



ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
4th Floor, Singareni Bhavan, Red Hills, Hyderabad 500 004

Dated: 02-03-2019

Present

Sri Justice G. Bhavani Prasad, Chairman

Sri P. Rama Mohan, Member

In the matter of Fourth Amendment to APERC (Interim Balancing & Settlement Code for Open Access Transactions), 2016 (Principal Regulation No.2 of 2006)

The subject matter has come up for hearing finally on 29-12-2018 and 19-01-2019 in the presence of Sri P. Shiva Rao, learned Standing Counsel for APTRANSCO, Sri Challa Gunaranjan, learned Counsel for South Indian Sugar Mills Association, Sri Nazer Ahmed, Consultant for A P Mini Hydel Power Developer's Association and Sri M. Venugopala Rao, Senior Journalist/objector. After carefully considering the material available on record and after hearing the arguments of the learned Standing Counsel and objectors, the Commission passed the following:

ORDER

1) The Commission notified "Andhra Pradesh Electricity Regulatory Commission (Interim Balancing & Settlement Code for Open Access Transactions) Regulation, 2006" under section 181 read with Section 42 (2), 66 and 94 (2) of the Electricity Act, 2003, specifying the prescribed approach for balancing and settlement of energy and demand and the same was published in the A.P. Gazette dated 11-08-2006.

2) Further, the Commission notified "Andhra Pradesh Electricity Regulatory Commission (Interim Balancing & Settlement Code for Open Access Transactions) First Amendment Regulation, 2013" published in the Gazette of Andhra Pradesh on 02-05-2013. Subsequently, the Commission notified "APERC (Interim Balancing & Settlement Code for Open Access Transactions) Second Amendment Regulation, 2014, published in the gazette of Andhra Pradesh on 01-04-2014 and APERC (Interim Balancing & Settlement Code) Third

Amendment Regulation, 2016, published in the gazette of Andhra Pradesh on 08-01-2016.

3) The Government of Andhra Pradesh has issued the new Solar Power Policy, 2015 and new Wind Power Policy, 2015 vide G.O.Ms.No.8, dated 12-02-2015 and G.O.Ms.No.9, dated 13-02-2015 superseding the earlier Solar Power Policy, 2012 and Wind Power Policy, 2008 *inter alia*, to meet the twin objectives of energy security and clean energy development.

4) M/s. APSPDCL submitted a representation vide letter dated 13-08-2018, stating that M/s. Balaji Energy is claiming deemed banked energy status for their Mini-Hydel project as per appendix –III to Regulation No. 2 of 2016 and sought for directions whether the said Mini-Hydel project is eligible for deemed banking of energy as per appendix –III of Regulation 2 of 2016, similar to Wind and Solar projects.

5) M/s APTRANSCO submitted a representation vide letter dated 27-11-2018, to make appropriate amendment to the regulation mentioning that for all the wind and solar power generators, the unutilized banked energy by the end of the year shall be deemed to be purchased at 50% Pooled cost of the applicable year, instead of existing 100% of the pooled cost.

6) With regard to the issue raised in para 4, the policies mentioned in para 3 above did not cover the issues related to Mini-hydel power generating plants. Since, Mini-hydel, Solar and Wind power generators generate clean and green energy and all the three stand on the same footing, it is very much essential that Mini-hydel power generating plants also need to be encouraged. In order to promote Mini-hydel power generation, the incentives provided for Solar and Wind generators; need to be extended to Mini-Hydel power plants also.

7) Accordingly, the Commission prepared a draft amendment to the Regulation for seeking comments/ suggestions from interested persons/ stakeholders as required under sub section (3) of Section 181 of the Electricity Act, 2003. The draft amendment regulation and public notice were hosted in the Commission's website on 16-11-2018. Public hearing was conducted on 15-12-2018 and final hearing was conducted on 22-12-2018.

8) With regard to the issue raised in para 5, the Commission issued a public notice on 19-12-2018 to elicit the views of stakeholders and interested persons. Public hearing was conducted on 19-01-2019.

9) The Learned standing counsel Sri. P. Shiva Rao, stated as follows:

(i) As per APERC Regulation 2 of 2016 the projects established under Wind and Solar Policy, 2015 are eligible for the following incentives.

“Energy injected into the grid from date of synchronization to Commercial Operation Date (COD) will be considered as deemed energy banking.”

“The unutilized banked energy shall be considered as deemed purchase by DISCOM(s) at the pooled power purchase cost as determined by the APERC for the applicable year. Energy settlement shall be done on monthly basis.”

(ii) The incentive provided by various states with regard to purchase of unutilized banked energy is as follows:

Tamilnadu: 75% of applicable wind/solar tariff.

Maharashtra: unutilized banked energy limited to 10% and purchased at pooled cost.

Rajasthan: only 10% banked energy at 60% of energy charges of large industrial tariff

Gujarat: all access at APPC for open access, captive wind/solar.

Karnataka: 85% of applicable tariff.

Madhya Pradesh: Solar at APPC and for wind Rs.2.50 paise per kWh.

a. The pooled cost trend since inception of the Regulation 2 of 2012 is as follows:

FY	O.P.No.	Date of order	Pooled Cost (Rs./Unit)
2011-12	62 of 2012	29.06.2013	2.69
2012-13	76 of 2013	28.12.2013	3.28
2013-14	33 of 2014	31.05.2014	3.38
2014-15	29 of 2015	07.11.2015	3.44
2015-16	52 of 2017	06.01.2018	3.65
2016-17	03 of 2018	03.03.2018	3.74

From the above it is observed that the pooled cost has been in increasing trend year after year so also there is substantial increase in NCE capacity addition, i.e. mostly wind and solar power capacity.

I. On the other hand the tariffs for Wind and Solar power projects in the country under competitive bidding have been in steep down trend as shown below:

II. WIND:

Sl. No.	Bidding Agency	Lowest Tariff (Rs./Unit)	Date of bid conclusion
1	SECI 1000MW	3.46	Feb 2017
2	SECI 1000MW	2.64	Oct 2017
3	GUVNL 500MW	2.43	Dec 2017
4	SECI 200MW	2.44	Feb 2018

III. SOLAR:

Sl. No.	Name of the project	Name of the State	Lowest tariff discovered in Rs. /unit	Date of bid conclusion
1	Ananthapur Solar Park, APGENCO	Andhra Pradesh	3.50	Dec 2016
2	Rewa Solar Park	Madhya Pradesh	3.30*	Feb-2017
3	250 MW Kadapa Solar Park	Andhra Pradesh	3.15*	April 2017
4	Bhadla solar park	Rajasthan	2.44*	May 2017
5	NTPC 750 MW NP Kunta Solar Park	Andhra Pradesh	2.72*	May 2018
6	SECI 750 MW Kadapa Solar Park	Andhra Pradesh	2.70*	July 2018
7.	SECI, ACME Solar Holding0073	ISTS II Across India	2.44	July 2018

*Trading Margin Rs. 0.07/kWh extra.

- d. Further, Commission vide orders dated 07.07.2018 in O.P.No.5 of 2017 accorded approval to APDISCOMs for procurement of Wind Power through competitive bidding from 01.04.2017 onwards.
- e. The Wind and Solar Power projects availing Open Access are exempted from paying transmission and Distribution charges to the utilities. Further, the Generators who have commissioned their projects under the new Wind power policy, 2015 and solar power policy 2015 period are eligible for 100% pooled cost towards the unutilized banked energy. Due to increased Wind and Solar capacity addition, the quantum of banked energy from the Wind and Solar generators under Open Access has been increasing considerably.
- f. As seen from the above, it is evident that the Wind and Solar tariffs realized in competitive bidding are much lesser than the pooled cost of power purchase.

The pooled cost is increasing from year to year which is at present Rs.3.74 per unit for the FY2016-17 applicable for FY2017-18 and as per the provisions of the Wind and Solar power policy, the projects commissioned during this period are eligible for 100% pooled cost for their unutilized banked energy. Apart from the above, these incentives are available for a period of ten (10) years from the date of commissioning of the project. As such since pooled cost is much higher than the tariff of power purchase available in the open market, the said regulation results in substantial revenue loss to APDISCOMs, besides nil income

towards Transmission or Distribution Charges. In case of Solar power projects injecting power at 33 kV or below, the distribution losses are also exempted.

10) Further, Sri P Shiva Rao, Learned Standing Counsel submitted that in view of the above and in view of the precarious financial position of APDISCOMs, an appropriate amendment to the regulation 2 of 2016 (Amendment to the regulation 2 of 2006) to the effect “that for all the Wind and Solar power generators, the unutilized banked energy by the end of the year shall be deemed to have been purchased by the DISCOM at 50% pooled cost of the applicable year, instead of existing 100% of pooled cost”.

11) Sri M. Venugopala Rao, Senior Journalist, made following submissions:

- a) The developers of wind and solar power projects, who do not have PPAs with the DISCOMs, sell their power to anybody willing to purchase it at the tariffs mutually agreed to. When the developers cannot sell their power due to lack of demand, they are given the facility to bank that surplus power with the DISCOMs under the policies of the Governments and regulations of APERC. When there is no demand for such power mainly during off peak hours and off peak seasons, the DISCOMs also are having surplus power and unable to sell the same in the open market at remunerative prices and they have to back down the surplus energy. In such a situation, the DISCOMs, by virtue of the policy of the GoAP which is adopted in the Regulation of the Commission, are compelled to take the power, the developers of wind and solar power projects offer under banking as they enjoy must run status. As a result, the DISCOMs have to back down thermal power, under merit order dispatch, and pay fixed charges, in order to take power banked by the developers of solar and wind power projects. In order to wriggle out, the private developers of wind and solar power from their predicament of being unable to sell their power, the DISCOMs have to shell out fixed charges for backing down thermal projects with whom they had long-term PPAs and binding obligations to purchase power. GoAP, while issuing its solar and wind power policies, and APERC, while adopting such questionable clauses as a part of its regulations, did not consider their irrationality and the avoidable loss caused to the DISCOMs which in turn is an avoidable burden on their consumers of power. Therefore, the banking facility provided in the regulation for Solar and Wind power plants can be dispensed. If not, it is proposed to impose the condition that the generators of solar and wind power, when they

bank their power with the DISCOMs, should pay the latter the fixed cost per kWh which is applicable to the power plant with highest variable cost with whom the DISCOMs had PPAs.

- b) Under the policies of the GoAP and regulations of APERC, banking charges shall be in kind @ 2% of the energy delivered at the point of drawl. When power is evacuated at 33 kV level, the transmission and distribution losses work out to 7-8%. In other words, if the developers who bank their power with the DISCOMs pay only 2% of the energy delivered at the point of drawl, the DISCOMs still incur a loss of 5-6% in terms of transmission and distribution losses for taking the unwarranted power banked by private developers. On the face of it, it is an absurd arrangement and goes against even the canons of free trade.
- c) If the private developers of solar and wind power take back the energy banked by them from the DISCOM concerned, the latter has to give power for which it has paid both fixed and variable costs. However, the fixed charges paid by the Discom for backing down in order to take the energy banked by the private developers remain as an avoidable loss to the DISCOM. While the private developers benefit by banking their surplus power with the DISCOMs, the latter incur loss for taking power banked by them and returning the same at the end of the financial year.
- d) If the private developers of solar and wind power fail to take back the power they banked with the DISCOMs at the end of the financial year concerned, such unutilized banked energy shall be considered as deemed purchase by the DISCOMs at the pooled power purchase cost as applicable for the financial year concerned determined by the Commission, as per the policies of GoAP and regulations of the Commission. As pointed out in the letter of the Chairman of APPCC and CMD of AP Transco, the falling prices of solar and wind power as discovered through competitive biddings are much lower than the pooled power purchase cost of the DISCOMs as determined by the Commission in its tariff order for the financial year concerned. Paying 100% of pooled power purchase cost for the power banked by the private developers and not taken back from the DISCOMs at the end of the financial year ensures undue benefit to the private developers, on the one hand, and imposes avoidable additional burden on the DISCOMs, on the other.

- e) Developers of wind and solar power projects are generating and selling power to the consumers of their choice under open access and earning substantial profits and the consumers purchasing power from them also must be getting that power at tariffs lower than the tariffs determined by the Commission in the annual tariff orders applicable to different categories of consumers. Needless to say, consumers, whether of commercial or industrial categories, opt for purchase of power under open access, if only the tariffs are lower than the tariffs applicable as per the annual tariff orders of the Commission. Otherwise, they opt to get supply of power from the DISCOMs only. Since the tariffs being determined by the Commission to commercial or industrial or other high consumption categories of consumers in the annual tariff orders are much higher than the tariffs of wind or solar power, both the developers of wind and solar power units and consumers who get supply of power from them under open access get benefit, the developers in the form of higher tariffs and the consumers in the form of relatively lower tariffs vis a vis tariff determined by the Commission for the same category of consumers.
- f) Even if the solar and wind power projects whose power is being sold under open access by their developers are old units, over the years they must have recovered a lion's share of their capital costs already. In other words, by continuing to sell their power under open access at tariffs which are much higher than they would have been due to depreciation of their units and recovery of capital cost, they continue to get windfall profits.
- g) When private developers of wind and solar power units are reaping windfall profits, as explained above, there is no rationale in claiming the banking burden, with just 2% of charges in kind, and getting paid 100% of pooled power purchase cost for not taking back the energy banked with the DISCOMs as a measure of encouraging solar and wind power. If developers can sell power, they will take back the power they banked with the DISCOMs. If not, they will get 100% of average pooled power purchase cost from the DISCOMs. It is nothing but pampering the private developers of wind and solar power at the cost of the DISCOMs and their consumers of power.
- h) As is well known, the tariffs being discovered through competitive bidding for solar and wind power are as low as less than Rs.2.50 per kwh. Needless to say, such developers reap windfall profits by selling their power under open access. With

tariffs for wind and solar power falling drastically through competitive bidding, the tendency to sell solar and wind power under open access gets intensified, and, as and when a viable and economical system of battery storage for power is developed and put to use, sale of solar and wind power under open access will increase by leaps and bounds. If the DISCOMs or their consumers of power are forced to bear the burden of fixed charges for backing down in order to take the power banked by private developers and loss of 5-7% of transmission and distribution losses, the totally unjustifiable burden on them would also increase accordingly. The trend of falling of solar and wind power tariffs and increasing average pooled power purchase cost ensures undue benefit to the developers of solar and wind power projects, while the totally unjustifiable burden on the DISCOMs would also increase accordingly. Such predatory absurdities are being perpetrated by politico-bureaucratic-corporate maverickism masquerading itself under the guise of “reforms” and working for ensuring undue benefits to private capital at the cost of larger public interest. Whatever loss the DISCOMs incur as a result of this irrational banking arrangement, it leads to increase in their revenue gap and need for tariff hike or higher subsidy from the Government.

- i) The GoAP has issued its latest solar and wind power policies - 2018 afresh in G.O. Ms No.1 and G.O. Ms. No.2, both dated 3.1.2019, respectively. In these policies, it is incorporated that banking charges shall be adjusted in kind @ 5% of the energy delivered at the point of drawl. Also, it is incorporated that the unutilized banked energy shall be considered as deemed purchase by the DISCOMs at 50% of the average pooled power purchase cost as determined by the APERC for the applicable year. These changes, if brought about in the regulations of the Commission, will partly undo the injustice being meted out to the DISCOMs and their consumers of power under the arrangement of banking.

12) Further, Sri M. Venugopala Rao, submitted that:

- i) for the reasons explained above, among others, to dispense with the irrational system of banking solar and wind power with the DISCOMs. If not, to impose the conditions that the generators of solar and wind power, when they bank their power with the DISCOMs, shall pay the latter the fixed cost per kwh which is

applicable to the power plant with highest variable cost with whom the DISCOMs had PPAs.

- ii) to enhance the banking charges to 7% in kind of the energy banked.
- iii) to amend its relevant regulations to the effect that the unutilized banked energy shall be considered as deemed purchase by the DISCOMs at 25% of the average pooled power purchase cost as determined by it for the applicable year.

13) Sri Challa Gunaranjan, Learned Counsel for A P South Indian Sugar Mills Association submitted the following points:

(i) The state of Andhra Pradesh is the largest producer of sugar in the country with an installed capacity to crush 90,000 MT per day. There are 18 mills in the private sector and 7 in the co-operative sector with a potential to generate 675 MW of power. However, out of the total units only 12 in the private and 2 in the co-operative sector have cogeneration facility aggregating to 154.30 MW. Andhra Pradesh was pioneer in promotion of co-generation of power and as up to 31-03-2004, 6 units had entered into power purchase agreement (PPA). However, subsequent to 31-03-2004 only 2 had entered into PPA indicating the non viability of tariff being offered by the DISCOMs.

(ii) As per MNRE report dt. 31-01-15 the present share of Non conventional energy (MNRE) out of the total power in Andhra Pradesh is only 8.25% whereas it is 27.4% in Karnataka, 36% in Tamilnadu, and 15.1 in Maharashtra. Renewable power generators are also denied the benefit of REC mechanism on grounds of preferential tariff being paid to them whereas actually there is no preferential tariff being extended.

(iii) The co-generated power is green power and is generated from renewable sources of Energy without causing any damage to the environment and lesser carbon emissions. The co-generated power should be placed on equal footing along with the Solar, Wind & Mini-Hydel Power Projects since the Energy generated from the co-generation is cleaner and greener than the rest of them. The incentives provided for the Solar & Wind generators must be extended to the co-generation Plants as well, in order to promote and encourage them. The fuels are renewable in short span of time in season of the year and it does not cause any disturbance to the eco-life and does not contribute to the global warming. It is

essential to provide the incentives of 'banking Energy' to the co-generation Plants for their promotion and to encourage generation through renewable sources of energy.

(iv) The co-generation plants and the Fuels used for generation of Energy through such plants are having many advantages for the Environment such as:

- Providing Clean and Green Energy.
- Reduces Air and Water Pollution
- Low levels of Ash in Bagasse
- No sulphur content in Bagasse which prevents Acid Rains
- Reduction in usage of Conventional Fuels

(v) On the other hand both solar and wind power suffer from following disadvantages:

- **Climatic Conditions:**

The climate and weather patterns influence power generation. Solar power is generated only during the day and where there is adequate sunshine. Wind power depends on wind which can never be predicted and thus these are infirm power generators unlike co-generated power which is firm power.

- **Large Area for Setup**

Large areas of land is required to set up solar and wind power generations resulting in diversion of scarce agricultural land for non agricultural purposes which is not the case in co-gen projects.

- **Contribution to local economy**

There is no contribution to local economy unlike co-gen units which assure all round growth of the rural economy.

- **Contribution to state exchequer**

The DISCOMs earn substantial revenue from power supplied to them by co-gen units. On the other hand on account of high tariff being paid to solar and wind power generators, the Government/DISCOMs do not earn any revenue.

- **Reliability**

Unlike other renewable energy sources which can also be operated during night, solar power is not generated during night time and also generation gets reduced in the event of storms or hurricanes.

- **Noise Disturbances**

Though wind energy is non-polluting, the turbines create a lot of noise.

- **Threat to Wildlife:**

Due to large scale construction of wind turbines at remote locations, it is a threat to wild life. Birds are sucked in to the turbines. Studies conclusively prove that animals see wind turbines as a threat to their life. Also, wind turbines require them to be dug deep into the earth which has a negative effect on the underground habitats.

It is submitted that in spite of the above disadvantages, the Government of Andhra Pradesh has announced Power policy 2015 to promote solar and wind power in the state by extending benefits and incentives like:

- a) Exemption from Line Maintenance charges
- b) Exemption from Cross Subsidy surcharge
- c) Exemption from Distribution losses & permission to bank power
- d) Permission to Bank 100% power
- e) Exemption from payment of Electricity duty

(vi) It is submitted that the co-generated power is not produced throughout the year and is produced only during the season and is renewable in nature. The Electricity generated through the season is used for captive consumption and during the off-season, when the plant is not in operation; Electricity is required for minimum consumption for running lights and other equipments in the co-generation plants. Since there are no long term power procurement arrangements in place unless the Electricity generated through season is allowed to be banked, the co-generation plants cannot effectively maximize its revenues besides utilising for captive purposes. The co-generation plants although having many benefits, no incentives and policies were provided so far for its encouragement and there is an extensive need to extend the benefits of Banking of Energy and all other exemptions as provided to the Wind Power, to the co-generation plants also for their promotion and encouragement.

(vii) Section 86(1)(e) of Electricity Act, 2003 mandates the Commission for encouragement of Renewable sources of energy and Non-conventional energy sources such as co-generation which emits less pollution when compared to the Conventional sources of Energy. The global concern over pollution problem caused by the increase in greenhouse gasses emission and consequent climate changes has resulted in paradigm shift in the approach towards development of energy sector in all the countries. The need for adoption of clean technology, improving end use efficiency and diversifying energy bases, etc., have

all been seriously considered by the Government of India since Sixth Five Year Plan. Electricity Act, 2003, National Electricity Policy, Tariff Policy have all addressed the necessity for promotion of the cogeneration and generation of electricity from renewable sources of energy. However, no incentives were provided and the benefits provided for the Solar and Wind Energy are not extended to the co-generation Plants.

(viii) The co-generated power which is also renewable in nature every year finds no place in the, policy announced by the Government. Given encouragement, sugar factories can set up new co-gen units or expand their existing capacities and thus reduce dependence on thermal power. The sugar industry in AP, disburses over Rs. 3,000 crores in the rural area as cane price alone and employs directly and indirectly over 5-6 lakhs workers. It further disburses over Rs. 1,430 crores for the people employed by way of wages and salaries and contributing around Rs. 1,700 crores to the State and Central exchequers every year by way of taxes.

(ix) It is submitted that with the advent of excess power available in Andhra Pradesh and in view of the foregoing ground realities and the benefits that are accrued, this Commission is requested to permit banking facilities for 100% power generated by co-gen units. Further, being a renewable energy, the Government is requested to extend the same benefits as are extended to Solar and wind power generators which fall under the same category of renewable power.

(x) It is therefore submitted that the energy generated through co-generation which is renewable in nature should be encouraged and promoted by extending the benefits of the Banking Energy having regard to the advantages mentioned above and the benefits granted under the (Interim balancing & settlement Code for Open Access Transaction) Regulation, 2006 must be extended to the co-generation plants which fall under the same category of renewable energy and which stand on the same footing as that of Solar & Wind Power. The benefits of Banking of Energy must be extended to the co-generation Plants as well along with the Mini-Hydel Power projects for promotion and development of co-generation plants.

14) M/s. A.P. Mini Hydel Power Developers Association submitted the following points:

(i) The Commission, having said that the three generating plants stand on the same platform and further stating the incentives provided for the Solar and Wind generators need

to be extended to Mini-hydel power plants have not suggested such amendments in the proposed amendment to the Regulation. Hence, it requires necessary amendments to the Regulation No. 2 of 2016, while proposing the amendments.

(ii) In this connection, the Govt. of India evolved the policy as its international obligation for generation of power through new renewable energy projects to reduce the pollution and conserve the fossil fuels & it is a clean & green power and accordingly, the state Government also adopted the same policy. The mini-hydel power projects, Solar Power projects and wind power projects etc., were notified under NRE projects, by the C.E.R.C. & A.P.E.R.C and while making the open access policy regulation by the APERC as per the Electricity Act, 2003 to sell the power to third parties, certain Regulations were made and in the first instance the Mini-hydel power projects and the wind projects were notified under open access policy of APERC Regulation No. 2 of 2006 and subsequently it was amended from time to time including Solar power projects and provided certain incentives to the Solar & wind power projects also without extending the same incentives to the Mini-hydel power projects, which had adverse impact on the Mini-hydel power projects to sell the power generated by them in the open market to third parties under open access policy competing with the Solar and Wind projects; thereby the objectives of the open access policy have been defeated as well as the purpose for which the Regulations were made and this action is arbitrary and opposed to Article 14 of the Constitution and contrary to the provisions of the Open access policy of the Electricity Act, 2003.

(iii) In the light of the above, the objectives of the Open access Regulation notified by the Commission shall not be fulfilled unless and until the incentives that are extended to the Solar power plants and wind power plants are extended to Mini hydel power plants also, particularly the incentives mentioned in para 4 (c) of Solar power policy G.O. No. 8 dated 12-02-2015 and para 8 (c) of Wind power policy G.O.No. 9 dated 13-02-2015.

(iv) As per the Commission, the three generating categories of plants such as Mini-hydel, wind & solar power plants stand on the same footing and the objectives of the three are also one and the same, hence, the Mini-hydel power plants also shall get the incentives on par with solar power plants vide its GO.Ms No. 8 and Wind power Projects vide its Go.Ms.No. 9 falling which it will be unlawful, arbitrary and opposed to Article 14 of the Constitution of India and it will fail to achieve the objective of Electricity Act, 2003 and open

access policy. In the absence of it, the very survival of the Mini Hydel power projects will become questionable.

15) The Commission examined all the issues right from issuance of principal Regulation (Regulation No. 2 of 2006) till the latest Regulation No. 2 of 2016. In the principal Regulation, banking facility was provided for Wind and Mini-Hydel generating plants. In the APERC (Interim Balancing & Settlement Code for Open Access Transactions), First Amendment Regulation, 2013 (Regulation no. 1 of 2013), banking facility was provided to Solar power generation plants apart from Wind and Mini-Hydel. In the APERC (Interim Balancing & Settlement Code for Open Access Transactions), Second Amendment Regulation, 2014 (Regulation no. 2 of 2014), deemed purchase facility @ 50% of the Pooled Power Purchase cost for unutilized banked energy was provided for Wind, Solar and Mini-Hydel Power plants. Subsequently in the APERC (Interim Balancing & Settlement Code for Open Access Transactions), third Amendment Regulation, 2016 (Regulation no. 2 of 2016), deemed purchase facility @ 50% of the Pooled Power Purchase cost for unutilized banked energy was provided for Mini-Hydel power plants. Whereas for solar and Wind generating plants deemed purchase facility was provided at the Pooled Power Purchase cost for unutilized banked energy.

16) The Installed capacities of Solar, Wind and Mini-Hydel upto 2014 and after 2014 were as mentioned below.

Generation	Till May, 2014 (MW)	After May, 2014 till date (MW)
Solar	100	2840
Wind	350	4080
Sub Total	450	6920
Mini-Hydel	100	103
Grand Total	550	7023

17) It can be seen that the present installed capacity of Solar and Wind power generators has increased 16 times of the installed capacity of year 2014.

18) With reference to the averments mentioned in the para 9 above, the Commission is of the opinion that incentives given to promote renewable energy sources such as Solar and Wind power generation with huge installed capacity around 7000 MW is definitely a cause of concern.

19) With reference to the averments mentioned in para 11 (b) and 11 (c) above, it is acceptable fact that the 2% banking charges fixed is very low compared to the existing wheeling losses of around 7% to 8% upto 33 kV level. The 2% banking charges were fixed 20 years back when the wind generation was less than 100 MW and the system demand was around 4000 MW. It is also a fact that the DISCOMs had to back down their thermal generation sources in order to accommodate Solar and Wind generation and thus meeting the fixed cost of obligation which is an avoidable loss.

20) With reference to the averments mentioned in para 13 above, the Commission is of the view that the co-generation power plants stand on different footing compared to Solar, Wind and Mini-Hydel power plants for the following reasons. The Solar, Wind and Mini-Hydel power plants are purely dependent on nature and climatic conditions like Wind flow, Sun availability and Water availability which is dependent on rain. The energy from these sources should be tapped whenever it is available unlike co-generation power plants. Power generation from co-generation plants can always be controlled and it is in the hands of power producer. In Sugar industry, power is generated by burning Bagasse which causes environment pollution and cannot be termed as clean and green power. The only difference is that unlike fossil fuels which are scarce in nature, fuels like Bagasse, firewood and other agricultural waste can be produced by growing crops and trees and hence it is included in the renewable energy category. The renewable energy fuels can also be used for alternate purpose in industries other than power generation. Since, as stated in para 13 (iii) and 13 (vii), co-generation plants will also cause environment pollution, though in lesser scale, they cannot be compared with Solar, Wind and Mini-Hydel power plants. In the principal regulation and in the subsequent amendments, the Commission made provision for energy banking facility consciously for Solar, Wind and Mini-Hydel power generating plants only as the power generation from these plants is clean and green power.

21) With reference to the averments mentioned in para 14 above, the Commission is of the view that all the three, i.e., Mini-hydel, Wind and Solar power generators produce clean and green energy and stand on the same footing. While issuing the Solar and Wind policies, the GoAP had somehow omitted to consider Mini-Hydel power generators. The Commission while issuing the Regulation No 2 of 2016 (Third Amendment to Principal Regulation No. 2 of 2006) mentioned in the Heading of Appendix-3 about banking facility allowed to

Wind/Solar/Mini-hydel power generators. But in the clause 2 of Appendix-3, deemed banking facility for the energy injected into the grid from date of synchronisation to COD was permitted to Solar and Wind generators only, inadvertently leaving aside the Mini-Hydel power generating plants. The exclusion of mini-hydel power generating plants in giving deemed banking facility in the said clause gave scope for some ambiguity in the Third Amendment Regulation No. 2 of 2016. In view of the above, the Commission is of the view that deemed banking facility for Mini-Hydel generating plants shall also be given on par with Solar and Wind Power generating plants.

22) Clause 12 of Regulation No.2 of 2006 as amended from time to time, has been clear since inception that the three kinds of power generators namely Wind, Mini Hydel and Solar alone are entitled to the banking facility of the electricity generated by them and that the other categories of generators are not entitled to the same. The same was faithfully carried out in the title / heading of Appendix-3 in including the said three categories of power generators. However, when it came to clause 2 of Appendix-3, Mini Hydel power generators were not included obviously by an inadvertent omission or oversight, which also might have been due to the reference made in clause 2 to G.O.Ms.No.8 dated 12-02-2015 and G.O.Ms.No.9 dated 13-02-2015 under which the Solar and Wind policies of the State Government were promulgated in 2015 with no corresponding State policy in respect of Mini Hydel power generators. Hence, inclusion of Mini Hydel power generators for all the benefits to which Solar and Wind power generators are entitled under Appendix-3 of Regulation No.2 of 2006 is correcting an obvious mistake and undoing a patent injustice.

23) Coming to the pooled cost of power purchase which was throughout taken as the basis for arriving at the purchase price payable by the distribution companies for unutilized banked energy, it is seen that the second amendment to Regulation 2 of 2006 by Regulation 2 of 2014 specified that, it was only 50% of such cost applicable for that financial year, as determined by the Commission, that was payable by the distribution companies, but as there was a change in that stipulation in Wind and Solar policies of 2015, making the payable price, the pooled cost of purchases itself, the proviso to clause 3 (f) has been inserted in Regulation No.2 of 2006 by the 3rd Amendment of 2016. The preamble to the said amendment Regulation itself made it clear that the issuance of the new Solar and Wind Power Policies of 2015 under G.O.Ms.No.8 and 9 respectively and the second letter from the

Government to the Commission giving directions under Section 108 of the Electricity Act, 2003 to give effect to the said policies made the Commission note the change made for deeming the unutilized banked energy as deemed purchase by the distribution companies at the pooled purchase cost, as determined by the Commission and make the consequential insertion of the proviso to clause 3 (f) of Appendix-3 of the Regulation.

24) However, now the Government of Andhra Pradesh has issued fresh orders under G.O.Ms.No.1 and 2 Energy, Infrastructure & Investment (PR.II) Department dated 03-01-2019 respectively promulgating the A.P. Solar Power Policy, 2018 and A.P. Wind Power Policy, 2018. Under both the policies, it was clearly specified in relation to energy banking that the deemed purchase by the distribution companies is considered at 50% of the average pooled power purchase cost as determined by the Commission. Though the policies were declared subsequent to the initiation of these proceedings proposing amendment to Regulation No.2 of 2006, the Commission has to take judicial notice of the two policies which have come into force in the meanwhile and the Commission has to give effect to the said policies of the State Government. Even on that count, apart from the merits of the proposed amendment, the price payable by the distribution companies for unutilized banked energy should be restricted to 50% of the pooled cost of power purchase.

25) Accordingly, considering all the objections/suggestions and in view of the above discussions, the Commission decided to make the following amendments to the “Andhra Pradesh Electricity Regulatory Commission (Interim Balancing & Settlement Code for Open Access Transactions) Regulation, 2016”.

- i) Clause 2 of Appendix – 3 shall be substituted with the following:
“The energy injected in to the grid from the date of synchronization to the Commercial Operation Date (COD) shall be considered as deemed banked energy.”
- ii) In Appendix -3, the proviso to 3 (f) shall stand deleted.

26) The Fourth Amendment to the “Interim Balancing & Settlement Code for Open Access Transactions, Regulation, 2016” shall be sent for publication in the Gazette of Andhra Pradesh.

This order is corrected and signed on this the 2nd day of March, 2019.

Sd/-
P. Rama Mohan
Member

Sd/-
Justice G. Bhavani Prasad
Chairman