# SECTORWATCH | CORONAVIRUS | POWER

Since the start of 2020, the novel coronavirus (COVID-19) outbreak has quickly spread across the world and caused disruptions in economies worldwide. Starting in China – itself a global manufacturing hub – and moving to more than 200 countries and territories, virtually all major economies and markets have been adversely impacted. The full impact of such an outbreak on Pakistan's economy is difficult to ascertain at present and will depend on the severity and duration of the outbreak as well as Government's response. However, it is clear that credit conditions are under stress and this will impact credit quality of many entities and sectors. In this context, PACRA aims to provide analysis on how the ongoing outbreak of COVID-19 may impact various sectors in Pakistan.

| SECTOR | SUB-SECTOR |
|---|---|
| ENERGY | POWER |

## SIZE

- Electricity generation for the period from Jan – Dec 2019 remains at 145,642 GWh (2018: 149,591& 2017: 132,499 GWh)
- Source-wise electricity generation is as follows:

| Energy Sources | | Electricity Generation GWh (Jan to Dec) | | | Installed Capacity | PACRA Rated Universe (% share in total capacity) |
|---|---|---|---|---|---|---|
| | | 2019 | 2018 | 2017 | MW | |
| Thermal | RLNG | 28,139 | 27,581 | 10,917 | 5,193 | 40% |
| | COAL | 21,371 | 16,469 | 5,295 | 4,520 | |
| | GAS | 18,825 | 22,402 | 18,758 | 1,860 | |
| | RFO | 5,939 | 14,318 | 25,863 | 4,783 | |
| | HSD | 12 | 24 | 1,889 | - | |
| | GENCOs | 10,903 | 15,023 | 18,401 | 4,337 | |
| | K - Electric | 10,722 | 9,979 | 9,489 | 2,267 | |
| | Others (CPPs/SPPs) | 223 | 640 | 540 | 353 | |
| | **Sub-Total** | **96,134** | **106,435** | **91,151** | **23,313** | |
| Hydel | WAPDA | 25,087 | 24,687 | 29,236 | 6,902 | 84% |
| | IPPs | 10,743 | 4,823 | 962 | 1,337 | |
| | **Sub-Total** | **35,830** | **29,510** | **30,199** | **8,239** | |
| **Nuclear** | **Nuclear Plants** | **9,227** | **9,015** | **7,718** | **1,295** | - |
| Renewable | Wind | 3,130 | 2,844 | 1,674 | 388 | 18% |
| | Solar | 702 | 762 | 668 | 1,185 | |
| | Bagasse | 618 | 1,025 | 1,089 | 252 | |
| | **Sub-Total** | **4,451** | **4,631** | **3,431** | **1,825** | |
| **Total** | | **145,642** | **149,591** | **132,499** | **34,672** | |

- Average monthly electricity generation CY2019: 16,626 MW
- Peak generation: 22,102 MW in July 2019
- Lowest consumption: 11,825 MW in February 2019

## PACRA PENETRATION

- PACRA universe consists of 26 power generation companies (including K-Electric) with installed capacity of ~ 16,570 MW. PACRA rated entities constitute 48% of the total installed capacity in the country.

## IMPACT

- According to payment mechanism under Power Purchase Agreements (PPAs), monthly capacity payments mainly comprises debt service, fixed operations and maintenance (O&M) costs, and return on equity on an Internal Rate of Return (IRR) basis. This is assured even if no electricity is purchased. In addition, IPPs receive payments for energy purchased on a per unit energy charge basis. Payments, subject to compliance with underlying conditions, are secured under sovereign guarantee.

- Share of RFO and HSD in electricity generation has decreased over the last few years while share of RLNG (19% of total generation) and coal (14% of total generation) has shown a significant growth in energy mix. In CY2019, generation through coal has increased by approximately 30% YoY and 9 coal based IPPs with the capacity of ~4,663 MWs are in pipeline.
- During 2019, there was an increase in share of energy generation from renewable sources and this will increase further in coming years.
- Economic activities have witnessed a contraction on account of Covid-19, which has resulted in decline in demand for electricity. Consequently, we have more capacity available and less consumption. However, while the capacity is not fully utilized, payments have to be made for the idle capacity {IPP's theoretical capacity (20,801 MW) – IPP's average generation (10,238 MW)} [only thermal other than GENCOs and renewable sources are considered].
- Circular debt has become pandemic for the power sector, with estimated total receivable amount outstanding with different companies in power chain is ~PKR 2 trillion. On a net basis, this amount was close to PKR 775bln at end-2019. As a short-term measure, the Government is planning to issue Energy Sukuks to arrange requisite funding to keep the chain operational (recent issue in process is PKR 200bln). The government has already accumulated a significant debt in the context of settlement of circular debt (pre-dominantly parked in Power Holding Private Limited). There are four reasons behind circular debt that includes: in-built subsidies (tariff difference), transmission and distribution losses, under-recovery, and theft. Herein, T&D losses contribute the maximum portion, highlighting the need to streamline power distribution companies to contain the menace of circular debt.
- Decision by the government to allow for deferred payment to consumers would also cause an incremental impact on Circular Debt.
- The 9 members committee chaired by Ex-SECP chairman submitted its findings and recommendations in its 'Power Sector Audit, Circular Debt Resolution and Future Roadmap' report. Their findings are critical in many aspects of sector, especially with reference to pre-committed profitability to IPPs, and design of 'Take or Pay' Model.
- Apart from project debt which IPPs have availed, there is sizable amount which they have to obtain for working capital financing; especially receivables. Most IPPs are given 3 Months KIBOR + 3.00% on their working capital debt. However, due to varied pattern of receipts from power purchasers, despite a better mark-up rate, financial institutions hesitate to fund IPPs. This, in turn, creates cash flow management challenges.
- There are ~ 96 IPPs (RLNG: 2, Coal: 9, Hydel: 24, Solar: 19, Wind: 17, Bagasse: 25) under construction (capacity 26,150 MWs). Due to the spread of Covid – 19, these projects are likely to face shipment challenges and human resource movement is critical for the development of projects, consequently realignment of related agreements with revised timelines is in order.
- The electricity consumption has plummeted by 30% due to Covid –19. Demand curve in the month of March has stood around 10,000 MWs against projection of about 15,000 MWs. Similarly, it is anticipated that in the coming months, consumption remains lower than projected due to lockdown in the country. On the other hand, authorities are compelled to provide uninterrupted power supply to even high-loss areas to maintain calm. This would add to loss in overall energy chain. Also, risk of theft and recovery delays would add to worries of the Government as well as power companies.
- Globally, the prices of commodities in energy basket (Oil, Coal, and RLNG) took a dip due to lower demand, resultantly the cost of generation has reduced. Further, the cuts in interest rates have created a beneficial impact on the financial cost of IPP's thus lowering the cost.



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