

**Power Update: April- July FY19**

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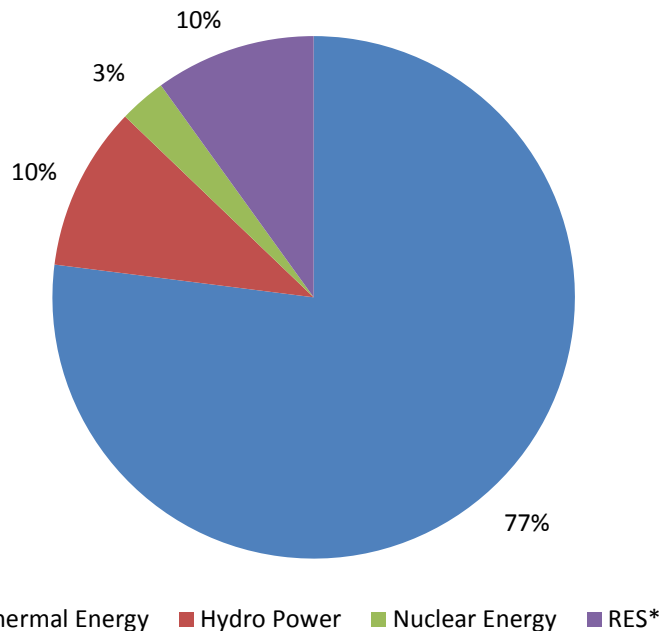
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Total electricity generated from conventional source in the country clocked 421.3 BU (billion unit) during April-July 2018, reporting growth of 3.7% over corresponding period in FY17. Additionally, electricity generated from renewable energy sources stood at 46.3 BU, recording a 21% growth over April-July FY18.

PLF of thermal power plants monitored by CEA stood at 61.64% during the 4-month period, indicating an improvement over 59.61% for the corresponding period in the previous year.

**Graph 1. Power Generation by Source**



\* Electricity generated April-July 2018, includes RES Source: CEA

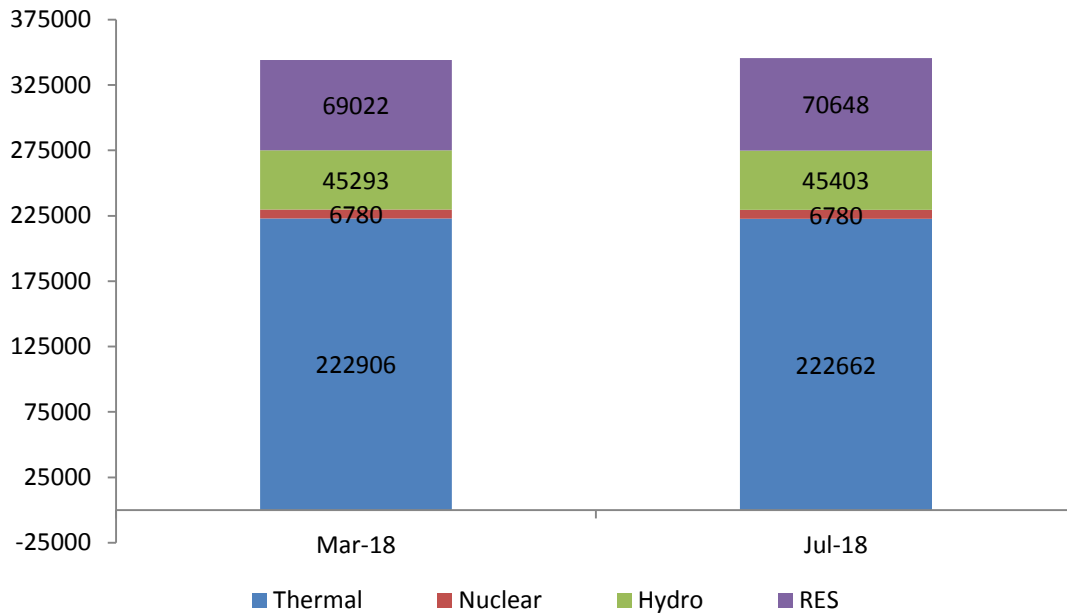
Installed capacity stood at 345.5 GW as of July 2018, recording a net capacity addition of 1.5 GW during the first four months of FY19. Solar, wind and hydro based energy witnessed new capacity commissioning.

Agencies cancelling auctioned renewable power capacity especially solar power is an emerging trend in the sector and the same needs to be addressed at the earliest. 3.9GW of auctioned solar projects have been cancelled till date by 3 state agencies, setting a bad precedent and dampening investor sentiment in the sector.

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**Installed capacity, addition and utilization:**

**Graph 2** Total Installed capacity (Source Wise- Capacity in MW (End of Month))



Source: CEA NRE- New and Renewable Energy

**Capacity Addition:**

- April-July FY19 witnessed retirement of 244 MW of thermal power capacity- 214 MW of coal powered plants and 30MW of Gas-based plants. Total thermal power capacity stood at 222.7 GW as of July 2018 vs 222.9 GW as of March 2018.
- During the 4-month period, 110MW of hydro-based plants were commissioned. Additionally, Solar power witnessed the highest capacity addition (1,371 MW), followed by wind power (247 MW) and small hydro (8 MW).
- PLF of thermal plants which includes coal and gas based power plants improved from 61.6% in Q1 FY18 to 63.7% in Q1FY19. Gas based power plants continued to witness below-par capacity utilization and witnessed further fall in PLF from near 22% recorded in FY18.
- **3.9GW of auctioned solar capacity was cancelled during the year.** SECI cancelled 2.4GW out of a total of 3GW Interstate Transmission System (ISTS) connected solar auction held in July 2018. Uttar Pradesh New and Renewable Energy Development Agency cancelled 1GW of grid-connected project in the same month. Gujarat Urja Vikas Nigam Ltd cancelled 500 MW of grid-connected solar capacity. Agencies stated high tariff and wide gap between winning bids for cancellation of auctions.

**Electricity demand and generation**

- Total energy generated from conventional sources in the country stood at 421.3 billion units (BU) during April-July 2018, growth of 3.7% over corresponding period in FY18.
- Renewable power generation recorded 21% increase in generation during the April-July 2018 at 46.3 BU.
- Thermal energy which includes coal-gas-diesel based power plants accounted for 77% of the power generated in the country. Nuclear-based, Hydro-power; and Renewable energy accounted for 3%, 10% and 10% respectively of the power generated during the year.

**Coal supply and consumption:**

- Total coal supplied by Coal India (CIL) & Singareni Collieries Company Limited (SCCL) to power sector stood at 179.2 MT between April-July 2018, recording a 13.6% growth in supplies over last year’s supplies during the corresponding period.
- Ratio of coal supplied to coal allocated by CIL and SCCL to CEA monitored power plants stood at 90%. This indicates 10% shortfall in supply vs allocated quantity.
- Coal e-auction volumes fell by 20% during the 4-month period. Coal prices in e-auction continued to command a higher premium of 75-85%.
- Use of imported coal fell by 9.2% to 17.52 MT during the first 4 months of FY19 over the corresponding period during the previous year.

Table 1 Coal Import by CEA Monitored Power Plant (In Million Tonnes)

	Actual (April-July 2017)	Actual (April-July 2018)
Imported Coal*	19.29	17.52(-9.2%)

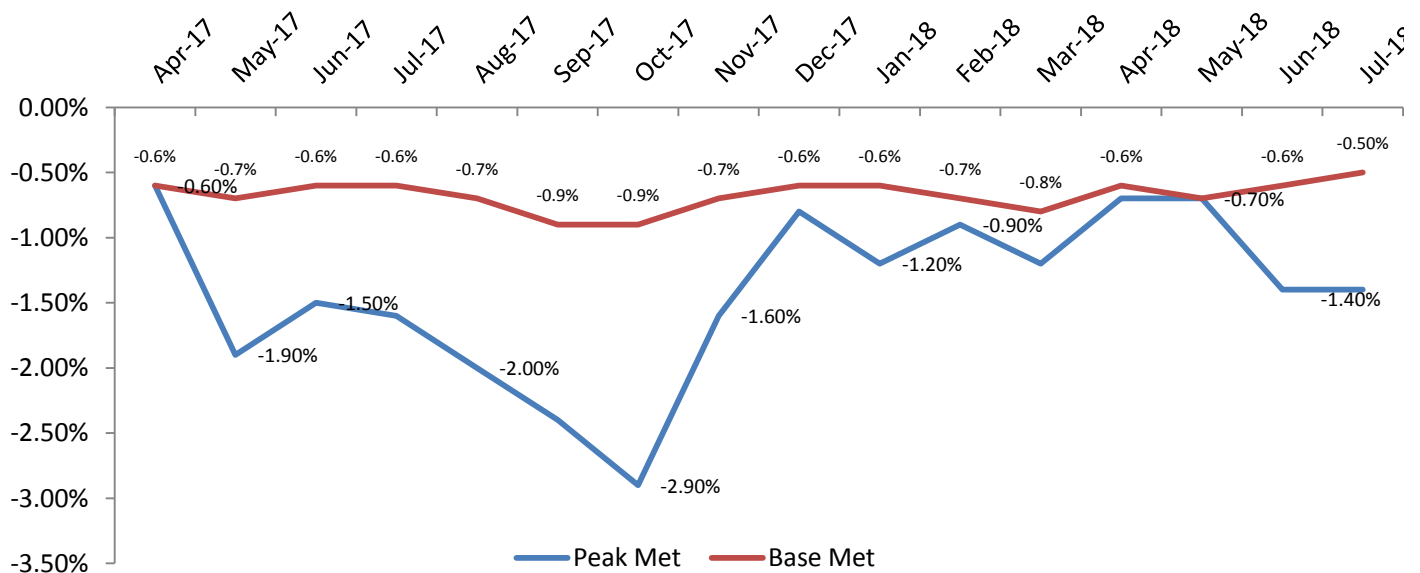
Source: CEA

- Domestic coal production grew by 12.8% during FY19. CIL alone recorded for most of the gains in coal production by clocking 14% growth in production during the first 4-months of FY19. CIL accounted for 90% of the domestic coal production.

**Contraction in power deficit continues:**

The demand supply gap during April-July period continued to remain range bound between 0.5-0.7%.

Graph 3 Peak and Base Deficit



Source: CEA W.r.t. Base Met and Peak Met

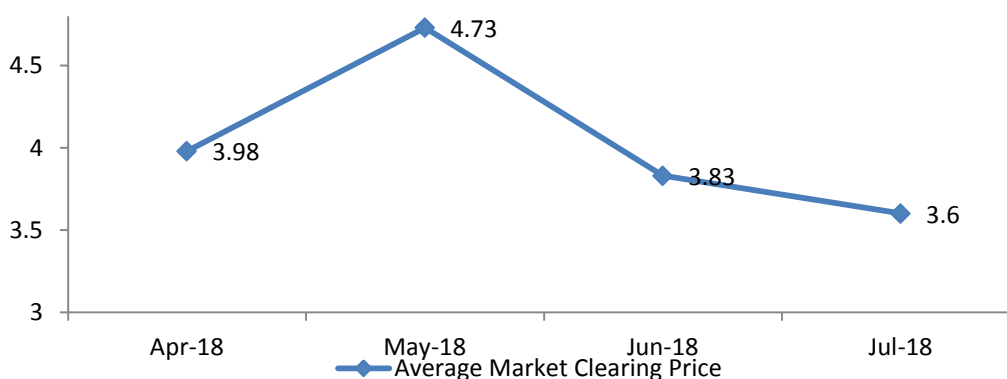
The demand-supply shortfall has been consistently contracting post October 2017. Coal availability has stabilised, but additional growth in electricity demand due to increased industrial activity or demand from households may lead to coal shortage which in turn leads to increase in spot-market power tariff. Increased spot market prices impact margins of power intensive sectors like metals, cement, textiles, fertilizers etc.

**Spot-market tariff trends:**

Short term power market constitutes about 10.6% of the total power purchase in the country. Exchanges account for 3.8% of the total power purchase transactions or 36% of the short term power market transactions in India. 89.4% of the total power purchase transactions is through PPAs (long term up to 25 years).

- In Q1FY19, peak demand from states namely Punjab, Meghalaya, Andhra Pradesh, West Bengal, Rajasthan, Telangana, Bihar and Odisha witnessed a steep growth. “Saubhagya” or Power for all scheme could be attributed much of this growth as it is ensuring 100% electrification across rural areas, which in turn would lead to increase in overall demand for power.
- As per IEX, the overall electricity peak and energy demand grew by 8% and 5% respectively in Q1FY19 over Q1FY18. This growth in demand has led to 22% growth in volume of electricity traded on IEX in Q1FY19 at 14.43BU.
- Spot-market tariffs remained range bound between April-July 2018. Shortfall in supplies of coal led to temporary hike in tariffs. Network congestion in transmission of power has been easing out, improving efficiency across regions.

**Grah 4 Average Market Clearing Price**



Source: IEX (Spot Market Prices- Market Data) in Rs. Per unit (kWh)

**States with power deficit:**

States with power deficit include Jammu & Kashmir, Chhattisgarh, Gujarat, Uttar Pradesh and Puducherry. Among these states, J&K and UP are among some states reporting highest AT&C losses. These states have also witnessed rapid electrification of households under “Saubhagya” Scheme.

Table 2 Electricity Deficit States (April-July '18)		
State	Peak Not met (Percentage)	AT&C Loss (UDAY)
Jammu and Kashmir	589 MU (20.0%)	53.8%
Chhattisgarh	259 MU (6.5%)	18.8%
Gujarat	726 MU (4.3%)	14.3%
Uttar Pradesh	436 MU (2.1%)	37.9%
Puducherry	400 MU (4.6%)	18.9%
<b>National</b>	<b>1,617 (0.9%)</b>	<b>23.1%</b>

Source: CEA, UDAY MU- Million Units

- AT&C losses have widened to 23.1% from 20% of 2017-18. Deterioration in AT&C losses highlights slippage in implementation of operational objectives of UDAY scheme. This could be gauged from status of completion of smart metering of lines, which stood at 3.82 lakh, less than 1.5% of the total target to be implemented. Smart metering was expected to improve collection efficiency by minimising human intervention as well as help consumers optimize use of electricity during peak demand hours.

### Status of Key policy's and industry issues:

#### SAUBHAGYA ("Power For All")

- The scheme launched in September 2017, targeted 100% electrification of households in the country. Out of the 32.8 million un-electrified households covered under the scheme, there are 19.5 million households remaining to be electrified by December 2018.
- 13.2 million Households have been electrified post October 2017, when Scheme was announced.
- The Government has been able to electrify 8.8 million households between April-August 2018 which is a substantial number.

Table 3: Electrified Households by States (Status % as a percentage of total households)

State	Electrified households as % of total	
	May 2018	August 2018
Uttar Pradesh	57%	69%
Bihar	75%	93%
Rajasthan	79%	91%
Madhya Pradesh	86%	98%
Jharkhand	48%	86%
Orissa	64%	83%

Source: saubhagya.gov.in & CARE

#### Insolvency and Bankruptcy proceedings:

- The implementation of orders as per February 2018 RBI circular to scrap all previous debt restructuring mechanisms (SDR,S4A etc) and initiate resolution process under IBC against defaulting companies would have an impact on 30% (15 GW) of the coal-based capacity under-construction.
- Inability to resolve non-commissioned power projects will limit the total installed thermal capacity (coal-based) to 225 GW by 2025. This assuming that all other factors like brownfield projects and expansion of existing capacity remains stagnant.

#### CARE Ratings Outlook:

- We retain our electricity generation outlook for FY19 i.e. growth of 6.0-7.0%. Rural electrification led by "Power for All" is expected to drive demand for electricity.
- August-October period usually witnesses improvement in output of coal from CIL & SCCL vs April-July period. But unprecedented demand for power especially due to increased industrial output may lead to shortage in availability of domestic coal. This in turn would lead to some plants switching to imported coal. With imported coal trading upward of \$115-120 since May 2018, it would impact margins of electricity generation companies.

- AT&C losses improvement looks unlikely. AT&C losses would remain around 20% during the year due to implementation of “SAUBHAGYA” Scheme. Lack of PPAs for the conventional energy producers would continue as a result of high AT&C losses.
- The Central Regulatory Authority and the Ministry of Power needs to address and formulate a definitive policy w.r.t. cancellation of PPAs and auctions of capacity, especially the ones being unilaterally initiated by State Power Agencies, Discoms etc. Tariffs are an outcome of competitive bidding and hence driven by competition and market-demand-supply scenario w.r.t order books. On many instances, the outcome may not be in line with the expectation of few state officials.
- **Impact of pending insolvency proceeding:** The banks may be able to resolve stressed operational projects but would be required to take considerable haircuts given excess capacity of coal-based plants in the country. As witnessed in recent cases of insolvency resolution, banks tend to re-initiate the insolvency proceedings in case of large haircuts, further delaying the resolution process. This in turn may impact the power generation from these plants or as much as 8-10% of the total power generated from coal based plants in the country.

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