

**BEFORE THE KARNATAKA ELECTRICITY REGULATORY COMMISSION,
BENGALURU**

Dated : 1st January, 2015

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| 1. Sri M.R. Sreenivasa Murthy | Chairman |
| 2. Sri H.D. Arun Kumar | Member |
| 3. Sri D.B. Manival Raju | Member |

RP No.7/2014

BETWEEN:

Bangalore Electricity Supply Company Limited,
K. R. Circle,
Bengaluru – 560 001.

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PETITIONER

(Represented by M/s. Thiru & Thiru, Advocates)

AND

NIL

..

RESPONDENT

- 1) This Review Petition is filed by the petitioner under Regulation 8 of the KERC (General & Conduct of Proceedings) Regulations, 2000, read with Section 94(f) of the Electricity Act, 2003, seeking review of the Order of the Commission dated 10.10.2013, in the matter of determination of tariff for grid interactive Solar Power Plants including roof top and small photovoltaic Power Plants (ANNEXURE – A1). The review is sought on two aspects: (i) determination of Rs.691 lakhs as capital cost for Solar PV Plants; and (ii) determination of O&M Cost of Solar Thermal Power Projects, as

per the order of the Central Electricity Regulatory Commission (CERC) dated 15.5.2014 .

2) The main grounds of review are as follows:

(a) The Commission had, in the Order dated 10.10.2013, determined Capital Cost for Solar PV Projects at Rs.830 Lakhs, relying on the Order of the CERC dated 28-2-2013. While the CERC had fixed the said Capital Cost for Solar PV Projects only for the year 2013 and has revised the Capital Cost for solar PV Plants for the year 2014, at Rs.691 Lakhs, vide Order dated 15.5.2014, this Commission has adopted the same Capital Cost of Rs.830 Lakhs for five years, without providing indexation. The absence of indexation mechanism in the Commission's Order results in unjust enrichment of the generating companies, as there is a downward trend in the capital cost for solar PV projects. The Capital Cost was Rs.1,000 Lakhs in FY 2012-13, Rs.800 Lakhs in FY 2013-14 and Rs.691 Lakhs FY 14-15, as per the orders of the CERC. If the Order dated 15.5.2014 of the CERC were to be available, the error of fixing the same Capital Cost for five years without indexation would not have occurred in the Commission's Order dated 10.10.2013.

(b) The O&M Cost of Solar Thermal Projects is fixed by the Commission at 1.5% of the Capital Cost, at Rs.18 Lakhs, with annual escalation of 5.72%. The CERC, in its Order 15.5.2014, has considered Rs.16.77 lakhs as the O&M

- cost by escalating the previous year's figure by 5.72% and a similar method should have been adopted by this Commission.
- 3) There is a delay of 216 days in filing the Review Petition. The Petitioner has filed I.A. No.1/2014 for condonation of delay, stating that the period from 10.10.2013 (i.e., the date of the Commission's order) till 15.5.2014 (i.e., the date of the CERC's Order) needs to be excluded and the period of limitation of 90 days provided in Regulation No.8 of the KERC (General & Conduct of Proceedings) Regulations, 2000, has to be counted from 15.5.2014, instead of 10.10.2013. The period of delay from 15.5.2014 to the date of filing of the Review Petition, viz., 12.8.2014, is explained by stating that the time of 88 days was taken by the Petitioner for circulating the Order of the CERC at various levels of administrative and technical hierarchy, considering the comments received, drafting the Petition and obtaining approval for filing. The Petitioner has stated that the delay is *bonafide* and reasonable, and has prayed for allowing the Review Petition, by condoning the delay, as it will impact the public by reduction of cost on the consumers.
- 4) We have heard the learned counsel for the Petitioner on the aspect of delay, and maintainability of the Review petition. We had also directed the Petitioner to file a list of Power Purchase Agreements (PPAs) signed by the Petitioner for Solar Power Projects. The Petitioner has filed a memo dated 13.11.2014, enclosing a list of PPAs entered into by the Petitioner

with eleven companies under 'reverse bidding process' at various rates, ranging from Rs.6.66 per unit to Rs.8.46 per unit, of which only two companies are supplying power at Rs.8.25 per unit and Rs.8.46 per unit.

- 5) Section 94(1)(f) of the Electricity Act, 2003 confers the power of review on the Commission and reads as follows:

“94. Powers of Appropriate Commission

(1) The Appropriate Commission shall, for the purposes of any inquiry or proceedings under this Act, have the same powers as are vested in a civil court under the Code of Civil Procedure, 1908 (5 of 1908) in respect of the following matters, namely:--

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XXXX

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(f) reviewing its decisions, directions and orders;

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XXXX”

- 6) Regulation 8(1) of the KERC (General & Conduct of Proceedings) Regulations, 2000, deals with review of the orders passed by the Commission and reads as follows:

“8. Powers of Review, Revision etc.

(1) The Commission may, either on its own motion or on an application made by any interested or affected party, within 90 days of the making or issuing of any decision, direction, order, notice or other document or the taking of any action in pursuance of these Regulations, review,

revoke, revise, modify, amend, alter or otherwise change such decision, direction, order, notice or other document issued or action taken by the Commission or any of its Officers."

- 7) According to the above provisions, the Commission has been vested with the powers of a Civil Court under the Code of Civil Procedure for the purpose of reviewing its decisions. The limitation provided in the Regulations is 90 days from the date of the order sought to be reviewed.
- 8) Without intending to dismiss the Review Petition on the technical grounds of delay, we have heard the Petitioner on the question of maintainability of the Review Petition. We deem it appropriate to see if the provisions of Order XLVII of the Code of Civil Procedure are satisfied.
- 9) Order XLVII Rule 1 of the Code of Civil Procedure deals with Review and reads as follows :

"ORDER XLVII- REVIEW

1. Application for review of judgment— (1) Any person considering himself aggrieved—

(a) by a decree or order from which an appeal is allowed, but from which no appeal has been preferred,

(b) by a decree or order from which no appeal is allowed, or

(c) by a decision on a reference from a Court of Small Causes,

and who, from the discovery of new and important matter or evidence which, after the exercise of due diligence was not within his knowledge or could not be produced by him at the time when the decree was passed or order made, or on account of some mistake or error apparent on the face of the record or for any other sufficient reason, desires to obtain a review of the decree passed or order made against him, may apply for a review of judgment to the Court which passed the decree or made the order.

- 10) Now, we need to see if the Review Petition is maintainable on the ground that, had the subsequent Order dated 15.5.2014 of the CERC been available when the Commission passed the impugned Order, whether a different view could have been taken by the Commission in respect of Capital Cost, and whether the alleged error would not have occurred. For this purpose, we have to first examine whether there is an error apparent on the face of the record in the Order of the Commission. The Commission had passed the Order after considering all the material placed before it, including the Order of CERC dated 28.2.2013 available on the date of the order of the Commission. The Order was passed after considering all oral and written suggestions / objections from the interested persons. The Petitioner had filed written submissions dated 6.8.2013, in response to the Discussion Paper issued by the Commission in the matter, and had requested for weighted average tariff for 25 years and for review of the tariff after five years. It had relied on the CERC Order dated 28.2.2013 and had requested for capital cost of Rs.8 Crores

for Solar PV Plants, and O&M expenses at 0.75% of the Capital Cost for Solar PV Plants (Rs.6 Lakhs / MW) and 1% for Solar Thermal Plants (Rs.12 Lakhs / MW), with an annual escalation of 5%. These submissions were considered by the Commission while passing the Order.

- 11) While determining Capital Cost and O & M expenses, the Commission, in the Order dated 10.10.2013, had held as follows:

“d. Capital Cost:

The following were the capital cost norms proposed in the discussion paper:

Particulars	Capital cost
Solar PV Plants	Rs.9.40 Crs. to 10.00 Crs. per MW
Solar Thermal Plants	Rs.12.75 Crs. to 14.00 Crs. Per MW
Solar rooftop PV plants	0.80 lakhs to 0.90 lakhs per kW

Further, the views of the stakeholders were also sought on whether separate tariff is required to be determined for projects availing capital subsidy, accelerated depreciation etc.

M/s TERI has suggested adoption of capital cost of Rs.8 Crore per MW for solar PV Plants, Rs.12.00 Crores per MW for solar thermal plants and Rs.1 lakh per KW for solar rooftop PV plants. M/s Atria Power Corporation Ltd., has suggested considering the capital cost based on the project size. They have suggested adoption of benchmark capital cost of Rs.14.00 Crores per MW for a 10 MW solar thermal plant and

a reduction of Rs.0.25 Crores for every 10 MW increase in capacity with a limit of Rs.12.50 Crores per MW. M/s Welspun Energy Ltd., have suggested Rs.11.00 Crores per MW for solar PV plants citing steep decline in the exchange rate of the Rupee. Sri G.G.Hegde Kadekodi has suggested capital cost of Rs.12.75 Crores per MW for solar PV and Rs.14.00 Crores per MW for solar thermal plants. M/s Moserbaer has suggested a capital cost of Rs.10.00 Crores per MW for solar PV. BESCO, citing CERC orders on petition No.242/2012 has suggested a capital cost of Rs.8.00 Crores per MW for solar PV Rs.12.00Crores per MW for solar thermal plants. M/s Astonfield have suggested adoption of capital cost of Rs.8.00 Crores per MW for solar PV plants.

M/s TERI, Astonfield, Gadag DCCI,PCKL, BESCO and M/s Welspun Energy Ltd., have suggested adoption of separate tariff for projects availing capital subsidy and accelerated depreciation.

Commission's Decision:

The capital cost consists of the cost of equipment along with the cost of land and civil works. The Commission, in its earlier tariff order dated 13th July 2010 had considered a capital cost of Rs.15.50 Crs. per MW for Solar PV plants and Rs.13 Crs. for Solar thermal plants.

The Commission notes that the Stakeholders have suggested capital cost ranging from Rs.8.00 Crs to Rs.12.75 Crs for Solar PV Plants and Rs.12.00 Crs to Rs.14.00 Crs for Solar thermal plants. However, it is observed that no suggestions are supported with sufficient data.

CERC in its order dated 28th February 2013 in suo-moto Petition No.242/SM/2012 has decided a benchmark capital cost of Rs.8.00 Crores per MW for solar PV and Rs.12.00 Crores per MW for solar thermal.

In the absence of any reliable data made available by the stakeholders, the Commission has decided to go by the benchmark cost determined by CERC as the same is derived after a detailed analysis of the market prices of each element of the capital cost.

The cost of the solar PV modules at Rs.325.92 lakhs per MW has been derived by CERC at an exchange rate of Rs.54.32 per US\$ considering the module cost at 0.60 US\$/Wp. The present rate of exchange is Rs.61.405 per US\$ (as on 04.10.2013) and the average exchange rate in the last six months works out to Rs.59.33 per US\$. Considering an exchange rate of about Rs.60 per US\$ and the module cost at 0.60US\$/Wp, the cost of the module would be Rs.360 lakhs per MW. Further, considering all other costs as per the benchmarked costs by CERC, the capital cost for Solar PV plants at the present rates would be about Rs.8.30 Crores per MW.

Thus, considering the changes in rupee's exchange rate as suggested by some of the stakeholders, the Commission decides to consider a capital cost of Rs.8.30 Crores per MW for Solar PV Plants.

As regards the solar thermal plants, the Commission notes that the benchmark cost derived by CERC indicates decline in capital costs of solar thermal plants to Rs.12.00 Crores per MW. While some stakeholders have suggested adopting CERC benchmark cost, others have suggested adopting 14 Crores per MW or link capital costs with the size of the plant. However, the claims of increased capital cost are not supported by any data. As such, the Commission decides to consider a capital cost of Rs.12.00 Crs per MW for Solar thermal plants.

The capital cost of rooftop solar PV plants considered by other SERCs in the Country range from Rs.1.00 lakh to Rs.1.20 lakhs per kW. The Solar Energy Corporation of India, in its proposal for introducing the pilot scheme for large scale grid connected rooftop solar power generation, has estimated the system cost at Rs.0.80 to Rs.0.90 Crores for a 100 kWp solar rooftop PV system. MNRE in its proposal of solar rooftop generation under JNNSM, has stated that the cost of rooftop PV systems could reach 85000 to 90000 per kW when a developer is able to reach a cumulative capacity of 5MW.

Considering the above available data on capital cost, the Commission decides to consider a capital cost of Rs.0.90 lakhs per kW for Solar Rooftop and small kW scale Solar PV plants. Thus, the Capital cost considered for determination of tariff is as follows:

Type of Solar plant	Capital cost
MW scale Solar PV plant	Rs.8.30 Crores/MW
MW scale Solar Thermal plant	Rs.12.00 Crores/MW
kW scale Solar rooftop and small solar plants	Rs.0.90 lakhs/kW

Further, in cases of projects availing capital subsidy of 30% the tariff with 30% reduction in capital cost as determined in this Order will be applicable."

"Operation & Maintenance expenses:

The Commission had proposed to consider O & M costs of Rs.9 lakhs per MW for Solar PV plants and Rs.13 lakhs per MW for solar thermal plants with an annual escalation of 5%. A nominal O & M expense for rooftop solar PV is also to be considered.

M/s TERI has recommended 1.5% of capital cost with an annual escalation factor of 5.72% towards O & M cost for solar PV and solar thermal plants. M/s Astonfield and M/s First Solar have suggested considering O & M expenses of 11.63 lakhs / MW with an escalation of 5.72% for solar PV. Sri G.G. Hegde Kadekodi has suggested adopting 0.7% of capital cost for solar PV and 1.5% of capital cost for solar thermal plants with an annual escalation of 5%.

Gadag DCCI has agreed with the proposal of the Commission. M/s Welspun Energy Ltd., have suggested considering O & M expenses of Rs.12 lakhs/MW. BESCO has suggested 0.75% of capital cost with 5% escalation for Solar PV, 1% of capital cost with 5% escalation for Solar Thermal and 0.5% of capital cost for rooftop plants. PCKL has suggested 1% of capital cost with 5.72% escalation. M/s Moserbaer has suggested considering Rs. 12.30 Lakhs per MW with an escalation of 5.72 %.

Commission's Decision:

The proposed O&M expenses of Rs 9 lakhs per MW works out to 1.125% of the capital cost for solar PV plants and Rs.13 lakhs per MW works out to 1% of the capital cost for Solar thermal plants.

While some of the stake holders have agreed with the proposal of the Commission, others have suggested O & M expenses of 0.75% to 1.5% of the capital cost for solar PV, 1.5% of the capital cost for solar thermal plants and 0.5% for solar rooftop PV plants. As regards the rate of annual escalation, some of the stakeholders have suggested adopting 5.72% annual escalation.

It is observed that while many stakeholders have suggested the levels of O&M expenses to be allowed but have not furnished any reliable information/data for such suggestions. The Commission notes that as suggested by stakeholders, while 1.5% of capital cost would be sufficient for solar PV and solar thermal plants, the O & M cost for rooftop PV plants should be more than 1.5% considering the lower capital cost. Considering the levels of O&M expenses suggested by the stakeholders, the Commission decides to adopt O & M expenses of 1.5% of the capital cost for Solar PV plants and solar thermal plants and 2.0% of the capital cost for solar rooftop PV in all cases with an annual escalation of 5.72%."

- 12) A perusal of the above Order would indicate that the Order is not solely based on the parameters considered by the CERC. The Commission had considered all other relevant aspects and fixed the capital cost of Rs.8.30

Crores and the O&M expenses at 1.5% of the Capital Cost for Solar PV Plants and Solar Thermal Plants, with annual escalation at 5.72%.

- 13) The Hon'ble Supreme Court has, in the case of *Kamlesh Verma –Vs- Mayavati* (**AIR 2013 SC 3301**), held as follows:

“16. Thus, in view of the above, the following grounds of review are maintainable as stipulated by the statute :

(A) When the review will be maintainable :-

- (i) Discovery of new and important matter or evidence which, after the exercise of due diligence, was not within the knowledge of the petitioner or could not be produced by him;*
- (ii) Mistake or error apparent on the face of the record;*
- (iii) Any other sufficient reason;*

The words 'any other sufficient reason' has been interpreted in Chhajju Ram v. Neki, AIR 1922 SC 112 and approved by this Court in Moran Mar Basselios Catholicos v. Most Rev.Mar Poulouse Athanasius & Ors., (1955) 1 SCR 520 : (AIR 1954 SC 526), to mean 'a reason sufficient on grounds at least analogous to those specified in the rule'. The same principles have been reiterated in Union of India v. Sandur Manganese & Iron Ores Ltd. & Ors., JT 2013 (8) SC 275 ; (2013) AIR SCW 2905).

- (B) *When the review will not be maintainable :-*
- (i) *A repetition of old and overruled argument is not enough to reopen concluded adjudications.*
 - (ii) *Minor mistakes of inconsequential import.*
 - (iii) *Review proceedings cannot be equated with the original hearing of the case.*
 - (iv) *Review is not maintainable unless the material error, manifest on the face of the order, undermines its soundness or results in miscarriage of justice.*
 - (v) *A review is by no means an appeal in disguise whereby an erroneous decision is re-heard and corrected but lies only for patent error.*
 - (vi) *The mere possibility of two views on the subject cannot be a ground for review.*
 - (vii) *The error apparent on the face of the record should not be an error which has to be fished out and searched.*
 - (viii) *The appreciation of evidence on record is fully within the domain of the appellate court, it cannot be permitted to be advanced in the review petition.*
 - (ix) *Review is not maintainable when the same relief sought at the time of arguing the main matter had been negatived."*

- 14) We feel that the Review Petition is not maintainable on any of the parameters mentioned in the above decision. In fact, it squarely fits into the parameters which are mentioned in paragraph 16(B) (iii) to (viii) of the above decision.
- 15) Further, the Hon'ble Supreme Court has, in *M/s.A.C. Estates-Vs-M/s.Serajuddin & Co. and another (AIR 1966 SC 935)*, held as follows:
- "..... But this cannot be a case of review on the ground of discovery of new and important matter, for such matter has to be something which existed at the date of the order and there can be no review of an order which was right when made on the ground of the happening of some subsequent event....."*
- 16) Admittedly, the Order dated 15.5.2014 of the CERC, which is now relied upon by the Petitioner, was not available when the Commission passed the Order dated 10.10.2013. We feel that review of an Order cannot be sought on a fresh material, which was not available on the date of passing of the Order. The purported inconsistency in the Order, so passed by the Commission without there being any opportunity to consider the subsequent Order of CERC in the matter, cannot qualify as an error apparent on the face of the record, under Order XLVII of the Code of Civil Procedure, so as to justify the review sought.

- 17) However, we note that the Capital Cost for Solar Power Projects is on a declining trend in the past few years, as mentioned in the CERC Order dated 15.5.2014, and perhaps there may be a case for revision of Capital Cost and O & M Costs. In the reverse bidding process referred to by the Petitioner, the average rate offered by the developers for supply of energy from Solar Power Projects in the year 2012 is Rs.8.22 per unit and in the year 2014 is Rs.7.51 per unit, of which Rs.6.66 per unit is the lowest rate. This would indicate that there has been substantial reduction in the Capital Cost after issue of the Commission's Order dated 10.10.2013. However, we do not agree that this can be a ground for re-determination of tariff in a Review Petition. In view of the changed circumstances, the Commission would examine the need to curtail the present Control Period and re-determine the tariff in separate proceedings, in due course.
- 18) For the foregoing reasons, we pass the following:

ORDER

The Review Petition is dismissed.

Sd/-

(M.R. SREENIVASA MURTHY)
CHAIRMAN

Sd/-

(H.D. ARUN KUMAR)
MEMBER

Sd/-

(D.B. MANIVAL RAJU)
MEMBER