

# SectorVector

## Reading the topical trends

September 2023

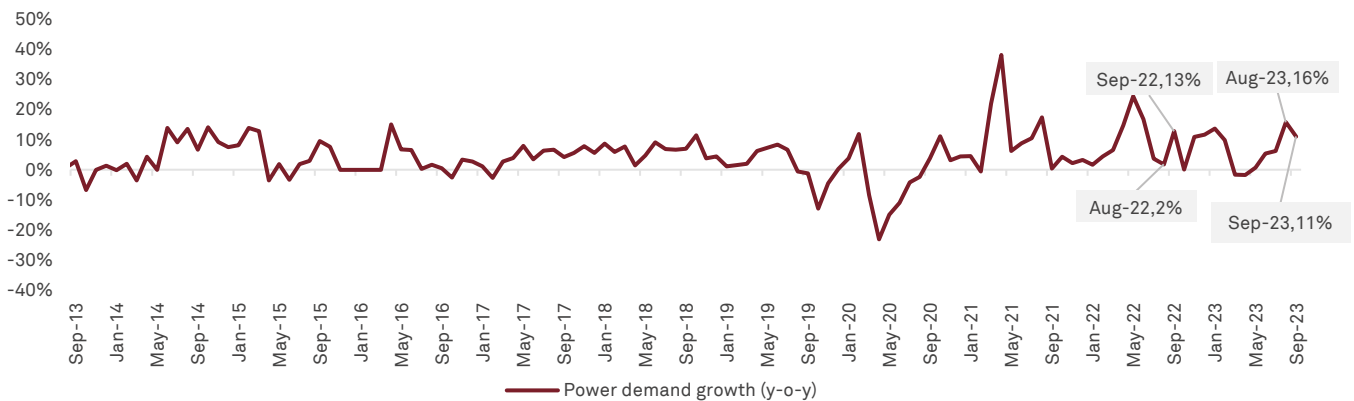
### Power play

#### Electricity demand soars higher in September

Power demand continued its growth momentum in September, logging a 10-12% growth on-year to a five year high of 140-142 billion units (BU), but declined 7% on-month after what was the driest August in nearly a decade, CRISIL MI&A estimates indicate.

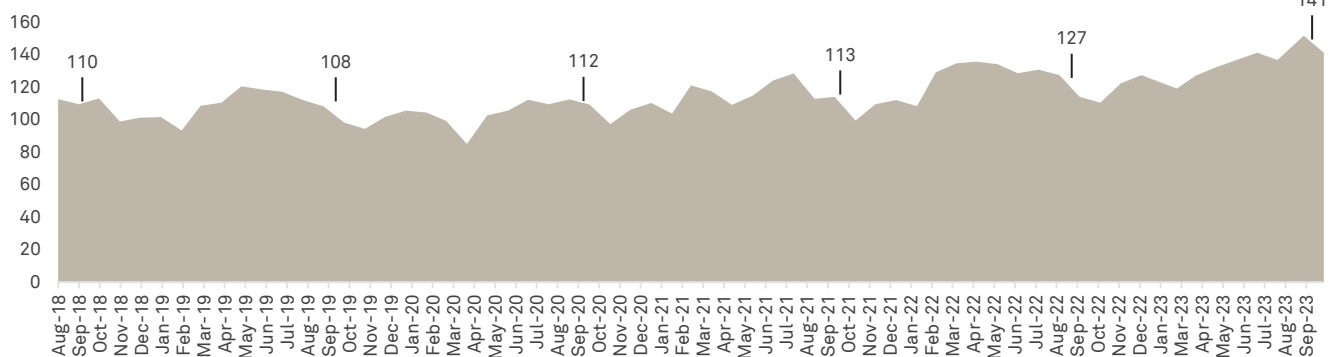
on-month after what was the driest August in nearly a decade, CRISIL MI&A estimates indicate.

Figure 1: Demand momentum continued in September, on a high base



Source: Central Electricity Authority (CEA), Power System Operation Corporation, CRISIL MI&A Research  
Note: Data for September 2023 is extrapolated from actual data until September 25

Figure 2: Base power demand was the highest for any September in last 5 years



Source: CEA, CRISIL MI&A Research  
Note: Data for September 2023 is extrapolated from actual data until September 25

In fact, post the deficit monsoon pan India in August, the recovery in September still could not prevent two successive months of all-time high peak power

demand – 238 GW in August followed by a higher 240 GW in September.

**Figure 3: Peak power demand in September topped August 2023 high**

GW	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
FY19	162	172	172	170	173	177	173	163	164	164	162	169
FY20	177	184	184	177	179	175	165	156	172	172	179	171
FY21	133	167	167	172	169	177	171	161	184	190	190	186
FY22	183	169	194	203	198	181	180	167	184	193	194	202
FY23	216	206	212	192	197	200	187	188	206	213	210	209
FY24	217	221	224	208	238	240						

% change from peak ■ Lean demand ■ >8% & <=20% ■ >7% & <=8% ■ >2% & <=6% ■ <=2% ■ Peak demand

Source: CEA

Note: Lean demand is lowest peak demand in a fiscal year; peak demand is highest peak demand in a fiscal year

Apart from agriculture, industrial and manufacturing activities also contributed to the sharp rise in power demand, which can be gauged by the Manufacturing Purchasing Managers' Index rising to a three-month

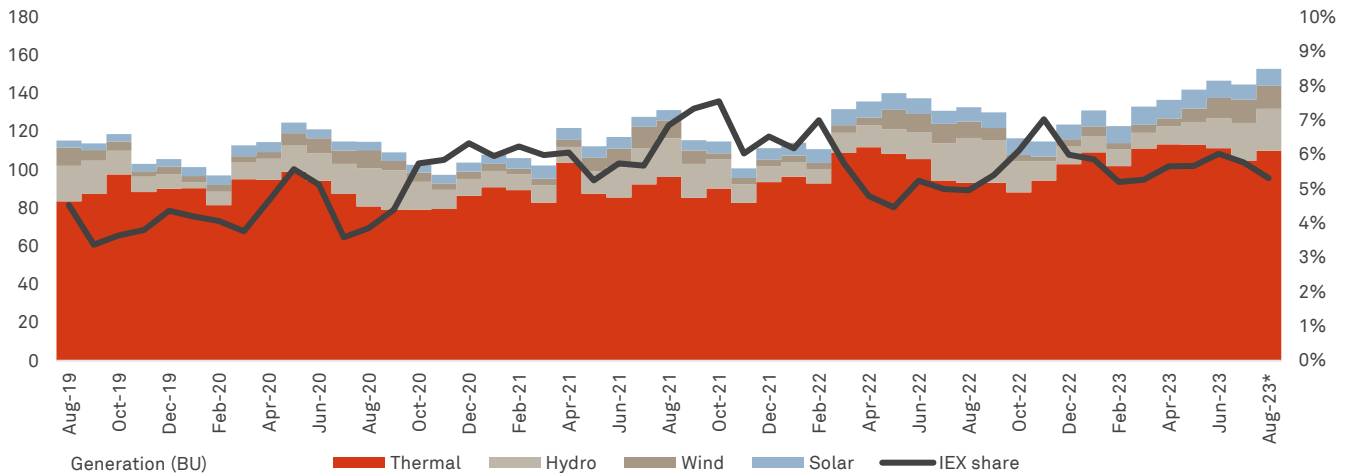
high of 58.6 in August. And with the onset of the festive season, this trend is likely to have continued well into September.

## September power generation mirrors demand

Overall power generation is estimated to have risen 9-10% on-year in September to 150-152 BU, after surging to a record high of 159 BU in August 2023. To cater to the rising demand for electricity, generators have increasingly been turning to the short-term power market.

The short-term markets, however, have moderated in September. Compared with the first week, the situation in the third week had improved because of healthy pickup in hydro generation, which led to both volumes (~14% drop on month) and peak prices (Rs 9.37 /unit from Rs 9.60/unit in August) in DAM dropping sequentially, while RTM growth remained healthy.

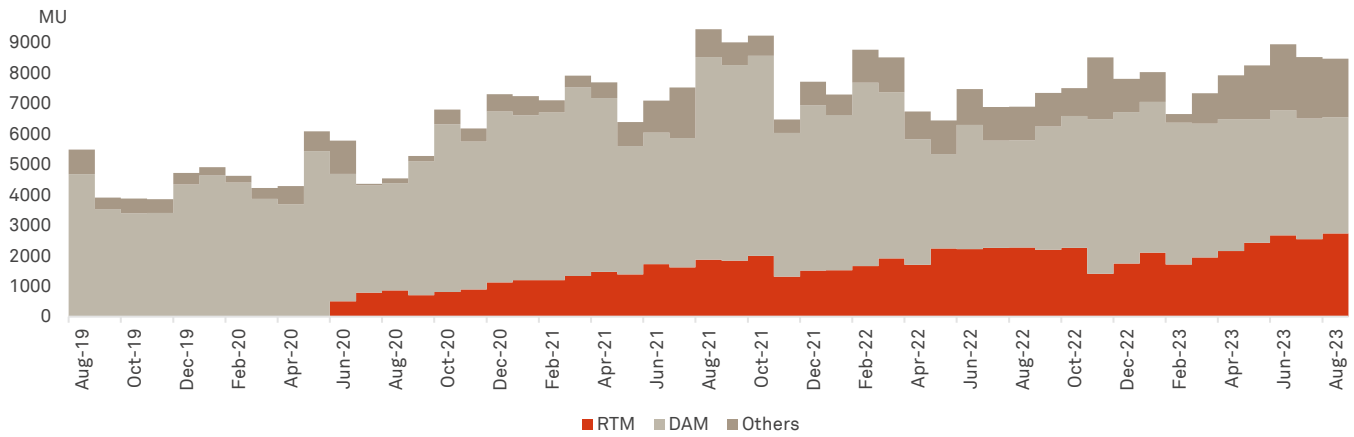
**Figure 4: Share of power exchange volume declined amid increase in market prices**



Source: CEA, IEX, NPP

Note: \* Provisional based on CEA estimates for August

**Figure 5: DAM volume drops 14%, while RTM volume grows 7% sequentially in September\***



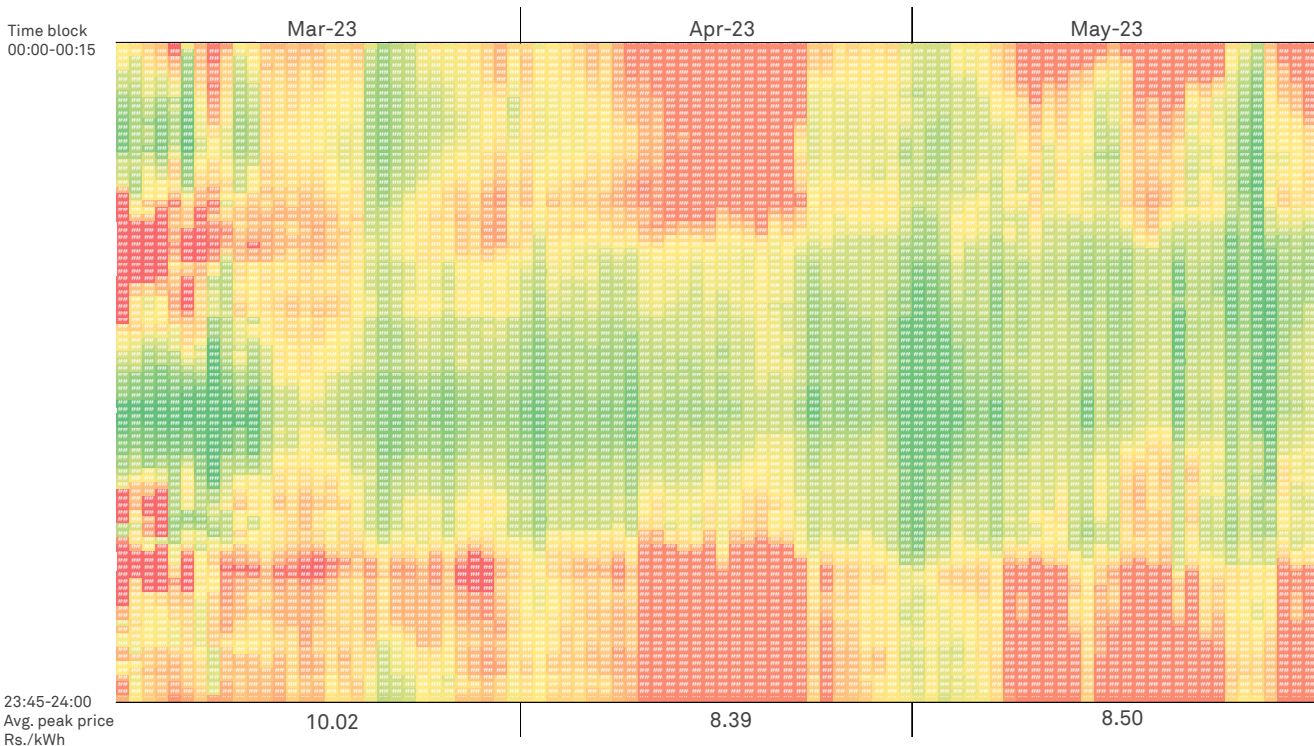
Source: Indian Energy Exchange (IEX)

Note: \* This is calculated taking 1st-25th of August and September

The daily data on IEX DAM peak prices and frequency of peak indicates unique trends:

- The number of instances where daily peak prices were recorded across the month for the respective time blocks rose sharply in the monsoon months of June-September 2023 vs. the summer months of March-May 2023. This is indicated by the higher reds seen in the monsoon months vis-à-vis the summer
- Also, within the monsoon months, August and the first week of September saw sharp rise in reds – periods where prices touched peak of the day – clearly indicating that dry spells in August and first week of September had an impact
- Also, despite the scorching heat, peak prices during the summer months were largely limited to night-time

**Figure 6: IEX DAM prices hitting peak levels between 6 PM and 6 AM during summer months**



Red – Highest price for the day; Green – Lowest price for the day; Yellow – 50th percentile

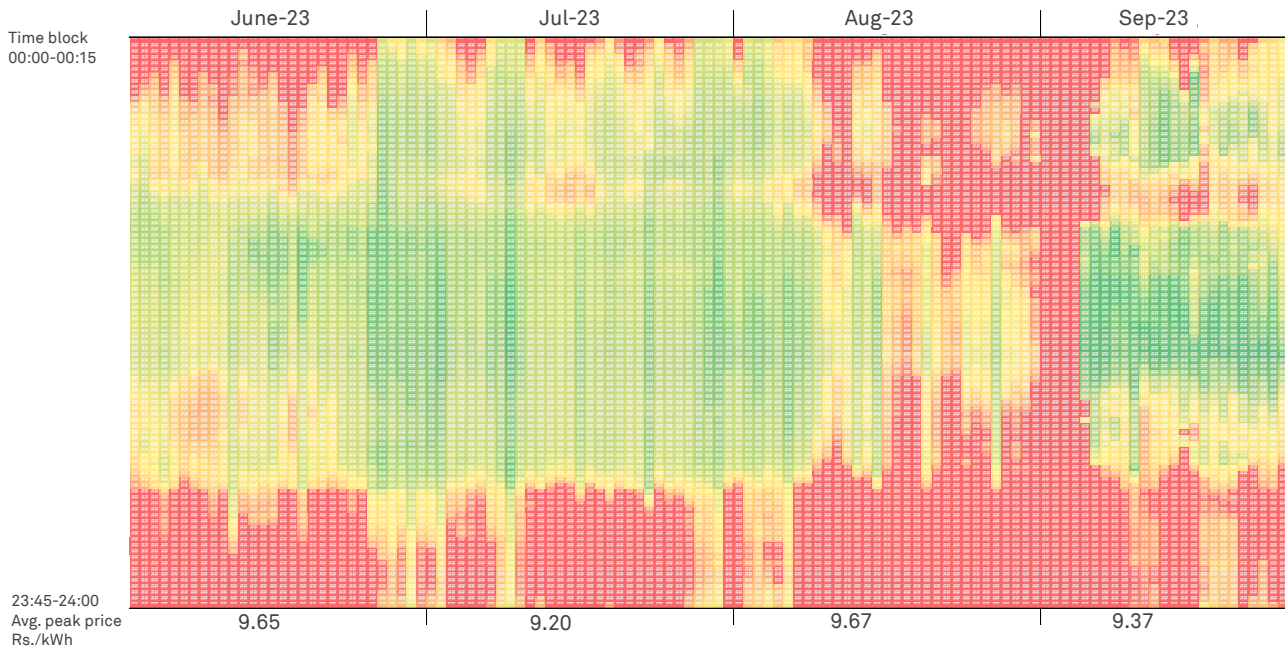
Note: In April 2023, Central Electricity Regulatory Commission lowered the price ceiling for all electricity contracts to Rs 10/kWh from Rs 12/kWh

Source: IEX

- Along with substantially higher time blocks reaching peak prices, monsoon months also saw higher average peak prices, as indicated at bottom

of the peak price charts. September, however, has seen moderation in peak prices for the first 25 days

Figure 7: Frequent peaks observed across time blocks in August and first week of September



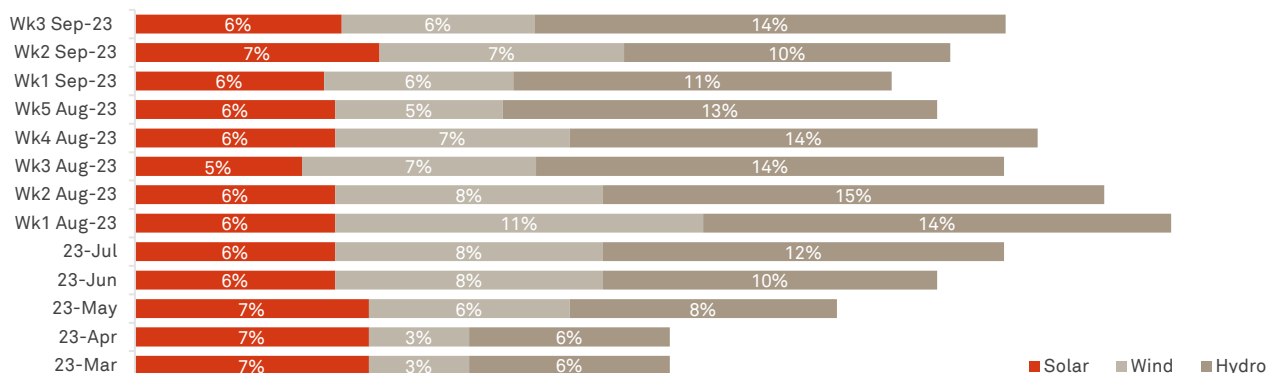
Red – Highest price for the day; Green – Lowest price for the day; Yellow – 50th percentile  
Note: September 2023 data is from 1st to 25th  
Source: IEX

### Generation volatility may have added to the woes

While solar and wind face intermittency issues, hydro enables steady supply of power and helps counter the intermittency. However, disturbed rainfall contributed to a decline of hydro power generation, which, combined with a slip in the share of wind, led to peak prices being recorded in high frequency time blocks on the IEX DAM in August and the first week of September.

In September, CRISIL MI&A Research, though, observes that the share of non-fossil fuel in generation did improve to 26% by week three from 23% in week one, providing some support to coal generation, thereby reducing pressure on the short-term market towards week three.

Figure 8: Share of solar, wind and hydro in total power generation for fiscal 2024 YTD

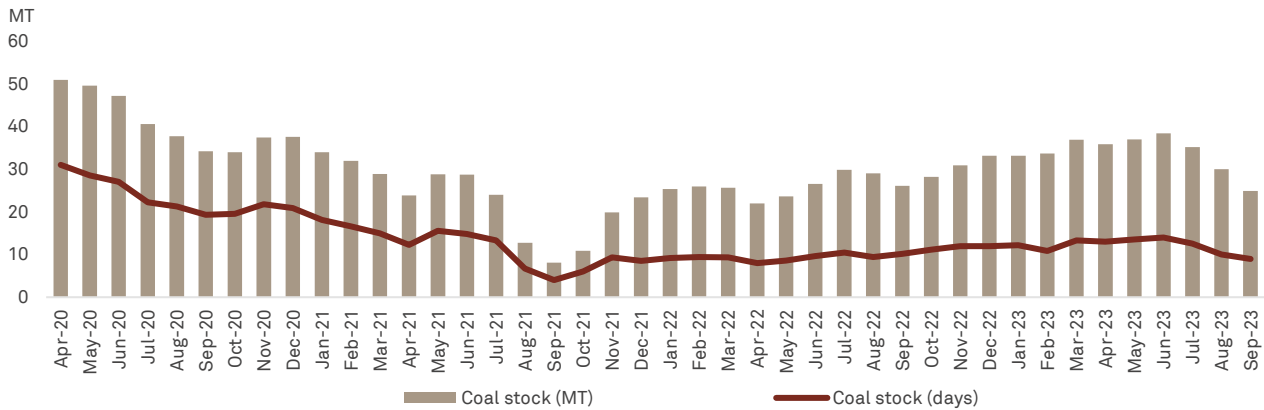


Note: Non-fossil includes wind, solar and hydro  
Source: National Power Portal, CEA

However, despite this relief, coal stocks with thermal power plants already declined to 25 million tonne as of September 25 from 30 million tonne on August 31. This

coal stock would, therefore, suffice for power plants for nine days, a dip from 10 days in August.

**Figure 9: Availability of coal stocks down to nine days in September 2023**



Source: Ministry of Coal

To address the increase in coal requirement from the power sector, the government extended the period of necessary blending of imported coal to March 2024, but reduced the weightage to 4% from the previous 6%, beginning October 2023.

Sufficient coal availability will likely ease the pressure on short-term prices. With El-Nino still looming as well as the onset of the festive season, the situation on

peak power requirement and the ability of power plants to service the demand will be monitorables.

That said, CRISIL MI&A Research expects power demand, which is estimated to increase 9-10% on-year in the second quarter of fiscal 2024, and to rise ~5% on-year over the full year.

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