ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

Vidyut Niyantrana Bhavan, Dinnedevarapadu Road, Kurnool - 518 002, Andhra Pradesh

TUESDAY, THE EIGHTEENTH DAY OF JUNE
TWO THOUSAND AND TWENTY-FOUR
(18.06.2024)

Present
Justice C.V. Nagarjuna Reddy, Chairman
Sri Thakur Rama Singh, Member
Sri P.V.R. Reddy, Member

RP No. 2 of 2021 in OP.NO. 46 of 2017

Andhra Pradesh Power Generation Corporation Limited (APGENCO),

....Petitioner

This Review Petition has come up for final hearing before the Commission on 20.12.2023 in the presence of Sri S.V. Ramana, Counsel representing Sri O.Manohar Reddy, learned Counsel for Petitioner; and Sri P. Shiva Rao, learned Standing Counsel for the Respondents. After hearing the argument of the learned Standing Counsel and carefully considering the material available on record, the Commission passes the following:

ORDER

1. The petitioner APGENCO filed this Review petition on 18.01.2021 under section 94 (1) (f) of the Electricity Act, 2003, read with Regulation 49 (1) of the APERC (Conduct of Business), Regulation 1999 seeking review of the Commission’s Order dated 22.10.2020 in OP No. 46 of 2017, wherein the Commission has approved and consented the PPA between the APDISCOMs and APGENCO for 25 years at a levelized tariff of Rs.2.95 per kWh for 400 MW solar power plant established by the APGENCO at Talaricheruvu in Anantapur District. The review is sought on the EPC cost, Land lease cost, O&M cost, APSPCL’s charges determined in the Order, method of computation of project depreciation, and Deemed Generation.

2. In response to the notice issued by the Commission, APDISCOMS filed a counter on 27.08.2021. DISCOMS's main submissions in their counter are that the Review Petition is not maintainable and the same deserves to be dismissed at the threshold without examining the merits or otherwise of the claims, as the Commission has given its just findings on each claim in its Order dated 22.10.2020.

3. With regard to the respective pleadings of the Petitioner and APDISCOMS, the point that arises for consideration is whether the grounds urged by the Petitioner, APGENCO, fall within the parameters of review and, if so, whether the petitioner is entitled to any relief.

4. Before discussing the grounds, it is necessary to discuss the scope of Review under Section 94(1)(f) of the Act. This Commission thoroughly discussed this aspect in its common order dated 4-8-2020 in R.P.No.1/2019 in O.P.No.30/2018 and R.P.No.3/2019 in O.P.Nos.28 and

29 of 2018 in **M/s. Tirumala Cotton & Agro Products Pvt. Ltd. and another Vs. M/s. Transmission Corporation of A.P. Ltd. and others.** It is useful to reproduce the relevant portion of the order hereunder:

" ….. Section 94(1)(f) of the Electricity Act (for short "the Act")" confers the power of review of its decisions, directions and orders on the Commission. However, neither the Act nor the Rules framed thereunder indicated any parameters for exercise of this power. In the absence of any indicia, it is not only apt but also permissible to follow the law laid down by the constitutional courts in this regard. In Sow Chandra Kanta & Another Vs. Sheik Habib (1975 SCC (4) 457) the Hon'ble Supreme Court held that a review of a judgement is a serious step and reluctant resort to it is proper only where a glaring omission or patent mistake or like grave error has crept in earlier by judicial fallibility. In P.N. Eswara Iyer vs. The Registrar, Supreme Court of India (1980 AIR 808), a constitution bench of the Supreme Court reaffirmed the ratio in Chandra Kanta (1 supra). In Shri Ravinder Kumar Vs. Kamal Sen Gupta (2008) 8, the Hon'ble Apex Court held that unlike in appeal, scope of review is grossly circumscribed to such cases where review seeker has made a discovery of a new and important matter of evidence, which, after exercise of due diligence, was not within his knowledge and could not be produced by him when the decree or order where some mistakes or errors apparent on the face of the record have been made or when the court has overlooked some obvious facts based on which decision could be made. The court further held that one of the above three considerations should be established for review. In Devender Pal Singh vs. State of NCT of Delhi (2003) 2 SCC 501, the Apex Court held that review is not a rehearing of appeal all over again and that the scope of interference is very limited to aspects such as miscarriage of justice."

Considering the limited scope of review jurisdiction, as explained in the above-quoted orders, we shall consider the grounds raised by the petitioner. The grounds raised by the Petitioner on each item, the counter of the DISCOMS and the Commission's analysis and decision are as follows.

A) EPC cost: The Petitioner stated that the Commission, in its order dated 22.10.2020, erroneously deducted Rs.19.32 lacs of O&M expenses while arriving at the EPC cost despite the statutory certificate issued by the auditor showing that the EPC cost excluded O&M Costs. Hence, the petitioner pleaded that it was an error apparent on the record.

The respondents DISCOMS stated that the auditor report is irrelevant to the purpose of a separate claim.

Analysis and decision: To examine the petitioner's grounds, the relevant findings of the Commission in the Order dated 22.10.2020 are extracted below.

" *Inclusion of the O&M expenses as part of capital cost is contrary to the tariff working principles and therefore cannot be accepted as it has tariff implications for the consumers. In view of the above, the Commission decides to keep O&M expenses out of the Capital Cost and it is treated separately as explained infra. Coming to the quantum of O&M expenses in all the three contracts, the same is found to be Rs.77.27 Cr. and it works out to Rs.19.32 Lakhs / MW.*

The *EPC Cost as certified by the Statutory Auditor is Rs. 451.42 Lakhs per MW. The portion of O&M expenses to the extent of Rs.19.32 Lakhs / MW has to be deducted from the Capital Cost and included under the O&M Cost. Accordingly, the allowable EPC Cost works out to be Rs.432.10 Lakhs/ MW."*

As seen from the above, the Commission has deducted the O&M costs from the EPC, as pointed out in the Review. As per the original LOAs/purchase orders placed on the EPC contractors, the first five-year O&M of the plant is covered under the scope of the contract. Hence, it was deducted from the EPC. Since the O&M cost in the EPC is covered only for five years, the Commission could have disallowed the O&M costs for the first five years instead of deducting them from the EPC while determining the tariff. But this was not done. The deduction of the Rs. 19.32 crores from the EPC is not correct since O&M in the contract does not cover the life period of the Project. Therefore, an apparent error has crept into the Order. Hence, We decide to allow the 19.32 lacks in the EPC cost and accordingly revise the EPC from Rs.432.10 lakhs/MW to Rs.451.42 lakhs/MW after disallowing the O&M expenses for the first five years for the determination of the tariff.

B) **Land lease cost:** The Petitioner stated that in its Order dated 22.10.2020**,** the Commission has allowed land lease cost Rs.1000 per acre considering GOMs.No.1dated 03.01.2019, and the said policy of the Government was amended in GOMs.No.35 dated 18.11.2019. In GOMs.No.35, the land lease cost Rs.1000 per acre was amended and 10% of the land cost has been fixed as lease. Hence, the petitioner is seeking review of the decision of the Commission.

The Respondent DISCOMS submitted that the Power Purchase Agreement was entered on 01.07.2017, and the project was commissioned in March

2019, and thus, the Commission has rightly fixed the land lease cost as per the GOMs No.1 dated 03.01.2019.

Analysis and decision: This issue was discussed elaborately in the order dated 20.02.2020 from pages 32 -37 under head APSPCL charges. The relevant part is extracted herein.

"The APGENCO has produced the following documents before the Commission, (i) Implementation and Support Agreement (ISA) and (ii) Land Lease Agreement (LLA). Both the above documents are unsigned. The Commission also finds a copy of the overing letter enclosed to the above documents by APSPCL when it has sent the said documents to APGENCO. In the said covering letter APSPCL requested APGENCO to pay the one time solar park development expenses @ Rs. 46 Lakh per MW and first year land lease charges @ Rs. 1000 per acre along with service tax for signing of ISA and LLA. A perusal of the recitals of the said ISA and LLA shows that the issue of land cost is not covered thereunder. Thus, APGENCO has not been fastened with any legal obligation to pay land cost. On the contrary, the letter dated 04.01.2019 addressed by the Chief Engineer/Commercial of APGENCO to the Commission clearly shows that the land belongs to APSPCL. The only document under which consideration for allotment of land for development of the present project by APGENCO envisaged is the unsigned LLA between APGENCO and APSPCL. No other document has been filed under which APGENCO has undertaken the liability of APSPCL towards the land cost. In the absence of any such legal obligation on the APGENCO and proof of payment of land cost, the land cannot be included as a component for fixation of tariff.

In the letter dated 04.01.2019, the Chief Engineer/Commercial of APGENCO, inter-alia, stated that the lease charges of Rs.1000 per Acre are nominal and that the same are part of O&M Charges. ………….

Being the owner of the land, APSPCL is only entitled to recover the lease charges as per the agreement with APGENCO and we find no justification whatsoever to include land cost as a component for working out tariff. All that APSPCL is entitled to recover in this regard is only lease charges. Hence, in place of cost of land we decide to allow annual lease charges at the agreement rate of Rs.1000 per acre."

As can be seen from the above, the APSPCL is only entitled to recover the land lease charges and accordingly allowed annual lease charges at the agreement rate of Rs 1000 per acre. This Commission has not referred to GO Ms No. 01 Dt 03.01.2019 while fixing the Land lease charges in the order dated 22.10.2020, as stated by the Review Petitioner. The DISCOMS' submission that the Commission has fixed the land lease cost as per GO MS No 1 is also incorrect. Even presuming that the lease charges in the agreement were based on GO MS No. 1 of 2019, that shall be applied prospectively. Further, as per the available records, the project was conceptualised in November 2014, necessary permission from GoAP was obtained in May 2015, detailed EPC contracts were awarded in May 2017, and the project achieved CoD in March 2019. As perused, the GO Ms No.01 dt 03.01.2019 pertains to AP Solar Policy-2018 and applies to the projects taken up subsequently pursuant to the provisions there under. By the time GO MS No. 01 was issued, the subject project attained the advanced commissioning stage and achieved CoD within two months from the date of issue of GO MS No.1. In our view GO MS No.1 and its amendment GO MS No 35 relied on by the Petitioner have no applications to the project on hand. However, the land lease charges payable from the project's zero date until the date of CoD must be capitalised. As such, a land lease charge of Rs 1000 per acre for 2000 acres for a time span of two years amounting to Rs 0.40 Crs is proposed to be added to the completed capital cost of the project. Further, In the Order and review, the annual land lease cost is taken as Rs 5 (five) lakhs instead of Rs.20 (twenty) lakhs. These errors crept in the calculations are corrected. Accordingly, this part of the order is reviewed in part, to the extent indicated above.

C) **O&M Cost:** The Petitioner submitted that the Commission while computing the O&M Cost for the 6th year, has taken the O&M Cost of the 5th year as Rs. 4.22 1akh per MW based on the competitive price arrived in the EPC bid. That the base O&M cost arrived at by the Commission for the 6th year cost will not compensate AP Genco for the actual O&M costs for the following reasons:

i. The EPC contractors have many cost factors and quoted below market 0 & M costs to win the bids.

ii. The escalation factor allowed would just meet the inflation cost and does not factor in the increased 0 & M that would be required in subsequent years on account of wear and tear and ageing of equipment. Hence, a higher base cost of INR 6 lakh per MW for the 6th year would be just and adequate to meet the actual costs to be incurred.

iii. The 0 & M carried out by EPC contractors would involve a degree of underpayment of the manpower deployed. This is against the philosophy of equity in public life, and hence, APGENC0 cannot underpay any of the resources deployed. Hence, a higher base of INR 6 Lakh per MW may be allowed for 0 & M Cost.

iv. The EPC Contractors have been observed to deploy fewer people and increase working hours for the deployed people, thereby going against the public interest. Hence, INR 6 Lakh per MW for the 6th year may be allowed for O&M costs.

v. Although the park is maintained by the respective contractors, APGENCO employees also monitor the technical and financial aspects of the project at the field and from Headquarters. The employee cost is a meagre sum of Rs.0.50 Lakh per MW (Rs.2 Cr), with a 5.72% escalation for the first five years.

For the above reasons and in the interest of justice, the petitioner sought review of the decision regarding O&M costs.

The Respondents DISCOMS submitted that the Commission had considered all the above submissions in the order under review. The O&M charges are approved in the Order based on the competitive price from the bids raised for the project. The DISCOMS further stated that the revised and higher O&M cost cannot be claimed by the Petitioner in the name of the Review.

Analysis and decision: After examination of the respective stands of both parties, it is to be noted that since the O&M of the plant for the first five years was in the vendor's scope, O&M was considered with escalation carried out on the 5th year of the O&M cost discovered in the successful bids. Accordingly, for the sixth year, an amount of Rs. 4.46 1akh per MW was allowed with detailed reasoning in the Order dated 22.10.2020. In addition to the above, a separate O&M cost for services rendered by APSPCL was also allowed. Hence, the Commission does not find any ground to reconsider its decision. Accordingly, the petitioner's plea is rejected. However, since Rs.19.32 lakhs was included in the EPC cost, the O&M costs were disallowed to APGENCO for the first five years as the same was in the scope of the vendors.

D) **<u>APSPCL Charges:</u>** The petitioner submitted that the Commission has not admitted any of the charges incurred by the Andhra Pradesh Solar Power Corporation Limited (APSPCL) for the development of the solar park. These charges have to be reimbursed by APGENCO to APSPCL. That the solar park scheme of the Government of India envisages supporting the states/UTs in setting up solar parks at various locations in the country to create the required infrastructure for solar power projects. The solar parks provide suitable developed land with all clearances, transmission systems, water access, road connectivity, communication networks, etc. The scheme facilitates and speeds up the installation of grid-connected solar power projects for electricity generation on a large scale. That if APSPCL did not take up such development, APGENC0 would have to undertake it, and the entire cost would be part and parcel of the capital cost of the solar project. That therefore, the cost incurred by APSPCL for the development of the Solar Park is an essential component of the Solar PV project's development cost. APSPCL has communicated that the proportionate cost to be paid by APGENCO is Rs.140.71 Crores, as against which, APGENCO has allowed only Rs. 102.39 Crores. The Details of the claim by APSPCL and allowed by APGENCO are given in the table below.

S.No.	Item	APSPCL Claim	APGENCO Agreed
1	Land Cost		
(i)	Patta Land	4.83	4.83
(ii)	Assigned Land	4.3	4.3
(iii)	Lease charges paid to GOAP*	35	11.36
2	Cost of Evacuation	82.11	82.11
3	Civil works	26.76	26.76
4	Revenue Expenditure	0.85	0.85
5	GST Paid on invoices raised	30.3	0
6	Income Tax Paid, Including GST	4.48	4.48
7	Proportionate HQ expenditure	0.08	0.08
	Total Expenditure	188.71	134.77
	Grant received from MNRE (CFA)	-48	-48
	NetTotal	140.71	86.77
8	GST@18%		15.62
9	GrandTotal		102.39

Stating the above grounds, the petitioner has prayed the Commission to allow Rs.102.39 Crores as part of the capital cost in the interests of justice.

The Respondents DISCOMS submitted that the petitioner originally claimed Rs.184.24 Cr as APSPCL charges, and as per the auditor report, the same was Rs.167.86 Cr. which includes Rs. 119.58 Cr of Land cost. The Petitioner has come up with a new claim of Rs.102.39 crores, which is self-contradictory. That the Commission has already held that the land cost cannot be considered as part of the capital cost and that the same has to be met from the MNRE grant received by APSPCL. Thus, the DISCOMS submitted that the charges, as claimed by the petitioner, need not be reviewed.

Analysis and decision: In order to examine the merits of the plea, it is relevant to extract the Commission's analysis on the same in its Order dated 22.10.2020 under review.

"……………………

Accordingly, the Commission decided to exclude the entire land cost of the allotted land (4018.24 Acres) which works out to Rs.119.58 Cr. (2941.68 acres at the rate of Rs.3.15 per acre and 1076.46 acres at the rate of Rs.2.50 per acre) from the APSPCL charges of Rs.167.86 Cr. Being the owner of the land, APSPCL is only entitled to recover the lease charges as per the agreement with APGENCO and we find no justification whatsoever to include land cost as a component for working out tariff. All that APSPCL is entitled to recover in this regard is only lease charges. Hence, in place of cost of land we decide to allow annual lease charges at the agreement rate of Rs.1000 per acre. As regards the balance costs, during the study, the Commission could discover a critical fact which has not been placed either by APGENCO or by APSPCL, namely the fact of APSPCL receiving from MNRE towards the grant component. The *relevant part of MNRE Guidelines for development of Solar Parks issued in February, 2017 is reproduced herein below:*

"7. Based on the application made by the SPPD to SECI for grant of up to Rs. 20 lakh/MW or 30% of the project cost including Grid-connectivity cost, whichever is lower, SECI will forward a request to MNRE. MNRE will thereafter sanction a grant to SECI.

12. The expenditure on the development of a solar park will mainly constitute (a) expenditure on account of development of land and its infrastructure facilities and (b) Transmission network and Pooling Substation. The MNRE grant may be utilized in such a manner that a higher proportion of funds are used for internal and external transmission as that is the most essential function.

The SPPD, responsible for development of the solar park, shall endeavour to optimise the total expenditure to be made for the development of the solar park, such that the power generated by the prospective solar project developers is low and competitive."

On coming to know of the above fact relating to the provision for payment of grant, the Commission called upon the APGENCO to confirm whether the grant was received or not. Through its communication vide Lr.No.CE(Comml)/SE(C&P)/DE(C&P)/RA&PPA/400MW SPV PP/D.No. 1115/20.Dt.09.10.2020, APGENCO has furnished the following information.

"The MNRE grant of Rs.20 Lakh/MW is received by APSPCL. APSPCL has communicated that the grant was utilized for development of Solar Park & Transmission network."

From the above information received from APGENCO, it is clear that a sum of Rs.20 lakhs / MW has been provided as a grant for development of the Solar park in terms of the MNRE guidelines quoted above. This amount is required to *be set off against the balance sum of Rs.48.28 Cr. out of Rs.167.86 Cr. towards APSPCL charges. It therefore follows that against the said sum of Rs.167.86 Cr., what is allowable is annual lease charges at the rate of Rs.1000 per acre as a substitute for land cost as claimed by APGENCO."*

As can be seen from the above, out of the claim of Rs.167.86 crores, the Commission allowed the land lease charges of Rs.1000 per acre as the land cost was not allowed. Though it was discussed that the grant received should be set off against the balance sum, excluding land cost, the same has not been worked out and shown. Hence, it is an inadvertent error in the Order which passes the Review criteria set by the Hon'ble Supreme Court. Accordingly, the Commission proposes to examine the APSPCL's cost to be allowed, which is essentially part of the capital cost. As the figures in the original petition and Review petition vary, the Commission has called for detailed information in this regard. By letter dated 18.05.2024, AP Genco submitted certain additional information, viz. An audit certificate from M/s Sagar & Associates, details of expenditure incurred by AP Genco towards APSPCL charges, purchase order placed on APSPCL by AP Genco, scope of APSPCL, etc. The audit certificate furnished by AP Genco has been examined component-wise. The cost of civil works for park development and Evacuation Expenditure incurred and certified by the Auditor deserves to be and is accordingly allowed. The order disallowing land cost is allowed to remain. However, as the land cost is disallowed, the lease charges for a two-year pre-commissioning period are admitted. The other small expenditure incurred by APSPCL/APGENCO and not certified by the Auditor is not admitted. The APSPCL is the joint venture of APGENCO and SECI. The GST has been paid by APSPCL because the charges were claimed to be one-time charges (OTC) for the park's development. If they had an alternative mechanism, the same could have been avoided, and APGENCO would not have acted prudently to reduce the tariff. Hence, the GST is also not admitted. Though it was stated earlier that a Capital Grant of Rs.20 Lakhs/MW is receivable aggregating to Rs.80 Crs for a 400 MW Solar project, an amount of Rs.48.20 Crs has been received as per the Auditor's certificate. After netting off the actual Grant received, the actual expenditure that is admissible towards Civil and electrical infrastructure payable to APSPCL works out to Rs 46.12 Crs as detailed in the table below. Accordingly, the Commission is inclined to accept this additional capital expenditure as part of the project's completed capital cost for tariff determination.

All figures in Rs. Crs

S. No.	Item	APSPCL Claimed from APGENCO	APSPCL charges claimed APGENCO in RP	Auditor Certificate			Approved in present Order
				Actual expenditure incurred	Expenditure to be incurred	Total as per Auditors Certificate	
		A	B	C1	C2	C=C1+C2	D
1	Land Cost						
	(i) Patta Land	*4.83*	*4.83*	*9.14*	*0.00*	*9.14*	*0.00*
	(ii) Assigned Land	*4.30*	*4.30*				
	*(iii) Lease charges paid to GOAP**	*35.00*	*11.36*	*0.00*	*0.00*	*0.00*	*0.40*
2	Cost of Evacuation	82.11	82.11	61.57	11.83	73.40	73.40
3	Civil works	26.76	26.76	19.80	0.73	20.52	20.52
4	Revenue Expenditure	0.85	0.85	0.00	0.00	0.00	0.00
5	GST Paid invoices raised	30.30	0.00	30.30	0.00	30.30	0.00
6	Income on tax paid including GST	4.48	4.48	0.00	0.00	0.00	0.00
7	Proportionate HQ expenditure	0.08	0.08	0.00	0.00	0.00	0.00
	Total Expenditure	**188.71**	**134.77**	**120.80**	**12.56**	**133.36**	**94.32**
8	Grant received from MNRE (CFA)	-48.00	-48.00	-48.20	0.00	-48.20	-48.20
	Net Total	**140.71**	**86.77**	**72.60**	**12.56**	**85.16**	**46.12**
9	GST @ 18%		15.62	0.00	0.00	0.00	0.00
10	**Grand Total**		**102.39**	**72.60**	**12.56**	**85.16**	**46.12**

E) Depreciation: The petitioner submitted that as per clause 33(2) of CERC Regulations dated 07.03.2019, depreciation has to be allowed @ 5.28% on the total capital cost till the loan is fully repaid and thereafter, the balance amount of capital cost is to be allowed in equal instalments. That the Commission has allowed the depreciation @ 5.28% on 90% of capital cost till the loan is repaid instead of the total capital cost in the Order dated 22.10.2020. Hence, the order suffers from an error apparent on the face of the record, which is liable to be corrected.

The Respondents DISCOMS submitted that the Commission has rightly allowed the depreciation @ 5.28% on 90% capital cost and that no error has occurred.

Analysis and decision: To examine the correctness of the plea, it is relevant to refer to Clause 15 of CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations 2017, which reads as below.

"15. Depreciation (1) The value base for the purpose of depreciation shall be the Capital Cost of the asset admitted by the Commission. The Salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the Capital Cost of the asset.

(2) Depreciation rate of 5.28% per annum for first 13 years and remaining depreciation to be spread during remaining useful life of the RE projects considering the salvage value of the project as 10% of project cost shall be considered.

(3) Depreciation shall be chargeable from the first year of commercial operation. Provided that in case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis."

From the above, a depreciation rate of 5.28% is to be applied to the approved capital cost and not to 90% of the approved cost. As per the Regulation, depreciation is to be accumulated up to 90% of the asset's value by taking 10% of the value as the asset's salvage value. In its Order dated 22.10.2020.

the Commission computed the depreciation on 90 % of the capital cost as stated by the Petitioner. It is an apparent error that crept into the order inadvertently. Hence, the same requires to be considered. Accordingly, the Commission is inclined to correct the error in the present Order.

F) Deemed Generation: The Petitioner submitted that APERC while determining the levelized tariff, assumed 24% CUF (Capacity Utilisation Factor). APGENCO, based on the PPA provisions, i.e. as per the Government Policy (G.O.Ms No. 8 dated 12-02-2015), assumed the project was a ``MUST RUN" Station. But in real-time, the project is being "backed down". APGENCO is raising claims for DEEMED GENERATION. The same was not considered by APDISCOMS. Hence, APGENCO requests the Commission to direct APDISCOMS to incorporate the "DEEMED GENERATION" provision specifically in PPA.

The Respondents DISCOMS submitted that the provision of “DEEMED GENERATION” cannot be incorporated in the PPA and that, though the Petitioner is a “Must Run” generator, the APSLDC, to protect the Grid Security, from time to time, has to issue directions to back down/restrict the energy generated by the Petitioner/any other Generators to protect the grid under Section 33 of Electricity Act, 2003. Thus, the “DEEMED GENERATION” claim cannot be incorporated into the PPA, particularly through the Review Petition.

Analysis and decision: On examining the stand of both parties, it is relevant to mention that the Must Run status has been conferred on Renewable Energy Projects under various Regulations, Rules, Policy directions and judicial pronouncements issued by Authorities to promote environment-friendliness in line with the objective of the Electricity Act 2003. The Backing down of RE generation under certain Grid Conditions/constraints is also imminent to protect grid security. The IEGC stipulated certain provisions on grid security and must run status of RE projects, and the FoR has formulated curtailment guidelines as per the Hon'ble APTEL's directions. The SLDC shall follow the same. If the petitioner is aggrieved by the action of SLDC, it may take an appropriate legal recourse. Hence, the Commission is not inclined to incorporate a new clause in the PPA, it falls outside the scope of the Review.

5. Accordingly, the Review petition is allowed in Part to the extent as reasoned above, and the resultant levelized tariff for 25 years, as worked out by the Commission, is Rs 3.09 per Unit against a rate of Rs 2.95 per Unit as determined in the Order dated 22.10.2020. This revised tariff is applicable from the date of the plant's COD, and the Respondents DISCOMS are directed to pay the difference in amount to APGENCO based on the actual energy they have received so far. The revised tariff calculation is enclosed as Annexure to this Order.

Sd/-	Sd/-	Sd/-
Sri Thakur Rama Singh	**Justice C.V. Nagarjuna Reddy**	**Sri P.V.R. Reddy**
Member	**Chairman**	**Member**

Annexure

A. Capital Cost details

Sr.No.	Details	UoM	Claimed by APGENCO in the Original Petition	Approved in APERC Order dated 22.10.2020 in OP.No.46/2017	Claim of APGENCO in RP	Approved by the Commission in Present Order	Difference
			A	B	C	D	E=(D-B)
1	EPC Cost	Rs. Lakhs/MW	445.60	432.10	451.42	451.42	19.32
2	APSPCL Charges	Rs. Lakhs/MW	46.06	0.00	25.60	11.53	11.53
3	Establishment & Adm	Rs. Lakhs/MW	1.00	0.40	0.40	0.40	-
4	Infrastructure	Rs. Lakhs/MW	1.00	0.00	0.00	0.00	-
5	Cable cost & Misc	Rs. Lakhs/MW	15.25	6.16	6.16	6.16	-
6	IDC	Rs. Lakhs/MW	23.00	24.75	24.75	24.75	-
7	Contingency	Rs. Lakhs/MW	1.00	0.00	0.00	0.00	-
8	Total Capital Cost	Rs. Lakhs/MW	532.91	463.41	508.33	494.26	30.85

B. Capital Cost Components

Sr.No.	Components	UoM	Approved in APERC Order dated 22.10.2020 in OP.No.46/2017	Claim of APGENCO in RP	Approved by the Commission in Present Order	Difference
			A	B	C	D=(C-A)
1	Capital cost	Rs. Lakhs/MW	463.41	508.33	494.26	30.85
2	Depreciation (90% of Capital Cost)	Rs. Lakhs/MW	417.07	457.50	444.83	27.77
3	Equity(20% of capital cost)	Rs. Lakhs/MW	92.68	101.67	98.85	6.17
4	Loan (80% of capital cost)	Rs. Lakhs/MW	370.73	406.66	395.41	24.68
5	Loan Repayment Period	Years	16	15	16	
6	Loan Interest Rate	%	9.5	9.5	9.5	-
7	Useful Life of Plant	Years	25	25	25	-
8	Capacity Utilization Factor	%	24	24	24	-
9	Discount factor	%	9.50	9.50	9.50	-
10	Panel capacity degradation per year (1-10 y)	%	1	1	1	-
11	Panel capacity degradation per year (11-25 y)	%	0.67	0.67	0.67	-
12	Working Capital Interest rate	%	11	11	11	-
13	O&M Escalation	%	5.72	5.72	5.72	-
14	Spares as a percentage of O&M Charges	%	15	15	15	-
15	Retun on Equity	%	11	11	11	-

C. Revised Levelised Tariff Calculations for 400 MW APGENCO Solar Power Plant at Talaricheruvu, Ananthapuram District

(All figures, except factors and items otherwise specified, are in Rs. Lakhs)

Description	Year																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Depreciation	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
Interest on Loan	36.32	33.85	31.37	28.89	26.41	23.93	21.45	18.97	16.49	14.01	11.53	9.05	6.57	4.09	1.62	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O&M Expenses as per Contracts	-	-	-	-	-	4.46	4.71	4.98	5.27	5.57	5.89	6.22	6.58	6.96	7.35	7.77	8.22	8.69	9.19	9.71	10.27	10.85	11.48	12.13	12.83
O&M Expenses APSPCL	1.84	1.95	2.06	2.17	2.30	2.43	2.57	2.72	2.87	3.04	3.21	3.39	3.59	3.79	4.01	4.24	4.48	4.74	5.01	5.29	5.60	5.92	6.26	6.61	6.99
Cost of Spares	0.28	0.29	0.31	0.33	0.34	1.03	1.09	1.15	1.22	1.29	1.36	1.44	1.53	1.61	1.70	1.80	1.91	2.01	2.13	2.25	2.38	2.52	2.66	2.81	2.97
Two Months Receivables	12.79	12.39	11.99	11.59	11.20	11.56	11.20	10.86	10.51	10.17	9.84	9.51	9.19	8.87	8.55	8.45	4.62	4.74	4.88	5.02	5.17	5.32	5.49	5.67	5.86
Working Capital	13.23	12.85	12.47	12.10	11.73	13.18	12.92	12.67	12.43	12.20	11.98	11.76	11.57	11.39	11.21	11.27	7.57	7.87	8.18	8.51	8.86	9.23	9.62	10.03	10.47
Interest on Working Capital	1.46	1.41	1.37	1.33	1.29	1.45	1.42	1.39	1.37	1.34	1.32	1.29	1.27	1.25	1.23	1.24	0.83	0.87	0.90	0.94	0.97	1.01	1.06	1.10	1.15
RETURN ON EQUiTY	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87	10.87
Land Lease Charges	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Total Annual Charges	76.79	74.37	71.97	69.56	67.17	69.44	67.32	65.23	63.17	61.13	59.12	57.13	55.18	53.27	51.38	50.79	27.64	28.40	29.20	30.05	30.95	31.89	32.90	33.95	35.08
Annual Energy (MU)	2.10	2.08	2.06	2.04	2.02	2.00	1.98	1.96	1.94	1.92	1.91	1.89	1.88	1.87	1.86	1.84	1.83	1.82	1.81	1.80	1.78	1.77	1.76	1.75	1.74
Yearly Tariff (Rs./kWh)	3.65	3.57	3.49	3.41	3.33	3.47	3.40	3.33	3.26	3.18	3.10	3.01	2.93	2.85	2.77	2.75	1.51	1.56	1.62	1.67	1.74	1.80	1.87	1.94	2.02
PV factor	1.00	0.91	0.83	0.76	0.70	0.64	0.58	0.53	0.48	0.44	0.40	0.37	0.34	0.31	0.28	0.26	0.23	0.21	0.20	0.18	0.16	0.15	0.14	0.12	0.11
NPV	3.65	3.26	2.91	2.60	2.31	2.21	1.97	1.76	1.58	1.41	1.25	1.11	0.99	0.88	0.78	0.71	0.35	0.33	0.32	0.30	0.28	0.27	0.25	0.24	0.23
Levellised Tariff payable for 25 years (Rs./kWh)	**3.09**																								