National Electric Power Regulatory Authority
Islamic Republic of Pakistan

Registrar

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No. NEPRA/TRF-UTESM-2016/17120-17122
December 30, 2016

Subject: **Decision of the Authority in the matter of Upfront Tariff for Existing Sugar Mills**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority (06 pages).

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

3. Order of the Authority is to be notified in the official Gazette.

Enclosure: As above

30.12.16
(Syed Safeer Hussain)

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

CC:

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

DECISION OF THE AUTHORITY IN THE MATTER OF
UPFRONT TARIFF FOR EXISTING SUGAR MILLS

Background

1.1 National Electric Power Regulatory Authority (hereinafter referred to as the "Authority") was established under section 3 of the 'Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997' (hereinafter referred to as the "Act") and its responsibilities under the Act include, inter alia, determination of tariff, rates, charges and other terms and conditions for supply of electric power services by the generation, transmission and distribution companies. In performing its functions, the Authority has to protect, as far as practicable, the interests of consumers and companies providing electric power services in accordance with the guidelines, not inconsistent with the provisions of the Act laid down by the Federal Government.

1.2 There is a potential of 600-700 MW in the form of Sugar Mills which started crushing in the country during November to February the period when the hydel is on lower side. As per Pakistan Sugar Mills, currently 86 Sugar Mills are working in Pakistan. Government of Pakistan in order to encourage generation on bagasse approved the framework in 2013 by including the bagasse / biomass in the renewable policy 2006. NEPRA has already announced the Upfront Tariff for Co-Generation Power Projects which are required to establish their power plants on new machines and as per terms and conditions laid down in the decision dated 29th May 2013. Almost seven (7) companies have opted the Upfront Tariff having capacity of 231 MW capacity. Out of which 139.7 MW are operational and around 92 MW is expected to be added in the system in 2016-17.

1.3 Most of the sugar mills have their basic core business of sugar production. During this process electricity is generated which is not only sufficient to meet their own requirement but surplus energy can be added into the system. Keeping in view this potential which is expected around 600-700 MW, NEPRA has already allowed the Distribution Companies to procure electricity from the existing sugar mills in accordance with the procedure laid down in the law. NEPRA in this regard has already approved the Power Acquisition Contract of different companies i.e. HESCO, PESCO, SEPCO, LESCO & MEPCO. Almost 24 sugar mills are providing around 125 MW electricity through the existing mechanism as per NEPRA approved tariff and terms and conditions. The generation tariff approved by the Authority is as under:

Description	Rs./kWh
Fuel Cost Component	6.29
Fixed Cost Component	1.53
Total	7.82

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1.4 In order to encourage the existing sugar mills to provide surplus energy to the system, the Authority in exercise of its powers under the Act, read with Rule 3 (1) of the National Electric Power Regulatory Authority (Tariff Standards and Procedure) Rules, 1998 (hereinafter referred to as the "tariff rules") and Regulation 3 of the National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011 (hereinafter referred to as the "upfront tariff regulations") initiated proceedings for the development and determination of upfront tariff for existing sugar mills.

2. Proceedings

2.1 The Authority on 11th February 2016 decided to initiate the suo moto proceedings for determination of Upfront Tariff for existing sugar mills. Accordingly the advertisement was published on 17th April 2016 in Daily "Business Recorder" and Daily "Dunia" wherein the salient features along with the date of 9th May 2016 of hearing was published. Individual letters were communicated to the stakeholders for meaningful participation in the hearing. In response comments from Al-Noor Sugar Mills and Ashraf Sugar Mills received to the following effect:

Al-Noor Sugar Mills

(a) Efficiency

The Authority has calculated the power plant thermal efficiency of Al-Noor Sugar Mills as 22.4% whereas it is on lower side. The highest efficiency of Tubro-Alternator is 16.04% and average is 13.12%.

(b) Price of Bagasse

The Authority has fixed the tariff keeping in view the price of Baggase at Rs. 2,861/M.Ton. During the cane crushing season the price of bagasse remains approximately Rs. 2,861/M.Ton but after the season, the price varies upto Rs. 4,000/M.Ton. So average recommended bagasse price is Rs. 3,375/M.Ton which is more justified.

(c) Baggase Price Mechanism

Rates of coal are reducing in international market as coal based power generation is discouraged being polluted fuel. Bagasse based power generation is encouraged being environment friendly and its rates are increasing day by day. Therefore linkage of tariff of bagasse based power with coal is not justified. It is therefore, requested that rates of bagasse should be re-linked with natural gas which is more justified because both fuel are environment friendly.

(d) Linkage of Bagasse Price Mechanism with Upfront Tariff

The Authority has linked up bagasse based power generation with coal price mechanism which is already decided in upfront bagasse based power plant. The Government is supporting the

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organizations against investment and have guaranty of power dispatch to national grid. Whereas in our case, we have invested from our own resources and are not getting any financial benefits against our investments. Therefore linkage with Upfront Tariff is not justified.

(e) Fixed Cost Component to be revised

Fixed cost component was revised in late 2008 at Rs. 1.26/kWh to Rs. 1.53/kWh i.e. at that time the minimum wages was Rs. 8,000/month but currently minimum wages are Rs. 1,3000/month i.e. about 62.5% increase. Fixed cost component is basically cost of operation and maintenance. Therefore with the passage of time fixed cost component should be revised accordingly.

ASHRAF SUGAR MILLS

(a) Fuel Cost Component

The fuel cost component has been worked out on the basis of US$/PKR exchange rate of Rs. 98/US$ whereas the current US$/PKR exchange rate is Rs. 104.68 and the same has to be utilized.

(b) Fixed Cost Component

The fixed cost component has been retained and no indexation is allowed on account of Consumer Price Index (CPI). It is requested that the CPI be incorporated in the fixed cost component.

(c) Indexation and Methodology

In line with the Upfront Tariff wherein the Authority on its own determines and announces the indexation to fuel cost component and fixed cost component on periodic basis, the same approach be opted in the instant case.

(d) Plant Efficiency

The Authority under the High Pressure Upfront Tariff, has allowed an efficiency of 24.50%. The efficiency under the proposed Upfront tariff is set at 22.49%. The efficiency of low pressure boilers and existing sugar mills is around 7-11%. The efficiency is unfeasible for the power purchaser. It is therefore requested that the efficiency be allowed as 16% instead of 22.49%.

3. The hearing in the matter was also conducted on 9.5.2016 wherein the stakeholders did participate.

4. The Authority considered the comments of the stakeholders. The Authority considers that there is a great potential of the surplus energy during the crushing season from different sugar mills. However, the process requires much more time to enter into the bilateral agreements

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between the power producer and power purchaser. Keeping in view the aforesaid, suo moto proceedings were initiated by the Authority in order to facilitate the existing sugar mills for opting upfront tariff and to avoid the delay due to the time taken in proceedings. The Authority is of the view that, the sugar mills who have objected the efficiency and fixed O&M are already providing the electricity under NEPRA Interim Power Procurement (Procedure & Standards) Regulations – 2005 regime to their respective Distribution Companies. Therefore the issues indicated by the Sugar Mills are irrelevant in the instant case.

5. Order

5.1 In exercise of powers under section 7 (3) (a) read with section 31 (4) of the Act, the Authority hereby determines and approves the following upfront tariffs, for generation of electricity from existing sugar mills, for delivery of electricity to the power purchaser on take and pay basis:

Description	Rs./kWh
Fuel Cost Component	6.29
Fixed Cost Component	1.53
Total	7.82

5.2 The fuel cost component is subject to adjustment mechanism which is as under:

Fuel cost component of tariff will be adjusted on account of variation in price of fuel (bagasse) on yearly basis in advance (w.e.f. 1st of October of each applicable year) as per the formula given hereunder.

$FCC_{(Rev)}$ = $FCC_{(Ref)} \times BFP_{(Rev)} / BFP_{(Ref)}$

Where;

$FCC_{(Rev)}$ = Revised fuel cost component of tariff for the applicable year.

$FCC_{(Ref)}$ = Reference fuel cost component of tariff of Rs. 6.29/kWh.

$BFP_{(Rev)}$ = Revised price of bagasse in Rs/ton as determined in accordance with mechanism set out below.

$BFP_{(Ref)}$ = Reference price of bagasse for the relevant year. Current reference price is Rs. 2861.12/ton

$BFP_{(Rev)}$ = $CPCIF_{(Rev)} \times 6905 / 23810$

Where;

$CPCIF_{(Rev)}$ = $\{CPFOB_{(Rev)} + MF_{(Rev)} + MI_{(Rev)}\} \times ER_{(Rev)}$

Where;

$CPCIF_{(Rev)}$ = Revised CIF price of coal in Rs/ton for the applicable year.

$CPFOB_{(Rev)}$ = Revised FOB price of coal expressed in US$/ton based on monthly average of prices published in the Argus McCloskey's API4 index for the relevant year.

$MF_{(Rev)}$ = Revised marine freight of coal per ton as worked out below.

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$MF_{(Rev)}$	=	US$ 19.19 x $BIX_{(Rev)}$ / $BIX_{(Ref)}$
Where;		
$BIX_{(Rev)}$	=	Revised monthly average of the daily Bunker Index price for 380-CST published by the Bunker Index for the relevant year.
$BIX_{(Ref)}$	=	Reference monthly average of the daily Bunker Index price of 380-CST published by the Bunker Index. Current reference for the month of April 2013 is US$ 641.8219/ton.
$MI_{(Rev)}$	=	$CPFOB_{(Rev)}$ x 0.1%
$ER_{(Rev)}$	=	Revised monthly average PKR/US$ exchange rate for the relevant month.

The constants such as 6905, 23810 and US$ 19.19 are fixed values representing LHV value of bagasse in btu/kg, LHV value of coal in btu/kg and fixed value of marine freight charges per ton of coal respectively.

6. <u>Terms and Conditions</u>

6.1 Following terms and conditions shall be applicable:

i. The existing sugar mills shall submit the generation license application and unconditional Upfront Tariff acceptance request simultaneously.

ii. Interconnection study approval and NOC from Environmental Protection Agency shall be submitted along with the generation license application.

iii. The sale purchase will be on take and pay basis.

iv. There will be no indexation in the fixed cost component.

v. The fuel cost component shall be adjusted on 1st October of each year based on the request submitted by the power producer.

vi. The consent of the power purchase is mandatory.

vii. The PAR shall be submitted by the Distribution Company within 15 days from issuance of consent of power purchase to the power producer.

viii. There is no minimum or maximum cap of energy offered by the existing sugar mills.

ix. The interconnection will be responsibility of the power purchaser. In case of interconnection facility by the power producer the same shall be reimbursed within three years to the power producer. However, the power producer in this case shall meet the standard opted and approved by the respective Distribution Company.

x. The Upfront tariff for existing sugar mills can be opted within one year from date of notification.

xi. The fuel cost component and indexation mechanism can be reviewed within three years from issuance of the Authority's decision.

xii. The decision to opt for upfront tariff for existing sugar mills once exercised shall be irrevocable.

xiii. The sponsor interested for opting Upfront Tariff shall submit the unconditional formal application to NEPRA for approval of the Authority.

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xiv. The Co-generation projects are allowed to use other biomass fuel such as rice husk, cotton stalk etc. in combination with Bagasse or separately. However use of coal imported or local is not allowed.

xv. The EPA / PPA executed shall be consistent with all applicable documents including Generation License and NEPRA's tariff determination for the power producer. Any provision of PPA / EPA which is inconsistent with NEPRA's tariff determination shall be void to that extent and its financial impact shall not be passed on to the end-consumers.

6.2 The above Order of the Authority is recommended for notification by the Federal Government, in the Official Gazette, in accordance with Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

AUTHORITY

27/12/16

(Major (R) Haroon Rashid)
Member

(Syed Masood-ul-Hassan Naqvi)
Member

(Himayat Ullah Khan)
Vice Chairman

(Brig. (R) Tariq Saddozai)
Chairman

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