

GOVERNMENT OF ANDHRA PRADESH
ENERGY, INFRASTRUCTURE & INVESTMENT DEPARTMENT

Letter No.1383/POWER.II.2/2016-2,

Dated.28/09/2016

From ,
The Principal Secretary to Government,
Energy, I&I Department,
A.P. Secretariat,
Hyderabad.

To
The Secretary,
Andhra Pradesh Electricity Regulatory Commission,
Singarani Bhavanam, Red Hills,
Hyderabad.(w.e.)

Sir,

Sub:- Energy, I & I Department - Representation to APERC to restrain the DISCOMs from entering PPAs for purchase of NCE indiscriminately and to give certain directions - Furnishing of remarks - Regarding.

- Ref:-1. The Vice Chairman & Managing Director, NREDCAP, No.NREDCAP/WE/ APERC/2016/1978, Dated 20-09-2016.
2. The Govt., letter No.1383/Pr.II(2)/2016, dated:24.09.2016.
3. The Vice Chairman & Managing Director, NREDCAP, No.NREDCAP/WE/ APERC/2016/2017, Dated 23-09-2016.

In continuation of the reference 2nd cited, I am to forward herewith the remarks/response received vide reference 3rd cited, on the representation dated:26.07.2016 of the APSEB Engineers Association as desired in Andhra Pradesh Electricity Regulatory Commission(APERC) letter No.APERC/Secy/F.NO. S-87/2016, dated. 20-07-2016, for taking necessary action.

Yours faithfully,



for Principal Secretary to Government

Copy to:-

The Vice Chairman & Managing Director,
New & Renewable Energy Development Corporation of Andhra
Pradesh(NREDCAP),Nampally, Hyderabad.(w.e.)



Receipt No : 356902/2016/POWER-II-E&I

ఆంధ్ర ప్రదేశ్ సూతన మరియు పునరుద్ధరణ యాంధ్రన వనరుల అభివృద్ధి సంస్థ లి.
New & Renewable Energy Development Corporation of Andhra Pradesh Ltd.

(A State Government Company)

(Formerly Non-Conventional Energy Development Corporation of Andhra Pradesh Ltd.)

Regd. Office :# 5-8-207/2, PISGAH Complex, Nampally, Hyderabad - 500 001, India.

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NREDCAP/WE/APERC/2016 / 1978

Dt: 20.09.2016

To
The Principal Secretary to Govt.,
Energy, I&I and CRDA Dept.,
Hyderabad.
Sir,

Sub: Representation to APERC to restrain the DISCOMs from entering PPAs for purchase of NCE indiscriminately and to give certain directions-Furnishing of remarks-Reg.

- Ref:1. Lr.No. APERC/Secy/F.No.S-15/2016, Dt:20.07.2016 of the Secretary, APERC
2. Our letter No.NREDCAP/WE/APERC/2016/1713, Dt: 18.08.2016
3. Lr .No.APERC/Secy/F.No.S-87/2016, Dt: 24.08.2016 of the Secretary, APERC

It is submitted that ,vide reference 1st cited, the Secretary APERC has communicated the representation Dt:16.07.2016 of Sir M Venugopal Rao and requested to offer considered views on or before 20.08.2016.

As we have to consult various stakeholders to get their views on promotion of Renewable Energy Projects taking into consideration the policies of Gol & State Government, we have requested the APERC to extend time upto 20.09.2016 for furnishing of remarks of the Government and other Stakeholders vide reference 2nd cited. Accordingly, the APERC has extended time upto 20.09.2016 for furnishing remarks on the representation.

In view of the above, the consolidated remarks/response on the representation is enclosed herewith for kind information and necessary action.

This is for favour of information.

Thanking you,

Yours faithfully

[Signature]
VC & Managing director 20/9/16

Encl: As above

Copy submitted to the CMD, APTRANSCO,Hyderabad.
Copy submitted to the Advisor, Energy Dept.,Hyderabad.
Copy to CMD,APEPDCL, Vishakapatnam.
Copy to CMD,APSPDCL,Tirupathi

3	Total	11.50%	14.25%	17%
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6. Given the targets to be met by the state of Andhra Pradesh, GoAP has been proactive to encourage solar power and wind addition in the state in a rigorous way. MNRE with National Institute of Solar Energy has estimated solar potential and Andhra Pradesh is one among the top five states and has installable capacity of 38 GWp. National Institute of Wind Energy (NIWE) has forecasted installable potential in wind for India in which Andhra Pradesh is again one of the four states and has an installable capacity of 44 GW. Andhra Pradesh is trying its best to leverage this opportunity to produce more green energy for the betterment of environment and society.

7. However, the wind power capacity harnessed by the State is low when compared to other wind power potential states in the country. The State wise percentage of wind power potential utilized as on 31.03.2016 as per the report of MNRE is as follows (Source: <http://mnre.gov.in/FileManager/UserFiles/State-wise-wind-power-potential-utilized.pdf>).

Sl No	State	Cumulative Wind Power installed capacity operational at the end of FY 2016 (MW)	Total Wind Power potential at 100 meter above ground level (MW)	Percentage of wind power potential utilized
1	Andhra Pradesh	1431.45	44229	3.24%
2	Gujarat	3948.61	84431	4.68%
3	Karnataka	2869.15	55857	5.14%
4	Kerala	43.5	1700	2.56%
5	Madhya Pradesh	2141.10	10484	20.42%
6	Maharashtra	4653.83	45394	10.25%
7	Rajasthan	3993.95	18770	21.28%
8	Tamil Nadu	7613.86	33800	22.53%
9	Telangana	77.7	4244	1.83%
10	Others	4.3	3342	0.13%
	Total	26777.45	302251	8.86%

8. If wind farms commission as per schedule, Andhra Pradesh is likely to meet RPO in FY 2016-17 and may exceed the RPO target marginally by 2018-19 (Refer Annexure 1). However, it is likely that actual commissioning of the wind farms might get delayed due to constraint in evacuation infrastructure capacity.

Rajasthan	Draft Generic Tariff for Renewable Energy Sources for FY 2016-17	2016-17	25 years	Not specified Separately	20%	6.04
					21%	5.76
Tamil Nadu	Comprehensive Tariff Order on Wind Energy dated March 31, 2016	FY 2016-17 to FY 2017-18	20 years	Not specified Separately	27.15%	4.16

11. Ensuring integration of intermittent energy sources like solar and wind power into the grid in a proper manner is important. However, these challenges arise for higher levels of RE penetration when compared to grid demand. But these operational issues and challenges can be tackled with collective effort of Government, power utilities, developers and institutes. Solar Energy Corporation of India (SECI) has announced that it will soon release tenders for solar project developers to install storage solutions along with their projects. While storage solutions are a recent development in India, as and when these technologies mature, these can be used more effectively for grid stability.
12. To enable adequate usage of network infrastructure and reduce intermittency, the GoAP has also enabled development of wind solar hybrid projects in the AP Wind Power Policy – 2015. Solar and wind power potential in AP is concentrated in the Rayalaseema belt and studies reveal that their generation profile is complementary to each other. A hybrid wind solar project can help utilize the transmission infrastructure optimally and improve the net energy injection into the grid. The draft Wind-Solar Hybrid policy has been prepared exclusively to promote Wind-Solar Hybrid projects in the State and has already been published by NREDCAP for stakeholder comments. This draft policy has been made formulated considering the draft Wind Solar Hybrid policy published by MNRE at the national level.
13. Niti Ayog, the think tank of the Government of India, has recently noted in its report on “India’s Renewable Electricity Roadmap 2030: Towards Accelerated Renewable Electricity Deployment” the following:
“We should not get into the mindset that RE is the intruder and conventional energy is the main player. Why not consider RE to be main occupants of the “house” and then work out the rest of the system around RE, essentially, because RE is the future?”

While keeping this in mind, responses to objections raised are provided below:

Sl. No	Objection	Reply
1	In its tariff order for 2016-17, the Hon'ble Commission has determined a power purchase requirement of 56804.56 mu for both APSPDCL and APEPDCL. The	GoAP is committed towards better environment and development of eco-system for RE in the state. The Government of AP has entered MOU on 04.12.2015 and Project Implementation Agreement (PIA) on 01.01.2016.

Sl. No	Objection	Reply												
		<table border="1" data-bbox="791 349 1434 510"> <tr> <td>2018-19</td> <td>600</td> <td>200</td> </tr> <tr> <td>2019-20</td> <td>600</td> <td>300</td> </tr> <tr> <td>2020-21</td> <td>600</td> <td>300</td> </tr> <tr> <td>Total</td> <td>3000</td> <td>1000</td> </tr> </table> <p data-bbox="791 555 1434 741">The MoU signed by the Government of AP with an objective to bring in investments in the Green Energy Sector and to create employment opportunities to the local unemployed youth which is essential in the residual State of AP after bifurcation.</p> <p data-bbox="791 786 1434 1093">M/s Suzlon Energy Ltd., and M/s Axis Energy Ventures India Pvt. Ltd have conducted Wind Resource Assessment studies as per the Guidelines of Ministry of New and Renewable Energy for Wind Measurement by Private Sector and subsequent development. After assessment of Wind data and technical feasibility the capacities were allotted as per the norms of Government/NREDCAP.</p> <p data-bbox="791 1137 1434 1332">Further, allocation of capacity sanctions have also been made to companies like Gamesa, Enercon, Mytra, Ecoron, Renew power, Regen energy and other small developers amounting to total of around 4000 MW.</p> <p data-bbox="791 1413 1434 1608">MoP has revised its RPO obligation to 11.5% (FY 2016-17), 14.25% (FY 2017-18) and 17% (FY 2018-19). The capacity from the wind power projects that are expected to come up in a phased manner over the coming years will help the state meet this obligation.</p> <p data-bbox="791 1653 1434 1883">The Hon'ble APERC had computed 10472 MW surplus assuming 1000 MW of power procurement through DBFOO from June 2016. However, the bidding process has been delayed and the power has not been available as envisaged from June 2016. It may also be noted that the PLF of thermal plants has</p>	2018-19	600	200	2019-20	600	300	2020-21	600	300	Total	3000	1000
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	<p>purchasing NCE of not less than five per cent of consumption (sales) by the Discoms, the availability of the same is almost double the requirement. In view of high cost of NCE and long-term burden it imposes on consumers of power, the Discoms should not force or permitted to enter into long-term PPAs to purchase NCE indiscriminately, even under the policies of the Governments, RPPO and the pretext of environmental protection. When we raised the point in our submissions on ARR and tariff revision proposals of the Discoms for the year 2016-17, the Hon'ble Commission expressed the view that "the need for promoting green energy for environmental protection and the necessity to keep the power purchase cost at a reasonable level have to be delicately balanced. The ecological balance has to be maintained to avoid any catastrophe to humanity which cannot be measured only in monetary terms. National and State policies in this regard also have to be kept in view" (page 37 of tariff order for 2016-17). Without going into the larger academic issues of "ecological balance" and avoidance of "any catastrophe to humanity," which by their very definition are global in nature and as such call for concerted efforts at global level and whose pros and cons can be discussed at length, and going by "the necessity to keep the power purchase cost at a reasonable level," I would like to reiterate that a reasonable limit should be maintained for purchasing NCE in view its higher costs and that there is need for going in for the same with restraint and gradually to take advantage of falling prices that are being</p>	<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Long Term Trajectory</th> <th>FY 2016-17</th> <th>FY 2017-18</th> <th>FY 2018-19</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Non Solar</td> <td>8.75%</td> <td>9.50%</td> <td>10.25%</td> </tr> <tr> <td>2</td> <td>Solar</td> <td>2.75%</td> <td>4.75%</td> <td>6.75%</td> </tr> <tr> <td>3</td> <td>Total</td> <td>11.50%</td> <td>14.25%</td> <td>17%</td> </tr> </tbody> </table> <p>The RPO achieved during the year 2015-16 was 0.17% 4.65% in case of non-solar and 0.16% in case of solar RPO.</p> <p>The RPO targets have already been revised for different states. For example:</p> <p>MERC Regulation of 2016 has set RPO for Maharashtra as shown below:</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Long Term Trajectory</th> <th>2016-17</th> <th>2017-18</th> <th>2018-19</th> <th>2019-20</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Non Solar</td> <td>10%</td> <td>10.50%</td> <td>11%</td> <td>11.50%</td> </tr> <tr> <td>2</td> <td>Solar</td> <td>1%</td> <td>1.50%</td> <td>2%</td> <td>2.50%</td> </tr> <tr> <td>3</td> <td>Total</td> <td>11%</td> <td>12%</td> <td>13%</td> <td>14%</td> </tr> </tbody> </table> <p>TNERC Amendment to Order on RPO issued in March 2016 has laid down a revised RPO trajectory:</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Long Term Trajectory</th> <th>2015-16</th> <th>2016-17</th> <th>2017-18</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Non Solar</td> <td>9%</td> <td>9%</td> <td>9%</td> </tr> <tr> <td>2</td> <td>Solar</td> <td>0.5%</td> <td>2.50%</td> <td>5%</td> </tr> <tr> <td>3</td> <td>Total</td> <td>9.50%</td> <td>11.50%</td> <td>14%</td> </tr> </tbody> </table> <p>The Government of AP has already requested (a)</p>	Sl. No.	Long Term Trajectory	FY 2016-17	FY 2017-18	FY 2018-19	1	Non Solar	8.75%	9.50%	10.25%	2	Solar	2.75%	4.75%	6.75%	3	Total	11.50%	14.25%	17%	Sl. No.	Long Term Trajectory	2016-17	2017-18	2018-19	2019-20	1	Non Solar	10%	10.50%	11%	11.50%	2	Solar	1%	1.50%	2%	2.50%	3	Total	11%	12%	13%	14%	Sl. No.	Long Term Trajectory	2015-16	2016-17	2017-18	1	Non Solar	9%	9%	9%	2	Solar	0.5%	2.50%	5%	3	Total	9.50%	11.50%	14%
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¹ TNERC Amendment to the Renewable Energy Purchase Obligation Regulation, 2010 dated 07 March 2016

Sl. No	Objection	Reply
	<p>"3.3 The Distribution Licensee shall procure power, under this Regulation, in conformity with the Power Procurement Plan as approved by the Commission."</p> <p>Without submitting and getting consent of the Commission for such a plan of long-term load forecast, resource plans and power procurement plans, if the Discoms, either on their own, or most probably at the behest of the Government, enter into PPAs, long-term or for short-term purchases of power, especially high cost NCE, indiscriminately, the very purpose of regulatory requirements for orderly development of power sector and protecting larger consumer interest gets defeated.</p>	<p>GoAP has signed MoU with best-in-class players in the industry - to promote RE in the state and to encourage them to contributing to the development of the eco-system in AP. These players have agreed to invest in AP by establishing manufacturing plants.</p>
5	<p>The Government of A.P. has been forcing the Discoms to enter into long-term PPAs for purchase of NCE power, in addition to short-term purchases, indiscriminately and present the Commission with a fait accompli by submitting such PPAs seeking its consent, in the absence of any long-term load forecast, resource and power procurement plans approved by it. In the name of encouraging generation, purchase and use of NCE, the powers-that-be are encouraging themselves and those whom they want to benefit in this questionable manner, in the absence of any reasonable restrictions imposed by the Commission, much to the detriment of larger consumer interest. It is high time the Hon'ble Commission directed the Discoms and brought them round to submit and get its consent for long-term load forecast, resource and power procurement plans after holding public hearings thereon.</p>	

Sl. No	Objection	Reply
		<p>As per the Ministry of Power, Government of India order dt: 22.07.2016 notified the long term growth trajectory of Renewable Power Purchase Obligation for Non- Solar and Solar from 2016-17 to 2018-19 and the period of regulation 1 of 2012 ends with 31 March 2017, APERC has placed notice and draft Renewable Power Purchase Obligation Regulations,2016 prescribing the RPPO target for the years from 2017-18 to 2021-22 by expending the trajectory issued by MoP. In its comments/views/suggestions of all the stakeholders before 07.10.2016.</p> <p>Niti Ayog had recently noted in "Report on India's Renewable Electricity Roadmap 2030: Toward Accelerated Renewable Electricity Deployment"</p> <p><i>"We should not get into the mindset that RE is the intruder and conventional energy is the main player. Why not consider RE to be main occupants of the "house" and then work out the rest of the system around RE, essentially, because RE is the future?"</i></p>
7	<p>Going by the above-mentioned letter of Principal Secretary, department of energy, to the C&MDs of the two Discoms, the PPAs are to be signed based on MoUs the Government of AP had with the Suzlon and Axis Energy companies. With the trend of tariffs coming down through real competitive bidding for NCE, need for pre-determination of normative tariffs for the same by ERCs has lost its relevance, as is being confirmed by experience repeatedly. Taking undue advantage of such normative tariffs, the Government can force the Discoms to enter into long-term PPAs with companies whom it wants to favour unduly and for extraneous</p>	<p>In case of MoU's, the tariff is determined Hon'ble APERC - based on regulations and public hearing. Moreover, the PPA is approved by the Hon'ble APERC.</p> <p>The extract from NTP -2016 is shown below:</p> <p><i>"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.</i></p>

Receipt No : 356902/2016/POWER-II-E&I&I

Sl. No	Objection	Reply
	<p>double the minimum percentage fixed by the Commission under RPP0 and scope for availing themselves of opportunities for purchasing NCE through real competitive bidding in a cautious and gradual manner, including offer of solar power by the Ministry of New and Renewable Energy @ Rs.4.50 per unit for a period of 25 years, without escalation, as conveyed through its letter dated 28.12.2015, is very much there. I sincerely hope that the Hon'ble Commission would re-assert its independence within the limitations of law, exercise its legitimate authority and take prompt and appropriate action on these issues in view of their urgency to protect larger consumer interest.</p>	<p>Discom shall abide by the directions of the Hon'ble APERC in this regard.</p>

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- Expected capacity addition is as below

Source	FY17	FY18	FY19	FY20	FY21	FY22
APGENCO Thermal	-	600	-	314	-	1,600
APGENCO Hydel	-	-	-	-	-	-
Central Generating Stations	200	586	26	-	-	-
NCE - Wind	800	1000	1000	1000	1000	1000
NCE - Solar	707	900	1000	1500	-	-
IPP	-	119	-	-	-	-
Others	736	-	-	-	(400)	-
Total	2,443	3,205	2,026	2,814	600	2,600

Receipt No: 356902/2016/POWER.II.E&I

అభివృద్ధి మరియు పునరుద్ధరణ ఇంధన వనరుల అభివృద్ధి సంస్థ లి.

New & Renewable Energy Development Corporation of Andhra Pradesh Ltd.

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E-mail : info@nedcap.gov.in, nedcap@ap.nic.in Website : www.nedcap.gov.in



NREDCAP/WE/APERC/2016 /1973

Dt: 20.09.2016

To
The Secretary
Hon'ble AP Electricity Regulatory Commission
#11-4-660, 4th Floor,
Singareni Bhavan, Red Hills
HYDERABAD 500 004

20/9/16

1-2 II
21/9/16

Sir,

Sub: Representation to APERC to restrain the DISCOMs from entering PPAs for purchase of NCE indiscriminately and to give certain directions-Furnishing of remarks-Reg.

As II
21/9/16

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With reference to the above, please find herewith enclosed the remarks / response on representation to APERC to restrain the DISCOMs from entering PPAs for purchase of NCE indiscriminately and to give certain directions .

1/2
21/9

This is for favour of information.

Thanking you,

Yours faithfully

VC & Managing director

Encl: As above

Copy submitted to the Principal Secretary to Govt., Energy, I&I and CRDA Dept.,Hyderabad.

Response to Objections/ requests raised by APSEB Engineers' Association

1. The Government of India has been encouraging renewable energy in a big way. India has submitted its Intended Nationally Determined Contribution (INDC) to the United Nations Framework Convention on Climate Change. As part of its commitment, India is set to reduce its emission intensity of its GDP by 33 to 35% by 2030 from 2005 levels and aims to achieve about 40% cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030. The Government has up-scaled the target of renewable energy capacity to 175 GW by the year 2022 which includes 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro-power.
2. Andhra Pradesh is poised for rapid industrial growth and availability of power is critical to sustain its vision of achieving double digit growth. With renewable energy sources becoming cost competitive to conventional energy sources, it is imperative to plan and support clean energy. Accordingly, GoAP has announced the AP solar power policy - 2015 and AP wind power policy -2015 to harness its large renewable energy potential for meeting the growing power requirements of the state.
3. In accordance with the pledge made by the Government of India to attain 175 GW of renewable energy capacity by 2022, Andhra Pradesh has announced a green commitment of 18,000 MW. Also, India has launched an International Solar Alliance at the COP 21 for all tropical countries to promote solar energy by reducing the cost of finance and technology in a collective manner. This initiative shall help boost the efforts of the solar industry to bring down the costs of solar power in a sustainable manner.

Objection/ Comment/ Suggestion

4. APSEB Engineers' Association has requested Hon'ble Commission to
 - (i) fix up optimum capacity of solar and wind generation ensuring grid stability
 - (ii) direct the power utilities to install solar and wind power generation as per the need of AP Grid and any excess capacity installed shall be exported to other states to meet statutory requirement of 5% non-conventional renewable energy (Renewable Power Purchas Obligation)

Response

5. The recently amended National Tariff Policy – 2016 (NTP -2016) has increased the SPO (Solar Power Purchase Obligation) obligation to 8% by FY 2021-22. In line with the NTP-2016 goal of increasing RPO (Renewable Purchase Obligation), Ministry of