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SectorVector

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Reading the topical trends

Power demand in India moderates as monsoon coverage improves

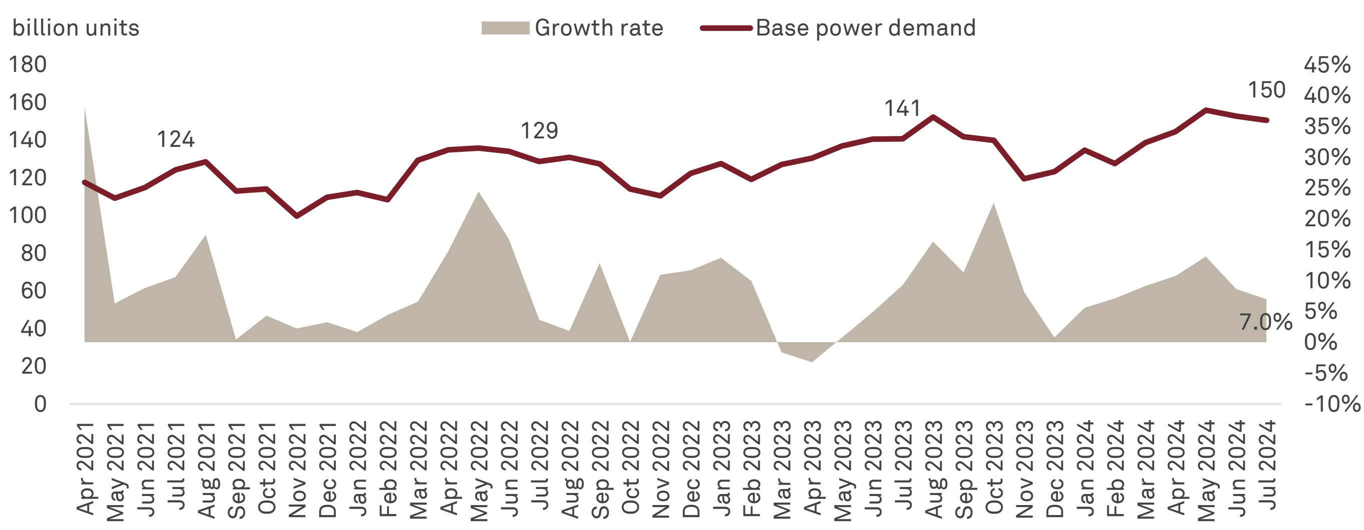
North bucks the trend

Power demand in India is estimated to have risen ~7.0% on-year in July to ~150 billion units (BUs) owing to higher power demand in rain-deficient northern states.

That follows an 8.6% on-year rise in demand in June.

Consequently, April-July 2024, demand for power increased ~10% on-year.

Figure 1: Power demand growth moderates in July as rainfall lowers temperatures



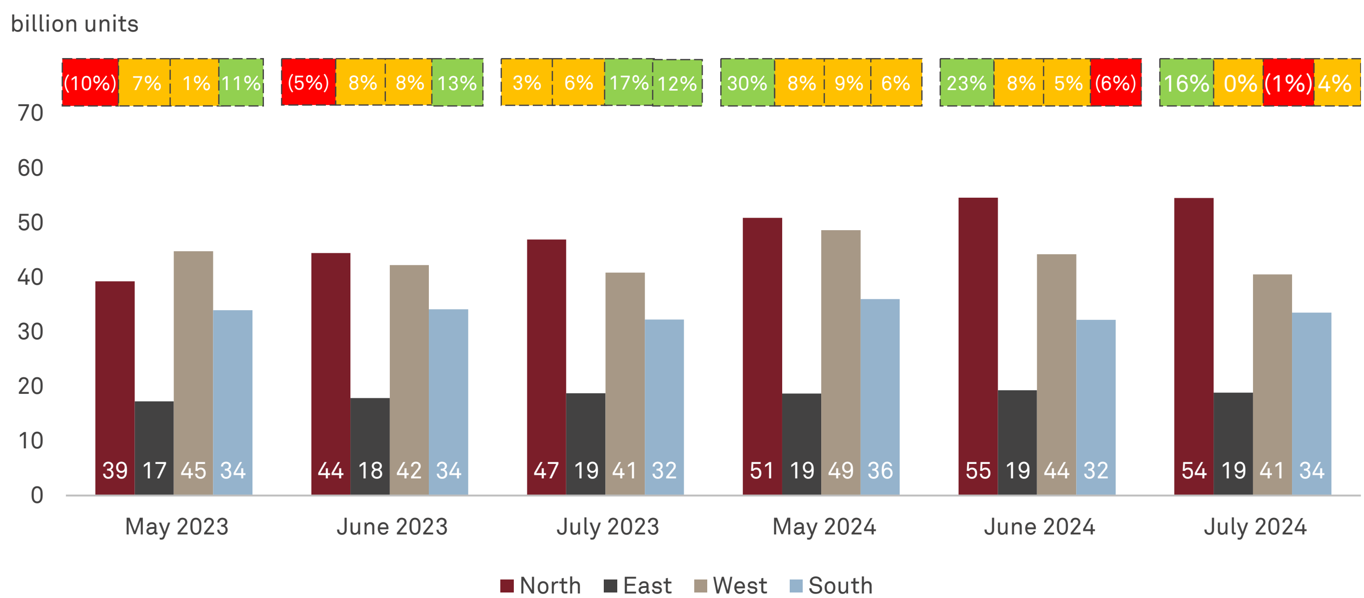
Note: July 2024 data is provisional from Grid India
Source: CEA, Grid India, CRISIL MI&A Research

However, minus the ~16% on-year surge in power demand in the north, demand moderated in other regions. Power demand rose ~4.0% in the southern region and declined a marginal ~1.0% in the western region. The sharp rise in demand in the northern region was primarily because of Punjab, Haryana and Rajasthan.

The variance in demand in the north vs the other regions can be explained largely by the spatial distribution of the monsoon.

In July, rainfall in Maharashtra and Gujarat was 63% and 45% higher than normal, respectively. Ditto Karnataka, Telangana and Andhra Pradesh — rainfall in these states was 60%, 33% and 28% above normal, respectively. In contrast, Punjab and Haryana received deficient rainfall of 44% and 41%, respectively, which is likely to have led to higher power demand for irrigation as these are key agriculture states.

Figure 2: Parched north keeps power demand high



Notes:
1) July 2024 data is provisional from Grid India
2) % above the bar indicates on-year power demand growth
3) Red: <0%; yellow: 0-10%; green: >10%
4) North: Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir, Ladakh, Punjab, Rajasthan and Uttarakhand; West: Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra, Dadra and Nagar Haveli, Daman, and Goa; South: Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu, Puducherry and Lakshadweep. East: Bihar, Damodar Valley Corporation, Jharkhand, Odisha, West Bengal, Sikkim, and Andaman and Nicobar Islands
Source: Central Electricity Authority (CEA), Grid India, CRISIL MI&A Research

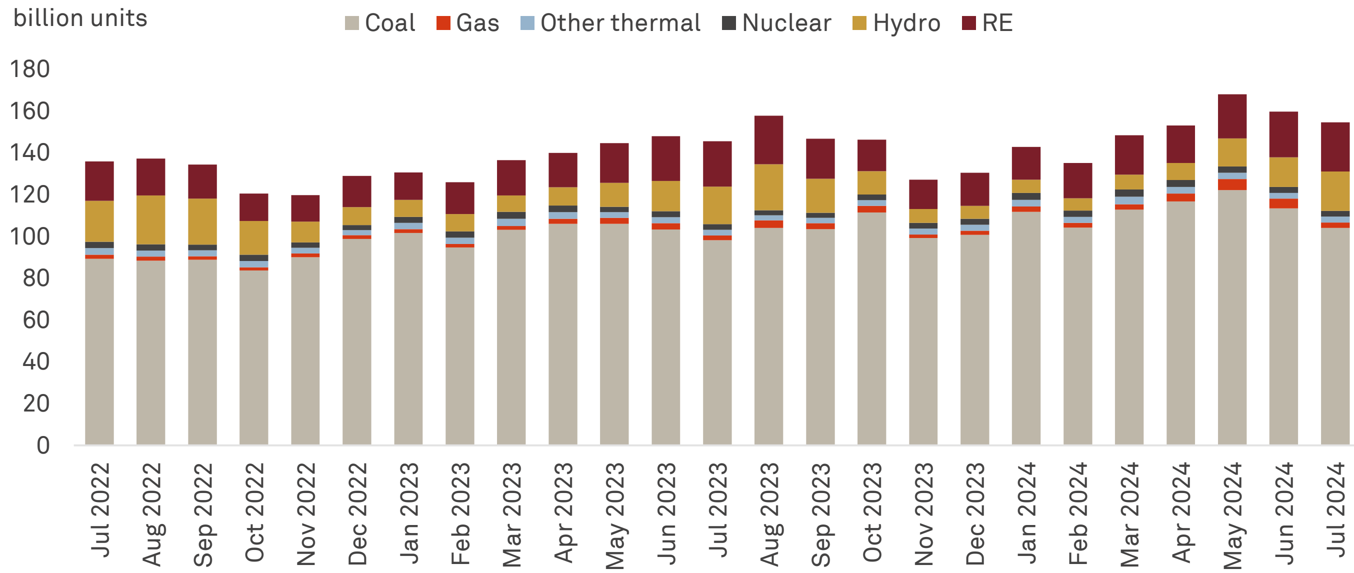
Generation more than sufficient to cover demand

Power generation is estimated to have increased ~5% on-year to ~156 BUs this July, more than sufficiently making up for the increase in demand. In fact, excluding hydro power, coal, nuclear and renewable energy generation increased during the month – 4%,17% and 12% on-year, respectively.

Hydro power generation is estimated to have declined ~6% on-year as per provisional data reported by Grid India because of deficient rainfall in the northern region – storage in 10 reservoirs under the Central Water Commission was only 33% of total capacity as on August 1, 2024 vis-a-vis 76% last year. Also, pan India, water level of 150 reservoirs during the period was 51% vs 56% last year.

Consequently, the share of coal, nuclear and renewable energy increased slightly on-year, whereas that of hydro power reduced to ~12% from ~13% in July 2023.

Figure 3: Other fuels pick up the slack of lower hydro generation



Note: July 2024 data is provisional from Grid India
Source: Grid India, CEA, CRISIL MI&A Research

Also, to cater to the rising demand for electricity, generators increasingly turned to the short-term power market.

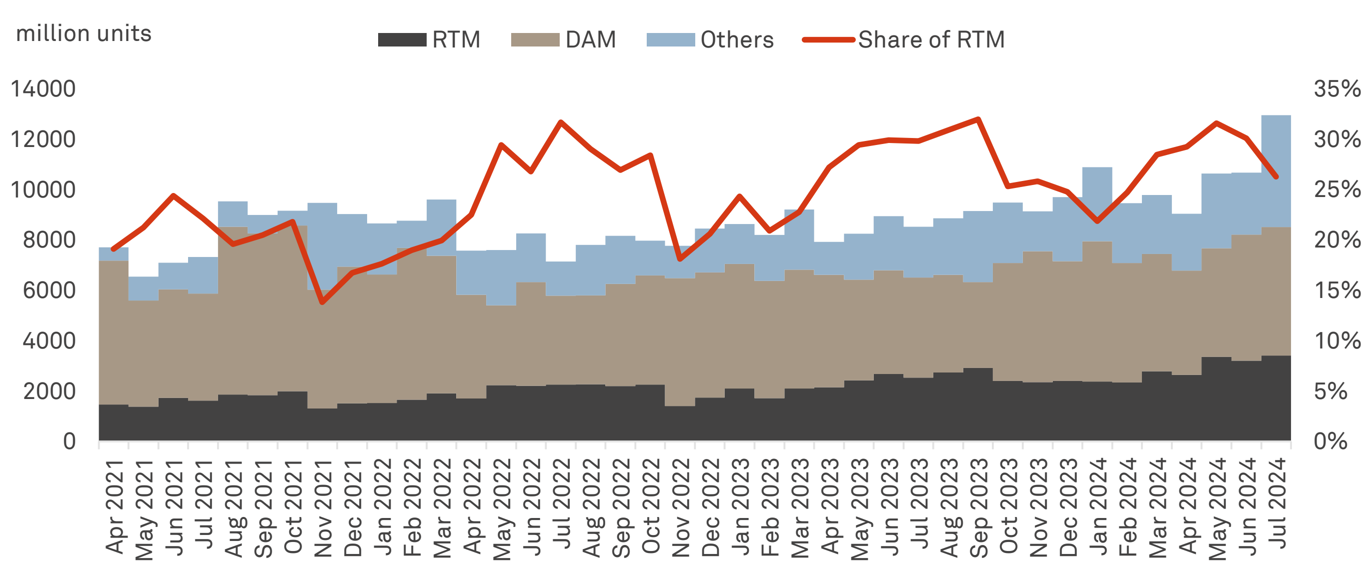
In line with the on-year rise in power demand, volume traded on the real-time-market (RTM) was estimated to have increased ~34% on-year in July, indicating the need for immediate delivery during periods of sudden high-power requirement.

Yet, weighted average market clearing prices increased only 0.5% during the period.

This contrast between volume and price rise indicated sufficient availability of power generation, limiting a price surge during high demand cycles.

Interestingly, RTM's share as a % of total volume on the Indian Energy Exchange rose to ~26% in July, higher than the average of 23% since its inception in June 2020.

Figure 4: RTM sees a surge during periods of high-power demand



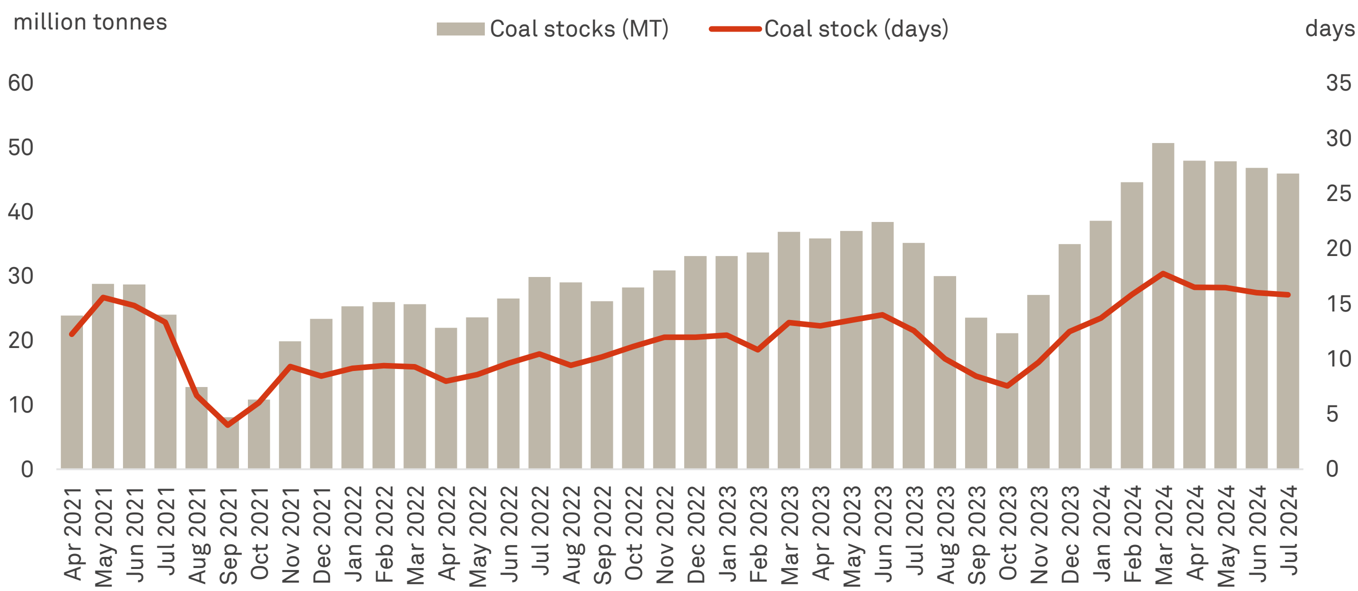
RTM – Real-Time-Market; DAM – Day Ahead Market
Source: Indian Energy Exchange

Coal generation provides support

Coal remains the key source of electricity generation in India. To ensure uninterrupted generation, dispatch of coal to power plants surged 6.7% on-year in the first quarter of fiscal 2025, thereby increasing coal stocks.

As on July 31, 2024, thermal power plants had 46 million tonne (MT) of coal as against 36 MT during the same period last year, while coal stocks are estimated to last 15 days vs 13 days in July 2023.

Figure 5: Coal stocks sufficient on steady dispatches



Source: National Power Portal

To avoid supply issues during the monsoon season, the government has also extended coal imported blending for domestic coal plants till October 15, 2024, though it has revised the blending weightage to 4% from 6% to ensure sufficient coal supply to power plants.

Power demand to track economic growth

CRISIL MI&A Research projects power demand to rise 6.5-7.5% on-year in fiscal 2025, owing to vagaries in the weather, including severe and prolonged heatwaves that occurred in the first quarter of fiscal 2025, as well as insufficient rainfall in July in northern India. Also, supporting demand is strong economic activity, with estimates pointing to the country's gross domestic product expanding between 6.8% on-year.

Analytical contacts

Sehul Bhatt
Director
CRISIL MI&A Research
sehul.bhatt@crisil.com

Siddharth Sanjay Kumar
Manager
CRISIL MI&A Research
siddharth.kumar@crisil.com

Surbhi Kaushal
Associate Director
CRISIL MI&A Research
surbhi.kaushal@crisil.com

Ambika Shevade
Senior Research Analyst
CRISIL MI&A Research
ambika.shevade@crisil.com

Media contacts

Prakruti Jani
Media Relations
CRISIL Limited
M: + 91 98678 68976
B: +91 22 3342 3000
prakruti.jani@crisil.com

Sanjay Lawrence
Media Relations
Crisil Limited
M: +918983321061
B: +91 22 3342 3000
sanjay.lawrence@crisil.com

Roma Gurnani
Media Relations
CRISIL Limited
M: +91 70662 92142
B: +91 22 3342 3000
roma.gurnani@ext-crisil.com