

SectorVector

Reading the topical trends

Sep 2024

Power demand ebbs for the first time in 15 months

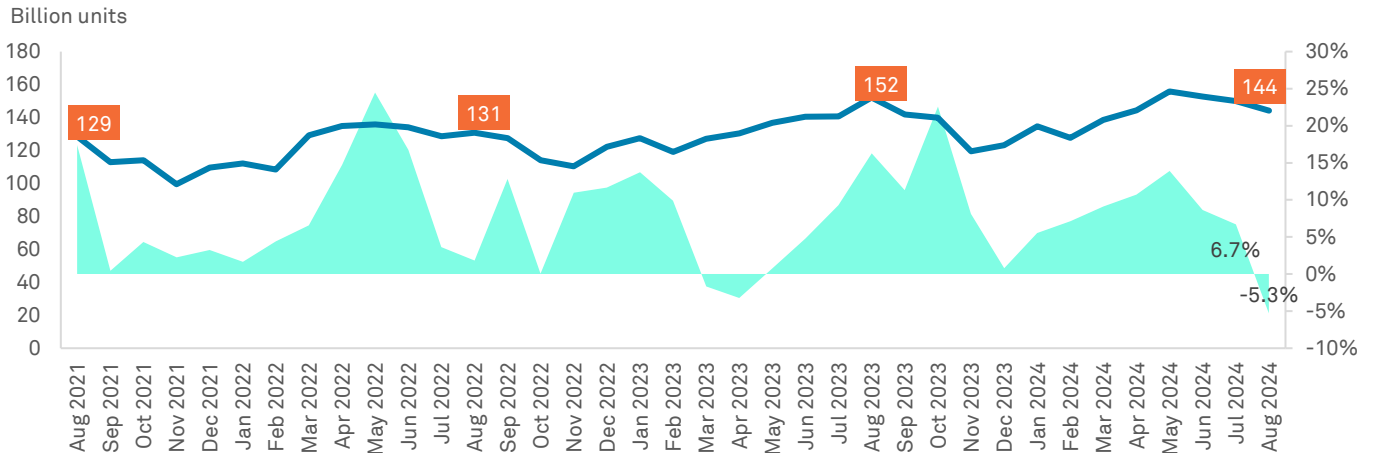
Coal-fired generation declines ~3% as hydro gains steam

Electricity demand in India is estimated to have declined ~5.3% on-year to ~144 billion units (BUs) in August even as the country received ~7% excess rainfall during the month.

This follows a 6.7% on-year rise in electricity demand in July.

Consequently, demand grew ~7% on-year in April-August 2024.

Demand wanes in August as rain provides respite from heat



Note: August 2024 data is provisional (from Grid India)
Source: Central Electricity Authority, Grid India, CRISIL MI&A Research

Peak power needs in line with base demand

GW	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
FY23	216	206	212	192	197	200	187	188	206	213	210	209
FY24	217	221	224	208	238	243	221	204	213	223	222	221
FY25	224	250	245	226	217*							

Note: August 2024 data is provisional (from Grid India)
Source: Central Electricity Authority, Grid India, CRISIL MI&A Research

% Dev from peak: Less than 0% (light blue), >0%&≤5% (yellow), >5%&≤10% (red), More than 10% (green), Peak demand for respective fiscal year (dark red)

Peak power demand is estimated to have declined to 217 GW in August compared with 238 GW a year earlier, which was the second-highest level recorded in fiscal 2024.

Similarly, weighted average market clearing price in the real time market declined ~45% on-year to Rs 3.3 per unit in August 2024 from Rs 6.0 per unit a year earlier.

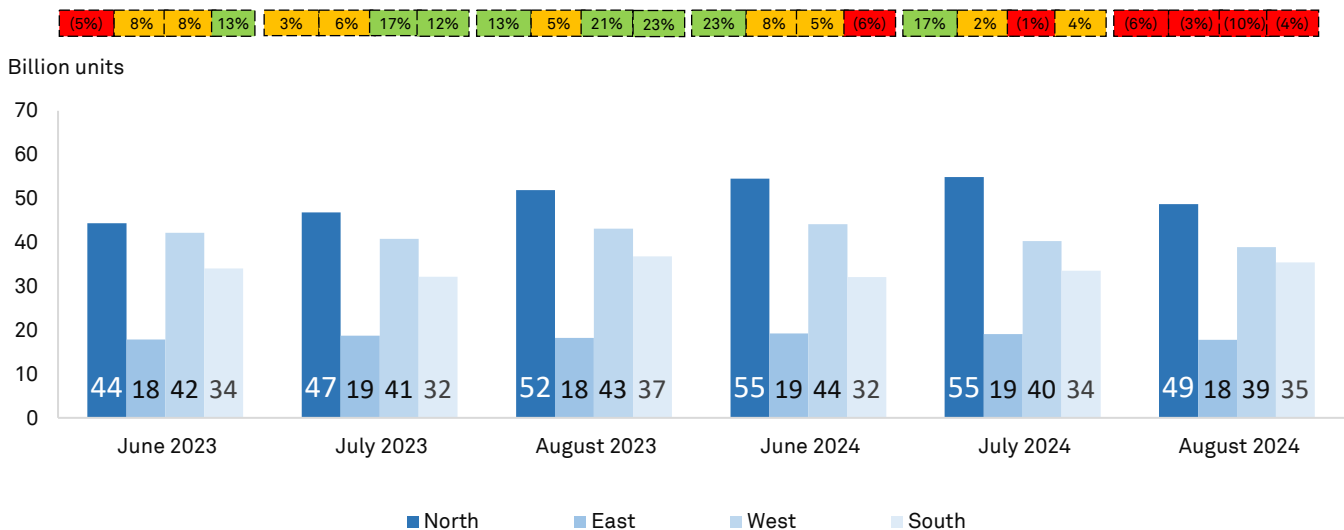
Demand moderated across India, with the western and northern regions experiencing on-year declines of ~10% and ~6%, respectively.

The decline in regional power demand closely follows the rainfall pattern and state-specific consumer preferences.

The agriculture-dominated states of Madhya Pradesh in western India and Rajasthan in North India led the dip in demand with on-year declines of ~13% and ~25%, respectively. These states also witnessed excess rainfall in August 2024 (~14% and ~44% above average in Madhya Pradesh and Rajasthan, respectively), which most likely drove down power demand for irrigation.

Another key agriculture state, Bihar, bucked the trend as it saw demand increase ~2% on-year in August. This could be attributed to district-level rainfall and irrigation needs. For example, Rohtas, a key paddy-growing district, experienced ~30% deficit in rainfall on an average in August, which would have likely increased demand for irrigation.

Demand ebbs across regions, western India leads the pack



Notes:

- 1) August 2024 data is provisional (from Grid India)
 - 2) % above the bar indicates on-year growth in power demand
 - 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, Grid India, CRISIL MI&A Research

Generation mirrors demand, drops ~3% on-year in August

Power generation is estimated to have declined ~3% on-year to ~155 BUs in August 2024. Coal and renewable energy production contracted ~3% and ~13%, respectively, during the month.

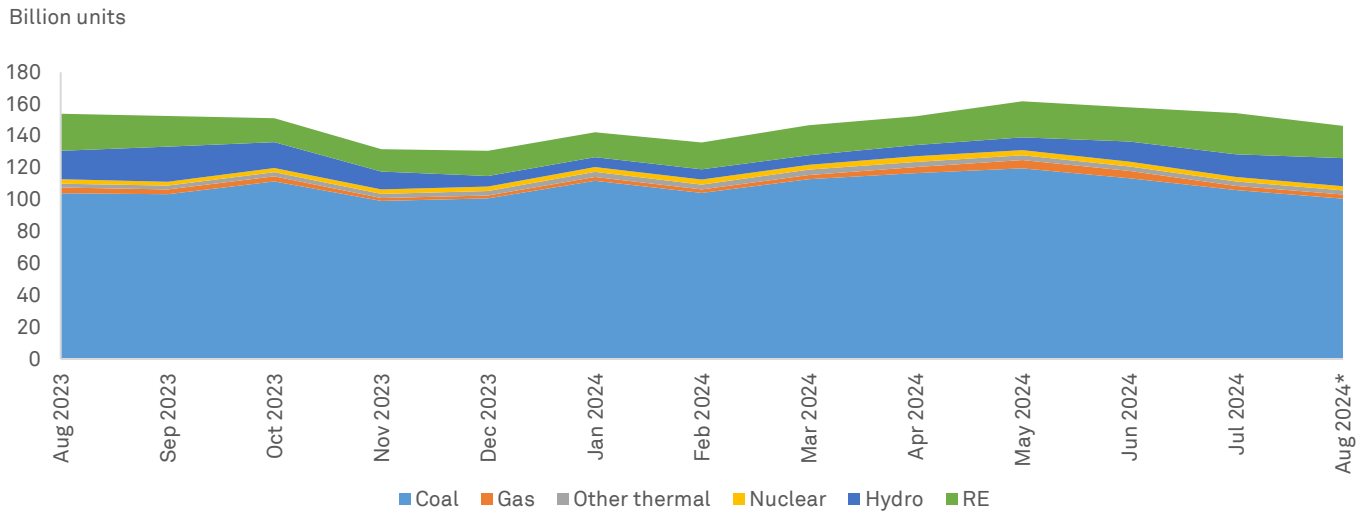
In contrast, hydropower generation surged ~7.6% on year after two consecutive months of decline as many

states received ample rainfall.

With the southwest monsoon covering more parts of the country in August, water level in 31 reservoirs and hydroelectric projects ticked up ~1% over a year earlier.

Thus, the share of coal and renewable energy in power production increased marginally on-year, while that of hydropower grew to ~15% from ~13%.

Hydro generation edges up in August after two months of decline



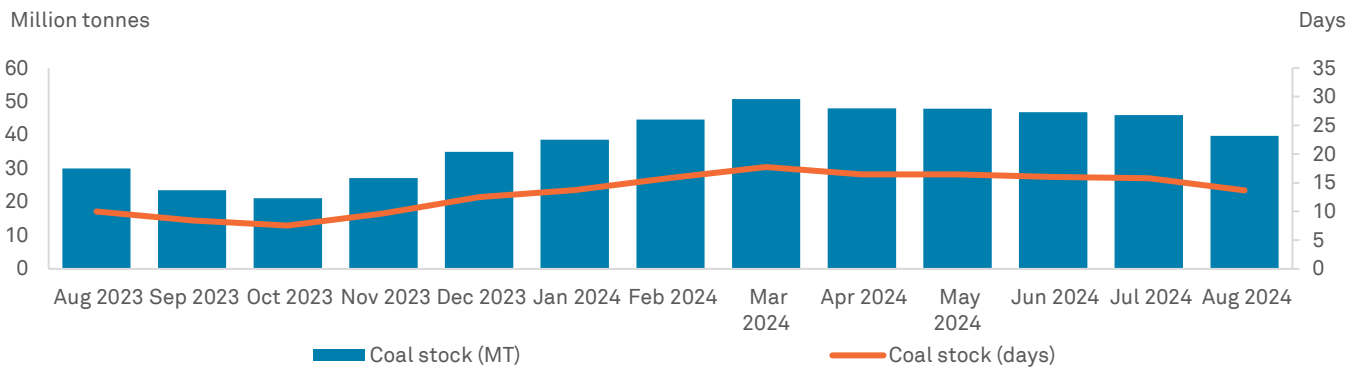
Note: August 2024 data is provisional (from Grid India)
Source: Grid India, CEA, CRISIL MI&A Research

Sufficient coal stock provides comfort to power plants

Coal remains a key source of electricity generation in India. coal production declined 7.51% on-year in August 2024 as monsoon picked pace. To ensure uninterrupted generation amid a surge in temperatures, a buildup of coal stock is essential.

As on August 30, 2024, thermal power plants had 40 million tonnes (MT) of coal compared with 30 MT a year earlier, while coal stock was estimated to last 14 days as against 10 days in August 2023.

Coal stock sufficient on steady dispatches



Source: National Power Portal

To ensure supply during monsoon, the government has extended coal-imported blending for domestic coal plants until October 15, 2024 and lowered the blending weightage to 4% from 6%.

Power demand to track economic growth

CRISIL MI&A Research projects power demand to grow 6.5-7.5% in fiscal 2025 owing to weather events, including severe and prolonged heat waves that occurred in the first quarter, as well as insufficient rainfall in July in northern India. Also supporting demand is strong economic activity, with estimates suggesting India's gross domestic product will expand 6.8% in fiscal 2025.

Analytical contacts

Sehul Bhatt

Director
CRISIL Market intelligence
and Analytics
sehul.bhatt@crisil.com

Surbhi Kaushal

Associate Director
CRISIL Market intelligence
and Analytics
surbhi.kaushal@crisil.com

Siddharth Sanjay Kumar

Manager
CRISIL Market intelligence
and Analytics
siddharth.kumar@crisil.com

Ambika Shevade

Senior Research Analyst
CRISIL Market intelligence
and Analytics
ambika.shevade@crisil.com

Media contacts

Prakruti Jani

Media Relations
CRISIL Limited
M: + 91 98678 68976
D: +91 22 3342 5916
B: +91 22 3342 3000
prakruti.jani@crisil.com

Sanjay Lawrence

Media Relations
CRISIL Limited
M: +918983321061
D: +91 22 3342 5916
B: +91 22 3342 3000
sanjay.lawrence@crisil.com

Roma Gurnani

Media Relations
CRISIL Limited
M: +91 70662 92142
D: +91 22 3342 5916
B: +91 22 3342 3000
roma.gurnani@ext-crisil.com

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