Order on procurement of Wind Power and Related Issues

Order No. 8 of 2020 dated 07-10-2020

BEFORE THE TAMIL NADU ELECTRICITY REGULATORY COMMISSION

PRESENT: **Thiru M.Chandrasekar - Chairman**
Dr.T.Prabhakara Rao - Member
Thiru K.Venkatasamy - Member/Legal

Order No. 8 /2020, dated 07.10.2020

In the matter of : Order on procurement of Wind Power and related issues

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In exercise of the powers conferred by Sections 181, 61 (h), and 86 (1) (e) of the Electricity Act 2003, (Act 36 of 2003), read with the National Electricity Policy, the Tariff Policy and Commission's Power Procurement from New and Renewable Sources of Energy Regulations, 2008, the Commission, after issuing a consultative paper for public view on "Procurement of Wind Power and related issues" inviting comments from stakeholders and after examining the views of all stakeholders, the views expressed by the Members of the State Advisory Committee (SAC) on the Consultative Paper in the meeting held on 20/3/2020, and on consideration of the views of the stakeholders and the SAC Members on the Consultative Paper, passes this suo motu Tariff Order on Wind Power.

This order shall take effect on and from the 7th of October, 2020.

Sd./-	Sd./-	Sd./-
(K.Venkatasamy)	(T.Prabhakara Rao)	(M.Chandrasekar)
Member/Legal	Member	Chairman

(By Order of the Tamil Nadu Electricity Regulatory Commission)

Sd./-
(S.Chinnarajalu)
Secretary

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TAMIL NADU ELECTRICITY REGULATORY COMMISSION

Order on procurement of Wind Power and Related issues

1.0 Overview

1.1 Commission in exercise of the powers vested under the Electricity Act,2003 and in compliance with the mandate of the Act to promote renewable energy has issued a number of tariff orders in respect of various sources of renewable energy. These orders on renewable energy sources covered tariff determination for purchase of power by the Distribution licensee, issues related to open access, its promotional aspects and banking of energy depending on the source of renewable power.

1.2 The conducive policies of the Central and State Government for promotion of renewable power has helped the sector achieve remarkable progress. Government of India has set a target of installing 60 GW of wind power capacity by 2022.

1.3 India is the world's fourth largest wind power producer with a total installed capacity of 38 GW as on 31.8.2020. Tamil Nadu is the largest producer of wind power with a capacity of 8543.2 MW. The total capacity of renewable power in the State is 14144.35 MW.

1.4 The development of wind energy in India has come against a back drop of favorable policy environment with grant of subsidies, generation based incentives and other fiscal incentives and promoted by the feed in tariff regime. Over the years, there is a shift from the feed in tariff/preferential tariff regime to an auction based regime. This has lowered the cost of procurement of power by the Distribution licensees. Technological improvements have made it possible to have high wind power generation even in low potential sites.

1.5 Government of India(GoI) issued draft guidelines in 2017 for Tariff-based competitive bidding process for procurement of power from grid-connected wind projects. The guidelines were notified by GoI vide resolution No.23/54/2017-R&R dt.8.12.2017.

1.6 The Solar Energy Corporation of India(SECI) has been conducting reverse auctions for wind power since 2017. Several States are procuring wind power through competitive bidding conducted by the State or by the Centre. The Central Electricity Regulatory Commission has not determined tariffs for wind power since the notification of RE Tariff Regulations in 2017.

1.7 Orders issued by the Commission so far – The first tariff order for procurement of wind power was issued in 2006. The second tariff order for wind energy was issued in 2009, third order in 2012, fourth order in 2016 and the fifth order in 2018. Specific issues in each order have been challenged by one or more of the stakeholders and have either been settled or dismissed. The tariff

orders issued by the Commission in 2016 and 2018 vide order No.3 of 2016 dt.31.3.2016 and Order No.6 of 2018 dt.13.4.2018 are also under contest and appeals are pending before the Hon'ble APTEL. There is no stay against any of the orders under contest. The validity of the Order No.6 of 2018 dt.13.4.2018 has been extended upto the date of issue of the next order vide Commission's order No.3 of 2020 dt.31.3.2020.

1.8 Considering that every order is an independent order, Commission issued a consultative paper discussing the approach for procurement of wind power by the Distribution Licensee and on related issues of open access and invited comments from stakeholders. Commission also conducted a State Advisory Committee meeting and discussed the various issues in the consultative paper. The list of stakeholders who furnished comments is annexed with this order as Annexure I and the abstract of the comments received from the stakeholders is annexed as Annexure II. The list of members present at the State Advisory Committee(SAC) meeting on 20/03/2020 is enclosed as Annexure III. Considering the important comments/suggestions received from the stakeholders and the SAC Members, legal provisions, orders passed by other State Electricity Regulatory Commissions, Central Electricity Regulatory Commission, Commission issues this order after due deliberations.

2.0 Legal framework:

2.1 Related Provisions of Electricity Act, 2003

2.1.1 Relevant provisions of Electricity Act, 2003 are reproduced below:

"Section 3(1): The Central Government shall, from time to time, prepare the National Electricity Policy and tariff policy, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy.

Section 61: The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-

……

(h) The promotion of cogeneration and generation of electricity from renewable sources of energy;

(i) The National Electricity Policy and tariff policy;

Section 62(1): The Appropriate Commission shall determine the tariff in accordance with the provisions of this Act for –

(a) Supply of electricity by a generating company to a distribution licensee:

Section 62(2): The Appropriate Commission may require a licensee or a generating company to furnish separate details, as may be specified in respect of generation, transmission and distribution for determination of tariff.

Section 62(5): The Commission may require a licensee or a generating company to comply with such procedure as may be specified for calculating the expected revenues from the tariff and charges which he or it is permitted to recover.

Section 63: Notwithstanding anything contained in section 62, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.

Section 86(1)(e): The State Commission shall promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;"

2.2 Related Provisions of National Electricity Policy

2.2.1 Relevant provisions of National Electricity Policy are reproduced below:

"Section 5.2.20 Feasible potential of non-conventional energy resources, mainly small hydro, wind and bio-mass would also need to be exploited fully to create additional power generation capacity. With a view to increase the overall share of non-conventional energy sources in the electricity mix, efforts will be made to encourage private sector participation through suitable promotional measures.

Section 5.12.2 The Electricity Act 2003 provides that co-generation and generation of electricity from non-conventional sources would be promoted by the SERCs by providing suitable measures for connectivity with grid and sale of electricity to any person and also by specifying, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee. Such percentage for purchase of power from non-conventional sources should be made applicable for the tariffs to be determined by the SERCs at the earliest. Progressively the share of electricity from non-conventional sources would need to be increased as prescribed by State Electricity Regulatory Commissions. Such purchase by distribution companies shall be through competitive bidding process. Considering the fact that it will take some time before non-conventional technologies compete, in terms of cost, with conventional sources, the Commission may determine an appropriate differential in prices to promote these technologies."

2.3 Related Provisions of Tariff Policy

2.3.1 Relevant provisions of Tariff Policy, 2016 are reproduced below:

Para 6.4 "(1) Pursuant to provisions of section 86(1)(e) of the Act, the Appropriate Commission shall fix a minimum percentage of the total consumption of electricity in the area of a distribution licensee for purchase of energy from renewable energy sources, taking into account availability of such resources and its impact on retail tariffs. Cost of

purchase of renewable energy shall be taken into account while determining tariff by SERCs. Long term growth trajectory of Renewable Purchase Obligations (RPOs) will be prescribed by the Ministry of Power in consultation with MNRE.

……

(i) Within the percentage so made applicable, to start with, the SERCs shall also reserve a minimum percentage for purchase of solar energy from the date of notification of this policy which shall be such that it reaches 8% of total consumption of energy, excluding Hydro Power, by March 2022 or as notified by the Central Government from time to time.

……

(iii) It is desirable that purchase of energy from renewable sources of energy takes place more or less in the same proportion in different States. To achieve this objective in the current scenario of large availability of such resources only in certain parts of the country, an appropriate mechanism such as Renewable Energy Certificate (REC) would need to be promoted. Through such a mechanism, the renewable energy based generation companies can sell the electricity to local distribution licensee at the rates for conventional power and can recover the balance cost by selling certificates to other distribution companies and obligated entities enabling the latter to meet their renewable power purchase obligations. The REC mechanism should also have a solar specific REC.

(iv) Appropriate Commission may also provide for a suitable regulatory framework for encouraging such other emerging renewable energy technologies by prescribing separate technology based REC multiplier (i.e granting higher or lower number of RECs to such emerging technologies for the same level of generation).Similarly, considering the change in prices of renewable energy technologies with passage of time, the Appropriate Commission may prescribe vintage based REC multiplier(i.e granting higher or lower number of RECs for the same level of generation based on year of commissioning of plant).

(2) States shall endeavor to procure power from renewable energy sources through competitive bidding to keep the tariff low, except from the waste to energy plants. Procurement of power by Distribution Licensee from renewable energy sources from projects above the notified capacity, shall be done through competitive bidding process, from the date to be notified by the Central Government.

However, till such notification, any such procurement of power from renewable energy sources projects, may be done under Section 62 of the Electricity Act, 2003."

2.4 Regulation 4(2) of the Power Procurement from New and Renewable Sources of Energy Regulation, 2008, specifies as follows:

"(2) While deciding the tariff for power purchase by distribution licensee from new and renewable sources based generators, the Commission shall, as far as possible, be guided by the principles and methodologies specified by:
(a) Central Electricity Regulatory Commission
(b) National Electricity Policy
(c) Tariff Policy issued by the Government of India
(d) Rural Electrification Policy
(e) Forum of Regulators (FOR)
(f) Central and State Governments

(3) The Commission shall, by a general or specific order, determine the tariff for the purchase of power from each kind of new and renewable sources based generators by the distribution licensee. ...
Provided where the tariff has been determined by following transparent process of bidding in accordance with the guidelines issued by the Central Government, as provided under section 63 of the Act, the Commission shall adopt such tariff."

2.5 Since the issue of the consultative paper, the Central Electricity Regulatory Commission has issued the RE Tariff Regulations 2020 on 23.6.2020. The Central Commission in its Regulations on Tariff determination for renewable energy sources has not fixed any generic tariff for wind and solar power.

2.6 CERC in the Statement of reasons provided for the RE Tariff Regulations 2020 has observed as follows:

"5.7 As regards determination of generic tariff for solar PV projects and wind projects, the Commission is of the view that under the prevailing market conditions, when most of

the solar and wind projects are being set up primarily through competitive bidding, determination of generic tariff based on norms will not provide right price signals…."

However, the Central Commission has set financial and operational norms that would serve as ceiling norms for determination of project specific tariff.

2.7 Government of India has issued guidelines for tariff based competitive bidding process for procurement of power from grid connected wind power projects vide resolution No. 23/54/2017-R&R dt.8.12.2017 and amendments issued from time to time.

3.0 Competitive bidding vs preferential tariff

3.1 In the tariff order issued for wind energy vide Order No.3 of 2016 dt.31.3.2016, in the context of deciding preferential tariff vs competitive bidding, Commission observed that the **'**Government of India has not issued any bidding guidelines from power procurement of wind energy as on date as specified in section 63 of the Electricity Act, 2003'. In accordance to para 6.4(2) of the Tariff Policy, 2016 that provided for procurement of power from renewable energy source projects under section 62 until a notification is issued by the Central Government, the Commission decided to fix the tariff as per the provisions under section 62 of the Electricity Act,2003.

3.2 The control period of Order No.3 of 2016 dt.31.3.2016 expired on 31.3.2018. Soon after, Commission issued Order No.6 of 2018 dt.13.4.2018

effective from 01.04.2018 determining tariff for wind power under section 62 of the Electricity Act 2003. Though bidding guidelines for procurement of wind power had been framed and notified by the Central Government, empowered by the provisions under section 62 of the Electricity Act 2003, Commission determined a feed in tariff/preferential tariff for procurement of wind power by the Distribution Licensee in the order of 2018. One of the issues under contest is the tariff determined in the order of 2018. Arriving at the capital cost of WEG has become a challenge in the recent years where competitive bidding has taken precedence and there is failure on the part of OEMs to disclose the actual cost.

3.3 The Solar Energy Corporation of India(SECI), the nodal agency that implements various government schemes, has conducted a number of competitive biddings and reverse auctions from 2017 for procurement of wind power. The very first auction conducted for procurement of wind power in February 2017 fetched a low tariff of Rs.3.46 per unit. Since then SECI has conducted different biddings for wind power in tranches and each bid acquired different tariffs(from Rs.2.44 to Rs.2.83). Various tariffs obtained through SECI's bidding were discussed in the consultative paper. UPERC in an order dt.22.8.2019 has approved adoption of tariff of Rs.2.90 plus trading margin of Rs.0.07 per unit for procurement of 460 MW of wind power from SECI.

3.4 Few of the States have also conducted competitive biddings and have obtained tariffs less than the feed in tariff. Competitive bidding in wind and solar energy has helped to make Renewable Energy (RE) competitive with conventional sources of energy. The capacities auctioned so far by SECI have all been priced below the national level APPC. Competitive biddings have proved to be beneficial to all stakeholders at large.

4.0 Procurement of wind power on expiry of control period of wind tariff order of 2018

4.1 The Electricity Act, 2003, the National Electricity Policy and the Tariff Policy, 2016 all have key enabling provisions that facilitate competitive bidding and these stipulations on competitive bidding aim to provide electricity at reasonable and competitive rates. Many of the States have refrained from determining tariffs for wind power under section 62 of the Electricity Act 2003 and are procuring wind power through competitive bidding.

4.2 To cite a few orders on renewable energy for wind, Gujarat ERC in the order dt.30.4.2020 has not determined any tariff for wind power. Similarly, Maharashtra ERC in the orders dt.30.4.2019 and 02.4.2020 has not determined tariff for wind power. The above two State Commissions have set a mechanism to adopt a tariff for wind power projects below the threshold capacity of 25 MW.

4.2.1 Extract of the approach followed in each of the orders referred to:

(a) Gujarat ERC's (GERC) Order dt.30.4.2020 for Procurement of power by Distribution Licensee from Wind Power Generators –

"3.1 Tariff Framework :
The tariff for all prospective Wind Power Projects shall be determined based on the rates discovered through competitive bidding.

The tariff for Wind Power Projects below the threshold limit of eligibility for participating in Competitive Bidding shall be considered equal to weighted average of the latest Tariff discovered through Competitive Bidding by State owned DISCOMs for Wind Power Projects and adopted by the Commission."

(b) Maharashtra ERC's (MERC) Order No.52 of 2019 dt.30.4.2019 on Determination of Generic tariff for Renewable Energy :

"2.1 Tariff Philosophy:

...

... In previous RE Tariff Orders, in absence of norms specified by CERC, the Commission has used norms arrived at, by analyzing RE Tariff Orders of other State Commissions.

The Commission also notes that purpose of RE Generic Tariff Order is to determine Tariff at which Distribution Licensee can procure energy from RE sources to fulfil its RPO. When, introduction of competitive bidding in RE has shown substantial reduction in RE Tariff, the Commission cannot continue determining Generic Tariff based of Financial Principles and Operating Norms in RE Tariff Regulations, 2015, which are not reflective of true current market conditions. The Commission cannot in the process burden the Distribution Licensees and in turn the consumers with increased cost of

meeting its RPO by fixing Generic Tariff based on dated technology, financial principles and operating norms.

Taking cognizance of the approach taken by CERC and the provisions relating to RE Generic Tariff Regulations, the Commission is separately taking up the revision of the Regulations to reflect these developments appropriately so as to bridge the significant gap in the Generic Tariff fixed in the past and the Tariff discovered through competitive bidding in recent times. Until amendments come into effect, in the interim, the Commission is invoking its power to remove difficulty under Regulation 82 of RE Tariff Regulations, 2015, and gives a ruling as under:

a. For FY 2019-20, no Generic Tariff will be determined for RE Technologies for which competitive bidding has been enabled and the Commission has adopted such competitively discovered Tariff.

Provided that in case of projects having capacity below the threshold limit of eligibility for participating in competitive bidding process as approved by the Commission, Distribution Licensee may sign EPA with such RE Projects at a Tariff which has been discovered in the latest competitive bidding and so adopted by the Commission. If the rates obtained through competitive bidding is not adequate' the licensee may go for a separate competitive bidding process for lower capacity plants which are not covered under the bidding guide lines by taking a separate approval of the commission. In absence of competitively discovered Tariff of concerned Distribution Licensee, Tariff discovered by other Distribution Licensee in the State shall be used for signing of EPA. Terms and Conditions of such EPA shall be identical to Terms and Conditions of EPA for those approved competitive bid."

4.3 Competitive bidding in an open market has brought about many private players. Every competitive bidding of SECI is seen to set a new benchmark

tariff. The tariffs obtained in the biddings are competitive and are reflective of the market price.

4.4 Stakeholders have suggested to determine feed in tariffs especially for wind capacities less than 25 MW for the reason that the minimum bid capacity prescribed in the guidelines for procurement of wind is 25 MW with each individual capacity not less than 5 MW. Some of the stakeholders have requested to fix tariffs for capacities upto 50 MW. Few stakeholders have submitted that market based tariff discovery is a better option to move forward.

4.5 Para 3.1 of Guidelines of Tariff based competitive bidding process for Procurement of power from Grid connected Wind power projects is extracted below:

'3.1 These guidelines are being issued under the provisions of section 63 of the Electricity Act 2003 for long term procurement of electricity through competitive bidding process, by the 'Procurer(s)' from grid connected Wind Power Projects (WPP) having (a) individual size of 5 MW and above at one site with minimum bid capacity of 25 MW for intra state projects; and (b) individual size of 50 MW and above at one site with minimum bid capacity of 50 MW for inter state projects.'

4.6 The growth of the wind power projects have so far been aided by the determination of feed in tariffs/preferential tariffs. Competitive bidding process is a transparent process that may reduce the power procurement cost of the licensee and also take care of consumer interest due to the fact that they capture

the market conditions. The project developers utilize the resources adopting advanced/efficient technology. The tariffs being discovered through competitive biddings are generally lower than cost plus tariffs. Ministry of New and Renewable Energy has in February 2020 removed the process of prescribing a cap or upper ceiling tariffs in a competitive bidding process. This may aid in awarding contracts to viable projects of any capacity.

4.7 The TNERC Power Procurement Regulations from New and Renewable Sources of Energy 2008 also provide for guidance of principles,methodologies of Central Commission, Tariff Policy, National Electricity Policy etc. and to adopt the tariff where the tariff has been determined by following transparent process of bidding in accordance with the guidelines issued by the Central Government, as provided under section 63 of the Act.

4.8 In view of the reasons aforementioned, and keeping in view the principles and provisions of competitive bidding in the Tariff Policy, Electricity Act 2003, State and Central Commission's Regulations, Commission decides that procurement of wind power by the Distribution Licensee, for compliance of RPO requirement, shall be through the competitive bidding route under section 63 of the Electricity Act 2003 following the bidding guidelines issued by the Central Government by adopting ceiling tariffs that are obtained in the Tariff based competitive bidding process conducted by SECI and approved by the Commission for adoption. If the bidding is not successful, the licensee may go for

a bidding without prescribing a cap after obtaining prior approval from the Commission to conduct such a bidding. The Distribution licensee may also procure power from the projects contracted through competitive bidding process by SECI, the nodal agency that floats tenders and conducts e-reverse auction for procurement of power from solar and wind power projects. In the case of smaller capacity plants of sizes 5 MW and less, the licensee may conduct a separate competitive bidding seeking prior approval from the Commission.

4.9 For any deviation from the bidding guidelines, the Licensee shall obtain approval from the Commission. Where the licensee conducts the bidding, Energy Purchase Agreement, billing and payment shall be as per the terms in the bidding. Sharing of CDM benefits shall be at 100% in the first year and thereafter reduced by 10% every year till the sharing becomes equal(50:50) between the developer and consumer

4.10 If the rates obtained are comparable and below the variable cost of power from conventional fuel based power sources, the licensee may procure over and above the limit of the RPO.

5.0 Issues related to open access:

1. Banking
2. Open access charges – Transmission and Wheeling, and Line losses
3. Cross subsidy surcharge
4. Reactive power charges

5. Grid availability charges
6. Energy Accounting and Billing Procedure
7. Energy wheeling agreement and fees
8. Security Deposit
9. Power factor disincentive
10. Metering
11. Connectivity and evacuation of power
12. Harmonics

5.1 Banking

5.1.1 The history of banking in this State is given below:

5.1.2 The first tariff order for wind power issued by the Commission was on 15.5.2006. Prior to this date, the erstwhile TNEB followed its rule of banking. Initially the wind energy generator was allowed to adjust the energy generated in two HT industrial services. A banking charge of 2% was levied from March 1986. This was raised to 5% in March 2002. Banking was initially fixed for a period of nine months and then modified to one month and then 3 months. Again in September 1986, banking was allowed for one year. In November 1989, banking was considered for two years which was then modified to one year from April to March in the year 2000. In March 2001, the banking period was reduced to one month and in 2002, banking was permitted for one year commencing from 1st of

April. Commission permitted banking for one year from April to March in the 2006 order and continued with it in all its orders issued in 2009, 2012 and 2016. In Commission's Orders of 2006, the unutilized energy was allowed to be encashed at 75% of the preferential tariff rate and this was continued in all the tariff orders for wind power issued by the Commission.

5.1.3 In the consultative processes undertaken by the Commission before issue of every tariff order, the Distribution licensee has always requested to remove the facility of banking provided to the wind energy generators citing huge financial losses on account of banking and the wind energy generators on the other hand had requested to continue with banking disputing the financial losses claim made by the licensee.

5.1.4 In the order of 2012, the banking charges were fixed as the difference between the average power purchase cost through bilateral trading on all India basis taken for a period of two years and the maximum preferential tariff specified in the order which worked out to Rs.0.94 per kWhr. This order on banking charges was challenged by stakeholders before Hon'ble APTEL vide Appeal Nos.197, 198 of 2013 etc. and APTEL remanded the issue to the Commission.

5.1.5 While disposing the remanded case in R.A No.6 of 2013 dt.31.3.2016, Commission observed that it is time that the promotional concessions are

gradually withdrawn and however fixed the banking charges at 10% in kind. In the order No. 3 of 2016, Commission fixed the banking charges at 12% in kind and in the order of 2018 banking charges were fixed at 14% in kind.

5.1.6 Appeals have been filed against the Order No. 3 of 2016, the remanded case in R.A No.6 of 2013 by the distribution licensee as well as the wind generators and captive users before the Hon'ble Appellate Tribunal of Electricity. Appeals have also been filed against the order of APTEL in Appeal Nos. 197,198 of 2013 etc. dt.24.5.2013, by the Distribution licensee and wind energy generators before the Hon'ble Supreme Court of India and against Order No.6 of 2018 dt.13.4.2018. These litigations are pending before the respective Courts of law.

5.1.7 Commission in the order No.6 of 2018 dt.13.4.2018 decided to continue with the banking period of 12 months from the 1st of April to 31st of March of the succeeding year for the Wind Energy Generators (WEGs) commissioned on or before 31.3.2018 under captive wheeling in the case of normal and REC scheme with the banking charges at 14% in kind, and extended banking facility of one month to the new WEG machines commissioned on or after 01.04.2018 both under normal and REC category, from 01.04.2018.Cases have been filed against the order No.6 of 2018 by stakeholders before the Hon'ble APTEL.

5.1.8 Abstract of the banking provisions in some of the renewable rich States are furnished below:

Name of State ERC	Banking provisions
Andhra Pradesh ERC	Banking period – 12 months from April to March; Drawal of banked energy not permitted from 1st April to 30th June and from 1st February to 31st March. In addition, drawal of banked energy during ToD period not permitted throughout the year. Banking charges - adjusted in kind @ 5% of the energy delivered at the point of drawal; Provisions on banking pertaining to drawal restrictions to be reviewed based on the power supply position in the State. Energy injected into the grid from date of synchronization to Commercial Operation Date(COD) considered as deemed banked energy. The unutilized banked energy deemed to be purchased by Discoms at 50% of the Average Pooled Power Purchase Cost for the applicable year. Payment for the deemed purchase of un-utilized banked energy shall be capped to 10% of the total banked energy during the applicable year. Energy settlement shall be done on monthly basis.
Gujarat ERC	Banking facility of one month; Excess generation shall be set off in one billing cycle in proportion to generation in peak and normal hours. No Banking for third party and set off will be done in the 15 minute time block with open access consumer's consumption.

	Surplus power after set off to be purchased by Distribution licensee at Rs.1.75 per unit and in case of wind power projects availing OA for captive use / third-party sale and opting for REC, the surplus power after set off will accordingly be purchased by the Distribution Licensee at 85% of Rs. 1.75/kWh, i.e., Rs. 1.50 per kWh.
Karnataka ERC	Banking – annual; Banking charges – 2% in kind; Unutilised banked energy purchased at 85% of generic tariff.
Maharashtra ERC	Banking - Permitted only on monthly basis (Previously it was for 12 months) Credit for energy banked during the month adjusted in the same month as per the energy injected in the respective TOD slots determined by the Commission in its orders; Energy banked during peak TOD slots can be drawn during off peak TOD slots but energy banked during off peak TOD slots cannot be drawn during peak TOD slots. Unutilized banked energy limited to 10% of actual total generation in a month considered as deemed purchase by Distribution licensee at a rate equivalent to that stipulated under yearly generic RE tariff order. Deemed purchase to be counted towards RPO of Distribution licensee.
Rajasthan ERC	Banking – monthly basis; RE generator has to intimate on the first day of every month the quantum of energy they wish to bank; Banked energy in a month shall not exceed quantum of energy injected in the grid; If energy injected

	is less than that indicated, banked energy will be restricted to energy injected.10% of unutilized banked energy at the end of the month shall be entitled for payment at 60% of large industrial power tariff excluding fuel surcharge. Unutilized banked energy, in excess of 10% shall lapse. Banking charges -2% in kind.

5.1.9 In the consultative paper, Commission proposed various restrictions in the banking facility provided to the wind energy generators by categorizing the machines commissioned prior to 1.4.2018,during the control period of the Order No.6 of 2018 dt.13.4.2018, and for those machines due to be commissioned under the proposed order.

5.1.10 Most of the stakeholders under captive wheeling have vehemently opposed removal of banking from its present form of 12 months from April to March with slot to slot adjustments, and adjustments from higher to lower slots. Reasons predominantly stated are the provisions on promotional measures for renewable sources of energy in the Electricity Act 2003,National Electricity Policy, Tariff Policy, recognition of banking in the various orders of the Commission and orders of Hon'ble APTEL, investments made on the assurance of banking and application of principles of estoppels.

5.1.11 The proposition of estoppels has been dealt in the order of 2012. Provisions of banking have been constantly changing at regular intervals in this State right from 1986. It was observed in Para 8.2.2 of the Commission's order, "*8.2.2 … Since the concept of banking itself has been undergoing change at regular intervals question raises as to against which particular promise estoppels would apply. The Commission is therefore of the considered view that estoppels cannot be invoked with regard to banking…"*

5.1.12 The stakeholders, Developers and captive users have expressed their views that removal of banking in phases or any change in banking period would impact the financials of a Company. Citations have been provided from the judgements issued by Hon'ble APTEL in Appeal No.53 of 2010 dt.21.9.2011(TNEB vs TNERC,IWPA,and Spinning Mills) and in Appeal No.42 of 2018 dt.29.3.2019 (M/s.Fortune Five Hydel vs Karnataka ERC). In Appeal No.53 of 2010, Hon'ble APTEL made observations that wind generators have set up facilities incurring heavy expenditure because of the promises made by the Government which included concept of banking, and in Appeal No.42 of 2018, Hon'ble APTEL viewed the reduction in banking period during the currency of the agreement as not sustainable in law, and that the order modifying the banking arrangement made by KERC is an order in violation of doctrine of legitimate expectation etc. and not supported with sufficient/requisite data and analysis.

5.1.13 The Distribution Licensee, TANGEDCO, have been appealing to the Commission from 2006 to dispense with the facility of banking. As per the data furnished by TANGEDCO, the total banked energy as on 31st January 2020 is 1872 MUs and the unutilized banked energy is 258.84 MUs. TANGEDCO's statement shows net loss of Rs.585.21 crores by netting the additional revenue that would be earned by sale to HT consumers with revenue foregone on wheeling charges on banked energy and payment for the banked energy. On the other hand, the stakeholders have shown gain to TANGEDCO ranging from Rs.1.46 to Rs.2.05 per unit through different calculations by adopting varied rates of realisation.

5.1.14 The comments received from stakeholders i.e that of generators, consumers and the Distribution licensee on the effects of banking are at variance as can be seen in para 5.1.10,5.1.12,5.1.13. The data furnished is not supportive of evidence and analysis to evaluate the financial injury caused to the TANGEDCO and wind energy generators. In view of the above and the findings of Hon'ble APTEL in A.No.42 of 2018 referred to by stakeholders, and on account of the unprecedented situation that arose due to the outbreak of the covid 19 pandemic where several restrictions were in place on the movement of public and opening of offices etc., and the gradual slowdown in economic activity, Commission decides not to disturb the current position in this order.

5.1.15 (i) Commission decides to continue with the banking period of 12 months from the 1st of April to 31st of March of the succeeding year for the WEG machines commissioned on or before 31.3.2018 under captive wheeling in the case of normal and for the WEGs under REC scheme, for which banking period of one year has been provided in the Order No.3 of 2016 as dealt in R.A No.6 of 2013 dt.31.3.2016. The applicable banking charges shall be 14% in kind.

5.1.15 (ii) The energy generated during April shall be adjusted against consumption in April and the balance if any shall be reckoned as the banked energy after deduction of banking charges in kind. The generation in May shall be first adjusted against the consumption in May. If the consumption exceeds the generation during May, the energy available in the bank shall be drawn to the required extent. If the consumption during May is less than the generation during May, the balance shall be added to the banked energy after deduction of banking charges in kind. This procedure shall be repeated every month until the month of March of the succeeding year.

5.1.15 (iii) The unutilized banked energy as on 31st March may be encashed at the rate of 75% of the applicable wind energy tariff fixed by the Commission for existing normal wind energy captive users. Where no tariff has been determined by the Commission, the bidding price may be adopted as per the procedure stated in para 5.6.3 (under para 5.6 Energy Accounting). For the

captive generators under REC scheme, the unutilized banked energy as on 31st March may be encashed at the rate of 75 % of the pooled cost of power notified under the TNERC (Renewable Energy Purchase Obligations)Regulations, 2010.

5.1.16 (i) For the WEGs commissioned on or after 1.4.2018 under normal or under REC scheme, the facility of banking of energy shall be for a period of one month. There shall be no banking charges.

5.1.16 (ii) The purchase of excess generation/ unutilized banked energy at the end of the month shall be at 75% of respective wind energy tariff for normal wind energy captive users. Where no tariff has been determined by the Commission, the bidding price may be adopted as per the procedure stated in para 5.6.3 (under para 5.6 Energy Accounting). For the captive generators under REC scheme, the unutilized banked energy at the end of the month may be encashed at the rate of 75% of the pooled cost of power notified under the TNERC (Renewable Energy Purchase Obligations)Regulations, 2010.

5.1.17 There shall be no facility of banking of energy for third party power purchase.

5.1.18 As and when the Commission's DSM regulations come into force, the adjustments of energy will be as per the said regulations/orders of the Commission.

5.2 Transmission, Wheeling charges & Scheduling and System operation charges :

5.2.1 Transmission, Wheeling and Scheduling & System operation charges are generally regulated by the Commission's Tariff regulations, Grid Connectivity & Open access regulations and Commission's order on open access charges issued from time to time. However, as a promotional measure, under sections 61 and 86(1) (e) of the Act, Commission in the tariff orders of 2012 and 2016 fixed 40% of the charges applicable for conventional power for wind energy.

5.2.2 Wind power has adequately been promoted and the tariffs lower than that of conventional power plants. The concessions granted are being subsidized by other users of the network and ultimately borne by the consumers.

5.2.3 In the case of scheduling and system operation charges, the work done by SLDC is the same as in the case of conventional power. SLDC has to monitor the grid operations effectively on real time basis. The scheduling and system operation charges have to be determined in a non-discriminatory manner with reference to the functions of SLDC and there cannot be any concession.

5.2.4 Wind energy is in a position to compete with conventional power sources and thus can be treated in the manner related to conventional power. In view of the above reasons, Commission fixed the transmission, wheeling and scheduling and system operation charges in the order No.6 of 2018 at 50% of that applicable for conventional power as notified by the Commission from time to time. Commission proposed the transmission, wheeling and scheduling and system operation charges at 100% of that applicable for conventional power in the consultative paper. Most of the stakeholders have requested to retain the existing level of 50% of charges. Commission decides to retain levy of transmission, wheeling and scheduling and system operation charges at 50% of that applicable for conventional power notified by the Commission from time to time for the WEGs commissioned under the normal category. In respect of the WEGs availing Renewable Energy Certificates (REC), 100% of the respective charges as specified in the relevant orders of the Commission are applicable.

5.2.5 Line losses :

5.2.5.1 The generators shall bear the actual line losses in kind as specified in the respective orders of the Commission issued from time to time.

5.3 Cross subsidy surcharge

5.3.1 The Commission in its tariff orders related to different renewable power, has ordered to levy 50% to 70% of the cross subsidy surcharge for third party open access consumers. In the last tariff order for wind power, 60%

of cross subsidy surcharge was levied. Commission proposed levy of 100% Cross Subsidy Surcharge as applicable in the case of power drawn from conventional generators. Most of the stakeholders have requested to retain existing level of cross subsidy. Commission decides to retain levy of cross subsidy surcharge at 60% of that applicable to conventional power as ordered in the Order No.6 of 2018 dt.13.4.2018.

5.4 Reactive Power Charges

5.4.1 Due to inherent characteristics, the induction type wind energy generators are prone to draw reactive power from the grid, if adequate power factor correction is not applied. During the wind season, wind energy generators contribute around 25% of the grid demand and in such a situation grid stability will be jeopardized, if the wind energy generators are allowed to draw considerable reactive power from the grid.

5.4.2 Distribution Licensee has requested to increase the reactive energy charges at Rs.1 per kVARh on WEGs who draw reactive power upto 10% of net active energy and at Rs.2 per kVARh for WEGs who draw reactive power above 10% of net active energy. Few stakeholders have requested to fix for the net drawal of reactive power. The generators are required to generate/absorb reactive power within their capability limits.

5.4.3 Commission decides to retain the charges fixed in Order No.6 dated 13.04.2018 i.e 25 paise per kVARh will be levied on wind energy generators, who draw reactive power up to 10% of the net active energy generated. Anyone drawing in excess of 10% of the net active energy generated will be liable to pay double the charge.

5.5 Grid Availability Charges

5.5.1 Start up power

5.5.1.1 Due to its infirm nature of the wind, stoppage of wind energy generation and frequent start up of WEGs are common in the wind energy sector. Therefore, the drawal of energy by the wind generators during the start up from the distribution licensee shall be adjusted against the generated energy. If the drawal of energy is more than the generation in a billing cycle, the energy is to be billed under HT industrial TF IA.

5.5.2 Stand by charges

5.5.2.1 If adequate generation does not materialize or if drawal by the captive/ third party consumer exceeds generation, the energy charges and demand charges at the user end shall be regulated as per the Tamil Nadu Electricity Regulatory Commission Grid Connectivity and Intra-State Open Access Regulations, 2014 and Commission's Regulation/Orders on Deviation Settlement Mechanism(DSM) and other relevant orders as may be applicable.

5.6 Energy Accounting and Billing Procedure

5.6.1 The energy accounting shall be regulated by the Commission's Regulations / Order on open access, Deviation Settlement Mechanism(DSM). Till such time the DSM is implemented in the State, if a renewable energy generator utilizes power for captive use or if he sells it to a third party, the distribution licensee shall raise the bill at the end of the billing period for the net energy supplied. The licensee shall record the slot wise generation and consumption during the billing period. Slot-wise adjustment shall be made for the billing period. Peak hour generation can be adjusted to normal hour or off peak hour consumption of billing period. Normal hour generation can be adjusted to off peak hour consumption of the billing period. Excess consumption will be charged at the tariff applicable to the consumer subject to the terms and conditions of supply.

5.6.2 When DSM is implemented, the licensee shall record the time block wise generation and consumption during the billing period. Time block wise adjustment shall be made for the billing period and the distribution licensee shall raise the bill for the net energy supplied. Excess consumption will be charged at the tariff applicable to the consumer subject to the terms and conditions of supply.

5.6.3 The excess generation/unutilized banked energy may be sold at the rate of 75% of respective wind energy tariffs applicable as per the orders of the Commission and where no tariff is determined, at 75% of the latest discovered bid tariff, for normal wind energy captive users. If there are more than one tariffs discovered through bidding process, the weighted average tariff shall be considered for payment. For the captive generators under REC scheme, the excess generation/unutilized banked energy at the end of the month may be encashed at the rate of 75% of the pooled cost of power notified under the TNERC (Renewable Energy Purchase Obligations)Regulations, 2010. Where no tariff has been determined, for the purpose of making payment to the REC generators for the unutilized banked energy, the bid discovered tariff adopted for payments for excess generation/unutilized banked energy will be considered as the preferential tariff.

5.7 Energy Wheeling Agreement and fees

5.7.1 The format for Energy Wheeling Agreement, application and agreement fees, procedure and terms & conditions are governed by Commission's following regulations in force.

(1) Tamil Nadu Electricity Regulatory Commission Grid Connectivity and Intra-State Open Access Regulations,2014.

(2) Power procurement from New and Renewable sources of energy Regulations 2008.

5.8 Security deposit

5.8.1 As regards the security deposit to be paid by captive/third party user, the Commission decides to retain the present arrangements i.e. charges corresponding to two times the maximum net energy supplied by the distribution licensee in any month in the preceding financial year shall be taken as the basis for the payment of security deposit.

5.9 Power Factor disincentive

5.9.1 Power factor disincentive may be regulated for the power factor recorded in the meter at the user end as specified in the relevant regulations/orders in force.

5. 10 Metering

5.10.1 The Commission decides that metering and communication shall be in accordance with the following regulations in force:

(1) Central Electricity Authority (Installation and Operation of Meters) Regulations

(2) Tamil Nadu Electricity Distribution and Supply Codes

(3) Tamil Nadu Electricity Grid Code

(4) Tamil Nadu Electricity Regulatory Commission Grid Connectivity and Intra-State Open Access Regulations,2014.

5.11 Connectivity and Evacuation of power

5.11.1 The connectivity and power evacuation system shall be provided as per

the Act / Codes/ Regulations/orders in force.

5.12 Harmonics

5.12.1 The WEGs shall follow the CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 in respect of harmonics. It is the responsibility of the generator to provide adequate filtering mechanism to limit the harmonics within the stipulated norms. It shall be done before connecting the generator to the grid and the harmonics shall be measured by the respective distribution licensee during the commissioning. If the WEGs inject the harmonics beyond the stipulated limit, they shall pay a compensation of 15% of applicable generation tariff rate to the distribution licensee in whose area the plant is located till such time it is reduced within the stipulated limit. The distribution licensee is responsible for measurement of harmonics with standard meters and issue notices for payment of compensation charges if the harmonics is beyond the stipulated limit. In the consultative paper, a minimum of 15 days notice period was proposed for payment of compensation charges. Stakeholders have requested for a time period of 90 days for payment of compensation charges. Commission decides that a minimum of 30 days notice period shall be given for payment of compensation charges.

6.0 Applicability of this order

6.1 This Order shall come into force from the date of issue i.e from 07.10.2020. The open access charges and other terms and conditions specified in this order shall be applicable to all the wind energy generators, irrespective of their date of commissioning.

7.0 Control period :

7.1 Many of the stakeholders have requested to fix a control period.

7.2 Regulation 6 of the Power Procurement from New and Renewable Sources of Energy Regulations, 2008 of the Commission specifies the following:

"The tariff as determined by the Commission shall remain in force for such period as specified by the Commission in such tariff orders and the control period may ordinarily be two years."

7.3 The Commission decides that the control period of this order shall be until 31.3.2022 and the tariff period shall be as per the bidding guidelines.

8.0 Directions

8.1 TANGEDCO/TANTRANSCO shall furnish monthly report of generation of wind energy and units banked, unutilized units by WEGs, the quantum of energy

Wheeled from the WEGs for captive consumption, third party sale and the quantum of energy purchased from the WEGs by 10th of every month to the Commission.

8.2 TANGEDCO shall also send a monthly report by 10th of every month on the number and details of agreements signed with the wind energy generators during the previous month and the number and details of agreements that have expired or were terminated/modified during the previous month to the Commission.

9.0 Acknowledgment

9.1 The Commission acknowledges with gratitude the contribution of the officers and staff of the Commission, the valuable comments offered by the stakeholders, the active participation and advice of the Members of the State Advisory Committee. The Commission is indebted to the valuable inputs offered by the Tamil Nadu Generation and Distribution Corporation Ltd..

(By order of Tamil Nadu Electricity Regulatory Commission)

Sd./-
(S.Chinnarajalu)
Secretary
Tamil Nadu Electricity Regulatory Commission

Annexure I

Sl.No	Name/Organisation
1	M/s.Coimbatore Pioneer fertilizers limited
2	M/s.TexTech Indo India Pvt. Ltd., Coimbatore
3	Thiru S. Narayanaswamy, Former Member Generation
4	M/s.Shree Mother Capfin & Securities Pvt. Ltd., Mumbai
5	M/s. Selvam Traders, Coimbatore
6	M/s. Platinum Energy, Mumbai
7	M/s. Aquasub Engineering, Coimbatore
8	M/s. Century Flower Mills Ltd., Chennai
9	M/s. Century Energy Trading LLP, Chennai
10	M/s.SKM Universal Marketing, Erode
11	M/s. KCP Limited, Chennai
12	M/s.Shree Vignesh Wind Mill Pvt. Ltd., Coimbatore
13	M/s. Carbonaire Industries (Madras) Pvt. Ltd., Chennai
14	M/s. Narasu's Saarathy Enterprises Pvt. Ltd, Salem
15	M/s. Engineered Power Resources India (P) Ltd., Bangalore
16	M/s. SAS Hotels and Enterprises Limited, Chennai
17	M/s. ANU Cashews, Quilon
18	M/s. Shanthi Feeds pvt. Ltd., Coimbatore
19	M/s. Texonic, Chennai
20	M/s. Lakshmivel Mills Pvt. Ltd., Perundurai
21	M/s. Sri Sughan International, Erode
22	M/s. Gugan Knitwears pvt. Ltd., Perundurai
23	M/s. Shri Hari Process, perundurai
24	M/s. SAM Turbo Industry Pvt. Ltd., Coimbatore
25	M/s. Texonic Instruments, Chennai
26	M/s. Tirupur Export Knitwear Industrial Complex, Tiruppur
27	M/s. Shobikaa Impex Pvt. Ltd., Karur
28	M/s. Vaata Windfarms pvt. Ltd., Chennai
29	M/s. Pioneer Jellice Inda Pvt. Ltd., Cuddalore
30	M/s. Tamil Nadu News Print and Papers Ltd., Trichy
31	M/s. Sri Lakshmi Saraswathi Textiles (Arni) Ltd., Tiruvannamalai
32	M/s. Tirupur Textiles Pvt. Ltd., Tirupur
33	M/s. Aniruth Green India Pvt. Ltd., Karur
34	M/s. Shifa Chemicals, Sivakasi
35	M/s. Livia Polymer Bottles Pvt. Ltd., Pudukottai
36	M/s. Shree Vari Multiplast India (P) Ltd., Erode
37	M/s. Shree Malaiamman Energy India Pvt. Ltd., Perundurai
38	M/s. VMA Wind Energy India Pvt. Ltd., Erode
39	M/s. TATA Power, Mumbai
40	M/s. VV Green power pvt. Ltd., Perundurai

41	M/s. PGSD ENGINEERING LLP, New Delhi
42	M/s. Royal Classic Mills (P) Ltd., Tiruppur
43	M/s. RC Wind Powers LLP, Tiruppur
44	M/s. Aniruth Green Tec Pvt. Ltd., Karur
45	M/s. ER Aditya Pure Wind Pvt. Ltd., Karur
46	M/s. Arun Wind mills India pvt. Ltd., Karur
47	M/s. Sri Suryodhayaa, Erode
48	M/s. Apsara Power India Pvt. Ltd., Karur
49	M/s.Arvind Green Infra Pvt. Ltd., Karur
50	M/s. Aadhav Energy Tech pvt. Ltd., Karur
51	M/s. Amirthaa Green Infra Pvt. Ltd., Karur
52	M/s. VXL Systems, Coimbatore
53	M/s. Shri Rama Green Infra Pvt. Ltd., Karur
54	M/s. Karur Sri Rama Wind Energy Pvt. Ltd., Karur
55	M/s. M CT M Global Investments pvt. Ltd., Chennai
56	Thiru Nagarajan. M. Head Accounts, Chennai
57	M/s. DEFFREE Engineering Pvt. Ltd., Coimbaote
58	M/s. TEXMO Industries, Coimbatore
59	M/s. Chennai Petroleum Corportion Ltd,
60	M/s. Tamilnadu Chlorates, Madurai
61	M/s. The India Cements Ltd., Salem
62	M/s. The KCP Limited, Chennai
63	M/s. Mannariah & Sons Pvt. Ltd. Tuticorin
64	M/s. Velavan Wind Energy Pvt. Ltd., Erode
65	M/s. NLC India Pvt. Ltd., Chennai
66	M/s. Paras Green Power LLP, Chennai
67	M/s. R. Aswatha Greens pvt. Ltd., Erode
68	Public Health Centre, Chennai
69	M/s. Mehta Export Corporation, Tirupur
70	M/s. TNPL Unit - II, Trichy
71	M/s. Premraj Wind Farm Pvt. Ltd., Tirupur
72	M/s. Premalaya Wind Farm Pvt. Ltd. Tirupur
73	M/s. Karur Prem Tex Wind Farm India Pvt. Ltd. Tirupur
74	M/s. RSM Autokast Ltd., Coimbatore
75	M/s. RSM Brakes, Coimbatore
76	M/s. RSM Rangamma Steels and Malleables, Coimbtore
77	M/s. Rajinikanth Foundations, Coimbatore
78	M/s. Shyamala Wind Energy Pvt. Ltd., Karur
79	M/s. Yash Metal Resources pvt. Ltd., Coimbatore
80	M/s. YMA Renewable Energy Pvt. Ltd., Coimbatore
81	M/s. The Southern India Mills Association, Coimbatore
82	M/s. Citizen's Contribution in Democracy, Chennai

83	M/s. JSW Energy Ltd., Mumbai
84	M/s. Brakes India Pvt. Ltd., Chennai
85	M/s. Prayas, Pune
86	M/s. Tamil Nadu Electricity Board Employees Federation, Chennai
87	M/s.Continuum Wind Energy India Pvt. Ltd., Chennai
88	M/s. Sembcorp Green India Ltd., Haryana
89	M/s. IWPA, Chennai
90	M/s. Leap Green Energy, Coimbatore
91	M/s. PESOT, Coimbatore
92	M/s. India Tax Payer, Coimbatore
93	M/s. TANGEDCO
94	M/s. Orient Green Power Company, Ltd., Chennai
95	M/s. Tamil Nadu Spinning Mills Association, Dindigul
96	Thiru. Manish K. Singh
97	M/s. IWEA, New Delhi
98	M/s. Stat Kraft Markets Pvt. Ltd., New Delhi
99	M/s. SEP Energy Pvt. Ltd., Gujarat
100	Thiru S. Solomon, TEEC/NLO Union
101	M/s. Indian Wind Turbine Manufacturers Association.
102	M/s. Tamil Nadu Electricity Board Engineers Union, Chennai
103	M/s. Tamil Nadu Electricity Workers Federation, Chennai
104	M/s. Tamil Nadu Electricity Board Dr. Ambedkar Employees Union
105	M/s. Tamil Nadu Electricity Employees Congress
106	M/S. Tamil Nadu Electricity Janata Employees Union, Chennai
107	M/s. TNEB Thozhilalar Poriyalar Aykkiya Sangam, Chennai
108	M/s. The South India Spinners Associatioin, (SISPA), Coimbatore
109	M/s. Tamil Nadu Electricity Consumer Association
110	M/s. SEP Energy Pvt. Ltd., Ahmedabad
111	Director / Generation, TANGEDCO with Annexure
112	M/s. TVS Ennogrip, Madurai
113	M/s. TVS Export, Madurai
114	Thiru Jeyakanthan, Chennai
115	Tmty. D. Anjalai, Padappai
116	Thiru R. Rajendran, Chennai
117	M/s. Consumer Awareness United of India
118	M/s. VKA Polymers Pvt. Ltd., Karur
119	M/s. Kaleeswari Refinery Pvt. Ltd., Chennai
120	M/s. Kaleeswari Infratec Pvt. Ltd., Chennai
121	M/s. Abi-Showatech, Vellore
122	Thiru R. Ponnambalaraman, Chennai
123	M/s. Consumer Awareness United of India, Chennai
124	Thiru. L. Narasim Prasad, Chennai Metro Rail Ltd., Chennai

125	Thiru R. Gunasekaran & others, Chennai
126	M/s. LNGS Pvt. Ltd., Coimbatore
127	M/s. Hitech Area Pvt. Ltd., Madurai
128	M/s. Pandian Chemicals Limited, Madurai
129	M/s. Mass Hitek & Theatres Pvt. Ltd., Chennai
130	M/s. G.K. Wind Farm India Pvt. Ltd., Coimbatore
131	M/s. Prasad Productions (P) Ltd., Chennai
132	M/s. Rajalakshmi Wind Energy Ltd., Chennai
133	M/s. Tamil Nadu Ar Products Pvt. Ltd., Chennai
134	M/s. TN Oxygen Pvt. Ltd., Chennai
135	M/s. Shri Nanda Ppaer & Board, Namakkal
136	M/s. Power Link System Pvt. Ltd., Coimbatore
137	M/s. Scent Trans Pvt. Ltd., New Delhi
138	M/s. Jubilee Sea Trade Pvt. Ltd., New Delhi
139	M/s. Ganpati Marin Enterprises Pvt. Ltd., Maharashtra
140	M/s. Rajeswari Renew Resources Pvt. Ltd., Tiruvallur
141	M/s. Indoflex Wind Power Pvt. Ltd., Tirupur
142	Thiru Veerappan, Retd. Special CE, PWD
143	M/s. Reliance Industries Ltd., Chennai
144	M/s. Federation of Anti Corruption Teams -India, Chennai
145	M/s. R.S.Y arns & Power Pvt. Ltd., Tirupur
146	M/s. Tamil Nadu Electricity Board Accounts & Executive Staff Union, Chennai
147	M/s. Flowers Street Residents Welfare Association, Chennai
148	M/s. Sundaram Non-conventional Energy Systems Limited, Chennai
149	M/s. TVS Sundaram Fasteners Limited, Chennai
150	M/s. Vembro Polymers, Erode
151	M/s. Spero Power Private Limited
152	M/s. Indowind Energy Ltd., Karnataka
153	M/s. Discounts Store (India) Pvt. Ltd., Chennai
154	M/s. Sughan Faarms, Namakkal
155	M/s. Samay India Private Ltd., Chennai
156	M/s. Samrakshana Property Services Pvt. Ltd.
157	Thiru Sriram Santhosh, Tirupur
158	M/s. TADC Metal Powder Company Limited, Madruai
159	M/s. Sri Nandha Paper and Board, Tiruchengode
160	M/s. SSMT Power Private Limited, Tirupur
161	M/s. Sri Jai Balaji Wind Energy Pvt. Ltd., Coimbatore
162	M/s. Sri Janarthana Spinning Mills, Coimbatore
163	M/s. Saks Power Pvt. Ltd., Chennai
164	M/s. K.T.V. Health Food Pvt. Ltd., Chennai
165	M/s. KoG-KTV Food Products (India) Pvt. Ltd., Tuticorin

166	M/s. KTV Oil Mills Pvt. Ltd., Chennai
167	M/s. Tamil Nadu Electricity Consumer Association (TECA)
168	M/s. Premier Mills Pvt. Ltd., Coimbatore
169	M/s. GTP Granites Limited, Salem
170	M/s. AMP Energy India Pvt. Ltd., New Delhi
171	M/s. Tamil Nadu National Electricity Workers Federation, Chennai
172	M/s. Ushdev Engitech Limited, Chennai
173	Tmty G. Santhi, Coimbaore
174	M/s. WRI India, bengaluru
175	M/s. Kashyap Consultancy Services, Coimbatore
176	Thiru A.D. Thirumoorthy, Member State working group for RE
177	M/s. ARH Energy LLP, Chennai
178	M/s. Maris Power Trading Company LLP, Chennai
179	M/s. Association of Indian Forging Industry
180	Thiru K. Selvaraj TNEB Janatha Sangam, Chennai

Annexure II

Abstract of comments received from stakeholders on the Consultative Paper on 'Procurement of Wind power and Related issues'

1. Procurement of wind power

Indian Wind Power Association (IWPA),Orient Green Power Company Ltd.

Regulation 6 of TNERC's Power Procurement from New and Renewable Sources of Energy Regulations 2008 specify that Commission shall determine deed in tariff by a general or specific order for purchase of power from Renewable Energy Sources by the Distribution Licensee and therefore Commission cannot do away with the determination of feed in tariff. Only large corporates can participate in competitive bidding and MSME cannot afford to set up large projects. Therefore, Commission may determine the feed in tariff such that MSME would be able to establish small scale projects. A fresh consultative paper may be issued determining tariff.

Techno Electric & Engineering Company Limited

The APPC is being capped at 75% of the preferential tariff of that year whenever it exceeds the preferential tariff. The CERC has amended the RE Tariff regulations such that no annual generic tariff shall be determined in the in the case of Wind and Solar power. Commission's Power Procurement from New and Renewable Sources of Energy Regulations has provisions for determination of Tariff from New and Renewable Sources of Energy. The Guidelines for competitive bidding issued by the Ministry of Power are for capacities of less than 25 NMW with individual capacities less than 5MW. Therefore, Commission may follow the process of tariff determination as per the Power Procurement of New and Renewable Sources of Energy regulations 2008. A fresh consultative paper may be issued determining tariff.

Statkraft Markets Private Limited

There is a declining trend in investments made in the country and in Tamil Nadu in the last two years due to the artificially low tariffs discovered in few central agency conducted bids. The tariffs are expected to increase.

Leap Green Energy

Competitive bidding conducted by various Governments require minimum capacity of 50MW. Biddings of SECI have a lot of concessions that are not available in this State. Without determining feed in tariff, there does not rise any requirement to revisit other issues. Without a feed in tariff, investments in green power will be reduced. The consultative paper does not have any promotional measures. By proposing 100% charges, all WEGS are eligible to under the REC scheme. A new consultative paper may be issued considering the above issues. The tariff on investments in Tamil Nadu will be totally different from that of tariffs discovered in biddings conducted by SECI.

Indian Wind Energy Association (InWEA)

Commission may clearly mention that the tariff to be adopted by DISCOM will be the latest tariff rate discovered through State‘s own bidding at the time of signing PPA .

Southern India Mills Association (SIMA)

Commission may determine a feed in tariff for wind energy.

Indian Wind Turbine Manufacturers Association

Commission should go with State bid and payment security as in the case of SECI rather than purchasing power through SECI.

TANGEDCO

Competitive bidding guidelines issued by the Government of India specifies projects with capacities of more than 25 MW. Tariff for project capacities upto 25 MW may be determined. Further , the feed in tariff is taken as the reference for comparison of rates with the Pooled cost of power purchase in order to make payment to generators under REC scheme. Also, feed in tariff may serve as a ceiling price for bidding price and at times when the response to tenders is very poor or cartelization of generators takes place.

Prayas (Energy Group)

The competitive bidding route is a welcome step and should be the default mode of procurement going forward. Commission may also consider directing the DISCOMs to appropriately modify the bidding documents so that procurement is not just based on least cost of generation, but could better reflect the best value for the TN system considering its load shape and other aspects like need for flexibility, transmission availability etc. Given the changing demand-supply mix in the state, the Commission may also consider directing the DISCOMs to initiate competitive bidding based procurement of RE + Storage capacity in the future.

SEP Energy Pvt. Ltd.

Non determination of tariff and linking payments to tariffs discovered will reduce the realization of WEGs as tariffs discovered in bidding are generally less than FiTs.

Other stakeholders :

Determination of feed in tariffs to help the MSME sector is suggested.

2. Banking

Indian Wind Power Association (IWPA), Orient Green Power Company Ltd.

The Electricity Act 2003 has mandated promotion of renewable power under section 86(1)(e) and section 61(h). By proposing to withdraw banking, WEGs would be forced to sell the surplus power which would have otherwise been banked and consumed, at 75% of FIT and force the captive users to buy power from TANGEDCO during the later period at a higher tariff. TANGEDCO has been citing opportunity losses of the gain through sale of surplus energy to them without banking and the purchase of energy from TANGEDCO at later dates.

The total quantum of banked energy in a year is 1600 MUs of which after deduction of 14% of baking charges in kind, 1400 MU is drawn from bank. Wind power is generated when the State faced its peak demand. TANGEDCO actually makes profits through banking. Wind power surplus is banked with other States and is drawn during the lean season.

TANGEDCO purchases short term power only from Feb to May. Until Jan wind power helps them. The cost of short term power is around Rs.3 per unit. There cannot be any loss on account of price difference between the time energy is banked and drawn..

Merely because the State has added enough or more capacity should not leave the investors at risk.

Both the options in Category A are aimed at withdrawing the existing banking facility. The proposal is in violation of the Hon'ble APTEL's order in Appeal No.53,54 & 95 of 2010 dt.21.9.2011.

Recently, in a similar case, in the order in Appeal No.42 of 2018 dt.29.3.2019 in the M/s.Fortune Five Hydel Projects Pvt.Ltd. vs KERC, Hon'ble APTEL has held that the impugned order of KERC which immaturely cancelled the 10 year

banking provisions to WEGs has been passed without adhering to the principles of natural justice, doctrine of promissory estoppels & legitimate expectation. Etc.

In the absence of any sunset clause at the time of investment , the Commission is stopped from making any changes to the banking facility. In as much as the characteristics of wind power cannot change, any attempt to make any changes to the existing banking facility is in gross violation of Hon'ble APTEL's order. In the case of WEGs commissioned during the control period of the order of 2018, IWPA has challenged the Order No.6 of 2018 dt.13.4.2018 and therefore the outcome of the appeal may be awaited.

For the WEGs to be commissioned from the proposed order, it would be prudent to pay 75% of FIT if determined in the proposed order or 75% of APPC without any cap applicable for that year for unutilized energy.

The location, facilities, incentives and conditions under which SECI conducts bidding will be different for different competitive biddings. Such parameters are not relevant to the generation cost of WEGs and hence the rates discovered under competitive biddings cannot be applied.

Withdrawal of banking in phases – Banking facility has its origin in promises made by the Government of Tamil Nadu/TNEB to industrialists to set up wind mills anywhere in the State. There was no restriction in the number of years for which the facility of banking would be available in the Policy/orders of Commission in the past. All investments have been made on the basis of banking facility .

Banking to third party – The difference between captive and third party purchaser is in payment of cross subsidy surcharge and additional surcharge. No bankng facility for third party sale is discrimination .Promotional measures of the Act are not restricted to captive users.

Leap Green Energy

Investments to the tune of Rs.25000 crores have been made by WEGs based on the promises by the Government of Tamil Nadu, TNEB and the orders of TNERC. Banking in the case of WEGs commissioned prior to 31.3.2018 are settled in law at various legal forums. Commission may determine banking charges reasonably required by the Distribution lIcensee to compensate them to extend the banking facilities. Commission may allow banking facilities irrespective the date of commissioning including for the WEGs in this control period. The contractual obligation between parties is not to be withdrawn.

InWEA

Limiting the use of banking facility only for captive use shall severely constrain the third party/open access wheeling transactions especially on those consumers who want green source of energy.

Commission may provide yearly banking or six month banking for captive and third party consumers Energy generation from wind is infirm in nature. A major part of total generation happens only in the monsoon period. During that time, generation from wind turbines may be in excess of consumption. Therefore, in the case of third party sale, excess energy may be purchased at 85% of tariff.

Withdrawal of banking in phases – This proposal will impact the financials of the already commissioned wind generators.

The Hon'ble APTEL in the Appeal Nos. 53 of 2010 and 116 of 20123 has categorically observed that banking facility is very much essential for wind energy. Withdrawal of banking in phases may be removed.

Southern India Mills Association (SIMA)

Wind turbines were mainly erected by the textile mills only for captive consumption. Removal of banking in any form would affect the textile mills depending on wind energy and textile mills would lose its competitiveness in the

global market. Textile mills have made huge investments of around Rs.20000 crores for around 3000 MW. Present proposal restricts green energy generation. Commission may retain the banking facility in its present form for the machines commissioned prior to 31.3.2018 . If Commission feels that TANGEDCO is incurring additional cost in purchasing power from January to March, to meet the consumption of banked units, a differential cost between TANGEDCO's power purchase price and wind average tariff may be fixed

Tamil Nadu Spinning Mills Association(TASMA)

Commission's order of 2009 and the order of Hon'ble APTEL in Appeal No.53,93 & 95 of 2010 dt.21.9.2011 has upheld the facility of banking of wind power. The order of 2012 also reiterates Hon'ble APTEL's observation of banking in Appeal No.98 of 2010 did not dispense with banking. The question as to whether to consider banking has been answered by both the Commission and Hon'ble APTEL. TANGEDCO cannot attempt to revisit the same and seek approval to withdraw the banking system for either the new wind mills or to alter the existing system. In a recent order passed by Hon'ble APTEL in Appeal No.42 of 2018 dt.29.3.2019, has held that 'the order passed by KERC modifying the terms and conditions of banking arrangements in the concluded contracts is not sustainable in the eyes of law.

For wheeling of power TANGEDCO collects –reactive power charge, T&D loss, transmission charge, wheeling charge, banking charge, scheduling and system operation charge, operation and maintenance charge which is Rs.1.55 per unit.

The retail tariff fixed for distribution of power is based on ARR provided by TANGEDCO and all the losses are getting absorbed in the new retail order. TANGEDCO earns a profit of Rs.2.07 per unit. All the options provided in the consultative paper disturb the scheme of banking. Banking may be retained and extended for third party also. Restricting consumption of own generation during

peak hours is legally not possible. For any purchase of IEX power,TANGEDCO receives cross subsidy surcharge. Existing priorities of adjustment only benefit TANGEDCO. On the matter on withdrawal of banking for the new WEGs, an appeal A.No.191 of 2018 filed by TASMA before Hon'ble APTEL is pending. Even assuming that TANGEDCO is incurring losses, it may be considered that retail tariff is fixed based on the ARR filed by TANGEDCO and as such all losses are fully absorbed and recovered in the new tariff

TANGEDCO

TANGEDCO has reproduced the comments furnished during the tariff process for issue of the wind tariff order in 2018 i.e objection to banking due to high infirm power, to bring non conventional energy source on par with conventional sources as per the mandate of the National Electricity Policy, banking severely affecting the financial health of TANGEDCO. TANGEDCO has strongly pleaded for dispensing with the banking facility and for payment of excess generation at 50% of respective wind energy tariff at the end of each billing month.

The losses due to banking furnished by TANGEDCO :

Total energy banked until Jan 2020 -1872 MU

After deducting unutilized units at 3%, net units that would be adjusted 1816 MU.

Sale of 1816 MU at Rs.6.35 /unit =1153 16 crores.

Amount payable for unutilized energy –(2112 MU * 2.50) = Rs.528 crores.

LESS Revenue foregone on Wheeling charges for 1816 M.U. @ Rs.0.22/unit =Rs.39.95 Crores

NET Loss to TANGEDCO due to banking preventing energy purchase by HT consumer from TANGEDCO –Rs.585.21.

However, if at all, banking is continued , to consider the following :

The banking period shall commence from 1st April and end on 31st March of the following year. The energy generated each month shall be adjusted against consumption of the same month.Excess generation over and above the consumption of each month i.e the banked energy shall be credited at 50% of the relevant tariff applicable to the WEGs. The amount thus credited at the end of every month shall be accounted at the end of every financial year after applying the cap as below:

Capping of wind generating capacity is to be made applicable to all the WEGs irrespective of whether banking is available or not and irrespective of date of commissioning. In order to limit the capacities contracted for wheeling that are disproportionate to the contracted demand/annual average consumption, the wind capacity contracted by open access consumers including captive shall be such that there is no excess generation over the annual consumption. Any generation in excess of 10% of annual consumption from the WEGs in a financial year will not be considered for payment of unutilized banked energy.

ABI Soorai Green, ABI Showatech India Private Ltd. , Brakes India Pvt. Ltd.

Banking facility for wind mills commissioned prior to 31.3.2020 should not be withdrawn as banking has been judiciously and contractually recognized by Hon'ble APTEL in Appeal No.53,54 & 95 dt.21.9.2011.option 2 effectively means banking is only for 9 months. Banking facility may be matched with the wind season i.e from July to March.

Aquasub Engineering

Banking may be retained from April to March.

Continuum Wind Energy India Pvt. Ltd.

Has cited Hon'ble's order AppealNo.53,54 & 95 dt.21.9.2011 on Banking of wind energy judiciously and contractually recognized. Changes in the terms and

conditions of banking is ultra vires the National Electricity Policy and Tariff Policy. Banking from April to March may be retained and applicable irrespective of the commissioning of WEGs.

DEFREE Engineering (P) Ltd.

Proposal for banking is a violation of Hon'ble APTEL's order ij Appeal No.53,54 & 95 dt.21.9.2011. A new progressive concepot withdrawing contentious issues may be issued.

JSW Energy Ltd.

Tariffs discovered through competitive bidding are reflective of the business conditions of the time of commissioning of those plants. Many factors influence the tariffs arrived through competitive bidding. Purchase of excess energy should be at 75% of the tariff determined by the Commission for that year of commissioning.

Flowers Street Residents Welfare Association

Electricity cannot be stored. Has welcomed withdrawal of banking.

Tamil Nadu Electricity Janata Workers Sangam ,TNEB Engineers Union,TNEB Employees Federation

WEGs are making huge profits. They may pay 25 paise per unit to compensate losses to the Licensee. Public hearing may be conducted before issue of the order.

Century Flour Mills Ltd.

Banking period from April to March and to all WEGs that have served beyond 10 years.

SEP Energy Pvt. Ltd.

The PLF of WEGs is as low as 19%.removal of banking will kill the wind energy sector as wind power is seasonal in nature. Priority of adjustment cannot be altered without furnishing any data. Payment of unutilized energy at tariffs discovered in competitive biddings is not reasonable. Commission may determine a tariff under its own regulations. With existing mechanism, realization per unit is Rs.4.94 and on withdrawal of banking the realisation will be Rs.2.18 per unit.payment of unutilized energy at rates discovered in biddings will further reduce the rate of realization.

Ganpati Marine Enterprises Pvt. Ltd., MCTM Global Investments Pvt Ltd., JVS Export,Jubilee Sea Trade Pvt. Ltd.,Livia Polimer Bottles Pvt.Ltd., SAS Hotels and Enterprises Ltd.,Scent Trans Pvt. Ltd.,Shanthi Feeds Pvt. Ltd., Sam turbo Industry Pvt. Ltd.,Sri Nanda paper and Board

Withdrawal of banking is not in consonance with the provisions of the Electricity Act 2003.Hon'ble APTEL in the Appeal Nos.53,54 & 95 of 2010 dt.21.9.2011 has observed that the concept of banking evolved by the State Commission was in line with the provisions in the Electricity Act 2003,National Electricity Policy and Tariff Policy and only because of the promises made the WEGs set up their wind mills.

Other stakeholders :

Have requested not to withdraw banking for wind mills commissioned prior to 31.3.2020, to retain banking from April to March. Some of them have stated that with existing mechanism, realization per unit is Rs.4.94 and on withdrawal of banking the realisation will be Rs.2.18 per unit.payment of unutilized energy at rates discovered in biddings will further reduce the rate of realization.

3. Capping of wind generating capacity

IWPA

The proposal is against the statutory mandate to allow any person to establish captive generating plants to utilize the energy at the destination of his use.

Surplus power is mandated to be procured as per applicable tariff orders. The annual wind power generation varies depending upon the wind speed and it may exceed 10% of expected generation/consumption. TANGEDCO sells excess generation at the average realisation rate of Rs.5.85 per unit and it pays only less than 50% of its realization to the WEGs for the unutilized units. It is justifiable to pay atleast 75% of APPC without ceiling.

Leap Green Energy

Wind energy is seasonal and generation varies year to year. Export oriented manufacturing industries are labelling their product as 'Made from Green Energy'. The generated energy is used only by the Distribution Licensee.

TASMA

Wind generation depends on the wind speed. Capping of excess generation may be removed. The entire world is looking at 'Made from Green Energy'. Our products are getting promoted as 'Made from green energy'. Commission may consider payment at 75% of applicable tariff without any cap.

TANGEDCO

Capping of wind generating capacity is to be made applicable to all the WEGs irrespective of whether banking is available or not and irrespective of date of commissioning.

DEFREE Engineering (P) Ltd.

Limiting the installed capacity and generation is against the statutory mandate of establishment of Captive Generating Plants.

JSW Energy Ltd.

There will always be excess generation of 40 to 60 % during the high wind season. Cap on excess generation will not be a practical solution and therefore the same may be removed.

Other stakeholders :

Capping of generation is against the mandate of the Electricity Act 2003 and clause 6.3 of Tariff Policy where the Commission has to create enabling environment to promote captive generation. There will always be excess generation of 40 to 60% during the high wind season. Cap on excess generation will not be a practical solution and therefore the same may be removed.

4. <u>Transmission,Wheeling charges,Scheduling and System Operation Charges and Line losses</u>.

IWPA

Increase in charges to that equal to conventional power violates section 61(h) and 86(1)9e0 of the Electricity Act 2003 on promotion of renewable energy. The Distribution/Transmission Licensees have not submitted ARR or requested for revision in charges. The PLF of conventional plant is 85% and in the case of wind mills it is less than 23%. SLDC is not scheduling power from each WEG. Scheduling charges may be collected for the entire installation of WEGs in the State as a single plant.

Leap Green Energy

Commission may revise the charges along with the requirement of ARR of the respective Licensee. TANGEDCO collects O&M charges to the tune of Rs.2.3 Lakhs per MW(escalated at 5% p.a) for WEGs connected with TANGEDCO/TANTRANSCO sub-stations. These charges are effectively 10 paise per unit which should be taken into account while fixing wheeling charges. Commission may allow the WEGs to carry the O&M of the sub-stations on their own under the supervision of of TANGEDCO/TANTRANSCO Engineers.

TASMA

Separate rate of transmission charges based on units generated may be fixed and not based on capacity. TASMA has filed appeals against the Hon'ble APTEL's order in the Hon'ble Supreme Court of India. Appeals have also been filed against the Commission's tariff orders 3 of 2016 and R.A No.6 of 2013. Increase of charges from 50% to 100% is not justifiable against the mandate of promotional measures for renewable energy in the Electricity Act 2003. Scheduling and System Operation charges may be fixed on the basis of PLF.

SIMA

Enhancement of charges will affect the sustainability of the industry. PLF of wind is less than 22.5% and cannot be compared with conventional energy with PLF of 85%.TANGEDCO collects O&M charges of Rs.2.3 Lakhs per MW from WEGs connected to TANGEDCO"s Sub- station which is effectively 10 paise per unit. Therefore, charges may not be enhanced.

InWEA

Commission may retain the existing charges.

TANGEDCO

100% of Transmission, Wheeling, Scheduling and System Operation Charges may be levied. On losses, TANGEDCO concurs with the views of the Commission.

ABI Soorai Green, ABI Showatech India Private Ltd., Brakes India Pvt. Ltd.

In the last Tariff order the charges were raised to 50%. The proposed raise in charges to 100% is a steep increase. The charges may be increased in steps.

Aquasub Engineering

Increase in charges on par with conventional energy is not in line with Electricity Act 2003

Continuum Wind Energy India Pvt. Ltd.

Increase in charges affects the financial viability of the projects commissioned by 31.3.2018.Existing concessional charges may be continued.

DEFREE Engineering (P) Ltd.

Treating renewable power on par with conventional power is violation of statute.

JSW Energy Ltd.

WEGs still require promotion and support. Only 25% of wind potential in this State has been utilized. Requisite promotions of wind power projects may continue.

Flowers Street Residents Welfare Association

Has welcomed withdrawal of concessions

Century Flour Mills Ltd.

Existing charges may be retained.

SEP Energy Pvt. Ltd.

With the existing open access charges, the charges paid per unit is 47 paise. The rates proposed would cost 94 paise per unit.

Ganpati Marine Enterprises Pvt. Ltd., MCTM Global Investments Pvt Ltd., JVS Export,Jubilee Sea Trade Pvt. Ltd.,Livia Polimer Bottles Pvt.Ltd., SAS Hotels and Enterprises Ltd.,Scent Trans Pvt. Ltd.,Shanthi Feeds Pvt. Ltd.,Sam turbo Industry Pvt. Ltd.,Sri Nanda paper and Board

By increasing the charges to that applicable for conventional power, the environmentally benign source of power has been brought on par with polluting thermal power. The concessions have been unilaterally withdrawn. Electricity costs are the major input costs.

Other stakeholders :

Have stated that the proposed raise in charges to 100% is a steep increase and that the charges may be increased in steps. Increase in charges affects the financial viability of the projects commissioned by 31.3.2018.Existing concessional charges may be continued. With the existing open access charges, the charges paid per unit is 47 paise. The rates proposed would cost 94 paise per unit. Some of the stakeholders have welcomed the measure.

5. Cross Subsidy Surcharge

TASMA

Renewable power and thermal power cannot be equated. Increase in CSS charges to 100% may be dropped.

Leap Green Energy

Commission may waive cross subsidy surcharge to promote third party purchase.

IWPA, ABI Soorai Green, ABI Showatech India Private Ltd., Brakes India Pvt. Ltd.

By increasing the CSS, the environmentally benign power has been brought on par with the polluting thermal power. Increase in CSS would place the wind power at a disadvantageous position considering its low PLF.

InWEA

Increase of CSS from 70% to 100% is against the Tariff Policy.

TANGEDCO

100% of cross subsidy charges may be levied. Cross subsidy surcharge is to compensate the loss of revenue due to third party consumption and is the same for both conventional and non conventional.

Aquasub Engineering

Increase in charges on par with conventional energy is not in line with Electricity Act 2003.

Continuum Wind Energy India Pvt. Ltd.

Existing concessional charges may be continued.

TNEB Engineers Union

Wind power has matured and can be treated on par with conventional power generators. Concessions on cross subsidy surcharge may be removed.

Other stakeholders :

Some of the stakeholders have indicated that Increase in charges on par with conventional energy is not in line with Electricity Act 2003 and existing concessional charges may be continued.

6. Reactive energy charges

InWEA

Commission may price the reactive energy on net basis i.e Reactive energy inmport minus Reactive energy export. Further, reactive energy charge smay be added to the monthly bill of third party power purchaser.

TANGEDCO

Reactive energy drawal may be charged at Rs.1.00 per kVarh upto 10% and Rs.2.00 per kVarh beyond 10%.Further every WEG should supply 5% of kVarh with respect to kWhr generation to the grid to offset the cost impact on TANGEDCO that provides reactive power from its own generation.

Other stakeholders :

Tamil Nadu Electricity Janata Workers Sangam, TNEB Engineers Union,TNEB Employees Federation

WEGs draw a lot of reactive power. They may be asked to pay higher compensation.

7. Grid availability charges

TANGEDCO

Start up power - Has requested to insert the expression,'if the drawal of energy is more than the generation in a billing cycle, the energy is to be billed under HT industrial TF IA.

Standby charges – Has concurred with the views of the Commission.

8. Energy Accounting

Leap Green Energy

Commission may provide adjustments from higher slot to lower slot even when DSM is implemented. 75% of cost of wind power may be paid to the WEGs without fixing any cap.

IWPA

The proposed time block wise adjustments would cause immense difficulties to captive users. The existing energy accounting of 5 slot adjustments with higher to lower slot adjustments may be retained. Unutilized energy may be paid at 75% of Pooled cost of power since terms and conditions of each competitive bidding are different. Fixing priorities is against the principle of free market and against the objects of Electricity Act 2003 that promotes competition. Captive user may be allowed to fix priorities as unutilized energy is paid only at 75%.

SIMA

The Textile mills do purchase IEX power and bank the wind energy to use in future. It is for this purpose that banking facility is created and banking charges levied. There is no correlation of increase in banking charges from 2% to 14%. Only to use the banked energy at a later date, these charges are paid.

Commission may do away with the direction on priority of adjustment and wait and watch in the current period.

TANGEDCO

Has concurred with the views of the Commission. Has requested to fix priority of adjustment in the order of higher tariff first and lower tariff last,banked energy, third party/IEX. If the generator has REC and preferential tariff under captive, adjustment for REC should be first.

Other stakeholders :

ABI Soorai Green, ABI Showatech India Private Ltd.

Existing priority of adjustment may be continued as firm power should be adjusted first and infirm power last..

Continuum Wind Energy India Pvt. Ltd. , DEFREE Engineering (P) Ltd.

Specifying priority of adjustment interferes with the right of banking for which charges are being paid.

JSW Energy Ltd.

Before implementation of DSM, considering infirm nature of wind power, existing energy adjustment and banking may be followed.After implementation of DSM, either the present adjustment may be continued or excess generation be permitted to be sold at 100% tariff without any cap.

Century Flour Mills Ltd.

Not allowing peak hour adjustments are against the principles of natural justice.

9. Energy Wheeling Agreement

TANGEDCO :

The existing EPA/EWA is a combined agreement covering connectivity, wheeling and open access. Commission may provide directions to separate the present agreement into three agreements – Connectivity agreement covering technical

details of connectivity, O&M, duration of agreement, Wheeling agreement showing details of users,duration of agreement, OA quantum, share capital, charges. Open Access agreement with STU for LTOA,MTOA or STOA with open access charges.

10. Security deposit

TANGEDCO

Security deposit may be equivalent to an amount of energy wheeled under open access during previous financial year at the appropriate tariff rate to provide security for adequate CSS payment.

11. Power Factor Disincentive

TANGEDCO – Has concurred with the views of the Commission.

12. Metering

TANGEDCO – Has concurred with the views of the Commission**.**

13. Connectivity and evacuation of power

TANGEDCO

Has concurred with the views of the Commission.

14. Harmonics

Leap Green Energy

Time limit for providing adequate filters for harmonics control may be enhanced to 90 from the proposed 15 days.

IWPA

TANGEDCO has framed a committee to go into the aspects of measuring and analysis of harmonics generated from wind mills. TANGEDCO shall be required to give 3 clear months notice after the measurement is taken for reducing the

Harmonics and thereafter measure and still if Harmonics are above the norms, then TANGEDCO may levy compensation by issue of 15 days notice.

TANGEDCO

Has concurred with the views of the Commission.

TNEB Engineers Union

An additional clause may be added to stop generation until reduction of harmonics within permissible levels.

15. Parallel Operation Charges

TASMA

At present there is no stand alone captive WEG. Parallel operation charges are not applicable to WEGs.

SIMA

As far as wind mills are concerned there is no parallel operation.

ABI Soorai Green,ABI Showatech India Private Ltd. ,Brakes India Pvt. Ltd.

Any new charge increases the cost of wind power making it a costly proposition to consumers.

TANGEDCO

Has concurred with the views of the Commission.

16. Control period

Leap Green Energy

Frequent changes on terms and conditions of business activities are not desired for any larger investment. The lenders and bankers prefer to have a longer policy terms to provide loans for investments. A longer control period is required. Commission may suitably order minimum control period of 5 years.

InWEA

The control period is left open ended. This will provide uncertainty in the mind of investors and will affect the investments in the wind energy sector. Gestation period of a wind energy project is twelve to fifteen months. Commission may specify the control period for three years.

Annexure III

State Advisory Meeting held on 20.3.2020

Members present

Sl.No.	Name
1.	Thiru. M.Chandrasekar, Chairman, TNERC
2.	Thiru. Dr.T.Prabhakara Rao, I.A.S., (R), Member, TNERC
3.	Thiru. K.Venkatasamy, Member, TNERC
4.	Thiru. Vikram Kapur, I.A.S., CMD, TANGEDCO Ltd., and Chairman, TANTRANSCO, and Principal Secretary to Government, Energy Department
5.	Thiru. M.R.Krishnan, Deputy Director, Consumer Association of India,Chennai
6.	Thiru S..Sankaranarayanan,General Manager,Tamil Nadu Energy Development Agency
7.	Ms.V.Geetha, Additional Secretary to Government**,** Energy Department, Government of Tamil Nadu
8.	Thiru A.Jesu Thayanand, Under Secretary to Government, Co-Operation, Food and Consumer Department
9.	Thiru T.Vijayarangan,Secretary,Anna Labour Union,Chennai