



ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

4th Floor, Singareni Bhavan, Red Hills, Hyderabad 500 004

Present

Sri Justice G. Bhavani Prasad, Chairman

Dr. P. Raghu, Member

Sri P. Rama Mohan, Member

Dated 4th April, 2016

In the matter of

POWER PURCHASE PRICE DETERMINATION FOR RESCOS DURING FY2016-17

The Kuppam Rural Electric Cooperative Society Ltd. OP .No.4 of 2016

The Anakapalle Rural Electric Cooperative Society Ltd, OP. No.5 of 2016

The Cheepurupalli Rural Electric Cooperative Society Ltd OP. No.6 of 2016

..... Applicants

The Aggregate Revenue Requirement filed by the Anakapalle Rural Electric Cooperative Society Ltd(Anakapalle RESCO), the Cheepurupalli Rural Electric Cooperative Society Ltd(Cheepurupalli RESCO) and The Kuppam Rural Electric Cooperative Society Ltd (Kuppam RESCO) in respect of their individual distribution and retail supply businesses for FY2016-17 for determination of Power Purchase Price to be paid by the applicants to the distribution licensees (from whom the applicants purchase the power) came up for consideration before the Commission. Upon careful consideration of the material available on record and additional information made available by the applicants, the Commission hereby passes this common order:

ORDER

Introduction

1. The three Rural Electric Cooperative Societies (RESCOs henceforth) in Andhra Pradesh State purchase electricity from distribution licensees for retail sale of electricity to consumers connected to Low Tension (LT) network in their designated areas of supply¹. Under the current regulatory provisions, the electricity purchased from distribution licensees by RESCOs is sold to retail consumers in their designated areas of supply at the tariff for retail sale of electricity as applicable to distribution licensees. The three RESCOs have filed the Aggregate Revenue Requirement (ARR) with the Commission for determination of Power Purchase Price to be paid to distribution licensees for supplies during FY2016-17². The Commission has taken these filings on record and used the information provided in these filings in determination of the power purchase price for each RESCO to be paid by RESCO to distribution licensee (Anakapalle and Cheepurupalli RESCOs to EPDCL and Kuppam RESCO to SPDCL) from whom they draw the electricity during FY2016-17 as detailed hereunder:

Methodology

2. The methodology for determination of power purchase price for a RESCO has been devised in such a manner that the RESCO after meeting its expenses prudently towards distribution and retail sale of electricity (excluding power purchase cost) from its revenues, remits the remaining revenue towards power purchase cost to the Distribution licensee who supplies the electricity to the RESCO. In this framework, the Commission;
 - a) Determines the expenditure/ARR for a RESCO towards distribution and retail sale of electricity (excluding power purchase cost) in its area of supply for a year (Expenditure),
 - b) Determines the sales volume in the area of supply of a RESCO and computes the revenue from the sale of electricity (at approved sales and tariff for retail sale of electricity) for a year (Revenue),
 - c) Determines the power purchase requirement/quantity for a RESCO based on the approved volume of sales and loss levels for a year (Power Purchase Quantity),
 - d) Computes the surplus available with a RESCO by deducting the expenditure from revenue and considers this amount as available for power purchase from the distribution licensee and
 - e) Computes the power purchase price for a RESCO by dividing the amount available for purchase with the power purchase requirement/quantity determined for that RESCO.

¹ Anakapalle RESCO has the designated area of supply in Visakhapatnam district and Cheepurupalli RESCO has the designated area of supply in Vizianagaram district, and these two RESCOs draw the electricity from Eastern Power Distribution Company of Andhra Pradesh Ltd (EPDCL). The Kuppam RESCO has the designated area of supply in Chittoor district and draws the electricity from Southern Power Distribution Company of Andhra Pradesh Ltd (SPDCL).

² The filing dates are: Anakapalle RESCO and Cheepurupalli RESCO- 29/12/2015 and 22/12/2015, Kuppam RESCO- 30 /11/2015.

Aggregate Revenue Requirement (ARR)

3. The gross ARR for a RESCO consists of a) return on capital computed on net capital base of RESCO and b) expenditure towards distribution and retail supply activities excluding power purchase cost. The gross ARR thus reflects the total expenditure to be recovered from the consumers to meet the capital and operating cost of a RESCO. The net ARR for a RESCO is the gross ARR net of non-tariff income (which is likely to be fixed in nature and independent of levy of charges and rates). The Commission has computed the net ARR for each RESCO for FY2016-17.

Return on Capital

4. The RESCOs have filed the capital base details for FY2016-17 in accordance with the format issued for this purpose by the Commission. The RESCOs are eligible to compute and claim 16% return on net capital as return on capital employed in the business during a year. Of the three RESCOs, Anakapalle RESCO has claimed the capital cost at ₹ 844.54 lakhs and Cheepurupalli RESCO has claimed ₹26.92 lakhs for FY2016-17. The Commission after scrutiny modified the above amounts to ₹ 879.72 lakhs and ₹ 17.78 lakhs for Anakapalle and Cheepurupalli RESCOs respectively. In case of Kuppam RESCO, the net capital base has become negative on account of huge consumer contributions to the capital base and thus the RESCO did not claim the return on capital for FY 2016-17. The details of capital base and return on capital employed are given in Annexure-01.

Expenditure

5. The three RESCOs have filed the expenditure details for FY2016-17 in accordance with the format issued for this purpose. The Commission has approved the expenditure as filed by RESCOs for FY2016-17 with the following modifications/additions/deletions for FY2016-17;

- a) In case of Anakapalle RESCO, the Commission has provided ₹600 lakhs as special expenditure provision to meet the damages caused by HUD HUD cyclone in 2014 to its distribution infrastructure as requested by the RESCO for FY2016-17. The Commission directs that:

The Anakapalle RESCO shall file quarterly reports during FY2016-17 with regard to the utilization of ₹600 lakhs expenditure provided in this Order to meet the damages caused by HUD HUD cyclone to its distribution infrastructure. The RESCO may stop filing of such quarterly reports after the amount is completely utilized for this purpose. The RESCO shall also reimburse to APEPDCL, the cost for the material it has received from the latter towards replacement of equipment damaged by HUD HUD cyclone.

Further, the Commission modified the depreciation amount for the RESCO for FY 2016-17 from ₹ 846.46 lakhs to ₹ 756.06 lakhs.

- b) In case of Cheepurupalli RESCO, the Commission has disallowed the expenditure items under the heads of cost towards distribution of LED Bulbs(₹100.2 lakhs), tax (₹80 lakhs) and interest on

share capital ((₹14.67 lakhs) keeping in view the meager surplus amount available with RESCO to purchase power for FY 2016-17.

c). In case of Kuppam RESCO, the Commission has disallowed the expenditure items under the head of contribution towards contingency reserve as the same is not required under the present regulatory framework.

6. With these modifications to the filings made by the RESCOs, the Commission has computed the total expenditure at ₹4250.06 lakhs for Anakapalle RESCO, ₹1252.99 lakhs for Cheepurupalli RESCO and ₹2011.94 lakhs for Kuppam RESCO during for FY2016-17. The expenditure details are given in annexure-02.

Non-Tariff Income

7. The RESCOs also earn some income from non-tariff sources (non-tariff income) such as customer charges, penalties, interest on deposits etc. The Commission has approved the non-tariff income as estimated and filed by RESCOs in their respective ARR filings at ₹631.72 lakhs for Anakapalle RESCO, ₹219.53 lakhs for Cheepurupalli RESCO and ₹102 lakhs for Kuppam RESCO during FY2016-17.

Aggregate Revenue Requirement (ARR)

8. The Commission has computed the Net ARR for each RESCO (by adding return on capital and expenditure and then deducting the non-tariff income) for FY2016-17 at ₹4498.06lakhs for Anakapalle RESCO, ₹1051.24 lakhs for Cheepurupalli RESCO and ₹1909.94 lakhs for Kuppam RESCO and these details are given in the table below.

Aggregate Revenue Requirement for RESCOs during FY2016-17(₹ lakhs)

| Item | Anakapalle | Cheepurupalli | Kuppam |
|---------------------------|----------------|----------------|----------------|
| 01. Return on Capital | 879.72 | 17.78 | 0 |
| 02. Expenditure | 4250.06 | 1252.99 | 2011.94 |
| 03. Gross ARR(01+02) | 5129.78 | 1270.77 | 2011.94 |
| 04. Non-Tariff Income | 631.72 | 219.53 | 102 |
| 05. Net ARR(03-04) | 4498.06 | 1051.24 | 1909.94 |

Sales, Power Purchase and Revenue from Tariffs

9. The Commission has determined the sales volume for the area of supply of each RESCO separately, after considering the historical sales volumes in the respective area of supply, distribution licensees' proposed sales volume to each RESCO and RESCOs' proposed sales volumes, at 201.95 MU for Anakapalle RESCO, 64.75 MU for Cheepurupalli RESCO and 283.22 MU for Kuppam RESCO during FY2016-17.

The Commission has computed the power purchase requirement, by grossing up the sales with applicable loss levels, at 227.19 MU for Anakapalle RESCO, 74.85 MU for Cheepurupalli RESCO and 329.48 MU for Kuppam RESCO during FY2016-17.

10. Since RESCOs also sell electricity at the tariff determined for distribution licensees for retail sale of electricity, the revenue from tariff for each RESCO has been estimated at the tariff applicable for retail sale of electricity during FY2016-17 with corresponding sales volumes for FY2016-17. The revenue from tariffs has been computed on sales apportioned to different consumer categories at ₹6607.87 lakhs for Anakapalle RESCO, ₹1135.42 lakhs for Cheepurupalli RESCO and ₹2978.03 lakhs for Kuppam RESCO during FY2016-17 and these details are given in annexure-03 and the summary is given in table below.

Sales, Power Purchase and Revenue from Tariffs during FY2016-17

| Item | Anakapalle | Cheepurupalli | Kuppam |
|---|----------------|----------------|----------------|
| 01. Sales, MU | 201.95 | 64.75 | 283.22 |
| 02. Power Purchase Quantity, MU | 227.19 | 74.85 | 329.48 |
| 03. Revenue from Tariff, ₹ lakhs | 6607.87 | 1135.42 | 2978.03 |

Excess Drawals by RESCOs during FY2016-17

11. The RESCOs may, without any restriction, draw the required additional quantum of energy to meet the requirement of additional sales to non-agricultural consumer categories from respective distribution licensees during FY2016-17. The additional net revenue that accrues to RESCOs as a result of higher sales volume to nonagricultural consumer categories will be transferred to Distribution licensees on completion of FY2016-17 through ARR determination for FY2017-18.
12. In case of supplies to agriculture, the RESCOs shall make all possible efforts not to exceed the sales volume approved in this Order while strictly implementing the policies of distribution licensee(from whom the RESCOs draw the power) in supplying energy to agriculture in its area of supply. Any excess sales volume to this consumer category will be reviewed separately in consultation with the distribution licensees.
13. However, the RESCOs shall continue to pay the rates determined for power purchase in this Order for excess volume also for all consumer categories during FY2016-17.

Surplus Available with RESCOs and Power Purchase Price for FY2016-17

14. The Commission, with the net ARR and Revenue from tariff as determined above, has computed the surplus available with RESCOs at ₹2109.81 lakhs in Anakapalle RESCO, ₹84.19 lakhs in Cheepurupalli RESCO and ₹1068.09 lakhs in Kuppam RESCO during FY2016-17. The power purchase price for each

RESCO has been determined (dividing the available surplus by approved power purchase quantity) at ₹0.93/kWh for Anakapalle RESCO, ₹0.11 /kWh for Cheepurupalli RESCO and ₹0.32/kWh for Kuppam RESCO during FY2016-17. The details are given in the table below:

Power Purchase Price for FY2016-17

| Item | Anakapalle | Cheepurupalli | Kuppam |
|--|-------------|---------------|-------------|
| 01. Net ARR (₹ lakhs) | 4498.06 | 1051.236 | 1909.94 |
| 02. Revenue (₹ lakhs) | 6607.87 | 1135.42 | 2978.03 |
| 03. Surplus Available for Power Purchase(02-01) (₹ lakhs) | 2109.81 | 84.19 | 1068.09 |
| 04. Power Purchase Quantity Approved (MU) | 227.19 | 74.85 | 329.48 |
| 05. Power Purchase Price(03/04) ₹/ kWh) | 0.93 | 0.11 | 0.32 |

Conclusion

15. The Commission has not accepted the RESCOs' submissions to the extent modified in this Order and has recomputed the ARR, Power Purchase Requirement, Revenue from Tariff and the Available Surplus based on alternate calculations for FY2016-17. The Commission has determined the Power Purchase Price (in accordance with para 14) to be paid by RESCO for energy draws from distribution licensees during FY2016-17 and each RESCO shall pay the Power Purchase Price determined in this Order to the respective distribution licensee for the energy draws during FY2016-17.
16. The RESCOs shall implement the tariff for retail sale of electricity determined by the Commission in its Order in O.P. No.1 of 2016 and O.P. No.2 of 2016 dated 31-03-2016 in their respective areas of supply as communicated separately in this regard.
17. The details of Revenues to the DISCOMs from the sale of energy to the RESCOs as per the Retail tariff Order for FY 2016-17 and as per the rates determined now are tabulated below.

| RESCO Name (1) | Located in | DISCOMs revenue from sale of energy to the RESCOs as per the Retail Tariff Order for FY 2016-17 (₹ Crs) (3) | DISCOMs revenue from sale of energy to the RESCOs as per the rates determined in this order (₹ Crs) (4) | Revenue Shortfall(-) /Gain(+) to the DISCOM (₹ Crs) (5)=(4)-(3) |
|-------------------|---------------|---|---|---|
| Anakapalli | APEPDCL | 34.44 | 21.94 | (-)12.5 |
| Cheepurupalli | | | | |
| Kuppam | APSPDCL | 8.68 | 10.68 | (+) 2 |

The Commission will deal with the above issue of the revenue shortfall/gain appropriately while determining the Retail Tariff of the DISCOMs for FY 2017-18

This Order is signed on 4th day of April, 2016.

Sd/
P. RAMA MOHAN
MEMBER

Sd/
P. RAGHU
MEMBER

Sd/-
G.BHAVANI PRASAD
CHAIRMAN

Annexure-01: Capital Base and Return on Capital during FY2016-17

| Capital Base Item(₹ lakhs) | Anakapalle | | Cheepurupalli | | Kuppam | |
|---|-----------------|-----------------|----------------|----------------|----------------|----------------|
| | RESCO | APERC | RESCO | APERC | RESCO | APERC |
| A: Positive Elements (01+...+05) | 13353.75 | 13253.75 | 2170.18 | 2170.18 | 8722.28 | 8732.9 |
| 01. Original Cost of Fixed Assets | 13073.75 | 13073.75 | 1842.87 | 1842.87 | 8342.69 | 8342.69 |
| 02. Cost of works in progress | 250.00 | 150.00 | 207.72 | 207.72 | 272.59 | 283.21 |
| 03. Working Capital | | | | | | |
| 04. Average Cost of Stores | 20.00 | 20.00 | 7.29 | 7.29 | 22.00 | 22.00 |
| 05. Avg. Cash and Bank balance | 10.00 | 10.00 | 112.3 | 112.3 | 85.00 | 85.00 |
| B: Negative Elements (06+...+11) | 8083.24 | 7755.5 | 2001.92 | 2059.08 | 11383.7 | 11383.7 |
| 06. Accumulated Depreciation | 5190.2 | 4862.46 | 1112.83 | 1112.83 | 6759.61 | 6759.61 |
| 07. Approved Loans | 1000.00 | 1000.00 | 0.00 | 40.66 | 778.81 | 778.81 |
| 08. Consumer Security Deposit | 436.49 | 436.49 | 141.72 | 158.22 | 401.24 | 401.24 |
| 09. Grants, aids & Subsidies | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10. T&D Reserves | 85.60 | 85.60 | 0.00 | 0.00 | 22.27 | 22.27 |
| 11. Consumer Contributions | 1370.95 | 1370.95 | 747.37 | 747.37 | 3421.72 | 3421.72 |
| C: Net Capital Base(A-B) | 5270.51 | 5498.25 | 168.26 | 111.1 | -2661.4 | -2650.8 |
| D: Return on Net Capital Base | 844.54 | 879.72 | 26.92 | 17.78 | 0.00 | 0.00 |

Annexure-02: Expenditure Items for RESCOs during FY2016-17

| Expenditure Item(₹ lakhs) | Anakapalle | | Cheepurupalli | | Kuppam | |
|--|----------------|----------------|---------------|----------------|---------------|---------------|
| | RESCO | APERC | RESCO | APERC | RESCO | APERC |
| 01. Wages and Salaries | 1892.00 | 1892.00 | 846.21 | 846.21 | 842.05 | 842.05 |
| 02. Admin. & General Expenses | 200.00 | 200.00 | 40.00 | 40.00 | 35.00 | 35.00 |
| 03. Repairs and Maintenance | 100.00 | 100.00 | 87.48 | 87.48 | 144.00 | 144.00 |
| 04. Rent, Rates & Taxes | 10.00 | 10.00 | 10.00 | 10.00 | 1.05 | 1.05 |
| 05. Approved Loan Interest | 0.00 | 0.00 | 9.00 | 9.00 | 69.25 | 69.25 |
| 06. Depreciation | 846.46 | 756.06 | 57.81 | 57.81 | 632.69 | 632.69 |
| 07. Contbn. to Employee Funds | 200.00 | 200.00 | 85.00 | 85.00 | 209.86 | 209.86 |
| 08. Contbn. to Gratuity Funds | 150.00 | 150.00 | 84.74 | 84.74 | | |
| 09. Interest on Security Deposit | 0.00 | 0.00 | 12.75 | 12.75 | 22.27 | 22.27 |
| 10. Legal Charges | 10.00 | 10.00 | 5.00 | 5.00 | 1.00 | 1.00 |
| 11. Auditors' Fees | 12.00 | 12.00 | 15.00 | 15.00 | 0.00 | 0.00 |
| 12. Contbn.to Contingency Reserves | 0.00 | 0.00 | 0.00 | 0.00 | 200 | 0 |
| 13. Taxes | 50.00 | 50.00 | 80.00 | 0.00 | 0.00 | 0.00 |
| 14. Provision for HUD HUD cyclone loss | 600.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15. Distribution of LED Bulbs | 270.00 | 270.00 | 100.20 | 0.00 | 0.00 | 0.00 |
| 16. Others | 0.00 | 0.00 | 0.00 | 0.00 | 24.77 | 24.77 |
| 17. For building construction | 0.00 | 0.00 | 0.00 | 0.00 | 50.00 | 50.00 |
| 18. Efficiency gains | 0.00 | 0.00 | 0.00 | 0.00 | 20.00 | 20.00 |
| 19. Expenditure | 4340.46 | 4250.06 | 1433.2 | 1252.99 | 2211.9 | 2011.9 |

Annexure-03: Sales, Power Purchase and Revenue from Tariff

Anakapalle RESCO: Sales and Revenue during FY2016-17

| Sales, Power Purchase and Revenue Consumer Category | RESCO | | APERC | |
|--|---------------|----------------------|---------------|----------------------|
| | Sales (MU) | Revenue (₹ lakhs) | Sales (MU) | Revenue (₹ lakhs) |
| LT-I: Domestic | 110.83 | 2838.98 | 100.89 | 2584.39 |
| LT-II: Non-Domestic | 11.86 | 1090.35 | 12.90 | 1204.05 |
| LT-III: Industry | 26.82 | 2059.47 | 27.36 | 2151.43 |
| LT-IV: Cottage Industries | 0.03 | 1.27 | 0.03 | 1.13 |
| LT-V: Agriculture | 59.45 | 0.00 | 48.77 | 0.00 |
| LT-VI: Street Lighting | 9.58 | 510.09 | 10.96 | 595.64 |
| LT-VII: General | 0.96 | 62.93 | 0.96 | 64.08 |
| LT-VIII: Temporary | 0.07 | 6.73 | 0.07 | 7.17 |
| Total | 219.59 | 6569.82 | 201.95 | 6607.87 |
| Power Purchase Quantity | 247.05 | n.a. | 227.19 | n.a. |

Cheepurupalli RESCO: Sales and Revenue during FY2016-17

| Sales, Power Purchase and Revenue Consumer Category | RESCO | | APERC | |
|--|---------------|----------------------|---------------|----------------------|
| | Sales (MU) | Revenue (₹ lakhs) | Sales (MU) | Revenue (₹ lakhs) |
| LT-I: Domestic | 28.53 | 641.98 | 22.62 | 509.08 |
| LT-II: Non-Domestic | 3.47 | 314.39 | 3.25 | 299.31 |
| LT-III: Industry | 3.01 | 229.96 | 2.44 | 190.57 |
| LT-IV: Cottage Industries | 0.00 | 0.00 | 0.00 | 0.00 |
| LT-V: Agriculture | 32.27 | 0.80 | 34.15 | 0.85 |
| LT-VI: Street Lighting | 2.59 | 143.94 | 2.13 | 120.68 |
| LT-VII: General | 0.21 | 14.06 | 0.16 | 14.93 |
| LT-VIII: Temporary | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 70.07 | 1345.13 | 64.75 | 1135.42 |
| Power Purchase Quantity | 81.00 | n.a. | 74.85 | n.a. |

Kuppam RESCO: Sales and Revenue during FY2016-17

| Sales, Power Purchase and Revenue Consumer Category | RESCO | | APERC | |
|--|---------------|----------------------|---------------|----------------------|
| | Sales (MU) | Revenue (₹ lakhs) | Sales (MU) | Revenue (₹ lakhs) |
| LT-I: Domestic | 36.97 | 1033.05 | 28.6 | 799.17 |
| LT-II: Non-Domestic | 7.83 | 745.53 | 7.91 | 765.85 |
| LT-III: Industry | 6.53 | 510.9 | 5.04 | 405.05 |
| LT-IV: Cottage Industries | 0.00 | 0.00 | 0.00 | 0.00 |
| LT-V: Agriculture | 380.08 | 127.55 | 223.21 | 74.91 |
| LT-VI: Street Lighting | 22.78 | 1121.06 | 17.88 | 883.03 |
| LT-VII: General | 0.53 | 42.9 | 0.56 | 46.16 |
| LT-VIII: Temporary | 0.022 | 4.16 | 0.020 | 3.87 |
| Total | 454.74 | 3585.15 | 283.22 | 2978.03 |
| Power Purchase Quantity | 529 | n.a. | 329.48 | n.a. |