Volume 6, Issue: 1, September, 2017

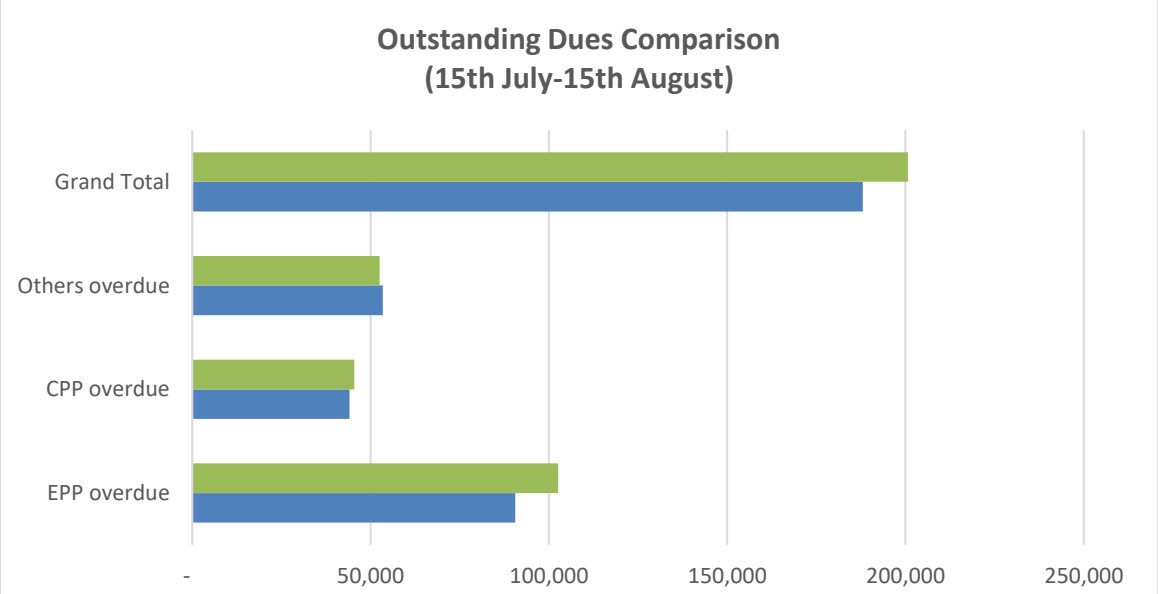
INDEPENDENT POWER PRODUCERS ADVISORY COUNCIL

MONTHLY NEWSLETTER

Welcome to the sixth edition of Independent Power Producers Advisory Council (IPPAC) 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 August, 2017 in PKR Millions

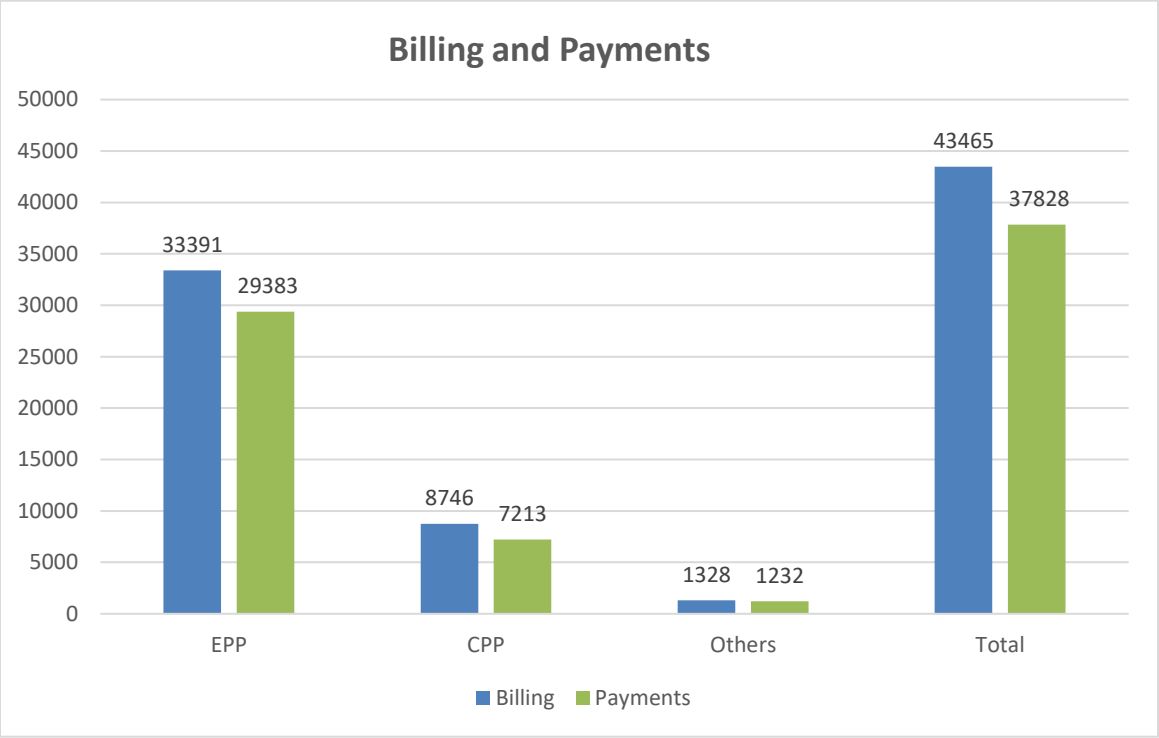


	EPP overdue	CPP overdue	Others overdue	Grand Total
Aug	102,646	45,472	52,557	200,676
July	90,567	44,062	53,434	188,064

Source: Member and Subsidiary IPPs

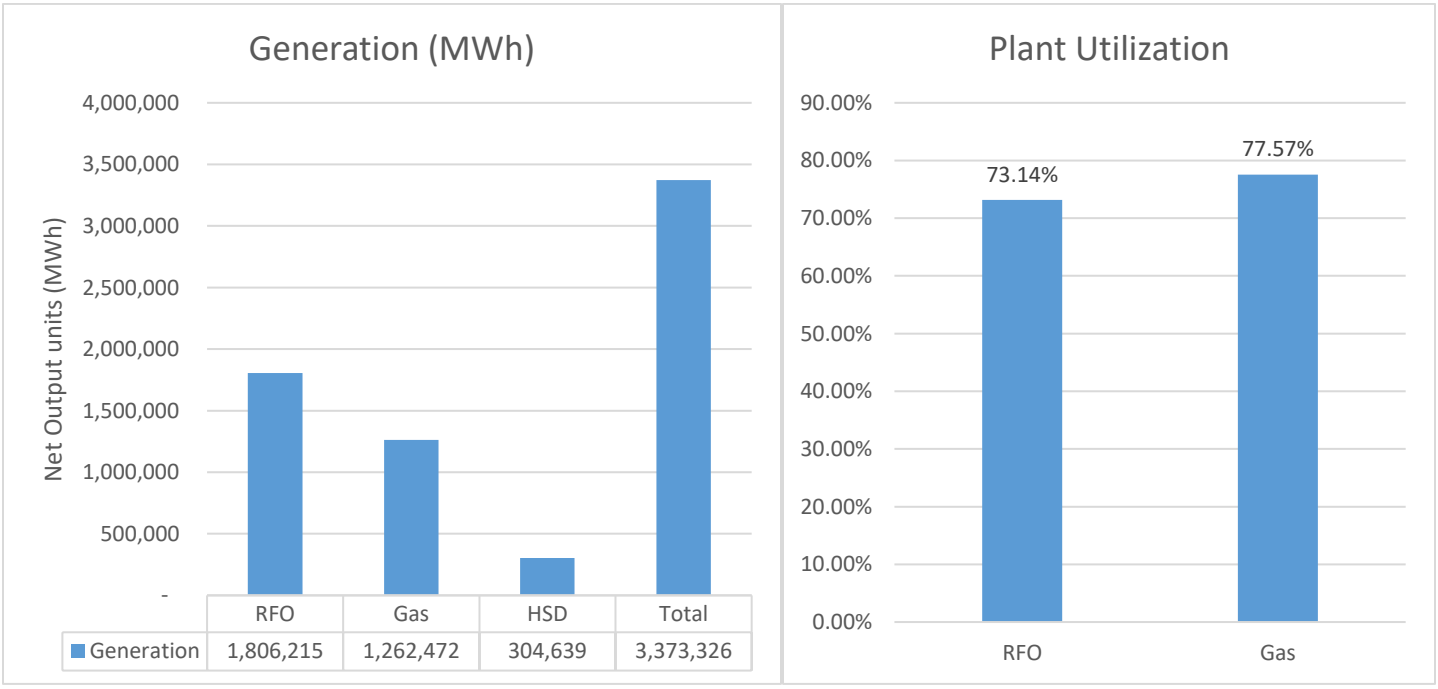
Monthly Infographics

Billing and Payments in August 2017 in PKR Millions



Source: Member and Subsidiary IPPs

Net Generation and Plant Utilization in August 2017



Source: Member and Subsidiary IPPs

Discussion: What is the Real Position of the Power Sector?

Overview of the sector

The electricity sector of Pakistan is categorized into a supply chain that comprises of generation, transmission and distribution segments. Electricity Generation in Pakistan consists of a mix of public and private owned generation units that use either Thermal, Coal, Hydel, Nuclear or Renewable Resources as their fuel. Independent power producers (IPPs) contribute significantly in electricity generation. The installed capacity stands at 26,711 MW. [1] (WAPDA Hydel: 6,902 MW, thermal GENCOs 4,762 MW, thermal IPPs 13,470 MW, hydro IPPs 215 MW, Nuclear 600 MW and renewables 800 MW), while the total electricity generated for the year 2015-16 stood at 112,000 GWh. [2] The transmission and distribution network is based on 500 kV, 220 kV, 132kV and 66kV transmission and distribution lines. NTDC manages assets, obligations and liabilities of 220 KV and 500KV Grid Stations and Transmission Lines/Network. Regional distribution companies distribute electricity to the end consumer and are responsible for revenue collection.

Issues being faced by the sector

The electricity sector in Pakistan is facing crises on many fronts. Financial crisis, circular debt, gap between supply and demand of electricity, load shedding, technical (T&D) losses and electricity theft are a few to name.

The circular debt stood at above PKR 400 billion as of June 2017 [3] resulting in irregularities in payments to the electricity producers and the fuel suppliers. This difference significantly impacts the supply chain, and hence the end user has to bear the brunt in the form of load shedding, and increase in tariff. The government plans to eliminate circular debt through rationalization of tariffs and pursuing a comprehensive energy sector reform agenda.

Against a peaking demand of 24,000 MW, capability of NTDC for supply of electricity stands at 20,000 MW resulting in a shortfall of 4,000 MW. [4] This situation, however is projected to improve, as more generation is expected to come online, and the capability of NTDC is expected to increase.

In terms of overall average losses of 15.23% allowed to DISCOs, actual average losses have been reported by DISCOs as 17.95% which stand at 2.72% above allowable limits. [5]

As on June 2016, the overall distribution sector receivables stood at PKR 684.06 billion whereas, the receivables at the start of this year were PKR 633.12 billion hence increasing by PKR 50.94 billion which are considerably less than the increase of PKR 120 billion during 2014-15. [6]

---

1 NTDC

2 NEPRA State of the Industry Report 2016

3 Pakistan Today – June 8, 2017

4 NTDC

5 NEPRA State of the Industry Report 2016

Impacts of the 2013 power policy

Provision of an efficient electricity supply system is among the key objectives of the National Power Policy 2013. As per the policy, the electricity shortfall is expected to be eliminated by the end of 2018. In addition to this, T & D losses are targeted to be reduced significantly while aiming for cheaper energy generation by deploying more hydel, LNG and coal generation and to integrate renewable energy resources into the energy mix.

As a part of working plan 2013-18, the following initiatives for power sector are being taken:

- Improvement in generation mix: To bring down the cost of generation by increasing the shares of hydro, LNG and coal based generation
- To commission Renewable Energy Projects of 5,695 MW (recommendations of the working group on alternate energy) to ensure energy security and diversity in the generation mix.
- The Overseas Private Investment Corporation (OPIC) is to facilitate the private sector investment in several wind projects of up to 250 MW.
- Taking steps to enhance energy efficiency and to promote energy conservation
- Under the China-Pakistan Economic Corridor (CPEC), China, electricity generation projects with a cumulative capacity of 17,000 MW at a cost of USD 32.293 billion are to be set up
- ADB is to finance 1,200 MW Jamshoro coal fired power plant
- The USAID is to finance construction and rehabilitation of Gomal Zam Dam, Satpara Dam, Mangla Dam, Kaitu Weir, and Tarbela Dam and the modernization of Guddu, Jamshoro, and Muzaffargarh power plants.

In its endeavor to achieve the specified goals, the government has added 9,000 MW of electricity in the past 4 years to the system. [7]The T&D losses have dropped to 17.95% from 18.70% in the year 2015-16, hence showing improvement. Under this policy, planned generation expansion is on track. 31 new transmission projects are being undertaken by the NTDC. This will augment their present transmission capacity of 39,641 MVA to 77,451 MVA. [8] Under CPEC, transmission system expansion with Matiari to Lahore (HVDC line) and Matiari to Faisalabad attaining COD by late 2018 would ensure active upgradation of the system to sustain additional generation.

This policy, as compared to the previous power policies has proved to be more fruitful being investor friendly and by targeting and focusing on resolving key issues being faced by the sector, as it has been able to diversify the energy mix by adding more hydel, coal and renewable generation. Fixating a return on equity, and provision for more fiscal freedom and has made the sector a safe investment area. The following comparison depicts the success of this power policy.

---

6 NEPRA State of the Industry Report 2016

7 PPIB

8 NTDC

Power Policy	Capacity added
1994	3120 MW
2002	2934 MW
2013	9000 MW

Source: PPIB

The concentration of renewable energy has risen to 3.35% of the installed capacity. Reliance on imported liquid fuels has decreased. Energy efficiency enhancement and conservation measures have resulted in reduction of technical losses, while the revenue recovery has increased to 94%. [9]

CPEC and the power sector

Power sector is a major focus of the CPEC, with approximately USD 33 billion expected to be invested in this sector. As part of the "Early Harvest" scheme of the CPEC, an estimated 10,400 MW of electricity generation capacity is expected to be added by the end 2018. The following projects are expected to come online as a part of CPEC:

Project Name	MW	Cost(US$ M)
2×660MW Coal-fired Power Plants at Port Qasim Karachi	1320	1,980
Suki Kinari Hydropower Station, Naran,Khyber Pukhtunkhwa	870	1,802
Sahiwal 2x660MW Coal-fired Power Plant, Punjab	1320	1,600
Engro Thar Block II 2×330MW Coal fired Power Plant TEL 1×330MW Mine Mouth Lignite Fired Power Project at Thar Block-II, ThalNova 1×330MW Mine Mouth Lignite Fired Power Project at Thar Block-II, Sindh, Pakistan	660 330 330	2,000
Surface mine in block II of Thar Coal field, 6.5 million tons/year		1,470
Hydro China Dawood 50MW Wind Farm (Gharo, Thatta)	50	125
300MW Imported Coal Based Power Project at Gwadar, Pakistan	300	600
Quaid-e-Azam 1000MW Solar Park (Bahawalpur) Quaid-e-Azam	1000	1,215
UEP 100MW Wind Farm (Jhimpir, Thatta)	100	250
Sachal 50MW Wind Farm (Jhimpir, Thatta)	50	134
SSRL Thar Coal Block-I 7.8mtpa &SEC Mine Mouth Power Plant(2×660MW)	1320	2,000 + 1,300
Karot Hydropower Station	720	1,420
Three Gorges Second Wind Power Project Three Gorges Third Wind Power Project	50 50	150
CPHGC 1,320MW Coal-fired Power Plant, Hub,Balochistan	1320	1940
Matiari to Lahore ±660kV HVDC Transmission Line Project		1,500
Matiari (Port Qasim) —Faisalabad Transmission Line Project		1,500
Thar Mine Mouth Oracle Power Plant (1320MW) & surface mine	1320	1,300
Kohala Hydel Project, AJK	1100	2,397
Rahimyar khan imported fuel Power Plant 1320 MW	1320	1,600
Cacho 50MW Wind Power Project	50	
Western Energy (Pvt.) Ltd. 50MW Wind Power Project	50	

Source: http://cpec.gov.pk/energy

9 NEPRA State of the Industry Report 2016

With the completion of these energy projects, the electricity supply-demand gap would be addressed, and the system is projected to have surplus dependable generation capacity by 2018. A diversified and more sustainable energy mix, resulting in enhanced energy security is expected, as several coal, hydro and renewable energy projects are expected to be completed under CPEC. These projects would not only help exploit indigenous resources, but also impact the social-economic situation, by providing direct and indirect jobs and economic development & prosperity as a result.

Projecting the future

Under vision 2025, electricity generation in the country is projected to cross 45,000 MW with 50% share coming off indigenous resources. With system upgradations, policy reforms and focus on efficiency and conservation measures, total T&D losses are expected to drop to 10%.

Under electricity import plans, projects such as CASA-1000 would provide for clean, reliable and cheap electricity. Bilateral energy trade and integrated energy markets would help utilize resources effectively and enhance trade ties amongst neighboring states.

Undertaking technological and policy reforms in the power sector is fundamental for improving efficiency of the sector and creating the enabling environment required to attract private sector investment. Subsidy reforms to balance government subsidies and tariff hikes, improving recoveries, reducing technical and non-technical losses, and enhancement in performances of DISCOs would enhance performance of the sector.

The ongoing problems of financial constraints and circular debt have impeded growth in the sector. In order to pursue sectoral reforms, the government invited the private sector to make necessary investment in loss making entities; GENCOs and DISCOs. However, the process was halted later on as a result of consistent pattern of problems including consumers' opposition, lack of competition, higher prices, oligopoly and lack of investments or innovations. However, this approach needs a revisiting, and in the light of the success story that is Karachi Electric KE, the privatization policy needs to be more comprehensive and needs to involve all stake holders. The liberalization of the electricity market, making a transition from a "vertically integrated" to "single buyer" and now to a "multi-buyer market" is expected to enhance sector efficiency by allowing the generating units to sell directly to the DISCOs and to the end consumers.

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

October

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

November

De-Risking the Power Sector for Lower Pricing

Established in 2010, IPPAC serves as an advisory body for Independent Power Producers (IPPs) in Pakistan. IPPAC 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 ippac@live.com