BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
AHMEDABAD

Shri G. Subba Rao, Chairman
Shri K.P. Gupta, Member
Shri Man Mohan, Member

Date: 11th August, 2006

Order No. 2 of 2006

Order

In the matter of: Determination of price for procurement of power by the Distribution Licensees in Gujarat from Wind Energy Projects

In exercise of the powers conferred under section 181 read with sections 61(h), 62(a) and 86(1)(e) of the Electricity Act, 2003 (Act 36 of 2003) and all other powers enabling it in this behalf, the Gujarat Electricity Regulatory Commission (the Commission) has determined the price for procurement of power by Distribution Licensees in Gujarat from wind energy projects.

Discussion paper on Tariff for wind energy projects

The Commission prepared a discussion paper on "Tariff for wind energy projects". The discussion paper was placed on the website of the Commission on 8-05-2006 for inviting comments / suggestions. The last date for filing objections/comments on the discussion paper was fixed as 31-05-2006. The list of those who have communicated their views is given in Annexure –I.

The Commission has considered the views of the stakeholders and also perused the orders of the other SERCs on wind energy tariff. The salient features of tariff as determined by the Commission are discussed below.

1. **Tariff- Project Specific or generalized**

   The Commission's Regulations on procurement of power from renewable sources provide that, the PPAs entered into by GEB, prior to the notification of these regulations shall continue to be in force for such period as mentioned in those PPAs. The said Regulations also indicate that while determining the tariff, the Commission will adopt normative parameters for financing cost, O&M and other expenses.

   As regards normative parameters, the Indian Wind Energy Association (InWEA) submitted that for wind energy projects normative/generalized tariff, rather than project specific tariff, is the preferable approach as this will incentivise efficiency in selection of site, technology, financing package, etc. However project specific tariff design may be considered, in case a wind energy developer approaches the Commission, with a specific petition providing rationale and justification for such project-specific tariff.

   The Commission considers that a general tariff for wind energy projects is desirable since it will provide an incentive to the investors for selecting the most efficient machines and the most suitable project locations (besides being non-discriminatory).

2. **Single Part vs. Two Part Tariff**

   As wind power is infirm, it is not amenable to grid dispatch instructions. Most of the costs of wind energy generation are fixed

in nature. For these reasons the Commission had, in its discussion paper, proposed to have a Single Part tariff for wind power.
InWEA, Indian Wind Turbine Manufacturers Association (IWTMA), Indian Wind Power Association (IWPA) and others endorsed the above view.

Therefore, the Commission has decided that there should be single part tariff for wind power procurement.

3. Evacuation Infrastructure

The Commission had suggested two options in this regard. Under option-I evacuation infrastructure cost is to be borne by the GETCO/distribution licensee. Under option- II it is to be borne by the Developers.

InWEA suggested that the Commission should only adopt Option no. II. It has been the past practice. It will avoid any ambiguity from tariff as well as implementation angles. Further, for timely completion, most of the projects coming up under the Vibrant Gujarat and other new projects, envisage creation of evacuation facilities by Developer. NEG MICON mentioned that developers have gained considerable experience in creating power evacuation facilities. Hence NEG MICON suggested only one tariff mechanism assuming creation of power evacuation facilities through developers. IWPA also suggested adoption of Option no. II.

The Gujarat Urja Vikas Nigam Limited (GUVNL) suggested that option-1 (i.e. evacuation infrastructure cost to be borne by the GETCO/distribution licensee) is not viable. GUVNL also mentioned that it will not be proper in view of Sections 62(3) and

46 of the Electricity Act, 2003 to pass on such expenditure through ARR to others.

Considering the above mentioned responses, the Commission deems it fit to determine the tariff according to option-II under which the total evacuation infrastructure cost is to be borne by the Developers.

4. Capacity Utilization Factor (CUF)

The Capacity Utilization Factor (CUF) depends on several factors such as wind velocity, air density, quality, capacity and age of machines, height of the hub, and length of blades. In the discussion paper, the Commission had considered 23% CUF based on the data obtained from manufacturers/developers of MW series machines.

The Commission received divergent responses on this aspect. However from the analysis of the performance of WTGs (installed during 2002 policy) submitted by GEDA, the Commission has noted that the maximum CUF achieved at the four sites (Jamnagar Coastal site, Jamnagar Inland Patelka, Bhavanagar Sonadar and Surajbari Kutch) are respectively: 23.97%, 20.2%, 22.5% and 25.68%.

In the discussion paper, it was mentioned that the project cost is linked with machine efficiency defined by the Capacity Utilization Factor and the project cost may correspondingly increase if machines of higher efficiency are used. At the same time, the energy generation (in terms of kWh) will also be higher. The CUF will also vary depending upon the capacity (in kW) of the machines. The new generation higher capacity generators (approximately 750 kW and above) will have a higher CUF.

The Commission would like to promote investment in efficient machines at good locations. Hence, the Commission has taken CUF of 23% as a reasonable estimate for determination of tariff.

5. Capital cost of project

In the discussion paper the Commission has proposed the capital cost for 1 MW of WEG at Rs. 435 lakhs. This includes the cost of: tower, generator, necessary controllers, power and control cabinets, DP structure, transformer and other associated equipments, foundation and erection, land, land development, roads and processing fee to GEDA. Further, the Commission had considered Rs. 30 lakhs for the power evacuation infrastructure cost (Option II, referred in para 3 ante). Thus the total capital cost for 1 MW of WEG was proposed to be considered as Rs. 465 lakhs.

In the comments received from various stakeholders, the Commission found that there is a wide variation in the project cost estimated by different stakeholders ranging from Rs. 3.5 Crores to Rs. 5.5 Crores per MW. The capital cost is *inter alia* related to the technology and output (CUF) of (generating) machines (discussed earlier in para 4).

Based on the inputs received from the various stakeholders and the levels of capital cost as estimated by other State Regulatory Commissions, the Commission has decided that Rs. 4.65 Crores (inclusive of evacuation arrangement cost) is a reasonable estimate for capital cost for 1 MW project. As mentioned earlier, the Commission has taken 23% CUF as a reasonable estimate for improved category of machines. From the above, the capital cost investment figure per unit of energy generated annually based on the MW series machines works out to Rs. 23/kWh. This includes both the parameters of capital cost/MW and CUF of the plant. The Commission regards this as reasonable.

6. De-rating

In the discussion paper the Commission had not considered de-rating factor for tariff determination.

The Commission has examined this aspect in the light of responses received. The Commission has provided O&M expenses at 1.5% of capital cost with 5% escalation (details in para 10) and it will cover this aspect.

7. Plant Life and Agreement period

The Commission had proposed project life as 20 years.

This was endorsed by majority of stakeholders who communicated their views to the Commission. The Commission also noted that some other State Commissions have, in fact, assumed the expected wind energy project life to be 20 years. The Commission is of the view that since the Electricity Act, 2003 seeks to promote use of non-conventional energy sources and since investment in that area in turn needs a stable environment, it would be appropriate to consider the plant life and agreement period as 20 years for tariff determination purposes.

8. Depreciation Rate

In the discussion paper, the Commission proposed to consider the rate of depreciation for wind farm as 4.5% (90% divided by 20 years which is the expected life of the project) for tariff determination purpose.

Majority of the stakeholders are in agreement with the rate of depreciation taken by the Commission.

The Commission believes that it would be appropriate to take depreciation on Straight Line Method as specified in the CERC Terms and Conditions of Tariff; which lay down that asset life is to be depreciated up to 90% of its initial value (considering residual value of 10% of its initial value) over the entire asset life (which is 20 years).

9. Advance Against Depreciation (AAD)

In the discussion paper, the Commission has not considered Advance Against Depreciation for purposes of tariff determination.

Since wind energy projects are getting accelerated depreciation benefits (under IT Act), AAD need not be allowed for tariff determination purpose.

10. O&M Expenses

The Commission, in its discussion paper, has considered O&M expenses of 1.50% of capital cost for the first year, to be increased thereafter at 5% per annum. O&M expenses cover the costs of: manpower, consumables, spares, turbine and other electrical system maintenance, road maintenance, insurance, other statutory duties, working capital and interest liability.

The Commission has also looked at the O&M cost norms adopted by other SERCs. KERC has allowed 1.25 % of project cost as O&M

expenses with 5% escalation every year. They have separately considered two months receivables as working capital requirement and interest thereon at 12.5%. MPERC has adopted 1 % for the first five years and with simple escalation of 5 % every year thereafter, inclusive of insurance cost. TNERC has adopted 1.10% for five years with 5% annual escalation thereafter. They have considered separately insurance cost at 0.75% for 5 years with reduction of 0.5% every year thereafter.

In view of the above, the Commission deems it fit to take O&M expenses at 1.50% of project cost (inclusive of de-rating (para 6), insurance and interest on working capital) with escalation of 5% per annum.

11. Debt : Equity ratio

The debt-equity ratio for wind Energy Project will be considered as 70:30.

12. Loan tenure and Loan repayment schedule

Considering various suggestions, the Commission has decided that it would be appropriate to consider loan tenure of 10 years, with quarterly repayment in equal installments.

13. Interest on long term debt

The Commission in its discussion paper considered interest on long term debt at 9% per annum.

Various organizations mentioned that interest rate of 9% based on IREDA financing scheme is unrealistic and that hardly any investors would be able to avail the same. Further they argued that the benefit given under Section 10(23) (g) of Income Tax Act, to banks and FIs, has been withdrawn leading to higher rates on loans. They have also submitted that the rates of interest on infrastructure finance range from 10.25% to 10.75%.

As it is well known, recently there has been an upward trend in the interest rates. The Reserve Bank of India, in July, 2006 has raised Repo rate by 25 basis point to 7 per cent. It has been found from the websites of some of the Banks that their Prime Lending Rate is in range of 10.5%-11.5%. In view of above and considering the various above mentioned responses, the Commission considers the interest rate at 10.25% on long term debt is reasonable for tariff determination purposes.

14. Return on Equity (RoE)

The Commission in its discussion paper proposed to consider the return on equity at 14%, post tax.

The Commission, after considering the comments and responses allows Return on Equity at 14% post tax.

15. Income Tax liability

In the discussion paper, the Commission considered the effect of the Income tax, Minimum Alternate Tax (MAT) and surcharge (being statutory liabilities) for tariff determination purpose. The Commission also considered the tax holiday available under Section 80-IA of the Income Tax Act and Income Tax benefit through Accelerated depreciation.

The Commission is of the view that Income tax liability should be allowed at prevailing rate for tariff determination purposes.

16. Tariff Rate

The Commission in its discussion paper proposed levelised cost as tariff during the project life of 20 years.

The Energy and Petrochemicals Department has suggested that tariff should be comparable with that of other States like Maharashtra, Karnataka and Tamilnadu. GEDA and CLP have suggested that the proposed tariff is low compared to Maharastra, MP and Rajasthan.

The Commission considered for comparative purposes the tariff for wind energy approved by some other State Commissions as in the following Table.

Sr. No.	**States**	**Tariff Rate in Rs./ kWh**	**Escalation Period**
1	Tamil Nadu*	2.90	No Escalation
2	Andhra Pradesh	3.37	No Escalation
3	Karnataka	3.40	No Escalation
4	Rajasthan	3.25	Rs. 3.25 for 1st year of operation, with an escalation of 2% every year up to the 10th year and Rs. 3.79 from 11th to 20th year;
5	Madhya Pradesh	3.97	Rs. 3.97 in 1st year, Rs. 3.80 in 2nd year, Rs. 3.63 in 3rd year, Rs. 3.46 in 4th year and Rs. Rs. 3.30 for 5th to 20th year
6	Maharashtra	3.50	Rs 3.50 in 1st year and increase at the rate of 15 paise per year for 13 years.

*(Average CUF of WEGs is high in Tamil Nadu which experiences two monsoonic periods and this reduces generation cost)

Strict application of cost plus approach would lead to high tariff in the initial years and result in extra burden on the consumers. Therefore, the Commission has considered levelised cost and opted for a fixed tariff for 20 years. The Commission also believes that such a tariff will provide reasonable incentive to developers as it gives stable tariff over a longer period.

Tariff for wind energy projects

(i) For new projects

Based on the various parameters as discussed above, the levelised cost of generation including RoE using discounting rate at weighted average cost of capital i.e. 11.38%, works out to Rs. 3.37 per KWh.

The Commission has determined the tariff for generation from wind energy project at Rs.3.37 (constant) for its entire project life of 20 years i.e. from the first year to the twentieth year. This tariff rate shall be applicable for purchase of wind energy by GUVNL/Distribution Licensees for complying with the purchase obligation that may be specified by the Commission from time to time. This tariff will be applicable to wind energy generators who commission brand new wind energy plants and equipments after the date of this order. Old/second hand equipment will not qualify for this tariff.

Those WEGs being set up exclusively for sale to distribution licensee will be eligible for the tariff framed by this order from the date of this order. Those WEGs being set up for self use and which have not opted for the benefits under the Wind Power Generation Policy – 2002, will be covered by the provisions of this order after 20th June 2007.

(ii) For existing projects

The tariff for existing wind energy projects shall continue to be governed by the PPAs entered into with erstwhile GEB or its successor entities for such period as mentioned in the PPAs.

Other issues: Comments / suggestions received and Commission's views / decisions

17. Control period

The Commission has proposed three years as control period. The tariff decided in a particular control period shall apply to all projects which are set up during that period. Further, it is proposed that the tariff determined for a project shall remain in effect for the whole project life of 20 years.

Considering the comments and other inputs, the Commission decides that the initial control period should be three years. The tariff decided in this order shall apply to all projects that come up within the control period for their 20 years of project life. Moreover, this tariff shall continue to be applicable till it is revised or till a new control period regime comes into existence.

18. Power Purchase Agreement (PPA)

In the discussion paper it was proposed that the Wind Energy Generator and distribution licensee/GUVNL shall have to sign a PPA for a period of 20 years and that prior to finalizing any PPA, they shall have to send a copy of the draft PPA to the Commission for approval. It was also mentioned that distribution licensees should prepare and file a model PPA and that it should include a clause for penalty in case the developer winds up operations before the 20 year power purchase agreement period.

The Commission has considered the views it has received and decided that GUVNL/Distribution licensee and Wind Energy Generator should enter into a PPA. However, the Commission will consider separately the question of Model PPA.

19. Pricing of reactive power

The provisions pertaining to reactive energy pricing for wind energy generators shall be in accordance with the Commission's orders from time to time.

At present such rates are as under:

(According to Tariff order dated 6th May 2006 in respect of GETCO's ARR/Tariff Petition 862/2006).

10 paise / KVARH	For the drawal of reactive energy at 10% or less of the net energy exported.
25 paise / kVARH	For the drawal of reactive energy at more than 10% of the net active energy exported.

20. Transmission & Wheeling Charges

Many respondents sought clarifications about the applicability of transmission and wheeling charges in case of procurement of power by distribution licensees from wind energy sources.

The Commission clarifies that the procurement of power by distribution licensees/GUVNL from wind energy sources shall be undertaken on 'Ex-Bus' basis (pooling station i.e. =66 KV Sending end).

However, in case the owner of a WEG opts for wheeling power for own use, the GETCO / Distribution Licensee shall transmit the power to the point of use. For transmitting this power to the point of use, only GETCO will be entitled to charge 4% of energy injected (in kind) as all inclusive Transmission charges/wheeling charges.

21. Sharing of benefits from Clean Development Mechanism (CDM)

In the discussion paper, the Commission had proposed that 25% of benefits received from the CDM projects are to be shared by the Developer with the Distribution licensee.

The proceeds of the carbon credits will accrue to the wind energy generator and will reduce costs correspondingly. Therefore the Commission, after considering all the aspects decides to pass on 25% of the gross CDM benefit to the Distribution Licensee.

22. Applicability of Intra-State ABT

InWEA and NEG MICON have suggested that as wind power cannot be precisely scheduled and dispatched (since it is mainly dependent on wind flow patterns), market based pricing framework would not be practicable. They have further suggested exemption of wind energy generation from the Intra-State Availability Based Tariff (ABT) or market balancing framework.

The Energy and Petrochemicals Department has also suggested that the Wind energy projects may be exempted from the purview of ABT.

It may be recalled that under Section 86(1)(e) of the Electricity Act, 2003, the Commission has to promote generation of electricity from renewable sources. The Commission also has to specify quantum of purchase of renewable energy by distribution licensee (as a percentage of total quantum of energy handled by a distribution licensee). The Commission issued necessary Regulations in this regard on 29.10.2005. Wind energy is one of the renewable energy sources. The distribution licensee will pay for such wind energy purchases in accordance with the tariff specified in this order.

As wind energy will get generated largely based on wind flow pattern, it cannot be brought within the ambit of Intra- State ABT. Incidentally Intra State ABT leads to liabilities in case of deviation from declared schedules of energy generation. As wind energy cannot be scheduled, the Commission has also kept WEGs out of the settlement mechanism linked with UI rate (which comes into play in case of deviations) under Intra State ABT.

23. **Energy accounting and commercial settlement for the WEGs**

The Commission has kept the WEGs out of the Intra State ABT. However, for the purpose of physical measurement of energy, WEGs will have to provide ABT compliant meters.

Normally a wind farm will have several WEGs. The generation of wind energy takes place at low voltage. Then it gets stepped up to 11 or 33 kV for transmission to a pooling sub-station. This pooling sub-station is usually owned by either GEDA or (under the 2002 policy) by a Developer facilitating investment in WEGs. The wind energy is further stepped up from 11or 33 KV to 66KV at pooling sub-station. Then it gets into the grid through a GETCO sub-station. Above arrangement presupposes that each owner should have atleast minimum of one wind energy turbine.

Interface metering between 66kV pooling sub-station and 66 kV GETCO sub-station shall confirm to the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006.

If all the WEGs in a wind farm are owned by a single investor, the ABT compliant meter can be placed at the point of injection i.e. at 66KV end at the pooling sub-station only and by the developer/owner.

Where the WEGs are owned by more than one investor, the ABT compliant meter at the pooling sub-station will have to be installed by GETCO on 66 KV side. In addition, individual owners will also install ABT compliant meters on their 11 or 33 KV injection point.

In an existing wind farm with WEGs governed by the State Government's policy of 1993 and 2002, new WEGs may come up. The Developers or GEDA should separate out the feeders (going to pooling stations) from WEGs covered under State policy and from WEGs (that will be) covered under Commission's order. Such separation is essential for the purpose of settlement of accounts.

The meters shall be installed latest by 30th November 2006. The process of installation of ABT compliant meters as mentioned above shall be supervised by GEDA.

At the end of every week, based on the data downloaded from individual owner's ABT compliant meters, SLDC will issue a statement to GEDA for allocation of power (injected into the grid) to each distribution licensee, in each 15 minute slot. It shall be the responsibility of the Developer to download the meter reading from individual owner's ABT compliant meters and furnish the same to SLDC.

At the end of the month, the GEDA will give in respect of those owners of WEGs who are also self users of their generation, a owner-wise statement of active energy injection and reactive energy drawal of their WEGs, to concerned Distribution Licensees.

Commercial settlement of WEGs installed under Wind Generation Policies of State Government issued in the years 1993 and 2002

The existing wind energy policies (1993 and 2002) of the State Government contain a provision for banking of wind energy generation. Under this arrangement, the WEG gets set off against his captive consumption to the extent of his wind energy generation. Such set off is given based on his captive consumption (which in effect is the energy he draws from the licensee at the point of use) and his wind energy generation in three specified parts of the day over a six month period.

In respect of wind energy generating units set up under the 1993 policy of Government of Gujarat and who have opted for wheeling for self use, the existing facility of six month banking shall continue till the agreement period. The WEGs set up during the operative period of the Wind Power Generation Policy-2002 (up to 19th June 2007) and who may have opted for wheeling for self-use, will also be eligible for the banking facility as envisaged in that policy. Any generation not consumed within the permissible banking period of six months will lapse.

The WEGs which came up under State Government's earlier policies will be governed till the Agreement periods (as may have been entered into under the State Government's policies of 1993 and 2002) by the applicable provisions of Set-off and payment under these relevant policies.

Commercial settlement for the new WEGs

Any developer/investor opting for sale to distribution licensee, will be covered by this order from the date of its issue. Further after 19.6.2007, new WEGs either for captive use or for sale to distribution licensee will be governed by this order.

As for wind energy generating units set up after 19th June, 2007 and who opt for self use, the generation from any such WEG shall be set off against the owner's monthly consumption at his manufacturing or other facility in a Distribution licensee area.

Any excess generation (over and above the set off against monthly consumption) will be treated as sale to the concerned distribution licensee at the tariff rate determined by the Commission under this order. The Distribution Licensee shall make payment for any such excess generation in a given month, before the last day of the succeeding month.

Any excess consumption will be treated as sale by the concerned distribution licensee at retail tariff rates applicable to that consumer category (to which the facility of wind energy owner belongs) as determined by the Commission from time to time.

24. Renewable Purchase Obligation (RPO) Operator

InWEA has suggested that the Commission may consider making Gujarat Urja Vikas Nigam Limited (GUVNL) as a Renewable Purchase Obligation (RPO) operator to procure renewable energy on behalf of all DISCOMs in the State of Gujarat. This is because separate PPA with each distribution licensee would lead to cumbersome calculations related to implementation of RPO and energy accounting.

The Commission has considered the suggestion and decided that GUVNL should enter into PPA with wind energy generator on behalf of the four Government Distribution Companies. GUVNL shall apportion such renewable energy purchased amongst DISCOMs based on the total consumption of the different distribution companies on a pro-rate basis.

However, wind energy generators would have to enter into PPA with Torrent Power AEC Limited (TPAL) and Torrent Power SEC Limited (TPSL) separately.

25. Projects installed under existing policy

Surat Municipal Corporation has submitted that the benefits of banking and wheeling of electricity as in case of industrial units under existing policy should also be allowed to Municipal Corporations.

The existing wind energy policies (1993 and 2002) of the State Government allowed wheeling of electricity by only industrial undertakings to their manufacturing units. Non-industrial non-manufacturing units are allowed to setup wind energy generating units only for sale to GEB.

The Commission is of the view that in future (from 20th June 2007) the benefits of wheeling of wind energy should be available to all categories of consumers for self consumption and not limited to manufacturing units only.

26. Supervision charges

At present 15% supervision charge on cost of evacuation infrastructure is being levied by GETCO.

The Energy and Petrochemicals Department has suggested that there is a need for reduction in the supervision charges levied by GETCO for the evacuation system. GEDA has suggested that it would be appropriate to have a ceiling on the percentage of supervision charges and that such ceiling should be linked only to the cost of labour and not to material cost.

The same issue was raised during the public hearing of ARR/Tariff petition of GETCO (862/2006). The Commission will examine this matter separately.

27. Competitive bidding

In the Discussion paper it was proposed that the Commission, in future, proposes to adopt a tariff based on competitive bidding among the WEGs in accordance with Section 63 of the Electricity Act, 2003. It was also mentioned that the bidding may be initiated by distribution licensees as and when there are sufficient number of WEGs so that competition may lead to price reduction. It was further mentioned that the bidding process will not affect the existing PPAs.

Southern Wind Farms Limited (SWL) has mentioned that considering the limited exploitation of renewable energy in the state, it is prudent to wait till such sources become competitive. They have further suggested that the competitive bidding process should be postponed till 2008-09 and that the Commission can take the decision thereafter.

The Commission recognizes that the share of wind energy in the State is negligible. Out of approximately 50,000 MUs handled in the State grid, the share of wind energy is around 250 Mus. Most of the WEGs in the State are for captive consumption. The Distribution Licensees are not getting wind energy even for meeting the 1% obligation prescribed by the Commission. Hence, the quantum of wind energy which can lead to meaningful competitive bidding for procurement does not really exist at present. However, as and when the number of WEGs goes up significantly, the Commission will address the question of competitive bidding by distribution Licensees for procuring wind energy.

To summarise the decisions of the Commission on Tariff for new wind energy projects are as under:

The Commission has determined the tariff for generation from new wind energy project at Rs.3.37 (constant) for its entire project life of 20 years i.e. from the first year to the twentieth year.

This tariff rate shall be applicable for purchase of wind energy by GUVNL/Distribution Licensees for complying with the purchase obligation that may be specified by the Commission from time to time.

This tariff will be applicable to wind energy generators who commission brand new wind energy plants and equipments after the date of this order. Old/second hand equipment will not be accepted.

Those WEGs being set up exclusively for sale to distribution licensee will be eligible for the tariff framed by this order from the date of this order and in accordance with the Regulations. However, the Commission will consider the question of enhancing the percentage obligation from time to time.

Those WEGs being set up for self use and which have not opted for the benefits under the Wind Power Generation Policy–2002 will be covered by the provisions of this order after 20^{th} June 2007.

Sd/-	**Sd/-**	**Sd/-**
(Man Mohan)	**(K.P. Gupta)**	**(G.Subba Rao)**
Member	**Member**	**Chairman**

Annexure – I

1.	Energy and Petrochemical Department, Gujarat of Gujarat
2.	CLP Power India
3	Indian Wind Power Association (IWPA)
4.	Gujarat Uraja Vikas Nigam Ltd. (GUVNL)
5	Raj Tillan
6.	ESSAR
7	Indian Wind Turbine Manufactures Association (IWTMA)
8.	Indian Wind Power Association (IWPA)
9.	Indian Wind Energy association (InWEA)
10.	Consolidated Energy Consultant Ltd
11	Surat Municipal Corporation (SMC)
12	Torrent Power AEC Ltd.
13	NEG MICON
12.	Southern Wind Farms Limited (SWL)
13.	Gujarat Ambuja Exports Ltd.
14.	Gujarat Energy Development Agency (GEDA)