ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

Vidyut Niyantrana Bhavan, Adjacent to 220/132/33/11 KV AP Carbides SS,
Dinnedevarapadu Road, Kurnool - 518 002, Andhra Pradesh.
Phones: 08518 - 294823,24,25,26

TENTH DAY, THE THURSDAY OF JULY
TWO THOUSAND AND TWENTY FIVE
(10.07.2025)

Present

Sri P.V.R.Reddy,
Member & Chairman i/c

O.P. No. 18 of 2024

IN THE MATTER OF

Approval for the continuation agreement entered on 26.02.2024 between Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL) and National Aluminium Company Limited (NALCO) for procurement of Power from the latter's 50.4 MW wind power plant located at Gandikota, Jammalamadugu in YSR Kadapa District, A.P., under Section 86(1)(b) read with Section 86(1)(e) of the Electricity Act, 2003.

BETWEEN

Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL)

....Petitioner

AND

National Aluminium Company Limited (NALCO)

....Respondent

This petition was taken up for final hearing on 11.06.2025 in the presence of Sri P.Shiva Rao, learned Standing Counsel for the Petitioner; and Sri Subrat K. Mohanty, learned counsel for the respondent, Sri M. Venugopala Rao, Senior Journalist. After hearing all the parties and after carefully considering the material available on record, the Commission passes the following:

ORDER

1. APSPDCL entered into a Power Purchase Agreement (PPA) with NALCO on 22.12.2012 for purchase of power from the latter's 50.4 MW wind power project located at Gandikota, Jammalamadugu in YSR Kadapa District of A.P. The PPA expired on 29.12.2022. Subsequently, APSPDCL submitted a letter to the Commission on 03.01.2024, requesting approval for the continuation of the PPA with NALCO for a further period of 15 year term at a negotiated tariff of Rs.2.55 per unit, subject to a 3% annual escalation, with REC benefits accruing to NALCO. In response, the Commission, vide the letter dated 19.02.2024, directed APDISCOMS to submit an appropriate petition for consideration and disposal of the matter.
2. Accordingly, APSPDCL filed a Petition before the Commission on 26.03.2024 under Section 86(1)(b) read with Section 86(1)(e) of the Electricity Act, 2003, seeking approval of the PPA dated 26.02.2024 entered into with NALCO for purchase of power from the above project for a further period of 15 years at a negotiated tariff of Rs.2.55 per unit, subject to a 3% annual escalation, with REC benefits accruing to NALCO.
3. The Commission took the above Petition on record and numbered it as O.P.No.18 of 2024 and posted the matter for hearing on 10.04.2024. During the hearing on 10.04.2024, the Commission directed APSPDCL to carry out publication of the petition in two newspapers, one in Telugu and another in English of the Andhra Pradesh Editions and file proof of publication by the next date of hearing. Accordingly, APSPDCL carried out the publication on 19.05.2024 and submitted the proof of publication to the Commission.
4. Subsequently, the Commission placed a Public Notice along with a copy of the Petition on its website on 26.07.2024 inviting views/objections/suggestions, if any, from the interested persons/stakeholders on the above Petition to reach the Commission Secretary on or before 28.08.2024, i.e., the date of public hearing. In response, the Commission received views/objections/suggestions from two objectors by the deadline.

5. **The case of the Petitioner in the Petition is briefly as follows:**

- On 22.12.2012, APSPDCL signed a PPA with NALCO to buy power from the latter's 50.4 MW wind power project located at Gandikota, AP. The agreement was for 10 years from the Commercial Operation Date (COD) at a provisional tariff of Rs.2 per unit. This ad-hoc rate was subject to adjustment based on the Average Pooled Power Purchase Cost (APPC), as determined by the Commission under the Renewable Energy Certificate (REC) mechanism in accordance with Regulation No. 01 of 2012 (Renewable Power Purchase Obligation Regulation issued by APERC). The project achieved COD on 30.12.2012.
- From the COD of the plant to 29.12.2022, i.e., the expiry of the PPA, APSPDCL paid the tariff to NALCO for the power generated from the project at the APPC rates ranging from Rs. 2.69/kWh to Rs.4.17/kWh, which were subsequently determined by the Commission for the period from FY 2011-12 to FY 2021-22.
- When the PPA with NALCO expired on 29.12.2022, APSPDCL was no longer required to buy power from them, as clearly outlined in Article 7 of the original PPA. Further, as per the PPA, any future power purchases would need mutual agreement and approval from the APERC.
- APSPDCL offered NALCO a tariff of Rs. 1.50 per unit for continued power supply. However, NALCO, a central government-owned company, found this tariff unviable for their project. NALCO also highlighted that their project was dedicated to the Nation in April 2017 by a Union Minister, considering it as a "National Asset."
- Subsequently, the matter was discussed at the 13th Southern Zonal Council meeting on 05.05.2023. Further, the Government of Andhra Pradesh (GOAP) sought updates from APDISCOMs regularly. Following extensive negotiations and considering that NALCO is a central government "Navaratna" company, a consensus was finally reached to extend the PPA for a further period of 15 years at a tariff of Rs. 2.55 per unit with a 3% annual escalation. Further, NALCO was permitted to avail REC benefits as enjoyed in the previous PPA.
- As any PPA or its amendment requires prior approval, APSPDCL requested the Commission vide the letter dated 03.01.2024, to accord permission for the amended PPA with NALCO for 15 years, at a tariff of Rs. 2.55 per unit with 3% annual escalation and REC benefits accruing to NALCO. In response, the Commission vide letter dated 19.02.2024, directed APDISCOMs to file a petition for consideration and disposal of the matter.
- The Commission has wide powers under Section 86(1)(b) of the Electricity Act, 2003, to regulate power procurement processes and can either approve or reject

proposed agreements. Further, Section 86(1)(e) mandates the Commission to promote renewable energy sources. Moreover, as per Section 21(5) of the AP Electricity Reforms Act, 1998 (which was saved under Section 183 of the Electricity Act, 2003), any PPA becomes void without Commission's consent.

- After stating the above, APSPDCL prayed the Commission to issue an appropriate order regarding the continuation of the PPA entered into with NALCO on 26.02.2024.

Objections/Suggestions/Views received and replies of APSPDCL

6. Sri M. Venugopala Rao, Senior Journalist and Sri Ch. Baburao, CPI(M)

- APSPDCL isn't obligated to continue purchasing power from this project as per the terms of the expired PPA. Further, the 14-month delay in signing a new PPA clearly indicates that APSPDCL doesn't need this power. Moreover, APSPDCL has not justified the need to purchase power from this project, especially considering existing power sources and projected demand. There are questions about whether this purchase is truly necessary to meet its Renewable Power Purchase Obligation (RPPO) or will it lead to an expensive surplus of power, forcing APSPDCL to pay fixed charges for unused capacity and acquire "unwarranted" renewable energy, particularly wind power. As APDISCOMs have already exceeded their current RPPO obligations, they must justify any further power purchases from the subject unit. The Commission needs to verify this factual position before making a decision on APDISCOMs' need for this power.
- APSPDCL's petition lacks transparency, as it hasn't publicly released crucial documents beyond the amended PPA and two letters from the GoAP. Key missing information includes the justification for purchasing power from this plant, the basis for the proposed Rs. 1.50 per unit tariff, communications with the Commission regarding the PPA, details from the Southern Zonal Council meeting, and the rationale behind the final tariff consensus with NALCO. This opacity hinders a thorough review, prompting a request for the Commission to mandate the disclosure of all relevant documents for greater consumer interest.
- NALCO's power project must have likely recovered most or all of its capital cost under the expired PPA, benefiting from "frontloaded" tariffs. Therefore, consumers, who bore this burden, should now benefit from the depreciated value of the plant. The Commission is requested to thoroughly examine NALCO's financial records (revenue, loan repayment, capital cost recovery, depreciation) to determine the true residual value of the unit. Based on this, the Commission should calculate a fair,

new tariff for the amended PPA, since the proposed Rs. 2.55 per unit with a 3% annual escalation is excessively high and would result in "windfall profits" for NALCO at consumers' expense. Further, whether the proposed 3% annual escalation is simple or compound needs clarification.

- The proposed amended PPA unfairly grants NALCO the benefit of RECs, despite the fact that RPPO's obligation is solely on APDISCOMs. The proposal forces APDISCOMs (and ultimately consumers) to bear "avoidable burdens" like backing down cheaper thermal power and paying fixed charges, while simultaneously buying expensive market power to cover peak deficits that renewable energy can't consistently meet. Since RECs are intrinsically linked to fulfilling RPPO requirements, and their benefit accrues when obligated entities exceed their targets, APDISCOMs should retain REC benefits. Therefore, the Commission is urged to amend the PPA to ensure REC benefits accrue to APDISCOMs.

Reply of APSPDCL

- The Ministry of Power (MOP) has mandated a higher Renewable Consumption Obligation (RCO) for DISCOMs, setting targets of 29.91% for FY 2024-25 and 33.01% for FY 2025-26. These figures are significantly higher than the 20% and 21% RPPO previously set by the Commission. Recently, APERC directed APDISCOMs to comply with the MOP's higher RCO targets. Therefore, the power from the subject project is essential to meet these increased renewable obligations.
- Non-signing the PPA for nearly 14 months after its expiration does not mean that the power from this project is not required. APSPDCL doesn't intend to buy power through a non-consented PPA.
- APSPDCL is of the view that the proposed tariff of Rs.2.55/unit is highly competitive given current power procurement costs, and the 3% annual escalation is reasonable compared to rising trends of power purchase costs. Regarding jurisdiction, the Commission has the authority to determine the final tariff, which APSPDCL will comply with. The mutually negotiated tariff is subject to the Commission's approval, and power procurement at this rate will only commence once the Commission consents to both the PPA and the proposed tariff.
- The original PPA stipulates that REC benefits accrue to NALCO, and the company has requested APSPDCL to allow them to retain these benefits with it for the duration of the extended agreement. After careful review of all aspects, the proposed tariff has been mutually agreed upon, subject to the approval of the Commission.
- The renewable energy from this plant is already part of the DISCOMs' energy mix,

having been included in the sources until the PPA expired almost a year ago; it's not a new source. The generator is a Central Government Undertaking, and the mutually agreed tariff is subject to the Commission's approval.

7. During the hearing on 11.06.2025, Sri M. Venugopala Rao, one of the objectors, stated that the replies furnished by APSPDCL to his objections are vague and not in the manner or to the extent sought for by him. Therefore, he requested the Commission to direct APSPDCL to furnish complete and specific information as sought in his objections. The Commission directed APSPDCL to provide the requisite information to Sri M. Venugopala Rao within ten days from 11.06.2025 and permitted him to submit his comments/suggestions, if any, within 10 days thereafter.

8. Accordingly, APSPDCL provided the following information to Sri M. Venugopala Rao vide letter dated 20.06.2025 with a copy to the Commission:

- APDISCOMs entered into a PPA with NALCO on 22.12.2012 for purchase of 50.4 MW of wind power from the latter's power project with the tariff set at Rs. 2.00/unit for 10 years and REC benefits going to NALCO. The PPA expired on 29.12.2022.
- The expired PPA had a clause (Article 7) which allowed for renewal of the PPA under mutually agreed terms prior to the 90 days of the expiry of the PPA subject to the consent of the Commission.
- Vide the order dated 28.06.2022, the Commission determined the tariff for wind power projects from 11th year onwards from COD at Rs. 2.64/unit. This new tariff applies to PPAs made under specific earlier orders in O.P.Nos 6 & 7 of 2009 and dictates that RECs would accrue to APDISCOMs. However, in the case of the expired PPA with NALCO, RECs accrued to NALCO.
- NALCO, a Central Public Sector Undertaking with Navaratna status, expressed its willingness to continue selling power to APDISCOMs 90 days prior to the PPA's expiration.
- APDISCOMs proposed a tariff of Rs. 1.50/unit to NALCO for the renewed PPA, as it is the lowest tariff payable to wind power projects determined by the Commission which completed 20 years, even though NALCO's plant had only completed 10 years of operation.
- However, NALCO, in the letter dated 06.09.2022, rejected the above offer on the ground that the proposed tariff is not viable due to high Operation & Maintenance (O&M) costs. They also highlighted that their wind projects, including the 50.4 MW one, were dedicated to India in April 2017.
- Therefore, APDISCOMs made a new offer to NALCO at Rs. 2.64/kWh (based on the APPC for FY 2011-12 and also in accordance with the Commission's order dated

28.06.2022 as already mentioned *supra*) . This offer included the condition that all REC benefits would go to APDISCOMs. NALCO, however, did not agree to this revised offer.

- NALCO brought the PPA renewal issue to the 13th Standing Committee meeting of the Southern Zonal Council on 05.05.2023. APDISCOMs, stated in the meeting that the prevailing wind tariffs (around Rs. 2.84/unit) and the APPC cost for FY 2020-21 (Rs. 4.60/unit) were both unfavorable for them.
- NALCO initially proposed extending the PPA for 15 years at a negotiated tariff of Rs. 2.55/unit with a 5% annual escalation, and with REC benefits accruing to NALCO. After further discussions, NALCO, vide the letter dated 02.11.2023, agreed to extend the PPA for an additional 15 years at a mutually agreed tariff of Rs. 2.55/unit with a 3% escalation over the previous year, and with REC benefits accruing to NALCO. This revised proposal was then submitted to the Commission for their consent.
- Calculations indicate that with a 3% annual compounding escalation, the initial tariff of Rs. 2.55/unit for off-taking 50.4 MW from NALCO would reach Rs. 3.86/unit over 15 years.
- Furthermore, APDISCOMs, as Designated Consumers (DCs) under the Energy Conservation Act, are obligated to comply with RCO requirements as per the MoP notification dated 20.10.2023, a mandate also confirmed by the Commission.

9. As of the date of this order, Sri M. Venugopala Rao has not provided any comments/ suggestions regarding the additional information furnished to him by APSPDCL.

Commission's Analysis and Decision

10. Having meticulously considered the submissions of NALCO, APDISCOMs and Objectors, the following key points warrant determination in this Petition:

A. Point No.1: Do APDISCOMs require the quantum of power specified in the PPA?

B. Point No.2: Should the Commission grant its approval to the proposed PPA? If the answer is yes, then does the PPA require any amendments? And

C. Point No.3: If the PPA is approved, what constitutes just and appropriate tariff for the power procurement under this PPA?

Re: Point No.1

11. Objections have been raised regarding the necessity of APSPDCL continuing to purchase power from NALCO's 50.4 MW wind power project, especially given the 14-month delay in signing a new PPA and existing power sources. Further, objectors argued that the purchase might not be genuinely needed for RPPO compliance, potentially leading to an expensive surplus and forcing APSPDCL to acquire "unwarranted" renewable energy and pay fixed charges for unused thermal capacity, particularly since APDISCOMs have already exceeded their current RPPO obligations. They urged the Commission to verify the actual need for this power.

Commission's analysis and decision

The Commission has examined the objectors' concerns in the backdrop of its Order dated 27.06.2024 on Load Forecasts and Resource Plans for FY 2024-29, its Order dated 12.04.2024 in O.P.No. 3 of 2024, and the notification dated 20.10.2023 issued by the MoP on the RPO Trajectory under the Energy Conservation Act, 2001.

Based on the Order dated 27.06.2024 on Load Forecasts and Resource Plans, the APDISCOMs are projected to experience energy shortages during morning and evening peak hours during the current control period. Furthermore, the MoP Notification 20.10.2023 mandates RPPO targets for the DISCOMs, ranging from 29.91% to 43.33% between FY 2024-25 and FY 2029-30. The Commission's Order dated 12.04.2024 in O.P. No. 3 of 2024, indicates that the anticipated RE available to DISCOMs, even after incorporating 7,000 MW of solar power from the Solar Energy Corporation of India (SECI) and the recent 400 MW of hybrid power from AEVIPL, will be insufficient to meet the stipulated RPPO targets starting from FY 2027-28. This shortfall is projected to escalate to 12,619 MU by FY 2029-30. The Order dated 27.06.2024 on Load Forecasts and Resource Plans also reiterates the shortfalls starting from FY 2027-28. Further, Section 86(1) (e) of the Electricity Act, 2003 mandates the State Commissions to promote cogeneration and generation of electricity from renewable sources of energy. These demonstrate a clear need for the power from this project. As regards the objectors' contention that purchases from this project would compel APSPDCL to procure "unwarranted" renewable energy and incur fixed charges for the backed down thermal energy, it should be noted that, as per the PPA, this project will not be treated as a 'must-run' one. Therefore, the obligation to dispatch energy from this project even in a surplus situation, leading to backing down of thermal stations and paying fixed charges, does not arise.

Point No.1 is accordingly answered.

Re: Point No.2

12. The objectors suggested to amend the PPA to ensure RECs benefits accrue to APDISCOMs, rather than NALCO.

Commission's analysis and decision

The high capital costs for setting up of wind power projects in the past were a key reason for providing REC benefits to generators like NALCO which were required to sell energy to APDISCOMs at comparatively lower APPC rates. Selling electricity at these lower rates was insufficient to recover these high capital costs. The REC mechanism allowed generators to earn additional revenue by selling RECs in power exchanges. This supplemented the APPC revenue, improving the financial viability of wind projects. This, in turn, encouraged investments in wind projects, and supported the transition to market-driven mechanisms. However, with the costs of wind energy production falling below that of fossil fuel based energy, the additional revenue from RECs is no longer essential for project viability nor is it the norm. Furthermore, NALCO must have recovered a significant portion of its investment in the project by now. Consequently, allowing NALCO to continue receiving REC benefits would be detrimental to the interests of APDISCOMs and consumers at large, while also undermining the primary objective of APDISCOMs' power purchase from this project, which is to fulfill their RPPO. Therefore, APSPDCL is directed to amend the PPA to ensure that REC benefits don't accrue to NALCO .

Point No.2 is accordingly answered.

Re: Point No.3

13. The objections received against the proposed tariff are:

NALCO has recovered most of its capital cost through past "frontloaded" tariffs, and that consumers should now benefit from the depreciated value of the plant; the tariff of Rs. 2.55 per unit with a 3% annual escalation is excessively high, potentially leading to "windfall profits" for NALCO; the Commission should review NALCO's financial records to determine a fair, new tariff based on the project's true residual value.

Commission's analysis and decision

As regards the objectors' contention that the Commission should examine NALCO's financial records to establish a fair, new tariff based on the project's actual residual value, it should be noted that NALCO accepted for APPC rates in the original PPA, which were lower than the cost-plus tariffs for wind power projects at that time, with the expectation of offsetting this through the sale of RECs. Had NALCO incurred losses in the process, surely it would not have been compensated later to bridge the losses. Thus, it is only fair that NALCO should be allowed to retain any profits it may have earned. Accordingly, there is no need to review or verify the financial records of this project. Instead, the Commission will proceed to determine the tariff for this project as discussed in the following paras.

APSPDCL has not provided the rationale or basis for the proposed tariff of Rs. 2.55 per unit with a 3% annual escalation. Additionally, there are no current regulations for determining tariffs for renewable energy projects in the state. In its prior orders, such as the common order dated 28.06.2022 in O.P. No. 29 of 2020 and subsequent similar orders, the Commission determined generic tariff from 11th year onwards for wind power projects which had completed 10 years based on the extant CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2020, to the extent needed. Since the wind power project of NALCO was commissioned around the same time as those covered in the above orders, the Commission will follow similar methodology by adopting the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2024, which are the extant Regulations, to the extent required, to calculate the various components of the tariff for this project.

A. **Capital Cost:** In the common order dated 28.06.2022 in O.P. No. 29 of 2020 and subsequent similar orders, the Commission adopted a capital cost of Rs. 4.7 Crores per MW. Hence, the Commission adopts the same Capital Cost for calculating the various tariff components for this project.

B. **Debt Equity Ratio**: In the common order dated 28.06.2022 in O.P. No. 29 of 2020 and subsequent similar orders, the Commission considered a Debt:Equity ratio of 70:30 in accordance with the CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020. Further, CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2024 specify a Debt:Equity ratio of 70:30. Therefore, the Commission adopts the said Debt:Equity ratio for this project.

C. **Return on Equity:** The Commission adopted a pre-tax Return on Equity (ROE) of 15.5% in the common order dated 28.06.2022 in O.P. No. 29 of 2020 and subsequent similar orders. Therefore, the Commission is inclined to continue the same rate for this project also.

D. **Interest cost on Debt:** In the common order dated 28.06.2022 in O.P. No. 29 of 2020 and subsequent similar orders, the Commission adopted a normative interest rate of 9.23%, which was arrived at by adding 200 basis points to the average Marginal Cost of Funds based Lending Rate (MCLR) of the State Bank of India (one-year tenor) for the preceding six months, in accordance with clause 14(2)(b) of the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2020. The same methodology is specified in clause 14(2)(b) of the CERC (Terms and Conditions for Tariff Determination from Renewable Energy

Sources) Regulations, 2024. Accordingly, the Commission adopts it for this project also. With the latest six-month average MCLR rate at 9%, adding 200 basis points yields an interest rate on debt of 11% for this project.

E. Depreciation: In the common order dated 28.06.2022 in O.P. No. 29 of 2020 and subsequent similar orders, the Commission adopted a net effective depreciation rate of 4.67% per annum for the first 15 years of the projects' operation and spread the balance depreciation evenly over the remaining useful life of the projects, i.e. over 10 years, in accordance clause 15(2) of the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2020. Clause 15(2) of the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2024, also specifies the same. Therefore, the Commission adopts the same rates for this project also. Accordingly, the accumulated depreciation for this project up to 31.07.2025 (NALCO has been selling power to third parties under open access since the PPA expired on 29.12.2022) works out to Rs.2.7626 Crores per MW.

F. O & M Expenditure: In the common order dated 28.06.2022 in O.P. No. 29 of 2020 and subsequent similar orders, the Commission escalated the O&M expenses as of the beginning of the 11th year by 3.84% every year to arrive at the O&M expenses for the next 10 years, in accordance with the escalation rate specified at clause 19(2) of the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2020. Therefore, the Commission adopts the same procedure for this project also, except that the escalation rate from FY 2024-25 will be 5.25% in accordance with the escalation rate specified in clause 19(2) of the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2024.

G. Interest on Working Capital (IWC): As per clause 17(1) of the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2024, the Working Capital requirement for wind power projects shall be computed as follows**:**

- Operation and Maintenance expenses for one month;
- Receivables equivalent to 45 days of tariff for the sale of electricity calculated on the normative Capacity Utilisation Factor or Plant Load Factor, as the case may be; and
- Maintenance spares equivalent to 15% of Operation and Maintenance expenses.

The Commission adopts the above methodology for computing the Working Capital for this project.

As regards the Interest on Working Capital (IWC), clause 17(4) of the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2024 specifies that IWC shall be at an interest rate equivalent to the normative interest rate of three hundred and twenty-five (325) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months. With the latest six-month average MCLR rate of SBI at 9%, adding 325 basis points yields an interest rate on Working Capital of 11% for this project.

H. **Discount Rate**: In the common order dated 28.06.2022 in O.P. No. 29 of 2020 and subsequent similar orders, the Commission adopted a discount rate of 9.17%. This rate was arrived at by computing the weighted average rate of interest on debt and post-tax ROE (pre-tax ROE multiplied by Minimum Alternate Tax). Therefore, the Commission adopts the same procedure for computing the Discount Rate up to the 20th year. However, for arriving at Discount Rate beyond 20th year, the pre-tax ROE has been multiplied with Corporate Tax rate, since clause 16(2) of the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2024 specifies the application of Corporate Tax rate on ROE for the projects' operation beyond 20 years.

I. **Capacity Utilisation Factor (CUF):** In the common order dated 28.06.2022 in O.P. No. 29 of 2020 and subsequent similar orders, the Commission adopted a Capacity Utilization Factor (CUF) of 23.5%. Therefore, the Commission adopts the same CUF for this project also.

J. The Levelized Tariff with the above components works out to Rs 2.49 per unit to be payable for 15 years from 01.08.2025. The tariff calculation sheet is enclosed as Annexure. The Levelized Cost with proposed tariff of Rs.2.55/unit with an escalation of 3% per year works out to Rs.2.99/unit, i.e. 50 paise more than the Commission's determined tariff of Rs.2.49/unit.

K. The above tariff has been determined in exercise of the powers conferred on the commission under Section 62, 86 (1) (a) and 86(1)(b) of the Electricity Act 2003.

14. The PPA and the above tariff are approved w.e.f. 01.08.2025 subject to the following conditions:

A. The REC benefits shall not accrue to NALCO.

B. The tariff at Rs.2.49 per unit determined in this order shall be applicable for 15 years from 01.08.2025.

C. APSPDCL shall have the first right of refusal on Power Purchase, if the project continues to operate after 15 years from 01.08.2025. The tariff beyond the above period shall be as mutually agreed by both parties and consented to by the Commission.

D. The developers shall abide by the orders, rules, regulations and terms and conditions as issued by the Commission from time to time.

E. The CDM benefits shall be shared in the ratio of 90:10 between the developers and the DISCOMs.

15. APSPDCL is directed to incorporate the necessary amendments as per this order and submit the PPA within 30 days from the date of this order for final approval by the Commission.

Sd/-
P.V.R.Reddy
Member & Chairman i/c

Annexure

Tariff Calculation of NALCO Wind Power Project for the next 15 years
Components considered for generic Tariff determination

Description	Value	Unit
Capacity	1	MW
Capital Cost per MW	4.7	Rs. Crores
Debt(70 % of Capital Cost)	3.29	Rs. Crores
Equity(30% of Capital Cost)	1.41	Rs. Crores
Cumulative Utilization Factor	23.5	Percentage
O&M cost first year of COD(1.25% of Capital Cost)	0.059	Rs. Crores
O&M escalation per annum (From 13th year)	5.25	Percentage
O & M Cost for 13th year	0.1034	Rs. Crores
Return on Equity (pre-tax)	15.50	Percentage
Accumulated Depreciation up to 31st July 2025	2.7626	Rs.Crores
Residual Value (10% of Capital Cost)	0.47	Rs.Crores
Balance amount to be depreciated	1.4674	Rs.Crores
Depreciation p.a from 13-15 years (@4.67%)	0.21949	Rs.Crores
Depreciation p.a for 16-25 years (@2%)	0.0940	Rs.Crores
Interest on Debt (SBI MCLR 1 year tenor + 200 BP)	11	Percentage
Discount Rate from 13-20 years	11.54	Percentage
Discount Rate from 21-25 years	10.73	Percentage
Interest on Working Capital (SBI MCLR 1 year tenor + 325 BP)	12.25	Percentage

S.No	Particulars	Units	Year of operation from COD															
			*13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	**28
1	**Gen MU**	MU	1.37	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	0.69
	Tariff Components																	
2	O&M	Rs.Crores	0.069	0.1088	0.1145	0.1206	0.1269	0.1335	0.1406	0.1479	0.1557	0.1639	0.1725	0.1815	0.1911	0.2011	0.2117	0.0745
3	Depreciation	Rs.Crores	0.1461	0.2195	0.2195	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	0.0940	0	0	0
4	Return on Equity	Rs.Crores	0.1455	0.2186	0.2186	0.2186	0.2186	0.2186	0.2186	0.2186	0.2186	0.2186	0.2186	0.2186	0.2186	0.2186	0.2186	0.1281
5	Outstanding Loan	Rs.Crores	0.5274	0.3813	0.1618	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Interest on Loan	Rs.Crores	0.039	0.042	0.018	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Interest on Working Capital	Rs.Crores	0.0081	0.0122	0.0121	0.0101	0.0104	0.0107	0.0110	0.0114	0.0117	0.0121	0.0124	0.0128	0.0133	0.0123	0.0127	0.0063
8	**Total (2+3+4+6+7)**	Rs.Crores	**0.4072**	**0.6010**	**0.5825**	**0.4432**	**0.4499**	**0.4568**	**0.4641**	**0.4718**	**0.4800**	**0.4885**	**0.4975**	**0.5069**	**0.5169**	**0.4319**	**0.4429**	**0.2733**
9	Cost per unit (8/1*10)	Rs. per unit	2.97	2.92	2.83	2.15	2.19	2.22	2.25	2.29	2.33	2.37	2.42	2.46	2.51	2.10	2.15	2.33
10	Year		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
11	Discount Factor		1.000	0.897	0.804	0.721	0.646	0.579	0.519	0.466	0.443	0.400	0.361	0.326	0.294	0.266	0.240	0.217
12	Discounted Cost (9*11)	in Rs/unit	2.971	2.617	2.274	1.552	1.412	1.285	1.171	1.067	1.032	0.949	0.872	0.803	0.739	0.558	0.517	0.505
13	**Levelised Tariff for 15 years (Rs/unit)**		**2.49**															

* 13th year :01.08.2025 to 31.03.2026, ** 28th year: 01.04.2041 to 31.07.2041 and full Financial Years for the rest of the years