

I

20 MW POWER STATION

AT

BAMBOOFLAT - PORT BLAIR

POWER PURCHASE AGREEMENT

BETWEEN

ANDAMAN & NICOBAR ADMINISTRATION
PORT BLAIR

AND

M/s SURYACHAKRA POWER CORPORATION LTD.
3-6-203/B, III FLOOR,
HIMAYATNAGAR,
HYDERABAD - 500 029.
INDIA

SIGNED ON 20th NOVEMBER, 1997

AND

ADDENDUM - 1 TO THE PPA,

SIGNED ON 30th MARCH, 1999
(Duly Incorporated)

Table of contents

	PAGE
PREAMBLE	01 - 03
ARTICLE 1. DEFINITIONS	04 - 17
ARTICLE 2. TERM OF AGREEMENT & SCOPE OF WORKS	18 - 18
2.1 Effect of Execution, Effective Date; Term of Agreement (a) Effect of Execution; Effective Date (b) Term and Effective Term (c) Extension of Term	
ARTICLE 3 UNDERTAKINGS AND OBLIGATIONS	19 - 29
3.1 Company Undertakings	
3.2 Company Obligations in Respect of the Electrical Interconnection Facilities and the Transmission Facilities	
3.3 THE ADMINISTRATION Undertakings	
(a) Consents	
(b) Site and infrastructure	
(c) Transmission Facilities and operation of Electrical Interconnection Facilities	
(d) Operation of Electrical inter connection facilities	
(e) Costs and Expenses of THE ADMINISTRATION Obligations	
3.4 THE ADMINISTRATION Representative; Review and Approval	
3.5 Project Construction and Milestone Schedule	
3.6 Delays to the Project; Adjustments to Milestone Schedule and Required Commercial Operation Date	
3.7 Drawings, Test Results, Etc.,	
(a) Company Retention of Records	
(b) Transfer of Information Upon Transfer of Project	
(c) THE ADMINISTRATION Retention of Records	
3.8 Procurement and Construction	
3.9 Capacity	
3.10 Liquidated Damages	
3.11 Shortfall in Rated Capacity	
3.12 Finalisation of Appendices	
ARTICLE 4 START-UP AND COMMISSIONING	30 - 30
4.1 Initial Energisation	
4.2 Commissioning and Testing	
4.3 Repairs after Commercial Operation	

ARTICLE 5. OPERATION AND MAINTENANCE OF THE PROJECT

31 - 33

- 5.1 Operation and Maintenance; Standards; Operators; Operating Committee
 - (a) Standards of Operation
 - (b) Safety and Safety Records
 - (c) Personnel Availability
 - (d) Operation and Maintenance Agreements
 - (e) Operating Procedures and Operating Committee
- 5.2 Co-ordination with THE ADMINISTRATION
 - (a) Project-Dispatch Centre Communications
 - (b) Daily Operations Log
 - (c) Declared Availability
- 5.3 Fuel Supply
- 5.4 Compliance with Laws
- 5.5 Access to Project

ARTICLE 6. SCHEDULED OUTAGES AND DISPATCH

34 - 37

- 6.1 Scheduled Outages
 - (a) Company Notices of Scheduled Outages
 - (b) THE ADMINISTRATION Response to Proposed Schedule; Rescheduling
 - (c) THE ADMINISTRATION Consent to Schedules; Technical Limits Constraints
 - (d) Rescheduling of Scheduled Outages
 - (e) Scheduled Maintenance During Unscheduled Outage
 - (f) Early completion of Scheduled Outages
- 6.2 Notification to THE ADMINISTRATION
- 6.3 Dispatch
- 6.4 No Adverse Discrimination
- 6.5 Emergency Plans

ARTICLE 7. SALE AND PURCHASE OF ENERGY

38 - 39

- 7.1 Sale and Purchase
 - (a) Sale and Purchase Obligations; title and Risk of Loss
 - (b) Commissioning of Synchronisation Prevented by Force Majeure, Delay or Default
- 7.2 Company's Electricity Requirements
- 7.3 Shortfall in energy
- 7.4 Administration right to shut down.

ARTICLE 8. BILLING AND PAYMENT

40 - 43

- 8.1 Meter reading and Recording
- 8.2 Billing and Payment; Disputes
 - (a) Billing and Payment
 - (b) Payment of Disputed Amounts; Resolution of Disputes
 - (c) Payment Upon Resolution of Dispute
- 8.3 Letter of Credit
- 8.4 Rebates
- 8.5 Supplementary Invoices
- 8.6 Late Payments
- 8.7 Penalty for failure.
- 8.8 Set-Off
- 8.9 Survival

ARTICLE 9. METERING

44 - 45

- 9.1 Metering System; Accuracy; Calibration
 - (a) Metering at interconnection Point
 - (b) Metering Equipment
 - (c) Inspection of Meters; Notice
 - (d) Accuracy Determinations
 - (e) Periodic Calibration of Meters
 - (f) SSS Meter Calibration for Testing
 - (g) Determinations if Meters Defective
 - (h) Determinations if Meters Variances
 - (i) Determinations if Meters Defective
 - (j) Testing and Corrections in Billing
- 9.2 Company's Access to Metering System

ARTICLE 10. INSURANCE

46 - 46

- 10.1 Insurance Policies
- 10.2 Additional Insured

ARTICLE 11. INDEMNIFICATION AND LIABILITY

47 - 47

- 11.1 Limitation of Liability
- 11.2 No Recourse against Company Officers Etc.,
- 11.3 Indemnification

ARTICLE 12. FORCE MAJEURE

48 - 52

- 12.1 Definition of Force Majeure
- 12.2 Notification Obligations
- 12.3 Duty of Mitigate
- 12.4 Continuing Payment Obligation: Force Majeure
- 12.5 Other Consequences
- 12.6 Consequences of Indian Political Events During Commercial Operation

ARTICLE 13. TERMINATION AND EVENTS OF DEFAULT	53 - 59
13.1 Company Events of Default	
13.2 THE ADMINISTRATION Events of Default	
13.3 Notice of Default	
13.4 Right to Enter and operate in the Event of Company Event of Default	
13.5 Consequences of Termination	
13.6 Continuing Payment Obligation: THE ADMINISTRATION Event of Default	
13.7 Rights and Remedies upon Company Event of Default	
13.8 Option to Purchase	
13.9 Consequence of Expiry	
ARTICLE 14. REPRESENTATIONS AND WARRANTIES	60 - 61
14.1 Representations and Warranties of Company	
14.2 Representations and Warranties of THE ADMINISTRATION	
ARTICLE 15. SETTLEMENT OF DISPUTES	62 - 64
15.1 Informal Dispute Resolution	
15.2 Arbitration of Disputes	
15.3 Arbitration Award	
15.4 Currency	
15.5 Separate Debt.	
15.6 Immunity	
15.7 Successors Etc.	
ARTICLE 16. NOTICES AND CHANGE IN LAW	65 - 66
16.1 Addresses and Addressees	
16.2 Change of Address	
16.3 Change-in-Law	
ARTICLE 16 A. SPECIAL PROVISIONS	67 - 68
ARTICLE 17. MISCELLANEOUS	69 - 74
17.1 Amendment	
17.2 Heading	
17.3 Third Parties	
17.4 No Waiver	
17.5 Relationship of the Parties	
17.6 Survival	
17.7 Language	
17.8 Governing Law	
17.9 Entirety	

- 17.10 Assignment
- 17.11 Confidentiality
- 17.12 Successors and Assigns
- 17.13 No Adverse Discrimination
- 17.14 Service of Process
- 17.15 Waiver of Immunity
- 17.16 Affirmation

Appendix A: Configuration /Technical details of 20MW.	75 - 78
Appendix B: Technical Limit	79 - 79
Appendix C: Project Milestone Schedule	80 - 80
Appendix D: Calculation of Payments	81 - 92
Attachment d(A)1: Model Calculation for determination of Capital cost and Model Tariff calculation for one year tariff	93 - 116(b)
Appendix E: Interconnection Points, Electrical Interconnection and Construction Interfaces	117 - 117
Appendix F: Project Testing specifications	118 - 120
Appendix K: Buy-Out Price	121 - 128
Appendix L: Determination of Availability	129 - 134
Attachment 1: Plot of Project Site	135 - 135
Blank Pages	136 - 140

List of Schedules

1. A&N Admn. Gazette Notification No. 325/82/F.No. 28-321/78-D dated 23.09.1983.	141 - 162
1(a)Ministry of Power & Non-Conventional Energy Sources, New Delhi Resolution 7/8/88 thermal dt. 22.10.1991.	163 - 166
1(b)Ministry of Power & Non-Conventional Energy Sources, New Delhi Resolution No. 7/70/90-IPC dt. 22.10.1991.	167 - 171
1(c)MOI, New Delhi Notification No. SO 265(E) dt. 27.3.94.	172 - 180
1(d)MOP, New Delhi Notification No. SO 151(E) dt. 26.2.97.	181 - 205
1(e)Guidelines for competitive bidding rules for private Power Project circulated by IPC of MOP, New-Delhi during January '95.	206 - 228
1(f)MOP, New Delhi D.O. No. C-236/95-IPC dt. 4.12.95.	229 - 229
1(g)MOP, New Delhi d.O. No. C-236/96-IPC-1 dt. 9.1.97.	230 - 231
1(h)CEA Office Memo. No. 1-3(2)/95-Secy/947 dt. 14.12.95 } CEA Letter No. 1-3(3)/97-Secy/742-87 dt. 4.2.97 } CEA Office Memo. No. 1-3(3)/97-Secy/DG dt. 4.2.97 }	232 - 241

1(i)MOP & NCES, New Delhi Notification No. SO 702 dated 15.10.1991.	242 - 245
1(j)Certificate of incorporation issued by Registrar of Companies, Andhra Pradesh.	246 - 247
1(k)Specification /typical values of HSD.	248 - 248
2. Site Location.	249 - 250
3. Inter-Connection of Power Houses.	251 - 251
4. Techno Economic Clearance for 20 MW Power House at Bambooflat vide A & N Administration Letter No. 4-2(2)/96-Power(DI) dated 20th Nov., 97.	252 - 279
5. State Bank of India Letter No. 41/196/Govt dt. 08.10.1997 regarding US Dollar Rates during the month of June 1997.	280 - 283

NOTE : Every effort has been made to incorporate the Addendum to the PPA signed on 20th November, 1997. In case of any doubt/clarifications, the Original PPA may please be referred.

****for circulation among the Engineers
of Electricity Department only****

POWER PURCHASE AGREEMENT

This Agreement is made on this day of 20th November, 1997 between The President of India represented by the Chief Secretary, Andaman and Nicobar Administration, Port Blair on behalf of Electricity Department, Andaman & Nicobar Administration which is maintaining the supply and securing equitable distribution of energy generated in Andaman & Nicobar Islands under the Andaman & Nicobar Islands Electrical Energy (Control and Supply Distribution, Consumption and use) order 1983 (Copy placed vide Schedule - 1), made under section 22 B of the Indian Electricity Act 1910 (9 of 1910), having its principle office at Port Blair, Andaman District, Andaman & Nicobar Islands, India (hereinafter referred to as "THE ADMINISTRATION" which expression shall unless excluded by or repugnant to the subject or context, include its successors and permitted assigns) of ONE PART.

AND"

M/S. SURYACHAKRA POWER CORPORATION LIMITED a company registered under the Companies Act 1956 (No.1 of 1956) registration No.01-19554 dated 28.2.1995 as Company which is in compliance under sub-section 4A of section 2 of Electricity (Supply) Act, 1948 (54 of 1948) placed vide Schedule 1(j), and as per Govt. of India, Notification No. 605 dt. 15.10.91, Schedule 1 (i) and having its office at 3-6-203/B III Floor, Himayath Nagar, Hyderabad-29, India (hereinafter referred to as the "THE COMPANY" which expression shall unless excluded by or repugnant to the subject or context, include its successors and permitted assigns) of the other part.

Whereas the Union Territory of Andaman and Nicobar Islands (hereinafter referred to as "Andaman and Nicobar Administration" has selected THE COMPANY as per the policy and guidelines laid down by the Ministry of Power, and Non-Conventional Energy Sources, Deptt. of Power, Govt. of India vide their notification/letters as mentioned below.:

- Schedule-1 A & N Notification No.325/82/
 F.No.325/82/F.No.28-321/78-D1 (PL) dt.23.9.1983.
- Schedule-I(a) No.7/8/88- Thermal, dt.22.10.1991.
- Schedule-I(b) No.7/70/90-I.P.Cell dt.22.10.1991.
- Schedule-I(c) M.O.P. Notification No.S.O.265 (E) dt.29th March 1994.
- Schedule-I(d) M.O.P. Notification No.S.O.251 (E) dt.30th March 1992
 amended upto 26th February, 1997.
- Schedule-I(e) M.O.P,D.O.No.A-32/95-IPC dt.18.1.95
 alongwith guide lines for competitive bidding route for
 private power projects.

- Schedule-I(f) M.O.P., D.O.No. C-236/95-IPC dt.4.12.95 adviceing the A&N Administration that the awarding of the project to private development within the review of the Administration.
- Schedule-I(g) M.O.P, D.O.No.C-236/96-IPC dt. 9.1.97 permitting this project for use of HSD oil as fuel in lieu of the liquid fuel policy resolution dt.6.11.95 for IPP projects and Ministry of Petroleum & Natural Gas letter No. 21017/7/94-Dist. dated 14.09.1994 allocating HSD Oil for the project at Bambooflat(enclosed as Schedule 4(e) of the Addendum, all other clearances for this project mentioned in Page 17 of PPA from 4(b) to 4(j) are enclosed to this addendum. Enclosed schedule 4(a) of Page 17 is available in Page 252 to 279 of the PPA.
- (Add 1)
- Schedule-I(g) M.O.P., D.O.No.A-27/94-IPC (Vol-II) dt.9.11.95, enclosing copy of M.O.P. Notification dt.6.11.1995 & Resolution A-27/94-IPC(Vol-II) dt.6.11.1995.
- Schedule-I(h) CEA, New Delhi Office Memorandum No. 1-3(2)/95-Secy/947 dated 14-12-95, norms regarding operation of Diesel Engine Generating Stations.
- (Add 2)
- Schedule-I(i) The Electricity Laws (Amendment) Act, 1991 vide No.605, dt.15.10.1991 and Gazette Notification S.O.702(E).
- Schedule-I(j) Registration of M/s. Suryachakra Power Corporation Limited, Hyderabad under the Companies Act, 1956(No.1 of 1956) vide S.No.01-19554 dt.28-02-1995.
- Schedule-I(k) Ministry of Power, New Delhi, D.O.No.C-236/96-IPC.I, dt.09.01.1997 addressed to The Chairman, CEA, and copy to Secretary, (Power), A & N Admn.
- Schedule-I(l) Specification of HSD Oil

(Add 71) to establish an Independent Power Plant (IPP) with installed capacity of 20 MW at Bambooflat Ferrargunj Tehsil, south Andaman, in Andaman District (hereinafter referred to as the said power station) vide locations shown in Schedule 2 and Schedule 3. The said power station would be established within a period of 24 months from the date of signing of this Agreement as all the clearances required as on date for this power station have already been received. The subsequent necessary statutory approvals and clearances, viz. obtaining of factory license, Employees State Insurance cover, equipment energiation clearance from Electrical Inspector, Madras, clearance of handling dangerous cargo inside the Power House premises and any other clearance required for successful commercial operation of the projects as per statutory requirement(s), if any required, from Central and state Govt. will have to be obtained by THE COMPANY within a period of 24 months from the date of signing the agreement or before the commencement of Commercial Operation Date of the last unit of the project.

WITNESSETH

WHEREAS, THE COMPANY plans to design, finance, construct, own and operate 20 MW electric Diesel (HSD) operated power generating facility, located at Bambooflat village, Ferrargunj Tahsil, Andaman District, A & N Islands, India (hereinafter referred to as "THE PROJECT")

NOW, THEREFORE, in view of the foregoing premises and in consideration of the mutual covenants and agreements hereinafter set forth, "THE ADMINISTRATION" and "THE COMPANY" (each individually a "Party" hereto and collectively the "Parties") hereby agree as follows:

ARTICLE 1
DEFINITIONS

When used herein or in the Tariff or any other document related to this Agreement, the defined terms set forth in this Article 1, shall have the following meanings (and other defined terms set forth in the Tariff shall have the meanings set forth therein):

- i. Abbreviations used: {Schedule - 1(h)}
- | | |
|------------------------------|---|
| (a) °C | : Degree Celsius |
| (b) Hz | : Hertz or cycles per second |
| (c) kCal | : Kilo-Calories |
| (d) g | : gram |
| (e) Kg. | : Kilogram |
| (f) Kg/cm ² (abs) | : Kilogram per square centimetre (absolute) |
| (g) kw | : Kilo watt |
| (h) kwh | : Kilo watt hour |
| (i) l | : Litre |
| (j) CEA | : Central Electricity Authority |
| (k) MW | : Megawatts |
- ii. "Acceptance Test" The Test conducted in accordance with Schedule-1(h) and Appendix - F that will demonstrate an ability to generate continuously at demonstrated capacity for Seventy two (72) hours in accordance with the Technical Limits and the fuel specifications set forth in Schedule-1(k), such test be conducted pursuant to the accepted test procedure (Appendix - F) hereof. For this purpose demonstrated capacity means the gross capacity of the project as built and as operated in accordance with Prudent Utility Practices, which may be less than 20 MW and the parameters are within the set norms vide Schedule-I(h).
- iii. "Acceptance Test Procedure"
- (a) THE COMPANY shall submit written notice of the date upon which the Unit(s)/Project will commence the Acceptance Test to THE ADMINISTRATION and the Independent Engineer (An Independent Engineering firm appointed by THE COMPANY and acceptable to THE ADMINISTRATION for the purpose of the acceptance Test) at least 48 hours before said test commencement. Any objections of THE ADMINISTRATION or the Independent Engineer to the time stated in THE COMPANY's notice of test commencement shall be promptly communicated to THE COMPANY, in any event not later than 12 hours before the time of commencement specified in such notice. If an objection to THE COMPANY's notice of test commencement is received within the period specified THE COMPANY shall agree to a one-time delay of the commencement of the Acceptance Test to a mutually acceptable re-scheduled time; provided, however, that such re-scheduled time shall be not later than 48 hours from the time stated in the Company's initial notice to THE ADMINISTRATION and the Independent Engineer. Such re-scheduled time of commencement may be agreed upon orally with written confirmation of such agreement to be provided by THE COMPANY to THE ADMINISTRATION and the Independent Engineer as soon as reasonably practicable following such agreement.

- (b) Prior to the Financial Closing Date, THE COMPANY will prepare in cooperation with THE ADMINISTRATION a testing protocol to add any necessary detail(s) to Appendix-F.
- (c) Upon not less than 48 hours prior notice to the Company THE ADMINISTRATION shall have the right to observe the progress of the construction of the Unit(s)/Project, the testing of the Unit(s)/Project and the operation of the Unit(s)/Project.
- (d) The Company shall provide THE ADMINISTRATION and the Independent Engineer written notice of the Unit(s)/Project successful completion of the Acceptance Test within 48 hours of such completion. Should THE ADMINISTRATION dispute the successful performance of the acceptance test by the project. The Administration shall promptly, but in any event within 48 hours of such notice, so notify THE COMPANY in writing. If THE ADMINISTRATION and the Company are unable to otherwise resolve the concern of THE ADMINISTRATION specified in such notice within 7 days after THE COMPANY's receipt thereof THE COMPANY shall either re-perform the Acceptance Test at a mutually agreed upon time or, if THE COMPANY believes that THE ADMINISTRATION's concerns are unjustified, THE COMPANY may schedule a meeting among THE COMPANY, THE ADMINISTRATION, and the Independent Engineer to resolve the dispute at a mutually agreeable time and place. If the parties are unable to resolve the dispute within 7 days after such meeting, the determination of the Independent Engineer shall be binding.
- (e) Should the Unit(s)/Project fail to successfully complete the Acceptance Test in accordance with Appendix-F, THE COMPANY may schedule a new test by submitting written notice of the date of the re-test at least 48 hours before the re-test commencement and otherwise in accordance with the procedure set forth herein. Except where the Unit's/Project's failure to successfully complete the Acceptance Test was the result of any action or direction of THE ADMINISTRATION, THE COMPANY may not schedule commencement of a repeat Acceptance Test after having failed to successfully complete a prior test at any time earlier than 3 days after the end of the unsuccessful previous test and may not schedule more than 15 witnessed retests in any Year.
- iv) "Accounting principles" shall mean generally accepted accounting principles applicable from time to time in India.
- (v) "Agreement" shall mean this Power Purchase Agreement, including its Appendices, Schedules and Exhibits, as the same may be amended, modified and supplemented from time to time in accordance with the terms and conditions hereof.

- (vi) "Approved Capital Schedule" shall mean the financial package of Debt and Equity Investments which are to be made in the Company for the purpose of enabling it to finance the capital cost, as set out in the techno-economic clearance of the THE ADMINISTRATION as it may be amended from time to time, plus the adjustments referred to in the definition of the capital cost. Any revision to the approved capital schedule after the commercial date of the project, shall not affect the approved capital schedule which was approved by the Administration but shall be made on a supplement thereto and shall take effect from the date of the supplement in respect of payments accruing under this Agreement after that date.
- (vii) "Approved Modifications" shall mean from time to time any capital improvements or changes under the construction contract approved by THE ADMINISTRATION and CEA (to the extent required by law) to enhance the efficiency of the project or increase its reliability or safety or otherwise to comply with laws of India.
- (viii) "Authorised Officer" shall mean with respect to THE ADMINISTRATION any officer of THE ADMINISTRATION who shall be designated as an "Authorised Officer" in a written notice provided to THE COMPANY by THE ADMINISTRATION.
- (ix) "Auxiliary Energy Consumption" - {Schedule - 1(h)}
 In relation to any period, the ratio, expressed as a percentage, of
 a) gross energy in kwh generated at the Generator(s) terminals, minus net energy in kwh delivered at the switch yard.
 to
 b) gross energy in kwh generated at the Generator(s) terminals. Auxillary consumption shall be on actual basis and shall not exceed the value stipulated in relevant notifications appended at schedule-1(h) i.e., with a capacity of 4.5%.
- Add-72
- (x) Authority : means Central Electricity Authority referred to in Article 3 of Electricity (Supply) Act, 1948.
- (xi) "Billing date: Means the fifth day after the metering date.
- (xii) Billing month: means the calendar month ending with the metering date.
- (xiii) "Business Day" - any day of the year on which Indian Banks are required or authorised to open for Business (including partial days) in Port Blair, A & N Islands, India.
- (xiv) "Calorific Value" : {Schedule - 1 (h)}
 a) "Gross Calorific Value" or "GCV" - The heat produced in Kcal by complete combustion of one kilogram (Kg) of liquid fuel expressed in "KCal/Kg" as per latest version of IS:1448. (P.6)

- b) "Net Calorific Value" or "NCV" - Gross calorific value minus the heat losses due to moisture in complete combustion of one kilogram of liquid fuel, expressed in "KCal/kg" as per latest version of IS:1448. (P.6)

Note : Ministry of Petroleum & Natural Gas Letter No. 21017/7/94-Dist. dated 14.09.1994.

The liquid fuel referred in this agreement is high speed diesel - a relaxation given by Min. of Power vide their D. O. No. C-236/96-IPC.I, dt. 09.01.97 addressed to The Chairman, CEA and copy endorsed to Secretary(Power) A&N Admn. placed vide schedule-I(g).

(xv) Capacity : (Schedule - 1(h) }

- a) "Maximum Continuous Rating" or "MCR" - In relation to a Unit the maximum continuous output at the Generator terminals, guaranteed by the manufacturer at ISO-3046 reference conditions and corrected to frequency beyond 50Hz (+ or -3%) and site conditions.
- Add3

— Explanation : The following factor which influences site selection have been considered in selecting site.

- a) Availability of adequate land for locating the power plant preferably with approach roads.
- b) Suitability of land from topography and geological aspects.
- c) Availability of adequate quantity of water to meet the fresh water requirements for closed circuit and sea water requirements for secondary cooling.
- d) Proximity to wharf facilities for movement of heavy equipments, fuel and lubricants.
- e) Facility for interconnection with transmission and distribution system for evacuation of power.
- f) Load centre.
- g) Environmental aspects.

- b) "Rated Capacity" In relation to the Generating Station the maximum continuous Rating (MCR) of unit multiplied by the number of units in the Generating Station.

- c) "Demonstrated Capacity" - In relation to a Unit, the electric output at Generator terminals demonstrated during performance Acceptance Test as per latest versions of ISO-3046 for Diesel Engine and IS:4722, IS:5422, IS:7132 and IEC-34 for Generator after successful trial operation and corrected to frequency beyond 50Hz (+ or -3%) and site conditions as at (xv) (a) above.
- Add4

d) "Installed Capacity" - In relation to the Generating Station, Rated capacity or sum of the Demonstrated capacities of the units in the generating station whichever is less.

e) "Available capacity" - In relation to any settlement period, the sum of

i) power delivered or deemed to have been delivered (in case of backing down) at switch yard

and

ii) Auxiliary power consumption

and corrected to annual mean dry bulb temperature at site and 50 Hz grid frequency.

Explanation : 1. Auxiliary Energy consumption shall be taken as Auxiliary Power consumption for this purpose.

2. Available capacity shall not exceed the installed capacity.

Add 5 3. The Administration will not allow any deration of the D.G. Sets in the installed capacity during the entire operation regime of the project for the term of agreement.

(xvi) "Capital Cost" means, subject to Article 3.11 and Article 3.10(d) of the Agreement, the cost (expressed in rupees) actually incurred by the Company in completing the Project will be as follows

Sl. No.	Item	Cost in MINR	Cost in MUS Dollar Price at Rs.36.00
1.	Imported eq.	379.08	10.53
2.	Indigenous eq.		
3.	Mec.Elec.Civ. and sub station	252.32	
Total		631.40	10.53

Add 6 which is as per foreign exchange rates assumed as in June 1997 and shall be included as "CAPITAL COST" except to the extent that the THE ADMINISTRATION approves such excess costs as not having been attributable to THE COMPANY to the Company's suppliers or contractors. In determining the amount of costs actually incurred in completing the project, account shall be taken of (i) any increase or decrease in capital Cost resulting from changes in the rates of exchange of the foreign currencies in which

project expenditures are authorized to be incurred from the level set forth in A&N TEC (ii) (A) any reduction in interest during construction and principal amount of loans through the application of delay liquidated damages received under the Construction Contractor other compensation paid by the EPC Contractor to the Company and applied to reduce Capital Cost as provided in Article 3.11.(iii) any change to the debt equity ratio from the ratio assumed in the Approved Capital Schedule, and (iv) any excess insurance proceeds paid to the Company (after adjustment for the loss or damage to the Project and, to the extent not included in actual project cost, the cost of repaid and replacement attributable to such loss or damage) in respect of any claims for loss or damage to the Project incurred prior to the Commercial Operation Date to this Appendix D. For purposes of determining the Capital Cost, all foreign currency loans and all foreign currency equity sources shall be converted into Rupees at the applicable Base Foreign Exchange Rate. It is understood and agreed that any increase or decrease in Capital cost due to changes in foreign currency exchange rates shall be reflected in the amount of actual capital cost. In case the actually incurred cost is less than the ceiling cost as mentioned in table, the lesser cost shall be taken as the capital cost. Capital cost includes interest during construction limited to a construction period of nineteen months for the first and second unit and twenty four months for Third and Fourth Units, and shall not include any additional amounts for a longer construction period, except with the approval of THE ADMINISTRATION due to delays not attributable to the Company or the Company's suppliers or contractors. Further for estimating Interest During Construction 37.5% of the capital cost is allocated for the first unit 23.5% of the capital cost allocated to the second unit, 21% of the capital cost allocated to the third unit and 18% of the capital cost allocated for the fourth unit.

(Add 8. Item (i) with two paras shifted to page 82 as item (v))

- (xvii) "Change in Law" (i) The enactment or issuance of any new law or regulation or (ii) the amendment, alteration, modification or repeal of any existing law or regulation of a Government Agency (including, without limitation, any law or regulation relating to any taxes, import fees or assessments or any expropriation or compulsory acquisition) or any new or modified directive or order thereunder, or (iii) any binding interpretation of any existing

law issued by a competent court, tribunal. Government Agency or statutory authority contrary to the existing official interpretation thereof, coming into effect after the date hereof, provision for which has not been made elsewhere in this Agreement or in the Approved Capital Schedule.

(xviii) "Commercial Operation Date" or "COD" - (Schedule - 1 (h))

In relation to a Unit, date by which the Maximum Continuous Rating (MCR) is demonstrated by a performance Acceptance test as per latest versions of ISO-3046 for Diesel Engine and IS:4722, IS:5422 & IS:7132 and IEC-34 for Generator after successful trial operation including stabilisation. The COD of the Generating Station shall be reckoned from the COD of the last unit.

Explanation : For energy generated upto COD of the Unit, fuel charges shall be payable to the Generating Company as per actuals.

(xix) "Company" M/s SURYACHAKRA POWER CORPORATION LIMITED a company established under the laws of India with its principal office located at 3-6-203/B, III Floor, Himayath Nagar, Hyderabad-500 029 and its successors and permitted assigns.

(xx) "Construction Contract" - The agreements entered into between the Company and the Engineering, Procurement and Construction Contractor (EPC) for the completion of the engineering, design, construction, start-up and testing of the Project, as the same may be amended, supplemented or modified from time to time in accordance with the terms and conditions thereof.

(xxi) "Contractors" - The EPC and all other contractors to the Company (and the respective subcontractors of all of the foregoing) in their respective capacities as such and the successors and permitted assigns of any of the foregoing.

(xxii) "Completion Cost" means the cost (expressed in rupees crores of foreign currency as applicable) actually incurred by the Company in completing the project, subject to incorporating the following principles clearly.

(i) Costs in excess of Rs. 37.908 crores i.e., 10.53 MUS Dollar foreign currency (A cost which have been agreed between the Administration and company for the purpose of PPA) to the extent approved by the Administration as not Having been attributable to THE COMPANY or the Company's suppliers or contractors shall be added to Rs. 37.908 crores i.e., 10.53 MUS Dollar foreign currency for arriving at completed cost.

(ii) Any increase or decrease in project cost attributable to changes in foreign currency exchange rates.

- (iii) The reduction in capital cost by an amount equal to any reduction in interest during construction and principle amount of loans through application of liquidated damages received under the construction contract on account of delay in completion.
- (iv) The demonstrated capacities of the units shall not fall short by more than 10 percent of the rated capacity. Where the Demonstrated capacities of the unit falls short by less than or equal to 10% of the rated capacity, each of the debt and equity components of the capital cost of the project shall be reduced pro-rata of shortfall in capacity. In case the shortfall in the capacity exceeds 10% of the rated capacity, the project shall stand rejected.
- (v) Reduction in capital cost due to change in the debt equity ratio from the ratio assumed in the approved capital cost.
- (vi) Reduction in the capital cost by an amount equal to insurance proceeds paid to THE COMPANY in respect of any claims for loss and damages to the project incurred prior to the COD.
- (vii) For the purpose of determining the completion cost all foreign currency loans and all foreign currency equity sources shall be converted into rupees at the exchange rates applicable at the time of physical occurrence of the event. In case the actually incurred cost is less than the ceiling cost of Rs. 37.908 crores i.e., 10.53 MUS Dollars foreign currency components of the PPA, the lesser cost shall be taken as the completion cost.
- (xxiii) "Day" shall means The 24 hours period of time beginning and ending at 00.00 Midnight Indian Standard Time.
- (xxiv) "Deemed Generation period" shall have the meaning specified in Appendix - D.
- (xxv) Depreciation :means the depreciation on buildings, equipment and other capitalised expenditure at the rates specified by the Govt. of India from time to time, under the provisions of Ministry of Power Notification No. S.O.265(E) dated 27.03.1994 and Notification No.S.O.266(E) dated 29.03.1994 and in respect of any asset, shall cease no sooner its net book value falls equal to the residual value i.e 10 percent of its original cost.
- (xxvi) "Deemed Generation Event" - The period of the effectiveness of the Despatch Instruction or other similar instruction giving rise to Deemed Generation.

(xxvii) "Direct Indian Political Event" - Those events of Force Majeure having effects set out in Article 12 which constitute Indian Political Events set forth in Article

(xxviii) Despatch Rights:

a) "Despatch Centre" shall mean THE ADMINISTRATION's control and despatching centre located at Bambooflat, Port Blair, India or such other similar centre as may be designated by THE ADMINISTRATION from time to time in writing as being the sole THE ADMINISTRATION control point for despatch Instructions to the Company for the project.

b) "Despatch" and "Despatch Instructions" shall mean written instructions or oral instructions later to be recorded issued by THE ADMINISTRATION from the Despatch Centre in accordance with this Agreement for THE COMPANY to schedule and control the generation of electricity by the project in order to increase or decrease the electric energy delivered to the Grid System. THE COMPANY shall also cater to all types and categories of load requirements under all conditions.

(xxix) "Dollar" or "U.S.Dollars" shall mean the lawful currency of the United States of America.

(xxx) DEBT: means the amount of any loan, non-convertible debentures, or other obligation contracted or raised and received by THE COMPANY and actually expended on the capital cost of the project, where under the terms of the loan, debenture or other obligation, as accepted by THE ADMINISTRATION, interest is payable at periodical intervals at rates specified by those terms and the principal amount of the loan, debenture or other obligation is repayable or redeemable in periodical intervals.

Explanation: Where any part of the Debt contracted is in the nature of the value of any asset or any service of any nature, the valuation thereof shall be approved by THE ADMINISTRATION.

(xxxi) Debt Repayment : means the liability of THE COMPANY to make repayment of one or more installments of the principal of any debt falling due during a year, under the terms thereof, and includes the actual rupee equivalent of such liability on any foreign debt at the current rate of exchange.

(xxxii) "Effective Date" - Same as financial closing date.

- (xxxiii) "Emergency" - A condition or situation that, in the reasonable opinion of THE ADMINISTRATION does materially adversely, or is likely materially adversely to (a) affect the ability of THE ADMINISTRATION to maintain safe, adequate and continuous electrical service to its customers, having due regard to the then current standard of electrical service provided to its customers or (b) endanger the security of persons, plant or equipment.
- (xxxiv) "Energy" - Electric energy, measured in kilowatt - hours, in the form of alternating current at normal operating frequency of 50 Hz permitting a variation of 48.50 to 51.50 Hertz and at a normal operating voltage of 33,000 volts but permitting a variation of plus five percent (+5%) or minus ten percent (-10%) of 33,000 volts, under all regime of operation(s).
- (xxxv) "Engineering procurement and construction Contractor" - ("EPC Contractor") - The party or parties to the construction contract other than the Company.
- (xxxvi) Equity: shall have the meaning specified in Appendix-D.
- (xxxvii) "Financial Closing Date" The date on which binding commitments to provide the financing for the project are issued and effective, conditions to initial borrowings are satisfied and amounts become available for borrowing from the Lenders.
- (xxxviii) "Force Majeure" an event, condition or occurrence specified in Article 12.
- (xxxx) "Generating station" - {(Schedule - 1(h))}
Means diesel engine generating station comprising of D.G units and balance of plant.
- (xxxxi) Heat Rate - {(Schedule - 1(h))}
- a) "Gross Heat Rate" or "GHR" - The heat energy in Kcal input to the unit to generate one KWH of electric energy at generator terminal.
Explanation : In relation to diesel Engine - Generator (DG) unit, the gross Heat Rate shall be based on NCV of fuel.
- b) "Net Heat Rate" or "NHR" - The heat energy in Kcal, input to the generating station to deliver one KWH at the switch yard.
- (xxxxii) "Maintenance Spares Allowance: - A working capital allowance for maintenance spares in an amount equal to the actual cost of maintaining a reasonable inventory of spares in accordance with Prudent Utility Practices, provided that during the first five years following the Commercial Operation Date this shall be deducted from such cost one fifth of the portion of Capital Cost Allocated to initial capitalised maintenance spares. During a year, the Maintenance Spares Allowance shall not exceed 1% of Capital Cost.

- (xxxixiii) Metering date: Means the mid-day of the last day of the calendar month to which the energy supplied relates.
- (xxxixiv) "Month" - A period beginning at 00:00 Midnight Indian Standard Time on the first Day of a calendar month and ending at 00:00 Midnight Indian Standard Time on the first Day of the next calendar month.
- (xxxixv) "Net Electrical Output" - All energy delivered by the Company to THE ADMINISTRATION at the Interconnection Point.
- (xxxixvi) Normative Level of Generation: The normative level of generation shall be 6000 hours/kilowatt/annum, for all calculations of the fixed charge of the Tariff.
- (xxxixvii) "Operation and Maintenance Expenses" {Schedule - 1(h)}
or "O&M expenses" -
In relation to a period, the expenditure incurred in operation and maintenance of the generating station including manpower, spares, consumables (including water) insurance and overheads.
Explanation: O & M expenses means all expenditure other than interest, depreciation, taxes on income, return on equity, debt repayment and variable cost, necessarily incurred by the company for the efficient and economic generation of power by the project and includes, inter alia, all staff related expenses, costs, royalties, taxes, duties and other Government charges in respect of spares for operation and Maintenance. Water and all other materials (excluding the variable cost materials), contract labour and other payments for running, repair, maintenance, replacement and overhauling of the plant(s), equipment and work necessary for such generation and insurance charges if any on any plant, equipment or materials as may be, in the opinion of THE COMPANY in accordance with Prudent Utility Practices be considered necessary subject to the final decision of the Government of India as to the treatment of insurance costs.
- (xxxixviii) "O & M Agreement" shall mean any agreement entered into between the Company and an operator selected by the Company containing terms and conditions for the operation, maintenance and repair of, and other matters relating to the project, as contemplated below in the explanation, as the same may be amended, modified and supplemented from time to time in accordance with provision thereof.

Explanation: Operation and Maintenance Agreements: The company shall have the right to contract the operation and maintenance of the Project to any person who is experienced in the operation and maintenance of electrical generating facilities and in connection therewith may enter into one or more O&M Agreements as the Company shall determine appropriate and on such terms and conditions as the Company shall determine. The Company shall notify THE ADMINISTRATION of the appointment of any such contractor and the execution of any O&M Agreement at least twenty (20) days prior to entering into an O&M Agreement with any person.

(IL) "Plant Fair Life" - {Schedule - 1(h)}
15 years as per Govt. of India Gazette
Notification No. 265(E) dated 29th March, 1994, as per
Schedule 1 (c) as amended from time to time.

(L) "Plant Load Factor" - {Schedule - 1(h)}
"Plant Load Factor" or "PLF" - In relation to any
period, the ratio, expressed as a percentage of

a) The sum of total Kwh delivered at the switch yard and auxiliary Energy consumption as per operation norms which shall not exceed total KWH generated at generator terminal.

"to"

b) Installed capacity, expressed in kilo watts (Kw) multiplied by the number of hours in the relevant period.

(Li) "Deemed Plant Load Factor" - In relation to any period of operation of the Generating Station, the ratio, expressed as percentage of

a) The sum of available capacities for each settlement period.

To

b) Installed capacity multiplied by the number of settlement periods.

(Lii) "Project" shall mean, collectively, the IC engine generating facility with total capacity of 20 megawatts and, where the context so requires, any Unit or units thereof to be constructed at Bambooflat, Port Blair, A & N Islands together with related facilities including roads, culverts, railways, facilities for fuel supply, water supply and waste water discharge (including related pipelines, storage tanks and pump houses) has been achieved all, as more specifically specified in Appendix A.

(Liii) "Prudent Utility Practices" shall mean those practices, methods, techniques and standards, as changed from time to time, that are generally accepted for use in the international electric utility industry, and commonly used in prudent electric utility engineering and operations to design, engineer, construct, test, operate and maintain equipment lawfully, safely, efficiently and economically as applicable to equipment of a certain size, service and type and that generally confirms to the manufacturers' operation and maintenance guidelines.

(Liv) Prescribed parameters : means the following operating parameters for the project plant for the purpose of determination of basic tariff rate of supply of power by THE COMPANY to THE ADMINISTRATION namely:
(Add. 10)

- a) Auxiliary consumption shall be as per GOI norms notified by CEA, New Delhi vide Schedule 1 (h).
- b) Station heat rate shall be 2000 Kilo calories per KILO WATT HOUR at ISO conditions for the permissible liquid fuel as per GOI norms notified by CEA, New Delhi vide Schedule 1 (h). The Station heat rate for site conditions based on lower calorific value (LCV) of the fuel is 2010 Kilo calories per KWH.

(Lv) "Return on Equity" or "ROE" shall have the meaning specified in Appendix D.

(Lvi) Scheduled Date of Completion : {Schedule - 1(h)}
Means date or dates of commercial operation of each unit as detailed in Appendix - C. However, all the units shall be commissioned within 24 months from the date of achieving financial closure.
(Add 73)

(Lvii) Station heat rate : means the quantum in kilo Calories of input heat energy required by the plant to generate one unit of energy.

(Lviii) "Unit" - {Schedule - 1(h)}
Shall mean each of diesel generating and ancillary equipment and facilities described in Appendix A.

(Lix) Working Capital : means the amount in Rupees needed to expend- ing on the inputs required for generation of power prior to the realisation of revenue by sale and shall be computed as per Schedule I (d).

(Lx) "Week" A period of seven (7) consecutive Days.

(Lxi) "Year" the date beginning on the Commercial Operation Date and ending on the 31st March and each successive 12 months period beginning on 1st April, during the term of this Agreement.

2. All other words and expressions, used herein and not defined herein but defined in the Electricity (Supply) Act, 1948 and office memorandum/notification issued from time to time in pursuance of Electricity (Supply) Act, 1948, Indian Electricity Act 1910 and I.E Rules, 1956 shall have the meanings, respectively, assigned to them in the said Act.

3. Conditions Precedent

The Obligations of The Administration and The Company under this Agreement is conditional to the occurrence of the following in full.

- (a) CNE Approval from Government of India for Purchase of energy through non plan Budgetary grants.
- (b) Transfer of the land and all the licenses/Clearances so far obtained by the Administration in favour of The Company including that from Ministry of Environment and Forests and Ministry of Power, Govt. of India. The list of clearances award for this project is appended below:

- Add II
- Schedule 4(a) - T.E.C for 20 MW DG Power House at Bambooflat vide A&N letter No.4-2(2)/96-Power(DI) dt.20th Nov '97
 - Schedule 4(b) - Compliance of section 29 of E.S.Act 1948 for 20 MW DG Power House.
 - Schedule 4(c) - Water availability Certificate from APWD, Port Blair vide letter No.WS/5-1/RCD/94/915/1915 dated 18.7.94.
 - Schedule 4(d) - Clearance from Central Water Commission in respect of supply of fresh water to the project vide letter No.12/14/83-UT/401 dated 19.9.94.
 - Schedule 4(e) - Fuel linkage clearance from Ministry of Petroleum & Natural Gas vide No.21017/7/94-Dist.dt.14.9.94 & letter of Secy.M.O.P., D.O. No.15(10)94-Th dt.3.5.94.
 - Schedule 4(f) - Air & Water pollution clearance from State Pollution Control Board vide No.240 & 241 dt.30.9.94.
 - Schedule 4(g) - Environment Clearance from M.O.E. & F vide O.M.No. J-13011/21/93-IA-III dt.22.4.94.
 - Schedule 4(h) - Clearance from Director General of Metrology, Mousam Bhawan, New Delhi vide letter No.EMD-01934/South Andaman dt.4.5.94.
 - Schedule 4(i) - Clearance from National Airport Authority, New Delhi vide 323/94 dt.21.9.94.
 - Schedule 4(j) - Clearance from The Conservator of Forest, Forest Deptt. vide No.325/129 dt.9th Sept. 1994.

ARTICLE 2

TERM OF AGREEMENT AND SCOPE OF WORKS

2.1 Effect of Execution; Effective Date; Term of Agreement

- (a) Effect of Execution; Effective Date. Upon execution of this Agreement by THE ADMINISTRATION and the Company, Articles 1, 2, 3 (other than Articles 3.1, 3.2, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, and 3.11) 11, 12, 13, 14, 15, 16 and 17 of this Agreement shall be in full force and effect. The Company may by written notice instruct the Contractor to proceed with the construction of the Project when all the conditions to effectiveness, set forth in item 3 of Article - 1, shall have been satisfied or waived by mutual agreement, shall be in full force and effect.
- (b) Term and Effective Term. This Agreement shall have a term (the "Term") commencing on the date hereof, and expiring on the date of the fifteenth (15th) anniversary of the Commercial Operation Date of the last Unit to be placed in commercial operation, unless earlier terminated in accordance with the terms hereof. The "Effective Term" shall commence on the Effective Date (as notified to THE ADMINISTRATION by the Company) and expire on the date of the fifteenth anniversary of the Commercial Operation Date of the last Unit to be placed in commercial operation, unless earlier terminated in accordance with the terms hereof.
- (c) Extension of Term. THE ADMINISTRATION may request an extension of the Term and the Effective Term for three further periods of five (5) years. Such request shall be made in writing not less than eighteen (18) months before the scheduled expiry of the then current Term or at such times as the Parties shall otherwise agree mutually. Within a reasonable time after such a request is made, the Parties shall enter into good faith negotiations regarding whether such an extension shall be effected and the terms and conditions thereof, including provision for additional Capital Costs to modernize and renovate the Project.

ARTICLE - 3

UNDERTAKING AND OBLIGATIONS

3.1 Company Undertakings

(a) THE COMPANY Shall:

- (i) use all reasonable efforts to obtain financing for construction and operation of the Project and to negotiate and execute the Fuel Supply Agreement, the Construction Contract and Financing Agreements, as contemplated in this Agreement;
- (ii) use all reasonable efforts to obtain all Consents and any other Indian Government Authorities; for the successful operation of project.
- (iii) engage only such advisors, representatives and experts as are experienced in the development, constructions and financing of power stations similar to the Project;
- (iv) use reasonable efforts to act in accordance with Prudent Utility Practices with the objectives of making the Rated Capacity less auxiliary load (permitted under CEA's Office Memo. dated 14.12.1995 for operation norms for diesel generating station vide Schedule - 1(h)) to THE ADMINISTRATION, a reliable supply of Electricity at the Interconnection point in accordance with such Dispatch Instructions as may be in effect throughout the term of this Agreement;
- (v) Prior to Financial Closing, obtain the approval of THE ADMINISTRATION as to the identity of the Contractor and the operator selected by THE COMPANY under the O&M Agreement and not, without the prior written consent of THE ADMINISTRATION (such consent not to be unreasonably withheld or delayed) change such Contractor or operator;
- (vi) following the Commercial Operation Date of the Project, keep THE ADMINISTRATION informed of the Project's electric generating capacity and of any impairment of its ability to generate electricity in accordance with Appendix L of this Agreement;
- (vii) provide at least three months notice to THE ADMINISTRATION of the time at which it expects to synchronize each Unit to the Grid System and to keep THE ADMINISTRATION informed thereafter as to any changes in the expected time of synchronization;
- (viii) Prior to the Commercial Operation Date of the Project, keep THE ADMINISTRATION informed as to the progress of the construction of the project and the estimated Commercial Operation Date of each Unit;

- (ix) enter into a Construction Contract that will require the construction of a plant that is consistent in all material respects with the Technical Limits as specified by Central Electricity Authority, in its techno-economic clearance, and not enter into any amendment to the Construction Contract or undertake or permit any modification to the Project that would detract from the Technical Limits in any material respect;
- (x) cause the Construction Contract to provide for the conducting of the Rated Capacity Test as provided in Appendix F and use reasonable efforts to cause the Construction Contract to be assigned to THE ADMINISTRATION upon the occurrence of a sale and purchase of the project pursuant to a Buy-Out Notice prior to the Commercial Operation Date of the Project;
- (xi) provide to THE ADMINISTRATION for its due diligence review copies of the "Technical Specifications" and "Plant Performance Test Plan" or equivalent thereto from the Construction Contract, subject to the provisions of Article 17.11;
- (xii) work with and co-operate in good faith with THE ADMINISTRATION with respect to all of THE ADMINISTRATION's obligation and rights hereunder;
- (xiii) refrain from entering into or amending or modifying the Fuel Supply Agreement without the approval of THE ADMINISTRATION in the respects contemplated herein, which approval shall not be unreasonably withheld or delayed.
- (xiv) provide THE ADMINISTRATION with copies of all publicly filed financial statements and reports;
- (xv) at all times on and after the Commercial Operation Date, maintain on site stocks of Fuel at least equivalent to the requirements for 30 Days' consumption and of Lubricating Oil equivalent to the requirements for 30 Days' consumption both at a Plant Load Factor as per normative level of generation of 6000 (68.49 PLF) hours per annum.
- (xvi) deliver drafts of the Approved Capital Schedule to THE ADMINISTRATION prior to the Financial Closing.
- (xvii) pay all amounts due to THE ADMINISTRATION (including liquidated damages) in accordance with the provisions of this Agreement.
- (xviii) furnish quarterly progress reports to THE ADMINISTRATION in accordance with the provisions contained in A&N Admn's techno-economic clearance vide No. 4-2(2)/96-Power(DI) dt. 20th Nov 97.

- (xix) (a) Refrain from making nominations that are in excess of the Fuel which would (in the absence of Dispatch Instructions) reasonably expected to be consumed so as to enable

THE COMPANY to operate the Project in accordance with the provisions of this Agreement.

(b) Otherwise make its nominations for Fuel in a reasonable and prudent manner so as to enable the Company to operate the Project in accordance with the provisions of this Agreement.

3.2 Company Obligations in Respect of the Electrical Interconnection Facilities and the Transmission Facilities.

(a) THE COMPANY shall operate the Electrical Interconnection Facilities in accordance with the instructions issued from time to time by THE ADMINISTRATION to THE COMPANY. THE COMPANY shall not be obliged to undertake any action whatsoever except as instructed as aforesaid.

(b) If, for reasons other than delays caused by an event of Force Majeure or default by THE ADMINISTRATION of any obligations hereunder, the occurrence of the Commercial Operation Date of the first unit is delayed beyond the later to occur of (1) 120 Days after the Required Commercial Operation Date of the first Unit and (2) 120 Days after the Transmission facilities have been commissioned and are ready for interconnection, the Company shall pay to THE ADMINISTRATION interest on the amount invested by THE ADMINISTRATION in the Transmission Facilities or the amount approved for such purpose by C E A at a rate which is one half per cent (0.5%) above the applicable Cash Credit Rate. As a condition precedent to the obligation of the Company to make any such interest payment THE ADMINISTRATION shall provide evidence reasonably satisfactory to THE COMPANY of the amounts invested and approved exclusively for this project. Such interest shall be paid monthly in arrears during the period commencing at the end of the fourth month following the later to occur of the event specified in (1) and (2) above until the date on which THE COMPANY achieves initial energisation of the first Unit pursuant to section 4.1.

3.3 THE ADMINISTRATION Undertakings

(a) Consents

(i) THE ADMINISTRATION undertakes to transfer THE COMPANY in connection with identifying the applications of THE COMPANY for consents and with obtaining of all appropriate clearances and other Governmental Authorities and Consents for development, construction and operation of the Project.

(ii) THE ADMINISTRATION undertakes to make due and proper application for and shall obtain all other Consents and Governmental Authorities relating to the Project, and all renewals thereof, that are required to be obtained by THE ADMINISTRATION or that are required to be in THE ADMINISTRATION's name, in a timely manner so as to enable THE COMPANY to implement the Project in accordance with this Agreement (including the Milestone schedule) the other Project Documents and the Financing Agreements.

(b) Site and Infrastructure

(i) THE ADMINISTRATION shall acquire or hold absolute legal title to, and make vacant possession of the land comprising the site free of all liens, charges, encumbrances, occupants and adverse claims and vested with all rights required or appropriate for the implementation of the Project at the site, and shall grant to THE COMPANY a Site Lease for a term of not less than 20 years commencing from the date of this Agreement on terms and conditions to the mutual satisfaction of both the parties including an option to extend the site lease until the expiry of any period by which this agreement is extended pursuant to article 2 or to the expiry of any period during which the provisions of section 13.9 are operative, plus, in each case, two years. In the event of a sale of the Project by THE COMPANY to a third party THE ADMINISTRATION shall grant a new site lease to such third party on terms substantially similar to the existing site lease (including the term). If this Agreement terminates as a result of a Company Event of default the Site Lease will terminate after the expiry of a two year period from the date of the termination of this Agreement, subject to cure rights provided to Lenders in the Financing Agreements. In the event of a purchase of the Project by THE ADMINISTRATION pursuant to a Buy-Out-Notice the Site Lease shall terminate on the date of payment of the Buy-Out-price.

(ii) THE ADMINISTRATION shall provide such assistance and support as the Company may require in (A) obtaining Governmental Authorisations for the grant of the Site Lease to the Company and for the construction and operation of the Project and an interacting with Indian Government Instrumentalities as to such Governmental Authorizations, (B) acquiring and obtaining unrestricted access to and possession of the Site, (C) obtaining adequate supplies of water for construction, testing, operation and maintenance of the Project during their terms of this Agreement, and (D) obtaining all the infrastructure and utilities support (including, without limitation, road access, cooling water pipeline, water drainage and sewage services, telephone, telecopier and electricity interconnections) necessary for construction and operation of the Project.

(iv) THE ADMINISTRATION shall work with and co-operate in good faith with the Company with respect to all of the Company's obligation and rights hereunder.

(c) Transmission Facilities and Operation of Electrical Interconnection Facilities.

(i) THE ADMINISTRATION shall develop, design, engineer, construct, procure and finance the Transmission Facilities in all material respects in accordance with the design and equipment parameters set forth in Appendix E.

(ii) THE ADMINISTRATION warrants that the Transmission Facilities shall be commissioned and ready for interconnection with the project not later than one hundred and twenty (120) days before the required commercial operation date of the first Unit.

(iii) If the Commercial Operation Date of any unit is delayed because the Transmission Facilities are not commissioned and ready for interconnection, THE ADMINISTRATION shall pay fixed charges (less return on equity) upto normative level of generation during the period of any such delay, measured from the time at which the Commercial Operation Date of such Unit would have been achieved but for THE ADMINISTRATION's delay, to the time at which the Commercial Date of such Unit is actually achieved. If the Commercial Operation Date of the Project is not achieved, other than by reason of a breach by THE ADMINISTRATION of its obligations hereunder or THE ADMINISTRATION Event of Default, and this Agreement is terminated, the Company shall refund to THE ADMINISTRATION all amounts paid by THE ADMINISTRATION pursuant to this Article 3.3(c)(iii). If the Commercial Operation date is achieved but the Rated Capacity demonstrated through the Rated Capacity Test is less than 20 MW, THE ADMINISTRATION shall receive a credit on future invoices for the amount of its over payment. Refunds and credits to THE ADMINISTRATION pursuant to this Article 3.3(c)(iii) shall accrued interest at the rate specified in Article 8.7.

(iv) From the day of interconnection and throughout the Term, THE ADMINISTRATION shall make and maintain all necessary arrangements for the receipt at, and evacuation and distribution from, the Transmission Facilities of all Electricity conveyed to the Transmission Facilities in such manner and at such times as shall not interfere with the operation of the Project by the Company, except as may be required for maintenance to the Transmission facilities, which THE ADMINISTRATION shall schedule during Scheduled Outages except to the extent of any Emergency on the THE ADMINISTRATION Grid System or any maintenance other than maintenance which could be regularly scheduled.

(v) THE ADMINISTRATION shall make all necessary arrangements for drawing and receiving Electricity produced by the project, including laying and re-routing new transmission lines, purchasing and installing power line carrier communications equipment for the transmission lines and acquiring

and installing protection relaying equipment an surge diverting equipment, and the construction and implementation of such arrangements shall be completed not less than one hundred and twenty (120) days prior to the required Commercial Operation Date of the first Unit.

(vi) All such arrangements, and the construction and implementation thereof, shall (i) be in compliance with all Indian Governmental Authorisations and Indian Legal Requirements and shall not cause the Company to breach or be in default under any of the project Documents, (ii) comply with Prudent Utility Practices and (iii) be in accordance with, and in compliance with, and not result in compliance by the Company therewith to result in failure to adhere to, Prudent Utility Practices.

(d) Operation of Electrical Interconnection Facilities

(i) Not later than one hundred and eighty (180) days prior to the Commercial Operation Date of the first Unit as set out in the Milestone Schedule, THE ADMINISTRATION and the Company shall agree on the terms of a manual for the operation of the Electrical Interconnection Facilities by the Company. The initial draft of the operating manual shall be prepared by THE ADMINISTRATION and submitted by THE ADMINISTRATION to the Company not later than ninety (90) days after the date of this Agreement. The operating manual shall accord with Prudent Utility Practices and shall comprise part of the Operating Procedures.

(ii) THE ADMINISTRATION shall ensure that full and sufficient instructions are given to the Company at all times for the operation of the Electrical inter connection Facilities which instructions shall be in accordance with the operating manual.

- (e) **Costs and Expenses of THE ADMINISTRATION Obligations:** All obligations of THE ADMINISTRATION pursuant to this Agreement shall be at the sole cost and expense of THE ADMINISTRATION unless otherwise expressly provided herein. THE ADMINISTRATION shall pay all amounts due to the Company (including liquidated damages) in accordance with the provision of this Agreement.

3.4 **THE ADMINISTRATION Representative; Review and Approval**

- (a) upon execution of this Agreement, THE ADMINISTRATION shall designate the Superintending Engineer, Electricity Department, Port Blair or his named representative (the "THE ADMINISTRATION Representative") who shall be authorized to represent THE ADMINISTRATION

TION in connection with all matters pertaining to THE ADMINISTRATION under the Agreement. All notices, approvals, instructions, information, and other correspondence given to or received from the THE ADMINISTRATION Representative shall have the same effect as if given to or received from THE ADMINISTRATION. THE ADMINISTRATION shall notify the Company of the designation of the THE ADMINISTRATION Representative by delivering to the Company a letter naming such person.

- (b) While the drawings, specifications, data, documents and proposals will be supplied to A&N Admn. but their approval will not be responsibility of A&N Admn.

3.5 Project Construction and Milestone Schedule

Subject to Article 3.6, the Company shall design, engineer, procure, construct and finance the Project with the intention of satisfying the items in the Milestone Schedule for which it is responsible. Each of the Company and THE ADMINISTRATION shall promptly inform the other in writing of any material deviations from the Milestone Schedule and consult with each other with respect thereto. And each of THE ADMINISTRATION and the Company shall make reasonable efforts to adhere to the Milestone Schedule. The Company may amend, modify or supplement the Milestone Schedule from time to time with the written concurrence of THE ADMINISTRATION (which shall not be unreasonably withheld or delayed) with out liability or obligation to THE ADMINISTRATION except as expressly provided herein, and shall provide THE ADMINISTRATION with copies of any such amendment, modification or supplementation. The Company shall provide adequate written notice to THE ADMINISTRATION of any change in the Milestone Schedule which would disrupt the construction schedule with respect to the Electrical Interconnection Facilities so as to avoid such disruption to the extent practicable.

3.6 Delays to the Project; Adjustments to Milestone Schedule and Required Commercial Operation Date.

If the development or implementation of the project or any part thereof by the Company has been delayed because of any THE ADMINISTRATION Event of Default, action or omission by the any Indian Government Agency, or because of any event of Force Majeure, the Parties shall confer as to the effect, if any, of such action or omission or event of Force Majeure and the Milestone schedule and the Required Commercial Dates shall be adjusted equitably, taking into account the effect which the Company demonstrates is properly attributable to such action or omission or event of Force Majeure and the ability of the Parties to reschedule activities to minimize the overall delays resulting therefrom; provided, however, that the Milestone Schedule and each Required Commercial Operation date shall be extended by at least one day for each day of delay resulting from such action or omission are event of Force Majeure.

3.7 Drawings, Test Results, Etc.,

- (a) Company Retention of Records. The Company shall obtain and retain at the Site.

(i) for all major items of equipment incorporated into the Project, copies of the specifications and operation manuals for such equipment;

(ii) copies of all test results for tests performed in accordance with the Construction Contract on the Project and all major items of equipment incorporated into the Project and identified in Appendix A, to the extent that such items are normally retained in accordance with Prudent Utility Practices or applicable Legal requirements, Governmental Authorisations, manufacturer's warranties or insurance policies and customary health and safety requirements;

(iii) as-built drawings for the project including the civil and architectural works; and

(iv) all detailed technical documents related to the design, engineering and construction of the project, to the extent that such items are normally retained in accordance with Prudent Utility Practices or applicable Legal Requirements, Governmental Authorizations, manufacturer's Warranties or insurance policies and customary health and safety requirements;

- (b) Transfer of Information Upon Transfer of Project. If all or any part of the Project is transferred to THE ADMINISTRATION, the information described in Article 3.7(a) and any other similar information in possession of the Company pertaining to the project or such part thereof, shall be provided to THE ADMINISTRATION, subject to the provisions of section 17.11.

- (c) THE ADMINISTRATION Retention of Records THE ADMINISTRATION shall obtain and retain at the Site.

(i) for all major items of equipment incorporated into the Electrical Interconnection Facilities and the Transmission Facilities, copies of the specifications and operation manuals for such equipment;

(ii) copies of all test results for tests performed in accordance with the construction contracts relating to the Electrical Interconnection Facilities and the Transmission Facilities, to the extent that such items are normally retained in accordance with good operating practice or applicable Legal Requirements with respect to such facilities, applicable Legal requirements, Governmental Authorizations, manufacturers Warranties, applicable insurance policies and customary health and safety requirements;

(iii) as-built drawings for the Electrical Interconnection Facilities and the Transmission Facilities, including the civil and architectural works; and

(iv) all detailed technical documents related to the design, engineering and construction of the Electrical Interconnection Facilities and the Transmission Facilities, to the extent that such items are normally retained in accordance with good operating practice with respect to such facilities, applicable legal requirements, Governmental Authorizations, manufacturer's warranties, applicable insurance policies and customary health and safety requirements.

3.8 Procurement and Construction

The Company shall construct, or cause to be constructed, the Project, substantially in accordance with the descriptions and parameters set forth in Appendix A and the Technical Limits. Other than for immaterial items, the Company shall cause new equipment and materials to be procured for incorporation in to the original construction of the major components of the Project.

3.9 Capacity

- (a) In accordance with the procedures set forth in Appendix F and the other provisions of this Agreement (but subject to Article 3.9(b));
 - (i) The Company shall perform the Rated Capacity Test for each Unit to determine the Rated Capacity of such Unit, and shall perform the Rated Capacity Test for all Units to determine the Rated Capacity of the Project.
 - (ii) If the Rated Capacity Test of the Project, conducted in accordance with the provisions of Appendix F, demonstrates that the Rated Capacity of the Unit/ Project is equal to or greater than 90% of Nameplate Capacity of the unit /project the Company shall have the right to declare the project to be in commercial operation on the Day following the date of acceptance or deemed acceptance of the Rated Capacity Test by THE ADMINISTRATION and such Day shall be the Commercial Operation Date of the unit /project.
 - (iii) If the Rated Capacity of a Unit or the Project (as the case may be) in the Rated Capacity Test accepted by THE ADMINISTRATION is in accordance with the provisions of Appendix F, if tested capacity exceeds 100% of the Nameplate Capacity, then the rated capacity will be deemed to be the name plate capacity.

- (b) Notwithstanding the foregoing provisions of sub-sections (i) to (ii) of Article 3.9(a), if the Company accepts any Rated Capacity Test and THE ADMINISTRATION disputes such Rated Capacity Test, the provisions of Paragraph 8.2 of Appendix F shall apply.

3.10 Liquidated Damages

- (a) Subject to sections 3.10(b) and (c), the Company agrees that the Commercial Operation Date of the Project shall occur no later than the required Commercial Operation date of the Project.
- (b) Except as provided in Article 3.10(c), if the Company fails to achieve the Commercial Operation Date of the Project within Seven hundred and eighty (780) Days of the Effective Date, the Company shall pay to THE ADMINISTRATION liquidated damages (which shall be the only damages payable in respect of any loss whether direct, proximate, consequential, foreseeable or otherwise arising out of such failure) at a maximum of 5% on every uncompleted units at the rate of 0.5% per week. For calculation of liquidated damages Article 2.3 of Appendix D may be referred wherein the capital cost is allocated unit wise.
- (c) Subject to the approval of the Lenders, the Company will use any liquidated damages paid by any Contractor to the Company under the construction Contract, as a result of delay of the Required Commercial Operation Date, to (i) pay interest under the Financing Agreements as it becomes due and (ii) to pay other costs resulting from the period of delay, such as any payments required to be paid to THE ADMINISTRATION pursuant to Article 3.10(a), commitment fees and other incremental financing costs pursuant to the financial package as approved by Department of Economic Affairs, Government of India, to repay the principal under the Financing Agreements and reduce the Capital Cost of the Project as detailed in Attachment D(A)-I.

3.11 Shortfall in Rated Capacity

The Project is to be designed as a 20 MW Power Plant. If the Rated Capacity of the Project demonstrated at the RC test is less than 20 MW on the Commercial Operation Date of the Project, then the applicable tariff shall be recalculated using a revised Capital Cost. The revised Capital Cost shall be the Capital Cost multiplied by the ratio of the Rated Capacity divided by 20 MW. If within sixty (60) days from the Commercial Operation Date of the Project the Company demonstrates to THE ADMINISTRATION during continuous generation for seventy two (72) hours that it has corrected some or all of the deficiency in attaining a Rated Capacity of 20 MW, the Capital cost shall be adjusted to reflect the revised Rated Capacity from the date on which such retest has been made. During any period for which the Capital Cost is reduced as provided above, PLF will be calculated based upon a denominator equal to the Rated Capacity at the RC Test, and at any retest and limit on retest shall be as per 9.2 of Appendix F.

3.12 Finalisation of Appendices

The Company and THE ADMINISTRATION each covenant and agree with the other to negotiate in good faith in order to finalise, within a reasonable time period of time after the date hereof, the definition of ambient Site conditions in Appendix D, the relevant parts of each of Appendices A,B,C,E,G and Attachment 2 which have not been completed or finalized at the date of execution of this Agreement. On finalization thereof each such Appendix and Attachment will be initialed on behalf of the Parties and when attached hereto will form part of this Agreement.

780
180

960

ARTICLE 4

START - UP AND COMMISSIONING

4.1 Initial Energisation

The Company shall not energise or back-feed power into any Unit without the prior written approval of THE ADMINISTRATION, which approval shall not be unreasonably withheld or delayed. The Company shall notify THE ADMINISTRATION of the initial energisation at least seven Days prior to the proposed date of energizing the main step-up transformers and back-feeding power to any Unit. THE ADMINISTRATION shall co-operate with the Company and ensure that such energisation or back-feeding may occur on such proposed date as notified by the Company to THE ADMINISTRATION.

4.2 Commissioning and Testing.

The Company shall be responsible for the development and implementation of test procedure during the Construction, start-up, testing and commissioning of the Project and shall notify THE ADMINISTRATION in advance of all testing as provided in Appendix F. THE ADMINISTRATION and its designees shall be entitled to be present at any such testing as provided in Appendix F.

4.3 Repairs after Commercial Operation

If the Commercial Operation Date occurs notwithstanding that the Project did not achieve the performance levels guaranteed in the Construction Contract or in any related agreement regarding the guaranteed initial performance of the Project or any part thereof, the Company, the Contractor or any other person designated by the Company or the Contractor, in each case acting reasonably, shall be permitted to implement repairs and improvements to the Unit in order to achieve such guaranteed performance levels during a period of twenty-four (24) months from the tests performed under the performance guarantee test of the Project or the Construction Contract for purposes of facilitating re-performance of the Rated Capacity Test. The Company shall be permitted to implement other repairs and improvements in order to enforce any warranties that exist under the Construction Contract at any time prior to the expiration of such warranties. THE ADMINISTRATION shall permit the scheduling of outages so as to accommodate such repair and improvements.

(ii) The Parties shall establish an operating committee in accordance with the provisions of, and the obligations and responsibilities of the operating committee shall be as set forth in the operating procedures.

5.2 Coordination with THE ADMINISTRATION

(a) Project-Dispatch Centre Communications. The Company and THE ADMINISTRATION shall maintain operating communications between the Project and the Dispatch Centre in accordance with procedures to be developed by the Operating Committee.

(b) Daily operations Log. The Company and THE ADMINISTRATION shall each keep a daily operations log for the Project which shall include information known to it on Unit availability, Maintenance Outages, Emergency Maintenance Outages, Scheduled Outages, Forced Outages, circuit breaker trip operations requiring a manual reset and any significant events related to the operation of the Project. The Company and THE ADMINISTRATION shall each have the right to review the other Party's log at all reasonable times and upon reasonable notice.

(c) Declared Availability. The Company shall deliver to THE ADMINISTRATION an Availability Notice pursuant to the provisions of Appendix L.

5.3 Fuel Supply

(a) Prior to Financial Closing, the Company shall make satisfactory arrangements for procuring all Fuel required for operation of the Project in accordance with this Agreement. Such arrangements shall be deemed to be satisfactory on THE ADMINISTRATION approval being given to the Fuel Supply Agreement.

(b) The Company shall be entitled to procure Fuel from indigenous sources.

Fuel : shall mean fuel oils as HSD which is permitted to be used in the Project under Indian Legal Requirements and on which the Project has been designed to operate.

Fuel Supply Agreement : shall mean any contract for the supply or transportation of Fuel to the Project, entered into between the Company and any entity, as any such contract may be amended, modified and supplemented from time to time in accordance with its terms subject to THE ADMINISTRATION approval, provided that THE ADMINISTRATION approval for any amendment, modification or supplement shall be required only if such amendment, modification or supplement would have a material economic impact on variable charge payments.

ARTICLE 5. OPERATION AND MAINTENANCE OF THE PROJECT

5.1 Operation and Maintenance: Standards: Operators: Operating Committee

- (a) Standards of Operation: The Company shall at all times after the Commercial Operation date of the first Unit and throughout the Term operate and maintain the Project in a manner consistent with Prudent Utility Practices. The Company shall also operate the Project in accordance with the Operating Procedures and the Dispatch Instructions, subject to the Technical Limits.
- (b) Safety and Safety Records : The Company shall employ in the Project all safety devices and safety practices required by Prudent Utility Practices. To the extent consistent with Prudent Utility Practices, the Company shall keep accurate records of any accident or other occurrence at the site that results in injury to persons or damage to property. The Company shall provide to THE ADMINISTRATION reasonable access to these records, subject Article 17.11.
- (c) Personnel Availability : The company shall ensure that its personnel are on duty at the Project at all times, twenty-four hours a day and seven days a week, commencing with the Commercial Operation Date of the first Unit in commercial operation and throughout the Effective Term. THE ADMINISTRATION shall ensure that its personnel (including but not limited to personnel with authority to give instructions to the Company pursuant to Article 3.2(a) are on duty at the Project and the Dispatch Centre, at all times, twenty-four hours a Day and seven days a week, commencing with the Commercial Operation Date of the First unit in commercial operation and throughout the Effective term and at such other times as the Company shall request upon reasonable notice in connection with any commissioning start-up and testing of the Project.
- (d) Operation and Maintenance Agreements: The company shall have the right to contract the operation and maintenance of the Project to any person who is experienced in the operation and maintenance of electrical generating facilities and in connection therewith may enter into one or more O&M Agreements as the Company shall determine appropriate and on such terms and conditions as the Company shall determine. The Company shall notify THE ADMINISTRATION of the appointment of any such contractor and the execution of any O&M Agreement at least twenty (20) days prior to entering into an O&M Agreement with any person.
- (e) Operating Procedures and Operating Committee (i) No later than one hundred and eighty (180) days after the Commercial Operation Date of the first Unit as set out in the Milestone Schedule, the Parties shall agree the Operating Procedures for the Project which shall be incorporated as Appendix G to this Agreement and which shall (unless the Parties agree otherwise) include detailed provision for those matters set out in the outline table of contents set out in Appendix G.

5.4 Compliance with Laws

The Company and THE ADMINISTRATION shall comply with all applicable Indian Legal Requirements and each of THE ADMINISTRATION and the Company shall comply in all material respects with and shall keep in full force and effect all Indian Governmental Authorizations required to be in their respective names, to be maintained by them or to be complied with by them for the performance of their respective obligations under this Agreement.

5.5 Access to Project

Not more than four (4) authorized representatives of THE ADMINISTRATION shall have access to the Project, subject to the Company's safety rules and regulations, as may be reasonably necessary for (i) the operation and maintenance of the Grid System, (ii) the reading and maintaining of the Metering System and the examining, repairing or removing of any of THE ADMINISTRATION's properties from the Site, (iii) the physical inspection of the Project, or (iv) the monitoring of compliance by the Company with the terms and conditions of this Agreement; provided that THE ADMINISTRATION's right of access under this section 5.5 shall not be exercised more times during any calendar year than is considered reasonable for a power purchaser from an independent power producer to exercise in accordance with Prudent Utility Practices. In exercising its right of access, THE ADMINISTRATION shall use due care to avoid damage to any property or person and inconvenience to the Company, its officers, directors, agents or employees and shall not interfere with the construction, procurement, operation, maintenance or repair of the Project.

ARTICLE 6. SCHEDULED OUTAGES AND DISPATCH

6.1 Scheduled Outages

(a) Company Notices of Scheduled Outages: The company shall (i) at least three (3) months prior to the Scheduled Commercial Operations Date of each Unit, submit to THE ADMINISTRATION its desired schedule of Scheduled Outage periods for each Unit for the period until the Scheduled Commercial Operation Date of the last Unit to be placed in commercial operation, and (ii) at least three (3) months prior to the Scheduled commercial Operation Date of the last Unit to be placed in commercial operation and no later than seventy-five (75) Days prior to the end of each Tariff year after the Stub Year, submit to THE ADMINISTRATION its desired schedule of Scheduled Outage periods for the next succeeding tariff year. As the need arises for maintenance, testing, inspection, repairs, replacements and improvements such schedule may be modified if the Company provides reasonable advance notice to THE ADMINISTRATION and the schedule permits readjustment.

(b) THE ADMINISTRATION Response to Proposed Schedule: Rescheduling: At least sixty (60) Days prior to the Scheduled Commercial Operation Date of each Unit and sixty (60) Days prior to the commencement of each subsequent Tariff Year, THE ADMINISTRATION shall notify the Company in writing whether the requested scheduled Outage periods are reasonably acceptable, and THE ADMINISTRATION shall accept such proposed schedule of the Company Unless such periods are not reasonably acceptable. In the event that THE ADMINISTRATION does not so notify the Company, in writing, the scheduled Outages proposed by the Company shall be deemed accepted. If THE ADMINISTRATION does not accept one or more of the requested Scheduled Outage periods, THE ADMINISTRATION shall advise the Company of a period that THE ADMINISTRATION determines to be reasonably acceptable for which such unacceptable scheduled Outage period can be rescheduled. Such rescheduled period shall be as close as reasonably practicable to the requested period shall comply with the Technical Limits, shall be of equal duration as the requested period, shall not unreasonably interfere with the operation, maintenance or repair of the Project and shall be scheduled at such time as THE ADMINISTRATION and the Company shall mutually agree.

(c) THE ADMINISTRATION Consent to Schedules: Technical Limits Constraints: The Company shall schedule Scheduled Outages only during periods agreed to in writing or deemed accepted by THE ADMINISTRATION as aforesaid; provided, however, that THE ADMINISTRATION shall not require the Company to schedule Scheduled Outages in a manner or time outside of the Technical Limits.

(d) Rescheduling of Scheduled Outages: Either Party may, upon written notice given not later than sixty (60) days prior to a scheduled Outage, request the rescheduling of such Scheduled Outage; provided, however, that a Scheduled Outage may not be brought forward more than thirty (30) days from the date of such notice nor may a Scheduled Outage be deferred by more than three

(3) months from the date originally scheduled therefore. Any rescheduling of Scheduled Outage in accordance with this Article 6.1 (d) shall be subject to mutual agreement of the Parties, which agreement shall not be unreasonably withheld or delayed, and shall be subject to the constraints provided in the penultimate sentence of Article 6.1(b).

(e) Scheduled Maintenance During Unscheduled Outage : If during an unscheduled Outage THE COMPANY is able to perform maintenance that effectively replaces maintenance that would have been performed during a future scheduled outage, THE COMPANY may, with the prior written approval of THE ADMINISTRATION (which approval shall not be unreasonably withheld or delayed), reduce, in whole or in part, the duration of such future scheduled outage by the number of hours of maintenance so performed during such unscheduled Outage or by such other amount as is consistent with Prudent Utility Practices. If no further scheduled Outage will occur in the calendar year during which such unscheduled outage occurs, the Company, in such notice, may apply the number of hours so performed or determined, as appropriate, to reduce the number of hours of maintenance in a future scheduled Outage to occur in the following calendar year. For the purpose of calculating the Incentive Payment, Deemed Generation shall be assumed not to accrue during any Deemed Generation Period which occurs during the period which would have been scheduled outage but for the operation of this Article 6.1(e). If the next succeeding scheduled outage will be reduced in length as a result of the operation of this Article 6.1(e) such next succeeding Scheduled Outage shall commence on the date originally scheduled therefor and shall end on an earlier date commensurate with such reduction. Additional cost on rescheduling should be borne by the firm.

(f) Early Completion of Scheduled Outages : If the Company is able to complete the maintenance to be performed during a scheduled Outage more quickly than originally anticipated, the Company may, upon written notice to the Dispatch Centre, request reconnection to the Grid System at a time earlier than the originally scheduled for completion of the Scheduled Outage. Early reconnection to the Grid System in accordance with this Article 6.1(f) shall be subject to the approval of THE ADMINISTRATION, which approval shall not be unreasonably withheld or delayed. If early reconnection is approved, the originally scheduled number of maintenance hours not used during the Scheduled Outage being terminated early shall be deducted from the period of such Scheduled Outage and concurrently added to the period of the immediately succeeding Scheduled Outage. For the purpose of calculating the Incentive Payment, Deemed Generation shall be assumed not to accrue during any Deemed Generation Period which occurs during a period in which the Project has been permitted to be reconnected to the Grid System prior to the time originally scheduled for completion of a Scheduled Outage.

6.2 Notification to THE ADMINISTRATION

The Company shall keep the Dispatch Centre informed as to the Declared Availability in accordance with the procedures laid down in Appendix 'L' of each unit in commercial operation prior to the Commercial Operation Date of the last Unit in commercial operation and of the Project after the Commercial Operation Date of the last Unit in commercial operation, including any Forced Outages and partial debating, in accordance with the Operating Procedures.

6.3 Dispatch

(a) The Company shall follow the Dispatch Instructions issued in accordance with this Agreement. THE ADMINISTRATION shall only issue dispatch Instructions which are in the interest of an integrated grid operation consistent with the Technical Limits and the avoidance of a Project shutdown consistent with the provisions of this Agreement. THE ADMINISTRATION shall not issue part-load Dispatch Instructions to the Company other than those expressly provided for in Article 6.3(b). deemed generation attributable to compliance with Dispatch Instructions shall be calculated by the Company on the basis of the Dispatch Instructions.

(b) Except in the event of an Emergency affecting the Grid System;

(i) no Dispatch Instructions shall require the Company to operate the Project.

during the Initial Tariff Year, Stub Year and during the first five (5) Tariff Years, at a load below normative level of generation i.e 6000 hrs/kw/year.

(ii) the Operating Procedures which related to Dispatch and Dispatch Instructions shall apply.

(c) The Company and THE ADMINISTRATION shall co-operate to establish a Dispatch plan at least ninety Days before the Scheduled Commercial Operation Date of the first Unit in commercial operation, which will take into account, inter alia, (i) the number of Units comprising the Project and which will require that Dispatch Instructions are given by THE ADMINISTRATION so as to minimize the consumption of Fuel and Lubricating Oil by the Project and the number of Dispatch Instructions which require THE COMPANY to restart a Unit after it has been backed-down and (ii) the Dispatch provisions in Article 6.3, 6.4 and 6.5 and the other provisions of this agreement.

6.4 No adverse Discrimination

- (a) THE ADMINISTRATION shall not practise any adverse discrimination against the Company in the exercise of its discretion or authority under this Agreement with respect to dispatching of the Project and approval of times of Scheduled Outages and of Forced Outages.
- (b) In the event that, after the date hereof, THE ADMINISTRATION develops a dispatch or grid code for the Grid System, the Parties shall negotiate in good faith to agree with a view to replacing Article 6.5 with the provisions in such code, on the basis that such replacement provisions shall apply to all generating systems within the Grid System and shall be no less favorable than the Dispatch provisions of this Agreement.

6.5 Emergency Plans

The Company and THE ADMINISTRATION shall establish mutually agreed upon emergency plans for the Project at least ninety Days before the Scheduled Commercial Operation Date of the first Unit in commercial operation, including (i) recovery from a local or widespread electrical blackout and (ii), voltage reduction in order to effect load curtailment, subject in each case to the Technical Limits.

ARTICLE 7. SALE AND PURCHASE OF ENERGY

7.1 Sale and Purchase

(a) Sale and Purchase Obligations: Title and risk of Loss. On and in accordance with the terms, and subject to the conditions, of this agreement, throughout the Effective Term, the Company agrees to sell and deliver, and THE ADMINISTRATION agrees to accept, receive and purchase, all Electricity and Deemed Generation from the Units and the Project for the consideration described herein, and including specifically Appendix D. Title to all energy generated by the Project shall pass to THE ADMINISTRATION at the Interconnection Point and THE ADMINISTRATION shall have sole and exclusive responsibility for, and risk of loss with respect to, all such Electricity from and after the moment such Electricity is delivered to the Interconnection Point.

(b) Commissioning if Synchronization Prevented by Force Majeure, Delay or Default. If the Company is unable to complete (i) the Synchronization of one or more Units or the Project to the Grid System in accordance with Article 4.2, or (ii) within 60 Days of the Scheduled Commercial Operation Date of the Unit or the Project, as the case may be, the Rated Capacity Test in accordance with Appendix F, due, in either case, to (A) an Indian Political Event, (B) any delay or default by THE ADMINISTRATION other than THE ADMINISTRATION's failure to complete the required Transmissions Facilities (to which event Article 3.3(C) (iii) shall apply) or any Indian Governmental Agency hereunder, under any Project Document to which it is a party or by which it is bound or (C) a THE ADMINISTRATION Event of Default, then until Synchronization occurs THE ADMINISTRATION shall pay any costs incurred as a result of such delay and any scheduled principal and Interest on Debt which accrue to the Lenders during the period of any such delay, measured from the time at which the Synchronization of such Unit would have been achieved but for any of the foregoing events, to the time at which synchronization of such unit actually occurs. THE ADMINISTRATION shall pay such costs and amounts corresponding to scheduled principal and Interest on debt as such costs are due. At Synchronization of the Last unit, or as soon thereafter as reasonably practical, the Company will determine the total additional costs and loss of Fixed Charge Payments minus ROE incurred by it for such period of delay (taking into account the Rated Capacity of each affected Unit) and make any necessary equitable adjustment to the Invoice Amount. The amounts of such payments that correspond to Interest on Debt shall not be included in Interest during construction and the amount of such payments ultimately determined to have been paid by THE ADMINISTRATION hereunder that correspond to principal shall be applied to reduce Capital Cost, with such reduction to be applied prorata to scheduled repayments of principal. Refunds and credits to THE ADMINISTRATION pursuant to this Article 7.1(b) shall accrue interest at the rate specified in Article 8.7, If synchronization is achieved but the Rated

ity demonstrated through the Rated Capacity Test is less 20 MW THE ADMINISTRATION shall receive a credit on future ces for the amount of its over payment. Refunds and credits to THE ADMINISTRATION pursuant to this Article 7.1(b) shall accrue interest at the rate specified in Article 8.7.

7.2 Company's Electricity Requirements.

Throughout the Term, and thereafter, if the Company shall retain possession or ownership of the Project, THE ADMINISTRATION agrees to sell and deliver to the Company Electricity adequate for the Company's own requirements and use during design, engineering, procurement, construction, commissioning, testing, start-up, operation, maintenance and repair of the Project as provided in this Agreement. The cost of such electricity calculated at a rate which shall not exceed any rate charged by THE ADMINISTRATION to any other actual industrial customer of THE ADMINISTRATION, as such rate shall be notified by THE ADMINISTRATION to the Company from time to time, shall be subtracted from the Invoice Amount for the relevant Billing Period in which such Electricity is provided to the Company. The Provisions of this Article 7.2 shall survive the termination of this Agreement.

7.3 In case of shortfall in energy generated in comparison to declared availability during peak hours (from 6 PM to 10PM) a penalty of two times the cost of generation for the shortfall in generation will be deducted from the corresponding bills of the billing month by THE ADMINISTRATION.

7.4 The Administration has the right to direct THE COMPANY to shut down the project under emergency condition as per Article 1 of (xxxiii) and the Admm. will continue to pay the full fixed charges for such period to the extent of normative level of generation.

ARTICLE 8. BILLING AND PAYMENT

8.1 Meter Reading and Recording

The Company and, at its option, THE ADMINISTRATION shall read the Metering System at 00:00 hours (midnight) on the first day of each billing period (each such date a "Metering Date") and the Company shall prepare a record of each reading (a "Record of Meter Reading").

8.2 Billing and Payment; Disputes

(a) **Billing Payment.** The Company shall prepare and submit (by facsimile transmission or otherwise) to THE ADMINISTRATION not later than the fifth Business Day after each Metering Date an invoice (a "Tariff Invoice") for the payments due to the Company under this agreement (other than those due in respect of a Supplementary Invoice but including the billing period ending immediately prior to such Metering Date), along with the corresponding Record of Meter Reading detailing Electricity and Deemed Generation and THE COMPANY'S calculation in accordance with the provisions of Appendix D of such payments due to the Company for such Billing Period. Payments due in respect of a Supplementary Invoice shall be paid in accordance with section 8.6. The aggregate amount of the payments due to the Company for such Billing Period as set forth in the applicable Tariff Invoice ("The Invoice Amount") which term shall also mean, with reference to any Supplementary Invoice, the aggregate amount of the payments due to the Company under such Supplementary Invoice) shall be due and payable by THE ADMINISTRATION.

(b) **Payment of Disputed Amounts; Resolution of Disputes.** If THE ADMINISTRATION disputes the accuracy of a Tariff Invoice or a Supplementary Invoice, THE ADMINISTRATION shall nevertheless pay the full amount of such Invoice but may serve notice on the Company that an amount submitted under such Invoice is disputed and the Parties shall use their best efforts to resolve the dispute in accordance with Article 15 within the time limits set forth therein.

(c) **Payment Upon Resolution of Disputes.** If, upon the resolution of a disputed amount, the Company is required to reimburse THE ADMINISTRATION, the Company shall make such payment to THE ADMINISTRATION with interest thereon. Such interest shall be payable at the rate which is one half per cent (0.5%) above the applicable Cash Credit Rate Calculated for the period from date of receipt of such amount is paid to but excluding the date on which THE ADMINISTRATION is reimbursed. To the fullest extent permitted by the law of India THE ADMINISTRATION hereby irrevocably waives the right to dispute any tariff Invoice or Supplementary Invoice after a period of one hundred and twenty days from the date on which THE ADMINISTRATION received such Invoice, unless THE ADMINISTRATION is able to demonstrate that it could not reasonably have been aware of an error in such Invoice during such period.

8.3 Letter of Credit

(a) In this agreement letter of credit amount shall mean during each tariff year in which there is a billing period, an amount equal to two next succeeding monthly tariff payments in respect of six month period following commission date of first unit and re-calculated after six month period to be twice the average monthly tariff payments for the immediately preceding six months, revised up to the commercial operation dates and then six monthly.

(b) THE ADMINISTRATION, at its own cost and expense, shall establish and maintain one or more transferable, assignable irrevocable and unconditional revolving Letters of Credit in favour of, and for the sole benefit of the Company. The Letters of Credit shall be established in favour of, and issued to, the Company not less than thirty (30) Days prior to Scheduled Commercial Operation Date of the first Unit and shall be maintained consistent herewith by THE ADMINISTRATION at any and all times during the Term. THE ADMINISTRATION shall, at least seven (7) days prior to any increase in the Letter of Credit Amount becoming effective, so establish Letter(s) of credit in aggregate equal to any such increase. Such Letter(s) of Credit shall be in form and substance acceptable to the Company, be issued by a Scheduled Bank in Port Blair, (India) acceptable to the Company, and be provided on the basis that;

(i) in the event an Invoice Amount of any Tariff Invoice or Supplementary Invoice due and payable by THE ADMINISTRATION pursuant to the terms of this Agreement is not paid in full by THE ADMINISTRATION as and when due, the Letter(s) of credit may be called by the Company for payment in full of the unpaid Invoice Amount of such Tariff Invoice or Supplementary Invoice and any interest on any of the foregoing as determined pursuant hereto, upon presentation of such Tariff Invoice or Supplementary Invoice (counter-signed or deemed to have been counter-signed) by the Company on the due date therefore or at any time thereafter, without any notification, certification or further action being required;

(ii) The amount of the Letter(s) of Credit shall in the aggregate be equal to the Letter of Credit Amount; and

(iii) after each call on any Letter of Credit, THE ADMINISTRATION shall no later than the close of business on the third Business Day next succeeding such call, cause such Letter of Credit to be renewed and replenished to its full amount as required hereunder. THE ADMINISTRATION shall provide a new or replacement Letter of Credit not less than six (6) months prior to expiration of any Letter of Credit and within ninety (90) Days of notice by THE COMPANY to THE ADMINISTRATION that the issuing bank is no longer acceptable to THE COMPANY.

If at any time THE ADMINISTRATION shall not pay to the Company any Invoice Amount or other amount due hereunder as and when due, the Company shall be entitled, without notice, claim or demand of any type, to draw on the Letter(s) of Credit for the entire amount then due to the Company.

8.4 Rebates

ADD.12 (a) If payment in full of a Tariff Invoice and all other amounts due in respect thereof is made on or prior to the date which is the fifth Business day after the Date of presentation of the Tariff Invoice to THE ADMINISTRATION pursuant to Article 8.2 (which presentation may be by facsimile transmission) by wire transfer payment or otherwise such that, in any such case, there shall be immediately available funds in an amount equal to the full amount due to the Company in the Company's account on such date which is such fifth Business Day, THE ADMINISTRATION shall be allowed a rebate equal to 2.5% of the amount of the Invoice Amount of such Tariff Invoice paid on such date. For payments within a period of one month on presentation of bills by the generating company, a rebate of 1% shall be allowed.

(b) If the Company shall receive all such amounts not later than such fifth Business Day in immediately available funds, such rebate, if any, may be taken by THE ADMINISTRATION as a credit against the Tariff Invoice which is then due (and no overdue) and then being paid.

(c) Notwithstanding the foregoing, THE ADMINISTRATION shall not be allowed a rebate under this Article 8.4, unless the Letter(s) of Credit specified in Article 8.3 and the Collateral Arrangements are, at the time such rebate is to be allowed, being maintained by THE ADMINISTRATION in accordance with Article 8.3.

8.5 Supplementary Invoices

Amounts owed by THE ADMINISTRATION pursuant to this Agreement and not billed by the Company in a Tariff Invoice, including Year-End Estimated Cost Adjustment Amount, the payments described in Article 4.2(b), Foreign Exchange Adjustment Payment, costs in respect of Fuel and other amounts which are indicated in this Agreement to be payable by a "Supplementary Invoice" may be billed at any time by means of supplementary Invoice (a "Supplementary Invoice"), which shall be payable on the same terms and conditions and in the same manner as a Tariff Invoice, except that the rebates provided to THE ADMINISTRATION pursuant to

Article 8.5 in connection with a tariff Invoice shall not be applicable with respect to any Supplementary Invoice unless such Supplementary Invoice is not in respect of one of the aforementioned amounts and relates exclusively to sales of Electricity after the Commercial Operation Date of the first Unit in commercial operation and any portion of the Invoice Amount with respect to any Supplementary Invoice shall be due and payable by THE ADMINISTRATION within fifteen (15) Days of receipt by THE ADMINISTRATION of the applicable Supplementary Invoice.

8.6 Late payments.

If any amount due hereunder from one Party (the "Payer") to another Party (the "Payee") is not paid when due, there shall be due and payable to the payee interest at the rate which is one half percent (0.5%) above the Cash Credit Rate, from and including the date on which such payment was due to but excluding the date on which such payment is paid in full with interest. All such interest shall accrued from day to day and shall be calculated on the basis of a 365-day year, compounded monthly, and paid on demand. If no due date is specified under this agreement with respect to any amount due under this Agreement, the due date thereof shall be fifteen (15) days after demand is made therefore by the payee.

8.7 Penalty for Failure

Payments due to THE ADMINISTRATION on account Failure will be in accordance with the provisions of Appendix L.

8.8 Set-Off

Notwithstanding anything to the contrary contained in this Agreement (except Article 7.2), each Party to the maximum extent permitted by Legal Requirements irrevocably waives any right to set-off, withholding or deduction that it may be entitled to assert under contract or law against any amount due to the other Party under this Agreement.

8.9 Survival

This Article 8 shall survive the execution, delivery and termination of this Agreement.

ARTICLE 9 METERING

9.1 Metering System; Accuracy; Calibration

(a) Metering at Interconnection Point. Actual Energy made available to THE ADMINISTRATION pursuant to this Agreement shall be measured at the Interconnection Point by the Metering System.

(b) Metering Equipment. The Metering System shall consist to main energy meters of two-tenths of one percent (0.2%) accuracy class (the "Main Meters") which shall be installed at the 33Kv points of supply and generator terminals at the Unit by the Company and check meters (the "Check Meters") at the same point and of the same accuracy and make which shall be installed by THE ADMINISTRATION at its cost. Each of these will be a pair of export and import meters. If THE ADMINISTRATION fails to install the Check Meters the Company may do so at THE ADMINISTRATION's expense.

(c) Inspection of Meters : Notice. All meters shall be jointly inspected and sealed on behalf of both the Parties and shall not be interfered with, except in the presence of the authorized representatives of both of the Parties. For testing and calibration of meters, a notice of two (2) Days shall be given by the Party requesting testing, to enable authorized representatives of both the Parties to be present.

(d) Accuracy Determinations. All meters shall be checked for accuracy quarterly by both Parties jointly and shall be treated as working satisfactorily so long as the errors are within the limits prescribed for meters of the class as per International Electro Technical Commission 687 ("IEC687") metering transformers shall be checked for accuracy at least once every two (2) years. Meter readings of the Main Meters will form the basis of billing hereunder, so long as the results of the quarterly checks thereof are within the prescribed limits.

(e) Periodic Calibration of Meters. All the Main Meters and the Check Meters shall be calibrated once in every six (6) months jointly by both Parties, in January and July, irrespective of the calibrations that might have been done, where necessary during the quarterly checks. The Parties shall endeavor to adjust errors to as close to zero (0) as possible.

(f) SSS Meter Calibration for Testing. For the purpose of testing and calibration, the static substandard meter shall be calibrated and sealed. This calibration and sealing shall be done every six (6) months at any of (i) Institute of Design for Electricity Measuring Instruments at Bombay, India (ii) Chief Electrical Inspector at Madras or (iii) National Physical Laboratories at Delhi/Calcutta, India.

(g) Determination if Meters Defective. The quantity of net electrical output as recorded by the Main Meters will be Actual Energy supplied to THE ADMINISTRATION. However, if during the period when the Main Meters or the ancillary or part thereof is found defective or the quarterly checks indicate errors beyond the prescribed limits of accuracy, the net electrical output as recorded by the Check Meters will be taken as Actual Energy supplied for the purpose of preparation of the relevant Tariff Invoice. Further, if the Main Meters and check Meters or any ancillary or part thereof are found defective or errors in meters are beyond the prescribed limits, then the actual Energy will be jointly determined by the Parties.

13 Add (h) Determinations if Meter Variances The quantity of net electrical output supplied to THE ADMINISTRATION shall be computed from the readings of the Main Meters. However, if in any month, the energy recorded by the Main Meters differs from the energy recorded by the corresponding Check Meters by more than plus/minus two fifth of one percent (0.4%) the Main Meters and the Check Meters shall be jointly tested in turn and errors at various levels as per the standard procedure shall be tabulated. If on such testing the main Meter error is found to exceed plus/minus one fifth of one percent (0.2%), the energy recorded by Main Meters for the above month(s) shall be revised accordingly and the Main Meters shall be recalibrated or replaced by correct meters. Pending results of such testing, billing and payment shall continue to be based on the energy recorded by the Check Meters.

(i) Determinations if Meters Defective. If the errors found at the time of half yearly calibration are beyond permissible limits, the same procedures applicable to the quarterly test checks shall be followed.

(j) Testing and Corrections in Billing. Corrections in billing, wherever necessary, shall be applicable to the period between the previous meter reading and the date and time of the test calibration in the current month when the error is observed and this correction shall be for the full value of the absolute error. For the purpose of the correction to be applied, the meter shall be tested at one hundred and five percent (105%), one hundred percent (100%), eighty five percent (85%), seventy five (75%) and fifty percent (50%), load at unity (1) power factor and one-half (0.5) power factor. Of these ten values, the error at the load and power factor nearest the average monthly load and the corresponding power factor during the period shall be taken as the error to be applied for correction.

9.2 Company's Access to Metering System

The Company and its representatives shall be entitled to be present at any test inspection, maintenance, and replacement of any part of the Metering System performed by THE ADMINISTRATION.

ARTICLE 10

10.1 Insurance Policies

Except as Any otherwise be agreed to by the Parties, the Company shall obtain by financial closing and maintain through the term of the Agreement, the following insurance policies and coverages with respect to the Project to the extent available on reasonable commercial terms, each in form and substance reasonably satisfactory to the Company.

(A) Machinery breakdown insurance :

Sum insured for machinery breakdown insurance could include the cost of engine, turbocharger, alternator and booster cum separator unit only.

(B) Fire and other natural hazards :

Sum insured has to include the entire asset value.

(C) Third party liability insurance:

Could be suitably worked out.

(D) Workman compensation insurance :

Could be suitably worked out.

10.2 Additional Insureds.

THE ADMINISTRATION, its Officers and employees shall be additional insureds under the coverage listed in Article 10.1(a) with a waiver of all rights of subrogation against THE ADMINISTRATION, its officers and employees.

ARTICLE 11.

INDEMNIFICATION AND LIABILITY

11.1 Limitation of Liability

Except as required by Article 11.4 and then only to the extent of liability under a judgment in favour of a third party rendered by an Indian Court, neither Party shall be liable to the other Party in contract, tort, warranty, strict liability or any other legal theory for any indirect, consequential, incidental, punitive or exemplary damages sustained by the other Party as a result of failure by the first Party to perform any of its obligations under the Agreement, regardless of whether such failure was the results of negligence of the first Party or its employees or agents to perform any of its obligations under the Agreement. The Parties acknowledge that Article 13.5 does not provide for any damages excluded by this Article 11.1.

11.2 No Recourse

THE ADMINISTRATION shall have no recourse against any Officer, Director, Shareholder of the Company or any affiliate of the Company or any of its Officers, Directors, Shareholders in respect of any obligations of the Company under this Agreement.

11.3 Indemnification

The Company shall indemnify THE ADMINISTRATION, its offices, board of Directors, and shareholders, against, and bear responsibility for, all loss of or damage to property, death or injury to any person (or any claim against THE ADMINISTRATION in respect thereof) and all expenses relating thereto (including, without limitation, reasonable legal fees) suffered by THE ADMINISTRATION in connection with the Project but only to the extent solely and directly resulting from any negligent act or omission of the Company and/or its Contractors, without recourse to THE ADMINISTRATION.

ARTICLE 12. FORCE MAJEURE

12.1 Definition of Force Majeure.

(a) "Force Majeure" shall mean any event or circumstance or combination of events or circumstances that adversely affects, prevents or delays any Party in the performance of its obligations in accordance with the terms of this Agreement, but only if and to the extent that such events and circumstances are not within the affected Party's reasonable control, directly or indirectly, and which the affected Party could not have prevented through the employment of Prudent Utility Practices or in the case not have prevented through the employment of Prudent Utility Practices or in the case of construction activities, through reasonable skill land care, and which the Party cannot remedy by exercise of due diligence including but not limited to, the expenditure of reasonable sums of money. Any events or circumstances meeting the description of Force Majeure which have the same effect upon the performance of any contractor shall constitute Force Majeure with respect to the Company.

(b) Force Majeure circumstances and event shall include the following events to the extent that such events or their consequences (it being agreed that if a causing event is within the reasonable control of an affected Party, the direct consequences shall also be deemed to be within such Party's reasonable control) satisfy the above requirement.

(1) the following non-political events (Non-Political Events), comprising:

(i) the effect of any natural element or other act of God, including but not limited to any storm, flood, lightning, earthquake, cyclone or other natural disaster;

(ii) fire or explosion, in each case not being due to any of the following: (x) the failure to operate the Project in accordance with Prudent Utility Practices, (y) circumstances within the reasonable control of the affected Party's Contractors, or (z) inherent defects in the equipment comprising the Project;

(iii) slowdowns, work-to-rule actions, go-slows, strikes or similar labour difficulties, other than those set forth in Article 12.1 (b) (2) (i) (B);

(iv) any event or circumstances affecting the ability of any contractor to the Project to fulfill its obligations to the Company or the Project where such event or circumstances would constitute an event of Force Majeure under this Article 12.1(b) (1) and which does not result in fully offsetting compensation actually paid to the Company by or on behalf of such contractor: or

(v) any event or circumstance of a nature analogous to any of the foregoing.

(2) the following other Force Majeure events (collectively "Indian Political Events") comprising.

(i) "Indirect Indian Political Events" comprising.

(A) any act of war (whether declared or undeclared), sabotage, terrorism or act of a public enemy, (including the acts of any independent unit or individual engaged in activities in furtherance of a programme of irregular warfare), acts of belligerence or foreign enemies (whether accorded diplomatic recognition or not), war, blockages, civil disturbance, revolution, rebellion or insurrection, exercise of military or usurped power, or any attempt at usurpation of power; or

(B) strikes, work to rule actions, go-slows or similar labour difficulties (excluding such events which are Site specific and solely and directly attributable to the Company that are not primarily motivated by a desire to improve compensation or working conditions of those involved); and

(ii) "Direct Indian Political Events" comprising:

(A) any Governmental Agency's unlawful, unreasonable and discriminatory delay, denial or refusal to grant or renew, or any unlawful, unreasonable and discriminatory revocation of any required permit, license, approval or authorization, including Governmental Authorizations, provided that such adverse governmental action or inaction did not result from the Company's non-compliance with any applicable law (other than Indian Legal Requirements resulting from a change in Law) or any condition to the granting or maintenance of any such permit, license, approval or authorization that was in effect at Financial Closing;

(B) the making of, or any change in, or change in interpretation of, any Indian Legal requirements after the date hereof adversely affecting the performance by either Party of its obligations hereunder or under any of the Financing Agreements or Project Documents;

(C) with respect to the Company only : (x) the expropriation or compulsory acquisition by any Governmental Agency of (aa) any shares in the Company or any Contractor if the result would be to acquire control of the Company or such Contractor (bb) any assets or rights of the Company or any Contractor; or (y) any other act of Governmental Instrumentally materially and adversely affecting the performance by the Company or any Contractor of any of its obligations pursuant to any of the Financing Agreements or Project Documents;

(D) any event or circumstance affecting the ability of any Contractor to the Project to fulfill its obligations to the Company and the project where such event or circumstance would constitute an event of Force Majeure under this Article 12.1 (b) (2) and which does not result in fully offsetting compensation actually paid to the Company by or on behalf of such Contractor;

(E) any interruption in the supply of Fuel resulting from any action of any Governmental Agency which restricts or prohibits (in part or full in full) import of Fuel, or

(F) any event or circumstance or a combination of the same of a nature analogous to any of the foregoing.

(c) Any event or circumstance or a combination of events and circumstance that would constitute an event of Force Majeure under both Articles 12.1(b) (1) and (2) shall be deemed to constitute an event of Force Majeure under Article 12.1(b) (2).

12.2 Notification Obligations

(a) The party claiming Force Majeure shall give notice to the other Party of an event of Force Majeure as soon as reasonably practicable. The affected Party shall thereafter furnish weekly reports with respect to its progress in overcoming the adverse effects of such event or circumstances and as soon as reasonably practicable shall submit to the other Party information supporting the claim for relief under this Article 12.

(b) The Party claiming Force Majeure shall give notice to the other party of (i) the cessation of the relevant event of Force Majeure and (ii) the cessation of the effect of such event of Force Majeure on the enjoyment by such party of its rights or the performance by such party of its obligations under this Agreement as soon as practicable after becoming aware of the events described in each of sub-sections (i) and (ii) above.

12.3 Duty to Mitigate

The Parties shall use reasonable efforts to mitigate the effect of any event of Force Majeure and to cooperate to develop and implement a plan of remedial and reasonable alternative measures to remove the event of Force Majeure; provided, however, that no Party shall be required under this provision to settle any strike or other labour dispute on terms it considered to be unfavourable to it. Upon the cessation of the event of Force Majeure, the Party affected thereby shall use its best efforts to resume normal performance of its obligations under the Agreement as soon as possible.

12.4 Continuing Payment Obligation : Force Majeure

a) Upon the occurrence and during the continuance of any event of Force Majeure, the Tariff and all other payment obligations of the Parties hereunder shall continue to be payable as set forth below:

(i) for Direct Indian Political Event the Project is deemed to be operating at the NPLF and full Fixed Charge Payment shall be paid by THE ADMINISTRATION.

(ii) For Indirect Indian Political Event the Project is Deemed to operate at the NPLF and the Company is entitled for Fixed Charge Payment Less Return on Equity.

(iii) For Non-Political Force Majeure no fixed charge payment will be made by THE ADMINISTRATION to the Company. However the Company may seek to receive the Fixed Charge Payment less Return on Equity which will be returned to THE ADMINISTRATION by the Company with interest determined pursuant to Clause 8.7. The said loan will be repaid by the Company with interest on the earlier to occur of (i) Company achieving NPLF in a Tariff Year, or (ii) end of the Tariff Year.

(iv) For Force Majeure affecting Grid, the Company is entitled to receive Fixed Charge Payment less ROE.

12.5 Other Consequences.

(a) Except as otherwise provided in this Article 12, neither Party shall be responsible or liable for any breach or deemed breach of this agreement due to its failure or delay in performing its obligations hereunder due to an event of Force Majeure for such period as the event of Force Majeure continues.

(b) Any time period specified for the performance of any obligation hereunder by the affected Party shall be extended by a period equal to the duration of the Force Majeure event or circumstance provided the affected Party shall not be entitled to any such extension to the extent that such delay or failure to perform would have occurred irrespective of the Force Majeure event or circumstance.

12.6 Consequences of Indian Political Events During Commercial Operation.

(a) After the Commercial Operation Date, if the PLF of the Project has been reduced for a continuous period of two hundred and seventy-seven (277) Days or more, due to the occurrence of a Direct Indian Political Event (disregarding any Deemed Generation during such period), by an amount equal to or exceeding fifty percent (50%) of the PLF achieved in the most recent tariff year in which the PLF was not affected by the occurrence of a Direct Indian Political Event (or by 34.25% in the case of Tariff Years with no such prior tariff year), THE ADMINISTRATION may, for so long as such Direct Indian Political Event is continuing, elect by delivering a Buy-Out Notice to the Company requiring the Company to sell the Project to THE ADMINISTRATION at the Buy-Out Price. THE ADMINISTRATION shall continue to make payments to the Company in accordance with Article 12.4 until payment of the Buy-Out Price to the Company. If THE ADMINISTRATION does not exercise its option to purchase the Project under this Article 12.6(a), it shall continue to make payments to the Company in accordance with Article 12.4.

(b) After the Commercial Operation Date if the PLF of the Project has been reduced for a continuous period of five hundred and forty (540) Days or more due to the occurrence of an Indirect Indian Political Event (disregarding any Deemed Generation during such period), by an amount equal to or exceeding fifty percent (50%) of the PLF achieved in the most recent Tariff Year in which PLF was not affected by the occurrence of an Indirect Indian Political Event (or by 34.25% in the case of Tariff Years with no such prior Tariff Year), THE ADMINISTRATION may, for so long as such Indirect Indian Political Event is continuing, elect by delivery of a Buy-Out Notice to the Company in writing requiring the Company to sell the Project to THE ADMINISTRATION at the Buy-Out Price. THE ADMINISTRATION shall continue to make payments to the Company in accordance with Article 12.5 until payment of the Buy-Out Price to the Company. If THE ADMINISTRATION does not exercise its option to purchase the Project under this section 12.6(b), it shall continue to make payments to the Company in accordance with section 12.4.

(c) Upon receipt of a Buy-out Notice and full and final payment by THE ADMINISTRATION and receipt by the Company of the Buy-Out Price from immediately available funds, this Agreement shall terminate. Until such time as such final payment is received by the Company, notwithstanding anything to the contrary contained herein, this Agreement shall remain in full force and effect.

ARTICLE 13. TERMINATION AND EVENTS OF DEFAULT

13.1 Company Events of default

The following events, unless occurring as a result of a breach by THE ADMINISTRATION of its obligations under this Agreement, shall constitute an event of default by the Company (a "Company Event of default"):

- (a) the failure of the Effective Date to occur within one hundred and twenty (120) days after the Financial Closing and the Company's failure to cure such failure within one hundred and eighty (180) days after written notice thereof to the Company from THE ADMINISTRATION;
- (b) the failure of the Project to pass the Project Characteristics Test described in Paragraph 6 of Appendix F by the date which is Eight hundred two (802) Days after Financial Closing;
- (c) the abandonment by the Company for a period of one (1) month of the construction of the Project after the commencement of construction without the written consent of THE ADMINISTRATION;
- (d) the abandonment or cessation by the Company for a period of one (1) month of the operation of the Project without the written consent of THE ADMINISTRATION;
- (e) operation of the Project by THE COMPANY such that during any period of twenty-four (24), consecutive months (excluding for purposes of the calculation of PLF herein and for purposes of determining the consecutive nature of such period, any Month during which generation by the Project was affected by Force Majeure) that begins not earlier than the date that is six (6) Months after the Commercial Operation Date of the Project, the monthly PLF (calculated to include Deemed Generation, if any) in each Month during such period such period is less than fifty-five percent (55%).
- (f) failure by the Company to procure or maintain any insurance pursuant to Article 10 except to the extent that such failure is not material;
- (g) willful destruction or material damage by the Company or its employees or agents at the direction of the Company of the Electrical Interconnection Facilities or the Transmission Facilities without the prior written consent of THE ADMINISTRATION, except in circumstances where such actions are taken to prevent immediate injury, death, or property damage and the Company uses its best efforts to provide THE ADMINISTRATION with advance notice of the need for such actions;

- (h) failure by the Company to make any payment or payments required to be made by it to THE ADMINISTRATION under this Agreement within ten (10) Business Days after the due date for payment;
- (i) THE COMPANY is adjudicated bankrupt or dissolved or a receiver is appointed for the whole or substantially the whole of its assets or proceedings for THE COMPANY's liquidation (except for the propose of amalgamation or reconstruction on terms approved by THE ADMINISTRATION are continuing for more than one hundred and twenty (120) days after they commenced and are not being contested by THE COMPANY in good faith.
- (k) the failure of THE COMPANY to cause financial closing to occur on or before fourteen (14) months from the later of (i) signing of this agreement , (ii) the issuance of the Administration techno-economic clearance and (iii) the issuance of the fuel linkage/transfer by the relevant Indian Governmental Agency, unless due to actions or omissions by THE ADMINISTRATION. In the event of THE COMPANY believes that an action of omission by the Administration is preventing the project from achieving financial closing then THE COMPANY shall notify THE ADMINISTRATION the deadline for financial closing specified in the first sentence of this section 13 (k) shall following the delivery of such notice. be extended for a period of time equal to the period of time required for the THE ADMINISTRATION (as the case may be) to correct the action or omission.
- (L) any other willful or reckless breach of a material term of this Agreement by the Company that is not cured within one hundred and eighty (180) days after written notice thereof to the Company from THE ADMINISTRATION ;or
- (M) prior to the Commercial operation Date of the Project, the combined shareholding of the Sponsors falls below 50% of the Equity, or, thereafter, below 33 1/3% of the Equity, unless the change in ownership is the result of a compliance with any order or directive of any Governmental Agency, or involves a transfer of shares from a Sponsor to its affiliate, or is approved by THE ADMINISTRATION (such approval not to be unreasonably withheld).

13.2 THE ADMINISTRATION Events of default

the following events, unless occurring as a result of breach by THE COMPANY of its obligations under this Agreement, shall constitute an event of default by THE ADMINISTRATION (THE ADMINISTRATION) event of default)

- (a) the expropriation, compulsory acquisition or nationalization by any Governmental Agency of (i) any interest in the Company or (ii) any assets, rights or interests of THE COMPANY or any contractor;
- (b) The dissolution of THE ADMINISTRATION or the transfer to a third party of either (i) the rights or obligations of THE ADMINISTRATION hereunder or (ii) all or a substantial portion of the assets of THE ADMINISTRATION, unless the resulting entity is able to perform THE ADMINISTRATION's obligations in no less a manner than THE ADMINISTRATION, the financial condition of the resulting entity is not less creditworthy than that of THE ADMINISTRATION and such resulting entity expressly assumes such obligations.
- (c) Provided the company has complied with its obligations under this agreement and has first made demand without satisfaction under the ANA letter of credit, ANA continually fails to observe or perform any of its obligations under Article 8 within 60 days (sixty) of the due date of invoice or where such payment obligation exceeds 90 (ninety) crores rupees, within thirty (30) days of the due date of the invoice.
- (d) any default (other than by the Company) if the THE ADMINISTRATION Guarantee shall at any time for any reason cease to be valid and binding or in full force and effect, or be declared null and void, or any security provided under any of the aforesaid shall cease to be effective, or if THE ADMINISTRATION so asserts;
 - (i) the occurrence of an Event of Default under and as defined in the Security Agreement.

13.3 Notice of Default

- (a) Upon the occurrence of a company Event of Default or a THE ADMINISTRATION Event of Default, as the case may be, THE ADMINISTRATION or the Company as the case may be, may deliver a notice to the other Party ("Notice of Default") specifying in reasonable detail the Company Event of Default or THE ADMINISTRATION Event of Default or, as the case may be, giving rise to the Notice of Default.
- (b) In the event of receipt by either Party of a Notice of default in accordance with Article 13.3(a), such party shall within fifteen (15) days thereof state in writing to the other Party its position as to the alleged Event of Default and what action it plans (including the timing thereof), if any, to remedy such default.
- (c) One hundred and eighty (180) days after delivery of a Notice of default by the Company and unless the THE ADMINISTRATION Event of Default giving rise to the Notice of Default shall have remedied, the Company may at any time terminate this Agreement by notice to THE ADMINISTRATION, which event Section 13.5 and Article 13.6 shall apply.

(d) one hundred and eighty (180) Days after delivery of a Notice of Default by THE ADMINISTRATION and unless the Company Event of Default giving rise to the Notice of default shall have been remedied, THE ADMINISTRATION may at any time terminate this Agreement by notice to the Company, in which event Article 13.8 shall apply.

13.4 Right to Enter and Operate in the Event of Company Event of Default.

(a) In the event of a Company Event of Default, if the Company ceases to operate the Project after the Commercial Operation Date of the Project for seventy two (72) consecutive hours without the written consent of THE ADMINISTRATION, other than because of (i) an Event of Force Majeure; (ii) Forced Outage, (iii) Scheduled Outage, (iv) breach of this Agreement by THE ADMINISTRATION; or (v) dispatch Instructions, then THE ADMINISTRATION shall have the right, upon seventy-two (72) hours written notice to the Company, or upon such other notice period as may be agreed to by the Parties (the "Notice Period"), to enter the site and operate the Project for a period of upto fifteen (15) days or for such further period as may be agreed to by the Parties. The Company shall have the right during the Notice Period to resume normal operations of the Project. THE ADMINISTRATION's right to operate the Project shall expire upon the earlier of (A) the end of fifteen (15) Days (subject to extension by mutual agreement) or (B) the Company demonstrating to the reasonable satisfaction of THE ADMINISTRATION that it can and will resume normal operation of the Project.

(b) During the period that THE ADMINISTRATION temporarily operates the Project on behalf of the Company pursuant to this Article 13.4, it shall be deemed to be a temporary agent of the Company and shall operate the Project in a manner that will not result in the Company being in default under any of its obligations to third parties. THE ADMINISTRATION shall indemnify and hold the Company harmless against any liabilities, loss or damage to THE COMPANY and the project, including, without limitation, for losses, costs, claim and liabilities incurred by the Company by reason of THE ADMINISTRATION's negligence in the operation of the Project, during such period.

(c) During the period of fifteen (15) days or any extended period that THE ADMINISTRATION operates the Project, the Company shall be paid the Fixed Charge Payment (minus the Return on Equity component) and the Variables Charges Payments, (if the Fuel, Lubricating Oil and or Water is made available by the Company) each calculated in accordance with appendix D;

(d) Notwithstanding the foregoing, the right of THE ADMINISTRATION to enter and operate the Project on a temporary basis shall be subject, in all respects, to the rights accorded to the Lenders under the Financing Agreements.

13.5

Consequence of Termination

(a) If this Agreement is terminated by reason of a THE ADMINISTRATION Event of Default, the buyout will occur as per Appendix K, then THE ADMINISTRATION shall be liable for all damages by way of cancellation or termination payments or charges for which the Company is liable as a result of termination of the Agreement including the following (i) all Debt repayments provided that the Debt repayments shall not include principal payments, if any, which have already been paid to the Company by THE ADMINISTRATION as part of Fixed Charge Payments but which have not been paid by the Company to the Lenders, fees, charges, penalties, premiums and other amounts due under the Financing Agreements, (ii) all amounts due and damages for default under contracts to purchase Fuel, transport Fuel, supplies, spare parts, and services including operating and maintenance services; (iii) all insurance premiums owed for periods following termination; (iv) damages claims or payments due under or on account of labour contracts; (v) any remaining payments owed for purchase or lease of the Site; (vi) any liability for or increase in any taxes, levies, assessment or cess, which would otherwise be paid by the Company or the shareholders on account of the sale or deemed sale of the Project, or termination of this Agreement, provided that, projected future tax payments shall be reduced to present value at the rate of sixteen percent (16%) and (vii) all attorneys' fees and expenses necessary to determine, resolve and discharge the obligations set forth in sub-Articles (i) through (iv); unless within thirty (30) Days of such termination the Company delivers a Buy-Out Notice to THE ADMINISTRATION requiring THE ADMINISTRATION, in lieu of having such liability to purchase the Project, in which event THE ADMINISTRATION shall purchase the Project at the Buy-Out Price.

(b) Upon termination of this Agreement, THE ADMINISTRATION shall remain liable for all damages accrued and payments due by THE ADMINISTRATION relating to or under this Agreement incurred before termination.

13.6

Continuing Payment Obligation : THE ADMINISTRATION Event of Default

Upon a THE ADMINISTRATION Event of Default, THE ADMINISTRATION shall not be relieved of any of its liabilities or obligations hereunder, including, without limitation, its liability for payments of the amounts in default, as well as for the Fixed Charge Payment after such THE ADMINISTRATION

Event of Default, and the Company shall have the right to recover from THE ADMINISTRATION any such amounts, THE ADMINISTRATION's obligations in respect of such amounts shall cease as soon as THE ADMINISTRATION has paid the Buy-Out Price pursuant to a Buy-Out Notice.

13.7 Rights and Remedies Upon Company Event of Default

(a) If a Company Event of Default has occurred, THE ADMINISTRATION shall, subject to the cure rights of the Company as provided in Article 13.3(d), proceed in accordance with Article 15, THE ADMINISTRATION may protect and enforce its rights, to recover any damages to which it may be entitled (including all costs and expenses reasonably incurred in the exercise of its remedy), and to seek specific performance by the Company of the Company's obligations under this Agreement.

(b) THE ADMINISTRATION's rights and remedies shall not be exclusive but, to the extent permitted by law, shall be cumulative and in addition to all other rights and remedies existing at law, in equity or otherwise; provided, however, that THE ADMINISTRATION may seek to exercise such rights and remedies only in accordance with the procedures set forth in Article 15. THE ADMINISTRATION may exercise each right and remedy afforded by this Agreement or by law from time to time as often as may be deemed expedient by THE ADMINISTRATION. No delay by, or omission of, THE ADMINISTRATION to exercise any right or remedy arising upon any Company Event of Default shall impair any such right or remedy or constitute a waiver of such event or an acquiescence thereto.

13.8 Option to Purchase

If a Company Event of Default has occurred, THE ADMINISTRATION shall, subject to the cure rights of the Company as provided in Article 13.3(d), have the option to purchase the Project (including fuel, materials, records, drawings and spare parts) Buy-out price such option may be exercised by THE ADMINISTRATION at any time within sixty (60) days following such Company Event of Default, upon giving a Buy-out Notice to the Company. Notwithstanding the foregoing, the option of THE ADMINISTRATION to purchase the Project shall be subject in all respects to the rights accorded to the Lenders under the Financing Agreements.

Consequence of Expiry

(a) Not later than one hundred and eighty (180) days prior to the expiry of the Term (as extended, if applicable) pursuant to article 2 the Company will notify THE ADMINISTRATION of such expiry and THE ADMINISTRATION may no later than ninety (90) days prior to the expiry of the Term (as extended, if applicable) pursuant to Article 2, elect in writing to purchase the Project at the Buy-Out price.

(b) If THE ADMINISTRATION does not make the election referred to in Article 13.9 (a) by the ninetieth (90th) Day prior to such expiry, the Company may either (i) sell and assign its interest in the Project to another entity, after providing THE ADMINISTRATION with rights of first offer to purchase the project on the same terms agreed to with such entity, which right of first offer shall be exercised by THE ADMINISTRATION at any time within ninety (90) days prior to the expiry of this Agreement; or (ii) sell Electricity to THE ADMINISTRATION's customers or others within A & N Islands, and in such event, THE ADMINISTRATION shall wheel, on request, at such wheeling charge as may be mutually agreed, which shall not exceed the wheeling charge levied by THE ADMINISTRATION on other similar generating stations.

ARTICLE 14. REPRESENTATIONS AND WARRANTIES

14.1 Representations and Warranties of Company

(a) The Company represents and warrants that:

- (i) the Company is a company duly organised and validly existing under the laws of India and has all requisite legal power and authority to execute this Agreement and carry out the terms, conditions and provisions thereof,

(ii) this Agreement constitutes the valid, legal and binding obligation of the Company, enforceable in accordance with the terms hereof except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganisation, moratorium or other similar laws affecting creditors' rights generally and to the extent that the remedies of specific performance, injunctive relief and other forms of equitable relief are subject to equitable defenses, the discretion of the court before which any proceedings there-
fore may be brought, and the principles of equity in general;
- (iii) there are no actions, suits or proceedings pending or, to the Company's knowledge, threatened, against or affecting the Company before any court or administrative body or arbitral that might materially adversely affect the ability of the Company to meet and carry out its obligations under this Agreement, and
- (iv) the execution and delivery by the Company of this Agreement has been duly authorised by all requisite corporate or partnership action, and will not contravene any provision of, or constitute a default under any other agreement or instrument to which it is a party or by which it or its property may be bound.
- (v) the company has duly paid all rents royalties and all public demands including provident fund dues, gratuity dues, employers state insurance dues, income tax, sales tax, corporation tax and all other taxes and revenue payable to the Government of India or to the A&N Admn. or to any local authority and that at present there are no arrears on such dues, rents royalties, taxes, revenues, dues and outstanding and that no attachments or warrants have been served on the company in respect of sales tax, income-tax, Government revenues and other taxes.

14.2 Representations and Warranties of THE ADMINISTRATION

THE ADMINISTRATION represents and warrants that:

- (i) THE ADMINISTRATION is a statutory body and validly existing under the Indian Legal Requirements and has all requisite legal power and authority to execute this Agreement and to carry out the terms conditions and provisions, hereof;
- (ii) this Agreement constitutes the valid, legal and binding obligation of THE ADMINISTRATION, enforceable in accordance with the terms hereof except as the enforceability thereof may be limited by laws affecting creditors generally, applicable bankruptcy, insolvency, reorganisation, moratorium or other similar laws and except to the extent that the remedies of specific performance, injunctive relief and other forms of equitable relief are subject to equitable defenses, the discretion of the court before which any proceeding therefore may be brought, and the principles of equity in general;
- (iii) there are no actions, suits or proceedings pending or, to THE ADMINISTRATION's knowledge, threatened, against or effecting THE ADMINISTRATION before any court or administrative body or arbitral tribunal which might materially adversely affect the ability of THE ADMINISTRATION to meet and carry out its obligations under this Agreement;
- (iv) the execution and delivery of this Agreement by THE ADMINISTRATION has been duly authorised by all requisite action, and will not contravene any provision of, or constitute a default under, any other agreement or instrument to which it is a party or by which it or its property may be bound;

ARTICLE 15.

SETTLEMENT OF DISPUTES

15.1 Informal Dispute Resolution

- (a) EACH Party shall designate in writing to the other Party a representative who shall be authorised to resolve any dispute arising under this Agreement in an equitable manner, and, unless otherwise provided herein, to exercise the authority of the parties to make decision by mutual agreement. If the designated representatives are unable to resolve any such dispute within fifteen (15) Days, such dispute shall be referred by such representatives to a senior officer designated by the Company and a senior officer designated by THE ADMINISTRATION, respectively, who shall attempt to resolve the dispute within a further period of 15 days.
- (b) The Parties agree to use all reasonable efforts to attempt to resolve all disputes arising hereunder promptly, equitable and in good faith, and further agree to provide each other with reasonable access during normal business hours to any and all non-privileged records, information and data pertaining to any such dispute.

15.2 Arbitration of Disputes

In the event the Parties are unable to resolve any dispute pursuant to Article 15.1, then:

- (a) Except as otherwise provided in this agreement, any dispute, controversy, or claim arising out of or relating to this Agreement, or the breach, termination or validity thereof, shall be finally settled by arbitration in accordance with this Article 15.2.
- (b) The arbitration shall be conducted in accordance with the Rules of the arbitration and Conciliation Act, 1996".
- (c) There shall be three arbitrators of whom each Party shall elect one. The two arbitrators thus appointed shall select the third arbitrator to act as chairman of the tribunal within thirty (30) days of the selection of the second arbitrator. If the two arbitrators appointed by the parties fails to agree on the third arbitrator, the Indian Council Court of Arbitration(ICA) shall make such appointment.

- (d) At any oral hearing of evidence in connection with the arbitration, which Party thereto or its legal counsel shall have the right to examine it witnesses and to cross-examine the witnesses of an opposing Party. No evidence of any witness shall be presented in written form unless the opposing Party or Parties shall have the opportunity to cross examine such witness, except as the Parties to the dispute otherwise agree in writing or except under extraordinary circumstances where the interest of justice require a different procedure.
- (e) The arbitration shall be held in Port Blair, A & N Islands, India shall govern the validity, interpretation, construction, performance and enforcement of the provisions contained in this section 15.2. The arbitration proceedings shall be conducted, and the award shall be rendered in the English /Hindi language.
- (f) This agreement and the rights and obligation of the Parties shall remain in the full force and effect pending the award in any arbitration proceeding hereunder.
- (g) The costs of arbitration shall be determined by the arbitral tribunal in accordance with the rules.
- (h) The Arbitration & Conciliation (Act No. 26 of 1996) shall be made applicable to the arbitration provisions, to any arbitration proceeding or award rendered hereunder, or to any dispute of difference arising out of or in relation to this Agreement.
- (i) The parties have rights of application or appeal to the courts of India to the fullest extent permitted by law in connection with any question or law arising in the course of the arbitration or with respect to any award made.

Provided, however, that if the dispute cannot be settled within 30 Days by mutual discussions as contemplated by Article 15.1 and in the event the any Arbitration then : (i) any such dispute shall be settled exclusively and finally pursuant to arbitration by a Tribunal in accordance with the provisions under arbitration and Conciliation Act ,1996 and the rules made there under. As in the force at the time such arbitration is commenced (and not pursuant to the rules of the ICC); (ii) the laws of India (and not of England) shall govern the validity, interpretation, construction, performance and enforcement of the provisions contained in this section 15.2; (iii) the site of arbitration shall be at Port Blair, India and (iv) except for sub-sections 15.2 (b), (c) and (e) which shall have no effect; the other provisions of this section 15.2 shall apply, subject to the Arbitration & Conciliation Act ,1996.

15.3 Arbitration Award.

The award of the arbitrators shall be final and binding upon the Parties, and shall be the sole and exclusive remedy between the Parties regarding any claims, counter-claims, issued or accountings presented or pledged to the arbitrators. Judgement upon any award may be entered in any court having jurisdiction. Amounts due under any such arbitrations award shall be paid within thirty (30) days of the award and interest shall accrued thereafter on unpaid amounts under the award at the rate specified in Article 8.7. Any costs, fees or taxes incident to enforcing such award shall, to the maximum extent permitted by law, be charged against the Party resisting such enforcement.

15.4 Currency

If, for the purpose of obtaining a judgement in any court with respect to the enforcement of any arbitration ward made by the arbitration proceeding described in this Article 15, shall be in Indian currency.

15.5 Separate Debt

The Parties further agree that any amount due under Article 15.4 shall be due as a separate debt and shall not be affected by or merged into any judgement being obtained for any other sum due under or in respect of this Agreement.

15.6 Immunity

To the extent that any Party hereto (including assignees of any Party's rights or obligations under this Agreement) may be entitled, in any jurisdiction, to claim for itself or its revenues, assets or properties, sovereign immunity from service of process, from suit, from the jurisdiction if any court, from an interlocutory order or injunction or the enforcement of the same against its property in such court, from attachment prior to judgement, from attachment in aid of execution of an arbitral award or judgement (interlocutory or final), or from any other legal process, and to the extent that, in any such jurisdiction there may be attributed such a sovereign immunity (whether claimed or not), each Party hereto hereby irrevocably agrees not to claim, and hereby irrevocably waives, such sovereign immunity.

15.7 Successors Etc.

This agreement to attribute shall be binding upon the successors, assigns and any trustee or receiver of each Party.

ARTICLE 16. NOTICES AND CHANGE IN LAW.

16.1 Addresses and Addressees

Except as otherwise expressly provided in this Agreement, all notices or other communications which are required or permitted hereunder shall be in writing and sufficient if delivered personally or sent by registered or certified mail, telecopier, telexcopier, Fax, telex or telegram addressed as follows:

If to THE ADMINISTRATION : Chief Secretary,
Andaman & Nicobar Administration,
Port Blair - 744102
A & N Islands

Attention : Secretary (Power)
Tel : 91-03192-32801
Fax : 91-03192-32095
With Copy to S.E. (Elect.) THE ADMINISTRATION

If to the Company : MANAGING DIRECTOR
: SURYACHAKRA POWER CORPORATION LIMITED
3-6-203/B, IIIrd Floor, Himayat Nagar,
HYDERABAD - 500 029.

Attention : MANAGING DIRECTOR
Facsimile No.91-040-3220974
Telephone No.91-040-3228453
With Copy to Director (Finance)
With Copy to the Local Office

All notices or communications given by telecopier, Fax, telex or telegram shall be confirmed by depositing a copy of the same in the post office in an envelope properly addressed to the appropriate Party for delivery by registered or certified mail. All notices shall be deemed delivered upon receipt.

16.2 Change of Address

Any party may by notice change the addresses and/or addressees to which such notices and communications are to be delivered or mailed.

16.3 Change-in-Law of Taxes

- (a) If, as a result of a Change-in-Law of Taxes, THE COMPANY suffers an increase in costs or reduction in net after tax return or other economic burden (including, without limitation), as a result of any restriction on the ability to

convert Rupees to dollars in accordance with the Tariff, or remit funds in Dollars outside India, the aggregate economic effect of which exceeds the equivalent of twenty thousand Dollars (US\$ 20,000) in any Tariff Year, the Company may so notify THE ADMINISTRATION and propose amendments to this Agreement so as to put the Company in the same economic position it would have occupied in the absence of such cost increase, reduction in return or other economic burden, and the Parties hereto shall meet and either agree on such amendments to this Agreement or alternative arrangements to implement the foregoing.

- (b) If, as a result of a Change-in-Law of Taxes, THE COMPANY enjoys a reduction in costs or increase in net after tax return or other economic benefit, the aggregate economic effect of which exceeds the equivalent of twenty thousand Dollars (US\$ 20,000) in any Tariff Year, THE ADMINISTRATION may so notify THE COMPANY and propose amendments to this Agreement so as to put THE COMPANY in the same economic position it would have occupied in the absence of such decreased cost, increase in return or other economic benefit and the Parties hereto shall meet and either agree on such amendments to this Agreement or alternative arrangements to implement the foregoing.
- (c) If no such agreement has been reached within ninety (90) days after any meeting pursuant to Article 16.3(a) or (b), the proposals of the Parties shall be submitted to arbitration pursuant to Article 15, such that the Company shall be put in the economic position it would have occupied in the absence of such Change in Law.

ARTICLE 16 A:

SPECIAL PROVISIONS

1. The Operating regime will be so observed by THE ADMINISTRATION from time to time that the generating units at the said project are not subjected to any undue electrical and/or mechanical stresses arising out of conditions extraneous to the said project. In any case the generating unit will not be required to operate out side the technical limits set up by the equipment manufactures provided all safety precaution and suitable relays for the equipment are in-built in the project.
2. Upon the company's request THE ADMINISTRATION shall provide THE COMPANY with electrical energy for construction if the existing capacity of the department so permits. THE ADMINISTRATION shall bill THE COMPANY for construction power at a price equal to THE ADMINISTRATION's published tariff for construction purposes or THE COMPANY may have its own installation to meet out their own requirements. THE COMPANY will not include the cost of this DG set installation in the capital cost of the project.
3. THE COMPANY also undertakes to provide a irrevocable bank guarantee of Rs.1.00 crore to THE ADMINISTRATION within a month after signing of the Power Purchase Agreement. THE COMPANY shall keep the Bank Guarantee valid at all times till the Commercial Operation Date of the last unit of the project. Any lapse in this regard shall be regarded as breach of contract.
4. THE COMPANY shall train SIX ENGINEERS (Of these four engineers from Electricity Department, Andaman & Nicobar Administration, Port Blair and TWO engineers of CEA) three for Diesel Engine and three for Alternators, Control Panels and other such areas at the Original Equipment Manufacturer Factory site at the cost of the company.
5. **Over Riding Clause :**
5. The Parties hereby expressly agreed that notwithstanding anything contained in this Agreement or any other agreement, if any element of the tariff provided for in this agreement shall be in deviation of, inconsistent with or repugnant to the provisions contained in the Indian Electricity (supply) Act, 1948 and in particular Notification No.SO.251(E) dated 31.03.1992 as amended from time to time till the date of signing of PPA, copies of which are annexed at Schedule I(d) such element shall be deemed to be amended to the extent required to bring it into compliance with the relevant provisions and any amounts paid by THE ADMINISTRATION in excess of the tariff as so amended shall be repaid by the Company.

Provided, however, that in no Billing Month shall the amount required to be refunded pursuant to this article reduce the tariff payable to the Company hereunder below the amount of the Fixed Charge (excluding the Return on Equity element) and variable charge otherwise payable in such billing month.

6. The invalidity or unenforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder.
7. Any terms and conditions that have been included in or excluded from this agreement or otherwise or bound to be any assistance to either of the parties or any terms and conditions which may require elaboration, clarification etc. necessary for the successful transformation of this agreement in to a full fledged Power Purchase Agreement, and for successful completion of the project shall be entered into in good faith after mutual discussion by way of supplement agreement(s).
8. Add. 14 The company has taken no deviation from the Government of India tariff notification and in case any deviations are noted at subsequent dates then the provisions of Government tariff notification shall prevail.

ARTICLE 17. MISCELLANEOUS

17.1 Amendment

(a) This Agreement can not be amended except by prior written agreement between the Parties.

(b) This Agreement, including the provisions set forth in Appendix D, is based upon the Government of India, Department of Power Notification dated March, 30, 1992, as amended as of January 17, 1994, August 22, 1994, January 13, 1995, December 14, 1995 and as of 26th February, 1997 (the "Notification") to the extent there are any amendments or modifications to the notification which come into effect after the date of this agreement and which if incorporated into this Agreement would result in terms more favourable to THE COMPANY and / or THE ADMINISTRATION then this Agreement shall be amended at the option of the Company to reflect such change and until such time, the prior terms of this agreement shall continue to bind the parties. The amended terms of this agreement will be deemed to be favourable to THE ADMINISTRATION if THE COMPANY can demonstrate to the reasonable satisfaction of THE ADMINISTRATION that such amended terms result in a lower tariff.

17.2 Heading

The headings contained in this agreement are used solely for convenience and do not constitute a part of this agreement nor shall headings be used in any manner to aid in the construction of this Agreement.

17.3 Third Parties

This agreement is intended solely for the benefit of the parties hereto. Nothing in this agreement shall be construed to create any duty to, standard of care with reference to, or any liability to, any person not a party to this agreement nor confess any right of suit or action whatsoever on any third party.

17.4 No Waiver

(a) No Waiver by either party of any default or defaults by the other party in the performance of any of the provisions of this agreement shall operate or be construed as a waiver of any other or further default or defaults whether of a like or different character, or shall be effective unless in writing duly executed by a duly authorized representative of such party.

- (b) Neither the failure by either party to insist on any occasion upon the performance of the terms, conditions and provisions of this agreement not time or other indulgence granted by one party to the other shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right hereunder, which shall remain in full force and effect.

17.5 Relationship of the Parties

This agreement shall not be interpreted or construed to create an association, joint venture, or partnership between the Parties or to impose any partnership obligation or liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

17.6 Survival

Cancellation, expiration, earlier termination of this Agreement or arbitration of disputes pursuant to Article 15 shall not relieve the Parties of obligation that by their nature should survive such cancellation, expiration or termination, including, without limitation, warranties, remedies promises of indemnity and confidentiality.

17.7 Language

The language of this Agreement shall be English. All documents, notices, waivers and all other communication written or otherwise between the Parties in connection with this Agreement shall be in English.

17.8 Governing Law

Subject to Articles 15.2(b) and 15.2(e) thereof, this Agreement and the rights and obligations hereunder shall be interpreted, construed and governed by the substantive laws of India.

17.9 Entirely

This Agreement, and all Appendices, Schedules, Exhibits and Attachments hereto, as intended by the parties as the final expressions of their agreement and are intended also as a complete and exclusive statement of the terms of their agreement. All prior written or oral understandings, offers or other communications of every kind pertaining to the sale or purchase of electricity hereunder to THE ADMINISTRATION by THE COMPANY are hereby abrogated and withdrawn.

17.10 Assignment

This agreement may not be assigned by either party other than by mutual agreement between the parties in writing. Notwithstanding the foregoing, the Company may prior to Financial Closing transfer all its right, title and interest in and to this Agreement to another entity, if such a transferee is controlled by the Company or by the Company's principals. Also notwithstanding the foregoing, for the purpose of financing the Project, the Company may assign or create security over its rights and interests under or pursuant to this Agreement and all Agreements & Documents related to this Agreement. THE ADMINISTRATION shall execute all such consents to assignment and/or acknowledgements of any security created in accordance with this Article 17.10 as are reasonably requested by the Company or the Lenders to give effect to the foregoing (which may include additional reasonable cure rights for the Lenders or their designees).

17.11 Confidentiality

(a) Each of the Parties shall hold in confidence the agreements relating to the Project and all documents and other information, whether technical or commercial, which is of a confidential nature supplied to it by or on behalf of the other Party relating to the design, construction, insurance, operation, maintenance, management and financing of the Project and shall not, save as required by law or appropriate regulatory Authorities, the Lenders, investors in the Company or by professional advisers of the Parties hereto or of the Lenders or investors as aforesaid, publish, otherwise disclose or use the same for its own purposes otherwise than as may be required to perform its obligations under this Agreement.

(b) The provision of paragraph (a) above shall not apply to: (i) any information in the public domain otherwise than by breach of this Agreement, (ii) information in the possession of the receiving Party thereof before divulgence as aforesaid, and which was not obtained under any obligation of confidentiality; and (iii) divulge the same, and which is not obtained under any obligation of confidentiality.

17.12 Successors and Assigns

This Agreement shall be binding upon, and inure to the benefit of, the Parties, hereto and their respective successors and permitted assigns.

17.13 No adverse Discrimination

THE ADMINISTRATION shall not practice any adverse discrimination against the Company in the exercise of its discretion or authority under this Agreement with respect to dispatching of the Project and approval of times of Scheduled Outages, maintenance outages and forced outages. The Company shall not unfairly and adversely discriminate against THE ADMINISTRATION under this Agreement with respect to its obligations hereunder.

17.14 Service of Process

In the case of the courts of India, THE ADMINISTRATION hereby designates, appoints and empowers the Secretary, Power, A&N Administration located at Port Blair, Andaman & Nicobar Islands as its authorised agent to accept, receive, acknowledge for and behalf of it and its property, service of any and all process which may be served in any action suit or proceeding of the nature referred to above in India.

- (a) THE ADMINISTRATION further agrees that all such service of process may be made personally or by mailing or delivering a copy of the summons and complaint or other legal process in any such legal suit, action or proceeding to THE ADMINISTRATION in case of any such agent at the foresaid addresses, and such agent is hereby authorized to accept, receive and acknowledge the same for and on behalf of it and to admit service with respect thereto. Service upon such agent shall be legal and binding upon THE ADMINISTRATION for all purposes notwithstanding any failure on the part of THE ADMINISTRATION to receive the same, and shall be deemed completed upon the delivery thereof to such agent (whether or not such agent shall give notice thereof to THE ADMINISTRATION), or upon the earliest other date permitted by applicable law.
- (b) THE ADMINISTRATION further irrevocably agrees to the service of process of any of the aforementioned court in any suit, action or proceeding by the mailing of the copies thereof by certified air mail, postage prepaid, return receipt requested, to THE ADMINISTRATION at the address specified in Article 16.1 hereof, such service to be effective upon the date of receipt indicated on the postal receipt returned from THE ADMINISTRATION. THE ADMINISTRATION agrees that it will at all times continuously maintain an agent to receive service of process in India on its behalf. In the event that for any reason any of the agents mentioned shall cease to serve as agents for THE ADMINISTRATION receive service of process hereunder, THE ADMINISTRATION shall promptly appoint a successor agent satisfactory to the Company.

17.15 Waiver of Immunity

(a) THE ADMINISTRATION hereby irrevocably agrees that it is subject to civil and commercial law with respect to its obligations under this agreement, and the execution, delivery and performance of this Agreement by it constitutes Private and Commercial acts rather than governmental and public acts.

(b) THE ADMINISTRATION hereby irrevocably agrees that it hereby expressly and irrevocably waives immunity including, without limitation, immunity from (i) service of process, (ii) jurisdiction or judgement of any court or tribunal, (iii) execution of a judgement and (iv) attachment of any THE ADMINISTRATION's property prior to any entry of judgement or from attachment of its property in aid of execution upon a judgement (except, under the laws of the United States of America . or other analogous laws, immunity from attachment for the purpose of obtaining jurisdiction in respect of THE ADMINISTRATION or its property) against THE COMPANY or its successors, assigns, Contractors agents, representatives and employees, or the Lenders, and from set-off or from any legal proceedings in India to enforce or collect upon any liability or obligation of THE ADMINISTRATION related to or arising from the transactions contemplated by this Agreement.

(c) without prejudice in the parties' right to enforce an arbitration award in any Indian Court in which enforcement proceedings may appropriately be brought, for the purpose of any matter related to the arbitration proceedings that require judicial resolution under the rules and English law and Indian law if the last para in section 15.2 is applicable, THE ADMINISTRATION and THE COMPANY further irrevocably agree that any legal suit, action or proceedings arising out of or relating to this Agreement shall be instituted in the courts of India and each of the parties hereby irrevocably waives to the fullest extent permitted by law, any objections which it may have now or hereafter to the laying of the venue or the jurisdiction or the convenience of the forum of any such legal suit, action or proceedings and irrevocable Submits generally and unconditionally to the jurisdiction of any such court for such purpose.

17.16 Affirmation

THE COMPANY and THE ADMINISTRATION declare and affirm that neither party nor its directors employees and of its agents or in the case of THE COMPANY its sponsors has paid nor has undertaken to pay and that it shall in future not pay any unlawful commissions bribe, pay-off kick-backs and that it has not in any other way or manner paid any sums whether in Indian currency or foreign currency and whether in India or abroad or in any manner given or offered to give any gifts or presents in India or abroad to any person or company to procure this Agreement. The company and THE ADMINISTRATION hereby undertake not to engage in any of the said or similar acts during the term of and relative to this agreement.

IN WITNESS WHEREOF each of the parties has agreement to be executed in more than one copy, each of which shall be deemed to be an original, as of the day and year first above written.

Executed by

CHIEF SECRETARY

SEAL

Chief Secretary Andaman & Nicobar Administration, Port Blair in the presence of

1.

2.

For Suryachakra Power Corporation Limited

SEAL

MANAGING DIRECTOR

Managing Director of the Company in the presence of

1.

2.

**CONFIGURATION/TECHNICAL DETAILS ALONGWITH LAY-OUT
20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)**

I. Four number of HSD based D G Engines to be located in Power Project at Bambooflat, A & N Islands as per following configuration/specks.

Salient Features :

1. DIESEL ENGINE DETAILS:

- | | | | |
|------|---|---|---|
| 1.1 | No. of Engines | - | 4 Nos. of 6250 KVA (5000 KWe) each 4 (four) stroke. |
| 1.2 | Configuration | - | V-Type |
| 1.3 | No. of Cylinders | - | 16 |
| 1.4 | Cylinder bore | - | 320 mm |
| 1.5 | Stroke | - | 420 mm |
| 1.6 | Direction of rotation fuel towards flywheel | - | Anti Clock wise |
| 1.7 | Speed | - | 600 rpm |
| 1.8 | Mean piston speed | - | 8.40 m/s |
| 1.9 | Mean effective pressure | - | Will be furnished later. |
| 1.10 | Swept volume per cylinder | - | 0.03381 Cub. Mtr. Per Cycle. |
| 1.11 | Compression ratio | - | 1 : 12.8 |
| 1.12 | Number of valves | - | 4 Per Cylinder |

2. GENERATOR DETAILS:

- | | | | |
|-----|---------------------|---|---------------------|
| 2.1 | Output KVA/KW | - | 6250 kva / 5000 KWe |
| 2.2 | Power Factor | - | 0.8 |
| 2.3 | Terminal Voltage | - | 11000 V |
| 2.4 | Rated Current | - | 320 Amps |
| 2.5 | Frequency | - | 50 Hz |
| 2.6 | Insulation Class | - | F/F |
| 2.7 | Short Circuit Ratio | - | 0.85 |

- 2.8 Rated KWE - 5000 Kw.
- 2.9 Rated speed - 600 RPM
- 2.10 Type of Excitation system - Brushless, Electronic exciter
- 2.11 Runaway speed - Will be specified later.
- 2.12 Continuous short circuit current - Will be specified later.
- 2.13 Enclosure - IP 23
- 2.14 Standard - DIN

3. ENGINE LUB OIL SYSTEM

- 3.1 Plate heat exchanger - 1 Per Engine
- 3.2 Lub Oil consumption - 1.1 gm/kwh
- Add 17 3.3 Lub Oil separator - Will be provided.
- Add 18 3.4 Pre Lube oil pump
 - Capacity - 18 Cubic Mtr./Hr. (Adequate Capacity shall be provided)
 - Electronic motor - 7.55 KW
- 3.5 Thermostatic three-way valves - Yes
- Add 19 3.6 Filter unit (On line changing type)
 - fine filter - Yes
 - drip-pan - Yes
 - diff pressure indicator - Yes

Add 20

4. COOLING SYSTEM

- 4.1 Heat Exchanger for cooling waters - Complete Cooling System for engine, Lub oil, & Water.
- 4.2. Preheating unit Capacity of each with pump. - 24 KW, 15 Cubic Mtr./Hr.

5. EXHAUST GAS SYSTEM

- 5.1. Four (4) sets of expansion bellows for exhaust pipe. - 3 Nos. each

Chimney, height 35 Mtrs. - 4 Nos.
Multiflue.

6. STARTING AIR SYSTEM

Compressed starting air is delivered by the air compressor and is supplied from the starting air unit to the air bottle. Control and working air outlet is connected to the compressed air supply via a pressure regulator of 6 bar.

- 6.1. Air bottles, capacity, 500 litres X 30 bar equipped with all necessary accessories. - 4 Nos.

Add.21

Add.22

7. MAIN SWITCHGEAR SYSTEM

Fully compartmentalised, sheet steel enclosed, dust & vermin proof switchboards per IS 13118, 1991/IEC - 56,

Busbar system - (33 kv indoor yard)

Protection class - IP 45

8. CIRCUIT BREAKERS

The circuit-breaker are equiped with auxiliary contacts, a.c. voltage charging motors, d.c. voltage closing and shunt tripping coils.

9. ELECTRICAL SYSTEM

- 9.1. Generating Transformers - 3 Nos.

(Two transformers to be supplied by SPCL and one is available with A&NA). The inpedence should match with each other.

Rated Power - 10MVA ONAN/ONAF

Rated Voltage - 11kv/33Kv

Frequency - 50 Hz
Cooling - ONAN/ONAF

9.2. SUB STATION Add: 23

i) Type : Indoor
ii) Voltage : 11/33Kv
iii) Number of 33Kv buses/bays : 3 Nos.

10. CONTROL/PROTECTION POWER SUPPLY & DISTRIBUTION

10.1. DC SYSTEM

Type	Lead Acid
Size	150 Ah/10h
Voltage	110 V DC

10.2. CHARGER

Primary voltage	415 V ac, 3 phase
Secondary	110 V DC

APPENDIX B

Technical Limits

All capitalized terms used herein shall have the respect meanings specified in the Power Purchase Agreement to which this Appendix is attached and of which it is a part, except as otherwise defined herein

(a) Nameplate Capacity 6250 KVA

(b) Frequency Limits 50 Hz ($\pm 3\%$)

(c) Phases 3 Phase

Add-24 (d) Grid System voltage limits 11,000 Volts + 5% or - 10%
(Plus) (Minus)

(e) Grid system fault level at 0.8
transformer bus power
factor.

Add-25 (f) Unit starts
cold starts 1 to 2 Minutes
hot starts 0.5 Minutes. [Provided all auxi-
illary system are
ready.

(g) Auxillary Consumption 4.5%

(h) Station heat rate 2000 K.Cal/Kwh

Add-26 (i) HSD Oil Consumption Based on 2000 K.Cal/KWH as per ISO.

(j) Lub Oil Consumption 1.1 Gm./Kwh based on ISO.

(k) O&M Expenses. 4% Per annum

APPENDIX C

Project milestone Schedule

All capitalized terms used herein shall have the respective meanings specified in the Power Purchase Agreement (as the same may be amended, modified and supplemented from time to time, the "PPA") to which this Appendix C is attached and of which it is a part, except as otherwise defined herein.

Milestone	Date
1. Financial closing	Four months from the date of fulfillment of conditions precedent as mentioned in Article 1 Clause(Lxi) 3 at Page 17 of PPA.
2. Effective Date	Same as financial closing date.
3. Commercial Operation date of the first and second Units.	19th month after the financial closing.
4. Commercial Operation Date of the third Units.	24th month after the financial closing.
5. Commercial Operation date of the fourth Units	24th month after the financial closing.
6. Commercial Operation Date	24th month after the financial closing of the Project.

APPENDIX - D

1. Definitions

1.1 Terms Defined in Power Purchase Agreement. All capitalized terms used in this Appendix D shall have their respective meanings given to them in the Power Purchase Agreement (as the same may be amended, modified and supplemented from time to time, the "Agreement") to which this Appendix D is attached and of which it is a part, except as otherwise defined herein.

1.2 Certain defined Terms. When used herein, the defined terms set forth below shall have the following respective meanings:

"Actual Energy" or "AE" shall mean, with respect to a Unit(s) or the Project for any period, the amount of energy, measured in Kwh by the Metering system in accordance with Article 9.1 of the Agreement at the Interconnection Point during such period.

"AE" shall mean Actual Energy in Billing Period, produced by Unit, or the Project.

"APCF" shall have the meaning Auxiliary Power Consumption Factor - 4.5% as per CEA norms dated 14.12.1995 provided no cooling towers is involved.

"Approved Modifications" shall mean any capital expenditures which from time to time are approved by CEA (if required by applicable Legal Requirements) and THE ADMINISTRATION, to enhance the efficiency of the Project or increase its reliability or safety or otherwise comply with the laws of India.

"Availability Notice" shall have the meaning specified in Appendix L.

"Base Foreign Exchange Rate", "BFXR" and "BFXRm" shall have the meaning specified therefor in the definition of "Foreign Exchange Adjustment".

"Capital Cost" means, subject to Article 3.11 and Article 3.10(d) of the Agreement, the cost (expressed in rupees) actually incurred by the Company in completing the Project will be as follows.

S.No.	Item	Cost in MINR	Cost in MUS Dollar price at Rs.36.00
1.	Imported eq.	379.08	10.53
2.	Indigenous eq.	\	
3.	Mec.Elec.Civ. and sub station	1252.32 /	-
Total		631.40	10.53

Add
30

which is as per foreign exchange rates assumed as in June 1997 and shall be included as "CAPITAL COST" except to the extent that the THE ADMINISTRATION approves such excess costs as not having been attributable to THE COMPANY to the Company's suppliers or contractors. In determining the amount of costs actually incurred in completing the project, account shall be taken of (i) any increase or decrease in capital Cost resulting from changes in the rates of exchange of the foreign currencies in which project expenditures are authorized to be incurred from the level set forth in A&N Admn's techno-economic clearance (ii) (A) any reduction in interest during construction and principal amount of loans through the application of delay liquidated damages received under the Construction Contract or other compensation paid by the EPC Contractor to the Company and applied to reduce Capital Cost as provided in Article 3.11. (iii) any change to the debt equity ratio from the ratio assumed in the Approved Capital Schedule, and (iv) any excess insurance proceeds paid to the Company (after adjustment for the loss or damage to the Project and, to the extent not included in actual project cost, the cost of repaid and replacement attributable to such loss or damage) in respect of any claims for loss or damage to the Project incurred prior to the Commercial Operation Date to this Appendix D.

(v) any expenditure on any outdoor yard equipment and switch gear, transformers and metering and protection equipment and the like, necessary to deliver the energy generated by the project to the Grid of THE ADMINISTRATION, at THE COMPANY and of Inter Connection Point at such voltage and other technical parameters of supply.

However, to the condition that the amount of compensation payable by the manufacturer/supplier for capacity reduction in equipment performance, is taken to reduce the capital cost on prorata basis.

For purposes of determining the Capital Cost, all foreign currency loans and all foreign currency equity sources shall be converted into Rupees at the applicable Base Foreign Exchange Rate. It is understood and agreed that any increase or decrease in Capital cost due to changes in foreign currency exchange rates shall be reflected in the amount of actual capital cost. In case the actually incurred cost is less than the ceiling cost as mentioned in table. The lesser cost shall be taken as the capital cost. Capital cost includes interest during construction limited to a construction period of nineteen months for the first and second units and 24 months for Third and Fourth Units, and shall not include any additional amounts for a longer construction period, except with the approval of THE ADMINISTRATION due to delays not attributable to the Company or the Company's suppliers or contractors. Further for estimating Interest During Construction 37.5% of the Capital cost is allocated for the first unit 23.5% of the capital cost allocated to the second unit, 21% of the capital cost allocated to the third unit and 18% of the capital cost allocated for the fourth unit.

The Company shall submit half-yearly reports certified by the Company's independent auditors (the "Actual cost Reports") to THE ADMINISTRATION of the capital cost actually incurred in completing the Project, as determined in accordance with generally accepted accounting principles. The Company shall permit access to papers, documents and records as may be considered necessary by THE ADMINISTRATION at the time of approval of final cost. During the period between the Commercial Operation Date and the delivery of the Actual Cost Reports on completion of the project (the "Actual Completion Costs Report"), and its approval by THE ADMINISTRATION, the Company will use the cost as mentioned in the table, as its provisional capital cost for purposes of tariff calculation. When the actual capital cost is finalized, the amount of overcharge or undercharge will be refunded or paid (as the case may be) in twelve equal payments at the time of the payment of the next twelve Billing Period Payments after such finalization).

Further provided that completion cost of the project shall be submitted to THE ADMINISTRATION for approval within a period of three months from the Commercial Operation Date of the Project.

"Change-in-Law Adjustment" shall have the meaning specified in Paragraph 6 of this Appendix D.

"Cost of Insurance" shall mean the costs incurred by the Company in obtaining and maintaining insurance coverage for commercial operation following the Commercial Date of a Unit or the Project, as applicable.

Add.
31 "Current Foreign Exchange Rate", "CFXR" and "CFXR m" shall have the meaning specified therefor in the definition of "Foreign Exchange Adjustment".

Add.
32 "Debt" shall mean the amount of any loans, notes, debentures, or other obligations (collectively "obligations") any currency entered into by the Company under the Financing Agreements, that are expended on the Project, as such amounts may be added to, incurred or revised from time to time following the Commercial Operation Date of the Project, and all costs associated therewith, where under the terms of such Obligation, interest is payable at periodic intervals.

Add.
33 "Declared Availability" and "DA" shall mean, for any Settlement period, the aggregate amount of net electrical capacity of all Units, expressed in MW, measured at Rated Grid Conditions at the inter connecting point, which the Company has most recently declared in an Availability Notice or a Revised Availability Notice for that Settlement Period, to represent the amount of net electrical capacity the Company expects could be delivered to THE ADMINISTRATION if all Units were fully loaded. The declared available capacity plus auxiliary consumption shall not exceed the installed capacity.

Add. 54
DEEMED GENERATION (DG) : In the event that there have been any reductions in the net generating capacity due to Deemed Generation events, the effect of these changes in respect of any period is calculated as follows :

$$DG = \sum_{i=1}^k [DC_i - X_i]$$

Where :

i = variation for 1 to k
 k = number of settlement periods in the relevant period in which there are Deemed Generation events :
 DC = the product of the Declared Capacity (in KW) adjusted as per Articles for the Settlement Period (i) and the duration of such Settlement Period (in hours), unless the value of DC in the Settlement Period (i) is less than the net Electrical Energy delivered, in KWH, by the Project in the Settlement Period (i) in which case the value of $DC_i - X_i = 0$;

X_i = Net Electrical Energy delivered, in KWH, by the project in each Settlement Period during such period.

If a post event notice applies to any Settlement Period than any Deemed Generation during such a Settlement Period shall be zero. Provided that in accordance with existing Electricity Tariff Notification for the time being, no incentive payment shall be payable by the Administration to the company in respect of Deemed Generation.

(i) any failure by THE ADMINISTRATION to take power or any action by the Company as the result of any directive, message or Dispatch Instruction issued by THE ADMINISTRATION through THE ADMINISTRATION's Dispatch Centre;

Add. 35
 (ii) "Depreciation" shall mean the depreciation on the assets of, on or constituting a part of the Project, and shall be based on the Capital Cost of such assets from time to time at the rates specified by GOI from time to time under the Electricity Laws; provided, however, that the allowance for Depreciation shall be zero (0) from and after the date on which the aggregate payments in respect of Depreciation equal ninety percent (90%) of the capital cost of all depreciable assets.

"Equity" shall mean the amount of paid up share capital of the Company.

"Estimated Annual Costs" shall be determined in accordance with Paragraph 3 of this Appendix - D.

"FEA" shall mean Foreign Exchange Adjustment

"FDRA" shall mean the "Foreign Debt Repayment Amount",

"Fixed Charge Payment" with respect to any Billing Period in any Tariff year shall be

$$\frac{\text{Estimated Annual Cost} \times D \times (A/B)}{\text{number of Days in such Tariff Year}} - C$$

Where

Add.
36
A = PLF calculated (rounded to the fourth decimal place) over all Billing Periods between and including the first Billing period in such Tariff Year and to the end of the applicable period (the Billing Period for which Fixed Charge Payment is being calculated) in such Tariff Year, provided that A shall not exceed NPLF.

B = 68.49% (NPLF)

C = the sum of all Fixed Charge Payments due and paid for all prior Billing Periods in such Tariff Year.

D = the number of Days elapsed in such Tariff Year through the last Day of such Billing Period.

"Foreign Debt" shall mean the whole or part of Debt contracted and realized or realizable by the Company in one or more foreign currencies in cash or otherwise in respect of which the obligation or liability to repay the principal and interest arises in such foreign currencies.

"Foreign Exchange Adjustment" or "FEA" shall mean the foreign currency exchange adjustment to be made as a part of each monthly Tariff Invoice and shall be equal to:

$$\{(A/B) * (CFXR_m - BFXR_m) * \{PFMFDRAM + (\text{foreign equity} * d/365)\}\} - F \quad \text{for any period } m.$$

where

A, B & D have the meanings set forth in definition of Fixed Charge Payment.

F = the sum of all Foreign Exchange Adjustment due and paid for all prior Billing Periods in such Tariff Year.

"CFXR" or the "Current Foreign Exchange Rate" shall mean the currency exchange rate between U.S. Dollars (or other applicable foreign currency) and Rupees calculated at the SBI Rupee - Dollars Exchange Rate at the close of Business on the Business Day immediately prior to the Date of the Tariff Invoice for which such calculation is being made. Exchange rate for conversion of foreign currency in Indian rupee during construction period should be bank's buying rate and while converting from Indian rupee to foreign currency the exchange rate should be bank's selling rate.

Add. 37. "BFXR" or the "Base Foreign Exchange Rate" shall mean the weighted average currency exchange rate only in U.S. Dollars and Indian Rupees utilised by the Company in computing the Rupee Capital Cost for all capital assets paid for by the Company in U.S. Dollars.

"PFMFDR" or the "Proforma Monthly Foreign Debt Repayment Amount" shall mean for each billing period the proforma amount of foreign debt to be repaid in such billing period which shall be annual foreign debt repayment amount for the year during which such billing period falls divided by the number of months in such Tariff Year.

"Foreign Debt Repayment Amount" or "FDRA" shall mean, with respect to a Tariff year or other period, the actual principal amount of any Foreign Debt falling due during such year or period, including amortized repayment of the amount of any debt falling due on maturity together with such interest, premiums, bank guarantee commissions and other amounts due which may be payable on such maturity, and in the currency specified by the Lender.

"Foreign Equity" shall mean the amount of Equity which is committed and subscribed for in foreign currency.

Add. 38. "Gross Actual Energy" shall, with respect to a Unit (during the Initial tariff year only) or, subsequently, the Project, for any period, be equal to Actual Energy divided by the difference between unity (one) and APCF i.e.,

$$\text{Gross Actual Energy} = \text{Actual Energy} / (1 - \text{APCF})$$

"Station Heat Rate" or "HR" shall mean 2000 kilocalories per kwh, on Lower Calorific Value of Fuel (at ISO conditions)

~~Incremental~~ payment for any Billing period shall be calculated at 0.65% of equity for every 1% increase in PLF over the normative PLF of 68.49%.

PLF shall be calculated (rounded to the forth decimal place) over all Billing periods between and including the first Billing Period in such Tariff Year and to the end of the applicable prior Billing Period (the Billing Period for which the Invoice is being calculated) in such Tariff Year, provided however that for purpose of incentive payments, PLF shall be reduced to the extent of Deemed Generation included in computation of PLF.

"Income Tax" shall mean all taxes on the net income levied by any Governmental Agency and paid by the Company with respect to its business of providing THE ADMINISTRATION with capacity and Electricity under the terms of this Agreement and any other activities necessarily and properly carried on by the Company in connection with that business, excluding (i) taxes on investment income, (ii) any increase in tax or penalty levied on the Company by reason of its default in reporting or paying any tax, and (iii) excluding any increase in taxes as a result of taxes on investment income; provided that, "Taxes" shall not include taxes on net income attributable to the Incentive Payment, and provided, further, that during any Tariff Year the total amount paid by THE ADMINISTRATION to THE COMPANY in respect of taxes shall not exceed the actual taxes paid by the Company during such Tariff Year. Income Tax on incentive generation will be borne by the Company.

Add.
39
40
"Indian Consumer Price Index" shall mean the proportionate increase in index value of the "All India Consumer Price Index (CPI) for Industrial Workers" as published monthly by the Centre for Monitoring the Indian Economy for the available calendar year. If such index is no longer published or available the Company and THE ADMINISTRATION shall select another index by mutual agreement.

"Indian Wholesale Price Index" shall mean the proportionate increase in "Wholesale Prices for Manufactured Goods" listed in "Index Numbers of Wholesale Prices and consumer Prices" as published monthly by the Centre for Monitoring the Indian Economy for the available calendar year. If such index is no longer published or available the Company and THE ADMINISTRATION shall select another index by mutual agreement or failing such agreement as determined pursuant to Article 15.

"Initial Tariff Year" shall mean the period commencing on the Commercial Operation Date of the first Unit and ending on the Commercial Operation Date of the last Unit.

"Interest During Construction" shall mean, with respect to the Project, interest, bank charges and commissions (if any and payment of which is approved by the A&N Admn. under the Electricity Laws) actually paid, accrued or payable by the Company on Debt, calculated on the balance of such Debt actually remaining to be discharged from time to time, at the rates of interest specified in the terms of such Debt, up to the Commercial Operation Date of the Project.

"Interest on Debt" shall mean the interest, bank commissions actually payable on Debt borne by the Company, arising after the Commercial Operation Date of each Unit in commercial operation, after taking into account the actual repayment liability with respect to Debt, under the terms thereof and includes the actual Rupee equivalent of such liability on Foreign Debt, at the then Current Foreign Exchange Rate applicable thereto, and shall cease as soon as Debt is fully paid.

Add 41

"Lender" shall mean any institution, corporation, partnership firm, individual, organization or other entity providing Debt or Working Capital to the Company.

"Lower Calorific Value of Fuel" or "LCVF" shall mean the weighted average lower calorific content of one kilogram of Fuel consumed, as recorded during a Billing period, on the basis of sampling methods, frequency and tests as mutually agreed between the Parties prior to Financial Closing, subject to the provisions of the Fuel supply Agreements "LCVF" shall mean Lower Calorific Value of Fuel in Billing period.

"Lubricating Oil" shall mean lubricating oil recommended by the manufacturer of the Units for use in their operation.

Add 42

✓ "Normative Plant Load Factor" or "Normative PLF" or "NPLF" shall be 6000 hours/annum and is 68.49% with respect to a Unit (during the Initial Year only) or the Project. "NPLF m" shall mean Normative Plant Load Factor for a period, m. This will be adjusted every year after duly computed by both parties.

"Observed Capacity" shall have the meaning specified in Paragraph 3(g) of Appendix L.

Add
43

"O & M and Insurance Expenses" shall mean O & M Expenses and cost of Insurance equal to 4% of Capital cost, subject to annual escalation on the first day of each Tariff Year for changes in the Indian Consumer price Index and Indian whole-sale price indices on a weighted average basis in accordance with a 30:70 ratio from the commercial operation date of the first unit. The annual escalation on each of the four unit would be allowed one year after the commissioning of the respective unit. However, one year after the commissioning of the entire plant the O&M escalation for all the four units would be trued up and there after the O&M expenses would be escalated every year after one year from the com-

missioning of the entire plant. The capital cost of each unit for the purpose of O&M expenses shall be in proportion to the capacity of that unit. "Operation & Maintenance Expenses" or O&M Expenses shall mean, with respect to any period, all expenditures for the generation of power and energy by the Plant and maintenance and repaid for the project, during such period other than Interest on Debt, Depreciation, Income Taxes, Other Taxes, Return on Equity, Variable Charge Payment, Interest on working capital, Incentive Payment and FEA.

Add
44 | "Other Taxes" shall mean any taxes (other than Income Taxes), imposed or levied, directly or indirectly, by any Indian Government Agency, with respect to sale of Electricity generated by the Project, relating to the foregoing.

"Period Hours" or "PH" shall mean total hours in a period. PH in one Tariff Year of twelve months equal 8,760 hours or 8,784 hours in leap years.

"PH" shall mean Period Hours

Add
45 | "Plant Load Factor" or "PLF" may refer "Item L" under Article 1.

"Pro Forma Monthly Foreign Debt Repayment Amount" or "PFMFDR" shall have the meaning specified for such term in the definition of "Foreign Exchange Adjustment".

Add
46 | "Return on Equity" or "ROE" shall be equal to:

(Equity) * (0.16)

Add 47 | if PLF m is greater than or equal to NPLF m, provided that the Rupee equivalent of Foreign Equity included as a part Equity in the ROE formula shall be converted at the Current Foreign Exchange Rate.

"Revised Availability Notice" shall have the meaning specified in Appendix L.

"Settlement Period" shall mean a one hour period beginning on the hour.

Add
48 | "Station Heat Rate" or "HR" shall mean 2000 kilocalories per Kwh, on Lower Calorific Value of Fuel (at ISO conditions).

Add
49 | "Stub Year" shall mean the period commencing from the commercial Operation Date of the last unit to the 31st March occurring after the Commercial Operation Date of such unit.

"Tariff Year" shall mean the Initial Tariff Year, the Stub Year, each period of twelve months following the end of the Stub Year and the period between the penultimate Tariff Year and the end of the Term, whether or not of twelve months duration.

"Variable Charge Payment" shall have the meaning specified in Paragraph 4 of this Appendix D.

"Working Capital" may be referred to, as per Clause 3.0 of CEA norms dated 14.12.1995.

2. Calculation of payment

2.1 Subject to Paragraph 2.2 below, the amount payable by THE ADMINISTRATION in respect of Electricity and Deemed Generation in a Billing Period shall be the sum of

- Add
50
- (i) the Fixed Charge payment; plus
 - (ii) the Variable charge payment; plus
 - (iii) the Incentive Payment, if any, and
 - (iv) the Foreign Exchange Adjustment

The Tariff Invoice for each Billing period shall specify for each of the foregoing components of the Invoice amount, the portion thereof which is denominated in a foreign currency and the portion thereof which is denominated in Rupees.

2.2 The amount payable by THE ADMINISTRATION in respect of Electricity and Deemed Generation in a Billing period which falls within the Initial Tariff year shall be the Estimated Annual Costs based on capital cost (as initially approved by the Administration), Debt and Equity allocated to each Unit as further described in Paragraph 2.3 below.

2.3 In the Initial Tariff year, the capital cost Debt and Equity will be allocated to each Unit from its Commercial Operation Date as below:

1st Unit	37.5%
2nd Unit	61.0% (Cumulative)
3rd Unit	82.0% (-do-)
4th Unit	100.0% (-do-)

within sixty (60) days after receipt of THE ADMINISTRATION approval of the completed cost (if required), the amount payable by THE ADMINISTRATION for Electricity and Deemed Generation of each Unit will be recalculated based on the above percentages and on the completed cost, Debt and Equity and the Charge-in-Law Adjustment.

3. Fixed Charge Payment P/186
 Add 52 As per the Government of India Notification dated March, 1992 as updated from time to time read alongwith CEA norms dated 14.12.1995. P/181
P/232

4. Variable Charge payments
 The variable charge payment for each Billing Period shall include the cost of fuel and the cost of Lubricating Oil, as follows

Fuel consumption Rate : F Kilo Grams per KWH

Lub Oil Consumption : L Kilo Grams Per KWH

Total generation : U Kwh

Cost of liquid fuel : FO Rs/kg (Indian Rupees per Kg. delivered to the station including all transportation handling, terminal and other charges and levies).
 Add 53

Cost of Lub Oil : LO Rs/kg (Indian Rupees per Kg. delivered to the station including all transportation handling, terminal and other charges and levies).

Station Auxiliary : A kwh.

% Station Auxiliary consumption : $A' = \frac{A \times 100}{U}$

Variable charges component of Tariff in Indian Paise.
 The value of fuel consumption rate should be arrived on the basis of the agreed station heat Rate of 2000 Kcal/Kwh at ISO conditions.

The variable cost per unit = $\text{Rs.} (100) \left[\frac{(F \times FO) + (L \times LO)}{(100 - A')} \right]$

Add. 54

Add. 75 [Where A' is Auxiliary consumption which shall be allowed on actual basis and will be restricted to ceiling norms.

Total variable charges = $100 \left[\frac{(F \times FO) + (L \times LO)}{100 - A'} \right] \times \text{Actual Energy}$

'F' is fuel consumption = $\frac{\text{Station heat rate}}{\text{weighted average calorific value of HSD}}$

Note : The weighted average calorific value of HSD oil will be determined by taking sample, as per relevant Indian standard and measuring the calorific value using suitable equipment by THE COMPANY which will also be monitored by THE ADMINISTRATION.

5. Payment of Income Tax

(a) The Tariff Invoice for each Billing period shall include an amount for projected Income Tax. The amount shall represent the Company's reasonable estimate of its liability for Income Tax that will fall due for payment during the relevant Tariff Year divided by the number of Billing Periods in such tariff year.

56 Add Such estimates shall take into account the tax effects of such projected Income Tax (less any amount standing to the credit of the Tax Escrow Account and any refund of Income Tax that the Company expects to receive during the year). The Company shall adjust the amount that THE ADMINISTRATION is required to pay into the Tax Escrow Account pursuant to this Paragraph 7 whenever there is any material change in the Company's estimate of its liability for Income Tax in respect of the Project. Separate Escrow Accounts shall be maintained for Income Tax purposes.

6. Overriding Nature of Certain Electricity Laws

The Parties hereby expressly agree that, notwithstanding anything contained in this Agreement or any other agreement, if any element of the tariff provided for in this Agreement shall be in deviation of, inconsistent with or repugnant to the provisions contained in the Electricity Supply Act, 1948 and in particular, Electricity Notification-Tariff and Electricity Notification-Generating Companies, such element shall be deemed to be amended to the extent required to bring it into compliance with the relevant provisions of the Electricity Notifications-Tariff and Electricity Notification-Generating Companies, any amounts paid by THE ADMINISTRATION in excess of the tariff as so amended shall be repaid by the Company, provided, however, that in no Billing Period shall the reduced amount required to be refunded pursuant to this Paragraph 8 of Appendix D reduce the tariff payable to the Company under this Agreement below the amount of the Fixed Charge Payment (excluding the Return on Equity element) and variable Charge Payment otherwise payable in such Billing Period.

MODEL CALCULATION FOR DETERMINATION OF CAPITAL COST

1. Completed Capital Cost
 Capital Cost Ceiling as per PPA : X

 In case completed Capital cost : a
 exceeds the ceiling, excess cost
 allowed by the THE ADMINISTRATION.

 In case completed Capital Cost : b
 is less than the ceiling cost, the
 amount of the cost underrun
 based on actual completion cost
 report approved by THE ADMINISTRATION.

 Completed Capital Cost : $y = (x+a)$ or $(x-b)$
 Whichever is applicable

2. Capital Cost reduction for shortfall in capacity

 Rated Capacity : p = 20.0 MW
 Tested Capacity : a = 20.0 MW
 Shortfall in Capacity : r = 0 MW (p-a)
 LD & Compensation received
 from EPC Contractor : c
 Pro rata reduction : $Y \times \text{Shortfall in Capacity} /$
 rated capacity = d (Say)

 Cost Reduction : e = c or d whichever is higher

3. Capital Cost Reduction for time delay

 LD received from EPC Contractor : f
 Interest accrued due to delay : g
 Principal repaid : h
 Commitment fees : i
 Payment to THE ADMINISTRATION : j
 So surplus is available : $k = f - (g+h+i+j)$

 If k is negative, it shall be reckoned as zero.

 Capital Cost Reduction : o = (h+k)

4. Capital Cost reduction for
excess insurance proceeds
received by the company. : 1
5. Capital cost for tariff calculation: $y - (e+h+k+l)$

ANNEXURE-I

IMPORT & INDIGENOUS COMPONENTS OF THE PROJECT
20 MW Power Project at Bambooflat A&N Islands.

ABSTRACT OF THE PROJECT COST

S1. No.	Description	*Foreign Components US\$ Million & MINR.	**Indigenous Components Rupees in Millions
1.	Land and Site Development	-	6.300
2.	Build. & Civil Cons.	-	54.900
3.	Works cost		
a.	Works cost excluding taxes and duties	\$8.77 MUSD (Rs. 315.72 MINR)	26.575
b.	Electricals	-	
c.	Taxes and duties	1.76 (Rs. 63.36 MINR)	45.045
4.	Contingencies	-	27.500
5.	Misc. Project Cost	-	38.975
6.	IDC	-	30.000
7.	Preliminary & capital issue expenses	-	18.525
8.	Start up fuel for testing and commissioning.	-	4.500
		----- 379.080 -----	----- 252.320 -----

TOTAL PROJECT COST = Foreign Components Plus Indigenous components
 which is equal to Rs. 63.14 CRORES.

ANNEXURE-II

BAMBOOFLAT (4X5 MW) (M/S SPCL)
TENTATIVE FINANCIAL PACKAGE

(a) EQUITY 30% OF THE PROJECT COST Rs. 1894.20

INDIAN COMPONENT
(Rs. LAKHS)

1. PROMOTERS

a) Indian Promoters, Friends & Relatives 25% of the equity.	473.55
b) NRI Friends, Relatives & OCBs 25% (Foreign Equity)	473.55
2. Foreign FIIs and Mutual Funds (7%)	132.60
3. EPC Contract (10% Indian)	189.42
4. Other Overseas investment (FDI) Foreign 33%	625.08
Sub-Total	<u>1894.20</u>

ABSTRACT

Total Foreign Investment on equity (65%)	1231.23
Total Indian investment on equity (35%)	662.97
Sub Total	<u>1894.20</u>

(b) DEBT 70% OF THE PROJECT COST

i) DFI/PFC (20% on total)	1262.80
ii) Overseas/ECB (50% on total)	3157.00
Sub Total	<u>4419.80</u>

* TOTAL PROJECT FINANCING Rs. 6314.00 Lakhs.

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs as per bid June '95 price level)	Revised completed project cost as on June '97
	Land & Site development.				
	Preliminary investigation and feasibility study.	Hect.	4.67		
	Acquisition of land for power house & allied works.	Hect.	4.67	7.00	7.50
	Land for colonies.	L.S.	-		
	Soil test.	L.S.	-		
	Site grading & fencing.				
	Land development charges at project site.	L.S.	-		
	Site grading.	Cu. Mtrs.	16667		
	Plot Drainage.	L.S.	-		
	Plot Sewerage.	L.S.	-	38.00	39.50
	Boundary Wall.	Mtrs.	850		
	Land Scaping.	L.S.	-		
	Roads on Culverts.				
	Culverts.		-	15.00	16.00
	Roads.				
	Sub-Total of Serial No. 1			60.00	63.00
	Building & Civil Construction.				
	Chimney /Structure foundation & piping exhaust supports etc.	Nos.	4	40.00	44.00
	Temporary Structure & enabling works.	Cu.	100		
	Office & Store.	Mtrs.		2.70	2.97
	Raising of water & power supply facilities at Project site.				
	Fire Fighting & Misc. items.				
	Foundation for 5 DG Sets of 4MW each and its allied works.	This included in mech. estimate.			
	Station Building.				

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOELAT (AAN ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs as per bid June '95 price level	Revised completed project cost as on June '97
	Piling.	Nos.	122		
	Excavations.	Cu.	1290		
	Plain Cement Concrete.	Cu.	96		
	RCC M20 Grade.	Cu.	3000	179.00	196.90
	Structural Steel.	Ton	100		
	Reinforcement.	Ton	200		
	Misc. Items.				
	Fresh Water Storage Overhead tank (2x80 KL Capacity).				
	Excavation.	Cu.Mtr	200		
	RCC.	Cu.Mtr	40		
	RCC M20 Grade.	Cu.Mtr	110	6.80	7.48
	Reinforcement.	Ton	12		
	Misc.				
	Circulating Water Pump House.				
	Excavation.	Cu.Mtr	1000		
	RCC.	Cu.Mtr	26		
	RCC M20 Grade.	Cu.Mtr	260	12.50	13.75
	Reinforcement.	Cu.Mtr	20		
	Misc.				
	Construction of Main Sea Water Pump House on Jetty (20x10 Mtrs)				
	Excavation.				
	RCC.	Cu.Mtr	14		
	RCC M20 Grade.	Cu.Mtr	170	9.00	9.90
	Reinforcement.	Cu.Mtr	15		
	Misc.				
	Construction of Jetty.		-	5.00	5.50
	Construction of Sea Water Cap- acity 40x20x3 Mtrs.		-	3.00	3.30
	Laying of HDPV intake and deli- very pipe lines for Sea Water lines including accessories.		-	6.00	6.60
	Laying of Fresh Water pipeline from dam site - 1 Kms. distance for collection of fresh water two lengths.		-	4.00	4.40

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (AAN ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs as per bid June '95 price level)	Revised completed project cost as on June '97
	Overhead Fresh Water Tank including filter water tank and small pumping facilities.			5.00	5.50
	Provision for meeting the environmental management programs.			15.00	16.50
	Fabrication of power control & relay cable trenches, tray cable gallery etc., inside and outside power house building.			20.00	22.00
	Township. Residential Colony.				
	Type V (140 Mtr. Sq.) 1 No.	Mtr. Sq	140		
	Type IV (84 Mtr. Sq.) 3 Nos.	Mtr. Sq	252		
	Type III (56 Mtr. Sq.) 5 Nos.	Mtr. Sq	336	95.00	104.50
	Type II (45 Mtr. Sq.) 15 Nos.	Mtr. Sq	675		
	Type I (34 Mtr. Sq.) 20 Nos.	Mtr. Sq	680		
	Water, Power Supply, Roads, Drainage Sewerage etc.				
	Misc. Civil Works & unforeseen items including raising of supports for equipments.			27.00	29.70
	Sub-Total Building & Civil Cons. (Item 2a - Item 2v)			499.00	549.00
	EPC Turnkey Contract value cost of Indian Technicians Miscellaneous fixed assets.			-	
	Diesel Engine, generator and accessories including silencers, exhaust, compressed air systems, 5 MW. Output capacity.	5 MW	4 Units		
	(a) Import Component			2568.50	3312.50
	(b) Indigenous Component.			499.00	160.13
	Control & Monitoring System for complete plant.		Included in Item 3a above.		
	Fuel Oil System.				

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (AN ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs as per bid June '95 price level)	Revised Completed project cost as on June '97
	Fuel oil pump house including MCCB room (Civil).	Mtr.Cu	100	4.00	4.40
	Fuel Oil treatment Plant (Civil)	Mtr.Cu	50	2.00	2.20
	Fuel Oil tank & dyke.				
	Excavation.	Mtr.Cu	200		
	Compaction.	Mtr.Cu	175		
	RCC.	Mtr.Cu	20		
	RCC M20 Grade.	Mtr.Cu	100	26.00	28.60
	Earthen Embankment.	Mtr.Cu	1300		
	Bitumin Layer.	Mtr.Cu	200		
	Reinforcement.	Ton	5		
	Structural Steel.	Ton	70		
	Misc.				
	Transformer Yard.				
	Excavation.	Mtr.Cu	160		
	RCC.	Mtr.Cu	20		
	RCC M20 Grade.	Mtr.Cu	100	5.00	5.50
	Reinforcement.	Ton	10		
	Misc. Viz. Stone Spreading etc.				
	Fencing.				
	Switchgear Rooms.				
	Excavation.	Mtr.Cu	130		
	RCC.	Mtr.Cu	20		
	RCC M20 Grade.	Mtr.Cu	160	10.00	11.00
	Reinforcement.	Ton	12		
	Structural Steel.	Ton	10		
	Misc.				
	Ancillary Works.				
	Canteen.	Mtr.Sq	100		
	Administrative Buildings.	Mtr.Sq	200		
	Fire Fighting Station.	(Fire tender station availa- ble at station)			
	Workshop Buildings.	Mtr.Sq	100		
	Store Building.	Mtr.Sq	100	22.00	24.20
	Gate House.	Mtr.Sq	30		
	Recreation Hall.	Mtr.Sq	50		

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs as per bid June '95 price level	Revised completed project cost as on June '97
	HSD Oil unloading pumps with accessories with piping with inflammable motor starters, Flow Meter arrangements etc.	Set	2		
	HSD Oil Storage tank with its allied works.	Included in Item 2n above.			
	HSD Oil purification plants pump, day service tank with accessories namely valves piping inflammable starter motors M.C.C.B. etc.				
	Fuel oil booster pump with piping flow meter etc.	Included in Item 3a above.			
	Laying of pipeline from Jetty to main dirty oil storage tank.	Set	2	9.40	13.31
3d	Fresh Water System, filtration plant with water supply pumps, Chlorination plants for raw water, filtered water and circulating water, Misc. sumps & Pumps.	Set	2	5.00	5.76
3e	Fire Fighting System.	L.S.	L.S.	10.00	11.50
3f	Cooling Water System. Direct Cooling (FW) CW Pump with allied works.	Included in Item 3a above.			
	Indirect Cooling (Sea Water) CW Pump & allied works.	Included in Item 3a above.			
3g	I.P. piping & fittings expansion bellows, 'Y' piece, outlet transmission piece, discharge piece.	Included in Item 3a above			
3h	Air Conditioning system for control & relay & monitoring room.			5.00	8.75
3i	Ventilation Systems.			2.00	2.30
3j	Crane & hoists. EOT Crane (25 Tons Capacity) for station building. Misc. Cranes & hoists mobile Crane forklift etc.	Set	1	25.00	28.75

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Contd...

(Code) No.	Description	Unit	Quantity	Amount (Rs. Lakhs) as per bid June '95 price level	Revised completed project cost as on June '97
3k	1312 KVA Black Start DG Sets complete with accessories.	Set	1	13.00	14.90
3l	Workshop Equipment.			8.00	9.20
3m	Lub Oil purification plant with pumps service tank piping etc.	Included in Item 3a above.			
3n	Initial Supply of lub oil to the DG Sets.	Included in Item 3a above.			
3o	Wall opening of the building including embedded steel works for piping ducts etc.			4.00	4.60
3p	Special Tools & accessories for installation & commissioning of the equipments, system and sub-system.			2.00	2.30
3q	Creation of Computer Cell with Mini Computers.			1.00	1.15
3r	Training of Staff of Electricity Department at Works site.			3.10	3.60
3s	Port handling charges and inland transportation for import component /Indigenous component.			32.00	54.00
3t	Initial Spares.				52.00
3u	Customs duty.			327.00	728.75
3v	Freight, insurance, excise duty, sales tax .			80.00	90.50
3w	Audit & Accounts.				40.00
3x	Erection, testing and commissioning charges.			50.00	87.00
	Sub - Total of EPC Turnkey Contract V			3644.00	4631.00

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOELAT (A&N ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs) (as per bid June '95 price level)	Revised completed project cost as on June '97
4	Elect. Miso. fixed assets.				
4a	Transformers.				
	2x10 MVA 11/33 KV step-up trans- fer & shifting of 1x10 MVA 11/33 KV from Chatham Power House in- cluding dismantling cost with al- lied panles cable etc., station service transformer 2x1600 KVA 11/0.4 KV.	Set Each	2 + (1) 2	55.50	63.83
4b	11 KV Swith gear & panels , DG Switch gear (500 MVA) Feeder & transformers isolator panels 250 MVA. Feeder & transformers isolator 400 MVA. Potential transformers panel. Synchronising equipments panel mobile type. Neutral grounding register. Surge Protection Panel. Bus Coupler.	Each Each Each Each Each Each Each Each Set	4) 9) 2) 2) 1) 4) 2) 1)	51.50	59.24
4c	33 KV Switch gear Transformer isolator 33 KV Bus coupler. Feeder isolator.	Each Set Each	1) 2) 4)	15.00	17.25
4d	415 Volts LV distribution system LV Station service board with bus coupler. LV emergency control panel with 8/C. LV MCCB. AMF Panel for black start with battery backup.	Set Set Set Set Set	1) 1) 2) 1)	10.70	12.37
4e	DG Facilities. 110 Volts battery banking. 110 Volts DC Battery boost & Fl- Float Charges. 24 Volts battery banking & batt- lery charger.	Set Set Set	2) 1) 1)	5.10	5.87

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOELAT (AAN ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs.Lakhs as per bid June '95 price level	Revised completed project cost as on June '97
	Emergency lighting system with its associated cabling.	Set	1)		
4f	Master Control System.				
	Remote control system with pan- els for generators, transformers including service transformer engine systems & sub-systems.	Set		20.00	23.00
	Relay & annunciation panels.	Set			
	Transformers System & Sub-system etc.				
4g	Power Control Panel.				
	33KV XLPE 240 Sq.mm. 3 Core	Km.	1.5		
	33 KV XLPE 185 Sq.mm. 3 core	Km.	1.5		
	11 KV XLPE 240 Sq. mm. 3 core	Km.	2.0	59.30	68.20
	11 KV XLPE 185 Sq. mm. 3 core	Km.	1.5		
	11.1 KV PVC armoured copper cable of 4x2.5 Sq.mm., 7x2.5Sq. mm. & 2x6 Sq. mm.	Set	1		
	End terminations & jointing kits				
	Instrumentation cable.	Set	1		
	Cable Tray.	Set	1		
4h	Internal lighting system.	L.S.	L.S.	3.40	3.91
4i	Communication system.	L.S.	L.S.	1.00	1.15
4j	Fire Alarm System.	L.S.	L.S.	2.00	2.30
4k	Grounding and lightening protec- tion systems.	L.S.	L.S.	5.00	5.75
4l	Electrical Workshop & lab.	L.S.	L.S.	2.50	2.80
	Freight, insurance, sales tax, spares, erection, testing are included in the estimates.				
	Total electrical works.			231.00	265.75
	Sub- Total Item 1 - 4			4434.00	5508.75

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs) as per bid June '95 price level	Revised completed project cost as on June '97
5	Preliminary & Capital Issue Expenses.				
5a	Brokerage commission on Capital issue, legal, Advt., Stationary	L.S.	L.S.	10.00	22.25
5b	Upfront fee etc.	L.S.	L.S.	20.00	23.00
5c	Other preliminary expenses. Company folating and initials.	L.S.	L.S.	25.00	30.00
5d	Establishment and travel for 22 months at Rs. 5 Lakhs/month.			90.00	110.00
	Total Preliminary in Capital issue expenses.			145.00	185.25
6	Interest During Construction. (Provision Only)			305.00	300.00
7	Provision for contingencies.			275.00	275.00
8	Margin money for working capital			66.00	-
9	Start up fuel and lub oil trail and test runs.			-	45.00
	GRAND TOTAL				
	TOTAL COST OF THE PROJECT			15225.00	16314.00

<u>Terms of Finance</u>	<u>Foreign Loan through B/G</u>	<u>Indian Loan Term Loans</u>
i) Amount of Debt	8.769 MUSD (Rs.315.7 MINR)	(Rs.126.28 MINR)
Add.		
57		
ii) Interest Rate	9.82%	18%
iii) Repayment period	10 years	10 Years
iv) Moratorium ** period (years)	2 Years from the drawal of 1st installment.	2 Years from the drawal of 1st installment.

Note : ** - Moratorium period not to be accounted for tariff calculations.

ANNEXURE - III

**20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)
ABSTRACT ESTIMATE FOR COMPLETED PROJECT COST**

(All figures of Rs. in Lakhs)

Sl. No.	Item	Amount as per June '95 price level	Revised completed project cost at June '97 price level
1.	Land & Site development.	60.00	63.00
2.	Buildings & Civil Construction.	499.00	549.00
3.	EPC Turnkey Contract value & Cost of Indian technicians.	3644.00	4631.00
4.	Electrical & Misco. Fixed assets.	231.00	265.75
5.	Preliminary & Capital Issue expenses.	145.00	185.25
6.	IDC	305.00	300.00
7.	Contigencies.	275.00	275.00
8.	Margin money for working capital.	66.00	-
9.	Startup fuel for trial & test run.	-	45.00
	Total cost of the project.	5225.00	6314.00

ANNEXURE - IV

ESTIMATE OF COST OF GENERATION OF BAMBOOELAI DIESEL POWER STATION - 20MW (A&N ISLANDS)

SLL NOS.	ALL FIGURES Rs. Lakhs
1. Capacity of the Station MW	20.00
2. Total Project Cost Rs. Lakhs	6314.00
3. Equity @ 30% Rs. Lakhs	1894.20
4. Debt @ 70% Rs. Lakhs	4419.80
5. Debt term & rate of INT 10Yrs. %	12.15
6. Units Generated MU @68.49% LF	120.00 \ For Calculation
7. Units Lost in auxillaries 4.5% As per CEA norms vide Schedule - 1(h)	5.00 of Fixed Cost as per CEA norms of maintaining 68.49% as PLF by IPP
8. Net Units for Sale MU	115.00 /
9. Fuel Used : 42.7 Mj/Kg. (10200 K. Cal/Kg)	HSD
10. Specific Fuel Consumption Kg./Unit	0.20
11. Lub Oil Consumption Gms./Unit	1.10
12. Fuel Cost Rs./M.T. (Landed Cost)	7684.32
13. Lub Oil Rs./M.T. (Landed Cost)	50000.00
14. Total Fuel Consumption/ annum. MT	24000
15. Total Fuel Cost	1844.24
16. Total Lub Oil Consumption/ annum. MT	132.00
17. Total Lub Oil Cost	66.00
18. Total Variable Cost	1910.24
WORKING CAPITAL REQUIREMENT	
1. 30 days primary fuel cost	151.00
2. 60 days Lub Oil Cost	11.00
3. O&M for one month with spares.	21.00
4. Spares for one year.	52.00
1. 2 Months receivables (Anti. L.S.)	597.00
Total Working Capital (Rs. Lakhs)	831.00

19. Computation of Fixed Cost

1.	O&M Expenses @4% on Total as per CEA Notification for MED Speed.	253.00
2.	Depreciation @7.8% on 90% of total cost	492.00
3.	Debt Servicing @12.15% on Balance Outstanding. 1st Year.	510.00
4.	Return on Equity @16%	303.00
5.	Total Working Capital Rs. Lakhs	831.00
6.	Interest on Working Capital @18% /annum	150.00
7.	Income Tax Paid	0.00
8.	Total Fixed Cost Per Annum	1708.07 (Say Rs.17.1 Crores)
9.	Fixed Cost Per Unit	1.49

20. Computation of Variable Cost.

1.	Fuel Cost.	1844.24
2.	Lub Oil Cost.	66.00
3.	Total Variable Cost.	1910.24
4.	Variable cost per unit.	1.64
5.	Total Cost of Production.	3582.07
6.	Total Cost per unit.	3.13
7.	Total Cost per unit against LC Payment Discount 2 1/2%.	3.05

Maximum Schedule 4 (B)

ता/Telephone : कें.प.म. CENTELRO
टेलिक्स/Telex : 72227-CEA IN
72171-CEA IN
82026-CEA IN
फैक्स/Fax : 6877267

भारत सरकार
GOVERNMENT OF INDIA

केन्द्रीय विद्युत प्राधिकरण
CENTRAL ELECTRICITY AUTHORITY

विद्युत मंत्रालय
MINISTRY OF POWER

सेवा भवन, रामाकृष्ण पुरम
SEWA BHAWAN, RAMAKRISHNAPURAM

नई दिल्ली-110066, दिनांक

NEW DELHI-110066, Dated 6th August, 1998

D.O.No.38/2/97-Legal/1362

Subject : 20 MW Power Station at Port Blair-PPA-Revised Model
Tariff Calculations - regarding.

Dear Dr. Padmasabham,

Reference is invited to our letter of even no. dated 3rd April, 1998 regarding above cited subject. The revised model tariff calculations have been carried out in the CEA and our observations/comments are as under :-

1. The Revised Model Tariff Calculations have been carried out by taking the Station Heat rate at site conditions as 2010 K.Cal./KWH. According to the revised calculations, the levelised tariff at 69.5% PLF is Rs. 8.99/KWH (with variable charges Rs. 2.66/KWH) as against earlier levelised tariff of Rs. 3.00/KWH.
2. The tariff schedule to be included in the CEA proposal may have to reduce 2 paise/KWH due to fall in specific fuel consumption based on design improvement outlined by SE, Electricity Department, A & N Administration vide his letter no. EL/EL/1-23/23/5023 dated 15th July, 1998.
3. This tariff schedule worked out in the CEA is for reference of A & N Administration only.
4. Reduction of 2 paise/KWH offered by M/o, PPA vide their letter dated 16th Jan., 1998, as also any other reductions mutually agreed between the signatories of the PPA will have to be separately taken into account as such revisions are not covered by the tariff calculations referred here.

Based on the above, the revised tariff schedule has been calculated and is enclosed for necessary action at your end.

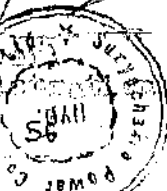
With regards,

Yours sincerely,

Encl : As Above

Dr. R. Padmasabham

Commissioner-cum-Secretary (Energy)
Andaman & Nicobar Island Administration
Port Blair - 744 103.



[illegible]

120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785																																																																																																																																																																																																																							

177	ST - Cashland Circle	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331	3332	3333	3334	3335	3336	3337	3338	3339	3340	3341	3342	3343	3344	3345	3346	3347	3348	3349	335
-----	----------------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----

127	Prod. Components (est/yr)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
-----	---------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

[illegible]

350	Charitable Exp	15.77	17.24	1.25	1.51	2.31	2.11	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13</
-----	----------------	-------	-------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	--------

[illegible]

116911

1
2
3
4

APPENDIX - E

Interconnection Points, Electrical Interconnection Facilities and Construction Interfaces

1. Definitions

Capitalized terms used herein and not otherwise defined herein shall have the respective meanings provided in the Power Purchase Agreement (as the same may be amended, modified or supplemented from time to time, the Agreement) which this is Appendix E and of which this Appendix E is a part.

2. Interconnection Points

The Interconnection Point will be at the 33 KV indoor feeder breakers and feeder control metering relay provided by the Company.

3. Tri-vector meter (of accuracy class 0.20 will be provided for tariff metering Electricity (active/reactive and maximum demand) exported from the Plant. Cts and CVTs connected to the tri-vector meters will be of 0.2 class accuracy.

4. Construction Interfaces

A. Company Scope: The Company will be responsible for the design, engineering, procurement, construction, supply and installation of the thirty three (33) Kv switch yard, including switch yard control building housing equipment/panels for Control/Protection/PLCC.

B. THE ADMINISTRATION Scope. THE ADMINISTRATION shall be responsible for the design, engineering, procurement, construction, supply and installation of; (i) the transmission lines (including conductor, line hardware, towers, etc.,) from the gantry of the switch yard (including supply of CBS clamps, connectors, insulators, etc.); and (ii) the thirty three (33) Kv switch yard at the other end, including switch yard control building housing equipments/panels for Control Protection PLCC. THE ADMINISTRATION shall also provide to the Company for proper coordination the data regarding Control/Protection/Control/protection/PLCC promptly upon generation, development or receipt thereof.

APPENDIX - F

PROJECT TESTING SPECIFICATIONS

General : After the plant is sufficiently completed such that all plant systems have been cleaned, checked, and commissined, the Company shall conduct an Acceptance Test and Characterists Tests as described below:

1. "Acceptance Test" shall be the basis for establishing the demonstated gross generation capacity of 20 MW and shall be provided for under the Construction Contract.

1.1. General Gross Generation Capacity Test Guidelines

1.1.1. The test shall be conducted in accordance with standard international test codes and practices, and included applicable sections of various DIN, IEC, ISO, IS and VDI codes. The major codes to be used in detemining overall acceptance will be based on the following:

ISO 3046	for Diesel Engine
IS 4722	for Generators
IS 5422	
IS 7132	
IEC 34	

1.1.2. All parties involved may participate in the tests in the capacity of observers, and the observers will have the opportunity to check that the tests are being performed in accordance with the established test procedures.

1.1.3. The EPC Contractor will conduct the test, and provide additional instrumentation if not "in-place" or fully adequate for the tests. All instrumentation will be properly calibrated and installed to pre defined International Standards.

1.2 Test Conditions

1.2.1. The facility will be inspected prior to the test, and corrective maintainance performed as appropriate to repair any damaged equipment.

1.2.2. No secial adjustments will be made that are inappropriate for normal and continuous operation.

1.3. Test

1.3.1 The test will be run under any and all ambient conditions (temperature, humidity, etc.,) that may exist during the time of the test, and no corrections in final generator gross output will be allowed as a result of prevailing ambient conditions.

1.3.2 The fuel will be HSD within the range of the fuel specification in the Fuel Supply Agreement, and no special effort will be made to improve the quality if it is within the specified range. In addition, calculations will be developed as part of the detailed test procedures to show that the test results document the ability of the Plant to meet rated capacity with fuel of the lowest quality permitted under the Fuel Supply Agreement.

1.3.3. The gross electrical output will be measured at the generator terminals, and the voltage, current, power factor and power output of each generator phase will be measured at the station transformers and current transformers. The measurements will be carried out according to the three-wattmeter method.

1.3.4. Capacity will be recorded for every hour of the 72 hour test period. Demonstrated capacity shall be equal to the mean value of each of the 72 one-hour gross output readings at the generator terminals.

Add 59. | 1.3.5. Correction curves are at Schedule 4(1).

1.3.6. With no special adjustments allowed for HSD quality or ambient conditions the performance test shall be deemed to have demonstrated the gross generation capacity of the Facility under all design conditions.

2. Electrical System Characteristic Test shall demonstrate the Project's ability to operate within the limits of the Electrical System Characteristics. An Electrical System Characteristics shall be deemed to be achieved in case of:

(a) Voltage, provided the Project operates within the voltage levels for the duration of the acceptance test. If during the test, voltage tests cannot be performed due to system constraints, data supplied from tests of the generator step-up transformers and generators supplied by the manufacturers shall be used to establish ability of the project to operate within the specified voltage limits.

(b) Grid Frequency, provided the Project operates within the frequency levels, as specified in this Power Purchase Agreement.

(c) Power factor, provided the Project operate within the Power factor range for the duration of the acceptance test. If during the acceptance test, Power factor tests cannot be performed due to system constraints, data supplied from test of the generator and generator step-up transformers supplied by the manufacturers shall be used to establish the ability of the project to operator within the specified voltage limits, as specified in this Power Purchase Agreement.

3. Project Characteristics Tests. No later than 548 days after the commercial operation date the company will conduct project characteristics tests. Such test may, at the company's option be conducted concurrently with the acceptance tests. The project characteristics shall be conducted as described for the following characteristics.

Load changes at Power: The ramp rate shall be not less than 0.5 MW/minute. It is anticipated that the unloading rate will be higher than the loading rate.

4. Interconnection Facilities shall be at 33KV after the stepup equipment.

5. Notice of Results: The company shall submit return notices with respect to the acceptance test and the electrical system Characteristics test to Administration before 5 days of rediness of the acceptance test.

6. Retesting: Upon giving appropriate notice the company shall be entitled to repeat any type of test.

APPENDIX K

Buy-out Price

1. Introduction

This Appendix sets out (i) the procedures to be adopted in the event that a Buy-out notice is issued by either party in accordance with the Power Purchase Agreement (the "Agreement") and (ii) the methodology to be followed for calculating the purchase price ("Buy-out price"). The provisions of this Appendix K shall survive expiry or termination of this Agreement.

2. Definitions

2.1 All capitalized terms shall have the meanings given to them in the Power Purchase Agreement (the "Agreement") to which this Appendix K is attached.

2.2 For purposes of this Appendix K, the following terms shall have the following meanings:

"Appraiser" shall mean an individual who is a partner with an independent firm of chartered accountants which has branches in New York, London and Bombay and is selected in accordance with the procedure set out in Paragraph 4 of this Appendix K.

"Buy-out" shall mean a purchase by THE ADMINISTRATION of the Project pursuant to the issue of a Buy-out Notice.

"Completion" shall mean the receipt by THE COMPANY of the Buy-out price in immediately available funds and the transfer of the Project to THE ADMINISTRATION.

"GOI Direct Political Event" shall mean any Direct Indian Political Event resulting from an act of any Governmental Agency of GOI.

Add 60 | "THE ADMINISTRATION Direct Political Event" shall mean any Direct Indian Political Event resulting from an act of any Governmental Agency of THE ADMINISTRATION.

"Statement of Practice" shall mean the publication entitled "The Statement of Asset Valuation Practice and Guidance Notes" issued by the Royal Institute of Chartered Surveyors in India.

"Transfer Date" shall mean the date of Completion agreed by the Parties but in no event later than sixty (60) days after the date of a Buy-out Notice unless extended by agreement of both parties.

"Valuation" shall have the meaning specified in Paragraph 4 (a).

3. Assets to be sold

a) THE ADMINISTRATION shall purchase all the assets of the Company required to operate the project including cancellation of lease of land (as per set procedures of the Revenue Department of the A & N Administration buildings, plant and equipment, fuel stockpiles, spare parts, records, drawings and all other consumables.

b) THE ADMINISTRATION shall not purchase or acquire any cash, whether in hand and/or in bank accounts, trade and book debts or receivables accruing to the Company prior to the Transfer Date, except as may be otherwise agreed between the Parties.

c) All other assets existing at the Transfer Date which are not including in sub-Paragraphs (a) and (b) above shall remain the property of the Company, including the proceeds of any insurance or warranty claims made prior to the Transfer Date.

d) The Company shall be responsible for discharging all liabilities and obligations of the Company accruing prior to the Transfer Date.

(e) No Warranties, whether express or implies, as to title, performance, merchantable quality, condition or fitness for any particular purpose, of the property or assets of the Project shall be given by the Company. The Company shall assign so far as is permissible under applicable legal Requirements its rights, if any, under warranties given in connection with such property or assets by third parties existing at the Transfer Date, except as provided in Sub-Paragraph (c).

(f) No Debt or other liability relating to the Project and incurred before the date of the Buy-out notice will be assumed by THE ADMINISTRATION unless it agrees otherwise with the Company. Due allowance shall be made in computing the Buy-out price to take account of liabilities assumed by THE ADMINISTRATION and liabilities retained by the Company.

(g) If so required by THE ADMINISTRATION, THE COMPANY shall use reasonable efforts to procure the novation to THE ADMINISTRATION of any relevant contract relating to the Project on such terms as THE ADMINISTRATION may negotiate with the other parties to such contracts.

4. Procedure for Determination of the Buy-out Price

Add. 61. a) Within 10 days after issuing a Buy-out Notice, the party issuing such Buy-out Notice shall provide the other party with a list of acceptable independent appraisers each of whom shall be competent and experience in the methods of valuation prescribed by this Appendix K and prepared to accept the appointment as Appraiser to carry out a determination of the Buy-out Price (the "Valuation"). The party receiving the list of appraisers may

Add. Page 33

03 '87 15:28 TO 49221285721+

FROM M O POWER

T-918 P.02

Copy to :

Dr. R. Padmenabhan, Commissioner-cum-Secretary(Power), Andaman & Nicobar Administration, Port Blair - The request of Andaman & Nicobar Administration for permitting use of high speed diesel (HSD) oil as a fuel for the above project has been examined and agreed to. You are advised to approach Ministry of Petroleum & Natural Gas (MP&NG) for transfer of HSD fuel oil linkage accorded to the project by MP&NG vide their letter dated 14-9-94 in favour of the private generating company.

(Pradip Bajjal)**Copy also to:****M/s Suryachakra Power Corporation Ltd., Hyderabad.****(Pradip Bajjal)**

01/09/97 15:20 TO 49221205721+

FROM M O POWER

T-910 P. 01



Pradip Bajaj
अपर सचिव
ADDITIONAL SECRETARY

भारत सरकार
GOVERNMENT OF INDIA
विद्युत मंत्रालय
MINISTRY OF POWER
श्रीम शक्ति भवन, 1पी ब्लॉक
SHRI SHAKTI BHAWAN, 1PI BLDG.

D.O.C-236/96-IPC.1

January 9, 1997

नई दिल्ली - 110001

New Delhi - 110001

Dear Shri Bag,

Please find enclosed a copy of the Andaman & Nicobar Administration letter No. 4-2(2)/96-Dev.I (Power) dated 3-10-96 regarding vetting by the Government of India, of the Power Purchase Agreement (PPA) to be signed between Andaman & Nicobar Administration and M/s Suryachakra Power Corporation Ltd. in respect of 20 MW diesel generation plant at Bamboo Flat along with copies of the earlier correspondence referred in the letter. Since Andaman & Nicobar Administration is an Union Territory, the administrative Ministry i.e., Ministry of Power has more responsibilities than in the case of a Independent Power Project (IPP) set up by a State Government. It has been decided that CEA could approve PPA with the assistance of their consultants M/s Price Water House, if necessary.

While approving the PPA and associated tariff schedules, CEA is also requested to examine the issues relating to features of the project approved during techno-economic clearance of the project such as 40% PLF etc. Andaman & Nicobar Administration have already approached CEA in this regard vide their letter No. EL/PL/1-43/96/4899-900 dated 14-8-96 (Copy enclosed for ready reference). The PPA may be examined and finalised by the CEA in consultation with Andaman & Nicobar Administration.

A copy of Andaman & Nicobar Administration letter no. 4-2(2)/96 - Power(Dev.I) dated 24-9-96 regarding proposal for consideration of Committee on Non-Plan Expenditure (CNE) for approving the payment obligations to the private generating company is also enclosed which may be examined by the CEA after finalisation of the PPA and make available their comments for taking further necessary action by the Ministry of Power.

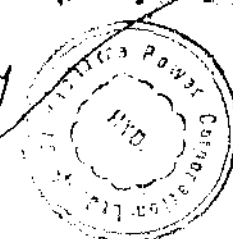
With regards,

Yours sincerely,

Encl: as above

Shri M.I. Bag
Chairman
CEA
New Delhi

(Pradip Bajaj)



236-29

2. Availability Notices.

- a) As soon as practicable before the Commercial Operation Date of the Project and thereafter at the beginning of each rescheduled Day, the Company shall deliver to THE ADMINISTRATION an Availability Notice (the "Availability Notice") containing the Declared Availability of the Project for each Settlement Period throughout the next following seven (7) Days (and where such Declared Availability changes, the time at which any change is expected to take effect). The Company may issue a standing notice which, until a subsequent Availability Notice is issued, shall be deemed to be the Availability for each day.
- b) Whenever the Company believes that any information that it has provided to THE ADMINISTRATION pursuant to this Paragraph 2 no longer accurately reflects its expectations, it shall promptly deliver to THE ADMINISTRATION a written notice (a "Revised Availability Notice") revising that information. The Revised Availability Notice shall be subject to acceptance by THE ADMINISTRATION and effective from the time of the delivery shall replace the Availability Notice which is revised.
- c) The Company shall take reasonable care in preparing Availability Notices and Revised Availability Notices with a view to declaring accurately the Company's expectations regarding the performance of the Project in accordance with this Agreement.
- d) During a Deemed Generation Period, no Availability Notice or Revised Availability Notice shall specify a Declared availability in excess of the Nameplate Capacity and any such notice shall if necessary, be deemed to be reduced to the Nameplate Capacity while such Deemed Generation Period continuous.
- e) The Company shall not declare capacity more than Nameplate Capacity without the consent of THE ADMINISTRATION.

3. Monitoring:

- a) If at any time THE ADMINISTRATION has reason to believe that an Availability Notice or Revised Availability Notice may not accurately reflect the gross generator capacity of the Project, it may monitor the project in accordance with and subject to the limits of this paragraph 3. Company shall not be entitled to revise the availability after the monitoring notice has been served.
- b) Each such time, prior commencement of its monitoring, THE ADMINISTRATION shall issue a notice (a "Monitoring Notice") to the Company identifying in reasonable detail the reasons why it believes the relevant Availability Notice or revised Availability Notice may not accurately reflect the gross

APPENDIX L

Determination of Availab

1. Definitions

- 1.1 Terms defined in Power Purchase Agreements and other terms used in this Appendix L shall have the same meanings given to them in the Power Purchase Agreement (as amended from time to time, the "Agreement") to which this appendix L is attached and of which it is a part, except as otherwise defined herein. All capitalized terms shall have the respective meanings given to them in the Power Purchase Agreement (as amended from time to time, the "Agreement") to which this appendix L is attached and of which it is a part, except as otherwise defined herein.
- 1.2 Certain Defined Terms. When used herein, the defined terms set forth below shall have the following respective meanings:
- "Availability Notice" shall have the meaning specified in Paragraph 2(a).
- "Declared Availability" shall have the meaning specified in Appendix D.
- "Failure" shall mean the project operating at less than its Declared availability as described in Paragraphs 3(f) and 3(g) provided that no Failure shall be deemed to have occurred if attributable to any Forced Outage, Force Majeure or deficiency in the Grid system outside the Technical Limits.
- "Interim Post Event Notice" shall mean a notice delivered by THE ADMINISTRATION to the Company pursuant to Paragraph 5 reporting the Modified Declared Availability of the Project following a Failure.
- "Modified Declared Availability" shall mean, with respect to a Settlement Period, the capacity of the Project which, following a failure, is calculated pursuant to paragraph 4.
- "Monitoring Notice" shall mean a notice issued by THE ADMINISTRATION to the Company pursuant to Paragraph 3(b).
- "Post Event Notice" shall mean a notice delivered by THE ADMINISTRATION to the Company pursuant to Paragraph 5 reporting the Modified Declared availability of the Project following a Failure.
- "Revised Availability Notice" shall have the meaning specified in Paragraph 2(b).
- "Settlement Period" shall mean a one-hour period beginning on the hour.

Capacity"). Any dispute regarding such determination shall be resolved through the provisions of Article 15 of the Agreement.

Add. 67 [Project is not capable the agreement; (Paragraph deleted)]

Misdeclaration Penalties :

"A - Capacity Failure" shall occur if -

(I) During actual operation, the net generating capacity in any of the settlement period is outside the range of 98% to 102% of the declared/instructed capacity.

or

(II) The net generating capacity in any of the monitored settlement period falls below the declared capacity.

Add. 69

If a "Capacity Failure" has occurred, the declared capacity for each monitoring period on that day, beginning from the settlement period when first time net generating capacity fell short of declared capacity to the last settlement period of the day, shall be reduced by twice the highest magnitude of the failure on that day. Magnitude of the failure for any settlement period shall be equal to absolute value of difference between declared capacity and net observed generating capacity.

A 'Revised Availability Notice' shall be disregarded for the purpose of misdeclaration penalty if company has already submitted 10 or more such notices since the beginning of sixth day prior to the day in question.

Add. 68: SL NO: 4 deleted

5. Post Event Notices

- (a) If THE ADMINISTRATION wishes to report Modified declared Availability to the Company following a Failure, it shall deliver a "Post Event Notice" or an "Interim Post Event Notice" to the Company within four (4) hours after the end of the Settlement Period in which the failure occurred.
- (b) An Interim Post Event Notice shall not be valid unless it specifies.
 - (i) the time and date that is issued;
 - (ii) the Settlement Periods in which the Failure occurred; and
 - (iii) a general description of the failure.
- (c) A post Event Notice shall be valid only if:
 - (i) it is delivered no later than 5 p.m. on the fifth day following the Failure;

generator capacity of the Project. No period of monitoring shall commence earlier than thirty (30) minutes after such Monitoring Notice has been given. The Monitoring Notice shall;

- i) state the maximum period over which monitoring will occur for each parameter; and
 - ii) instruct the Company as to how it should operate the Project for the purpose of demonstrating the identified parameter. The total period of monitoring shall not exceed four (4) hours.
 - c) Unless the Company satisfies THE ADMINISTRATION within thirty (30) minutes after receipt of Monitoring Notice of the accuracy of the relevant Availability Notice or Revised Availability Notice, the period of monitoring shall begin as stated in the Monitoring Notice.
 - d) The Company shall not be entitled to any additional compensation beyond its right to receive the charges payable pursuant to Appendix D by reason of the Monitoring Project.
 - e) No more than one Monitoring Notice may be delivered by THE ADMINISTRATION in a Day unless the Company issued a Revised availability Notice after the conclusion of the period of monitoring.
 - f) If THE ADMINISTRATION desires to monitor the gross generator capacity of the Project, it shall instruct the Company to operate the Project at its Declared Availability. If the monitored gross generator capacity during a settlement period is below the Declared availability for such settlement period (other than while responding to a Dispatch Instruction to increase or decrease load), then a "Failure" shall have occurred. The magnitude of such failure shall be equal to the Declared Availability minus the monitored gross generator capacity. If during actual operation net generated capacity is less than 98% or more than 102% of the declared /despatched capacity, this condition would also be treated as failure.
 - g) If THE ADMINISTRATION wishes to monitor the net generating capacity of the Project during an Emergency or an event of Force Majeure which prevents the Project from operating at its Declared Availability, THE ADMINISTRATION shall not be required to instruct the Project to operate at its Declared Availability for the purpose of monitoring but may inspect any unit and carry out any reasonable tests, at rated grid conditions, in order to verify its declared availability.
- Add. 65
- Add. 66
- ↓
- If it shall be determined that the project is not capable of being operated consistently with its declared availability, then a failure shall be deemed to have occurred and magnitude of failure shall be equal to the difference between the Declared availability and the available capacity determined on the basis of such inspection or testing (the "Observed

PLOT OF PROJECT SITE**MEETS & BOUNDS DESCRIPTION**

The proposed project is to be located at the site within the defunct Bambooflat Power House owned by Andaman & Nicobar Electricity Department. The details of the project site are given below :-

- | | | | |
|----|------------|---|-------------------------------------|
| 1. | Total Area | : | 4.67 Hectares. |
| 2. | Location | : | Bambooflat, Port Blair, A&N Islands |
| 3. | Latitude | : | 6 - 14 North |
| 4. | Longitude | : | 92 - 94 East |
| 5. | Leel | : | 4.77 Mtrs. from MSL. |

ADDITIONAL CLAUSE : (Refer Addendum - 1 of PPA Signed on 20.11.97 - Point 76)

Add-76

The site conditions are given by Andaman & Nicobar Administration are as follows :-

- | | | | |
|----|-------------------------------------|---|------------------------------------|
| a. | Highest Dry Bulb Temperature | : | 30.1 Deg.C |
| b. | Lowest Dry Bulb Temperature | : | 25.4 Deg.C |
| c. | Annual Mean Bulb Temperature | : | 28.2 Deg.C |
| d. | Highest Monthly Mean Dry Bulb Temp. | : | 25.9 Deg.C |
| e. | Annual Mean Wet Bulb Temperature | : | 24.8 Deg.C |
| f. | Max. Humidity at 28.2 Deg.C | : | 89% |
| g. | Average Annual Rainfall | : | 3180.5 mm. |
| h. | Heaviest Rainfall in 24 hrs. | : | 295 mm. |
| i. | Average Rainy Days in a Year | : | 147 |
| j. | Max. Wind Velocity | : | 19.8 Km/hr. |
| k. | Altitude, above sea level | : | 4.25 Mtrs. |
| l. | Installation | : | Indoor |
| m. | Atmospheric Condition | : | Highly Corrosive Saline Atmosphere |
| n. | Sea Water Temperature | : | 30 Deg.C |

- (ii) it is preceded by a valid Interim Post Event Notice delivered no later than four (4) hours after the failure occurred (unless the Post Event Notice itself is delivered to the Company within this four (4) hour dead line);
 - (iii) it specifies the Settlement Periods in which the Modified Declared Availability of the Project is to be reported;
 - (iv) it describes the Failure in reasonable detail, accompanied by available evidence that such Failure occurred;
 - (v) it states Modified Declared capacities for Settlements Periods affected by the Failure, along with supporting calculations; and
 - (vi) it is limited to matters specified in the Interim Post event Notice (if any) associated with the failure.
- (d) The time periods specified in this Paragraph 5 shall be extended to take account of any inability to deliver any notices due to Force Majeure.

6. Notices.

All written notices required to be given pursuant to this Appendix L may be delivered by facsimile. Except for Interim Post Event Notices and Post Event Notices, which shall be effective only upon the receipt of a written notice in accordance with Paragraph 5 of this Appendix L, all other notices described in this Appendix 1 may be given by the Company initially by telephone, and will be deemed to have been received by THE ADMINISTRATION upon such communication provided that a written notice with respect to such communication is delivered to THE ADMINISTRATION within four (4) hours of such communication by telephone. The four (4) hours specified in this Paragraph shall be extended, taken account of any inability to deliver notices due to Force Majeure including transmission difficulties that are beyond the control of the Parties.

7. Disputes. Any disputes arising out of this Appendix L shall be resolved in accordance with the provisions of article 15 of the agreement.

ATTACHMENT - I

	A	B	C	D	E	F	
Reason for Termination	Uplift	DCFC	CPV	TV	Total Debt Amount	Transfer Taxes	Transfer Costs
Company sale option following the Admn. event of default	30%	100%	100%	0%	100%	100%	100%
The Admn. Purchase option following company event of default	0%	25%	See Note I	0%	100%	See Note 2	0%
Company sale option or Admn. purchase option following GOI direct Indian Political event or the Admn. event of default.	22.5%	75%	100%	0%	100%	100%	75%
Company sale option or the or the Admn. purchase option following direct Indian Political event.	30%	100%	100%	0%	100%	100%	100%
The Administration purchase option following indirect Indian Political event.	0%	55%	100%	0%	100%	100%	55%
Admn. purchase option following expiry of agreement.	0%	0%	0%	100%	0%	100%	100%

- NOTES : 1. If the CPV is positive after all adjustments by the appraiser, then B = 0%. If the CPV is negative, then B = 100%.
2. In the event termination occurs as a result of company default or pursuant to fuel supplier default, the Admn. shall pay all transfer taxes in excess of 5.5% of the buy out price.

ABB : DCFC = Depreciated Cash Flow Valuation.
 CPV = Construction Period Valuation. (Equity + ROE)
 TV = Terminal Valuation.
 ROE = Return On Equity.

providing for termination payments in project documents have been disclosed to the Admn. prior to the financial closing date and have not been made amended (except with the Admn's written consent) to increase the amount of payment) and all taxes including capital gains taxes and income taxes but excluding Transfer Taxes as defined in Paragraph 5 (f) above.

6. The Buy-Out Price.

The "The Buy-Out Price" shall equal the sum of the following elements, adjust if appropriate under paragraph 3 (f) of this Appendix K:

- a) A * DCFV
- b) B * CPV
- c) C * TV
- d) D * Total Debt Amount
- e) E * Transfer Taxes, and
- f) F * Transfer Cost

For the purposes of determining the Buy-Out Price, the figure represented by the letters A, B, C, D, E and F above shall be determined by reference to the table set out in Attachment 1 to this Appendix K. The Notes to the Table should also be taken into account when calculating the relevant variable.

v) such other matters as the Appraiser may determine.

However, THE COMPANY should not suffer a reduction in the Buy-Out Price for losses which have occurred due to an

Indian Political Event or for which compensation would have been available through liquidated damages in the Construction Contract had the termination not halted construction. To the extent that the Company receives any compensation through liquidated damages, the amount of compensation shall reduce the Buy-Out Price commensurately.

d) The terminal valuation ("TV") shall equal 50% of the depreciated replacement cost ("DRC") which shall assume that the Project has an operating life of fifteen (15) years from the commercial operation date of the project and which shall be the sum of:

i) the value of the Project's right, title and interest in land, buildings and fixtures calculated on the Depreciated Replacement Cost basis, as detailed in the Statement of Practice and,

ii) the value of all plant, machinery and equipment owned by the Project calculated by reference to the net current replacement cost thereof, as detailed in the valuation of Plant and Machinery assets practices set out in the statement of practice.

e) The "Total Debt Amount" shall be given in Rupees and shall equal all outstanding Principal repayments of THE COMPANY pursuant to the Approved Capital Schedule plus any working capital and any accrued interest and financing fees as at the Transfer Date plus during the construction period only any trade payables, excluding termination payments and other amounts included as Transfer Costs owed by the Company to the Contractor.

f) The transfer Taxes" shall equal all stamp and additional stamp duties and any other taxes (including any sales or value added taxes but not capital gains tax or income tax) and any registration fees that become payable by the Company as a result of the purchase of the Project by THE ADMINISTRATION.

Add.
62.

g) The "Transfer Cost" shall equal all costs and liabilities of THE COMPANY which are a result of purchase of the Project by THE ADMINISTRATION, including without limitation, the fees and out-of-pocket expenses of the Appraiser, Lenders' fees and out-of-pocket expenses for repayment of any Debt, any termination payments or novation fees on contracts in connection with the Project whose terms are reasonable and Customary for private power projects such as the Project or were specifically approved by THE ADMINISTRATION, (but only to the extent that the contractual terms

ii) The valuation will be conducted on the presumption that this Agreement will continue in full force and effect until the end of its full fifteen year Term and will be conducted on the further presumption (which the Appraiser can depart from for goods reason, such reason not to be the existence of an Indian Political Event or a THE ADMINISTRATION Event of Default) that all other contracts in connection with the Project, including in particular, all outstanding Fuel Supply Agreements (whether or not such agreements are novated or assigned to THE ADMINISTRATION) will continue in full force and effect until their natural expiry. Furthermore, it will be assumed that for the purposes of the Valuation that THE ADMINISTRATION meets its future payment obligations under the Agreement and that there is no end of an events of Force Majeure (other than Indian Political Events) that led directly to the issue of the Buy-out Notice, as well as an end to any Indian Political Events, whether or not such Indian Political Events led directly to the issue of the Buy-out notice.

iii) Any reduction of the value in the assets of the Project due to Indian Political Events shall not be for the account of the Company and shall not reduce the buy-out price from that which would have pertained if such an Indian Political Event had not occurred.

b) The discounted cash flow valuation ("DCFV") shall be an estimate of the net present value of the expected cash flows accruing to the Company (after all Debt service and all other Project costs and expenses) as a result of operating the Project as a going concern over the remainder of the term of this Agreement (as if it were not terminated until its expiry at the end of fifteen (15) years beginning on the Commercial Operation Date) plus the residual value of the project as set forth below. The DCFV shall be carried out in line with normal industry practice, following the guidelines set out below.

i) Annual cash flow ("ACF") projections in Rupees shall be prepared on an after-tax basis according to the following formula

ACF : Rev-Opex-Capex - Debt - Taxes - DNWI

where

Rev : All operating revenues determined under this Agreement and any payment for ancillary services.

Opex : Cash expenses of the project including all interest and fees on borrowings, except that any cash expenses required as a result of an Indian Political Event shall not be included in Opex.

nominate one of the persons on that list to be the Appraiser within 5 Days after it receives the list, failing which either Party may ask the President or Acting president for the time being of the Institute of Chartered Accountants of England and Wales or (if a majority of the Company's shares are then owned by Indian nationals resident in India) the President of the Institute of the Chartered Accountants of India to nominate an individual who has the necessary qualifications and experience to act as Appraiser and that person subject to this agreement to act) shall be the Appraiser.

b) The appraiser shall prepare the Valuation in accordance with the methodology set out in Paragraphs 5 and 6 of this Appendix. Throughout the Valuation Process, the Appraiser shall consult with the Parties keep them advised of the progress of the valuation and shall take in to account any representations made by either party. Both parties shall be entitled to receive and comment on the other Party's representations and be present at all meetings between the Appraiser and the Other party.

c) The Appraiser shall complete the Valuation within sixty (60) days of the issue of the Buy-out Notice and deliver a written copy of his determination of the Valuation to both parties.

d) The Transfer Date shall occur within thirty (30) Days after receipt of the issue of the Buy-Out Notice and deliver a written copy of his determination of the Valuation to both parties.

e) Following Completion (but no later than sixty (60) Days thereafter) THE ADMINISTRATION and the Company may each submit a "Post-Closing Adjustment" to the other party to reflect differences between the assumptions used in the Valuation and the actual asset position on the Transfer Date, for example, a difference in inventory levels and other matters as to which post closing adjustments are appropriate in making the Valuation. Post-Closing Adjustments will be paid promptly by the recipient. Any dispute over the Post-closing Adjustment shall be referred to the Appraiser.

f) The Appraiser's decision shall be final and binding on the Parties and not open to dispute or arbitration.

5. Calculation of the Components of the Buy-Out Price.

a) The general guidelines for determining the Buy-Out price shall be as follows:

i) The Buy-Out Price will be stated in the Valuation in Rupees. If there is a movement of 1% or more between the Rupee/Dollar Exchange rate used in the Valuation and the rate on the Transfer date, then the Appraiser will update the Valuation following completion to reflect the exchange rate on the Transfer Date and any difference will be included as a Post-Closing Adjustments;

- vi) The discount rate will be a nominal discount rate (i.e) including inflation) and will be determined by the Appraiser based on the cost of equity of electrical generating companies that are publicly quoted in India but adjusted to take into account the location and size of the project, the fact that it may be a private company without a diversified portfolio of assets, the length of operating history, the predictability of the cash flows and their limited growth potential and any other factors that the Appraiser judges to be appropriate. The discount rate shall be determined to be in range of 11% to 15% in real terms plus the forecast of Indian inflation made pursuant to sub-Paragraph (iii) above, minus the forecast of U.S. inflation.
 - vii) The DCFV should be based on the value of the assets as at the Transfer Date, However, the DCFV should also include a component to cover any reduction in profits that THE COMPANY has suffered as a result of the Company receiving reduced revenues between the date of any Termination Notice and the Transfer date. Such component shall be calculated at the sole discretion of the Appraiser.
- D) The construction period valuation ("CPV") shall apply if the Project has not reached its commercial operation Date and shall be stated in Rupees. The CPV shall equal 100% of the sum of all Equity up until the Transfer Date plus an allowed return on any such equity ("uplift") at a compound annual rate over such period as shown in paragraph 6 of this Appendix K. Such sum shall be in the currencies in which the Equity was originally subscribed, converted in to Rupees at an estimated exchange rate at the Transfer Date. The Appraiser shall make any adjustments that in his sole discretion he feels are necessary to account for any loss or gain in the value of the underlying assets, such adjustments should reflect:
- i) the extent to which the progress of construction of the project would lead to damages being payable to THE ADMINISTRATION for delay;
 - ii) the extent to which the amounts actually incurred by the Company differ from the budgeted amounts at the start of construction;
 - iii) the extent to which the estimated final specifications, operating costs and performance characteristics of the Project differ from those anticipated at the start of construction;
 - iv) the amounts included in Equity that have been spent on the Projects, and

- Capex : Any capital expenditure not already included in Opex, including the estimated cost of repairing any defect or physical loss or damage to the project, except that any capital expenditure required as a result of an Indian Political Event shall not be included in Capex.
- Debt : All principal repayments pursuant to the Approved Capital Schedule, and any reduction or increases in any working capital loans, increases in such being treated as negative number.
- Taxes : Corporate income taxes
- DNWI : Any increase or decrease in net working investment required each Tariff Year. Reduction in net working investment shall be treated as negative. The net working investment shall be the sum of inventories and trade receivables minus payables.
- ii) ACF's should be considered to occur on average at the middle of each Tariff year.
- iii) Inflation and exchange rate movements shall be applied to the components of the forecast. The forecast of Indian inflation used in the computation of the Buy-out Price shall not be less than 7% nor greater than 11% per annum. Any exchange rate forecasts shall be based on purchasing power parity so that forecast movements in exchange rates will be determined by a forecast of the differential inflation rates in the respective countries.
- iv) The Appraiser will have sole regard to the future operation of the Project, considering all factors that are likely to affect it, including but not limited to the following:
- A) Plant Load Factors for the calculation of tariffs should be based on historical performances unless there is a reason to believe that this is not a reliable indicator of future performance.
- B) Plant heat rates should also reflect historical performance but should also take in to account future heat rate degradation of the Project.
- C) Operation and Maintenance Expenses should be based on Prudent Utility Practice and should reflect historical performance levels as well as any factors, which in the judgement of the Appraiser, are likely to affect future cost levels.
- v) A terminal value cash flow shall be included at the end of the final year of the projection period. Such cash flow shall equal the Terminal Value as defined below.

TERMS AND CONDITIONS :

The applicant shall make an application for grant of Fresh Consent at least 30 days before the date of expiry of the Consent.

Add. Page
45

Necessary fee, as prescribed, for obtaining consent shall be paid for by the applicant, alongwith the Consent application.

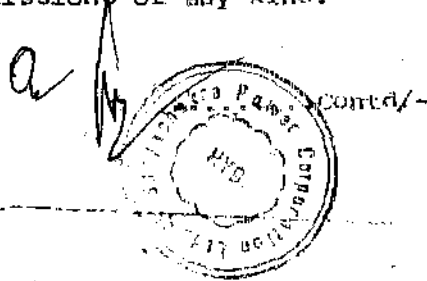
The industry would immediately submit the revised application for consent to this Board in the event of any change in the raw material, process, air pollution equipment, rate of emissions etc.

The applicant shall not change or alter either the quality or the quantity or the rate of emission without the previous written permission of the Board.

The existing control equipment, if any, shall be altered or replaced in accordance with the directions of the Board.

The applicant shall either:

- (a) Not later than 30 days from the date of issue of this Consent Order, certify in writing to the Member Secretary that the applicant had installed or provided for an alternate electric power source sufficient to operate all facilities installed by the applicant to maintain compliance with the terms and conditions of this consent.
 - (b) Not later than 30 days from the date of this consent certify writing to the Member Secretary that upon the reduction loss or failure of one or more of the Primary source of electric power to any facilities installed by the applicant to maintain compliance with the terms and conditions of this consent, the applicant shall hold, reduce or otherwise control production and/or terms and conditions of this consent.
1. No control equipment or chimney shall be altered or replaced or as the case may be erected or re-erected except with the previous approval of this Board.
2. There shall not be any fugitive emissions from the premises.
3. The liquid effluent arising out of the operation of the air pollution control equipment shall also be treated in a manner and to the standards stipulated in the consent granted under water (Prevention and control of pollution) Act, 1974 by this Board.
4. Solid waste : The solid waste arising in the factory premises as sweeping empty containers, residues, sludges, including those from control equipments etc. shall be disposed off carefully, by land filling, sales etc. so as not to cause fugitive emissions of any kind.



THE CONDITIONS OF CONSENT FOR THE ISSUANCE
OF A DIRECTION OF EMISSION UNDER EMISSIONS OF
THE AIR (PREVENTION & CONTROL OF POLLUTION)
ACT, 1981

Add. Page 44

The applicant shall maintain good housekeeping both within the factory and in the premises. All pipelines, valves, storage tanks, etc. shall be leakproof, in plant allowable pollutants levels, if specified by Central Board should be strictly met.

Adequate facilities shall be provided for sampling viz, sampling holes of specified locations and dimension, platform of specified size and strength, pulley arrangements, electric connections etc.

The applicant/company shall comply with and carry out directions/orders issued by the Board in this Consent Order and at all subsequent times without any negligence on his its part. The applicant/company shall be liable for such legal action against him as per provision of the law/Act in case of violation of any order/directives issued at any time and/or non compliance of the terms and conditions of this Consent Order.

The applicant shall not change or alter the quality/quantity of rate of emission and also the final outlets without the rate of emission and also the final outlets without the prior written permission from the Board.

Any upset condition in any of plant/plants of the factory which is likely to result in increased emission(s) and/or result in violation of emission standards mentioned in conditions shall be reported to this Board, telegraphically with intimation to the Member Secretary, Central Pollution Control Board.


A green belt (having tall and dense trees) around the factory should be provided under intimation and approval of the Central Board.

The applicant shall furnish to the visiting officer and/or the Central Board any information regarding the construction/installation or operation of the establishment or of emission/control system and such other particulars as may be pertinent to prevent and controlling air pollution.

The Control equipment of such specifications as the Central Board may approve in this behalf shall be installed and operated in the premises where the industry is carried on or proposed to be carried on.

The existing control equipment if required shall be altered or replaced in accordance with the directions of the Central Board.

The above general conditions may be modified by Central Board from time to time and copies of such modified conditions will be communicated to the industries concerned by Registered Post.


Member Secretary.



Add. Page 43

NO. 3-25/SGI/FCB/DEU(SCI)/93-94/50
ANDAMAN AND NICOBAR ADMINISTRATION
POLLUTION CONTROL BOARD
DIRECTORATE OF EDUCATION

Schedule 4(5)

Port Blair, dated the 1st March, 1994.

To

Shri Bhagat Singh,
Superintending Engineer,
Electricity Department,
Port Blair - 744101,
A & N Islands.

Consent for Commissioning a 20 MW (4 x 5 MW)
Thermal Power Plant (Diesel Power House) at
Bambooflat, under section 21 of the Air
(Prevention and Control of Pollution) Act, 1981.

Consent is hereby granted under Section 21 of
the Air (Prevention And Control of Pollution) Act, 1981
(herein after referred to as the Act) and the rules and
orders made there under to the Electricity Department,
P.O. Bambooflat, Andaman and Nicobar Island, Port Blair
(herein after referred to as the 'applicant') authorising
them to establish their Thermal Power Plant at Bambooflat
as notified. Subject to the conditions stated below and
the general consent conditions enclosed herewith :

1. This consent is valid for commissioning the Thermal
Power Plant (Diesel Power House) of 20 MW capacity;
2. The particulate matter emission from any of the
sources shall not exceed 150 mg/Nm³;
3. The height of the stack shall be 15 meters; 5 meters
above the building in which the DG sets are to be
housed or 15 meters from the ground level whichever
is higher;
4. Only H.S.D. Oil shall be used as fuel in the DG set
and the fuel consumption of H.S.D. Oil shall not exceed
80.00 MT (Eighty MT)/Day with maximum one percent
sulphur content;
5. The applicant shall provide facilities for sampling
of stack emission as per Central Board's Emission
Regulation (Part III) No. COINDS/20/84-85;
6. Notwithstanding the condition No. 1 the Consent shall
be valid upto the period of commissioning of the
power Plant. The Consent issued to you would auto-
matically stand revoked without any further notice in
case of your not meeting the above conditions;
7. The Consent order is further subject to the terms and
conditions incorporated in the schedule annexure
enclosed hereto.

- 40 -
Member Secretary.

GOVERNMENT OF INDIA
विद्युत विभाग
MINISTRY OF POWER
भवन नं. ११, रवी मार्ग,
SHRAVA SHAKTI BHAVAN, RAVI MARG,

Add. Page 42

सं क्रि. - ११०००१

New Delhi-110001

3rd May, 1994.

No. 15(10)/94-Th.

The Electricity Department, Andaman & Nicobar Administration has submitted a project proposal to the Central Electricity Authority for installation of 4x5 MW Diesel Generating sets at Bombooflat, Port Blair, South Andaman for techno-economic clearance. The first unit is planned to be commissioned in September, 1996, 2nd unit by April, 1997 and rest two by August, 1998.

The CEA have indicated the following requirements of High Speed Diesel oil for the proposed diesel generating sets:

1996-97	4380 KL
1997-98	8760 KL
1998-99	17520 KL
onwards	

The above requirements of H.S.D. are based on 40% PLE and specific consumption of 0.25 Litre/Kwh. In order to enable CEA to consider the above scheme for techno-economic clearance, establishment of fuel linkage as aforesaid is essential.

I shall be grateful if you could have the matter examined in your Ministry and issue necessary approval for the fuel linkage to enable CEA to consider the above project for techno-economic clearance.

With regards,

Yours sincerely,

[R. VASUDEVAR]

Shri T.N.R. Rao,

Secretary,

Ministry of Petroleum & Natural Gas,

Sewa Bhawan,

New Delhi.

Copy forwarded for information to:-

1. Shri M.A. Ramanan, Member (Thermal), Central Electricity Authority, Sewa Bhawan, RK Puram, New Delhi.
2. Shri V.K. Sharma, Deputy Secretary (OM), Ministry of Power, New Delhi.

Under Secretary to the Govt. of I

Add. page 42

- 26 - 39 -

PLOR



No. 21017/7/94-Dist.
Government of India
Ministry of Petroleum & Natural Gas
.....

New Delhi, dated 14th Sept. '94

To

The Secretary
Ministry of Power
Shram Shakti Bhavan
New Delhi

Sub: HSD supply to Electricity Department, Andaman
& Nicobar Administration for 4x5 MW Diesel
Generating Sets.
.....

Sir,

Please refer to your d.o. No. 15(10)/94-Th.
dt. 3.5.94 regarding allotment of HSD to the
Electricity Department, Andaman and Nicobar
Administration for installation of 4x5 MW Diesel
Generating Sets at Bombooflat, Port Blair, South
Andaman to be commissioned in September, 1996.

2. The Ministry has reconsidered the case, and
has allocated HSD amounting to 4380 KLS for the year
1996-97, 8760 KLS for the year 1997-98 and 17520 KLS
for the year 1998-99 through IOC to Andaman and
Nicobar Administration for the project which is to be
commissioned from September, 1996 subject to
clearance of TEC.

Yours faithfully,

(Sunil Uke)

Dy. Secretary to the Govt. of India
Tel No. 383074

Copy to:

1. Member (Thermal) & Ex-Officio Addl. Secretary
to Govt. of India, Central Electricity
Authority, Sewa Bhawan, R.K. Puram, New Delhi
w.e.f. his d.o. No. CEA/TP/241(Gen.)/94/661
dated 19.4.94.
2. Executive Director, OCC, New Delhi w.r.t. Fax
No. MC & ES : 12240.5 dated 4.7.94.
3. Director (Mkt.), IOC, Bombay.

4-159.94
Dy. Secretary to the Govt. of India



Director (CIA), C.R.A.
Deputy Director, CIA
Deputy Director, CIA
Deputy Director, CIA
Deputy Director, CIA

1. *Thymus* *sp.*

The above report was received in this Department on 2.9.1994 and necessary action was taken on 2.9.1994 in this regard. It was examined and some additional information was required for the purpose of the report. It was examined and some additional information was required for the purpose of the report. It was examined and some additional information was required for the purpose of the report.

[illegible]

Schedule 4(d)
Add. page 40

Add. page 40

... H.O. 1, A.P.W.E.

Schedule 45

Port Blair, dated the 18th July, 1994.

Add page 39

The Superintending Engineer,
Electricity Department,
Port Blair.

Re: Furnishing of details of Bambooflat Reservoir - Reg.

Ref. No. SL/PL/1-43/94/0556 dated 11/7/1994.

With reference to your office letter cited
No. I have been directed to inform you that the
required details regarding availability of water for
DG Power SSK House at Bambooflat is given as

Total demand of water	- 211.16 million lit.
Demand of water for Thermal Water Station.	- 121.00 -do-
Demand of water for Civil Population	- 90.16 -do-
Ratio of water for Power Station & Civil population	- 60/40 3:2

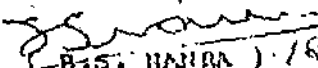
The details of requirement of water for DG Power
Station is as under :-

Working under 150 dry days, per day Requirement - $28 \times 24 = 672$	672 Cum.
150 days requirement - 672×150	= 100800 ..
+ 10% for wastage -	= 20160 ..
= 120960 Cum or Say 121 Million Lit.	

Water by
... and colony.

Yours faithfully,

1.7 ton/day


B.S. HAJIRA) 18/7/94.
SURVEYOR OF WORKS,
C.C.I.

32.2 ton/day

33.9 ton/day



आदेश
अतिरिक्त

Schedule 4(b)

Add. page : 38

प्रकाशित इ. अ. अधिकारी
Published by Authority

नं. 55, पोर्ट ब्लेयर, दण्डवत्, 10 मई, 1994.
No. 55, PORT BLAIR, TUESDAY, MAY 10, 1994.

ANDAMAN AND NICOBAR ADMINISTRATION
SECRETARIAT

NOTIFICATION

Port Blair, dated the 10th May, 1994.

No. 50/94/F. No. 4-1 (24)/93-Power (U).—The following draft scheme prepared for installation of 20 MW Diesel generating power plant at Bambooflat, Port Blair, South Andaman at an estimated cost of Rs. 6994.92 lakhs (PL-1593) hereby published as required under Sub-Section (2) of section 29 of the Electricity (Supply) Act, 1948 for the information of all persons likely to be affected thereby and persons hereby given that those who have any objection or suggestion to make in respect of the said scheme may send the same in writing so as to reach the Superintending Engineer, Electricity Department, Port Blair within two months from the date of publication of the Notice.

SCHEME

Salient features of the Scheme 'Installation of 20 MW Diesel generating power plant at Bambooflat, South Andaman.'

SCHEME AT A GLANCE:

This scheme is projected to augment the D. G. Capacity at South Andaman Island in a long run keeping in view the increase in Power demand by 2000 A. D.

LOCATION:

- | | |
|--------------|--------------------------------|
| (a) Zone | : Andaman and Nicobar Islands. |
| (b) District | : South Andaman. |
| (c) Tehsil | : Ferrargunj. |
| (d) Village | : Bambooflat (4.67 Hect.) |

WORKS ENVISAGED IN THIS SCHEME:

(a) D. G. Sets:

Four Nos. 5000 KW D. G. Sets with auxiliary equipments will be installed and commissioned at Bambooflat by setting up of a new power house with allied civil structures.

(b) Tie-up Sub-Station:

1x11 kVA, 11/33 KV step-up sub-station.

(c) Tie connection:

This proposed new power house will be inter-connected by double circuit 33 KV tie line of 3 Kms. each with existing Chatham Power House. Out of these three Kms., one Km circuit will be laid through sub-marine cables drawn between Hope Town tip to Chatham Power House.

(d) Civil Works:

Construction of Power House building, office-cum-store building with other facilities like maintenance cell, workshop, garage, POL shed, sea water settling pond storage facilities, foundations for equipments, auxiliary structures, Main Sea water pump house with jetty etc.

(e) Environment Clearance:

This scheme has been cleared from environmental angles by Ministry of Environment and Forests in their office memorandum No. J/13011/21/93-1A-III dated 22-4-94.

(f) Estimated Cost:

The estimated cost of the scheme is Rs. 6994.92 lakhs and all the works envisaged are expected to be completed before 1998-99.

(Sd/-)

Assistant Secretary (Power)

Price: Rupee One and Twenty-Five Paise only.

C/94-55 Gazette/94-250 Copies.

256 - 35



- 2 -

- (e) Cooling water system including direct and indirect cooling water pumps with allied works.
- (f) L.P. Piping and fittings.
- (g) Air conditioning system comprising heat recovery system.
- (h) Ventilation system.
- (i) 25T capacity EOT cranes, Misc. cranes and hoists.
- (j) 312 KVA Black start DG sets.
- (k) Workshop equipment.
- (l) Lub. oil purification plant.
- (m) Special tools and accessories.
- (n) Creation of Computer cell with mini computer.
- (o) Training of staff of Electricity Department at work site.

III. Electrical works

- (a) Purchase and installation of 1x10 MVA 11/33 KV and 2x1600/2000 KVA 11/0.4 KV transformers including shifting of 2x10 MVA 11/33 KV transformer from Chatham to Bambooflat.
- (b) 11 KV switchgear and panels including DG switchgear panels, 11 Nos. feeder and isolator panels, 2 potential transformer panels, 1 No. synchronising panel, neutral grounding resistors, 2 Nos. Surge protection panels and 1 No. Bus coupler panels.
- (c) 33 KV switchgear including 1 No. transformer and 4 Nos. feeder isolators and 2 Nos. 33KV Bus couplers.
- (d) 415 volts LV Distribution system switchgear including station service board, emergency control panel, MCCB and AMF panels for black start.
- (e) D.C. facilities including 110V and 24V Battery banks, boost and float charges.
- (f) Master control system including remote control panels and relay and annunciation panels for generators, transformers and feeders etc.
- (g) Power and control cables including 3 Kms. 33KV, 3.5 Kms. 11KV and required lengths of 1.1 KV and instrumentation cables.
- (h) Various other facilities like internal lighting system, communication system, fire alarm system, grounding and lightning protection and electrical workshop and laboratory equipments.

.....

SCOPE OF WORKS FOR ESTABLISHMENT OF 20 MW
DIESEL POWER STATION AT BAMBOOFLAT.

The scope of works are as detailed below:

CIVIL

- a) Development of 4.67 hectrs. of existing land at Bambooflat for construction of Power House and allied structures.
- b) Acquisition of land for staff colony at Bambooflat.
- c) Construction of 0.95 km. of approach road at Bambooflat.
- (d) Construction of 40 mtrs. x 60 mtrs. of Station building for housing the DG sets and allied equipments.
- e) Construction of 2x80 KL fresh water storage tank.
- f) Construction of circulating water pump house.
- g) Construction of jetty, 20x10 metres main sea water pump house, 40x20x3 metres settling tank alongwith associated intake and delivery pipings.
- h) Laying of 1 km. of fresh water pipe line.
- i) Construction of fuel oil pump house including MCCB and tank foundation for fuel oil treatment plant.
- j) Construction of fuel oil tank and Dyke.
- k) Construction of Transformer yard.
- l) Construction of switchgear room.
- m) Construction of Auxiliary building.
(i) canteen 100 Mts², (ii) Administrative building 200 Mtr.²
(iii) workshop building 100 Mtr.², (iv) store building 100 Mtr.²
(v) Gate house (vi) recreation hall-50 m²
- n) Provision for meeting Environmental requirements such as setting up of monitoring equipments and providing green belt.
- o) Construction of 45 nos. staff quarters viz 20 Nos. Type-I, 15 Nos. Type II, 6 Nos. Type III, 3 Nos. Type IV and 1 No. Type V.

Mechanical work

Purchase installation and commissioning of Diesel Generation sets aggregating to 20MW capacity at Bambooflat power house including following auxiliary equipments/facilities.

Control and Monitoring system for complete plant.

Fuel oil system including HSD oil unloading pumps, HSD oil storage tank, HSD purification plant, FOIL oil booster pumps and associated pipelinen.

Fresh water system including water supply pumps, chlorination plants, wind. pump pumps.

Fire fighting system.

Annexure-I

COST ESTIMATES FOR 20 MW DIESEL
GENERATING POWER PLANT AT BANBOOFLAT SOUTH MIDAH

<u>SL.NO.</u>	<u>ITEM</u>	<u>RUPEES IN LACS.</u>
1.	Preliminary works & cost of land	6.95
2.	Civil works.	571.20
3.	Mechanical works.	
3(a)	Diesel engines, generators and accessories incl. inlet filter, silencers, control & monitoring system etc. (CIF prices) incl. spares.	2775.21 960.00 125.78 <hr/> 3860.99
(b)	Water system, ventilation and Air conditioning, fire fighting, Laboratory, Cranes & Hoists etc. (Ex-works prices, spares, freight, insurance & taxes on local components).	249.81 126.14 <hr/> 375.95
(c)	Port handling & in land transportation.	74.71
(d)	Custom duty on imported equipments @ 20% of CIF cost.	Incl. clause 3 (a) above.
(e)	Erection, testing & commissioning charges.	199.10
4.	Electrical works incl. spares, freight taxes, insurance, erection, testing & commissioning.	374.00
	TOTAL WORKS COST	5462.90
5.	Establishment @ 3% of works cost	163.89
6.	Training of O&M staff (Incl. in 126.14 at 3b above).	3.14
7.	T&P @1% of works cost	54.63
8.	Contingency @ 3% of works cost	163.89
9.	Audit & Accounts @1% of works cost	54.63
10.	Consultancy charges @1% of works cost.	54.63
	TOTAL	5954.55
	Say Rs.	5955 lakhs.
	IDC @12%	Rs. 733 lakhs
	Total cost of the scheme including IDC Rs.	<hr/> 6688 lakhs.

(Rupees Six Thousand Six hundred & eighty Eight lakhs)

Add. Page - 34

Schedule - 4(a)

Government of India
Central Electricity Authority
U.P. Directorate

2-Community Centre, Vasant
Vihar, New Delhi - 110057

No. 4/10(92)/93-UP(CEA)/10 dated the 6th Jan., 1995

To

✓ Secretary (Power),
A&N Admn.,
A&N Islands,
Port Blair.

Subj:- Scheme report for establishment of 20MW Diesel Power
Station at Bambooflat in South Andaman.

Sir,

The above scheme report costing Rs.66.88 crores including IDC of Rs.7.33 crores is found to be techno-economically in order subject to the following conditions to be fulfilled by the A&N authorities.

- (i) the techno-economic clearance of power evacuation scheme for the above generation scheme to be obtained in time.
- (ii) confirmation of the continuance of the validity of the directive of Ministry of Home Affairs dated 5th August, 1959,
- (iii) meeting the conditions stipulated in the Ministry of Environment and Forest Clearance letter dated 22.4.94.

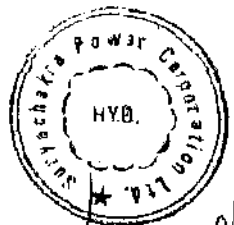
The scope of works and abstract cost of the estimate for the above scheme shall be as per Annexure I & II respectively.

Necessary action for obtaining the required expenditure sanction and investment approval from competent authorities may please be taken at your end early.

Yours faithfully,

(S.L. Narasimhan)
Chief Engineer

Encl : As above.



[Handwritten signature]

Enclosed above

(R.K. Jain)
Chief Engineer (Legal)

Yours faithfully

The above points at 1 and 2 are to be made a part of addendum to be included in the comments already furnished on 3.3.58 at Port Blair.

VA) Frequency variation from +3% to -3% No change in HCR

V) Voltage variation: 5% to -10% No change in HCR

The oil discarded during an engine oil change (when required) shall not be included in the lubricating oil consumption declaration as per ISO 3046 / 1/1936 Item 9.3.

IV) Lub oil consumption

Heat rate at ISO condition as per PPA

Heat rate as per site conditions

Increase in heat rate from ISO condition to site conditions referred by ARI Adm is 10K.cal/kwh an increase of 0.50%.

III) Variation of heat rate under ISO and site conditions :

Raw Water Temp. Deg.C	27	28	29	30	31	32	33	34
Output MW	100	100	100	100	100	100	99	98
HCR	100	100	100	100	100	100	99	98

II) Correction curves w.r.t cooling water temperature:

Add. Page 68

Government of India
Central Electricity Authority
907-E, Sewa Bhawan, R.K. Puram,
New Delhi-110066

27/97-Legal/463

Dated 3.4.98

Mr R. Padmanabhan
Commissioner-Cum-Secretary,
(Power),
Andaman and Nicobar Island Admin.
Port Blair

Mr S.M. Nangpal,
Managing Director,
M/S SPCL,
3-5-725, Street No 11,
Mumbai-400029

220MW Power Station at Port Blair-PWA-Model Tariff
calculation based on latest fuel and lub oil prices-
performance curve etc-Reg.

This has reference to our letter of even number dated 3.3.98
relating to PWA and A&N Administration at Port Blair on 2nd and
3rd M/S SPCL and 559 at 7.3.98 and 559 at 21.3.98.
Reference to information received from M/S SPCL, vide above.
Model Tariff calculations based on latest fuel and lub oil
prices as per our letter of 3.3.98 at Port Blair and M/S
to model calculations based on the assumptions given in the
statement. The actual tariff applicable for any month is to be
computed based on the model calculations. A 15 year average
tariff and levelised tariff are also furnished in the enclosed
performance curves submitted by PWA with supporting letters from
M/S SPCL and M/S A&N have been reviewed. The performance characteristics
of the machine for different variations of parameters are
given below have been considered for computing the rate heat rate.
Correction curves with reference to ambient temperature given are
level: 25 30 35 40 45 50 55
M/S SPCL, PWA, Reg. C
100 100 100 100 100 100 100



of the revenue stream of the utility but from the budgetary provisions of the Govt. Since AMI Islands is a U.T. and the Govt. is expected to provide for Non-plan funds for payment of Electricity demands to the IPP, the arrangement is even better than the Counter-Guarantee by the Govt. However, if the Macrow Account is insisted upon to increase the comfort of lenders, the same could be arranged by the AMIA in consultation with the Ministry of Home Affairs.

The matter regarding Heat Rate ~~aspect~~ has been examined in detail in the OEA and it is confirmed that the calculations of Station Heat Rate of 8030 Kcal/Kwh at site conditions are ⁱⁿ order.

Yours sincerely,

(R.K. Jain)
Chief Engineer (Legal)

Dr. R. Padmanabhan,
Commissioner-cum-Secretary (Power)
AMI Administration
Port Blair.

Copy to :

Shri Nimesh Jain
Deputy Secretary (IPG), Ministry of Power, Shree Bhakti Bhawan
Rafi Marg, New Delhi-110 001.

2. Dr. S.M. Manepalli, Managing Director, M/s. SPCL
3-6-7EB, Street No. 11, Himayat Nagar, Hyderabad-500 089.
3. Chief Engineer (P&CA), CEA
4. Chief Engineer (Thermal Appraisal), CEA
5. Chief Engineer (DPED), CEA

Add. page 67

Central Electricity Authority
907(8), - Sewa Bhawan
R.K. Puram
New Delhi-110 066

D.O.No.38/2/97-Legal/902-07

15/15 June, 1998

Dear Dr. Padmanabhan,

Please refer to your D.O. letter No.4/2(2)/97-Power(El) dated 27th November, 1997 regarding proposal for consideration of Committee on Non-plan expenditure for approval of payment obligation to M/s. SPCL by MoHA for a period of 15 years under the IPA for 20 MW DC Plant at Bambooflat. A meeting was held on dated 8.6.98 in the chamber of Dr. P.D. Shenoy, Additional Secretary, Ministry of Home Affairs to discuss the matter regarding requirement and provision of funds under Non-plan in the budget of MoHA for purchase of power from M/s. SPCL for a period of 15 years. During the discussions it emerged that this case will have to be referred to CNE Committee for their approval. Accordingly it is suggested that A&N Administration may prepare and forward to MoP a detailed draft CNE proposal giving full justification of 20MW plant on the basis of demand projection & present position full details of the requirement of funds for purchase of power from M/s. SPCL, likely recovery from the power supply to electricity consumers and the extent of subsidy for 15 years. Details like peak shortage, energy shortage, present demand and projected demand for 15 years may also be provided in detail in the proposal. It was also decided that the detailed proposal would be sent by the MoP for CNE approval and only after CNE approval the MoHA would be able to make provision of funds under Non-plan in their budget.

In reference to your letter dated 12.2.98 addressed to Shri P.I. Suvarathan, J.S.(Mop) regarding increasing the fuel linkage for maintaining the PLF of 63.49%, it is stated that the plant was proposed to operate at a PLF of 62.5%, while the full fixed charges are recoverable at 63.49% PLF as per Tariff Notification. Such a provision would be construed as a deviation and A&N needs to approach MoP for relaxation for operation of plant at PLF lower than normative PLF for recovery of full annual fixed charges. The basis on which 63.49% PLF is now being considered by A&N needs to be justified with full details.

As regards opening of Escrow Account, there is no doubt that lenders for projects developed through non-recourse funding insist on Escrow Account. But in this particular case the payment to the IPP is not proposed to be met out

Add. page 66

Contd... 2/-

OFFICE OF THE CONSERVATOR OF FORESTS

(Andaman Circle)

Chatham, Port Blair - 744102

File Page 55

Schedule A(j)

Date: 9th Sept. 1994.

129

To

The Superintending Engineer,
Electricity Department,
Andaman and Nicobar Administration,
Port Blair.

Subject:- Power evacuation from the proposed
20 M.W. diesel power station at
Bambooflat- reg.

Sir,

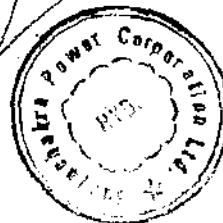
Please refer to your letter No. EL/PL/1-43/94/
9797 dated the 9th Sept. 1994 regarding ^{power} evacua-
tion from the proposed 20 M.W. diesel power station
at Bambooflat. Since the power evacuation is to be
done through overhead system on the same existing
alignment, where no Govt. forest land is involved,
the Forest department does not have any objection
for power evacuation from the proposed power station
at Bambooflat.

Yours faithfully,

Conservator of Forests,
Andaman Circle.

9/9/94

Cok/-



222

52



National Airports Authority,

RAJIV GANDHI BHAVAN, SAKDARJUNG MHPORI
NEW DELHI-110013

१६०॥॥ ॥॥॥ ॥॥॥

240. *Enallagma cyathigerum* = *Enallagma*

ARI

Dated 21.11.2016, 2016

Schedule 444

Add. page 54

The Superintending Engineer,
Electricity Department,
Anderson & Nicolson Administration,
FCM-4618.

Subj: Issue of BOC for the proposed const. of Chimney for 2001

FORMER STATION, 62, 155, 001, 1, 1, 1

Please refer to your letter No EL/71/1-42/84/86E2 dated 11-11-84 on the subject mentioned above.

[illegible]

2. This no objection Certificate is being issued on the express understanding that the site elevation indicated level (height above mean sea level) viz. A-77.00 m, MSL, relative location of the proposed Oldg. Structure & its distance and bearings from the ARB Runway ends, as tendered by the applicant(s) are correct. If, however, at any stage it is established that the said data as tendered by the said applicant is actually different from the one tendered & which could adversely affect aircraft operations, the structure or building thereof in respect of which this "N.O.C." is being issued will have to be demolished at risk own cost as may be directed by the National Aeronautics Authority. The applicant(s) is/are therefore advised in his/their own interest to verify the elevation and other data furnished for the site, before unbinding on the proposed construction.

2. The issue of the 'NOC' is further subject to the provisions of Section 2-A of the Indian Aircraft Act, 1934 and those of any notifications issued thereunder from time to time and under which the applicant may be called upon by the National Airports Authority to demolish in whole or in part the structure now being authorised vide this 'N.O.C.'

5. No Radio/TV Antennas, lightning arresters, stakcage, Mumlve, Overhead water tank and attachments or fixtures of any kind shall project above the height indicated in para 2.

5 The use of all fixed or electric fixed turnance is obligatory.

7. This Certificate is valid for a period of two years from the date of its issue. If the building/structural Chimney is not constructed & completed within the above mentioned period of two years he will be required to obtain a fresh 'No Objection Certificate' from the Chairman National Airports Authority and/or the Director of Aerodromes, Calcutta Region. The date of completion of building/structure/Chimney should be intimated to the H.A.A. and/or the director of Aerodromes Calcutta Region.

6. No light or a combination of lights which by reason of its intensity, configuration or colour may cause confusion with the aeronautical ground lights of the Airport shall be installed at the site at any time during or after the construction of the building.

to NATIONAL ANTHROPOLOGICAL ARCHIVES

Easy to i

1. The Regional Executive Director, N.A.A., CALIFORNIA Region, CALIFORNIA Airport Collection-57, with his letter No. _____, dated _____, 1964, advised that the Assn. Engineer, Survey, (W.S.) H & K wards, Municipal Offices Building, 1st floor, R.H. Fisher Bldg., Underway, Bombay-39 (E.S.) 1st floor, Municipal Transport Garage Bldg. Behind West Bldg. Airport, Penikese, Chhatrapati S. B. D. Bldg., Bombay-39.

1. James Earl Ray
2. James Earl Ray
3. James Earl Ray
4. James Earl Ray
5. James Earl Ray
6. James Earl Ray
7. James Earl Ray
8. James Earl Ray
9. James Earl Ray
10. James Earl Ray
11. James Earl Ray
12. James Earl Ray
13. James Earl Ray
14. James Earl Ray
15. James Earl Ray
16. James Earl Ray
17. James Earl Ray
18. James Earl Ray
19. James Earl Ray
20. James Earl Ray
21. James Earl Ray
22. James Earl Ray
23. James Earl Ray
24. James Earl Ray
25. James Earl Ray
26. James Earl Ray
27. James Earl Ray
28. James Earl Ray
29. James Earl Ray
30. James Earl Ray
31. James Earl Ray
32. James Earl Ray
33. James Earl Ray
34. James Earl Ray
35. James Earl Ray
36. James Earl Ray
37. James Earl Ray
38. James Earl Ray
39. James Earl Ray
40. James Earl Ray
41. James Earl Ray
42. James Earl Ray
43. James Earl Ray
44. James Earl Ray
45. James Earl Ray
46. James Earl Ray
47. James Earl Ray
48. James Earl Ray
49. James Earl Ray
50. James Earl Ray
51. James Earl Ray
52. James Earl Ray
53. James Earl Ray
54. James Earl Ray
55. James Earl Ray
56. James Earl Ray
57. James Earl Ray
58. James Earl Ray
59. James Earl Ray
60. James Earl Ray
61. James Earl Ray
62. James Earl Ray
63. James Earl Ray
64. James Earl Ray
65. James Earl Ray
66. James Earl Ray
67. James Earl Ray
68. James Earl Ray
69. James Earl Ray
70. James Earl Ray
71. James Earl Ray
72. James Earl Ray
73. James Earl Ray
74. James Earl Ray
75. James Earl Ray
76. James Earl Ray
77. James Earl Ray
78. James Earl Ray
79. James Earl Ray
80. James Earl Ray
81. James Earl Ray
82. James Earl Ray
83. James Earl Ray
84. James Earl Ray
85. James Earl Ray
86. James Earl Ray
87. James Earl Ray
88. James Earl Ray
89. James Earl Ray
90. James Earl Ray
91. James Earl Ray
92. James Earl Ray
93. James Earl Ray
94. James Earl Ray
95. James Earl Ray
96. James Earl Ray
97. James Earl Ray
98. James Earl Ray
99. James Earl Ray
100. James Earl Ray

Sl. no. 11 (a)

Schedule 4(h)

No. BNU-01934/South Andaman

Add. page 53



NO.

GOVERNMENT OF INDIA
INDIA METEOROLOGICAL DEPARTMENT
OFFICE OF THE
DIRECTOR GENERAL OF METEOROLOGY
MAUSAM BHAVAN, LODI ROAD
NEW DELHI-110003
Telegraphic Address :
DIRGENMET, NEW DELHI

Stamp/Date..... MAY 21 1994

Dr. S. Dhowmik
Joint Director (Technical)
Ministry of Environment & Forests
Mansarovar Bhawan
C.O.D. Complex, Lodi Road,
New Delhi-110003.

20 MW D.G. Power House at South Andaman-Environmental
clearance regarding.

Kindly refer to your letter No. J-13011/21/93-1A
dated 13.1.1994 addressed to the Superintending Engineer,
City Department, Andaman and Nicobar Administration,
concerning appropriate stack height for 20 MW D.G.
House at South Andaman.

This office has examined the proposed thermal project
meteorological aspects of air pollution after receipt of
documents from the Superintending Engineer under
Order No. BL/PL/1-43/94/3419-22 dt. 23.3.1994. Considering
the existing background pollution levels of SO₂ and NO_x
relatively insignificant in that area, it has been estimated
that maximum short-term (8-hr) ground level concentrations of
NO_x are likely to remain within the Ambient Air Quality
standards laid down for rural and residential area in case the
stack height of the proposed D.G. power house is kept

Yours faithfully,

(S.C. SHARMA)

Director

For Director General of Meteorology



- 277 50 -

Add page 52

- 1x) Adequate measures for control of noise pollution should be taken so as to keep the noise levels below 85 db, in the working environment.
- x) A separate environment cell with suitable qualified people to carry out various functions should be set up under the control of a Senior Executive who will report directly to the head of the organisation.
- xi) Adequate monitoring stations with minimum one meteorological station for air and water quality should be provided in consultation with the State Pollution Control Board. Levels of pollutants (SPM, SO₂ and NOX) should be monitored on regular basis and record maintained.

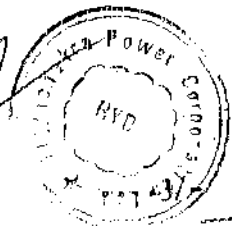
3. The conditions stipulated may be varied or new conditions may be added or the clearance revoked, if necessary in the interest of environmental protection and if there is any change in the project profile, non-satisfactory implementation of the stipulated conditions, etc.

4. The stipulations will be implemented, among others under the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1986, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991.

5. Necessary funds should be provided in the project for implementation of the above mentioned conditions and environmental safeguards. The funds earmarked for the environmental protection measures should not be diverted for other purposes and yearwise expenditure should be reported to this Ministry.

(Dr. S. Bhattacharya)
Joint Director (Scientific)

Shri Bhagat Singh,
Andaman and Nicobar
Administration,
Electricity Department,
Port Blair.





MIS :
Telegram : PARYAVARAN,
NEW DELHI

दूरभाष :
Telephone No.
टेलिग्राफ :

Telex : W-66185 DOE IN
Fax : 4300678

Schedule of (g)
Att. page 51

भारत सरकार
पर्यावरण एवं वन विभाग
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS
पर्यावरण भवन, पी.जी.डी. कॉम्प्लेक्स
परीदी रोड, नई दिल्ली-110003
LORI ROAD, NEW DELHI-110003

22.4.94.

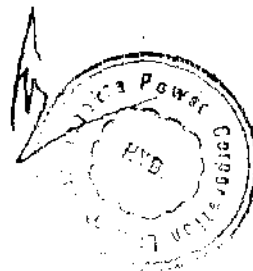
OFFICE MEMORANDUM

Subj:- Diesel based power station (4x5 MW) at Bamboo flat of South Andaman Island.

Andaman and Nicobar Administration may refer to their letter No. EL/PL/1-43/93/8935-36 dated 26th November, 93 on the above cited subject.

2. The proposal has been examined and the undersigned is directed to convey environmental approval subject to the implementation of the following conditions and safeguards -

- i) High Speed diesel (HSD) oil should only be used as feed stock. The sulphur content of HSD oil should not exceed 1%.
- ii) The liquid effluents emanating from different units of the power station should be treated as per the standards stipulated by CPCB/state authority.
- iii) No structures should be provided/built within 200 metres from the HTL.
- iv) The Project Authority should obtain confirmation from India Meteorological Department/CPCB regarding stack height.
- v) No forest land should be required.
- vi) A detailed plan for obtaining fill material and rehabilitation of the area should be submitted within a period of three months for approval from this Ministry.
- vii) A green belt not less than 50 mt. width and adequate density should be raised all around the plant.
- viii) Fire & explosion hazards should be prevented and controlled due to use and storage of oil.



- 269 - 48 -

Add. page 50

Ro. 3-25/S LT/PCL/DIO(SC)/94/ 0/10
ANDAMAN AND NICOBAR ADMINISTRATION
POLLUTION CONTROL BOARD

C O R R I G E N D U M

In the letter No. 3-25/S LT/PCL/DIO(SC)/
94/50 dated 1st March, 1994, under serial No. 1
the sentence.

" This consent shall be valid for a period
upto the date of commissioning of the Thermal
Power Plant (Diesel Power House)." is substit-
uted as " The consent is valid for commissioning
of thermal power plant (Diesel Power House) of
70 Mw Capacity."

Post Dated.
Dated : 30/9/94.

30/9/94
Member Secretary
Pollution Control Board
Andaman & Nicobar Islands



7/6
Add. Page 49

NO. J-25/S & T/PCE/DEU(Sc)/93/12/11
ANDAMAN AND NICOBAR ADMINISTRATION
POLLUTION CONTROL BOARD
.....

Port Blair, dated the 30th Sept. 1994

To

The Superintending Engineer,
Electricity Department,
Andaman & Nicobar Islands,
Port Blair.


Sub :- Issue of Corrigendum - regarding.
Ref :- Your letter No. EL/PL/1-43/94/10187
Dated 29th September, 1994.

.....

Sir,

Kindly find enclosed corrigendum for the consent
No. J-25/S&T/PCE/DEU(Sc)/93-94/50 dated 1st March, 1994
in respect of Consent for commissioning of 20MW (4x5 MW)
Thermal Power Plant (Diesel Power House) at Bambooflat
under Section 26 of the water (Prevention and Control
of Pollution) ACT 1974. for further necessary action
at your end.

Yours faithfully,


(N. Das) 30/9/94

Member Secretary
Pollution Control Board
Andaman and Nicobar Islands
Port Blair.

मुख्य सचिव
Chief Secretary

Pl. handover this message
to Shri M.D. Shantaramoorthy, A.C.C.E.
Camp New Delhi.




- 267 46 -

Add. page 48

(6/8)

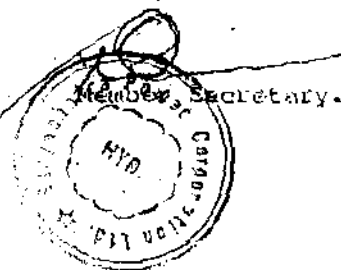
1. The applicant shall make an application for renewal of consent in the prescribed form in triplicate at least 30 days before the date of expiry of the consent or 30 days before 'New or altered outlet' is proposed to be commissioned and/or new discharge is proposed to be made, whichever is earlier;
2. All conditions and instructions as provided in the 'General conditions for consent to discharge Trade effluent' as enclosed herewith are to be strictly followed;
3. The role of trees in the removal of certain organic as well as inorganic toxicants is well known. Besides, the trees also play a very important role in purifying urban atmosphere within and as well as Municipal treatment plants. In view of this, the applicant shall plant minimum three varieties (Eucalyptus, Subabul or any suitable variety) of trees at the density of not less than 1000 trees per acre and all along the boundaries of the industry premises;
4. Notwithstanding anything contained in this conditional letter of consent, the Central Board reserves to it the right and power under section 27(2) of the Water Act (Prevention and control of Pollution) Act, 1974 to review any one or all the conditions imposed herein and to make such variations as deemed fit for the purpose of the Act, by the Central Board.


Member Secretary.



...any air pollutant into the atmosphere in excess of the standards laid down by the Board occurs or is apprehended to occur due to accident or other unforeseen act or event, the person in charge of the premises from where such emission occurs or is apprehended to occur shall forthwith intimate the fact of such occurrence to this Board, telegraphically under intimation to the District Health Officer.

12. In case of such episodal discharges/emission mentioned in 11 above, the industry should take immediate action to bring down the emission below the limits prescribed in the Consent item.2.
13. A good house keeping shall be maintained both within the factory and in the premises. All hoods, pipes, valves shall be leakproof.
14. The applicant shall comply with and carry out directives/orders issued by the Board in this Consent order and at all subsequent times without any negligence on his part. The applicant shall be liable for such legal action against compliance of any order/directives issued at any time and/or violation of the terms and conditions of this Consent Order.
15. An inspection book shall be opened and made available to the Board's officers during their visit to the factory.
16. The applicant shall furnish to the visiting officer and/or the Board any information regarding the constructions, installation or operation of air pollution control equipments system and such other particulars as may be pertinent to preventing and controlling pollution of air.
17. The applicant shall provide facility for collection of samples to the Board's staff and also provide sampling ports in the stack.
18. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred above required variation (including the change of any control equipment; either in whole or in part) this Board after giving the applicant an opportunity of being heard may vary all or any of such conditions and there upon the applicant shall be bound to comply with the conditions so varied.
19. The applicant shall plant minimum three varieties of trees such as Eucalyptus, Su-babul etc. at the density of not less than 1,000 trees per acre over 33 percent of the available open land.



- (g) "Date of commencement of supply" means the date of expiry of a period of 3 months from the date of intimation to an intending consumer, of the availability of or the date of availing of electrical energy supply by the consumer, whichever is earlier.
- (h) "Department" means the Electricity Department of Andaman and Nicobar Administration;
- (i) "Factory" means any premises including the precincts thereof wherein ten or more persons are working and in any part of which a manufacturing process is being carried on with the aid of electrical power;
- (j) "High Tension" means all high and extra high pressures available in the supply system of the Department;
- (k) "Islands" means the Union Territory of Andaman and Nicobar Islands;
- (l) "Low Tension" means all low and medium pressures available in the supply system of the Department;
- (m) "Licensee" means the Electricity Department of the Andaman and Nicobar Administration.
- (n) "Maximum Demand" means the average amount of Kilowatt or Kilovolt amperes, as the case may be, delivered to the point of supply of the consumer and recorded during a thirty minutes period of maximum use in a month.
- (o) "Month" means the calendar month or the period between the meter reading date in a particular month and the corresponding meter reading date of the immediately succeeding month.
- (p) "Outlet" means in any electrical installation, a point to which an electrical appliance is intended to be immediately connected;
- (q) "Power Factor Means"
- In a single phase circuit, the ratio of the watts to volt amperes;
 - In a three phase circuit, the ratio of the total watts to the total equivalent volt amperes
- Explanation: Power factor is the active power divided by apparent power;
- (r) "Rules" means the Indian Electricity Rules, 1956; and (2) All other words and expressions use herein but not defined, shall have the meanings respectively assigned to them in the Act or the 'Rules'.
- (s) "Electrical Inspector" means a duly qualified Electrical Engineer appointed by the Administrator under the provision of Section 36 of I.E. Act, 1910 in the Electrical Inspectorial Organisation of A & N Islands.

3. Once the supply of electricity is connected or has been made available to the consumer by the Department, the consumer and the department shall be bound by the terms and conditions etc. of supply as set forth in this order or any modifications thereof as may be made from time to time.

PART - II

Applications for supply:—4. (a) (i) Application for supply or additional supply of electrical energy shall be made in the form in Annexure-I, copies of which can be obtained at a cost of one rupee from any office of the Department. The application shall be signed by the owner of the lawful occupier of the premises for which supply is required.

(ii) The consumers taking supply at low and medium voltage for industrial purposes as well as those taking high voltage supply will be required to sign an agreement as per the form prescribed in Annexure - II.

(iii) Power supply will ordinarily be arranged in the order of priority.

(b) Where the consumer has no footpath abutting public street and where the service line has necessarily to cross over or go under somebody else's property, the consumer shall obtain the necessary right of way and permission at his risk and own expenses and continue it as long as the supply is to be maintained.

(c) Any extra expense incurred in laying the service line and maintaining the same in accordance with the rules shall be at the expense of the consumer.

(d) Any assistance or information required in filling up the form may be given to the intending applicant at any office of the Department.

Notice before connection:—5 (a) The intending consumer should give, at least one month's notice before the date of actual requirement for power supply upto 10 KVA. Requisition for power supply in excess of 10 KVA shall be given at least six months prior to the date of requirement. The grant of such power will however, depend on the availability of power with the Department.

(b) The intending consumer shall, however, commence to take supply within three months of intimation by the Department that supply is available. Should the consumer fail to take the supply within the aforesaid period, the minimum charge (calculated) based on connected load shall be levied monthly, until the consumer avails of the supply.

DISTRIBUTION MAIN 6 Where the length of service line exceeds 300 meters the Deptt will submit quotation of estimate of the cost for laying the service line and distribution mains for supplying energy to the consumers premises. The consumer shall be required to deposit the actual cost of materials and labour, plus 10% departmental charges before the distributing mains are laid. The deposit having been duly made by the consumer, order shall be issued for the work to be taken in hand. The amount so deposited shall be subsequently adjusted, if necessary, towards the actual cost of the distributing mains.

The department shall have the right to disconnect the supply in case of non-payment of dues.

SERVICE LINES 7. (a) Subject to availability of power and upon receipt of an application, and Engineer of the Department will inspect the premises and fix the point of entry of the service line and the position of the service cutouts and meter in consultation with the consumer, prior notice of which will be sent to the consumer concerned. The position of the supply of service main cut-out or circuit breakers and the meter shall be so fixed as to permit easy access to the employees of the Department at any time.

(b) The Department will in no case fix its apparatus, and meters at any place, where entry by its employees into "purdah" or religious place is necessitated.

(c) The Department provides overhead service line free of cost upto a maximum of 30 metres outside the limits of the property in respect of which the requisition is made from the nearest distributing main.

Any length in excess of 30 metres as defined above and the whole of the service line within the limits of the property in respect of which the application is made shall be paid for by consumer, the applicant himself. The cost mentioned above however, shall be exclusive of its proportionate cost of first pole and fitting beyond the free length aforesaid. The proportionate cost of such pole and fitting shall be in the same ratio as the free length to the length of the line beyond the free length from the point of tapping of the service and the next support of the service line. The cost of various service line materials shall be payable by the consumer, inclusive of cost of labour and in addition to an amount equivalent to 15% of the above cost towards departmental charges, tools, and plants, stocks incidentals and contingencies.

NOTE: (i) The Department shall have the right to tap any service lines laid for any consumer for extending power supply to other consumers in the vicinity or for any other purpose.

(ii) For any defects in the service connections, and works arising during the first year of servicing of the installation, the cost of repairs or replacement will be borne by the consumer.

(d) Fees to be paid to the Electrical Inspector for inspection of high tension and low tension lines for supply of electrical energy to consumers shall be to the account of the consumers and shall be paid in advance.

(e) Where any difference or dispute arises as to the cost of fixing of the position of service lines, the matter shall be referred to the senior-most officer of the Department and his decision thereon shall be final and binding on the consumers.

(f) The Department will not commence laying of a service line, unless the applicant requiring it executes a contract with the Department in the form prescribed in Annexure II agreeing thereon to take supply for a period of not less than two years from the date of commencement of supply and further agree to the back billing by the Department, if the meter/meters installed in his premises are tampered with or the electrical energy is improperly used in any other manner, resulting in the reading being non-recorded or when the meter shows that the unit of electrical energy in a particular month is unreasonably when consumption of previous few months.

(g) The service line, not with standing that a portion or whole of the cost has been paid for by the consumer shall remain the property of the Department, by which above it is to be maintained.

(h) The consumer will not be called upon to replace or renew or maintain these lines at his own cost, as might be subsequently required due to natural wear and tear of the lines or due to any other cause beyond his control. Replacements necessitated on account of increase load/demand subsequently, or any willful act or default on the part of the consumer will, however, be carried out by the Department at the cost of the consumer who shall have to deposit the estimated cost on this account, when demanded.

(i) So long as the installation is in service and so long as the lines are not dismantled, the service lines shall remain the property of the Department which will maintain these lines and the consumer shall not alter or otherwise modify these lines of his own.

(j) If a consumer desires to have the position of the existing service line altered the Department shall carry out the alteration and, charge the consumer the cost of the additional materials used, the labour employed, plus 58% Departmental charges on the above.

Security Agreement: 8 (a) (i) The Department may require any consumers to enter into a formal contract in the form prescribed in Annexure-II and further to deposit security in cash for the payment of energy supplied. It shall be refunded to him when the agreement terminates after deduction, if any, of the amount due from him to the Department. This deposit is intended to be adjusted towards charges in arrears and this will accordingly be adjusted and it shall not be necessary to obtain the consent of the consumer for such adjustment.

(ii) The Department shall be at liberty for good and sufficient reasons to be recorded in writing to demand and enhanced security deposit from any consumer at any time during the subsistence of the contract.

Department Supply Mains and apparatus: 9 (a) The Department shall provide its own meter boards and cutouts for the low tension consumers and all circuit breakers and high tension fuse for high tension consumers and these shall remain the property of the Department and must on no account be operated, handled or removed by any one who is not an employee of the Department. Likewise, the seals, nameplates and distinguishing numbers or marks of the Department affixed shall in no circumstances be kept, removed or erased by anyone other than an employee of the Department, duly authorised for the purpose.

- (b) Every consumer shall compensate to the Department for any damaged and cost of making good and any damage caused to the mains, apparatus or instruments or any other property of the Department installed in the consumers premises occasioned by reasons of any act, neglect or default of the consumer or his servants or civil agents employed by him. In addition consumers shall also be liable to pay such penalties as prescribed by the Act and the Rules, for continued unauthorized interference on his part with the Department's property or seals.
- (c) The Department shall have the right to use meters and apparatus provided under sub-clause (a) above for a similar supply to other premises in the neighbour hood, provided the supply to the consumers is not thereby affected. Permission to lay cables under across or over to consumers premises or for fixing apparatus upon the said premises by the Department, shall be deemed to be implied and vested in the Department with due care and regards to his safety.

Wiring on consumer's premises:—10 (a) For the protection of the consumer and the public in general it is necessary that the wiring in the consumer's premises should conform to the standard prescribed in the rules, and the rules of the Fire Insurance Company, in terms of which the building, if any, is insured. The Department shall not accept any responsibility for the proper maintenance or testing of the wiring on consumer's premises. It shall be the responsibility of the consumer's to have the installation tested atleast, once in two years. The regulations of the electrical equipment of buildings issued by the Institution of Electrical Engineers and the specification issued by the Government of India for electrical works in Government buildings, especially with regard to method of carrying out metal sheathed wiring shall ordinarily be adopted by the consumers.

- (b) If any consumer adopts any electrical appliance which is likely to effect injuriously the supply to other consumers or uses the energy supplied or deals with it in any manner so as to interfere unduly or improperly with the efficient supply of energy to any other person or fails to keep in proper order, any meter belonging to the department by which the supply is registered, the Department may discontinue the supply after serving an advance notice of seven days of its intension to the consumer concerned.

- (c) If any conductor of the consumer's installation is to be connected to the metal conductor of the Department's system, the consumer shall comply with the provision of Rule 32 of the rules and shall not insert in his installation a cutout of switch other than a fused switch arranged to operate simultaneously the earthed and live conductor.

Apparatus on consumers premises:—11 (a) The consumer must in all cases, provide fused quick break main switches and a main fuse on each pole other than the earthed neutral which must be erected within one metre of the Department's meter board or in such other position as shall be approved by an Engineer of the Department.

- (b) All transformers, switch gear and other electrical equipments belonging to the consumer and connected to the mains of the Department shall be maintained to the satisfaction of the Deptt. A high tension consumer must provide on the supply side, a gang operated tripple pole isolating switch with high tension fuses of the fast blowing characteristic which should be graded to operate that they should blow off before the over head protective devices in the department's terminal switch operates.

Inspection and Testing:—12 (a) All installations shall be required to be approved by the Department and no connection shall be provided without the inspection and approval of the installation in the consumer's premises by an Engineer of the Department.

- (b) The Department will give a notice to consumer of its intension to inspect and test the installation. The consumer or his representative shall be present at the time of testing and or servicing the installation so as to furnish the information, which may be required by the inspecting official of the Department.

- (c) No charge shall be payable by the consumer for the first test. Subsequent tests due to faults found at the initial test and failure of the consumer to keep the appointment shall be charged in accordance with the schedule of service and miscellaneous charges for the time being in force.

- (d) The Department will undertake to test the single phase installation periodically in accordance with clause 46 of Annexure VI to the Rules, the charges for which will be collected alongwith monthly bills. Any inspection between specified periods will be carried out only after payment of the prescribed fees. The Department shall however, not be responsible for any defects in the internal wiring of the premises and for accident, damages etc. to it.

- (e) In case of a reconnection of supply after a period of six months or more, the consumer shall submit test report of the licensed electrical contractor before the supply is reconnected and in such cases the provisions sub-clause (a) to (c) of clause 10 shall apply.

Service Connection:—13. (a) When the installation satisfies the test mentioned above the Executive Engineer of the Department shall arrange to service the installation, seal the meter(s) and cutout(s) and fix a meter card on the board. The meter card will contain, apart from initial meter reading, full information regarding consumers' name, address, connected load, meter number, date of connection, class of tariff number of outlets, size of fuse wire, meter reading date and Revenue Registration number of the installation.

- (b) The Consumer or his authorised representative is required to sign in the sealing register and on the completion report that his installation has been serviced, and that seals of the meters and cutouts are intact.
- (c) The meter boards, main cutouts, etc. shall on no account be handled, or removed by any person other than the authorised representative of the Department. The consumer shall be responsible for the safe custody of the Department's materials within his premises.
- (d) Immediately after servicing of the installation a Revenue Registration number shall be given to the installation, and pointed on the meter board. This shall invariably be quoted in all future correspondence with the Department.

Extension, Addition & alternations:—14. Should the consumer at any time, after the supply of energy has been commenced, desire to increase the number or size of lights, fans, motors etc. on such premises or in any way to alter the position of it's wiring notice thereof shall be sent in writing to the Executive Engineer of the Department whose representative will call at and inspect the installation and if necessary, change the meters and fuses and alter the service line. Wherever necessary the consumer shall change the contracted demand or connected load. A test report duly signed by his Wiring contractor shall be submitted by the consumer and cost of the alternation to the service line shall also be borne by him. In such cases, the provision of clause II above shall apply. Failure to give such notice may render the supply liable to be summarily disconnected. During the time any alternations, additions or repairs are being executed, the supply to the circuit which is being altered, added to, or repaired must be entirely disconnected and it shall remain so until the alternation, addition or repair has been duly tested and passed by the Department.

Rating of installations: 15. (a) In order to determine the minimum charge payable by a consumer under the appropriate tariff, every lighting installation will be rated/re-rated by the Department when serviced initially or when bifurcated subsequently, so as to determine the number of outlets provided in his installations.

- (b) When for any reasons it is not possible to determine the maximum demand, power factor or any other electrical quantity in respect of an installation, the Department shall determine such quantities periodically by rating/re-rating and the same shall be binding on the consumer.
- (c) A motive power installation is subject to rating/re-rating by the Department at its discretion, and such rating/re-rating shall be binding on the consumer.
- (d) Where a consumer applies to the department for re-rating his installation due to some additions or alternations in the installation, the department shall arrange to have this done on payment of the prescribed fee and the re-rating shall take effect from the date such additions or alternations made or from the next meter reading date following the date of payment of the fee whichever is later, irrespective of the date of re-rating by the Department.

Defects in consumers installations: 16. In the event of any defects being discovered in the consumer's wiring or apparatus connected to the department's mains, any earth leakage occurring on any section of consumer's apparatus, the consumer shall, in the absence of the employees of the department, disconnect the same forthwith and notify the same to the Electrical Inspector and shall not reconnect the same except with the consent of the department. The Department reserves similar rights to disconnect, should the defect come to its notice earlier.

Failure of supply: 17 (a) (i) The department reserves the right to impose restriction on the use of power in any part of the day or night if the same is deemed necessary, in order to safeguard the department's generating and distributing apparatus.

- (ii) The department while imposing cut on energy consumption or cut on maximum demand on its consumers, may at its discretion levy penal rate of tariff for any excess energy consumed or maximum demand drawn, as the case may be by the consumer over and above the restricted quantity of energy consumption or maximum demand as may be stipulated by the department from time to time.
- (b) The department, notwithstanding its obligation to supply electricity day and night, shall not be liable to pay any claim for loss, damage or compensation whatsoever arising out of failure of supply, when such failure is attributable to orders of civil or military authorities, break down of machinery and plants, or caused directly or indirectly connected with mutiny, riots, insurrection, strikes, lockouts, fire, flood, tempest, lightning, earthquake or other forces, accidents or causes beyond the control of the department. The supply of electrical energy should be otherwise continuous.
- (c) Should at any time, the department's main service fuse fails, notice thereof shall be sent to the complaint-cell of the department. The consumer or his representatives may give a fuse off call either in person or over telephone. Only authorised employees possessing the identity card of the department are permitted to replace the fuses in the department's cut out. Consumer shall not replace these fuses. If the seal of the department's apparatus is found broken, the consumer will render himself liable to such penalty as may be prescribed by the department.

(d) In attending fuse calls, the department shall give top most priority in case of fire due to short circuiting accidents like falling of distribution poles, snapping of wires, arcing in consumers mains etc.

(e) If the failure of supply is due to any cause other than the department's apparatus, the consumer will be charged for the attendance of the fireman in accordance with the rates prescribed in the schedule of service and miscellaneous charges contained in part III of this order. The charges levied shall be for each call made irrespective of the number of fuses renewed at a point of supply.

Access to premises & apparatus Sec. 18 (a): 18 (a) The authorised employees of the department shall be entitled to enter upon the premises of the consumer at all reasonable times for the purpose of inspecting and for recording the meter readings and for the purposes connected with apparatus installed in the consumer's premises and belonging to the department or for doing all other things necessary or incidental to the proper continuance and maintenance of supply to consumers.

(b) If the consumer fails to give the authorised representative of the department reasonable facilities to enter the premises for recording meter readings, inspection, testing, removal of supply lines, meter fittings works and apparatus the department shall be at liberty to discontinue the supply after giving the consumer 24 hours notice in writing of its intention to do so.

Installation of meters: 19 (a) (i) If required by the consumers, the Department shall supply a meter with auxiliary equipment on monthly rental basis to be paid in accordance with the rates prescribed in the schedule contained in Part III of this Order. Having agreed to take the Department's meter, the consumer shall not be entitled to have his own meter.

(ii) The Department's meter shall normally be installed at the point of entry to the building and shall be installed according to the convenience of the Department.

(iii) The consumer shall be responsible for the safety of the meter from theft or damage.

(b) Accuracy of the amount of energy supplied to a consumer shall be ascertained by means of a correct meter of appropriate capacity which will be supplied by the Department and the meter rent will be collected as specified in the tariff for the time being in force.

(c) If the consumer disputes the accuracy of the Department's meter/meters, he may upon giving notice and paying the prescribed fee, have the same tested by the Department in accordance with section 26 of the Act. In the event of the meter being tested and found to be incorrect beyond the limits of accuracy prescribed by the rules, the testing fee shall be refunded to the consumer, otherwise the testing fee will be forfeited to the Department. In case, the meter is found defective, the amount of the bill will be adjusted in accordance with the result of the tests taken with respect to the meter readings of the three months prior to the month in which the consumer has disputed the accuracy of the department's meter, having due regard to the condition of installation, occupancy etc, during the month under dispute and during the previous three months. In all such cases, the decisions of the Electrical Inspector shall be final, conclusive and binding on the consumer.

(d) The Department may require security against loss or damage to the metre hired by the consumers equivalent to the price of the meter. The Department shall have the right to recover the cost of meters lost or damaged in consumers premises, if it is proved that such loss, damage etc has occurred due to negligence on the part of the consumers. The consumer shall provide a wooden box or a cover with locking arrangements for the meter as precautionary measure against damage or loss of the meter.

READING OF METERS 20(a) Meter readings will be taken by the employees of the Department once in a month, or at such intervals as it shall be expedient. The Meter Readers shall have the right of access to the consumers premises at all reasonable times for the purpose of taking such readings. The reading of each meter shall be entered by the Meter Reader in the meter card attached to the meter.

(b) (i) When a consumer leaves his installation connected to the mains of the Department, but locks up the meter or otherwise makes it inaccessible for reading by the staff of the Department, for the first month of such inaccessibility, the consumer shall be charged on the basis of the minimum monthly charge prescribed or on the basis of the preceding six months average consumption whichever is more, subject to adjustment as and when the actual meter reading becomes available as laid down in paragraph (iii) sub clause (b) of this clause.

(ii) If the meter remains inaccessible in the succeeding month as well, the consumer will be served with 24 hours notice under section 20 of the Act requiring him to give reasonable facilities to the Meter Reader of the Department for taking the meter reading at a fixed time and date as may be specified in the notice of the consumer and if he fails to comply with the notice the supply to the premises shall be disconnected and the consumer will be charged on the basis of the prescribed minimum monthly charge or on the basis of the preceding six months average consumption, whichever is more, for the second month also subject to adjustment as laid down in para (iii) of sub clause (b) of this

(iii) When the meter is made accessible for the purpose of taking the reading and settling the account, the consumer shall be charged on the basis of the actual meter readings, less charges already paid during the said period of inaccessibility, subject however to the prescribed monthly minimum.

(iv) In the event of disconnection, the supply will be reconnected only after the payment by the consumer of all due and the prescribed reconnection fees. The prescribed minimum charges will become payable by such of the consumers as have not completed initial guarantee period, even though supply is disconnected during the period the meter is inaccessible for reading.

(c) (i) Where a supply of electrical energy to a consumer is given and the meter provided in his premises is found to be defective, or it has ceased to function or pilferage of energy or malpractice is suspected the quantity of electricity supplied during the period when the meter installed, was found to be defective or when it has ceased to function, shall be assessed as mentioned in paragraphs (ii), (iii) and (iv) of this sub-paragraph.

(ii) Electricity supplied to the consumer shall be assessed on the average monthly consumption by him during the last three months preceding the month in which the meter ceased functioning or became defective; provided that condition in regard to use of electricity during the said three months were not different from those which prevailed during the period when the meter ceased to function or became defective.

(iii) If the condition in regard to use of electricity during the period mentioned above were not the same but were different, assessment shall be made on the basis of the electricity supply made to the consumer during consecutive three months during the preceding 24 months when the condition in regard to the use of electricity was not different from those which prevailed when the meter ceased functioning or became defective.

(iv) When it is not possible to select a set of three months as indicated in paragraph (ii) and (iii) above and if meter is not at all installed, the quantity of electricity supplied shall be assessed by the concerned Assistant Engineer of the Department on the basis of connected load and hours of usage of electricity by the consumer. However, in the case of industrial consumers, due regard shall be given to the production figures and conditions of working during the period in question.

(d) In case the consumer does not agree to the assessment made by the concerned Assistant Engineer of the Department, the matter shall be referred to the Electrical Inspector whose decision thereon shall be final, conclusive and binding on the consumer.

21. In the event of energy meter of an installation being out of order for any reason other than by a human agency, the installation may be back billed for a maximum period of six months or for such period as may be deemed appropriate in the circumstances of the case, on the basis of the average of the highest consumption recorded during any three months of the year in which the fall in the quantum of consumption is noticed, and in case where it is not possible, then on the basis of the highest consumption recorded during any three months of the preceding year. The faulty meter will be replaced by another one in good working order immediately or the same will be repaired and reinstalled as expeditiously as possible.

Charge for supply:

22 (a) The method for supply of electrical energy and charges for it shall be levied as may be fixed by the Admin. from time to time.

(b) Unless otherwise specified all high tension and low tension rates refer to one point of supply only.

(c) The charges for the electrical energy as per the details thereof shown in the electricity bill shall be paid by the consumer to the Department every month at the Department's office form in which the electricity bill is issued or as may be otherwise required by the Department. In case of revision of the rates of the electrical energy the consumer shall be liable to pay the charges at the revised rates.

(d) Bill for energy consumption of all classes of consumers shall be for the whole number units. The difference of reading in the meter during the preceding month being less than one unit shall be counted in the month as a continuous consumption.

23. Consumer intending to vacate or sub let his premises shall give to the Deptt. a clear seven days' notice in writing and in advance as to whether the supply of electricity to the premises should be disconnected or the meter reading should continue to be recorded and the bills submitted, otherwise the Deptt. can not guarantee that the meter reading will be taken on the required date. For failure to give such notice, the consumer shall be held responsible for all energy consumed in the premises and for the safety of the Department's apparatus installed in the premises, until the expiration of 48 hours from the first working day after notice of disconnection the supply of electricity to the premises in writing has been received at the office of the Department.

Consumer leaving the station for a period exceeding two months and locking his premises while being away, or whose premises is expected to remain locked and unoccupied for similar period due to non-tenancy or for other reasons, shall inform the Department in writing before hand so that the meters installed at the premises may be removed. Installation disconnected and the service wire and other apparatus removed, if agreed to by and between the Deptt. and the consumer or otherwise, the consumer shall notify the Department as to when the key of the premises can be obtained, to enable the Department to remove the fuses whenever it is desired to test the distribution mains in the consumer's premises. In such cases, consumer shall not be charged even the prescribed minimum charge provided that:

(i) The meter rent is to be paid as long as the meter remains installed on the consumers' premises. If the meter is removed, a fee of Rs. 5/- (Rupees five) only shall be charged for removing and

- (ii) The consumer agrees to the extension of the term of the agreement by the period by which the payment by the consumer of the prescribed monthly minimum charges remains waived, if the period of the contract as specified in the agreement has not already expired.
- (iii) The maximum period of such disconnection shall not exceed six months.
- (iv) A reconnection fee of Rs. 10.00 (Rupees ten) only shall be paid by the consumer before the connection for resuming the supply of electricity to the premises is restored.
- (c) If the consumer requires connection before the expiry of two months, both the reconnection fee and the prescribed monthly minimum charges shall have to be paid by the consumer. IN THAT case the life of the contract as specified in the relevant agreement will be extended.
- (d) If the service line remains under disconnection for a continuous period of six months or more, the Department will dismantle the service line materials, meter, cut-out, all other apparatus provided by the Department in the premises after serving a month's notice on the consumer. After removal of the service line, the consumer will be treated as a fresh applicant for the purpose of restoring supply of electricity to his premises.

Service of notice:

- (e) Any notice by the Department to a consumer shall be deemed to have been duly served, if it is addressed to the consumer and sent by post or delivered to some person at the address notified by the consumer to the Dept. or if there is no person in such premises to the person whom the same can, with reasonable diligence, be delivered, or by affixing it at some conspicuous part of such premises.

Payment of bills

24. (a) The Electricity bills shall be paid by the consumer at the concerned Department's office within 15 days from the date of presentation or on such date as may be specified in the bill, or as provided for in the agreement for supply of electricity.

- (b) Any complaint with regard to the accuracy of the bills shall be made in writing to the local office of the Department. The amount of such bills shall be paid under protest within the period or date as mentioned in subclause (a) of this section. The amount of bills paid under protest will be retained as an advance to the credit of the consumers' account until such time, as the bills in dispute have been finally settled.
- (c) If the consumer fails to pay any bill presented to him within the prescribed period, the Department shall be at liberty to take action under sub section (i) of section 24 of the Act. Any additional expenditure incurred by the Department to recover the outstanding dues through suit, will also be recoverable from the defaulter consumer in addition to the dues outstanding against him.
- (d) Any payment made by a consumer shall first be adjusted towards the arrears, if any due from him and shown in the bill. No exemption from delayed payment towards electricity bills shall be allowed if full payment of the bill including arrears is not made within the period as prescribed in sub clause (a) of this clause.
- (e) Bills will normally be delivered at the consumers' premises by hand every month. However, the Department shall not be responsible for non-receipt of the bill by the consumer who shall inform the Department if no bill is received by him within seven days from the date of meter reading taken, otherwise it will be deemed that the bills have reached the consumer in time.
- (f) If the bill remains unpaid for one month from the date of disconnection of supply, the Department may after giving notice to the defaulter cancel the agreement and adjust the security deposit towards the arrears due from the consumers.
- (g) In case the last date for payment of the bill happens to be a Sunday or a declared public holiday, payment can be made by the consumer on the next working day without any additional charge.
- (h) The Department shall have the discretion either to refuse or to accept payment towards electricity dues and charges made by cheques and shall be at liberty to demand payment from any consumer in cash or by demand draft on local bank in respect of the charges due to the Department.

System of supply

25. The Department's declared pressure of supply shall be generally as follows:—

(a) Low Tension supplies

- (i) Alternating current, single phase two wire, 50 cycle, 230 volts between phase and neutral.
- (ii) Alternating current

अण्डमान तथा
ANDAMAN AND



निकोबार राजपत्र
NICOBAR GAZETTE

सत्यमेव जयते

असाधारण

EXTRAORDINARY

प्राधिकार से प्रकाशित

Published By Authority

सं. 281, पोर्ट ब्लेयर, बुधवार, सितम्बर 23, 1983
No. 281, Port Blair Friday, Sept. 23, 1983

ANDAMAN AND NICOBAR ADMINISTRATION

NOTIFICATION

Port Blair the 23rd Sept. 1983.

No. 325/82/P. No. 28-321/78-D I. (PL) Whereas the Administrator (Lt Governor) Andaman and Nicobar Islands is of opinion that it is necessary or expedient so to do, for maintaining the supply and securing equitable distribution of energy generated by the Electricity Department, A & N Administration.

Now, therefore, in exercise of the powers conferred by section 22 B of the Indian Electricity Act, 1910 (Act 9 of 1910) read with the Govt. of India, Ministry of Home Affairs Notification No. F 2/2/60-Ind (II) dated the 11th March, 1960, and in supersession of this Administration's Order No. NR dated 21st September 1951, the Administrator (Lt Governor) A & N Islands hereby makes the following order providing for the control, supply, distribution, consumption and use of electrical energy, namely:—

PART-I

Short title, extent, and commencement: 1. (a) This order may be called "Andaman and Nicobar Islands Electrical Energy (Control and supply distribution, consumption and use) Order, 1983".

(b) It extends to the whole of the Union Territory of Andaman and Nicobar Islands.

(c) It shall come into force with immediate effect.

Definitions: 2. (1) In this order, unless the context otherwise required:—

(a) "Administration" means the Andaman and Nicobar Administration.

(b) "Act" means the Indian Electricity Act, 1910 (Act No. 9 of 1910).

(c) "Annexure" means the annexure to this order;

(d) "Consumer" means any person who is supplied with electrical energy by the electricity department Andaman and Nicobar Administration or whose premises for the time being is connected for the purpose of supply of energy with the work of electricity department, Andaman and Nicobar Administration and includes consumers temporarily disconnected;

(e) "Consumer's Terminal" means the ends of the electric supply lines situated upon any consumer's premises and belonging to him, at which the supply of electrical energy is delivered from the service lines;

(f) "Connected Load" means the sum total of installed capacities of all the electrical energy consuming devices, including the portable apparatus on the consumer's premises which can be operated simultaneously, excluding again or stand by capacities in the form of extra units of larger ratings than necessary.

(b) High Tension supplies:

Alternating current, three-phase three-wire, 50 cycle, above 400 volts between phases available in the supply system of the department.

- (c) Supply for lighting and small power purpose will be at low tension and for large power, where the connected load exceeds 100 HP and bulk requirement, the supply will be at high tension, provided, however that when the consumer is unable to receive power for want of transformers and other high tension equipment of his own, and where it is feasible for the department to use its own transformer and other equipment and arrange to supply power at low tension, the supply may be arranged at low tension and the installation billed at low tension tariffs.

- (d) For the present, the declared voltage of the Department at High tension is 11 KV and 33 KV.

26. Classification of installation:

(a) Single phase two wire, 230 volts.

- (i) Domestic and Commercial lighting up to 2.5 KW.
- (ii) Motive power installation not exceeding 2.5 KW.
- (iii) Depending on the location and conditions of working the Department may relax the above limitation at its discretion.

(b) Three-phase, four wire, 400 volts between phases and 230 volts between phase and neutral.

- (i) General supply exceeding 15 amperes.
- (ii) Motive power installation exceeding 1 HP but not exceeding 10 HP in the aggregate.
- (iii) Motive power installation exceeding 10 HP but not exceeding 20 HP in the aggregate.
- (iv) Motive power installation exceeding 20 HP but not exceeding 50 HP in the aggregate.
- (v) Motive power installation exceeding 50 HP but not exceeding 100 HP in the aggregate.

(c) Three-phase, 3-wire above 400 volts between phases, motive power exceeding 100 HP connected load in the aggregate.

27. General Wiring conditions:

- (a) Mains The consumer's mains shall in all cases be brought back to the Department's point of supply and sufficient cable shall be provided for connecting it with the Department's apparatus.

- (b) Switches and Fuses: The consumer shall provide power linked quick break main switches of requisite capacity to carry and break current in each conductor near the commencement of supply. All the consumer's switches shall be on the line and the letter 'N' shall be painted on the wooden board directly underneath the neutral conductor where it leaves the consumer's main switch connecting with the meter. No single pole switch or cut-out should remain inserted in any neutral conductor.

- (c) Balance of load: If the connected load of any installation exceeds 15 amperes at 230 volts, the installation shall be wired on the group system separate neutral wires being brought back in each case to the Department's point of supply. An approved form of linked switch (single Pole) with two single poles fuses shall control each main circuit. The Lamps, fans or any other apparatus of which the installation consists, shall be so grouped that, under normal working conditions the current remains balanced and no current flows in the neutral wire.

- (d) Low and Medium pressure LT supply:—With low and medium pressure (LT) supplies i.e. 230 volts and 400 volts, the Department's meter and service cut outs, if not iron clad and earthed, shall preferably be enclosed in a strong wooden box suitably ventilated and provided with a hasp, staple and lock. All wires between which a difference of potential 250 volts or over, exists, shall be made inaccessible to unauthorised persons, or enclosed in an earthed metallic casing or conduit. A caution board printed in English and Hindi shall be affixed there to.

- (e) Earthing: Gas and water pipes shall on no account be used for earthing purposes. All wiring shall be kept away as far as possible from gas and water pipes.

- (f) Domestic Heating and cooking:—A special circuit for heating and cooking, where ever necessary shall be run from the Department's point of supply. Wall plugs used on these circuits shall be of the concentric type or three pin type, the third pin connected to earth. Two pin plugs or lighting circuit shall not be allowed to be used.

- (g) Plugs:—All plugs shall be switched on the live wire and not on the neutral.

- (h) Wiring: Single leads shall not be allowed to be run separately in iron conduit.

28. A. C. Motor Installation:

- (a) Motors shall be provided with a control gear so as to provide satisfactory maximum current demand from the consumers' installation exceeding the limit given in the following schedule at any time under all possible conditions. Failure to comply with these regulations will render

the consumer liable to disconnection from the supply on account of the interference with the supply to other consumers.

* Nature of supply	Size of installation	Limit of max. current.
1. Single Phase	Upto & including 1½ HP	6 x full load current.
2. Three Phase	Upto & including 3 HP	8 x full load current.
	Above 3 HP & upto 20 HP	2 x full load current.
	Above 20 HP & upto 100 HP	1.5 x full load current.
	Above 100 HP	1.25 x full load current.

Before the above facility is given to the consumer the transformer capacities, their connected load and diversity factor shall be examined by the Department's Engineer.

- (b) Motor circuits shall be controlled by a triple pole linked switch protected by No-volt release and T. P. fuses. It is important that the releases should be maintained in thorough working order. Wiring for motors shall be run with all wires bunched in a single metallic conduit, which shall be efficiently earthed through-out and connected to the frame of the motor from which two separate and distinct earth wires shall be run. The minimum size of the earth wire permitted is number 10 or 2/14 SWG or number 8 B & S. Installation of all motors shall comply with the rules in every respect.

29. Power Factor of Apparatus:

- (a) (i) The Department reserves the right to refuse or discontinue to supply energy in the case of installations whose test or record average power factor is less than 90% until, such time the average power factor is improved to a value not less than 90%. If the average power factor is below 90% it will be necessary to install suitable power factor correction apparatus within six months from the date of notice, failing which the Department reserves the right to discontinue power supply without prejudice to the recovery of minimum charges or continue power supply to such consumers who agree to pay the penal charges as mentioned till such time the power factor correction apparatus is installed.

(ii) Where the test or recorded average power factor of the installation is more than 75 per cent but less than 90% penal charges at 10% of the total power supply bill shall be levied.

(iii) Where the test or recorded average power factor of the installation is less than 75 percent penal charges at 20 percent of the total power supply bill shall be levied.

(iv) The power factor shall be one, that is determined during the half an hour of maximum demand of any working day in the month.

30. Prejudicial use of supply:

- (a) The consumer shall not keep connected to the Department's supply system any apparatus which the Department may deem likely to interfere with or affect injuriously the Department's supply to other consumers.

(b) The consumer shall not, except to the extent herein prescribed keep an unbalanced loading in the three phase of the supply taken by him from the Department, the maximum permissible difference in current between any two phases being 5 percent.

(c) The consumer shall not make such use of supply given to him by the Department as to act-prejudicially to the Department in any manner what-so ever.

- (d) (i) If at any time the energy supplied under one method of charging is misused for purpose for which a higher method of charging is inferred, the Executive Engineer or Assistant Engineer of the Department, having jurisdiction, shall assess the quantum of energy so misused and charge for that quantum of energy, for a minimum period of six months or for such longer period as may be deemed justified in the circumstances of any given case, at thrice the normal rate applicable for the purpose for which the energy is misused.

In case where the energy consumed both in respect of authorised and unauthorised loads is recorded in the meter, the quantum of energy misused shall be computed, taking in to consideration the ratio of the Un-authorized load to that of the authorised load.

- (ii) Where there is no recording of consumption of energy due to tampering of meter by a human agency, the quantity of energy misused shall be determined by the total number of running hours calculated for each category and then the amount of back billing to the consumer shall be determined at thrice the normal rate of such class of supply.

- (c) Where it is established to the satisfaction of an Engineer of the Department that a consumer has dishonestly used or consumed or maliciously caused energy to be wasted or diverted, such officer shall estimate the value of the electrical energy thus used, drawn, consumed, wasted or diverted for the a period of six months.

or for such period as may be deemed justified in the circumstances of a particular case, at thrice the normal rate of tariff applicable to the installation from which the energy is drawn, used, consumed, wasted, or diverted, and demand and collect the same by including it in the next bill.

or by a separate bill. Such amount shall be deemed to be arrears of electricity charges. Neither failure to launch a prosecution nor the acquittal of the consumer in the event of a criminal prosecution having been launched against him on this account on a ground other than that the prosecution case is false, shall bar the proceedings under this provision. The levy of such arrears of electricity charges shall be without prejudice to the Department's right to disconnect the service of the consumer and or take such other action as the Department is entitled to take under any law for the time being in force. Any consumer aggrieved by an order of assessment made by an engineer of the department under these provisions may first pay the amount demanded and then may appeal to the next higher authority within a fortnight of the communication of the order.

The appellate authority shall not entertain appeals in such cases unless the arrears of electricity charges in compliance with the order appealed against have been duly paid by the appellant and such receipt in token of such payment enclosed with the appeal. The decision of the appellate authority shall be conclusive, final and binding on the appellant, and the department.

- (f) Where any consumer is detected to have been involved in the commission of any malpractice, with reference to use of electrical energy including unauthorised alterations to installations, unauthorised extensions and the use of devices to commit theft of electrical energy, the department may without prejudice to its other right, cause the consumer's supply to be disconnected forthwith. The supply may be restored at the discretion of the department, if the consumer suitably compensates the department and complies with such other action as may be directed by the department in this regard.
- (g) If any consumer deliberately obstructs any employee of the department from inspecting the premises provided with the electrical installations or equipment belonging to the department or where the consumer in such premises is reasonably suspected to be involved in some act of malpractice prejudicial to the interest of the department, the department may cause the supply to be disconnected forthwith without notice and keep such supply disconnected till the consumer affords reasonable facility of inspection to the department. If such inspection reveals nothing to indicate any malpractice or acts prejudicial to the interest of the department, power supply shall be restored to the consumer by the department forthwith.
- (h) The employees of the department shall have the right of access to the consumer's premises at all reasonable hours for checking the installations and equipment of the department and the consumer, and for all other purposes connected with the supply of electricity. Where there is reason to suspect that the consumer is indulging in any malpractice with reference to use of electrical energy including unauthorised alterations to installations, unauthorised extensions and the use of devices to commit theft of electrical energy, the department shall be entitled to cause an inspection of the consumer's premises forthwith.

31. Discontinuance of supply.

- (a) The department reserves the right to discontinue supply of electrical energy to a consumer on giving 24 hours notice in writing, if there is reason to believe that the consumer is contravening any of the provisions of the Act or the rules or these conditions of supply, or committing a breach of his agreement with the department or in the event of the consumer's bankruptcy or the execution of any assignment for the benefit of the creditors or if the consumer is a limited company, in the event of compulsory or voluntary liquidation.
- (b) In the event of supply being disconnected for any of the reasons mentioned above, all the money then due from and payable by the consumer to the Department shall become due and recoverable forthwith and the consumer shall continue to pay the monthly minimum charges and the minimum guarantee, if any, for the unexpired period of the agreement or, where there is no written agreement for the period which would have been applicable if an agreement had been executed.

32. Reservation of Rights

- (a) Save as provided for in the Act and the Rules the Department does not bind itself to connect any installation, unless the guaranteed revenue is sufficient to cover the cost of service and supply of electrical energy.
- (b) The Department always reserves the right at any time to end, cancel alter and to any of these conditions and schedule of service and miscellaneous charges.
- (c) Notwithstanding anything contained herein, the agreement executed by the consumer with the Department for the supply of electricity to the consumer is liable to be curtailed or staggered or suspended altogether during peak load hours or such other hours as may be deemed appropriate by the Department or as may be ordered by the Central Govt. under the Act or under the provisions of any other enactment, as amended and notified from time to time and governing the supply and use of electricity and the rules and regulations for the time being in force thereunder.

33. Interpretation:

- (a) These conditions will be read and construed as being subject in all respects, to the provisions of the Act and to the provisions of any other law relating to the supply of electricity for the time being in force.

- (b) Nothing contained in these conditions shall abridge, curtail or prejudice the rights of the Department and of the consumer under any central act or any rules or orders made thereunder or the power of the electricity Department to relax, at its discretion, in individual cases on merit, any or all of the foregoing conditions.

34 Resale of Energy:

- (a) No consumer shall sell electrical energy supplied to him by the Department to any other person without the prior written permission of the Department. However, collection of electricity charges by the house owners from the tenant for residential purposes shall not be deemed as sale of electrical energy.

35. RESTRICTIONS ON USE OF ELECTRICITY BY THE CONSUMERS :

The consumer shall curtail, stagger, restrict, regulate or altogether cease to use electricity as use when so directed by the Department, if the power position or any other emergency in the Department's power system warrants such a course of action and Department shall not be responsible for any loss or inconvenience occasioned to the consumer as a result of such curtailment, staggering, restrictions, regulation or such direction of use of Electricity. The Department may at its discretion give such rebate or reduction in charges payable by the consumers on account of such curtailment, staggering or cessation of supply of electricity, as may be decided by the Department, if the curtailment, staggering or cessation is for a period exceeding one month.

36 SECURITY DEPOSIT:

The amount of the security deposit shall be calculated as follows:—

Domestic	= Rs. 20/05 KW	} of the connected/contracted load and or period thereof or 3 months estimated consumption whichever is higher.)
Commercial	= Rs. 30/01 KW	
	and part thereof or	
All other	= Rs. 50/- KW	
	and part thereof or	

In case of temporary supply the amount of security deposit shall be as follows:

LT Single Phase supply	= Rs. 100/-
LT Three Phase supply	= Rs. 200/-

PART- III

SCHEDULE OF SERVICE AND MISCELLANEOUS CHARGES:

- Service line to the consumers will be provided in accordance with the provisions contained in clause 7 herein above.
- Extension or additions to service line, if any, to meet increased demands will be charged for on the same basis as stated in clause 7 herein above.
- Intending consumers will be furnished with an estimate of cost and this amount is payable in advance. On completion of work, a bill for the actual amount payable, will be forwarded to the consumer, and any difference between the advance payment and the value of the estimate shall be paid by or refunded to the consumer, as the case may be.
- The Service connection charges are payable in advance and in no case, work will be carried out unless the charges are so paid.
- No materials whatsoever shall be accepted from the consumers for the purpose of service connection.

3. TEMPORARY SUPPLY:

- Charges for depreciation on returnable materials at the rate of 4 percent per month or part thereof.
- Labour charges: as per actual cost both for erection and dismantling.
- Probable energy supply charges: The charges for current supplied shall be such as may be notified from time to time by the Administration in the schedule of tariff.
- Cost of Non returnable materials—Actual cost to be charged.
- Service ordered charges:—
 - Single phase service
 - Poly-phase service

15 per cent on (a+b+c)

Note: A token amount of Rs. 5/- (Rupees five only) will be deducted out of the Security deposit for inspection of spot and preparation of the estimates etc. for temporary power supply provided the consumers do not come forward after the power is sanctioned.

(i) Single phase

meter

50 p. per meter per month.

(ii) Poly phase meter Rs. 1/- per meter per month.

(iii) Demand for special type of meter Rs. 4/- per meter per month.

Note: For the first month of service connection or on reconnection, the meter rent will be 50 per cent only, if the period of 15 days or less and full if the period is more than 15 days. For the month in which the meter is removed the rent will be calculated on similar basis.

4. CHARGES FOR TESTING & RE-SEALING OF EQUIPMENT:--

- | | |
|------------------------------|----------|
| (a) (i) Single phase meter | Rs. 10/- |
| (ii) Poly phase meter | Rs. 25/- |
| (iii) Demand or special type | Rs. 30/- |

b. Re-sealing of Meters, maximum demand indicators, cutouts and instruments of the Department in the consumer's premises if found broken, Rs. 5/-

Note: (1) The rates are applicable for testing meters at the instance of the consumer

(2) The amount collected will be refunded or readjusted in the monthly bills, if the meter is inaccurate

(3) These charges are not applicable for the sealing broken by Department's employees for the purpose of inspection, testing disconnection, replacement of fuses etc

5. Charges for Rating of installation :

- (a) Re-rating of lighting installation Rs. 10/- (ten).
(b) Re-rating of motive power installation Rs. 20/- (twenty).

6. Charges for testing of installation :

(a) The first test and inspection a new installation shall be carried out free of charges, but should any further test and/or inspection be found necessary owing to any fault in the installation or non compliance with the conditions of supply. The charges payable in advance for each additional test and/or inspection shall be Rs. 10/- (Ten).

7. Charges for re-connections.

- | | |
|---|------------|
| (a) Low tension service single phase supply : | |
| (i) LTIC cut outs on meter board, | Rs. 5.00 - |
| (ii) on the pole aerial cut out | Rs. 10.00 |
| (b) Low tension service three phase supply : | |
| (i) on the pole aerial cut outs | Rs. 20.00 |
| (ii) LTIC cutout on meter board | Rs. 10.00 |
| (c) High tension service | Rs. 50.00 |

Note :

1. If the same consumer is reconnected more than twice within a period of twelve months, 50 per cent will be added to the foregoing charges.

Explanation : Period of twelve months is to be calculated with reference to the period immediately preceding the reconnection specified and has no relevance to calendar year.

2. A new consumer who occupies a premises after paying arrears outstanding against an installation under disconnection in the same premises, will be reconnected free of cost.

8. Charges for service Calls :

(a) Charges for attendance of fuzeman where the failure of supply is due to the fault of consumer's installation

- (i) Rs. 1/- per call for LT consumers upto 25 amps.
(ii) Rs. 2/- per call for LT consumer above 25 amps.
(iii) Rs. 3/- per call for HT consumers.

(b) Charges for continuous attendance of fuzemen at consumer's premises during any function (maximum 8 hours subject to availability of fuzemen) Rs. 5/-

Note : The charges levied is for each call made, including an necessary calls irrespective of the number of fuses renewed at a point of supply

9. Other miscellaneous Charges :

- (a) Changing meter only at the request of the consumer where it is not necessitated by increase in consumption and demand permanently i.e. for temporary increase in load etc. Rs. 5/-.

Note: For special occasions like marriage, festivals, etc. consumers requiring additional power for short periods shall be charged a fee of Rs. 5/- towards temporarily changing the existing meter in case the capacity is insufficient. This does not come under purview of temporary supply which envisages a separate service to the consumer.

- (b) Changing or moving a meter board : Actual cost plus departmental charges @ 15% of actual cost.
 (c) Replacement of meter cards found to be missing from consumer's premises; Rs. 1.00
 (d) Filling of transformer Oil (first sample) Rs. 50.00
 (e) High tension power supply agreement forms (for each transfer or assignment) Rs. 2.00
 (f) Low tension power supply Rs. 1.00
 (g) Non commercial consumers agreement form Rs. 1.00
 (h) Commercial concerns or cinema agreement form Rs. 5.00
 (i) Industrial power supply at Low tension agreement form Rs. 20.00
 (j) For inspecting the premises for the second and subsequent time for the preparation of estimate for service makes the event of the absence of the consumer during inspection or for modification of the estimate already prepared at the request of the consumer. Rs. 10.00

10. Miscellaneous Works :

The charges payable in advance for any work which the Department may undertake for the consumer and which is not included in the foregoing schedule, shall be the actual cost plus 15% of departmental charges. Estimate will be furnished if demanded by the consumer.

11. Ignorance of Rules :

Ignorance of procedure and rules on the part of the consumer will not exonerate him from payment of any fees due to the Department.

PART IV

ANNEXURE—I

ANDAMAN AND NICOBAR ADMINISTRATION
ELECTRICITY DEPARTMENT

Application for Electric supply for Domestic/ Commercial Industrial purposes.

Clause 4 (a) (i)

To

The Executive Engineer/Assistant Engineer/Junior Engineer,
Electricity Department
Andaman & Nicobar Islands, Port Blair

Sir,

(1) I/we hereby require you, in accordance with clause VI of the schedule to the Indian Electricity Act, 1910 within one month or within such longer period as the Electricity Department may allow, from the date of this requisition to supply energy for the premises owned/occupied by me/us and situated within the area of supply.

I/we further require you to supply me/us with the necessary meter/meters on hire in terms of section 26 of the Indian Electricity Act, 1910. I/we agree to give such security as may be required for the price of the meter/meters, whenever called upon to do so.

(2) Applicant's name :

Occupation/Designation

House No. and/or name of the premises:

Street:

Locality:

Town:

Village or taluk:

Owned by:

Tenanted by:

Written permission of the landlord tendered:

Yes/No not applicable;

The following are my/our requirements:—

No. of points Wattage Total Wattage.

3. (A) Domestic (or Residential)

a. LIGHTS:

b. Fans:

c. Heating & small powers:

d. Plug points:

(B) Commercial power motor &/or Apparatus:

a. Lights:

b. Fans:

c. Heating & small power:

d. Plug points:

I/we further require you to supply me/us with the necessary meter/meters on hire in terms of section 26 of the Indian Electricity Act, 1910. I/we agree to give such security as may be required for the price of the meter/meters whenever called upon to do so.

I/we agree to bear any cost or repairs or replacements arising during the first year of servicing of the installation due to the defect in the internal wiring of my/our installations.

I/we shall agree to the back billing by the Electricity Department upto a maximum of six months, at thrice the normal rate of tariff applicable, if the meter/meters is/are tampered, thus resulting in the readings being non-recorded or in showing the units consumed considerably less.

The necessary requisition form duly filled in is attached herewith.

Signature of applicant:

Age:

Present address:

Signature and address of witness:

Dated:

Signature:
Executive Engineer
Assistant Engineer
Junior Engineer.

WIRING COMPLETION AND TEST REPORT

Application No.
Load sanctioned:
No. of outlay:

Tariff Applicable:
Deposit Amount
Receipt No.

Place:
Date:

To

The Assistant Engineer
the Junior Engineer
Electricity Department

I/we wish to inform you that the installation at _____ occupied _____ has been completed by me/us in all respect and is now ready for test.

I/we enclose herewith in duplicate the detailed wiring diagram for this installation.

The details of the installation and tests obtained are as follows:—

Name of demand	No. of points	Wattage of points	Total Watt.	Installation resistance	Description of Wiring	Remarks
LIGHTING						
Lights	(a) Drops (b) Brackets (c) Water Lights (d) Other Fittings Fans Wall Plugs					
Domestic Appliances: Cookers, Refrigerators, Water heaters Other Purposes, Wall Plugs						
	No.	BHP	Total BHP	Insulation resistance to earth	Description of wiring between pole	Remarks
		Each				
Motors: Industrial: Pumps: Other purposes:						

Size of wire, standing, single or multicore, type of insulation, open/teakwood casing and capping/bleeding/TSS/
Metal sheathed/ conduct wiring size of conduct etc.

No. of distribution boards, starters, iron clad switches etc.

The insulation was tested by me/us on _____ in accordance with the Indian Electricity Rules, 1936.

Consumer's Signature _____
Address:

Signature of the wiring Contractor
Address: _____

(For department's use)

- (a) The first test and inspection of new installation or of an extension to an existing installation shall be carried out free of charge but should any further test or inspection be found necessary owing to any fault in the installation or for non-compliance with the regulations of supply, the charges, payable in advance for each additional test and/or inspection shall be Rs 5/-

Type of premises:	Consumers' No.
Total No. of points/meters:	Dated of servicing
	(a) Date of providing service connection.
	(b) Date of commencement of supply:
Total connected load	New Service
Load connected on phases:	Tapping:
	A:
	B:
	C:
Telephone crossing:	From Pole No.
DISTRIBUTION TRANSFORMER :	SERVICE LINE
Location:	(a) Feeder No:
Voltage ratio	(b) Phase of connection:
Capacity:	(c) Total connected load including this connection.

CONNECTED LOAD:

- (a) Transformer:
(b) Transformer feeder:
(c) Total connected load including this connection:

METER:

Type and make:

Out out
Length of service line in Meter:
Test (in megger value)
Between phases.
Phase to earth.

Serial number:
Initial reading

GENERAL:

Meter sealed:

- (a) cover
(b) at terminal covers;
out-out sealed:
Does installation comply with rules:
Are any effects noticed: ~~None~~
Rotation of meter checked OK.
Meter Card Fixed:

Certified that the installation was tested and meggered by me

Junior Engineer:

State Whether residence, shop, office, hotel, restaurant, cinema, theatre, hospital, religious Education Institution, Factory (Describe) Agricultural pumping, other pumping (Describe) cottage industry (describe).

(b)

(For Office Use Only)

Sanction No:

LEADER FOLIO No.

WO No. & Date:

Account No.

INSTALLATION No.

History sheet No.

Service

Junior Engineer

AR Accountant.

Checked

Assistant Engineer.

ANNEXURE-III

ANDAMAN AND NICOBAR ADMINISTRATION
ELECTRICITY DEPARTMENT

Agreement for power supply at low tension for industrial (active) power to power installations with connected load of 1 HP and above

An agreement made at _____ this day _____ of _____ the month of _____ the year _____ between President of India, acting through, the Executive Engineer, Electricity Department Andaman and Nicobar Islands (herein after called the Supplier who expression shall wherever the context so admits, include his successors in office and assigns) of the one part and Shri _____

hereinafter called the 'consumer' who expression shall wherever the context so admits, include his successor or successors in business and permitted assigns or his heirs, executor administrators) of the other part

Whereas at the request of the consumer the supplier has agreed to supply to the consumer electrical energy for driving the consumer's Mill/Factory/Works/mechanism situated in his premises and bonafide lighting within the factory/mill/works premises including (1) Yard lighting (2) first aid centre (3) office (4) Mill/factory/works run canteens and (5) watch and ward subject to the following agreed and accepted terms and conditions.

(1) Power supply required for hotels and canteens run by contractor's residential quarters other than those of the watch and ward, show and sales rooms used for sales to public, street lights on approach road and in the residential area, club etc, though situated within the factory/Mill premises will be separately metered and billed for at the appropriate tariff for power supply in force from time to time

(2) The electrical energy utilised under this agreement for bonafide lighting including (1) Yard light (2) first aid centres (3) offices (4) factory/works, mill run canteens (5) watch and ward within the premises of consumer's factory/works/mills shall not in any one month exceed 15 (Fifteen) percent of that utilised for industrial (active) purposes. Electrical energy used in excess of the above quantity shall be billed for at the appropriate rates. The street lights and such other items not within the premises of the consumer's factory/works/mill and/or not directly connected with the manufacturing processes of the consumer's factory/works/mill will be separately metered and billed for at appropriate tariffs for power supply in force from time to time.

(3) (a) In this agreement, unless the context otherwise requires the Act shall mean the INDIAN Electricity Act, 1910 and Electricity (Supply) Act, 1948 as amended from time to time or such other enactment governing the supply and use of electrical energy as may be in force for the time being.

(b) The "Rules" shall mean the Rules and Regulations framed under the Act and for the time being in force.

Monthly minimum charges:

(4) The consumer hereby agrees and consents that in consideration of the supplier reserving the quantum of power specified in clause 5 herein to pay to the supplier monthly power supply charges of not less than the monthly minimum charges in accordance with the standard tariff applicable to this class of load viz. _____ irrespective of the fact whether the consumer avails of the power supply or not

(5) CONNECTED LOAD

During the period of supply is hereinafter mentioned the supplier shall supply to the consumer and the consumer shall take from the supplier electrical energy required by the consumer for the purpose herein above specified at a single point of supply within 30 metres from the supplier's power lines the point of supply being mutually agreed upon up to maximum extent of _____ HP being the nominal HP of the meter/meters installed by the consumer.

Proper use of Power:

(6) (a) Electrical energy supplied under this agreement shall not be utilised by the consumer in a manner whatsoever prejudicial to the supplier and all usage must be according to such method or methods and in such places or places as have been previously approved by the supplier. The consumer agrees to not re-sell the electrical energy to another person without obtaining the prior written consent of the supplier.

(b) The consumer also agrees to make use of the power supply during day and night except during peak load hours of supply i.e. from 1700 hrs to 2100 hrs. If the consumer commits breach of any of the above conditions, the supplier will have the option of terminating the agreement and also levying penalty amounting to twice the rate applicable for the purpose for which the energy is actually used. The decision of the supplier as to the amount and period for which penalty is to be levied shall be final.

Continuity of Power supply:

(7) (a) The supplier shall take all reasonable precautions to ensure continuity of supply of power to the consumer at the point of supply, but he shall not be liable to the consumer for any loss due to interruptions in the supply during war, mutiny, riot, labour disputes, or by reasons of earthquake hurricane, tempest or any accident or causes beyond the control of the supplier

provided always that the supplier shall give notice through press or radio as early as possible a out probable duration of any interruption in supply as may be necessitated due to any of the aforesaid causes and shall use every practical means to minimise the period of its interruption.

Damage to person or property:

8) The supplier will not be liable in any event except for the negligence of the supplier for damage to person or property arising, occurring or resulting from the use of the power.

SYSTEM OF SUPPLY:

(9) (a) The supply of electrical energy to the consumer shall be in the form of three phase alternating current at a frequency of 50 cycles per second and a pressure of.....volts, subject to the tolerance limits permitted by the Act and the RULES.

(b) The supplier shall provide the service line free of cost upto a maximum of 30 metres outside the limits of the property in respect of which the requisition for supply of electrical energy has been made from the nearest distributing main. Any length in excess of 30 metres as defined above and the whole of the service line within the limits of the property in respect of the application made shall be paid for by the consumers. The service line so provided shall always be deemed to be the property of the supplier for maintenance purposes from the date of service of the consumer's installation, notwithstanding the payment therefor made by the consumer to the supplier. The consumer agrees to bear any cost of repair or replacement arising during the first year of servicing of the installation due to the defect in the service connection works of any installation.

10. POINT OF SUPPLY AND METERING:

(a) The metering shall be at the point of supply. But if due to lack of necessary equipment, the metering is done by the supplier at a point other than the point of supply, the power losses in the equipment etc. the point of supply and point of actual metering will be added on the actual quantity of power recorded and the sum total thereof reckoned for billing purposes.

CHECK METERS:

(b) The consumer may at his own expense install check meter in his feeders at the works/mill/factory.

METER SEALS:

(c) The meters and cut-out sealed by the supplier shall not be interfered with by the consumer.

11. DISCONNECTION OF POWER SUPPLY FOR ROUTINE TEST:

The supplier reserves the right to discontinue the supply of power after notice for the purpose of routine testing for a period not exceeding an hour once every month and also at any other time if it appears necessary to the supplier to test any position of the plant in order to secure subsequent continuity of supply or for the purpose of connection new machinery. This monthly stoppage may at the option of the supplier, be extended on due notice of six hours once in every six months. No indemnity or compensation shall be claimed by the consumer for such stoppage or inconvenience resulting therefrom.

12. ACCOMMODATIONS FOR SUPPLIER APPARATUS:

(a) During the continuance of this agreement the consumer shall provide and continue to provide free of charge and/or rent, accommodation, duly approved by the authorised employees or agents or officers of the supplier, for the housing of suppliers equipment and apparatus necessary for the performance of this agreement. The supplier shall be at liberty to bring upon the accommodation so provided at the consumers premises not only the cables required for the supply of electrical energy to the consumer but also the cables, accessories and equipments necessary for giving connection to other consumers through the cable, equipment, accessories and terminals etc. situated at the consumers premises provided the consumer shall, in no way, interfere with the power supply or its continuity jeopardised as a result of such action on the part of the supplier.

13. ENTRY IN THE CONSUMER'S PREMISES:

The authorised employees or officers of the supplier shall, at all reasonable times, without notice, be entitled to enter the premises of the consumer to read the meter/meters and/or to inspect the entire electrical installation only on the production of permit issued by the supplier or his authorised representatives. Such permit shall be produced before the consumer or employee or representative of the consumer in charge of the installation.

Any attempt on the part of the consumer, or his agents, or his employees, or anyone else, purporting to act on his behalf and in his interest, to prevent such entry of authorised employees of the consumer shall render the consumer liable to have the power supply cut off immediately and reconnection shall not be made until the cost of disconnection and reconnection has been duly paid by the consumer.

14. CONSUMERS INCREASED LOAD REQUIREMENTS:

(a) If the consumer desires to increase the power specified in clause 5 thereof he shall give due and proper notice in writing to the supplier for the additional power required, and should the

supplier be not able to supply this additional power, he shall within six months of the receipt of such notice intimate whether or not he undertakes to supply the full additional power asked for within one year from the date of receipt of the notice from the consumer or

(b) In the event of the supplier intimating his inability to supply such additional power if the supplier fails within the said six months to intimate as to whether or not the supplier can supply additional power, the consumer shall be at liberty to utilise his own generating plant provided however, that such plant shall be operated only when the maximum demand or rated load is not less than the contractor demand specified in clause 5 at the time supplier shall have intimated his inability to supply the additional power.

(c) If at any time during a month the connected load specified in this agreement is unauthorisedly increased by the consumer, then without prejudice to any criminal prosecution or other legal action which the supplier may take against the consumer, the consumer shall on demand pay to the supplier for such connected load exceeding the load indicated in this agreement, at thrice the normal rate per HP per month.

15. Termination of agreement when consumer fails to take power supply :

Should the consumer continue to take power for a period extending three consecutive months, the supplier shall be at liberty to terminate this agreement by giving seven days' clear notice to the consumer and upon such termination of the agreement, the consumer shall forthwith pay to the supplier all the amounts then due as per this agreement together with a further sum equal to the total amount of the monthly minimum charges based on nominal HP (of the motor/motors installed by the consumer) as specified in clause 5 hereof or on capital cost incurred by the supplier which ever is higher, for the unexpired period of this agreement, and the supplier shall be entitled to remove from the premises of the consumer all equipment, apparatus and fixtures belonging to the suppliers.

16. Monthly payment of power supply charges :

(a) The consumer shall pay to the supplier every month charges for the electrical energy supplied to the consumer during the proceeding month i.e. for period between meter reading date in particular month and the corresponding meter reading date of the immediately succeeding month, at the rates and monthly minimum charges specified in the supplier's standard tariff schedule in force from time to time and applicable to the class of power supply as specified in this agreement.

Variation in tariff and/or Mode of Billings :

(b) This agreement is based on the existing tariff for power supply. If the A & N Administration or the supplier want to reasonably vary the rates of monthly minimum charges reasonably alter the mode of billing referred to in this agreement to conform with any variation in the cost of production and supply of the power during the continuance of this agreement, the consumer will abide by such changes and pay the varied charges to the supplier.

Disconnection for Arrears :

(c) In case the consumer fails to pay any charges due for power supplied, within 15 days after the date of presentation of the bill, the supplier shall have the option to cut off the supply of power after giving seven clear days' notice to the consumer without prejudice to the recovery of all dues from the consumer, including the cost of power supplied upto the date on which supply of power is cut off. In such eventuality the consumer shall also be liable to pay monthly minimum charges prescribed under this agreement during the entire period of such stoppage of power supply.

17. Period of this agreement :

(a) This agreement shall commence from the date of power supply specified in sub-clause (b) of this clause and shall continue for a period of two (2) years therefrom subject to earlier termination under any of the provisions of this agreement or upon either party giving one month's notice in writing of his intention to terminate this agreement but without prejudice to the rights and liabilities of either party in respect of any matter antecedent to such termination.

Commencement of Supply :

(b) Within a period of three months from the date of intimation from the supplier or any officer authorised by the supplier, that the supply of electrical energy is available, the consumer shall commence to take the supply of electrical energy under this agreement and unless in the opinion of the supplier the consumer is unable to take such supply for causes beyond his control, the date of commencement of supply shall be the date of the expiry of the said three months period or the date of actual commencement of supply whichever is earlier and from such date the consumer shall become liable to pay to the supplier the amount of monthly power supply charges and monthly minimum charges as prescribed under this agreement.

18. Discontinuance of power supply as per Act and the Rules :

(a) In the event of the supply of energy being disconnected by the supplier in consequence of any breach or default on the part of the consumer entitling the supplier so to do under the provisions of the Act and the rules, the amount of charges for the electrical energy already supplied and all other amounts then payable under this agreement shall become due and recoverable forthwith provided always and it is hereby expressly declared that during the period of such discontinuance the consumer shall continue to pay the monthly minimum charges prescribed under this agreement.

(a) General Conditions and Miscellaneous Charges:

The existing general conditions and miscellaneous charges for supply of electrical energy set out in part III of the Andaman and Nicobar Islands Electrical Energy Control of supply distribution, consumption and use of electrical Energy order 1983, shall be deemed to be an integral part and parcel of this agreement and shall govern the parties hereto in so far as applicable. The parties hereto shall abide by the changes made from time to time in these general conditions and miscellaneous charges.

Supplier's Advice:

(b) The supplier shall, from time to time provide free of charge such expert advice and assistance as may be required by the consumer and as may in the sole discretion of the supplier be made available in the circumstances in connection with the electric installation in the..... But there shall be no obligations upon the supplier under this clause in the event of any requirement of the consumer entailing extra expense to the supplier.

22 Applications of the provisions of the Act and Rules:

The provisions of the Act and the Rules for the time being in force shall apply to all matters not herein before specifically provided.

23 Marginal Notes:

The Marginal notes do not form part of this agreement and shall not be referred to for the construction and interpretation of any of the provisions of this agreement. In witness whereof the parties hereto have herewith set their respective hands and seals of office, on the day, month and year first above written.

1. Witness.

Signature

Executive Engineer (Supplier)

ELECTRICITY DEPARTMENT A & N ISLANDS

for and on behalf of the President of India.

2. Witness.

Signature of Consumer:

Note: For renewal of agreement delete clause (7) (b) in full under dated full signature of the consumers and that of the Officer authorised in this behalf to sign the Agreement.

By Order and in the Name of the Lt. Governor.

plants can be offered for sale to the SEBs

2 MODIFICATIONS IN THE FINANCIAL ENVIRONMENT FOR PRIVATE SECTOR UNITS:

2.1 Debt equity ratio upto 4:1 is permissible for all prospective private enterprise entrants (i.e. for both licensees and generating companies) to the electricity sector, that is, a minimum of 20% of the total outlay should be the equity component, at least 11% of the total outlay must come through promoters contribution. In the rest of the total outlay, less equity, which may be upto 80% of the total project cost, an amount not exceeding 40% of the total outlay may come from Indian public financial institutions, but the remaining amount should be met from other sources. In other words, to ensure that the investor brings in additionality of resources to the electricity sector, not less than 60% of the total outlay for the project must come from sources other than Indian public financial institutions.

2.2 Upto hundred per cent (100%) foreign equity participation, can be permitted for projects set up by foreign private investors in the Indian electricity sector

2.3 With the approval of the Government, import of equipment by private utilities, electricity projects can be permitted, in cases where a foreign supplier(s)/agency(ies) is/are extending concessional credit.

2.4 The financial parameters laid down in the Electricity (Supply) Act, 1948 of the licensing companies with regard to rate of return has been raised (through an amendment to the Sixth Schedule in paragraph XVII 10(b) of the (Electricity (Supply) Act) 1948) from the 2% as applicable over the RBI rate, to the investments already made, to 5% over the RBI rate for investments made after this amendment.

2.5 Special appropriations may be permitted by the State Governments each year to cover the higher debt redemption obligation of the licensee (Sixth Schedule, Paragraph XVII 2(c) - (vb) of Electricity (Supply) Act, 1948) which was not the case earlier.

2.6 In case of licensees, capitalisation of interest charges during the construction period, (i.e. between the date of grant of license and the date when the undertaking commences supply) as actually accrued, will be permitted to be included as 'original cost'. This facility will apply also to expansions, after this amendment. The previous system was calculating the interest charges at one per cent above the average RBI's rate. This amendment has been brought about in Sixth Schedule Paragraph XVII 5(b) of Electricity (Supply) Act, 1948.

3 MODIFICATION IN THE ADMINISTRATIVE ENVIRONMENT:

3.1 The list of major clearances and the agencies from whom clearances are to be obtained for setting up the projects in the electricity sector is provided at

"SCHEDULE

Description of Assets		Existing		Revised	
		Fair life (years)	Depreciation (Straight line)	Fair life (years)	Depreciation (Straight line)
(1)		(2)	(3)	(4)	(5)
A.	Land owned under full title	Infinity	--	Infinity	--
B.	Land held under lease				
	a) for investment in the land	The period of lease or the period remaining unexpired on the assignment of the lease	--	The period of lease or the period remaining unexpired on the assignment of the lease	--
	b) for cost of clearing site	The period of the lease remaining unexpired at the date of clearing the site	--	The period of lease remaining unexpired at the date of clearing the site	--
C.	Assets Purchased New				
	a Plant and machinery in generating stations including plant foundations -				
	i) Hydro-electric	35	3.40	35	3.40
	ii) Steam electric NHRS & Waste Heat Recovery Boilers/Plants	25	5.06	25	5.06
	iii) Diesel- electric and gas plant	15	8.24	15	8.24
	b. Cooling towers and circulating water systems	25	5.06	25	5.06
	c Hydraulic works forming part of Hydro-electric system including -				
	i) Dams Spillways weirs, canals, reinforced concrete Flumes and siphons	50	1.95	50	1.95

37					
	ii) Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge tanks, hydraulic control valves and other hydraulic works.	35	3.40	35	3.40
	d Building & civil engineering works of permanent character, not mentioned above -				
	i) Offices & showrooms	50	1.95	50	3.02
	ii) Containing thermo-electric generating plant	25	5.06	25	7.84
	iii) Containing Hydro Electric generating plant	35	3.40	35	3.40
	iv) Temporary erection such as wooden structures	5	21.55	5	33.40
	v) Roads other than kutcha roads	50	1.95	50	3.02
	vi) Others	50	1.95	50	3.02
	e Transformers, transformer (Kiosk) sub-station equipment & other fixed apparatus (including plant foundations)				
	i) Transformers (including foundations) having a rating of 100 kilo volt amperes and over	25	5.06	25	7.81
	ii) Others	25	5.06	25	7.84
	f. Switchgear including cable connections	25	5.06	25	7.84
	g. Lightning arrestors:				
	i) Station type	25	5.06	25	7.84
	ii) Pole type	15	8.24	15	12.77
	iii) Synchronous condensor	35	3.40	35	5.27
	h. Batteries	5	21.55	5	33.40
	i) Underground Cable including joint boxes and disconnected boxes	35	3.40	35	5.27
	ii) Cable duct system	50	1.95	50	3.02

i. Overhead lines including supports:	35	3.40	35	5.27
i) Lines on fabricated steel operating at nominal voltages higher than 66 KV.	25	5.06	25	7.84
ii) Lines on steel supports operating at nominal voltages higher than 13.2 kilovolts but not exceeding 66 kilo volts	25	5.06	25	7.84
iii) Lines on steel or reinforced concrete supports	25	5.06	25	7.84
iv) Lines on treated wood supports				
j. Meters	15	8.24	15	12.77
k. Self propelled vehicles	5	21.55	5	33.40
l. Air conditioning plants:				
i) Static	15	8.24	15	12.77
ii) Portable	5	21.55	5	33.40
m. i) Office furniture and fittings	15	8.24	15	12.77
ii) Office equipments	15	8.24	15	12.77
iii) Internal wiring including fittings and apparatus	15	8.24	15	12.77
iv) Street light fittings	15	8.24	15	12.77
n. Apparatus let on hire				
i) Other than motors	5	21.55	5	33.40
ii) Motors	15	8.24	15	12.77
p. Communication equipment:				
i) Radio and high frequency carrier system	15	8.24	15	12.77
ii) Telephone lines and telephones	15	8.24	15	12.77
q. Assets purchased second hand and assets not otherwise provided for in the Schedule	Such reasonable period as the competent Government determines in each case having regard to the nature, age and condition of the assets at the time of its acquisition by the owner.			

(F No. 6/1/TAR/FF/93-94)
(T. SETHUMADHAVAN)
Joint Secretary

THE GAZETTE OF INDIA : EXTRAORDINARY [PART II-SEC. 3(1)]

MINISTRY OF POWER

NOTIFICATION

New Delhi, the 29th March, 1994

S.O. 269(E) :- In exercise of the power conferred by sub-section (2) of section 43A, sub-section (1) section 68 and sub-section (3) of section 75A of the Electricity (Supply) Act, 1948 (54 of 1948), the Central Government, after consultation with the Central Electricity Authority, hereby makes the following amendments to the notification of the Government of India in the erstwhile Ministry of Power and Non-conventional Energy Sources, Department of Power, No.S.O.93(E), dated the 23rd January, 1992, namely:-

In the said notification-

- (a) for the words, figures and letters "statement of accounts commencing on 1st April, 1992", the words, figures and letters "statement of accounts commencing on 1st April, 1994" shall be substituted;
- (b) for the schedule, the following schedule shall be substituted, namely--

SCHEDULE

Description of Assets	Existing		Revised	
	Fair life (years)	Depreciation (straight line)	Fair life (years)	Depreciation (straight line)
(1)	(2)	(3)	(4)	(5)
A.Land owned under full title	Infinity	-	Infinity	-
B.Land held under lease:				
(a) for investment in the land	The period of lease or the period remaining unexpired on the assignment of the lease	-	The period of lease or the period remaining unexpired on the assignment of the lease	-

(b) for cost of clearing site.	The period of the lease remaining unexpired at the date of clearing the site	-	The period of the lease remaining unexpired at the date of clearing the site	-
--------------------------------	--	---	--	---

**C.Assets:
purchased new :**

(a) Plant and machinery in generating stations including plant foundations :-

(i) Hydro-electric	35	3.40	35	3.40
(ii) Steam-electric MRS & Waste Heat Recovery Boilers/Plants	25	6.06	25	7.84
(iii) Diesel-electric & gas plant	15	8.24	15	8.24
(b) Cooling towers and circulating water systems	25	6.06	25	7.84

(c) Hydraulic works forming part of hydro-electric system including:-

(i) Dams, Spillways weirs, canals reinforced concrete Flumes & siphons	60	1.95	60	1.95
(ii) Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works.	35	3.40	35	3.40

(d) Building & civil engineering works of a permanent character, not mentioned above.				
(i) Offices & showrooms	60	1.95	60	1.02
(ii) Containing thermo-electric generating plant	26	5.06	26	7.84
(iii) Containing hydro-electric generating plant	36	3.40	36	3.40
(iv) Temporary erection such as wooden structures	5	21.55	5	33.40
(v) Roads other than kutcha roads	50	1.95	50	3.02
(vi) Others	50	1.95	50	3.02
(e) Transformers, transformer (Kiosk) sub-station equipment & other fixed apparatus (including plant foundations)				
(i) Transformers (including foundations) having a rating of 100 kVA or over	25	5.06	25	7.84
(ii) Others	25	5.06	25	7.84
(f) Switchgear, including cable connections	25	5.06	25	7.84
(g) Lightning arrestors:				
(i) Station type	25	5.06	25	7.84
(ii) Pole type	15	5.06	15	7.84
(iii) Synchronous condenser	36	3.40	36	3.40
(iv) Batteries:	5	21.55	5	33.40

SCHEDULE-1 (c)
8/9

(i) Underground Cable including joint boxes and disconnection boxes	35	3.40	35	6.27
(ii) Cable duct system	50	1.95	50	3.02
(i) Overhead lines including supports:				
(i) Lines on fabricated steel operating at nominal voltages higher than 33 KV	35	3.40	35	5.27
(ii) Lines on steel supports operating at nominal voltages higher than 13.2 KVo volts but not exceeding 33 Kilo volts	25	8.06	25	7.94
(iii) Lines on steel or reinforced concrete supports	25	5.06	25	7.84
(iv) Lines on treated wood supports	25	8.06	25	7.84
(j) Motors on treated	15	8.24	15	12.77
(k) Self propelled vehicles	5	21.55	5	33.40
(l) Air conditioning plants:				
(i) Static	15	8.24	15	12.77
(ii) Portable	5	21.55	5	33.40
(m) (i) Office furniture and fittings	15	8.24	15	12.77
(ii) Office equipments:	15	8.24	15	12.77
(iii) Internal wiring including fittings and apparatus	15	8.24	15	12.77
(iv) Street light fittings	15	8.24	15	12.77
(n) Apparatus for power:				
(i) Other than motors	5	21.55	5	33.40
(ii) Motors	15	8.24	15	12.77

SCHEDULE-1 (c)
9/9

(p) Communication equipment:				
(i) Radio and higher frequency carrier system	15	8.24	15	12.77
(ii) Telephone lines and telephones	15	8.24	15	12.77
(q) Assets purchased second hand and assets not otherwise provided for in the schedule	Such reasonable period as the competent Govt. determines in each case having regard to the nature, age and condition of the assets at the time of its acquisition by the owner.			

Sd/-
[F.No.6/1/Tariff/93-94]
T.SETHUMADHAVAN, Jt.Secy.

THE GAZETTE OF INDIA
EXTRAORDINARY
PART II-Section 3-Sub-Section(ii)
PUBLISHED BY AUTHORITY
MINISTRY OF POWER
NOTIFICATION
New Delhi, the 30th March, 1992

(As amended vide Notification No. S.O. 36(E) dated 18/19 Jan'94, S.O. 605(E) dated 22nd August, 1994, S.O 39(E) dated 12th Jan.'95, S.O. 167(E) dated 6th November '95 and S.O.151 (E), dated 26th February, 1997)

S.O. 251(E) In exercise of the powers conferred by sub-section (2) of section 43A of the Electricity (Supply) Act, 1948 (54 of 1948), hereinafter referred to as the Said Act, the Central Government hereby determines the factors in accordance with which the tariff for sale of electricity by Generating Companies to the Board and to other persons shall be determined, as follows:-

1. Thermal Power Generating Stations

The two-part tariff for sale of electricity from Thermal Power Generating Stations (including gas and Na phtha based stations) shall comprise the recovery of annual fixed charges consisting of interest on loan capital, depreciation, operation and maintenance expenses (excluding fuel), taxes on income reckoned as expenses, return on equity and interest on working capital at a normative level of generation, and energy (variable) charges covering fuel cost recoverable for each unit (kilowatt hours) of energy supplied and shall be based on the following norms:

1.1 The norms of operation and Plant Load Factor as has been laid down by the Authority, for the time being, subject to modifications thereof, if any under Sub-Section (2) of section 43A of the Said Act, namely:

i. Plant Load Factor

During stabilisation period	4500 hours/Kw/year
Subsequent period	6000 hours/Kw/year

ii. Station Heat Rate for coal based stations

During stabilisation period	2600 K. Cal/Kwh
-----------------------------	-----------------

SCHEDULE-1 (d)

2/25

Subsequent period 2500 K. Cal/Kwh

(In respect of 500 MW units where the boiler feed pumps are electrically operated the heat rate of 40 K. Cal/Kwh shall be reduced from station heat rate)

III. Station Heat Rate for gas and Naphtha based stations

For open cycle 2900 K. Cal/Kwh
For combined cycle 2000 K. Cal/Kwh

IV. Secondary fuel oil consumption for coal based stations

During stabilization period 5 ml/Kwh
Subsequent period 3.5 ml/Kwh

V. Auxillary Consumption

With cooling tower

without cooling tower

(a) Coal based stations

200 MW series	9.5 per cent	9.0 per cent
500 MW series		
Steam driven pumps	8.0 per cent	7.5 per cent
Electrically driven pumps	9.5 per cent	9.0 per cent

(b) Gas and Naphtha based stations

Combined cycle	3.0 per cent
Open cycle	1.0 per cent

(During the stabilisation period, normative auxillary consumption shall be reckoned at 0.5 per cent over and above the figures specified above)

VI. Stabilisation period

Stabilisation period commencing from the date of commercial operation shall be reckoned as follows:

(a) Thermal	180 days
-------------	----------

- (b) Open cycle gas and Naphtha based station 90
(c) Combined cycle gas and Naphtha based station 90 days

vii. Date of Commercial Operation

The date of commercial operation of individual units shall be reckoned as follows:-

Thermal Units: Not exceeding 180 days from the date of synchronisation.

Gas and Naphtha based Units: From the date of synchronisation.

"Explanation:- For removal of doubts, it is clarified that the norms laid down by the Authority are the ceiling norms only and this shall not preclude the Boards and Generating Companies from agreeing to accept improved norms".

1.2 The capital expenditure of the project shall be financed as per the approved financial package set out in the techno-economic clearance of the Authority. The project cost shall include capitalised initial spares. The approved project cost shall be the cost which has been specified in the techno-economic clearance of the Authority.

The actual capital expenditure incurred on completion of the project shall be the criterion for the fixation of tariff. Where the actual expenditure exceeds the approved project cost the excesses as approved by the Authority shall be deemed to be the actual capital expenditure for the purpose of determining the tariff.

Provided that such excess expenditure is not attributable to the Generating Company or its suppliers or contractors:

Provided further that where a power purchase agreement entered between the Generating Company and the Board provides a ceiling on capital expenditure, the capital expenditure shall not exceed such ceiling.

Provided also that in case of multi-unit project, the percentage of capital cost as specified by the Authority in its techno-economic clearance shall be considered for fixation of tariff, on commercial operation of the progressive units but in case of delay in commissioning of second or subsequent units from the scheduled date, the project cost, for the period of delay, shall be retrospectively approved for the tariff purpose in the ratio of proportionate allocation of units; provided further that if the capital cost of the project increases, in comparison to the cost approved in

Techno-economic Clearance, on account of foreign exchange variation or change of law and approved by the competent Government; the project developer may approach the Authority not more than once in year in any financial year for the mid term review of the capital cost.

1.3 In respect of infirm power, that is sale of electricity prior to commercial operation of the unit, any revenue from such sale (other than the fuel cost), shall be taken as reduction in Capital expenditure and not as net revenue.

1.4 Extra rupee liability towards interest payment and loan repayment actually incurred, in the relevant year shall be admissible; provided it directly arises out of foreign exchange rate variation and is not attributable to Generating company or their suppliers or contractors.

1.5 The annual fixed charges shall be computed on the following basis:

- a) Interest on loan capital shall be computed on the outstanding loans, including the schedule of repayment, as per the financial package approved by the Authority.
- b) The rates of depreciation shall be applicable as notified by Central Government, from time to time.
- c) Operation and Maintenance expenses including insurance for the first full year, after commissioning of the Plant, shall be calculated as a percentage on the actual capital expenditure as provided in clauses 1.2 on the basis of one of the following alternatives, namely:-
 - (i) at the rate of 2.5 per cent of the actual capital expenditure of ceiling on capital expenditure provided in the power purchase agreement; or
 - (ii) at 2 per cent of the actual capital expenditure on ceiling on capital expenditure provided in the power purchase agreement together with actual expenditure on insurance.

provided that total of 2 per cent of the actual capital expenditure on ceiling on capital expenditure provided in the power purchase agreement and the actual expenditure on insurance shall not exceed 3 per cent on the capital expenditure as provided in clause 1.2.

SCHEDULE -1 (d)

5/25

"Note-1: The expenditure on the operation and maintenance including insurance, calculated on the basis of 2.5 per cent for the first year, shall be revised in each subsequent year as may be mutually agreed upon between the Board and the Generating Company on the basis of weighted price index. Alternately, the expenditure on operation and maintenance, calculated on the basis of 2 per cent for the first year, shall be revised in each subsequent year on the basis of weighted price index, but the actual expenditure on insurance or ceiling insurance expenses, for the first year shall not be subject to escalation in the subsequent year.

Note-2 - In case of multi-unit project, the operation and maintenance expenses, in respect of each unit for the purpose of tariff, shall be allowed on the above Percentage of the capital expenditure calculated in proportion to the capacity of each unit and not on the basis of allocation of capital expenditure in Techno-economic clearance. The escalation shall be allowed after one year, from the date of the commissioning of the units".

- d) Tax on income, if any, to be computed as expense at actuals. Any under or over recoveries of tax on income shall be adjusted every year, on the basis of a certificate of Statutory Auditors.

Note - Provided that the tax on income on the business of electricity as a component of Annual Fixed Charge shall constitute the ceiling, but the Boards shall not invariably allow tax on income on incentive payable as a pass-through in tariff and shall negotiate for the tax on income not being a pass-through beyond the generation level of 6000 hrs/kw/year.

- e) Return on equity shall be computed on the paid up and subscribed capital relating to the generating unit, and shall be 16 per cent of such capital.

Explanation-1 :- For the purpose of this paragraph, the Generating Company shall, in regard to subscribed equity brought in foreign exchange, have the option to compute the return on equity not exceeding 16 per cent in the currency of the subscribed capital.

Explanation-II:- Premium raised by the Generating Company while issuing share capital and investment or internal resources created out of free reserve of existing company, if any, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing the return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the power generation project and forms part of the approved financial package as set out in the techno-economic clearance accorded by the Authority.

f) Interest on Working Capital shall cover:

- (i) Fuel cost for one month and reasonable fuel stocks as actually maintained but limited to fifteen days for pit head stations and thirty days for non pit head stations, calculated on normative plant load factor basis;
- (ii) sixty days stock of secondary fuel oil, calculated on normative plant load factor basis;
- (iii) operation and maintenance expenses (cash) for one month;
- (iv) maintenance spares at actuals subject to a maximum of one per cent of the capital cost but not exceeding one year's requirements (its value of one fifth of initial spares already capitalised; and
- (v) receivables equivalent to two months' average billing for sale of electricity calculated on normative plant load factor basis"

1.6 Full fixed charges shall be recoverable at generation level of 6000 hours/kw/year (4500 hours/kw/year during stabilisation period). Payment of fixed charges below the level of 6000 hours/kw/year shall be on prorata basis. There shall not be any payment for fixed charges for generation level above 6000 hours/kw/year. For generation of above 6000 hours/kw/year, the additional incentive payable shall not exceed 0.7 per cent of paid up and subscribed capital, for each percentage point increase of Plant Load Factor above the normative level of 6000 hours/kw/year. While computing the level of generation, the extent of backing down, as ordered by the Regional Electricity Boards or State Load Despatch Centre, as the case may be, shall be reckoned as generation achieved. The payment of fixed charges shall be on monthly basis, proportionate to the electricity drawn by the respective Boards and other

person. Necessary adjustment based on actual shall be made at the end of each year.

Note-1 The additional incentive of return on equity of 0.7 per cent for each percentage increase above the normative level of 6000 hours/kw/year, mentioned above, shall be the maximum ceiling. It shall be open to the Generating Companies and Boards or other power purchasers to negotiate and fix a suitable lower additional incentive, within the above ceiling.

Note-2 For Naphtha based thermal plants, the extent of backing down, as ordered by Regional Electricity Boards or the State Load Despatch centre, as the case may be, beyond plant Load Factor of 6000 hours/Kw/Year, shall not be reckoned as generation achieved for incentive purpose.

Note-3 For Diesel Engine generating units the extent of backing down, as ordered by Regional Electricity Boards or the State Load Despatch Centre, as the case may be, beyond Plant Load Factor operation norms laid down by the Central Electricity Authority for the time being, subject to modification therefor, if any, shall not be reckoned as generation achieved for incentive purpose.

1.7 Energy (variable) charges shall cover fuel costs and shall be calculated as follows:

(a) **Primary fuel namely Coal or Gas or Naphtha**

Quantity shall be computed on the basis of Station Heat Rate (less heat contributed by secondary fuel oil as below, for coal based stations) and gross calorific value of coal or gas or Naphtha actually fired.

(b) **Secondary fuel oil only for coal based station**

At normative consumption

During stabilisation period

Subsequent period

5ml/kwh;

3.5ml/kwh.

(c) Adjustment on account of variation in price or heat value of fuels 8/25

Initially Gross Calorific value of coal or gas or Naphtha may be taken as per actual in the preceding three months. Any variation shall be adjusted on a month to month basis on the basis of Gross Calorific Value of coal or gas or Naphtha actually received and burnt and actual landed cost incurred by the Generating Company for procurement of coal, oil or gas or Naphtha as the Gross Calorific Value of coal or gas or Naphtha actually received and burnt and actual landed cost incurred by the Generating Company for procurement of coal, oil or gas or Naphtha as the case may be.

1.8 For payment of bills through letter of credit, a rebate of 2.5 per cent shall be allowed. If the payments are made by a mode other than through letter of credit but within a period of one month of presentation of bills by the Generating company, a rebate of 1 per cent shall be allowed.

2. Hydro Power Generating Stations

The two-part tariff for sale of electricity from hydro power generating stations shall comprise the recovery of annual capacity charge consisting of interest on loan capital, depreciation and energy charges consisting of operation and maintenance expenses, tax on income reckoned as expenses, return on equity and cess/levy on water charges at actuals and interest on working capital at a normative level of generation.

2.1 Definitions for tariff of hydro stations

In paragraphs 2 to 2.8, -

(i) "Availability", in relation to a project, means the capacity of the project, including the generating units, to generate power on availability of water, and the annual availabilities of a project shall be determined as per the following formula:-

$$\text{Percentage Annual Availability} = \frac{(H_1 U_1 + H_2 U_2 + \dots + H_n U_n) \times 100}{(U_1 + U_2 + \dots + U_n) \times 8760}$$

Where, U_1, U_2, \dots, U_n are the capacities in Mega Watts of different units, and

H_1, H_2, \dots, H_n are the hours for which the respective units were available for

0/25

operation during the year;

(ii) "Design Energy" means the quantum of energy which could be generated in a 90 percent dependable year with 95 percent availability of installed capacity of the station:

Explanation- If the total energy generation in the years for which hydrological data is available (say N years) is arranged in descending order then N+1th year would represent the 90 per cent dependable year. The 90 percent dependable year is a year in which the annual energy generation has the probability of being equal to or in excess of 90 per cent of the expected period of operation of the scheme.

(iii) "Installed Capacity" means the summation of the name plate capacity of the generating units in the station or the capacity as decided in consultation with the Authority from time to time considering the up rating, derating, etc. as may be applicable.

(iv) "Project" includes the complete hydro power generating facility covering all components such as dam, intake water conductor systems, power station generating units of the scheme as apportioned to power generation and as decided by the Authority.

(v) "Secondary Energy" means the quantum of energy generated in excess of the design energy on an annual basis in the station.

(vi) "Station" means a hydro generating station having an installation of one or more hydro generating units including reversible units.

2.2 The norms of operation as have been laid down by the Authority for the time being subject to modification thereof, if any, under sub section (2) of section 43 A of the Act are as under:-

(i) Normative level of generation (Design Energy):

Energy computed in a 90 percent dependable year with 95 percent availability of installed capacity, as set out in techno-economic clearance.

(ii) Normative availability of the project:

90 percent availability

(iii) Auxiliary consumption:

0.5 percent of energy generated.

(iv) Transformation losses (from generation voltage to transmission voltage):

0.5 percent of energy generated.

(v) Date of Commercial Operation:

Not exceeding 15 days from the date of synchronization.

Explanation:- For removal of doubts, it is clarified that the norms laid down by the Authority are the ceiling norms only and this shall not preclude the Boards and Generating Companies from agreeing to accept improved norms.

2.3 (a) The capital expenditure of the project shall be financed as per the approved financial package set out in the techno-economic clearance of the Authority.

(b) The project cost shall include capitalized initial spares. The approved project cost shall be the cost which has been specified in the techno-economic clearance of the Authority.

(c) The actual capital expenditure incurred on completion of the project shall be a criterion for the fixation of tariff. Where the actual expenditure exceeds the approved project cost, the excess expenditure as approved by the Authority shall be deemed to be the actual capital expenditure, for the purpose of determining the tariff, provided that such excess expenditure is not attributable to the Generating Company or its supplier or contractors.

Provided further that where a power purchase agreement entered into between the Generating company and the Board provides a ceiling on capital expenditure, the capital expenditure shall not exceed such ceiling.

2.4 In respect of infirm power, i.e. sale of electricity prior to commercial operation of the unit, any revenue from such sale shall be taken as reduction in capital expenditure and not as net revenue.

2.5 Extra rupee liability towards interest payment and loan repayment actually incurred in the relevant year shall be admissible, provided it directly arises out of foreign exchange rate variation and is not attributable to Generating Company or its suppliers or contractors.

2.6 The annual capacity charges shall be computed on the following basis, namely:-

- (a) Interest on loan capital shall be computed on the outstanding loans, including the schedule of repayment, as per the financial package approved by the Authority;
- (b) The rates of depreciation shall be applicable as notified by the Central Government from time to time; or "Advance Against Depreciation" shall be applicable at an annual amount not exceeding one-twelfth of the loan amount and limited to the actual loan liability of the year, as per the approved financial package.

Explanation I The total of depreciation including Advance Against Depreciation, charged through the tariff shall not exceed 90 per cent of the approved capital cost during the life of the project.

Explanation-II In case a generating company takes assets on lease, the leasing charge as approved by the Authority, shall be considered in the capacity charge in lieu of depreciation and interest liability.

2.7 Full capacity charges shall be recoverable in 7,884 hours/year (90 per cent Availability) of operation. Payment of capacity charge below the level of 7,884 hours/year shall be on pro-rata basis. There shall not be any payment of capacity charges for availability level above 7884 hours/years. The capacity charge shall be calculated on monthly basis and denominated in Rs. /kw/ month.

2.8 Total Energy charges for a year shall be computed on the following basis:

- (a) Operation and maintenance expenses, inclusive of insurance expenses for the first full year after commissioning of the plant, shall be calculated at 1.5 per cent of the approved capital expenditure or the ceilings on capital expenditure as provided in paragraph 2.3.

The expenditure on operation and maintenance, inclusive of insurance expenses, in each subsequent year after the first full year of operation shall be revised as may be mutually agreed upon between the Board and Generating Company on the basis of the weighted price index.

- (b) Tax on income, if any, shall be computed as expense at actuals. Any over recoveries or under recoveries of tax on income shall be adjusted every year on the basis

of a certificate of Auditors.

SCHEDULE-1 (d)
12/25

(c) Return on Equity shall be computed at 16 per cent on the paid up and subscribed capital relating to the generating unit.

Explanation I: For the purpose of this sub paragraph, the Generating Company shall, in regard to subscribed equity brought in foreign exchange have the option to compute the return on equity not exceeding 16 percent in the currency of the Subscriber Capital.

Explanation II Premium raised by the Generating Company while issuing share capital and investment of internal resources created out of free reserve of an existing company, if any, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing the return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the power generation project and form part of the approved financial package as set out in the techno-economic clearance accorded by the Authority.

(d) Interest on Working Capital which covers:

- (i) The operation and maintenance expenses for one month;
- (ii) Maintenance spares at actuals but not exceeding one year's requirements less value of one fifth of initial spares already capitalized; and
- (iii) Receivables equivalent to two months of average billing for sale of electricity.

(e) Other Miscellaneous charges:-

As may be specifically applicable to the generating unit/station. These would include cess for the use of water for power generation, if levied, and energy consumption charges for pumped storage schemes as per actual payment made for the energy supplied for purpose of pumping water.

2.9 The per unit cost of primary energy shall be calculated by dividing the total Energy Charges by the Design Energy of the project and shall be denominated as Rupee per Kilo-watt hour. The payment of primary energy charges shall be based on actual generation during the month, limited to the design energy apportioned for the month. For this purpose, the full Design Energy shall be apportioned in the twelve calendar months of the year, as may be mutually agreed between the Board and the Company.

2.10 Incentives:

In addition to the 'capacity charge' and 'primary energy charge', the company shall be paid incentive as under:

(i) For 'Availability' of installed capacity above normative level of 90 per cent, the rate of incentive shall be mutually agreed upon between the Generating Company and the Board but it shall not exceed 0.7 per cent return on equity for each percentage point increase in availability.

(ii) Energy charges for secondary energy:

The rate of incentive for secondary energy shall be mutually agreed between the Board and the Generating Company. However, the maximum payment on this account in any year shall not exceed 10 per cent return on equity.

The incentive on account of higher Availability and Secondary Energy shall be payable on a monthly basis subject to a cumulative adjustment in each month of the financial year and final adjustment at the end of the year.

2.11 Deemed Generation

If the station has achieved the normative Availability level in a contract year, but actual energy generation falls short of design energy for reasons solely attributable to hydrology, the energy charges for generation up to design energy shall be payable to the Generating Company during the first seven years of operation.

In case of reduced generation due to reasons beyond the control of Generating Company and non-availability of Board's transmission lines or on receipt of backing down instructions from the concerned Regional Electricity Board and it results in spillage of water, the energy loss on account of such spillage shall be considered as deemed generation limited to the design energy.

2.12 For payment of bills through letters of credit, a rebate of 2.5 per cent shall be allowed. Where payments are made otherwise than through opening of Letters of Credit, but within a period of one month of presentation of bills by the Generating company, a rebate of 1 per cent shall be allowed.

3.0 General

3.1 The tariff for the sale of electricity by a Generating Company to a Board may also be determined in deviation of the norms, other than the norms regarding operation and Plant Load Factor, specified in this notification subject to the conditions that-

- (a) The overall per unit tariff of electricity calculated on the basis of the norms in deviation does not exceed the per unit tariff calculated on the basis of the norms specified in this notification.
- (b) the concerned State Government has, after satisfying itself, recommended that the deviations made are justified; and
- (c) the Central Government after satisfying itself that the overall per unit tariff is in accordance with condition (a) above, approves the deviations.

3.2 In case a Generating Company is permitted by the competent Government to supply electricity direct to a consumer in terms of clause (c), sub-section (1), section 43A of the said Act, such sale shall be at mutually negotiated rates, agreed upon between the generating company and the other person(s), subject to the approval of the competent Government.

3.3 This notification shall be applicable for determining the tariffs for sale of electricity from such generating stations, whose financial package for investment is approved by the Authority, on or after the date of its publication in the Official Gazette.

3.4 This notification shall be applicable to such hydro-power generating stations which shall commence commercial operation on or after the 1st January, 1997.

Sd/-

Joint Secretary to the Government of India

SCHEDULE-1
15/25

Foot Note: The Principal Notification was published in the Gazette of India, Part II, Sec.3, Sub-section (ii), dated 30th March, 1992 and subsequently amended by S.O. 36 (E) dated 19.1.1994, S.O. 605 (E) dated 22.8.1994, S.O. 39(E) dated 12.1.1995 and S.O. 167 (E) dated 6.11.1995 and S.O.151 (E), dated 26th February, 1997.

SCHEDULE-1 (d)

To be published in the Gazette of India
Part II, Section - 3, Sub-Section (ii)
Published by Authority.
Ministry of Power.

NOTIFICATION

New Delhi, the 26th February, 1997.

S.O. 151(E). In exercise of the powers conferred by sub-section (2) of section 43A of the Electricity (Supply) Act, 1948 (54 of 1948), the Central Government hereby makes the following amendments in the notification of the Government of India in the Ministry of Power No. S.O. 251(E), dated the 30th March, 1992, namely:-

In the said notification,

- (1) in clause 1.2, after the second proviso, the following provisos shall be inserted, namely:-

" Provided also that in case of multi-unit project, the percentage of capital cost as specified by the Authority in its techno-economic clearance shall be considered for fixation of tariff, on commercial operation of the progressive units but in case of delay in commissioning of second or subsequent units from the scheduled date, the project cost, for the period of delay, shall be retrospectively approved for the tariff purpose in the ratio of proportionate allocation of units ;
provided further that if the capital cost of

the project increases, in comparison to 17/25 cost approved in Techno-economic-Clearance, on account of foreign exchange variation or change of law and approved by the competent Government; the project developer may approach the Authority not more than once in year in any financial year for the mid term review of the capital cost.

(2) in clause 1.5,

(A) in paragraph (c),

(i) for the words "Operations and Maintenance Expenses", the words "Operation and Maintenance Expenses including insurance" shall be substituted;

(ii) for the 'Note', the following 'Notes' shall be substituted, namely:-

"Note-1 The expenditure on the operation and maintenance including insurance, calculated on the basis of 2.5 per cent for the first year, shall be revised in each subsequent year as may be mutually agreed upon between the Board and the Generating Company on the basis of weighted price index. Alternately, the expenditure on operation and maintenance, calculated on the basis of 2 per cent for the first year, shall be revised in each

SCHEDULE-1 (d)

subsequent year on the basis of weighted ^{18/25} price index, but the actual expenditure on insurance or ceiling insurance expenses, for the first year shall not be subject to escalation in the subsequent year.

Note-2 - In case of multi-unit project, the operation and maintenance expenses, in respect of each unit for the purpose of tariff, shall be allowed on the above Percentage of the capital expenditure calculated in proportion to the capacity of each unit and not on the basis of allocation of capital expenditure in Techno-economic clearance. The escalation shall be allowed after one year, from the date of the commissioning of the units" ;

(B) in paragraph (d), the following proviso shall be inserted, namely:-

Note --- " Provided that the tax on income on the business of electricity as a component of Annual Fixed Charge shall constitute the ceiling, but the Boards shall not invariably allow tax on income on incentive payable as a pass-through in tariff and shall negotiate for the tax on income not being a pass-through beyond the generation level of 6000 hrs/kw/year "

(C) for paragraph (f), the following paragraph shall be substituted namely:-

SCHEDULE-1 (d)

(E) Interest on Working Capital shall cover: 19/25

- (i) fuel cost for one month and reasonable fuel stocks as actually maintained but limited to fifteen days for pit head stations and thirty days for non pit head stations, calculated on normative plant load factor basis;
- (ii) sixty days stock of secondary fuel oil, calculated on normative plant load factor basis;
- (iii) operation and maintenance expenses (cash) for one month;
- (iv) maintenance spares at actuals subject to a maximum of one per cent of the capital cost but not exceeding one year's requirements less value of one fifth of initial spares already capitalised; and
- (v) receivables equivalent to two months' average billing for sale of electricity calculated on normative plant load factor basis".

(3). for clause 1.6, the following clause shall be substituted, namely:-

" 1.6 Full fixed charges shall be recoverable at generation level of 6000 hours/kw/year (4500 hours/kw/year during stabilisation period). Payment of fixed charges below the level of 6000 hours/kw/year shall be on prorata basis. There shall not be any payment for fixed charges for generation level above 6000 hours/kw/year. For generation of above 6000 hours/kw/year, the additional incentive

To be published in the Gazette of India ^{20/25}
Part II, Section - 3, Sub-Section (ii)
Published by Authority.
Ministry of Power.

NOTIFICATION

New Delhi, the 26th February, 1997.

S.O. 151(E). In exercise of the powers conferred by sub-section (2) of section 43A of the Electricity (Supply) Act, 1948 (54 of 1948), the Central Government hereby makes the following amendments in the notification of the Government of India in the Ministry of Power No. S.O. 251(E), dated the 30th March, 1992, namely:-

In the said notification,

- (1) in clause 1.2, after the second proviso, the following provisos shall be inserted, namely:-

" Provided also that in case of multi-unit project, the percentage of capital cost as specified by the Authority in its techno-economic clearance shall be considered for fixation of tariff, on commercial operation of the progressive units but in case of delay in commissioning of second or subsequent units from the scheduled date, the project cost, for the period of delay, shall be retrospectively approved for the tariff purpose in the ratio of proportionate allocation of units ;
provided further that if the Capital cost of

SCHEDULE- 1 (d)

the project increases, 21/25 comparison to the cost approved in Techno-economic Clearance, on account of foreign exchange variation or change of law and approved by the competent Government; the project developer may approach the Authority not more than once in year in any financial year for the mid term review of the capital cost "

(2) in clause 1.5,

(A) in paragraph (c),

(i) for the words "Operations and Maintenance Expenses" the words "Operation and Maintenance Expenses including insurance" shall be substituted;

(ii) for the 'Note', the following 'Notes' shall be substituted, namely:-

"Note-1 The expenditure on the operation and maintenance including insurance, calculated on the basis of 2.5 per cent for the first year, shall be revised in each subsequent year as may be mutually agreed upon between the Board and the Generating Company on the basis of weighted price index. Alternately, the expenditure on operation and maintenance, calculated on the basis of 2 per cent for the first year, shall be revised in each

SCHEDULE-1 (d)
22/25

subsequent year, on the basis of weighted price index, but the actual expenditure on insurance or ceiling insurance expenses, for the first year shall not be subject to escalation in the subsequent year.

Note-2 - In case of multi-unit project, the operation and maintenance expenses, in respect of each unit for the purpose of tariff, shall be allowed on the above Percentage of the capital expenditure calculated in proportion to the capacity of each unit and not on the basis of allocation of capital expenditure in Techno-economic clearance. The escalation shall be allowed after one year, from the date of the commissioning of the units";

(B) in paragraph (d), the following proviso shall be inserted, namely:-

Note --- " Provided that the tax on income on the business of electricity as a component of Annual Fixed Charge shall constitute the ceiling, but the Boards shall not invariably allow tax on income on incentive payable as a pass-through in tariff and shall negotiate for the tax on income not being a pass-through beyond the generation level of 6000 hrs/kw/year "

(C) for paragraph (f), the following paragraph shall be substituted namely:-

(f) Interest on Working Capital shall cover:

- (i) fuel cost for one month and reasonable fuel stocks as actually maintained but limited to fifteen days for pit head stations and thirty days for non pit head stations, calculated on normative plant load factor basis;
- (ii) sixty days stock of secondary fuel oil, calculated on normative plant load factor basis;
- (iii) operation and maintenance expenses (cash) for one month;
- (iv) maintenance spares at actuals subject to a maximum of one per cent of the capital cost but not exceeding one year's requirements less value of one fifth of initial spares already capitalised; and
- (v) receivables equivalent to two months' average billing for sale of electricity, calculated on normative plant load factor basis.

(3). for clause 1.6, the following clause shall be substituted, namely:-

" 1.6 Full fixed charges shall be recoverable at generation level of 6000 hours/kw/year (4500 hours/kw/year during stabilisation period). Payment of fixed charges below the level of 6000 hours/kw/year shall be on prorata basis. There shall not be any payment for fixed charges for generation level above 6000 hours/kw/year. For generation of above 6000 hours/kw/year, the additional incentive

payable shall not exceed 0.7 per cent of paid up and subscribed capital, for each percentage point increase of Plant Load Factor above the normative level of 6000 hours/kw/year. While computing the level of generation, the extent of backing down, as ordered by the Regional Electricity Boards or State Load Despatch Centre, as the case may be, shall be reckoned as generation achieved. The payment of fixed charges shall be on monthly basis, proportionate to the electricity drawn by the respective Boards and other person. Necessary adjustment based on actual shall be made at the end of each year.

Note-1 The additional incentive of return on equity of 0.7 per cent for each percentage increase above the normative level of 6000 hours/kw/year, mentioned above, shall be the maximum ceiling. It shall be open to the Generating Companies and Boards or other power purchasers to negotiate and fix a suitable lower additional incentive, within the above ceiling.

Note-2 For Naphtha based thermal plants, the extent of backing down, as ordered by Regional Electricity Boards or the State Load Despatch centre, as the case may be, beyond plant Load Factor of 6000 hours/Kw/Year, shall not be reckoned as generation achieved for incentive purpose.

Note-3 For Diesel Engine generating units the extent of backing down, as ordered by Regional Electricity Boards or the State Load Despatch Centre, as the case may be,

beyond Plant Load Factor operation norms laid down by the Central Electricity Authority for the time being, subject to modification therefor, if any, shall not be reckoned as generation achieved for incentive purpose"

4. after clause 1.7, the following clause shall be inserted, namely:-

" 1.8 For payment of bills through letter of credit, a rebate of 2.5 per cent. shall be allowed. If the payments are made by a mode other than through letter of credit but within a period of one month of presentation of bills by the Generating company, a rebate of 1 per cent shall be allowed"

M. K. Shivrain
(S.R. SHIVRAIN)
Joint Secretary to the Government of India.
F.No. 6/1/Tariff/95/Vol-IV 1

**GUIDELINES FOR COMPETITIVE
BIDDING ROUTE
FOR
PRIVATE POWER PROJECTS**



**INVESTMENT PROMOTION CELL
MINISTRY OF POWER
GOVERNMENT OF INDIA**

JANUARY, 1995

सचिव
SECRETARY

भारत सरकार
GOVERNMENT OF INDIA
विद्युत मंत्रालय
MINISTRY OF POWER
श्रीम शक्ति शिवन, राफ़ी मार्ग
SHRIAM SHAKTI SHIVAN
RAFI MARG

नई दिल्ली - 110001
New Delhi-110001

D.O. No. A - 32/95- IPC

18th January, 1995

Dear

At the time the Private Power Policy was launched in 1991, the methodologies regarding Independent Power Projects (IPP) had not totally crystallised. Therefore, like all other countries - development and developing - the initial project solicitation was through the MOU route.

2. From the experience gained over the past three years, it is now possible to follow the bidding route for IPPs, in the interest of transparency as well as to encourage competition, which would no doubt also help in getting a better deal for the State Electricity Boards (SEBs). We can resort to the bidding route only when the State Governments have undertaken and integrated resource planning exercises thereby enabling them to identify the system needs, additional capacities required, the technical and environmental characteristics and the mode of despatch etc. The next stage would be preparation of feasibility reports and obtaining different clearances and linkages for the projects. Bidding route also requires that financing arrangements, PPA, legally enforceable FSA etc. are standardised and published.

3. The Minister for Power had written to all the Chief

Ministers way back in October, 1993 that it is necessary to introduce competition by asking for priced bids. I had also written to you in November, 1993 to fix a date beyond which SEBs would not offer any projects except through the bidding route.

4. We had also organised a number of workshops for State/SEB officers so that they could prepare scientific bidding documents. Notable among these workshops was the technical workshop on competitive bidding on private power organised with the help of the World Bank in Hyderabad in June 94 which was attended by a large number of State/SEB officials. Infact, some of the States like Andhra Pradesh, Maharashtra, Rajasthan and Haryana have finalised their latest batch of projects on a partial bidding route. We are again going to hold a training course on "Bid Solicitation, project appraisal and negotiation" in ASCI Hyderabad in January-February 1995 for the benefit of State/SEB officials. We hope that you would be nominating suitable candidates to take advantage of this training course as well.

5. In its effort to play the role of Developmental Financial Institution, PFC has established the Technical Assistance Project for Private Power Development - a US \$ 20 million development soft loan with an interest rate of 12.5% and repayment period of 20 years including therein a moratorium of up to 5 years - with World Bank assistance. Services of experienced consultants for project preparation, preparation of pre-feasibility and feasibility reports, detailed project reports, bid preparation/evaluation, selection of Independent Power Producers, negotiation of Power Purchase and other related Agreements with the selected Independent Power Producers can be financed under this loan. The utilization of such services could even save precious time in identification of various risks, analysis of the project proposals from financial and technical angles, ensure proper allocation of risks between the developer and the SEB, resulting in a reasonable tariff for purchase of power and expeditious implementations of these projects (Please see Annexure).

6. The Ministry has now prepared a set of guidelines to assist the State Governments in following the bidding route, a copy of which is enclosed. We hope that these guidelines would be useful to you, while adopting the competitive bidding route. We have also decided that all future projects should come through the process of competitive bidding. In fact, the Central Electricity Authority is being asked not to entertain any future proposals of competitive bidding. It is, however, recognised that the SEBs have already entered into numerous MOUs, the validities of which have not yet expired, and the SEBs might be at various stages of negotiation with the parties. Therefore, some time would need to be allowed to see the outcome of these MOUs. However, this period should not be an indefinite period and it would be advisable to weed out the non-serious proposals and include those schemes on the competitive bidding process as well. We would like to receive suggestions from you regarding the period these MOUs should be permitted for achieving financial closure.

With regards,

Yours sincerely,

(R. VASUDEVAN)

Encl : As above

To all Chief Secretaries of
State Governments/UTs.

GUIDELINES FOR COMPETITIVE BIDDING ROUTE FOR PRIVATE POWER PROJECTS

CHAPTER 1

INTRODUCTION

- 1.1 The private power policy of GOI has generated keen interest among the project developers and the domestic and international financing community. We have over 90 proposals from the private sector for putting up power projects for a capacity of about 50,000 MW. Most of the present proposals with the GOI have evolved on the basis of negotiations for which Memorandum of Understandings (MOUs) have been signed by the states with the project promoters. This has sparked an intense debate in the media and in various other forums in relation to the selection of private power companies without the competitive bidding route.
- 1.2 In the initial phase of any private investment policy in the capital intensive infrastructure projects, the proposals from private sector can come up only through negotiations, more so in the case of private power projects, as there is no earlier experience in this area both for the investors as well as the government. Furthermore, the financial health of the State Electricity Boards (SEBs) would not have evoked the requisite confidence amongst the investors to participate in an open bid for the private power projects in the initial stages. The negotiated route was therefore the only feasible option to provide a fillip to the private power policy in its initial phase of implementation. However, the importance of a transparent competitive bidding procedure in assigning power projects to the private companies has very well been recognised by the government and it would now be

the obvious choice after necessary experience has been gained by the government and the private sector.

- 1.3 The competitive bidding process needs considerable preparatory work before it could be successfully implemented. For the competitive bidding process to be successful, it is mandatory to evolve a well thought out plan by the states. Establishment of transparent bidding procedures and a set of preannounced criteria against which bids would be evaluated would be essential for such an approach. In this regard both the price and non-price factors for evaluating the bids will have to be carefully considered and selected. The non-price factors which would normally relate to the technical parameters of the project and the competence of the bidder would have to be precise, explicit and unambiguous. Lack of clarity and specifying broad and general criteria would lead to submission of significantly different proposals making the evaluation exercise an inept task. Evaluation of price bids would also require considerable preparatory effort particularly in applying net present value techniques, comparative assessment of the foreign exchange implications of various offers, comparative sensitivity analysis of specific risk factors etc. Expertise in these areas within the government can be developed only over a period of time.
- 1.4 Adoption of a bidding procedure would also imply a certain amount of readiness of the project as well (viz. finalisation of the feasibility report, availability of all clearances including environmental clearance and the project site - which are time consuming matters) and of course definite clarity about the yardstick/criteria which are to be used on the basis of which bids are to be evaluated.
- 1.5 The competitive bidding process is normally followed in two stages : (i) the RFQ (Request for Qualifica-

tions) stage and (II) the RFP (Request for Proposal) stage.

- 1.6 The RFQ stage establishes a threshold criteria in the four principal areas viz. Organization, Financial Capability, Management Capability and Technical Capability so as to qualify for the subsequent RFP process only those parties which meet the stipulated criteria. The RFQ threshold criteria needs to be carefully framed to ensure that the selection at the RFP stage is done to a larger extent only on quantifiable price consideration; the other parameters having been eliminated in the RFQ stage.
- 1.7 The RFP process also needs considerable preparatory work. The design of RFP should broadly take into consideration factors such as engineering adequacies, acceptance of SEB operating requirements, pricing, plant availability, draft PPA and other agreements to be provided to the bidders, evaluation criteria, price caps, acceptable inflation indices; and clear identification of GOI's, state government's, SEB's and bidders' responsibilities. These would have to be framed in an unambiguous to seek uniform information from the bidders in the prescribed formats to facilitate smooth evaluation.
- 1.8 Most of the project developers find competitive bidding to be a costly and time consuming exercise as preparation of feasibility. Reports etc. which have to necessarily precede bidding involve high costs. The developers are not prepared to commit themselves to such high investments in the project development phase. Establishment of a bidding procedure would thus imply preparation of a shelf of fully cleared projects both for generation and distribution as well as establishment of a set of criteria for evaluation of bids received in response to invitation for bids for specific projects. This is obviously a time consuming process and would require significant effort on the part of the State Government and the SEBs.

CHAPTER 2

SYSTEM PLANNING AND SELECTION OF THE PROJECT

- 2.1** The planning process should clearly identify the system requirements and decide on the size and type of the plants, estimated on the basis of demand projection, power evacuation arrangement, availability of fuel and water, ash disposal/utilisation and also taking into account environmental aspects, local issues such as type of land, resettlement, employment etc. However, minor adjustment on the selection of the sites and size of the plants may be considered during the pre-qualification stage if the pre-qualified bidders so desire. Demand projection as per the long term planning and the special features of the pre-selected site may be highlighted in the solicitation document.
- 2.2** The State Government/State Electricity Board would also have to plan for whether the proposals should be for new plants, extension of existing plants or refurbished generation, demand-side investments etc. The ultimate capacity of the project along with the stages of implementation and time scheduling may be clearly identified. This will enable the project sponsors to plan for development of the infrastructure for ultimate size of the plant. The type of power plant - i.e. base load, intermediate, peaking, etc. of the plant would also have to be firmed up at this stage. For example, depending upon load growth and supply and demand some hydel plant may be run as base load for some years and may be converted to peak load stations and later on by adding more generating units.
- 2.3** The size of the plant with future expansion is required for economic development of infrastructure.

The type of fuel including back up/secondary fuel, the technical and environmental characteristics for the ultimate size of the project, may be identified and mentioned at the planning stage. In case of coal fired Thermal Stations, the decision regarding supply of coal by M/s. Coal India Ltd. (CIL) or identification and development of the captive mine by the project sponsors would have to be planned before hand.

- 2.4 The project specific such as source of water, linkage of coal and the coal transportation system, utilisation/disposal of ash, special characteristics of the pre-selected site, power evacuation arrangements and terminal points should be clearly identified at the planning stage. The SEBs will also have to plan for the power evacuation arrangement and the level of voltage at which power will be evacuated from the plant along with the time frame for the implementation of the evacuation arrangement.
- 2.5 The planning exercise should also consider whether sales to third parties, including industrial customers and other State Electricity Boards (SEBs), will be permitted. The modalities of sales to third parties and appropriate compensation to the SEB for third party sales would come up at the RFP stage and be clearly identified in the PPA.

CHAPTER 3

PROJECT PREPARATION

- 3.1** Project Preparation includes resource planning land acquisition, various inputs/clearances, resettlement and infrastructure development. The Project Developers may find getting various inputs, clearances, permits, etc. from the State and Central Agencies time consuming. The State Govt/SEBs are in a better position to obtain the above clearances and necessary rights to the power project sites. The SEBs may acquire the land and obtain environmental clearances with ease and the resettlement issues can be solved by the State Govt. without much difficulty.
- 3.2** The Project Developers will find the project easily financed if all permits, licenses, inputs and clearances are already available. In such a case the Project Developers will not have to invest significant time and resources for obtaining the above inputs/clearances. This will minimise the project development risk. The expenses incurred by the State Govt. SEBs may be charged to the project which will be considered by the promoter as development expenses. The solicitation document should clearly indicate the inputs/clearances that have been obtained by the purchasers. Finally, the full identified and developed project should be offered to the private developers for bidding. This will minimise the project development risk and cost and the development period will also be considerably reduced.
- 3.3** What should be borne in mind is that if the SEB has planned well the project preparation, then it can help in considerably reducing the time for the project to come on stream. Also, the better the project preparation at this stage, the lesser would be the time spent on negotiations, resulting in considerable sav-

ings to both parties. At this stage it would be worthwhile to spend some time to identify the tasks and the party which is in the best position to tackle the task and place the obligation for that task accordingly. Basically what needs to be done at this stage is to determine the extent to which the purchaser should facilitate in the project development.

CHAPTER 4

THE SOLICITATION DOCUMENTS

- 4.1 The typical bid solicitation documents include (a) Request for Qualification (b) Request for Proposals, (c) Power Purchase Agreement, and (d) Implementation Agreement (between the developer and the State Government). The private development of a mine will require a separate implementation agreement. The division of the competitive process into the RFQ and RFP stages makes the entire process more transparent and orderly. RFP is the key document in the solicitation process and shall be provided to the prequalified bidders alongwith the power purchase agreement and the implementation agreement.

REQUEST FOR QUALIFICATIONS

- 4.2 The objective of the RFQ stage of the competitive bidding process is to qualify only those parties for final bidding who have the necessary financial, managerial and technical capabilities and experience for executing and operating the proposed project efficiently. In view of comparatively modest outlays more bidders can participate in the RFQ process. The experienced and competent bidders who are pre-qualified will have the assurance that they will be finally bidding alongwith other comparable competent bidders.
- 4.3 Elimination of non-competent parties at the RFQ stage will minimise the chances of receiving bids at the RFP stage, which are either poorly prepared or do not conform to the RFP requirements. Restricting the final bidding process only to potential bidders will help the SEB in evaluating bids quickly and with less resources. The interaction between the SEBs and the participants in the RFQ stage can help the SEBs in refining the subsequent RFP. This will improve the

prospects of receiving final with minimal deviation from the parameters laid down in the RFP, thus making the bid evaluation more transparent. The bidders selected after the RFQ process can afford to take risks in investing significant resources for submitting quality proposals at the RFP stage.

- 4.4 The sponsors seeking qualification are likely to have different backgrounds and in many cases they may not have all the skills and experience needed for development and operation of a power project. They would, if qualified, have to induct other promoter-partners into a consortium for project development, construction and operation. It will be desirable to stipulate that all sponsors are corporate bodies registered under the Indian Companies Act, 1956 or equivalent laws in the case of foreign applicant. It may be preferable to stipulate a minimum operating period (say 7 years) as a pre-qualifying requirement for the sponsors in the operation of a power project.
- 4.5 The sponsors shall indicate the promoters' equity in line with the GOI guidelines. The company shall provide evidence that it has managed industrial enterprises of comparable plant capacity. If its own management team has not been responsible for construction or operation of a power plant of comparable size and technology, it should provide information on how the sponsor plans to acquire the needed management and expertise. It may be stipulated in the RFQ that in the event the sponsor company is not itself an experienced power plant operator, the company will secure such an operator to be a member of the promoters' consortium and will entrust the plant operation and maintenance to that operator.
- 4.6 The RFQ stage is an integral part of the competitive bidding process. Shortlisting of the potential bidders on the basis of non-price factors at the RFQ stage, will enable SEBs to attach greater weight on price

factor as a selection criterion in the RFP stage.

REQUEST FOR PROPOSALS

- 4.7 The Request for Proposals (RFP) is the main document in the solicitation process and should be carefully designed for each specific project. The RFP, along with the power purchase agreement (PPA) and the implementation agreement (IA) should be provided to the pre-qualified bidders. The pre-qualified bidders should be brought down to a manageable level (say 3 to 5 bidders) at the RFQ stage.
- 4.8 All the pre-qualified bidder should have a clear understanding of the project in order to enable them prepare the bids under a common set of assumptions. The RFP and associated PPA and IA should contain technical details of the power plant, viz size and type of the generating units, modules, summer/winter ratings, site characteristics such as type of cooling and make-up water, type of operation, environmental requirements, type of fuel, control requirements and so on. If the bidders are clear about the requirements of the power plant, the bids are expected to be submitted on the basis of similar technical parameters.
- 4.9 In addition to the various technical, financial and contractual details, the RFP Document should include the following specific information :
- (i) *Introduction and Over-view*
The introduction and over-view should be provided at the beginning of the RFP Document. The salient features of the plant should be summarised in this chapter of the RFP. A brief detail of each section of the RFP Document should be indicated so that the bidder may get a clear conception of the document. The RFP establishes several minimum requirements for

proposals in the form of the mile-stones. It may be indicated that these minimum requirements must be satisfied by the deadline set for submission of proposals.

(ii) *Procedure*

The procedure includes general requirements that apply to submitting a proposal and to ensure uniform and comparable proposals that can be reviewed within a reasonable time frame. This section covers form of the proposals, the required content, the timing of pre-bid conference, inquiries, concerning the RFP, scheduled for the solicitation, amendment of RFP, rules for submitting proposals by consortia, reasons due to which the proposals can be rejected, and so on. There should be clarity in laying down the procedures so as to avoid any confusion.

(iii) *Scope of Responsibilities*

The RFP alongwith other associated document should clearly identify the responsibilities of the three parties connected with the power project i.e. the State Govt., the SEB and the Successful bidder. This section of the RFP shall identify the major responsibilities of each of the parties e.g. Support and agreement, clearances and right-of-way assistance shall be the responsibility of the State Govt.; power evacuation arrangement will be the responsibility of the SEB, and infrastructure development within the plant boundary fuel linkage etc. is the responsibility of the successful bidder, and so on.

(iv) *Non-price Factor*

SEBs require reliable power supply for the entire PPA period and place significant value on the economic, technical and environmen-

tal feasibility of the proposed project. While the bid price will be one of the important factors in the evaluation of the proposal, careful consideration should be given to the non-price factors such as bidders experience, technical expertise, viability and relative competitiveness of the financial plan, plant, design, O & M plan, project scheduling plan and any deviation in the PPA and IA. Although less weight shall be given to the non-price factors of the bids of pre-qualified bidders, evaluation of these factors require careful judgement and proper expertise.

(v) **Price Factors**

Once the bidders are pre-qualified, maximum weightage should be given to the price factors in the bids. Bidders are required to submit a price proposal that satisfy the following criteria and assumptions :

- (i) The name plate capacity of the generating unit in line with the specified capacity.
- (ii) The power shall be sold to the SEB at the specified delivery point.
- (iii) A guaranteed heat rate curve alongwith guaranteed head rate data shall be provided by the bidder.
- (iv) Fuel linkage and storage of back-up fuel.
- (v) Bidders to specify financing rates, inflation factor and exchange rates.
- (vi) Technical requirements consisting of plant operation and maintenance.
- ~~(vii) The price proposal shall consist of both fixed and variable portion.~~

- (viii) PLF as considered in the price proposal.

The RFP should include information like selection of appropriate discount rate to reduce the prices to a common denominator such as the levelisation of the annual price/Kwh.

(vi) **Evaluation and Negotiation**

This section of the RFP describes the evaluation process and the price and non-price factors as discussed above, that would be considered for comparing and evaluating the bidders proposals and the minimum information to be provided by the bidder on each of the factors to demonstrate that the proposal is responsive to the requirements of this RFP. The evaluation of the proposal should be done in three stages as follows :

Stage -I

SEB will review the proposal to determine whether the proposals are substantially responsive to the requirements of the RFP. The SEB reserves the right to reject any proposal which is non-responsive with respect to the criteria already included in the RFP such as failure to meet proposal deadline, proposal is not accompanied by the earnest money deposit, failure to provide certain information, proposal not submitted in proper format, the proposal is not valid for the period specified in the RFP, and so on.

Stage -II

The SEB will rank the responsive proposals based on the weightage as discussed above. The factors that are considered and the method followed for scoring/ranking shall be clearly indicated in the RFP.

Stage-III

The SEB will have further negotiations with the bid-

ders, whose proposals are accepted. On this basis SEB will select the highest ranked bidder for negotiation of the PPA and IA. If the negotiations do not result in contractual agreements within the negotiation time period, SEB may begin negotiations with the next best proposal.

POWER PURCHASE AGREEMENT

- 4.10 The power purchase agreement (PPA) is the heart and soul of a private power project. The RFP provided to the pre-qualified bidders, should include the PPA as a part of the solicitation documents. First and foremost, the PPA guarantees a market and a corresponding revenue stream for the power to be produced by the project. Second, the PPA defines the rights and obligations of the project developer and SEB during the development, construction and operation phases of the useful life of a privately owned power plant.
- 4.11 The PPA defines the service that the SEB can expect and which it must be entitled to rely upon in planning to meet its customers needs. The PPA has to ensure that performance is rendered as promised. The PPA allocates the risks associated with a power project, including fuel prices and other operating costs, financing costs, construction cost and various performance factors. Related documents that may be necessary in course of structuring the power purchase agreement are guarantees from the SEB or the State Government, governmental authorisations to produce electricity, environmental aspects, etc.
- 4.12 The PPA defines the service that the project developer and the power plant will provide to the SEB through several provisions, including :
- (i) technical description of the power plant, perfor-

mance standards, quality of power to be produced, detailed specification of fuel, environmental responsibilities,

- (ii) term of PPA, including the provision of extension, early termination, transfer of the project at the end of the PPA term.
- (iii) the O & M procedures, metering arrangements, payment and billing terms, protection equipment, personnel and safety requirements, operating records, performance level, spare parts
- (iv) energy price, O & M costs, penalty and bonus terms, third party sales.
- (v) milestones for progress of construction, construction monitoring by SEB.
- (iv) force majeure provisions, labour disputes, regulatory changes, disputes resolution modification, or amendments, Governing law, termination and buyout provisions, etc.

4.13 The PPA is the source of all funds and should be commercially viable. Both SEBs and developers and their finances - will be paying the closest attention to the PPA. The other agreements included in a successful private power project financing must complement the PPA. The SEBs should retain control over drafting of the PPA and this will give them a significant advantage in negotiation.

IMPLEMENTATION AGREEMENT

4.14 The project developer may look to the State Government/SEB for certain concessions and incentives. These arrangements will typically be formulated in an implementation agreement (IA) between the State

Government and the developer. Through the implementation agreement, the government may provide infrastructure facilities outside plant boundary, access to raw water, resettlement, assistance in obtaining permits, licences and clearances, and so on. The obligations of the State Government will vary from project to project and are likely to change over time.

CHAPTER 5

SUMMARY

- 5.1 The primary benefit of a competitive bidding procedure is that it provides the State Government/State Electricity Board with a pre-determined mechanism by which to evaluate proposals. Competitive bidding procedures allows the SEB to compare the experience levels, technical capability, equipment financial capability and other important differences existing between the competitive bidders. Such procedures also allow the purchaser to obtain market based prices. Although, generally the bidding process is a favourable method by which to obtain bids, conducting bid solicitation and evaluation is a very complex process. At very stage of the bid solicitation and evaluation process the services of technical, managerial, financial and legal experts are essential.
- 5.2 The solicitation and evaluation process may differ with the size and type of power projects but there is a core set of issues common to bidding process as suggested below :
- a) The technical aspects of a pre-selected power project includes such matters as type and size of the plant technology, being adopted, development of O & M protocols, mode of operation, back-up fuel requirements etc. These technical aspects affect the projects design and cost and need to be finalised before the RFP and PPA stage. A team of technical experts is, therefore, required to be associated at the development stage onwards of the project.
 - b) It is preferable to offer a fully identified and developed project for competitive bidding, wherever feasible. The State Government/SEB may,

therefore, tie-up inputs and obtain clearance including acquisition of land. This will reduce the project development time and minimise the risk to the promoter. However, the expenses incurred by State Government/SEB on this account may be charged to the project and the promoter may include the same as development expenses.

- c) The objective of the RFQ stage is to shortlist competent bidders to participate in the RFP process. This stage of pre-qualification enables selection at the RFP stage to a large extent on quantifiable price considerations. The RFQ process, therefore, needs to be considered carefully. Critical information to be sought from each sponsor on technical qualification and organizational, managerial and financial capability will need to be sufficient to enable evaluation to be made as objectively as possible.
- d) The RFP and associated documents viz. PPA, IA and any other necessary agreement, should be prepared in the early stage of the solicitation process. These are inter-connected documents and should be drafted with clarity keeping the following objectives in view.
 - i) The solicitation documents should include technical parameters of the plant in detail. The scope of work and terminal points shall be clearly defined in the documents.
 - ii) The allocation of responsibilities between the State Government and SEB should be identified and agreed upon before including the same in the solicitation documents.
 - iii) The commercial and contractual terms of the PPA should be carefully drafted by the SEB

as these would have an important bearing on the proposal.

- e) The SEB should avail of the services of experts at each stage of the solicitation process. The evaluation team and the Negotiation Team should be formed by taking experts from technical, financial, managerial and legal discipline.

भारत सरकार
GOVERNMENT OF INDIA

विद्युत मंत्रालय
MINISTRY OF POWER

P.K.BASU
Director(IPC)
Tel:3717753

DO No.C-236/95-IPC

Dated December 4, 1995.

Dear Shri Lalla,

Reference is invited to your letter no.4-2(2)95-Power(DI) dated 5/6th November, 1995 regarding establishment, operation and maintenance of 20 MW diesel generation plant at Bambooflat. It is understood that the cost of the project is less than Rs.100 crores. As such award of the project to private developer is within the purview of the Union Territory of A&N Islands and techno-economic clearance from Central Electricity Authority is not required. Your attention is, however, drawn to our letter No.A-32/95-IPC(p) dated the 14th August, 1995 regarding projects costing less than Rs.100 crores.

Regarding meeting the tariff subsidy by the Government of India, the matter be decided in consultation with the Planning Commission who have suggested, perhaps, that the cost of power to be purchased from the private power plant will be under non-plan expenditure.

It is noted that the plant is based on High Speed Diesel. In this connection, attention is invited to our Resolution dated 6.11.1995 regarding permitting liquid fuel based power plant which was already circulated along with our Do No.A-27/94-IPC (Vol.III) (copy with enclosures enclosed for ready reference). The power plant may be based on one or more of the liquid fuels as permitted in the Resolution. As you would note use of HSD has not been permitted under the policy. The scheme would thus have to be structured on a permissible fuel.

With regards,

Yours sincerely,

(P.K.Basu)

Shri S.P.Lalla
Secretary (Power)
A&N Administration
Secretariat

Part III

श्री कृष्ण, रानी मार्ग, नई दिल्ली-110001
Shri K. Bhawan, Rani Marg, New Delhi-110001

Fax: 371-7519

Tel:

SCHEDULE-1 (g)

1/2

15:28 TO 49221205721+

FROM M O POWER

T-918 P.01



Pradip Bajaj
अपर सचिव
ADDITIONAL SECRETARY

भारत सरकार
GOVERNMENT OF INDIA
विद्युत मंत्रालय
MINISTRY OF POWER
नव सविता मकान, एपी मार्ग
SHYAM SHAKTI BHAWAN, RAJ MARG

D.O.C-236/96-IPC.I

January 9, 1997
नई दिल्ली - 110001

New Delhi - 110001

Dear Shri Beg,

Please find enclosed a copy of the Andaman & Nicobar Administration letter No. 4-2(2)/96-Dev.I (Power) dated 3-10-96 regarding vetting by the Government of India, of the Power Purchase Agreement (PPA) to be signed between Andaman & Nicobar Administration and M/s Suryachakra Power Corporation Ltd. in respect of 20 MW diesel generation plant at Bamboo Flat along with copies of the earlier correspondence referred in the letter. Since Andaman & Nicobar Administration is an Union Territory, the administrative Ministry i.e., Ministry of Power has more responsibilities than in the case of a Independent Power Project (IPP) set up by a State Government. It has been decided that CEA could approve PPA with the assistance of their consultants M/s Price Water House, if necessary.

While approving the PPA and associated tariff schedules, CEA is also requested to examine the issues relating to features of the project approved during techno-economic clearance of the project such as 40% PLF etc. Andaman & Nicobar Administration have already approached CEA in this regard vide their letter No. EL/PL/1-43/96/4899-900 dated 14-8-96 (Copy enclosed for ready reference). The PPA may be examined and finalised by the CEA in consultation with Andaman & Nicobar Administration.

A copy of Andaman & Nicobar Administration letter no. 4-2(2)/96 - Power(Dev.I) dated 24-9-96 regarding proposal for consideration of Committee on Non-Plan Expenditure (CNE) for approving the payment obligations to the private generating company is also enclosed which may be examined by the CEA after finalisation of the PPA and make available their comments for taking further necessary action by the Ministry of Power.

With regards,

Yours sincerely,

Encl: as above

(Pradip Bajaj)

Shri M.I. Beg
Chairman
CEA
New Delhi

SCHEDULE-1 (g)

2/2

99 197 15:20 TO 49221209721+

FROM M O POWER

T-918 P.02

Copy to :

Dr. R. Padmenabhan, Commissioner-cum-Secretary(Power), Andaman & Nicobar Administration, Port Blair - The request of Andaman & Nicobar Administration for permitting use of high speed diesel (HSD) oil as a fuel for the above project has been examined and agreed to. You are advised to approach Ministry of Petroleum & Natural Gas (MP&NG) for transfer of HSD fuel oil linkage accorded to the project by MP&NG vide their letter dated 14-9-94 in favour of the private generating company.

(Pradip Baljal)

Copy also to:

M/s Suryachakra Power Corporation Ltd., Hyderabad.

(Pradip Baljal)

1 (h)

CENTRAL ELECTRICITY AUTHORITY
OFFICE OF SECRETARY, C.E.A.

No.1-3(2)/95-Secy/947

Dated 14th December, 1995

OFFICE MEMORANDUM

SUB: Norms regarding operation of Diesel Engine Generating Plants.

In exercise of the powers conferred by sub-Section(2) of Section 43 A of the Electricity (Supply) Act, 1948, the Central Electricity Authority hereby lays down the following norms regarding operation of Diesel Engine Generating Stations, subject to subsequent modifications, if any, in accordance with which the tariff for sale of electricity by Generating Companies to the Board and to other persons shall be determined :

Engines	Unit	Power Plant	Power Plant
		With Medium Speed 4 Stroke Engines	With Low Speed 2 Stroke
i) Annual Plant Load Factor based on Rated capacity at annual mean site ambient conditions:	Percent	88.5	88.5
ii) Gross Heat Rate on Lower Calorific Value (LCV) at standard reference conditions as per the latest edition of ISO 3046/1:	% Cal/kwh	2000	1900
iii) Auxiliary power consumption with			
a) wet cooling towers	Percent	4.0	3.0
b) Radiator cooling :	Percent	4.5	3.5
iv) Lubricating oil consumption :	g/kwh	1.1	1.2
v) Date of Stabilisation of individual DG sets shall be reckoned as :	From the date of Synchronisation.		

of individual DG sets shall be reckoned as:

2.0 Operation and Maintenance (O&M) expenses including insurance for the first full year, after the Commercial Operation of the plant shall be calculated in terms of percentage given below, of the capital expenditure as defined at Para 1.2 of Ministry of Power's Notification No. S.O.251(E) dt. 30.3.82 as amended till 13.1.95 or the ceiling on capital expenditure provided in the Power Purchase Agreement:

- | | |
|-----------------------------------|---------------|
| (a) Medium Speed 4 Stroke Engines | : 4.0 percent |
| (b) Low Speed 2 Stroke Engines | : 2.5 percent |

The O&M expenses including insurance in subsequent years shall be revised according to the formula as may be agreed upon between the Board and the Generating Company on the basis of weighted price indices.

3.0 Working Capital shall cover the following costs:

- i) Fuel consumption for one month and reasonable fuel stocks as actually maintained but limited to thirty (30) days.
- ii) Sixty (60) days' stock of Lubricating oil consumption.
- iii) O&M expenses for one month.
- iv) Maintenance spares at actuals but not exceeding one year's requirement less value of 1/5th of initial spares already capitalised and.
- v) Receivables equivalent to two months' average sale of electricity.

Note 1: These norms are valid for Diesel Engines without Flue Gas Desulphurization (FGD) system and without Selective Catalytic Reactor (SCR) system and are applicable for the life of the D.G. plant for a period of fifteen (15) years of operation.

Note 2: The liquid fuels shall be limited to Heavy Fuel Oils such as Heavy Petroleum Stock (HPS), Low Sulphur Heavy Stock (LSHS), Heavy Furnace Oil (HFO) and Furnace Oil (FO).

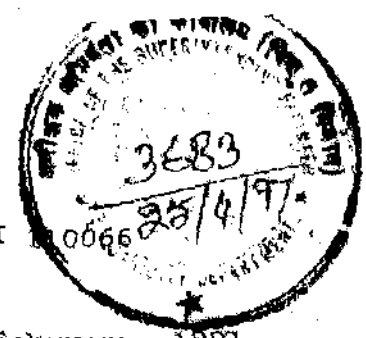
Sd/-
(G.V.SINGH)
Secretary, CEA

To,

1. Secretary (Power), Ministry of Power, Shram-Shakti Bhawan, N.Delhi
2. Power Secretaries of all State Govts.
3. Chairman of all State Electricity Boards.
4. Joint Secretary & Legal Adviser, Ministry of Law, Justice and Co-Affairs.

CE
AEPL
25/4

15



GOVERNMENT OF INDIA
CENTRAL ELECTRICITY AUTHORITY
SEWA BHAVAN, RAMAKRISHNAPURAM, NEW DELHI

No: 1-3(3)/97 - Secy/CEA/742-82

4th February, 1997

To

1. Secretary (Power),
Ministry of Power,
SS Bhavan, New Delhi-110001.
2. Power Secretaries of all State Governments.
3. Chairmen of all State Electricity Boards.
4. Joint Secretary and Legal Adviser,
Deptt of Legal Affairs, Ministry of Law, Justice
& Company Affairs, Govt. of India, New Delhi.

Dear Sir,

I am pleased to forward herewith the following
OFFICE MEMORANDA dated 04.02.1997 for favour of reference
and record:-

1. O.M. No: 1-3(3)/97-Secy/DG
dated 04.02.1997
2. O.M. No. 1-3(3)/97-Secy/ST
dated 04.02.1997

Yours faithfully,

(Signature)
(I.K. Ahluwalia)
Secretary, C.E.A.

Encl: as above.

Copy to:

1. PS to Chairman, CEA
2. PS to Member (Planning), CEA
3. PS to Member (E&C), CEA
4. PS to Member (Thermal), CEA
5. PS to Member (G&O) CEA
6. Chief Engineers (C&P)/TAD/TTD/F&CA)

Shri S. P. Lalla
Secretary (Power)
Andaman & Nicobar Administration
Port Blair
FAX 03192-21227

(Signature)
(I.K. Ahluwalia)
Secretary, C.E.A.

*Forwarded in original to
Superintending Engineer,
Electricity Dept.
BE, W. Group, Akur*

CENTRAL ELECTRICITY AUTHORITY
OFFICE OF SECRETARY, CEA

No. 1-3(3)/97-Secy/DG

Dated 4th February, 1997

OFFICE MEMORANDUM

Subject: Norms regarding operation of Diesel Engine
Generating Stations.

In exercise of the powers conferred by Sub-section (2) of Section 43A of the Electricity (Supply) Act, 1948, the Central Electricity Authority (CEA) hereby lays down the following norms, in supersession of relevant norms laid down earlier vide O.M. No. 1-3(2)/95-Secy/947 dated 14.12.95 regarding operation of Diesel Engine Generating stations subject to subsequent modifications, if any, in accordance with which the tariff for sale of electricity by Generating Companies to the Board shall be determined.

1.0 DEFINITIONS

1.1 'Abbreviations used'

- (a) °C - Degree Celsius
- (b) Hz - Hertz or cycles per second
- (c) kCal - kilo-Calories
- (d) g - gram
- (e) kg - kilogram
- (f) kg/cm² (abs) - kilogram per square centimetre (absolute)
- (g) kW - kilo Watt
- (h) kWh - kilo Watt hour
- (i) l - Litre

1.2 'Auxiliary Energy Consumption' - In relation to any period, the ratio, expressed as a percentage, of

- (a) gross energy in kWh generated at Generator(s) terminals minus net energy in kWh delivered at the switchyard

to

- (b) gross energy in kWh generated at the Generator(s) terminals.

1.3 Calorific Value:

1.3.1 'Gross Calorific Value' or 'GCV' - The heat produced in kCal by complete combustion of one kilogram (Kg) of liquid fuel expressed in 'kCal/kg' as per latest version of IS:1448 (F:6).

1.3.2 'Net Calorific Value' or 'NCV' - Gross Calorific value minus the heat losses due to moisture in complete combustion of one kilogram of liquid fuel, expressed in 'kCal/kg', as per latest version of IS:1448 (F:6).

1.4 Capacity:

1.4.1 'Maximum Continuous Rating' or 'MCR' - In relation to a Unit the maximum continuous output at the Generator terminals, guaranteed by the manufacturer at 130-326 reference conditions and corrected to 50 Hz grid frequency and site conditions.

V.V. / mgs
can be put in house
for 182
Explanation : Site conditions refer to annual mean dry bulb temperature, annual mean relative humidity and maximum charge air coolant temperature.

1.4.2 'Rated Capacity' - In relation to the Generating Station the Maximum Continuous Rating (MCR) of unit multiplied by the number of units in the Generating Station.

1.4.3 'Demonstrated Capacity' - In relation to a Unit, the electric output at Generator terminals demonstrated during Performance Acceptance Test as per latest versions of ISO-3046 for Diesel Engine and IS:4722, IS:5422, IS:7132 and IEC-34 for Generator after successful trial operation and corrected to 50 Hz grid frequency and site conditions as at 1.4.1 above.

1.4.4 'Installed Capacity' - In relation to the Generating station, Rated capacity or sum of the Demonstrated capacities of the units in the generating station whichever is less.

1.4.5 'Available capacity' - In relation to any settlement period, the sum of

a) power delivered or deemed to have been delivered (in case of backing down) at switchyard

and

b) Auxiliary power consumption and corrected to annual mean dry bulb temperature at site and 50 Hz grid frequency.

Explanation : 1. Auxiliary Energy consumption shall be taken as Auxiliary Power consumption for this purpose.

2. Available capacity shall not exceed the installed Capacity.

1.5 'Commercial Operation Date' or 'COD' - In relation to a Unit, date by which the Maximum Continuous Rating (MCR) is demonstrated by a Performance Acceptance Test as per latest versions of ISO-3046 for Diesel Engine and IS:4722, IS:5422 & IS:7132 and IEC-34 for Generator after successful trial operation including stabilisation. The COD of the Generating Station shall be reckoned from the COD of the last Unit.

Explanation : For energy generated upto COD of the Unit, fuel charges shall be payable to the Generating Company as per actuals.

1.6 'Generating Station' - In relation to

Diesel Engine Generating Station : DG units and balance of plant

1.7 Heat Rate

1.7.1 'Gross Heat Rate' or 'GHR' - The heat energy in kcal input to the Unit to generate one kWh of electric energy at Generator terminals.

Explanation: In relation to, Diesel Engine-Generator (DG) unit, the Gross Heat Rate shall be based on NCV of fuel.

1.7.2 'Net Heat Rate' or 'NHR' - The heat energy in kCal, input to the Generating Station to deliver one kwh at the switchyard.

1.8 'Operation and Maintenance Expenses' or 'O&M Expenses' -

In relation to a period, the expenditure incurred in operation and maintenance of the generating station including manpower, spares, consumables (including water), insurance and overheads.

1.9 'Plant Life' - As per Govt. of India Gazette Notification No.265 (3) dated 29th March, 1994, as amended from time to time.

1.10 Plant Load Factor :

1.10.1 'Plant Load Factor' or 'PLF' - In relation to any period, the ratio, expressed as a percentage of

(a) The sum of total kwh delivered at the switchyard and Auxiliary Energy consumption as per operation norms to

(b) Installed Capacity, expressed in kilo watts(kw) multiplied by the number of hours in the relevant period,

1.10.2 'Deemed Plant Load Factor' - In relation to any period of operation of the Generating Station, the ratio, expressed as percentage, of

a) The sum of available capacities for each Settlement Period, to

b) Installed capacity multiplied by the number of settlement Periods

1.11 'Settlement Period' - An hour or any other mutually agreed period during which the available capacity shall be taken as constant and equal to average capacity during the period.

1.12 'Unit' - In relation to:

Diesel Engine Generating Station : Diesel Engine-Generator and auxiliaries.

2.0 OPERATION NORMS FOR DIESEL ENGINE GENERATING STATIONS

2.1 Installed Capacity

The installed Capacity of the D.G. Generating Station shall be maintained same throughout the Plant Life.

The sum of the Demonstrated Capacities of the units shall not fall short by more than 10 percent of the Rated Capacity. Where the sum of the Demonstrated Capacities of the units falls short by less than or equal to 10 percent of the Rated Capacity, each of the debt and equity components of the capital cost of the project shall be reduced pro-rata of shortfall in capacity. In case the shortfall in the capacity exceeds 10 percent of the Rated Capacity, the project shall stand rejected.

2.2 Annual Plant Load Factor (APLF) and Deemed Annual Plant Load Factor (DAPLF)

2.2.1 The annual Plant Load Factor shall not be less than 75.0%. Extent of backing down, as ordered by the Regional Electricity Board, beyond Deemed Annual Plant Load Factor of 75.0%, shall not be reckoned as generation achieved for incentive purposes.

Deemed Annual Plant Load Factor shall be calculated as per the following formula:

$$\text{Deemed Annual Plant Load Factor} = \frac{\text{Sum of Deemed Daily Plant Load Factors}}{365}$$

Where the Deemed Daily Plant Load Factor (DDPLF) shall be determined by the following formula:

$$\text{DDPLF} = \frac{\text{Sum of Available capacity for each settlement period of the day}}{\text{Installed capacity} \times \text{No. of settlement periods in a day.}}$$

2.2.2 In case Deemed Annual Plant Load Factor exceeds 75.0%, the Annual Plant Load Factor, to be calculated based on actual generation achieved, shall be used for incentive purposes.

2.3 Heat Rate

2.3.1 Net Heat Rate

The daily Net Heat Rate of the Generating Station shall be determined by the following formula:

$$\text{DNHR} = \text{GHR} \times \frac{100}{100 - \text{ABC}}$$

Where, DNHR is the Net Heat Rate of the Generating Station during a day

GHR is the Gross Heat Rate of the Diesel Generating Unit in kCal/kWh corrected to site ambient conditions to take into account the deviations from standard reference conditions of ISO-3046

AEC is the Auxiliary Energy Consumption, expressed in percentage,

The monthly average Net Heat Rate shall be calculated by weighted average as per the following formula:

$$\text{MNHR} = \frac{\text{Sum of (DNHR} \times \text{NkWh) during the month}}{\text{Sum of NkWh during the month}}$$

Where MNHR is the monthly average Net Heat Rate in kCal/kWh,
DNHR is the Net Heat Rate for a day in kCal/kWh
NkWh is the net kWh delivered at the switchyard during the relevant day

2.3.2 Gross Heat Rate

The Gross Heat Rate of the Diesel Generating Unit at standard reference conditions as per the latest version of ISO-3046 shall be (a) the following values or (b) guaranteed heat rate corresponding to MCR, whichever is less:

Type of D.G.Engine	Gross Heat Rate in kCal/kWh
(i) Medium speed 4-stroke	2000
(ii) Low speed 2-stroke	1900

Note : The Gross heat rate indicated above shall remain applicable for various loading conditions of the station. Generally the heat rate of DG unit does not vary significantly between 70% and 100%. In case station load comes down to 70% or less, some D.G. unit(s) can be shut down maintaining higher loading of the working DG sets.

2.4 Auxiliary Energy Consumption

The Auxiliary Energy Consumption of Generating Stations shall not exceed the following values:

Type of D.G. Engine	Auxiliary Energy consumption in percentage	
	with radiator cooling	using wet cooling tower
(a) Medium speed 4-stroke	4.5	4.0
(b) Low speed 2-stroke	3.5	3.0

2.5 Lubricating Oil Consumption

Lubricating Oil Consumption shall not exceed the following values:

Type of D.G.Engine	Lubricating Oil (incl.Cylinder Oil) Consumption in g/kWh(gross)
(a) Medium speed 4-stroke	1.0
(b) Low speed 2-stroke	1.2

2.6 Annual Operation and Maintenance (O&M) Expenses:

The annual Operation and Maintenance (O&M) expenses after the Commercial Operation Date of the last Unit shall be determined as per the following formula:

$$C(O\&M)_n = OMP * CC (0.7 WP_n / WP_1 + 0.3 CP_n / CP_1)$$

Where, $C(O\&M)_n$ is the annual Operation & Maintenance expenses in crores of Rupees for the nth year,

OMP is O&M percentage factor being 0.04 for plant based on medium speed 4-stroke D.G. engines and 0.025 for plant based on low speed 2 stroke D.G. engines

CC is the completed cost in crores of Rupees, as approved by the CSA (or Competent Authority approved by the State Government as the case may be) or the capital cost provided in the Power Purchase Agreement between the Generating company and the Board, whichever is less.

WP_n is the wholesale price index during the nth year, and

CP_n is the consumer price index during the nth year.

Note : (1) Upto the Commercial Operation Date of the last Unit, the O&M Expenses for Units in commercial operation shall be allowed in proportion to the allocation of the capital cost to the respective Unit as set out in the techno-economic clearance of the CSA or clearance of the competent authority approved by the State Government.

(2) No escalation in O&M Expenses shall be allowed upto one year from the COD of the Generating Station.

2.6 A Working Capital

For the purpose of calculation of interest on Working Capital, the Working Capital in respect of operational parameters shall not exceed the following:

(a) One and a half months' expenses of the following items:

- (i) Fuel consumption at 75.0% PLF.
- (ii) Lubricating oil including cylinder oil consumption at 75.0% PLF.
- (iii) Annual O&M Expenses.

(b) Expenses of the following items of stock :

- (i) half a month's consumption of fuel at 75.0% of installed capacity.
- (ii) half a month's consumption of lubricating oil including cylinder oil at 75.0% of installed capacity.
- (iii) One year maintenance spares at 40 percent of annual O&M Expenses.

Note : (i) Consumption of fuel and lubricating oil including cylinder oil shall be calculated as per relevant operation norms specified at para 2.3 and 2.5 above.

(ii) In respect of one year maintenance spares, for each of the first 3 years of operation of the station, one third of capitalised spares cost shall be deducted from the cost of one year maintenance spares.

(iii) In case the due date of payment of monthly bill is less than one month as per Power Purchase Agreement, the one and a half months expenses specified at item (a) above shall be limited to 'n + 15' days expenses where 'n' is the number of days for due payment of monthly bills.

2.7 General :

2.7.1 These specified norms shall apply for new and unused D.G. power plants for the entire Plant Life of the Generating stations.

2.7.2 Liquid fuels to be used in D.G. sets shall be limited to Heavy Fuel Oils such as Heavy Petroleum Stock (HPS), Low Sulphur Heavy Stock (LSHS), Heavy Furnace Oil (HFO) and Furnace Oil (FO).

2.7.3 These norms do not take into account special requirements such as flue gas desulphurisation (FGD) system, Selective Catalytic Reduction (SCR), make up water desalination or sewage treatment system which are site specific.

2.7.4 The above norms shall come into force with immediate effect.

(Signature)
(I.K.AHLUWALIA)
SECRETARY, CEA

To

1. Secretary (Power), Ministry of Power, Shram Shakti Bhvan, New Delhi.
2. Power Secretaries of all State Governments.
3. Chairman of all State Electricity Boards.
4. Joint Secretary and Legal Adviser, Department of Legal Affairs, Ministry of Law, Justice and Company Affairs.

Copy to:

1. PS to Chairman/Members, CEA
2. Chief Engineers (C&P/TAD/TFD/F&CA)

(Signature)
(I.K.AHLUWALIA)
SECRETARY, CEA

The Electricity Laws (Amendment) Act, 1991
The Gazette of India
EXTRAORDINARY

PART II- Section 3 - Sub-Section (ii)

PUBLISHED BY AUTHORITY

No. 805, NEW DELHI, TUESDAY, OCTOBER 15, 1991/ASVINA 23, 1913

Ministry of Power & Non-Conventional Energy Sources

(Department of Power)

NOTIFICATION

New Delhi, the 15th October, 1991

S.O. 702(E). - In exercise of powers conferred by sub-section (2) of section 1 of the Electricity Laws (Amendment) Act, 1991 (50 of 1991), the Central Government hereby bring into force the said Act from the date of publication of this notification in the official gazette

(No 711/91-PC)
N. RAMJI, Jt. Secy

ANNEXURE
THE ELECTRICITY LAWS (AMENDMENT) ACT, 1991

No 50 OF 1991
27th September, 1991

An Act further to amend the Indian Electricity Act, 1910 and the Electricity (Supply) Act, 1948

Be it enacted by Parliament in the Forty-second Year of the Republic of India as follows :-

1. Short title and commencement -
 - (1) This Act may be called the Electricity Laws (Amendment) Act, 1991.
 - (2) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.
2. Amendment of section 6 of Act 9 of 1910 - In section 6 of the Indian Electricity Act, 1910, in clause (b) of sub-section (1) for the words 'twenty' and 'ten', the words 'thirty' and 'twenty' shall respectively, be substituted.
3. Amendment of section 2 - In section 2 of the Electricity (Supply) Act, 1948 (54 of 1948) -
 - (i) after clause (3), the following clause shall be inserted, namely :-

(3A) "competent government" means the Central Government in respect of a Generating Company wholly or partly owned by it and in all other cases the Government of State in which the generating station of a Generating Company is located or proposed to be located;
 - (ii) for clause (4A), the following clause shall be substituted, namely :-

(4A) "Generating Company" means a company registered under the Companies Act, 1956 (1 of 1956) and which has among its objects the establishment, operation and maintenance of generating stations;
 - (iii) after clause (9), the following clauses shall be inserted, namely :-

(9A) "Regional Electricity Board" means any of the Boards as constituted immediately before the commencement of the Electricity Laws (Amendment) Act, 1991, by resolution of the

Central Government for ensuring integrated operation of constituent system in the region;

(9B) "Regional Load Despatch Centre" means the Centre so designated where the operation of each of the Regional Electricity Grids constituting the country's power system is co-ordinated;

4. Amendment of section 15A. - In section 15A of the principal Act, -

(i) the word "Formation", occurring in the marginal heading and sub-section (1) shall be omitted;

(ii) for sub-sections (2) and (3), the following sub-sections shall be substituted, namely :-

"(2) The objects of a Generating Company shall include -

(a) establishment, operation and maintenance of generating stations and tie-lines, sub-stations and main transmission lines connected therewith;

(b) operation and maintenance of such generating stations, tie-lines, sub-stations and main transmission lines as are assigned to it by the competent government or governments.

(3) The Generating Company shall carry on its activities within such areas as the competent government or governments, as the case may be, may, from time to time specify in this behalf.

(iii) sub-sections (4), (6) and (7) shall be omitted.

5. Amendment of Section 18A. - In section 18A of the principal Act, in sub-section (1), for the words "promoting government or promoting governments", at both the places where they occur the words "competent government or governments" shall be substituted.

6. Amendment of section 29. - In section 29 of the principal Act, -

(i) for sub-section (1), the following sub-section shall be substituted, namely :-

"(1) Every scheme estimated to involve a capital expenditure exceeding such sum, as may be fixed by the Central Government, from time to time, by notification in the Official Gazette, shall, as soon as may be, after it is prepared, be submitted to the Authority for its concurrence."

(ii) in sub-section (4), in the proviso, for the words "promoting government or one of the promoting governments", the words "competent government or one of the competent governments" shall be substituted.

7. Amendment of section 30. - In section 30 of the principal Act, in clause (g), the words "and such other directions as may be given by the Central Government" shall be added at the end.

8. Amendment of section 31. - In section 31 of the principal Act, in sub-section (1), in the proviso, for the words "the promoting government or one of the promoting governments", the words "competent government or one of the competent governments" shall be substituted.

9. Amendment of section 39. - In section 39 of the principal Act, -

(i) in sub-section (2), in the proviso, for the words "promoting government or one of the promoting governments", the words "competent government or one of the competent governments" shall be substituted;

(ii) after sub-section (2), the following sub-section shall be inserted, namely :-

"(3) For the purposes of this section, no direction shall be issued to a Generating Company wholly or partly owned by the Central Government, unless and until the prior concurrence of that Government is obtained."

10. Amendment of section 43 - In section 43 of the principal Act, sub-section (3) shall be omitted.

11. Insertion of new section 43A - After section 43 of the principal Act, the following section shall be inserted, namely :-

"43A. Terms, conditions and tariff for sale of electricity by Generating Company - (1) A Generating Company may enter into a contract for the sale of electricity generated by it-

(a) with the Board constituted for the State or any of the States in which a generating station owned or operated by the Company is located,

(b) with the Board constituted for any other State in which it is carrying on its activities in pursuance of sub-section (3) of section 15A, and

(c) with any other person with consent of the competent government or governments

(2) The tariff for the sale of electricity by a Generating Company to the Board shall be determined in accordance with the norms regarding operation and the Plant Load Factor as may be laid down by the Authority and in accordance with the rates of depreciation and reasonable return and such other factors as may be determined, from time to time, by the Central Government, by notification in the Official Gazette:

Provided that the terms, conditions and tariff for such sale shall, in respect of a Generating Company wholly or partly owned by the Central Government, be such as may be determined by the Central Government and in respect of a Generating Company wholly or partly owned by one or more State Governments be such as may be determined, from time to time, by the government or governments concerned."

12. Substitution of new section for section 55. - For section 55 of the principal Act, the following section shall be substituted, namely :-

"55. Compliance of directions of the Regional Electricity Board, etc. by licensees or Generating Companies.-

(1) Every licensee shall comply with such reasonable directions as the Board may, from time to time, give him for the purpose of achieving the maximum economy and efficiency in the operation of his undertaking or any part thereof.

(2) Every licensee or Generating Company shall follow all the directions of the Regional Electricity Boards and shall conduct their operations in accordance with the instructions of the Regional Load Despatch Centre so as to ensure integrated grid operations.

(3) If any dispute arises with reference to the integrated grid operations as to whether any direction given under sub-section (1) or sub-section (2), is reasonable or not, it shall be referred to the Authority, whose decision thereon shall be final; so, however, pending the decision of the Authority, directions of the Regional Electricity Boards or the Regional Load Despatch Centers shall prevail in the interest of smooth operation of the integrated grid."

SCHEDULE- 1 (1)
4/4

13. Amendment of section 75A. - In section 75A of the principal Act, -

- (i) sub-section (1) shall be omitted;
- (ii) in sub-section (2), for the word "promoting" wherever it occurs, the word "competent" shall be substituted;
- (iii) for sub-section (3), the following sub-section shall be substituted, namely :-

"(3) For the purpose of preparing the statement of accounts referred to in sub-section (2), the depreciation to be provided every year shall be calculated at such rate as may be specified by the Central Government, by notification in Official Gazette, in accordance with the provisions of section 43A."

- (iv) sub-section (3A) shall be omitted;

- (v) in sub-section (4), for the words, brackets and figure "sub-sections (1) and", the word "sub-section" shall be substituted.

14. Amendment of Sixth Schedule. - In the Sixth Schedule to the principal Act, in paragraph XVII, -

- (i) in sub-paragraph (2), in clause (c), after sub-clause (va), the following sub-clause shall be inserted, namely :-

"(vb) debt redemption obligation of the private licensees which may be done on a year to year basis, taking into account the requirements of debt redemption and resource generation through depreciation, retained surplus,"

- (ii) in sub-paragraph (6), for clause (b), the following clause shall be substituted, namely :-

"(b) interest charges on capital expenditure incurred during the period between the date of grant of the licence and the date when the undertaking commences supply, from borrowed moneys and properly attributable to the assets as actually accrued up to the date of such supply as well as interest incurred on outlays for subsequent expansions."

- (iii) in sub-paragraph (10), in clause (b), for the words "part of capital base for that year, the Reserve Bank rate ruling at the beginning of that year, plus two per centum," the following words, brackets and figures shall be substituted, namely :-

"capital base for that year, the Reserve Bank rate ruling at the beginning of the year plus

- (i) two per centum for investments made up to the date of the commencement of the Electricity Laws (Amendment) Act, 1981; and
- (ii) five per centum for investments made thereafter."

K. L. MOHANPURIA,
Additional Secretary to the Government of India.



प्रमाण, आई. आई.
Form I.R.

निगमन का प्रमाण-पत्र

CERTIFICATE OF INCORPORATION

नं. 01-19554 of 19 94-95

मैं निम्नलिखित प्रमाणित करता हूँ कि आज

कम्पनी अधिनियम, 1956 (1956 के 1) के अधीन निगमित की गई है और वह कम्पनी परिलक्षित है।

I hereby certify that **SURYACHAKRA POWER CORPORATION LIMITED**

is this day incorporated under the Companies Act, 1956 (No.1 of 1956) and that the Company is limited.

मेरे हस्ताक्षर से आज तारीख 28th

Given under my hand at **HYDERABAD** this **28th**
February
day of **One thousand nine hundred and Ninety five.**

(9th Fhalguna 1916 saka)



व. एच. सी. - 1
J.S.C-1.

(Signature)
(N.R. SRIDHARAN)

कम्पनियों का रजिस्ट्रार
Registrar of Companies
Andhra Pradesh.

Company No. 01-19554



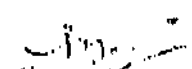
Certificate of Commencement of Business.
Pursuant of section 149(3) of the Companies Act, 1956.

I hereby certify that the SURYACHAKRA POWER CORPORATION
LIMITED

which was incorporated under the Companies Act, 1956, on the 28th
day of FEBRUARY, 1995 and which has this day filed a duly verified
declaration in this prescribed form that the conditions of section 149 (1) (a) to
(d)/149 (2) (a) to (c) of the said Act, have been complied with is entitled to
commence business.

Given under my hand at Hyderabad this 16th day of MARCH
one thousand nine hundred and NINETY FIVE.



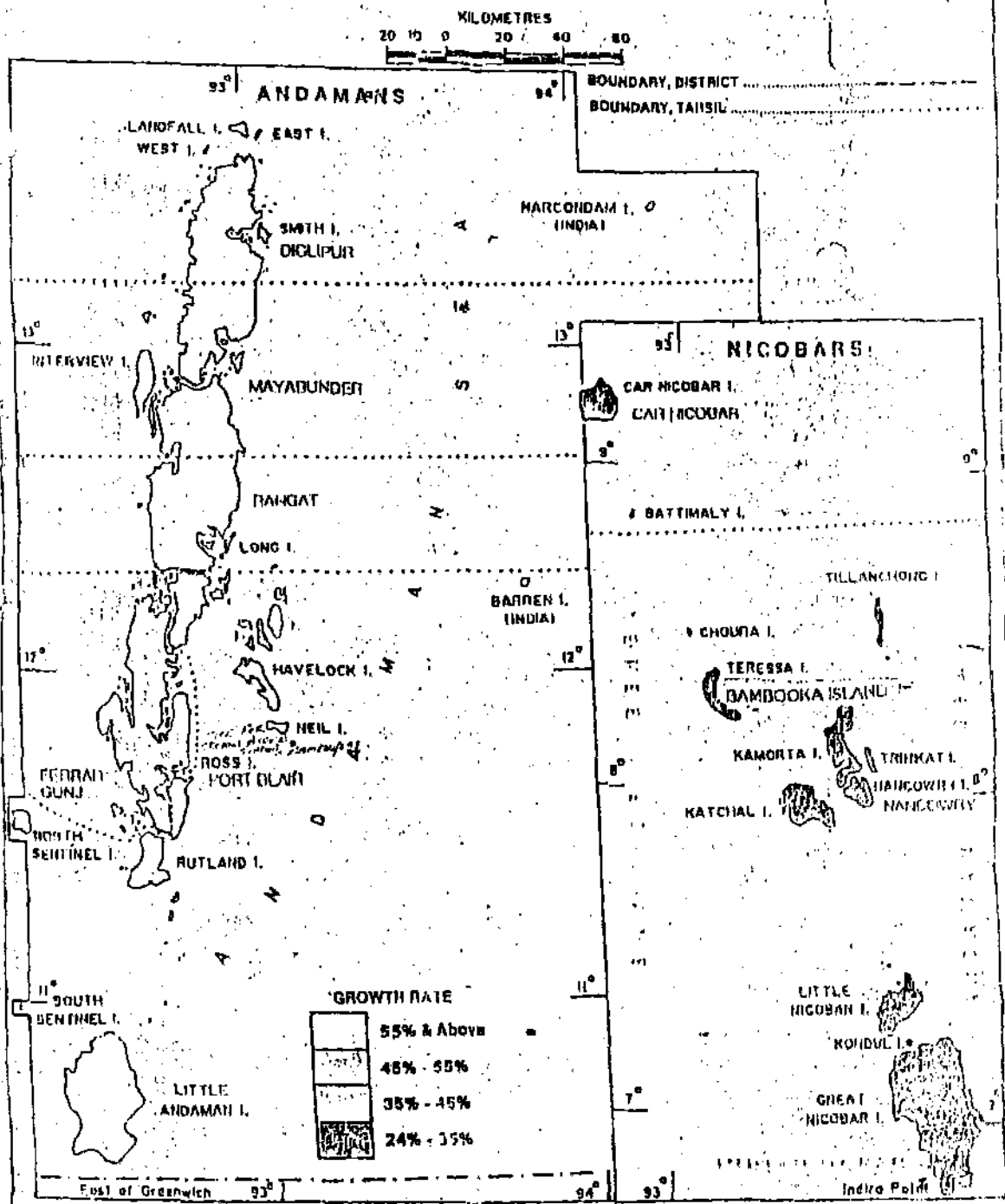

(B.N. JEYA)
REGISTRAR OF COMPANIES
ANDHRA PRADESH, HYDERABAD

SPECIFICATIONS/TYPICAL VALUES FOR HSD

CHARACTERISTIC	UNIT	SPECIFICATION	TYPICAL VALUES	METHOD
ACIDITY INORGANIC		NIL	NIL	P:2
ACIDITY TOTAL	MG KOH/GM	0.50	0.02	P:2
ASPHALT RESIDUE (RAMSBOTT) MAX	% WT	0.01	NIL	P:4
VISCOSITY @ 15 DEG C	% WT	0.2	0.08	P:8
FLASH POINT MIN	GM/ML	REPORT	0.8587	P:16
FLASH POINT MAX		42	49	P:9
FLASH POINT MIN @ 366 DEG C	% VOL	90	93	P:18
FLASH POINT MAX	DEG C	32	38	P:20
FLASH POINT MAX	DEG C	6	<6	P:10
FLASH POINT MAX	% WT	0.05	NIL	P:30
FLASH POINT TOTAL MAX	% WT	1	0.35	P:33
VISCOSITY @ 38 DEG C	CST	2.0-7.5	3.27	P:25
WATER CONTENT, MAX	%VOL	0.05	NIL	P:40
TOTAL SEDIMENTS	MG/100ML	1.0	0.4	APP:A
COPPER STRIP CORROSION		NOT LESS	1	P:15
HOURS @ 100 DEG C		THAN 1		

ANDAMAN AND NICOBAR ISLANDS

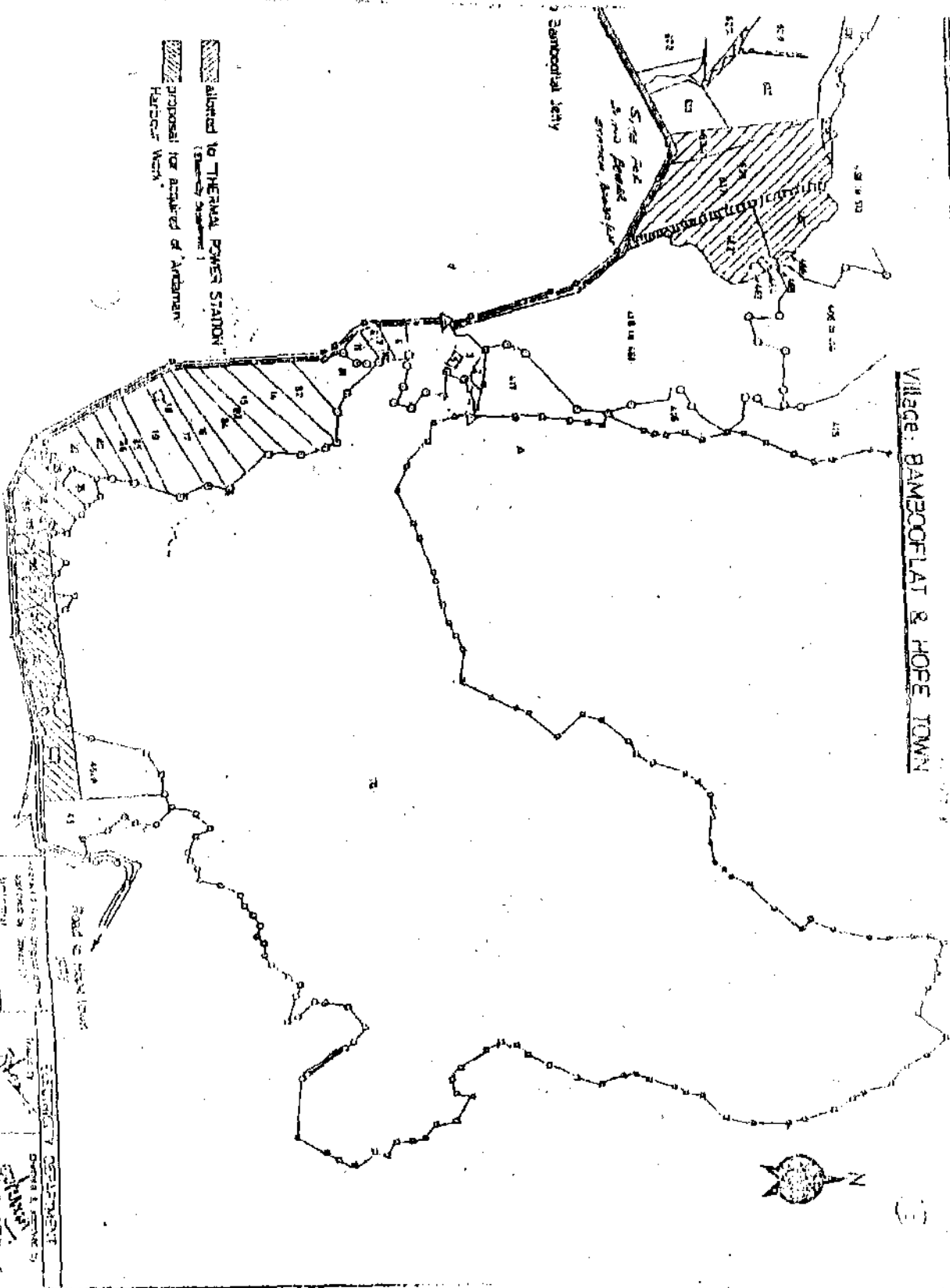
TAHSILWISE DECENNIAL POPULATION GROWTH 1981-91



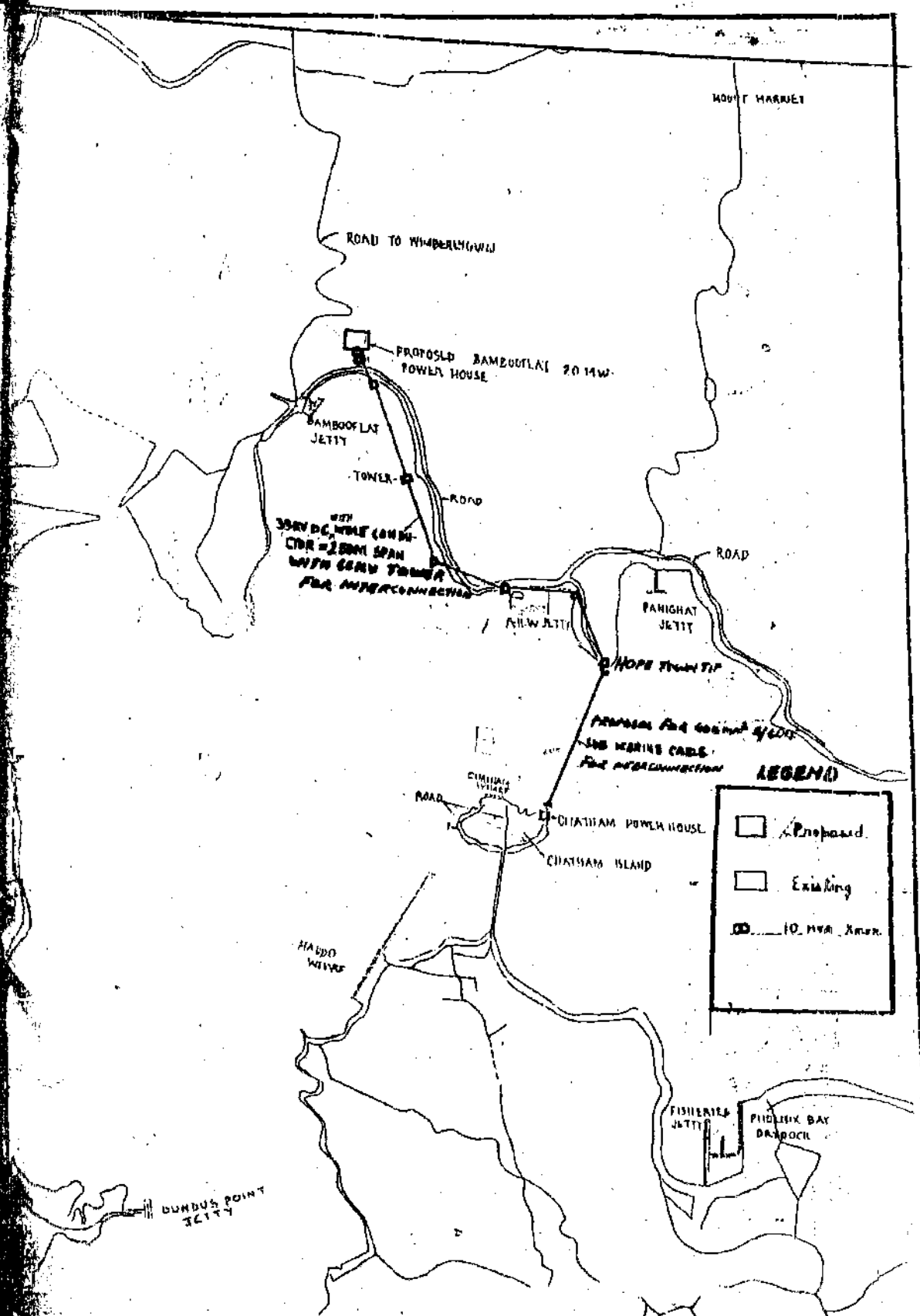
Based upon Survey of India map with the permission of the Surveyor General of India.
The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

© Government of India Copyright, 1990

VILLAGE: BAMECOFLAT & HOPE TOWN



SCHEDULE-3



Sd/- 4

No. 4-2(2)/96-Power(DI)
Andaman and Nicobar Administration
Secretariat

--:-

Port Blair dated the

20th Nov 1997.

OFFICE MEMORANDUM

Sub :- Establishment of 4x5 MW (20 MW) Diesel Generating power Station at Bambooflat, South Andaman, Andaman District, A&N Islands by M/s Suryachakra Power Corporation Limited, Hyderabad (IPP participation) - Estimated completed cost of US \$ 10.53 million (Rs. 37.908 Crores) plus Rs. 25.232 Crores totaling to Rs. 63.14 Crores - Issue of sanction under section 28 of Electricity (Supply) Act 1948 - Issue of revised sanction -Regarding.

-: :-

1. In pursuance of the Ministry of Home Affairs Notification No. SO 652 dated 11.03.1960 (Exhibit - 1) and Notification No. A-55/95-IPC(Pt.) Dated 28.12.1995 (Exhibit - 2) and subsequent directions issued by Ministry of Power, New Delhi vide D.O. No. C-236/95-IPC dated 04.12.1995 (Exhibit - 3) and D.O. No. A-32/95-IPC(Pt.) dated 14.08.1995 (Exhibit - 4) and also in pursuance of Letter No. SPCL/SVN/A&N/PPA/345/97 dated 6th October, 1997 of M/s Suryachakra Power Corporation Limited, Hyderabad, requesting for issue of authorisation and sanctions on the basis of Detailed Project Report (DPR) submitted therewith under Section 18(A) and under section 28 of Electricity (Supply) Act 1948 respectively, for establishment of 4x5 MW Diesel Generating Power Station proposed by the Company, for development at Bambooflat, South Andaman, Andaman District in Andaman and Nicobar islands as specified in the feasibility report and other documents, papers, notes etc., submitted to the Administration. The authorisation under Section 18(A) of E(S) Act, 1948 was issued by the Administration vide Letter No.4-2(2)/96-Power(DI) dated 23rd June, 1997.

2. Further as per the direction/notifications referred in Para 1 above and more specifically the feasibility report submitted by the Company is in line and the Administration hereby accord sanctions to the feasibility report submitted by the company under Section 28 of E(S) Act, 1948 for the scheme at an estimated completed cost of US \$ 10.53 million plus rupees 25.232 Crores totaling to Rs. 63.14 Crores with the stipulations that :-

... A & B to this memorandum unless otherwise.
Andaman and Nicobar Administration, while according
under section 31 of Electricity (Supply) Act, 1948 after
the financial package.

(c) Taxes and duties on domestic component shall be as per actuals.

(d) Change in Indian Law resulting in change in cost.

(ii) The Abstract of the Completed Capital Cost approved by the Andaman and Nicobar Administration is enclosed in Annexure-A, summary of Financial package, as submitted by the company and considered by the Andaman and Nicobar Administration, is at Annexure-B and the salient features of the scheme are set-forth at Annexure-C.

(iii) For working out tariff for sale of bulk power for energy generated from this project, the company shall comply with the Normative Operative Parameters which may be laid down by the Central Electricity Authority under section 43 (A) Sub-Section (2) and in accordance to Section 2 of sub-section 1 of Electricity (Supply) Act 1948 for the proposed type of plant but not exceeding :-

a) Heat Rate	- 2000 K.Cal/Kwh
b) Auxillary Consumption	- 4.5 %

5. The above sanction is subject to the fulfillment of the following conditions.

(i) The company shall obtain requisite clearance of Foreign Investment Promotion Board (FIPB) for investment of foreign equity/debt as envisaged in Annexure - B.

ii) Approval of the Ministry of Finance for foreign exchange outgo, external commercial borrowings and foreign debt : foreign equity.

iii) Financial package submitted by M/s. Suryachakra Power Corporation Limited, shall not be inferior to the tentative financial package submitted by the company.

iv) The project cost shall not increase on account of additional expenditure incurred, if any, to meet the stipulations of the Ministry of Environment & Forest (MOEF).

v) The period of moratorium, if any, availed by M/s Suryachakra Power Corporation Limited, in any loan package shall not be taken into account for tariff calculation.

vi) That the PPA is finally examined by SCOPPA.

vii) That the approval of the Ministry of Home Affairs for Non-Plan expenditure towards the purchase of Power is accorded to the Andaman & Nicobar Administration.

viii) That M/s. Suryachakra Power Corporation shall not undertake any work in any pre-emptive manner unless the CNE accord final clearance.

4. The project shall be completed within a period of 24 (Twenty Four) months from the date of clearance from CNE.

i) Unit 1 & 2	-	19th month.
ii) Unit 3	-	21st month.
iii) Unit 4	-	24th month.

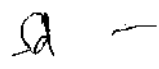
5. Three(3) copies of the semi annual progress reports on physical progress of the scheme and expenditure actually incurred duly certified by statutory auditors shall be submitted to the Administration till the COD of the last unit.

6. The completion cost of the scheme shall be submitted to the Andaman and Nicobar Administration for approval within a period of 3 months from the COD of the last unit.

7. This clearance is subject to review on submission of the firm financial package within a period of 6 months from the date of approval by CNE.

Encl : As Above

Annexure A,B,C & Exhibits 1 To 6



Secretary (Power)
A & N Administration

To
M/s Suryachakra Power Corporation Limited,
3-6-203/B, III Floor,
Himayathnagar,
Hyderabad - 500 029.

Copy along with its enclosures forwarded to :-

1. The Secretary to Govt. of India, Ministry of Home Affairs, New Delhi with reference to his D.O.No. 13013/1/96-ANI dated 14.06.1996.
2. The Secretary to Govt. of India, Ministry of Power, Shram Shakti Bhawan, New Delhi - 110 001 with reference to his D.O.No. C-236/96-IPC-I dated 09.01.1997.
3. The Secretary to the Lieutenant Governor, A & N Islands.

4. The Joint Secretary(IPC)/Thermal, Ministry of Power, Shram Shakti Bhawan, New Delhi - 110 001.
5. The Advisor(Energy Division), Planning Commission, Vojana Bhawan, Parliament Street, New Delhi - 110 001 with reference to Planning Commission Office Memorandum No. 1-26(B)/95-P&E dated 14.09.1995.
6. The Chairman, Central Electricity Authority, R.K.Puram, New Delhi - 110 066.
7. The Commissioner-cum-Secretary(Finance), A & N Administration, Port Blair.
8. The Deputy Secretary, Ministry of Petroleum & Natural Gas, Shastri Bhawan, New Delhi with reference to his letter No. 21017/7/94-Dist dated 14.09.1994 wherein Ministry provided fuel linkage for the project.
9. The Member Secretary, Director of Education, Pollution Control Board, Andaman and Nicobar Islands, Port Blair with reference to his letter No. 3-26/S&T/PCI/WW(SC)/94/240 and 241 dated 30.09.1995.
10. The Chief Engineer(Legal), Central Electricity Authority, Sewa Bhawan, R.K.Puram, New Delhi. This has reference to letter No. 38/2/97-Legal dated 02.05.1997.
11. The Joint Director(Scientific), Ministry of Environment & Forest, Paryavaran Bhawan, CGO Complex, Lodi Road, New Delhi - 110 003., with reference to office memorandum No. J/13011/21/93-1A-III dated 22.04.1994.
12. The Chairman, CWC, Sewa Bhawan, R.K.Puram, New Delhi - 110 066 with reference to his letter No. 12/14/B3-UT/406 dated 18.09.1994.
13. The Development Commissioner, A & N Administration, Port Blair.
14. The Director for Director General of Meteorology, Mausam Bhawan, Lodi Road, New Delhi - 110 003 with reference to his letter No. EMU-01934/South Andaman dated 04.05.1994.
15. The Assistant Director(NOC), Airport Authority of India (NAD), Operational Complex, Safdargunj Airport, Rajiv Gandhi Bhawan, New Delhi - 110 003 with reference to his letter No. 20012/323/94-ARI dated 07.10.1996.
16. The Superintending Engineer, Electricity Department, Port Blair.


Assistant Secretary(Power).

20 MW Power Project at Bambooflat A&N Islands.

ABSTRACT OF THE PROJECT COST

Sl. No.	Description	*Foreign Components US\$ Million & MINR.	**Indigenous Components Rupees in Millions
1.	Land and Site Development		6.300
2.	Build. & Civil Cons.		54.900
3.	Works cost		
a.	Works cost excluding taxes and duties	\$8.77 MUSD (Rs. 315.72 MINR)	26.575
b.	Electricals		
c.	Taxes and duties	1.76 (Rs. 63.36 MINR)	45.045
4.	Contingencies		27.500
5.	Misc. Project Cost		38.975
6.	IDC		30.000
7.	Preliminary & capital issue expenses		18.525
8.	Start up fuel for testing and commissioning.		4.500
		379.080	252.320

TOTAL PROJECT COST = Foreign Components Plus Indigenous components which is equal to Rs. 637.14 CRORES.

ANNEXURE - B

BAMBOOFLAT (4X5 MW) (M/S SPCL)
TENTATIVE FINANCIAL PACKAGE

(a) <u>EQUITY 30% OF THE PROJECT COST</u>		Rs. 1894.22
		<u>INDIAN COMPONENT</u>
		<u>(Rs. Lakhs)</u>
1. <u>PROMOTERS</u>		
a) Indian Promoters, Friends & Relatives 25% of the equity.	473.55	
b) HRI Friends, Relatives & OCBs 25% (Foreign Equity)	473.55	
2. Foreign FIIs and Mutual Funds (7%)	132.60	
3. EPC Contract (10% Indian)	189.42	
4. Other Overseas investment (FDI) Foreign 33%	625.00	
Sub-Total	1894.20	
<u>ABSTRACT</u>		
Total Foreign Investment on equity (65%)	1231.23	
Total Indian investment on equity (35%)	662.97	
Sub Total	1894.20	
(b) <u>DEBT 70% OF THE PROJECT COST</u>		
i) DFI/PFC (20% on total)	1262.00	
ii) Overseas/ECB (50% on total)	3157.00	
Sub Total	4419.00	
* TOTAL PROJECT FINANCING		Rs. 6314.00 Lakhs.

20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

The Fast number of HED based D G Engines to be located in Power Plant at Bambooflat, A & N Islands as per following configuration.

Salient Features :

1. DIESEL ENGINE DETAILS:

- | | | | |
|------|--|---|---|
| 1.1 | No. of Engines | - | 4 Nos. of 5250 KVA (5000 KWe) each 4 (four) stroke. |
| 1.2 | Configuration | - | V-Type |
| 1.3 | No. of Cylinders | - | 16 |
| 1.4 | Cylinder bore | - | 320 mm |
| 1.5 | Stroke | - | 420 mm |
| 1.6 | Direction of rotation
fuel towards flywheel | - | Anti Clock wise |
| 1.7 | Speed | - | 600 rpm |
| 1.8 | Mean piston speed | - | 0.40 m/s |
| 1.9 | Mean effective pressure | - | Will be furnished later. |
| 1.10 | Swept volume per cylinder | - | 33.81 per cycle |
| 1.11 | Compression ratio | - | 1 : 12 : 0 |
| 1.12 | Number of valves | - | 4 Per Cylinder |

2. GENERATOR DETAILS:

- | | | | |
|-----|---------------------|---|---------------------|
| 2.1 | Output KVA/KW | - | 5250 kva / 5000 KWe |
| 2.2 | Power Factor | - | 0.8 |
| 2.3 | Terminal Voltage | - | 11000 V |
| 2.4 | Rated Current | - | 320 Amps |
| 2.5 | Frequency | - | 50 Hz |
| 2.6 | Insulation Class | - | F/F |
| 2.7 | Short Circuit Ratio | - | 0.05 |

- 2.8 Rated KWE 5000 KW.
- 2.9 Rated speed - 600 RPM
- 2.10 Type of Excitation system - Brushless, Electronic exciter
- 2.11 Runaway speed - Will be specified later.
- 2.12 Continuous short circuit current - Will be specified later.
- 2.13 Enclosure - IP 23
- 2.14 Standard - DIN

3. ENGINE LUB OIL SYSTEM

- 3.1 Plate heat exchanger - 1 Per Engine
- 3.2 Lub Oil consumption - 1.1 gm/kwh
- 3.3 Lub Oil separator - Not required for HSD.
- 3.4 Pre Lube oil pump
 - Capacity - 10 Cubic Mtr./Hr.
 - Electronic motor - 7.55 KW
- 3.5 Thermostatic three-way valves - Yes
- 3.6 Filter unit
 - fine filter - Yes
 - drip-pan - Yes
 - diff pressure indicator - Yes

4. COOLING SYSTEM

- 4.1 Heat Exchanger for cooling waters - Single Circuit Cooling only HT Cooler.
- 4.2. Preheating unit Capacity - 24 KW, 15 Cubic Mtr./Hr.
of each with pump.

5. EXHAUST GAS SYSTEM

- 5.1. Four (4) sets of expansion bellows for exhaust pipe. 3 Nos. each

Chimney, height 33 Mtrs. 4 Nos.
Multiflue.

6. STARTING AIR SYSTEM

Compressed starting air is delivered by the air compressor and is supplied from the starting air unit to the air bottle. Control and working air outlet is connected to the compressed air supply via a pressure regulator of 6 bar.

- 6.1. Air bottles, capacity, 500 litres X 30 bar equipped with all necessary accessories. 2 Nos.

7. MAIN SWITCHGEAR SYSTEM

Fully compartmentalised, sheet steel enclosed, dust & vermin proof switchboards per IS 13118, 1991/IEC - 50,

Bustar system - (33 kv indoor yard)

Protection class - IP 4X

8. CIRCUIT BREAKERS

The circuit-breaker are equipped with auxiliary contacts, a.c. voltage charging motors, d.c. voltage closing and shunt tripping coils.

9. ELECTRICAL SYSTEM

- 9.1. Generating Transformers 3 Nos.

(Two transformers to be supplied by SPCL and one is available with A&NA). The impedance should match with each other.

Rated Power - 10MVA ONAN/ONAF

Rated Voltage - 11kv/33kv

Frequency - 50 Hz
Cooling - ONAN/ONAF

2.2. SUB STATION

i) Type : Indoor
ii) Voltage : 11/33Kv
iii) Number of 33Kv buses - 1 No.

10. CONTROL/PROTECTION POWER SUPPLY & DISTRIBUTION

10.1. DC SYSTEM

Type	Lead Acid
Size	150 Ah/10h
Voltage	110 V DC

10.2. CHARGER

Primary voltage	415 V ac, 3 phase
Secondary	110 V DC

No. 70/53/51-A.N.
Government of India,
Ministry of Home Affairs.

Exhibit No. 1

New Delhi-2, the 19th December, 1953.

NOTIFICATION

In pursuance of clause (1) article 243 of the Constitution of India the President hereby directs that the Chief Commissioner of the Andaman and Nicobar Islands shall discharge within the said islands all the functions and powers of the State Government under the Indian Electricity Act, 1910 (IX of 1910), and the rules made thereunder except under the following sections, clauses and rules namely:-

Sections 13, 18, 34, and 35
Clauses V(2) and XIII of the Schedule
Rules, 4, 6, 117 and 118.

Sd/-

(N. Sahgal)

By Secy to the Govt. of India.

No. 70/53/51-A.N. New Delhi-2 the 23rd December, 1953.

Copy forwarded to all State Governments Parts A, B, and C except the State of Jammu and Kashmir.

the "Ministries of the Government of India" "with 10
the Planning Commission, the Cabinet Secretariat, S/Os. to
the Prime Minister's Secretariat, the Secretary the Miny.
to the President, the General Water and Power of I&P
Commission. and CP&PO (PH)

Sd/-

(S. J. MANANTALA)

Under Secretary to the Government of India

Ministry of Home Affairs.

New Delhi, the 11th March, 1960.

S.O. 632 - In pursuance of clause (1) of article 239 of the Constitution of India and in supersession of the notifications of the Govt. of India in the Ministry of Irrigation and Power No. EL.II-12 (17) dated the 16th November, 1953, and in the Ministry of Home Affairs No. 7/53/51-A.N. dated 19th December, 1953, of Himachal Pradesh and the Chief Commissioners of Manipur, Tripura and the Andaman Islands shall discharge, within their respective territories all the functions of the State Govt. under the Indian Electricity Act, 1910 (IX of 1910) and the rules made thereunder, except under the following provisions, namely:-

Section 13, 18, 34, 36 and 35 of the said Act, Clauses XIII of the Schedule to the Act, and rules 6, 123 and 134 of the said rules.

(No. F2/2/60-Jud.II)

Sd/-

A. R. Prabhu,
Deputy Secretary.

(Published in Gazette of India Part II Section 3 (ii) dated 19.3.1960).

(To be published in Part II, Section 3, Sub-section (ii) of the Gazette of India)

Government of India
Ministry of Power

New Delhi, dated the 28th December, 1995.

Notification

S.O. In exercise of the powers conferred by sub-section (1), of section 29 of the Electricity (Supply) Act, 1948 (54 of 1948) and in supersession of the notification of the Government of India in the Ministry of Power No. S.O. 3264 dated the 19th October, 1994, the Central Government hereby fixes, ---

(i) in relation to a scheme for generating station prepared by a Generating Company and selected through a process of competitive bidding by the competent Government or Governments, rupees four hundred crores; and

(ii) in relation to all other schemes, rupees one hundred crores

as the sum of capital expenditure exceeding which the scheme shall be submitted to the Authority for its concurrence.

Sd/-

(Pradip Ballal)

Joint Secretary to the Government of India
(File No. A-55/95.D0(1PC-1))

EX-110 11 NO 3
GOVERNMENT OF INDIA
Ministry of Power

P. K. BARI
Director (PCC)
Tel: 3717753

DD No. C-236/95-IPC

Dated December 1, 1995.

Dear Shri Lalla,

Reference is invited to your letter no. A-2(2)95-Power(D) dated 30th November, 1995 regarding establishment, operation and maintenance of 20 MW diesel generation plant at Dambhoat. It is understood that the cost of the project is less than Rs. 100 crores. As such award of the project to private developer is within the purview of the Union Territory of A&N Islands and technical clearance from Central Electricity Authority is not required. Your attention is, however, drawn to our letter No. A-32/95-IPC(p) dated the 14th August, 1995 regarding projects costing less than Rs. 100 crores.

Regarding meeting the tariff subsidy by the Government of India, the matter be decided in consultation with the Planning Commission who have suggested, perhaps, that the cost of power to be purchased from the private power plant will be under non-plan expenditure.

It is noted that the plant is based on High Speed Diesel. In this connection, attention is invited to our Resolution dated 6.11.1995 regarding permitting liquid fuel based power plant which was already circulated along with our Do No. A-23/94-IPC (Vol. III) (copy with enclosures enclosed for ready reference). The power plant may be based on one or more of the liquid fuels as permitted in the Resolution. As you would note use of HSD has not been permitted under the policy. The scheme would thus have to be structured on a permissible fuel.

With regards,

Yours sincerely
[Signature]
P. K. BARI

Shri P. K. Lalla
Secretary (Power)
A&N Administration
Secretariat

For and to the order of the Secretary
P. K. BARI, PCC, New Delhi-110001

Fax: 3717519
Tel:

PRADIP DALJAL
Joint Secy
JOINT SECRETARY
Tel. No. 3714042
Fax No. 3717519

MINISTRY
GOVERNMENT OF INDIA
Durg Road
MINISTRY OF POWER
200, 201B, 202, 203
SHIMLA SHAKTI BHAVAN, RAJENDRA NAGAR,

EXHIBIT NO. 4

Ref. No. - 110001

New Delhi - 110001 16th August, 1995

Dear

1559
You are aware that the Central Electricity Authority has been directed by the Government not to entertain projects unless they come through the competitive bidding route, from the State Governments, after 10th February, 1995.

2. Though the projects below hundred crores will not come to the Central Electricity Authority, the Ministry would advise that as far as possible States should offer projects through a bid route, even though they are below hundred crores.

Yours sincerely,

(PRADIP DALJAL)

12-23-95 16:58

S.E. ELECTRICITY DEPT. PUNE BLDR.

vihar, New Delhi - 110057

No. 4/10 (92)/93-UT (CEA)/10

dated the 6th Jan., 1995

To

✓ Secretary (Power),
AGN Admn.,
AGN Islands,
Port Blair.

Subj: Scheme report for establishment of 20MW Diesel Power Station at Bambooflat in South Andaman.

SLE,

4/1/95
The above scheme report costing Rs. 66.99 crores including IDC of Rs. 7.33 crores is found to be techno-economically in order subject to the following conditions to be fulfilled by the AGN authorities.

- (i) the techno-economic clearance of power evacuation scheme for the above generation scheme to be obtained in time.
- (ii) confirmation of the continuance of the validity of the directive of Ministry of Home Affairs dated 5th August, 1959.
- (iii) meeting the conditions stipulated in the Ministry of Environment and Forest Clearance letter dated 22.4.94.

The scope of works and abstract cost of the estimate for the above scheme shall be as per Annexure I & II respectively.

Necessary action for obtaining the required expenditure sanction and investment approval from competent authorities may please be taken at your end early.

Yours faithfully,

(S.L. Narasimhan)
Chief Engineer

Encl: As above.

RUPEES IN LACS

1.	Preliminary works & cost of land	6.95	2/
2.	Civil works.	571.20	
3.	Mechanical works.		
3(a)	Diesel engines, generators and accessories incl. inlet filter, silencers, control & monitoring system etc. (CIF prices) incl. spares.	2775.21	
		960.00	
		125.78	
		3860.90	
(b)	Water system, ventilation and Air conditioning, fire fighting, Laboratory, Cranes & Hoists etc. (Ex-works prices, spares, freight, insurance & taxes on local components).	299.81	
		126.14	
		375.95	
(c)	Port handling & in land transportation.	74.71	
(d)	Custom duty on imported equipments @ 20% of CIF cost.		Incl. clause above.
(e)	Erection, testing & commissioning charges.	199.10	
4.	Electrical works incl. spares, freight taxes, insurance, erection, testing & commissioning.	374.00	
	TOTAL WORKS COST	5462.90	
5.	Establishment @ 3% of works cost	163.89	
6.	Training of O&M staff (Incl. in 126.14 at 3b above).	3.14	
7.	T&P @1% of works cost	54.63	
8.	Contingency @ 3% of works cost	163.89	
9.	Audit & Accounts @1% of works cost.	54.63	
10.	Consultancy charges @1% of works cost.	54.63	
	TOTAL	5954.56	
	Say Rs.	5955 lakhs.	
	Rs.	733 lakhs	
	Total cost of the scheme including IDC Rs.	6688 lakhs.	
	(Rupees Six Thousand Six hundred & Eighty Eight lakhs)		

3/4

SCOPE OF WORKS FOR ESTABLISHMENT OF 20 MW
DIESEL POWER STATION AT BAMBOOFLAT.

The scope of works are as detailed below:

I. CIVIL

- (a) Development of 4.67 hecta. of existing land at Bambooflat for construction of Power House and all structures.
- (b) Acquisition of land for staff colony at Bambooflat.
- (c) Construction of 0.95 km. of approach road.
- (d) Construction of 40 metre x 60 metre of station building housing the DG sets and allied equipments.
- (e) Construction of 2x30 KL Fresh water storage tank.
- (f) Construction of circulating water pump house.
- (g) Construction of jetty, 20x10 metres main sea water house, 40x20x3 metres settling tank alongwith associated intake and delivery pipings.
- (h) Laying of 1 km. of Fresh water pipe line.
- (i) Construction of fuel oil pump house including KOCK Sunk foundation for fuel oil treatment plant.
- (j) Construction of fuel oil tank and Dyke.
- (k) Construction of Transformer yard.
- (l) Construction of switchgear room.
- (m) Construction of Auxiliary building.
 - (i) canteen 100 Mtr.²; (ii) Administrative building
 - (iii) workshop building 100 Mtr.²; (iv) Store building
 - (v) Gate house (vi) recreation hall 50 m².
- (n) Provision for meeting Environmental requirement as setting up of monitoring equipments and providing belt.
- (o) Construction of 45 nos. staff quarters viz: 20 Nos. Type I, 15 Nos. Type II, 6 Nos. Type III, 3 Nos. Type IV and 1 No. Type V.

II. Mechanical work

1. Purchase, Installation and commissioning of Diesel Generator set having capacity at Bambooflat power house including following auxiliary equipments/facilities.
 - (a) Control and Monitoring system for complete plant.
 - (b) Fuel oil system including HSD oil unloading pump, HSD storage tank, HSD purification plant, fuel oil booster and associated pipelines.
 - (c) Fresh water system including water supply pump, chlorination pump, water supply pumps.
 - (d) Air conditioning system.

14/4

- 2 -

- (12) Cooling water system including direct and indirect cooling water pumps with allied works.
- (13) L.P. Piping and fittings.
- (14) Air-conditioning system comprising heat recovery system.
- (15) Ventilation system.
- (16) 25T capacity EOT cranes. Misc. cranes and hoists.
- (17) 312 IWA Black start DG sets.
- (18) Workshop equipment.
- (19) Lub. oil purification plant.
- (20) Special tools and accessories.
- (21) Creation of Computer cell with mini computer.
- (22) Training of staff of Electricity Department at work site.
- (23) Electrical works
 - (a) Purchase and installation of 1x10 MVA 11/33 KV and 2x1500/2000 KVA 11/0.4 KV transformers including shifting of 2x10 MVA 11/33 KV transformer from Chatham to Bambooflat.
 - (b) 11 KV switchgear and panels including DG switchgear panels, 11 Nos. feeder and isolator panels, 2 potential transformer panels, 1 No. synchronising panel, neutral grounding resistors, 2 Nos. Surge protection panels and 1 No. Bus coupler panels.
 - (c) 33 KV switchgear including 1 No. transformer and 4 Nos. feeder isolators and 2 Nos. 33KV Bus couplers.
 - (d) 115 volts LV Distribution system switchgear including station service board, emergency control panel, MCCB and MCB panels for black start.
 - (e) C.C. facilities including 110V and 24V Battery banks, boost and float charges.
 - (f) Heater control system including remote control panels and relay and annunciation panels for generators, transformers and feeders etc.
 - (g) Power and control cables including 3 Nos. 33KV, 3.5 Nos. 11KV and required lengths of 1.1 KV and instrumentation cables.
 - (h) Various other facilities like internal lighting system, communication system, fire alarm system, grounding and lightning protection and electrical workshop and laboratory equipments.

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs)	Revised (Completed as per bid project June '95 cost as price level on June '97)
	<u>Land & Site development.</u>				
	Preliminary investigation and feasibility study.	Hect.	4.67		
	Acquisition of land for power house & allied works.	Hect.	4.67	7.00	7.50
	Land for colonies.	L.S.	-		
	Soil test.	L.S.	-		
	Site grading & fencing.				
	Land development charges at project site.	L.S.	-		
	Site grading.	Cu.	16567		
		Mtrs.			
	Plot Drainage.	L.S.	-		
	Plot Sewerage.	L.S.	-	38.00	39.50
	Boundary Wall.	Mtrs.	850		
	Land Scaping.	L.S.	-		
	<u>Roads on Culverts.</u>				
	Culverts.		-	15.00	16.00
	Roads.				
	Sub-Total of Serial No. 1			60.00	63.00
	<u>Building & Civil Construction.</u>				
	Chimney / Structure foundation & piping exhaust supports etc.	Nos.	4	40.00	41.00
	Temporary Structure & enabling works.	Cu.	100		
	Office & Store.	Mtrs.		2.70	2.97
	Raising of water & power supply facilities at Project site.				
	Fire Fighting & Misc. items.				
	Foundation for 5 DG Sets of 4MW each and its allied works.	This included in mech. estimate.			
	Station Building.				

ELECTRICITY DEPARTMENT - PORT BLAIR

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs)	Revised Completed as per bid project June '95 cost as price level on June '97
	Piling.	Mos.	122		
	Excavations.	Cu.	1290		
	Plain Cement Concrete.	Cu.	96		
	RCC M20 Grade.	Cu.	3000	179.00	196.90
	Structural Steel.	Ton	100		
	Reinforcement.	Ton	200		
	Misc. Items.				
	Fresh Water Storage Overhead Tank (2x80 KL Capacity).				
	Excavation.	Cu. Mtr	200		
	RCC.	Cu. Mtr	40		
	RCC M20 Grade.	Cu. Mtr	110	6.80	7.48
	Reinforcement.	Ton	12		
	Misc.				
	Circulating Water Pump House.				
	Excavation.	Cu. Mtr	1000		
	RCC.	Cu. Mtr	26		
	RCC M20 Grade.	Cu. Mtr	260	12.50	13.75
	Reinforcement.	Cu. Mtr	20		
	Misc.				
	Construction of Main Sea Water Pump House on Jetty (20x10 Mtrs)				
	Excavation.				
	RCC.	Cu. Mtr	14		
	RCC M20 Grade.	Cu. Mtr	170	9.00	9.90
	Reinforcement.	Cu. Mtr	15		
	Misc.				
	Construction of Jetty.		-	5.00	5.50
	Construction of Sea Water Cap- acity 40x20x3 Mtrs.		-	3.00	3.30
	Laying of HDPE Intake and deli- very pipe lines for Sea Water lines including accessories.		-	6.00	6.60
	Laying of Fresh Water pipeline from dam site - 1 Kms. distance for collection of fresh water two lengths.		-	4.00	4.40

ELECTRICITY DEPARTMENT - PORTBLAIR

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BANDOFLAT (AAK ISLANDS)

Contd...

ELECTRICITY DEPARTMENT - PORTBLAIR

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs) per bid project (June '95 cost as price level on June '97)	(Revised) (Completed cost as price level on June '97)
	Fuel oil pump house including (MCCB room (Civil)).	(Mtr. Cu)	100	4.00	4.40
	Fuel Oil treatment Plant (Civil)	(Mtr. Cu)	50	2.00	2.20
	Fuel Oil tank & dyke.				
	Excavation.	(Mtr. Cu)	200		
	Compaction.	(Mtr. Cu)	175		
	RCC.	(Mtr. Cu)	20		
	RCC M20 Grade.	(Mtr. Cu)	100	26.00	28.60
	Earthen Embankment.	(Mtr. Cu)	1300		
	Bitumen Layer.	(Mtr. Cu)	200		
	Reinforcement.	(Ton)	5		
	Structural Steel.	(Ton)	70		
	Misc.				
	Transformer Yard.				
	Excavation.	(Mtr. Cu)	160		
	RCC.	(Mtr. Cu)	20		
	RCC M20 Grade.	(Mtr. Cu)	100	5.00	5.50
	Reinforcement.	(Ton)	10		
	Misc. Viz. Stone Spreading etc.				
	Fencing.				
	Switchgear Rooms.				
	Excavation.	(Mtr. Cu)	130		
	RCC.	(Mtr. Cu)	20		
	RCC M20 Grade.	(Mtr. Cu)	160	10.00	11.00
	Reinforcement.	(Ton)	12		
	Structural Steel.	(Ton)	10		
	Misc.				
	Ancillary Works.				
	Canteen.	(Mtr. Sq)	100		
	Administrative Buildings.	(Mtr. Sq)	200		
	Fire Fighting Station.	(Fire tender station availa- ble at station)			
	Workshop Buildings.	(Mtr. Sq)	100		
	Store Building.	(Mtr. Sq)	100	22.00	24.20
	Gate House.	(Mtr. Sq)	30		
	Recreation Hall.	(Mtr. Sq)	50		

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (AAK ISLANDS)

Contd...

ELECTRICITY DEPARTMENT - PORTBLAIR

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs) as per bid June '95 price level on June '97	Revised Completed project cost as June '97
	Overhead Fresh Water Tank including filter water tank and small pumping facilities.			5.00	5.50
	Provision for meeting the environmental management programs.			15.00	16.50
	Fabrication of power control & relay cable trenches, tray cable gallery etc., inside and outside power house building.			20.00	22.00
	Township. Residential Colony.				
	Type V (140 Mtr. Sq.) 1 No.	Mtr. Sq	140		
	Type IV (84 Mtr. Sq.) 3 Nos.	Mtr. Sq	252		
	Type III (56 Mtr. Sq.) 6 Nos.	Mtr. Sq	336	95.00	104.50
	Type II (45 Mtr. Sq.) 15 Nos.	Mtr. Sq	675		
	Type I (34 Mtr. Sq.) 20 Nos.	Mtr. Sq	680		
	Water, Power Supply, Roads, Drainage Sewerage etc.				
	Misc. Civil Works & unforeseen items including raising of supports for equipments.			27.00	29.70
	Sub-Total Building & Civil Cons. (Item 2a - Item 2v)			499.00	549.00
	EPC Turnkey Contract value cost of Indian Technicians Miscellaneous fixed assets.				
	Diesel Engine, generator and accessories including silencers, exhaust, compressed air systems, 5 MW. Output capacity.	5 MW	4 Units		
	(a) Import Component.			2568.50	3312.50
	(b) Indigenous Component.			499.00	160.13
	Control & Monitoring System for complete plant.		Included in Item 3a above.		
	Fuel Oil System.				

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Contd...

ELECTRICITY DEPARTMENT, PORT BLAIR

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs) as per bid June '95 price level '97	Revised completed project cost as on June '97
	MSD Oil unloading pumps with accessories with piping with inflammable motor starters, flow meter arrangements etc.	Set	2		
	MSD Oil Storage tank with its allied works.	Included in Item 2a above.			
	MSD Oil purification plants pump, day service tank with accessories namely valves piping inflammable starter motors M.C.C.U. etc.				
	Fuel oil booster pump with piping flow meter etc.	Included in Item 3a above.			
	Laying of pipeline from Jetty to main dirty oil storage tank.	Set	2	9.40	13.31
3d	Fresh Water System, filtration plant with water supply pumps, Chlorination plants for raw water, filtered water and circulating water, Misc. sumps & Pumps.	Set	2	5.00	5.76
3e	Fire Fighting System.	L.S.	L.S.	10.00	11.50
3f	Cooling Water System. Direct Cooling (FW) CW Pump with allied works.	Included in Item 3a above.			
	Indirect Cooling (Sea Water) CW Pump & allied works.	Included in Item 3a above.			
3g	H.P. piping & fittings expansion bellows, 'Y' piece, outlet transmission piece, discharge piece.	Included in Item 3a above			
3h	Air Conditioning system for control & relay & monitoring room.			5.00	8.75
3i	Ventilation Systems.			2.00	2.30
3j	Crane & hoists. DOT Crane (25 Tons Capacity) for station building. Misc. Cranes & hoists mobile Crane forklift etc.	Set	1	25.00	28.75

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs) (as per bid) June '95 price level on June '97	Revised completed project cost as on June '97
3k	312 KVA Black Start DG Sets complete with accessories.	Set	1	13.00	14.90
3l	Workshop Equipment.			8.00	9.20
3m	Lub Oil purification plant with pumps service tank piping etc.	Included in Item 3a above.			
3n	Initial Supply of lub oil to the DG Sets.	Included in Item 3a above.			
3o	Wall opening of the building including embedded steel works for piping ducts etc.			4.00	4.60
3p	Special Tools & accessories for installation & commissioning of the equipments, system and sub-system.			2.00	2.30
3q	Creation of Computer Cell with Mini Computers.			1.00	1.15
3r	Training of Staff of Electricity Department at Works site.			3.10	3.60
3s	Port handling charges and inland transportation for import component / Indigenous component.			32.00	54.00
3t	Initial Spares.				52.00
3u	Customs duty.			327.00	728.75
3v	Freight, insurance, excise duty, sales tax.			80.00	90.50
3w	Audit & Accounts.				40.00
3x	Erection, testing and commissioning charges.			50.00	87.00
	Sub - Total of EPC Turnkey Contract V			3644.00	4631.00

ELECTRICITY DEPARTMENT - PORT BLAIR

TMA FORM 104/1519/92

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs) (as per bid) (June '93 price level)	Revised Completed project cost as on June '97
1	Elect. Misc. fixed assets:				
1a	Transformers.				
	2x10 MVA 11/33 KV step-up trans- fer & shifting of 1x10 MVA 11/33 KV from Chatham Power House inc- luding dismantling cost with al- lied panels cable etc., station service transformer 2x1500 KVA 11/0.4 KV.	Set Each	2 + (1) 2	55.50	63.83
14b	11 KV Switch gear & panels . 100 Switch gear (500 MVA) Feeder & transformers isolator panels 250 MVA. Feeder & transformers isolator 400 MVA. Potential transformers panel. Synchronising equipments panel Imobile type. Neutral grounding register. Burge Protection Panel. Bus Coupler.	Each Each Each Each Each Each Each Each Set	4) 9) 2) 2) 1) 4) 2) 1)	51.50	59.24
14c	33 KV Switch gear Transformer isolator 33 KV Bus coupler. Feeder isolator.	Each Set Each	1) 2) 4)	15.00	17.25
14d	415 Volts LV distribution system LV Station service board with bus coupler. LV emergency control panel with 10/C. LV MCCB. ANF Panel for black start with battery backup.	Set Set Set Set Set	1) 1) 2) 1) 1)	10.70	12.37
14e	100 Facilities. 110 Volts battery banking. 110 Volts DC Battery boost & FI- Float Charges. 24 Volts battery banking & batt- ery charger.	Set Set Set Set	2) 1) 1) 1)	5.10	5.87

ELECTRICITY DEPARTMENT - PORT BLAIR

TWO LOANS (1991-1995) - M&H

DETAILED ESTIMATE FOR 20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs)	Revised (Completed)
				as per bid project June '95 cost as price level on June '97	
	Emergency lighting system with its associated cabling.	Set	1		
14f	Master Control System.				
	Remote control system with pan- els for generators, transformers (including service transformer engine systems & sub-systems.	Set		20.00	23.00
	Relay & annunciation panels.	Set			
	Transformers System & Sub-system etc.				
14g	Power Control Panel.				
	133KV XLPE 240 Sq. mm. 3 Core	Km.	1.5		
	133 KV XLPE 185 Sq. mm. 3 core	Km.	1.5		
	111 KV XLPE 240 Sq. mm. 3 core	Km.	2.0	59.30	68.20
	111 KV XLPE 185 Sq. mm. 3 core	Km.	1.5		
	11.1 KV PVC armoured copper cable 1 of 4x2.5 Sq. mm., 7x2.5 Sq. mm. & 12x6 Sq. mm.	Set	1		
	End terminations & jointing kits				
	Instrumentation cable.	Set	1		
	Cable Tray.	Set	1		
14h	Internal lighting system.	L.S.	L.S.	3.40	3.91
14i	Communication system.	L.S.	L.S.	1.00	1.15
14j	Fire Alarm System.	L.S.	L.S.	2.00	2.30
14k	Grounding and lightening protec- tion systems.	L.S.	L.S.	5.00	5.75
14l	Electrical Workshop & lab.	L.S.	L.S.	2.50	2.80
	Freight, insurance, sales tax, spares, erection, testing are included in the estimates.				
	Total electrical works.			231.00	265.75
	Sub- Total Item 1 - 4			4434.00	5508.75

DETAILED ESTIMATE FOR 20 MW POWER STATION AT DAMDOOFLAT (A&N ISLANDS)

Contd...

Code No.	Description	Unit	Quantity	Amount (Rs. Lakhs) as per bid June '95 price level	Revised completed project cost as on June '97
5	Preliminary & Capital Issue Expenses.				
5a	Brokerage commission on Capital issue, legal, Advt., Stationary	L.S.	L.S.	10.00	22.25
5b	Upfront fee etc.	L.S.	L.S.	20.00	23.00
5c	Other preliminary expenses. Company folating and initials.	L.S.	L.S.	25.00	30.00
5d	Establishment and travel for 22 months at Rs. 5 Lakhs/month.			90.00	110.00
	Total Preliminary in Capital issue expenses.			145.00	185.25
6	Interest During Construction. (Provision Only)			305.00	300.00
7	Provision for contingencies.			275.00	275.00
8	Margin money for working capital			66.00	-
9	Start up fuel and lub oil trail and test runs.			-	45.00
	GRAND TOTAL				
	TOTAL COST OF THE PROJECT			15225.00	16314.00

19/10

20 MW POWER STATION AT BAMBOOFLAT (A&N ISLANDS)
ABSTRACT ESTIMATE FOR COMPLETED PROJECT COST

(All figures of Rs. in Lakhs)

(Sl. No.)	Item	Amount as per June '95 price level	Revised completed project cost at June '97 price level
1.	Land & Site development.	60.00	63.00
2.	Buildings & Civil Construction.	499.00	549.00
3.	EPC Turnkey Contract value & Cost of Indian technicians.	3644.00	4631.00
4.	Electrical & Misc. Fixed assets.	231.00	265.75
5.	Preliminary & Capital Issue expenses.	145.00	185.25
6.	IDC	305.00	300.00
7.	Contingencies.	275.00	275.00
8.	Margin money for working capital.	66.00	-
9.	Startup fuel for trial & test run.	-	45.00
	Total cost of the project.	5225.00	6314.00



The Superintending Engineer,
Electricity Department,
A & N Administration,
PORT BLAIR.

भारतीय स्टेट बैंक
State Bank of India

फैक्स / Fax-03192-30160	पोर्ट ब्लेयर	PORT BLAIR
टेलिफैक्स / Tlx-0695-234 SBPB IN	आन्ध्रप्रदेश एवं निकोबार द्वीपसमूह	Andaman & Nicobar Islands
मोडेम / Modem 03192-30224	744 101,	Pin - 744 101
21539 (CM & Mgr. 'P')	तार विभाग	Telegram : THISTLE.
20457 Dy. Mgr.		
(Accnts/Cash)		

क्रमांक

No. 41/ 196 /Govt.

दिनांक

Date 08.10.97.

Dear Sir,

US DOLLAR RATES

DURING THE MONTH OF JUNE 1997.

With reference to your letter No. EL/PL/1-43/97/6448 dated the 6th October 1997, we mention below the rates of US Dollars prevailed during the month of June 1997 for preparing Power Purchase Agreement at your end.

US D\$		Rs
		<u>06.06.97</u>
T.T. Selling	1	35.97
Bill Selling	1	36.04
		<u>16.06.97</u>
T.T. Selling	1	36.01
Bill Selling	1	36.08
		<u>23.06.97</u>
T.T. Selling	1	36.01
Bill Selling	1	36.08

We also enclose our Foreign Exchange rate lists for your perusal.

Yours faithfully,

(V.K. MITRA)
CHIEF MANAGER.

OVERSEAS BRANCH
CALCUTTA

PRIVATE & CONFIDENTIAL
EXCHANGE RATE LIST FOR POUND STERLING, U.S. DOLLAR & M.F.C.
APPLICABLE TO TRANSACTIONS BELOW THE EQUIVALENT OF RS. 10,00,000/- ON A
FIRM BASIS PROVIDED THE RATE LIST USED IS NOT MORE THAN ONE WEEK OLD.

	SELLING		BUYING		T.C. FOR UNIT	
	BILL Rs.	T.T. Rs.	T.T. Rs.	BILL Rs.	BUYING Rs.	SELLING* Rs.
STERLING	59.09	58.97	58.36	58.33	57.80	59.25
U.S. DOLLAR	36.04	35.97	35.62	35.60	35.30	36.15
CAN. DOLLAR	26.21	26.16	25.89	25.87	25.70	26.30
D. MARK	21.03	20.99	20.77	20.76	20.60	21.10
DUTCH GUILDER	18.69	18.65	18.46	18.45		
S. FRANC	25.45	25.40	25.14	25.12	25.00	25.55
BEL. FRANC (100)	101.95	101.75	100.48	100.42		
F. FRANC	6.22	6.20	6.14	6.14	6.10	6.25
IT. LIRE (100)	2.12	2.11	2.09	2.09		
JAP. YEN (100)	30.98	30.92	30.59	30.57	30.45	31.05
DAN. KRONER	5.52	5.51	5.45	5.45		
NOR. KRONER	5.05	5.04	4.99	4.98		
SW. KRONER	4.63	4.63	4.57	4.57		
AUS. SCHILLING	3.00	3.00	2.94	2.94		
AUS. DOLLAR	27.43	27.37	27.07	27.06	26.85	27.50
N. Z. DOLLAR	24.85	24.80	24.52	24.51		
NED. DOLLAR	14.33	14.31	14.15	14.15		
SING. DOLLAR	25.17	25.15	24.88	24.87	24.70	25.30
HK. DOLLAR	4.66	4.65	4.60	4.60	4.55	4.65

*Branch should use above Selling rate for the sale of Travellers' Cheque and simultaneously recover 1% commission on the same and credit the same to Commission Account only. The resultant figure may be rounded off to the nearest five paise.

AND THE ABOVE RATES ARE IN INR FOR ONE UNIT OF FOREIGN CURRENCY EXCEPTING BEL. FRANC, IT. LIRE & JAP. YEN WHICH ARE FOR 100 UNITS OF THESE CURRENCIES.

SPECIAL INSTRUCTIONS : REMAIN UNCHANGED.

RATES FOR POUND STERLING AND U.S. DOLLAR CURRENCY NOTES :

		BUYING	SELLING	INTER OFFICE RATE
STG.	1.00	Rs. 57.50	Rs. 59.55	Rs. 57.95
USD.	1.00	Rs. 35.10	Rs. 36.35	Rs. 35.35

OBCal/97/101

Date : 02nd June, 1997.

Time : 10:30

B. S. CHATTERJEE
DY. GENERAL MANAGER

STATE BANK OF INDIA
OVERSEAS BRANCH
CALCUTTA

PRIVATE & CONFIDENTIAL

EXCHANGE RATE LIST FOR POUND STERLING, U.S. DOLLAR & MFC.

APPLICABLE TO TRANSACTIONS BELOW THE EQUIVALENT OF RS. 10,00,000/- ON A FIRM BASIS PROVIDED THE RATE LIST USED IS NOT MORE THAN ONE WEEK OLD.

	SELLING		BUYING		T.C. PER UNIT	
	BILL Rs.	T.T. Rs.	T.T. Rs.	BILL Rs.	BUYING Rs.	SELLING Rs.
STERLING	59.04	58.93	58.32	58.29	57.75	59.20
U.S. DOLLAR	36.08	36.01	35.66	35.64	35.35	36.20
CAN. DOLLAR	26.14	26.08	25.81	25.80	25.65	26.20
D. MARK	20.81	20.77	20.56	20.55	20.40	20.85
DUTCH GULDER	18.54	18.47	18.28	18.27		
S. FRANC	25.04	24.99	24.73	24.72	24.60	25.10
N. FRANC (100)	100.95	100.76	99.50	99.44		
F. FRANC	6.16	6.15	6.09	6.08	6.05	6.20
IT. LIRE (100)	2.12	2.12	2.09	2.09		
JAP. YEN (100)	31.64	31.57	31.24	31.22	31.10	31.75
DAN. KRONER	5.47	5.46	5.40	5.39		
NOR. KRONER	4.97	4.96	4.91	4.90		
SW. KRONER	4.65	4.64	4.59	4.59		
AUS. SCHILLING	2.97	2.96	2.91	2.91		
AUS. DOLLAR	27.13	27.08	26.78	26.77	26.55	27.20
N. Z. DOLLAR	24.86	24.81	24.53	24.52		
HAL. DOLLAR	14.34	14.32	14.16	14.16		
SIKG. DOLLAR	25.28	25.23	24.97	24.96	24.75	25.35
HK. DOLLAR	4.66	4.65	4.60	4.60	4.55	4.65

*Branch should use above Selling rate for the sale of Travellers' Cheque and simultaneously recover 1% commission on the same and credit the same to Commission Account only. The resultant figure may be rounded off to the nearest five paise.

ALL THE ABOVE RATES ARE IN IND FOR ONE UNIT OF FOREIGN CURRENCY EXCEPTING BEL. FRANC, IT. LIRE & JAP. YEN WHICH ARE FOR 100 UNITS OF THESE CURRENCIES.
SPECIAL INSTRUCTIONS: REMAIN UNCHANGED.

RATES FOR POUND STERLING AND U.S. DOLLAR CURRENCY NOTES:

	BUYING	SELLING	INTER OFFICE RATE
STG. 1.00	Rs. 57.45	Rs. 59.50	Rs. 57.90
USD. 1.00	Rs. 35.15	Rs. 36.40	Rs. 35.40

OPORD/97/111

Date: 16th June, 1997.

Time: 10:30

B. C. CHATTERJEE
DY. GENERAL MANAGER

STATE BANK OF INDIA
OVERSEAS BRANCH
CALCUTTA

PRIVATE & CONFIDENTIAL

EXCHANGE RATE LIST FOR POUND STERLING, U.S. DOLLAR & MFC.
APPLICABLE TO TRANSACTIONS BELOW THE EQUIVALENT OF RS.10,00,000/- ON A
FIRM BASIS PROVIDED THE RATE LIST USED IS NOT MORE THAN ONE WEEK OLD.

	SELLING		BUYING		T.C. PER UNIT	
	BILL Rs.	T.T. Rs.	T.T. Rs.	BILL Rs.	BUYING Rs.	SELLING* Rs.
STERLING	59.78	59.67	59.05	59.02	58.45	59.95
U.S. DOLLAR	36.08	36.01	35.66	35.64	35.35	36.20
CAN. DOLLAR	25.96	25.91	25.64	25.62	25.45	26.05
D. MARK	20.87	20.83	20.61	20.60	20.45	20.95
100 GUILDER	18.55	18.51	18.32	18.31		
S. FRANC	25.04	24.99	24.73	24.72	24.60	25.10
SWI. FRANC (100)	101.26	101.07	99.80	99.75		
F. FRANC	6.10	6.10	6.11	6.11	6.05	6.20
ST. LIRE (100)	2.14	2.13	2.11	2.11		
JAP. YEN (100)	31.24	31.18	30.85	30.83	30.70	31.35
DAN. KRONER	5.48	5.47	5.41	5.41		
NOR. KRONER	4.97	4.96	4.90	4.90		
SW. KRONER	4.68	4.67	4.62	4.62		
AUS. SCHILLING	2.98	2.97	2.92	2.92		
AUS. DOLLAR	27.11	27.06	26.76	26.75	26.50	27.20
N. Z. DOLLAR	24.68	24.63	24.36	24.34		
NAB. DOLLAR	14.34	14.31	14.16	14.15		
SING. DOLLAR	25.26	25.21	24.95	24.93	24.75	25.35
HK. DOLLAR	4.66	4.65	4.60	4.60	4.55	4.65

*Branch should use above Selling rate for the sale of 'Travellers' Cheque and simultaneously recover 1% commission on the same and credit the same to Commission Account only. The resultant figure may be rounded off to the nearest five paise.

ALL THE ABOVE RATES ARE IN INR FOR ONE UNIT OF FOREIGN CURRENCY EXCEPTING
SWI. FRANC, IT. LIRE & JAP. YEN WHICH ARE FOR 100 UNITS OF THESE CURRENCIES.
SPECIAL INSTRUCTIONS : REMAIN UNCHANGED.

RATES FOR POUND STERLING AND U.S. DOLLAR CURRENCY NOTES :

		BUYING	SELLING	INTER OFFICE RATE
STG.	1.00	Rs.58.15	Rs.60.25	Rs.58.60
USD.	1.00	Rs.35.15	Rs.36.10	Rs.35.40

OBCAU/97/116
DATE: JUNE 23, 1907
TIME: 10:00

B.S.CHATTERJEE
BY. GENERAL MANAGER

II

20 MW POWER STATION
AT
BAMBOOFLAT – Port Blair

Addendum – 1

To the PPA Signed On 20.11.1997

Between

**Andaman & Nicobar Administration
Port Blair**

&

**M/s Suryachakra Power Corporation Ltd.
Hyderabad**

Dated : 30.03.1999

20 MW POWER STATION
AT
BAMBOOFLAT – Port Blair

Addendum – 1
To the PPA Signed On 20.11.1997

Between

Andaman & Nicobar Administration
Port Blair

&

M/s Suryachakra Power Corporation Ltd.,
Hyderabad

Dated : 30.03.1999

TO BE READ AS :

a) "Maximum Continuous Rating" or "MCR" - In relation to a Unit the maximum continuous output at the Generator terminals, guaranteed by the manufacturer at ISO-3046 reference conditions and corrected to frequency beyond 50Hz (+ or - 3%) and site conditions.

4. c) "Demonstrated Capacity" - In relation to a Unit, the electric output at Generator terminals demonstrated during performance Acceptance Test as per latest versions of ISO-3046 for Diesel Engine and IS:4722, IS:5422, IS:7132 and IEC-34 for Generator after successful trial operation and corrected to 50Hz grid frequency and site conditions as at (xv) (a) above.

TO BE READ AS :

c) "Demonstrated Capacity" - In relation to a Unit, the electric output at Generator terminals demonstrated during performance Acceptance Test as per latest versions of ISO-3046 for Diesel Engine and IS:4722, IS:5422, IS:7132 and IEC-34 for Generator after successful trial operation and corrected to frequency beyond 50 Hz (+ or - 3%) and site conditions as at (xv) (a) above.

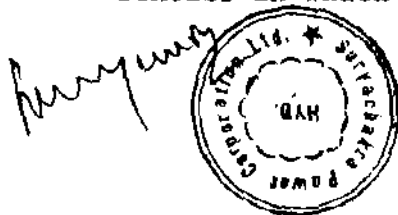
Page No 8

5. 3. The Administration will not allow any dération of the D.G. Sets in the installed capacity during the entire operation regime of the project for the term of agreement. For the terms of agreement.

TO BE READ AS :

3. The Administration will not allow any deration of the D.G. Sets in the installed capacity during the entire operation regime of the project for the term of agreement.

6. (xvi) which is as per foreign exchange rates assumed as in June 1997 and shall be included as "CAPITAL COST" except to the extend that the THE ADMINISTRATION approves such excess costs as not having been attributable to THE COMPANY to the Company's suppliers or contractors. In determining the amount of costs actually incurred in completing the project, account shall be taken of (i) any increase or decrease in capital Cost resulting from changes in the rates of exchange of the foreign currencies in which



Chief Secretary
A & N Administration
Port Blair, Andamans.

**20 MW POWER STATION AT BAMBOOFLAT - PORT BLAIR
POWER PURCHASE AGREEMENT BETWEEN ANDAMAN & NICOBAR ADMINISTRATION,
PORT BLAIR & M/s. SURYACHAKRA POWER CORPORATION LIMITED, HYDERABAD**

**ADDENDUM TO POWER PURCHASE AGREEMENT SIGNED ON 20th NOV '97.
BASED ON DISCUSSION WITH CEA, SPCL AND A & N ADMINISTRATION AT
PORT BLAIR ON 2nd & 3rd MARCH 1998**

Page No 2

1. Schedule-I(g) M.O.P, D.O.No. C-236/96-IPC dt. 9.1.97 permitting this project for use of HSD oil as fuel in lieu of the liquid fuel policy resolution dt. 6.11.95 for IPP projects.

TO BE READ AS :

Schedule-I(g) M.O.P, D.O.No.C-236/96-IPC dt. 9.1.97 permitting this project for use of HSD oil as fuel in lieu of the liquid fuel policy resolution dt.6.11.95 for IPP projects and Ministry of Petroleum and Natural Gas letter No.21017/7/94-Dist. dated 14.09.1994 allocating HSD oil for the project at Bambooflat (Enclosed as Schedule 4(e) of the Addendum, all other clearances for this project mentioned in page 17 of PPA from 4(b) to 4(j) are enclosed to this addendum. Enclosed schedule 4(a) of page 17 is available in page 252 to 279 of the PPA.

2. Schedule-I(h) CEA, New Delhi Office Memorandum No. 1-3(2)/95-Secy/947 dated 14-12-95 and No. 1-3-(3)/97-Secy/DG dated 04.02.1997 forwarded vide forwarding Lr.No.1-3(3)/97-Secy./CEA/742-87, dated 04-02-1997 to Secretary, (Power) Min.of Power, S.S.Bhavan, New Delhi-1 - Norms regarding operation of Diesel Engine Generating Stations.

TO BE READ AS :

Schedule-I(h) CEA, New Delhi Office Memorandum No. 1-3(2)/95-Secy/947 dated 14-12-95, Norms regarding operation of Diesel Engine Generating Stations.

Page No 1

3. (xv) Capacity : (Schedule - 1(h))

- a) "Maximum Continuous Rating" or "MCR" - In relation to a Unit the maximum continuous output at the Generator terminals, guaranteed by the manufacturer at ISO-3046 reference conditions and corrected to 50Hz grid frequency and site conditions.



- 1 -

[Signature]
Chief Secretary
A & N Administration
Port Blair, Andamans.

TO BE READ AS :

- (xvi) which is as per foreign exchange rates assumed as in June 1997 and shall be included as "CAPITAL COST" except to the extent that the THE ADMINISTRATION approves such excess costs as not having been attributable to THE COMPANY to the Company's suppliers or contractors. In determining the amount of costs actually incurred in completing the project, account shall be taken of (i) any increase or decrease in capital Cost resulting from changes in the rates of exchange of the foreign currencies in which

Page No 9

7. (xvi) Continuation

project expenditures are authorized to be incurred from the level set forth in A&N TBC (ii) (A) any reduction in interest during construction and principal amount of loans through the application of delay liquidated damages received under the Construction Contractor other compensation paid by the EPC Contractor to the Company and applied to reduce Capital Cost as provided in Article 3.11. (iii) any change to the debt equity ratio from the ratio assumed in the Approved Capital Schedule, and (iv) any excess insurance proceeds paid to the Company (after adjustment for the loss or damage to the Project and, to the extent not included in actual project cost, the cost of repaid and replacement attributable to such loss or damage) in respect of any claims for loss or damage to the Project incurred prior to the Commercial Operation Date to this Appendix D. For purposes of determining the Capital Cost, all foreign currency loans and all foreign currency equity sources shall be converted into Rupees at the applicable Base Foreign Exchange Rate. It is understood and agreed that any increase or decrease in Capital cost due to changes in foreign currency exchange rates shall be reflected in the amount of actual capital cost. In case the actually incurred cost is less than the ceiling cost as mentioned in table. The lesser cost shall be taken as the capital cost. Capital cost includes interest during construction limited to a construction period of nineteen months for the first and second unit and twenty four months for Third and Fourth Units, and shall not include any additional amounts for a longer construction period, except with the approval of THE ADMINISTRATION due to delays not attributable to the Company or the Company's suppliers or contractors. Further for estimating Interest During Construction 37.5% of the capital cost is allocated for the first unit 23.5% of the capital cost allocated to the second unit, 21% of the capital cost allocated to the third unit and 18% of the capital cost allocated for the fourth unit.

Handwritten signature



- 13 -

Handwritten signature

Chief Secretary
A & N Administration
Port Blair, Andaman.

TO BE READ AS :

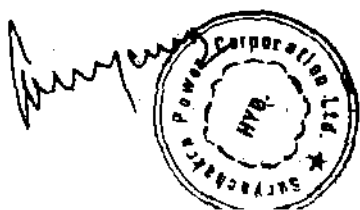
(xvi) Continuation

project expenditures are authorized to be incurred from the level set forth in A&N TEC (ii) (A) any reduction in interest during construction and principal amount of loans through the application of delay liquidated damages received under the Construction Contractor other compensation paid by the EPC Contractor to the Company and applied to reduce Capital Cost as provided in Article 3.11. (iii) any change to the debt equity ratio from the ratio assumed in the Approved Capital Schedule, and (iv) any excess insurance proceeds paid to the Company (after adjustment for the loss or damage to the Project and, to the extent not included in actual project cost, the cost of repaid and replacement attributable to such loss or damage) in respect of any claims for loss or damage to the Project incurred prior to the Commercial Operation Date to this Appendix D. For purposes of determining the Capital Cost, all foreign currency loans and all foreign currency equity sources shall be converted into Rupees at the applicable Base Foreign Exchange Rate. It is understood and agreed that any increase or decrease in Capital cost due to changes in foreign currency exchange rates shall be reflected in the amount of actual capital cost. In case the actually incurred cost is less than the ceiling cost as mentioned in table, the lesser cost shall be taken as the capital cost. Capital cost includes interest during construction limited to a construction period of nineteen months for the first and second unit and twenty four months for Third and Fourth Units, and shall not include any additional amounts for a longer construction period, except with the approval of THE ADMINISTRATION due to delays not attributable to the Company or the Company's suppliers or contractors. Further for estimating Interest During Construction 37.5% of the capital cost is allocated for the first unit 23.5% of the capital cost allocated to the second unit, 21% of the capital cost allocated to the third unit and 18% of the capital cost allocated for the fourth unit.

8. Item (i) with two paras shifted to Page No 82 as Item (v).

Page No 11

9. (xxv) Depreciation : means the depreciation on buildings, equipment and other capitalised expenditure at the rates specified by the Govt. of India from time to time, under the provisions of Ministry of Power Notification dated 29.03.1994 and in respect of any asset, shall cease no sooner its net book value falls equal to the residual value i.e 10 percent of its original cost.



- 4 -

Chief Secretary
A&N Administration
Port Blair, Andaman

TO BE READ AS :

- (xxv) Depreciation : means the depreciation on buildings, equipment and other capitalised expenditure at the rates specified by the Govt. of India from time to time, under the provisions of Ministry of Power Notification No. S.O. 265(E) dated 27.03.1994 & Notification No. S.O. 266(E) dated 29.03.1994 and in respect of any asset, shall cease no sooner its net book value falls equal to the residual value i.e 10 percent of its original cost.

Page No 16

10. (Liv) Prescribed parameters : means the following operating parameters for the project plant for the purpose of determination of basic tariff rate of supply of power by THE COMPANY to THE ADMINISTRATION namely:
- Auxiliary consumption shall be as per GOI norms notified by CEA, New Delhi vide Schedule 1 (h).
 - Station heat rate shall be 2000 kilo calories per KILO WATT HOUR for the permissible liquid fuel as per GOI norms notified by CEA, New Delhi vide Schedule 1 (h).

TO BE READ AS :

- (Liv) Prescribed parameters : means the following operating parameters for the project plant for the purpose of determination of basic tariff rate of supply of power by THE COMPANY to THE ADMINISTRATION namely:
- Auxiliary consumption shall be as per GOI norms notified by CEA, New Delhi vide Schedule 1 (h).
 - Station heat rate shall be 2000 kilo calories per KILO WATT HOUR at ISO conditions for the permissible liquid fuel as per GOI norms notified by CEA, New Delhi vide Schedule 1 (h). The station heat rate for site conditions based on Lower Calorific Value (LCV) of the fuel is 2010 Kilo calories per KWH.



- 1 5 -

Chief Secretary
A & N Administration
Port-Blair, Andaman.

Page No 17

11. Schedule 4(a) - T.E.C for 20 MW DG Power House at Bambooflat vide A&N letter No.4-2(2)/96-Power(DI) dt. th Oct 97

TO BE READ AS :

Schedule 4(a) - T.E.C for 20 MW DG Power House at Bambooflat vide A&N letter No.4-2(2)/96-Power(DI) dt. 20th Nov 97

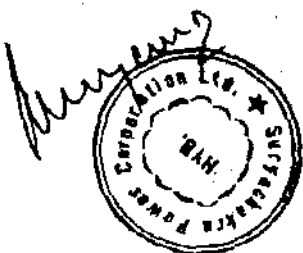
Page No 42

12. 8.4 Rebates.

(a) If payment in full of a Tariff Invoice and all other amounts due in respect thereof is made on or prior to the date which is the fifth Business day after the Date of presentation of the Tariff Invoice to THE ADMINISTRATION pursuant to Article 8.2 (which presentation may be by facsimile transmission) by wire transfer payment or otherwise such that, in any such case, there shall be immediately available funds in an amount equal to the full amount due to the Company in the Company's account on such date which is such fifth Business Day, THE ADMINISTRATION shall be allowed a rebate equal to 2.5% of the amount of the Invoice Amount of such Tariff Invoice paid on such date for payments within a period of one month on presentation of bills by the generating company, a rebate of 1% shall be allowed.

TO BE READ AS :

- (a) If payment in full of a Tariff Invoice and all other amounts due in respect thereof is made on or prior to the date which is the fifth Business day after the Date of presentation of the Tariff Invoice to THE ADMINISTRATION pursuant to Article 8.2 (which presentation may be by facsimile transmission) by wire transfer payment or otherwise such that, in any such case, there shall be immediately available funds in an amount equal to the full amount due to the Company in the Company's account on such date which is such fifth Business Day, THE ADMINISTRATION shall be allowed a rebate equal to 2.5% of the amount of the Invoice Amount of such Tariff Invoice paid on such date. For payments within a period of one month on presentation of bills by the generating company, a rebate of 1% shall be allowed.



- 6 -

Chief Secretary
A & N Administration
Admission

Page No 45

13. 9.1 (h) Determinations if Meter Variances The quantity of net electrical output supplied to THE ADMINISTRATION shall be computed from the readings of the Main Meters. However, if in any month, the energy recorded by the Main Meters differs from the energy recorded by the corresponding Check Meters by more than plus/minus one percent ~~(1.0%)~~ the Main Meters and the Check Meters shall be jointly tested in turn and errors at various levels as per the standard procedure shall be tabulated. If on such testing the main Meter error is found to exceed plus/minus one-half of one percent (0.5%), the energy recorded by Main Meters for the above month(s) shall be revised accordingly and the Main Meters shall be recalibrated or replaced by correct meters. Pending results of such testing, billing and payment shall continue to be based on the energy recorded by the Check Meters.

TO BE READ AS :

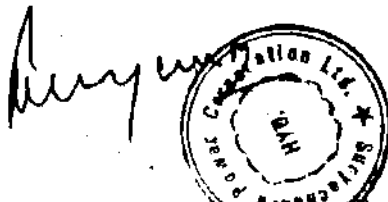
- 9.1 (h) Determinations if Meter Variances The quantity of net electrical output supplied to THE ADMINISTRATION shall be computed from the readings of the Main Meters. However, if in any month, the energy recorded by the Main Meters differs from the energy recorded by the corresponding Check Meters by more than plus/minus two fifth of one percent (0.4%) the Main Meters and the Check Meters shall be jointly tested in turn and errors at various levels as per the standard procedure shall be tabulated. If on such testing the main Meter error is found to exceed plus/minus one fifth of one percent (0.2%), the energy recorded by Main Meters for the above month(s) shall be revised accordingly and the Main Meters shall be recalibrated or replaced by correct meters. Pending results of such testing, billing and payment shall continue to be based on the energy recorded by the Check Meters.

Page No 68

14. 8. The company has taken no deviation from the Government of India tariff notification and in case any deviations are noted at subsequent dates then the provisions of Government tariff shall prevail.

TO BE READ AS :

8. The company has taken no deviation from the Government of India tariff notification and in case any deviations are noted at subsequent dates then the provisions of Government tariff notification shall prevail.



- 17 -

[Signature]
Chief Secretary
A & N Administration
Port Blair, Andamans,

Page No 75

15. 1.10 Swept volume per cylinder - 33.81 per cycle

TO BE READ AS :

- 1.10 Swept volume per cylinder - 0.03381 Cub. Mtr. Per Cycle.

16. 1.11 Compression ratio - 1 : 12 : 8

TO BE READ AS :

- 1.11 Compression ratio - 1 : 12.8

Page No 76

17. 3.3 Lub Oil separator - Not required for HSD.

TO BE READ AS :

- 3.3 Lub Oil separator - Will be provided.

18. 3.4 Pre Lube oil pump

Capacity - 18 Cubic Mtr./Hr.

TO BE READ AS :

- 3.4 Pre Lube oil pump

Capacity - 18 Cubic Mtr./Hr. (Adequate capacity shall be provided).

19. 3.6 Filter unit

- | | | |
|---------------------------|---|-----|
| - fine filter | - | Yes |
| - drip-pan | - | Yes |
| - diff pressure indicator | - | Yes |

TO BE READ AS :

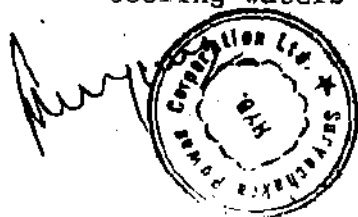
- 3.6 Filter unit (On line changing type)

- | | | |
|---------------------------|---|-----|
| - fine filter | - | Yes |
| - drip-pan | - | Yes |
| - diff pressure indicator | - | Yes |

20. 4. COOLING SYSTEM

- 4.1 Heat Exchanger for cooling waters

Single Circuit Cooling only HT Cooler.



- 18 -

Chief Secretary
N.E.N Administration
New Delhi, India

TO BE READ AS :**4. COOLING SYSTEM**

4.1 Heat Exchanger for cooling waters

- Complete Cooling system for engine, lub oil, & water.

Page No 77

21. 6.1. Air bottles, capacity, 500 litres X 30 bar equipped with all necessary accessories. - 2 Nos.

TO BE READ AS :

- 6.1. Air bottles, capacity, 500 litres X 30 bar equipped with all necessary accessories. - 4 Nos.

22. 7. MAIN SWITCHGEAR SYSTEM

Fully compartmentalised, sheet steel enclosed, dust & vermin proof switchboards per IS 13118, 1991/IEC - 56,

Busbar system - (33 KV indoor yard)

Protection class - IP 4X

TO BE READ AS :**7. MAIN SWITCHGEAR SYSTEM**

Fully compartmentalised, sheet steel enclosed, dust & vermin proof switchboards as per IS 13118, 1991/IEC - 56,

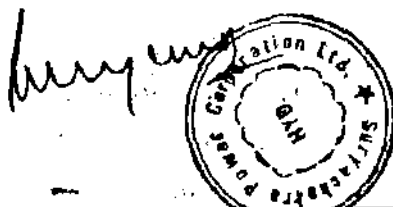
Busbar system - (33 KV indoor yard)

Protection class - IP 45

Page No 78

23. 9.2. SUB STATION

- i) Type : Indoor
 ii) Voltage : 11/33KV
 iii) Number of 33KV buses : 1 No.



- 19 -

[Signature]
 Chief Secretary
 A & N Administration
 Port Blair, ANDAMANES.

TO BE READ AS :**9.2. SUB STATION**

- i) Type : Indoor
 ii) Voltage : 11/33KV
 iii) Number of 33KV buses/bays : 3 Nos.

Page No 79

24. (d) Grid System voltage limits 11,000 Volts

TO BE READ AS :

- (d) Grid System voltage limits 11,000 Volts + 5% or - 10%

25. (f) Unit starts
 cold starts Min. approx.
 hot starts Min. approx.

TO BE READ AS :

- (f) Unit starts
 cold starts 1 to 2 Minutes Provided all auxi-
 hot starts 0.5 Minutes. liary systems are
 ready.

26. (i) HSD Oil Consumption Based on 2000 KCL /KWH as per ISO.

TO BE READ AS :

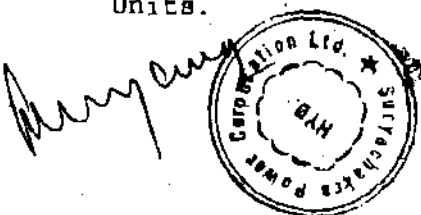
- (i) HSD Oil Consumption Based on 2000 K.Cal/KWH as per ISO.

Page No 80

27. 3. Commercial Operation date of the first and second Units. 20th month after the financial closing.

TO BE READ AS :

3. Commercial Operation date of the first and second Units. 19th month after the financial closing.



[Signature]
 N & N Administration
 P.O. Box 10, Andher East

28. 4. Commercial Operation Date of the third Units. 21th month after the financial closing.

TO BE READ AS :

4. Commercial Operation Date of the third Units. 24th month after the financial closing.

Page No 81

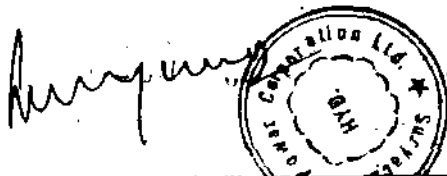
29. "Base Foreign Exchange Rate", "BFXR" and "BFXR" shall have the, meaning specified therefore in the definition of "Foreign Exchange Adjustment".

TO BE READ AS :

"Base Foreign Exchange Rate", "BFXR" and "BFXRm" shall have the, meaning specified ~~therefor~~ in the definition of "Foreign Exchange Adjustment".

Page No 82

30. which is as per foreign exchange rates assumed as in June 1997 and shall be included as "CAPITAL COST" except to the extent that the THE ADMINISTRATION approves such excess costs as not having been attributable to THE COMPANY to the Company's suppliers or contractors. In determining the amount of costs actually incurred in completing the project, account shall be taken of (i) any increase or decrease in capital Cost resulting from changes in the rates of exchange of the foreign currencies in which project expenditures are authorized to be incurred from the level set forth in A&N Admn's techno-economic clearance (ii) (A) any reduction in interest during construction and principal amount of loans through the application of delay liquidated damages received under the Construction Contract or other compensation paid by the EPC Contractor to the Company and applied to reduce Capital Cost as provided in Article 3.11. (iii) any change to the debt equity ratio from the ratio assumed in the Approved Capital Schedule, and (iv) any excess insurance proceeds paid to the Company (after adjustment for the loss or damage to the Project and, to the extent not included in actual project cost, the cost of repaid and replacement attributable to such loss or damage) in respect of any claims for loss or damage to the Project incurred prior to the Commercial Operation Date to this Appendix D. For purposes of determining the Capital Cost, all foreign currency loans and all foreign currency equity sources shall be converted into Rupees at the applicable Base Foreign Exchange Rate. It is understood and agreed that any increase or decrease in Capital cost due to changes in foreign currency exchange rates shall be reflected in the amount of actual capital cost. In case the actually incurred cost is less than the ceiling cost as mentioned in table. The lesser cost shall be taken as the capital cost.



-- 11 --

[Handwritten Signature]
Chief Secretary
A & N Administration
P.O. Box 11, Kadamba.

Capital cost includes interest during construction limited to a construction period of nineteen months for the first and second unit and 20 & 23 months for Third and Fourth Units respectively, and shall not include any additional amounts for a longer construction period, except with the approval of THE ADMINISTRATION due to delays not attributable to the Company or the Company's suppliers or contractors. Further for estimating Interest During Construction 37.5% of the Capital cost is allocated for the first unit 23.5% of the capital cost allocated to the second unit, 21% of the capital cost allocated to the third unit and 18% of the capital cost allocated for the fourth unit.

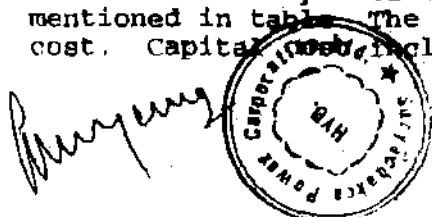
TO BE READ AS :

which is as per foreign exchange rates assumed as in June 1997 and shall be included as "CAPITAL COST" except to the extent that the THE ADMINISTRATION approves such excess costs as not having been attributable to THE COMPANY to the Company's suppliers or contractors. In determining the amount of costs actually incurred in completing the project, account shall be taken of (i) any increase or decrease in capital Cost resulting from changes in the rates of exchange of the foreign currencies in which project expenditures are authorized to be incurred from the level set forth in A&N Admn's techno-economic clearance (ii) (A) any reduction in interest during construction and principal amount of loans through the application of delay liquidated damages received under the Construction Contract or other compensation paid by the EPC Contractor to the Company and applied to reduce Capital Cost as provided in Article 3.11. (iii) any change to the debt equity ratio from the ratio assumed in the Approved Capital Schedule, and (iv) any excess insurance proceeds paid to the Company (after adjustment for the loss or damage to the Project and, to the extent not included in actual project cost, the cost of repaid and replacement attributable to such loss or damage) in respect of any claims for loss or damage to the Project incurred prior to the Commercial Operation Date to this Appendix D.

(v) any expenditure on any outdoor yard equipment and switch gear, transformers and metering and protection equipment and the like, necessary to deliver the energy generated by the project to the Grid of THE ADMINISTRATION, at THE COMPANY and of Inter Connection Point at such voltages and other technical parameters of supply.

However, to the condition that the amount of compensation payable by the manufacturer/supplier for capacity reduction in equipment performance, is taken to reduce the capital cost on prorata basis.

For purposes of determining the Capital Cost, all foreign currency loans and all foreign currency equity sources shall be converted into Rupees at the applicable Base Foreign Exchange Rate. It is understood and agreed that any increase or decrease in Capital cost due to changes in foreign currency exchange rates shall be reflected in the amount of actual capital cost. In case the actually incurred cost is less than the ceiling cost as mentioned in table. The lesser cost shall be taken as the capital cost. Capital cost includes interest during construction limited



- 12 -

Chief Secretary
A & N Administration
Port Blair, Andaman

to a construction period of nineteen months for the first and second units and 24 months for Third and Fourth Units, and shall not include any additional amounts for a longer construction period, except with the approval of THE ADMINISTRATION due to delays not attributable to the Company or the Company's suppliers or contractors. Further for estimating Interest During Construction 37.5% of the Capital cost is allocated for the first unit 23.5% of the capital cost allocated to the second unit, 21% of the capital cost allocated to the third unit and 18% of the capital cost allocated for the fourth unit.

Page No 83

31. "Current Foreign Exchange Rate", "CFXR" and "CFXR m" shall have the meaning specified therefore in the definition of "Foreign Exchange Adjustment".

TO BE READ AS :

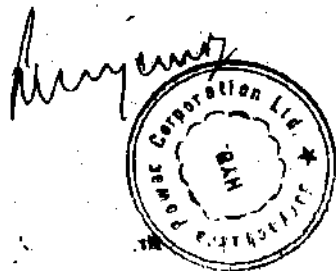
"Current Foreign Exchange Rate", "CFXR" and "CFXR m" shall have the meaning specified ~~therefor~~ in the definition of "Foreign Exchange Adjustment".

32. "Debt" shall mean the amount of any loans, notes, debentures, or other obligations (collectively "obligations") any currency entered into by the Company under the Financing Agreements, that are expended on the Project, as such amounts may be added to, incurred or revised from time to time following the Commercial Operation Date of the Project, and all costs associated therewith, where under the terms of such Obligation, interest is payable at periodic intervals at rates specified by such terms and the principal amount of such obligations is repayable or redeemable at periodic intervals or in a lump sum at the end of the tenure of such Obligations as may be specified by such terms, including without limitation any such obligations that are subject to the approval of the lenders and by the terms thereof convertible into equity after the commercial date of the project.

TO BE READ AS :

"Debt" shall mean the amount of any loans, notes, debentures, or other obligations (collectively "obligations") any currency entered into by the Company under the Financing Agreements, that are expended on the Project, as such amounts may be added to, incurred or revised from time to time following the Commercial Operation Date of the Project, and all costs associated therewith, where under the terms of such Obligation, interest is payable at periodic intervals.

33. "Declared Availability" and "DA" shall mean, for any Settlement period, the aggregate amount of gross electrical capacity of all Units, expressed in MW, measured at Rated Grid Conditions at the generator terminals of the Units, which the Company has most recently declared in an Availability Notice or a Revised Availability Notice for that Settlement Period, to represent the amount of gross electrical capacity the Company expects could be delivered to THE ADMINISTRATION if all Units were fully loaded.



- 13 -

Handwritten signature

Chief Secretary
A & N Administration
Port Blair, Andamans.

TO BE READ AS :

"Declared Availability" and "DA" shall mean, for any Settlement period, the aggregate amount of net electrical capacity of all Units, expressed in MW, measured at Rated Grid Conditions at the inter connecting point, which the Company has most recently declared in an Availability Notice or a Revised Availability Notice for that Settlement Period, to represent the amount of net electrical capacity the Company expects could be delivered to THE ADMINISTRATION if all Units were fully loaded. The declared available capacity plus auxillary consumption shall not exceed the installed capacity.

Page No 83 - 84

34. "Deemed Generation" and "DG" shall mean, with respect to the Project during a Deemed Generation Period, the difference, in Kwh, between (x) the product of (i) the lower of (x) Declared Availability of the Project (in MW) in the Deemed Generation Period (y) Rated Capacity (unless it cannot be determined, for example, due to the occurrence of an event of Force Majeure), and (z) Observed Capacity, (ii) the number of period Hours in the Deemed Generation Period, and (iii) one thousand (1,000) and (y) Gross Actual Energy produced by the project during such Deemed Generation period "DG", shall mean the Deemed Generation for Period Hours; accordingly, $DG = (D \times PH \times 1,000) - (\text{Gross Actual Energy})$, where D=the lower of (x) Declared Availability of the Project (in MW) in such period, (y) Rated Capacity (unless it cannot be determined, for example, due to the occurrence of an event of Force Majeure); and (z) Observed Capacity;

Deemed Generation to the extent required to enable the Company to achieve NPLF in a Tariff year would be taken.

"Deemed Generation Period" shall mean any period of time during which energy was available to be generated by the Project, but was not generated due to:

TO BE READ AS :

DEEMED GENERATION (DG) : In the event that there have been any reductions in the Net Generating Capacity due to Deemed Generation events, the effect of these changes in respect of any period is calculated as follows :

$$DG = \sum_{i=1}^k [DC_i - X_i]$$

where :

i = variation for 1 to k

k = number of Settlement Periods in the relevant period in which there are Deemed Generation events :

DC_i = the product of the Declared Capacity (in KW) adjusted as per Articles for the Settlement Period (i) and the duration of such Settlement Period (in hours), unless the value of DC in the Settlement Period (i) is less than the Net Electrical Energy delivered, in KWH, by the Project in the Settlement Period (i), in which case the value of DC_i - X_i = 0;

[Signature]



- 14 -

[Signature]

Chief Secretary
A & N Administration
Port Blair, Andaman & Nicobar

X₁ = Net Electrical Energy delivered, in KWH, by the project in each Settlement Period during such period.

If a Post Event Notice applies to any Settlement Period then any Deemed Generation during such a Settlement Period shall be zero. Provided that in accordance with existing Electricity Tariff Notification for the time being, no incentive payment shall be payable by the Administration to the company in respect of deemed generation.

Page No 84

35. (ii) "Depreciation" shall mean the depreciation on the assets of, on or constituting a part of the Project, and shall be based on the Capital Cost of such assets from time to time at the rates specified by GOI from time to time under the Electricity Laws; provided, however, that the allowance for Depreciation shall be zero (o) from and after the date on which the aggregate payments in respect of Depreciation equal ninety percent (90%) of the capital cost of all depreciable assets.

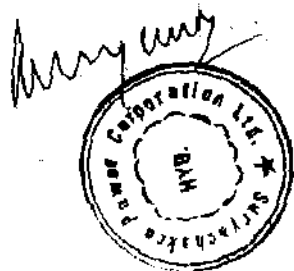
TO BE READ AS :

"Depreciation" shall mean the depreciation on the assets of, on or constituting a part of the Project, and shall be based on the Capital Cost of such assets from time to time at the rates specified by GOI from time to time under the Electricity Laws; provided, however, that the allowance for Depreciation shall be zero (0) from and after the date on which the aggregate payments in respect of Depreciation equal ninety percent (90%) of the capital cost of all depreciable assets.

36. A = PLF calculated (rounded to the fourth decimal place) over all Billings Period between and including the first Billing period in such Tariff Year and to the end of the applicable period (the Billing Period for which Fixed Charge Payment is being calculated) in such Tariff Year, provided that A shall not exceed NPLF.

TO BE READ AS :

A = PLF calculated (rounded to the fourth decimal place) over all Billing Periods between and including the first Billing period in such Tariff Year and to the end of the applicable period (the Billing Period for which Fixed Charge Payment is being calculated) in such Tariff Year, provided that A shall not exceed NPLF.



- 15 -

[Signature]

Chief Secretary
N.A. Administration
P.O. D.I. Andamora

Page No 85

37. "BFXR" or the "Base Foreign Exchange Rate" shall mean the currency exchange rate only in U.S. Dollars and Indian Rupees utilised by the Company in computing the Rupee Capital Cost for all capital assets paid for by the Company in U.S. Dollars.

TO BE READ AS :

"BFXR" or the "Base Foreign Exchange Rate" shall mean the weighted average currency exchange rate only in U.S. Dollars and Indian Rupees utilised by the Company in computing the Rupee Capital Cost for all capital assets paid for by the Company in U.S. Dollars.

Page No 86

38. "Gross Actual Energy" shall, with respect to a Unit (during the Initial tariff year only) or, subsequently, the Project,

for any period, be equal to Actual Energy divided by the difference between unit and APCF i.e.,

TO BE READ AS :

"Gross Actual Energy" shall, with respect to a Unit (during the Initial tariff year only) or, subsequently, the Project,

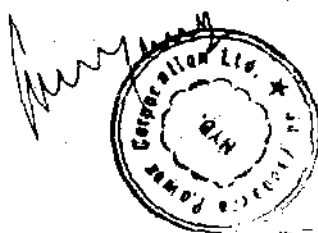
for any period, be equal to Actual Energy divided by the difference between unity (one) and APCF i.e.,

Page No 87

39. attributable to the Incentive Payment, and provided, further, that during any Tariff Year the total amount paid by THE ADMINISTRATION to THE COMPANY in respect of taxes shall not exceed the actual taxes paid by the Company during such Tariff Year.

TO BE READ AS :

attributable to the Incentive Payment, and provided, further, that during any Tariff Year the total amount paid by THE ADMINISTRATION to THE COMPANY in respect of taxes shall not exceed the actual taxes paid by the Company during such Tariff Year. Income Tax on incentive generation will be borne by the Company.



[Signature]

Chief Secretary
A & N Administration
Port Blair, Andaman.

40. "Indian Consumer Price Index" shall mean the proportionate increase in index value of the "All India Consumer Price Index (CPI) for Industrial Workers" as published monthly by the Centre for Monitoring the Indian Economy for the available calendar year. If such index is no longer published or available or available the Company and THE ADMINISTRATION shall select another index by mutual agreement.

TO BE READ AS :

"Indian Consumer Price Index" shall mean the proportionate increase in index value of the "All India Consumer Price Index (CPI) for Industrial Workers" as published monthly by the Centre for Monitoring the Indian Economy for the available calendar year. If such index is no longer published or available the Company and THE ADMINISTRATION shall select another index by mutual agreement.

41. "Lender" shall mean any institution, corporation, partnership, firm, individual, organization or other entity providing Debt or Working Capital to the Company.

TO BE READ AS :

"Lender" shall mean any institution, corporation, partnership firm, individual, organization or other entity providing Debt or Working Capital to the Company.

Page No 88

42. "Normative Plant Load Factor" or "Normative PLF" or "NPLF" shall be 6000 hours/annum and is 68.49% with respect to a Unit (during the Initial Year only) or the Project. "NPLF m" shall mean Normative Plant Load Factor for a period, m. This will be adjusted every year after due measured by both parties.

TO BE READ AS :

"Normative Plant Load Factor" or "Normative PLF" or "NPLF" shall be 6000 hours/annum and is 68.49% with respect to a Unit (during the Initial Year only) or the Project. "NPLF m" shall mean Normative Plant Load Factor for a period, m. This will be adjusted every year after duly computed by both parties.

43. "O & M and Insurance Expenses" shall mean O & M Expenses and cost of Insurance equal to 4% of Capital cost, subject to annual escalation on the first day of each Tariff Year for changes in the Indian Consumer price Index and Indian wholesale price indices on a weighted average basis in accordance with a 30:70 ratio from the commercial operation date of the first unit.



- 17 -

Handwritten signature of the Chief Secretary.
Chief Secretary
A & N Administration
Port Blair Andamans

112

"Operation and Maintenance Expenses" or "O & M Expenses" shall mean the annual escalation on each of the four unit would be allowed one year after the commissioning of the respective unit. However, one year after the commissioning of the entire plant the O&M escalation for all the four units would be trued up and there after the O&M expenses would be escalated every year after one year from the commissioning of the entire plant. The capital cost of the each unit for the purpose of O&M expenses shall be in proportion to the capacity of that unit, with respect to any period, all expenditures for the generation of power and energy by the Plant and maintenance and repaid of the project, during such period other than Interest on Debt, Depreciation, Income Taxes, Other Taxes, Return on Equity, Variable Charge Payment, Interest on working capital, Incentive Payments, Cost of Insurance and FEA.

TO BE READ AS :

"O & M and Insurance Expenses" shall mean O & M Expenses and cost of Insurance equal to 4% of Capital Cost, subject to annual escalation on the first day of each Tariff year for changes in the Indian Consumer price Index and Indian wholesale price indices on a weighted average basis in accordance with a 30:70 ratio from the commercial operation date of the first unit. The annual escalation on each of the four units would be allowed one year after the commissioning of the respective unit. However, one year after the commissioning of the entire plant the O & M escalation for all the four units would be trued up and thereafter the O & M expenses would be escalated every year after one year from the commissioning of the entire plant. The capital cost of each unit for the purpose of O & M expenses shall be in proportion to the capacity of that unit. "Operation and Maintenance Expenses" or "O & M Expenses" shall mean, with respect to any period, all expenditures for the generation of power and energy by the the plant and maintenance and repaid for the project, during such period other than Interest on Debt, Depreciation, Income Taxes, Other Taxes, Return on Equity, Variable Charge Payment, Interest on Working capital, Incentive Payment and FEA.

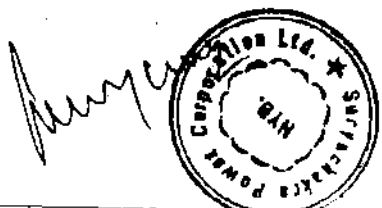
44. "Other Taxes" shall mean any taxes (other than Income Taxes), imposed or levied, directly or indirectly, by any Indian Government Agency, with respect to sale of Electricity generated by the Project, relating to the foregoing. Income Tax on incentive generation will be borne by the company.

TO BE READ AS :

"Other Taxes" shall mean any taxes (other than Income Taxes), imposed or levied, directly or indirectly, by any Indian Government Agency, with respect to sale of Electricity generated by the Project, relating to the foregoing.

Page No 82

45. "Plant Load Factor" or "PLF" may refer article 1 of (L)



- 118 -

Chief Secretary
A & N Administration
Port Blair, Andaman & Nicobar

TO BE READ AS :

"Plant Load Factor" or "PLF" may refer "Item L" under article 1.

46. "Return on Equity" or "ROC" shall be equal to:

TO BE READ AS :

"Return on Equity" or "ROE" shall be equal to:

47. if $PLF_m > NPLF_m$

TO BE READ AS :

if PLF_m is greater than or equal to $NPLF_m$.

48. "Station Heat Rate" or "HR" shall mean 2000 kilocalories per Kwh, on Lower Calorific Value of Fuel (at site conditions)

TO BE READ AS :

"Station Heat Rate" or "HR" shall mean 2000 kilocalories per Kwh, on Lower Calorific Value of Fuel (at ISO conditions).

49. "Stub Year" shall mean the period commencing from the commercial Operation Date of the last unit to the March 31 first occurring after the Commercial Operation Date of such unit.

TO BE READ AS :

"Stub Year" shall mean the period commencing from the commercial Operation Date of the last unit to the 31st March occurring after the Commercial Operation Date of such unit.

50. 2.1 Subject to Paragraph 2.2 below, the amount payable by THE ADMINISTRATION in respect of Electricity and Deemed Generation in a Billing Period shall be the sum of

- (i) the Fixed Charge payment; plus
- (ii) the Variable charge payment; plus
- (iii) the Incentive Payment, if any, plus
- (iv) the Foreign Exchange Adjustment, and plus
- (v) the Change-in-Law Adjustment

TO BE READ AS :

- 2.1 Subject to Paragraph 2.2 below, the amount payable by THE ADMINISTRATION in respect of Electricity and Deemed Generation in a Billing Period shall be the sum of

- (i) the Fixed Charge payment; plus
- (ii) the Variable charge payment; plus
- (iii) the Incentive Payment, if any, and
- (iv) the Foreign Exchange Adjustment.

[Signature]



- 19 -

[Signature]
Chief Secretary
A & N Administration
Port Blair, Andaman Islands.

51. 2.2 The amount payable by THE ADMINISTRATION in respect of Electricity and Deemed Generation in a billing period which falls within the initial tariff year shall be the estimated annual costs based on capital cost (as initially approved by the CEA), Debt and Equity allocated to each Unit as further described in paragraph 2.3 below :

TO BE READ AS :

- 2.2 The amount payable by THE ADMINISTRATION in respect of Electricity and Deemed Generation in a billing period which falls within the initial tariff year shall be the estimated annual costs based on capital cost (as initially approved by the ADMINISTRATION), Debt and Equity allocated to each Unit as further described in paragraph 2.3 below ;

Page No 90

52. 3. Fixed Charge Payment :

As per the CEA norms dated 14.12.1995.

TO BE READ AS :

3. Fixed Charge Payment :

As per the Government of India Notification dated March 1992 as updated from time to time read alongwith CEA norms dated 14.12.1995.

53. Cost of liquid fuel : FO Rs/kg (Indian Rupees per Kg. delivered to the station including all transportation handling, terminal and other charges and levies required to be added to the liquid fuel.)

TO BE READ AS :

- Cost of liquid fuel : FO Rs/kg (Indian Rupees per Kg. delivered to the station including all transportation handling, terminal and other charges and levies).



- 20 -

[Signature]
 General Manager
 Port Blair Administration

Page No 91

54. Variable charges component of Tariff in Indian Paise.
The value of fuel consumption rate should be arrived on the basis of the agreed station heat Rate of 2000 Kcal/Kwh.

$$\text{The variable cost per unit} = \text{Rs.} \frac{(100) [(F \times FO) + (L \times LO)]}{(100 - A')}$$

Where A' is Auxilary consumption restricted to ceiling norms

$$\text{Total variable charges} = \frac{100 [(F \times FO) + (L \times LO)] \times A.E}{100 - A'}$$

'F' is fule consumption = $\frac{\text{Station heat rate}}{\text{weighted average calorific value of HSD}}$

Note : The weighted average calorific value of HSD oil will be determined by taking sample, as per relevant Indian standard and measuring the calorific value wing suitable equipment by THE COMPANY which will also be monitered by THE ADMINISTRATION.

TO BE READ AS :

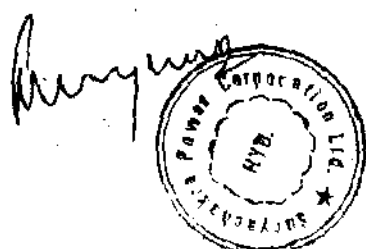
Variable charges component of Tariff in Indian Paise.
The value of fuel consumption rate should be arrived on the basis of the agreed station heat Rate of 2000 Kcal/Kwh at ISO conditions.

$$\text{The variable cost per unit} = \text{Rs.} \frac{(100) [(F \times FO) + (L \times LO)]}{(100 - A')}$$

Where A' is Auxilary consumption restricted to ceiling norms

$$\text{Total variable charges} = \frac{100 [(F \times FO) + (L \times LO)] \times \text{Actual Energy}}{100 - A'}$$

'F' is fuel consumption = $\frac{\text{Station heat rate}}{\text{weighted average calorific value of HSD}}$



-: 21 :-

[Signature]
Chief Secretary
A & N Administration
Port Blair, Nicobar Islands.

116

Note : The weighted average calorific value of HSD oil will be determined by taking sample, as per relevant Indian standard and measuring the calorific value using suitable equipment by THE COMPANY which will also be monitored by THE ADMINISTRATION.

55. 5. Change in Law Adjustment

Change in Law Adjustment : Any Change in Law adjustment to be made pursuant to the provisions of the Agreement shall be made and the Company shall calculate equitable adjustments to the Fixed charge payment and the Incentive Payment to reflect any such increase in costs or decrease in revenues or such impact, expenditure or incurrence with the intent that the financial position of THE COMPANY and its shareholders and investors shall remain unaffected by such Change-in Law: Provided, however, that if any such change in Law shall result in an increase of revenues, or a decrease in costs, to THE COMPANY, which by its terms if specifically required to be passed on as a benefit or rebate to THE ADMINISTRATION, then in accordance with the procedures set forth in the foregoing provisions, the amount of such benefit or rebate actually obtained/received by the Company shall be provided to THE ADMINISTRATION in the form of a credit against Tariff Invoices.

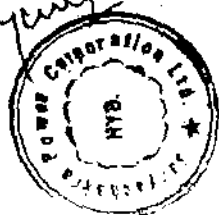
TO BE READ AS :

The Item 5 of Appendix - D to be deleted.

Page No 92

56. 6. Payment of Income Tax

(a) The Tariff Invoice for each Billing period shall include an amount for projected Income Tax. The amount shall represent the Company's reasonable estimate of its liability for Income Tax that will fall due for payment during the relevant Tariff Year divided by the number of Billing Periods in such tariff year. Such estimates shall take into account the tax effects of such projected Income Tax (less any amount standing to the credit of the Tax Escrow Account (as defined in Paragraph 7(b) below) and any refund of Income Tax that the Company expects to receive during the year). The Company shall adjust the amount that THE ADMINISTRATION is required to pay into the Tax Escrow Account pursuant to this Paragraph 7 whenever there is any material change in the Company's estimate of its liability for Income Tax in respect of the Project. Separate Escrow Accounts shall be maintained for Income Tax purposes.



- 22 -

[Signature]
Chief Secretary
A & N Administration
Port Blair, Andaman.

TO BE READ AS :

6. Payment of Income Tax

(a) The Tariff Invoice for each Billing period shall include an amount for projected Income Tax. The amount shall represent the Company's reasonable estimate of its liability for Income Tax that will fall due for payment during the relevant Tariff Year divided by the number of Billing Periods in such tariff year.

Such estimates shall take into account the tax effects of such projected Income Tax (less any amount standing to the credit of the Tax Escrow Account and any refund of Income Tax that the Company expects to receive during the year). The Company shall adjust the amount that THE ADMINISTRATION is required to pay into the Tax Escrow Account pursuant to this Paragraph 7 whenever there is any material change in the Company's estimate of its liability for Income Tax in respect of the Project. Separate Escrow Accounts shall be maintained for Income Tax purposes.

Page No 97

Add following at the end of Page 97

57. Terms of Finance

	<u>Foreign Loan</u> through B/G	<u>Indian Loan</u> Term Loans
i) Amount of Debt	8.769 MUSD (Rs.315.7 MINR)	(Rs.126.28 MINR)
ii) Interest Rate	9.82%	18%
iii) Repayment Period	10 Yrs.	10 Yrs.
iv) Moratorium ** Period(Years)	2 Years from the drawal of 1st instalment.	2 Years from the drawal of 1st instalment.

Note : ** - Moratorium period not to be accounted for tariff calculations.

Page No 109 - 116

58. Tariff schedule with the assumption indicated therein is attached as Schedule 4(k).

Page No 119

59. 1.3.5 Correction Curves are at Schedule 4(l).



- 23 -

Handwritten signature
Chief Secretary
A & N Administration
P.O. District Administration

Page No 121

60. "THE ADMINISTRATION Director Political Event" shall mean any Direct Indian Political Event resulting from an act of any Governmental Agency of THE ADMINISTRATION.

TO BE READ AS :

"THE ADMINISTRATION Direct Political Event" shall mean any Direct Indian Political Event resulting from an act of any Governmental Agency of THE ADMINISTRATION.

Page No 122

61. 4. Procedure for Determination of the Buy-out Price

a) Within 10 days after issuing a Buy-out Notice, the party issuing such Buy-out Notice shall provide the other party with a list of acceptable appraisers each of whom shall be competent and experience in the methods of valuation prescribed by this Appendix K and prepared to accept the appointment as Appraiser to carry out a determination of the Buy-out Price (the "Valuation"). The party receiving the list of appraisers may nominate one of the

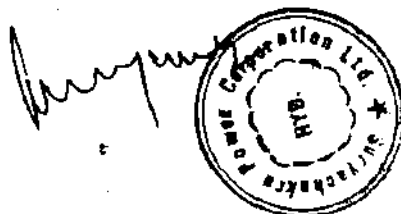
TO BE READ AS :

4. Procedure for Determination of the Buy-out Price

a) Within 10 days after issuing a Buy-out Notice, the party issuing such Buy-out Notice shall provide the other party with a list of acceptable independent appraisers each of whom shall be competent and experienced in the methods of valuation prescribed by this Appendix K and prepared to accept the appointment as Appraiser to carry out a determination of the Buy-out Price (the "Valuation"). The party receiving the list of appraisers may nominate one of the

Page No 127 - 128

62. g) The "Transfer Cost" shall equal all costs and liabilities of THE COMPANY which are a result of purchase of the Project by THE ADMINISTRATION, including without limitation, the fees and out-of-pocket expenses of the Appraiser, Lenders' fees and out-of-pocket expenses for repayment of any Debt, any termination payments or novation fees on contracts in connection with the Project whose terms are reasonable and Customary for private power projects such as the Project or were specifically approved by THE ADMINISTRATION, (but only to the extent that the contractual terms providing for termination payments in project documents have been disclosed to the Admn. prior to the financial closing date and have not been made amended (except with the Admn's written consent) to increase the amount of payment) and all taxes including capital gains taxes and income taxes but excluding Transfer Taxes as defined in Paragraph 5 (f) above.



- 24 -

Handwritten signature
 Chief Secretary
 A. & N Administration
 Port Blair, Andaman

TO BE READ AS :

g) The "Transfer Cost" shall equal all costs and liabilities of THE COMPANY which are a result of purchase of the Project by THE ADMINISTRATION, including without limitation, the fees and out-of-pocket expenses of the Appraiser, Lenders' fees and out-of-pocket expenses for repayment of any Debt, any termination payments or novation fees on contracts in connection with the Project whose terms are reasonable and Customary for private power projects such as the Project or were specifically approved by THE ADMINISTRATION, (but only to the extent that the contractual terms providing for termination payments in project documents have been disclosed to the Admn. prior to the financial closing date and have not been amended (except with the Admn's written consent) to increase the amount of payment) and all taxes including capital gains taxes and income taxes but excluding Transfer Taxes as defined in Paragraph 5 (f) above.

Page No 130

63. b) Whenever the Company believes that any information that it has provided to THE ADMINISTRATION pursuant to this Paragraph 2 no longer accurately reflects its expectations, it shall promptly deliver to THE ADMINISTRATION a written notice (a "Revised Availability Notice") revising that information. The Revised Availability Notice shall be subject to acceptance by THE ADMINISTRATION without penalty to the Company and effective from the time of the delivery shall replace the Availability Notice which is revised.

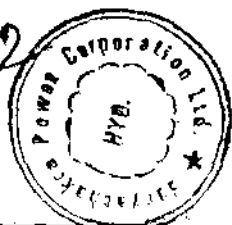
TO BE READ AS :

b) Whenever the Company believes that any information that it has provided to THE ADMINISTRATION pursuant to this Paragraph 2 no longer accurately reflects its expectations, it shall promptly deliver to THE ADMINISTRATION a written notice (a "Revised Availability Notice") revising that information. The Revised Availability Notice shall be subject to acceptance by THE ADMINISTRATION and effective from the time of the delivery shall replace the Availability Notice which is revised.

64. 3. Monitoring:

- a) If at any time during a Deemed Generation Period THE ADMINISTRATION has reason to believe that an Availability Notice or Revised Availability Notice may not accurately reflect the gross generator capacity of the Project, it may monitor the project in accordance with and subject to the limits of this paragraph 3.

Signature



-: 25 :-

Signature

Chief Secretary
G. H. Administration
Port Blair, Andaman;

TO BE READ AS :

3. Monitoring:

- a) If at any time THE ADMINISTRATION has reason to believe that an Availability Notice or Revised Availability Notice may not accurately reflect the gross generator capacity of the Project, it may monitor the project in accordance with and subject to the limits of this paragraph 3. Company shall not be entitled to revise the availability after the monitoring notice has been served.

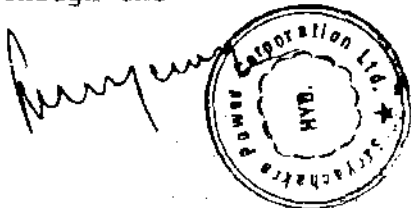
Page No 131

65. f) If THE ADMINISTRATION desires to monitor the gross generator capacity of the Project, it shall instruct the Company to operate the Project at its Declared Availability. If the monitored gross generator capacity during a settlement period is below the Declared availability for such settlement period (other than while responding to a Dispatch Instruction to increase or decrease load), then a "Failure" shall have occurred. The magnitude of such failure shall be equal to the Declared Availability minus the monitored gross generator capacity. If during actual operation net generated capacity is less than 98% or more than 102% of the declared /despatched capacity, this condition would also be treated as failure.

TO BE READ AS :

f) If THE ADMINISTRATION desires to monitor the gross generator capacity of the Projects it shall instruct the Company to operate the Project at its Declared Availability. If the monitored gross generator capacity during a settlement period is below the Declared availability for such settlement period (other than while responding to a Dispatch Instruction to increase or decrease load), then a "Failure" shall have occurred. The magnitude of such failure shall be equal to the Declared Availability minus the monitored gross generator capacity. If during actual operation net generated capacity is less than 98% or more than 102% of the declared /despatched capacity, this condition would also be treated as failure.

66. g) If THE ADMINISTRATION wishes to monitor the gross generating capacity of the Project during an Emergency or an event of Force Majeure which prevents the Project from operating at its Declared Availability, THE ADMINISTRATION shall not be required to instruct the Project to operate at its Declared Availability for purposes of monitoring. If during any monitored Settlement Period, the Project is undergoing maintenance or repairs which would not permit THE COMPANY to claim Deemed Generation, THE ADMINISTRATION may inspect any Unit and carry out any reasonable test, at Rated Grid conditions, in order to verify its Declared Availability at any time when, pursuant to the terms of this Agreement, PLF takes account of the declared availability even though the



- 26 -

[Signature]
 Chief Secretary
 A. & N. J. [illegible]
 Port Blair, Andaman & Nicobar Islands

TO BE READ AS :

If the Administration wishes to monitor the net generating capacity of the project during an emergency or an event of Force Majeure which prevents the project from operating at its declared availability, the administration shall not be required to instruct the projects to operate at its Declared Availability for the purpose of monitoring but may inspect any unit and carry out any reasonable test, at rated grid conditions, in order to verify its declared availability. If it shall be determined that the project is not capable of being operated consistently with its Declared Availability, then a failure shall be deemed to have occurred and Magnitude of failure shall be equal to the difference between Declared Availability and the available capacity determined on the basis of such inspection or testing (the "observed capacity"). Any dispute regarding such determination shall be resolved through the provisions of Article 15 of the Agreement.

Page No 132

67. project is not capable of being operated. If it shall be determined that the project is not capable of being operated consistently with its declared availability, a failure equal to the difference between the declared availability and the available capacity determined on the basis of such inspection or testing (the "observed capacity") shall be deemed to have occurred. The magnitude of the failure shall be equal to the declared availability minus the reduction of gross generating capacity below declared availability resulting from such repairs and maintenance for each such settlement period. Any dispute as to such determination shall be resolved through the provisions of Article 15 of the agreement.

TO BE READ AS :

This paragraph to be deleted.

68. 4. Modified Declared Availability:
If a failure has occurred, the Modified Declared Availability for each of the Settlement Period comprised in the period of monitoring in which the failure occurred and in each of the three preceding Settlement Period shall equal the declared availability for such Settlement Period minus twice the magnitude of the failure.

In any Billing period, for any Day in which the difference between the Declared Availability of the Project (for the purposes of this provision, as declared in an Availability Notice at the beginning of such Day) and the actual capacity of the project on each such Day (determined on the basis of any Revised Availability Notice, Post Event Notice or Interim Post Event Notice given in accordance with this Appendix L) exceeds [101] Mwh for each day for more than 5 Days in that Billing Period, the fixed Charge Payment for Electricity supplied during such Billing Period, shall be reduced by Misdeclaration Penalty Factor.

M. J. ...



- 27 -

[Signature]

Chief Secretary
A & N Administration
Post Bag, Andamau

TO BE READ AS :

To be deleted from the document.

69. If a 'Capacity Failure' has occurred, the Declared capacity for each monitoring period on that day, beginning from the settlement period when first time net generating capacity fall short of Declared capacity to the last settlement period of the day, shall be reduced by twice the highest magnitude of the failure on that day. Magnitude of the failure for any settlement period shall be equal to absolute value of difference between Declared capacity and net observed generating capacity.

TO BE READ AS :

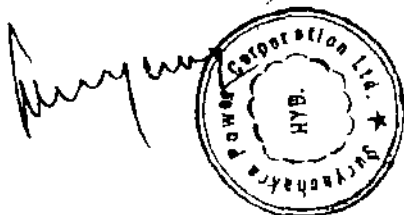
If a 'Capacity Failure' has occurred, the Declared capacity for each monitoring period on that day, beginning from the settlement period when first time net generating capacity fell short of Declared capacity to the last settlement period of the day, shall be reduced by twice the highest magnitude of the failure on that day. Magnitude of the failure for any settlement period shall be equal to absolute value of difference between Declared capacity and net observed generating capacity.

Page No 256

70. Page No 256 being superfluous is deleted.

71. Page No. 2

To establish Independent Power Plant (IPP) with installed capacity of 20 MW at Bambooflat, Ferrargunj Tehsil, South Andaman, in Andaman District (hereinafter referred to as the said power station) vide locations shown in schedule-2 & Schedule-3. The said power station would be establish within a period of 24 months from the date of signing of this agreement as all the clearance required as on date for this power station have already been received. The subsequent necessary statutory approvals and clearances, viz, obtaining factory license, Employees State Insurance Cover, equipment energisation clearance from Electrical Inspector, Madras, clearance of handling dangerous cargo inside the power house premises and any other clearance required for successful commercial operation of the projects as per statutory requirement(s), if any required, from Central & State Govt. will have to be obtained by THE COMPANY within a period of 24 months from the date of signing the agreement or before the commencement of Commercial Operation Date of the last unit of the project.



- 28 -

[Signature]
Chief Secretary
A & N Administration
Port Blair, Andaman.

TO BE READ AS

To establish Independent Power Plant (IPP) with installed capacity of 20 MW at Bambooflat, Ferrargunj Tehsil, South Andaman, in Andaman District (hereinafter referred to as the said power station) vide locations shown in schedule-2 & Schedule-3. The said power station would be established within a period of 24 months from the date of achieving financial closure and all the clearances required as on date for this power station have already been received. The subsequent necessary statutory approvals and clearances, viz. obtaining factory license, Employees State Insurance Cover, equipment energisation clearance from Electrical Inspector, Madras, clearance of handling dangerous cargo inside the power house premises and any other clearance required for successful commercial operation of the projects as per statutory requirement(s), if any required, from Central & State Govt. will have to be obtained by THE COMPANY within a period of 24 months from the date of signing the agreement or before the commencement of Commercial Operation Date of the last unit of the project.

72. **Page No. 6 Article - 1 Item (ix) (b)**

(ix) "Auxillary Energy Consumption"

(b) Gross energy in Kwh generated at the generator(s) terminals and shall not exceed the value stipulated in relevant notifications appended at Schedule-1(h).

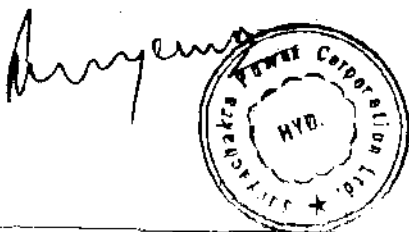
TO BE READ AS

Gross energy in Kwh generated at the generator(s) terminals. Auxiliary consumption shall be on actual basis and shall not exceed the value stipulated in relevant notification appended at Schedule-1(h) i.e., with a cap of 4.5%

73. **Page No. 16 Article-1(Lvi)**

Scheduled date of completion :

Means date or dates of commercial operation of each unit as detailed in Appendix-C. However, all the units shall be commissioned within 24 months from the date of signing of the Power Purchase Agreement.



- 29 -

[Handwritten Signature]
Chief Secretary
A & N Administration
Port Blair, Andaman.

TO BE READ AS

Means date or dates of commercial operation of each unit as detailed in Appendix-C. However, all the units shall be commissioned within 24 months from the date of achieving financial closure.

74. Page No. 80 Appendix-C

Milestone	Date
1. Financial closing	The date determined in accordance with Article-13.1(k)

TO BE READ AS

Milestone	Date
1. Financial closing	Four months from the date of fulfillment of conditions precedent as mentioned in Article-1 Clause-(Lxi) 3 at Page 17 of PPA.

75. Page No. 91 Appendix-D Clause-4

Variable charges component of Tariff in Indian Rupee.
The value of fuel consumption rate should be arrived on the basis of the agreed station heat rate of 2000 K.cal/Kwh.

$$\text{The variable cost per unit} = \frac{\text{Rs. (100) } \{ (F \times FO) + (L \times LO) \}}{(100 - A')}$$

Where A' is Auxiliary consumption restricted to ceiling norms.

TO BE READ

Variable charges component of Tariff in Indian Rupee.
The value of fuel consumption rate should be arrived on the basis of the agreed station heat rate of 2000 K.cal/Kwh.

$$\text{The variable cost per unit} = \frac{\text{Rs. (100) } \{ (F \times FO) + (L \times LO) \}}{(100 - A')}$$

Where A' is Auxiliary consumption which shall be allowed on actual basis and will be restricted to ceiling norms.

[Signature]



30

[Signature]
Chief Engineer
Central Electricity Board
New Delhi

76. **Additional clause**

The site conditions are given by Andaman and Nicobar Administration as follows :-

a. Highest dry bulb temperature	:	30.1 Deg.C
b. Lowest dry bulb temperature	:	25.4 Deg.C
c. Annual mean bulb temperature	:	28.2 Deg.C
d. Highest monthly mean dry bulb temp.	:	25.9 Deg.C
e. Annual mean wet bulb temperature	:	24.8 Deg.C
f. Max. humidity at 28.2 Deg.C	:	89.4
g. Average annual rain fall	:	3180.5 mm
h. Heaviest rainfall in 24 hrs.	:	295 mm
i. Average rainy days in a year	:	147
j. Max. wind velocity	:	19.8 Km/h
k. Altitude, above sea level	:	4.25 m
l. Installation	:	Indoor
m. Atmospheric conditions	:	Highly corro sive saline atmosphere
n. Sea water temperature	:	30 Deg.C

Total Number of Pages in the Addendum : 31

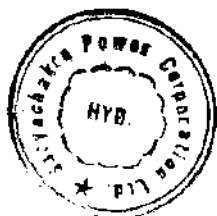
For Saryu Chakra Power Corporation Ltd.
SPCL,
Managing Director

WITNESS 1

[Signature]
K. VALI SAHEB SARKAR

WITNESS 2

[Signature]
H. SURENDRAJI
OSD SPCL



FOR A & N Admin.

Chief Secretary
Chief Secretary

A & N Administration
Port Blair, Andamans.

WITNESS 1

[Signature]
30/3/11
CMO (S. Chakraborty)
P.O. No. 1, Port Blair

WITNESS 2

[Signature]
22/3
V. Hachibhi
dy Sec. P.O.

128

SCHEDULE-1 (g)

11/2



Pradip Bajal
अपर सचिव
ADDITIONAL SECRETARY

D.O.C-236/96-IPC.1

FROM M D POWER

T-910 P. 01

भारत सरकार
GOVERNMENT OF INDIA
विद्युत मंत्रालय
MINISTRY OF POWER
नव शक्ति भवन, एन 1 मार्ग
SHRI SHAKTI BHAVAN, EN1 MARG

January 9, 1997

नई दिल्ली - 110001

New Delhi - 110001

Dear Shri Bag,

Please find enclosed a copy of the Andaman & Nicobar Administration letter No. 4-2(2)/96-Dev.1 (Power) dated 3-10-96 regarding vetting by the Government of India, of the Power Purchase Agreement (PPA) to be signed between Andaman & Nicobar Administration and M/s Suryachakra Power Corporation Ltd. in respect of 20 MW diesel generation plant at Bamboo Flat along with copies of the earlier correspondence referred in the letter. Since Andaman & Nicobar Administration is an Union Territory, the administrative Ministry i.e., Ministry of Power has more responsibilities than in the case of a Independent Power Project (IPP) set up by a State Government. It has been decided that CEA could approve PPA with the assistance of their consultants M/s Price Water House, if necessary.

While approving the PPA and associated tariff schedules, CEA is also requested to examine the issues relating to features of the project approved during techno-economic clearance of the project such as 40% PLF etc. Andaman & Nicobar Administration have already approached CEA in this regard vide their letter No. EL/PL/1-43/96/4899-900 dated 14-8-96 (Copy enclosed for ready reference). The PPA may be examined and finalised by the CEA in consultation with Andaman & Nicobar Administration.

A copy of Andaman & Nicobar Administration letter no. 4-2(2)/96 - Power(Dev.1) dated 24-9-96 regarding proposal for consideration of Committee on Non-Plan Expenditure (CNE) for approving the payment obligations to the private generating company is also enclosed which may be examined by the CEA after finalisation of the PPA and make available their comments for taking further necessary action by the Ministry of Power.

With regards,

Yours sincerely,

Encl: as above

Shri M.I. Bag
Chairman
CEA
New Delhi

(Pradip Bajal)



32

Chief Secretary
A & N Administration
Port Blair, Andaman

SCHEDULE-1 (g)

2/2

TO 15120 TO 49221285721+

FROM M Q POWER

T-910 P.02

Copy to :

Dr. R. Padmanabhan, Commissioner-cum-Secretary(Power), Andaman & Nicobar Administration, Port Blair - The request of Andaman & Nicobar Administration for permitting use of High speed diesel (HSD) oil as a fuel for the above project has been examined and agreed to. You are advised to approach Ministry of Petroleum & Natural Gas (MP&NG) for transfer of HSD fuel oil linkage accorded to the project by MP&NG vide their letter dated 14-9-94 in favour of the private generating company.

(Pradip Baijal)

Copy also to:

M/s Suryachakra Power Corporation Ltd., Hyderabad.

(Pradip Baijal)



55

Chief Secretary
A.C.M. Administration
Port Blair, Andaman.

Schedule - 4(a)

Secretary (Power),
A&N Admin.,
A&N Islands,
Port Blair.

Subj: Scheme report for establishment of 20MW Diesel Power Station at Dabhooflat in South Andaman.

SIR,

The above scheme report costing Rs.66.93 crores including IDC of Rs.7.33 crores is found to be techno-economically in order subject to the following conditions to be fulfilled by the A&N authorities.

- (i) the techno-economic clearance of power evacuation scheme for the above generation scheme to be obtained in time,
- (ii) confirmation of the continuance of the validity of the directive of Ministry of Home Affairs dated 5th August, 1959,
- (iii) meeting the conditions stipulated in the Ministry of Environment and Forest Clearance letter dated 22.4.94.

The scope of works and abstract cost of the estimate for the above scheme shall be as per Annexure I & II respectively.

Necessary action for obtaining the required expenditure sanction and investment approval from competent authorities may please be taken at your end early.

Yours faithfully,

(S.L. Narasimhan)
Chief Engineer

Encl : As above.



Chief Secretary
A & N Administration
Port Blair, Andaman.

50.00.

ITEM

RUPEES IN LACS.

1.	Preliminary works & cost of land	6.95
2.	Civil works.	571.20
3.	Mechanical works.	
3(a)	Diesel engines, generators and accessories incl. inlet filter, silencers, control & monitoring system etc. (CIF prices) incl. spares.	2775.21 960.00 125.78 <u>3860.90</u>
3(b)	Water system, ventilation and Air conditioning, fire fighting, Laboratory, Cranes & Hoists etc. (Ex-works prices, spares, freight, insurance & taxes on local components).	299.81 126.14 <u>375.95</u>
3(c)	Port handling & in land transportation.	74.71
3(d)	Custom duty on imported equipments @ 20% of CIF cost.	Incl. clause : a) above.
3(e)	Erection, testing & commissioning charges.	199.10
3(f)	Electrical works incl. spares, freight, taxes, insurance, erection, testing & commissioning.	374.00
	TOTAL WORKS COST	5462.90
4.	Establishment @ 3% of works cost	163.09
5.	Training of O&M staff (Incl. in 126.14 at 3b above).	3.14
6.	T&P @ 1% of works cost	54.63
7.	Contingency @ 3% of works cost	163.89
8.	Audit & Accounts @ 1% of works cost	54.63
9.	Consultancy charges @ 1% of works cost.	54.63
	TOTAL	5954.56

Any B. 5955 lakhs.

IDC @ 12%

B. 723 Lakhs

Total cost of the scheme including IDC is. 6678 lakhs.

(Rupees Six Thousand Six hundred & Eighty Eight lakhs)



35

Chief Secretary
A & N Administration
Port Blair, A.N.S.D.

4/4

- 2
- (1) Cooling water system including direct and indirect cooling water pumps with allied works.
 - (2) L.A. Piping and fittings.
 - (3) Air-conditioning system comprising heat recovery system.
 - (4) Ventilation system.
 - (5) 25T capacity EOT cranes, Misc. cranes and hoists.
 - (6) 312 KVA Black start DG sets.
 - (7) Workshop equipment.
 - (8) Lab. oil purification plant.
 - (9) Special tools and accessories.
 - (10) Creation of Computer cell with mini computer.
 - (11) Training of staff of Electricity Department at work site.

III. Electrical works

- (1) Purchase and installation of 1x10 MVA 11/33 KV and 2x1500/2000 KVA 11/0.4 KV transformers including shifting of 2x10 MVA 11/33 KV transformer from Chatham to Bambasflat.
- (2) 11 KV switchgear and panels including DG switchgear panels, 11 Nos. feeder and isolator panels, 2 potential transformer panels, 1 No. synchronising panel, neutral grounding resistors, 2 Nos. Surge protection panels and 1 No. Bus coupler panels.
- (3) 33 KV switchgear including 1 No. transformer and 2 Nos. feeder isolators and 2 Nos. 33KV Bus couplers.
- (4) 110 volts LV Distribution system switchgear including station service board, emergency control panel, MCCB and AMP panels for black start.
- (5) Facilities including 110V and 24V Battery banks, boost and float charges.
- (6) Motor control system including remote control panels and relay and ammeter panels for generators, transformers and feeders etc.
- (7) Power and control cables including 3 Nos. 33KV, 3.5 Nos. 11KV and required lengths of 1.1 KV and instrumentation cables.
- (8) Various other facilities like internal lighting system, communication system, fire alarm system, grounding and lightning protection and electrical workshop and laboratory equipments.

-37-



[Signature]

Chief Secretary
A.C.N. Administration
Port Blair, ANDAMANES



GOVERNMENT
OF INDIA

Ministry of Power
Published by Authority

Schedule-4(b)

No. 55, DE SER, KARAK, 10th, 1994.
No. 55, PORT BLAIR, TUESDAY, MAY 10, 1994.

ANDAMAN AND NICOBAR ADMINISTRATION
SECRETARIAT

NOTIFICATION

Port Blair, dated the 10th May, 1994.

No. 55/94(F, No. 4-1 (24)/93-Power (01).—The following draft scheme prepared for installation of 20 MW Diesel generating power plant at Bamboolhat, Port Blair, South Andaman at an estimated cost Rs. 8994.92 lakhs (PL-1893) hereby published as required under Sub-Section (2) of section 29 of Electricity (Supply) Act, 1948 for the information of all persons likely to be affected thereby and hereby given that those who have any objection or suggestion to make in respect of the said scheme may send the same in writing so as to reach the Superintending Engineer, Electricity Department, Port Blair within two months from the date of publication of the Notice.

SCHEME

Salient features of the Scheme: Installation of 20 MW Diesel generating power plant at Bamboolhat, South Andaman.

SCHEME AT A GLANCE:

This scheme is projected to augment the D. G. Capacity at South Andaman Island in a long run, keeping in view the increase in Power demand by 2000 A. D.

LOCATION:

- (a) Area : Andaman and Nicobar Islands.
- (b) District : South Andaman.
- (c) Tehsil : Farrington.
- (d) Village : Bamboolhat (4.67 Hect.)

ENVISAGED IN THIS SCHEME:

(a) D. G. Sets:

Four Nos. 5000 KW D. G. Sets with auxiliary equipments will be installed and commissioned at Bamboolhat by setting up of a new power house with allied civil structures.

(b) Step up Sub-Station:

1x11 MVA, 11/33 KV step-up sub-station.

(c) Line connection:

This proposed new power house will be inty-connected by double circuit 33 KV tie line of 13 kms. each with existing Chatham Power House. Out of these three kms., one Km. each will be laid through sub-marine cables drawn between Hapa Town to Chatham Power House.

(d) Civil Works:

Construction of Power House building, Office-cum-store building with other facilities like incident cell, workshop, garage, POL shed, sea water settling pond storage facilities, foundations for equipments, auxiliary structures, Main Sea water pump house with jetty etc.

(e) Environment Clearance:

This scheme has been cleared from environment angles by Ministry of Environmental and Forests vide their office memorandum No. J/13011/21/93-IA-III dated 22-4-94.

(f) Estimated Cost:

The estimated cost of the scheme is Rs. 8994.92 lakhs and all the works envisaged are expected to be completed before 1998-99.

Sd/-

Assistant Secretary (Power)

Price: Rupee One and Twenty-Five Paise only.
41PP5-55 Gazette/94-250 Copies.



38

Chief Secretary

Andaman and Nicobar Administration
Port Blair, ANDAMAN

--- ASSISTENDING ENGINEER
CONSTRUCTION CIRCLE NO. 1, A.P.M.D.

Schedule - AC

Post Blair, dated the 16th July, 1994.

The Superintending Engineer,
Electricity Department,
Port Blair.

4. Enriching of details of Bambooflat Reservoir - reg.

FILE NO. EL/PL/1-43/94/8556 dated 11/7/1994

With reference to your office letter cited
No. 7 have been directed to inform you that the
details regarding availability of water for
the power station at Dumbouflat is given as

Total demand of water	- 211.16 million lit.
Demand of water for Thermal Power Station	- 121.00 -do-
Demand of water for Civil Population	- 90.16 -do-
Sharing of water for Power Station & civil population	- 60/40 3:2

The details of requirement of water for DC power is as under :-

1. During entire 150 dry days, per day
 requirement - $28 \times 24 = 672$ Cum. 672 Cum.
 2. 150 days requirement - $672 \times 150 = 100800$ "
 3. 10% for wastage - " = 20160 "
 4. = 120960 Cum or Say 121 million Ltr.

... and colony.

Yours faithfully,

Aug - Jan / day

20-5-11
SURVEYOR OF WORKS,
C.C.I. A

32.2 km/day

3.3.29. 10m/100

Anthony

39

Chief Secretary
C. & N. Administration
Port Blair, Andaman

PO7 (P), Soma Bhawan, R. L. Forum,
New Delhi-110066, the 19th Sept. 94

The Director (UT),
Central Electricity Authority,
No. 2, Community Centre,
Vasant Vihar, New Delhi-110057.

Schedule 4(d)

Scheme Report for Diesel Power Station at
South Andaman, Capacity 20 MW (4x5 MW)
costing Rs. 6992.92 lakhs, Revised in Nov. 93.

- 1) U.O. No. 622/ENR/93/TPA-I/CEA/1994, dt. 24th Feb. 94.
- 2) U.O. No. 2/14/94-UT/95, dt. 18/2/94, and
- 3) No. 2/14/94-UT/364-365, dt. 25/1/94.

The above scheme report was received in this Directorate on 1.9.1994. It was examined and some additional information was obtained from U.T. Pw. of CEA and the Electricity Department of Andaman. The required information and data were supplied by the Pw. on 1.9.1994 through Sh. L. D. Ananthamurthy, A.E. (P.) who came to Delhi on tour. He had discussions with the Director on 2.9.1994 and necessary clarifications were given regarding the water availability and requirement for the Diesel Station.

The total storage available for water supply in the Diesel reservoir is 230 million litres whereas total water required for Diesel Power Station and for Colony in 12.5/94 is 10.17 M/yr which is only about 5.2% of the available capacity.

Moreover, S.E. CC No. 1, JMW, Port Blair, has issued a letter No. WS/1.5/30/93/3053 dt. 10.11.93 addressed to the Electricity Dept., Port Blair, guaranteeing the required water for the power house and Colony from the Diesel Reservoir.

Considering the fact of available water requirement, Pw. has no objection for clearing scheme from water availability for the said D.C. Power House and Colony.

Yours faithfully,

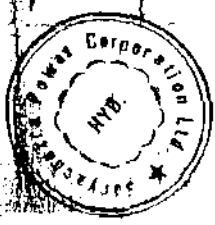
(T. B. Koodal)
Director (UT).

Director (EPHA), C.B.A., Soma Bhawan, North Wing, 9th Floor,
R. L. Forum, New Delhi.

As Director, Project Appraisal (U), C&C, Soma Bhawan, New Delhi.

(T. B. Koodal)
Director (UT).

Maryam



40 3 94



amul

Chief Secretary
Andaman and Nicobar Administration
Port Blair, Andaman.

Schedule 4 (C)

12

No. 21017/7/94-Dist.
Government of India
Ministry of Petroleum & Natural Gas

New Delhi, dated 14th Sept. '94

The Secretary
Ministry of Power
Shram Shakti Bhavan
New Delhi

HSD supply to Electricity Department, Andaman
& Nicobar Administration for 4x5 MW Diesel
Generating Sets.

Please refer to your d.o. No. 15(10)/94-TH.
3.5.94 regarding allotment of HSD to the
Electricity Department, Andaman and Nicobar
Administration for installation of 4x5 MW Diesel
Generating Sets at Bombooflat, Port Blair, South
Andaman to be commissioned in September, 1996.

The Ministry has reconsidered the case, and
allocated HSD amounting to 4300 Kls for the year
1997-98, 8760 Kls for the year 1997-98 and 17520 Kls
for the year 1998-99 through IOC to Andaman and
Nicobar Administration for the project which is to be
commissioned from September, 1996 subject to
sanction of TEC.

Yours faithfully,

[Signature]

(Sundil Deka)

By Secretary to the Govt. of India
Tel No. 383074

Member (Thermal) & Ex-Officio Addl. Secretary
to Govt. of India, Central Electricity
Authority, Sewa Bhawan, R.K. Puram, New Delhi
v.e.f. his d.o. No. CRA/TP/241(Gen.)/94/661
dated 19.4.94.

Executive Director, OCC, New Delhi v.e.f. Fax
No. HC & ES : 12240.5 dated 9.7.94.

Director (NKT), IOC, Bombay.

By Secretary to the Govt. of India



[Signature]

Chief Secretary
A & N Administration
Port Blair, Andaman.

136

2/2

भारत सरकार
GOVERNMENT OF INDIA
विद्युत विभाग
MINISTRY OF POWER
एन.डी.ए. भवन, लखनऊ,
SHRAJA BHARTI BHAWAN, AGRAHAR,

Sl. No. - 110001

New Delhi-110001

3rd May, 1994.

No. 15(10)/94-Th.

The Electricity Department, Andaman & Nicobar Administration has submitted a project proposal to the Central Electricity Authority for installation of 4x5 MW Diesel Generating set at Bombooflat, Port Blair, South Andaman for techno-economic clearance. The first unit is planned to be commissioned in September, 1996, 2nd unit by April, 1997 and rest two by August, 1998.

The CEA have indicated the following requirements of High Speed Diesel oil for the proposed diesel generating sets:

1996-97	4380 KL
1997-98	8760 KL
1998-99	17520 KL
onwards	

The above requirements of H.S.D. are based on 40% PLF and specific consumption of 0.25 Litre/Kwh. In order to enable CEA to consider the above scheme for techno-economic clearance, establishment of fuel linkage as aforesaid is essential.

I shall be grateful if you could have the matter examined in your Ministry and issue necessary approval for the fuel linkage to enable CEA to consider the above project for techno-economic clearance.

With regards,

Yours sincerely,

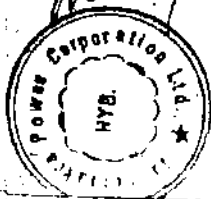
[H. VASUDEVAI]

Shri T.M.R. Rao,
Secretary,
Ministry of Petroleum & Natural Gas,
Indira Bhawan,
New Delhi.

Copy forwarded for information to:-

1. Shri M.A. Ramanan, Member (Thermal), Central Electricity Authority, Sewa Bhawan, RK Puram, New Delhi.
2. Shri V.K. Sharma, Deputy Secretary (OM), Ministry of Power, New Delhi.

S.S. Talwar
(S.S. Talwar)
Under Secretary to the Govt. of I



Chief Secretary

Port Blair, Andaman.

NO. 3-13/SEI/PCB/DIR(SOI)/13-01/20
 ANDAMAN AND NICOBAR ADMINISTRATION
 POLLUTION CONTROL BOARD
 DIRECTORATE OF EDUCATION

Schedule 415

Port Blair, dated the 1st March, 1994.

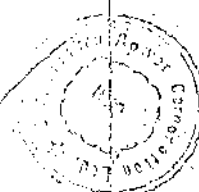
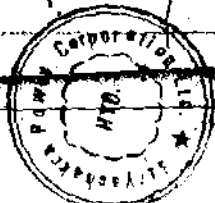
To
 Shri Bhagat Singh,
 Superintending Engineer,
 Electricity Department,
 Port Blair - 744101,
 A & N Islands.

Consent for Commissioning a 20 MW (4 x 5 MW)
 Thermal Power Plant (Diesel Power House) at
 Bambooflat, under section 21 of the Air
 (Prevention and Control of Pollution) Act, 1981.

Consent is hereby granted under Section 21 of
 the Air (Prevention And Control of Pollution) Act, 1981
 (herein after referred to as the Act) and the rules and
 orders made there under to the Electricity Department,
 P.O. Bambooflat, Andaman and Nicobar Island, Port Blair
 (herein after referred to as the 'applicant') authorising
 them to establish their Thermal Power Plant at Bambooflat
 as notified. Subject to the conditions stated below and
 the general consent conditions enclosed herewith:

1. This consent is valid for commissioning the Thermal
 Power Plant (Diesel Power House) of 20 MW capacity;
2. The particulate matter emission from any of the
 sources shall not exceed 150 mg/M³;
3. The height of the stack shall be 15 meters; 5 meters
 above the building in which the DG sets are to be
 housed or 15 meters from the ground level whichever
 is higher;
4. Only H.S.D. Oil shall be used as fuel in the DG set
 and the fuel consumption of H.S.D. Oil shall not exceed
 80.00 MT (Eighty MT) / Day with maximum one percent
 sulphur content;
5. The applicant shall provide facilities for sampling
 of stack emission as per Central Board's Emission
 Regulation (Part III) No. COINDS/20/84-85;
6. Notwithstanding the condition No. 1 the Consent shall
 be valid upto the period of commissioning of the
 power Plant. The Consent issued to you would auto-
 matically stand revoked without any further notice in
 case of your not meeting the above conditions;
7. The Consent order is further subject to the terms and
 conditions incorporated in the schedule annexure
 enclosed hereto.

Member Secretary



Chief Secretary
 A & N Administration
 Port Blair, Andaman.

GENERAL CONDITIONS OF CONSENT FOR EMISSION/
REGULATION OF EMISSION UNDER SECTION 21 OF
THE AIR (PREVENTION & CONTROL OF POLLUTION)
ACT, 1961

The applicant shall maintain good housekeeping both within the factory and in the premises. All pipelines, valves, storage tanks, etc. shall be leakproof, and all allowable pollutants levels, if specified by Central Board should be strictly met.

Adequate facilities shall be provided for sampling viz, sampling holes of specified locations and dimension, platform of specified size and strength, pulley arrangements, electric connections etc.

The applicant/company shall comply with and carry out directions/orders issued by the Board in this Consent Order and at all subsequent times without any negligence on his its part. The applicant/company shall be liable for such legal action against him as per provision of the law/Act in case of violation of any order/directives issued at any time and/or non compliance of the terms and conditions of this Consent Order.

The applicant shall not change or alter the quality/quantity of rate of emission and also the final outlets without the rate of emission and also the final outlets without the prior written permission from the Board.

Any upset condition in any of plant/plants of the factory which is likely to result in increased emission(s) and/or result in violation of emission standards mentioned in conditions shall be reported to this Board, telegraphically under intimation to the Member Secretary, Central Pollution Control Board.

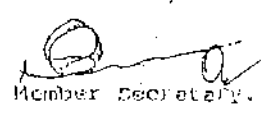
A green belt (having tall and dense trees) around the factory should be provided under intimation and approval of the Central Board.

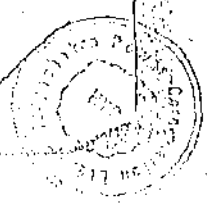
The applicant shall furnish to the visiting official and/or the Central Board any information regarding the construction/installation or operation of the establishment or of emission/control system and such other particulars as may be pertinent to prevent and controlling air pollution.


The Control equipment of such specifications as the Central Board may approve in this behalf shall be installed and operated in the premises where the industry is carried on or proposed to be carried on.

The existing control equipment if required shall be altered or replaced in accordance with the directions of the Central Board.

The above general conditions may be modified by Central Board from time to time and copies of such modified conditions will be communicated to the industries concerned by Registered Post.


Member Secretary.

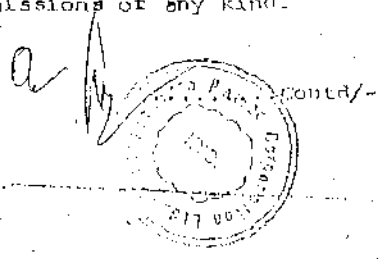
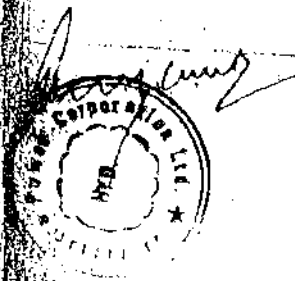




Chief Secretary
A.C.M. Administration
Port Blair, Andaman Islands

TERMS AND CONDITIONS :

- The applicant shall make an application for grant of Fresh Consent at least 30 days before the date of expiry of the Consent.
- Necessary fee, as prescribed, for obtaining consent shall be paid for by the applicant, alongwith the Consent application.
- The industry would immediately submit the revised application for consent to this Board in the event of any change in the raw material, process, air pollution equipment, rate of emissions etc.
- The applicant shall not change or alter either the quality or the quantity or the rate of emission without the previous written permission of the Board.
- Any existing control equipment, if any, shall be altered or replaced in accordance with the directions of the Board.
- The applicant shall either:
- (a) Not later than 30 days from the date of issue of this Consent Order, certify in writing to the Member Secretary that the applicant had installed or provided for an alternate electric power source sufficient to operate all facilities installed by the applicant to maintain compliance with the terms and conditions of this consent.
 - (b) Not later than 30 days from the date of this consent certify writing to the Member Secretary that upon the reduction loss or failure of one or more of the primary source of electric power to any facilities installed by the applicant to maintain compliance with the terms and conditions of this consent, the applicant shall hold, reduce or otherwise control production and/or terms and conditions of this consent.
- No control equipment or chimney shall be altered or replaced or as the case may be erected or re-directed except with the previous approval of this Board.
- There shall not be any fugitive emissions from the premises.
- The liquid effluent arising out of the operation of the air pollution control equipment shall also be treated in a manner and to the standards stipulated in the consent granted under water (Prevention and control of pollution) Act, 1974 by this Board.
- Solid waste : The solid waste arising in the factory premises as sweeping empty containers, residues, sludges, including those from control equipments etc. shall be disposed off carefully, by land filling, sales etc. so as not to cause fugitive emissions of any kind.

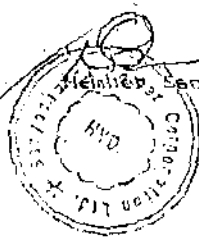


- 45 -

[Handwritten signature]

Chief Secretary
S & P Administration
Punjab Pollution Control Board

- 140
- 11- wherein any air pollution control area the emission of any air pollutant into the atmosphere in excess of the standards laid down by the Board occurs or is apprehended to occur due to accident or other unforeseen and or event, the person in charge of the premises from where such emission occurs or is apprehended to occur shall forthwith intimate the fact of such occurrence to this Board, telegraphically under intimation to the District Health Officer.
 12. In case of such episodal discharges/emission mentioned in 11 above, the industry should take immediate action to bring ~~bring~~ down the emission below the limits prescribed in the Consent item.2.
 13. A good house keeping shall be maintained both within the factory and in the premises. All hoods, pipes, valves shall be leakproof.
 14. The applicant shall comply with and carry out directives/orders issued by the Board in this Consent Order and at all subsequent times without any negligence on his part. The applicant shall be liable for such legal action against compliance of any order/directives issued at any time and/or violation of the terms and conditions of this Consent Order.
 15. An inspection book shall be opened and made available to the Board's officers during their visit to the factory.
 16. The applicant shall furnish to the visiting officer and/or the Board any information regarding the construction, installation or operation of air pollution control equipments system and such other particulars as may be pertinent to preventing and controlling pollution of air.
 17. The applicant shall provide facility for collection of samples to the Board's staff and also provide sampling parts in the stack.
 18. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred above required variation (including the change of any control equipment; either in whole or in part) this Board after giving the applicant an opportunity of being heard may vary all or any of such conditions and there upon the applicant shall be bound to comply with the conditions so varied.
 19. The applicant shall plant minimum three varieties of trees such as Eucalyptus, Su-babul etc. at the density of not less than 1,000 trees per acre over 33 percent of the available open land.



46

[Signature]

Chief Secretary

AN Administration
Port Blair, Andaman

75/11/201/94
JAN-74
November, 1994.

Port Blair, dated the

To
Shri Dhogai Singh,
Superintending Engineer,
Electricity Department,
Port Blair - 744101,
Andaman and Nicobar Islands.

Consent for Commissioning a 20 MW (4 x 5 MW)
Thermal Power Plant (Diesel Power House) at
Bambooflat, Under Section 26 of the Water
(Prevention & Control of Pollution) Act, 1974.

Consent is hereby granted for establishing a
Thermal Power Plant at Bambooflat under Section 26 of the
Water (Prevention & Control of Pollution) Act, 1974 subject
to the following terms and conditions :

1. This consent shall be valid for a period upto the date
of commissioning of the Thermal Power Plant (Diesel Power
House).
2. The Maximum daily discharge shall not exceed the following :

Type of Effluent	Maximum Daily Discharge (MLD)
Domestic	0.60
Industrial (Process, Floor and Equipment washing/cooling and bleed water)	5.00

3. a) Domestic waste water shall be treated in a septic
tank followed by soil absorption system or through metal
filter for soil absorption ;
b) The industrial effluent shall be treated, before
disposal as per Clause No. 4 so as to conform to the
standards prescribed in Central Board's Minimal
National Standards Thermal Power Plant; COIRBS/21/1986;
4. Industrial effluent (after treatment where necessary)
shall be discharged on factory's own land for gardening
or irrigation purpose;
5. Samples of treated industrial effluent shall be collected
at the terminal manhole once in a week/fortnight/month/
three months/six months/year, on any fixed working day of
normal production and shall be analysed for all the
parameters in respect of which limits have been fixed vide
condition no.3 stated above. Reports or analysis shall
be submitted to this Board regularly or immediately after
the analysis is completed. Methods of sampling and testing
shall be as per IS:4733 and IS:2480 as the case may be
for domestic and industrial effluents;



Chief Secretary

Andaman and Nicobar Administration
Port Blair, Andaman.


142

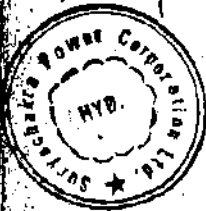
1. The applicant shall make an application for renewal of consent in the prescribed form in triplicate at least 30 days before the date of expiry of the consent or 30 days before "New or altered outfall" is proposed to be commissioned and/or new discharge is proposed to be made, whichever is earlier;

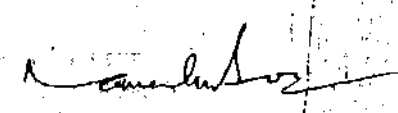
2. All conditions and instructions as provided in the 'General conditions for consent to discharge Trade effluent' as enclosed herewith are to be strictly followed;

3. The role of trees in the removal of certain organic as well as inorganic toxicants is well known. Besides, the trees also play a very important role in purifying the atmosphere within and as well as Municipal treatment plants. In view of this, the applicant shall plant minimum three varieties (Eucalyptus, Subsal or any suitable variety) of trees at the density of not less than 1000 trees per acre and all along the boundaries of the industry premises;

4. Notwithstanding anything contained in this conditional letter of consent, the Central Board reserves to it the right and power under section 27(2) of the Water Pollu (Prevention and control of Pollution) Act, 1974 to review any one or all the conditions imposed herein and to make such variations as deemed fit for the purpose of the Act, by the Central Board.


Member Secretary.




Chief Secretary
A & N Administration
Port Blair, Nicobar Islands.

NO. J-25/S & T/PCB/DEP(SC)/93-94/50
ANDAMAN AND NICOBAR ADMINISTRATION
POLLUTION CONTROL BOARD

Port Blair, dated the 30th Sept, 1994

To

The Superintending Engineer,
Electricity Department,
Andaman & Nicobar Islands,
Port Blair.

Sub: Issue of Corrigendum - regarding.
Ref: Your letter No. EL/PL/1-43/94/10107
Dated 29th September, 1994.

Sir,

Kindly find enclosed corrigendum for the consent
No. J-25/S&T/PCB/DEP(SC)/93-94/50 dated 1st March, 1994
in respect of consent for commissioning of 20MW (4x5 MW)
Thermal Power Plant (Diesel Power House) at Sindhufine
under Section 26 of the water (prevention and control
of Pollution) ACT 1974. for further necessary action
at your end.

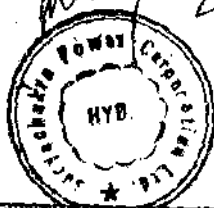
Yours faithfully,

(H. Das) 78/3114

Member Secretary
Pollution Control Board
Andaman and Nicobar Islands
Port Blair.

मुख्य सचिव
Chief Secretary

Pl. handover this to Shri M.D. Shankar Prasad, H.E. (E&E)
to Shri M.D. Shankar Prasad, H.E. (E&E)
Camp New Delhi



Chief Secretary

A. & N. Administration
Port Blair, Andaman

144

PORT BLAIR

ON 101


No. 3-24/S LT/PCL/DND(5C)/94/ (R/D)
ANDAMAN AND NICOBAR ADMINISTRATION
POLLUTION CONTROL BOARD

C O R R I G E N D U M


In the letter No. 3-25/6 & T/PCL/DND(5C)/
94/50 dated 1st March, 1994, under serial No. 3
the sentence,

" This consent shall be valid for a period
upto the date of commissioning of the Thermal
Power Plant (Diesel Power House)." is substi-
tuted as " The consent is valid for commissioning
of thermal power plant (Diesel Power House) of
20 Mw Capacity."

Port Blair,
Dated : 30/9/94.


Member Secretary
Pollution Control Board,
Andaman & Nicobar Islands




Chief Secretary
A & N Administration
Port Blair, Andaman.



NO. J-13911/21/93-A-533
 DDC
 Telephone : PARYAVAHAN, NEW DELHI
 TELETYPE :
 Teletype No.
 FAX :
 Telex : W-55185 DUE IN
 Fax : 3360370
 PARYAVAHAN
 GOVERNMENT OF INDIA
 MINISTRY OF ENVIRONMENT & FORESTS
 PARYAVAHAN, NEW DELHI, 110003
 PARYAVAHAN CHAWAN, C.O. COMPLEX
 610 XIR, 4th Floor-110003
 LOHIA ROAD, NEW DELHI-110003

Schedule 4 (g)

OFFICE MEMORANDUM

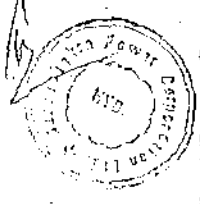
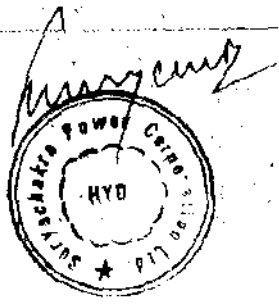
22.11.94

Subj:- Diesel based power station (4x5 MW) at Bamboo flat of South Andaman Island.

Andaman and Nicobar Administration may refer to their letter No. EL/PL/1-43/93/8935-36 dated 20th November, 93 on the above cited subject.

2. The proposal has been examined and the undersigned is directed to convey environmental approval subject to the implementation of the following conditions and safeguards -

- i) High Speed diesel (HSD) oil should only be used as feed stock. The sulphur content of HSD oil should not exceed 1%.
- ii) The liquid effluents emanating from different units of the power station should be treated as per the standards stipulated by CPCB/state authority.
- iii) No structures should be provided/built within 200 metres from the HTL.
- iv) The Project Authority should obtain confirmation from India Meteorological Department/CPCB regarding stack height.
- v) No forest land should be required.
- vi) A detailed plan for obtaining fill material and rehabilitation of the area should be submitted within a period of three months for approval from this Ministry.
- vii) A green belt not less than 50 mt. width and adequate density should be raised all around the plant.
- viii) Fire & explosion hazards should be prevented and controlled due to use and storage of oil.



- 51 -

[Signature]

Chief Secretary
 A & N Administration
 Port Blair, Andaman.

- 146
- ix) Adequate measures for control of noise pollution should be taken so as to keep the noise levels below 85 db, in the working environment.
 - x) A separate environment cell with suitable qualified people to carry out various functions should be set up under the control of a Senior Executive who will report directly to the head of the organisation.
 - xi) Adequate monitoring stations with minimum one meteorological station for air and water quality should be provided in consultation with the State Pollution Control Board. Levels of pollutants (SM, SO₂ and NOX) should be monitored on regular basis and record maintained.

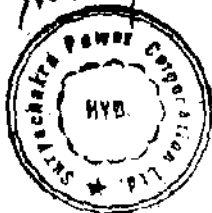
1. The conditions stipulated may be varied or new conditions may be added or the clearance revoked, if necessary in the interest of environmental protection and if there is any change in the project profile, non-satisfactory implementation of the stipulated conditions, etc.

4. The stipulations will be implemented, among others under the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1986, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991.

5. Necessary funds should be provided in the project for implementation of the above mentioned conditions and environmental safeguards. The funds earmarked for the environmental protection measures should not be diverted for other purposes and yearwise expenditure should be reported to this Ministry.

Shri Bhagat Singh,
Auduman and Bladder
Administration,
Electricity Department,
Port Blair.

(Dr. S. Ghoshik)
Joint Director (Scientist)



- 52 -

Chief Secretary
A. & N. Administration
Port Blair, Andaman

OFFICE OF THE CONSERVATOR OF FORESTS

(Andaman Circle)
Chatham, Port Blair - 744102

Schedule *M/J*

Date: 9th Sept. 1994.

To

The Superintending Engineer,
Electricity Department,
Andaman and Nicobar Administration,
Port Blair.

Subject:- Power evacuation from the proposed
20 M.W. diesel power station at
Bambooflat- reg.

Sir,

Please refer to your letter No. EL/PL/1-43/94/
7797 dated the 9th Sept. 1994 regarding ^{power} evacua-
tion from the proposed 20 M.W. diesel power station
at Bambooflat. Since the power evacuation is to be
done through overhead system on the same existing
alignment, where no Govt. forest land is involved,
the forest department does not have any objection
for power evacuation from the proposed power station
at Bambooflat.

Yours faithfully,

[Signature]
Conservator of Forests,
Andaman Circle.

5/9/94

Encl/-



- 55

[Signature]
Chief Secretary
A & N Administration
Port Blair, Andaman

Schedule 4 (B)

तार/Teleg. क.वि.म. CENTELEC
टेलीक्स/Telex 72227-CEA IN
72171-CEA IN
82026-CEA IN
फैक्स/Fax 6877267

भारत सरकार
GOVERNMENT OF INDIA

केन्द्रीय विद्युत प्राधिकरण
CENTRAL ELECTRICITY AUTHORITY

विद्युत मंत्रालय
MINISTRY OF POWER

सेवा भवन, रामाकृष्णा पुरम्
SEWA BHAWAN, RAMAKRISHNAPURAM

R.K. Jain
Chief Engineer

Tel: 6101039

नई दिल्ली-110066, दिनांक

NEW DELHI-110066, Dated 6th August, 1998

D.O.No.98/2/97-Legal/1362

Subject : 20 MW Power Station at Port Blair-PPA-Revised Model
Tariff Calculation - regarding.

Dear Dr. Padmanabhan,

Reference is invited to our letter of even no. dated 3rd April, 1998 regarding above cited subject. The revised model tariff calculations have been carried out in the CEA and our observations/comments are as under :-

1. The Revised Model Tariff Calculations have been carried out by taking the Station Heat rate at site conditions as 2010 K.Cal./KWH. According to the revised calculations, the levelised tariff at 68.5% PLF is Rs. 3.99/KWH (with variable charges Rs. 2.66/KWH) as against earlier levelised tariff of Rs.3.98/KWH.
2. The tariff schedule to be included in the CNE proposal may have to reduce 2 paise/KWH due to fall in specific fuel consumption based on design improvement confirmed by SE, Electricity Department, A & N Administration vide his letter no.EL/PL/1-43/98/5023 dated 15th July, 1998.
3. This tariff schedule worked out in the CEA is for reference of A & N Administration only.
4. Reduction of 2 paise/KWH offered by M/s. SPCL vide their letter dated 16th Jan., 1996, as also any other reductions mutually agreed between the signatories of the PPA will have to be separately taken into account as such revisions are not covered by the tariff calculations referred here.

Based on the above, the revised tariff schedule has been calculated and is enclosed for necessary action at your end.

With regards,

Encl: As above

Dr. R. Padmanabhan
Commissioner-cum-Secretary (Power)
Andaman & Nicobar Island Administration
Port Blair - 744 101.



56

Yours sincerely,

(R.K. Jain)

Chief Secretary
A & N Administration
Port Blair, Andaman & Nicobar Islands

- 6 The total non-resident shareholdings in the Indian company should not exceed the amount as well as the percentage specified in the approval letter. For any proposed increase in the amount, as also the percentage of the Non-Resident shareholding, prior approval of the Government shall be obtained.
- 7 In case the proposed activity is not exempted from the provisions of Industrial (Development & Regulation) Act, 1951 and the Foreign Exchange Regulation Act, 1973 it will be your responsibility to obtain such clearances as may be required under the said Acts.
- 8 The location of the industrial projects, will be subject to Central or State Environmental laws or regulations including local zoning and land use laws and regulations.
- 9 Adequate steps shall be taken on the satisfaction of the Government to prevent air, water and soil pollution. Such anti-pollution measures to be installed should conform to the effluent and emission standards prescribed by the State Government in which the factory or the industrial undertaking is located.
- 10 You shall not manufacture items reserved for the Small Sector without prior approval of the Government as per the prescribed policy and procedure.
- 11 Import of capital equipments, components and raw materials will be allowed as per the import policy prevailing from time to time.
- 12 This approval letter is made a part of the foreign collaboration agreement to be executed between you and the foreign collaborator and only those provisions of the agreement which are covered by this letter or which are not in variance with the provisions of this letter shall be binding on the Government of India or Reserve Bank of India.
- 13 You may now proceed to finalise the agreement.
- 14 The agreement shall be subject to Indian Laws.
- 15 The approval is valid for a period of two years from the date of issue. Within this period, you are required to file the collaboration agreement with the Reserve Bank of India / Authorised Foreign Exchange Dealer.
- 16 You may approach your Regional Office of Exchange Control Department of Reserve Bank of India for necessary permission under Section 19 of FERA, 1973, for allotment of shares to Non-Residents.
- 17 You are requested to send Foreign Investment Remittance Certificate (FIRC) to the Regional Office, Reserve Bank of India, immediately on receipt of foreign remittance.
- 18 All remittances to the foreign collaborator shall be made as per the exchange rates prevailing on the day of remittance.
- 19 The Administrative Ministry for this Project is the Ministry of Petroleum and Natural Gas and Ministry of Power, New Delhi.
- 20 You are requested to acknowledge and confirm acceptance of the above terms and conditions to Secretariat for Industrial Assistance (FC.II Section) and the Administrative Ministry.

Central Electricity Authority
907(3) New Bham
R.R. Bham
101, 2nd Floor, Bham

*For n. Admin
Asst. at Bham
8/27/78*

D.O. No. 38/2/97-Log-1/902

15/15 June, 1988

Dear Mr. Padmanabhan,

Schedule A(c)

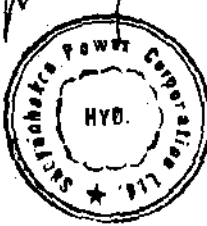
Please refer to your D.O. letter No. 4/20/97-Power(01) dated 27th November, 1987 regarding proposal for consideration of Committee on Non-plan expenditure for approval of payment obligation to H/s. SECL by AHA for a period of 15 years under the PFA for B. H. 00 Plant at Bhabhapat. A meeting was held on dated 8.6.88 in the chamber of Dr. P. D. Chinnay, Additional Secretary, Ministry of Home Affairs to discuss the matter regarding requirement and provision of funds under Non-plan in the budget of HHA for purchase of power from H/s. SECL for a period of 15 years. During the discussions a view emerged that this case will have to be referred to the Committee for their approval. Accordingly it is suggested that AHA Administration may prepare and forward to HOP a detailed draft DUE proposal giving full justification of such plant on the basis of demand projected present position, full details of the requirement of funds for purchase of Power from H/s. SECL, likely recovery from the power supply to electricity consumers and the extent of subsidy for 15 years. Details like peak shortage, energy shortage, present demand and projected demand for 15 years may also be provided in detail in the proposal. It was also decided that the detailed proposal would be sent by the HOP for DUE approval and only after DUE approval the HHA would be able to make provision of funds under Non-plan in their budget.

In reference to your letter dated 12.12.88 addressed to Shri P. I. Subramanian, J. S. (HOP) regarding increasing the fuel linkage for maintaining the PLF of 68.49%, it is stated that the plant was proposed to operate at a PLF of 52.5%, while the full fixed charges are recoverable at 68.49% PLF as per Tariff Notification. Such a provision would be construed as a deviation and AHA needs to approach HOP for relaxation for operation of plant at the lower than normative PLF for recovery of full annual fixed charges. The basis on which 68.49% PLF is now being considered by AHA needs to be justified with full details.

As regards opening of Escrow Account, there is no doubt that lenders for projects developed through non-plan funding insist on Escrow Account, but in this particular case the payment to the LFR is not proposed to be met out

Sd/-

M. S. Srinivasan



66

M. S. Srinivasan

Chief Secretary
S. & N. Administration
New Bham

- 2 -

of the revenue stream of the utility but from the budgetary provisions of the GoI. Since A&N Islands is a U.T. and the GoI is expected to provide for Non-plan funds for payment of Electricity demands to the IPP, the arrangement is even better than the Counter-Guarantee by the GoI. However, if the Escrow Account is insisted upon to increase the comfort of lenders, the same could be arranged by the A&NIA in consultation with the Ministry of Home Affairs.

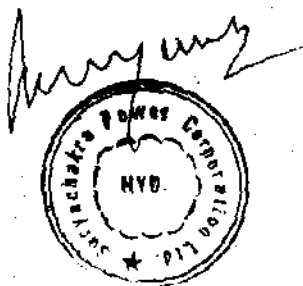
The matter regarding Heat Rate aspect has been examined in detail in the CEA and it is confirmed that the calculations of Station Heat Rate of 3010 Kcal/Kwh at site conditions are Order.

Yours sincerely,



(H.K. Jadhav)
Chief Engineer (Legal)

Dr. R. Padmanabhan
Commissioner-cum-Secretary (Power)
A&N Administration
Port Blair.




Chief Secretary
A&N Administration
Port Blair, Andaman.

154
Government of India
Central Electricity Authority
907-B, Sewa Bhawan, R.K. Puram,
New Delhi-110066

1/97-Legal/463

Dated 3.4.98

Dr R. Padmanabhan
Commissioner-Cum-Secretary,
(Power),
Andaman & Nicobar Island Admn.
Port Blair

Dr S.N. Manopalli,
Managing Director
M/S SPCL,
3-6-725, Street No 11,
Himayatnagar, Hyderabad-500029

Sub: 20MW Power Station at Port Blair-PPA-Model Tariff
Calculation based on latest fuel and lub oil prices-
performance curve etc-Reg.

This has reference to our letter of even number dated 3.3.98
being addendum to PPA signed on 20.11.97 based on discussions
with M/S SPCL and Addl Administration at Port Blair on 2nd and
3rd March 98. M/S SPCL has sent information regarding tariff calculations
based on fuel and lub oil and correction curves vide their letters
dated 10.3.98, 11.3.98 and 12.3.98 at 6.3.98 and 559 at 7.3.98 and 599 at 11.3.98.
Reference to information received from MD, SPCL, vide above.

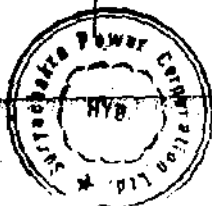
Hence, our comments are given as under:-

Model Tariff calculations based on latest fuel and lub oil
prices as per our letter dt 3.3.98 at Port Blair and M/S SPCL
letters referred to above are enclosed herewith. The calculations
are model calculations based on the assumptions given in the
Statement. The actual tariff applicable for any month is to be
computed based on the model calculations. A 15 year average
tariff and levelised tariff are also furnished in the enclosed
Statement.

Performance curves submitted by IPP with supporting letters from
M/S BSES and M/S MAK have been reviewed. The performance character-
istics of the machine for different variations of parameters are
given below have been considered for computing the site heat rate.

Correction curves with reference to ambient temperature @ sea
level:

Amb. Temp. Deg.C	25	30	35	40	45	50	55
HR	100	100	100	100	100	100	100



...2/-
Chief Secretary
Andaman Administration
Port Blair, Andamans.

ii) Correction curves w.r.t cooling water temperature:

Raw Water Temp. Deg.C	27	28	29	30	31	32	33	34
% output MW	100	100	100	100	100	100	99	98

iii) Variation of heat rate under ISO and site conditions :

Increase in heat rate from ISO condition to site conditions referred by A&N Admn is 10K.cal/kwh an increase of 0.50%. Therefore,

Heat rate at ISO Condition as per PPA .. 2000 K.Cal/kwh
Heat rate as per site conditions 2010 k.cal/kwh

iv) Lub Oil consumption

The oil discarded during an engine oil change (when required) shall not be included in the lubricating oil consumption declaration as per ISO 3046 /1/1836 item 9.3.

v) Voltage variation: 5% to -10% No change in MCR

vi) Frequency variation from +3% to -3% No change in MCR

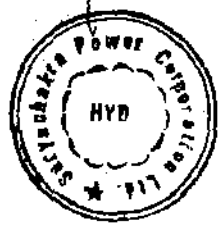
The above points at 1 and 2 are to be made a part of addendum to be included in the comments already furnished on 3.3.98 at Port Blair.

Yours faithfully

Encls: As above

(R.K.Jain)
Chief Engineer (Legal)

Ranjana



[Signature]
Chief Secretary
A&N Administration
Port Blair, Andaman.

156
BY REGISTERED POST

NO. FC.II. : 297(98)/39(98)
Government Of India
Ministry Of Industry
Department Of Industrial Policy & Promotion
Secretariat For Industrial Assistance
Foreign Collaboration - II Section

New Delhi, the May 12, 1998.

To
M/s. SURYACHAKRA POWER CORPORATION LIMITED
3-6-725, STREET NO.11
HIMAYATNAGAR
HYDERABAD-500 029

SUBJECT: Application for foreign collaboration (SIA Regn.
No. FC.I. 39 dated 21/01/98)

Dear Sir,

I am directed to refer to the above mentioned application and to convey approval of Government of India to your proposal, subject to the following terms and conditions.

- 1 Name and address of foreign collaborator : M/s. THE WING GROUP,
1610, WOODSTEAD COURT,
STE 220,
THE WOODLANDS TEXAS 7730
U.S.A.
- 2 Item(s) of manufacture/ activity covered by the foreign collaboration : 1) FOR SETTING UP A 20 MW DIESEL GENERATING POWER STATION AT BAMBOOFLAT, PORT BLAIR, ANDAMAN & NICOBAR ISLANDS
- 3 Proposed Location : BAMBOOFLAT PORT
District : BLAIR, SOUTH ANDAMAN
State : ANDAMAN & NICOBAR
- 4 a) Foreign Equity Participation : 39.00% (Thirty Nine percent) amounting to Rs. 738.24 Lakhs (Seven Hundred Thirty Eight Point Seven Four Lakhs) in the paid up capital of the company.
b) NRI Equity Participation (Repatriable): 25.00% (Twenty Five percent) amounting to Rs. 473.53 Lakhs (Four Hundred Seventy Three Point Five Five Lakhs) in the paid up capital of the company.
- 5 The approval is subject to the condition that supply of fuel will be looked into separately and that Government / Oil company will not be under compulsion to allocate the fuel on account of FIPB approval.

21/5/98 132
V.B.

No.4-2(2)/96-Power(DI)
ANDAMAN AND NICOBAR ADMINISTRATION
SECRETARIAT.

Port Blair, the dated 23rd June, 1997.

To

M/s Suryachakra Power Corporation Ltd,
3-6-203/B, 11th Floor,
Himayat Nagar,
HYDERABAD -500 029.

Sub:- Authorisation under Section 18(A) of Electricity
(Supply) Act, 1948 - regarding.

Ref:- Yours letter No. SPOL/SVN/AM/PPA/173 dated 08-05-97.

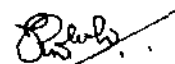
Sir,

In pursuance of Ministry of Power Notification No.F 16 No.A-55/95-DO(IPC-I) dated 28th December, 1995 read with Min. of Home Affairs Notification No.80 652 dated 11-3-1960, and subsequent directions issued by Min. of Power, New Delhi vide D.O. No.C-2036/95-IPC dated 4th December, 1995, the Andaman and Nicobar Administration hereby authorises M/s Suryachakra Power Corporation Ltd., Hyderabad to establish, operate and maintain the 20MW Diesel Power Station at Bamboeflat, Andaman District at Andaman and Nicobar Islands, as required under Section 18(A) of Electricity (Supply) Act, 1948.

The above authorisation is however subject to the following conditions :-

- (i) That the P.P.A is formally scrutinised vetted/ cleared by the CBA/Min. of Power.
- (ii) That the approval of the Ministry of Home Affairs for Non-Plan expenditure towards the purchases of Power is accorded to the Andaman and Nicobar Administration.
- (iii) That M/s Suryachakra Power Corporation shall not undertake any work in any pre-emptive manner unless the PPA is formally signed after final clearance by CBA/Min. of Power.

Yours faithfully,


(DR. A. PADMANABHAN)
SECRETARY (POWER)

Copy to the Superintending Engineer, Electricity
Department, Port Blair for information.

ASSISTANT SECRETARY (POWER)

21 A copy of the collaboration agreement, signed by both parties may be furnished to the following authorities:-

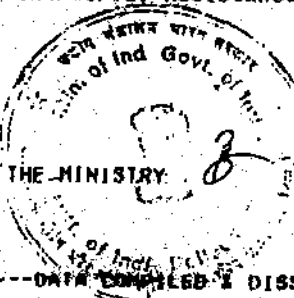
(A) Administrative Ministry/Department as mentioned above.

(B) Secretariat for Industrial Assistance (Foreign Collaboration II Section), Department of Industrial Policy & Promotion, Udyog Bhawan, New Delhi - 110011.

(C) Department of Scientific and Industrial Research, Technology Bhawan, New Mehrauli Road, New Delhi.

22 All future correspondence for amendments/changes in terms and conditions of the approval letter or for extension of validity, if required, etc., may be addressed to the Entrepreneurial Assistance Unit of the Secretariat for Industrial Assistance, Udyog Bhawan, New Delhi 110011.

23 You are requested to furnish the information as per the questionnaire at Annexure on 1st January & 1st July every year till the receipt of approved foreign equity and commencement of production to the Secretariat for Industrial Assistance (FC-II Section), Udyog Bhawan, New Delhi - 110011.



Yours faithfully

P.C. Bhatt

(P.C. BHATT)

UNDER SECRETARY TO THE GOVT. OF INDIA.

PH NO : 3017277

FAX No. : 3011770

DATA COMPILED & DISSEMINATED BY INDUSTRY DIVISION, NIC

BY REGISTERED POST
AMENDMENT NO. 1

No. FC.II. 197(98)/39(98)-Amend
Government of India
Ministry of Industry
Department of Industrial Policy & Promotion
SIA (FC.II. Section)

New Delhi, the 23rd July, 1998.

✓ M/s Suryachakra Power Corporation Ltd.,
3-6-725, Street No. 11,
Himayatnagar,
HYDERABAD.

Subject: Application for foreign collaboration (SIA Regn. No. FC.I 39 dated 21.1.98).

Reference: This Ministry's approval letter No. FC.II. 197(98)/39(98) dated 12.5.98.

Dear Sirs,

I am directed to refer to your letter dated 29.6.98 on the above mentioned subject with reference to this Ministry's letter referred to above and to convey the approval of the Government to the following amendment: -

Amendment to Clause 1 of the Approval letter to read as under :

Clause 1 :

Name and address of : M/s Caterpillar Power Ventures International
Foreign Collaborator Ltd., USA.

2. All other terms and conditions of the letter referred above shall remain unchanged.
3. Kindly acknowledge the receipt of this letter.

Yours faithfully,

(Signature)

(P.C. BHATT)

Under Secretary to the Government of India

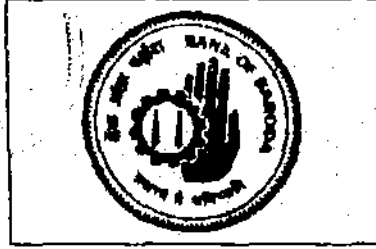


బ్యాంక్ ఆఫ్ బరోడా

(ప్రధాన కార్యాలయము : మాండ్వి, బరోడా)

పోస్ట్ బాక్స్ నం. 64, 17-1-6, మేయిన్ రోడ్
కాకినాడ - 533 001

జిల్లా : తూర్పుగోదావరి (ఆంధ్ర)
ఫోన్ : 0884 - 376118, (రెసి) 376070
ఫాక్స్ : 0884 - 61749, గ్రామ్స్ రాన్సమ్



बैंक ऑफ बड़ौदा

(प्रधान कार्यालय : मांडवी, बड़ौदा)

पो.बा.नं. 64, 17-1-6, मैनरोड
काकिनाडा - 533 001.

जिला : पूर्व गोदावरी (आं.प्र.)
फोन : 0884 - 376118. (नि) 376070
फाक्स : 0884 - 61749
तार : रानसम

SM:ADV:41/679.

29.5.2000

M/s Surya chakra Sea foods limited,
A- 12, Devinivas, Subhadra Ardade,
Bhanugudi Junction,
KAKINADA.

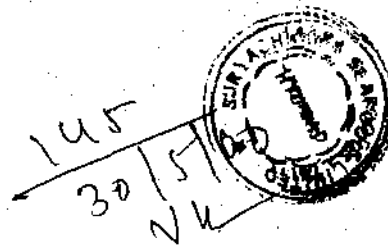
Dear Sir,

Re: Your request for one time settlement.

We refer to your letter dated 29.5.2000 in the captioned matter. In this connection, we would like to inform you that we have referred the matter to our higher authorities and we shall revert back to you on hearing from them.

Yours faithfully,

Senior Branch Manager.



Bank of Baroda

(Head Office : Mandvi, Baroda)

Post Box No. 64, 17-1-6, Main Road, KAKINADA - 533 001, Dist : East Godavari (A.P.)
Phone : 0884 - 376118, (R) 376070, Fax : 0884-61749, Grams : RANSOM

No. 34/4/96-SEB(Vol.III-Pt)
Government of India
Ministry of Power

Shram Shakti Bhawan, Rafi Marg,
New Delhi, dated the 30th September, 1998
05th October, 1998

To
The Lt. Governor,
A & N Islands,
Port Blair.

Subject :- Provision of Non-Plan funds for purchase of power from 20 MW power generation station at Bambooflat Port Blair (Adnaman & Nicobar Islands) to be set up by M/s Suryachakra Power Corporation Ltd. Hyderabad.

I am directed to convey the approval of the Committee on Non-Plan Expenditure (CNE) to the making of provision of Rs. 269.91 crores (Gross Non-Plan provision of Rs. 661.540 crores minus Revenue from Energy sales of Rs. 269.910 crores) in the Non-Plan budget of the UT of Andaman and Nicobar Administration spread over a period of 15 years for the purchase of power from 20 MW power generating station to be set up by M/s Suryachakra Power Corporation Ltd., Hyderabad at Bambooflat, South Andaman.

Necessary proposal for making year-wise provision of funds may be submitted to the Ministry of Home Affairs for making the provision in their Non-Plan budget.

The IFP and the UT Administration shall ensure compliance of verification/safeguards as suggested by the Committee on Non-Plan Expenditure under para 14 of the Minutes of the meeting issued vide OM No. G.28021/5/98-Fin dated 15th September, 1998.

The UT Administration should ensure the share of revenue component of Rs. 269.910 crores spread over a period of 15 years during the tenure of pay offs to the firm for purchase of power as per Annexure attached.

5. This issues with the concurrence of Internal
vide their Dairy No.2324/Fin/98 dated.30.09.1998.

Yours faithfully,

(M.R. RAJORIA)

UNDER SECRETARY TO GOVT.

Tel. No. 332 0759

Copy to :-

1. Secretary (Exp.) / Addl. Secretary (Budget) / Joint Secy.
Dy. Secretary (Budget), Ministry of Finance.

2. Addl. Secretary / Dy. Secretary, Ministry of Home Affairs
is requested that necessary funds may please be
under the Non-Plan in the budget of UT Administration.

3. Chairman (CEA) / Member (E&C) / Member (PS), Central Elec.
Authority, Sewa Bhawan, R.K.Puram, New Delhi.

4. PS to Secretary / PS to Spl. Secy. / JS (PP&EA) / JS (IP)
Ministry of Power.

5. Finance / Budget Section, Ministry of Power.

6. Secretary (P), A & N Administration, A & N Islands
Blair-744101.

Dy. Resident Commissioner, A & B Bhawan, 12 Chanakya
New Delhi - 110 021.

(M.R. RAJORIA)

UNDER SECRETARY TO GOVT.

Tel. No. 332 0759

**20 MW POWER STATION
AT
BAMBOOFLAT – PORT BLAIR**

ADDENDUM-2

To the PPA signed on 20.11.1997

Between

**Andaman & Nicobar Administration
Port Blair**

&

**M/s Suryachakra Power Corporation Ltd.
Hyderabad**

Dated: 18.08.2011

This Addendum- 2 to Power Purchase Agreement, is made on this day of 18th August ,2011 between "THE ADMINISTRATION" AND "THE COMPANY" with the following:

"WHEREAS the Power Purchase Agreement (PPA) was executed on 20/11/1997 followed by Addendum - 1 signed on 30.03.1999, between the parties i.e. "THE ADMINISTRATION" and "THE COMPANY" i.e M/s SURYACHAKRA POWER CORPORATION LIMITED.

"WHEREAS the parties to the said agreement have agreed to add clauses for calculation of consumption of the HSD oil by conversion of "HSD in Weight" to "HSD in Volume" considering the density at ambient temperature in the Monthly tariff invoices.

"NOW, THEREFORE, the following clauses are added in the Power Purchase Agreement:

1. The weight of HSD oil consumed was being calculated on the basis of density 15°C, as recorded by IOCL in the invoices as per standard procedures as the supply of HSD oil was in Litres. (Volume).
2. The CEA vide letter No. DPD/UT/374-6(A&N)/2008/467 dated 22/02/08 (**Attachment - 1**) provided the procedure/formulae for calculating the HSD oil consumption in volume at ambient temperature to be considered from April'2007.
3. As the supply of HSD and operation of the Power Plant at the ambient temperature, IPP was recording a higher consumption they raised issue with A&N Administration and in turn took up with CEA for advice and clarification as original PPA was finalized by CEA. This issue was subsequently deliberated at MHA on 17.07.08 vide MOM circulated vide No. U-13034/19/2008-ANL dated 21/08/08, (**Attachment - 2**) wherein Additional Secretary (NM), MHA mentioned that CEA's advise on HSD should be final to which the Director MOP also agreed. The procedure / formulae so finalized by CEA should form a part of PPA. In this process IOCL may be formally consulted.



[Handwritten signature]

[Handwritten signature]

4. Accordingly CEA communicated their advise vide their letter DP&D/UT/374-6(A&N)/2008/2724 dated 29/09/08, (Attachment - 3) the density corresponding to the actual temperature at suppliers end (and not at 15°C) should be taken for computations. This density can be taken from the suppliers (M/s IOCL, Port Blair). In the view of the above the procedure / formulae for calculating the fuel consumption in volume (Litres) at ambient temperature is as below.

Page No. 91 of PPA signed on 22.11.97 & page No. 21, Sl. No. 54 of Addendum - 1 signed on 30.03.1999.

EXISTING ENTRY

2.3(4) Variable charge payments

The variable charge payment of each Billing Period shall include the cost of fuel and the cost of Lubricating oil as follows:

Fuel consumption Rate	: F Kilo Grams per KWH
Lub oil Consumption	: L Kilo Grams per KWH
Total generation	: U Kwh
Cost of liquid fuel	: FO Rs/Kg (Indian Rupees per kg. delivered to the station including all transportation handling, terminal and other charges and levies).
Cost of Lub oil	: LO Rs/Kg (Indian Rupees per kg. delivered to the station including all transportation handling, terminal and other charges and levies).
Station Auxiliary	: A kwh

% station Auxiliary Consumption: $A' = \frac{A \times 100}{U}$

U

Variable charges component of Tariff in Indian Paise.

The value of fuel consumption rate should be arrived on the basis of the agreed station heat Rate of 2000Kcal/Kwh at ISO conditions.

The variable cost per unit = Rs. $\frac{(100)[(F \times FO) + (L \times LO)]}{(100 - A')}$

Where is A' is Auxiliary consumption which shall be allowed on actual basis and will be restricted to ceiling norms.

The variable charges = Rs. $\frac{(100)[(F \times FO) + (L \times LO)] \times \text{Actual Energy}}{(100 - A')}$

F is fuel consumption = $\frac{\text{Station heat Rate}}{\text{Weighted average calorific value of HSD}}$

Note: The weighted average calorific value of HSD oil will be determined by taking sample, as per relevant Indian Standard and measuring the calorific value with suitable equipment by THE COMPANY which will also be monitored by THE ADMINISTRATION.

TO BE READ AS

2.3(4) Variable charge payments

The variable charge payment of each Billing Period shall include the cost of fuel and the cost of Lubricating oil as follows

2.3(4) Variable charge payment

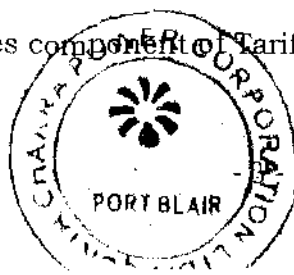
The variable charge payment of each Billing Period shall include the cost of fuel and the cost of lubricating oil as follows:

Fuel consumption Rate	: F Kilo Grams per KWH
Lub oil Consumption	: L Kilo Grams per KWH
Total generation	: U Kwh
Cost of liquid fuel	: FO Rs/Kg (Indian Rupees per kg. delivered to the station including all transportation handling, terminal and other charges and levies).
Cost of Lub oil	: LO Rs/Kg (Indian Rupees per kg. delivered to the station including all transportation handling, terminal and other charges and levies).
Station Auxiliary	: A kwh
% station Auxiliary Consumption:	$A' = \frac{A \times 100}{U}$

U

Variable charges component of Tariff in Indian Paise.

(Signature)



(Signature)

The value of fuel consumption rate should be arrived on the basis of the agreed station heat Rate of 2010Kcal/Kwh at ISO conditions (Addendum- I).

The variable cost per unit = $\text{Rs. } \frac{(100) \{[(F \times F_O) + (L \times L_O)]\}}{(100-A)}$

Where is A' is Auxiliary consumption which shall be allowed on actual basis and will be restricted to ceiling norms.

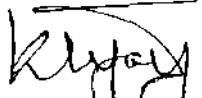
The variable charges = $\frac{(100) \{[(F \times F_O) + (L \times L_O)]\} \times \text{Actual Energy}}{(100-A)}$

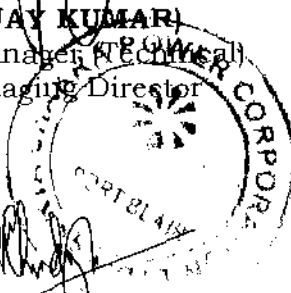
F is fuel consumption = : $\frac{\text{Station heat Rate}}{\text{Weighted average calorific value of HSD}}$

Fv is the fuel consumption in terms of volume $\left[\frac{\text{Station heat Rate}}{\text{Weight Average calorific value of HSD}} \right] + \left[\text{Wt. Avg Density at Ambient temp.} \right]$

Note: The Wt. Avg. density at ambient temperature, at fuel (HSD) supply terminal (IOCL terminal) port Blair, to be considered as indicated in their invoices by the Administration, while processing the monthly Tariff bills.

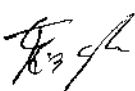
For Suryachakra Power Corporation Ltd.


(K. VIJAY KUMAR)
General Manager (Technical)
For Managing Director




Witness-1

Witness-2



Rashmi Singh


For A&N Administration


(SHAKTI SINHA)
Chief Secretary
A & N Administration
अ तथा नि प्रशासन A & N Administration
पोर्ट ब्लेयर-744101 Port Blair-744101

Witness -1

Witness -2


Jalaj Shrivastava
प्रधान सचिव ()
Principal Secretary ()
अ तथा नि प्रशासन
A & N Administration
पोर्ट ब्लेयर Port Blair


यमिन मुहम्मद मुरताजा - Yameen Md. Murtaza
असिस्टेंट इंजीनियर / Superintending Engineer
विद्युत विभाग / Electricity Department
आर. एन. प्रशासन
A & N Administration



Government of India
भारत सरकार
Central Electricity Authority
केन्द्रीय विद्युत प्राधिकरण



Distribution Planning & Development Division
विस्तारण आयोजन एवं विकास प्रभाग

Sewa Bhawan, R. K. Puram, New Delhi - 110066

सेवा भवन आर के पुरम नई दिल्ली - 110066

Ph: 011-26106258 Fax: 011-26102793

(आई एन आर नो 1/000)

No DPD/UT/374-6(A&N)/2008/467

DLR¹⁰¹ February 2008

श्री मनोहर सिंह,

अधिक्षक अभियंता

विद्युत विभाग

अडमान एवं निकोबार प्रशासन

पोर्ट ब्लेयर - 744101

Fax 03192-233365

AB (Nok)
4
373

विषय : 20 MW बम्बूफ्लैट विद्युत संयंत्र - Density के आधार पर HSD Oil की खपत सही करने के बारे में

Sir,

Please refer to letter No. EL/PL/1-43(b)/4706 dated the 7-11-2007, on the above subject. The matter has been examined by Thermal Engineering & Technology Division and Legal Divisions of CEA and the following may be noted:

- a) Density of HSD at 15 deg C mentioned in IOC's invoice.

The density of HSD at 15 deg C mentioned in IOC's invoice is for the purpose of determining the product quality variation at the receiving end and at the dispatch depot of the Oil Company. The A&N Gazette Notification dated 27.05.1991 (Schedule 1, clause 1) may be seen for this purpose.

- b) Density of HSD at ambient temperature mentioned in IOC's invoice.

The density of HSD at ambient temperature mentioned in IOC's invoice is for the purpose of determining the quantity of product being filled at the dispatch depot, which can be later used for determining the Fuel input into the DG sets and its cost in Rs./Kg as per PPA (Page 90).

- c) Heat rate variation with Calorific Value

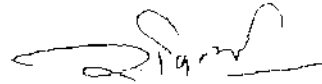
The heat rate does not depend on calorific value and density of liquid fuels, since the heat input is based on weight of liquid fuel consumed by the DG sets.

d) The fuel consumption and its cost allowable as per the PPA have been computed and is given in Annexure-A enclosed.

e) It may be seen from the detailed calculation that the IPP is eligible to get the cost of fuel @ Rs. 6.609 per Kwh (taking the cost per litre of HSD as Rs. 28.64) and density at ambient temperature (30.5° C – assumed) as 0.844 as indicated by IOC in invoice dated 31.7.2007.

In view of the above, it is reiterated that the claim of M/s. SPCL that the fuel charges in RS. / Kg. based on density at ambient temperature since April 2003 is reasonable and may be agreed to as communicated vide our letter dated 16-10-2007.

भवदीय



(आर के वर्मा)

निदेशक (डी पी डी)

(12)



(1)

(1)

Annexure-A

1 kwh at ambient temp. Heat Rate allowed is 2010 K.Cal (As per PPA)
SD being supplied having Calorific Value of 42.64 mj/kg of HSD (IOC letter enclosed)

$$\begin{aligned}\text{Therefore, 1kg of HSD} &= 42.64 \text{ mj} \\ &= 42.64 \times 10^6 / 4184 \text{ K.Cal} = 10191.204 \text{ K.Cal} \\ &\quad (4184 \text{ j} = 1 \text{ K.Cal})\end{aligned}$$

Therefore, for generating 1 kwh the IPP is allowed the fuel cost for

$$\begin{aligned}&= \frac{2010}{10191.204} \text{ kg of fuel} \\ &= 0.1972289 \text{ kg of fuel}\end{aligned}$$

Therefore the IPP is eligible to have fuel cost at the rate of 0.1972289 kg of fuel per kwh at the ambient temperature.

As per IOC invoice (copy enclosed), density at ambient temp. (30.5 °C) = 0.844

$$\begin{aligned}\text{Therefore, quantity of fuel consumed in litre/unit} &= \frac{0.1972289}{0.844} \\ &= 0.2336835 \text{ litre}\end{aligned}$$

Indicative cost/litre of HSD = Rs.28.64

Cost of fuel consumed per kwh = $28.64 \times 0.2336835 = \text{Rs.}6.6926954$

Therefore, as per the above calculation the IPP is entitled to get the fuel cost of Rs.6.6926954/kwh

Whereas, the IPP has claimed and paid by A&N Admin. as given below:-

As per IOC the density at 15 °C = 0.8547

$$\begin{aligned}\text{The quantity of fuel consumed in litre/unit} &= \frac{0.1972289}{0.8547} \\ &= 0.230758 \text{ litre}\end{aligned}$$

Indicative cost/litre of Rs.28.64

Cost of fuel consumed per kwh = Rs.6.6089091/kwh

i.e. the cost difference per kwh = $\text{Rs.}6.6926954 - 6.6089091 = \text{Rs.}0.0837449/\text{kwh}$
say 8.37 paise/kwh





No. U-13034/19/2008-ANL

Government of India/Bharat Sarkar
Ministry of Home Affairs/Grih MantralayaNew Delhi, dated the 21st August, 2008

OFFICE MEMORANDUM

Subj: Meeting held in the O/c the AS (NM) on 17th July, 2008 on issue regarding payment of M/s Surya Chakra Power Corporation Ltd. Hyderabad from A&N Administration - Minutes regarding.

The undersigned is directed to forward herewith a copy of the minutes of the meeting held on 17th July, 2008 under the Chairmanship of Additional Secretary (NM), MHA for information and necessary action.

(J P Mishra)
Director (NM)
Tele/Fax: 2408433

Secretary
Ministry of Power,
Shram Shakti Bhavan,
New Delhi

Chief Secretary
A&N Administration,
Secretariat,
Port Blair

Member (Thermal)
Central Electricity Authority,
Ganga Bhavan,
R K Puram,
New Delhi

Managing Director
M/s. Suryachakra Power Corporation Ltd.,
Plot No. 1115, Road No. 54,
Jubilee Hills,
Hyderabad - 500 033.

Encl. No. 4-2(8) 2007 Power (PF)
ANDAMAN AND NICOBAR ADMINISTRATION.
Secretariat.

Port Blair, dated the 29th August, 2008.

Copy together with a copy of its enclosure is forwarded to the Superintending Engineer, Electricity Department, Port Blair for taking necessary action on the points decided in the meeting.

Asst. Secy (Power)

DRAFT MINUTES OF THE MEETING HELD IN THE OFFICE OF AS(NM) AT 11.00 A.M. ON 17.7.2008 ON ISSUE OF PENDING PAYMENT TO M/s SURYA CHAKRA POWER CORPORATION LIMITED, (SPCL) HYDERABAD

A meeting was chaired by Shri Vinay Kumar, AS(NM). A list of participants is annexed.

At the outset, AS(NM) welcomed all the participants and desired to know from Managing Director, SPCL, Hyderabad regarding problems being faced by M/s SPCL. He informed about dues payable by the A&N Administration, arrears from - escalation of project cost from 63.14 crores to Rs.85.10 crores, balance payment of Rs.5.70 crores on HSD, other items such as interest on working capital (Rs.0.92 crores), income tax/others (Rs.1.08 crores), penalties (Rs.0.67 crores), O&M and administrative expenses (Rs.0.63 crores), fuel oil cost (Rs.0.05 crores) and interest for delay in payments (Rs.3.43 crores). It was further explained that project cost got enhanced due to various factors like non-availability of foreign technicians due to Kargil War, escalation of price, non-execution of transmission lines etc.

AS(NM) desired to know about the details of Power Purchase Agreement. It was explained that the PPA speaks of the total cost of the project at Rs.63.14 crores with a leverage on account of variation in foreign exchange rate, interest during construction and financial charges, taxes and duties on domestic components and change in Indian law resulting in change in cost. Director (CEA) informed that the PPA has been duly approved by CEA after according Techno Economic Clearance (TEC) to the Project by their concerned wing. Director(MOP) added that the fixed and variable charges in the tariff is being determined on the basis of project cost. The addendum to the PPA was signed on 30th March, 1999. This PPA is for 15 years starting from April, 2003, the year in which the project commenced. After completion of the 15 years, either continuation of this project shall be approved for M/s SPCL or the A&N Administration may take over the project on the cost agreed upon, as per PPA.

(N)

[Signature]

As regards the M/s SPCL, same has already begun after commencement of the project in April, 2003. As against Rs.414.15 crores claimed by M/s SPCL through their regular monthly bills, around Rs.405 crores has already been paid to them. However, these figures will vary in case the enhanced project cost claimed is accepted.

MD, A&N desired to know whether the completion cost of Rs.63.14 crores mentioned in the PPA is provisional or finalized. Secretary (Power), A&N Administration explained that the above cost is the completion cost with certain exceptions, as mentioned above. MD, M/s SPCL again stressed upon that completion cost is Rs.35.19 crores.

Director (CEA) informed that A&N Administration had requested CEA to finalise the completion cost of the Project. However, as per Electricity Act 2003, CEA cannot examine/approve the completion cost of the Project.

Director, Ministry of Power informed that Joint Electricity Regulation Commission as advocated during the meeting taken by Chief Secretary, A&N Administration, with the I.P.P., on this issue on 1.7.2008, is already at the stage of finalization.

As per discussions, it was agreed that the I.P.P.'s demand of allowing enhanced Project cost need to be examined by an agency having expertise in the field such as Joint Regulatory Commission or Ministry of Power, in terms of PPA.

The issue regarding the claim of M/s SPCL of Rs.5.70 crores pertain to cost payable on transfer of HSD oil from I.O.C L. Terminal to IPP Power House at ambient temperature 15 degree centigrade. The normal procedure is for recording specific gravity of HSD oil at 15 degree centigrade which IOCL follows in all other cases for supplies to Electricity Department. SE, A&N Islands explained that as per PPA 2000 kilo calories per kilo wet ton is the notified heat rate which was further increased to 2010 kilo

notes as per recommendation of C.E.A. for site conditions. From May, 2007, M/s SPCL had started billing for H.S.D. consumption based on specific gravity at ambient temperature (actual site temperature) which has additional financial implication of Rs.6-7 lakh per month for the department. MD M/s SPCL stated that in their tariff invoices sent since the commissioning of power station in April, 2003, they have been mis-calculating the quantum of fuel by considering the density of HSD corresponding to 15 degree centigrade whereas they should have considered the density corresponding to the ambient temperature. He stated that the tariff invoices should be based on the density measured at ambient temperature. He mentioned that I.O.C.L. need to record specific gravity of H.S.D. oil at ambient temperature, which was later on reverted to normal standard of 15 degree centigrade. The matter was referred by Electricity Department, A&N Administration to the CEA twice but finality could not be attained. Director, CEA clarified that as per the PPA, the heat rate is with respect to the weight and not volume of H.S.D. This particular issue was clarified by S.E., A&N Administration that it was the invoices prepared by I.O.C.L. for supply of H.S.D. oil to M/s SPCL which carried specific mention of the ambient temperature whereas in other cases this is not mentioned. The I.O.C.L. was advised by the Electricity Department to follow the universal procedure in this regard. Secretary (Power), A&N Administration informed the Chair that the Administration is facing audit objections and hence matter is to be resolved. For this, the Administration has already written a recent letter to CEA dated the 15th July, 2008 giving details in this regard with the request for examination at their end and advising the Administration for their future course of action, since no clarification on these audit objections have been received from C.E.A. on earlier reference of 14.3.08.

(Action : A&N Admin.)

JS(UT) desired that if any other issues is required to be clarified by UT Administration, a reference should be sent to the CEA immediately so that they can examine and tender their advice to the Administration within a week's time.

In this connection, S.E., A&N Islands stressed upon the need for developing the formula/calculation method for consumption of HSD (in volume terms) in consonance



63
with the PPA. He further clarified on being asked that in PPA, HSD calculation is based on kg (i.e. weight) whereas normal supply from IOCL to IPP is in litres (i.e. volume). Therefore, standard formula has to be devised for converting litres into kg, so as to facilitate in making payments in respect of HSD received by I.P.P. from I.O.C.L. at ambient temperature. The procedure/formula to be finalized by CEA should form part of PPA. In this process, the IOCL should be formally consulted. AS(NM) mentioned that CEA's advice on HSD should be final. Director, MOP also agreed on this issue.

(Action : A&N Admn./CEA)

AS(NM) asked Ministry of Power to take expeditious action on constitution of Joint Electricity Regulation Commission. Also, if it is going to be delayed, MoP should decide that who would be the authority to go into the issue of completed cost of the project.

(Action : Mo Power)

Further, JS(UT) desired that remaining issues having lesser financial implications and having no linkages with enhanced project cost could be sorted out at the level of Area Administration. The 5th of August, 2008 should be the final date for resolving these issues.

The meeting ended with a vote of thanks to the Chair.



LIST OF PARTICIPANTS WHO ATTENDED THE MEETING
UNDER THE CHAIRMANSHIP OF ADDITIONAL SECRETARY(NM) ON 1st
JULY, 2008 AT 11.00 A.M. REGARDING RELEASE OF PAYMENT TO M/S
SURYACHAKRA POWER CORPORATION LTD.

<u>S.No.</u>	<u>Name & Designation</u>	<u>Ministry/Department</u>
1.	Shri Vinay Kumar, AS(NM)	NIHA
2.	Smt. B. Bhamathi, JS(UT)	NIHA
3.	Shri J.P. Misra, Director(ANL)	NIHA
4.	✓ Shri Kailash Chandra, Secretary (Power)	A&N Admn.
5.	Shri Manohar Singh, S.E. (Elect.)	A&N Admn.
6.	Shri Puneet Goel, Director(Thermal)	M/o Power, New Delhi
7.	Shri S. Seshadri, CE	CEA, New Delhi
8.	Shri R.K. Verma, Director	CEA, New Delhi
9.	Dr. S.M. Manepalli, MD	M/s SPCL, Hyderabad.
10.	Shri Vijay Kumar, GM	M/s SPCL, Hyderabad
11.	Shri D. Krishna Rao, DGM(Finance)	M/s SPCL, Hyderabad
12.	Shri V. Madhava Naidu, Director	M/s SPCL, Hyderabad.

10

24



Government of India

भारत सरकार

Central Electricity Authority

केन्द्रीय विद्युत प्राधिकरण

Sector Bhawan, R. K. Puram, New Delhi - 110066

सेक्टर भवन अरु के पुरम नई दिल्ली - 110066

Tel. 011-26106258; Fax No. 011-36101793



13th Feb 2009 2009

पत्र सं: DP&D/UT/374-6(A&N)/2008/2-124

दिनांक: 27.09.2008

Secretary (Power)

UT Administration of A&N Islands

Port Blair - 744101

Fax No. 03192 233629.

Subject: 20 MW IPP Power Plant at Bambooflat South Andaman, A&N Islands - Calculation of HSD oil consumption for the 20 MW Power plant on the basis of density at site temperature - Reg.

Sir,

Please refer to Letter No. 4-2(1)/2007-Power dated 15.7.08 and Letter No. EL/PL/1-43(b)/3454 dated 9.9.08 from UT Administration of A&N Islands on the above subject.

1. The contentions made in the letter dated 15.07.08 are as under:

(i) CEA vide letter dated 6.8.98 had finalized the site heat rate as 2010 kcal/kWh and the same was incorporated in the revised PPA. Further, the site ambient conditions were also incorporated in the PPA as additional clause No. 76. Thus, the advise by CEA vide letters dated 16.10.97 and 22.02.08 for granting the IPP consumption of HSD based on site density needs to be reconciled with the earlier advise of specifying heat rate at site conditions as 2010 kcal/kWh.

(ii) As per the PPA, the calorific value of HSD is required to be determined by the company at site and is also to be monitored by the administration. IPP is presently carrying out, measurement of ambient temperature with uncertified thermometers. Further, the PPA does not have any provision for measurement of density at site conditions and then computing the calorific value of HSD.

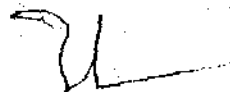
A&N Administration has thus requested that the matter may be examined again by CEA.

2. Our views in the matter are as under:

- i) The issues involved viz, site heat rate of DG sets and the density to be adopted for computation of HSD consumption are two distinct and unrelated issues and need to be dealt separately.
- ii) Heat rate indicates the intrinsic heat or energy consumption in the DG set to generate 1 kWh of electricity. As the normative heat rate of 2000 kcal/kWh specified in the CEA norms of 1995 and also adopted in the PPA is at ISO condition, the same is required to be corrected for the site conditions. The heat rate of DG set at site ambient conditions would be slightly higher than at ISO conditions, and accordingly a marginally higher heat rate of 2010 kcal/kWh corresponding to site ambient conditions had been incorporated in the addendum to PPA based on the advice by legal division of CEA.
- iii) As the normative heat rate indicates the heat energy required in terms of kcal, a methodology is required to compute the actual consumption of HSD which would provide the equivalent heat input in terms of kcal. The heat value of the fuel to be used could be any of the following:-
 - a. As certified by the supplier (M/s IOC).
 - b. Determined by the IPP (M/s Suryachakra power) at site and verified by the A&N administration.
 - c. Computed by IPP from density at 15 deg. C given in the invoice using standard ASTM tables.
- iv) There appears to be no dispute on calorific value and only the temperature corresponding to which the density is to be taken (ambient temperature or 15 deg C) are disputed.

The calorific value is expressed in terms of kcal/Kg of fuel and it does not vary with the temperature as it relates to the mass of the fuel and not volume. From the calorific value and heat rate, the weight of HSD in Kilograms which would supply the equivalent kcal is determined.

- v) However, HSD and other petroleum fuels are traded by the suppliers on the basis of volume (Litres/Kilolitres) and not weight. The volume of fuel is dependent on temperature and thus the same weight at different temperature would



lead to different volumes. As the IPP is entitled to consume a certain weight of fuel based on the allowed heat rate, he would have to be allowed the equivalent volume of fuel at the site conditions which corresponds to his entitled weight.

- a) Presently the density at 15 deg C is being used for the computation of admissible volume (or computation of weight received corresponding to the volume of tank truck say 12 kl). This however, would show higher weight as the actual loading temperature at the suppliers end is NOT 15 deg C and is generally much higher. The IPPs contention to adopt density corresponding to site temperature is also not correct as the dispatch volume of say 12 kl in the invoice is corresponding to the temperature at dispatch end (suppliers end) and any further change in temperature leads to corresponding change in volume also.
- a. As regards the contention made in the earlier correspondences of Superintending Engineer (A&N) Administration (S.E A&N Letter no. EL/PL/1-43(b)/4706 dated 7.11.07) that the standard density at 15 deg C is to be adopted as per Andaman & Nicobar Gazette Notification dated 27.9.1991 and IOC letter No.TPE/SCP/07 dated 20.8.07 the following is clarified :
 - b. The A&N Gazette notification is aimed at prevention of adulteration and other malpractices. It thus requires that suppliers shall invariably mention the density at 15 deg. C in their invoices so that the same can be cross checked by the customers/receiving locations at their end so as to verify that the density at 15 deg. C (as computed from the measurement of density and temperature at site and converting with reference of ASTM tables) is within the permissible range (+/- 0.003) so as to ensure that the integrity of the product quality is maintained and there has been no adulteration etc. It, however, does not imply that the density at 15 deg. C would be used to compute the weight of the fuel at the site irrespective of site temperature.
 - c. The clarification by IOC in their above referred letter that the density at 15 deg. C is used to compute the calorific value as per Bureau of Indian standard implies that the reference temperature used for calorific value is 15 deg. C which is also mentioned at para 3 of IS 1448-1960 enclosed with A&N Island letter of 15.7.2008. Thus the statement of IOC does not imply that density at 15deg C is to be used for computation of equivalent volume for the

to

72

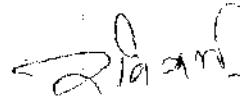
given weight or vice versa at site as seem to have been interpreted by A&N administration.

3. In view of the above, the following is suggested:

- i) The density corresponding to the actual temperature at supplier's end (and NOT at 15 deg C) should be taken for computations. This density can be taken from the supplier (M/s IOC) or alternately the temperature at dispatch end can be taken from supplier and the density can be computed from ASTM tables corresponding to the given 15 deg C density in the invoice and dispatch temperature.
- ii) If however both dispatch temperature and dispatch density cannot be obtained from suppliers, then the actual temperature at site could be taken with properly calibrated and certified thermometers and site density can be worked out corresponding to given 15 deg C density in invoice and measured site temperature. As the difference in the product temperature between dispatch end and site would be minor, this would not lead to any significant errors.

4. Regarding the observations of audit it is reiterated that PPA has been signed between the IPP and A&N Administration and will remain binding on them unless these are modified in accordance with the procedure prescribed in the PPA. The A&N Island Administration and their audit unit has to abide by the terms and conditions stipulated in the PPA for allowing consumption of HSD oil in respect of financial implications or loss to either parties.

भवदीय


(अर.के.वर्मा)
निदेशक

✓ Copy to S.E. (Electricity Deptt.), UT of A&N Administration, Port Blair-744101 (Fax No. 03192-233365)



