

Note on Wind Energy in Andhra Pradesh

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INTRODUCTION:

Renewable energy (RE) has gained importance in the background of the debates and discussions on climate change all over the world. RE sources are gaining importance in reducing global warming gas emissions as they do not depend on fossil fuel. In India at present more than 75% of the power generation depends on coal based thermal power plants. In the background of emerging global obligations to bring down emissions of gases responsible for global warming the Government of India has brought out promising legal provisions and policies to promote renewable energy. Here it will not be out of place to mention that India is the first country to have a separate ministry – Ministry for New and Renewable Energy (MNRE) – to promote renewable energy based power generation in the country.

The Electricity Act 2003 contained provisions for promotion of renewable energy. According to section 86 (1)(e) of the Electricity Act, 2003 one of the functions of the state Electricity Regulatory Commissions is to “promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee”. The Preamble to this Act mentions that the Act is meant to ensure transparent policies and promotion of efficient and environmentally benign policies.

The National Electricity Policy notified on 12th February 2005 and National Tariff Policy notified on 6th January, 2006 also provided for promotion of renewable energy. The National Electricity Policy suggested encouraging private sector participation to exploit fully feasible potential of non-conventional energy resources through suitable promotional measures. The National Electricity Policy also suggested that RE shall be procured through competitive bidding process. It suggested differential tariffs to promote non-conventional technologies, as it would take some time before these technologies compete, in terms of cost, with conventional sources. National Tariff Policy provided that the appropriate Commission shall taking into account availability of renewable energy resources in the region and its impact on retail tariffs while fixing a minimum percentage for purchase of energy from such sources.

The National Action Plan on Climate Change (NAPCC) released on June 30, 2008 suggested that starting 2009-10 RE procurement may be set at 5% of total electricity purchase, and this to be increased by 1% each year for 10 years. That is, by 2020 RE sources should contribute 15% of total power generated in the country.

Forum of Regulators (FOR) national body of electricity regulators in India in its report “Policies on Renewables: Report” released in November 2008 held that RPO percentage should be applicable to energy input, not in terms of installed capacity. RPO percentage should be maintained at the minimum level of 5% by 2010. The overall RPO percentage may be specified rather than technology specific percentage. This Report suggested adopting cost plus tariff using the site specific CUF and a higher rate of return on equity. It suggested Renewable Energy Certificates (REC) to remove road blocks in flow of RE from surplus states to deficit states. It felt that the issues related to the eligibility of fossil fuel based

co-generation for the purpose of RPO and imposing RPO on open access or captive consumers needs to be further studied.

The Andhra Pradesh Electricity Regulatory Commission (APERC) with the powers and obligations bestowed by the above Acts and policies issued the first Renewable Power Purchase Obligation (RPPO) Order on 27th September 2005. This Order is applicable to every distribution licensee, captive power consumer, open access consumer and scheduled consumer (to the extent of power availed through open access) shall be required to purchase electricity at the percentage specified hereinabove of his total consumption of electricity within the area of a distribution licensee from non-conventional energy sources. This RPPO Order stipulates that every person or entity to whom this Order applies, shall purchase not less than five per cent (5%) of his consumption of energy from RE sources under RPPO during each of the year.

This Order of APERC included wind as one of the sources of energy for the purpose of complying with the percentage of RE procurement. One-half of one percentage point out of the RPPO (one-half of one per cent of total consumption) shall always be kept reserved by the distribution licensees for procurement of wind-based energy and shall be diverted, if necessary, to other NCE, only on a temporary basis, and also that all energy available from this source shall be purchased until it reaches the aforementioned one-half of one percentage point even if consequently, the total NCE purchase exceeds the total RPPO considering the NCE power purchase commitments made under the PPAs already entered into and consented to by the Commission.

The New and Renewable Energy Development Corporation of Andhra Pradesh (NREDCAP) estimated the wind energy potential at 2110 MW. The Government of Andhra Pradesh (GoAP) also in its G.O. Ms. No.48, dated 11.04.2008 quoting the Centre for Wind Energy Technology (C-WET) of the Ministry of New and Renewable Energy (MNRE), Government of India (GoI) placed the wind energy potential in the state at 2100 MW. The Indian Wind Energy Association (InWEA) estimates the wind energy potential at 8675 MW. This is more than four times the figure adopted by the GoAP and its nodal agency NREDCAP.

CONTENT OF THE POLICY:

The Department of Energy of Government of Andhra Pradesh (GoAP) issued New Wind Power Policy through the Government Order G.O. Ms. No.48 on 11-04-2008.

This Government Order (GO) at the outset stated that fast depletion of fossil fuels, increasing demand for electricity, increase in green house gas emissions and global warming have necessitated promotion of generation of energy through Non-conventional energy (NCE) and renewable sources. Amongst NCE sources, Wind is an important source of energy. This GO also noted that keeping in view the commitment of the Government to promote non-polluting sources of energy and to accelerate harnessing the wind potential of the State, Government has introduced the new policy for development of wind power in Andhra Pradesh (AP). This policy will be in operation for 10 years.

The objective of this policy is to encourage optimum utilization of the available wind power potential in the State by facilitating adoption of state of art technology through private participation, balancing the interest of the customer and the developers.

The NREDCAP has been designated as Nodal Agency by the GoAP in implementation of this policy. It can approve projects up to 20 MW capacity. NREDCAP may facilitate required clearances for the project at the State and Central Government levels and grant of loans by IREDA/PFC/REC and other term loan agencies/commercial banks as required by the Developer and regulate the allotment of wind generation power projects.

The following provisions of this GO related to wind energy tariff, banking, evacuation, land allotment and others help to address the financial health of the firms setting up wind power plants:

1. Developers would be eligible for using the power produced from the wind energy generators for captive consumption or making sale to a third party or to DISCOMs.
2. The DISCOMs are permitted to offer Rs.3.10 per unit to the wind power projects for a period of 10 years.
3. The eligible developer shall bear the entire cost of power evacuation facilities for interconnecting the wind farms with the Grid.
4. The 3rd party sale will be permitted only to HT - I category consumers.
5. The eligible developers may be given concessional wheeling and transmission charges, as there will be no emission of green house gases from the wind farms. This will be subject to approval of APERC. The concessional wheeling and transmission charges for captive use or 3rd party sale may be in kind at 5% of energy delivered into the grid (which includes transmission and distribution losses).
6. Banking of energy will not be allowed. The energy generated, if not consumed during the billing month, would be treated to have been sold to respective DISCOM. DISCOM may pay for such unconsumed/unutilized energy at the following tariff: 75% of Rs.3.10 per unit or 75% of the lowest tariff resulting from the bidding process under this policy, whichever is lower. This will be subject to approval by the APERC.
7. The eligible developers who opt for sale of energy to DISCOMs shall share carbon credits under the Clean Development Mechanism (CDM) with DISCOMs. They may be allowed to retain 90% CDM benefit and pass on 10% benefit to the Distribution Company. However, this is subject to the approval of the APERC.
8. The government land to be allotted to private developers at market value. Each eligible developer may be allocated available government land to harness up to a maximum of 200 MW of wind power initially. After commissioning of 100 MW capacity wind energy plants in the 1st stage in the allocated government land, the Government may release land for another 100 MW capacity wind energy plants.

Wind energy plants being set up for own/captive use or 3rd party sale may be given higher priority in allotment of Government land.

Subsequent to the above GO the GoAP issued another GO – G.O. Ms. No. 99 dated 09-09-2008. This GO was issued in response to a letter written by the Indian Wind Turbine Manufacturers Association (IWTMA) requesting the GoAP for certain amendments to the New Wind Power Policy. Following this a Committee was constituted by the AP Power Coordination Committee (APPCC) consisting of DISCOMS' officials, VC & MD NEDCAP and representatives of the IWTMA as members. This committee did not consult any other stakeholders like energy consumers. Based on the recommendations of this Committee the GoAP issued the new GO amending certain provisions of the earlier GO. The new amendments are favourable to the developers. Important changes are:

1. Operative period of the policy is reduced to 5 years from 10 years.
2. The tariff is increased to Rs.3.50 per unit from Rs. 3.10.
3. The Energy generated by captive generating Plants, if not consumed during the billing month, would be deemed to have been sold to respective DISCOM and the DISCOM has to pay for such energy at the rate of 85% instead of 75% of the tariff.

In the case of the earlier G.O. also the GoAP claimed that the G.O was being issued in response to the request of the IWTMA. But a perusal of the Note File related to this G.O. shows that the request is not from IWTMA but from Suzlon Energy Limited's south India representative. This Note File also recorded contents of the letter from Chairperson and Managing Director of APTRANSCO which pointed out certain irregularities committed by Suzlon Energy Limited and Enercon in acquiring lands for the wind energy plants. It was mentioned that Suzlon was given possession of 616 acres of government land and Enercon was given possession of 220 acres of government land indicating monopolising of potential sites by these companies and preventing other interested wind energy developers from entering the sector, leading to capture of wind power market by one or two companies at the cost of consumers. It was suggested that government land might be allotted to the wind energy developers based on lowest tariff offered rather than preemptive allotment to one or two developers. Another suggestion was that land should be allotted on 20 years lease but not out right hand over. But these suggestions were not taken in to account while issuing the G.O./policy. The whole process of issuing the G.O. in question is far from transparent.

Though the Policy mentioned tariff for purchase of wind energy and wheeling and other related issues like banking it mentioned that these need to be approved by the APERC in keeping with the new Act and regulations governing the power sector in the country.

Subsequent to the above policy announcement from the GoAP the APERC in its order dated 31-03-2009 in O.P. No. 16 of 2008 related to Renewable Power Purchase Obligation (RPPO) stipulated that every distribution licensee shall be required to purchase 5% of the electricity consumed in its area from renewable power sources during the period 2009-10 to 2013-14. Wind is one of the six renewable

sources of power identified in this Order. Within the total RPP0 0.5% of the electricity consumed in its area has to be sourced from wind energy plants.

Through another Order dated 01-05-2009 in O.P. No. 6 and 7 of 2009 the APERC determined Rs. 3.50 per unit to be the price at which wind power is to be purchased. This price is the same as that suggested by the GoAP. According to this Order developers shall bear the entire cost of power evacuation facilities. The CDM benefits shall be shared in the ratio of 90:10 between developer and DISCOM.

By way of compliance the APERC in the above Order stipulated that each DISCOM shall furnish the information in a specific format suggested by it within 15 days of completion of each quarter to the Commission. Any default by DISCOMs in fulfilling the obligation will attract penal provisions under the Act.

According to the policy document NREDCAP as a nodal agency for promotion of renewable energy may facilitate grant of loans by IREDA/PFC/REC and other term loan Agencies/Commercial Banks as required by the Developer. NREDCAP may also facilitate required clearances for the project at the State and Central Government levels and regulate the allotment of wind generation power projects. Though NEDCAP has the powers to approve plants up to the capacity of 20 MW, land allotment will be done by the GoAP.

Before issuing the above two orders the Commission conducted two separate public hearings with the participation of DISCOMs' representatives, officials of NREDCAP, wind energy developers' representatives and CSO representatives. Apart from the public hearings conducted by the APERC no attempt was made to involve stakeholders in policy formulation regarding the formulation of wind energy policy, either by the GoAP or by the NREDCAP.

Besides the above tariff determined by the APERC the GoI will provide generation based incentive to the wind energy units at the rate of Rs. 0.50 per unit of power produced by wind power developers up to a maximum of 50 MW capacity. There were attempts to increase this eligible capacity.

PROGRESS IN IMPLEMENTATION:

At the time of issue of this GO wind power potential was estimated to be about 2100 MW. Out of this 107 MW has already been harnessed and other projects with a total capacity of 346 MW were under implementation. NREDCAP approved proposals by private developers to set up wind power projects with combined capacity of 1,800 MW. With this the total capacity sanctioned for developers of wind mills has reached 3,800 MW. Out of 2,000 MW of wind power plants sanctioned in the past only a few of them came up. During 2011-12 the installed capacity of wind energy generation in the state reached 387.50 MW. In order to quicken the process of wind power plant development the Chief Minister ordered setting up of a Unified Authority to verify and clear said that the lands identified for establishment of wind power stations.

ISSUES IN IMPLEMENTATION:

No clear time line:

Though the G.Os/Policy was meant for promotion of wind energy it did not provide a clear time line or target for achievement by implementation of the policy. As such it is difficult to compare the progress in generation of wind energy with the text of the policy document.

Absence of proper reporting and monitoring:

The APERC in its order on RPPO issued in 2009 included provisions for monitoring/reporting on implementation. According to paragraph 6 of this order on RPPO each DISCOM shall furnish information within 15 days after completion of each quarter to the Commission on progress of implementation of RPPO. But DISCOMs are not reporting to the APERC as directed by this order. Lack of proper reporting also comes in the way of assessing the progress in implementation of the policy.

Understaffed agencies:

Both the institutions NREDCAP – the nodal agency and APERC – the regulatory body are understaffed affecting their performance in implementation and monitoring of the policy. NREDCAP is understaffed and also it does not have access to specialists. Because of this it depends on the wind energy developers and ends up supporting the contentions of the developers without independently examining them. Because of this its credibility is low. In one of the public hearings one of the members of APERC commented that NEDAP was functioning like a Postman for developers and that it was not applying its mind. Also, the above G.O./Policy did not have any provision that provided financial assistance to NREDCAP in implementation of this G.O./Policy.

In the case of APERC it has one Deputy Director entrusted with the responsibility of examining proposals related to power purchase (PPA) from all sources including renewable sources and monitor them.

Lack of transparency:

Lack of transparency in policy formulation and implementation is having its impact on progress of capacity addition in wind energy.

The GoAP did not disclose any information to the public before the announcement of the above policy on wind energy. In the policy formulation by the State Government the stakeholder participation was very limited. The State Government issued the G.O. in question and later amended it in response to letters written by the Indian Wind Turbine Manufacturers Association (IWTMA) or one of the members of that Association. The State Government did not consult other stakeholders. The GoAP did not call for public inputs before announcing its policy. The letter written by IWTMA which became the basis for the new G.O. was not made public at the time of issuing this G.O. The GoAP did not open any windows of engagement for stakeholders other than IWTMA. The public were kept in dark about the policy. The implementation of the policy is also characterized by lack of transparency. This prompted one of the

leaders of the opposition party in the state – Mr. Payyavula kesav of Telugu Desam Party, to call for an enquiry in to land allotment to wind energy developers in the state (Andhra Jyothi, 26-12-2011).

The applicable Acts as well as Regulations framed under these Acts enjoin on the APERC to discharge its responsibilities in a transparent manner. According to section 10 (7) of the AP Electricity Reforms Act, 1998 “In the discharge of its functions the Commission shall be entitled to and shall consult to the extent the Commission considers appropriate from time to time such persons or group of persons who may be affected or are likely to be affected by the decisions of the Commission”. The Conduct of Business Regulations, 1999 formulated by the APERC further lays down the procedures for participation. According to section 51 of these Regulations the proceedings before the Commission shall be open to the public. These Regulations also deal with procedures to be followed in filing petitions and hearings. According to Section 20 of these Regulations Records of every proceeding shall be open, as of right, to the inspection of the parties or their representatives at any time either during the proceedings or after the orders are passed. Similarly these records, except those parts which for reasons specified by the Commission are confidential, shall be open to inspection by any person other than the parties to the petition either during the proceedings or after the orders have been passed.

In the Case of RPPO the APERC issued a public notice on 24-11-2008 calling for objections/suggestions and the public hearing was held on 09-01-2009. The Order was issued on 31-03-2009. In the case of wind energy tariff public notice was issued on 04-02-2009 and after the public hearing order was issued on 01-05-2009. The APERC released consultation papers before the public hearings. In the proceedings before the APERC both on RPPO and wind energy tariff representatives of all stakeholders participated. The APERC Orders referred to the arguments of all the stakeholders who participated in the public hearings. Though the APERC examined written as well as oral submissions issuing its order, its order was not much different from the state government’s policy decision.

Information Asymmetry:

Lack of reliable information, even to the regulators, on different parameters affecting energy tariffs is also having its impact on tariff determination. This is particularly the case with capital costs of wind energy plants. Unreliable figures on capital costs of wind energy units are coming in the way of arriving at proper cost of generating wind energy. Near monopoly condition in wind turbine manufacturing and lack of transparency in contracts for wind mill erection, operation and maintenance are some of the reasons for this information asymmetry. The following table adopted from the application made by the InWEA before the APERC provides per MW cost of wind power plants quoted by Suzlon Power in different states within a gap of few months:

Table: 1 **Capital Cost of Wind Power Plants**

Client	Submission date	Cost per MW (Rs in Crore)
Gujarat Alkalies	17-3-2007	5.14
Chennai Port Trust	04-4-2007	5.36
Rajasthan Mines & Minerals	23-4-2007	5.16
ONGC – Gujarat	15-6-2007	6.08
BEL – Karnataka	16-6-2007	7.45

Source: APERC Discussion Paper on Renewable Energy Tariff, 2008

The above table shows that the Suzlon Power Company hiked the cost of plant per MW by more than Rs. 2 crore within three months. Based on these figures InWEA adopts Rs. 5.75 crore per MW. And based on this capital cost it wants to adopt Rs. 4.37 per unit power purchase cost from wind energy units. Regulatory process instead of being captured by the resourceful agency like developers through this information asymmetry it should find ways and means to break through this asymmetry and help to arrive at genuine tariff that will improve positions of all stakeholders.

Price Issue:

The developers of wind energy plants as well as NREDCAP were of the view that the wind energy tariff decided by the APERC was not attractive enough for the developers to enter the scene. According to them the tariff prescribed by the Commission was coming in the way of realizing the RE potential in the state. The Indian Wind Energy Association (InWEA) demanded a tariff of Rs. 4.37 per unit of wind energy while APERC prescribed a price of Rs. 3.50 per unit. Here it is to be noted that there is wide variation in tariffs demanded by WEA and tariffs allowed by the states which in its own admission facilitated huge capacity addition of wind power.

Table: 2 **Capital costs of wind energy plants**

State	Per Unit Tariff in Rs	Installed Capacity in 2004-05 in MW	Installed Capacity in 2007-08 in MW	Capacity Added in MW
AP	2.70	121.2	122.5	
Tamil Nadu	2.90	2057.3	3873.4	1861.1
Gujarat	3.37	268.0	1252.9	984.9
Karnataka	3.40	411.3	1011.4	600.1
Maharashtra	3.50	457.3	1755.9	1298.6
Rajasthan	3.60	284.8	538.8	254.0
Madhya Pradesh	3.97	29.5	187.7	158.2

Source: APERC Discussion Paper on Renewable Energy Tariff, 2008

The above table shows that though Tamil Nadu offered lower tariff than other states mentioned in the table it added more new capacity (1861.1 MW) than other states. Madhya Pradesh offered more tariff

than other states but added lesser new capacity (158.2 MW) than other states. From this it is clear that lower tariff allowed by the DISCOMs cannot be taken as a reason for lower capacity addition in AP.

NREDCAP also suggested that instead of providing upper ceiling on tariff the Commission shall prescribe a fixed tariff. The Commission had suggested the upper ceiling on tariff on the basis of 15 parameters. It is to be noted that these parameters will be changing for each plant and given the number of plants it may not be possible to specify fixed tariff for each plant. It is for the respective DISCOMs to arrive at power purchase prices for each plant.

Low PLF:

In Andhra Pradesh PLF of wind plants is lowest in the country – less than 10%. It is important to examine the factors that are leading to such situation. One reason may be that given the capital subsidy which enables them to recover their capital cost within a short time they might have least interest in generating power. The newly introduced generation based incentive is expected to address this aspect.

Community Lands

Usually land allotted to wind energy plants by the Government relate to common property resources, revenue forests and reserve forests. While allotting these lands for erection of wind energy plants care shall be taken to see that the local communities' access to these lands is not taken away. The local communities depend on these lands for grazing, fuel wood collection and non-timber forest produce (NTFP). Local communities shall be consulted before allotment of these community lands to wind energy farms.

Conclusion:

Though there are promising legal provisions and policies to promote wind energy, the results were not as promising. Implementation of wind energy policy in Andhra Pradesh is characterized by lack of transparency. At the outset policy making itself was through non-transparent process. While developers' concerns were addressed consumers' apprehension of higher power purchase cost was not taken in to account. Both the agencies tasked with implementation and monitoring of the policy – NREDCAP and APERC are understaffed to do justice to their job. Over and above all these information asymmetry robbed the legitimacy of promotion of wind energy as renewable energy. Even the Electricity Regulatory Commission did not have access to reliable information.

Reference:

Jagdeesh, Anumakonda. 1999. **Institutional Dynamics and Barriers in Wind Energy Development: A case study of Tamil Nadu and Andhra Pradesh, India.** Working Paper 1999:4. CICERO, Oslo, Norway.

Annexure - 1

**DETAILS OF POTENTIAL SITES FOR WIND POWER PROJECTS IN
ANDHRA PRADESH**

S. No	Name of the Station	District	Estimated Wind Power Potential (MW)	Projects already Installed (MW)	Projects allotted and to be commissioned (MW)	Land Details
1	BADHRAMPALLI KOTTALA	Anantapur	30.00	-	34.00	Govt./Private
2	BANDARLAPALLI(KM Pally)	Anantapur	10.00	10.00	10.00	Govt.
3	KADAVAKALLU	Anantapur	150.00	38.35	112.10	Govt./Private
4	KAKULAKONDA (TTD) -	Chittoor	12.00	6.00	--	TTD
5	KONDAMITHEPALLI	Kurnool	75.00	62.75	26.00	Govt./Private
6	M.P.R.DAM	Anantapur	30.00	-	24.00	Govt
7	MUSTIKOVALA	Anantapur	40.00	-	30.00	Govt.
8	NALLAKONDA	Anantapur	100.00	-	137.00	Govt./Private
9	NARASIMHAKONDA	Nellore	10.00	2.50	-	Govt.
10	NAZEERABAD	Rangareddy	5.00	-	5.00	Govt.
11	PAMPANOOR THANDA	Anantapur	15.00	-	15.00	Govt.
12	PAYALAKUNTALA	Kadapa	50.00	-	69.00	Govt.
13	RAMAGIRI I	Anantapur	60.00	51.74	20.00	Govt.
14	RAMAGIRI III	Anantapur	25.00	-	---	Govt.
15	SINGANAMALA	Anantapur	10.00	-	12.80	Govt./Private
16	TALLIMADUGULA	Anantapur	50.00	5.00	24.80	Govt.
17	TIRUMALA	Chittoor	2.00	1.03	-	TTD
18	VAJRAKARUR	Anantapur	700.00	-	570.50	Private
19	BORAMPALLI	Anantapur	200.00	-	150.00	Private
20	BURUGULA	Kurnool	120.00	-	20.00	Govt.
21	CHINNABABAIYAPALLI	Anantapur	50.00	-	55.00	Govt.
22	JAMMALAMADUGU - I	Kadapa	25.00	-	30.00	Govt./Private
23	JAMMALAMADUGU	Kadapa	25.00	-	30.00	Govt./Private

	- II (Gandikota)					
24	KODUMURU	Kurnool	6.00	-	--	Govt./Private
25	KORRAKODU	Anantapur	10.00	-	10.00	Govt.
26	MADUGUPALLI	Anantapur	30.00	-	-	Govt./Private
27	TALARICHERUVU	Anantapur	150.00	-	-	Govt./Private
28	TIRUMALAYAPALLI	Anantapur	402.00	-	241.40	Govt./Private
29	ULINDAKONDA	Kurnool	25.00	-	15.00	Govt.
30	ALANGARAPETTA	Anantapur	20.00	-	20.00	Govt./Private
31	SIDDANAGATTA	Anantapur	20.00	-	20.00	Govt.
32	BHEEMUNIPATNAM	Visakhapatnam	20.00	-	-	Govt.
	Total:		2377.00	177.37	1660.20	

Note: Actual potential may vary based on actual field conditions

Source: http://www.nedcap.gov.in/PDFs/Potential_Sites_WP.pdf

Annexure - 2

DETAILS OF NEW PROPOSALS RECEIVED AS ON 31-03-2011

S. No.	Name of the Developer	Capacity Applied (MW)	Location	Date of receipt of application
1	Rake power Ltd	5.00	Kadavakallu	21.01.2011
2	Ray Urja Infrastructure LLP	20.00	Nallakonda	03.02.2011
3	Enercon Wind Farms (Kerala) Pvt. Ltd	2.40	Nallakonda	03.02.2011
4	KSK Wind Energy Pvt.ltd	174.00	Tirumalayapalli	05.02.2011
5	KSK Wind Energy Pvt. Ltd	87.00	Talaricheruvu	05.02.2011
6	KSK Wind Energy Pvt.Ltd	282.00	Payalakuntla	05.02.2011
7	Vision Renegies & Projects Pvt.Ltd	50.00	Talaricheruvu	07.02.2011
8	Shubh Realty (south) Pvt.Ltd	36.00	Vajrakarur	09.02.2011
9	Synefra Engg. & Construction Ltd	42.00	Gandikota	09.02.2011
10	Helios Infratech Pvt.ltd	65.00	Madugupalli, Nayanikonda and Vamkonda	13.02.2011

11	Animala Wind Power Pvt.Ltd	60.00	Animala, Kadapa	15.02.2011
12	Rayala Wind Power Co.Pvt.Ltd	200.00	Balavenkatapuram	15.02.2011
13	Gamesa Wind turbines pvt.ltd	200.00	Taggupati & Honnura	01.03.2011
14	Renwable Energy Generation Pvt.Ltd	20.00	Talaricheruvu.	04.03.2011
15	ZR Renewable Energy Pvt.Ltd	20.00	Talaricheruvu	05.03.2011
16	Gamesa Wind Turbines Pvt.Ltd	19.50	Talaricheruvu	18.03.2011
17	RSR Power Pvt.Ltd	19.55	Talaricheruvu	22.03.2011
18	Swarna Projects Pvt.Ltd	20.00	Burugula	28.03.2011
	Total ...	1322.45		

Source: http://www.nedcap.gov.in/PDFs/Potential_Sites_WP.pdf