India’s Energy Overview

March 2026

VASUDHA FOUNDATION
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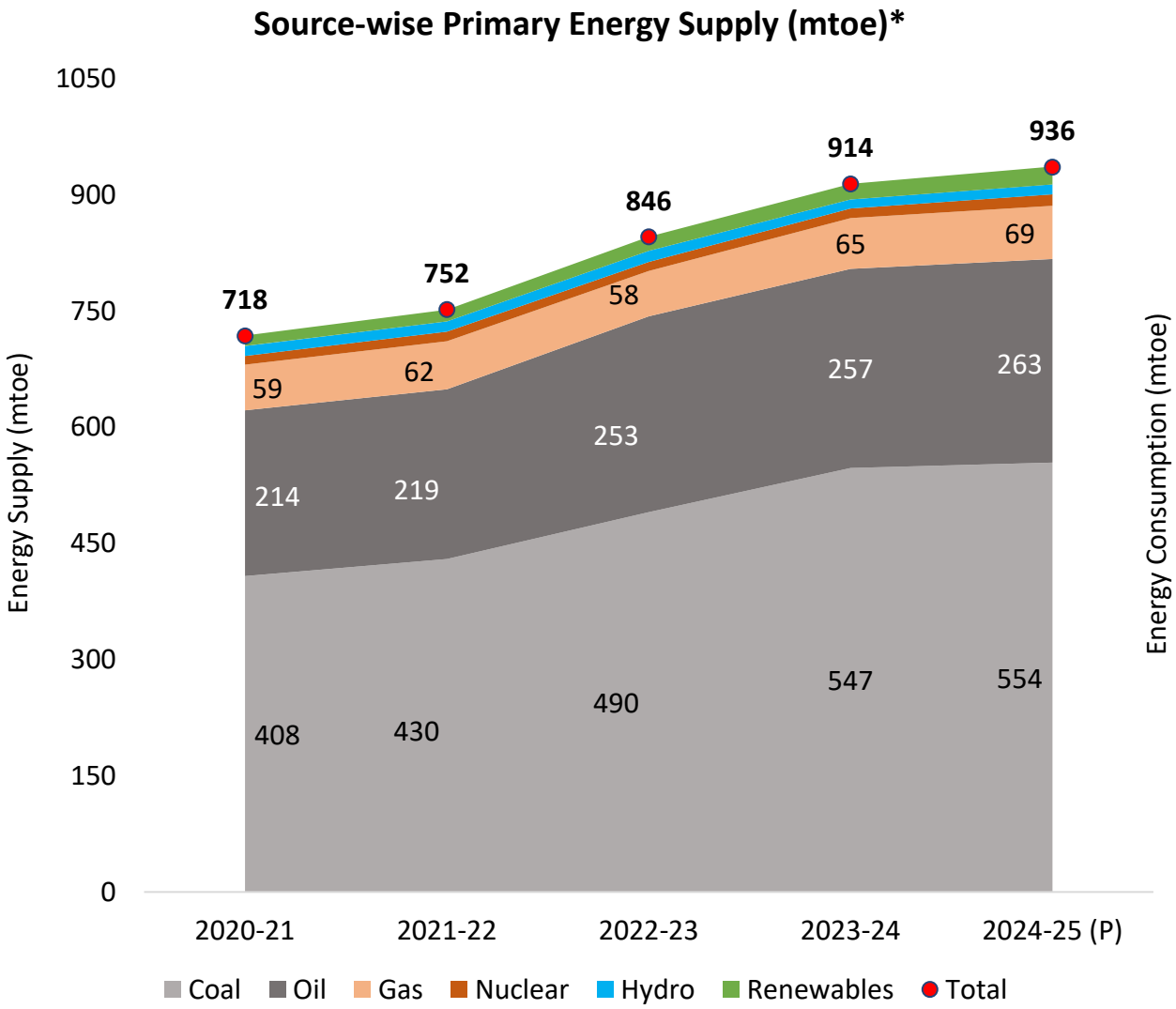
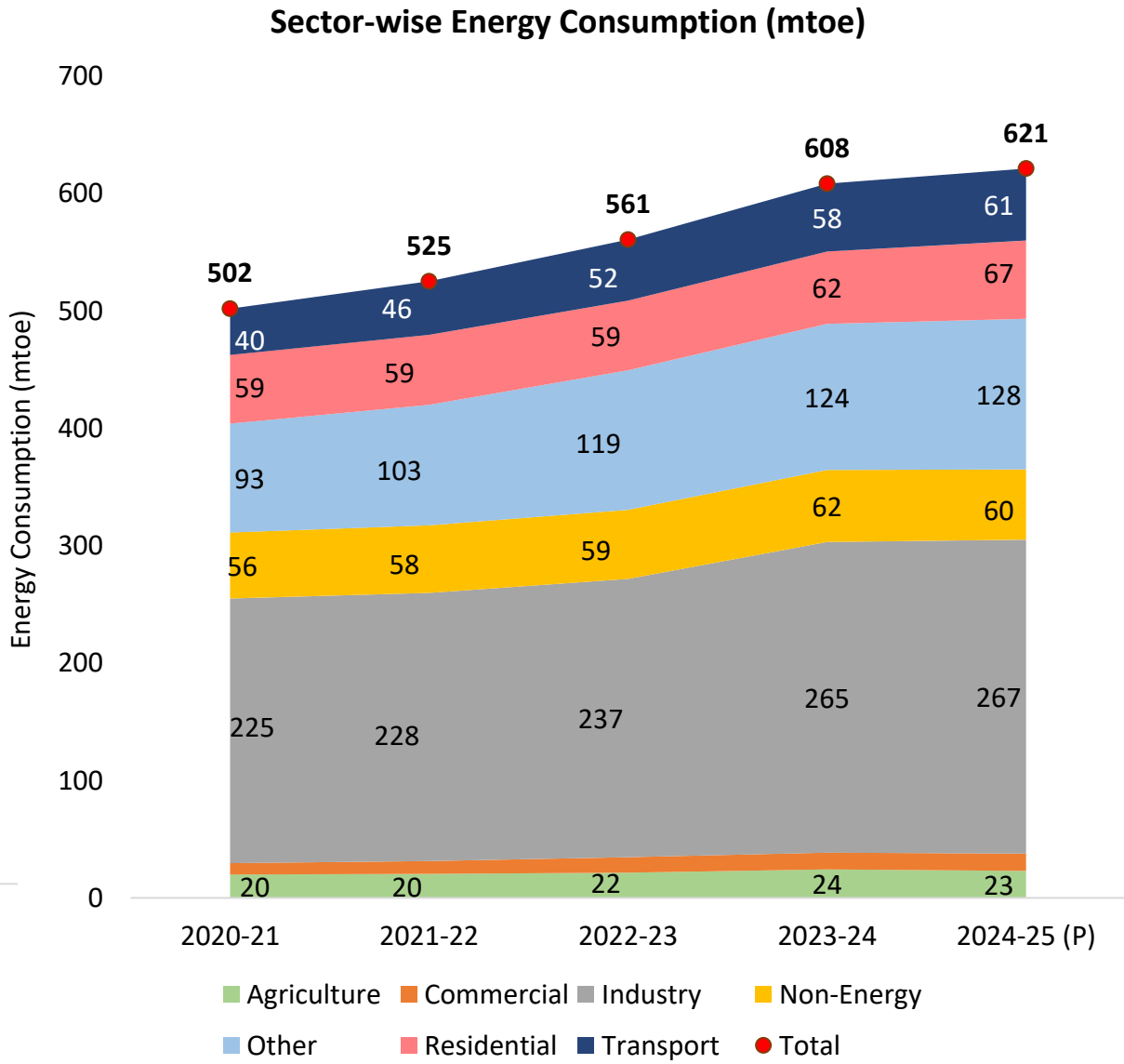
Contents

Primary* and Final Energy Mix in India

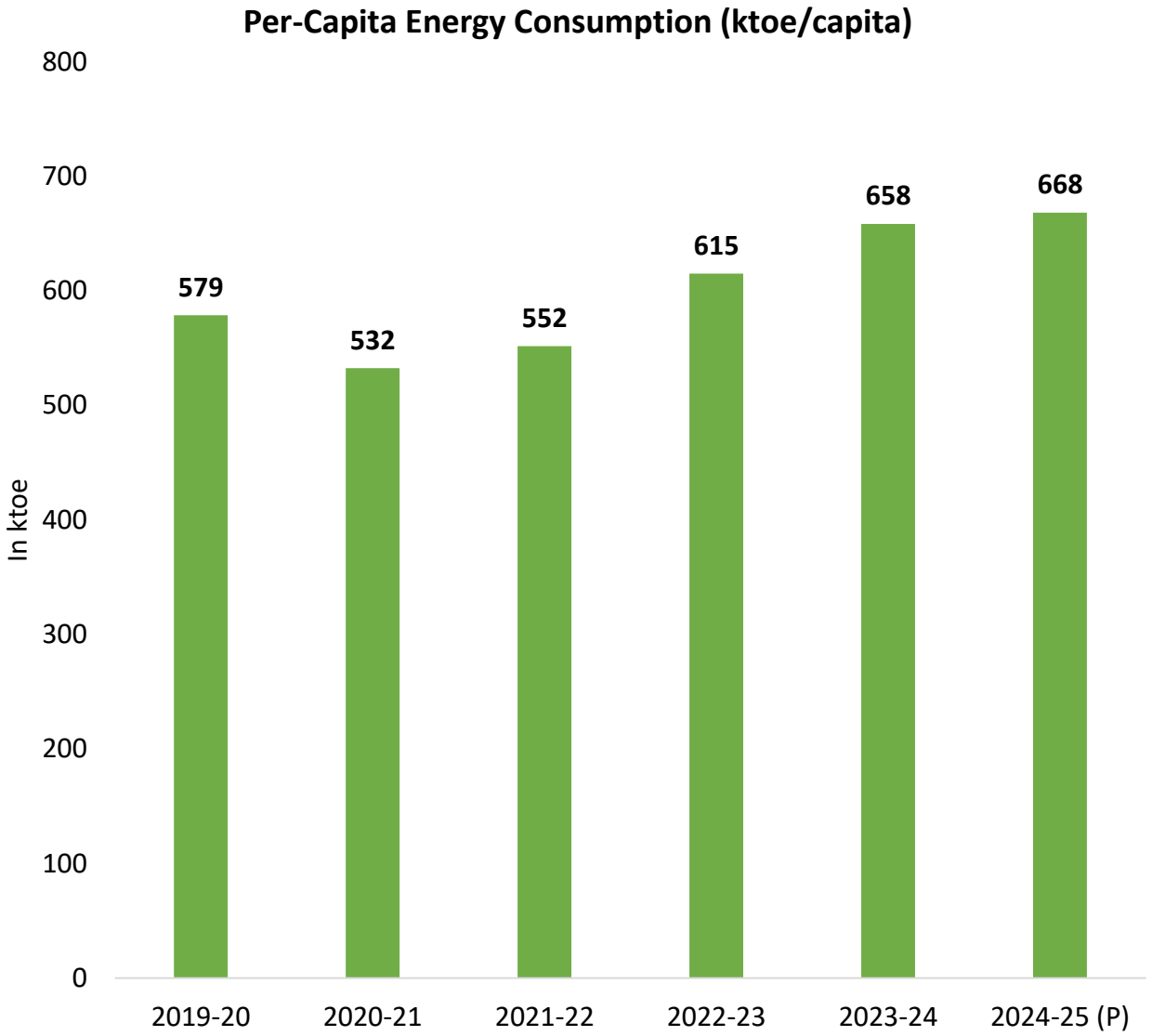


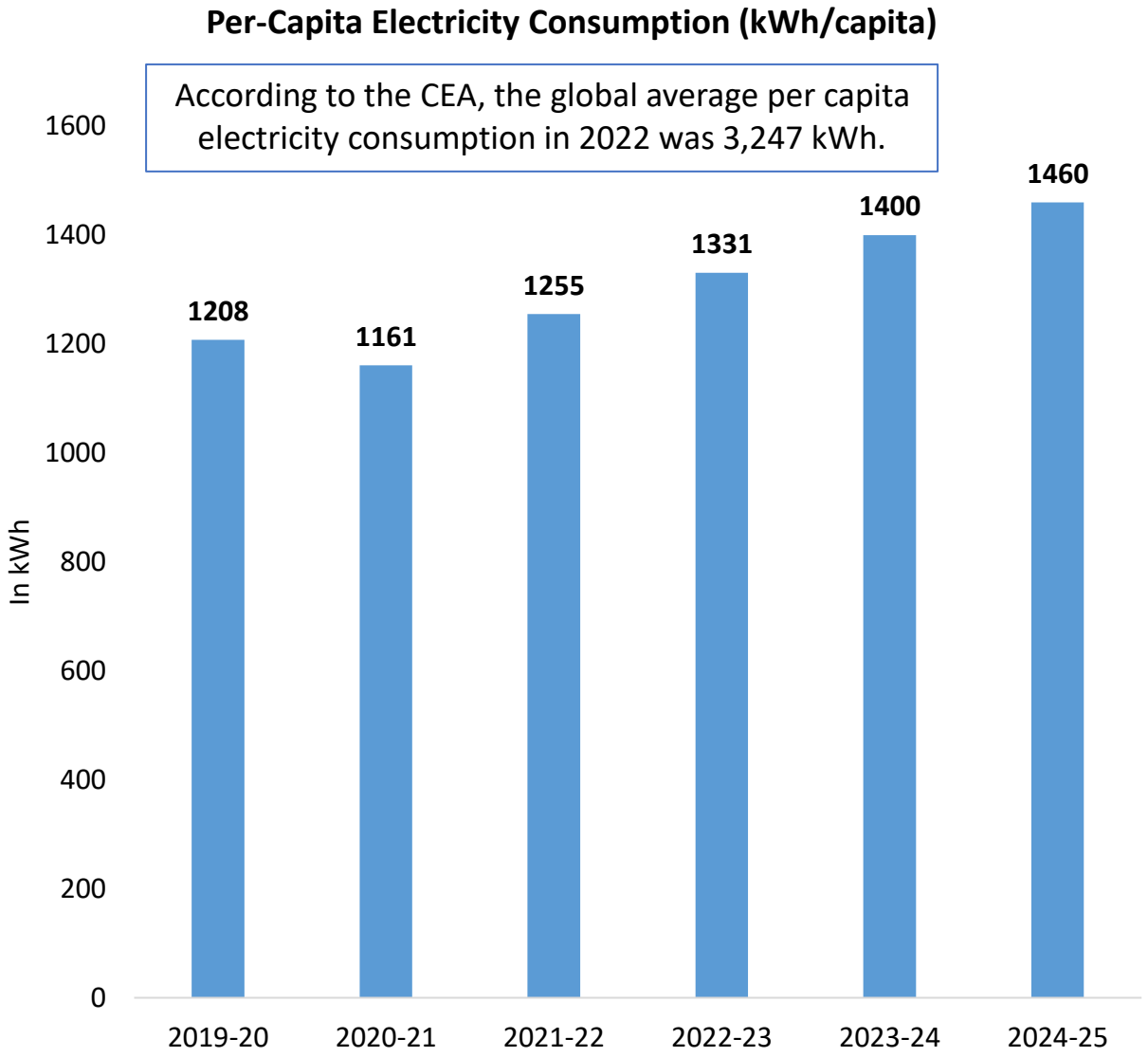


*Excluding biofuels, waste, and other non-commercial source of energy

Source: ICED

Per-Capita Energy and Electricity Consumption

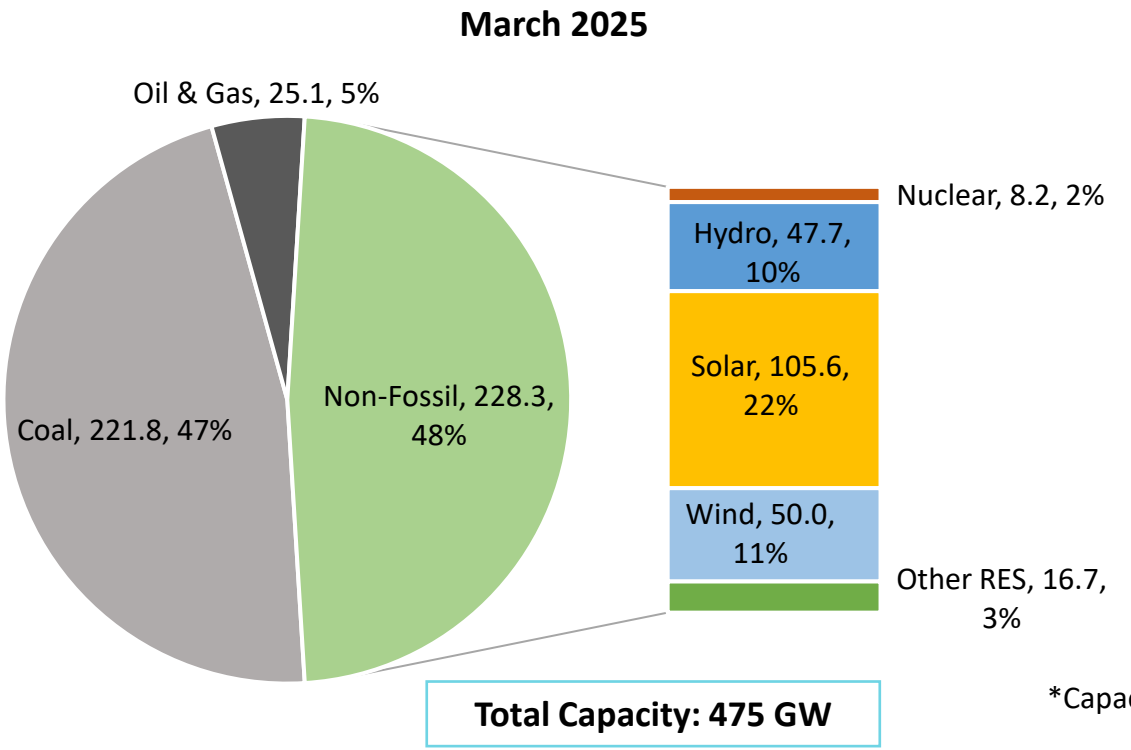


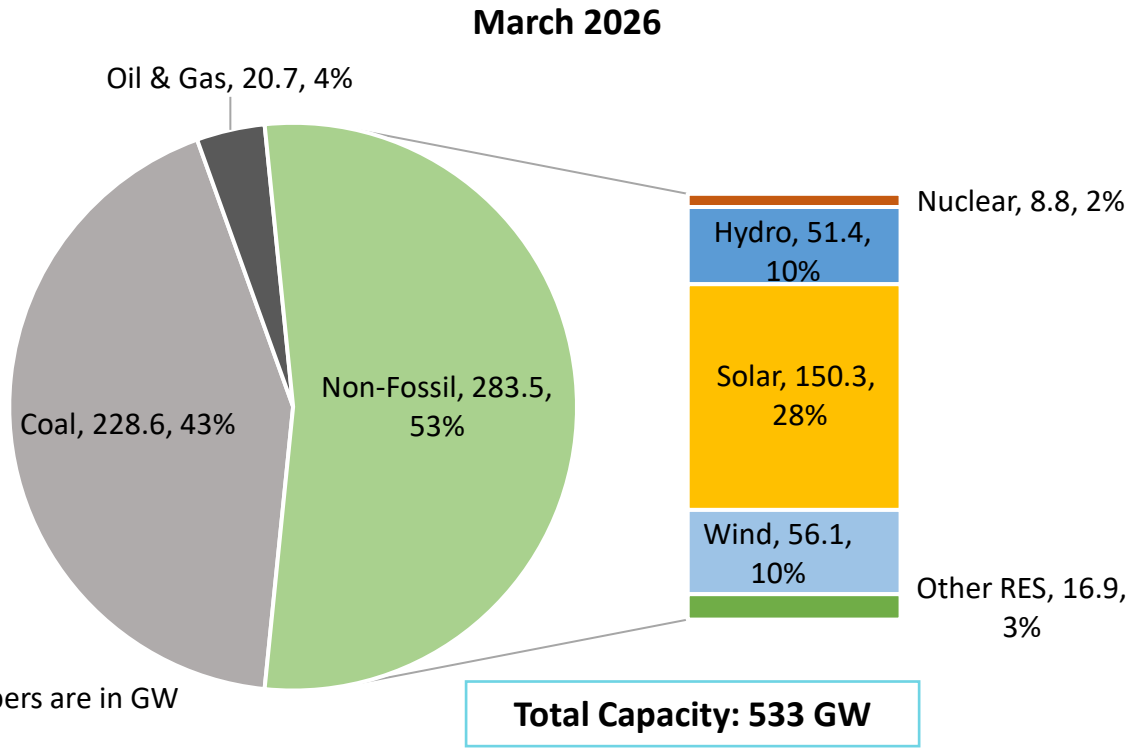


Note: Per Capita energy consumption is calculated on energy supply basis.

Source: ICED & CEA

India’s Electricity Capacity Mix (Utility-scale)



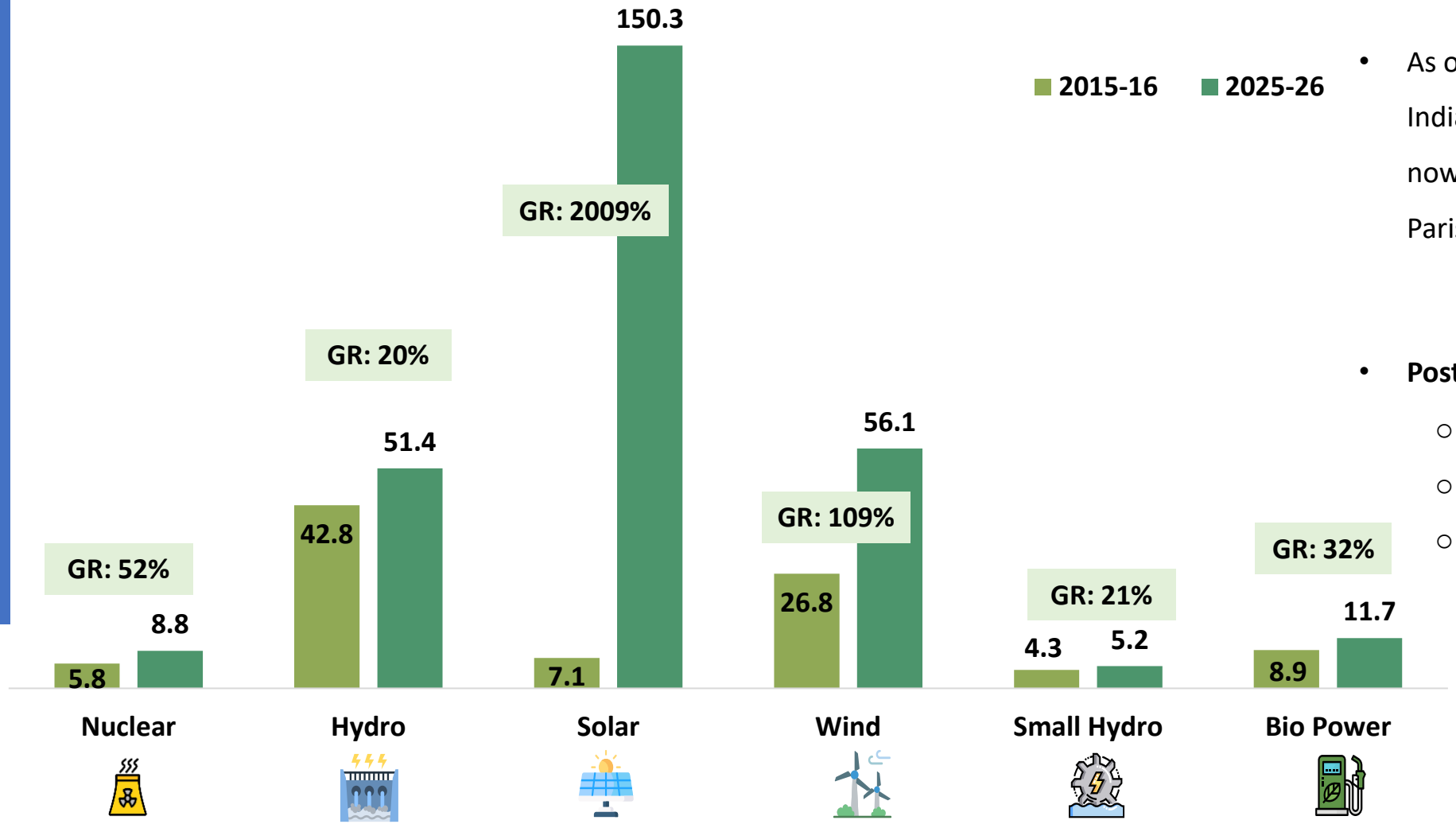


*Capacity Numbers are in GW

- India’s electricity generating capacity is 533 GW as on Mar’2026 [coal 229 GW (43%), solar 150 GW (28%), wind 56 GW (10%), and hydro 51 (10%)].
- India has achieved its NDC target of 53% non-fossil capacity, 5 years ahead of the originally set in 2030.
- As on Mar’2026, India’s renewable energy capacity (including large hydro) stood at 275 GW out of 533 GW.

Source: CEA

Non-Fossil Energy Capacity (in GW) Growth Post-2015 Paris Agreement



- As of 31 March 2026, **53% (284 GW)** of India's total power capacity **(533 GW)** is now non-fossil fuel-based, meeting the Paris Agreement pledge.

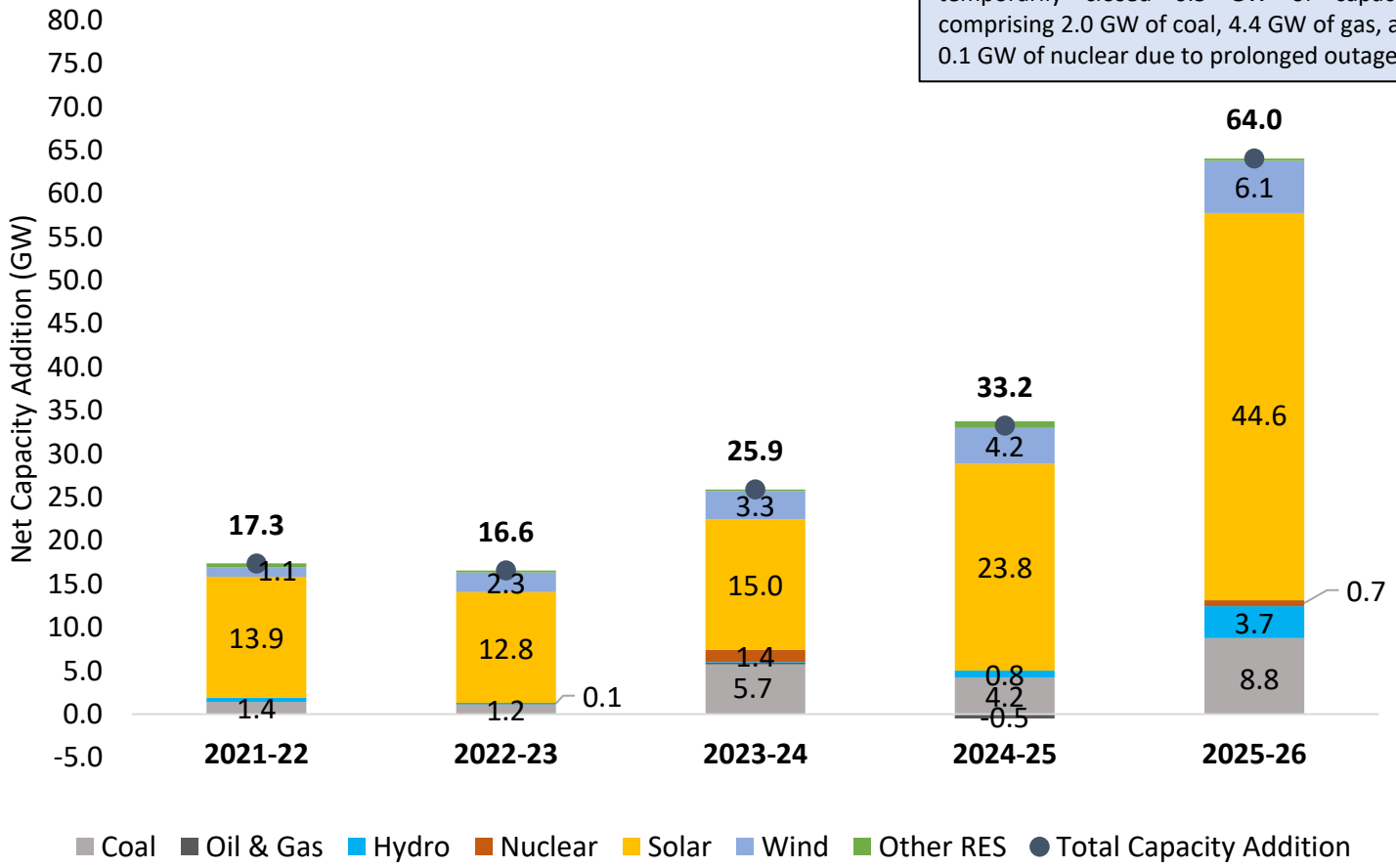
- **Post-2015 Paris Agreement Growth**:
  - solar capacity increased **21-folds**
  - wind power **doubled**
  - nuclear increased by **4% CAGR**.

Source: CEA & MNRE

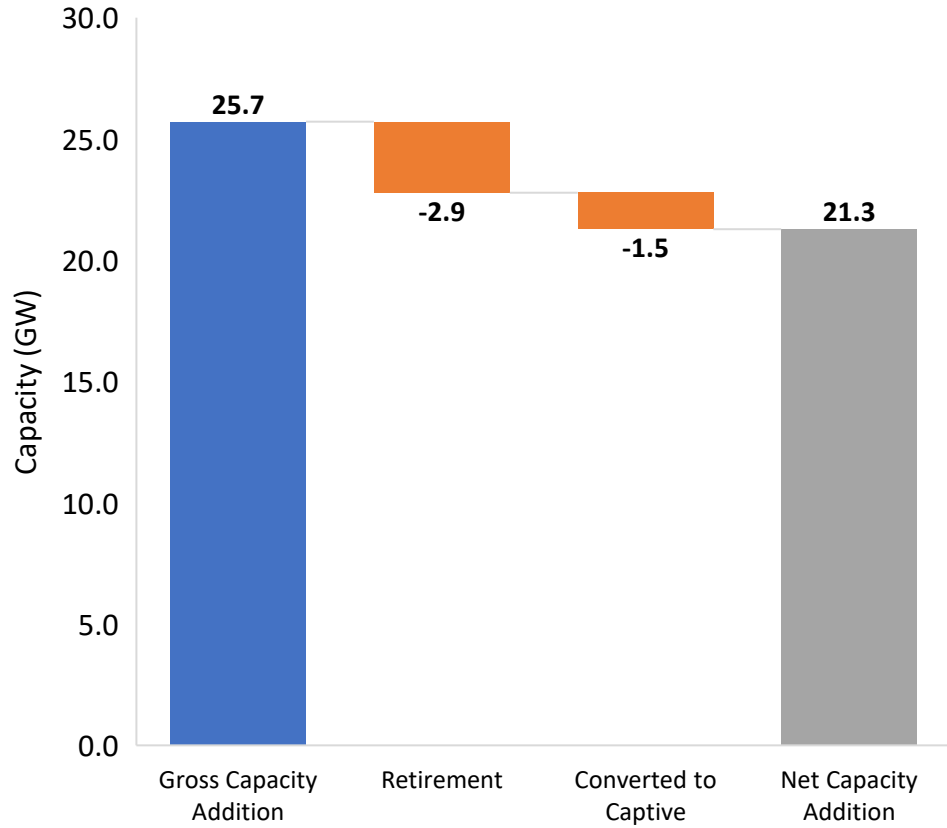
India’s Electricity Capacity Addition in last 5 years

Source-wise Net Capacity Addition (GW)

From Apr’2025 to Mar’2026, the CEA has temporarily closed 6.5 GW of capacity, comprising 2.0 GW of coal, 4.4 GW of gas, and 0.1 GW of nuclear due to prolonged outage.



Net Coal Capacity Addition during 2021-22 to 2025-26



- A total of 134 GW of generation capacity has been added in RE (Hydro, solar, wind, and other RES) over the past 5 years (2021-22 to 2025-26), whereas the net coal capacity addition during the same period was 21 GW, mostly in the central sector.

Source: CEA & MNRE

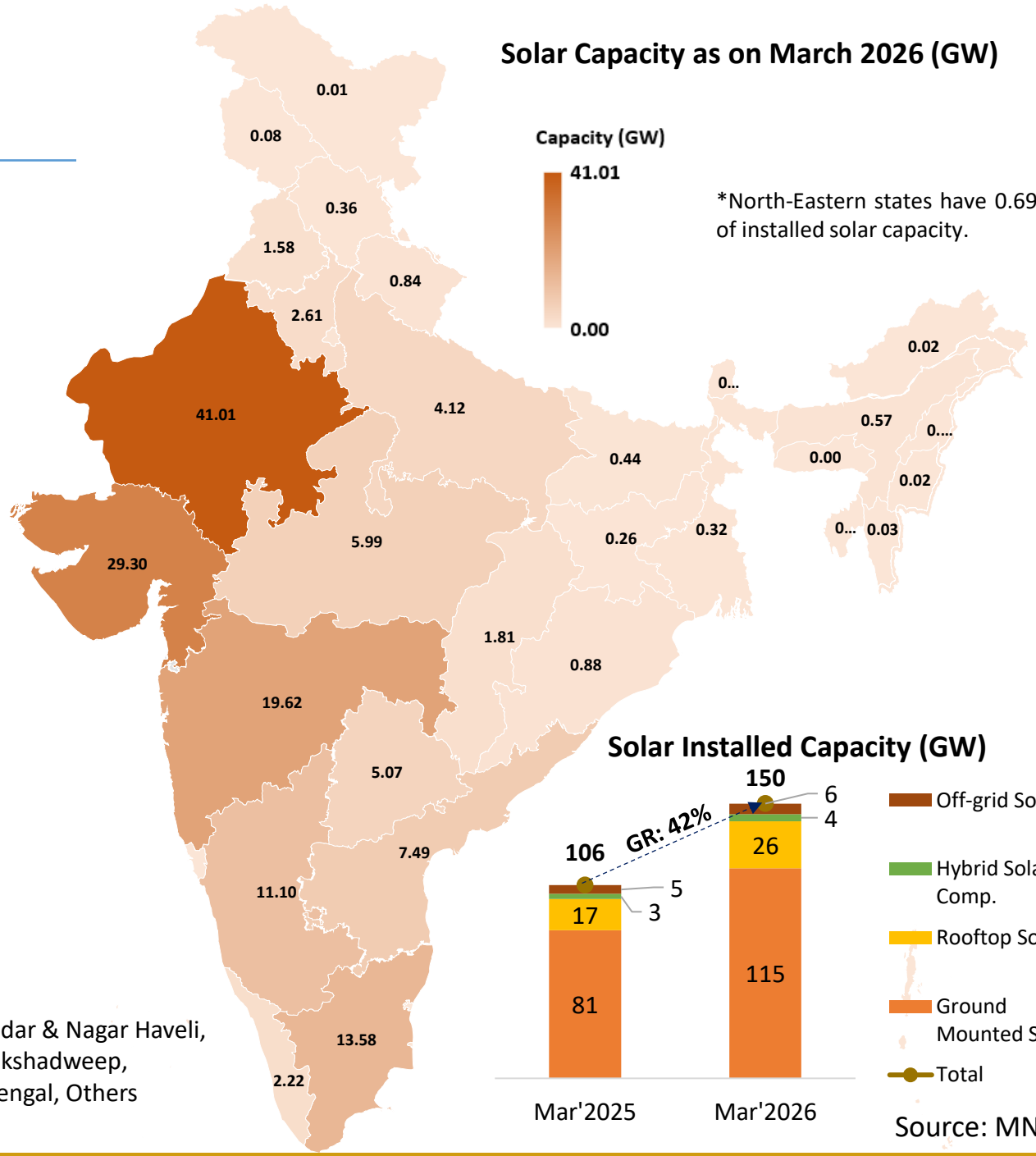
State-wise Solar Capacity

as on March 2026

State-wise Installed Capacity of Solar Power (GW)					
States	**Ground Mounted**	**Rooftop**	**Solar Component in Hybrid**	**Off Grid**	**Total Solar Power**
Rajasthan	**36.13**	2.09	1.98	0.82	**41.01**
Gujarat	20.97	**6.88**	**1.27**	0.17	29.30
Maharashtra	12.17	5.44	0.00	**2.01**	19.62
Tamil Nadu	11.97	1.53	0.00	0.07	13.58
Karnataka	9.86	0.84	0.36	0.04	11.10
Andhra Pradesh	6.38	0.77	0.25	0.09	7.49
Madhya Pradesh	4.99	0.89	0.00	0.10	5.99
Telangana	4.36	0.70	0.00	0.01	5.07
Uttar Pradesh	3.05	0.72	0.00	0.36	4.12
Haryana	0.27	1.19	0.00	1.15	2.61
Kerala	0.34	1.85	0.00	0.02	2.22
Chhattisgarh	1.25	0.17	0.00	0.39	1.81
Punjab	0.89	0.58	0.00	0.12	1.58
Odisha	0.66	0.16	0.00	0.06	0.88
Others	1.58	1.92	0.00	0.37	3.87
All India	**114.87**	**25.73**	**3.86**	**5.80**	**150.26**

Others include- Andaman & Nicobar, Arunachal Pradesh, Assam, Bihar, Chandigarh, Dadar & Nagar Haveli, Daman & Diu, Delhi, Goa, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Ladakh, Lakshadweep, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Puducherry, Sikkim, Tripura, West Bengal, Others

Solar Capacity as on March 2026 (GW)



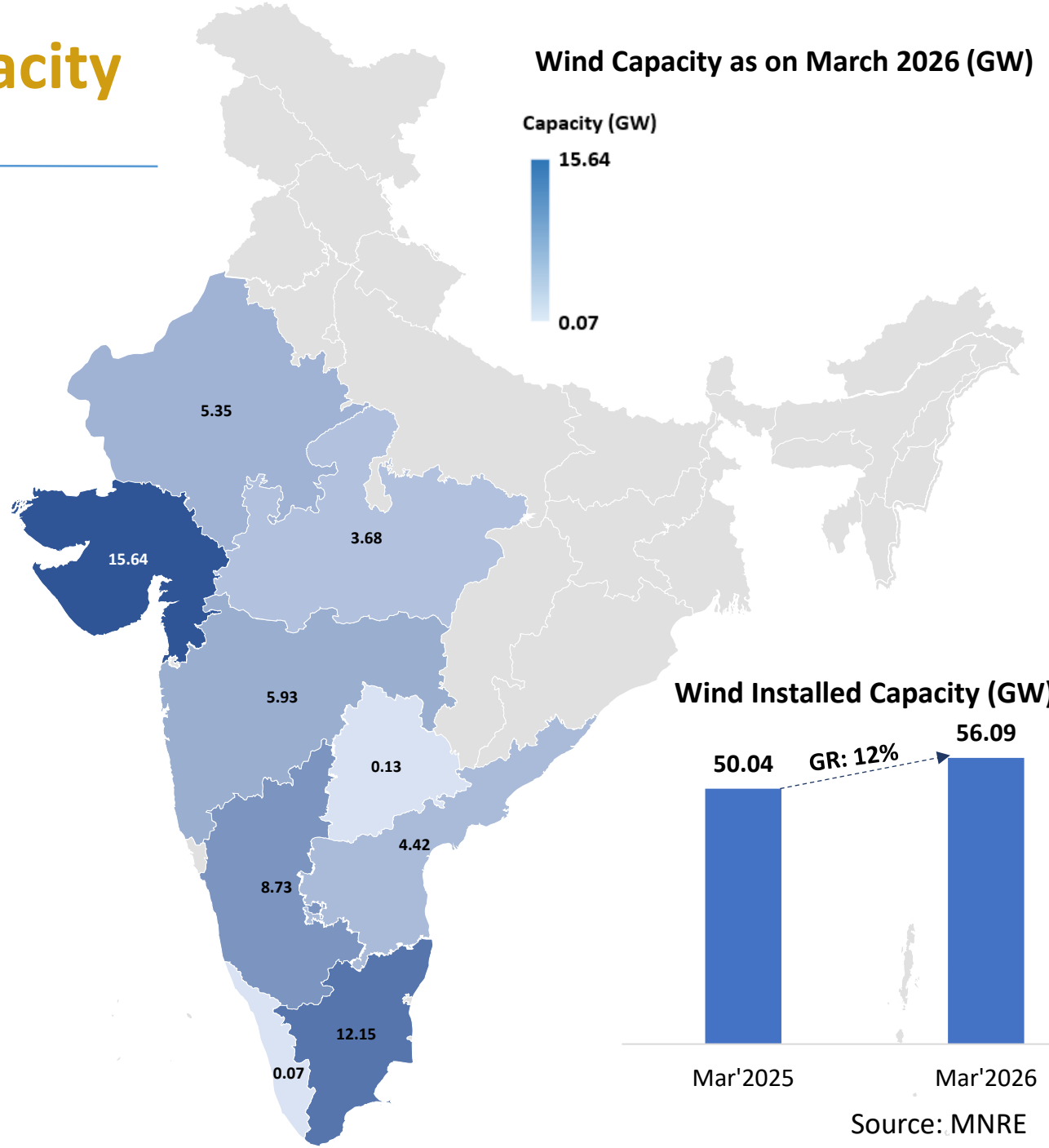
Solar Installed Capacity (GW)

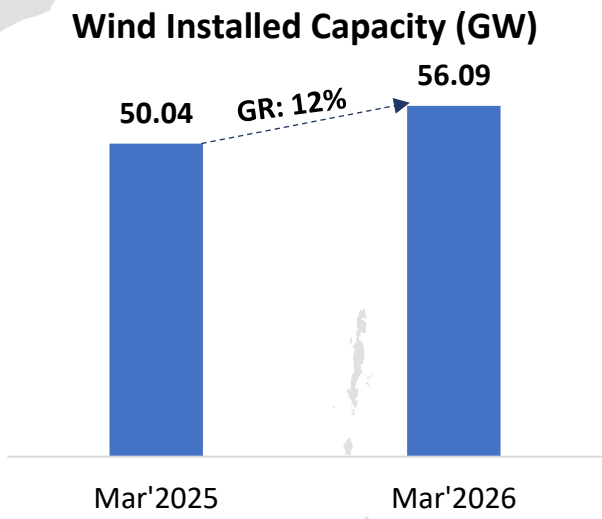
Source: MNRE

State-wise Wind Onshore Capacity

as on March 2026

State-wise installed capacity of Wind (Onshore) Power	
States	**Installed Capacity (GW)**
Gujarat	15.64
Tamil Nadu	12.15
Karnataka	8.73
Maharashtra	5.93
Rajasthan	5.35
Andhra Pradesh	4.42
Madhya Pradesh	3.68
Telangana	0.13
Kerala	0.07
India Total	**56.09**

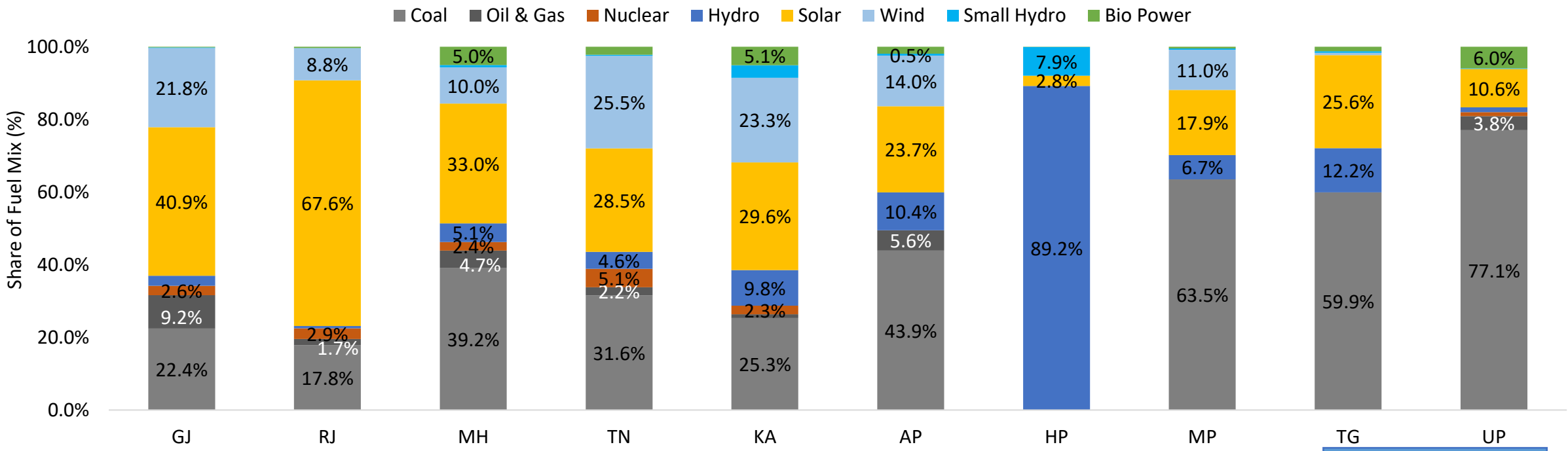




Source: MNRE

Top 10 High RE* States and Their Capacity Mix

as on March 2026



Numbers are in GW

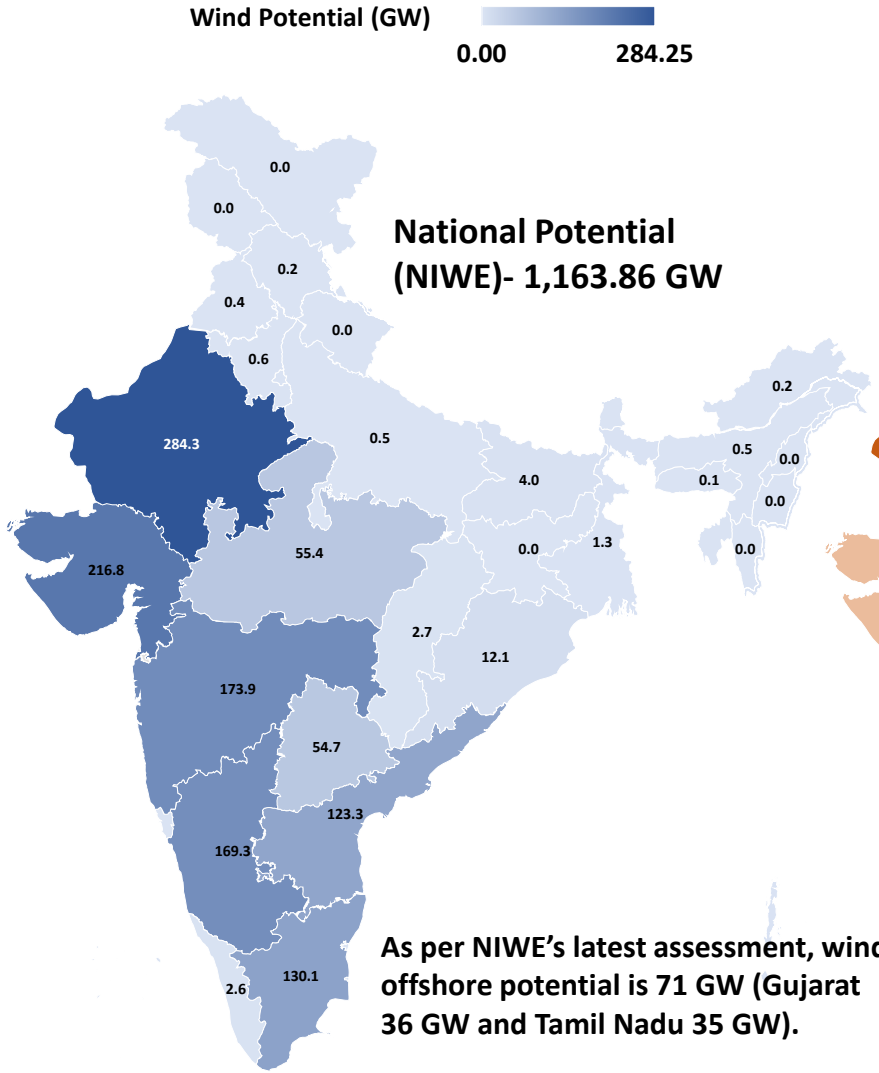
Parameters	GJ	RJ	MH	TN	KA	AP	HP	MP	TG	UP
Total Installed Capacity	71.69	60.65	59.52	47.64	37.48	31.65	12.80	33.35	19.77	38.95
Total RE Capacity	47.18	47.02	31.98	29.11	26.72	15.98	12.80	12.18	7.93	7.01
RE Share	66%	78%	54%	61%	71%	50%	100%	37%	40%	18%

NOTE: *Renewable Energy including Large Hydro

Source: MNRE & NPP

Renewable Energy (RE) Potential

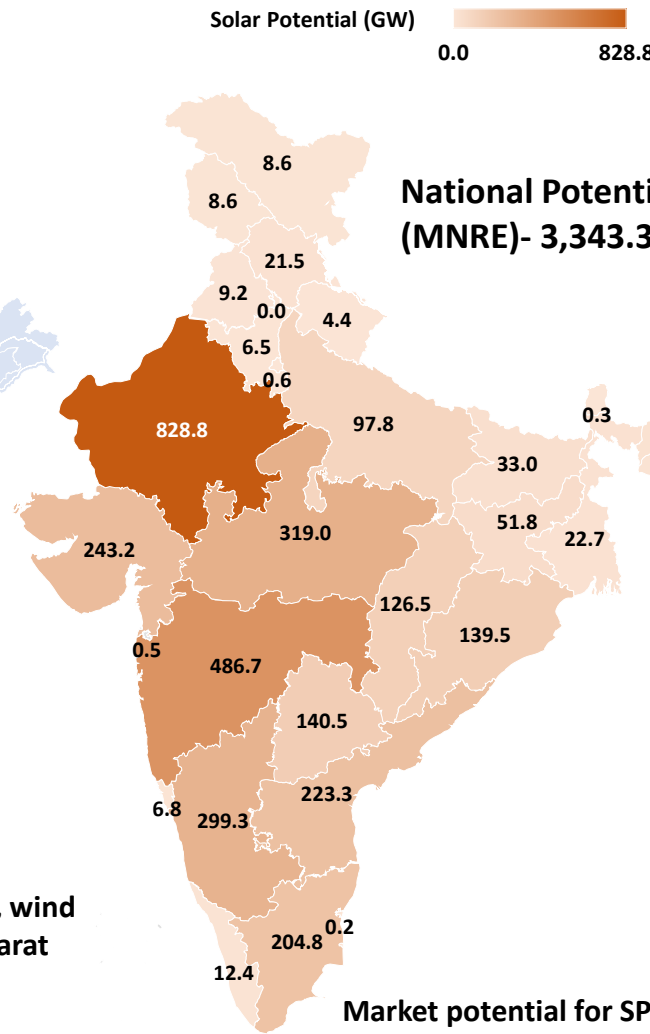
Wind Onshore (at 150m agl) and Offshore Potential



National Potential (NIWE)- 1,163.86 GW

As per NIWE's latest assessment, wind offshore potential is 71 GW (Gujarat 36 GW and Tamil Nadu 35 GW).

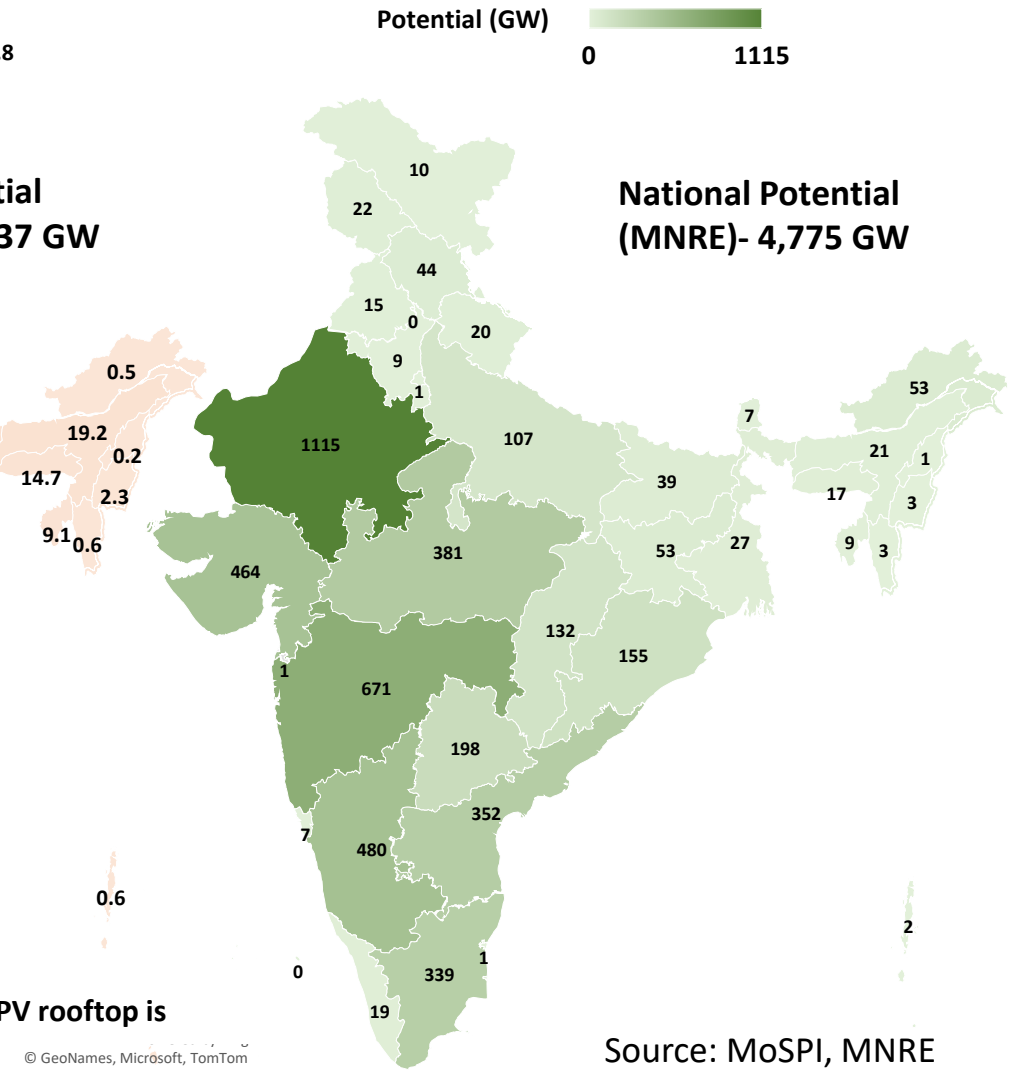
Solar Ground Mounted Potential (at 6.69% wasteland)



National Potential (MNRE)- 3,343.37 GW

Market potential for SPV rooftop is 124 GW.

Renewable Energy Potential (all sources incl. large Hydro)

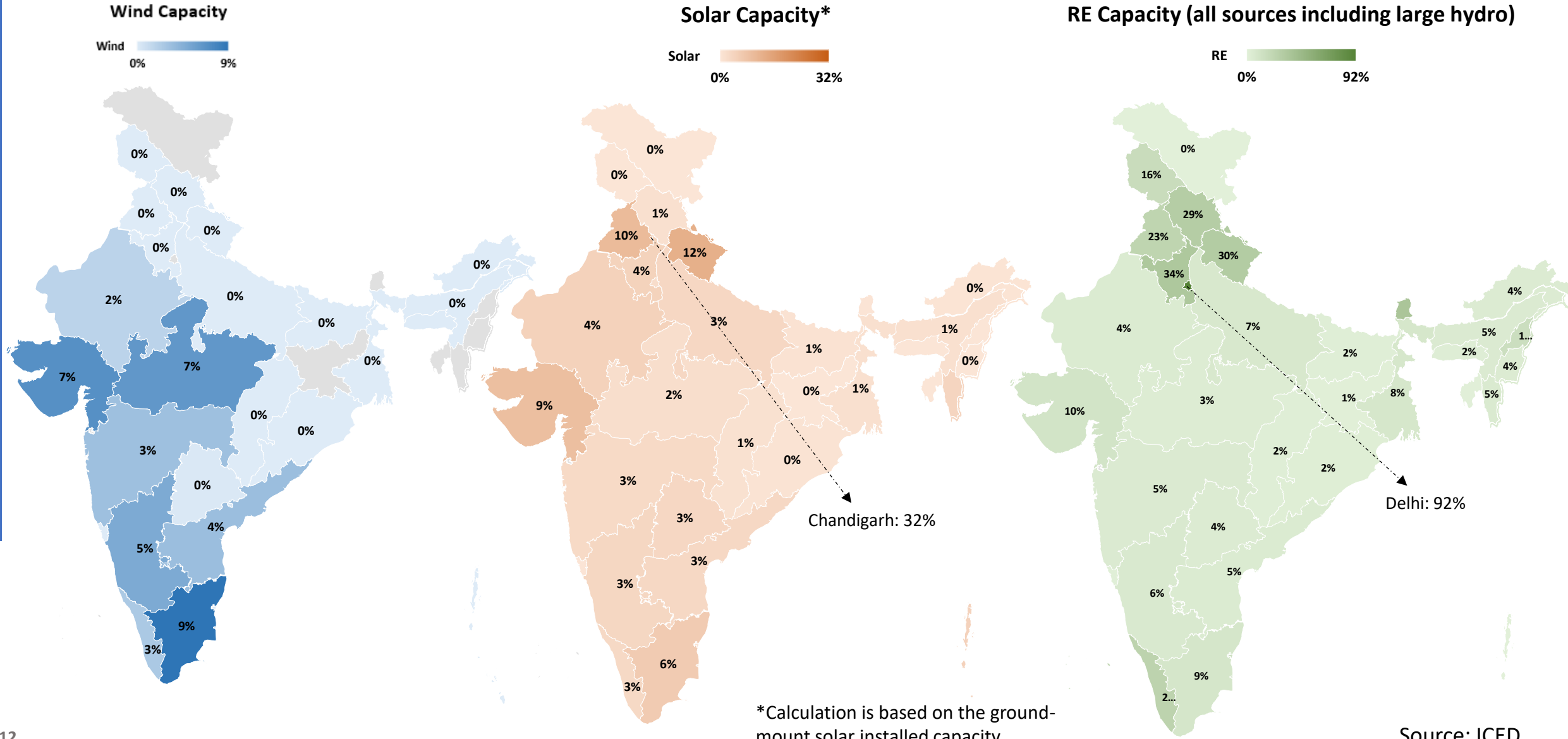


National Potential (MNRE)- 4,775 GW

© GeoNames, Microsoft, TomTom

Source: MoSPI, MNRE

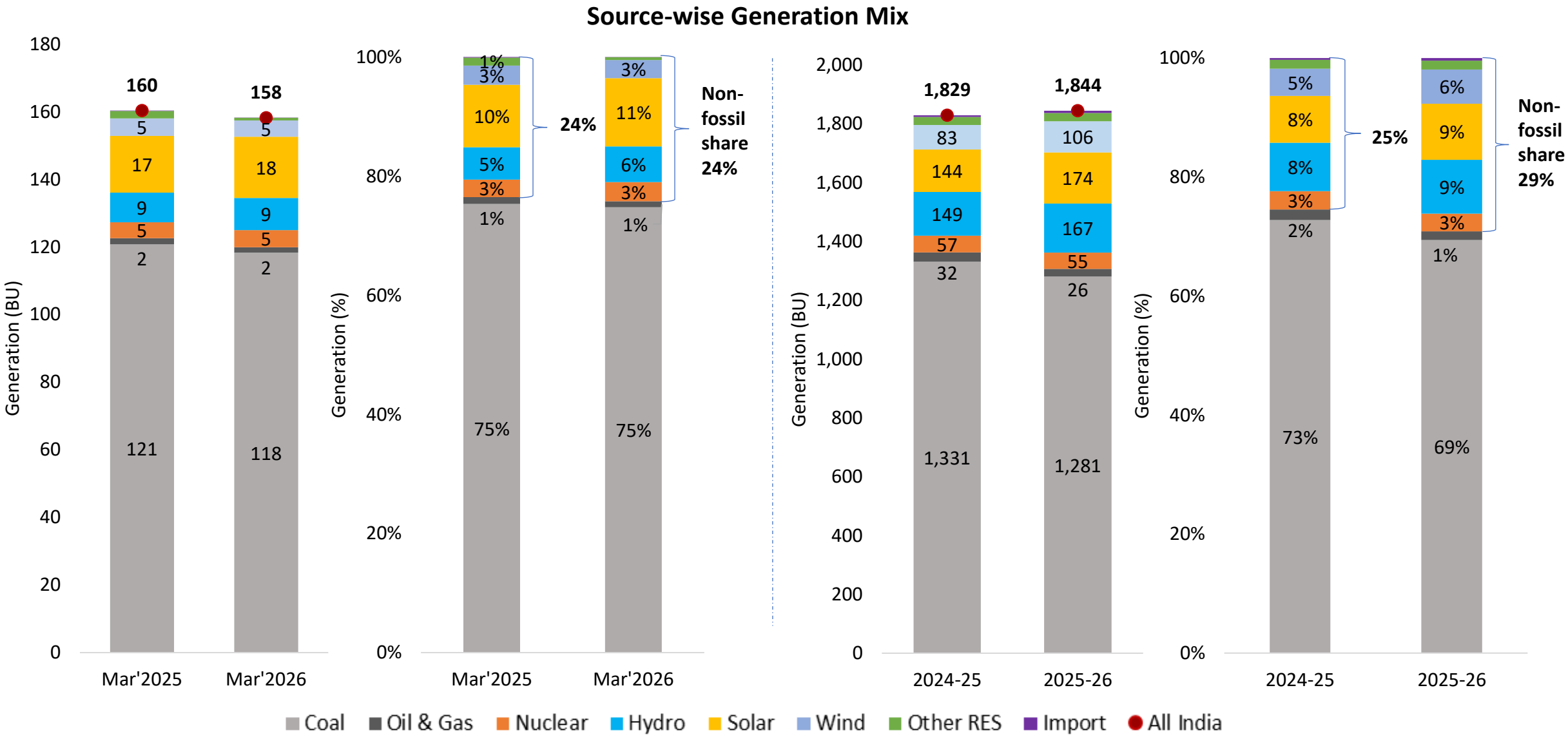
RE Installed capacity as a Percentage of the Total Resource Potential in the State (as on March 2026)



*Calculation is based on the ground-mount solar installed capacity.

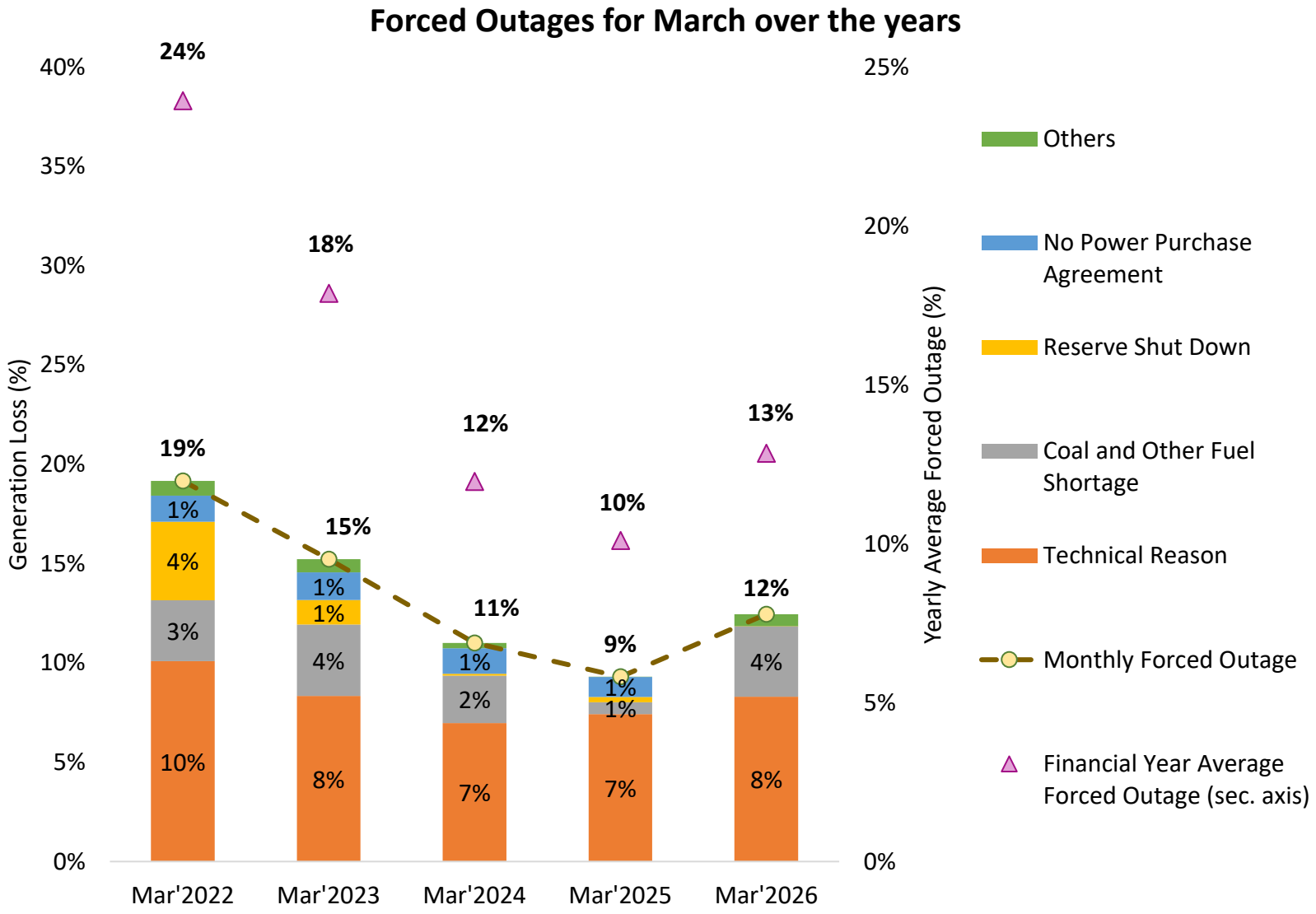
Source: ICED

India’s Electricity Generation Mix



Source: CEA

Thermal Generation Loss and Reasons for Forced Outages

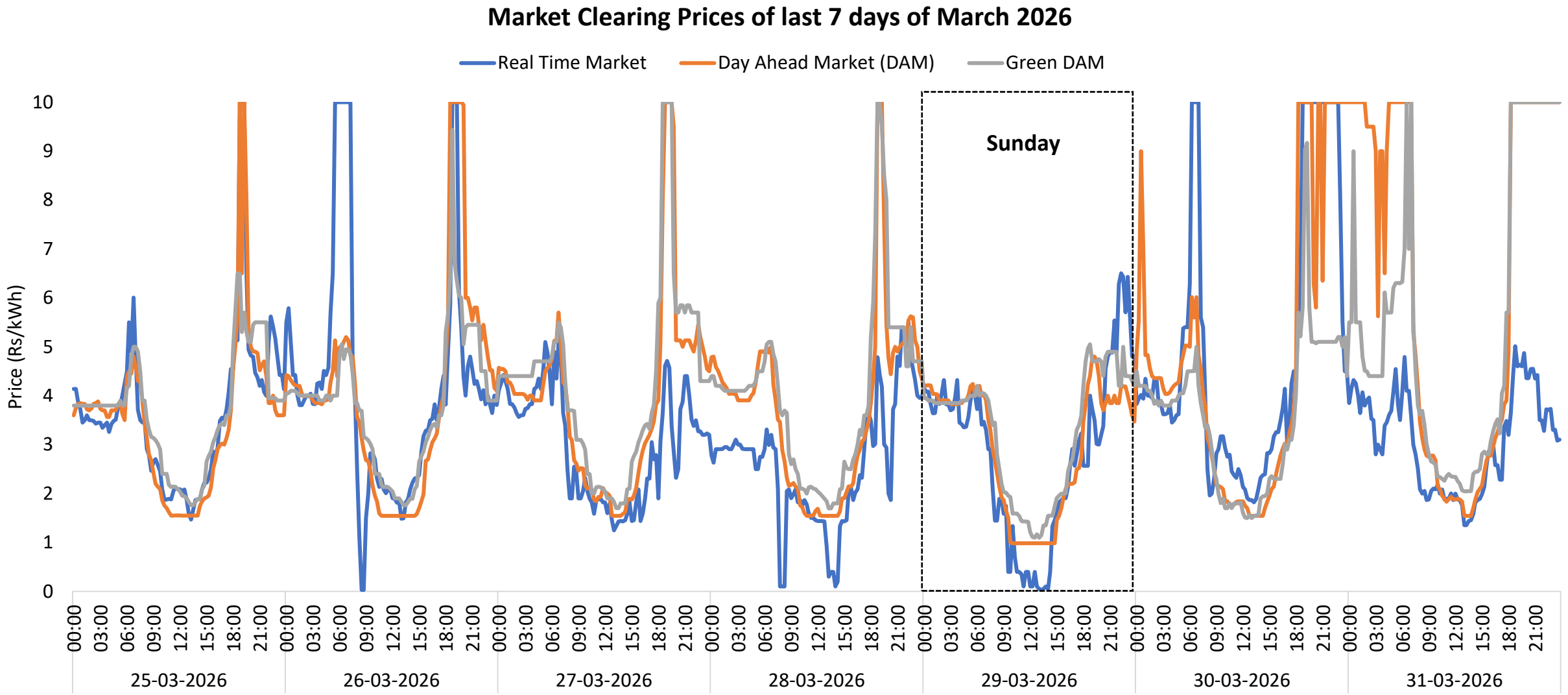


Year/ Month		Average Forced Outage Share
Yearly	FY 2023-24	12%
	FY 2024-25	10%
	FY 2025-26	13%
Monthly	Mar'2024	11%
	Mar'2025	9%
	Mar'2026	12%

Thermal includes only Coal and Lignite Plants.

Source: ICED

Indian Electricity Exchange (IEX) Market Snapshot

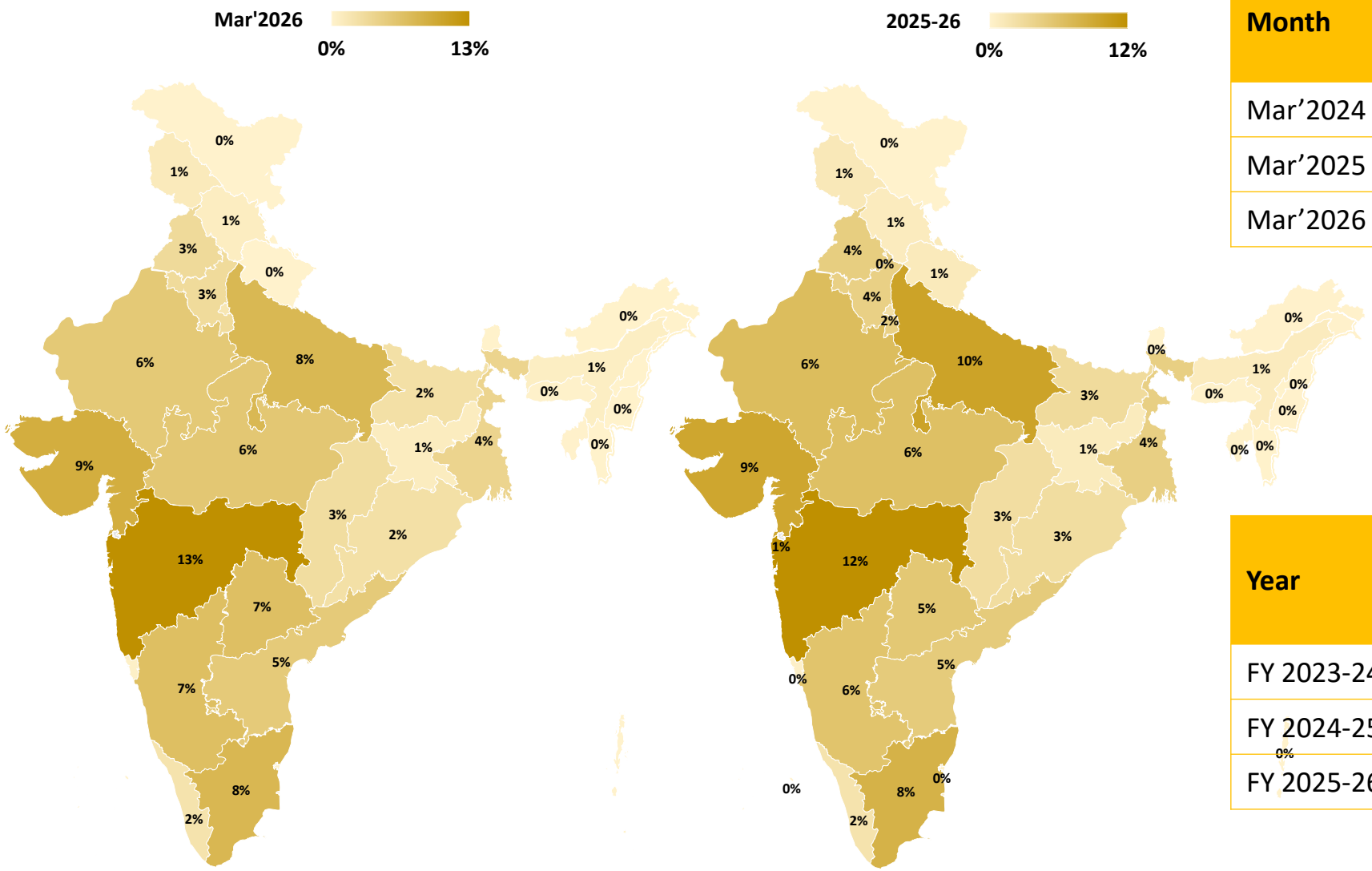


In April 2023, CERC revised the price ceiling from ₹12/kWh to ₹10/kWh in the power exchange market.

Source: IEX

National and State level Electricity Demand

State-level Electricity Demand as a percent of National Demand (%)



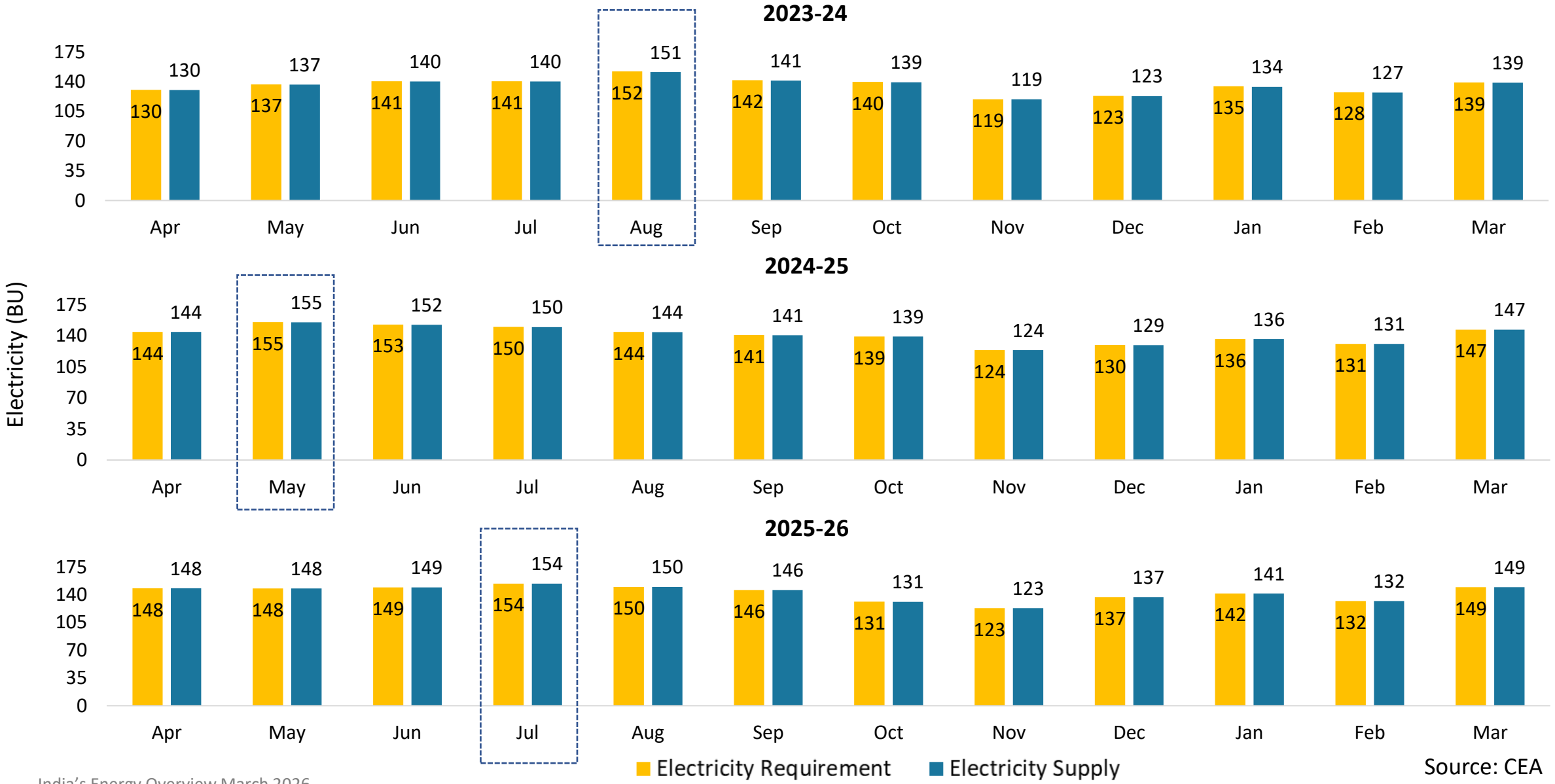
Month	Electricity Demand (BU)	Electricity Supply (BU)	Gap (BU) (+/-)
Mar'2024	139	139	0.1
Mar'2025	147	147	0.0
Mar'2026	149	149	0.1

Year	Electricity Demand (BU)	Electricity Supply (BU)	Gap (BU) (+/-)
FY 2023-24	1,626	1,622	4.0
FY 2024-25	1,694	1,692	1.6
FY 2025-26	1,709	1,708	0.5

NOTE: The demand represented above includes intra state T&D losses.

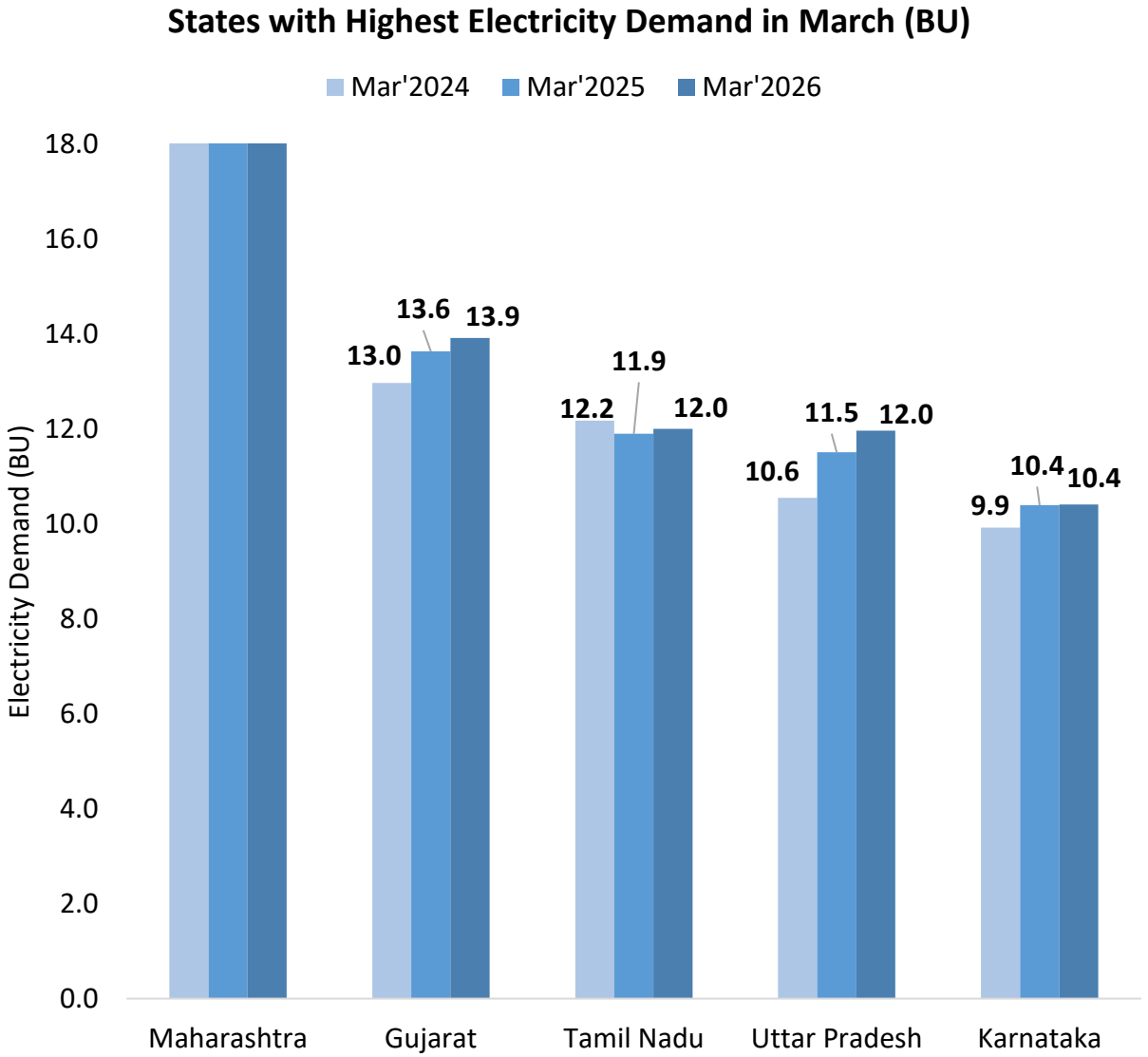
Source: CEA

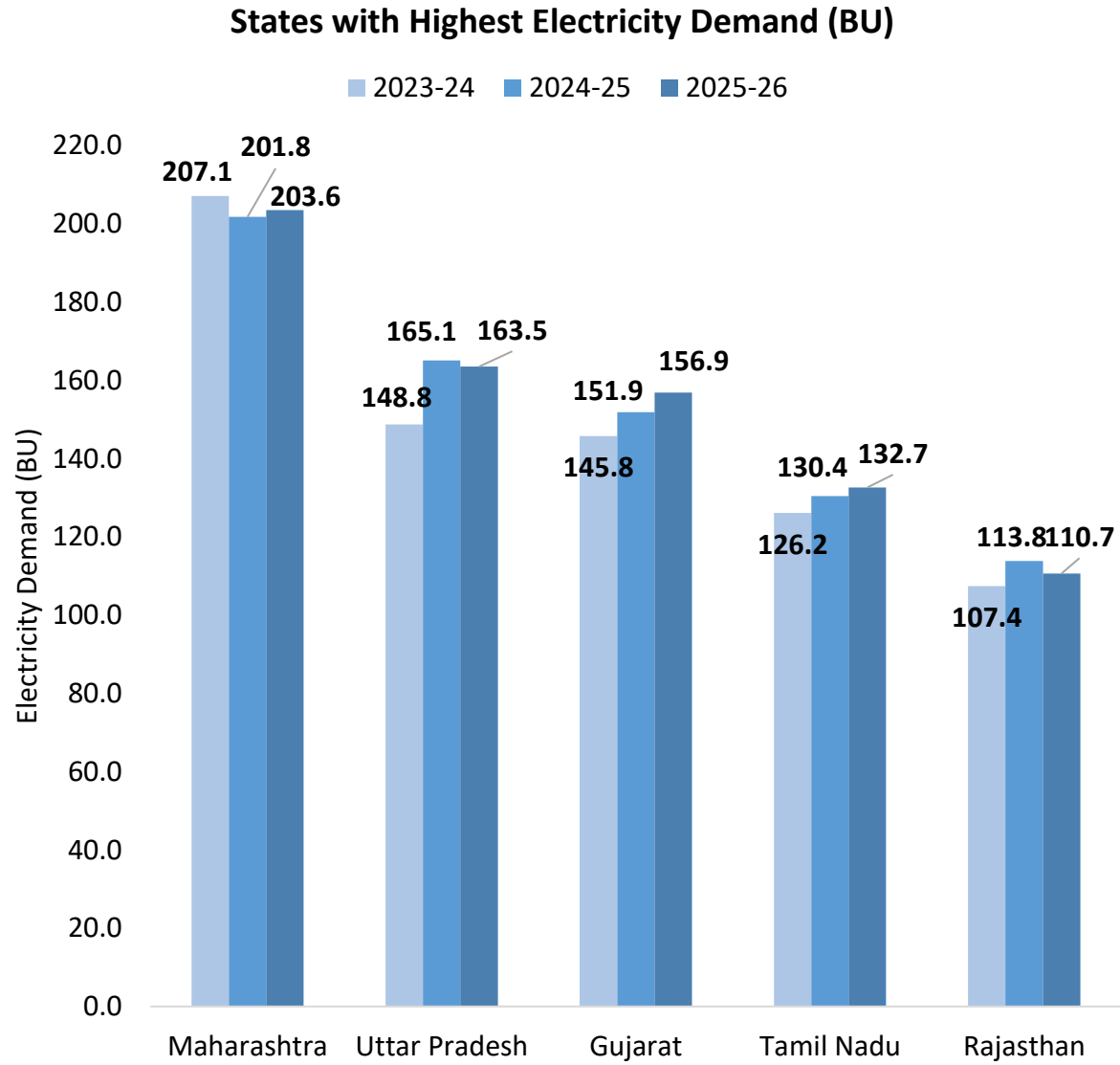
India’s Monthly Electricity Requirement and Supply



Source: CEA

Monthly Electricity Demand of the Top 5 States

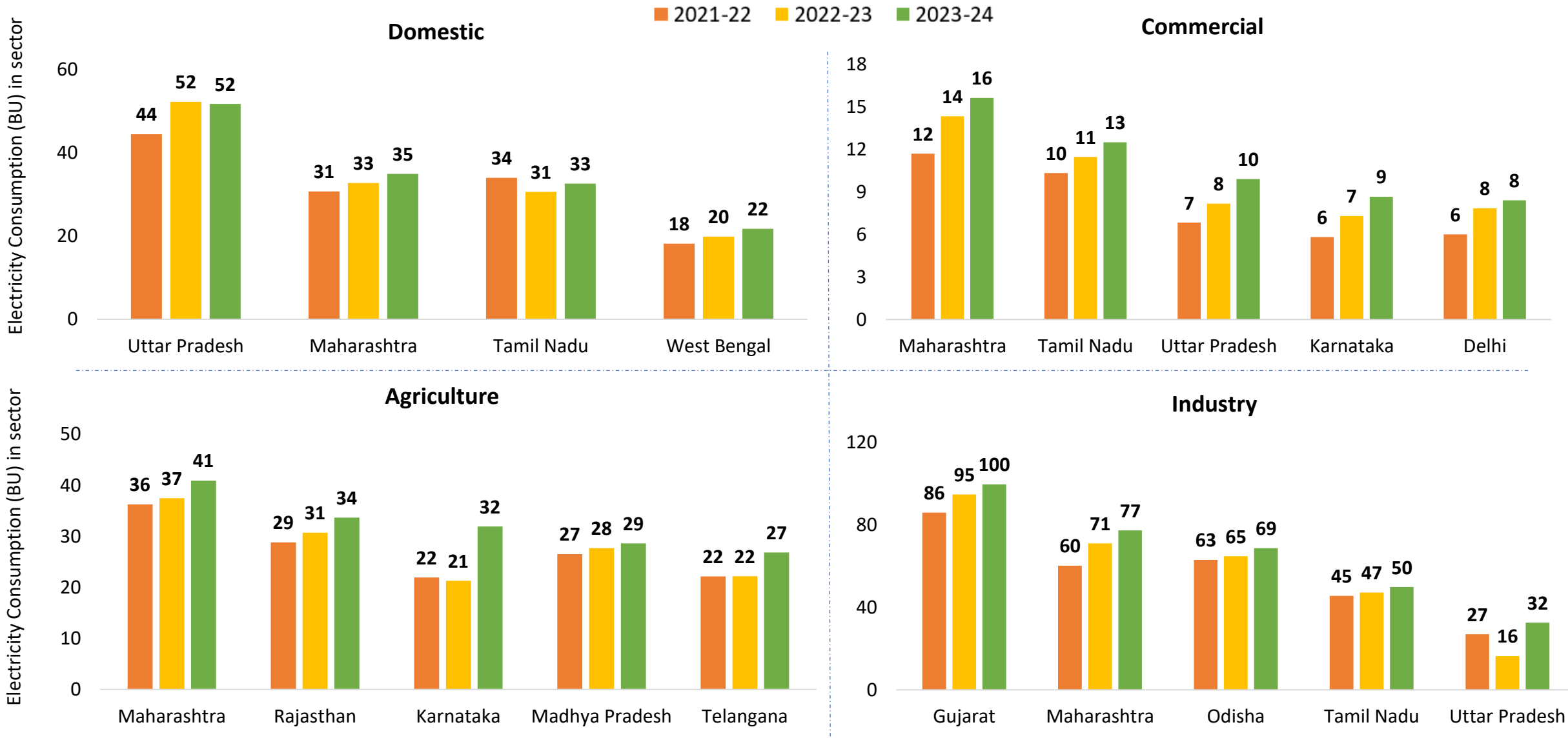




Note: The electricity demand data for Mar'26 is Provisional.

Source: CEA

Electricity Consumer-Category wise Top 5 States

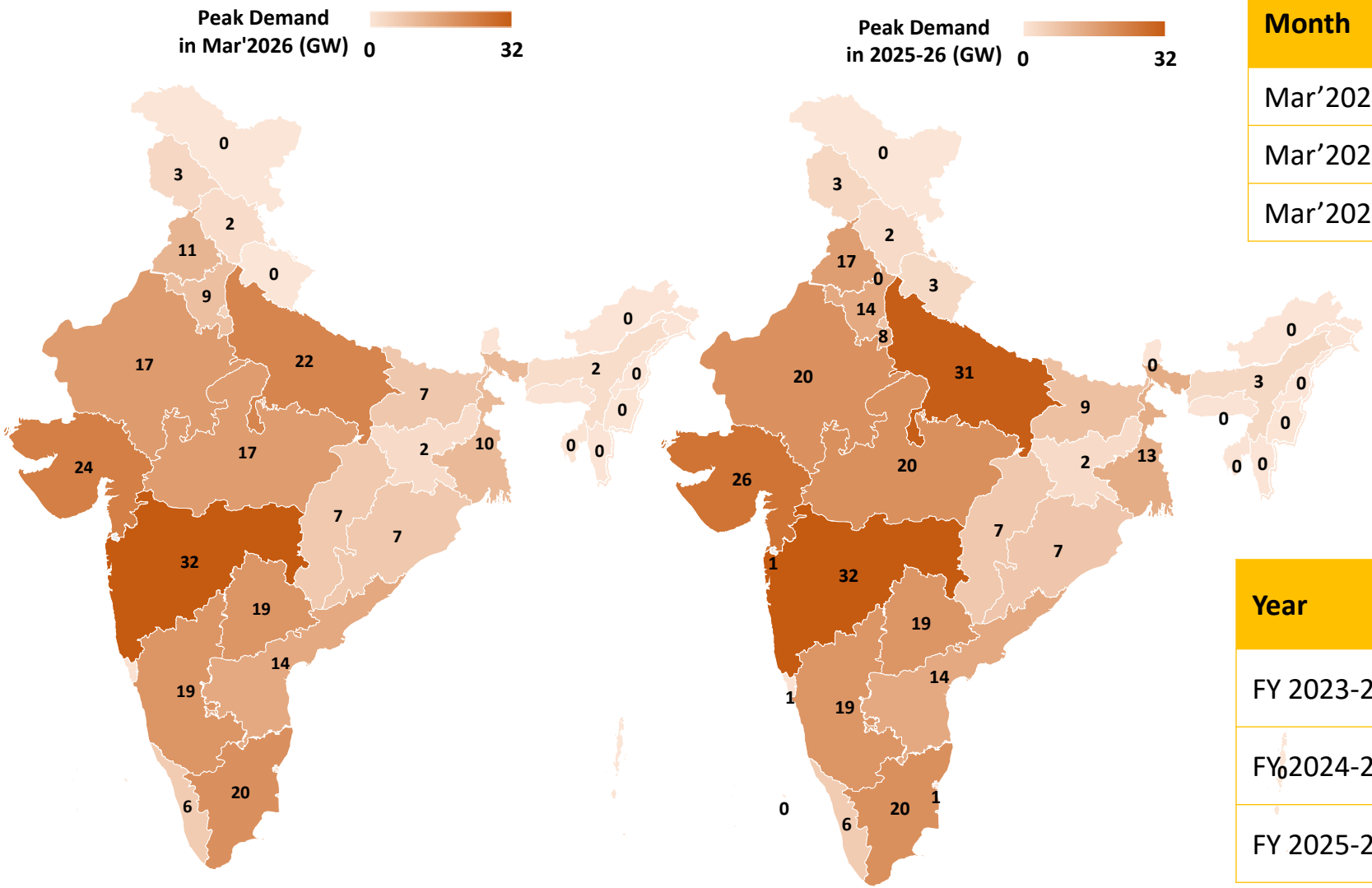


NOTE: Top 5 States under consumer-categories are selected on the basis of 2023-24

Source: CEA

National and State level Peak Electricity Demand

State-level Peak Electricity Demand (GW)



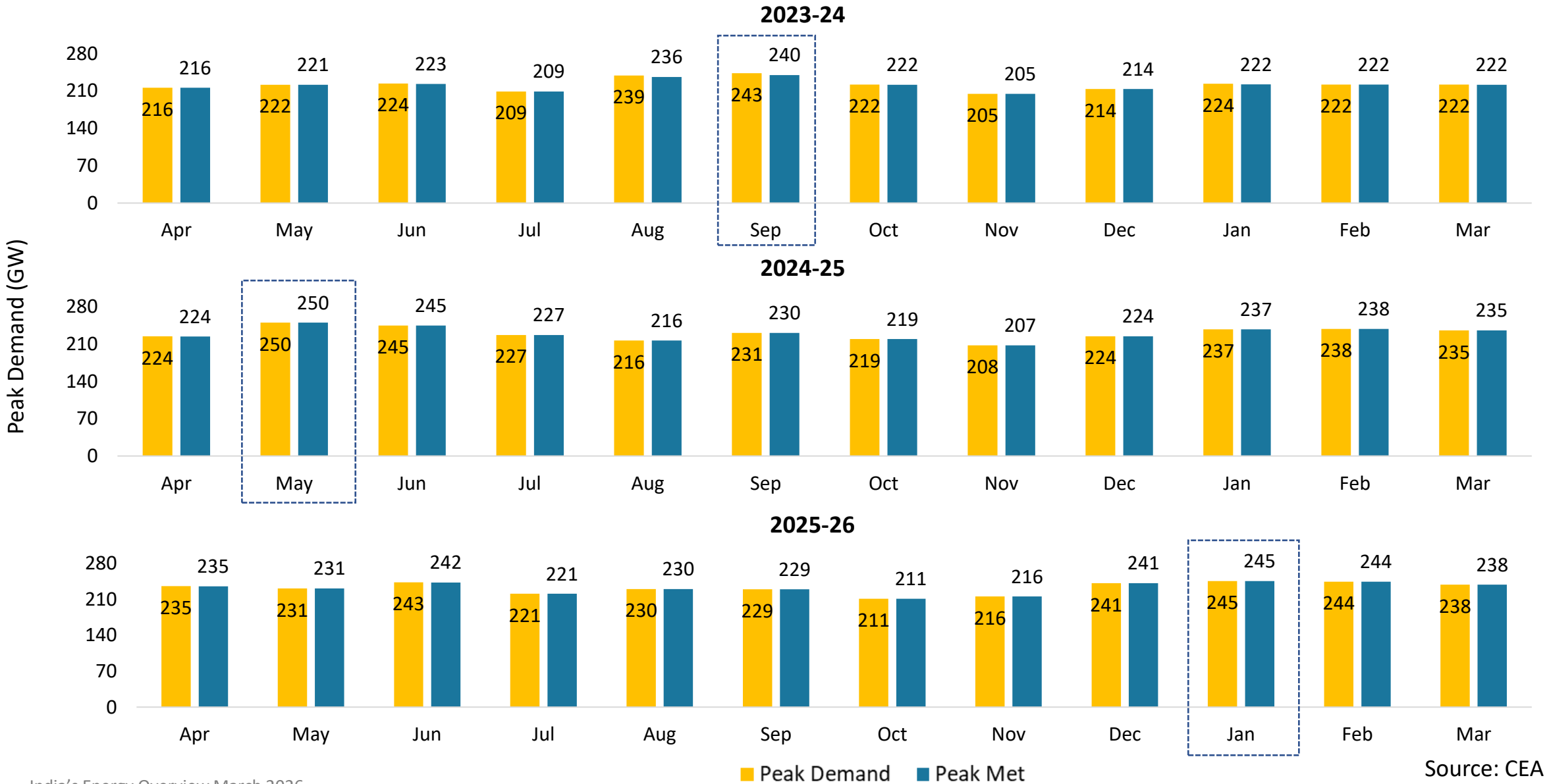
Month	Peak Demand (GW)	Peak Supply (GW)	Gap(GW) (+/-)
Mar'2024	222	222	0.1
Mar'2025	235	235	0.0
Mar'2026	238	238	0.0

Year	Peak Demand (GW)	Peak Supply (GW)	Gap (GW) (+/-)
FY 2023-24	243	240	3.3
FY 2024-25	250	250	0.0
FY 2025-26	245	245	0.0

Note: The peak electricity demand data for Mar'26 is Provisional.

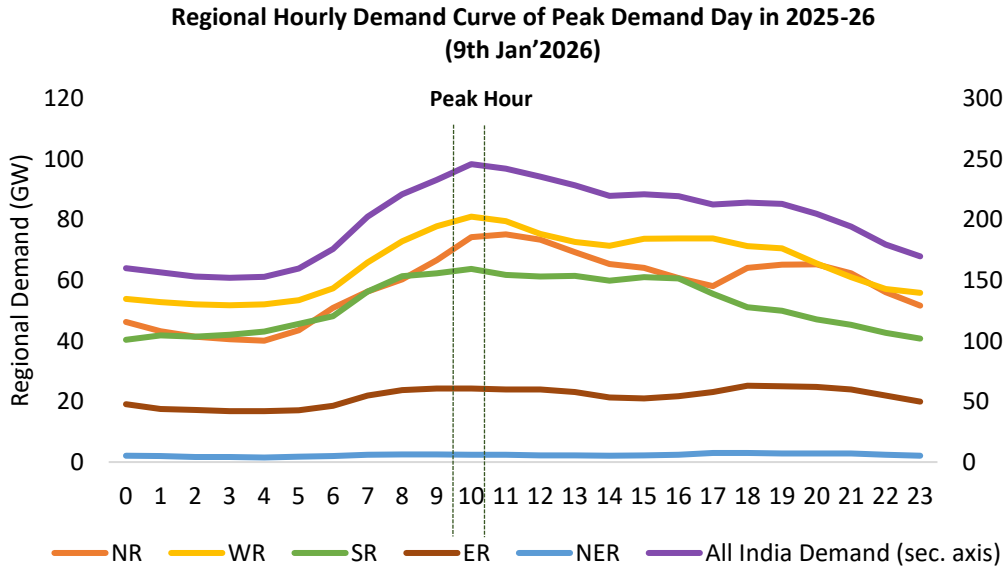
Source: CEA

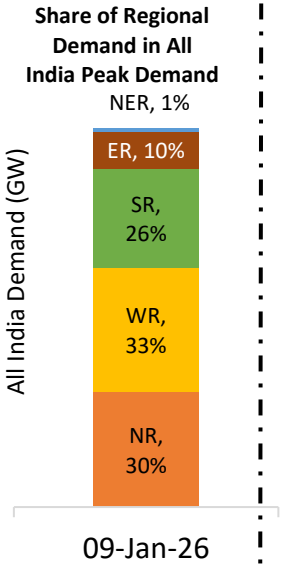
India’s Monthly Peak Electricity Demand and Supply

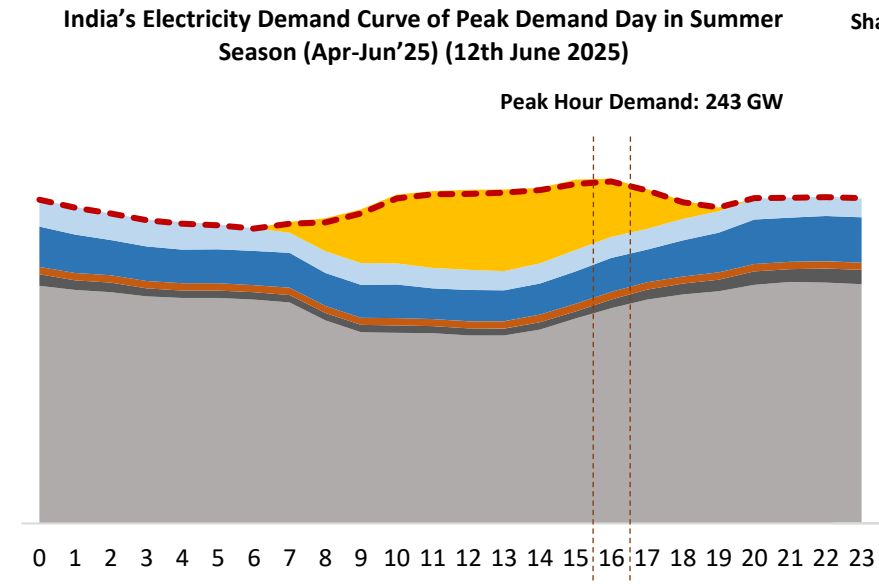


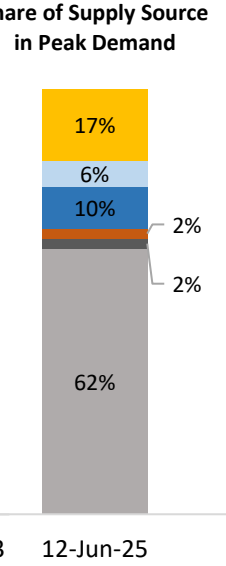
Source: CEA

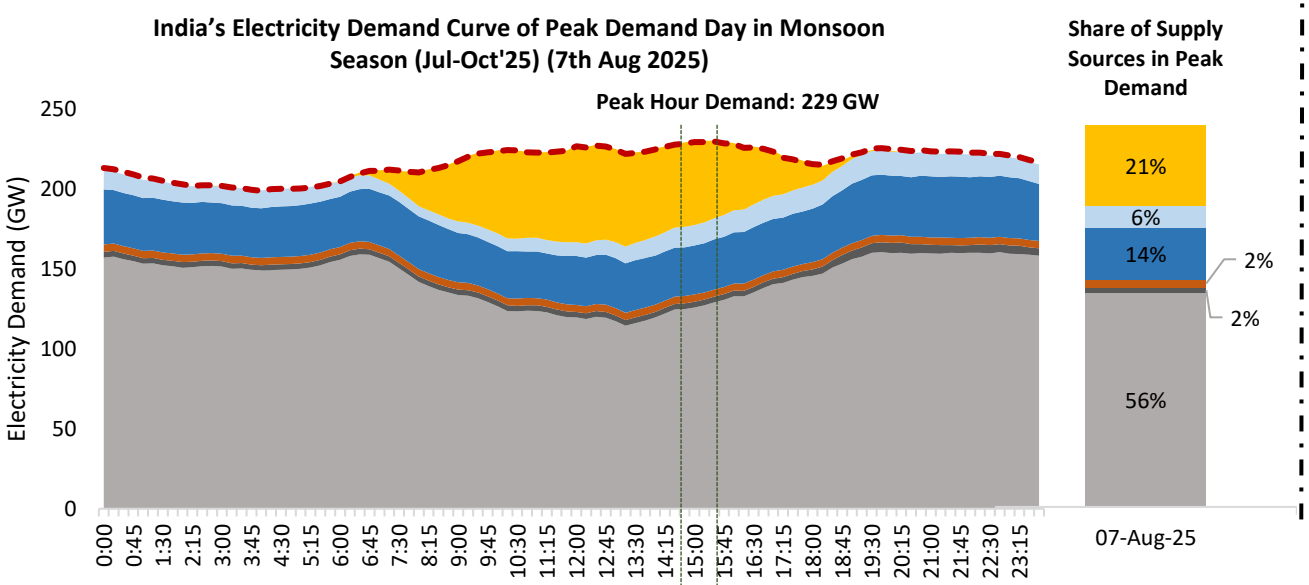
All India, Regional and Seasonal Electricity Demand Curve of Peak Demand Day

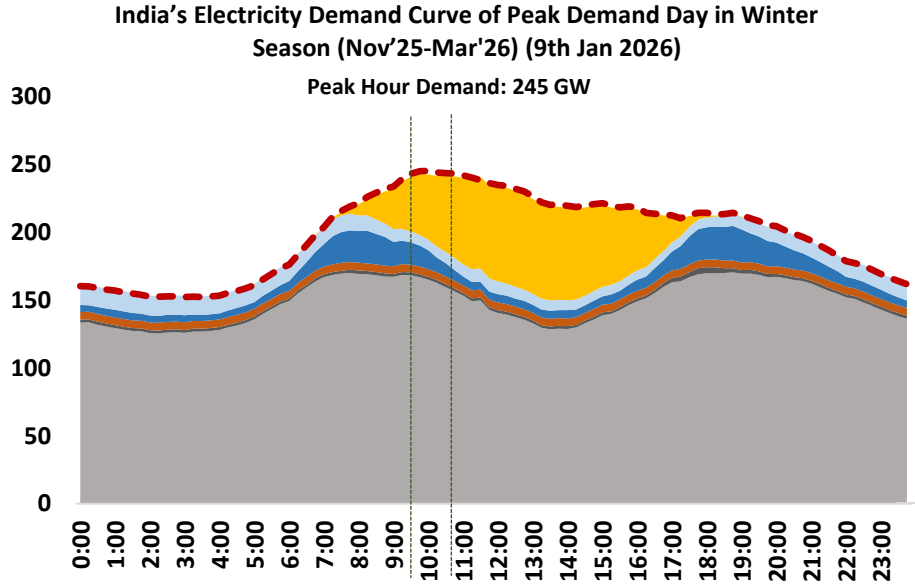


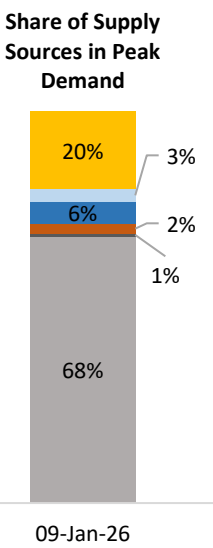








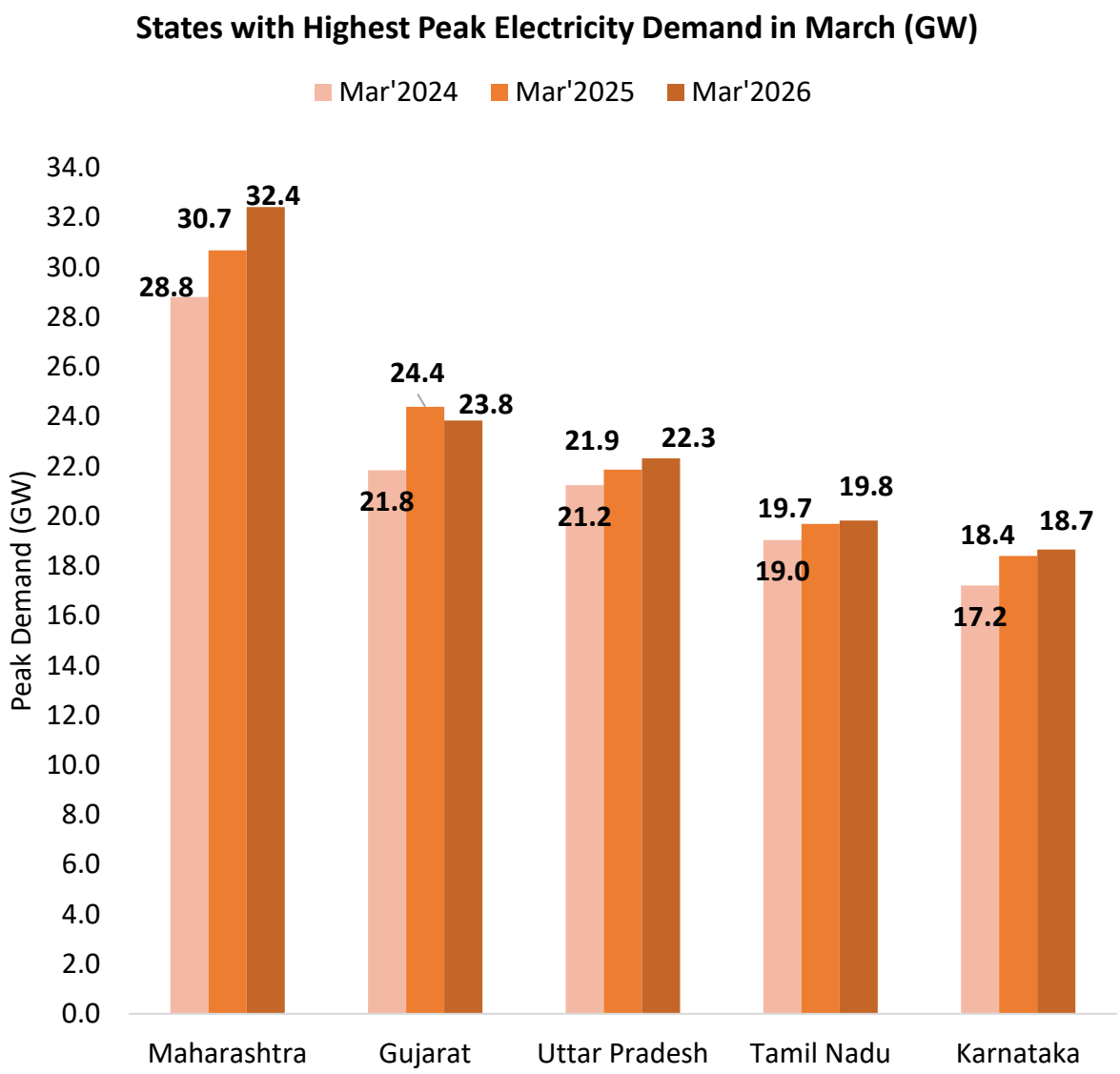


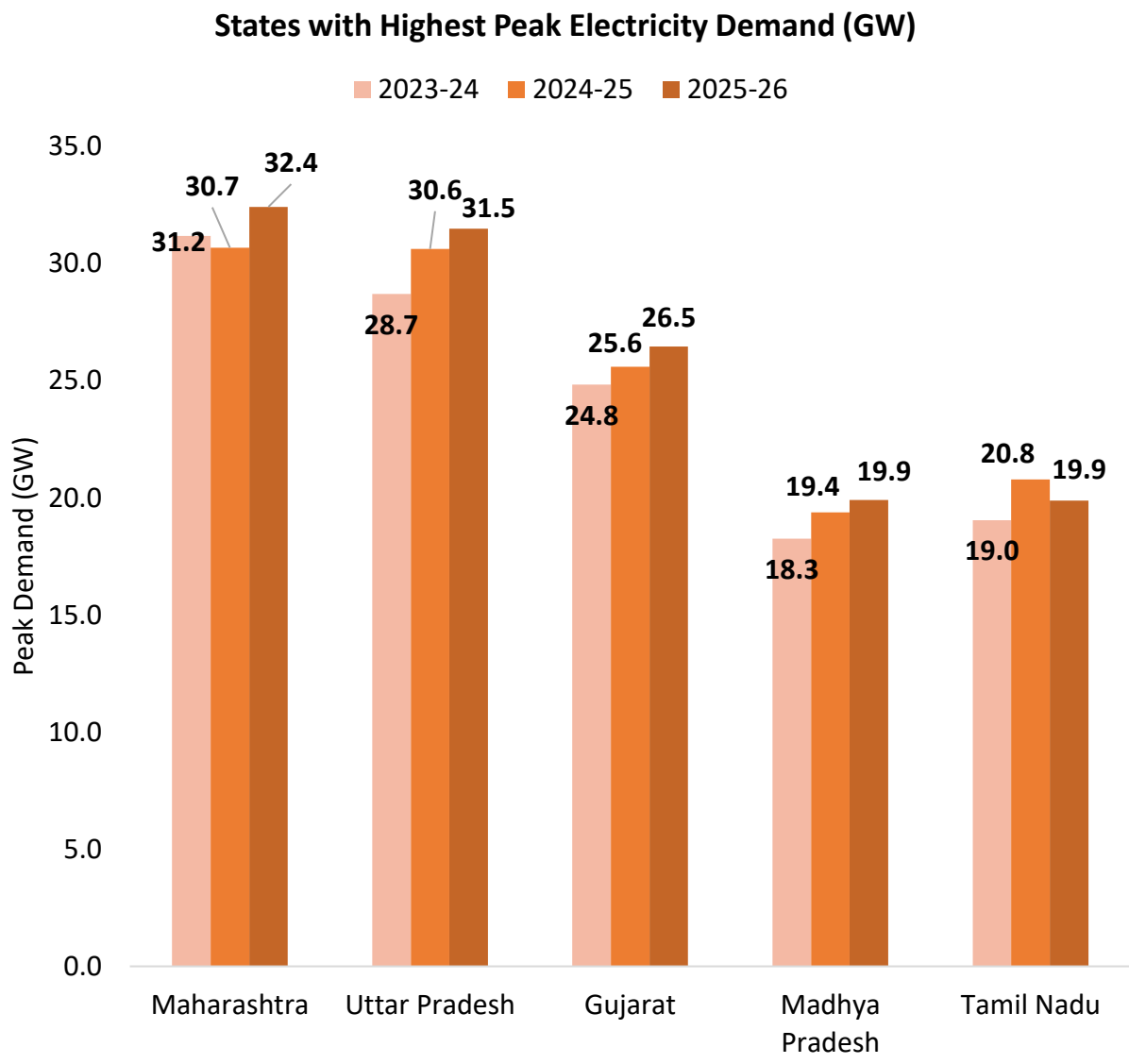


Coal Gas Nuclear Hydro Wind Solar Gross Demand

Source: Grid-India

Monthly Peak Electricity Demand of the Top 5 States

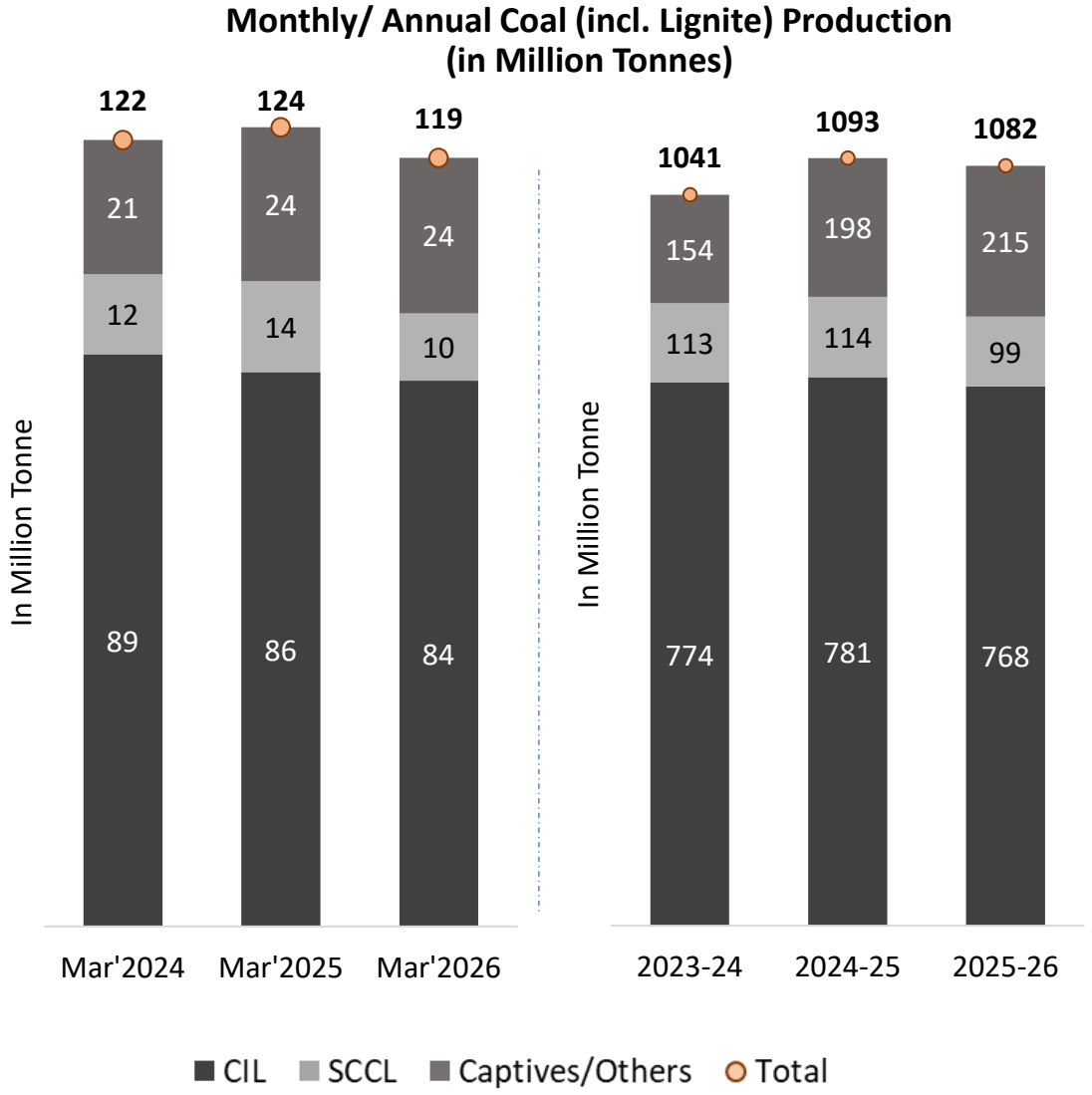




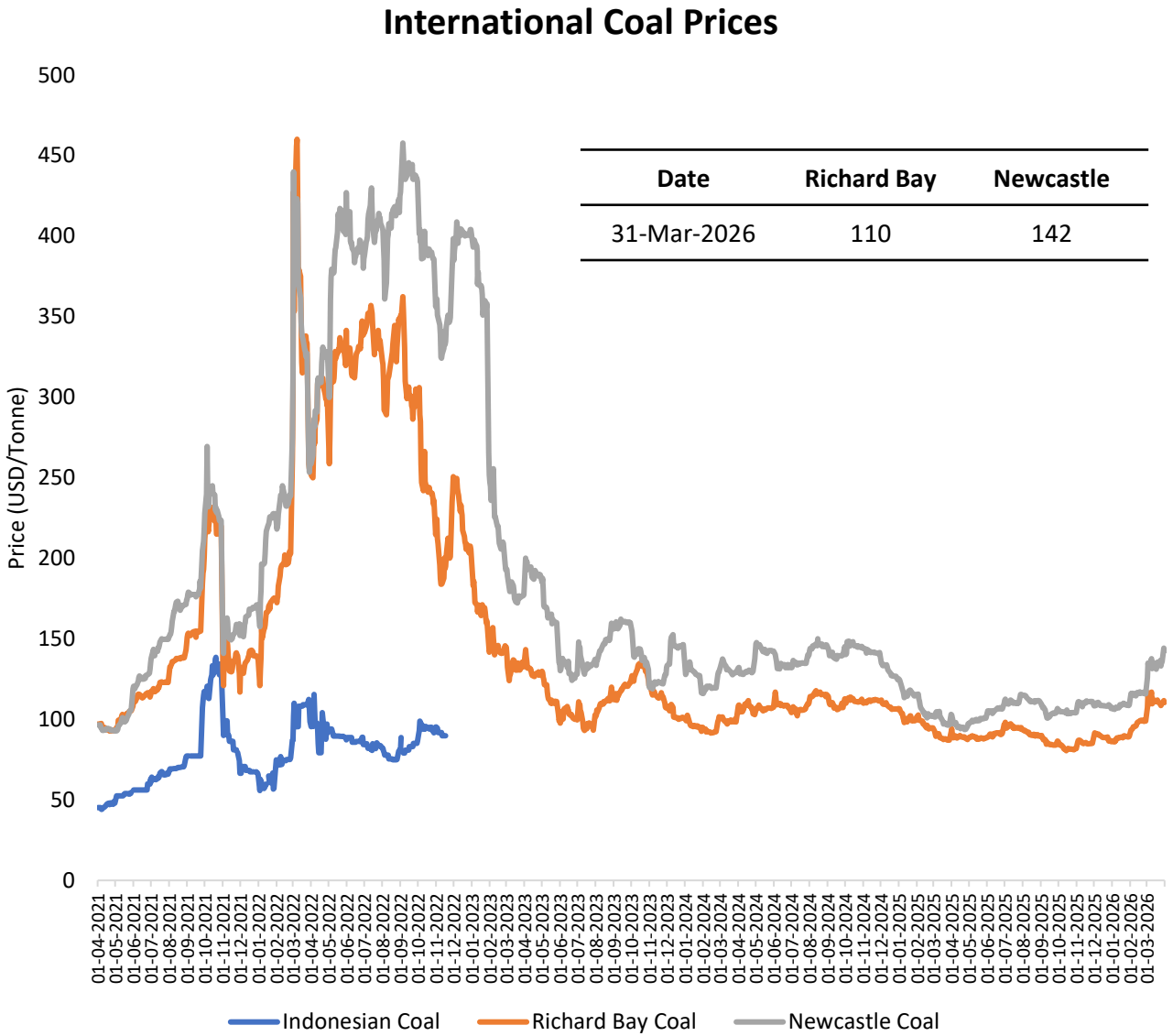
Note: The peak electricity demand data for Mar'26 is Provisional.

Source: CEA

Monthly Coal Statistics



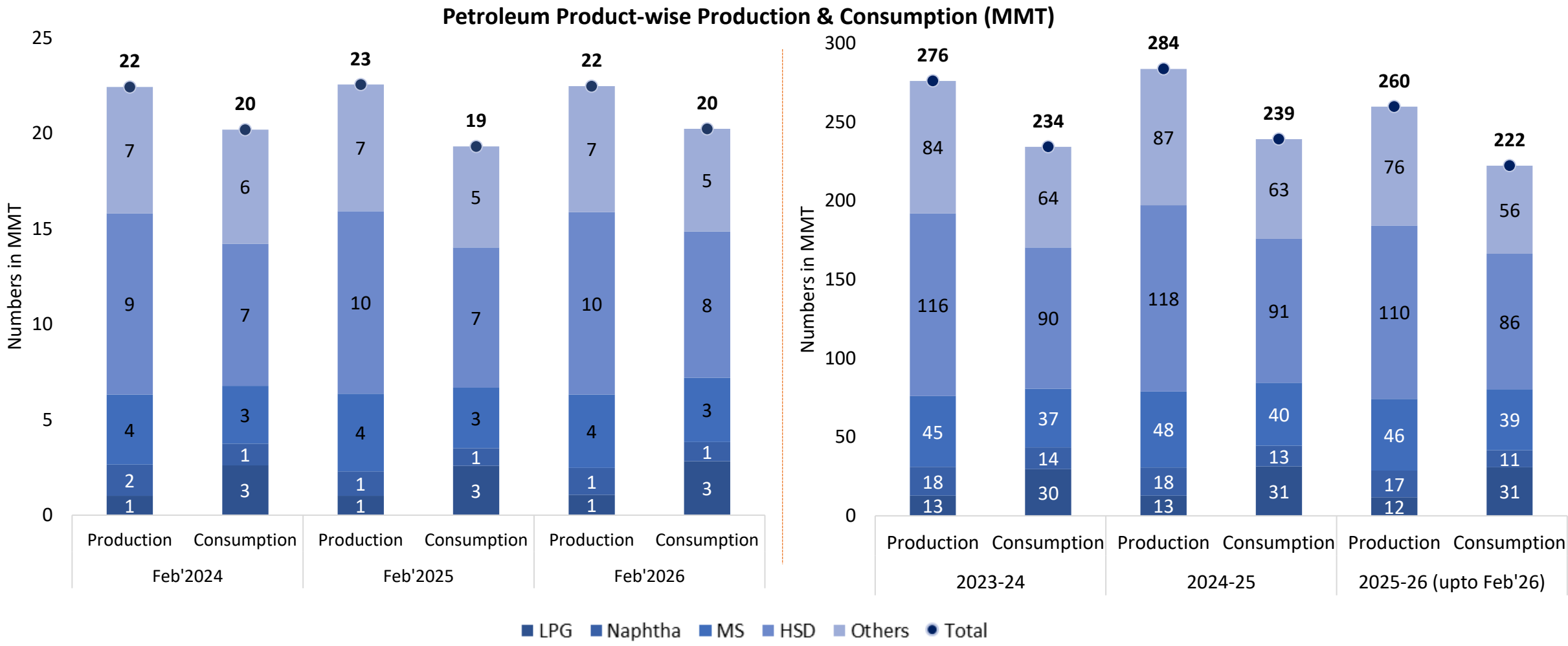
Source: Ministry of Coal



Date	Richard Bay	Newcastle
31-Mar-2026	110	142

Source: Investing.com

Oil Market Scenario (1/3)



Others include ATF, SKO, LDO, Lubes, FO, LSHS, Bitumen, pet coke, and others.

Abbreviations: ATF- Aviation Turbine Fuel, FO- Furnace Oil, HSD- High-Speed Diesel, LDO- Light Diesel Oil, MS- Motor Spirit (Petrol), SKO- Superior Kerosene Oil, LSHS- Low Sulphur Heavy Stock, LPG- Liquefied Petroleum Gas, MMT- Million Metric Tonne

NOTE: The data is available latest up to February 2026.

Source: PPAC

Oil Market Scenario (2/3)

Import/Export of Crude Oil and Petroleum Products ('000 Tonnes)							
Petroleum Products	Import/ Export	Monthly			Yearly		
		Feb'24	Feb'25	Feb'26	2023-24	2024-25	2025-26 (up to Feb'26)
Crude Oil	Import	18244	19466	19431	234262	243225	225683
	Export	0	0	0	0	0	0
	Net Import	**18244**	**19466**	**19431**	**234262**	**243225**	**225683**
LPG	Import	1750	1568	1721	18514	20667	20503
	Export	45	49	50	525	551	522
	Net Import	**1705**	**1520**	**1671**	**17989**	**20116**	**19982**
Diesel	Import	11	7	3	42	42	32
	Export	2396	2329	1705	28204	28027	25266
	Net Import	**-2385**	**-2322**	**-1701**	**-28162**	**-27985**	**-25234**
Petrol	Import	0	0	0	717	235	0
	Export	1256	1687	1387	13472	15830	15474
	Net Import	**-1256**	**-1687**	**-1387**	**-12755**	**-15596**	**-15474**
Others	Import	2766	2378	2088	29419	29960	24758
	Export	1620	1563	1217	20391	20667	15677
	Net Import	**1146**	**815**	**872**	**9029**	**9293**	**9082**

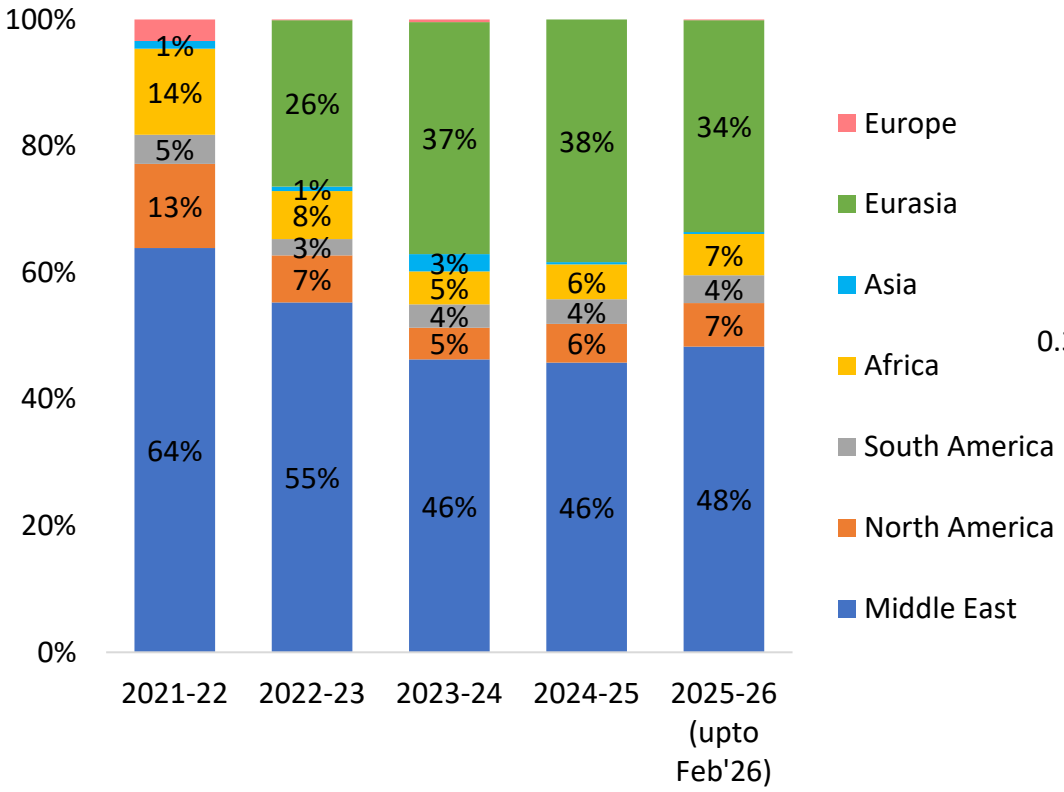
*Others include ATF, Naphtha, SKO, LDO, Lubes, FO, LSHS, Bitumen, pet coke, and others.

NOTE: The data is available latest up to February 2026.

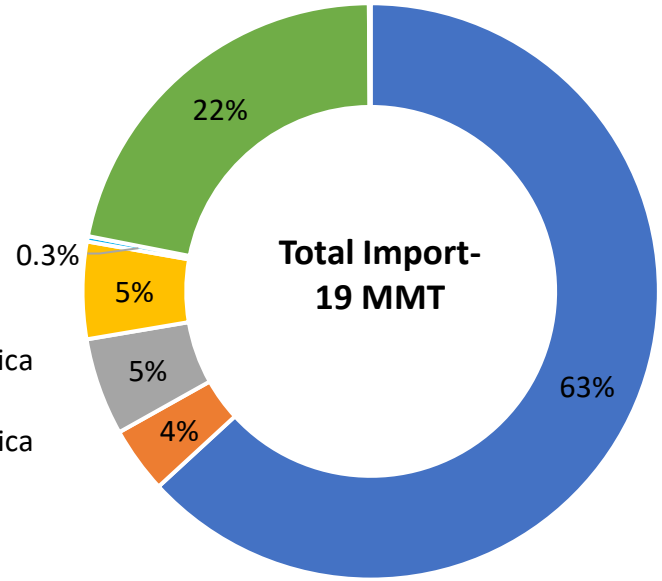
Source: PPAC

Oil Market Scenario (3/3)

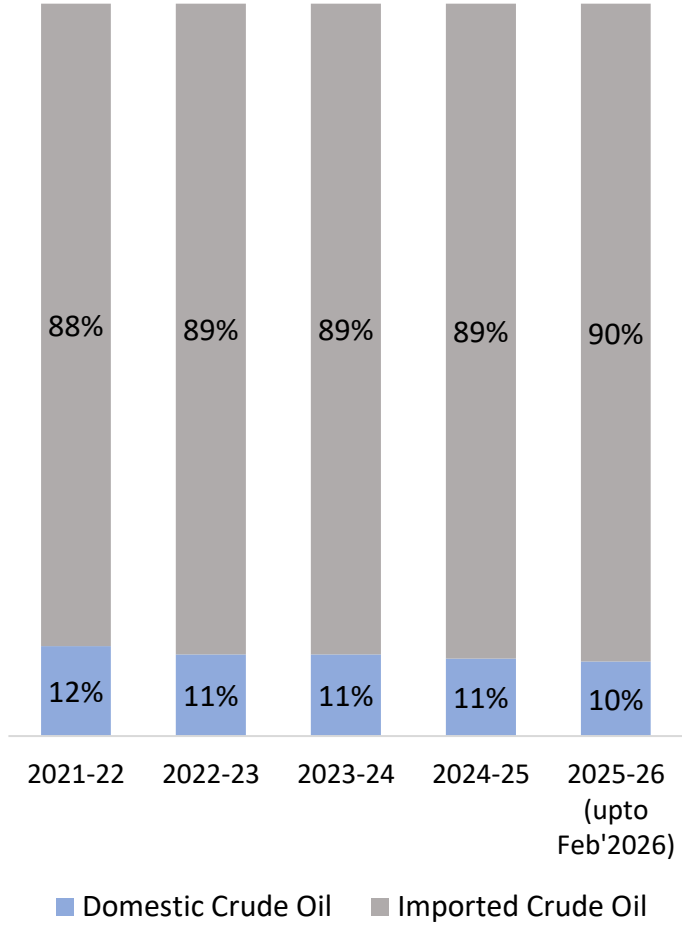
Region-wise Share in Import of Crude Oil (%)



Regional share of Imported Crude Oil in February 2026



Domestic and Imported Crude Oil share in India (%)

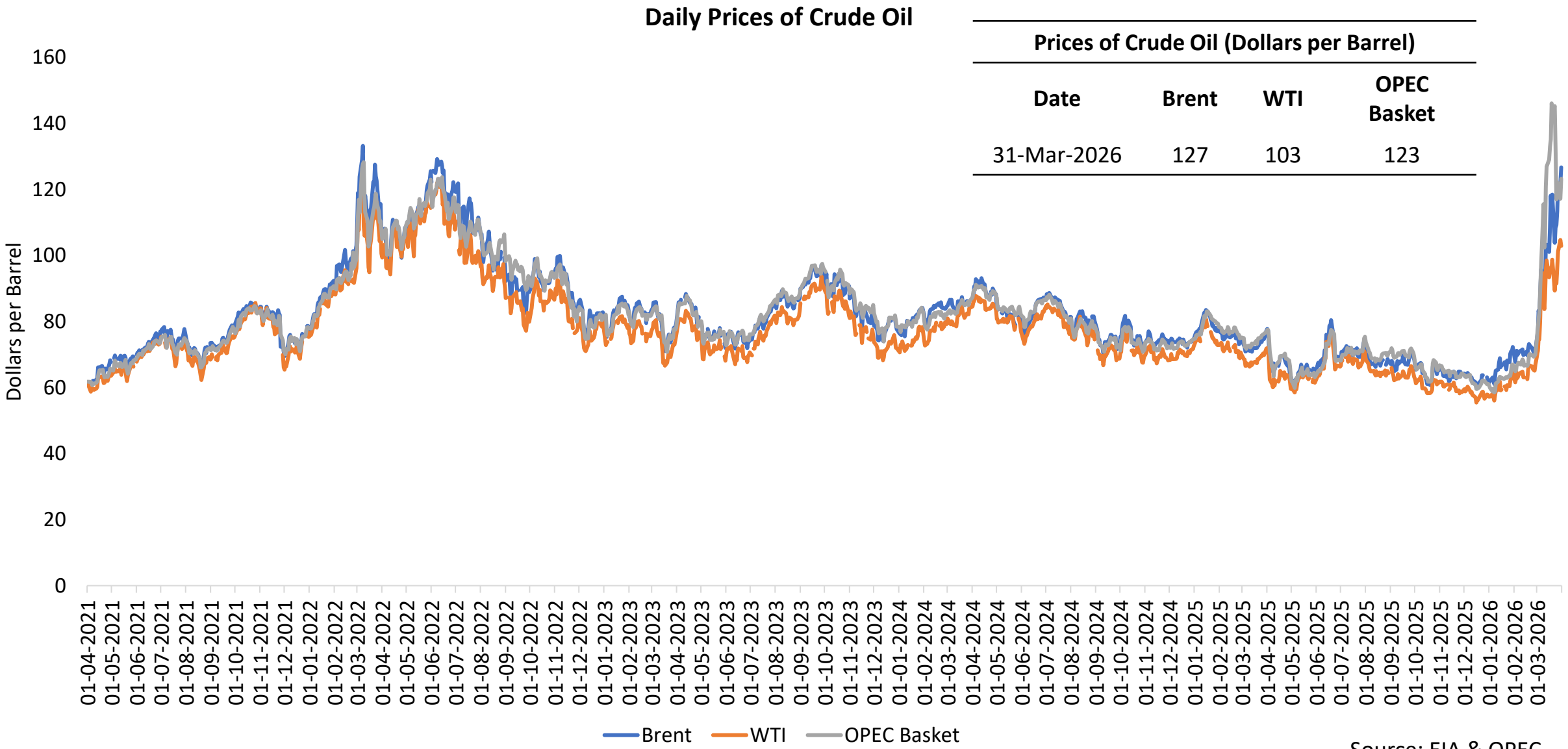


Total Import of Crude Oil (MMT)			
Total Import	2023-24	2024-25	2025-26 (up to Feb'26)
Crude Oil	**234**	**243**	**226**

NOTE: The data is based on the latest available information.

Source: MoPNG and PPAC

Daily Prices of Crude Oil

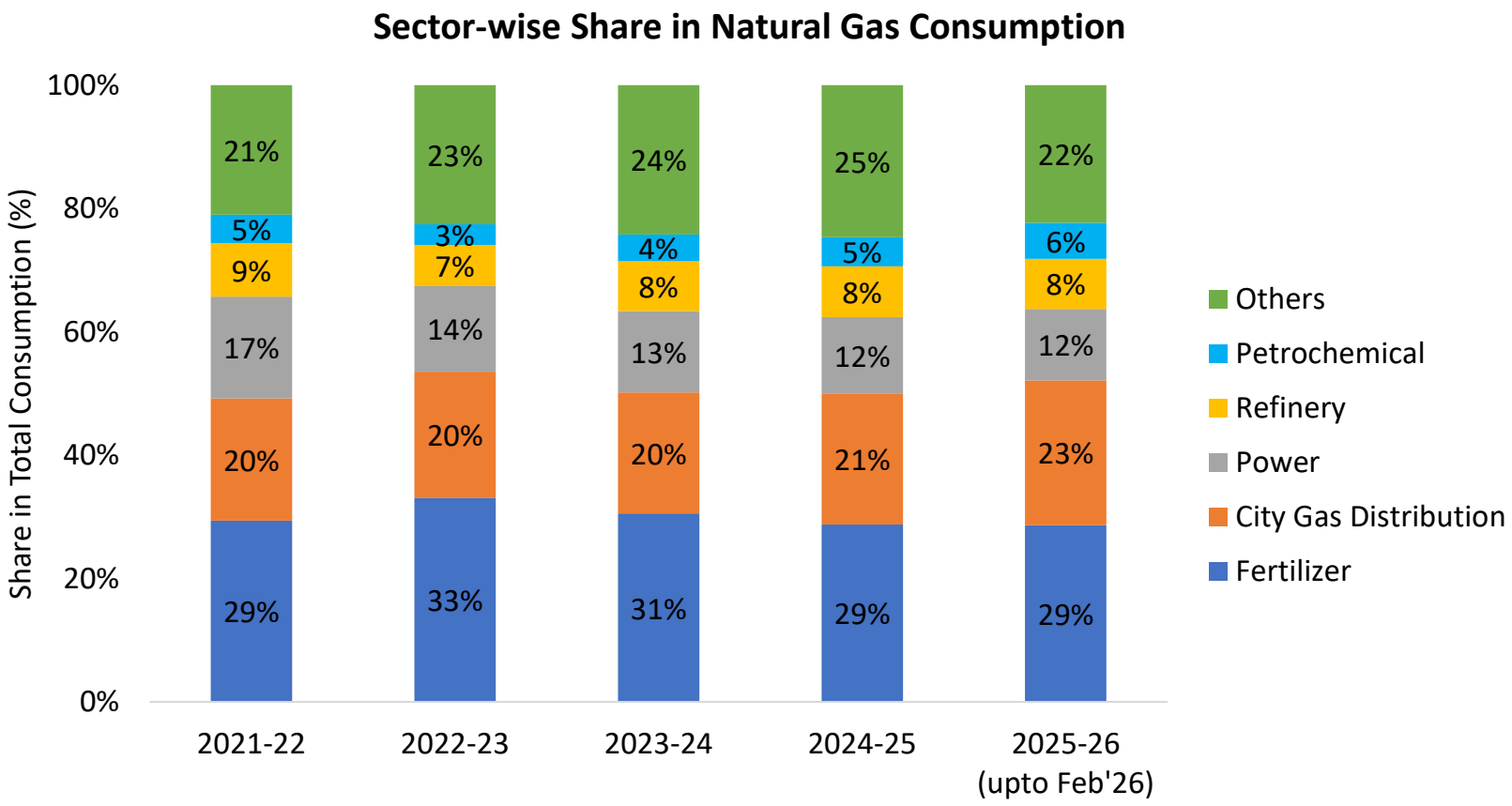


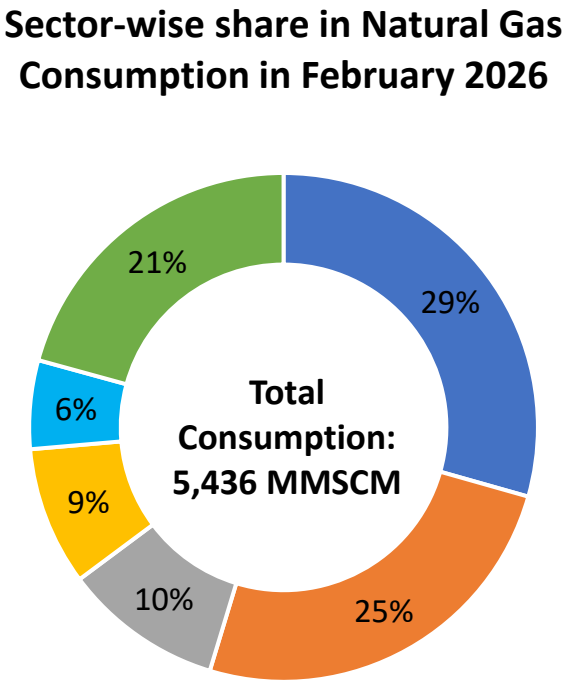
Prices of Crude Oil (Dollars per Barrel)

Date	Brent	WTI	OPEC Basket
31-Mar-2026	127	103	123

Source: EIA & OPEC

Gas Market Scenario (1/2)





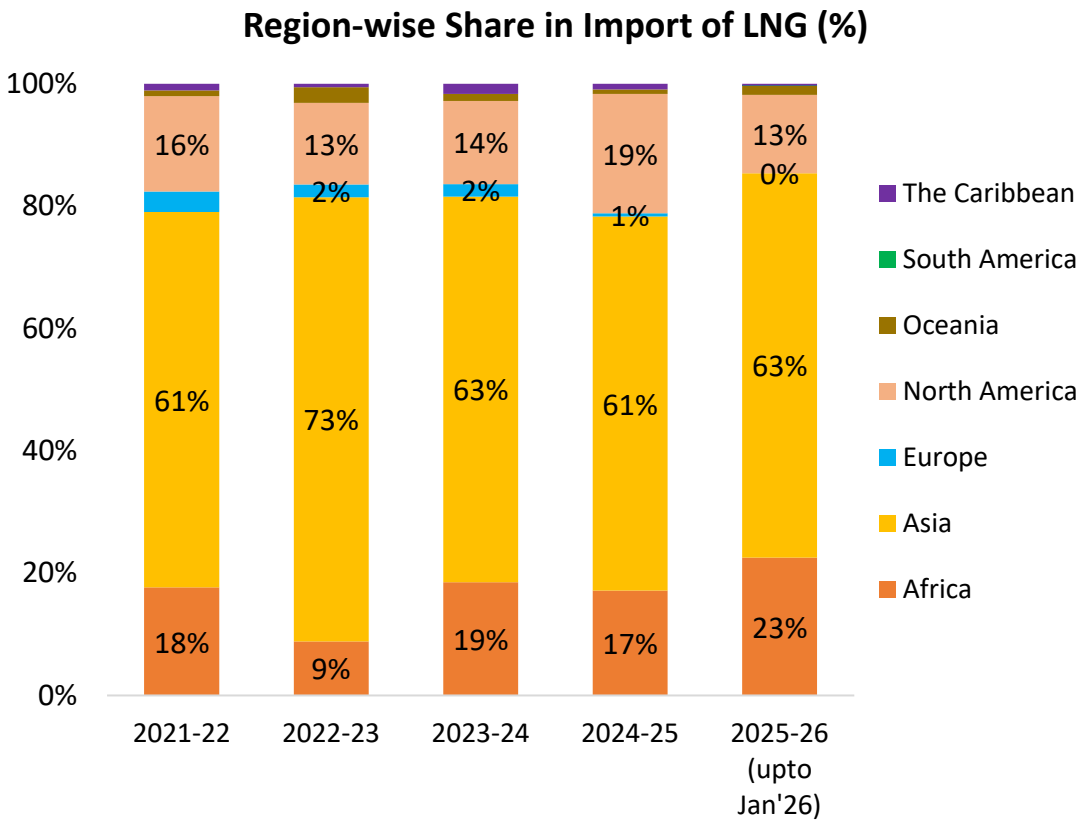
Total Consumption of Natural Gas (NG) (MMSCM)					
Total Consumption	2021-22	2022-23	2023-24	2024-25	2025-26 (up to Feb'26)
Natural Gas	**61,491**	**58,702**	**68,809**	**71,196**	**64,238**

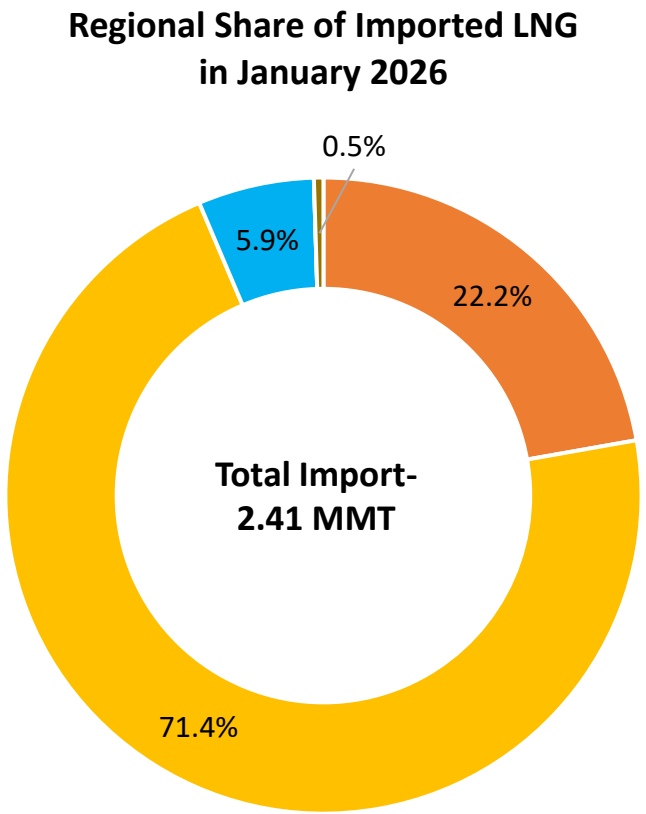
Others include- Internal Consumption of Pipeline System, Industrial, Sponge iron/steel, LPG shrinkage, Manufacturing, Agriculture (tea plantation), Others

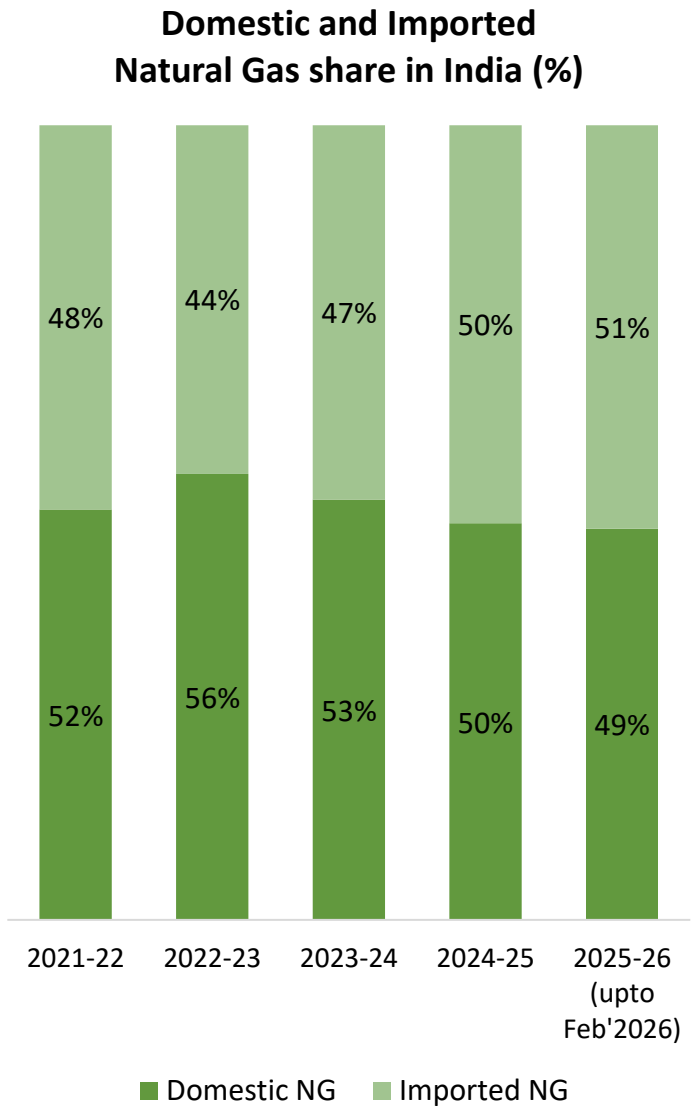
NOTE: The data is available latest up to February 2026

Source: PPAC

Gas Market Scenario (2/2)







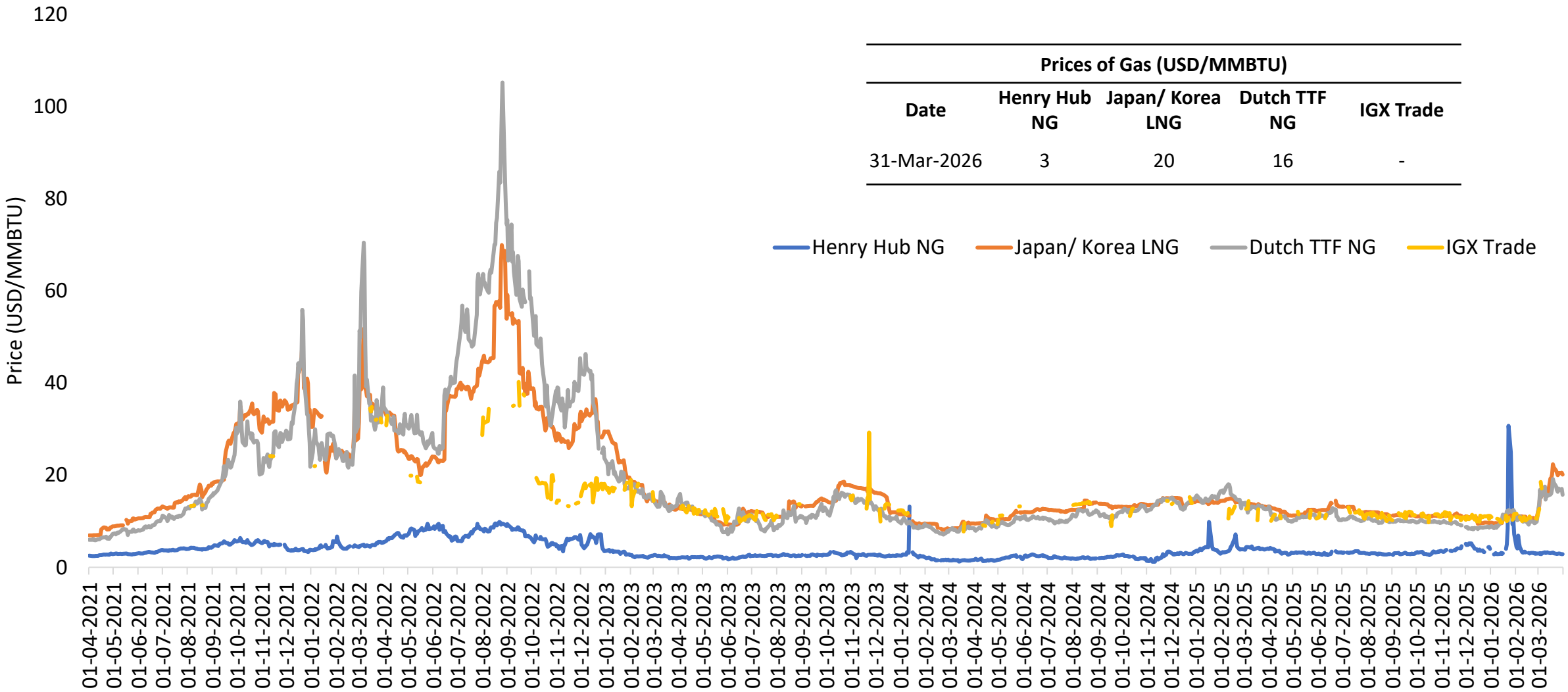
Total Import of Liquified Natural Gas (LNG) (MMT)			
Total Import	2023-24	2024-25	2025-26 (up to Feb'26)
LNG	**24.00**	**26.96**	**24.49**

NOTE: The data is based on the latest available information.

Source: MoCI and PPAC

Daily Prices of Gas

Gas Daily Market Price



Prices of Gas (USD/MMBTU)

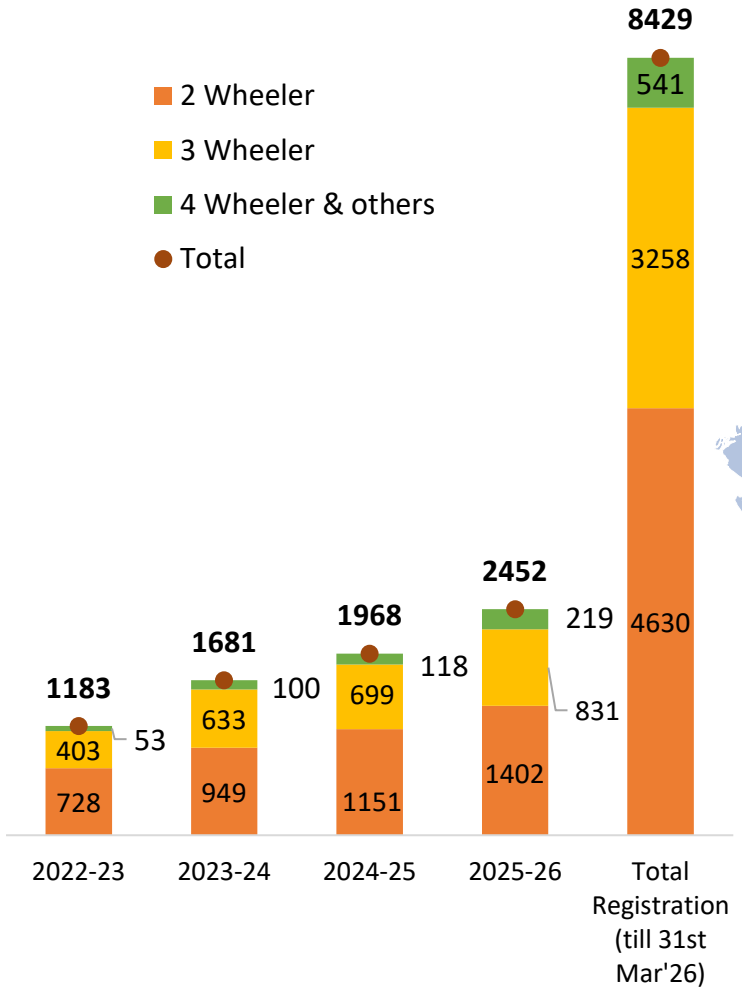
Date	Henry Hub NG	Japan/ Korea LNG	Dutch TTF NG	IGX Trade
31-Mar-2026	3	20	16	-

MMBTU- Million Metric British Thermal Unit

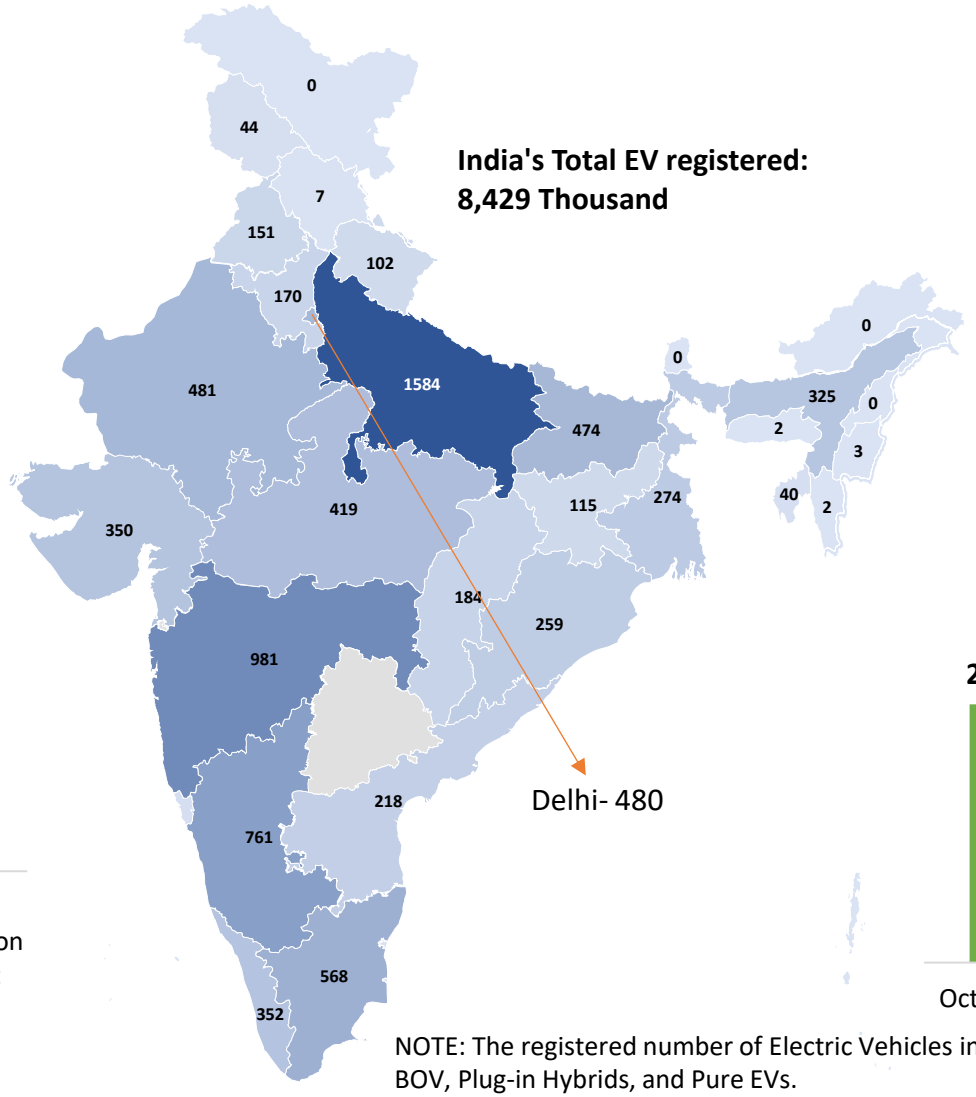
Source: EIA, Investing.com, IGX

Status of Electric Mobility in India (1/2)

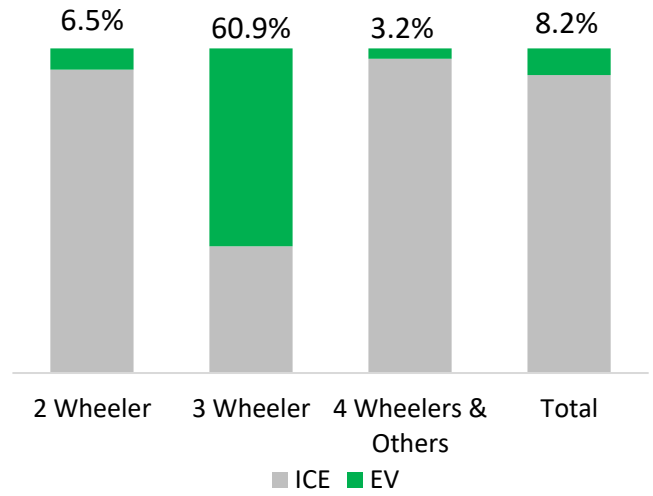
National EV registration (Number in Thousands)



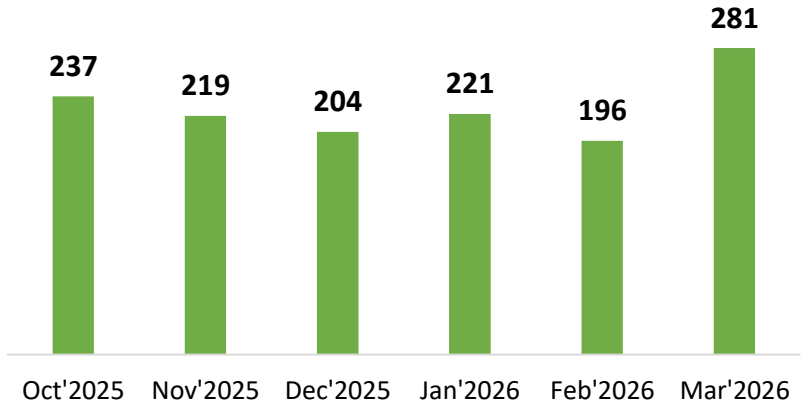
Cumulative State-wise EV registration as on 31st March 2026 (in Thousands)



EV and ICE sale composition in 2025-26



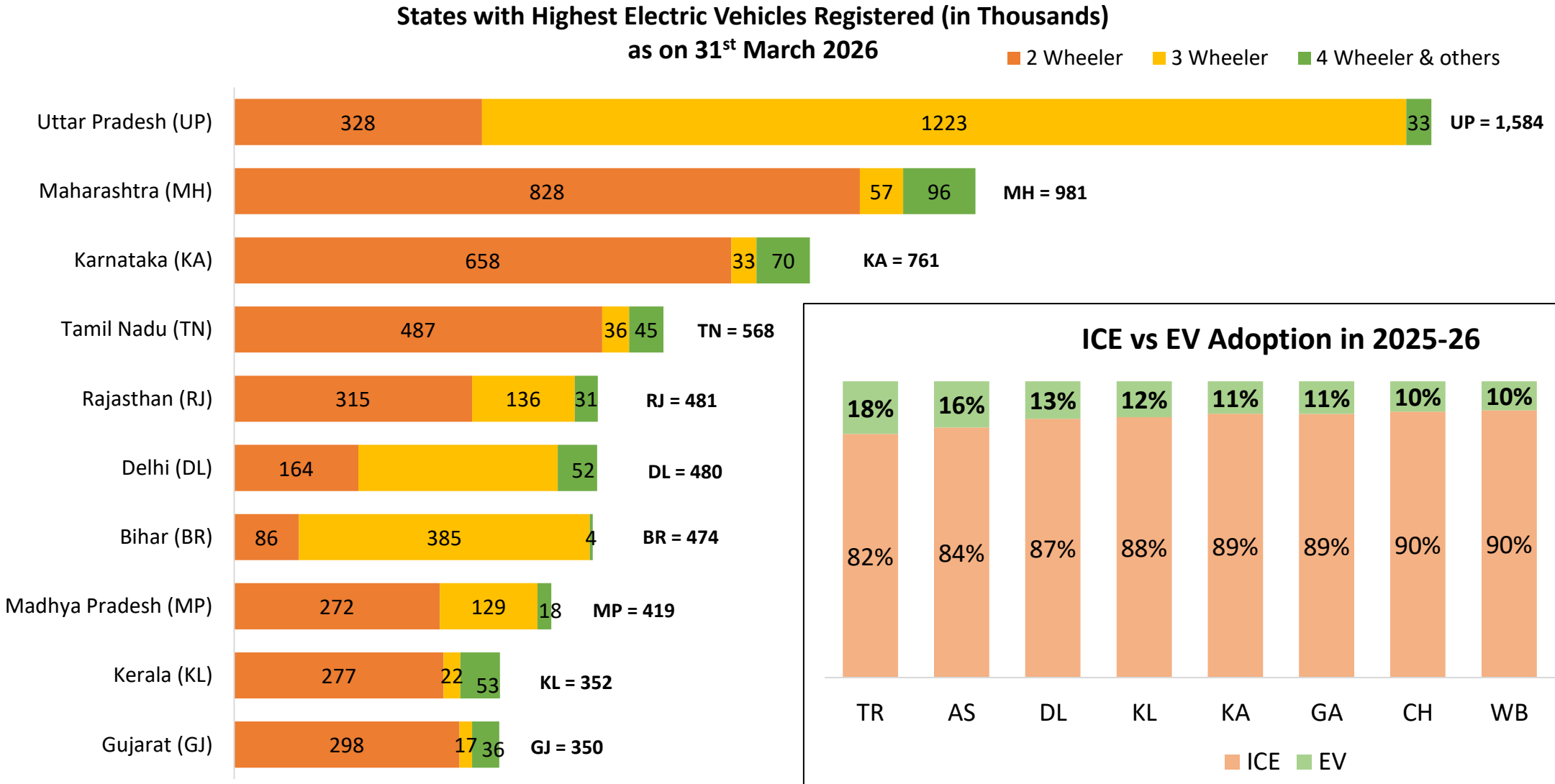
Provisional Monthly EV registered (in Thousands)

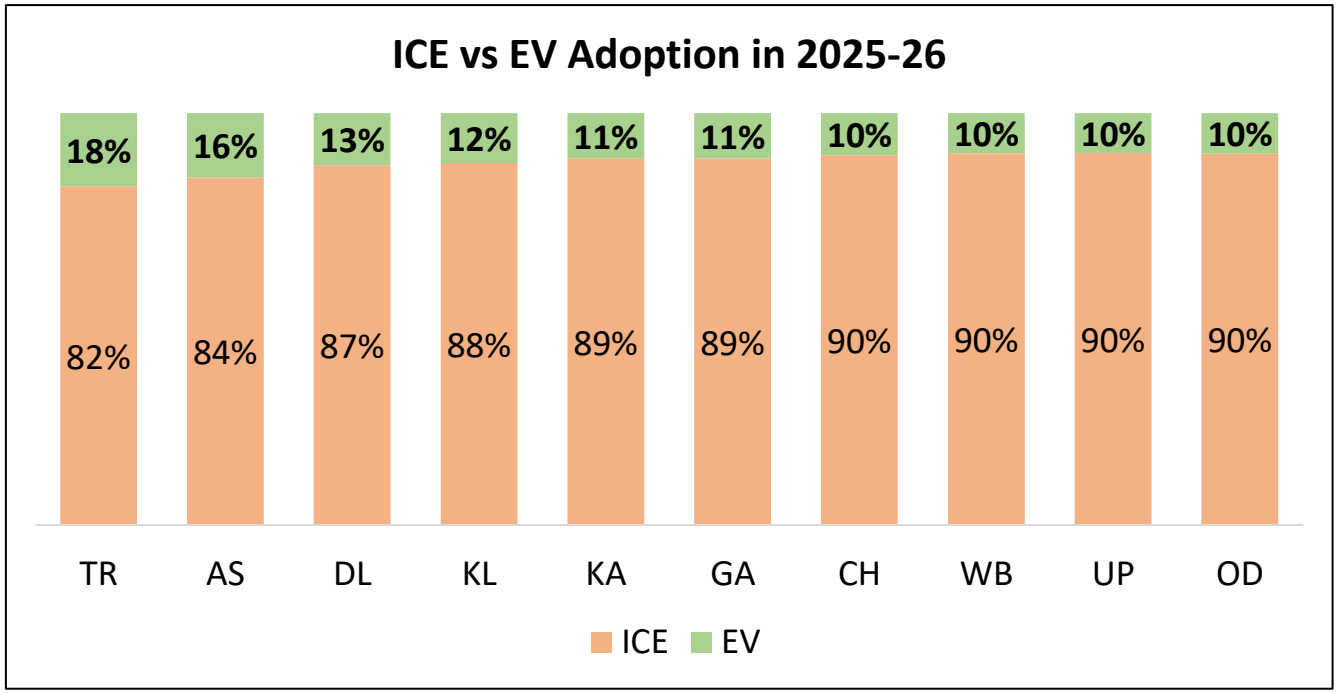


NOTE: The registered number of Electric Vehicles includes Electric BOV, Plug-in Hybrids, and Pure EVs.

Source: VAHAN Dashboard

Status of Electric Mobility in India (2/2)





NOTE: AS- Assam, CH- Chandigarh, GA- Goa, OD- Odisha, TR- Tripura, WB- West Bengal

Source: VAHAN Dashboard

Recent Interventions to promote Renewable Energy

Solar

Under the PLI scheme, the GOI has announced INR 19,500 crores to incentivize the manufacturing of domestic solar PV modules.

PM-Surya Ghar: Muft Bijli Yojana relaesed with a total outlay of Rs. 75,021 crore for installing rooftop solar (RTS) for one crore households. The scheme provides a CFA of Rs 30,000 for a 1 kW RTS system, Rs 60,000 for a 2kW RTS system, and Rs 78,000 for a 3kW RTS system.

The inter-state transmission charges are waived for 25 years for the projects being commissioned before 30th June 2025.

The updated RPO compliance supports solar integration of up to 33.57% of the electricity purchased by DISCOMs/states till the year 2029-30.

PM KUSUM scheme has been extended till Mar'26 to install pump sets up to 15 HP in selected areas.

Wind

Reverse auctions have been scrapped for wind projects. A traditional two-part (technical and financial) bid system has been put in place.

To support off-shore wind, SECI will invite bids for up to 4GW to set up offshore wind plants off the coast of Tamil Nadu and Gujarat.

The ISTS charges are waived for 25 years for the onshore projects being commissioned before 30th June 2025 and for off-shore projects on or before 31st December 2032.

The updated RPO compliance supports WIND integration of up to 6.94% of the electricity purchased by DISCOMs/states till the year 2029-30.

The National Repowering & Life Extension Policy for Wind Power Projects- 2023, for wind power projects is released for the optimum utilization of wind energy resources by maximizing energy (kWh) yield per sq. km of the wind project areas.

The GoI has decided to invite bids for 50 GW of RE annually, which includes up to 10 GW of wind capacity.

Energy Storage

Ministry of Power has released the guidelines for the development of PSP with the target of 26.7 GW of PSP and 47.2 GW of BESS to integrate with RE capacity till 2032.

PLI scheme unveiled for setting up 50 GWh ACC battery storage with an outlay of ₹18,100 crores.

Under the Waste Management Rules 2022, the disposal of waste batteries in landfills and incineration is prohibited and the recycling of waste batteries is made mandatory.

CERC, under RRAS regulation, has allowed the use of energy storage in secondary and tertiary ancillary support.

CERC has issued a draft second amendment to the Tariff Regulations,2024, proposing a dedicated tariff framework for integrated energy storage systems (ESS) paired with coal, lignite, or gas-based plants and ISTS.

The Energy Storage Obligation of DISCOMs is pegged at 4.0% up to 2029-30.

In India, approximately 10.62 GW of solar capacity coupled with 12.52 GWh of BESS has been tendered as of April 2025.

Green Hydrogen (H_2)

National Green Hydrogen Mission (NGHM) aims to meet the target of 5 million metric tonnes of green hydrogen production by 2030. The initial outlay for the Mission will be INR 19,744 crores. NGHM portal to track the recent initiatives and developments.

India's first Green Hydrogen Hub to be build in Andhra Pradesh by NTPC at an estimated cost of ₹1.85 Lakh Crore with a capacity of producing 1500 TPD Green Hydrogen and 7500 TPD Green Hydrogen derivative

MNRE has sanctioned pilot projects on Hydrogen Fuelled Buses and Trucks consisting total of 37 vehicles and 9 hydrogen refueling stations.

MNRE has sanctioned 3 pilot projects in steel sector for use of green Hydrogen in steel production to be commissioned in next 3 years with total financial outlay of ₹347 Crore from GoI.

Indian Railways to run 35 Hydrogen trains under "Hydrogen for Heritage" at an estimated cost of ₹ 80 crores per train and ground infrastructure of ₹ 70 crores per route on various heritage/hill routes.

Recent Key Highlights or Announcements (1/2)

- The Union Cabinet, chaired by Narendra Modi, has approved the Small Hydro Power (SHP) Development Scheme for the period 2026-27 to 2030-31, with an outlay of ₹2,584.6 crore to add around 1,500 MW capacity. The scheme provides higher financial support for North Eastern and border areas, promoting development in remote regions. It is expected to mobilize ~₹15,000 crore investment while strengthening domestic manufacturing. The initiative emphasizes decentralized renewable energy, helping reduce transmission losses and improve rural energy access. It also supports DPR preparation for ~200 projects to create a future pipeline, and is likely to generate 51 lakh person-days of employment, contributing to sustainable socio-economic development.

- India exchanged Green Ammonia agreements under the National Green Hydrogen Mission, a key step toward energy security, as noted by Pralhad Joshi. The 10-year contracts ensure demand certainty and drive investments, with ~7.24 lakh tonnes per annum allocated to fertilizer units to support decarbonization. The initiative reduces import dependence, saving ~$2.5 billion over a decade, while competitive pricing boosts domestic viability. Overall, it strengthens Aatmanirbhar Bharat and creates opportunities in clean energy and jobs.

- The Delhi Government has released the Delhi Electric Vehicle Policy, 2026-2030 (Draft), aimed to accelerate EV adoption across all major vehicle segments and improve air quality by reducing reliance on Internal Combustion Engine (ICE) vehicle. The key highlights are:
  - From 1 April 2027, only electric three-wheelers will be registered and from 1 April 2028, only electric two-wheelers will be registered.
  - 100% exemption on road tax and registration fees for EVs priced under ₹30 lakh until March 31, 2030 and 50% reduction for strong hybrid EVs.
  - Scrappage incentives proposed for switching to EVs across categories. These include ₹10,000 for two-wheelers, ₹25,000 for three-wheelers, ₹1 lakh for cars (priced up to ₹30 lakh) and ₹50,000 for goods vehicles.
  - Target of 30% electric school buses by 2030.
  - Continued push for expanding charging infrastructure, including potential mandates for charging points in residential and commercial buildings.

Recent Key Highlights or Announcements (2/2)

- Government of Maharashtra has released "Maharashtra Renewable Energy and Energy Storage Policy for 2025-26 to 2035-36". The key highlights are:
  - Targets 65% renewable energy share in electricity demand by FY 2035–36, positioning Maharashtra as a leader in India's energy transition
  - Projected demand of 350-360 BU, with incremental demand to be fully met through renewable energy
  - Requires ~100 GW of RE capacity supported by ~100 GWh/day energy storage
  - Mandates DISCOMs to procure energy storage equivalent to at least 10% of demand
  - Promotes co-located storage with RE projects and makes storage mandatory for new projects above 100 kW
  - Provides incentives such as waivers on transmission and wheeling charges for storage systems
  - Encourages both centralized and decentralized energy storage solutions
  - Focuses on grid stability, hybrid RE projects, and thermal-RE bundling
  - Supports MSME adoption of battery storage systems
  - Enables demand flexibility and efficient integration of renewable energy into the grid.

- The Government of Karnataka has launched the 'Mukhya Mantri Saura Krishi Yojana', modeled on the PM-KUSUM Component C scheme, to develop 3,000 MW of solar capacity at KPTCL substations through the Renewable Energy service company (RESCO) model, with an estimated investment of ₹10,500 crore.

- Telangana (TGERC) and Rajasthan (RERC) have introduced the **Framework for Resource Adequacy Regulation, 2026**. These regulations mandate DISCOMs to ensure 24/7 power supply through scientific, long-term (10-year) planning, incorporating renewable energy, storage, and demand-side management to meet peak demand reliably.

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