



# Whistleblower Pakistan

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Ref: \_\_\_\_\_

Dated: 13<sup>th</sup> October, 2017

The Chairman,  
National Electric Power  
Regulatory Authority (NEPRA),  
Attaturk Avenue (East), NEPRA Tower,  
Sector G-5/1, Islamabad.

TRUSTEES

Mr. Yasmeen Tariq

Justice (R) Nasira Iqbal

Mrs. Shahana Farid  
(Secretary General)

Mr. Sobail Khanfar

Justice (R) Zia Perwaiz  
(Vice Chairman)

Justice (R) Dr. Ghous  
Muhammad  
(Chairman)

Subject: Information with regard to Power Plants approved by  
NEPRA under NCPP Regime.

Dear Sir,

The attention of the Authority is drawn towards the Decisions through which it has determined the 'Tariff' and approved the 'Terms and Conditions' for various Power Plants set up under the New Captive Power Plants (NCP) regime. NEPRA did not determine the Tariff for these Plants under the NEPRA Tariff Standards and Procedure Rules, 1998 but determined the Tariff under NEPRA Interim Power Procurement (Procedure & Standards) Regulations, 2005. Power Acquisition Requests for these Power Plants were submitted by the Distribution Companies.

2. It is the understanding of Whistleblower Pakistan (WBP) that NEPRA has determined the Tariff and approved the same terms and conditions for all these Power Plants. However, from the data submitted by CPPA (G) before NEPRA in the matter of monthly fuel charges adjustments, WBP has noted that the per unit fuel costs of these Power Plants are different.

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3. Without prejudice to WBP's view point in the matter of NCPPs, WBP would like to have some information with regard to efficiency and fuel cost component of these Power Plants. But before raising its queries, WBP would like to reproduce the deliberation and decision with regard to 'Fuel Cost Component' recorded in NEPRA's Decision made in the matter of PAR of HESCO in respect of Omni Power (Private) Limited:

"15 Fuel Cost Component

15.1 This is the major cost constituent of a thermal power plant and accounts for 60% to 80% of the overall electricity cost depending upon the type of fuel used. Fuel cost component of tariff is a function of heat rate (thermal efficiency) of the power plant, price of gas and LHV-HHV factor to convert HHV gas price to LHV gas price. In the PPA HESCO agreed the fuel cost component of Rs. 2.89/kWh on HHV gas price of Rs. 238.38/MMBUs.

15.2 In order to assess the reasonability of the fuel cost component, HESCO was asked to explain the basis of the fuel cost component. Since HESCO had no information/basis of the tariff and the terms and conditions agreed in the PPA signed under the Policy; therefore CPPA on behalf of HESCO stated that;

i) The reference benchmark fuel cost component of Rs. 2.89/kWh was negotiated and agreed between APTMA members and WAPDA Authority as per NEPRA's directives based on pipeline quality natural gas at a reference price of Rs. 238.38/MMBTU with GCV (Btu/Scf) of 899 HHV and plant heat rate of 12,124 Btu/kWh which corresponds to an efficiency of 28.15%.

ii) It has no information about the actual thermal efficiency of the plant.



iii) In the first instance a fuel cost component of Rs. 2.31/kWh and fixed cost component of Rs. 1.16/kWh was offered to CPPs/SPPs to lessen the power shortage in the country. No gas based CPP/SPP offered power on these rates. Consequent upon meetings and negotiations of APTMA's members with Member (Power) WAPDA, these rates were enhanced to Rs. 2.89/kWh as fuel cost component and Rs. 1.26/kWh as fixed cost component. Later on the fixed cost component was enhanced from Rs. 1.26/kWh to Rs. 1.53/kWh upon demand of APTMA's members keeping in view the increase in inflation rate.

iv) The fuel cost component depends upon the cost of fuel (HHV or LHV as applicable) and the heat rate of the plant under consideration. According to CPPA the heat rate of the reciprocating engines have remained significantly the same over a period of time. The engine manufacturers are quoting the same heat rate as they were quoting 16 years ago as apparent from the contracts signed recently and in 1994. CPPA stated that the efficiency of engines if maintained and overhauled according to manufacturers' guidelines can be maintained at the same level. Similarly the efficiency and heat loss of the unit and auxiliary transformers, other major constituents of the heat loss cycle, also hardly deteriorate over a period of time. HESCO did not have any information; therefore the Power Producers were directed to provide Manufacturers' Brochures, which were provided accordingly.

v) Upfront tariff comprising fuel cost component of Rs. 2.31/kWh (at thermal efficiency of 39%) and fixed cost component of Rs. 1.16 / kWh was offered to SPPs / CPPs to lessen power shortage in the country. No gas based SPP / CPP offered power on these rates.

vi) The fuel cost component of NCPPs is part of a negotiated upfront tariff for either "take it" or "leave it" under a package deal. According to CPPA all the tariff



components and its underlying terms & conditions have been considered in totality; therefore any comparison of individual upfront tariff component or its terms/conditions with any tariff component or terms/conditions approved by NEPRA for GENCO or IPP tariff would give a false and misleading view.

15.3 The Authority examined and considered the above response of CPPA and noted that CPPA's response was misconceived and misinterpreted. In the NEPRA's advertisement dated 15-06- 2007 with respect to procurement of surplus power from Captive Power Plants (CPPs) and letter No. NEPRA/R/TRF-100/APTMA/2481-82 dated 06-06-2007 there were no directives regarding fuel efficiency agreed by the CPPA/DISCOs. Despite the advertisement allowing procuring power at agreed rates, the power purchaser was required to comply with the relevant laws, rules and regulations, which were however not complied with. Furthermore, it appears from CPPA's response that the reference fuel cost component was negotiated without proper working and analysis.

15.4 It is evident from the response provided by CPPA that no benchmark efficiency was adopted in the Policy and the impact of low underlying efficiency was not evaluated while agreeing the fuel cost component. Thermal efficiency is one of the most important factors in evaluation of a thermal power plant.

15.5 From the available information it is observed that there has been great improvement in the plant efficiency over the period and contrary to the CPPA's statement more efficient plants are available in the market. The Authority considers that the justification for accepting lower efficiency than the actual on the ground that APTMA did not agree to the actual efficiency level is not acceptable.



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This becomes even more important when the fuel cost component is subject to adjustment on account of fuel price variation. In Authority's opinion such an adjustment can only be considered if the thermal efficiency is determined at actual.

15.6 According to the M/s IS. ZA. AD Associates the inappropriate allocation of scarce gas to less efficient generating units and consequential non-generation by IPPs is a matter of great concern. The intervener suggested that the Efficiency for such plants to be at least 42% based on gas engines combined cycle modes. Similar comments have been forwarded by MoW&P. Approval of Power Acquisition Request in respect of Omni Power (Pvt) Limited. The Ministry submitted that the utilization of gas allocation may not be wasted on single cycle, low efficiency plants rather it is advisable to use this pipeline quality gas allocation in more efficient, bigger plants like Orient, Sapphire or Halmore. The ministry further commented that the criterion for fuel cost component should be based upon brand new machinery. The Ministry's concerns regarding utilization of scarce gas in less efficient power plants are although valid but these should have been considered while endorsing the said Policy by the Ministry. The Authority is of the view that while allocating the gas priority should be given the most efficient plants over the less efficient plants like Captive, New Captive or Small power plants and state owned GENCOs.

15.7 The Authority considers that the each tariff component has to be based on reasonable assumptions particularly fuel cost component because it has to be adjusted for variation in fuel prices. In Authority's opinion in the instant case agreeing to the same fuel cost component as was applicable to old captive power plants cannot be considered a prudent decision; particularly when brand new machinery is required to be installed and the end-consumers have to pay the debt servicing which is the substantial portion of the total project cost. In view thereof

