

Volume : 3

Issue:8

August 2015

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Shri T V Thalavai, CEO, Aarudhra Wind Energy (P) Ltd., Udumalpet

Dr. R Venkatesh, President, Power Quality Solutions, EPCOS India, Nashik

From the Chairman's Desk



Dear Friends

7th Regional Interactive Meeting of potential investors organized by MNRE: MNRE had convened a meeting at Le Meridien Chennai on July 31, 2015 to review growth of RE since REINVEST held in February 2015. The Secretary MNRE, Shri Upendra Tripathy and Joint Secretaries, MNRE were also present at the meeting. Shri Tripathy

mentioned that a similar meeting has been organized in all the State Capitals to have a clear time line of achieving 175 GW of RE power. He commended your Association's role in initiating the Forecasting project in Tamil Nadu. He wanted more interaction between various States. He pointed out that China has four Banks that finance RE but there is not a single Bank in India dedicated for financing RE. He mentioned that IREDA could become a Bank to exclusively cater to financing RE.

The representatives of Tamil Nadu and Puducherry Governments made presentations highlighting the potential for various RE projects and the support given by them.

Highest evacuation in Tamil Nadu: On August 11, 2015, TANGEDCO had evacuated 4144 MW of Wind Energy that was 32% of TN Load of 12,944 MW and 84.359 million units representing 29.28% of Tamil Nadu total consumption for that day. This is a record. Your Association immediately sent letters to the Chairman TNEB and the Energy Secretary, Government of Tamil Nadu, Ms. Varsha Joshi, JS, MNRE & Dr. Dilip Nigam, Director, MNRE thanking them for their support and congratulated them for the achievement. Dr. Saikumar & Ms. Varsha Joshi acknowledged our thanks.

Progress of Forecasting Project: 93 Meters have been installed in 62 Substations accounting for 5461 MW. Fitting of the meters in the remaining Substations are expected to be completed by the end of August 2015. We are facing some hurdle or the other that has delayed this project but we are overcoming all these issues and making progress every day. In the meantime your Association is furnishing forecast data to TANGEDCO which they are using to evacuate the maximum wind energy possible.

National Council Meeting at Hyderabad: The Second National Council Meeting was held on August 12, 2015 at Hyderabad. Several issues were discussed. An Investors meeting was also held on the same day. Shri Kamalakar Babu CMD of NREDCAP was the Chief Guest of the evening. It is heartening to note the proactive steps being taken by the AP Government officials to support wind energy. Your Association expects that Andhra Pradesh will lead installations of WEGs this year.

Regulatory Control for FSP (Forecast Service Provider): A few of our National Council members felt that your Association should write to MNRE and the regulatory bodies to insist on some sort of regulation for FSPs. Presently the forecasters are not held accountable for the forecast they give. Regulation will ensure that only serious players are in the market and it will ensure upholding of some standards in the forecasting mechanism.

INDIAN WIND POWER ASSOCIATION

Door No. E, 6th Floor, Tower-1, Shakti Towers No. 766, Anna Salai, Chennai 600 002 Phone : 044 4550 4036 | Fax : 044 4550 4281 E-mail : iwpahq@windpro.org, Website : www.windpro.org



Withdrawal of High Court case on RRF: Annoyed by levy of UI Charges a case was filed in the High Court of Madras in July 2013 challenging the CERC's order regarding the RRF mechanism. CERC has since withdrawn the levy of UI Charges, our case has been withdrawn. A circular was sent to all the members.

Installing REMC in TN : Shri Kashish Bhambhani, Chief Manager (Smart Grid), PGIL had visited NIWE Chennai and had discussion with TANGEDCO & TANTRANSCO officials. Later in the afternoon he had discussions with your Association officials in the presence of NIWE officials at NIWE. He had explained the framework of the REMC modelled on the European framework. He stressed on the importance of providing accurate data failing which the REMC will not be effective.

Renewable Energy Law: Your Associations' views and suggestions on the proposed RE Law have been submitted to the MNRE. The details are given on pages 22 to 32.

Fitting of LVRT on Wind Turbines: The case for fixing of LVRT came for hearing on August 25, 2015. We reiterated our points of arguments,

particularly on the applicability being only on units commissioned after 14.04.2014 and connected at 66KV and above. This is in terms of the Regulations. SRLDC argued that it should be applicable even on existing units based on the general purpose of the Regulations. Our legal counsel pointed out that the units were commissioned based on the then existing Regulations, which did not provide for LVRT and all technical and financial decisions were taken on the said basis. It is for this reason that the Regulations also provided only for prospective application.

CEA mentioned that they are proposing to amend the Regulations to make LVRT applicable on existing units also and further to reduce the voltage level to 33 KV. These are of course separate proceedings and if and when the Regulations are amended, their application would be considered. However, the present petition would have to be considered based on the existing Regulations which provide for only prospective application and for 66 KV and above.

On the issue of stall regulated machines, our Counsel argued that it is technically not possible for installation as was also agreed in the meeting. CERC observed that stall regulated turbines cannot be allowed for ever and that they would provide for time period by which the new installations of stall regulated turbines should be phased out. The existing ones would not be affected and also the ones which are to be established within the time period provided by CERC. The orders in the petition are reserved

With best wishes and regards

Prof. Dr. Kasthurirangaian Chairman

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: T A N G E D C O :

From Er. A. Subramanian, B.E., M.I.E., Chief Engineer, Non Conventional Energy Sources, TANGEDCO 144, Anna Salai, Chennai - 600 002.

NINDPRO

То

1. The Superintending Engineer NCES/Tirunelveli

2. The Superintending Engineer NCES/Udumalpet

Sir,

Lr.No.CE/NCES/EE/WPP/AEE2/F.REMC/D. 2233/15, dt. 03.08.2015

- Sub: NCES Forecasting of Wind Energy study carrying out by National Institute of Wind Energy (NIWE Formerly C-WET) continuous supply to be maintained in the Substations to improve the accuracy of the forecasting instruction issued regd.
- Ref: 1. Lr.No.CE/NCES/EE/WPP/AEE2/F. REMC/D.961/15, dt:16.05.2015
 - 2. Indian Wind Power Association Letter dt. 03.08.2015.

As per the approval of Ministry of New & Renewable Energy, National Institute of Wind Energy (NIWE - Formerly C-WET) is conducting study on forecasting of wind energy at Tamil Nadu during this wind season and TANGEDCO is supporting the NIWE by provinding the wind data installing ABT meters in all the wind farm connected Substations.

The pilot study was launched on 13.05.2015 by NIWE and from the ABT meters installed Substations, by capturing the real time data, NIWE is furnishing the wind forecast on daily basis.

In order to fine tune the study and to improve the accuracy of the forecasting, NIWE requesting continous supply to the following 5 No. Substations without backdown for 7 days.

Start Date	End Date	Name of Sub Station	Capacity	Total Capacity
		Udayathur	210.350	
		Keelaveeranam	144.275	
04.08.2015	10.08.2015	Panapatty	74.600	
		Kundadam	57.250	
		Andipatti	75.250	561.725
11.08.2015	17.08.2015	Thandalyarkulam	103.825	
		Sundankurichi	117.650	
		Poigai (Echanda)	100.500	
		Anthiyur	103.250	
		Kamachipuram	69.300	547.665
18.08.2015	24.08.2015	Radhapuram	139.215	
		Amuthapuram	189.600	
		Palappampatti	33.100	
		Elavanthy	114.790	
		Kandamanur	51.000	527.705

Start Date	End Date	Name of Sub Station	Capacity	Total Capacity
		Sankaneri	157.150	
	Veerasigamani	102.725		
25.08.2015	25.08.2015 31.08.2015	M.N.Patty	28.300	
		Poolankinar	66.150	
	-	Rasingapuram	56.100	410.425

Hence the Superintending Engineer / NCES / Tirunelveli & Udumalpet are requested to maintain continous supply to the above list of Substations for 7 days on rotational basis in order to cover all the four passes.

Copy submitted to CMD/TANGEDCO/Chennai - 2.

Copy to the Chief Engineer/Grid Operation/Chennai - 2.

Copy to the Superintending Engineer/LD&GO/Chennai - 2.

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Copy to National Institute of Wind Energy/Chennai

Copy to Indian Wind Power Association/Chennai

Copy to the Sub LDC/Madurai & Erode

Copy to the Superintending Engineer/Tirunelveli EDC, Tuticorin EDC, Kanyakumari EDC, Ramnad EDC, Udumalpet EDC, Dindigul EDC, Tirupur EDC, Theni EDC, Coimbatore South EDC.



Office : S1. Geetha Building, 333. Nehru Street, Ram Nagar, Coimbatore-641 009 Tel: 0422- 4377288 Tele Fax: 0422-2235513 Factory: 13/62-C, Trichy Road, Kannampalayam, Coimbatore-641 042 Tel: 0422- 2682310, Cell: 98430 82666. Website : www.premlumtransmission.com www.kayarrengineering.com Email:kayarrcoimbatore@yahoo.com

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: TANGEDCO:

Er. A. Subramanian, B.E., M.I.E., Non Conventional Energy Sources,

WINDPRO

TANGEDCO 144, Anna Salai, Chennai - 600 002. To

1. The Superintending Engineer NCES/Tirunelveli

2. The Superintending Engineer NCES/Udumalpet

Lr.No.CE/NCES/EE/WPP/AEE2/F.REMC/D. 2342/15, dt. 22.08.2015

Sir.

From

Chief Engineer,

- Sub: NCES Forecasting of Wind Energy study carrying out by National Institute of Wind Energy (NIWE Formerly C-WET) continuous supply to be maintained in the Substations to improve the accuracy of the forecasting - revised list of SS for the period 25.08.2015 to 31.08.2015 - instruction issued - regd.
- Ref: 1. Lr.No.CE/NCES/EE/WPP/AEE2/F. REMC/D.961/15, dt:16.05.2015
 - 2. Indian Wind Power Association Letter dt. 03.08.2015.
 - 3. Lr.No.CE/NCES/EE/WPP/AEE2/F.REMC/D.2233/15, dt:03.08.2015
 - 4. NIWE Letter dt.21.08.2015.

In order to fine tune the study and to improve the accuracy of the forecasting, based on the request of National Institute of Wind Energy (NIWE - Formerly C-WET) instruction has been issued vide reference (3) to maintain continuous supply to the 5 No. Substations without backdown for 7 days on rotation basis from 04.08.2015 to 31.08.2015.

Now National Institute of Wind Energy vide the reference (4) stated that, since there is no historical and real time data available for Sankaneri SS, Muthunaikanpatty SS and Rasingapuram SS, has requested continuous supply for Koodankulam 10(1) SS, Thungavi SS and Kamachipuram 10(1) SS, so that they could analyse more details.

Hence the Superintending Engineer / NCES / Tirunelveli & Udumalpet are requested to maintain continuous supply to the following list of Substations for 7 days from 25.08.2015 to 31.08.2015.

Start Date	End Date	Name of Sub Station	Capacity in MW	Total Capacity in MW
	Koodankulam 10(1) SS	56.500		
		Veerasigamani SS	102.725	
25.08.2015	25.08.2015 31.08.2015	Thungavi SS	123.270	
		Poolankinar SS	66.150	
	Kamachipuram 10(1) SS	50.000	398.645	

Copy submitted to CMD/TANGEDCO/Chennai - 2.

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Copy to Indian Wind Power Association/Chennai

Copy to the Sub LDC/Madurai & Erode

Copy to the Superintending Engineer/Tirunelveli EDC, Tuticorin EDC, Kanyakumari EDC, Ramnad EDC, Udumalpet EDC, Dindigul EDC, Tirupur EDC, Theni EDC, Coimbatore South EDC.

Yours faithfully,

CHIEF ENGINEER/NCES





वर्षा जोशी, आई.ए.एस संयुक्त सचिव Varsha Joshi, IAS Joint Secretary भारत सरकार नवीन और नवीकरणीय ऊर्जा मंत्रालय Government of India Ministry of New and Renewable Energy

> D. No. 63/50/2015-WE Dated: 20.8.2015

Dear De Kasturinangain,

As you may be aware that India has a gross wind power potential of around 100 GW mainly in the States of Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu. With improved technology, higher blade diameters, and higher hub heights, the potential is likely to be increased many-folds. A total capacity of about 24,000 MW has so far been installed in the country. This has been possible due to the concerted efforts of the Central Government and State Governments to provide a conducive environment for the growth of industry as well as for private sector investment. It may be worthwhile to mention that most of the wind power capacity installed in the country is through private sector investment.

2. The Government has set a target of cumulative wind power capacity of 60 GW by 2022, which means we have to do around 36 GW in remaining period. The Government has been supporting the development of the sector through a host of fiscal and promotional incentives. The major factor driving the growth of the wind sector in the country, so far, has been the provision of 80% Accelerated Depreciation and Generation Based Incentive (GBI). So far, the wind generation has been absorbed in the state of generation. With enhanced penetration, the states are now finding it difficult to absorb more due to grid stability issues. In order to achieve the targets, we have to take the wind generation out of the host state, for which we have to take up new business models. There are state specific issues for larger deployment of wind energy.

 In this connection, Hon'ble Minister (I/C) Power, Coal and NRE, Shri Piyush Goyal is taking an interaction meeting with Hon'ble State Ministers, State Energy Secretaries and industry representatives on 26,08,2015 at 12.30 PM in the Conference Room (No, 105), MNRE, 14th Block, CGO Complex, Lodi Road, New Delhi –110003 as per attached programme.

 You are kindly requested to make it convenient to attend the meeting. A line of confirmation will be highly appreciated.

welter deep regards,

Yours Sincerely

Varsha Joshi

Dr. K. Kasturirangaian Chairman Indian Wind Power Association Door No. E, 6th Floor, Tower-I, Shakthi Towers No. 766, Anna Salai, Chennai – 600 002



ब्लॉक नं. 14, केन्द्रीय कार्यालय परिसर, लोदी रोड, नई दिल्ली 110003 Block No. 14, CGO Complex, Lodi Road, New Delhi 110 003 Tel. : 011-24361027 Fax : 011-24367413 Email : varsha.joshi@nic.in



Letter received from Panchayat Samiti Office, Jaisalmer, Rajasthan

कार्यालय पंचायत समिति सम, मुख्यालय जैसलमेर

कमांक/लेखा/2015/2987 दिनांक: 15 जुलाई, 2015

नोटिस

(अन्तर्गत धारा 68(2) राजस्थान पंचायती राज अधिनियम, 1994 सपठित नियम 57, 58 एवं 59 राजस्थान पंचायत नियम 1996)

यतः पंचायत समिति सम ने अपनी साधारण सभा दिनांक 15 जुलाई, 2015 में संकल्प संख्या 16 पारित किया है कि पंचायत समिति सम के क्षेत्र में स्थापित पवन ऊर्जा सयंत्र एवं ईट भट्टा जिससे व्यावसायिक रूप से उत्पादन किया जा रहा है, पर प्रति इकाई पवन ऊर्जा सयंत्र/ईंट भट्टा पर रूपये 11,000/- (अखरे रूपये ग्यारह हजार मात्र) का कर प्रति वर्ष प्रति इकाई की दर से अधिरोपित की जायें।

यतः उक्त कर अधिरोपण के संकल्प से संबंधी सूचना से प्रमाणित पक्षकारों को सूचित किया जाना अपेक्षित है।

अतः इस नोटिस के जरिये पंचायत समिति सम के क्षेत्र में स्थापित पवन ऊर्जा सयंत्र/ईट भट्टा के स्वामित्व धारकों/लीजधारकों/उपलीज धारकों को उक्त संकल्प से सूचित कर इस संबंध में यदि कोई आक्षेप हो तो इस कार्यालय में व्यक्तिशः अथवा रजिस्टर्ड/डाक से फाईल करने के लिए इस नोटिस के जारी होने के एक माह की अवधि अर्थात् 15 अगस्त, 2015 तक अनुज्ञात की जाती है। उक्त कालावधि एवं तिथ्नि के पश्चात् प्राप्त होने वाले किसी आक्षेप/आपत्ति पर विचार नहीं किया जायेगा।

> विकास अधिकारी पंचायत समिति सम,मु० जैसलमेर दिनांक : 15 जुलाई, 2015

कमांक/सम/2988-3003

WINDPRO

IWP/

प्रतिलिपि निम्न को सूचनार्थ एवं अग्रिम आवश्यक कार्यवाही हेतु प्रेषित है :

- 1. आयुक्त, ग्रामीण विकास एवं पंचायती राज विभाग, राजस्थान, जयपुर
- 2. जिला कलक्टर, जैसलमेर
- 3. मुख्य कार्यकारी अधिकारी, जिला परिषद, जैसलमेर
- 4. प्रधान महोदया, पंचायत समिति सम, मु0 जैसलमेर।
- अति0 मुख्य कार्यकारी अधिकारी, जिला परिषद, जैसलमेर
- तहसीलदार, जैसलमेर/फतेहगढ
- इनोक्स विंड इन्फ्रास्टेक्चर सर्विस लिमिटेड, प्लॉट न. 75, नेहरू भूमि विकास बैंक, सी. वी.सिंह कॉलोनी, जैसलमेर।
- इनोक्स विंड लिमिटेड, इनोक्स टॉवर, 17, सेक्टर–16 ए, नोएडा 201301, उत्तरप्रदेश।
- 9. विंड वर्ड ऑफिस, रेल्वे क्रोसिंग के पास, पैट्रोल पम्प, रिको शिल्पग्राम एरिया, जैसलमेर।
- सुजलोन एनर्जी लिमिटेड, 1फ्लोर नीलकण्ठ, 1 भवानीसिंह रोड नेहरू सहकार भवन के सामने, सी–स्कीम, जयपुर–302001
- एनरकॉन इण्डिया लिमिटेड, 605–608, 5फ्लोर एपेक्स मॉल लाल कोठी स्कीम, जयपुर–302015

12. मैनेजर,

13. नोटिस बोर्ड कार्यालय जिला कलक्टर /जिला परिषद कार्यालय/संबंधित ग्राम पंचायत

14. 193 95, 605-608,

5 मलोर, ट्रीस्टन ज्ञाल लॉल डाही स्डीम, W44X -302015

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Choice of Smart Investors – Evergreen Solar

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Advantages:

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- Single Axis Tracking contributes upto 25% increased generation
- Shorter Payback Period due to increasing Power & Fuel Costs

300KW Solar Rooftop Project Done On Asbestos Roof



Customers are welcome to visit our site to witness the performance and quality of construction

Our Solar Modules are certified for:

• IEC 61215:2005 Ed. 2–Design Qualification & Type Approval.

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- IEC 61730-1 & 2 Safety Class II
- IEC 61701: Salt Mist Corrosion Testing
- Mechanical Load & Heavy Snow Load @ 5400 Pascal.

Our Company is certified for: ISO 9001:2008 ISO 14001:2004 OHSAS 18001:2007

MNRE Channel Partner



Our 2 MW Solar Plant with Single Axis Tracking installed near Coimbatore





IWPA RSC Letter to Panchayat Samiti Office, Jaisalmer, Rajasthan

दिनांक :- 14-08-2015

श्रीमान विकास अधिकारी, पंचायत समिति सम, मुख्यालय, जैसलमेर (राज.)



महोदय,

इण्डियन विंड पावर एसोसियेशन(IWPA) को उसके सदस्यो ने सूचित किया है कि पचांयत समिति सम द्धारा साधारण सभा दिनांक 15 जुलाई 2015 के संकल्प संख्या 16 द्धारा इस पचांयत समिति के क्षेत्राधिकार में स्थापित पवन ऊर्जा संयत्रो पर 11000/- (ग्यारह हजार रुपये) वार्षिक प्रति ईकाई की दर से अधिरोपित किये जाने का सकल्व प्रस्तावित है।

इण्डियन विंड पावर एसोसियेशन(IWPA) अपने सदस्यो की ओर से इस प्रस्ताव पर निम्नलिखित आपत्ति दर्ज कराती है :-

- 1. राज्य में कही भी विंड मिलो पर स्थानीय करारोपण नही है।
- विंड मिलो की स्थापना राज्य एंव केन्द्र सरकार द्धारा प्रोत्साहित है एंव इनको विभिन्न प्रकार सुविधाऐ देकर स्थापित कराया जा रहा है अत: ऐसे प्रोजेक्ट पर स्थानीय करारोपण राज्य एंव केन्द्र सरकार की नीतियो के विरुद्ध है। तथा यह निवेशको एंव विकास कर्ताओ को हतोत्साहित करेगा, जिससे प्रदेश में निवेश को नुकसान होगा।
- निवेशको एंव विकास कर्ताओ से राज्य सरकार द्धारा आंवटित भूमि पर 405 प्रति बीधा एंव 603 प्रति बीधा की लीज एंव सब लीज राशि प्रतिवर्ष ली जाती है।
- 4. विंड मिलो की स्थापना करते समय भी विंड कम्पनियो को कई प्रकार की शुल्क विभिन्न सरकारी एंव नोडल ऐजेन्सीज जो कि पहले ही काफी ज्यादा है जमा कराने होते है।

President	Vice President	Hon. Secretary	Hon. Treasurer
Manak Talera	Rajendra Vyas	Chandra Shekhar Khunteta	Anil Saboo
M : 9829066605	M : 9829059727	M : 9829010591	M : 9829087459
9829066605 In	dian Wind Power As	sociation - Rajasthan State Cour	ncil

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POWERA



- 5. वर्तमान में प्रदेश के विभिन्न विधुत मण्डलो की आर्थिक स्थिति खराब है तथा अरबो रुपये के नुकसान में है इस कारण निवेशको को उत्पादित विधुत के मासिक भुगतान मे चार माह से सात माह तक का विलम्ब मे हो रहा है। निवेशक समय पर बैकों से लिऐ गये ऋण का भुगतान समय पर नहीं कर पा रहे है एंव ब्याज का अतिरिक्त भुगतान करना पड रहा है।
- पूर्व में राज्य सरकार द्धारा भी भूमिकर के रुप में एक अतिरिक्त कर अधिरोपित किया गया था जिसे भी राज्य हित् में वापिस लिया गया है।
- 7. विडंमिलो से सम्बन्धित विभिन्न उपकरणो पर VAT की छूट प्राप्त है।

- छैसलमेर जिले में केबल चोरी बहुतायत में हो रही है जिसके कारण करोडो रुपये का निवेशको को नुकसान हो रहा हैं।
- विधुत मण्डलो द्धारा कम कीमत पर बिजली बाहर से खरीदी जा रही है और विंड मिलो को जबरन बंद करा कर उत्पादन रोका जा रहा है जिससे निवेशको को आर्थिक नुकसान हो रहा है।
- 10. स्थानीय अवाछिंत तत्व समय समय पर प्रोजेक्ट स्थापना के दोरान एंव उसके पश्चात निवेशको परेशान करते है जिससे भी आर्थिक हानि होती है।

अतः राज्य में निवेश को प्रोत्सहित करने के लिए एंव राज्य एंव केन्द्र सरकार द्धारा प्रोत्साहित इस उधोग पर इस करोरोपण के सकंल्प का वापिस लिया जाने का कष्ट करावे।

धन्यवाद सहित

सद्भावी

(चन्द्रशेखर खुंटेटा) (सचिव)





IWPA AP & TSC Secretary's Report

Chairman welcoming the newly Elected Members

I have great pleasure in placing before the Annual General Meeting a brief account of the activities of the State Council during the last one year. The AP Chapter of IWPA has become the AP & TS Chapter from the last AGM itself.

The IWPA AP & TS Chapter has been very actively initiated by several issues related to development of Wind Energy Sector in Andhra Pradesh and Telangana Regions at various Government departments and some of them are highlighted below:

- 1. Represented to the Secretary, APERC on the Comprehensive Evacuation Scheme of Wind Power Projects by APTRANSCO, for the payment of Security Deposit in the form of BG
- Represented to the Energy, Prinicpal Secretary to Govt of Telangana for new wind power policy in the state of Telangana.
- 3. Represented to the ED, Planning to keep the issue of submitting BG's in abeyance till the announcement of new wind power policy.
- Represented to the CGM, TSSPDCL, for giving time to give our response for the letters communicated by TS SPDCL on Supply and scheduling of power to TS SPDCL from wind projects located in Kurnool & Anantapur Districts.
- 5. Represented to the Hon'ble Chief Minister of Telangana for promotion of wind power projects development in the state.

- 6. Represented to the Principal secretary to the Govt of AP, for Extension of time for entering into agreement with NREDCAP on new capacity allocations.
- Represented to the VC & MD, NREDCAP, for extension of time for payment of sanction fee & providing Bank Guarantee.
- 8. Represented to the Principal Secretary to Govt of AP also for extension of time till the end of April,2015 for payment of sanction fee & providing Bank Guarantee also.
- Represented to the Principal Secretary to Govt of AP once again for extension of time for entering into agreement with NREDCAP



 IWPA AP&TSC, Secretary, Shri S Sri Murali welcoming the members



NDPRC

Chairman felicitating the Chief Guest Shri Kamalkar Babu CMD NREDCAP

- 10. Represented to the Principal Secretary to Govt of AP, Revenue (Land) to give the instructions to the Collectors to arrange the Revenue land in advance possession jointly in the name of NREDCAP and the developer.
- 11. Submission to the Secretary, APERC, for their notification in the matter of seeking views and suggestions of SAC members to determine the tariff for Wind Solar Hybrid projects.



AGM of AP&TSC in Progress



National Council Meeting in Progress

- Submission to the Secretary, APERC on the draft notification in the matter of issuing Terms & Conditions for tariff determination for upcoming wind energy projects in the state of AP in the period FY 2015-16 to FY2019-20.
- 13. Presented to the Secretary, TSERC, for determination of wind tariff for the Wind Power Projects to be commissioned in the state of Telangana after 31st of March, 2015.
- 14. Represented to the CMD, AP TRANSCO on curtailment of wind power generation by SLDC.
- Represented to the Secretary, APERC to advise APTRANSCO, APDISCOM and SLDC to adhere to AP Wind power policy 2015.
- 16. Submission to the Commission Secretary on the final day of pronouncing the tariff order to give a draft tariff order initially and it should be released for public hearing before issuing a final Tariff order.

Inspite of the fact that there is not much of capacity addition in the state, we have introduced 4 new members to the association after the last AGM and many of the members have discontinued their membership because they have sold out their machines in Tamilandu. with the support being extended by the national chapter, we expect to take the state chapter to new strides.

RE Status in Andhra Pradesh State as on 31.07.2015

Resource	Cumulative capacity commissioned upto 2014-15 (in MW)	Capacity commissioned during 2015-16 (in MW)	Cumulative capacity commissioned (in MW)
Wind Power	1016.22	43.70	1059.92
Solar Power (GOI)	92.00	-	92.00
Solar Power (State Policy)	42.85	7.80	50.65
Small Hydro	89.098	-	89.098
Biomass Based	171.25	-	171.25
Biomass Energy Co-generation (Non-Bagasse) (Captive use only)	50.94	-	50.94

Resource	Cumulative capacity commissioned upto 2014-15 (in MW)	Capacity commissioned during 2015-16 (in MW)	Cumulative capacity commissioned (in MW)
Co-Generation with Bagasse	198.95	-	198.95
Municipal Solid Waste	6.15	-	6.15
Industrial waste	26.51	7.50	34.01
TOTAL	1693.968	59.00	1752.968



Policy, Proceedings, Regulations and Generic Preferential Tariff for Wind Power Projects in Andhra Pradesh 2015:

Policy:

Wind power is already economical in comparison to conventional power sources and Andhra Pradesh has a huge wind power potential that is yet to be harnessed. The wind power potential in the combined state of Andhra Pradesh as estimated by the National Institute of Wind Energy (NIWE), formerly known as Centre for Wind Energy Technology (C-WET) is around14,497 MW at 80 m level with maximum potential existing in the districts of Ananthapur, Kadapa, Kurnool, Chittoor and Nellore districts.



The Government of Andhra Pradesh has earlier issued "Wind Power Policy", vide G.O.Ms.No.48 dated 11.04.2008 and G.O.Ms. No.99 dated 09.09.2008, to promote wind power projects.Since the policy operative period was for five (5)years, the policy expired in April,2013.

The NEDCAP has announced the Wind Power Policy in Andhra Pradesh in 2015. The policy shall come into operation with effect from the date of issuance and shall remain applicable for a period



of five (5) years and/ or shall remain in force till such time a new policy is issued.

Highlights:

Particulars	Description
Single Window clearance	All approvals / clearances will be disposed within 30 days from the date of registration.
Capacity Allotment	NREDCAP will be responsible for capacity allotment for up to 40 MW and to recommend capacity allotment beyond 40 MW to Government of AP.
Wind Resource Assessment studies in Private Sector	Permission for carrying out Wind Resource Assessment by the private entities will be given by the Nodal Agency on a first come first serve basis.
Hybrid Projects	Solar and wind hybrid power projects will be encouraged in the State.
Evacuation facility	The Eligible Developer will have to bear the entire cost of construction of power evacuation facilities.
	Incentives Offered
Wheeling Chargers	Captive use / third party sale within the State wheeling charges will be exempted. While for wind power for sale outside the State shall be as per APERC regulations.

Particulars	Description
Banking	100% Banking for all Captive and Open Access during all 12 months of the year. Banking charge @ 2% of energy delivered will be adjusted.
Open access	Intra-state Open Access clearance for the whole tenure of the project or 25 years whichever is earlier will be granted.
Electricity Duty	All wind power projects are exempted from paying Electricity Duty in case of sale of power to AP DISCOM's.
Industry Status & PPP Status	Wind Power Projects shall be treated as eligible industry under the incentives available to industrial units. PPP status will be provided for projects selling power to DISCOM.
Must Run Status	Injection from Wind Power Projects will be considered to be deemed scheduled, subject to prevailing regulations / grid code of appropriate commission.
Pollution clearance	Wind Projects will be exempted from obtaining pollution clearances.

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Proceedings:

On 23rd July 2015, the Andhra Pradesh Electricity Regulatory Commission has implemented the Proceedings (No. 11/2015) of "Approval of Terms and Conditions for Tariff determination for Wind Power Projects in the State of Andhra Pradesh for the period FY2015-16 to FY2019-20".

The following provisions are also to be added to the final regulation:

- Evacuation Guidelines: The Evacuation Guidelines / practice directions issued by the Commission from time to time shall be applicable for all the wind power projects established since these regulations coming into force.
- ii. Model PPAs: The model Power Purchase Agreements earlier approved by the Commission shall be applicable to all the

wind power projects established since these regulations coming into force also to the extent they are in consonance with these regulations.

Regulations:

On 31st July 2015, the Government of Andhra Pradesh has declared the Regulation No. 1 / 2015 in the matter of "Terms and Conditions for Tariff Determination for Wind Power Projects in the State of Andhra Pradesh for the period from 2015-16 to 2019-20".

Generic Preferential Tariff Order:

On 1st August 2015, the Andhra Pradesh Electricity Regulatory Commission has declared the order (No. 03 of 2015) for Generic Preferential Tariff applicable from 31st July 2015 till 31st March 2016 in respect of Wind Power Projects in the State of Andhra Pradesh.

The useful life of the Wind Power Plants as 25 years, the levelised generic preferential tariff works out to `4.83 / unit without considering the accelerated depreciation and `4.25 with accelerated depreciation.

This tariff shall be applicable for all the new wind power projects entering into Power Purchase Agreements (PPA) on or after the date of notification of the Regulations in the Official Gazette of the Govt. of Andhra Pradesh i.e., 31-07-2015.

Issues pertaining to wind power sector in AP:

- 1. RPO Petition filed by Discoms for waiver of shortfall and reduction of RPO target.
- ROW Issues Land Owners are asking for more money for ROW.
- 3. Capacity allotment issues Capacity allotted to non-serious players are idle.
- Bifurcation of state might have tremendous impact on deployment of wind power generation as there is ambiguity in PPA, resource allocation & administrative delays etc.
- 5. AP lacks evacuation infrastructure in the wind potential areas and the development has been in snail pace

Wind Power Generation in AP 2015-16:(Private)

- 1. April 2015 1016.22 MW 72.38 M.U.
- 2. May 2015 1016.22 MW 165.17 M.U.
- 3. June 2015 1016.22 MW 296.93 M.U.



SRPC's Note on Carving out Control Area for Managing Wind Power at Regional Level

Carving Out Wind Farms from State Control Area

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Let a control area with load of 10,000 MW having internal generation of 8,800 MW including 1,000 MW of wind injection has contracted additional 1,200 MW from Inter State Transmission System (ISTS). Area Control Error or deviation would be monitored through the links which connects State network with ISTS, in this case it consist of four lines. The power flow from Interstate system would be around 1,200 MW which is sum of power flow from four lines as shown in Fig-1.



Fig. 1. Control Area Connected to ISTS

Now whether due to expected variation or error in forecasting if there is reduction in wind generation from 1,000 MW to 0 MW then without any balancing mechanism in place the direct impact of this power reduction in wind generation would reflect as extra power drawn over and above contracted power through ISTS as internal generation would now reduce from 8,800 MW to 7,800 MW (Fig-2). Such dependency on ISTS for meeting the variation in wind power is not allowed as per IEGC. The control area should at any cost do the required balancing act to ensure that any variation in wind does not reflect in the change in power flow along the ISTS. Under such a situation if there is drop in power flow from Wind power either it has to ramp up the power from other source or go for load shedding. In other case if there is a ramp up power from Wind source it need to back down power from other source or block wind energy.





Now let the wind Substation is connected to communication system from which real time data can be transmitted as done in the case of any conventional generator. This wind generator now could be re designated as Inter State Generating Station (ISGS). For re designating it as ISGS communicating system capable of transmitting real time data is only required. It does not call for any network modification etc. An ISGS can well be embedded in a state network and still can be under the control of Regional Load despatch Centre.





Wind Power would now sell the forecasted power through schedule transaction like any other ISGS connected in state network under the control of RLDC. Let in a case wind has forecasted a generation of 1,000 MW. RLDC would schedule this transaction to the host state as done in any other case. Now Schedule transaction from ISTS would be 2,200 MW with 1,200 MW contracted power and 1,000 MW from wind. Total power drawn from ISTS now would be through six lines (assuming two wind stations) (Fig-3). It means ISTS which comprised of four lines now is of six lines. Any variation in wind generation would reflect in power flow in two lines connected to wind substation , as the connected loads are same the change in power flow in two lines would also reflect in remaining four ISTS line in such a way that sum of six line remains same hence drawal from ISTS would not change. By this arrangement it could be ensured that any wind power variation would not impact the host state in terms of deviation.

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Fig. 4. ACE with Wind as Separate Control Area

It requires communication system only with which the total drawal by control area can be recalculated with additional information of power flow from wind lines (Fig-4). The new computation of drawal would not be a function of wind generation. This would insulate each control area from the variation of Wind Generation. This would be in line with any mega solar projects coming up. Such arrangement does not require wind substation to be directly connected to ISTS. Like in case of NPCIL, MAPS which is an interstate generating station connected to state system under the control of SRLDC. Any variation in NPCIL, MAPS generation does not reflect as error in any states drawal though NPCIL, MAPS is embedded in Tamil Nadu state network like any wind Substation.

A relook in RRF Scheme of Hon'ble CERC clearly implies the same approach. In RRF Mechanism if due to any variation in wind energy which was captured through Special Energy Meters, if drawal from ISTS changes which result to any penalty/incentive to Host state RRF would have insulated Host State from the same. Hence RRF was incorporated to insulate host state from receiving/ paying any incentive/penalty due to variation of wind power from the forecasted value. But the RRF scheme assumed that Host state can pass any variation in wind generation from forecasted value to ISTS in real time. As per IEGC the same was not allowed which clearly specify that any variation in wind cannot be passed to ISTS. As per IEGC host state need to absorb any variation without the same reflecting to ISTS. A commercial settlement assuming a scenario which in real time in not allowed did not sync hence RRF was put under abeyance.

Special Energy Meter which can communicate in real time if used for drawal computation of host state then wind farm covered under RRF could be re designated as Inter State Generating Station (ISGS) embedded in state network.

Forecasted Wind generation can be scheduled to any control Area. Variation of Generation from forecasted value can be dealt in the same manner as dealt with any RE Source directly connected to ISTS like rescheduling or deviation settlement mechanism of Hon'ble CERC.

Though with the above mechanism host state which is purchasing power gets insulated from any variation it may further be required to assess whether host state can absorb any quantum of power scheduled to it with wide variation from previous fifteen minute block to immediate next block. For example total wind power scheduled to any control area say changes from say 1,000 MW to 500 MW. Though host state need not worry about the factor that whether wind farm output in that block is 1,000 MW or not, irrespective of which control area can draw 1,000 MW. But whether control area can absorb 1,000 MW in that block by backing down its generation from conventional source. And if forecasted figure shows a generation drop to 500 MW can the conventional sources ramp up by 500 MW with in this anticipated time.

It implies that the ability of a control area to absorb variation depends on its ability to ramp up or ramp down its generation from other source. This in turn depends on the total generation on bar. A bigger control area would be in better place to absorb more variation than a smaller control area. It means the ability of any control area to absorb variation even in its schedule transaction would again depend on the electrical size of the control area. Tamil Nadu may not be in position to handle a change in wind power from 4,000 MW to 2,000 MW in two blocks with a size of 12,000 MW. To handle such situation more control areas (states) should be brought in hence getting bigger electrical size.

This can be achieved through Interstate power flow. The forecasted wind generation should be scheduled to all the control areas in the ratio of peak demand of each control area for the month. This would ensure that though there may be huge predicted variation in wind power, each control area need to adjust its generation to a lesser extend as its requirement to adjust the variation would only be a factor of it. This would require PPA to be modified accordingly which can be taken care during repowering or while new PPA agreements are being signed.

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July 27, 2015

Shri Upendra Tripathy, IAS Secretary Ministry for New & Renewable Energy New Delhi -110003

Respect Sir,

We thank the MNRE in bringing out a separate Act for the promotion of Renewable Power in the country, we request the MNRE to consider/incorporate the following important points in the RE Act for effectively achieving its objectives.

- In the case of the Electricity Act 2003, the Act has clearly set out standards, procedures and principles that must be followed to achieve its objectives. The policy issued thereon are only outlines what the government/ministry hopes to achieve and the road map to achieve them. Where as in the draft RE Act, it has been observed that only a general frame work has been provided in the Act and the setting out of standards, procedures and principles have been transferred to the RE policy to be issued and the Committee to be constituted. Policies may be considered as guidelines. A law, on the other hand, is a legally enforceable rules. Therefore important principles, standards and procedures may be better incorporated into the RE Act itself.
- 2. The ultimate objective of the RE Act is to promote RE power as mandated by the preamble of the draft RE Act. To achieve this objective, there shall be an enabling provision in the Act to make the RE power to achieve grid parity and commercial viability. Therefore first and the foremost

objective of the RE Act is to achieve grid parity of RE power vis-a- vis conventional power as specified in section 26(ii) of the draft RE Act. Unfortunately the major RE power, namely the Wind Power and Solar Power could never get grid parity with conventional power due to its inherent infirmness. Even after the state—of-the-Art forecasting model put in place, RE power is preferred only second to firm conventional power. That is the reason why the Regulators under the Electricity Act provided Promotional measures such as "must run", priority in merit order despatch etc. Only these promotional measures can provide Wind/Solar power to achieve grid parity.

- 3. Next to the grid parity, the second important objective is making the RE power commercially viable. This has been done by providing Banking facility to wind power by most of the state Regulators. If the banking is stopped wind energy cannot achieve commercial viability. Interestingly, the Electricity Act has not explicitly provided such promotional measures, (must run and banking). However, the Regulators provided the same so as to promote the green power to make them to achieve grid parity and commercial viability.
- It is highly disappointing that the Draft RE Act which is meant for specifically promoting the green power, has not even taken care of the promotional measures provided by

Indian Wind Power Association

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the Electricity Act(General law) and regulations made there on. The RE Act should make up & provide these enabling provisions explicitly because the electricity regulators at any time may modify their regulations and negate the must run and banking provisions under the pressure of interested parties. This may happen because these promotional measures are not explicitly specified in the Electricity Act. This may also happen if the RE Act come into force in the present draft form. If it is not available in the RE Act, the distribution licensee and other interested parties can very well approach the High/Supreme court and get the Regulations modified. Any attempt to specify such promotional measures in the Renewable Policy will not effectively serve its purpose for the reasons already discussed.

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5. One of the main reason for the phenomenal growth of wind power and consequent industrialisation especially in Tamil Nadu is due to its practice of year round banking. Similar way, other States should also get industrialised under "Make in India" Programme through year round banking of Seasonal Wind Energy. Wind forecast is not the solution to grid parity but a solution to scheduling and despatch. With the best forecast, vagaries of the wind power can be better understood but vagaries cannot be eliminated. Therefore priority such as must run should be provided for the very survival of the wind power industry without which the government cannot achieve its ambition of adding 60,000 MW of wind power by 2022.Therefore Must Run,

and banking Provisions have to be explicitly provided in the RE Act which is already in vogue under the E Act and regulations made thereon. The very purpose of the RE Act will not be served if the must run and banking facility are not explicitly provided in the RE Act.

 It is true that the Distribution licensee (DL) may incur certain cost on banking of infirm power. It can be always calculated reasonably and the DL can be compensated accordingly. APTEL has already issued direction to SERCs to calculate banking charges reasonably.

The National RE fund/state green fund proposed in the RE Act may also be utilised to reduce the burden of the RE Developer to meet out this cost.

Taking into account the above points, we submit the suggested modifications/additions/deletions to the draft RE Act as in the Annexure.

Thanking you in anticipation,

With Best Wishes & Regards,

For Indian Wind Power Association,

Prof. Dr. K. Kasthurirangaian Chairman

Enclosure: Annexure to the Draft National Renewable Energy Act 2015

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IWPA Annexure to the Draft National Renewable Energy Act 2015

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IWP

Provisions in the draft Act	Suggested Addition/ modification/deletion	Reason for the suggestion
(General observation on)		General but important observations on the Draft Renewable
National Renewable Energy Act 2015		1. In the case of the Electricity Act 2003, the Act has clearly
-Preamble		set out standards, procedures and principles that must be
-Need for the Act		followed to achieve its objectives. The policy issued thereon
-Structure of the Act and its		achieve and the road map to achieve them. Whereas in
-Objectives		the draft RE Act, it has been observed that only a general
(please see our suggestions)		framework has been provided in the Act and the setting out of standards, procedures and principles have been transferred to the RE policy to be issued and the Committee to be constituted. Policies may be considered as guidelines. A law, on the other hand, is legally enforceable rules. Therefore, important principles, standards and procedures may be better incorporated into the RE Act itself.
		2. The ultimate objective of the RE Act is to promote RE power as mandated by the preamble of the draft RE Act. To achieve this objective, there shall be an enabling provision in the Act to make the RE power to achieve grid parity and commercial viability. Therefore, first and the foremost objective of the RE Act is to achieve grid parity of RE power vis-a- vis conventional power as specified in Section 26(ii) of the draft RE Act. Unfortunately, the major RE power, namely the Wind Power and Solar Power could never get grid parity with conventional power due to its inherent infirmness. Even after the state—of-the-Art forecasting model put in place, RE power is preferred only second to firm conventional power. That is the reason why the Regulators under the Electricity Act provided promotional measures such as "must run", priority in merit order despatch etc. Only these promotional measures can provide Wind/Solar power to achieve grid parity.
		3. Next to the grid parity, the second important objective is making the RE power commercially viable. This has been done by providing Banking facility to wind power by most of the State Regulators. If the banking is stopped wind energy cannot achieve commercial viability. The Electricity Act has not explicitly provided such promotional measures, (must run and banking). However, the Regulators provided the same so as to promote the green power to make them to achieve grid parity and commercial viability.

Provisions in the draft Act	Suggested Addition/ modification/deletion	Reason for the suggestion
		4. To avoid disappointment that the Draft RE Act which is meant for specifically promoting the green power, has to taken care of the promotional measures provided by the Electricity Act (General law) and regulations made thereon. The RE Act should provide these enabling provisions explicitly because the electricity regulators at any time may modify their regulations and negate the must run and banking provisions under the pressure of interested parties. This may happen because these promotional measures are not explicitly specified in the Electricity Act. This may also happen if the RE Act come into force in the present draft form. If it is not available in the RE Act, the distribution licensee and other interested parties can very well approach the High/Supreme court and get the Regulations modified. Any attempt to specify such promotional measures in the Renewable Policy will not effectively serve its purpose for the reasons already discussed.
		5. One of the main reason for the phenomenal growth of wind power in the country especially in Tamil Nadu is due to its must run status and yearly banking facility. Wind forecast is not the solution to grid parity but a solution to scheduling and despatch. With the best forecast, vagaries of the wind power can be better understood but vagaries cannot be eliminated. Therefore, priority such as must run should be provided for the very survival of the wind power industry without which the government cannot achieve its ambition of adding 60,000 MW of wind power by 2022. Therefore Must Run, and banking Provisions have to be explicitly provided in the RE Act which is already in vogue under the E Act and regulations made thereon. The very purpose of the RE Act will not be served if the must run and banking facility are not explicitly provided in the RE Act.
		6. It is true that the Distribution licensee (DL) may incur certain cost on banking of infirm power. It can be always calculated reasonably and the DL can be compensated accordingly. APTEL has already issued direction to SERCs to calculate banking charges reasonably. The National RE Fund/State Green Fund proposed in the RE Act may also be utilised to reduce the burden of the RE Developer to meet out this cost.

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Section 2. Standard clauses about applicability of Act and notification

Version-2 of Clause 1 and 2(1) The electricity sector including electricity generation from renewable resources is covered under the Electricity Act, 2003. It is presently being amended to give an impetus to the development of electricity generation and consumption from renewable energy sources apart from a push for open access and choice of supplier. However, some critical issues which will have serious implications for aggressive RE deployment are still not covered adequately in E Act such as principles of grid planning, grid operations and grid management, including cost sharing of each of these aspects. Other key aspect is concept of national target and its compliance by utilities.

(2) The proposed Renewable Energy Bill therefore covers such issues which ideally should be covered under the E-Act, 2003, however are not yet covered in the draft publicly available. Such issues therefore need to be read along with the proposed modifications toE Act and this Bill, and are captured in last Part (Part VI).

Section 3(22)

22) – Renewable Energy (RE) SourcesII means energy derived from non-depleting resources and includes the following sources-

- i. Wind
- ii. Solar radiation;
- iii. Mini hydro;
- iv. Biomass;
- v. Biofuels;
- vi. Landfill & Sewage gas;
- vii. Municipal solid waste;

Suggested Addition / Modification / Deletion

Section 2. Standard clauses about applicability of Act and notification

Version-2 of Clause 1 and 2(1) The electricity sector including electricity generation from renewable resources is covered under the Electricity Act, 2003. It is presently being amended to give an impetus to the development of electricity generation and consumption from renewable energy sources apart from a push for open access and choice of supplier. However, some critical issues which will have serious implications for aggressive RE deployment are still not covered adequately in E Act such as principles of grid planning, grid operations and grid management specific to Renewable Energy, including cost sharing of each of these aspects. Other key aspect is concept of national target and its compliance by utilities.

(2) The proposed Renewable Energy Bill therefore covers such issues which ideally should be covered under the E-Act, 2003, however are not yet covered in the draft publicly available. Such issues therefore need to be read along with the proposed modifications to E Act and this Bill, and are captured in last Part (Part VI).

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Section 3(22)

sources-

Wind

Solar radiation;

Landfill & Sewage gas;

Municipal solid waste;

Mini hydro;

Biomass;

Biofuels;

i.

ii.

iii.

iv.

V.

vi.

vii.

Reason for the suggestion

The principles of grid planning, grid operations and grid management havebeen extensively covered under Part V of the Electricity Act 2003(E Act). Further all such issues are specifically covered in the Grid Codes issued by the Central and State Regulatory Commissions. Grid planning, grid operations and grid management which are specific to RE only is not covered by E Act. Hence Section 2 may be modified accordingly.

There are dust/gaseous (hydro carbon) industrial wastes derived from Petroleum crude input. Such wastes are depletable and are not qualified for RE source as per the first part of the definition.

To give more clarity, the word "nondepleting" may be added in the explanation to definition.

Provisions in the draft Act	Suggested Addition / Modification / Deletion	Reason for the suggestion
viii. Industrial waste;	viii. Industrial waste;	
ix. Geothermal energy;	ix. Geothermal energy;	
x. Ocean energy;	x. Ocean energy;	
xi. Any other energy source, as may be notified by the Ministry; and	xi. Any other energy source, as may be notified by the Ministry; and	
xii. Hybrids of above sources	xii. Hybrids of above sources	
[In this definition: solar radiation include photovoltaics and solar thermal generation; biomass comprises solid, liquid, and gaseous fuels from crop residues, including timber and harvest residues as well as waste wood and organic waste from food production and animal husbandry. It also includes feedstock from dedicated biomass plantations grown on degraded/waste lands deemed suitable for this purpose by relevant authorities; ocean energy includes wave, tidal and marine sources based on coastal land and/ or shallow coastal waters; and industrial waste includes all solid, liquid and gaseous by products/effluents which can be used for energy generation, including agro-industrial wastes and by products.]	[In this definition: solar radiation include photovoltaics and solar thermal generation; biomass comprises solid, liquid, and gaseous fuels from crop residues, including timber and harvest residues as well as waste wood and organic waste from food production and animal husbandry. It also includes feedstock from dedicated biomass plantations grown on degraded/waste lands deemed suitable for this purpose by relevant authorities; ocean energy includes wave, tidal and marine sources based on coastal land and/or shallow coastal waters; and industrial waste includes all solid, liquid and gaseous by products/ effluents <u>which are non-depleting</u> and can be used for energy generation, including agro-industrial wastes and by	
Chapter III: Authorities to be appointed/		In this Committee, a permanent member from RE Industry, especially from Wind
National Renewable Energy Committee (NREC)		Energy industry may be considered for appointment.
Section 7. The Central Government shall constitute a body to be known as the National Renewable Energy Committee within {three} months from the date of commencement of this Act.		

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Provisions in the draft Act	Suggested Addition / Modification / Deletion	Reason for the suggestion
Additional Section for discussion:	Additional section for discussion:	Adding the trading function to the
1. Constitution and Roles of RE Corporation of India (RECI):	1. Constitution and Roles of RE Corporation of India (RECI):	Corporation as suggested will help exchange of RE power outside the state.
 a. Central Government shall, within {one year} of the notification of the Act, create or designate {/ cause} one of its existing corporate entities as the – Renewable Energy Corporation of India. 	 a. Central Government shall, within {one year} of the notification of the Act, create or designate {/ cause} one of its existing corporate entities as the — Renewable Energy Corporation of India. 	
b. The Renewable Energy Corporation of India shall be incorporated under the CompaniesAct 2013.	b. The Renewable Energy Corporation of India shall be incorporated under the Companies Act 2013.	
c. The Renewable Energy Corporation of India shall perform the following functions:	c. The Renewable Energy Corporation of India shall perform the following functions:	
i. Act as a national level RE procurement entity	i. Act as a national level RE procurement entity	
ii. Support development of Renewable Energy Investment Zones across the country	ii. Support development of Renewable Energy Investment Zones across the country	
(Project development)	iii. Act as a National level RE power trading entity	
	(Project development)	
Section 15. National Renewable Energy Policy		As on date (before amendment to E Act) National Electricity Policy, Tariff Policy are
(1) Within six months of this Act, the Ministry shall, in consultation with the State governments, prepare and publish, the National Renewable Energy Policy		case with the National Rural Electrification Policy. Since the SERC is the quasi-judicial authority for implementing the provisions
(2) Provided however that such RE Policy shall be formulated keeping in consideration the appropriate provisions of the Electricity Act 2003, as amended from time to time, and the provisions of this law, aimed at		of the Renewable Energy Act/Policy, the RE policy shall be made mandatory for the purpose of implementation by the SERCs and suitable provision may be specified in the RE Act.
the optimum and integrated development of the renewable energy sector, and its applications, including electricity, heating, lighting, cooking, cooling, transport, irrigation, and combinations of the same.		

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Specifically, the policy shall



Provisions in the draft Act	Suggested Addition / Modification / Deletion	Reason for the suggestion
i <u>. Build upon and be complementary to the</u> National RE Policy notified from time to time under the Electricity Act 2003		It is true that the Distribution licensee (DL) may incur certain cost on banking of infirm power. It can be always calculated
26. The National RE Fund and the State Green Funds shall be applied for meeting the expenses incurred for implementation		reasonably and the DL can be compensated accordingly. APTEL has already issued direction to SERCs
of the objectives and provisions of this Act, as specified by the National RE Policy and National RE Plan, and may be used inter alia for:		to calculate banking charges reasonably. The National RE fund/state green fund proposed in the RE Act may also be utilised
i. Lowering risk and cost of capital for investments in RE projects		to reduce the burden of the RE Developer to meet out this cost.
ii. Financially supporting users, primarily distribution companies in case of electricity, and direct users of other RE technologies and applications, such that they become indifferent in the choice between conventional and renewable electricity and between conventional energy and RE resources, until parity is achieved		
iii. Infrastructure development for renewable energy;		
Promotion and launch of such programmes for adoption of international best practices.		
Section 39(7) Renewable Generation Obligation: Any generating company may establish, operate and maintain a generating station without obtaining a licence under the EA 2003, if it complies with the technical standards relating to connectivity with the grid referred to in clause (b) of section 73 of EA 2003:		It may not be economical to ask every generator to keep a spinning reserve of 5%. It is especially not workable for a RE generators.Ultimately this cost will be added in the tariff of the generator. Instead, every distribution licensee will be asked to maintain a spinning reserve which has already been prescribed by CEA and it is supposed to be followed by the distribution
 Provided that any generating company establishing may be required by the system operator to build and maintain a spinning reserve of such capacity as may be notified by the Central Government from time to time: 		licensee. This is more economical. Hence sub section (i) may be deleted.

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Provisions in the draft Act

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(2) Cost of Grid connectivity:

- i. Provided also that the renewable energy generator shall bear the expenses associated with the interconnection of their facility to the network provided that in relation to wind power projects and solar photovoltaic projects interconnection point shall be line isolator on ongoing feeder on HV side of the pooling substation and in relation to Solar thermal, SHP, biomass power and non-fossilfuel based cogeneration power projects the interconnection point shall be line isolator on outgoing feeder on HV side of generator transformer.
- ii. The costs associated with strengthening the grid beyond the interconnection point shall be borne by the operator of the network system whose grid needs strengthening
- iii. Deemed Generation: Provided further that if the grid is not available for power evacuation after the project has commenced generation or is already operational, the power will considered to be deemed generated and sold, with charges being payable to the RE generator. Detailed guidelines in this respect shall be issued as part of RE Policy

40. Procurement of Renewable Electricity and payment guarantee

(4) The Ministry shall, within one year of notification of the Act, establish clear guidelinesfor procurement mechanisms including but not limited to competitive bidding processes

Suggested Addition / Modification / Deletion

(2) Cost of Grid connectivity:

i. Provided also that the renewable energy generator shall bear the expenses associated with the interconnection of their facility to the network provided that in relation to wind power projects and solar photovoltaic projects interconnection point shall be line isolator on ongoing feeder on HV side of the pooling substation and in relation to Solar thermal, SHP, biomass power and non-fossil fuel based cogeneration power projects the interconnection point shall be line isolator on outgoing feeder on HV side of generator transformer.

ii. The costs associated with strengthening the grid beyond the interconnection point shall be borne by the operator of the network system whose grid needs strengthening

iii. "Deemed Generation: Provided further that if the LIVE grid is not MADE available for power evacuation after the project has commenced generation or is already operational, the power will considered to be deemed generated and sold, with charges being payable to the RE generator. Detailed guidelines in this respect shall be issued as part of RE Policy.

40. Procurement of Renewable Electricity and payment guarantee

(4) The Ministry shall, within one year of notification of the Act, establish clear guidelinesfor procurement mechanisms including but not limited to competitive bidding processes. However the existing power purchase and wheeling Agreements shall be safeguarded and hold good till the expiry of the agreements.

Reason for the suggestion

The WEGs in Tamil Nadu are the worst affected due to backing downs/ disconnections from the grid. Inspite of must run provision, the WEGs are denied grid access by the TANGEDCO. Wind generation is seasonal and hence deemed generation may be provided if evacuation is not available for whatsoever reason. The Regulation has been modified accordingly.

The addition is to safeguard the existing power purchase and wheeling Agreements.

For providing more clarity the words "cross subsidy" have been added.

The implementation of common RPO among all the states necessitates flow of RE power from RE rich states to RE deficient states. Hence inter-state Transmission charges and losses may be waived like for Solar.



Provisions in the draft Act	Suggested Addition / Modification / Deletion	Reason for the suggestion	
(7) The open access consumers procuring electricity from renewable energy sources not to pay the surcharge for open access.	 7) The open access consumers procuring electricity from renewable energy sources not to pay the cross subsidy surcharge for open access. 8) The Open Access consumers procuring 		
	electricity from RE source not to pay Transmission Charges and losses for Inter– State Transmission.		
41. Timely Payments for RE Procurement:	41. Timely Payments for RE Procurement:	In Tamil Nadu, the security in the form of interest for the delayed payment is not materialising. Hence the payment security may be specifically made as bank guarantee.	
(1) Regulated Obligated Entities shall within one year of the notification of the Act, create adequate and sufficient payment security mechanisms that ensure timely payments for RE power procured	1) Regulated Obligated Entities shall within one year of the notification of the Act, create adequate and sufficient payment security in the form of Bank guarantee mechanisms that ensure timely payments for RE power procured		
Section 42 (3) Forecasting of RE generation as input to system operation	Section 42 (3) Forecasting of RE generation as input to system operation	There are large number of small wind generators in the country and it is very	
i. The Ministry shall, within one year of the notification of the Act, designate an entity (the Power System Corporation of India) as the Nodal Entity for the task of developing forecasts for all RE generation connected to the grid	i. The Ministry shall, within one year of the notification of the Act, designate an entity (the Power System Corporation of India) as the Nodal Entity for the task of developing forecasts for all RE generation connected to the grid	difficult to collect data from all of them directly. Obtaining data collectively will be more practicable. Accordingly the section may be modified.The cost incurred by the existing WEGs on forecasting based on the earlier Regulations	
ii. All new renewable electricity generators will provide all production data to the nodal Entity. The data collected by the Nodal Entity will be collected using techniques which have been internationally tested and recorded in Internationally accepted formats, made available to the public on a single platform and updated regularly	ii. All new renewable electricity generators either individually/ collectively will provide all production data to the nodal Entity. The data collected by the Nodal Entity will be collected using techniques which have been internationally tested and recorded in Internationally accepted formats, made available to the public on a single platform and updated regularly	may also be reimbursed since such costs have not been taken into consideration by the SERC while setting the feed in tariff and they have incurred extra cost on this account.	
(6) The Ministry shall allocate funds for activities relating to RE generation			

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(Terms & Conditions on OA) Third Amendment

NDPRC



July 14, 2015

To, **The Secretary,** Karnataka Electricity Regulatory Commission 6th & 7th Floor, Mahalakshmi Chambers, 9/2, M.G. Road, Bangalore - 560 001

Sub: Comments on Draft notification on "Karnataka Electricity Regulatory Commission (Terms and Conditions for Open Access) (Third amendment) Regulations, 2015 issued by KERC on 1st July 2015

Respected Sir

On behalf of its members Indian Wind Power Association (IWPA) would like to express our sincere gratitude to this Hon'ble Commission for always being in the forefront in promoting environmentally benign energy sources and also endowing its kind support towards development of renewable energy in the state of Karnataka.

With reference to the above draft regulations, we submit our comments as below.

Amendment of Regulation 2

The Honorable Commission has proposed to include Wheeling and Banking Agreement under ("j-1")"Open Access Agreement".

Further under Substitution of Regulation 9, Procedure for applying for Open Access other than Day Ahead Transaction, sub clause (12)

"the Nodal Agency shall prepare the standard open access agreement formats as required after obtaining due approval of the Commission and make the standard agreement formats available to public and shall host the agreement formats on the website of the Nodal Agency.

Provided that the current agreement formats approved by the Commission shall be in force until amended by the nodal agency and approved by the Commission."

1. IWPA submission on including wheeling and banking agreement in Open Access regulations.

We wish to submit that the concept of Wheeling and banking model was adopted in the state prior to establishment of the Honorable Commission. The Honorable Commission after it was established considered the pros and cons and decided to continue with the Wheeling & Banking arrangement.

In order to encourage wind investment in the state, wheeling and banking charges (W&B Charges) were determined by this Commission. After enactment of EA 2003 the said system was continued and W&B charges were Determined in the respective consumer Tariff orders.

Further, in order to provide a clear visibility for the Investors, this Honorable Commission had issued orders in the matter of

Indian Wind Power Association - Karnataka State Council No. 50, Ground Floor, Millenium Towers, Queens Road, Bengaluru 560 051. National Council: *Chennai;* Regional Council: *New Delhi;* State Council: *Ahmedabad, Hyderabad, Jaipur, Mumbai*



The KERC had passed the said orders after hearing all the stake holders. In order to ensure smooth functioning of the arrangement, KERC also brought out the **Standard draft Wheeling & Banking agreement** to be entered into between the Investor seeking the Wheeling & Banking arrangement, KPTCL and the ESCOM.

All the above initiatives confirm that this Commission recognizes the W&B transaction as a "necessary and distinct category" of transaction outside the ambit of Open access regulations.

Presumably, the Honorable Commission's order No v/15/14 dated 12th September 2014 entails the requirement of 15 min scheduling from both Generator and Consumer. The present draft Regulation is a continuation to the above cited order wherein the W&B arrangement also is mentioned as part of the said Regulation.

If this is the intent, the entire W&B arrangement itself will get defeated as it is not possible for Wind power to schedule power. The Commission had considered these facts earlier and had determined the W&B charges keeping the Wind power outside the ambit of Open access.

IWPA request

In view of the above we request this Honorable Commission not to include W&B agreement in "Karnataka Electricity Regulatory Commission (Terms and Conditions for Open Access) (Third amendment) Regulations 2015.

2. IWPA submission on preparation of Standard Open Access agreement formats by Nodal Agency.

This Honorable Commission vide its Order No B/01/1 dated 11.07.2008 framed standard Wheeling and Banking Agreement (W&B Agreement) along with the W&B charges for wind power project in due consultation with the KPTCL, ESCOMs and the Wind Insutry. The above order was valid for a period of 5-years from 11.07.2008 i.e. for RE projects commissioned between 11.07.208 and 10.07.2013.

Subsequent to the said Order this Honorable Commission vide its order dated 09.10.2013 continued the earlier order

dated 09.06.2005 till 31.03.2014 allowing captive generators to avail REC benefit. Further, the Commission vide its order dated 24.04.2014 extended the validity of the above order up to 30.06.2014.

The Commission vide its order dated 04.07.2014 approved W&B charges for both non-REC and REC (captive power plant) categories and made these charges applicable for the projects commissioned on or before 31.03.2018 and which is valid for a period of 10 years.

The Commission vide its order dated 08.07.2014 had approved standard W&B agreement for RE projects.

The Commission vide its order dated 26.02.2015 amended standard W&B Agreement formats for non-REC route projets and captive RE projects.

IWPA Request

All the above exercises were concluded by the Honorable Commission by floating respective consultation papers, obtaining comments of stakeholders and state utilities and conducting of public hearing. And finally the Commission concluded the standardization of agreements during February 2015 and the same is valid up to 31.03.2018.

Any redrafting of the said agreements in the name of open access agreement by nodal agency and limiting the role of this Honorable Commission, we are afraid, may adversely affect the confidence of investing community in the sustainability of regulatory orders in the state.

Hence we request the Honorable Commission not to disturb the settled W&B agreement format and W&B charges and keep W&B of Wind power projects agreements outside the ambit of 'Karnataka Electricity Commission (Terms and Conditions for Open Access) (Third amendment) Regulations, 2015 proposed by this Honorable Commission and oblige.

Thanking you,

Yours faithfully,

B.S. Sheety President (Indian Wind Power Association (Karnataka State Council)





Tariff Order received from APERC



ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION HYDERABAD

Order No. 03 of 2015 dated 01.08.2015

(Suo-motu)

Present : Justice G. Bhavani Prasad - Chairman Dr. P. Raghu - Member Sri. P. Rama Mohan - Member

In the matter of notifying the generic preferential tariff applicable from 31st July 2015 till 31st March 2015 in respect of Wind Power Projects in the State of Andhra Pradesh pursuant to Regulation 6 of Regulation No. 1 of 2015

In compliance with the statutory mandate of Section 61 (h) and Section 86 (1) (e) of the Electricity Act, 2003 and in accordance with the Andhra Pradesh Electricity Regulatory Commission (Terms and Conditions for Tariff Determination for Wind Power Projects) Regulations, 2015 (Regulation No. 1 of 2015) in general and Regulation No. 6 thereof in particular and the principles and parameters prescribed therein for determination of generic preferential tariff on suo-motu basis for wind power projects and in exercise of the powers conferred under Regulation No. 24 of the said Regulations and Regulation No. 55 of the Andhra Pradesh Electricity Regulatory Commission (Conduct of Business) Regulatons, 1999 (Regulation No. 2 of 1999) and all other powers hereunto enabling, the Andhra Pradesh Electricity Regulatory Commission (Commission makes the following order:

As per Regulation 6 of Andhra Pradesh Electricity Regulatory Commission (Terms and Conditions for Tariff Determination for Wind Power Projects) Regulations 2015, the generic preferential tariff applicable for FY2015-16 shall be notified soon after the publication of the regulations in the Official Gazette to be applicable with effect from the date of the regulations coming into force.

Before making Regulation No. 1 of 2015, public notice was given and after considering all the suggestions and objections received from the public and the stakeholders, the said Regulation has been notified. The parameters for fixation of tariff specified therein work themselves out in arriving at the generic preferential tariff for the FY2015-16 as a necessary consequence, which is hence, a matter of mere arithmetical computation in implementation of and in compliance with the provisions of Regulation No. 1 of 2015.

Accordingly, the parameters taken into consideration as per the Regulation No. 1 of 2015 for determination of tariff are as hereunder:

	Parameter	Value
А	Tariff Period	25 Years
В	Useful Life	25 Years
С	Capital Cost	₹ 600 lakhs / MW (including evacuation cost)
D	0 & M Expenses	₹ 8.57 lakhs / MW
E	0 & M Expenses' Escalation	7.52% p.a.
F	Depreciation for the first 10 years	7% p.a.
G	Depreciation for the remaining useful life of the plant	1.33% p.a.

	Parameter	Value
Н	Capacity Utilization Factor (CUF)	23.5%
I	Return on Equity	16%
J	Interest Cost on Debt	13%
К	Tenure of Loan	10 years
L	Interest on Working Capital	13.5%
К	Debt Equity Ratio	70 : 30

Based on the above parameters and considering the useful life of the Wind Power Plants as 25 years, the levelised generic preferential tariff works out to `4.83 / unit without considering the accelerated depreciation and `4.25 with accelerated depreciation. The Commission accordingly, notifies the levelised generic preferential tariff as follows:

Tariff without AD benefit	Tariff with AD benefit
₹ 4.83	₹ 4.25

This tariff shall be applicable for all the new wind power projects entering into Power Purchase Agreements (PPA) on or after the date of notification fo the Regulations in the Official Gazette of the Govt. of Andhra Pradesh i.e., 31.07.2015.

This order is corrected and signed on this 1st day of August, 2015.

DPR

Sd/-	Sd/-	Sd/-
P. Rama Mohan Member	Dr. P. Raghu Member	Justice G. Bhavani Prasad Chairman

<u>Erratum</u>

To the APERC Order No. 03/2015, dated 01-08-2015

In the matter of notifying the generic preferential tariff applicable from 31st July, 2015 till 31st March, 2016 in respect of Wind Power Projects in the State of Andhra Pradesh pursuant to Regulation 6 of Regulation No. 1 of 2015, for correction of a typographical error.

The value of the parameter in column 'E' i.e., 0 & M Expenses Escalation shall be read as 5.72% p.a in place of 7.52% p.a shown in the table at page 2 of the order.

Sd/-

P. Rama Mohan

Member

Sd/-

Dr. P. Raghu

Member

Sd/-

Justice G. Bhavani Prasad Chairman

CERTIFIED COPY

SECRETARY : A.P. Electricity Regulatory Commission Hyderebad.





Gist of proceedings of meeting with Smt. Shanti Prasad Ji Ex Chairman, RERC held at Jaipur on August 18, 2015

This is with reference to discussions held on yesterday at M/s Wind World's office at Apex Mall, lalkothi, Jaipur.

WINDPRO

It was suggested by Sh. Shanti Prasad ji that Investors must claim for the deemed generation for the period and they get the the getails of the curtailed hours from concern developers.

The claim copy / invoice will be helpful on writ filling or with future communication with concerned division.

So all are requested to pls start the process & mark a copy (scan) to us also.

Also discussed the RERC (Terms and Conditions for Determination of Tariff for Renewable Energy Sources - Wind and Solar Energy) Regulations, 2014 as well as other regulations referred therein provides for must run status as detailed here under. Section 61 of the Electricity act 2003 provides that in specifying the terms and conditions for the determination of tariff, state commission shall be guided by the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees. CERC`s tariff regulation also specify must run status as stated hereunder.

2. The Rajasthan Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Renewable Energy Sources - Wind and Solar Energy) Regulations, 2014 provides as under:-

10. Despatch principles for electricity generated from Wind and Solar Energy

(1) All Wind and Solar energy plants shall be treated as 'MUST RUN' power plants and shall not be subjected to 'merit order despatch' principles.

(2) The despatch principles for electricity generated from Wind and Solar Energy plants shall be as per the provisions of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010, as amended from time to time, except where specific provision has been made under the Rajasthan Electricity Regulatory Commission (Rajasthan Electricity Grid Code) Regulations, 2008. 3. Sub reg (2) refers to Rajasthan Electricity Regulatory Commission (Rajasthan Electricity Grid Code) Regulations, 2008 and the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010. The provisions of these regulations is as under:-

(A). The Rajasthan Electricity Regulatory Commission (Rajasthan Electricity Grid Code) Regulations 2008(as amended vide 1st amendment dated 10th, June 2011- shown in [])

"7.0 Chapter-VII SYSTEM SECURITY ASPECTS

[7.8.1 The SLDC shall make all efforts to evacuate the available solar and wind power and treat as a must-run station after taking into consideration the storage capacity. However, SLDC may instruct the solar /wind generator to back down generation on consideration of grid security or safety of any equipment or personnel is endangered and Solar/ wind generator shall comply with the same.

10.0 Chapter -X SCHEDULEING, DESPATCH AND ACCOUNTING

10.3 Generation Despatch

[The SLDC shall maintain the record of schedule from renewable power generating stations based on type of renewable energy sources i.e. wind or solar from the point of view of grid security. While scheduling generating stations in a region, system operator shall aim at utilizing available wind and solar energy fully as per provisions of latest IEGC.]

(B). The Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010.

5.2 System Security Aspects

(u) Special requirements for Solar/ wind generators System operator (SLDC/ RLDC) shall make all efforts to evacuate the available solar and wind power and treat as a must-run station. However, System operator may instruct the solar /wind generator to back down generation on consideration of grid security or safety of any equipment or personnel is endangered and Solar/ wind generator shall comply with the same. For this, Data Acquisition System facility shall be provided for transfer of information to concerned SLDC and RLDC



4. PART - VII - TARIFF of the Electricity act 2003 provides as under:-

"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:-

(a) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;

(h) the promotion of co-generation and generation of electricity from renewable sources of energy;"

5. The Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 has provided as under:-

"11. Despatch principles for electricity generated from Renewable Energy Sources:

6. Thus all regulatory provisions provides for Wind Generation to be must run.



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