

ఆంధ్రప్రదేశ్ आन्ध्र प्रदेश ANDHRA PRADESH

No2.44.0.23 1.2019 Rs. 100/-

old to Sri: 1. Kadanda Ram S/o. Satyanarayana, Vijayanada

Mom: AP GENCO, Vijayawada.

AMENDED AND RESTATED **POWER PURCHASE AGREEMENT** 

R.L. No: 06-15-005/2018 VALID UP TO: 31-12-2020 D.No: 6-66/1, PRASADAMPADU VJA (R) Cell: 9246416358

**BETWEEN** 

ANDHRA PRADESH POWER GENERATION CORPORATION LIMITED

AND

SOUTHERN POWER DISTRIBUTION COMPANY OF ANDHRA PRADESH LIMITED EASTERN POWER DISTRIBUTION COMPANY OF ANDHRA PRADESH LIMITED FOR SALE OF POWER FROM

RAYALASEEMA THERMAL POWER PROJECT STAGE IV (1x600 MW)

THIS AMENDED AND RESTATED POWER PURCHASE AGREEMENT, hereinafter called "Agreement", entered into on this 28th day of January Two Thousand and Nineteen.

#### Between

Eastern Power Distribution Company of Andhra Pradesh Limited, constituted under the sub-section (6) of section 23 of Andhra Pradesh Electricity Reform Act, 1998 (Act, 30 of 1998) and having its registered office at P&T Colony, Seethammadhara, Visakhapatnam

(Commercial) APGENCO, Vidyur Soudha.

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GENERAL MANAGER / IPC CHIEF GENERAL MANAGER PPA. RA & QC A.P.E.P.D.C. LTD. VISAKHAPATNAM-13.

(hereinafter referred to as "APEPDCL"); and Southern Power Distribution Company of Andhra Pradesh Limited constituted under the sub-section (6) of section 23 of Andhra Pradesh Electricity Reform Act, 1998 (Act, 30 of 1998) and having its registered office at 19-13-65/A, Raghavendra Nagar, Kesvayana Gunta, Tiruchanur Road, Tirupathi – 517501 (hereinafter referred to as "APSPDCL"); (hereinafter each of APEPDCL and APSPDCL are, as the context may require, individually referred to as "APDISCOM" and collectively referred to as the "APDISCOMS" which expression shall, unless it be repugnant to the context or meaning thereof include its successors and assignees), as parties of the first part, and

 ANDHRA PRADESH POWER GENERATION CORPORATION LIMITED, constituted under Section 13 of APER ACT 1998 having its registered office at Vidyut Soudha, Vijayawada – 520004 (hereinafter called "APGENCO") which expression shall, unless repugnant to the context or meaning thereof include its successors and assignees, as party of the second part.

WHEREAS Govt. Of Andhra Pradesh has accorded approval to APGENCO for setting of Rayalaseema Thermal Power Project Stage-IV (1x600 MW) at Muddanur of YSR kadapa District in the State of Andhra Pradesh, herein after referred to as "RTPP Stage – IV", and generally referred to as "Project".

Whereas APGENCO is a Generating Company wholly owned by the Government of Andhra Pradesh will establish RTPP Stage-IV and to be owned and operated by APGENCO.

WHEREAS the POWER PURCHASE AGREEMENT dated: 22nd November 2010 entered between the erstwhile Andhra Pradesh state consisting of Four DISCOMs APSPDCL, APPRDCL and APCPDCL as parties of the first part and ANDHRA PRADESH POWER GENERATION COMPANY LIMITED as party of the second part.

WHEREAS in due course of time the unified Andhra Pradesh has been bifurcated into two states viz., Telangana and Andhra Pradesh w.e.f. 2<sup>nd</sup> June'2014 as per the Re-organisation Act 2014.

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WHEREAS APERC of united Andhra Pradesh has returned the PPA dated: 22<sup>nd</sup> November 2010 of 1x600MW RTPP Stage-IV for want of Information vide its letter dated:23.08.2014.

AND Whereas APDISCOMS are desirous of purchasing all the declared capacity and energy from Rayalaseema Thermal Power Project Stage-IV and APGENCO is willing to sell the same to APDISCOMS on mutually agreed terms and conditions.

The terms and conditions of the Power purchase agreement are as per prevailing APERC regulations and any changes in APERC regulations that may occur in future shall be applicable for all operating norms or any other parameters.

# **Article 1: Interpretation and Definitions**

- 1.1 Project: Means the new coal based Thermal Power Station namely Rayalaseema Thermal Power Project Stage-IV (1X600MW) established at Muddanuru village of YSR Kadapa District in the State of Andhra Pradesh, India with one Generating Unit, having a design rated capacity of 600 MW. All facilities and related assets required for the efficient, economic and safe operation of the Power Station including, without limitation, any rail equipment, coal handling and ash disposal facilities and sampling and testing facilities and infrastructure features where so ever situated..
- 1.2 Acceptance Test for establishing the Capacity of the Unit: Acceptance test for establishing the Capacity of the Unit shall be performed in the presence of APDISCOMS representatives and on satisfying the capacity of the Unit, the capital cost of the project shall be arrived at on pro-rata basis against the rated capacity.
- **1.3 ACT:** means the electricity Act, 2003.
- 1.4 Additional Capitalization: means the capital expenditure actually incurred after date of Commercial operation of the station and admitted by the Commission after prudence check.
- **1.5 APERC:** means the Andhra Pradesh Electricity Regulatory Commission constituted under Andhra Pradesh Electricity Reform Act, 1998.
- **1.6** Approved Capital Cost: to be taken into account at any time for the purposes of the Tariff means the amount of Capital Cost of the Project admitted subjected to approval of APERC.
- **1.7 Authority:** means the Central Electricity Authority referred to in Electricity (Supply) Act, 1948 or any successor entity entrusted with its functions and capacities.
- 1.8 Auxiliary Consumption: Auxiliary consumption or 'Aux' in relation to a period in case of a generating station means the quantum of energy consumed by auxiliary equipment of the generating station, such as the equipment being used for the purpose of operating plant and machinery including switchyard of the generating station and the transformer losses within the generating station, expressed as a percentage of the sum of gross energy generated at the generator terminals of all the units of the generating station:

Provided that auxiliary energy consumption shall not include energy consumed for supply of power to housing colony and other facilities at the generating station and the power consumed for construction works at the generating station;

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1.9 Plant Load Factor (PLF): The Plant Load Factor in a Tariff Year expressed in percentage is:

PLF = 
$$10000 \times \sum_{i=1}^{N} SG_i / \{ N \times IC \times (100 - AUXn) \} \%$$
 where

N : No. of time blocks in the given period

SGi : Schedule Generation in MW for the ith time block in such period

IC : Installed Capacity of the generating station in MW

Aux<sub>n</sub>: Normative auxiliary consumption in MW expressed as a percentage of gross

generation.

The above PLF definition shall be applicable only after implementation of ABT and till the implementation ABT, the PLF definition is as follows:

PLF = ( Net Electrical Energy (Ex-Bus in MWH)+Normative Auxiliary Consumption(in MWH)) in a year

(Installed Capacity of Thermal Power station in MW) x No.of hours in a year

1.10 Availability: It is in relation to a Thermal Generating station for any period means the average of the daily average declared capacity for all the days during that period expressed as a percentage of the installed capacity of the Generating stations minus the normative auxiliary consumption in MW and shall be computed in accordance with the following formula.

Availability = 10000 x 
$$\sum_{i=1}^{N} DC_i / \{ N \times IC \times (100 - AUXn) \} \%$$
 where

N : No. of Days during the period

DCi : Average Declared Capacity for the i<sup>th</sup> day of the period in MW

IC : Installed Capacity of the generating station in MW

Aux<sub>n</sub>: Normative auxiliary consumption as percentage of gross generation.

- 1.11 Gross Calorific Value (GCV): Gross Calorific Value means, in respect of coal and secondary fuel, heat produced in Kcal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel, as the case may be:
- 1.12 Station Heat Rate: Station Heat Rate means the quantum in Kilo Calories of input heat energy required by a Thermal Power Station to generate one Electrical Energy Unit at the Generator terminals, as per APERC Regulations.
- 1.13 COD of the Project: means the Commercial Operation Date of the 600 MW unit which was commissioned on 29.03.2018 at 00:00 Hrs as per the procedure indicated under Annexure-II "Commissioning & Testing" of the PPA. Copy of the Installed Capacity Test of Unit-6 (1 x 600 MW) held on 29.03.2018 is enclosed.

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- 1.14 Commercial Operation Date or COD: means in relation to an unit or block of the thermal generating station, the date declared by the generating company after demonstrating the maximum continuous rating (MCR) or the installed capacity (IC) through a successful trial run after notice to the beneficiaries, and in relation to the generating station as a whole, the date of commercial operation of the last unit or block of the generating station.
- 1.15 In firm power: means electricity injected in to grid prior to the commercial operation of a unit or block of generating station.
- 1.16 Debt: means the amount of any loans, debentures or other similar obligations, contracted or raised and received by APGENCO for the Project, but only to the extent that the proceeds of such capital contribution are exclusively utilized on the Capital Cost of the Project.
- 1.17 Debt Repayment: means, in relation to a specified period, the amount of Debt which is 70% of the capital Cost which APGENCO is due to repay in such period, in Indian Rupees in which the Debt is Incurred.
- 1.18 Declared Capacity (DC): means the capability of the generating station to deliver exbus electricity in MW declared by such generating station in relation to any period of the day or Whole of the day, duly taking into account the availability of fuel.
- **1.19 Net Electrical Energy:** It is the energy, supplied by APGENCO from RTPP Stage-IV measured in kWh, at the point of interconnection in accordance with the provisions of Article 4.
- **1.20 Dispatch Instructions:** Dispatch Instruction shall be as mentioned in the Grid Code as per clause1.21
- 1.21 Grid Code: Grid Code means the Code of Technical Interface (Grid Code) 2001 Revision 1. June 2001 and amendments made thereon.
- **1.22 Interconnection point:** Interconnection point means the outgoing feeders of the power plant and the grid are connected in the power plant switchyard.
- 1.23 Licensee: Means a person, granted a license under section 14 of the Act.
- 1.24 Maximum Continuous Rating: It is in relation to unit of the thermal power generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters, and in relation to a unit or block of a combined cycle thermal power generating station means the maximum continuous output at generator terminals, guaranteed by the manufacturer with steam injection and corrected to 50Hz grid frequency and specified site conditions.
- **1.25** Date of Effectiveness of Agreement: Date of Effectiveness of Agreement shall be the CoD date of the unit.

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- 1.26 Prudent Utility Practices: Prudent Utility Practices means the practices, methods, techniques, and standards that are generally accepted nationally and internationally from time to time and commonly used in the national and international electric utility industry for the operation and maintenance of equipment of the size and having the other characteristics of a Power Station in a safe, prudent and reliable manner consistent with the parameters for such operation and maintenance set forth in this Agreement, which practices, methods, techniques and standards shall be adjusted as necessary to take account of the requirements of Law, physical conditions at the site on which a Power Station is located and operation and maintenance guidelines of the manufacturers of plant and equipment incorporated in the Power Station which APGENCO is required to follow in order to maintain in effect any warranties, guarantees or insurance policies relating thereto.
- **1.27 Depreciation:** means the sum of the amounts of depreciation on buildings, equipment and other capital facilities of the Project on the date hereof, and in respect of any asset, shall be allowed up to 90% of the approved Capital Cost and shall cease so soon as its net book value equals the residual value i.e., 10% of its original cost as included in the Capital Cost.
- **1.28 Duration of Agreement:** Duration of Agreement shall be 25 years from date of C.O.D of the project.
- 1.29 Energy Certification Committee (ECC): shall be the Body of the Designated Officers constituted at the headquarters by both the Parties to certify each Billing Month the Net Energy Sale by one Party to the other based on the Monthly Meter Readings jointly recorded at the power house.
- **1.30 Designated Officer:** The Designated Officer in APDISCOMS/APGENCO shall be of the rank of a Financial Advisor and Chief Controller of Accounts (FA & CCA) or any other Officer designated by APDISCOMS/APGENCO for matters relating to Billing and Payment.
- 1.31 Installed Capacity: means the summation of the name plate capacities of all the units of generating stations or the capacity of the generating station (reckoned at the generator terminals) as approved by the commission from time to time.
- 1.32 Installed Capacity Test: In relation to any Generating Unit means any capacity test of such Generating Unit to be carried out pursuant to Annexure-II (Commissioning and Testing).
- **1.33 Monthly Bill:** Monthly Bill will have the meaning ascribed to it under Article 4.3 for Thermal Energy Supplied under this Agreement.
- 1.34 Metering Date: Metering Date for the first calendar month will be date of Commercial operation date. Subsequent Metering Date will mean midday (12:00 hours) of the last day of each calendar month. However, the Metering Date of the Financial Year ends at 24:00 Hrs on 31<sup>st</sup> march of Subsequent year and so on.

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- **1.35 Billing Date:** The Billing Date shall be 5 (five) days after the Meter Reading Date in each Calendar month.
- **1.36 Billing Month:** The Billing Month means Metering Date of calendar month to the Metering Date of the next calendar month.
- 1.37 Interest on Working Capital: The Interest on Working Capital shall be as per the APERC norms.
- **1.38** Income Tax: Income Tax payable/ paid shall be limited to the extent of Return on Equity (RoE)/actuals whichever is less.
- 1.39 Due Date of Payment: In case of a regular Monthly Bill due date of payment shall be 60 (sixty) days from the Billing Date and in case of a Supplementary Bill it shall be 60 (sixty) days from the presentation of the Supplementary Bill to the Designated Officer of APDISCOMS.
- **1.40** Supplementary Bill: Supplementary Bill will have the meaning ascribed to it in Article 4.4.
- **1.41** Business Day: It shall be construed as a reference to a day (other than Sunday) on which banks are generally open for business in Vijayawada.
- **1.42** Tariff Year: Tariff Year shall be the financial year.
- **1.43 Cut-off Date:** The date of the first financial year closing after three hundred and sixty five days of the date of commissioning of a generating station.
- 1.44 Emergency: Emergency means a condition on or affecting APGENCOs electrical system which is beyond the reasonable control of APTRANSCO and which threatens the safe and reliable operation of the system or which is likely to result in the disruption of safe, adequate and continuous electric supply by APTRANSCO or which endangers life or property, and which condition is aggravated by continued deliveries of energy from APGENCO electrical system.
- **1.45 GOI:** Government of India.
- **1.46 GoAP:** Government of Andhra Pradesh.
- **1.47 IEGC:** Indian Electricity Grid Code, as approved by CERC.
- **1.48 LC:** Irrevocable Revolving Letter (s) of Credit.
- **1.49 Main and Check Meter:** Meter for measurement and checking of import / export of energy at interconnection point for Energy Accounting.

1.50 STU: State Transmission Utility.

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### 1.51 Project Completion Schedule:

The date of Financial Closure of the Project is 10.02.2011 and the Scheduled date of CoD is 10.10.2014.

1.52 'Meter' means a device suitable for measuring, indicating and recording consumption of electricity or any other quantity related with electrical system and shall include, wherever applicable, other equipment such as Current Transformer (CT), Voltage Transformer (VT) or Capacitor Voltage Transformer (CVT) necessary for such purpose;
• Dedicated CTs and PTs shall be used for energy meters.

However as per the request of APGENCO, dedicated metering CT & PT cores provided in separate secondary boxes may be allowed for interface metering due to space constraint to provide dedicated metering CTs & PTs for this specific project only.

**1.53 'Standby Meter'** means a meter connected to CT and VT, other than those used for main meter and check meter and shall be used for accounting and billing of electricity in case of failure of both main meter and check meter.

# Article 2: Sale & Purchase of available Electrical Capacity & Energy

#### 2.1 Power Supplies by APGENCO:

- (a) Sale and Purchase of Infirm Power: After Synchronization and prior to the COD of any Generating Unit, APGENCO will sell and APDISCOMS will purchase all infirm power generated by that Generating Unit. APDISCOMS will reimburse APGENCO the actual cost of all Coal and Secondary Fuel consumed for such generation. APGENCO agrees to demonstrate these costs, if so required by APDISCOMS. APGENCO shall furnish a Bill to APDISCOMS for this infirm power on the last day of each month for this purpose and APDISCOMS shall pay this Bill immediately.
- (b) Sale and Purchase of Declared Capacity and Net Electrical Energy: Save as otherwise provided in this Agreement, from and after the COD of the First Generating Unit, APGENCO shall make available and deliver, and APDISCOMS shall purchase for the consideration set forth in this Agreement, the entire Declared Capacity and all Net Electrical Energy generated by the Project, subject, in the case of Net Electrical Energy, to such Dispatch Instructions as may be in effect from time to time.
- 2.2. Power Supplies by APDISCOMS: Upon APGENCO's request, APDISCOMS shall provide electrical energy to APGENCO for construction, start-up and maintenance, and also for commissioning of the Project. APDISCOMS shall furnish a bill to APGENCO for such power at a price equal to APDISCOMS's published tariff for construction power during the construction and start-up period up to the COD of the Project.

After COD of the Project, Tariff Bills presented by APGENCO to APDISCOMS shall be on a net energy basis taking into account the power supplied by APDISCOMS to the Project.

#### 2.3. Dispatch Instructions (DI):

- 2.3.1 At 10.00 hours every day, APGENCO shall directly provide Capacity Notice to the APSLDC, denoting the Unit-wise Hourly MW Availability (00.00 24.00 hours) on day ahead basis. APSLDC shall in turn intimate the same day by 16.00 hours the Generation Schedule to APGENCO for the following day with respect to all the Units of the Project that have declared Capacity Notice.
- 2.3.2 APGENCO shall follow the APSLDC's directives, to back down, increase or resume generation, decrease generation at times on a day, provided that such directives are consistent with the technical limits of the facility, Prudent Utility Practices or in accordance with discharge functions of APSLDC. The duration of back down and quantum of energy backed down each day shall be reconciled and certified by both APGENCO (at Station level) and APSLDC on monthly basis. Any changes in generation, revisions are to be communicated to SLDC from time to time.

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2.3.3 Nothing contained in this Agreement shall be construed to require APGENCO to operate the facility, at any time, including emergency, inconsistent with Prudent Utility Practices and the Technical Limits in any manner.

#### 2.3.4 Backing Down Limits Of Unit:

For RTPP Stage -IV, Gross generation of Unit can be backed down up to the minimum technical limit of the unit and the technical minimum for the plant shall be 55%. The Unit shall be compensated depending on the average unit loading as per the regulation 6.3 B of CERC regulations (IEGC), 2010.

2.3.5 In the absence of any Dispatch Instructions from APTRANSCO, the unit will operate according to the day ahead Capacity Notice furnished by APGENCO.

#### **Article 3: Generation Tariff**

3.1.1 Tariff: The Tariff will be determined as two-part tariff for each Tariff Year. The Tariff shall be the sum of the Fixed Charge and the Variable Charge. Incentive Payment (if any), as calculated pursuant to provisions of this Agreement is payable in addition.

#### 3.2 Fixed Charges

- **3.2.1** Annual Fixed Charges: APGENCO shall claim the Annual Fixed Charges as approved by APERC for each Tariff Year and the Annual Fixed Charges shall comprise of the following:
  - (i) Return on capital employed (ROCE)
  - (ii) Depreciation
  - (iii) O&M expenses
  - (iv) Taxes on income restricted to ROE.
- **3.2.2 Capital Cost:** The capital cost as per the PPA dated 22.11.2010 is Rs. 3525.00 Crores. But, APGENCO revised the capital cost to the tune of Rs. 4853.38 Crores from 3525.00 Crores, which will be filed by APGENCO before APERC as part of the determination of Tariff. After fixation of the tariff by APERC, the same shall be implemented.
- **3.2.3** The Operation & Maintenance Charges: The Operation & Maintenance Charges are as approved by the Hon'ble APERC.
- **3.2.4 Debt-Equity ratio**: The Debt-Equity ratio as on the date of commercial operation shall be taken as **70:30** for determination of tariff irrespective of the actual quantum of Debt and equity.

#### 3.2.5 Recovery of Fixed Charges:

- (a) Annual Fixed Charges shall be computed on prorate basis after the Unit is declared for commercial operation date.
- (b) If any Licensee or Generating Company recovers a price or charge exceeding the tariff determined under section 62 of the Act and in accordance with this regulation, the excess amount shall be recoverable by the party who has paid such price or charge along with interest equivalent to the Bank rate of Reserve Bank of India without prejudice to any other liability incurred by such Licensee or Generating Company.
- (c) Target availability of the unit/Station for recovery of annual full fixed charges shall be 80%. APGENCO shall receive full Annual Fixed Charges if Availability in the Tariff Year is not less than 80%. If Availability is less than 80%, Annual Fixed Charges shall be allowed on pro-rata basis.

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- (d) One-twelfth of the full "Annual Fixed Charges", computed pursuant to this Article 3.2.1 shall be claimed through the "Monthly Bill", on every month of a Financial Year. The amount of any over payment relative to the actual Availability shall be adjusted at the end of the Tariff year through a supplementary bill.
- **3.2.6** Renovation and Modernisation: If carried out for RTPP-IV, leading to an increase in life and/or efficiency/sustainability of the plant, such additional costs incurred shall be taken for consideration of Fixed Charge in future.
- 3.3 Variable Charges: For any Billing Month, the Variable Charges consists of cost of coal & oil. Landed cost of coal and oil shall include transit and handling charges (transportation by rail/road or any other means), royalty on coal, taxes, and duties as applicable. Energy charges shall be arrived after considering transit & Windage losses as given in 3.5.4.

Variable charges shall be paid based on the computation as per Annexure-III.

Fuel Shortage (Coal): In case of fuel shortage in a thermal generating station, the generating company may propose to deliver a higher MW during peak-load hours by saving fuel during off-peak hours. The concerned Load Dispatch Centre may then specify a pragmatic day ahead schedule for the generating station to optimally utilize its MW and energy capability, in consultation with the beneficiaries. Declared Capacity in such an event shall be taken to be equal to the maximum peak hour ex power plant MW schedule specified by the concerned Load Dispatch Centre for that day.

- **3.4 Operating Parameters:** The values of Operating parameters like Station Heat Rate, Auxiliary power consumption and specific consumption of secondary fuel oil for the duration of the PPA shall be as per APERC Regulations applicable from time to time.
- 3.5 Norms of Operation
  - 3.5.1. Auxiliary consumption: 6.0 % with Cooling Towers.
  - 3.5.2. Gross Station Heat rate: 2425 kcal/kwh.
  - 3.5.3. Specific oil consumption: 2.0 ml/ kwh
  - 3.5.4. Windage & Tansit losses: The Windage & Tansit losses of coal shall be 0.8%. The above norms will be considered till issuance of norms by APERC for 600 MW units.
- **3.6** Fuel Cost Adjustment (FCA): FCA shall be made at the end of each quarter as illustrated in Annexure-V.

#### 3.7 Incentive:

- a) Target plant load factor for incentive shall be 80%.
  - b) Incentive shall be payable at a flat rate of 25 paisa/kwh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to target Plant Load Factor
  - c) The above incentive shall be applicable as per clause (15) of APERC Regulations 1 of 2008, dt: 01.09.2008.

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- 3.8 Charges for Unscheduled interchange if ABT is implemented: The generating station shall be entitled to receive or shall be required to bear, as the case may be, the charges for deviations between energy sent-out corresponding to scheduled generation and actual energy sent-out, in accordance with the balancing and settlement code notified by the commission. Provided that the rate for determination of such charges shall be notified by the commission from time to time.
- **3.9** Sale of Infirm Power: Any revenue (other than the recovery of fuel cost) earned by the Generating company from sale of infirm power shall be taken as reduction in capital cost and shall not be treated as revenue.
- 3.10 Levies, Taxes, Duties, Cess: The above Tariff is exclusive of any statutory taxes, levies, duties, cess or any other kind of imposition (s) whatsoever imposed/charged by any Government (Central/State) and/ or any other local bodies/authorities on generation of electricity including auxiliary consumption or any other type of consumption including water, transmission, environment protection, sale or on supply of power/ energy and / or in respect of any of its installations associated with Generating Stations and/or on Transmission System.

The total amount of such levies/taxes/ duties/ cess etc. payable by APGENCO to the authorities concerned in any month on account of the said levies/taxes/duties/cess etc. as referred to above shall be borne and additionally paid by APDISCOMS to APGENCO.

If any such levies/taxes/ duties/ cess etc., payable by APGENCO in advance in any month, APGENCO shall submit a bill to APDISCOMS supported by a letter or notice issued by concern authorities at least 20 (twenty) days before the due date of such payment. APDISCOMS shall pay to APGENCO an amount equal to such levies/taxes/ duties/ cess etc. within ten (10) days from the receipt of such Bill.

**3.11 Deemed Generation:** Stoppage of generation due to problems in Power evacuation for Generating stations treated as Deemed Generation for the purpose of computation of availability for payment of fixed charges.

In case of non-availability of fuel, APDISCOMS & APGENCO will decide and finalise in consultation with Coal companies at that time.

- **3.12** Admission of Energy bills: Details shall be given by APDISCOMS every month for the amounts deducted if any, for all energy bills sent by APGENCO with specific Remarks.
- 3.13 Payment Mechanism: The bills shall be presented to the Designated Officer of APDISCOMs for payments. Payments by APDISCOMS for the bills raised by APGENCO shall be made within 60 days through revolving Letter of Credit (LC) to be opened in favour of APGENCO to cover one-month receivables valid for the term of the PPA. All LC charges shall be to APDISCOMs account. Escrow to cover one month receivables valid for the tenure of the PPA as per the procedure indicated in the Annexure-VI.

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- **3.14** Rebate on payment through LC: For payment of bills through a letter of credit on presentation/RTGS APGENCO shall give a rebate of 2 per cent of the bill amount. If the payments are made within one week of presentation of the bill, the APGENCO shall give a rebate of 1.25 per cent of the bill amount.
- 3.15 Surcharge Due on Late Payment: In case the payment by APDISCOMS is delayed beyond a period of 60 days from the date of billing, late payment surcharge at the rate of 1.25% per month or part thereof shall be levied by APGENCO.
- 3.16 Income Tax: Incidence of tax liability on APGENCO as per Income Tax Act in force from time to time shall be payable in addition to the amount as per the Tariff Bill by APDISCOMS duly certified by the Auditors of APGENCO. However the tax payable on income exceeding the Return on Equity will not be charged to APDISCOMS. If any advance income tax is payable by APGENCO in any month, APGENCO shall submit a bill to APDISCOMS supported by a certificate of its chartered accountant at least 20 (twenty) days before the due date of such payment. APDISCOMS shall pay to APGENCO an amount equal to such advance tax within ten (10) days from the receipt of such Bill. After the tax assessment is completed for any year, if any, balance tax amount is payable by APGENCO, APDISCOMS shall pay such balance tax within 15 days of demand by APGENCO. In case the tax authority refunds any amounts to APGENCO including interest thereon; APGENCO shall promptly make an appropriate refund to APDISCOMS.
- 3.17 Change in law: In the event of any new law, regulation or tax or in the event of any change, amendment, modification or repeal of any law, regulation or tax (including without limitation, any withholding taxes, cess, duties, environmental taxes, sales taxes, property taxes, import fees or assessments) of any Government Authority after the date of effectiveness of this agreement, detrimentally or beneficially affects APGENCO, then APGENCO shall send a notice in writing to APDISCOMS regarding such an event and both parties shall meet and endeavour to agree to an amendment to this agreement to pass on the impact of such an event to APDISCOMS, which shall be settled through supplementary invoice. If within 90(ninety) days after such notification, the parties are unable to reach agreement on such amendment, or in the event that an agreement to amend has been reached but no amendment has been executed within 30 (thirty) days after reaching of such agreement to amend, either party shall have the right to commence the dispute resolution procedures set forth in Article 8 to determine the appropriate amendment to this agreement.
- **3.18 General:** Any changes in APERC regulations that may occur in future shall be applicable for all operating norms or any other parameters.
- 3.19 The operating Parameters issued by APERC for 600 MW Units shall be applicable from the Date of issue.

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# **Article 4: Metering & Billing**

- 4.1 Monthly Meter Readings: Monthly meter readings shall be jointly taken (and a joint acknowledgment thereof signed) by the authorized representatives of both parties at an agreed time on each Metering Date. Whenever difference between the readings of the Main meter and the Check meter for any month is more than 0.5%, the procedure laid down in the CEA metering regulations may be followed. If either Party fails to attend the joint meter reading at the agreed time, the readings provided by the Party which conducts such reading shall be conclusive for the purposes of this agreement: provided that the results of such reading be provided to the other party which shall be certified by an officer of the party conducting the meter reading.
- 4.2 Installation, Inspection and Sealing, Half Yearly Calibration, periodical testing yearly at NABL accredited laboratory etc., & testing conditions are as per Annexure-IV.
- 4.3 Monthly Bill: On or before each Billing Date, APGENCO shall submit to APDISCOMS a Monthly Bill based on (a) meter reading that has either been signed by both Parties or certified by APGENCO with respect to APDISCOMS refusal to sign within five days of the Metering Date and (b) the Tariff, which will set out the monthly Fixed Charges and the monthly Variable Charges with respect to the Power Stations covered under this Agreement. Each Monthly Bill for a Billing Month shall be payable by APDISCOMS in accordance with this Agreement on or before the Due Date of Payment., which will be the date 60days from the date of billing to the Designated Officer of APDISCOMS.
- **4.4 Supplementary Bills**: Any amount due to APGENCO by APDISCOMS under this Agreement other than amounts set out in a monthly Tariff Bill shall be payable within sixty (60) days after presentation of Supplementary Bill(s) by APGENCO to APDISCOMS. This will include, but not be limited to the following;
  - a) Claims for Income Tax
  - b) Statutory Duties, Taxes, Cess, Levies, fee, Royalty, etc.
  - c) Monthly Tariff Adjustments
  - d) Water charges, NALA charges, etc.
  - e) Any claims of Central/State/Local authorities/Bodies, etc.
  - g) Any other claim admissible under this Agreement
- 4.5 Any Supplementary Bill which reflects an amount owed by APGENCO to APDISCOMS shall be reflected as a credit in the next Monthly Bill.

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# **Article 5: Implementation of the Agreement**

All discretions to be exercised and directions, approvals, consents and notices to be given and actions to be taken under these provisions unless otherwise expressly provided herein, shall be exercised and given by the signatories to this Agreement or by the authorized representative(s) that each Party may nominate in this behalf and notify in writing to the other Party by Registered Post. Any other nomination of authorized representative (s) shall be informed likewise in writing to / by APDISCOMS within one month of signing of the Agreement. Notwithstanding any nomination, the Managing Director / APGENCO or his authorized representatives at its Registered Office shall be authorized to act for and on behalf of APGENCO.

# **Article 6: Duration of the Agreement**

This Agreement shall be deemed to be in force from date of synchronisation of unit and in operation for twenty five (25) years from the date of commercial operation of the project.

This Agreement may be extended, renewed, amended or replaced by another Agreement, on or before the expiry of this agreement, on such terms and for such further period of time as the Parties may mutually agree subject to prior consent of Andhra Pradesh Electricity Regulatory Commission (APERC).

# **Article 7: Force Majeure**

No party shall be liable for any claim for any loss or damage whatsoever arising out of failure to carry out the terms of the Agreement to the extent that such a failure is due to force majeure events such as war, rebellion, mutiny, civil commotion, riot, strike, lock-out, forces of nature, accident, act of God and any other reason beyond the control of concerned party. But any party claiming the benefit of this clause shall reasonably satisfy the other party of the existence of such an event and give written notice within a reasonable time to the other party to this effect. Generation/drawl of power shall be started as soon as practicable by the parties concerned after such eventuality has come to an end or ceased to exist.

The generator is entitled to claim only fixed charges and cannot claim any consequent losses during Force Majeure period. In case any payments are received from the contractor or coal supplier by way of compensation by APGENCO and compensation received from Insurance towards Fixed cost component if any, in the event of any Force majeure, then APGENCO shall be liable to pass on such benefit to APDISCOMs.

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#### **Article 8: Arbitration**

All differences or disputes between the parties arising out of or in connection with this Agreement shall be endeavoured to be settled amicably through negotiation between Heads of the Organisations or their authorised representatives failing which shall be settled through arbitration as provided herein.

In the event of any such differences or disputes between the parties, any party may by a written notice of 30 days to the other party request Andhra Pradesh electricity Regulatory commission (APERC) to settle such disputes.

#### **Article 9: General**

- 9.1 Agreement final and complete: This Agreement contains the full and complete understanding between the parties and supersedes all prior arrangements and understandings whether written or oral appertaining to the subject matter of this Agreement and may not be varied except by an instrument in writing signed by all of the parties to this Agreement. No representations or promises not expressly contained in this Agreement have any effect of modifying this Agreement.
- Waiver: If any provision of this Agreement shall be adjudged by a court to be unlawful void or unenforceable such provision shall to the extent required be severed from this Agreement and rendered ineffective as far as possible without modifying the remaining provisions of this Agreement and shall not in any way affect any other circumstances or the validity or enforcement of this Agreement. No failure or delay on the part of the parties to this Agreement relating to the exercise of any right power privilege or remedy provided under this Agreement shall operate as a waiver of such right ,power, privilege or remedy or as a waiver of any preceding or succeeding breach by the other party to this Agreement nor shall any single or partial exercise of any right power privilege or remedy preclude any other or further exercise of such or any other right power privilege or remedy provided in this Agreement all of which are several and cumulative and are not exclusive of each other or of any other rights or remedies otherwise available to a party at law or in equity.
- 9.3 Circumstances not covered in this Agreement: The parties acknowledge and accept that it has not been possible to envisage all the circumstances that may arise in the course of the dealings between the parties and therefore it has not been possible to provide for all such eventualities. In the course of the implementation of the Agreement the parties may be faced with matters which have not been expressly dealt with in this Agreement. The parties shall discuss and find an appropriate solution to such matters amicably and parties shall act on best endeavour basis keeping in view the interest of both the parties.

If the parties are unable to arrive at a settlement, the matter shall be referred to arbitration in accordance with Article 8 and the decision of the arbitrator(s) shall be final and binding on the parties.

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#### Article 10: Notice

All notices required or referred to under this Agreement shall be in writing and signed by the respective authorized signatories of the Parties mentioned herein above, unless otherwise notified. Each such notice shall be deemed to have been duly given to the other Party if delivered or served by Registered Post/Speed Post or by any other mode with an acknowledgement in terms of Article 5.

#### **Article 11: Assignment**

APGENCO acknowledges and accepts that APDISCOMS shall (with the consent of APGENCO) be entitled to assign all its rights, duties, obligations and responsibilities under this Agreement to any other successor entities, either wholly or partly and to one or more of them and in such manner as may be agreed to between APDISCOMS and the said successor entities with the approval of APERC and after due service of written notice of the proposed assignment to APGENCO. Upon such assignment taking place, the corresponding rights, obligations and interests of APDISCOMS shall in connection with this agreement or incidental thereto devolve on the successor entities.

Provided that APDISCOMS shall continue to be responsible for all obligations outstanding prior to the date of assignment, until these are fully discharged by the successor entities

Provided that at a subsequent date, the successor entities refuses to accept any rights/obligations/liabilities as not devolving on them, these will automatically revert to APDISCOMS, who shall discharge their obligations in the respect of such rights, obligations and liabilities without any demur.

11.2 For the purpose of obtaining financing for the project, APGENCO may assign or create security over its rights and interests under or pursuant to this Agreement to any one or all the lenders of this Project.

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In witness where of the parties have signed this Agreement on the day, month and year first written above.

For and on behalf of

**Andhra Pradesh Power Generation Corporation Limited** 

For and on behalf of

**APDISCOMS** 

Chief Engineer/Commercial APGENCO Chief Engineer . . (Commercial)

APGENCO, Vidyut Soudha, Gunadala, Vijavawada-520 004.

CGM(PP, RA & QC)/A CHIEF GENERAL MANAGER PPA, RA & QC A.P.E.P.D.C. LTD. VISAKHAPATNAM-13.

In the presence of

fintending Engineer (Commercial & Planning) APGENCO, Vidyut Soudha,

Gunadala, Vijayawada-529 004

In the presence of

SE/LPC /APPCC

2.

Commercial & Planning APGENCO, Vidyut Soudha, GUNADALA, VIJAYAWADA-520004

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# **Annexure-I**

# Rayalaseema Thermal Power Project Stage-IV (1X600MW) Cost Estimates

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SI. No.	Description	Amount		
1	BTG package	1459.11		
2	Provision for taxes on erection PO and increase in taxes on supply PO of BTG package	35.00		
3	Price variation clause on BTG package	200.00		
4	BOP Package including Civil works	1256.63		
5	Other Civil works including land & CSR	100.22		
6	Providing Bye-pass line connection from existing kalamalla Railway station			
7	Spares	39.00		
8	Establishment & Consultancy	55.26		
9	Operator Training	2.86		
10	Start-up fuel	12.00		
11	Contingencies & Overheads	76.00		
12	IDC & Financial Charges	1542.00		
13	Electrification of Railway lines and signaling in the Marshalling yard	10.00		
	Total Project Cost	4853.38		

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#### Annexure-II

# **Commissioning & Testing**

**1.1 Guidelines:** The commissioning of the Project will require satisfactory performance of a number of tests prescribed to demonstrate conformance with regulatory requirements.

An Installed Capacity Test shall be carried out during the Reliability Run as defined in the "Tests on Completion" in the EPC Contract entered into, or to be entered into, by APGENCO for the purposes of the Project.

APGENCO shall give APDISCOMS at least Seven (7) days prior written notice of the date on which the Installed Capacity Test will commence.

APGENCO and APDISCOMS shall designate representatives to witness and observe the test. The Generating Unit shall be operated within the manufacturer's specified limits and in accordance with Prudent Utility Practices for the duration of the test.

- **1.2 Test Conditions General Considerations:** The Performance Guarantee Test shall be designed and carried out in accordance with standard ASME PTC 6 Turbo-Generators. Results will be communicated after success full completion of test.
  - i) The Performance Guarantee Test will be run under any and all ambient conditions (temperature, humidity etc) that may exist during the time of the Performance Guarantee Test, and no corrections in final generator gross output will be allowed as a result of prevailing ambient conditions.
  - ii) The fuel will be within the range of the fuel specification in the Coal Supply Agreement (CSA).
  - iii) Correction curves will be used if Grid operation during the Performance Guarantee Test exceeds the Grid Technical Limits.
  - iv) The Performance Guarantee Test shall be deemed to have demonstrated the gross Generation capacity of the Generating Unit under all design conditions and therefore no Adjustments shall be made on account of fuel quality or ambient conditions.
  - v) Electrical system Characteristics Test shall demonstrate the Project's ability to operate within the limits of the electrical system characteristics. Electrical system characteristics Compliance shall be deemed to be achieved in case of:
    - a. Voltage provided the Project operates within the nominal voltage levels of the Grid for the duration of the Performance Guarantee Test. If during the test, voltage tests cannot be performed due to Grid constraints, data supplied from tests of the generator step-up transformers and generator supplied by the manufacturers shall be used to establish the ability of the Project to operate within the specified voltage limits.

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- b. Grid frequency provided the Project operates within the nominal frequency levels for the duration of the Performance Guarantee Test.
- c. Power factor, provided the Project operates within the power factor range for the duration of the Performance Guarantee Test. If, during the Performance Guarantee Test, power factor tests cannot be performed due to Grid constraints, data supplied from tests of the generators and the generator step-up transformers supplied by the manufacturers shall be used to establish the ability of the Project to operate within the specified voltage limits.

Electrical output shall be measured at the generator terminals using test class instruments with an overall measurement uncertainty of # 0.5% (utilizing meters of class 0.2 accuracy). The metering system shall be capable of measuring instantaneous output (MW), hourly average power (MW) and the integrated energy over the relevant test period (MWh).

#### 1.3 Installed Capacity Test:

- a) APGENCO shall conduct Installed capacity test for declaration of COD as per CEA guidelines if any. Each Installed Capacity Test shall be carried out at maximum continuous rating over a continuous period of seventy-two (72) hours for determination of installed capacity of the unit. Provided that if the Generating Unit's Installed Capacity is determined to be higher than 600 MW, including if any permitted retest shall result in such Generating Unit's Installed Capacity being higher than 600 MW, then the Installed Capacity of such Generating Unit shall be limited to 600 MW and shall apply for the purpose of calculation of PLF. If the Generating Unit's Installed Capacity is determined to be lower than 600 MW, the capital cost of the project shall be arrived at on pro-rata basis against the rated capacity.
- b) APGENCO shall demonstrate declared capacity as per 18.1 of APERC regulations.

#### 1.4 Test Results

- **1.4.1** Within five (5) Days after the completion of the Installed Capacity Test APGENCO shall submit a written report to APDISCOMS which shall contain:
  - Details of the results of the tests including sufficient data to demonstrate that all requirements of the Installed Capacity Test and the Electrical System Test have been met.
  - ii) if a Generating Unit has passed the Installed Capacity Test for the purposes of COD, the date and time for commencement of Commercial Operation for such Generating Unit for the purposes of this Agreement.

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- **1.4.2** If APDISCOMS disputes any or all of the results contained in the report provided by APGENCO pursuant to paragraph 1.4.1 above then APDISCOMS shall initiate the informal Dispute and Arbitration detailed in Article 8 of this Agreement.
- **1.4.3** Energy generated during testing and commissioning: At all times after the Scheduled Date of Synchronisation of each Generating Unit, APDISCOMS shall accept all electrical output produced by such Generating Unit during start-up, commissioning and testing performed pursuant to Article 2.1(a) of this Agreement.

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#### Annexure - III

# **Computation of Variable Charges**

#### **Energy Charges**

a. Energy charges shall cover fuel costs and shall be worked out on the basis of ex-bus energy sent out corresponding to scheduled generation as per the following formula.

Energy charges (Rs)= Rate of Energy charges in Rs/KWh X Ex-bus energy sent out corresponding to scheduled generation for the month in Kwh

Where,

Rate of Energy Charges (REC) shall be the sum of the cost of normative quantities of Primary and secondary fuel for one KWh of ex-bus energy sent out corresponding to scheduled generation and shall be computed as under:

REC = 
$$\frac{100\{P_p \times (Q_p)_n + P_s \times (Q_s)_n\}}{(100-(AUX_n))}$$

Where,

- P<sub>p</sub>= Landed cost of Primary fuel namely coal or lignite or gas or liquid fuel in Rs/Kg or Rs/cubic- meter (m³) or Rs./Litre, as the case may be
- $(Q_p)_{n=}$  Quantity of primary fuel required for generation of one KWh of electricity at generator terminal in Kg or litre or  $m^3$ , as the case may be and shall be computed on the basis of normative Gross Station Heat rate (less heat contributed by secondary fuel oil for coal/lignite based generating stations) and gross calorific value of coal/lignite or gas or liquid fuel as fired.
- Ps =Landed cost of secondary fuel oil in Rs/ml
- ( $Q_s$ ) n= Normative quantity of secondary fuel oil in ml/KWh as per clause 11.1.4, as the case may be, and
- AUX  $_n$  = Normative Auxiliary Energy consumption as percentage of gross generation as per clause 11.1.2, as the case may be.
- b. Adjustment of rate of energy charge(REC) on account of variation in price or heat value of fuels. Initially, gross calorific value of coal/lignite or gas or liquid fuel shall be taken as per actuals of the preceding three months. Any variation shall be adjusted on month to month basis on the basis of gross calorific value of coal/lignite or gas or liquid fuel received and burnt and landed cost incurred by the Generating Company for procurement of coal/lignite, oil, or gas or liquid fuel, as the case may be. In case of any dispute, an appropriate application in accordance with the Conduct of Business Regulations shall be made before the Commission.
- c. Landed cost of fuel: The landed cost of fuel shall include price of fuel corresponding to the grade/quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road/pipeline or any other means, and, for the purpose of calculation of energy charges, shall be arrived at after considering transit losses as per clause 11.1.5 of APERC Regulations.

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# Annexure - IV

# **Energy Meters & Calibration**

- 1.1 Installation of Energy meters: Main & check energy meters of 0.2S class accuracy shall be installed at the interconnection point. Standby meters of 0.2S class accuracy shall be provided in the appropriate locations as specified in the CEA metering regulations 2006. The Main, check & standby meters will be installed and maintained by APGENCO. Cost of the main, check & standby meters and charge for all types of testing and calibration will be borne by APGENCO. The meters should have provision to record parameters even if there is a Potential Transformer fuse failure. APGENCO shall also ensure installation of adequate telemeter and communications equipment to transmit information on an on-line basis to APSLDC. These meters shall be jointly calibrated, inspected and sealed by and on behalf of APGENCO and APDISCOMs and shall not be interfered with except in the presence of the other party on mutual consent of parties when necessity arises.
- 1.2 Inspection and Sealing: All the meters shall be jointly inspected and sealed with a seal owned by each Party and shall not be opened, calibrated or tested except in the presence of the representatives of both Parties; Provided that, if one Party gives the other Party not less than two weeks prior notice (or where, due to the requirements of this Agreement or any other event or circumstances, it is necessary for such opening calibration or testing to be carried out within any shorter period, such prior notice as shall be reasonable in the circumstances) that any such meter is to be opened, calibrated or tested, and such other Party does not attend such opening, calibration or testing, then the first Party may proceed with such opening, calibration or testing without the presence of such other Party.
  - 1.3 Errors in Main Meters: Whenever the monthly meter reading indicates errors in the Main Meters beyond the permissible limit but no such error is noticed in the Check Meters, billing for the month will be done on the basis of the Check Meters and Main Meters will be immediately repaired and recalibrated.
  - 1.4 Errors in both the Main Meters and Check Meters: If the monthly meter reading of both the Main Meters and the corresponding check Meters are found to be beyond permissible limits of error, the Main Meters and the Check Meters shall be immediately repaired, recalibrated and replaced. For this period the readings of standby meters shall be taken to arrive at the correct energy for billing purposes for the period of the Month up to the time of such test repairs, recalibration & replacement. Billing for the period thereafter until the next monthly meter reading shall be as per the calibrated Main Meter.
  - **1.5 Defects**: If both the Main Meter and the Check Meter fail to record or if any of the potential transformer fuses are blow out, then the energy will be computed based on standby meter reading for that period of defect.

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- 1.6 Correction of Meter Error: For the purpose of corrections to be applied, the meter shall be tested as per the applicable standards. The error at the load and power factor nearest the average monthly load served at the point during the period shall be taken as the error to be applied for correction. The meter shall be tested at NABL accredited laboratories.
- 1.7 Correction of Meter: All the periodical checks and calibration shall be conducted in the presence of authorised representatives of APGENCO and APDISCOMS and results/corrections implemented shall be applicable and binding on both parties. The meters shall be jointly sealed after each calibration or when the seal is broken on mutual consent of the parties.
- 1.8 Testing after Notice: If at any time any party feels that the meter is not recording correctly it shall give notice to the other party. APGENCO shall undertake testing and calibration (if necessary) at NABL accredited laboratory in co-ordination with APDISCOMs. If error on such testing is found to exceed the error limits specified in the relevant standards for the class of the meter, the meter shall be replaced. Necessary adjustments in the bills shall be made from the time of previous meter reading till the time of the calibration if the defective meter reading has been used for billing for the concerned period. The testing after notice from APDISCOMs would be done by APGENCO and if on such testing errors are found to be within limits, APGENCO shall be compensated by the payment of actual cost of such test by APDISCOMs.
- 1.9 Other Meters: Points of metering if any, other than the interconnected points, where meters are to be installed for mutual benefit will be decided in the co-ordination committee meeting between both parties. The type of meters, accuracy class etc. will be decided by the same committee
- 1.10 Records: APGENCO and APDISCOMS shall each compile and maintain records respective meter readings recorded by each Party for the energy generated by APGENCO and delivered to APDISCOMS. Such records will be made available for inspection by the other Party during business hours upon reasonable advance notice.
- **1.11 General:** Regarding the metering, the guide lines issued by CEA from time to time shall be applicable and final.

# Annexure - V

# **Computation of Delivered Cost of Coal – Thermal Plants**

- 1. Weight of Coal: The weight of coal received for the Thermal Power Station for the purpose of calculating Weighted Average Delivered Cost of Coal will be the weight of coal supplied by the supplier reduced by the quantity lost in transit, Windage & shrinkage, etc. This loss shall be 0.8%.
- 2. Cost of Coal: Total Cost of Coal delivered at each Thermal Power Station shall constitute the price paid to the coal supplier, all incidental duties and taxes paid to the State or Central Government and the cost of optimal transportation.
- 3. Weighted Average Delivered Cost of Coal: The cost of coal for the computation of Variable Charges will be the weighted average delivered cost of coal. For the purpose of the weighted average, cost of coal received will be the total cost of coal calculated as per Clause 2 above divided by the quantity of coal delivered at the Thermal Power Station (in Rs. per metric tonne), as per Clause 1 above.

#### **Example:**

Opening Stock at RTPP-IV = 100 metric tonne

Opening Weighted average Cost of Coal = Rs. 920 per metric tonne

Let quantity of Coal supplied by M/s MCL to RTPP-IV = 100 metric tonne

#### Cost of Coal:

Basic Cost = Rs. 70,000.00
Royalty = Rs. 500.00
CST = Rs. 280.00
Freight = Rs. 23,000.00
Total Cost = Rs. 93,780.00

Coal Lost in Transit, Windage & shrinkage = 0.8 metric tonne

Quantity Coal delivered at RTPP-IV = 99.2metric tonne

Closing weighted average cost of coal =

{Cost of Coal received + (Op ening Stock x Op Weighted Average Cost per tonne)} {Op Stock + Quantity of Coal Delivered #}

$$= \frac{\{Rs.93,780 + (Rs.920 \times 100)\}}{\{100 + 99.2\}} = Rs. 933$$

The cost to be taken for the purpose of Variable Cost is Rs 933 per Tonne

# considering transit loss, Windage & shrinkage etc.

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# **Annexure-VI**

To provide additional security to the APGENCO for the APDISCOM's obligation hereunder, APDISCOMs shall also open an escrow account with any of the Scheduled Banks which account shall be maintained by such bank as an agent for the APGENCO, and which shall be pledged as security to the APGENCO and its Lenders for payment of all sums due to the APGENCO by APDISCOMs under this Agreement as further set forth herein. Such account shall be opened on or before the date thirty (30) days prior to the effective date. Such account shall be funded with revenues from payments due to APDISCOMs from consumers of APDISCOMs. APDISCOMs shall cause all payments due to APDISCOMs from such consumers to be deposited in such Escrow account aggregating an amount equal to the L.C amount. Such instruction shall be irrevocable during the term of this agreement. APDISCOMs shall not act in any manner as may negatively affect the inflow of the revenues into this account and shall take such steps as may be necessary to assure the flow of the specified level of revenues in such account (including adding or substituting consumers and undertaking collection efforts) during the term of this agreement. Provided that APDISCOMs, in compliance with its obligations under this agreement with respect to payment of all sums when due to the APGENCO, through the Letter of Credit or otherwise APDISCOMs shall be entitled to withdraw funds from the Escrow account each month to be used for such purposes as the APDISCOMs may designate. In the event of APDISCOMs failure to pay any sums due to the APGENCO on the due date of payment through the Letter of Credit or otherwise, when any sum is due to the APGENCO, or in case of non-renewal of the Letter of Credit, the APGENCO, by notice in writing to the bank holding the Escrow Account, may require such bank not to honour any of cheques, hundies and requisition presented to it by or on behalf of APDISCOM or any other drawals on the account until after the claim of the APGENCO is first discharged.

Chief Engineer

(Commercial)
APGENCO, Vidyut Soudha,
Gunadala, Vijayawada-520 004.

--END--

CHIEF GENERAL MANAGER
PPA, RA & QC

A.P.E.P.D.C. LTD.

# Minutes of Meeting held on 29.03.2018 for COD of Unit-6 of Rayalaseema Thermal Power project stage IV (1x600 MW)

The Installed capacity Test of Unit-6 of RTPP Stage - IV was conducted in the presence of the following officials of APGENCO, APTRANSCO, APPCC, APSPDCL, APEPDCL & NTPC.

#### **Members Present:**

#### APGENCO:

- 1. Sri. G. Kesava Swami, CE/O&M/RTPP/APGENCO
- 2. Smt. M. Padma Sujatha, CE/Commercial/APGENCO
- 3. Sri. R.Ravindra Kumar, CE/Generation/APGENCO

#### **APSPDCL**:

1. Sri. V.Ravi, GM/IPC

#### APEPDCL:

1. Sri. P.Prabhakara Rao, GM/Planning & PP

#### **APTRANSCO:**

- 1. Sri. G.Raja Babu, CE/IPC& Power systems/APPCC
- 2. Sri. Ch. Subrahmanyam Raju, DE/Thermal/IPC
- 3. Sri. A. Sanni Babu, DE/Tech & MRT Vigilance
- 4. Sri. T.V.V.D.V.Prasad, ADE/MRT Vigilance
- 5. Sri. K. Vamsi Krishna, ADE/Power Systems
- 6. Sri. P. Raj kumar, AE/Commercial/APPCC

#### NTPC:

1. Sri. N. Prem Kumar, AGM/OS - SRHQ.

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The installed capacity test for COD has been conducted from 15:30 Hrs on 25.03.2018 to 22:30 hrs on 28.03.2018.

The average Generating Capacity during the test period of 72 Hrs (excluding interruption and partial loading period) has been observed as 600.82 MW and the performance of the unit is found to be satisfactory. The test results are recorded and enclosed in the ANNEXURE.

Page 1 of 2

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APGENCO will submit a written report to APDISCOMs within five (5) days from the date of completion of Installed Capacity Test for declaration of COD of Unit-6 of RTPP -IV with effect from 00.00 hrs on 29.03.2018. Further, the Performance Guarantee test results of the unit will be submitted soon after completion of the same.

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1 -	APGENCO		1.	APTRANSCO/APPCC
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	NTPC			k. Vansi Krishm
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# ANNEXURE

Installed Capacity Test for declaration of COD of RTPP Stage-IV (1x600 MW)

Meter S_No. 0	526/978	1	- Harris Royalus		Meter MF = 1.0		
	Hour	Time	Hourly Data Energy Meter		Cumulative Data		Remarks
Date			Reading (MWH)	Generation (MU)	Generation (MU)	Average Load (MW)	
	0	15:30	72909.2				
	1	16:30	73509.4	0.600	0.6002	600.20	
	2	17:30	74122.1	0.613	1.2129	606.45	
	3	18:30	74742.8	0.621	1.8336	611.20	
25.03.18	4	19:30	75352.3	0.610	2.4431	610.78	
	5	20:30	75962.1	0.610	3.0529	610.58	
	6	21:30	76580.5	0.618	3.6713	611.88	
	7	22:30	77185.0	0.605	4.2758	610.83	
		23:30	77317.6	0.133			Unit trippe d @ 22:49 Hrs
		0:30	77317.6	0.000			Unit synchronized @ 01:03 Hrs.
		1:30	77539.3	0.222	eministra 21-a 16 augusta -		Partial load during load raisin
		2:30	77705.6	0.166			Partial load during load raisin
	8	3:30	78265.6	0.560	4.8358	604.48	
	9	4:30	78870.6	0.605	5.4408	604.53	
	10	5:30	79478.3	0.608	6.0485	604.85	
	11	6:30	80089.4	0.611	6.6596	605.42	
with the	12	7:30	80697.9	0.609	7.2681	605.67	
	13	8:30	81310.1	0.612	7.8803	606.18	
	14	9:30	81922.4	0.612	8.4926	606.61	
	15	10:30	82502.6	0.580	9.0728	604.85	
	16	11:30	82982.4	0.480	9.5526	597.04	
26.03.18		12:30	83312.7	0.330			Load reduced due to Safety valve problem
	17	13:30	83812.8	0.500	10.0527	591.34	
	18	14:30	84401.0	0.588	10.6409	591.16	
	19	15:30	84991.0	0.590	11.2309	591.10	
	20	16:30	85591.0	0.600	11.8309	591.55	
	21	17:30	86193.0	0.602	12.4329	592.04	1 2 H5 H 2 T 1 T 1 T 1 T 1
	22	18:30	86793.4	0.600	13.0333	592.42	
	23	19:30	87395.2	0.602	13.6351	592.83	I HORITORN LINE
	24	20:30	87999.8	0.605	14.2397	593.32	
	25	21:30	88578.3	0.579	14.8182	592.73	0677
-	26	22:30	89162.2	0.584	15.4021	592.39	0
- 1	27	23:30	89775.0	0.613	16.0149	593.14	

K115, Ana

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	28	0:30	90380.9	0.606	16.6208	593.60	· ·
	29	1:30	90977.0	0.596	17.2169	593.69	
	30	2:30	91567.0	0.590	17.8069	593.56	
and the same	31	3:30	92157.1	0.590	18.3970	593.45	
1 D 1 - 2	32	4:30	92767.2	0.610	19.0071	593.97	
	33	5:30	93367.5	0.600	19.6074	594.16	
( parell	34	6:30	93967.4	0.600	20.2073	594.33	
	35	7:30	94557.3	0.590	20.7972	594.21	
	36	8:30	95162.9	0.606	21.4028	594.52	
	37	9:30	95765.2	0.602	22.0051	594.73	
	38	10:30	96373.6	0.608	22.6135	595.09	
	39	11:30	96980.3	0.607	23.2202	595.39	
27.03.18	40	12:30	97593.8	0.614	23.8337	595.84	
	41	13:30	98198.5	0.605	24.4384	596.06	
	42	14:30	98808.5	0.610	25.0484	596.39	
	43	15:30	99414.5	0.606	25.6544	596.61	
	44	16:30	100019.5	0.605	26.2594	596.80	
	ed forecas	17:30	100624.5	0.605	26.8644	596.99	
	45	18:30	101237.1	0.613	27.4770	597.33	
	46	19:30	101843.4	0.606	28.0833	597.52	
	47	1-328-04-2	102453.5	0.610	28.6934	597.78	
	48	20:30	103061.6	0.608	29.3015	597.99	
	49	21:30	103664.3	0.603	29.9042	598.08	
	50	The Control of the Control	104273.5	0.609	30.5134	598.30	
	51	23:30	104273.5	0.606	31.1194	598.45	
	52	0:30	105486.6	0.607	31.7265	598.61	
	53	1:30	106098.4	0.612	32.3383	598.86	
	54	2:30		0.613	32.9509	599.11	
	55	3:30	106711.0	0.614	33.5647	599.37	
	56	4:30	107324.8	0.614	34.1783	599.62	
	57	5:30	107938.4	0.610	34.7885	599.80	
	58	6:30	108548.6	0.611	35.3998	600.00	
28.03.18	59	7:30	109159.9	0.609	36.0090	600.15	
	60	8:30	109769.1		36.6094	600.15	
	61	9:30	110369.5	0.600	37.2185	600.30	
	62	10:30	110978.6	0.609	THE STATE OF	600.41	
	63	11:30	111586.2	0.608	37.8261	600.41	
	64	12:30	112191.0	0.605	38.4309	600.56	
	65	13:30	112796.4	0.605	39.0363	10000	
	66	14:30	113402.2	0.606	39.6421	600.64	
1	67	15:30	114009.4	0.607	40.2493	600.74	Mu

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100		3.69	114119.10	0.11			Unit tripped @ 15=41 Hrs due to Condeser vac uum low
		3.73	114365.70	0.25			Unit synchro nised @ 16:42 H rs.
28.03.18	68	18:30	114950.8	0.585	40.8344	600.51	
20.03.10	69	19:30	115561.1	0.610	41.4447	600.65	
	70	20:30	116183.6	0.623	42.0672	600.96	
	71	21:30	116778.0	0.594	42.6616	600.87	
	72	22:30	117375.3	0.597	43.2589	600.82	Installed capacity test concluded.

APEPDCL

1 Muy

**APGENCO** 

1 hrey

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