



National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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Registrar

No.NEPRA/R/TRF-149/SUNEC-2009 /4423-4425

December 13, 2010

**Subject: Decision of the Authority in the Matter of Tariff Petition filed by SUNEC
Wind Power Generation (Pvt.) Ltd. [Case # NEPRA/TRF-149/SUNEC-2009]**

Dear Sir,

Enclosed please find herewith the subject Decision of the Authority (05 pages) in the matter of Tariff Petition filed by SUNEC Wind Power Generation (Pvt.) Ltd. regarding 2.4 MW Wind Energy Power Plant proposed to be located at Village Bochal Khurd, Tehsil Kallar Kahar, District Chakwal, Punjab in Case No. NEPRA/TRF-149/SUNEC-2009, for information, please.

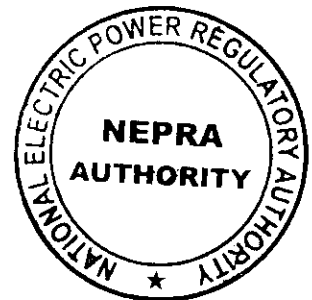
Encl: As above

Secretary
Ministry of Water & Power
'A' Block, Pak Secretariat
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, Islamabad.


(Syed Safer Hussain)



Decision of the Authority in the matter of Tariff Petition filed by
SUNEC Wind Power Generation (Pvt) Limited (SWPGL)
Case No. NEPRA/TRF-149/SUNEC-2009.

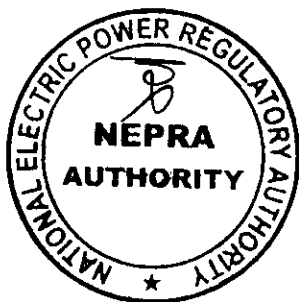
SUNEC Wind Power Generation (Pvt) Limited (hereinafter referred to as "the Petitioner") filed a tariff petition (hereinafter referred to as "the Petition") under rule 3 of the National Electric Power Regulatory Authority Tariff (Standards and Procedure) Rules, 1998 (hereinafter referred to as "the Tariff Rules") on December 21, 2009 for determination of generation tariff in respect of its 2.4 MW Wind Energy Power Plant to be located at Village Bochal Khurd, Tehsil Kalar Kahar District Chakwal in the province of Punjab.

2. In accordance with sub-rule(3) of rule 4 of the Tariff Rules, the petition was admitted by the Authority on March 16, 2010. Consequent to the admission and in accordance with sub-rule (5) of rule 4 of the Tariff Rules, the Authority gave directions for service of notices to the respondents and other parties affected or interested which in the opinion of the Authority are likely to be affected or interested for filing replies or communication in opposition or in support of the Petition and for the purpose of expeditious and efficient conduct of hearing. The notice of Admission/Hearing was published in national newspapers on March 18, 2010. Written notices were also sent to the ministries, distribution companies and various representative bodies for their participation. Islamabad Electric Supply Company (hereinafter referred to as "IESCO" or the "Power Purchaser") which is the proposed power purchaser in this case, offered its comments, while raising objections on the net energy output, high cost of debt and levelized tariff as proposed by the petitioner. The comments received from IESCO were forwarded for petitioner's response. The hearing of the Petition was held on April 05, 2010 which was attended by IESCO, the Petitioner and other stakeholders. However, no Intervention Request was filed.

3. The Petitioner through its initial submissions requested for approval of a levelized tariff of US cents 15.43/kWh (Rs. 12.9612/kWh) at US\$/PKR rate of Rs. 84.00 for the 20 years life of the project along with normal indexation of various tariff components. The levelized tariff has been calculated on the basis of the following technical and financial assumptions/parameters.

Turbines 4 Nos.	Sunec 600 kW
Capacity	2.4 MW
Gross Electrical Output	6.776 GWh
Wake Loss	0.034 GWh
Net Electrical Output	6.693 GWh
Plant Capacity Factor	31.8%
Project Cost	5.00 million
EPC Cost	4.340 million
Project development cost	0.660 million
O&M cost per annum	0.2375 million
Insurance	0.5% of project cost
Debt/Equity	70:30
Debt	KIBOR (12.5% plus 3% spread)
Rate of Return	15% IRR based.

4. The Petitioner also submitted a copy of Equipment Supply Contract signed between the Petitioner's parent company i.e. Nanjing SUNEC Wind Generator Equipment Factory China and its locally incorporated company SUNEC Wind Power Generation (Pvt) Limited (SWPGL).



According to the Equipment Supply Contract the following components of EPC Cost are covered under the overall contract price of US\$ 4.340 million.

Cost Components	US\$ Million
Wind Turbines, blades, gear box, wind generator, yaw system, breaking system, rotor & horizontal axis	2.1000
Towers 60m height 4 numbers	0.3967
Control system, microprocessor, modem standby power, UPS	0.1935
Interconnection facility (cables, step up transformer, breakers	0.5499
Foundation for towers	0.2250
Installation, commissioning and testing	0.8750
Total	4.3400

5. Besides, various other objections raised by the Central Power Purchasing Agency (CPPA) and IESCO on the requested project costs and high levelized tariff by the Petitioner, the following key issues/objections raised by the power purchaser and other stakeholders were brought up and discussed in the hearing of the petition held on April 05, 2010 for decision of the Authority.

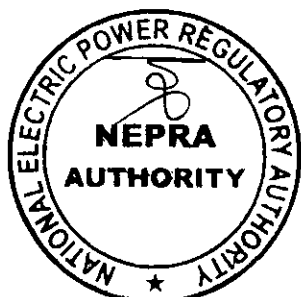
6. Net Energy Output

6.1 The Petitioner estimated annual net energy output of 6.693 GWh for its 2.4 MW wind energy plant at an average benchmark wind speed of 7.6 m/sec. According to the Petitioner, the net energy output was estimated for a single wind turbine of 600 kW and extrapolated to include net energy output of 4 such wind turbines to arrive at the total net energy output of its 2.4 MW wind power plant. The calculations for the net energy output were done using data of the Pakistan Meteorological Department (PMD), USAID and NERL. The feasibility study for the project was conducted by the Nanjing SUNEC Wind Generation Equipment Factory China who is the manufacturer of SUNEC wind turbines.

6.2 The net energy output of 6.693 GWh estimated by the Petitioner was strongly objected by the power purchaser (IESCO). The power purchaser through its submissions as well as at the time of hearing showed its serious reservations over the benchmark wind speed and other parameters used by the petitioner for calculating its net energy output. IESCO provided a copy of a study carried out by the PMD in July 2009 for accessing the wind energy potential in the Kallar Kahar area at different hub heights (i.e. 20 m, 30 m 50m and 80 m). The conclusion of the study is reproduced as hereunder.

“Sometimes simply wind speed averages may not reflect the true picture of the actual wind power potential of an area. For this purpose, it is pertinent to compute Wind Power Density and assign the area to one of the seven wind classes based on ‘Wind Power Density’ data. Monthly wind power density for Kallar Kahar at 50m height is 293 W/m². According to international wind classification, this power density categorizes Kallar Kahar as marginal site for wind power generation”.

6.3 The power purchaser also submitted data of wind energy output from the Petitioner's existing wind energy power plant of 50 KW (a pilot project) which is in operation since August 2009 according to which the net energy supplied to IESCO for the period August 2009 to March



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2010 was 7410 kWh at an average plant capacity factor of 3.56%. The Authority was also informed that there is no PPA signed for the existing facility between the parties as yet.

6.4 Contrary to submissions of the Petitioner at page 3 of its tariff petition, the Authority at the hearing of the petition was told that the feasibility study of the project has not been approved by the AEDB appointed panel of experts. Accordingly AEDB was asked vide our letter No. NEPRA/TRF-149/SUNEC-2009/4707 dated June 17, 2010 to confirm the status of feasibility study of the Petitioner and to verify the net energy output of the Petitioner through its independent consultant (Risoe International Laboratory Denmark). AEDB through its letter No.B/3/1/SWPGL/07 dated August 31, 2010 intimated that the feasibility study of the Petitioner has not been approved by its Panel of Experts due to the reason that there is no credible historical wind data available to benchmark wind speed for the project site. Hence AEDB is not in a position to verify the net energy output for the Petitioner.

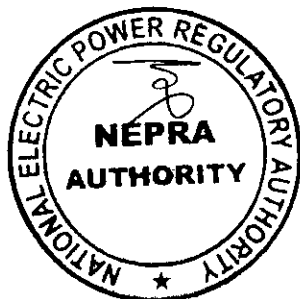
6.5 The Authority also noticed that no power acquisition request has been filed by the power purchaser, rather it has linked submission of its power acquisition request with prior approval of feasibility study by the AEDB and agreement /negotiation of terms of the PPA with the Petitioner.

6.6 The energy output of wind power plant is one of the key components of generation tariff and therefore, correct estimation of net wind energy output is of utmost importance which has a direct bearing on the requested overall tariff by the Petitioner. Although the Petitioner has agreed to undertake the wind speed risk, which is contrary to the provisions of the GoP Policy for Renewable Energy 2006, yet the Authority considers that without credible and correct estimation of net energy output duly endorsed by the independent consultants of AEDB, it would not be fair and reasonable to rely on net energy output figure of 6.693 GWh as per the calculations of the Petitioner. Furthermore, in the opinion of the Authority, the Petitioner has also failed to adequately address objections raised by the power purchaser and has not been able to provide willingness of the power purchaser (power acquisition request by IESCO) to whom it intends to sell its entire net energy output. In view of the aforementioned the Authority can not rely on net energy output estimates as provided by the Petitioner and therefore declines to approve the net energy output of the Petitioner.

7. Interconnection Study

7.1 During the hearing of the petition it was observed by the Authority that load flow/interconnection study for evacuation of power from the proposed 2.4 MW power plant of the Petitioner has not been finalized between the petitioner and the power purchaser. The petitioner however submitted that it has provided the proposed scheme for power off-take by the power purchaser to the CPPA for approval, which was not confirmed by the Power Purchaser. While explaining its position the Power Purchaser pointed out towards non-cooperation on the part of the Petitioner regarding provision of important technical information and backup calculations for various cost components of tariff including a copy of the approved feasibility study for its assessment. AEDB through its letter dated August 31, 2010 also confirmed that the Petitioner has not submitted its grid interconnection studies along with its feasibility report. The Power Purchaser while raising its objections over the proposed interconnection at 11 kV feeder submitted as follows;

"The interconnection of SUNEC Wind Power plant with existing 11 kV Miani feeder is not possible due to the following reasons;



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- i) The existing 11kV feeder is not designed for reverse power flow from tail end of the feeder toward 66 KV Noorpur Sethi Grid Station.
- ii) Load shedding/management has to be carried out on the feeder whereas the proposed Power generators are not capable to operate and remain synchronized with the IESCO system during load shedding hours.
- iii) Therefore subject to finalization of proposal an independent 11 KV feeder is required to be constructed by M/s SUNEK for interconnection at Grid-station (Noorpur Sethi)".

7.2 The Power Purchaser through its submissions to the Authority also complained that the sponsor of the project company had not made any liaison with IESCO while determining of site, project layout, substation design, transmission line and interconnection arrangements.

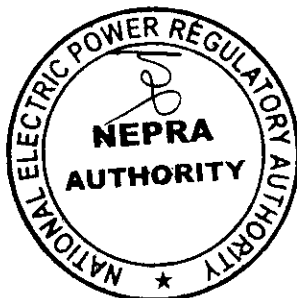
7.3 The GoP Policy for Development of Renewable Energy for Power Generation 2006 provides an arrangement for the interconnection of power plant with the grid with options for sharing of costs and also makes it mandatory on the power purchaser to buy all the available energy from the renewable sources. The Authority however, observed that there is a lack of coordination on these fundamentals issues between the power purchaser and the Petitioner. The Authority considers that it is in the best interest of the Petitioner to exchange and share all the technical and financial information with the power purchaser and reach an agreement for smooth and timely connection with the grid for power evacuation by the power purchaser.

8. The Authority also found through various communications by the authorized representative of the Petitioner (Mr. Najib Ahmed Sharif) that the company is facing management related issues due to differences between the directors of the company. The Authority received various letters from the Petitioner for not entertaining any other person except Mr. Najib Ahmed Sharif who is the authorized representative of the Petitioner. Similar representations were also made by the other director of the company (Mr. Liu Mingyi) who is undisputedly owner of 50% shares in the company. According to latest information provided by the Petitioner the matter has been agitated before court of competent jurisdiction (Senior Civil Judge, Lahore) and is pending adjudication.

9. Consequently to above referred management issues and litigation pending before Senior Civil Judge, Lahore, the Authority considers that for all practical purposes the status of EPC contract of the Petitioner already signed with its parent company (Nanjing SUNEK Wind Generator Equipment Factory China) at a fixed price of US\$ 4.34 million, being the main component of its total project cost on the basis of which it sought approval of tariff, has also become controversial and undependable for determination of tariff.

10. In order to understand the current status of the company and to ensure whether the petitioner would be able to develop this project in view of the aforementioned management issues of the company, the Authority decided to hold a meeting with the shareholders of the company. Accordingly, the petitioner was directed to provide the latest audited financial statements of the company vide our letter No.NEPRA/TRF-149/SUNEC-2009/3085 dated October 14, 2010. The Petitioner, however, could not provide the audited financial statements of the company and requested the Authority to postpone the proposed meeting with the Authority till resolution of the management issues of the company.

11. According to the Tariff Rules, the Authority has a stipulated period of six months to decide a Petition which has expired on September 15, 2010. In order to provide an ample opportunity to the Petitioner of being heard and provide the requisite information as discussed in



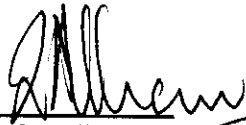
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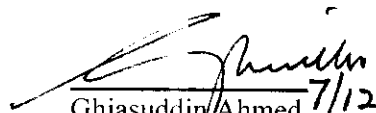
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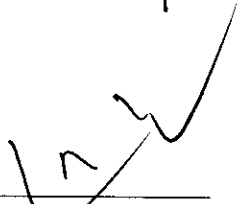
the foregoing paras, the Authority extended the period twice each comprising of one month. In view of the position of the case, the Authority does not find any justification for further extending and delaying its determination.

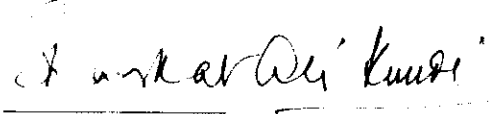
12. The Authority, therefore, holds that in view of the lack of requisite information and shortcomings in the tariff petition of the Petitioner as enumerated and explained above, the Petition does not merit consideration and is therefore dismissed for: i) non availability of required information or supporting documents; (ii) non reliability of the information provided in the Petition (e.g. feasibility study needs to duly approved by the Panel of Experts of AEDB in accordance with the GoP Policy for Development of Renewable Energy for Power Generation 2006) and through various communications of the Petitioner in response to the Authority directions; and (iii) management issues of the company which are *sub-judice* in the court of Senior Civil Judge, Lahore. The Petitioner may file tariff petition afresh after completing all the information as required by the Authority to determine tariff; resolving its management issues and complying with the requirements of rules and regulations.

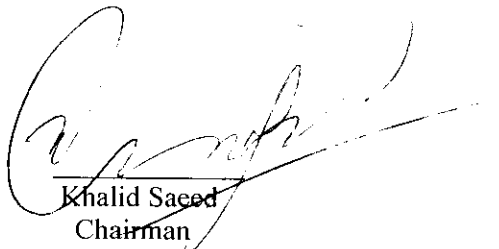
Authority:


Zafar Ali Khan
Member 6/12/10


Ghiasuddin Ahmed
Member 7/12.


Maqbool Ahmed Khawaja
Member


Shoukat Ali Kundi
Vice Chairman/ Member 10.12.2010


Khalid Saeed
Chairman

