Volume 7, Issue: 1, October, 2017

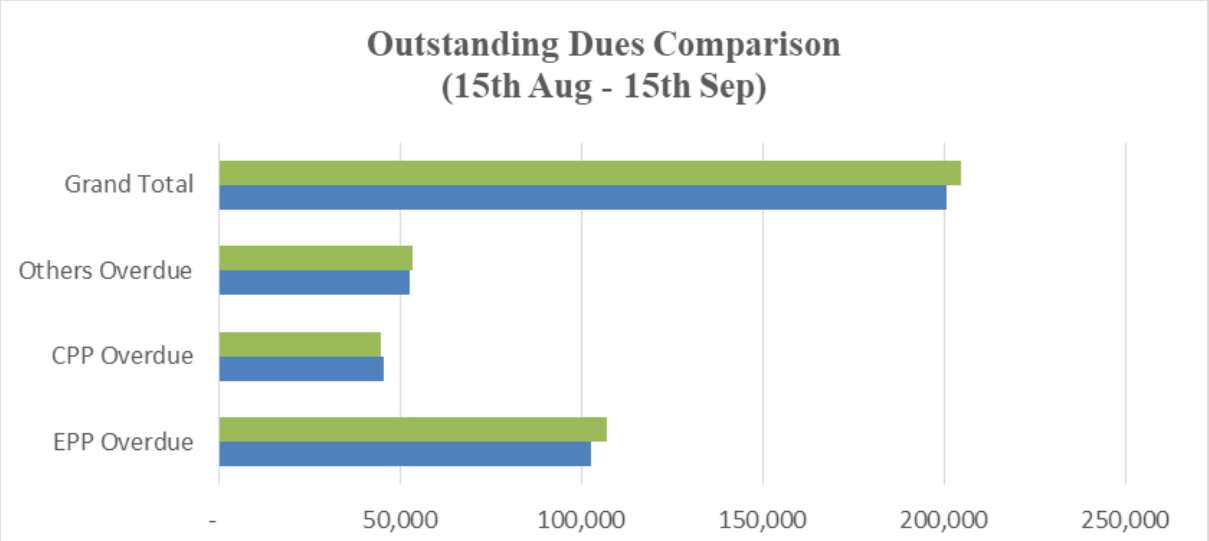
INDEPENDENT POWER PRODUCERS ASSOCIATION

MONTHLY NEWSLETTER

Welcome to the seventh edition of Independent Power Producers Association (IPPA) Newsletter. The newsletter is published on a monthly basis to ensure regular dissemination of information to Member IPPs and other stakeholders, and also to provide a platform to discuss issues pertinent to the energy sector of Pakistan. We would like you to send us your feedback and comments on how to improve the monthly newsletter.

Monthly Infographics

Outstanding Dues as of 15th September, 2017 in PKR Millions

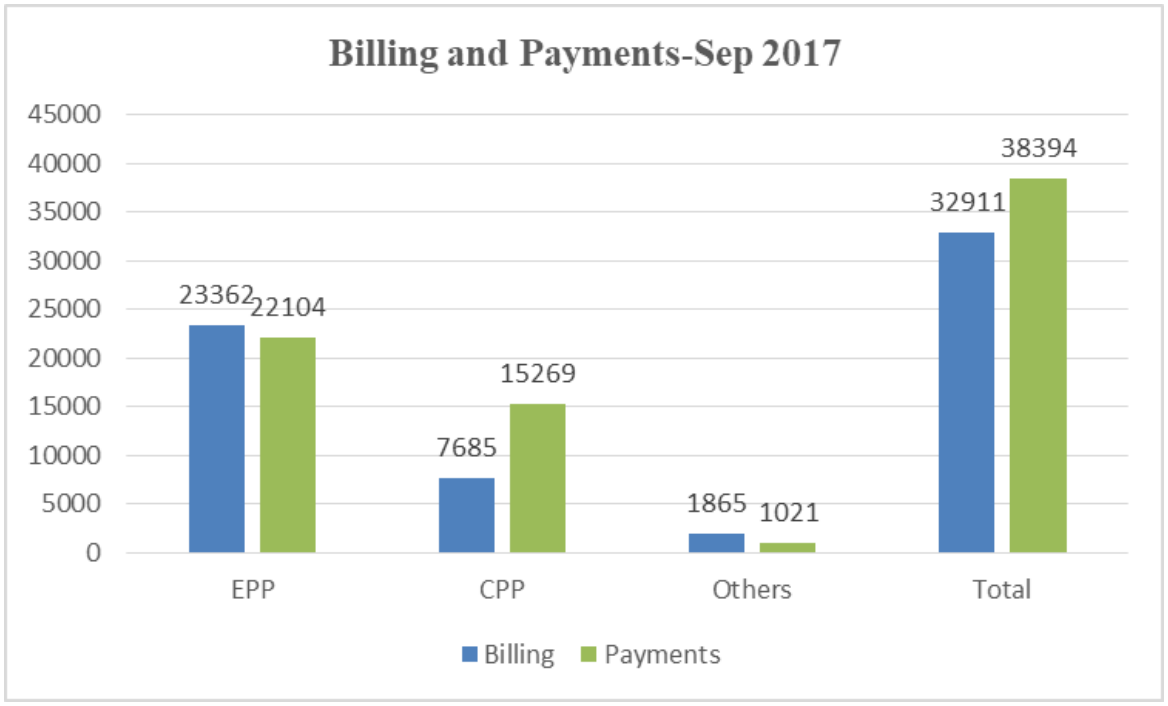


	EPP Overdue	CPP Overdue	Others Overdue	Grand Total
Sep	106835	44604	53311	204750
Aug	102,646	45,472	52,557	200,676

Source: Member and Subsidiary IPPs

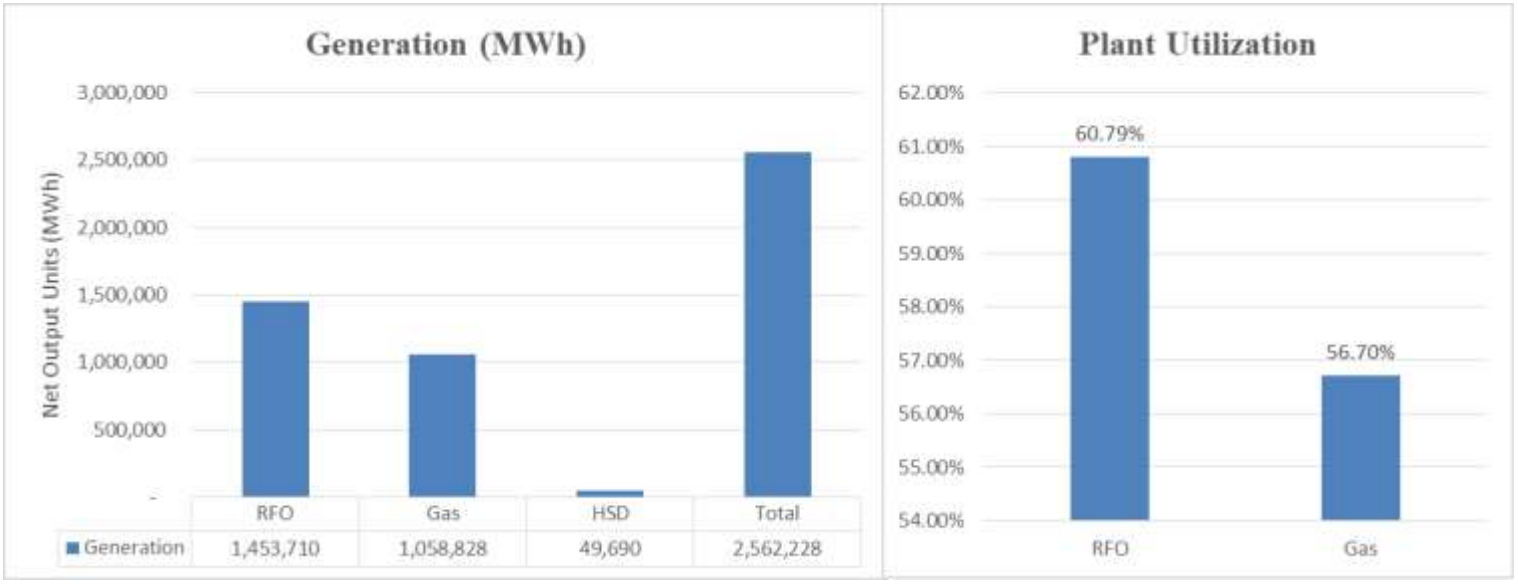
Monthly Infographics

Billing and Payments in September 2017 in PKR Millions



Source: Member and Subsidiary IPPs

Net Generation and Plant Utilization in September 2017



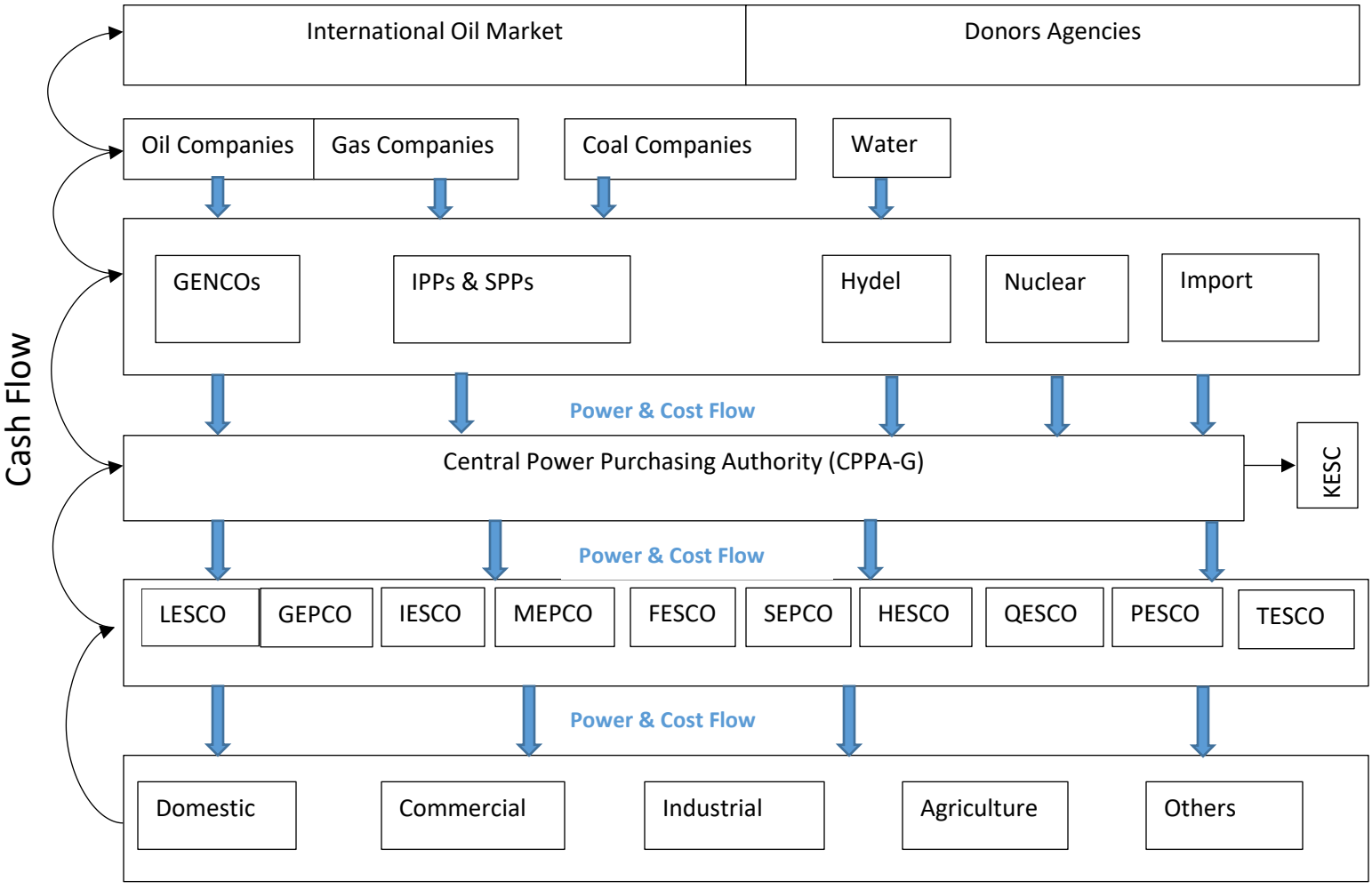
Source: Member and Subsidiary IPPs

Discussion: Is Electricity Trading a viable option for Pakistan's Power Sector?

Introduction

In Pakistan, the electricity sector is regulated by the National Electric Power Regulatory Authority (NEPRA). As a regulator, NEPRA not only issues generation and distribution licenses but also determines and approves generation (Independent Power Producers (IPPs) and government-owned generation companies (GENCOs)), transmission, distribution and end consumer tariffs. The existing structure of the power sector entities in Pakistan is illustrated below:

Power Flow and Transfer of Costs



The flow diagram highlights the power flow and indicates that a single-buyer model prevails in Pakistan. This very model restricts the DISCOs ability to purchase electricity at competitive rates. This in turn not only affects the financial viability of the electricity sector but also raises the cost of electricity for the end consumer.

Unlike Pakistan, there is a rising global trend towards a deregulated structure of the electricity industry.[1] Asian countries like India, Singapore, and China are also taking substantial measures to reform their electricity market.[2]The key rationale behind liberalizing and deregulating electricity markets is to promote competition, which will curb the cost of electricity provided to the end consumers.[3] Moreover, in a competitive environment, power producers have an incentive to not only operate in the most efficient manner but also to invest in technology innovation, to maximize their profits.[4]

However, it is pertinent to mention that before Pakistan can move towards a deregulated sector, it is inevitable to understand what electricity trading entails and most importantly whether Pakistan has the required infrastructure to support such a setup.

Electricity Trading

The key difference between other commodity trading and electricity trading is that electricity cannot be stored in any significant quantity. Unlike other commodity and financial markets, the supply side participants in electricity trading are not large in number. In addition to technical complexities, operation and control side of the electricity trading is equally complex as it involves interaction between several market entities, fulfilling a wide range of contractual obligations and separation of primary and ancillary services.[5]

In the existing electricity markets in the world, electricity trading is carried out through several arrangements[6]:

1) Electricity Pool
   It is a contractual arrangement which facilitates competitive bidding among the electricity suppliers. This process helps to determine the whole sale price of electricity for every period of every day. The duration of the period may differ in trade markets across countries.

2) Bilateral Trading
   It involves a future contract between the buyer and seller. This contract is without any third person interference. It allows the electricity consumers to negotiate the least price from the power producers, independent of the official price. There are further three forms of bilateral trading
   - Customized long-term contract
   - Trading 'Over The Counter'

[1] 'An Electric Power Trading Model for Indian Electricity Market' by P.Bajpai and S.N. Singh
[2] An Electric Power Trading Model for Indian Electricity Market' by P.Bajpai and S.N. Singh
[3] 'Electricity Market Trading' by Paule Stephenson & Mihai Paun
[4] 'An Electric Power Trading Model for Indian Electricity Market' by P.Bajpai and S.N. Singh
[5] An Electric Power Trading Model for Indian Electricity Market' by P.Bajpai and S.N. Singh
[6] 'Market Power in the Great Britain Wholesale Electricity Market' by Abd Jamil and Ahmad Fairuz

- Electronic Trading

3) Spot Market
   It is spot market run by an Independent System Operator (ISO). ISO manages offers and bids from the market participants, to ensure the balance of the system.

Prerequisites for Electricity Trading in Pakistan

Any open market operation requires financial security for the seller. In most cases where the commodity being sold is not perishable, the delivery of commodity is done after payment, thereby providing a base level of security, and the risk of price movement in the intervening period is covered through other financial instruments. In case of perishable items, the commodity also has a diminishing value, thereby enhancing the need of security. In the case of electricity, this is a unique commodity, with a time based transient nature, and it perishes instantly. Therefore, it is necessary to have full security of payment by the buyer before the seller can sell it. In all cases around the world, buyers and sellers have to provide security for trading in commodities, and in cases like these the security is often third party financial instruments. For example, a buyer on Indian Electricity Exchange has to provide standing letters of credit for the amount it wishes to purchase, and any time its exposure increases beyond the letter of credit value, the exchange stops delivering power to it.

In the Pakistani system, the inflow of funds from sale of electricity is well short of outflow for purchase. To spell it out, after netting its own operating cost, the amount of money a DISCO remits to CPPA-G for the power supplied to it, is insufficient to clear all amounts CPPA-G has to pay to the transmission company, cover its own costs and then pay the generators for the power supplied by them. Hence, the perpetual shortfall that we call circular debt. In this environment, how can a seller supply power to the market operator CPPA-G on a traded basis, when they have no security that the payment will be received on the delivery date (or a date agreed past that). Therefore, unless the financial side of the trade is first secured through structural changes to ensure that the inflow is equal to, or exceeds the required outflow, no open market operation can happen in reality, and the whole exercise will simply be a theoretical process in which the only thing accomplished will be shuffling of the shortfall across various entities.

Moreover, as discussed earlier, the electricity trade market is complex in nature therefore; there is a need to develop a solid framework governing the market. It should provide clear guidance on all scenarios which may arise in the electricity trade market. Both the market operator and market participants should have a clear understanding of the framework and regulations. Any ambiguity may lead to misinterpretation by the market operator and/or market participants resulting in discord among the said parties. Given the volatile and complex nature of the market, such a dispute may lead to the collapse of the electricity trade market. Therefore, regulatory framework should be drafted in consultation with stake holders of the power sector, so that the trade market can be operated smoothly.

In nutshell, the market operator has a crucial role to play. It must be an independent entity with the required information and expertise to manage the functioning of the trade market. First, the energy ministry needs to commit to the independence of the market operator. In the current market system, NEPRA was established to operate independently of the government; however it was stripped off its autonomy in May, 2017.[7] However, if in an electricity trade market, the market operator is not independent and impartial, it will defeat the purpose of deregulating the market as the efficiency gains from competition will not be materialized. Second, for the market to function there is a need to ensure timely and accurate information, such as demand forecasts, to the market participants. It may be done through online bulletin board which may provide real-time information to all market participants.[8] Third, the electricity market is volatile and the only entity which is responsible to ensure stability of the market is the market operator, therefore, the human resource employed in the market operator should be well versed in the functioning of the electricity trade market.

Conclusion

Although, deregulation of the electricity sector has many benefits, however, the current state of the power sector of Pakistan is not viable to establish an electricity trade market. There is a need to work on several crucial issues before the foundations of electricity trade market can be laid. First, there is a need to ensure the financial viability of the power sector. This may be done through improving the transmission and distribution network, privatization of GENCOs and subsidy elimination. Second, there is a need to establish an environment of financial security, where contractual obligations are honored. Then, NEPRA should engage key stakeholders and expert personnel to develop a comprehensive set of regulations and framework for the electricity trade market.

[7] 'Nepra Stripped of its autonomy' by Khaleeq Kiani

[8] An Electric Power Trading Model for Indian Electricity Market' by P.Bajpai and S.N. Singh

Our Members

	Member IPPs	Primary Fuel	Alternate Fuel	Gross Capacity (MW)	Net Capacity (MW)
1	The Hub Power Company (Tehsil Hub)	RFO	HSD	1292	1200
2	Pakgen Private Limited	RFO	-	365	350
3	Lalpir Private Limited	RFO	-	362	350
4	Kohinoor Energy Limited	RFO	-	131	126
5	TNB Liberty Power Limited	GAS	HSD	235	211
6	Uch Power (Private) Limited	GAS	-	586	551
7	Rousch (Pakistan) Power Limited	GAS	HSD	412	395
8	Habibullah Coastal Power (Pvt.) Co.	GAS	HSD	140	126
9	Attock Gen Limited	RFO	HSD	165	156
10	Atlas Power Limited	RFO	HSD	225	214
11	Nishat Power Limited	RFO	HSD	200	195
12	Nishat Chunain Limited	RFO	HSD	200	195.6
13	Liberty Power Tech. Limited	RFO	HSD	200	195
14	Orient Power Company Limited	GAS	HSD	229	213
15	Saif Power Limited	GAS	HSD	229	209
16	Sapphire Electric Company Limited	GAS	HSD	225	209
17	Halmore Power Generation Co. Ltd.	GAS	HSD	225	209
18	Engro Powergen Qadirpur Limited	GAS	HSD	227	217
Subsidiary IPPs					
19	Hub Power Company Ltd (Narowal)	RFO	-	220	214
20	Uch-II Power (Pvt) Ltd	GAS	-	404	375.2
21	Saba Power Company (Private) Limited	RFO	-	134	125.5

Upcoming Topics

November

Power and Litigation

December

Coal Fired Plants - Pakistan and South Asia

Established in 2010, IPPA serves as an advisory body for Independent Power Producers (IPPs) in Pakistan. IPPA liaises with the government and related departments such as NEPRA, SECP, WAPDA, CPPA-G, NTDC and PPIB and also serves as a facilitator between various IPPs and stakeholders within the power sector.

If you have any suggestions or feedback, kindly write to us at feedback@ippa.com.pk