



Registrar

National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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No.NEPRA/PAR-111 /1276-1278
February 7, 2014

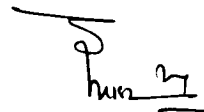
Subject: Approval of the Authority in the matter of Power Acquisition Request filed by Hyderabad Electric Supply Company Ltd. (HESCO) for Purchase of 10 MW from Bhandi Sugar Mills (Pvt.) Ltd. (BSMPL) under NEPRA Interim Power Procurement (Procedures and Standards) Regulations, 2005 [Case # PAR-111]

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority (07 pages) in Case No. NEPRA/PAR-111.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette in accordance with the provisions of Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).
3. Please note that only Order of the Authority at paras 7.1 & 7.2 of the Decision relating to the reference tariff etc. needs to be notified in the official gazette.

Enclosure: As above


(Syed Safeer Hussain)

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

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.



National Electric Power Regulatory Authority
(NEPRA)

Approval of

Power Acquisition Request filed by

Hyderabad Electric Supply Company (HESCO)

For Purchase of 10 MW from Bandhi Sugar Mills (Pvt.) Limited

Under

Interim Power Procurement (Procedures & Standards) Regulations 2005

(NO: NEPRA/PAR-111)

Islamabad

Feb. 7th, 2014



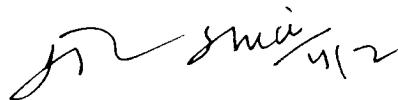
Approval of the Authority in the Matter of Power Acquisition Request filed by Hyderabad Electric Supply Company (HESCO) for Purchase of 10 MW from Bandhi Sugar Mills (Pvt.) Limited under Interim Power Procurement (Procedures & Standards) Regulations 2005

(NO: NEPRA/PAR-111)

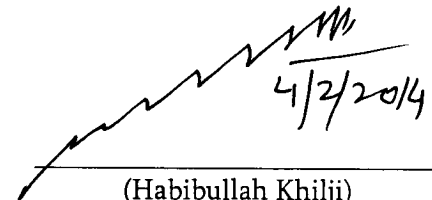
FILED BY

Hyderabad Electric Supply Company (HESCO), WAPDA Offices Complex, Hussainabad, Hyderabad

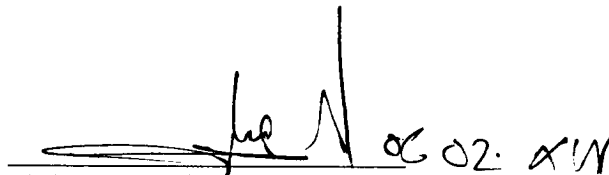
AUTHORITY



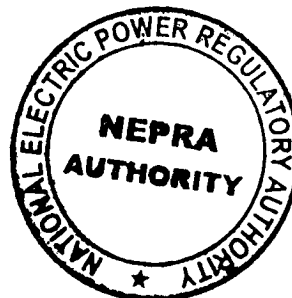
(Major. (R) Haroon Rashid)
Member

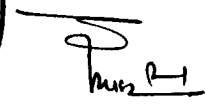

4/2/2014

(Habibullah Khilji)
Member


02.02.14

(Khawaja Muhammad Naeem)
Vice Chairman

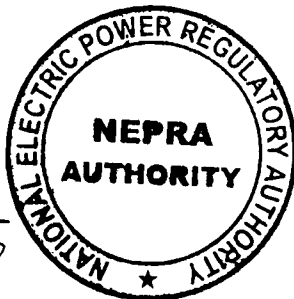



02.02.14

1. **Background and Brief History**

- 1.1 Considering the acute shortage in power sector and widening gap in the demand supply of electricity, NEPRA vide its advertisement dated 15-06-2007, allowed the Captive Power Producers having capacity less than 50MW to sell electricity to Distribution companies on mutually agreed rates. In this regard NEPRA vide letter dated 28-04-2008 issued guidelines according to which the CPPA and DISCOs were required to file a Power Acquisition Request to NEPRA under IPPR Regulations.
- 1.2 Taking notice of the fact that DISCOs had not submitted PARs in respect of power purchases from CPPs/SPPs/NCPPs, the Authority vide its letter dated 27-01-2012 directed all DISCOs to file power acquisition requests in respect of energy purchased from all CPPs/ SPPs/NCPPs, existing or new, in the prescribed manner as laid down in the IPPR Regulations.
- 1.3 The Authority noted that permission granted through notice published on 15-06-2007 and subsequent communications were misinterpreted and the relevant Rules and Regulations were not being followed by the DISCOs. In view thereof, the Authority vide advertisement dated 01-02-2012 modified its decision with respect to permission granted through advertisement dated 15-06-2007 and other communications to the extent that all SPPs/ CPPs who intend to sell electric power to DISCOs/ CPPAs/ BPCs will need to either approach NEPRA directly for determination of tariff under NEPRA Tariff (Standards & Procedure) Rules, 1998 or through DISCOs/ CPPA under NEPRA Interim Power Procurement Regulations-2005 ("IPPRs").
- 1.4 NEPRA vide letter dated 09-02-2012 again advised all DISCOs to submit the requisite PARs to NEPRA duly supported by the information/ documents prescribed under IPPRs. Further, the DISCOs had been informed that any purchase of power by DISCOs/ CPPA without prior permission/ authorization of NEPRA is violation of NEPRA's applicable documents and the licensee shall be liable to be proceeded under the relevant rules for any such violation.
- 1.5 Hyderabad Electric Supply Company (HESCO) vide letter dated 16.05.2013 submitted the subject Power Acquisition Request (PAR) in respect of procurement of 10.0 MW Bagasse based power from M/s Bandhi Sugar Mills (Private) Limited (BSMPL), Bandhi, Nawabshah, Sindh under NEPRA Interim Power Procurement (Standards & Procedure) Regulations, 2005 (the "Regulations"). HESCO stated that " Bandhi Sugar Mills (Pvt) Limited has offered 10.0 MW Bagasse based (Produced from Sugar cane) Power to HESCO. HESCO intends to purchase the power from Bandhi Sugar Mills (Pvt) Limited under SPP on take-and-pay basis and hereby request for acquisition of power under IPPR-2005 (Interim Power Procurement Regulation-2005)". HESCO also submitted a draft PPA between HESCO and Bandhi Sugar Mills (Pvt) Limited, Bandi, District Nawabshah, Sindh for purchase of 10.0 MW of Power on take and pay basis from BSMPL. The term of agreement is 5 years from the date of signing of the agreement which can be extended by mutual consent of the parties. HESCO request is reproduced as under:

HESCO is of the view that Tariff determination is the prerogative of NEPRA in this case, however if NEPRA has no objection on the tariff, approved by CPPA for CPPs/SPPs (Small Power Producers) as mentioned above. HESCO can adopt and own the Tariff.



2. **Bandhi Sugar Mills (Pvt.) Limited (BSMPL)**

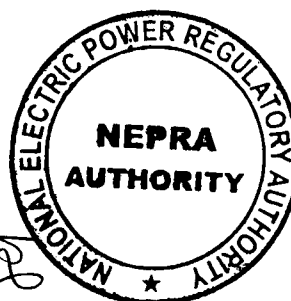
- 2.1 BSMPL is a Captive Power Producer (CPP). The term Captive Power Producer (CPP) has been defined as *"Industrial undertaking or other businesses carrying out the activity of power production for self consumption, who intends to sell the power, surplus to their requirement, to a Distribution Company or bulk-power consumer"*.
- 2.2 NEPRA has granted a Generation License No. SGC/89/2013 dated 26.08.2013 to BSMPL as CPP for its 12 MW (Gross) Bagasse based thermal power plant located at Bandhi, District Benazirabad / Nawabshah, Sindh.

3. **Proceedings:**

- 3.1 The Authority on 27.06.2013 admitted the PAR submitted by HESCO. The Authority considering the demand supply gap decided to grant permission to all DISCOs to procure power from the baggase based small power plants on the following conditions:
- The power plant should hold a valid generation licence.
 - The Power Acquisition Request for such purchase should be filed by the concerned DISCOs / CPPA with NEPRA prior to starting such purchases.
 - DISCOs / CPPA should take a declaration on legal paper from power seller that it will settle the claims of its sold electricity as per the rate and terms and conditions as approved by the Authority.
- 3.2 The IPPRs do not require for giving public Notice of Admission / public hearing of PAR seeking comments/replies but in order to meet the ends of natural justice, notice of admission/public hearing with the title and brief description of the PARs filed with respect to similar technologies were published in the national newspapers. Individual letters were also sent to the stakeholders. The Authority in the similar cases of baggase based power projects carried out the detailed analysis and due diligence. Since, the Authority has already carried out its due diligence in the similar cases; therefore the Authority decided not to conduct the hearing in the instant case.
- 3.3 Pursuant to regulation 5(1) of the IPPRs, before executing a power acquisition contract, a DISCO is required to file its proposed contract for its approval by the Authority. HESCO, along with the PAR also submitted the proposed Power Purchase Agreement (PPA) for the approval of the Authority.
- 3.4 As per details of the PPA, the agreed tariff is Rs. 5.15 /kWh on energy delivered basis comprising of Fuel Cost Component of Rs.3.62/kWh, based upon Reference Gas Price of Rs. 238.38/MMBTU and Fixed Cost Component of Rs.1.53/kWh excluding General Sales Tax (GST). As per the mechanism provided in the PPA, the Fuel cost component is adjustable as per the following formula:

$$FCC_{(Rev)} = GP_{(Rev)} / GP_{(Ref)} * FCC_{(Ref)}$$

Where:





FCC (Rev)	=	Fuel Cost Component applicable for the Billing Cycle
GP (Rev)	=	Revised Gas Price, excluding GST for the Billing Cycle as notified by OGRA for WAPDA power stations
GP (Ref)	=	Reference Gas Price i.e Rs. 238.38 / MMBTU (HHV)
FCC (Ref)	=	Rs. 3.62/ kWh

3.5 According to the PPA submitted by HESCO, the Power Purchaser will pay the company (BSMPL) the Fuel Cost Component and Fixed Cost Component against the delivered kWh on Take-and-Pay basis.

4. **Prudence of Tariff:**

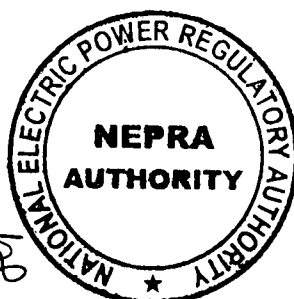
4.1 In order to examine the prudence of the power acquisition and the agreed terms and conditions as per the Section 7(3)(a) of NEPRA Act read with the provisions of IPPRs a detailed exercise was carried out by the Authority in similar cases. In this regard the tariffs of the regional countries were also compared in addition to the benchmarks established by the Authority in similar technology.

4.2 The findings, analysis and decisions of the authority on different aspects / ingredients of the tariff, negotiated and agreed between HESCO & BSMPL is provided in the succeeding paragraphs.

5. **Fuel Cost Component**

5.1 Considering the existing demand supply gap, increasing trend in RFO price and its impact on exchange rate, affect of non-availability of electricity on economy, unemployment etc, the Authority considers that the alternative resources which are producing electricity on lower rates as compared to the RFO and HSD etc based generation needs to be encouraged. The Authority further considers that the generation on bagasse being and indigenous fuel is of great importance with respect to energy security of the country. Moreover, this is not only a comparatively cheaper source of generation but also contributes in reducing demand supply gap during winter season, when hydel generation is at its minimum due to canal closure. Furthermore, these power plants are not only using indigenous fuel (bagasse) to produce electricity but also the rates of electricity supplied by such plants are on lower side as compared to the electricity produced by RFO and HSD based power plant. At present the fuel cost component of efficient RFO based power plants is Rs. 14.8486/kWh on per M.Ton price of Rs. 75,486.67. Similarly the fuel cost component of the HSD power plants on HSD Ex-GST price of Rs. 100.9560 per Litre is around Rs. 20.9019/kWh. Thus further induction of these power plants in the power system will not only minimize the demand supply gap but it will also offset the impact of RFO and HSD based generation. The bagasse based generation attributes in lowering the basket price; thus ultimately reduces the consumer-end tariff.

5.2 In order to analyze the prudence of the tariff requested by HESCO, the fuel cost component indicated by CPPA and agreed in the PPA, (At Reference Gas Price of Rs. 238.38/MMBtu = Rs.3.62/kWh and at current gas price of Rs. 573.28/MMBtu worked out as Rs. 8.7057/kWh) was analyzed to assess the efficiency at which this component was calculated. Accordingly, a detailed study of the cogeneration bagasse-based power plants based on the available information in the



neighboring countries was carried out. Based on the detailed study and keeping in view the above facts, the fuel cost component being reasonable was allowed to the baggase based power projects i.e. Shakarganj, RYK Mills, Ashraf Sugar Mills, Kamalia etc.

- 5.3 The Authority while approving the PARs filed by the different Distribution Company allowed the same mechanism for indexation of the fuel cost component with the gas price which was existed in their PPA. However, the Authority considers that the gas being precious fuel is underpriced and it is expected that the rates will be increased in future. The Authority has therefore decided to revisit the mechanism of linking fuel cost component with gas price. However, in order to adopt the mechanism prescribed in the Upfront Bagasse based tariff, the Authority has decided to initiate the separate proceedings. Since the revision of the adjustment mechanism after consultation with the stakeholder would require considerable time therefore the Authority has decided to allow the same fuel cost component with the same adjustment mechanism which was allowed to other bagasse based power plants. The adjustment mechanism of the energy component is given hereunder:

$$FCC_{(Rev)} = GP_{(Rev)} / GP_{(Ref)} * FCC_{(Ref)}$$

Where:

FCC (Rev) = Fuel Cost Component applicable for the Billing Cycle

GP (Rev) = Revised HHV Gas Price per MMBtu net of GST for the Billing Cycle as notified by OGRA for Captive power stations

GP (Ref) = Reference Gas Price i.e Rs. 238.38 / MMBTU (HHV)

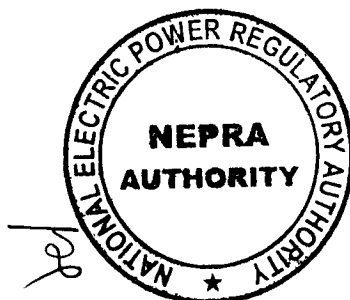
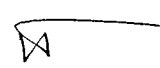
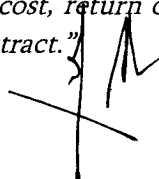
FCC (Ref) = Rs. 3.62/ kWh

- 5.4 HESCO is directed to incorporate modification in its PPA in accordance with above fuel cost component adjustment mechanism.

6. Fixed Cost Component

HESCO and BSMPL have agreed Rs. 1.53/kWh as fixed cost component. The Authority in other similar cases considering the fixed cost component being reasonable allowed the same. The Authority therefore decided to allow the same in the instant case. However, in the instant cast the fixed cost component definition needs to be amended as per the definition allowed in the previous cases which is as under:

"Fixed Cost Component" — The tariff component payable @ Rupees 1.53 per kWh delivered, by the Company which included but not limited to O&M cost, tax on income of the Company, insurance cost, return on investment, duties etc. This component will remain fixed till the expiry of this contract.



7. ORDER

- 7.1 In pursuance of the Regulation 4(1) of the NEPRA Interim Power Procurement (Procedure & Standards) Regulations 2005, Hyderabad Electric Supply Company (HESCO) is granted permission for acquisition of 10 MW power from Bandhi Sugar Mills (Pvt.) Limited on take and pay basis. In pursuance of Regulation 5 of the Regulation of IPPR-2005 read with Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, the power acquisition contract is hereby approved. The approved rates shall be applicable from the date of grant of generation license to BSMPL.

Reference Tariff

Description	Rs. / kWh
Fuel Cost Component (Gas Price Rs. 251.55/MMBTU)	3.62
Fixed Cost Component	1.53
Total Generation Cost of delivered unit	5.15

- 7.2 The fuel cost component shall be adjusted according to the following formula:

$$FCC_{(Rev)} = GP_{(Rev)} / GP_{(Ref)} * FCC_{(Ref)}$$

Where:

$$\begin{aligned} FCC_{(Rev)} &= \text{Fuel Cost Component applicable for the Billing Cycle} \\ GP_{(Rev)} &= \text{Revised HHV Gas Price per MMBtu net of GST for the Billing Cycle as notified by OGRA for Captive power stations} \\ GP_{(Ref)} &= \text{Reference Gas Price i.e Rs. 238.38 / MMBTU (HHV)} \\ FCC_{(Ref)} &= \text{Rs. 3.62/ kWh} \end{aligned}$$

The above Order is to be notified in the official gazette in accordance with the provisions of Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997.

