**PART-I**
**FORM- 1**

**Summary Sheet**

**Name of the Company** **APGenco**

**Name of the Power Station :** **RTPP stage II**

(Rs in Crs)

| S.No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1.1 | Depreciation | 7.85 | 7.85 | 7.85 | 7.85 | 7.85 |
| 1.2 | Return on Capital Employed[1] | 79.37 | 78.94 | 78.55 | 78.19 | 77.87 |
| 1.3 | O & M Expenses | 196.81 | 209.88 | 223.82 | 238.68 | 254.53 |
| | **Total** | 284.03 | 296.67 | 310.22 | 324.72 | 340.25 |

**2.Calculation of Rate of Energy Charge(Rs./kWh)[1]**

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.1 | Rate of Energy Charge from Primary Fuel (REC)p[2] | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 |
| 2.2 | Rate of Energy Charge from Secondary Fuel (REC) | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.3 | Rate of Energy Charge ex-bus(REC)[3A,3B,3C] | 3.87 | 3.87 | 3.87 | 3.87 | 3.87 |

Petitioner

**PART-I**
**FORM-2**

## Plant Characteristics

**Name of the Company** : APGENCO

**Name of the Power Station** : Rayalaseema Thermal Power Station Stage II

**Basic characteristics of the plant**[1] : Coal based thermal plant with conventional Boiler and Steam Turbine.

**Special Features of the Plant** :

**Site Specific Features**[2] :

**Special Technological Features**[3] :

**Environmental Regulation related features**[4] : ESPs are provided for pollution control in both the Units. Opacity meters are provided for SPM measurement and measurement of SOX and NOX emissions provided.

**Any other special features** :

| **Fuel Details**[5] | Primary Fuel | Secondary Fuel | Alternate Fuels |
|---|---|---|---|
| | Coal | Heavy oil/Light Diesel oil | --- |

| **Details** | **Module number or Unit number** | |
|---|---|---|
| Unit No. | 1 | 2 |
| | Unit-1 | Unit-2 |
| Installed Capacity (IC) | 210MW | 210MW |
| Date of Commercial Operation (COD) | 12.08.2007 | 29.03.2008 |
| Type of cooling system[6] | Closed cycle cooling system with ND cooling | Closed cycle cooling system with ND cooling towers |
| Type of Boiler Feed Pump[7] | Motor driven | Motor driven |

**PETITIONER**

**PART-I**
**FORM-3**

**Normative parameters considered for tariff computations**

**Name of the Company** **APGENCO**

**Name of the Power Station** **RTPP Stage II**

**Year ending March**

| Particulars | Unit | As per fillings | As per APERC norms |
|---|---|---|---|
| | | 2019-24 | |
| 1 | 2 | 3 | 4 |
| Rate of Return on Capital Employed | % | 11.8 | Not mentioned |
| Target Availability | % | 80% | 80% |
| Target PLF | % | - | 80% |
| Auxiliary Energy Consumption | % | 9 | 9 |
| Gross Station Heat Rate | kCal/kWh | 2500 | 2500 |
| Specific Fuel Oil Consumption | ml/kWh | 2 | 2 |
| O&M Cost * | Rs.Lakh/MW | - | - |
| Cost of Coal/Lignite for WC[1] | in Months | 1 | 1 |
| Cost of Secondary Fuel Oil for WC[1] | in Months | 1 | 1 |
| Fuel Cost for WC[2] | in Months | | |
| Liquid Fuel Stock for WC[2] | in Months | | |
| O & M Expenses for WC | in Months | 1 | 1 |
| Maintenance Spares for WC | % | 1 | 1 |
| Recievables for WC | in Months | 2 | 2 |
| Prime lending Rate of SBI | % | - | |
| Incentive Rate | Paise / kWh | 25 | 25 |

**PETITIONER**

**PART-I**
**FORM-5**

**Abstract of Admitted Capital Cost for the existing Projects**

**Name of the Power Station : RTPP II**

| | |
|---|---|
| Capital Cost as admitted by APERC | Rs 1874.46 Crs |
| Capital cost admitted as on_____ | 31.03.2014 |
| (Give reference of the relevant APERC Order with Petition No. & Date) | O.P.No.3 of 2016 dated 26.03.2016 |
| Foreign Component, if any (In Million US $ or the relevant Currency) | - |
| Domestic Component (Rs. Cr.) | Rs 1874.46 Crs |
| Foreign Exchange rate considered for the admitted Capital cost | - |
| **Total Capital cost admitted (Rs. Cr)** | Rs 1874.46 Crs |

PETITIONER

| | | | Form 7 |
|---|---|---|---|
| **Name of the Company** | **APGENCO** | | |
| **Name of the Power Station** | **RTPP II** | | |
| | **Package1** | **Package2** | **Package3** |
| **1** | **2** | **3** | **4** |
| **Source of Loans** | PFC | Karnataka Bank | Karur Vysya Bank |
| **Currency** | INDIAN Rs | INDIAN Rs | INDIAN Rs |
| **Amount of Loan sancioned** | 1215.00 | 50.00 | 54.40 |
| **Amount of Gross Loan drawn Upto 31.03.19** | 1215.00 | 48.13 | 51.67 |
| **Interest Type** | Floating | Floating | Floating |
| **Fixed Interest Rate, if applicable** | - | - | - |
| **Base Rate, if Floating Interest** | 10.20% | 8.50% | 9.00% |
| **Margin, if Floationg Interest** | - | - | - |
| **Are there any Caps/Floor** | - | - | - |
| **If above is yes, specify caps/floor** | - | - | - |
| **Moratorium Period** | | 1 Year | 1 Year |
| **Moratorium efective from** | | 2-Jul-09 | 22-Jul-16 |
| **Repayment Period** | 12 Years | 10 Years | 10 Years |
| **Repayment effective from** | 15-Oct-07 | 31-Jul-10 | 22-Aug-17 |
| **Repayment Frequency** | Monthly | Monthly | Monthly |
| **Repayment Instalment** | 32 **#** | 120 | 108 |
| **Base ExchangeRate** | - | - | - |
| | | | |

**# Note : After 37 Quarterly installments (out of 48), repayment of this loan was rescheduled to monthly basis @ IR of 10.20% from Nov'16 for the remaining period of the loan i.e 32 monthly installments**

**FORM- 11**

## Statement of Depreciation

**Name of the Company** APGENCO

**Name of the Power Station** RTPP-II

(Rs in Laks)

| **Financial Year** | **Upto 2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** | **2023-24** |
|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Depreciation on Capital Cost** | 1874.46 | 1905.93 | 1905.93 | 1905.93 | 1905.93 | 1905.93 |
| **Depreciation recovered during the Year** | 144.22 | 7.85 | 7.85 | 7.85 | 7.85 | 7.85 |
| **Depreciation & Advance against Depreciation recovered during the year** | 144.22 | 7.85 | 7.85 | 7.85 | 7.85 | 7.85 |
| **Cumulative Depreciation & Advance against Depreciation recovered upto the year** | 1578.18 | 1586.03 | 1593.88 | 1601.73 | 1609.58 | 1617.43 |

Petitioner

**PART-I**
**FORM- 12**

**Calculation of Depreciation Rate**

**Name of the Power Station-RTPP-O&M stage -II**

(Amount in lacs)

| Sl. no. | Asset Name | Gross Block as on 31.03.2019 or as on COD, whichever is later | Additions | Depreciation Rates as per CERC's Depreciation Rate Schedule | Depreciation Amount |
|---|---|---|---|---|---|
| | **1** | **2** | | **3** | **4** |
| 1 | Land & Land rights | 5.81 | | 0.00% | |
| 2 | Building | 12,981.83 | | 3.02% | 963.93 |
| 3 | Lines and Cable networks | 0.46 | 0.46 | 7.84% | 0.06 |
| 4 | Plant&Equipment | 148,230.54 | 98.90 | 7.84% | 10,269.75 |
| 5 | Capital spares | - | 0 | | |
| 6 | Hydraulic works | 27,739.26 | 3.55 | 3.40% | 1,936.35 |
| 7 | other civil works | 1,218.66 | | 3.02% | 167.49 |
| 8 | Vechicles | 375.88 | | 33.40% | |
| 9 | Land(Lease hold) | - | | | |
| 10 | Others | 689.54 | 21.87 | 12.77% | 78.95 |
| 11 | Intangible assets | | | | |
| | **TOTAL( 1 to 11)** | **191,241.99** | **124.78** | | **13,416.53** |
| | **Weighted Average Depreciation Rate (%)** | | | | **7.02%** |

Form 13

| | Name of the Company | APGENCO | | | | | |
|---|---|---|---|---|---|---|---|
| | Name of the Power Station | RTPP II | | Amount in Crores | | | |
| S.No | Particulars | Existing 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 |
| 1 | **Loan 1 - PFC 31301013** | | | | | | |
| | Gross Loan - Openig | 1215.00 | 1215.00 | | | | |
| | Cumulative Repayment of Loans upto Current Year | (1,083.70) | (1,188.74) | | | | |
| | **Net Loan - Opening** | 131.30 | 26.26 | | | | |
| | Add: Drawals during the Year | - | - | | | | |
| | Less: Repayment of the Loans during the year | (105.04) | (26.26) | | | | |
| | **Net Loan - Closnig** | **26.26** | **0.00** | | | | |
| | Average Net Loan | 26.26 | 0.00 | | | | |
| | Rate of Interest on Loan | 10.20% | 10.20% | | | | |
| 2 | **Loan 2 - Karnataka Bank** | | | | | | |
| | Gross Loan - Openig | 48.13 | 48.13 | | | | |
| | Cumulative Repayment of Loans upto Current Year | (38.80) | (43.80) | | | | |
| | **Net Loan - Opening** | 9.33 | 4.33 | | | | |
| | Add: Drawals during the Year | - | - | | | | |
| | Less: Repayment of the Loans during the year | (5.00) | (4.33) | | | | |
| | **Net Loan - Closnig** | **4.33** | **0.00** | | | | |
| | Average Net Loan | 4.33 | 0.00 | | | | |
| | Rate of Interest on Loan | 8.50% | 8.50% | | | | |
| 3 | **Loan 3 - Karur Vysya Bank** | | | | | | |
| | Gross Loan - Openig | 50.34 | 51.67 | 51.67 | 51.67 | 51.67 | 51.67 |
| | Cumulative Repayment of Loans upto Current Year | (4.03) | (10.07) | (16.11) | (22.15) | (28.19) | (34.23) |
| | **Net Loan - Opening** | 46.31 | 41.60 | 35.56 | 29.52 | 23.48 | 17.44 |
| | Add: Drawals during the Year | 1.33 | - | - | - | - | - |
| | Less: Repayment of the Loans during the year | (6.04) | (6.04) | (6.04) | (6.04) | (6.04) | (6.04) |
| | **Net Loan - Closnig** | **41.60** | **35.56** | **29.52** | **23.48** | **17.44** | **11.40** |
| | Average Net Loan | 41.60 | 35.56 | 29.52 | 23.48 | **17.44** | **11.40** |
| | Rate of Interest on Loan | 9.00% | 9.00% | 9.00% | 9.00% | 9.00% | 9.00% |

**PART-I**
**FORM- 13A**

## Calculation of Return on Capital Employed

**Name of the Company** APGENCO

**Name of the Power Station** RTPP-II

(Amount in Crs)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Regulated Rate Base[1] | 11.8% | 11.8% | 11.8% | 11.8% | 11.8% |
| WACC[1] | 672.61 | 669.02 | 665.69 | 662.64 | 659.89 |
| RoCE | 79.37 | 78.94 | 78.55 | 78.19 | 77.87 |

**Petitioner**

**PART-I**
**FORM- 14**

## Working Capital

**Name of the Company** APGENCO

**Name of the Power Station** RTPP-II

( Rs in Crs)

| Sl. No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Cost of Fuel | 94.92 | 94.92 | 94.92 | 94.92 | 94.92 |
| 2 | O & M expenses | 16.40 | 17.49 | 18.65 | 19.89 | 21.21 |
| 3 | Maintenance Spares | 26.57 | 27.63 | 28.74 | 29.89 | 31.09 |
| 4 | Recievables | 237.19 | 239.29 | 241.55 | 243.97 | 246.56 |
| | Total Working Capital | 375.08 | 379.33 | 383.86 | 388.67 | 393.78 |

**Petitioner**

**PART-I**
**FORM- 1**

**Summary Sheet**

**Name of the Company** **APGenco**

**Name of the Power Station :** **RTPP stage III**

(Rs in Crs)

| S.No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1.1 | Depreciation | 90.11 | 90.11 | 12.57 | 12.57 | 12.57 |
| 1.2 | Return on Capital Employed | 82.97 | 72.40 | 60.30 | 59.09 | 57.91 |
| 1.3 | O & M Expenses | 98.41 | 104.94 | 111.91 | 119.34 | 127.26 |
| | **Total** | 271.49 | 267.45 | 184.78 | 191.00 | 197.74 |

**2.Calculation of Rate of Energy Charge(Rs./kWh)**

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.1 | Rate of Energy Charge from Primary Fuel | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 |
| 2.2 | Rate of Energy Charge from Secondary Fuel | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.3 | Rate of Energy Charge ex-bus | 3.87 | 3.87 | 3.87 | 3.87 | 3.87 |

Petitioner

**PART-I**
**FORM-2**

## Plant Characteristics

**Name of the Company** : APGENCO

**Name of the Power Station** : Rayalaseema Thermal Power Station Stage III

**Basic characteristics of the plant**[1] : Coal based thermal plant with conventional Boiler and Steam Turbine.

**Special Features of the Plant** :

**Site Specific Features**[2] :

**Special Technological Features**[3] :

**Environmental Regulation related features**[4] : ESPs are provided for pollution control in both the Units. Opacity meters are provided for SPM measurement and measurement of SOX and NOX emissions provided.

**Any other special features** :

| **Fuel Details**[5] | Primary Fuel | Secondary Fuel | Alternate Fuels |
|---|---|---|---|
| | Coal | Heavy oil/Light Diesel oil | --- |
| **Details** | **Module number or Unit number** | | |
| Unit No. | 1 | | |
| Installed Capacity (IC) | 210MW | | |
| Date of Commercial Operation (COD) | 10.02.2011 | | |
| Type of cooling system[6] | Closed cycle using induced draft cooling tower | | |
| Type of Boiler Feed Pump[7] | Motor driven | | |

**PETITIONER**

PART-I

FORM-3

**Normative parameters considered for tariff computations**

**Name of the Company** **APGENCO**

**Name of the Power Station** **RTPP Stage III**

| Particulars | Unit | As per fillings | As per APERC norms |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **Rate of Return on Capital Employed** | **%** | **11.8** | **Not mentioned** |
| **Target Availability** | **%** | 80% | 80% |
| **Target PLF** | **%** | - | 80% |
| **Auxiliary Energy Consumption** | **%** | 9 | 9 |
| **Gross Station Heat Rate** | **kCal/kWh** | 2500 | 2500 |
| **Specific Fuel Oil Consumption** | **ml/kWh** | 2 | 2 |
| **O&M Cost *** | **Rs.Lakh/MW** | 28.68(with 6.64% esc) | - |
| **Cost of Coal/Lignite for WC[1]** | **in Months** | 1 | 1 |
| **Cost of Secondary Fuel Oil for WC[1]** | **in Months** | 1 | 1 |
| **Fuel Cost for WC[2]** | **in Months** | | |
| **Liquid Fuel Stock for WC[2]** | **in Months** | | |
| **O & M Expenses for WC** | **in Months** | 1 | 1 |
| **Maintenance Spares for WC** | **%** | 1 | 1 |
| **Recievables for WC** | **in Months** | 2 | 2 |
| **Prime lending Rate of SBI** | **%** | - | |
| **Incentive Rate** | **Paise / kWh** | 25 | 25 |

**PETITIONER**

**PART-I**
**FORM-5**

**Abstract of Admitted Capital Cost for the existing Projects**

**Name of the Power Station : RTPP III**

| | |
|---|---|
| Capital Cost as admitted by APERC | Rs 1182.42 Crs |
| Capital cost admitted as on_____ | 31.03.2014 |
| (Give reference of the relevant APERC Order with Petition No. & Date) | O.P.No.3 of 2016 dated 26.03.2016 |
| Foreign Component, if any (In Million US $ or the relevant Currency) | - |
| Domestic Component (Rs. Cr.) | Rs 1182.42 Crs |
| Foreign Exchange rate considered for the admitted Capital cost | - |
| **Total Capital cost admitted (Rs. Cr)** | Rs 1182.42 Crs |

PETITIONER

| | | |
|---|---|---|
| | | Form 7 |
| **Name of the Company** | **APGENCO** | |
| **Name of the Power Station** | **RTPP III** | |
| **Particulars** | **Package1** | **Package2** |
| **1** | **2** | **3** |
| **Source of Loans** | PFC 31301015 | Vijaya Bank |
| **Currency** | INDIAN Rs | INDIAN Rs |
| **Amount of Loan sancioned** | 796.80 | 200.00 |
| **Amount of Gross Loan drawn Upto 31.03.19** | 796.80 | 200.00 |
| **Interest Type** | Floating | Floating |
| **Fixed Interest Rate, if applicable** | - | - |
| **Base Rate, if Floating Interest** | 10.20% | 9.75% |
| **Margin, if Floationg Interest** | | |
| **Are there any Caps/Floor** | - | - |
| **If above is yes, specify caps/floor** | - | - |
| **Moratorium Period** | 28 Months | 36 Months |
| **Moratorium efective from** | 27-Mar-08 | 20-Nov-07 |
| **Repayment Period** | 15 Years | 10 Years |
| **Repayment effective from** | 15-Jul-10 | 31-Jan-11 |
| **Repayment Frequency** | Monthly | Quarterely |
| **Repayment Instalment** | 101 **#** | 40 |
| **Base ExchangeRate** | - | - |
| | | |
| **# Note : After 26 Quarterly installments (out of 60), repayment of this loan was rescheduled to monthly basis @ IR of 10.20% from Nov'16 for the remaining period of the loan i.e 101 monthly installments** | | |

**PART-I**

**FORM- 11**

**Statement of Depreciation**

**Name of the Company** APGENCO

**Name of the Power Station** RTPP-III

(Rs in Laks)

| **Financial Year** | **Upto 2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** | **2023-24** |
|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Depreciation on Capital Cost** | 1182.42 | 1219.14 | 1219.14 | 1219.14 | 1219.14 | 1219.14 |
| **Depreciation recovered during the Year** | 90.11 | 90.11 | 90.11 | 12.57 | 12.57 | 12.57 |
| **Depreciation & Advance against Depreciation recovered during the year** | 90.11 | 90.11 | 90.11 | 12.57 | 12.57 | 12.57 |
| **Cumulative Depreciation & Advance against Depreciation recovered upto the year** | 728.40 | 818.51 | 908.62 | 921.19 | 933.76 | 946.33 |

Petitioner

**PART-I**
**FORM- 12**

**Calculation of Depreciation Rate**

**Name of the Power Station-RTPP-III**

(Amount in lacs)

| Sl. no. | Asset Name | Gross Block as on 31.03.2019 or as on COD, whichever is later | Additions | Depreciation Rates as per CERC's Depreciation Rate Schedule | Depreciation Amount |
|---|---|---|---|---|---|
| | **1** | **2** | | **3** | **4** |
| 1 | Land & Land rights | - | | | |
| 2 | Building | 11,949.32 | | 3.02% | 900.82 |
| 3 | Lines and Cable networks | 51.78 | | 7.84% | 4.06 |
| 4 | Plant&Equipment | 94,696.16 | 3,629.02 | 7.84% | 8,204.94 |
| 5 | Capital spares | - | | | |
| 6 | Hydraulic works | 14,043.07 | 8.12 | 3.40% | 1,530.47 |
| 7 | other civil works | 871.36 | 22.32 | 3.02% | 32.24 |
| 8 | Vechicles | - | | | |
| 9 | Land(Lease hold) | - | | | |
| 10 | Others | 323.09 | 12.39 | 12.77% | 40.34 |
| 11 | Intangible assets | | | | |
| | **TOTAL( 1 to 11)** | **121,934.78** | **3,671.85** | | **10,712.87** |
| | **Weighted Average Depreciation Rate (%)** | | | | **8.79%** |

Form 13

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Name of the Company** | **APGENCO** | | | | | |
| | **Name of the Power Station** | **RTPP III** | | **Amount in Crores** | | | |
| **S.No** | **Particulars** | **Existing 18-19** | **19-20** | **20-21** | **21-22** | **22-23** | **23-24** |
| **1** | **Loan 1 - PFC 31301015** | | | | | | |
| | Gross Loan - Openig | 796.80 | 796.80 | 796.80 | 796.80 | 796.80 | 796.80 |
| | Cumulative Repayment of Loans upto Current Year | (412.89) | (467.73) | (522.57) | (577.41) | (632.25) | (687.09) |
| | **Net Loan - Opening** | 383.91 | 329.07 | 274.23 | 219.39 | 164.55 | 109.71 |
| | Add: Drawals during the Year | - | - | - | - | - | - |
| | Less: Repayment of the Loans during the year | (54.84) | (54.84) | (54.84) | (54.84) | (54.84) | (54.84) |
| | **Net Loan - Closnig** | **329.07** | **274.23** | **219.39** | **164.55** | **109.71** | **54.87** |
| | Average Net Loan | 329.07 | 274.23 | 219.39 | 164.55 | 109.71 | 54.87 |
| | Rate of Interest on Loan | 10.20% | 10.20% | 10.20% | 10.20% | 10.20% | 10.20% |
| **2** | **Loan 2 - Vijaya Bank** | | | | | | |
| | Gross Loan - Openig | 200.00 | 200.00 | 200.00 | | | |
| | Cumulative Repayment of Loans upto Current Year | (145.18) | (165.18) | (185.18) | | | |
| | **Net Loan - Opening** | 54.82 | 34.82 | 14.82 | | | |
| | Add: Drawals during the Year | - | - | - | | | |
| | Less: Repayment of the Loans during the year | (20.00) | (20.00) | (14.82) | | | |
| | **Net Loan - Closnig** | **34.82** | **14.82** | **0.00** | | | |
| | Average Net Loan | 34.82 | 14.82 | 0.00 | | | |
| | Rate of Interest on Loan | 9.75% | 9.75% | 9.75% | | | |

**PART-I**
**FORM- 13A**

## Calculation of Return on Capital Employed

**Name of the Company** APGENCO

**Name of the Power Station** RTPP-III

(Amount in Crs)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Regulated Rate Base[1] | 11.8% | 11.8% | 11.8% | 11.8% | 11.8% |
| WACC[1] | 703.17 | 613.60 | 510.98 | 500.78 | 490.74 |
| RoCE | 82.97 | 72.40 | 60.30 | 59.09 | 57.91 |

**Petitioner**

**PART-I**
**FORM- 14**

## Working Capital

**Name of the Company** APGENCO

**Name of the Power Station** RTPP-III

(Amount in Crs)

| Sl. No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Cost of Fuel | 47.46 | 47.46 | 47.46 | 47.46 | 47.46 |
| 2 | O & M expenses | 8.20 | 8.75 | 9.33 | 9.95 | 10.61 |
| 3 | Maintenance Spares | 16.60 | 17.26 | 17.95 | 18.67 | 19.42 |
| 4 | Recievables | 140.17 | 139.50 | 125.72 | 126.76 | 127.88 |
| | Total Working Capital | 212.43 | 212.97 | 200.46 | 202.84 | 205.37 |

**Petitioner**

# FORM-18

**Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014)**

**Details/Information to be submitted in respect of Fuel for Computation of Energy Charges**

**Name of the Company : APGENCO**

**Name of the Station : RTPP**

**Month : 01-07-2018 TO 30-09-2018**

| S.No. | Particulars | Unit | Jul-18 | | | | Aug-18 | | | | Sep-18 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Domestic Coal | | | Imported Coal | Domestic Coal | | | Imported Coal | Domestic Coal | | | Imported Coal |
| | | | Supplied by MGR | Supplied by ARR | E-Auction Coal | | Supplied by MGR | Supplied by ARR | E-Auction Coal | | Supplied by MGR | Supplied by ARR | E-Auction Coal | |
| | | | (i) | (ii) | (iii) | (vi) | (i) | (ii) | (iii) | (vi) | (i) | (ii) | (iii) | (vi) |
| 1 | Quantity of coal supplied by the coal company inclusive of opening stock of coal | (MT) | | 409423.11 | | | | 417365.35 | | | | 440491.28 | | |
| 2 | Adjustment (+/-) in quantity supplied by the coal company | (MT) | | | | | | | | | | | | |
| 3 | Coal supplied by the coal company inclusive of opening stock of coal (1+2) | (MT) | | 409423.11 | | | | 417365.35 | | | | 440491.28 | | |
| 4 | Normative transit & handling losses (for coal based projects) | (MT) | | 2940.42 | | | | 2360.24 | | | | 1918.76 | | |
| 5 | Net coal supplied inclusive of opening stock of coal (3-4) | (MT) | | | | | | | | | | | | |
| 6 | Amount charged by the coal company inclusive of value of opening stock of coal | (Rs.) | | 1308309913.00 | | | | 1219391003.69 | | | | 1551347449.00 | | |
| 7 | Adjustment (+/-) in amount charged by the coal company | (Rs.) | | | | | | | | | | | | |
| 8 | Total amount charged inclusive of opening stock of coal (6+7) | (Rs.) | | 1308309913.00 | | | | 1219391003.69 | | | | 1551347449.00 | | |
| 9 | Transportation charges by Rail/Ship/Road Transport | (Rs.) | | 675093369.64 | | | | 644445925.58 | | | | 480007306.47 | | |
| 10 | Adsutment (+/-) in amount charged by Railways/Transport company | (Rs.) | | | | | | | | | | | | |
| 11 | Demurrage charges, if any | (Rs.) | | | | | | | | | | | | |
| 12 | Cost of diesel in transporting coal through MGR system | (Rs.) | | | | | | | | | | | | |
| 13 | Total transportaion charges (9+/-10-11+12) | (Rs.) | | 675093369.64 | | | | 644445925.58 | | | | 480007306.47 | | |
| 13A | Others (Stone picking charges, Loco driver's salary, sampling charges etc.) | (Rs.) | | 9870304 | | | | 8920528 | | | | 3695191 | | |
| 14 | Total amount charged for coal supplied including transportation (8+13+13A) | (Rs.) | | 1993273586.64 | | | | 1872757457.27 | | | | 2035049946.47 | | |
| 15 | Landed cost of coal | (Rs.) | | | | | | | | | | | | |
| 16 | Blending ratio | | | | | | | | | | | | | |
| 17 | Weighted average cost of coal | (Rs./MT) | | **4903.71** | | | | **4512.61** | | | | **4640.17** | | |
| 18 | GCV of Domestic coal as per bill of coal company, CIMFR EM basis | (kCal/Kg) | | 4007 | | | | 3800 | | | | 4425 | | |
| 19 | GCV of Imported coal as per bill of coal company AD basis | (kCal/Kg) | | - | | | | - | | | | - | | |
| 20 | Weighted average GCV of coal as billed CIMFR EM basis | (kCal/Kg) | | 4007 | | | | 3800 | | | | 4425 | | |
| 21 | GCV of Domestic coal as recieved at station (Bunker front sample, AFB) | (kCal/Kg) | | 3252 | | | | 3298 | | | | 3507 | | |
| 22 | GCV of Imported coal as recieved at station, TM basis | (kCal/Kg) | | - | | | | - | | | | - | | |
| 23 | Weighted average GCV of coal as recieved at station (Bunker front sample, AFB) | (kCal/Kg) | | 3252 | | | | 3298 | | | | 3507 | | |

# FORM-18

**Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014**

**Details/Information to be submitted in respect of Fuel for Computation of Energy Charges**

**Name of the Company : APGENCO**
**Name of the Station : RTPP**
**Month : 01-07-2018 TO 30-09-2018**

| S.No. | Particulars | Unit | Jul-18 | | Aug-18 | | Sep-18 | |
|---|---|---|---|---|---|---|---|---|
| | | | HFO | HSD | HFO | HSD | HFO | HSD |
| | | | (i) | (ii) | (i) | (ii) | (i) | (ii) |
| 1 | Quantity of oil supplied by the oil company inclusive of opening stock of oil | (MT) | 3301.44 | 615.91 | 2833.84 | 594.01 | 2525.64 | 577.71 |
| 2 | Adjustment (+/-) in quantity supplied by the oil company | (MT) | | | | | | |
| 3 | Oil supplied by the oil company inclusive of opening stock of oil (1+2) | (MT) | 3301.44 | 615.91 | 2833.84 | 594.01 | 2525.64 | 577.71 |
| 4 | Normative transit & handling losses (for oil based projects) | (MT) | | | | | | |
| 5 | Net oil supplied inclusive of opening stock of oil (3-4) | (MT) | | | | | | |
| 6 | Amount charged by the oil company inclusive of value of opening stock of oil | (Rs.) | 139097167.22 | 28767308.37 | 119396116.95 | 27744425.07 | 106410950.80 | 26983100.97 |
| 7 | Adjustment (+/-) in amount charged by the oil company | (Rs.) | | | | | | |
| 8 | Total amount charged inclusive of opening stock of oil (6+7) | (Rs.) | 139097167.22 | 28767308.37 | 119396116.95 | 27744425.07 | 106410950.80 | 26983100.97 |
| 9 | Transportation charges by Rail/Ship/Road Transport | (Rs.) | | | | | | |
| 10 | Adsutment (+/-) in amount charged by Railways/Transport company | (Rs.) | | | | | | |
| 11 | Demurrage charges, if any | (Rs.) | | | | | | |
| 12 | Cost of diesel in transporting oil through MGR system | (Rs.) | | | | | | |
| 13 | Total transportaion charges (9+/-10-11+12) | (Rs.) | | | | | | |
| 13A | Others (Stone picking charges, Loco driver's salary, sampling charges etc.) | (Rs.) | | | | | | |
| 14 | Total amount charged for oil supplied including transportation (8+13+13A) | (Rs.) | 139097167.22 | 28767308.37 | 119396116.95 | 27744425.07 | 106410950.80 | 26983100.97 |
| 15 | Landed cost of oil | (Rs.) | 42132.27 | 46707.00 | 42132.27 | 46707.00 | 42132.27 | 46707.00 |
| 16 | Blending ratio | (Rs./MT) | | | | | | |
| 17 | Weighted average cost of oil | (Rs./MT) | 42336.94 | | 42362.07 | | 42422.17 | |
| 18 | GCV of HFO oil as per bill of oil company (As per Test Reprot) | (kCal/Lr) | 9728 | - | 9728 | - | 9728 | - |
| 19 | GCV of HSD as per bill of oil company | (kCal/Lr) | - | - | - | - | - | - |
| 20 | Weighted average GCV of oil as billed (As per Test Report) | (kCal/Lr) | 9728 | - | 9728 | - | 9728 | - |
| 21 | GCV of HFO OIl as recieved at station | (kCal/Lr) | - | - | - | - | - | - |
| 22 | GCV of HSD as recieved at station | (kCal/Lr) | - | - | - | - | - | - |
| 23 | Weighted average GCV of oil as recieved at station | (kCal/Lr) | - | - | - | - | - | - |

**PART-I**
**FORM- 1**

**Summary Sheet**

**Name of the Company** **APGenco**
**Name of the Power Station :** **Dr. NTTPS stage IV**

(Rs in Crs)

| S.No. | Particulars | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1.1 | Depreciation | 156.98 | 23.97 | 23.97 | 23.97 | 23.97 |
| 1.2 | Return on Capital Employed | 133.06 | 111.96 | 109.57 | 107.21 | 104.87 |
| 1.3 | O & M Expenses | 156.86 | 167.28 | 178.39 | 190.23 | 202.86 |
| | **Total** | **446.90** | **303.21** | **311.93** | **321.41** | **331.70** |

**2.Calculation of Rate of Energy Charge(Rs./kWh)**

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.1 | Rate of Energy Charge from Primary Fuel | 3.07 | 3.07 | 3.07 | 3.07 | 3.07 |
| 2.2 | Rate of Energy Charge from Secondary Fuel | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.3 | Rate of Energy Charge ex-bus | 3.15 | 3.15 | 3.15 | 3.15 | 3.15 |

Petitioner

**PART-I**
**FORM-2**

**Plant Characteristics**

**Name of the Company** APGenco

**Name of the Power Station** Dr Narla Tata Rao Thermal Power Station stage IV

**Basic characteristics of the plant**[1] Coal based thermal station( 1x500 MW) with conventional boiler and steam turbine

**Special Features of the Plant**

**Site Specific Features**[2] Near to river Krishna. Cooling water is taken from the upstream of the river and return water is fed back to the river downstream. Alternative cooling water system with forced draught cooling towers is also available.

**Special Technological Features**[3]

**Environmental Regulation related features**[4] ESPs are provided for pollution control in all the Units. Opacity meters are provided for SPM measurement and measurement of SOX and NOX emissions provided.

**Any other special features**

| **Fuel Details**[5] | Primary Fuel | Secondary Fuel | Alternate Fuels |
|---|---|---|---|
| | Coal | Heavy Oil/Light Diesel Oil | - |

| **Details** | **Unit no.1** |
|---|---|
| Installed Capacity (IC) | 500 Mw |
| Date of Commercial Operation (COD) | 28.01.2010 |
| Type of cooling system[6] | Once through cooling by river water along with Forced draught cooling towers in summer |
| Type of Boiler Feed Pump[7] | Motor driven & Turbine driven |

**Normative parameters considered for tariff computations**

**Name of the Company** **APGENCO**

**Name of the Power Station** **Dr NTTPS-IV**

**Year ending March**

| Particulars | Unit | As per fillings | As per APERC norms |
|---|---|---|---|
| | | 2019-24 | |
| -1 | | 2 | 3 |
| **Rate of Return on Capital Employed** | **%** | **11.8** | **Not mentioned** |
| **Target Availability** | **%** | 80.00% | 80.00% |
| **Target PLF** | **%** | 80.00% | 80.00% |
| **Auxiliary Energy Consumption** | **%** | 7.5 | 7.5 |
| **Gross Station Heat Rate** | **kCal/kWh** | 2450 | 2450 |
| **Specific Fuel Oil Consumption** | **ml/kWh** | 2 | 2 |
| **O&M Cost** | **Rs.Lakh/MW** | - | - |
| **Cost of Coal/Lignite for WC[1]** | **in Months** | 1 | 1 |
| **Cost of Secondary Fuel Oil for WC[1]** | **in Months** | 1 | 1 |
| **Fuel Cost for WC[2]** | **in Months** | | |
| **Liquid Fuel Stock for WC[2]** | **in Months** | | |
| **O & M Expenses for WC** | **in Months** | 1 | 1 |
| **Maintenance Spares for WC** | **%** | 1 | 1 |
| **Recievables for WC** | **in Months** | 2 | 2 |
| **Prime lending Rate of SBI** | **%** | - | |
| **Incentive Rate** | **Paise / kWh** | 25 | 25 |

**PETITIONER**

**PART-I**
**FORM-5**

**Abstract of Admitted Capital Cost for the existing Projects**

**Name of the Power Station : Dr NTTPS IV**

| | |
|---|---|
| Capital Cost as admitted by APERC | Rs 2118.85 Crs |
| Capital cost admitted as on_____ | 31.03.2014 |
| (Give reference of the relevant APERC Order with Petition No. & Date) | O.P.No.3 of 2016 dated 26.03.2016 |
| Foreign Component, if any (In Million US $ or the relevant Currency) | - |
| Domestic Component (Rs. Cr.) | Rs 2118.85 Crs |
| Foreign Exchange rate considered for the admitted Capital cost | - |
| **Total Capital cost admitted (Rs. Cr)** | Rs 2118.85 Crs |

PETITIONER

| | | | |
|---|---|---|---|
| **Name of the Company** | | **APGENCO** | |
| | | | |
| **Name of the Power Station** | | **VTPS IV** | |
| | | | |
| **Particulars** | **Package1** | **Package2** | **Package3** |
| **1** | **2** | **3** | **4** |
| **Source of Loans** | REC | Andhra Bank | P&S Bank |
| **Currency** | INDIAN Rs | INDIAN Rs | INDIAN Rs |
| **Amount of Loan sancioned** | 1560.00 | 200.00 | 100.00 |
| **Amount of Gross Loan drawn Upto 31.03.19** | 1551.40 | 182.18 | 99.88 |
| **Interest Type** | Floating | Floating | Floating |
| **Fixed Interest Rate, if applicable** | - | - | - |
| **Base Rate, if Floating Interest** | 10.20% | 9.70% | 9.70% |
| **Margin, if Floationg Interest** | | | |
| **Are there any Caps/Floor** | - | - | - |
| **If above is yes, specify caps/floor** | - | - | - |
| **Moratorium Period** | 36 Months | 36 Months | 24 Months |
| **Moratorium efective from** | 2-Jan-06 | 29-Mar-07 | 24-Jan-08 |
| **Repayment Period** | 12 Years | 10 Years | 10 Years |
| **Repayment effective from** | 30-Jun-10 | 30-Jun-10 | 26-Feb-10 |
| **Repayment Frequency** | Monthly | Quarterly | Monthly |
| **Repayment Instalment** | 63 **#** | 40 | 120 |
| **Base ExchangeRate** | - | - | - |
| | | | |
| **# Note : After 26 Quarterly installments (out of 48), repayment of this loan was rescheduled to monthly basis @ IR of 9.95% from Jan'17 for the remaining period of the loan i.e 63 monthly installments** | | | |

**PART-I**
**FORM- 11**

## Statement of Depreciation

**Name of the Company** **APGENCO**

**Name of the Power Station** **Dr.NTTP-IV**

| **Financial Year** | **Upto 2018-19** | **2019-2020** | **2020-2021** | **2021-2022** | **2022-2023** | **2023-2024** |
|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Depreciation on Capital Cost** | 2118.85 | 2157.78 | 2157.78 | 2157.78 | 2157.78 | 2157.78 |
| **Depreciation recovered during the Year** | 156.98 | 156.98 | 23.97 | 23.97 | 23.97 | 23.97 |
| **Depreciation & Advance against Depreciation recovered during the year** | 156.98 | 156.98 | 23.97 | 23.97 | 23.97 | 23.97 |
| **Cumulative Depreciation & Advance against Depreciation recovered upto the year** | 1425.51 | 1582.49 | 1606.46 | 1630.43 | 1654.40 | 1678.37 |

Petitioner

**PART-I**

**FORM- 12**

**Calculation of Depreciation Rate**

**Name of the Power Station-Dr.NTTPS- Stage-IV(4510)**

(Amount in lacs)

| Sl. no. | Asset Name | Gross Block as on 31.03.2019 or as on COD, whichever is later | Additions | Depreciation Rates as per CERC's Depreciation Rate Schedule | Depreciation Amount |
|---|---|---|---|---|---|
| | **1** | **2** | | **3** | **4** |
| 1 | Land & Land rights | 1,848.91 | - | 0.00% | |
| 2 | Building | 18,990.40 | 47.19 | 3.02% | 1,401.65 |
| 3 | Lines and Cable networks | 29,083.66 | 1.06 | 7.84% | 2,280.23 |
| 4 | Plant&Equipment | 167,419.64 | 2,982.04 | 7.84% | 14,444.24 |
| 5 | Capital spares | 421.03 | 421.03 | 7.84% | 33.00 |
| 6 | Hydraulic works | 4,592.00 | 57.75 | 3.40% | 362.55 |
| 7 | other civil works | 5,417.69 | 338.90 | 3.02% | 183.03 |
| 8 | Vechicles | 2.04 | - | 33.40% | |
| 9 | Land(Lease hold) | - | - | 0.00% | |
| 10 | Others | 786.82 | 45.43 | 0.80 | 98.28 |
| 11 | Intangible assets | | - | 25.00% | |
| **12** | **TOTAL(1 to 11)** | **228,562.19** | **3,893.40** | **1.71** | **18,802.98** |
| | **Weighted Average Depreciation Rate (%)** | | | | **8.23%** |

Form 13

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Name of the Company** | **APGENCO** | | | | | |
| | **Name of the Power Station** | **Dr NTTPS IV** | | **Amount in Crores** | | | |
| **S.No** | **Particulars** | **Existing 18-19** | **19-20** | **20-21** | **21-22** | **22-23** | **23-24** |
| **1** | **Loan 1 - REC410007** | | | | | | |
| | Gross Loan - Openig | 1551.40 | 1551.40 | 1551.40 | 1551.40 | | |
| | Cumulative Repayment of Loans upto Current Year | -1034.23 | -1163.52 | -1292.81 | -1422.10 | | |
| | **Net Loan - Opening** | 517.17 | 387.88 | 258.59 | 129.30 | | |
| | Add: Drawals during the Year | - | - | - | - | | |
| | Less: Repayment of the Loans during the year | (129.29) | (129.29) | (129.29) | (129.30) | | |
| | **Net Loan - Closnig** | **387.88** | **258.59** | **129.30** | **0.00** | | |
| | Average Net Loan | 387.88 | 258.59 | 129.30 | 0.00 | | |
| | Rate of Interest on Loan | 10.20% | 10.20% | 10.20% | 10.20% | | |
| **2** | **Loan 2 - Andhra Bank** | | | | | | |
| | Gross Loan - Openig | 182.18 | 182.18 | | | | |
| | Cumulative Repayment of Loans upto Current Year | (160.43) | (180.43) | | | | |
| | **Net Loan - Opening** | 21.75 | 1.75 | | | | |
| | Add: Drawals during the Year | - | - | | | | |
| | Less: Repayment of the Loans during the year | (20.00) | (1.75) | | | | |
| | **Net Loan - Closnig** | **1.75** | **0.00** | | | | |
| | Average Net Loan | 1.75 | 0.00 | | | | |
| | Rate of Interest on Loan | 9.70% | 9.70% | | | | |
| **3** | **Loan 3 - P&S** | | | | | | |
| | Gross Loan - Openig | 99.88 | 99.88 | | | | |
| | Cumulative Repayment of Loans upto Current Year | (81.75) | (91.75) | | | | |
| | **Net Loan - Opening** | 18.13 | 8.13 | | | | |
| | Add: Drawals during the Year | - | - | | | | |
| | Less: Repayment of the Loans during the year | (10.00) | (8.13) | | | | |
| | **Net Loan - Closnig** | **8.13** | **0.00** | | | | |
| | Average Net Loan | 8.13 | 0.00 | | | | |
| | Rate of Interest on Loan | 9.70% | 9.70% | | | | |

**PART-I**
**FORM- 13A**

## Calculation of Return on Capital Employed

**Name of the Company** APGENCO

**Name of the Power Station** Dr.NTTPS -IV

(Amount in Crs)

| **Particulars** | **2019-2020** | **2020-2021** | **2021-2022** | **2022-2023** | **2023-2024** |
|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** |
| Regulated Rate Base | 11.8% | 11.8% | 11.8% | 11.8% | 11.8% |
| WACC | 1126.71 | 948.81 | 928.55 | 908.52 | 888.75 |
| RoCE | 132.95 | 111.96 | 109.57 | 107.21 | 104.87 |

**Petitioner**

**PART-I**
**FORM- 14**

## Working Capital

**Name of the Company** APGENCO

**Name of the Power Station** Dr.NTTPS -IV

(Amount in Crs)

| Sl. No. | Particulars | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Cost of Fuel | 91.98 | 91.98 | 91.98 | 91.98 | 91.98 |
| 2 | O & M expenses | 13.07 | 13.94 | 14.87 | 15.85 | 16.91 |
| 3 | Maintenance Spares | 31.83 | 33.11 | 34.43 | 35.81 | 37.24 |
| 4 | Recievables | 258.44 | 234.49 | 235.95 | 237.53 | 239.24 |
| | Total Working Capital | 395.32 | 373.52 | 377.23 | 381.17 | 385.37 |

**Petitioner**

# FORM-18

Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014

**Details/Information to be submitted in respect of Fuel for Computation of Energy Charges**

**Name of Company : APGENCO**

**Name of Station : VTPS -IV**

**Month : 01-07-2018 TO 30-09-2018**

| S.No. | Particulars | Unit | Jul-18 | | | | Aug-18 | | | | Sep-18 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Domestic Coal | | | Imported Coal | Domestic Coal | | | Imported Coal | Domestic Coal | | | Imported Coal |
| | | | Supplied by MGR | Supplied by ARR | E-Auction Coal | | Supplied by MGR | Supplied by ARR | E-Auction Coal | | Supplied by MGR | Supplied by ARR | E-Auction Coal | |
| | | | (i) | (ii) | (iii) | (vi) | (i) | (ii) | (iii) | (vi) | (i) | (ii) | (iii) | (vi) |
| 1 | Quantity of coal supplied by coal company inclusive of opening stock of coal | (MT) | | 201289.81 | | | | 221732.40 | | | | 226766.87 | | |
| 2 | Adjustment (+/-) in quantity supplied by coal company | (MT) | | | | | | | | | | | | |
| 3 | Coal supplied by coal company inclusive of opening stock of coal (1+2) | (MT) | | 201289.81 | | | | 221732.40 | | | | 226766.87 | | |
| 4 | Normative transit & handling losses (for coal based projects) | (MT) | | 1503.88 | | | | 1680.11 | | | | 1661.73 | | |
| 5 | Net coal supplied inclusive of opening stock of coal (3-4) | (MT) | | | | | | | | | | | | |
| 6 | Amount charged by coal company inclusive of value of opening stock of coal | (Rs.) | | 511603729.49 | | | | 453269581.74 | | | | 545733715.93 | | |
| 7 | Adjustment (+/-) in amount charged by coal company | (Rs.) | | | | | | | | | | | | |
| 8 | Total amount charged inclusive of opening stock of coal (6+7) | (Rs.) | | 511603729.49 | | | | 453269581.74 | | | | 545733715.93 | | |
| 9 | Transportation charges by Rail/Ship/Road Transport | (Rs.) | | 295629779.00 | | | | 391458567.00 | | | | 355200416.44 | | |
| 10 | Adsutment (+/-) in amount charged by Railways/Transport company | (Rs.) | | | | | | | | | | | | |
| 11 | Demurrage charges, if any | (Rs.) | | | | | | | | | | | | |
| 12 | Cost of diesel in transporting coal through MGR system | (Rs.) | | | | | | | | | | | | |
| 13 | Total transportaion charges (9+/-10-11+12) | (Rs.) | | 295629779.00 | | | | 391458567.00 | | | | 355200416.44 | | |
| 13A | Ors (Stone picking charges, Loco driver's salary, sampling charges etc.) | (Rs.) | | 8741709.76 | | | | 9047897.42 | | | | 8877758.69 | | |
| 14 | Total amount charged for coal supplied including transportation (8+13+13A) | (Rs.) | | 815975218.25 | | | | 853776046.16 | | | | 909811891.06 | | |
| 15 | Landed cost of coal | (Rs.) | | | | | | | | | | | | |
| 16 | Blending ratio | | | | | | | | | | | | | |
| 17 | Weighted average cost of coal | (Rs./MT) | | **4084.25** | | | | **3879.88** | | | | **4041.72** | | |
| 18 | GCV of Domestic coal as per bill of coal company, CIMFR EM basis | (kCal/Kg) | | 3776 | | | | 3916 | | | | 3918 | | |
| 19 | GCV of Imported coal as per bill of coal company AD basis | (kCal/Kg) | | - | | | | - | | | | - | | |
| 20 | Weighted average GCV of coal as billed CIMFR EM basis | (kCal/Kg) | | 3776 | | | | 3916 | | | | 3918 | | |
| 21 | GCV of Domestic coal as recieved at station (Bunker front sample, AFB) | (kCal/Kg) | | 3315 | | | | 3467 | | | | 3483 | | |
| 22 | GCV of Imported coal as recieved at station, TM basis | (kCal/Kg) | | - | | | | - | | | | - | | |
| 23 | Weighted average GCV of coal as recieved at station (Bunker front sample, AFB) | (kCal/Kg) | | 3315 | | | | 3467 | | | | 3483 | | |

**FORM-18**

Details/Information to be provided to beneficiaries under Clause (7) of Regulation 30 of CERC (Terms & Conditions of Tariff) Regulations, 2014

**Details/Information to be submitted in respect of Fuel for Computation of Energy Charges**

**Name of Company : APGENCO**

**Name of Station : VTPS -IV**

**Month** Month : 01-07-2018 TO 30-09-2018

| S.No. | Particulars | Unit | Jul-18 | | Aug-18 | | Sep-18 | |
|---|---|---|---|---|---|---|---|---|
| | | | HFO | HSD | HFO | HSD | HFO | HSD |
| | | | (i) | (ii) | (i) | (ii) | (i) | (ii) |
| 1 | Quantity of oil supplied by oil company inclusive of opening stock of oil | (MT) | 3481.83 | 355.00 | 3186.83 | 327.50 | 5877.55 | 316.00 |
| 2 | Adjustment (+/-) in quantity supplied by oil company | (MT) | | | | | | |
| 3 | Oil supplied by oil company inclusive of opening stock of oil (1+2) | (MT) | 3481.83 | 355.00 | 3186.83 | 327.50 | 5877.55 | 316.00 |
| 4 | Normative transit & handling losses (for oil based projects) | (MT) | | | | | | |
| 5 | Net oil supplied inclusive of opening stock of oil (3-4) | (MT) | | | | | | |
| 6 | Amount charged by oil company inclusive of value of opening stock of oil | (Rs.) | 97128996.08 | 22394123.78 | 88899680.30 | 20659348.17 | 197802448.82 | 19933896.55 |
| 7 | Adjustment (+/-) in amount charged by oil company | (Rs.) | | | | | | |
| 8 | Total amount charged inclusive of opening stock of oil (6+7) | (Rs.) | 97128996.08 | 22394123.78 | 88899680.30 | 20659348.17 | 197802448.82 | 19933896.55 |
| 9 | Transportation charges by Rail/Ship/Road Transport | (Rs.) | | | | | | |
| 10 | Adsutment (+/-) in amount charged by Railways/Transport company | (Rs.) | | | | | | |
| 11 | Demurrage charges, if any | (Rs.) | | | | | | |
| 12 | Cost of diesel in transporting oil through MGR system | (Rs.) | | | | | | |
| 13 | Total transportaion charges (9+/-10-11+12) | (Rs.) | | | | | | |
| 13A | Ors (Stone picking charges, Loco driver's salary, sampling charges etc.) | (Rs.) | | | | | | |
| 14 | Total amount charged for oil supplied including transportation (8+13+13A) | (Rs.) | 97128996.08 | 22394123.78 | 88899680.30 | 206593348.17 | 197802448.82 | 19933896.55 |
| 15 | Landed cost of oil | (Rs.) | 27895.99 | 63082.75 | 27895.99 | 63082.75 | 33653.91 | 63082.75 |
| 16 | Blending ratio | | | | | | | |
| 17 | Weighted average cost of oil | (Rs./MT) | **30896.41** | | **29470.49** | | **36282.36** | |
| 18 | GCV of HFO oil as per bill of oil company (As per Test Reprot) | (kCal/Lr) | 9753 | - | 9753 | - | 9753 | - |
| 19 | GCV of HSD as per bill of oil company | (kCal/Lr) | - | - | - | - | - | - |
| 20 | Weighted average GCV of oil as billed (As per Test Report) | (kCal/Lr) | 9753 | - | 9753 | - | 9753 | - |
| 21 | GCV of HFO OIl as recieved at station | (kCal/Lr) | - | - | - | - | - | - |
| 22 | GCV of HSD as recieved at station | (kCal/Lr) | - | - | - | - | - | - |
| 23 | Weighted average GCV of oil as recieved at station | (kCal/Lr) | - | - | - | - | - | - |

**FORM – 3**

**SALIENT FEATURES OF HYDRO ELECTRIC PROJECT**

**NAME OF COMPANY:** APGENCO.

**NAME OF POWER SATION:** Nagarjuna Sagar Tail Pond Dam Power House.

| | |
|---|---|
| **1. Location** | |
| State/Distt. | Satrasala Village, Rentachintala Mandal, Guntur (Dist). |
| River | Krishna |
| **2. Diversion Tunnel** | |
| Size, shape | |
| Length | |
| **3. Dam** | |
| Type | Gravity with gates |
| Maximum dam height | 16.0M (Max. Spillway height) |
| **4. Spillway** | |
| Type | OGEE |
| Crest level of spillway | 59.20M |
| **5. Reservoir** | |
| Full Reservoir Level (FRL) | +EL:75.5M |
| Minimum Draw Down Level (MDDL) | +EL:74.0M |
| Live storage (MCM) | 1 TMC |
| **6. Desalting Arrangement** | |
| Type | SLUICE Gates |
| Number and Size | 2Nos, 1.80m X 3.0m |
| Particle size to be removed (mm) | |
| **7. Head Race Tunnel** | |
| Size and type | |
| Length | |
| Design discharge (Cumecs) | |
| **8. Surge Shaft** | |
| Type | |
| Diameter | |
| Height | |
| **9. Penstock/ Pressure shafts** | |
| Type | Steel |
| Diameter & Length | 6.60m, 54m |
| **10. Power House** | |
| Type | Surface |
| Installed capacity (No of units x MW) | 2x25MW |
| Packing capacity during lean period (MW) | - |
| Type of turbine | Vertical Kaplan |
| Rated Head (M) | 21.9M |
| Rated Discharge (Cumecs) | 135 Cumecs (4767C/s) |
| **11. Tail Race Channel** | |
| Diameters, shape width | 38.30m |
| Length | 540m |
| Minimum tail water level | 52m (for 1 unit), 53.315m (2 units) |
| **12. Switchyard** | |
| Type of Switch gear | SF6 |
| No. of generator bays | 2 |
| No. of Bus coupler bays | - |
| No. line bays | 5 |

Note: Specify limitation on generation during specific time period on account of restriction (s) on water use due to irrigation, drinking water, industrial, environmental considerations etc.

**PETITIONER**

# BREAK UP OF CAPITAL COST FOR HYDRO POWER GENERATION STATION

**NAME OF POWER STATION :NAGARJUNA SAGAR TAIL POND DAM HES ( 2X25MW)**

(Amount in Rs.)

| Sl. No | Head of works | Original cost as approved by Authority | | | Cost on COD | Variation | Reasons for variation | Admitted cost |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | | | | 4 | 5 | 6 | 7 |
| 1.0 | **Infrastructure works** | Revised administrative approval vide GOO No.402/Projects/2014, Dt.14-12-2004 : 464.73 Crores (Dam & Power House) | Revised administrative approval vide GOO No.209/HPC/2012, Dt.31-07-2018 : 295.00 Crores (958.67 crores-Dam : 695.22 +NSTP HES:263.45) | Revised administrative approval vide GOO No.92/CE(HPC& HP)/2017, Dt.12-07-2018 : 295.00 Crores (Power House) | | | | |
| 1.1 | Preliminary including Developmnet | | | | 400000.00 | | | |
| 1.2 | Land | | | | 4321000.00 | | | |
| 1.3 | Buildings | | | | 160067562.00 | | | |
| 1.4 | Township | | | | 24487315.00 | | | |
| 1.5 | Maintenance | | | | | | | |
| 1.6 | Tools & Plants | | | | | | | |
| 1.7 | Communication | | | | 38410939.00 | | | |
| 1.8 | Environment & Ecology | | | | | | | |
| 1.9 | Losses on stock | | | | | | | |
| 1.10 | Receipt & Recoveries | | | | | | | |
| 1.11 | Total (Infrastructure works) | | | | | | | |
| 2.0 | **Major Civil works** | | | | | | | |
| 2.1 | Dam, Intake & Desilting Chambers | | | | | | | |
| 2.2 | HRT, TRT, Suge Shaft & Pressure shafts | | | | | | | |
| 2.3 | Power Plant civil works | | | | 778056791.00 | | | |
| 2.4 | Other civil works (to be specified) | | | | 59581946.00 | | | |
| 2.5 | Total (Major civil works) | | | | | | | |
| 3.0 | **Hydro Mechanical equipments** | | | | 129291159.00 | | | |
| 4.0 | **Plant & Equipment** | | | | 890974385.00 | | | |
| 4.1 | Initial spares of plant & Equipment | | | | | | | |
| 4.2 | Total ( Plant & Equipment) | | | | | | | |
| 5.0 | **Taxes and Duties** | | | | | | | |
| 5.1 | Custom Duty | | | | | | | |
| 5.2 | Other taxes & Duties | | | | | | | |
| 5.3 | Total taxes & Duties | | | | | | | |
| 6.0 | **Construction & Pre-commissioning expenses** | | | | | | | |
| 6.1 | Erection, testing & Commissioning | | | | | | | |
| 6.2 | Construciton Insurance | | | | | | | |
| 6.3 | Site supervision | | | | | | | |
| 6.4 | Total (Const. & Pre-commissioning) | | | | | | | |
| 7.0 | **Overheads** | | | | | | | |
| 7.1 | Establishment | | | | 227700000.00 | | | |
| 7.2 | Design & Engineering | | | | 3000000.00 | | | |
| 7.3 | Audit & Accounts | | | | | | | |
| 7.4 | Contingency | | | | | | | |
| 7.5 | Rehabilitation & Resettlement | | | | | | | |
| 7.6 | Total (Over heads) | | | | | | | |
| 8.0 | **Capital cost without IDC & FC** | | | | | | | |
| 9.0 | Financing charges (FC) | | | | | | | |
| 10.0 | Interest during construciton (IDC) | | | | 632500000.00 | | | |
| 11.0 | **Capital cost with IDC & FC** | | | **295.00 Cr** | **2948791097.00** | | | |

Note :

1. In case of time and cost over-run of the project, a detailed note giving reasons of such time and cost over run should be submitted, bringing out the agency responsible and whether such time and cost over run was beyond the control of the generating company.

Chief Engineer

FORM-5C

BREAK UP OF CAPITAL COST FOR PLANT & EQUIPMENT

NAME OF POWER STATION :NAGARJUNA SAGAR TAIL POND DAM HES ( 2X25MW)

(Amount in Rs.)

| Sl No | Head of works | Original cost as approved by Authority | Cost on COD | Variation | Reasons for variation | Admitted cost |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1.0 | **Generator, turbine & Acessories** | | 626058129.5 | | | |
| 1.1 | Generator package | | | | | |
| 1.2 | Turbine package | | | | | |
| 1.3 | Unit control Board | | 0 | | | |
| 1.4 | C & I Package | | 80613069.5 | | | |
| 1.5 | Bus Duct of GT connection | | 7456977.39 | | | |
| 1.6 | Total (Generator, turbine & Acessories) | | **714128176.4** | | | |
| 2.0 | **Auxillary Electricial Equipment** | | | | | |
| 2.1 | Step up transformer | | 38359465 | | | |
| 2.2 | Unit Auxillary Transformer | | 1300000 | | | |
| 2.3 | Local supply transformer | | 0 | | | |
| 2.4 | Station transformer | | 163090.54 | | | |
| 2.5 | SCAIDA | | 0 | | | |
| 2.6 | Switchgear, Batteries, DC dist. Board | | 2189526 | | | |
| 2.7 | Telecommunication equipment | | 0 | | | |
| 2.8 | Illumination of Dam, PH and Switchyard | | 17996541 | | | |
| 2.9 | Cables & Cable facilities, grounding | | 9723169.74 | | | |
| 2.10 | Diesel Generating sets | | 1770805.17 | | | |
| 2.11 | Total (Auxillary Elect. Equipment) | | **71502597.45** | | | |
| 3.0 | **Auxillary equipment & services for power station** | | | | | |
| 3.1 | EOT crane | | 3776010 | | | |
| 3.2 | Other cranes | | | | | |
| 3.3 | Electric lifts & elevators | | 4223989 | | | |
| 3.4 | Cooling water system | | 4726227.45 | | | |
| 3.5 | Drainage & dewatering system | | 4820170 | | | |
| 3.6 | Fire fighting equipment | | 3221513.1 | | | |
| 3.7 | Air conditioning, ventilation and heating | | 11887527 | | | |
| 3.8 | Water supply system | | 0 | | | |
| 3.9 | Oil handling equipment | | 4921799.44 | | | |
| 3.10 | Workshop machines & equipment | | 2187022.7 | | | |
| 3.11 | Total (Auxillary Equipment & Services for PS) | | 39764258.69 | | | |
| 4.0 | Switchyard package | | 61123756 | | | |
| 5.0 | Initial spares for all above equipment | | 4455597 | | | |
| 6.0 | **Total (Plant & Equipment)** | | **890974385.53** | | | |

Chief Engineer
HPC & Hydel Projects
APGENCO, Vidyut Soudha,
VIJAYAWADA - 520 004.

**FORM- 1**

**Summary Sheet**

**Name of the Company** **APGenco**

**Name of the Power Station :** **NSTPHES**

(Rs in Crs)

| S.No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1.1 | Depreciation | 9.35 | 10.03 | 10.03 | 10.03 | 10.03 |
| 1.2 | Return on Capital Employed[1] | 32.71 | 32.95 | 32.79 | 31.62 | 30.45 |
| 1.3 | O & M Expenses | 7.58 | 8.08 | 8.62 | 9.19 | 9.80 |
| | **Total** | 49.64 | 51.06 | 51.44 | 50.84 | 50.28 |

**PART-I**
**FORM- 11**

## Statement of Depreciation

**Name of the Company** **APGENCO**

**Name of the Power Station** **NSTP HES**

(Rs in Crs)

| Financial Year | Upto 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Depreciation on Capital Cost | 263.45 | 275.42 | 294.88 | 294.88 | 294.88 | 294.88 |
| Depreciation recovered during the Year | - | 9.35 | 10.03 | 10.03 | 10.03 | 10.03 |
| Depreciation & Advance against Depreciation recovered during the year | - | 9.35 | 10.03 | 10.03 | 10.03 | 10.03 |
| Cumulative Depreciation & Advance against Depreciation recovered upto the year | 10.09 | 19.44 | 29.47 | 39.5 | 49.53 | 59.56 |

**PART-I**
**FORM- 13A**

## Calculation of Return on Capital Employed

**Name of the Company** APGENCO

**Name of the Power Station** NSTPHES

(Amount in crs)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Regulated Rate Base[1] | 11.8% | 11.8% | 11.8% | 11.8% | 11.8% |
| WACC[1] | 277.20 | 279.20 | 277.91 | 267.95 | 258.01 |
| RoCE | 32.71 | 32.95 | 32.79 | 31.62 | 30.45 |

**Petitioner**

**PART-I**
**FORM- 14**

## Working Capital

**Name of the Company** APGENCO

**Name of the Power Station** NSTPHES

(Amount in Rs)

| Sl. No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | O & M expenses | 0.63 | 0.67 | 0.72 | 0.77 | 0.82 |
| 2 | Maintenance Spares | 2.96 | 3.08 | 3.21 | 3.33 | 3.47 |
| 3 | Recievables | 8.27 | 8.68 | 8.57 | 8.47 | 8.38 |
| | Total Working Capital | 11.86 | 12.43 | 12.50 | 12.57 | 12.67 |

**Petitioner**

Break-up of Capital Cost for Coal/Lignite based projects

Name of the Power Station : RTPP-IV, Unit-6 (1X600 MW)

| Sl.No. | Break Down | As on COD(Rs Cr) |
|---|---|---|
| **1.0** | **Cost of Land & Site Development** | |
| 1.1 | Land | 27.44 |
| 1.2 | Rehabilitation & Resettlement (R&R)(CSR works) | 14.22 |
| 1.3 | Preliminary Investigation & Site development | |
| | **Total Land & Site Development** | **41.66** |
| **2.0** | **Plant & Equipment** | |
| **2.1** | **Steam Generator Island (incl. PVC)** | |
| **2.2** | **Turbine Generator Island (incl. PVC)**<br>**BTG supply + PVC = 1161.54+200** | 1361.54 |
| **2.3** | **BOP Mechanical (steel, water sys)** | 636.56378 |
| 2.3.1 | External water supply system(Raw water) | 0.59 |
| 2.3.2 | CW system(CW+ACW=19.94+5.29) | 25.23 |
| 2.3.3 | DM water Plant | 17.65 |
| 2.3.4 | Clarification plant | 13.09 |
| 2.3.5 | Chlorination Plant | 7.84 |
| 2.3.6 | Fuel Handiling & Storage system | 10 |
| 2.3.7 | Ash Handling System | 96.31378 |
| 2.3.8 | Coal Handling Plant (CHP + Marshalling +TH+WT) | 242 |
| 2.3.9 | Rolling Stock and Locomotives | |
| 2.3.10 | MGR | |
| 2.3.11 | Air Compressor System | 10 |
| 2.3.12 | Air Condition & Ventilation System | 17.08 |
| 2.3.13 | Fire fighting System | 12 |
| 2.3.14 | HP/LP Piping | 10.95 |
| 2.3.15 | ETP + CPU + Lab equipment + W.S. Crane + NDCT + Chimney + Stack elevator +Misc pumps = 19.82+14.07+3.24+1.08+30+2.50+1.25+0.36 | 72.32 |
| 2.3.16 | Cranes & hoists + Elevators + MRS + Workshop equipment +GERB springs + Misc supply =21+8+8+2.50+8+4.4 | 51.9 |
| 2.3.17 | Structural steel for BOP works | 54 |
| | **Total BOP Mechanical** | 640.96378 |
| **2.4** | **BOP Electrical** | 64 |
| 2.4.1 | Switch Yard Package | |
| 2.4.2 | Transformers Package | |
| 2.4.3 | Switch gear Package | |
| 2.4.4 | Cables , Cable facilities & grounding | |
| 2.4.5 | Lighting | |
| 2.4.6 | Emergency D.G. set | |
| **2.5** | **BOP C & I Package** | 22.35 |
| | **Total Plant & Equipment excluding taxes & Duties** | 2088.85378 |
| **2.60** | **Taxes and Dutles**<br>**(BTG supply tax 123.18+Taxes on Erection PO 40)** | 163.18 |
| 2.6.1 | Custom Duty | |
| 2.6.2 | Other Taxes & Duties | |
| | **Total Taxes & Duties** | 163.18 |
| | **Total Plant & Equipment with taxes** | **2252.03378** |

| | | |
|---|---|---|
| **3.0** | **Initial spares incl. GST** | **65** |
| **4.0** | **Civil Works** | |
| 4.1 | Main plant/Adm. Building | |
| 4.2 | CW system | |
| 4.3 | Cooling Towers | |
| 4.4 | DM water Plant | |
| 4.5 | Clarification plant | |
| 4.6 | chlorination plant | |
| 4.7 | Fuel Handling & Storage system | |
| 4.8 | Coal Handling Plant | |
| 4.9 | MGR & Marshalling Yard | |
| 4.10 | Ash Handling System | |
| 4.11 | Ash disposal area development | |
| 4.12 | Fire fighting System | |
| 4.13 | Township & Colony | |
| 4.14 | Temp. construction & enabling works | |
| 4.15 | Road & Drainage | |
| | BOP civil works | 483.28 |
| | Non BOP civil works | 58.56 |
| | **Total Civil works** | **541.84** |
| **5.0** | **Construction & Pre- Commissioning Expenses** | |
| 5.1 | Erection Testing and commissioning (BTG 174.39+ BOP 46.03) | 220.42 |
| 5.2 | Site supervision | |
| 5.3 | Operator's Training | 2.86 |
| 5.4 | Construction Insurance | |
| 5.5 | Tools & Plant | |
| 5.6 | Start up fuel HFO + LDO+ Coal + Demurrages (HFO&LDO=33.16) | 33.16 |
| | **Total Construction & Pre- Commissioning Expenses** | **256.44** |
| **6.0** | **Overheads** | |
| 6.1 | Establishment | 95.49 |
| 6.2 | Design & Engineering (Desein &Quest POs with taxes as per SAP) | 6.3 |
| 6.3 | Audit & Accounts | |
| 6.4 | Contingencies (including by-pass line works) | 77.31 |
| | **Total Overheads** | **179.1** |
| **7.0** | **Capital cost excluding IDC & FC** | 3336.07378 |
| 7.1 | Interest During Construction (IDC till 12.09.2014=660.58) | **1533.75** |
| 7.2 | Financing Charges (FC) | |
| **8.0** | **Capital cost including IDC & FC** | **4869.82378** |

13/2/18

**Chief Engineer/Generation.**

**PART-I**
**FORM- 1**

**Summary Sheet**

**Name of the Company** **APGenco**

**Name of the Power Station :** **RTPP stage IV**

(Rs in Crs)

| S.No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1.1 | Depreciation | 373.71 | 373.71 | 373.71 | 373.71 | 373.71 |
| 1.2 | Return on Capital Employed | 647.12 | 602.61 | 558.12 | 513.66 | 469.22 |
| 1.3 | O & M Expenses | 117.60 | 125.41 | 133.74 | 142.62 | 152.09 |
| | **Total** | 1138.43 | 1101.73 | 1065.57 | 1029.99 | 995.02 |

**2.Calculation of Rate of Energy Charge(Rs./kWh)**

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.1 | Rate of Energy Charge from Primary Fuel | 3.56 | 3.56 | 3.56 | 3.56 | 3.56 |
| 2.2 | Rate of Energy Charge from Secondary Fuel | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.3 | Rate of Energy Charge ex-bus | 3.64 | 3.64 | 3.64 | 3.64 | 3.64 |

Petitioner

**PART-I**
**FORM-2**

## Plant Characteristics

**Name of the Company** : APGENCO

**Name of the Power Station** : Rayalaseema Thermal Power Station Stage IV

**Basic characteristics of the plant**[1] : Coal based thermal plant with conventional Boiler and Steam Turbine.

**Special Features of the Plant** :

**Site Specific Features**[2] : Expansion in the same power plant area at Rayalaseema

**Special Technological Features**[3] :

**Environmental Regulation related features**[4] : ESPs are provided for pollution control in both the Units. Opacity meters are provided for SPM measurement and measurement of SOX and NOX emissions provided.

**Any other special features** :

| **Fuel Details**[5] | Primary Fuel | Secondary Fuel | Alternate Fuels |
|---|---|---|---|
| | Coal | Heavy oil/Light Diesel oil | --- |
| **Details** | **Module number or Unit number** | | |
| Unit No. | 1 | | |
| Installed Capacity (IC) | 600 MW (1x500+20%) | | |
| Date of Commercial Operation (COD) | 29.03.2018 | | |
| Type of cooling system[6] | Closed cycle cooling system using Natural draft cooling tower | | |
| Type of Boiler Feed Pump[7] | Motor driven | | |

**PETITIONER**

PART-I

FORM-3

**Normative parameters considered for tariff computations**

**Name of the Company** **APGENCO**

**Name of the Power Station** **RTPP Stage IV**

| Particulars | Unit | As per fillings | As per APERC norms |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **Rate of Return on Capital Employed** | **%** | **11.8** | **Not mentioned** |
| **Target Availability** | **%** | 80% | 80% |
| **Target PLF** | **%** | - | 80% |
| **Auxiliary Energy Consumption** | **%** | 6 | 6 |
| **Gross Station Heat Rate** | **kCal/kWh** | 2425 | 2425 |
| **Specific Fuel Oil Consumption** | **ml/kWh** | 2 | 2 |
| **O&M Cost *** | **Rs.Lakh/MW** | - | - |
| **Cost of Coal/Lignite for WC[1]** | **in Months** | 1 | 1 |
| **Cost of Secondary Fuel Oil for WC[1]** | **in Months** | 1 | 1 |
| **Fuel Cost for WC[2]** | **in Months** | | |
| **Liquid Fuel Stock for WC[2]** | **in Months** | | |
| **O & M Expenses for WC** | **in Months** | 1 | 1 |
| **Maintenance Spares for WC** | **%** | 1 | 1 |
| **Recievables for WC** | **in Months** | 2 | 2 |
| **Prime lending Rate of SBI** | **%** | - | |
| **Incentive Rate** | **Paise / kWh** | 25 | 25 |

**PETITIONER**

| | Form 7 |
|---|---|
| **Name of the Company** | **APGENCO** |
| **Name of the Power Station** | **RTPP IV** |
| **Particulars** | **Package1** |
| **1** | **2** |
| **Source of Loans** | PFC 31301016 |
| **Currency** | INDIAN Rs |
| **Amount of Loan sancioned** | 3612.80 |
| **Amount of Gross Loan drawn Upto 31.03.19** | 3612.80 |
| **Interest Type** | Floating |
| **Fixed Interest Rate, if applicable** | - |
| **Base Rate, if Floating Interest** | 10.20% |
| **Margin, if Floationg Interest** | |
| **Are there any Caps/Floor** | - |
| **If above is yes, specify caps/floor** | - |
| **Moratorium Period** | 83 Months |
| **Moratorium efective from** | 15-Feb-11 |
| **Repayment Period** | 15 Years |
| **Repayment effective from** | 15-Jan-18 |
| **Repayment Frequency** | Quarterly |
| **Repayment Instalment** | 60 |
| **Base ExchangeRate** | - |

**PART-I**

**FORM- 11**

**Statement of Depreciation**

**Name of the Company** APGENCO

**Name of the Power Station** RTPP-IV

(Rs in Laks)

| **Financial Year** | **Upto 2018-19** | **2019-20** | **2020-21** | **2021-22** | **2022-23** | **2023-24** |
|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Depreciation on Capital Cost** | | 4853.38 | 4853.38 | 4853.38 | 4853.38 | 4853.38 |
| **Depreciation recovered during the Year** | | 373.71 | 373.71 | 373.71 | 373.71 | 373.71 |
| **Depreciation & Advance against Depreciation recovered during the year** | | 373.71 | 373.71 | 373.71 | 373.71 | 373.71 |
| **Cumulative Depreciation & Advance against Depreciation recovered upto the year** | | 373.71 | 747.42 | 1121.13 | 1494.84 | 1868.55 |

Petitioner

Form 13

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Name of the Company** | **APGENCO** | | | | | |
| | **Name of the Power Station** | **RTPP IV** | | **Amount in Crores** | | | |
| **S.No** | **Particulars** | **Existing 18-19** | **19-20** | **20-21** | **21-22** | **22-23** | **23-24** |
| **1** | **Loan 1 - PFC 31301016** | | | | | | |
| | Gross Loan - Openig | 3612.80 | 3612.80 | 3612.80 | 3612.80 | 3612.80 | 3612.80 |
| | Cumulative Repayment of Loans upto Current Year | (60.21) | (301.06) | (541.92) | (782.77) | (1,023.62) | (1,264.48) |
| | **Net Loan - Opening** | 3552.59 | 3311.74 | 3070.88 | 2830.03 | 2589.18 | 2348.32 |
| | Add: Drawals during the Year | - | - | - | - | - | - |
| | Less: Repayment of the Loans during the year | (240.85) | (240.85) | (240.85) | (240.85) | (240.85) | (240.85) |
| | **Net Loan - Closnig** | **3311.74** | **3070.88** | **2830.03** | **2589.18** | **2348.32** | **2107.47** |
| | Average Net Loan | 3311.74 | 2778.76 | 2537.91 | 2297.06 | 2056.20 | 1815.35 |
| | Rate of Interest on Loan | 10.20% | 10.20% | 10.20% | 10.20% | 10.20% | 10.20% |

**PART-I**
**FORM- 13A**

## Calculation of Return on Capital Employed

**Name of the Company** APGENCO

**Name of the Power Station** RTPP-IV

(Amount in Crs)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Regulated Rate Base[1] | 11.8% | 11.8% | 11.8% | 11.8% | 11.8% |
| WACC[1] | 5484.09 | 5106.85 | 4729.83 | 4353.02 | 3976.46 |
| RoCE | 647.12 | 602.61 | 558.12 | 513.66 | 469.22 |

**Petitioner**

**PART-I**
**FORM- 14**

## Working Capital

**Name of the Company** APGENCO

**Name of the Power Station** RTPP-IV

(Amount in Crs)

| Sl. No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Cost of Fuel | 127.55 | 127.55 | 127.55 | 127.55 | 127.55 |
| 2 | O & M expenses | 9.80 | 10.45 | 11.14 | 11.88 | 12.67 |
| 3 | Maintenance Spares | 48.53 | 50.47 | 52.49 | 54.59 | 56.77 |
| 4 | Recievables | 444.83 | 438.71 | 432.69 | 426.76 | 420.93 |
| | Total Working Capital | 630.71 | 627.18 | 623.87 | 620.78 | 617.92 |

**Petitioner**

| BREAK UP of CAPITAL COST | | | |
|---|---|---|---|
| Name of the Power Station : Dr. Narla TataRao Thermal Power Station, Stage-V, 1x800 MW | | | |
| S No. | Break Down | Cost in Rs. Cr | Remarks |
| 1 | Cost of Land & Site Development | - | |
| 1.1 | Land | - | |
| 1.2 | Rehabitation & Resettlement (R&R) | - | |
| 1.3 | Preliminary Investigation & site development | - | Included in Civil works Sl No.4) below |
| 2 | Plant & Equipment | | |
| 2.1 | Steam Generator Island | 1775.35 | |
| 2.2 | Turbine Generator Island | | |
| 2.3 | BOP Mechanical | 916.67 | |
| 2.4 | BOP Electrical | 232.69 | |
| 2.5 | BOP C & I | 61.16 | |
| 2.6 | Taxes & Duties | 394.40 | |
| 3 | Initial Spares | 110.50 | |
| 4 | Civil Works | 1002.22 | |
| 5 | Construction & Pre Commissioning Expenses | | |
| 5.1 | Erection Testing and commissinoning | 328.47 | |
| 5.2 | Site Supervision | - | Included in Consultancy ( 6.2) |
| 5.3 | Operators Training | - | Included in Respective packages |
| 5.4 | Construction Insurance | - | Included in Respective packages |
| 5.5 | Tools & Plant | - | Included in Respective packages |
| 5.6 | Start up fuel | 12.00 | |
| 6 | Overheads | | |
| 6.1 | Establishment | 20.00 | |
| 6.2 | Design & Engineering (Consultancy) | 10.00 | |
| 6.3 | Audit & Accounts | - | Included in 6.1 Above |
| 6.4 | Contigency | 30.00 | |
| 6.5 | CSR | 40.00 | |
| 8 | Implementation of MoE&F Norms | 540.00 | |
| **7** | **Capital Cost Excluding IDC & FC** | **5473.46** | |
| 7.1 | IDC & Financing Cost | 670.34 | |
| **9** | **Capital Cost Including IDC & FC** | **6143.80** | Total Cost may vary on the final completion of the project due to implementation of GST and MoE&F norms. |

Chief Engineer / TPC
APGENCO, Vidyut Soudha,
Vijayawada - 520 004

**PART-I**
**FORM- 1**

**Summary Sheet**

**Name of the Company** **APGenco**
**Name of the Power Station :** **Dr. NTTPS stage V**

(Rs in Crs)

| S.No. | Particulars | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1.1 | Depreciation | 156.12 | 473.08 | 473.08 | 473.08 | 473.08 |
| 1.2 | Return on Capital Employed | 269.86 | 792.21 | 735.90 | 679.64 | 623.41 |
| 1.3 | O & M Expenses | 51.75 | 167.22 | 178.32 | 190.16 | 202.79 |
| | **Total** | **477.73** | **1432.51** | **1387.30** | **1342.88** | **1299.28** |

**2.Calculation of Rate of Energy Charge(Rs./kWh)**

| | | | | | | |
|---|---|---|---|---|---|---|
| 2.1 | Rate of Energy Charge from Primary Fuel | 2.84 | 2.84 | 2.84 | 2.84 | 2.84 |
| 2.2 | Rate of Energy Charge from Secondary Fuel | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| 2.3 | Rate of Energy Charge ex-bus | 2.92 | 2.92 | 2.92 | 2.92 | 2.92 |

Petitioner

**PART-I**
**FORM-2**

**Plant Characteristics**

| | |
|---|---|
| **Name of the Company** | APGenco |
| **Name of the Power Station** | Dr Narla Tata Rao Thermal Power Station stage V |
| **Basic characteristics of the plant**[1] | Coal based thermal station( 1x800 MW) with Super critical technology |

**Special Features of the Plant**

| | |
|---|---|
| **Site Specific Features**[2] | In the existing premises of Dr Narla Tata Rao Thermal power Station. Site is located on left side of river krishna at a distance of 2km between Ibrahimpatnam & Kondapalli Village in Krishna District & 16 Km north side of Vijayawada city. |
| **Special Technological Features**[3] | Super critical technology. The steam Generator is drumless. |
| **Environmental Regulation related features**[4] | ESPs are provided for pollution control in all the Units. Opacity meters are provided for SPM measurement and measurement of SOX and NOX emissions provided. |

**Any other special features**

| **Fuel Details**[5] | Primary Fuel | Secondary Fuel | Alternate Fuels |
|---|---|---|---|
| | Coal | Heavy Oil/Light Diesel Oil | - |

| **Details** | **Unit no.1** |
|---|---|
| Installed Capacity (IC) | 800 MW |
| Date of Commercial Operation (COD) | - |
| Type of cooling system[6] | Closed cycle cooling system uning Natural Draft cooling Tower |
| Type of Boiler Feed Pump[7] | Motor driven & Turbine driven |

**Normative parameters considered for tariff computations**

**Name of the Company** **APGENCO**

**Name of the Power Station** **Dr NTTPS-V**

**Year ending March**

| Particulars | Unit | As per fillings 2019-24 | As per APERC norms |
|---|---|---|---|
| -1 | | 2 | 3 |
| **Rate of Return on Capital Employed** | **%** | **11.8** | **Not mentioned** |
| **Target Availability** | **%** | 80% | 80% |
| **Target PLF** | **%** | 80% | 80% |
| **Auxiliary Energy Consumption** | **%** | 6 | 6 |
| **Gross Station Heat Rate** | **kCal/kWh** | 2425 | 2425 |
| **Specific Fuel Oil Consumption** | **ml/kWh** | 2 | 2 |
| **O&M Cost** | **Rs.Lakh/MW** | - | - |
| **Cost of Coal/Lignite for WC[1]** | **in Months** | 1 | 1 |
| **Cost of Secondary Fuel Oil for WC[1]** | **in Months** | 1 | 1 |
| **Fuel Cost for WC[2]** | **in Months** | | |
| **Liquid Fuel Stock for WC[2]** | **in Months** | | |
| **O & M Expenses for WC** | **in Months** | 1 | 1 |
| **Maintenance Spares for WC** | **%** | 1 | 1 |
| **Recievables for WC** | **in Months** | 2 | 2 |
| **Prime lending Rate of SBI** | **%** | - | |
| **Incentive Rate** | **Paise / kWh** | 25 | 25 |

**PETITIONER**

| | |
|---|---|
| **Name of the Company** | **APGENCO** |
| | |
| **Name of the Power Station** | **VTPS V** |
| | |
| **Particulars** | **Package1** |
| **1** | **2** |
| **Source of Loans** | REC 417478 |
| **Currency** | INDIAN Rs |
| **Amount of Loan sancioned** | 4300.31 |
| **Amount of Gross Loan drawn Upto 31.03.19** | 3773.24 |
| **Interest Type** | Floating |
| **Fixed Interest Rate, if applicable** | - |
| **Base Rate, if Floating Interest** | 11.40% |
| **Margin, if Floationg Interest** | |
| **Are there any Caps/Floor** | - |
| **If above is yes, specify caps/floor** | - |
| **Moratorium Period** | 56 Months |
| **Moratorium efective from** | 14-Dec-15 |
| **Repayment Period** | 10 Years |
| **Repayment effective from** | 30-Dec-20 |
| **Repayment Frequency** | Quarterly |
| **Repayment Instalment** | 40 |
| **Base ExchangeRate** | - |

**PART-I**
**FORM- 11**

## Statement of Depreciation

**Name of the Company** **APGENCO**

**Name of the Power Station** **Dr.NTTP-V**

| Financial Year | Upto 2018-19 | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Depreciation on Capital Cost | | 6143.88 | 6143.88 | 6143.88 | 6143.88 | 6143.88 |
| Depreciation recovered during the Year | | 156.12 | 473.08 | 473.08 | 473.08 | 473.08 |
| Depreciation & Advance against Depreciation recovered during the year | 0.00 | 156.12 | 473.08 | 473.08 | 473.08 | 473.08 |
| Cumulative Depreciation & Advance against Depreciation recovered upto the year | 0.00 | 156.12 | 629.20 | 1102.28 | 1575.36 | 2048.44 |

Petitioner

Form 13

| | Name of the Company | APGENCO | | | | | |
|---|---|---|---|---|---|---|---|
| | Name of the Power Station | VTPS V | | Amount in Crores | | | |
| S.No | Particulars | Existing 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 |
| 1 | **Loan 1 - REC 417478** | | | | | | |
| | Gross Loan - Openig | 1988.23 | 3773.24 | 4300.31 | 4300.31 | 4300.31 | 4300.31 |
| | Cumulative Repayment of Loans upto Current Year | 0.00 | 0.00 | 0.00 | (215.02) | (645.05) | (1,075.08) |
| | **Net Loan - Opening** | 1988.23 | 3773.24 | 4300.31 | 4085.29 | 3655.26 | 3225.23 |
| | Add: Drawals during the Year | 1785.01 | 527.07 | - | - | - | - |
| | Less: Repayment of the Loans during the year | 0.00 | 0.00 | (215.02) | (430.03) | (430.03) | (430.03) |
| | **Net Loan - Closnig** | **3773.24** | **4300.31** | **4085.29** | **3655.26** | **3225.23** | **2795.20** |
| | Average Net Loan | 3773.24 | 4300.31 | 4085.29 | 3655.26 | 3225.23 | 2795.20 |
| | Rate of Interest on Loan | 11.40% | 11.40% | 11.40% | 11.40% | 11.40% | 11.40% |

**PART-I**
**FORM- 13A**

## Calculation of Return on Capital Employed

**Name of the Company** APGENCO

**Name of the Power Station** Dr.NTTPS -V

(Amount in Crs)

| **Particulars** | **2019-2020** | **2020-2021** | **2021-2022** | **2022-2023** | **2023-2024** |
|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** |
| Regulated Rate Base | 11.8% | 11.8% | 11.8% | 11.8% | 11.8% |
| WACC | 2286.94 | 6713.61 | 6236.48 | 5759.64 | 5283.11 |
| RoCE | 269.86 | 792.21 | 735.90 | 679.64 | 623.41 |

**Petitioner**

**PART-I**
**FORM- 14**

## Working Capital

**Name of the Company** APGENCO

**Name of the Power Station** Dr.NTTPS -V

(Amount in Crs)

| Sl. No. | Particulars | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Cost of Fuel | 136.42 | 136.42 | 136.42 | 136.42 | 136.42 |
| 2 | O & M expenses | 13.07 | 13.93 | 14.86 | 15.85 | 16.90 |
| 3 | Maintenance Spares | 61.44 | 63.90 | 66.45 | 69.11 | 71.88 |
| 4 | Recievables | 512.89 | 511.60 | 504.06 | 496.66 | 489.39 |
| | Total Working Capital | 723.82 | 725.85 | 721.79 | 718.04 | 714.59 |

**Petitioner**

Form 2&3

**NAME OF COMPANY : APGENCO**
**NAME OF POWER STATION : Polavaram HES 960 MW (12X80 MW)**

**SALIENT FEATURES**

**POLAVARAM DAM / RESERVOIR**

| | | |
|---|---|---|
| **Reservoir** | | |
| Catchment Area | | 306643 Sq. Km. |
| Type of dam | | Earth-Cum-Rock fill Dam |
| Length of Dam | : | 2454 m |
| Maximum height | | 57.90 m |
| FRL | | 45.72 m |
| MDDL | | 41.15 m |
| Gross Capacity | : | 194.60 TMC |
| Live Capacity | : | 75.20 TMC |
| **Spillway** | | |
| Length | : | 1128.40 m |
| No. of Gates | ; | 48 Nos. |
| Size of Gates | ; | 16 m x 20 m |
| **Design Flood (Cumec)** | | |
| a. Dam | | 1,41,435 cumecs (49.93 lakh cusecs) |
| **Irrigation (Ha)** | | |
| Right Main canal | | 1,62,691 Ha |
| Left Main canal | | 2,16,197 Ha |

**POLAVARAM HYDRO ELECTRIC PROJECT**

| | | | | |
|---|---|---|---|---|
| 1 | **Name** | | Polavaram Hydro Electric Project (12X80 MW ) | |
| 2 | **Location** | : | The power scheme is proposed at the location of "D" hill on the left side of the earth cum rock fill dam across river Godavari East Godavari District of Andhra Pradesh | |
| | Longitude / Latitude | : | $81^{o}$-46' E / $17^{o}$ - 13' N | |
| 3 | **Power Potential** | | | |
| | | | **1st Year** | **35th Year** |
| | Gross Energy | : | 2308.41MU | 431.27 MU |
| | Net Energy | : | 2285.33 MU | 426.96 MU |

**Major Civil Components of the project**

| | | | |
|---|---|---|---|
| 1 | **Approach Channel** | : | |
| | Discharge Capacity | : | 3972 Cumecs |
| | Length | : | 206m |
| | Width | : | 294 m |
| | Bed Level | : | (+) 35.00 |
| 2 | **Intake Pool** | | |
| | Bed Level | : | (+) 35.00 |
| | Level at End | : | (+) 13.85 |
| | Width | : | 294 m |
| | Length | : | 64 m |
| | Section | : | Lined |
| 3 | **Intake Structure** | | |
| | Bottom Level | : | (+) 13.85 / 20.0 |
| | Top Level | : | (+) 48.22 |
| | Length | : | 294 m |
| 4 | **Intake Tunnels** | : | |
| | Number of tunnels | : | 12 Nos. |
| | Discharging capacity | : | 331 Cumecs/each Unit |
| | Length of tunnel | : | 115 m |
| | Diameter of Tunnel | : | 9 Metres (Finished), Circular |

| | | | |
|---|---|---|---|
| 5 | **Intake Gates** | : | |
| | Number of gates. | : | 12 Nos. |
| | Size of gates | : | 6.50 m x 11.90 m |
| | No of Stop log gates | : | 3 |
| | Size of gates | : | 6.5X11.9 |
| 6 | **Power House** | : | |
| | Size of Power House | : | 365 x 26 m ( Main machine hall - 300X26) |
| | Service bay floor level | : | (+) 26.00 m |
| | Unloading bay floor level | : | (+) 35.00 m |
| | Distance between Units | : | 24 m |
| 7 | **DT Structure** | | |
| | No of DT gates | : | 24 |
| | Bottom Level | : | (-) 3.00 |
| | Top level of DT gates | : | (+) 35.00 m |
| | Clear vent size | : | 8.75X8.75 (24 Nos) |
| 8 | **Tailrace Pool** | : | |
| | Section | : | Lined |
| | Bed Level at Start | : | (-) 3.00 m |
| | Bed level at end | : | (+) 12.39 |
| 9 | **Tailrace Channel** | : | |
| | Length | : | 1130 m |
| | Slope | : | 1 in 3000 |
| | Discharging Capacity | : | 3972 Cumecs |
| | Section | : | LINED |
| | Bed Width | : | 254.32 |
| | Bed Level at Start | : | (+) 12.39 m |
| 10 | **Land for PHEP** | : | |
| | Patta land & Govt Land | : | 121.615 Hectares |

**Major Electrical & Mechanical Components of the project**

| | | | |
|---|---|---|---|
| 1 | **Turbines** | : | |
| | Type | : | Vertical Kaplan, Semi Spiral turbines |
| | Design head | : | 27 m. |
| | Runner diameter | : | 6150 mm |
| | Trbine Speed | : | 115.38 rpm |
| | Design discharge | : | 331 Cumecs |
| 2 | **Generators** | | |
| | Type | : | Synchronous vertical Generator |
| | Rated Voltage | : | 11 ± 10 % |
| | Rated KVA | : | 88888 |
| | Type of Winding | : | Wave Winding |
| | Insulation Class | : | Class F |
| | No of Poles | : | 52 |
| 3 | **Generator Transformers** | : | |
| | Location | : | 26m |
| | No of Transformers | : | 12 Nos |
| | Rating | : | 11KV/400 KV,100MVA |
| 4 | **Switch yard** | : | |
| | Type | : | Indoor GIS |
| | No of Buses | : | 2 Nos |
| | No. of Feeders | : | 2 Nos |
| | Voltage Level | : | 400KV |
| | No. of Bays | : | 21 Nos |

**FORM- 1**

**Summary Sheet**

**Name of the Company** **APGenco**

**Name of the Power Station :** **Polavaram HES**

(Rs in Crs)

| S.No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1.1 | Depreciation | - | - | 23.60 | 121.62 | 179.71 |
| 1.2 | Return on Capital Employed[1] | - | - | 85.16 | 437.02 | 631.26 |
| 1.3 | O & M Expenses | - | - | 10.41 | 53.66 | 79.28 |
| | **Total** | - | - | 119.17 | 612.30 | 890.25 |

| | Form 7 |
|---|---|
| **Name of the Company** | **APGENCO** |
| **Name of the Power Station** | **960MW Polavaram** |
| **Particulars** | **Package1** |
| **1** | **2** |
| **Source of Loans** | REC 4112037 |
| **Currency** | INDIAN Rs |
| **Amount of Loan sancioned** | 3965.11 |
| **Amount of Gross Loan drawn Upto 31.03.19** | 977.96 |
| **Interest Type** | Floating |
| **Fixed Interest Rate, if applicable** | - |
| **Base Rate, if Floating Interest** | 11.40% |
| **Margin, if Floationg Interest** | |
| **Are there any Caps/Floor** | - |
| **If above is yes, specify caps/floor** | - |
| **Moratorium Period** | 82 Months |
| **Moratorium efective from** | 6-Jan-18 |
| **Repayment Period** | 20 Years |
| **Repayment effective from** | 30-Mar-25 |
| **Repayment Frequency** | Quarterly |
| **Repayment Instalment** | 80 |
| **Base ExchangeRate** | - |

**PART-I**
**FORM- 11**

## Statement of Depreciation

**Name of the Company** **APGENCO**

**Name of the Power Station** **Polavaram HES**

(Rs in Crs)

| Financial Year | Upto 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Depreciation on Capital Cost | - | - | - | 294.88 | 294.88 | 294.88 |
| Depreciation recovered during the Year | - | - | - | 23.6 | 121.62 | 179.71 |
| Depreciation & Advance against Depreciation recovered during the year | - | - | - | 23.6 | 121.62 | 179.71 |
| Cumulative Depreciation & Advance against Depreciation recovered upto the year | - | - | - | 23.6 | 145.22 | 324.93 |

Form 13

| | Name of the Company | APGENCO | | | | | |
|---|---|---|---|---|---|---|---|
| | Name of the Power Station | 960MW Polavaram | | Amount in Crores | | | |
| S.No | Particulars | Existing 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | **Loan 1 - REC 4112037** | | | | | | |
| | Gross Loan - Openig | 617.25 | 977.96 | 1177.96 | 1777.96 | 2277.96 | 3277.96 |
| | Cumulative Repayment of Loans upto Current Year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | **Net Loan - Opening** | 617.25 | 977.96 | 1177.96 | 1777.96 | 2277.96 | 3277.96 |
| | Add: Drawals during the Year | 360.71 | 200.00 | 600.00 | 500.00 | 1000.00 | 565.11 |
| | Less: Repayment of the Loans during the year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | **Net Loan - Closnig** | **977.96** | **1177.96** | **1777.96** | **2277.96** | **3277.96** | **3843.07** |
| | Average Net Loan | 977.96 | 1177.96 | 1777.96 | 2277.96 | 3277.96 | 3843.07 |
| | Rate of Interest on Loan | 11.40% | 11.40% | 11.40% | 11.40% | 11.40% | 11.40% |

**PART-I**
**FORM- 13A**

## Calculation of Return on Capital Employed

**Name of the Company** APGENCO

**Name of the Power Station** Polavarm HES

(Amount in crs)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Regulated Rate Base[1] | - | - | 11.8% | 11.8% | 11.8% |
| WACC[1] | - | - | 721.73 | 3703.58 | 5349.63 |
| RoCE | - | - | 85.16 | 437.02 | 631.26 |

**Petitioner**

**PART-I**
**FORM- 14**

## Working Capital

**Name of the Company** APGENCO

**Name of the Power Station** Polavaram HES

(Amount in Crs)

| Sl. No. | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | O & M expenses | - | - | 6.67 | 7.12 | 7.59 |
| 2 | Maintenance Spares | - | - | 53.39 | 55.53 | 57.75 |
| 3 | Recievables | - | - | 152.79 | 153.27 | 151.85 |
| | Total Working Capital | - | - | 212.85 | 215.92 | 217.19 |

**Petitioner**