

India's Energy Overview

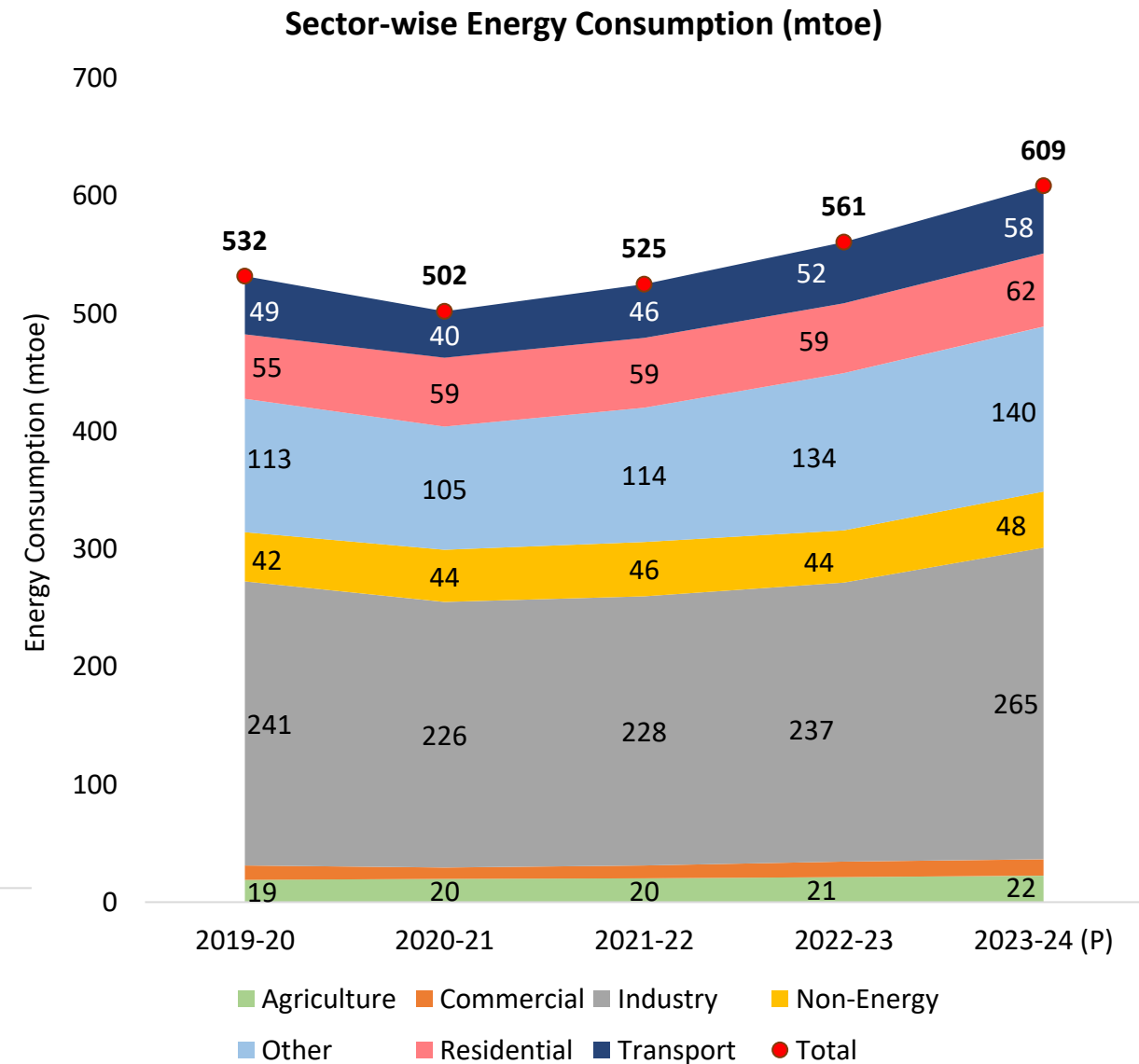
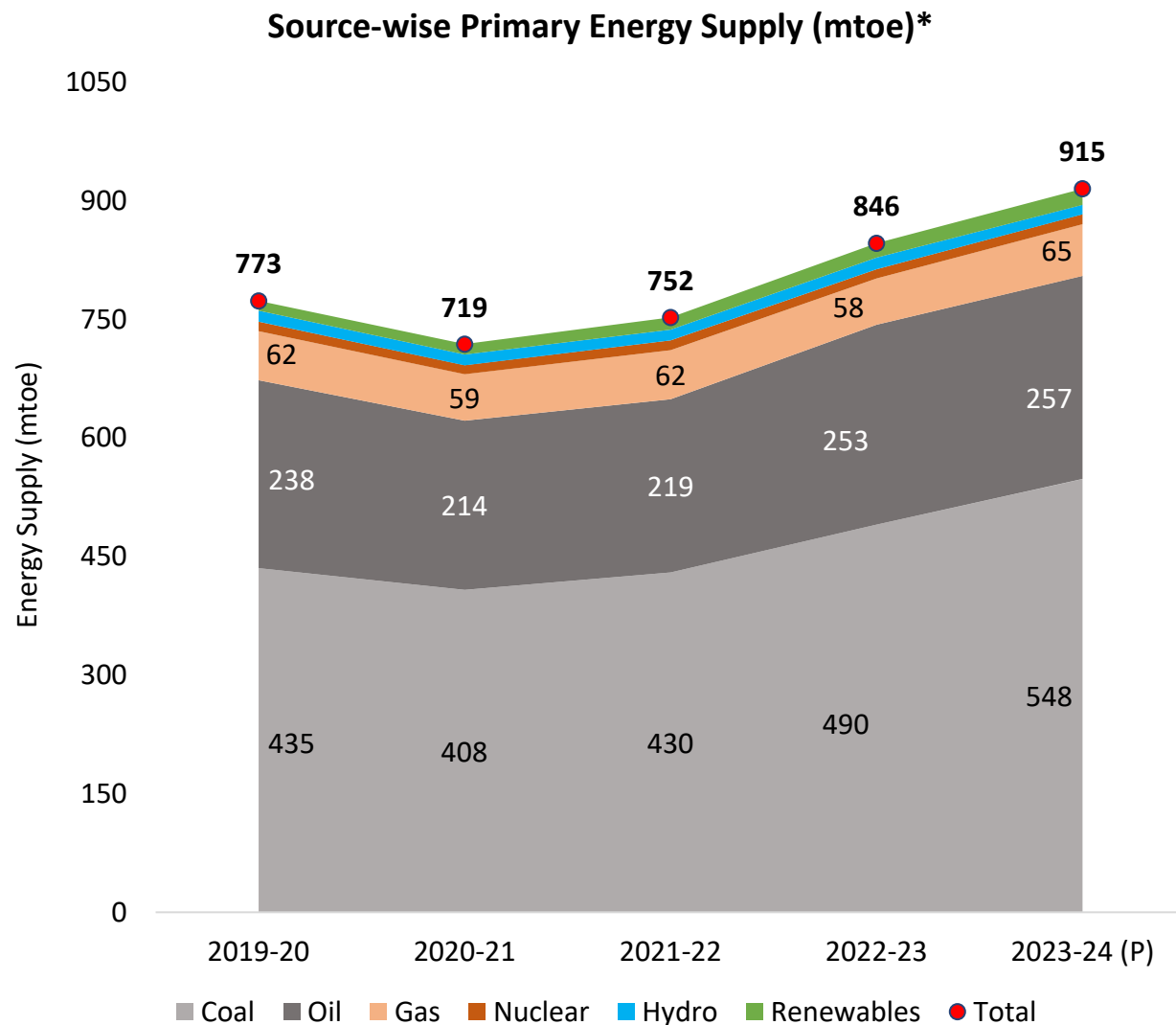
November 2025



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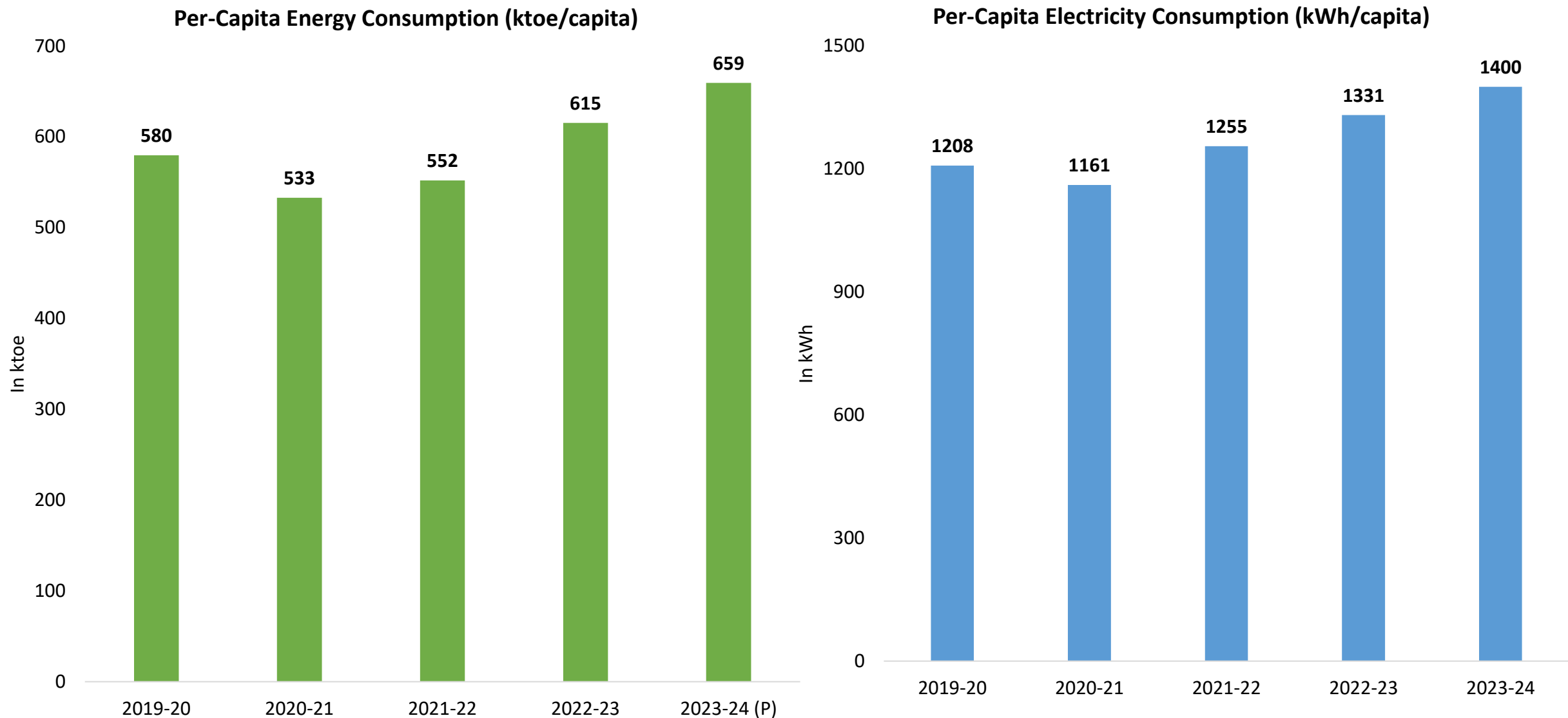
Primary* and Final Energy Mix in India



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

Source: ICED

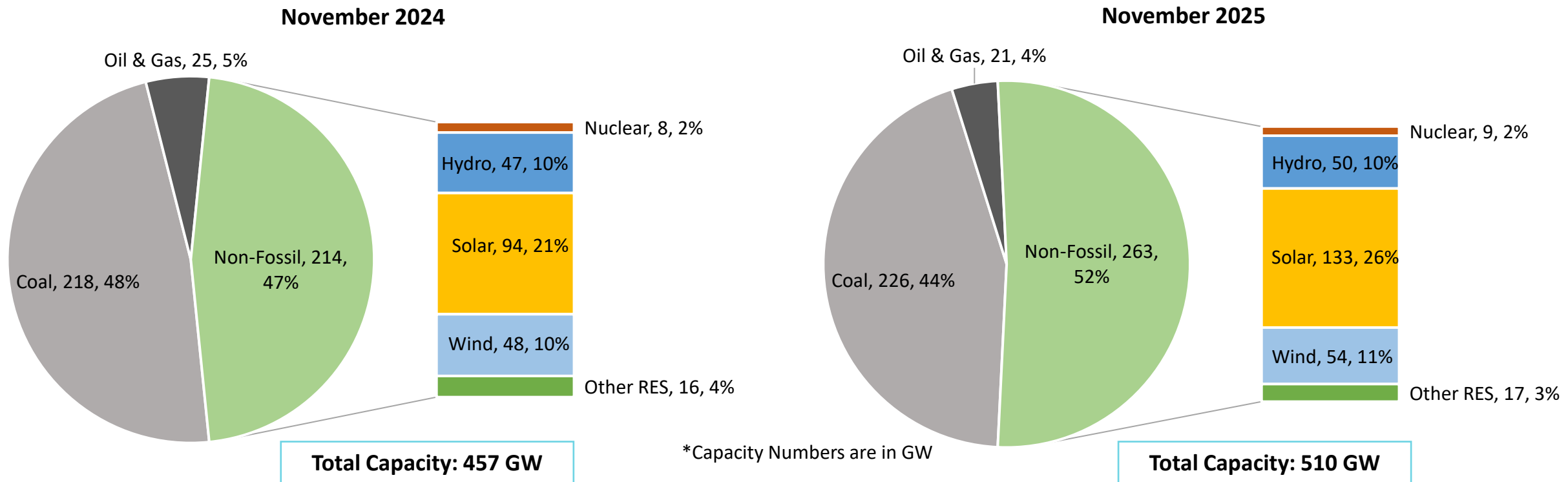
Per-Capita Energy and Electricity Consumption



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

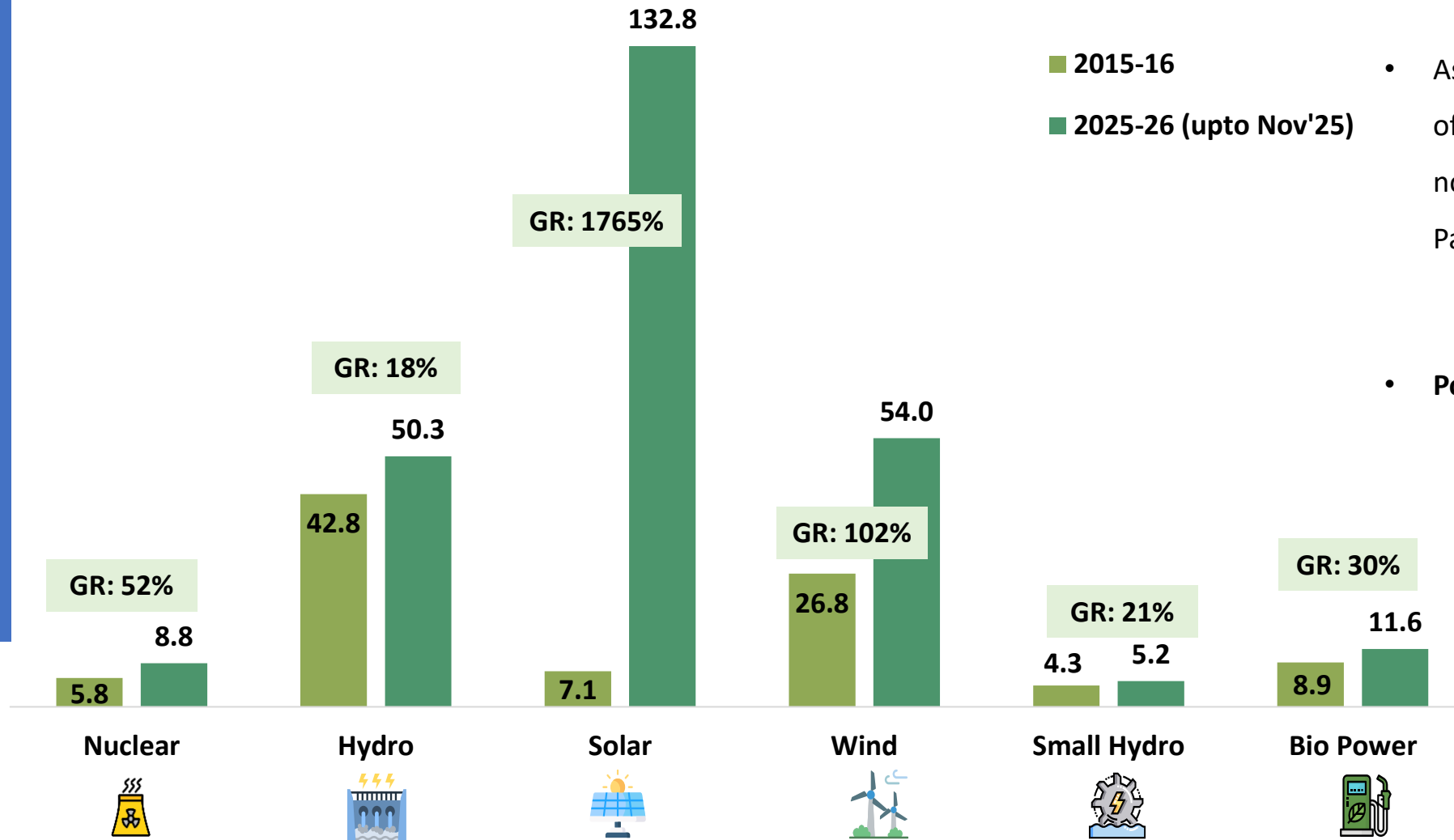
Source: ICED & CEA

India's Electricity Capacity Mix (Utility-scale)



- India's electricity generating capacity is 510 GW as on Nov'2025 [coal 226 GW (44%), solar 133 GW (26%), wind 54 GW (11%), and hydro 50 (10%)].
- India has achieved its NDC target of 52% non-fossil capacity, 5 years ahead of the originally set in 2030.
- As on Nov'2025, India's renewable energy capacity (including large hydro) stood at 254 GW out of 510 GW.

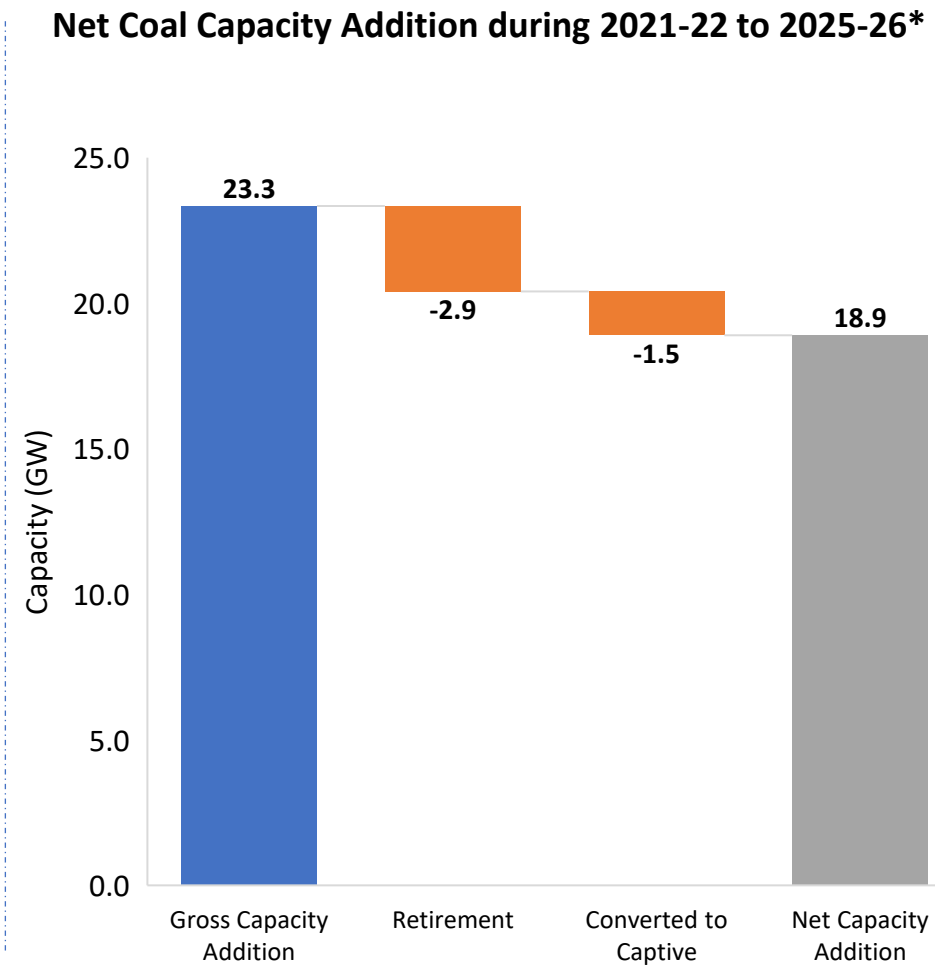
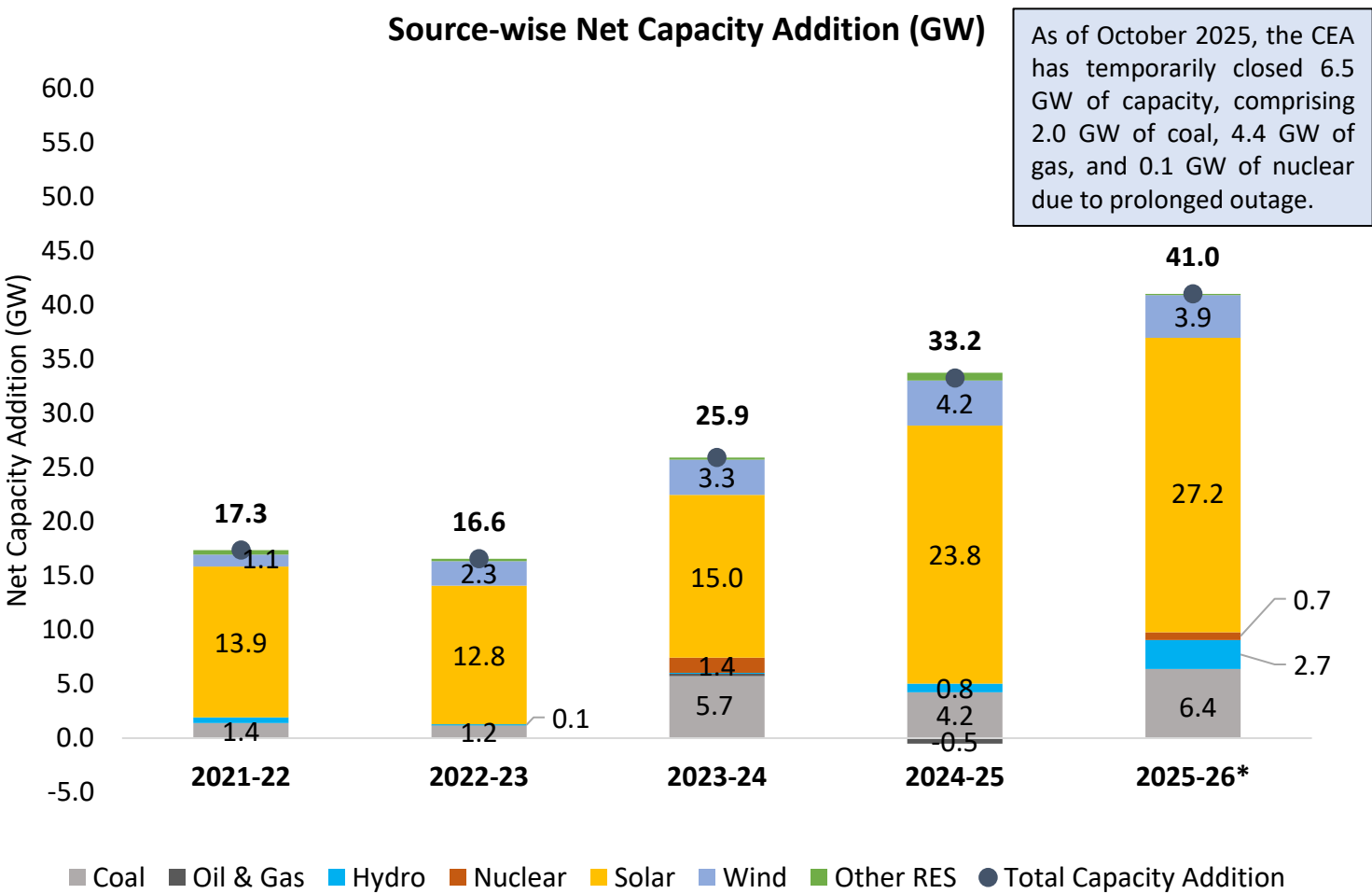
Non-Fossil Energy Capacity (in GW) Growth Post-2015 Paris Agreement



- As of November 30, 2025, **51.5% (263 GW)** of India's total power capacity (**510 GW**) is now non-fossil fuel-based, meeting the Paris Agreement pledge.

- Post-2015 Paris Agreement Growth:**
 - solar capacity increased **18-folds**
 - wind power **doubled**
 - nuclear energy **doubled**.

India's Electricity Capacity Addition in last 5 years



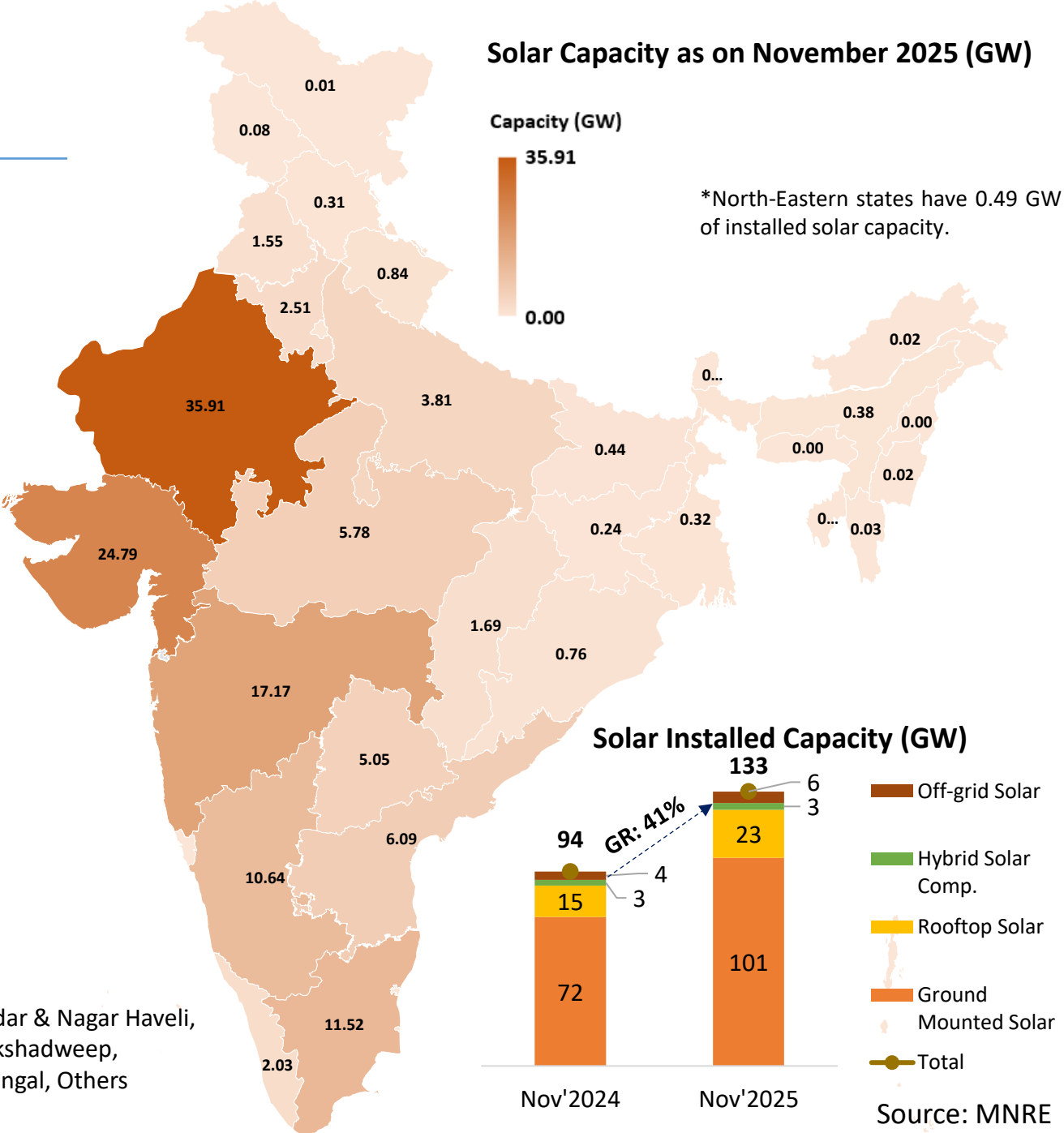
- A total of 113 GW of generation capacity has been added in RE (Hydro, solar, wind, and other RES) over the past 5 years (2021-22 to 2025-26*), whereas the net coal capacity addition during the same period was 19 GW, mostly in the central sector.

State-wise Solar Capacity

as on November 2025

State-wise installed capacity of Solar Power (GW)					
States	Ground Mounted	Rooftop	Solar Component in Hybrid	Off Grid	Total Solar Power
Rajasthan	31.17	1.95	1.98	0.82	35.91
Gujarat	17.16	6.32	1.15	0.17	24.79
Maharashtra	10.77	4.59	0.00	1.81	17.17
Tamil Nadu	10.17	1.27	0.00	0.07	11.52
Karnataka	9.58	0.80	0.21	0.04	10.64
Andhra Pradesh	5.29	0.72	0.00	0.09	6.09
Madhya Pradesh	4.89	0.79	0.00	0.10	5.78
Telangana	4.36	0.68	0.00	0.01	5.05
Uttar Pradesh	2.79	0.67	0.00	0.36	3.81
Haryana	0.27	1.10	0.00	1.14	2.51
Kerala	0.32	1.68	0.00	0.02	2.03
Chhattisgarh	1.13	0.17	0.00	0.39	1.69
Punjab	0.89	0.56	0.00	0.10	1.55
Uttarakhand	0.54	0.27	0.00	0.02	0.84
Others	1.47	1.60	0.00	0.39	3.47
All India	100.80	23.17	3.34	5.55	132.85

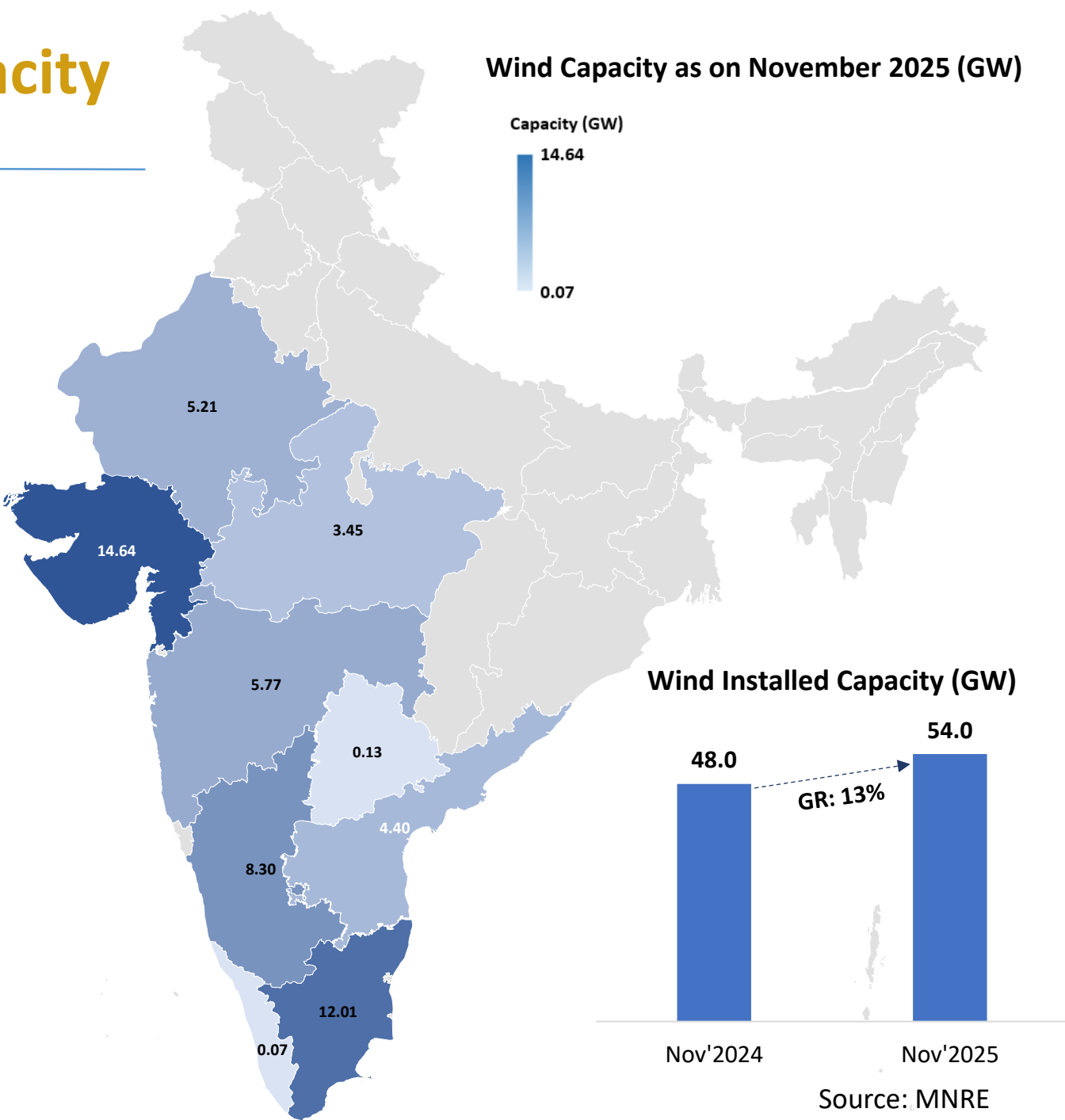
Others include- Andaman & Nicobar, Arunachal Pradesh, Assam, Bihar, Chandigarh, Dadar & Nagar Haveli, Daman & Diu, Delhi, Goa, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Ladakh, Lakshadweep, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Puducherry, Sikkim, Tripura, West Bengal, Others



State-wise Wind Onshore Capacity

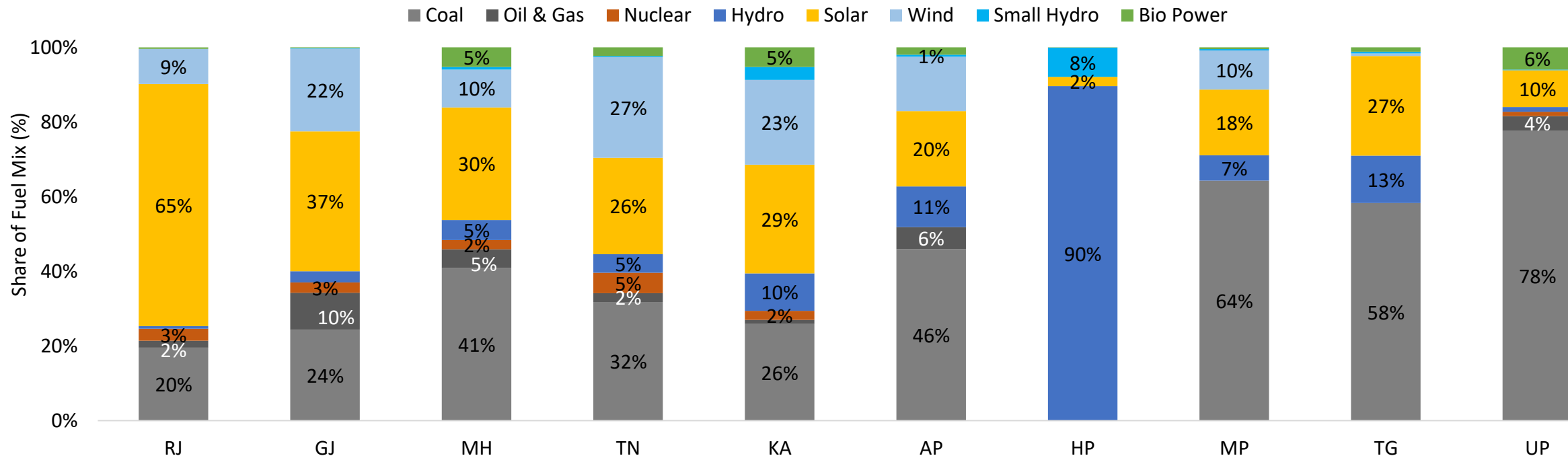
as on November 2025

State-wise installed capacity of Wind (Onshore) Power	
States	Installed Capacity (GW)
Gujarat	14.64
Tamil Nadu	12.01
Karnataka	8.30
Maharashtra	5.77
Rajasthan	5.21
Andhra Pradesh	4.40
Madhya Pradesh	3.45
Telangana	0.13
Kerala	0.07
India Total	53.99



Top 10 High RE* States and Their Capacity Mix

as on November 2025

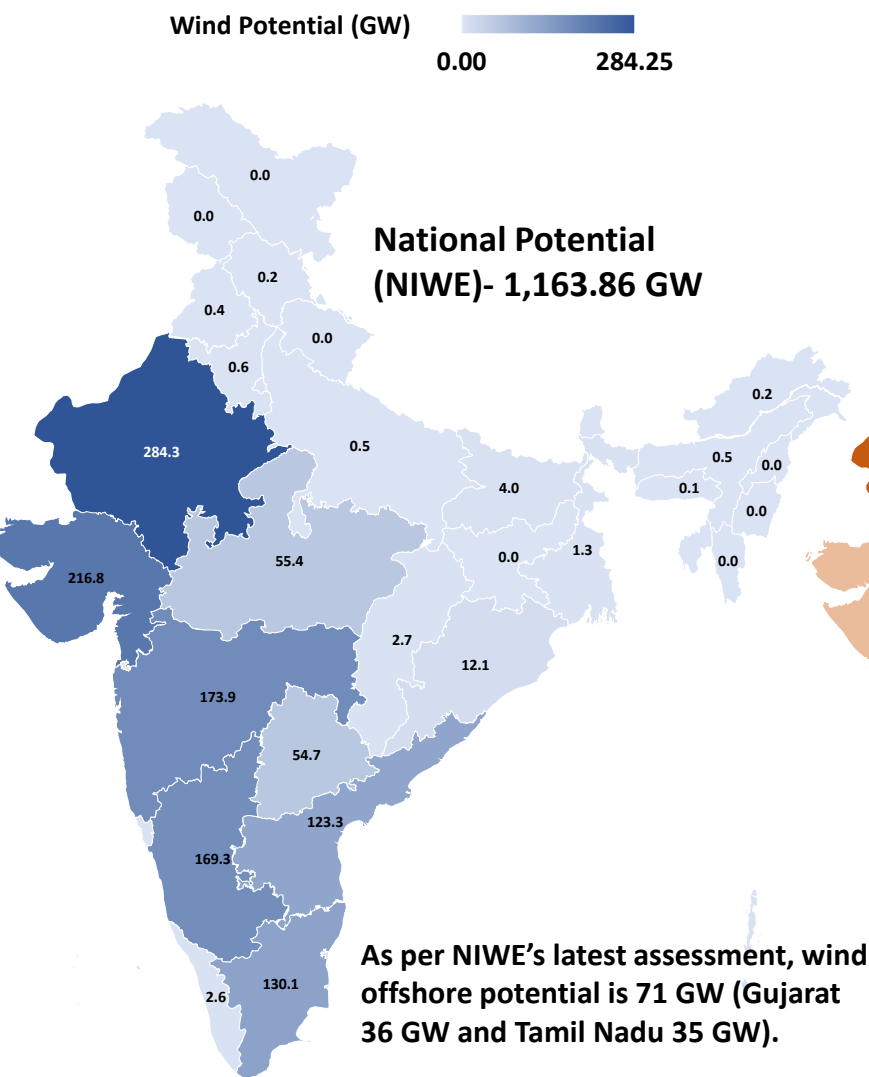


Numbers are in GW

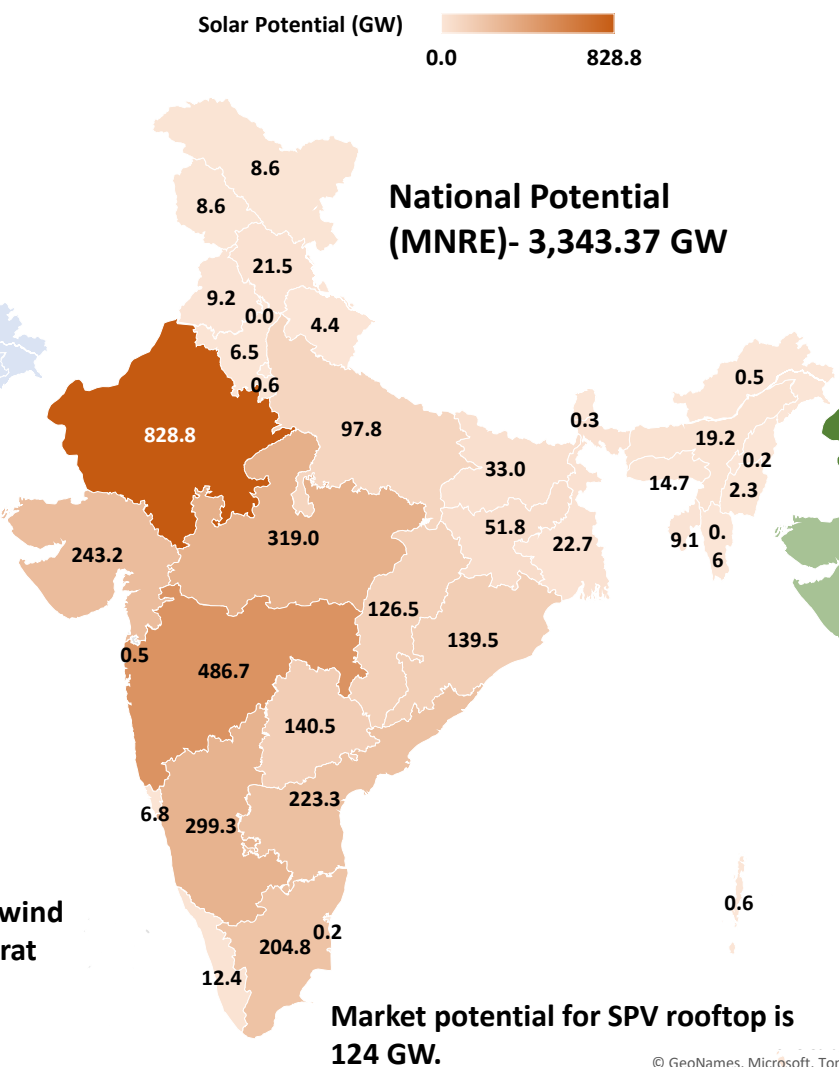
Parameters	RJ	GJ	MH	TN	KA	AP	HP	MP	TG	UP
Total Installed Capacity	55.39	66.18	56.90	44.56	36.59	30.20	12.74	32.91	18.94	38.62
Total RE Capacity	41.76	41.67	29.37	26.90	25.84	14.54	12.74	11.74	7.90	6.67
RE Share	75%	63%	52%	60%	71%	48%	100%	36%	42%	17%

Renewable Energy (RE) Potential

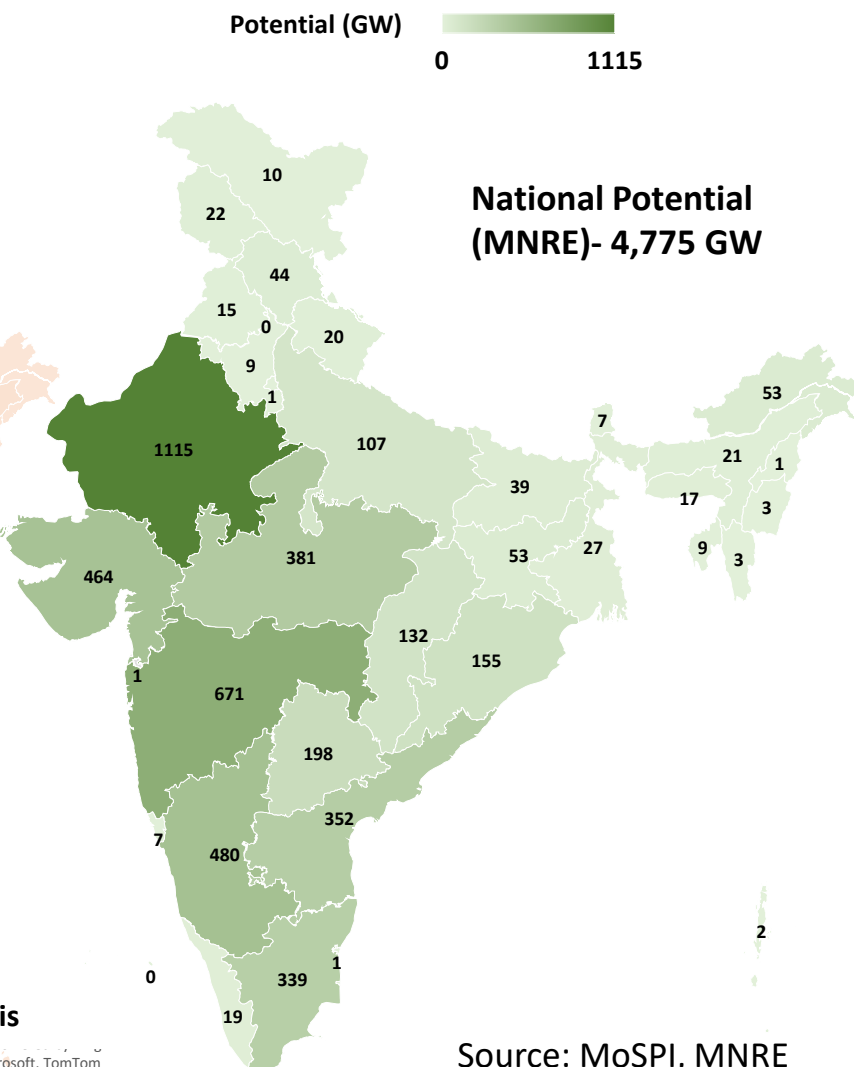
Wind Onshore (at 150m agl) and Offshore Potential



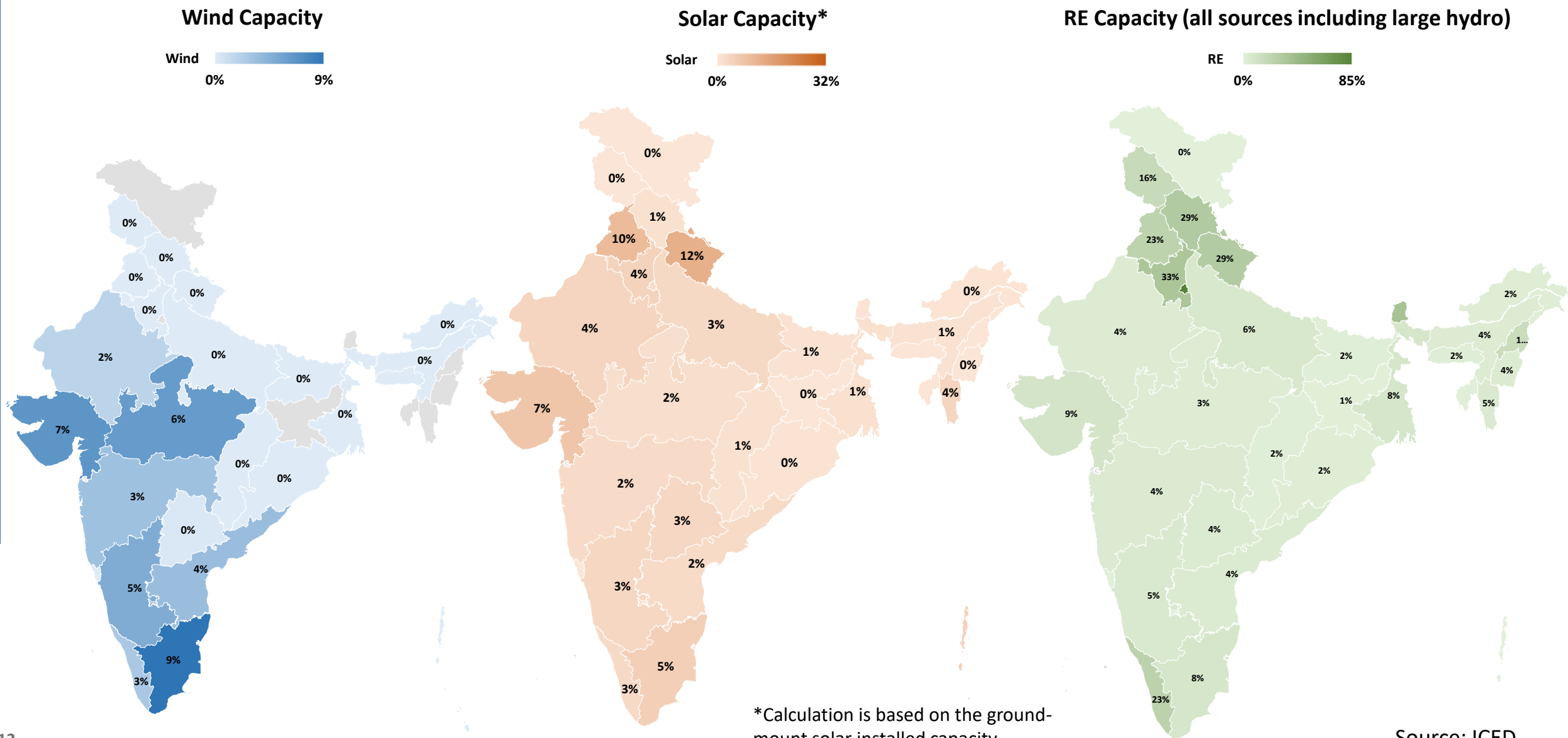
Solar Ground Mounted Potential (at 6.69% wasteland)



Renewable Energy Potential (all sources incl. large Hydro)

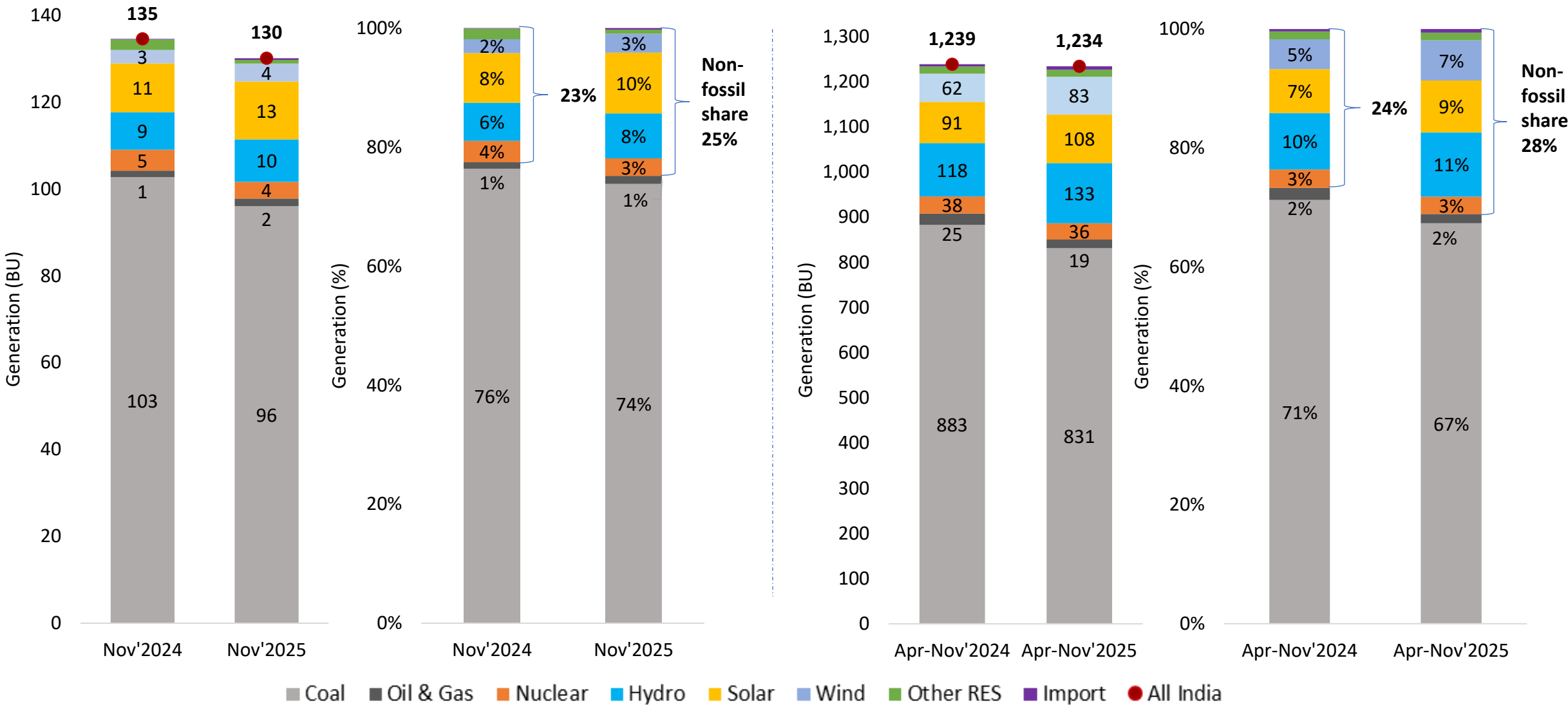


RE Installed capacity as a Percentage of the total resource potential in the state as on November 2025

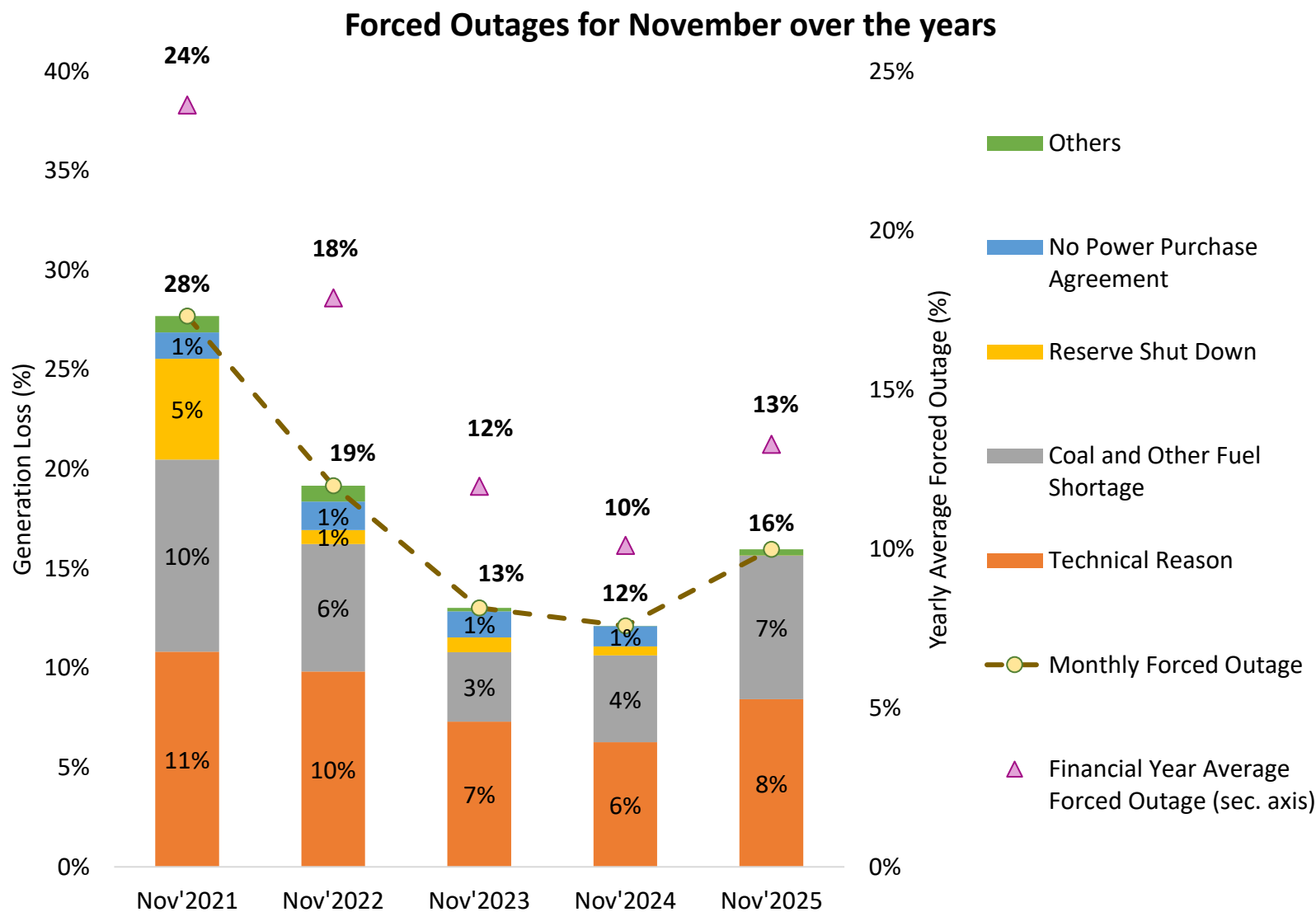


India's Electricity Generation Mix

Source-wise Generation Mix



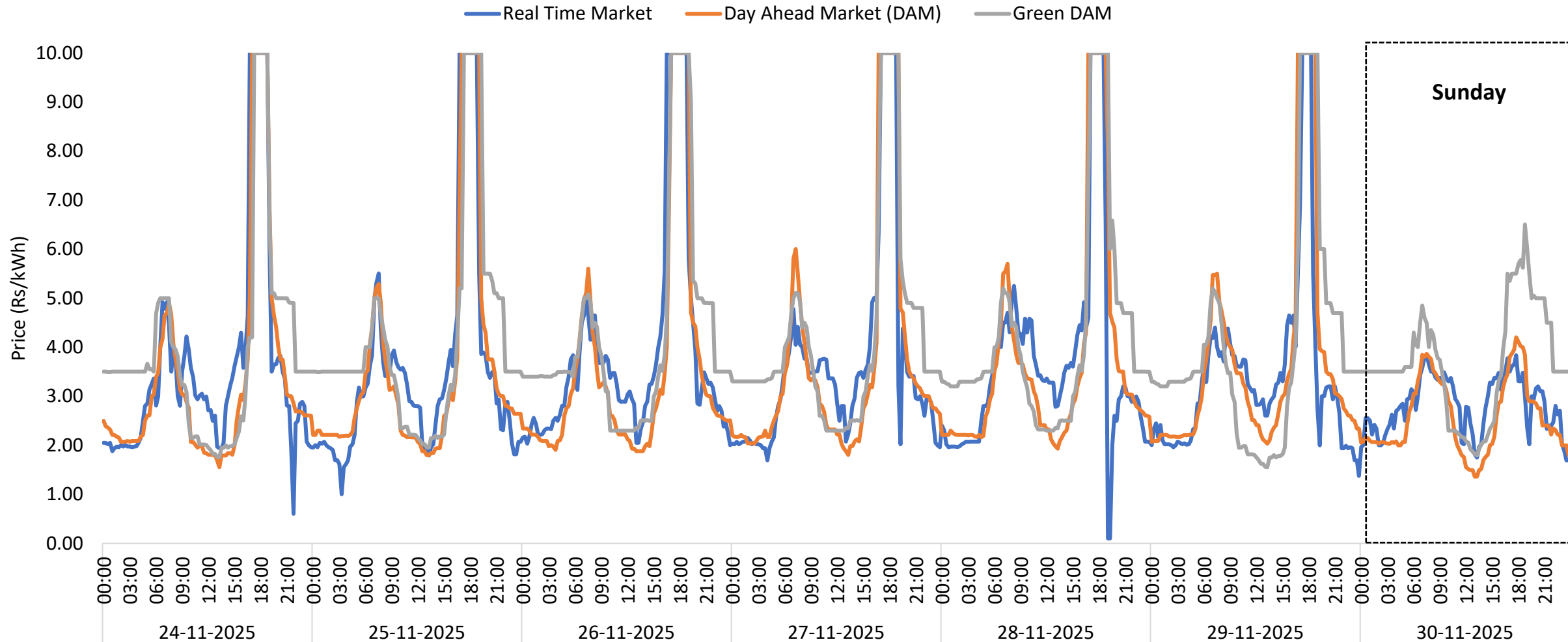
Thermal Generation Loss and Reasons for Forced Outages



Year/ Month		Average Forced Outage Share
Yearly	FY 2023-24	12%
	FY 2024-25	10%
	FY 2025-26 (up to Nov'25)	13%
Monthly	Nov'2023	13%
	Nov'2024	12%
	Nov'2025	16%

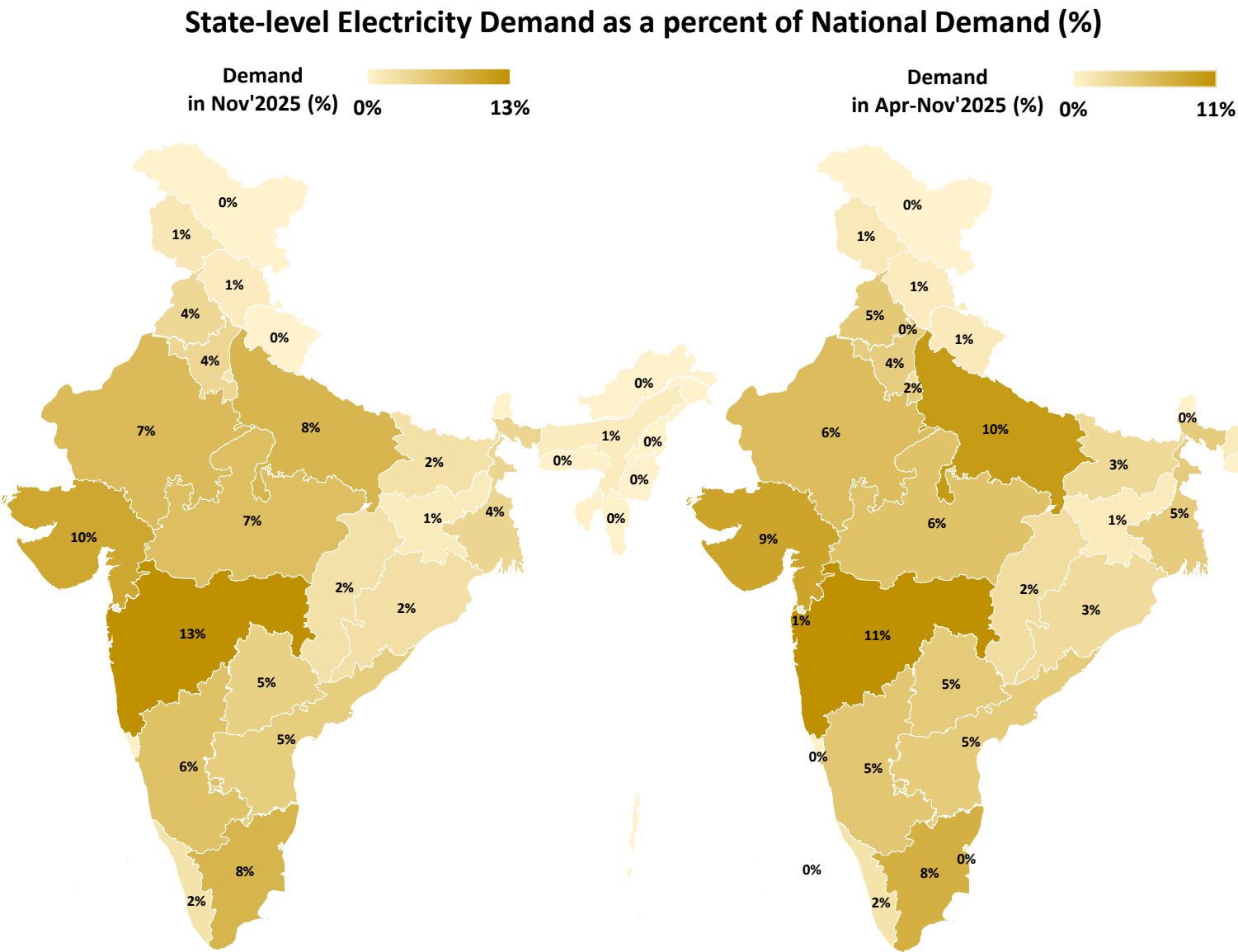
Indian Electricity Exchange (IEX) Market Snapshot

Market Clearing Prices of last 7 days of November 2025



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

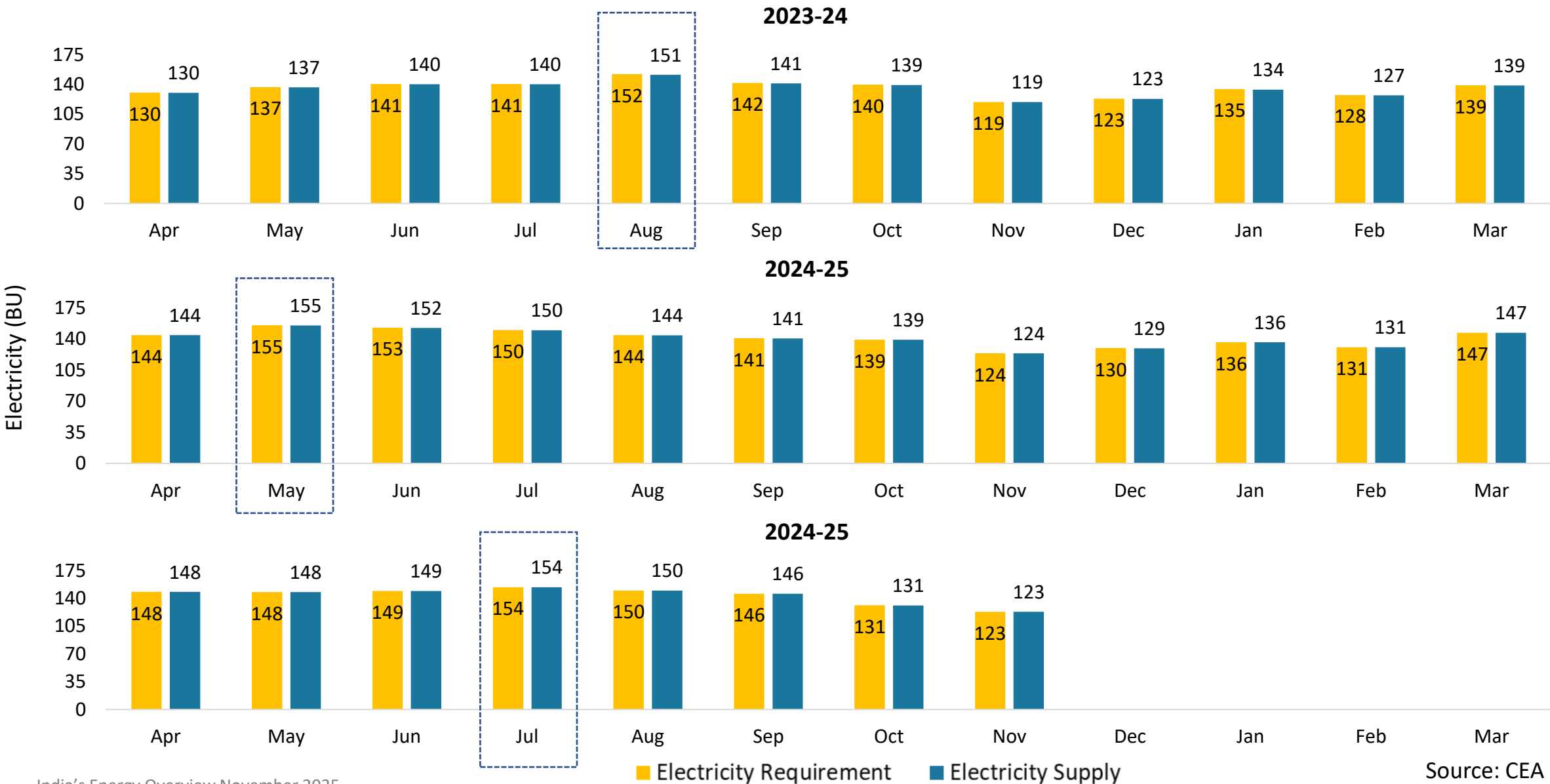
National and State level Electricity Demand



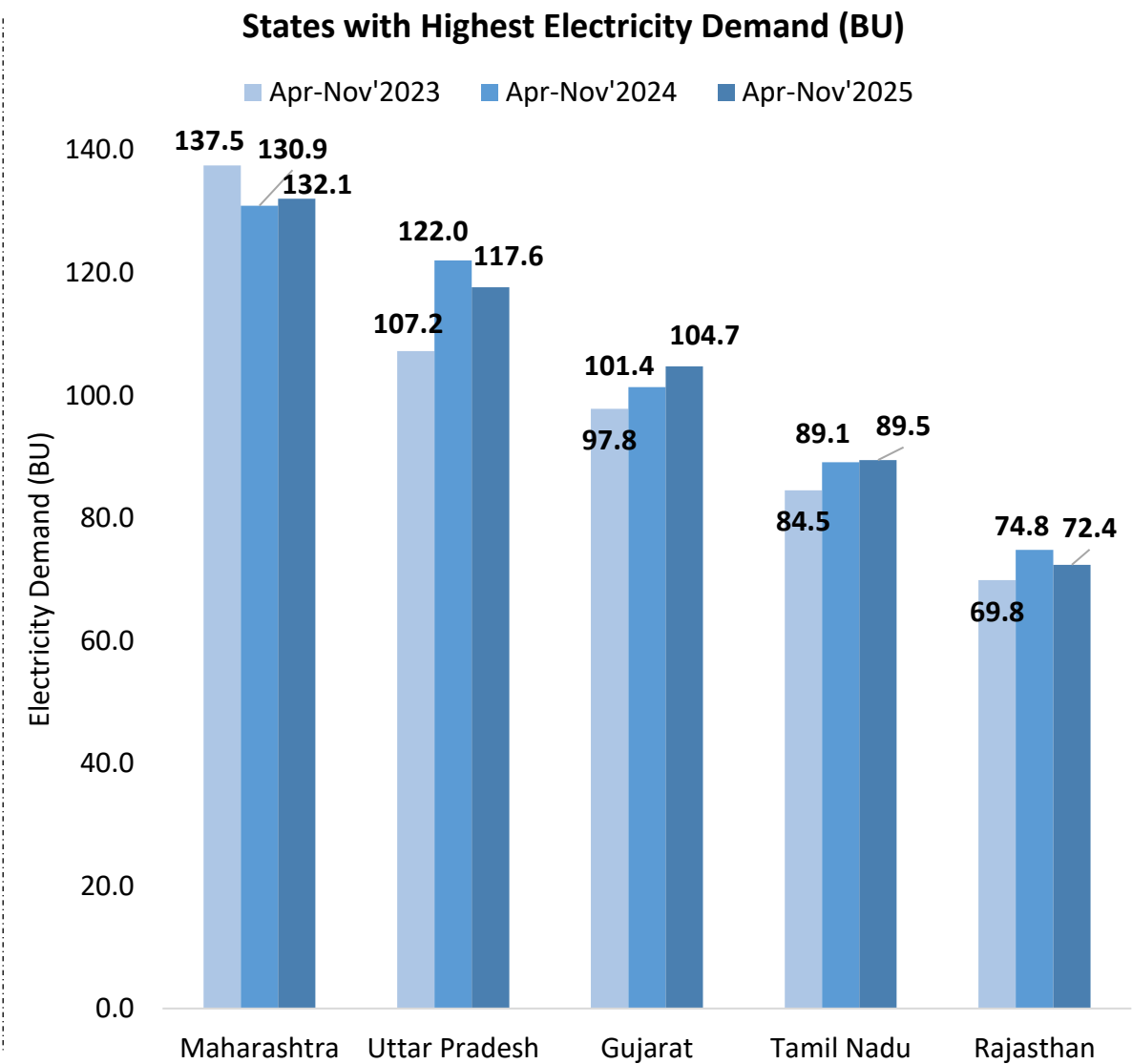
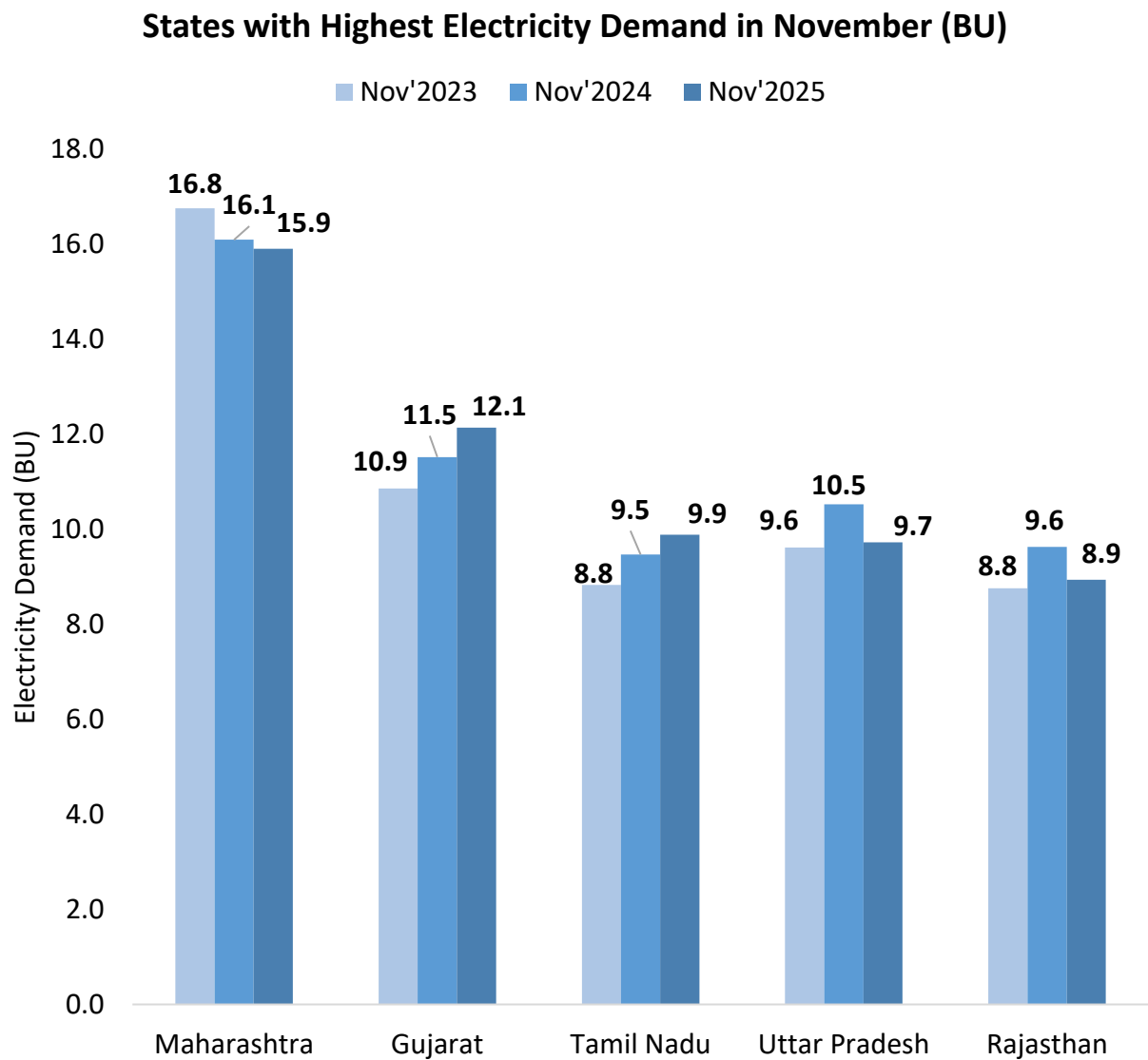
Month	Electricity Demand (BU)	Electricity Supply (BU)	Gap (BU) (+/-)
Nov'2023	119	119	0.1
Nov'2024	124	124	0.0
Nov'2025	123	123	0.0

Apr-Oct	Electricity Demand (BU)	Electricity Supply (BU)	Gap (BU) (+/-)
FY 2023-24	1,102	1,099	3.0
FY 2024-25	1,150	1,149	1.3
FY 2025-26	1,149	1,148	0.3

India's Monthly Electricity Requirement and Supply



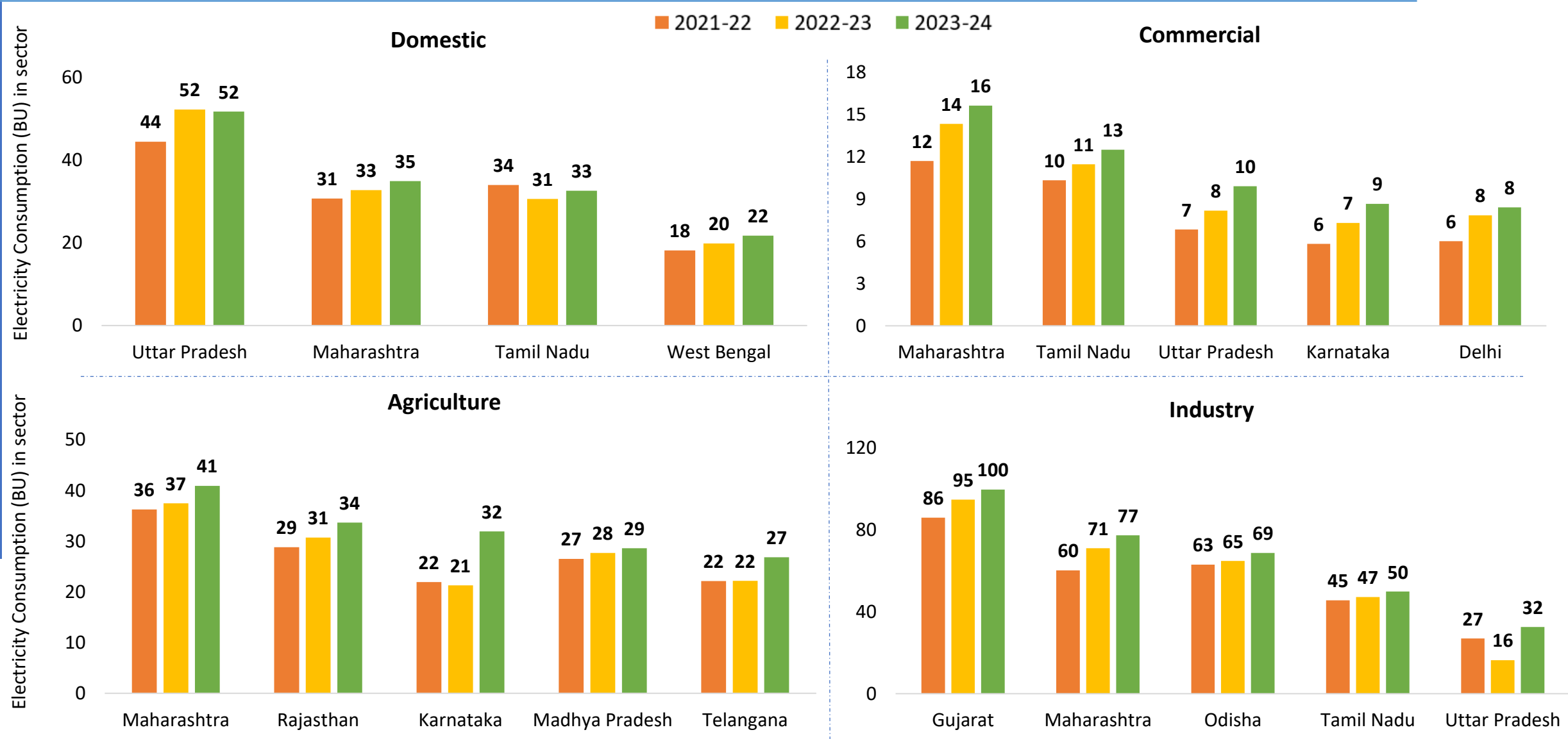
Monthly Electricity Demand of the top 5 states



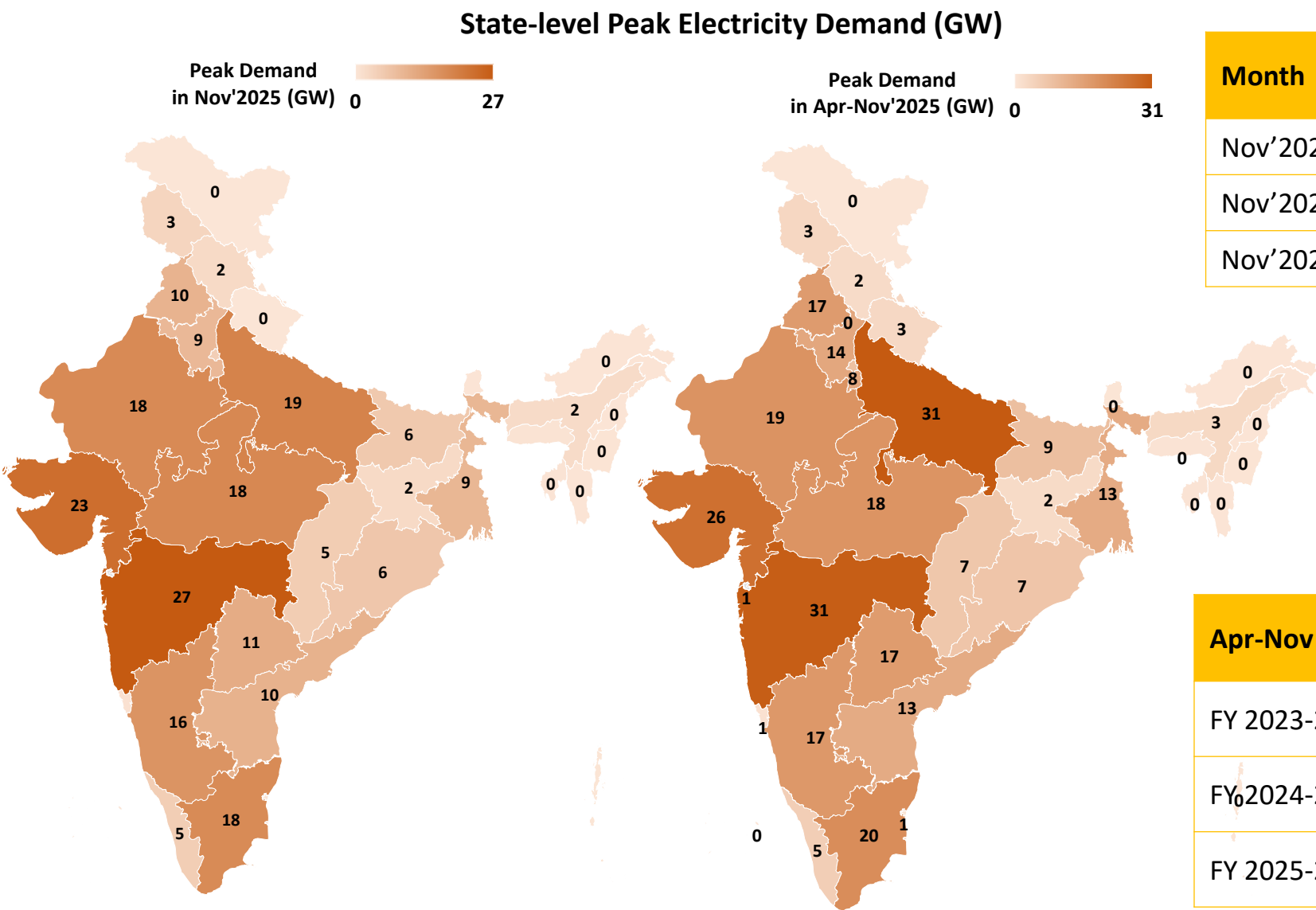
Note: The electricity demand data for Nov'25 is Provisional.

Source: CEA

Electricity Consumer-category wise top 5 States



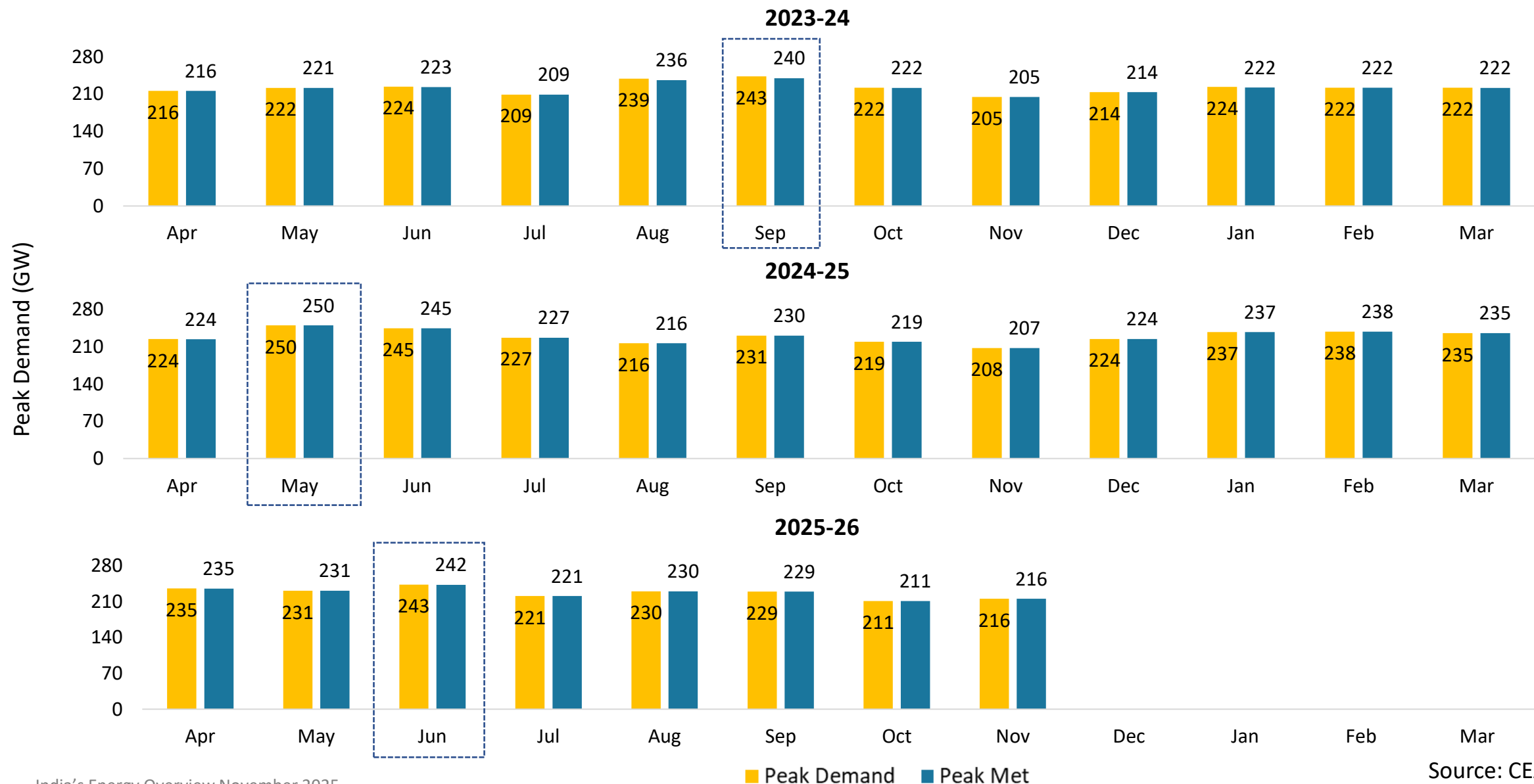
National and State level Peak Electricity Demand



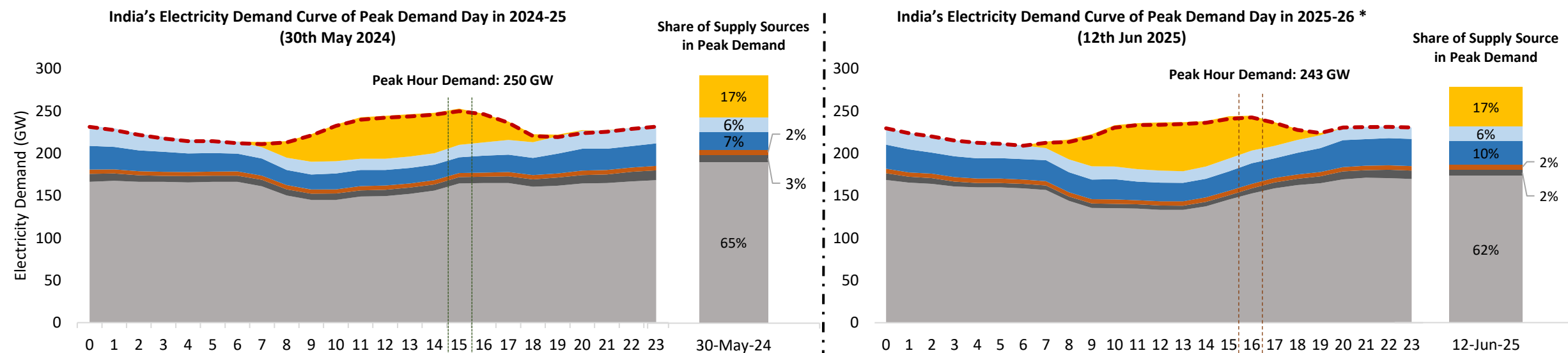
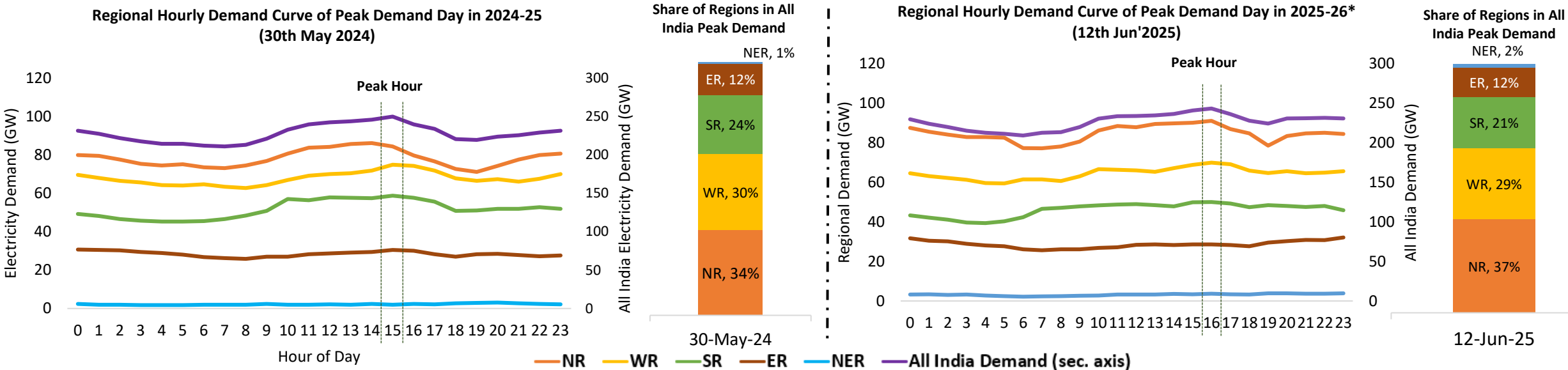
Month	Peak Demand (GW)	Peak Supply (GW)	Gap(GW) (+/-)
Nov'2023	205	205	0.2
Nov'2024	208	207	0.1
Nov'2025	216	216	0.1

Apr-Nov	Peak Demand (GW)	Peak Supply (GW)	Gap (GW) (+/-)
FY 2023-24	243	240	3.3
FY ₀ 2024-25	250	250	0.0
FY 2025-26	243	242	0.3

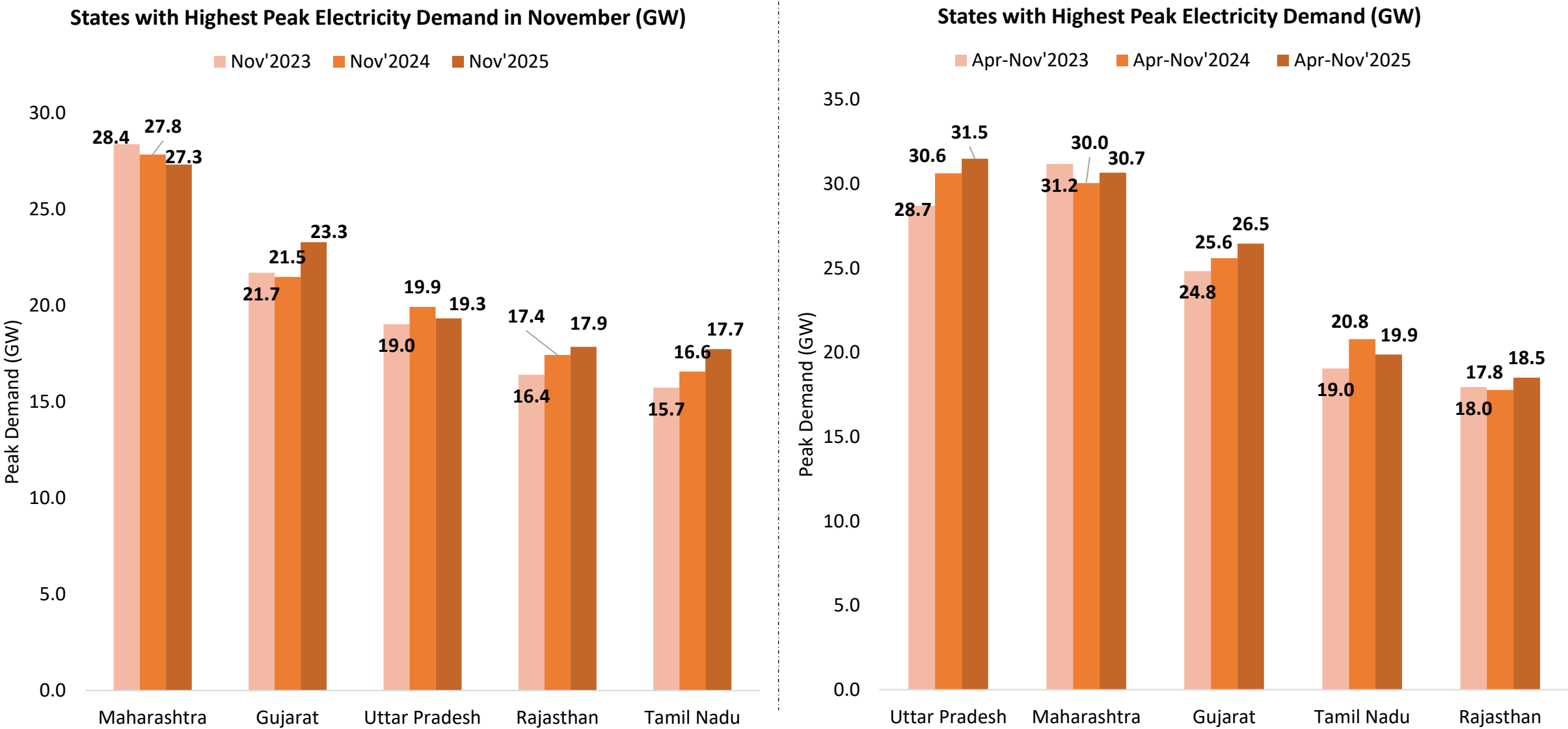
India's Monthly Peak Electricity Demand and Supply



All India and Regional Electricity Demand Curve of Peak Demand Day



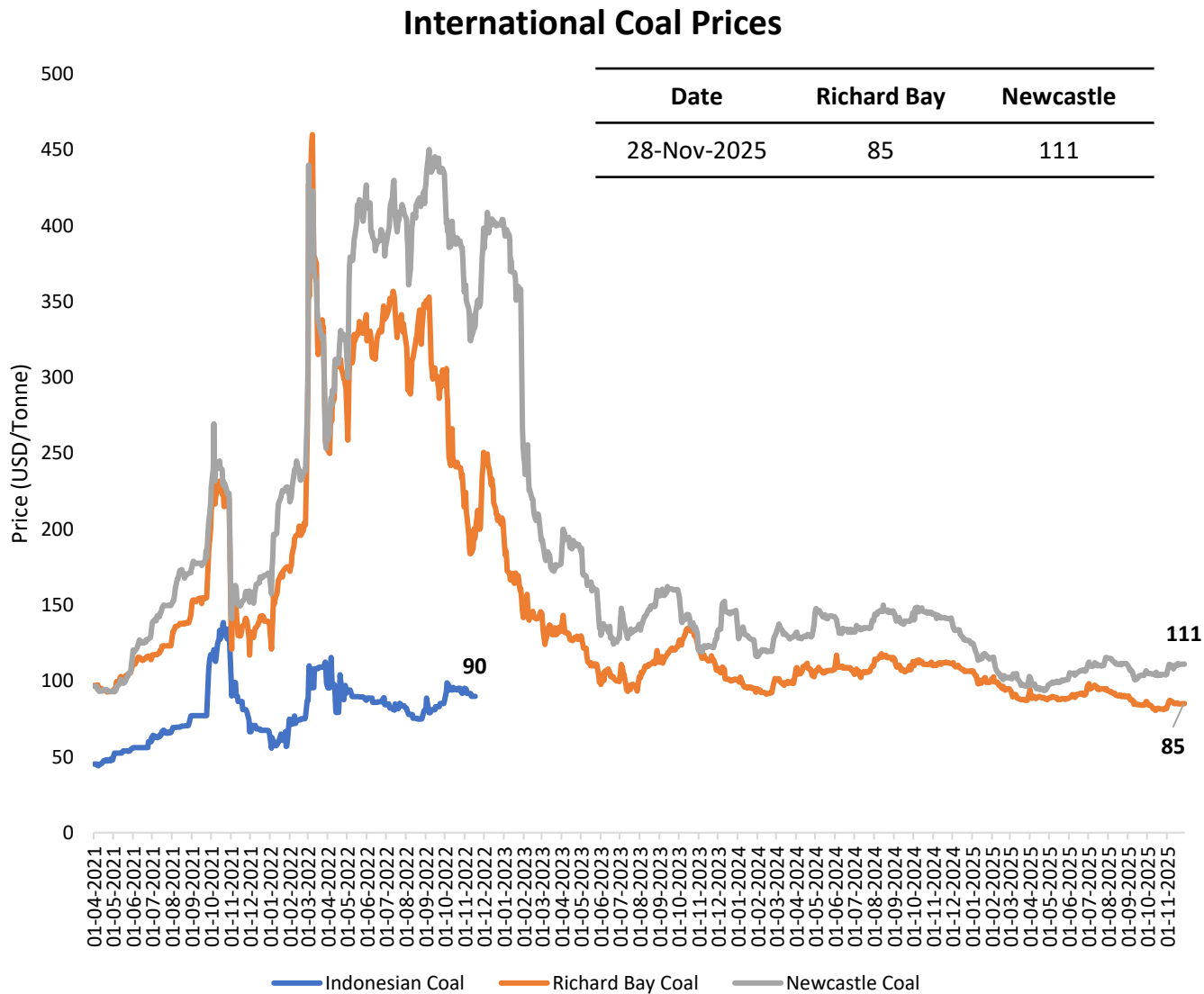
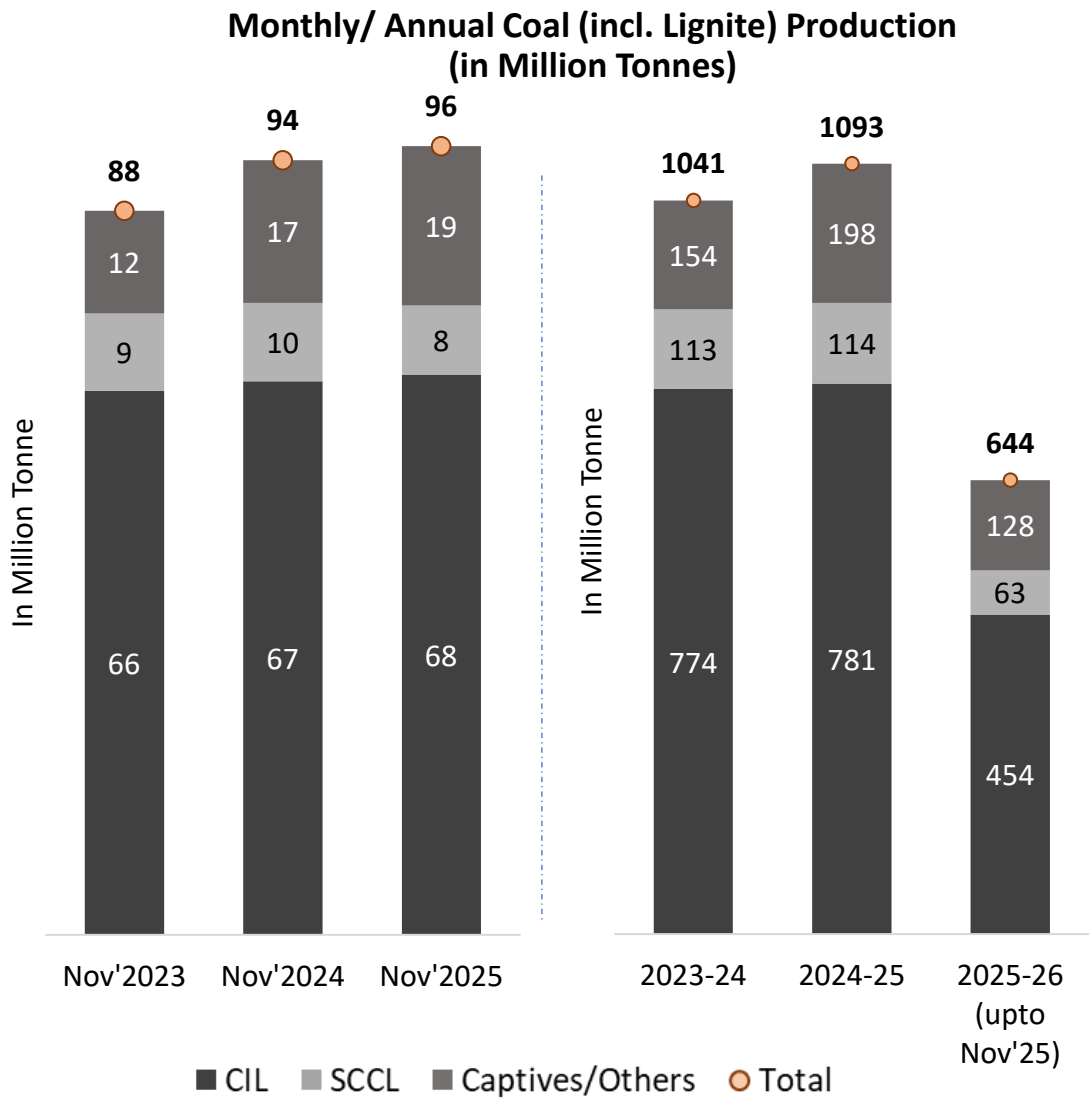
Monthly Peak Electricity Demand of the top 5 states



Note: The peak electricity demand data for Nov'25 is Provisional.

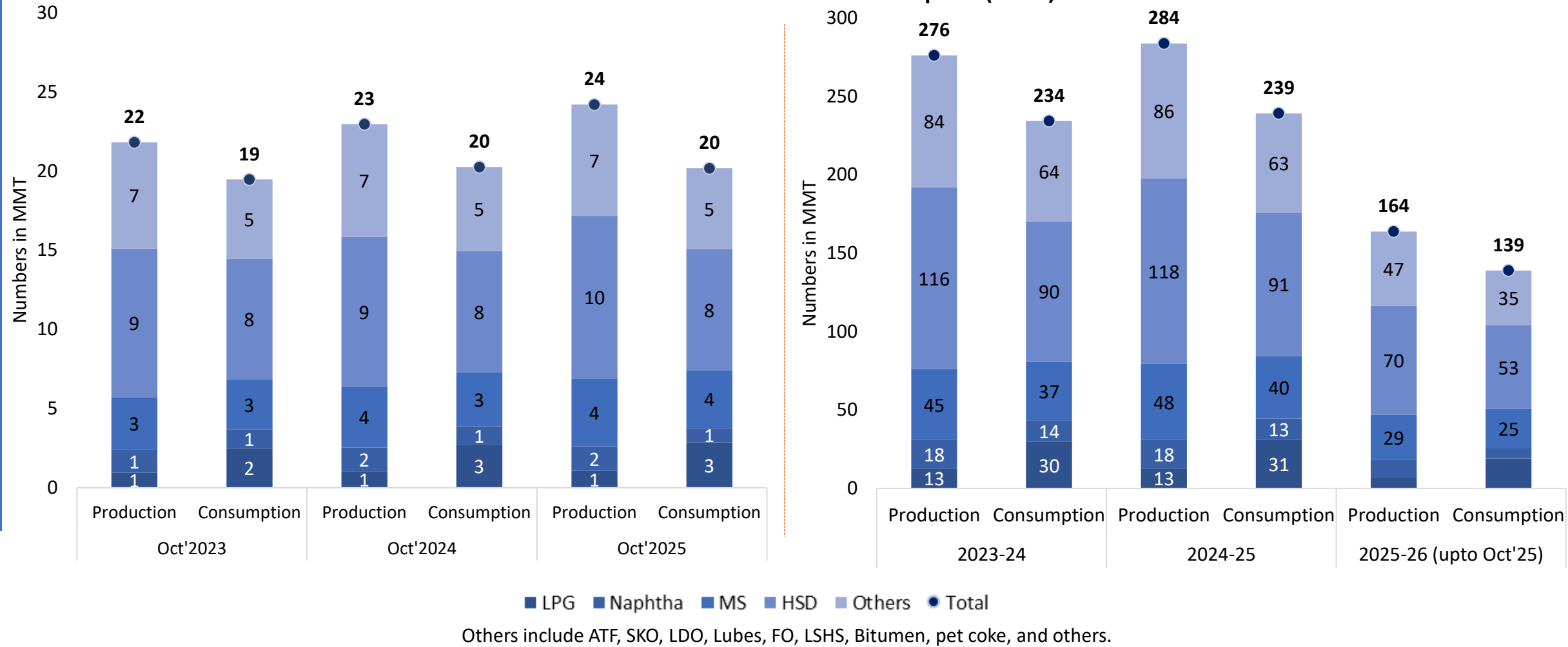
Source: CEA

Monthly Coal Statistics



Oil Market Scenario (1/3)

Petroleum Product-wise Production & Consumption (MMT)



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

Oil Market Scenario (2/3)

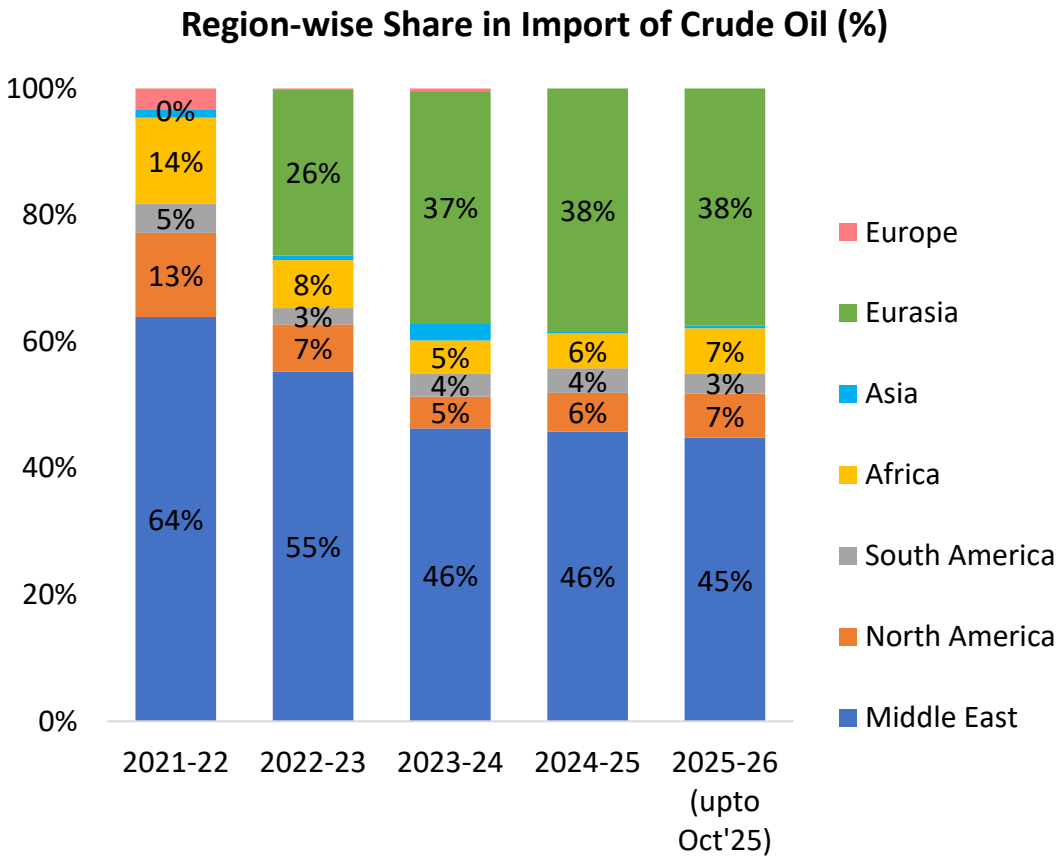
Import/Export of Crude Oil and Petroleum Products ('000 Tonnes)							
Petroleum Products	Import/ Export	Monthly			Yearly		
		Oct'23	Oct'24	Oct'25	2023-24	2024-25	2025-26 (upto Oct'25)
Crude Oil	Import	18729	19937	21054	234262	243225	142687
	Export	0	0	0	0	0	0
	Net Import	18729	19937	21054	234262	243225	142687
LPG	Import	1916	2003	1919	18514	20667	12788
	Export	43	47	43	525	551	326
	Net Import	1872	1957	1877	17989	20116	12463
Diesel	Import	4	9	3	42	42	16
	Export	2110	2349	2707	28204	28027	16527
	Net Import	-2106	-2340	-2704	-28162	-27985	-16511
Petrol	Import	200	0	0	717	235	0
	Export	671	1118	1372	13472	15830	9608
	Net Import	-472	-1118	-1372	-12755	-15596	-9608
Others	Import	2429	2667	2422	29419	29960	16966
	Export	1659	1540	993	20391	20667	10554
	Net Import	770	1127	1430	9029	9293	6412

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

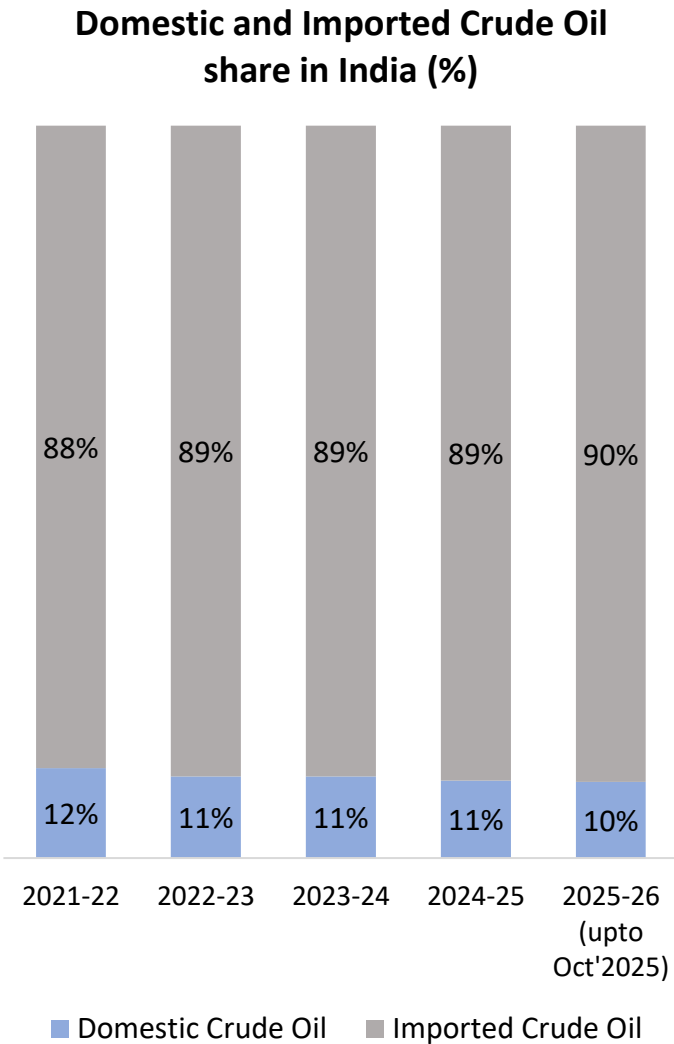
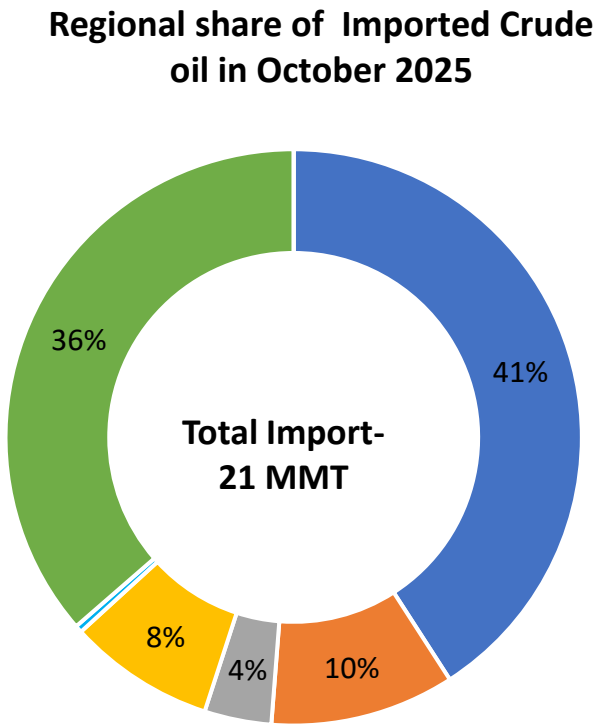
NOTE: The data is available latest up to October 2025.

Source: PPAC

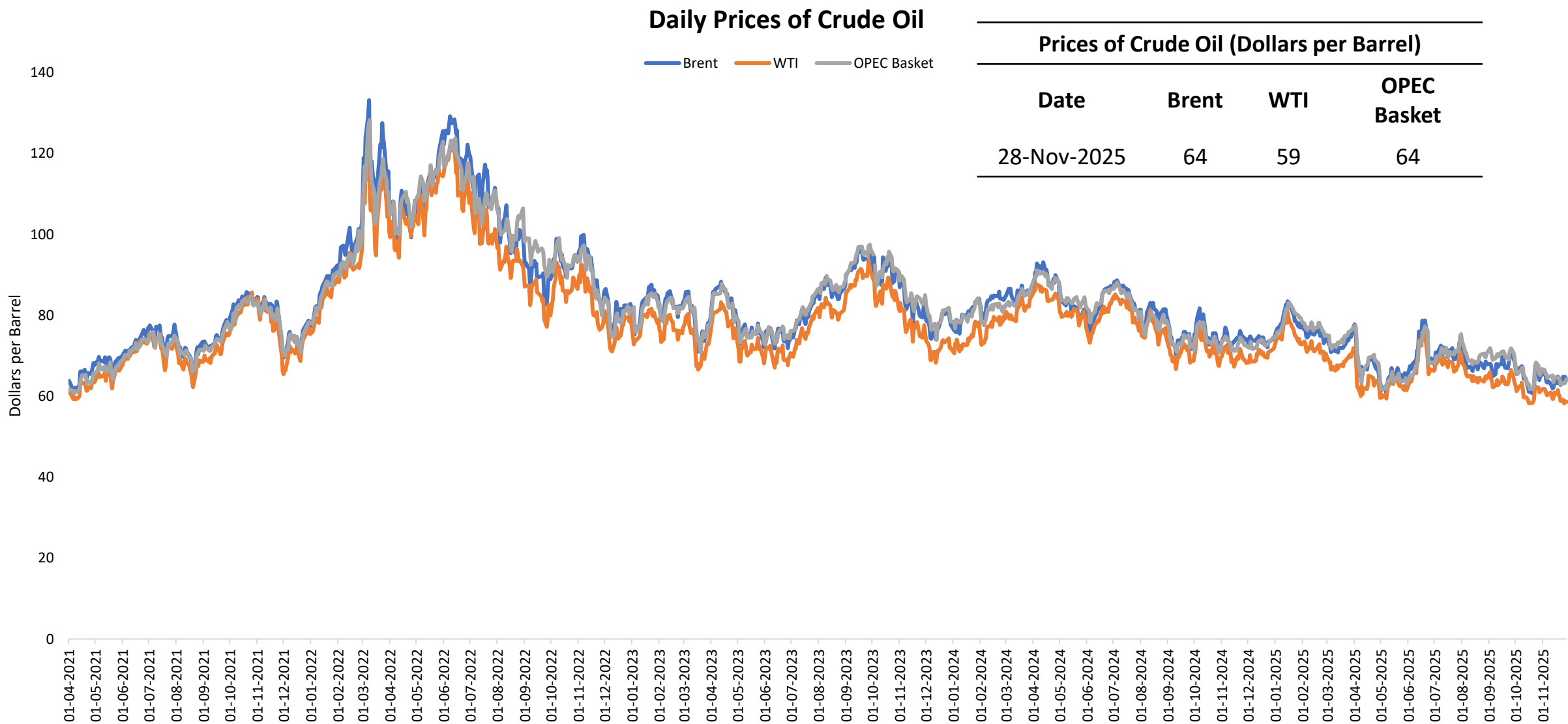
Oil Market Scenario (3/3)



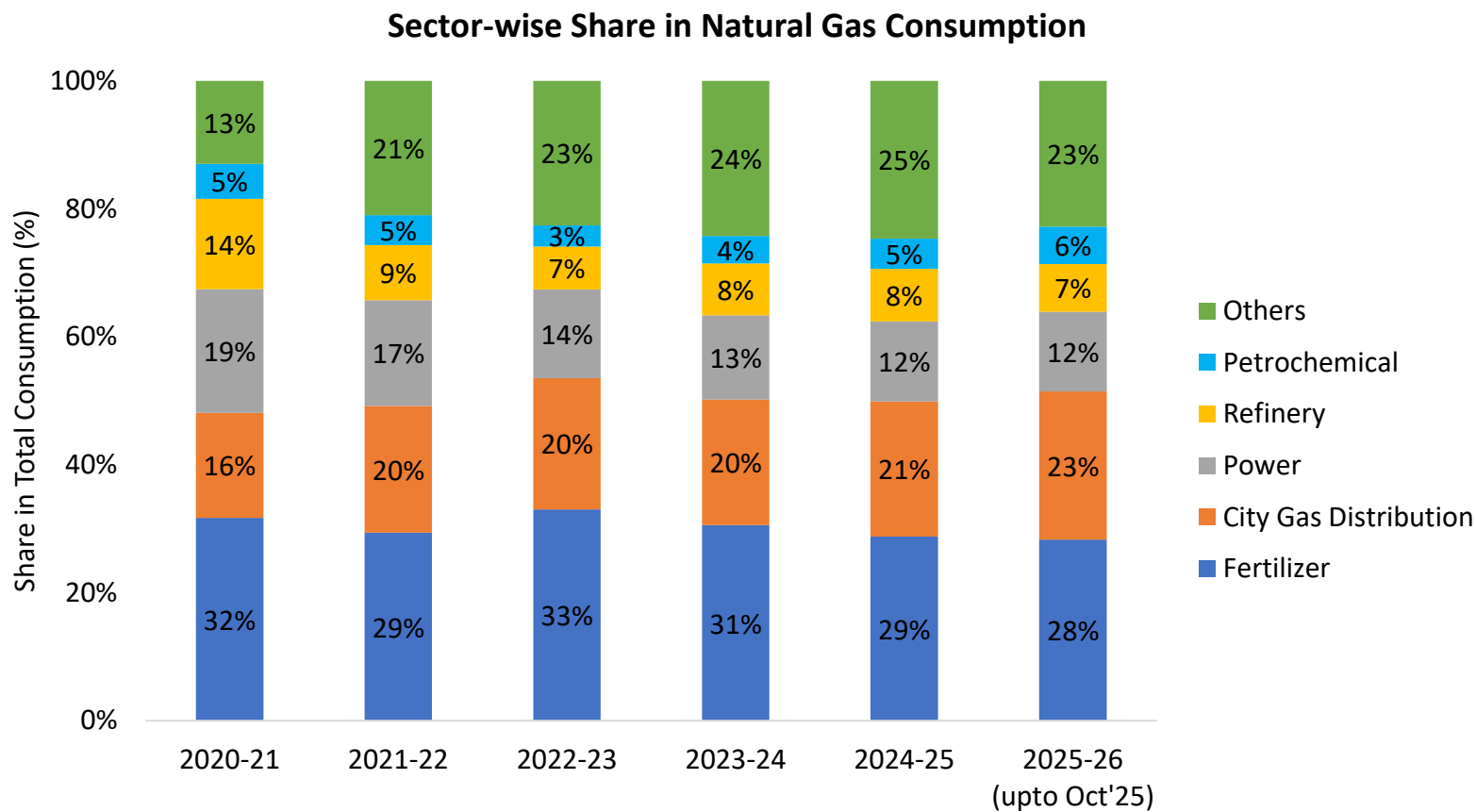
Total Import of Crude Oil (MMT)			
Total Import	2023-24	2024-25	2025-26 (up to Oct'25)
Crude Oil	234	243	143



Daily Prices of Crude Oil

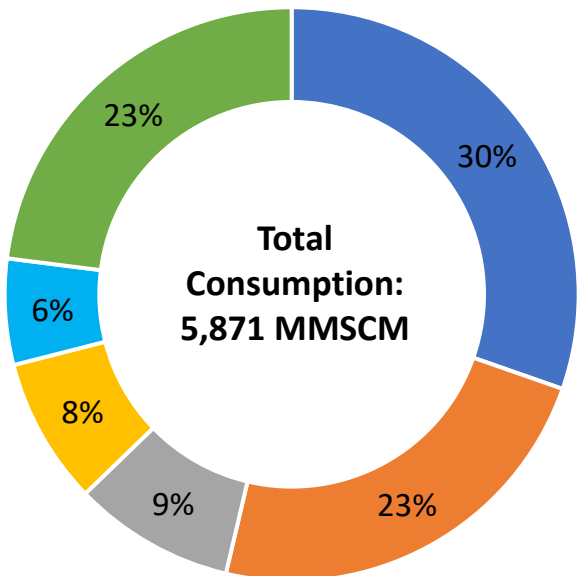


Gas Market Scenario (1/2)



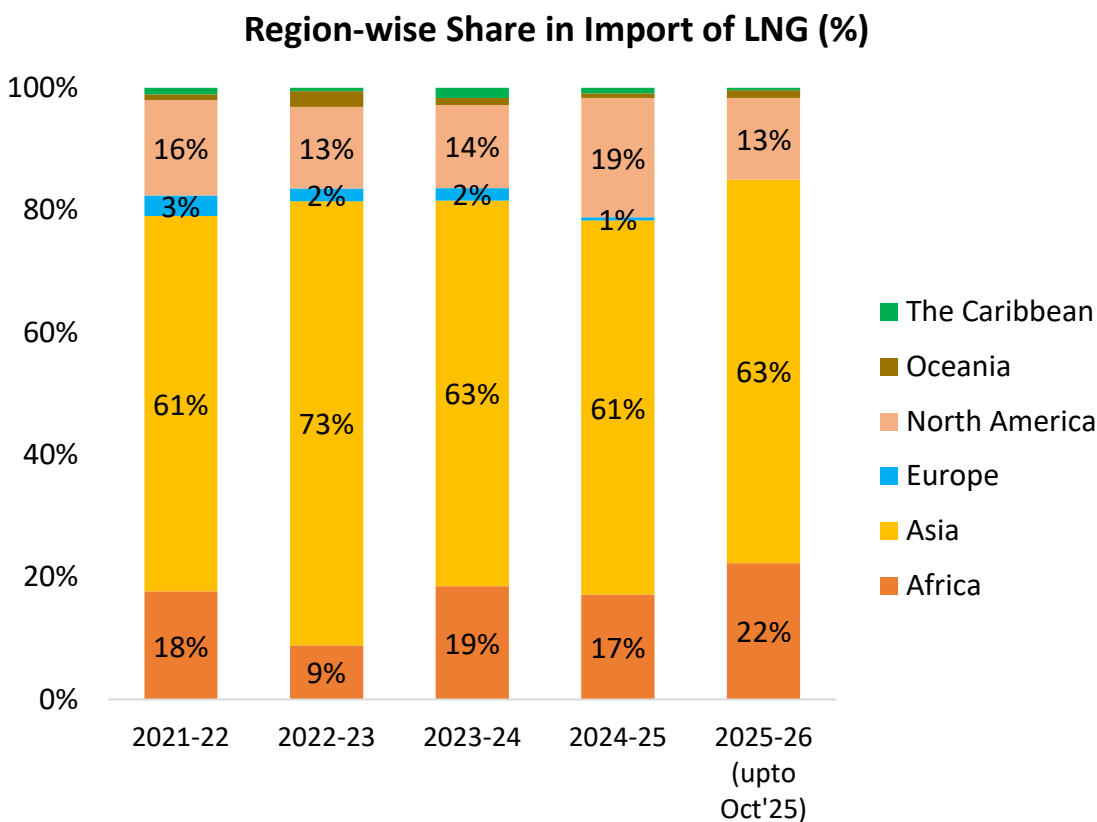
Total Consumption of Natural Gas (NG) (MMSCM)					
Total Consumption	2021-22	2022-23	2023-24	2024-25	2025-26 (up to Oct'25)
Natural Gas	61,491	58,702	68,809	71,196	40,739

Sector-wise share in Natural Gas Consumption in October 2025



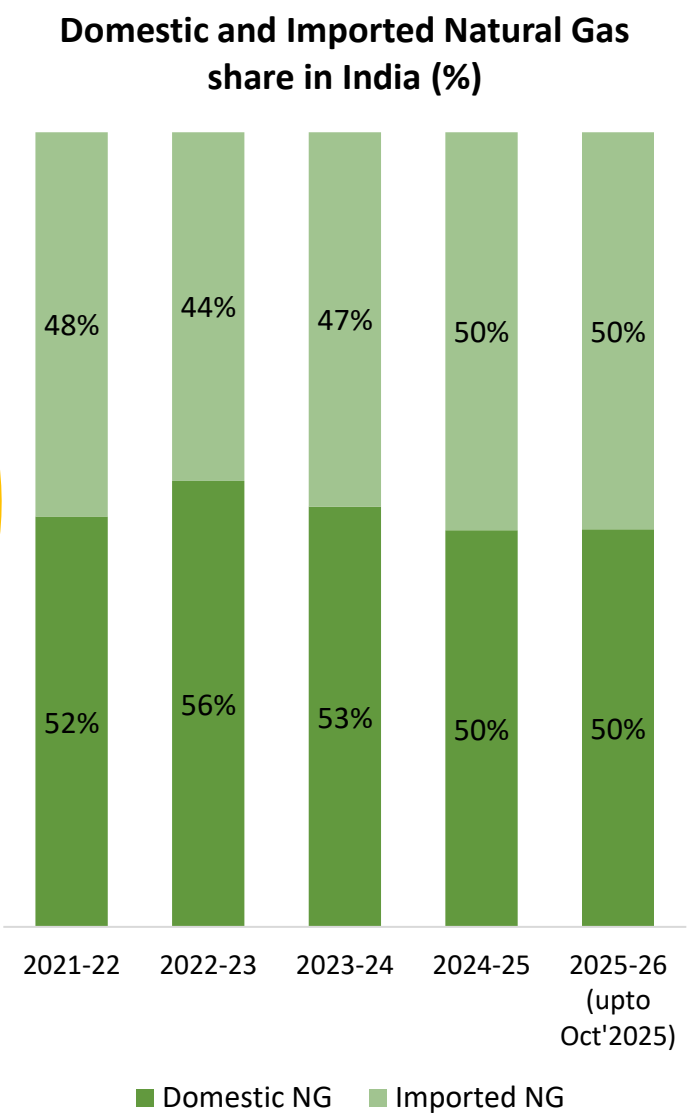
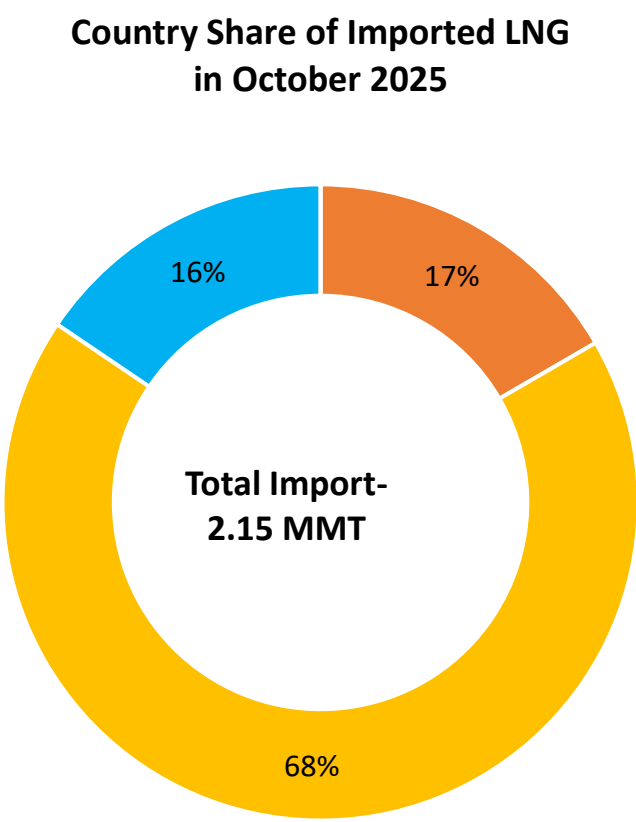
Others include- Internal Consumption of Pipeline System, Industrial, Sponge iron/steel, LPG shrinkage, Manufacturing, Agriculture (tea plantation), Others

Gas Market Scenario (2/2)



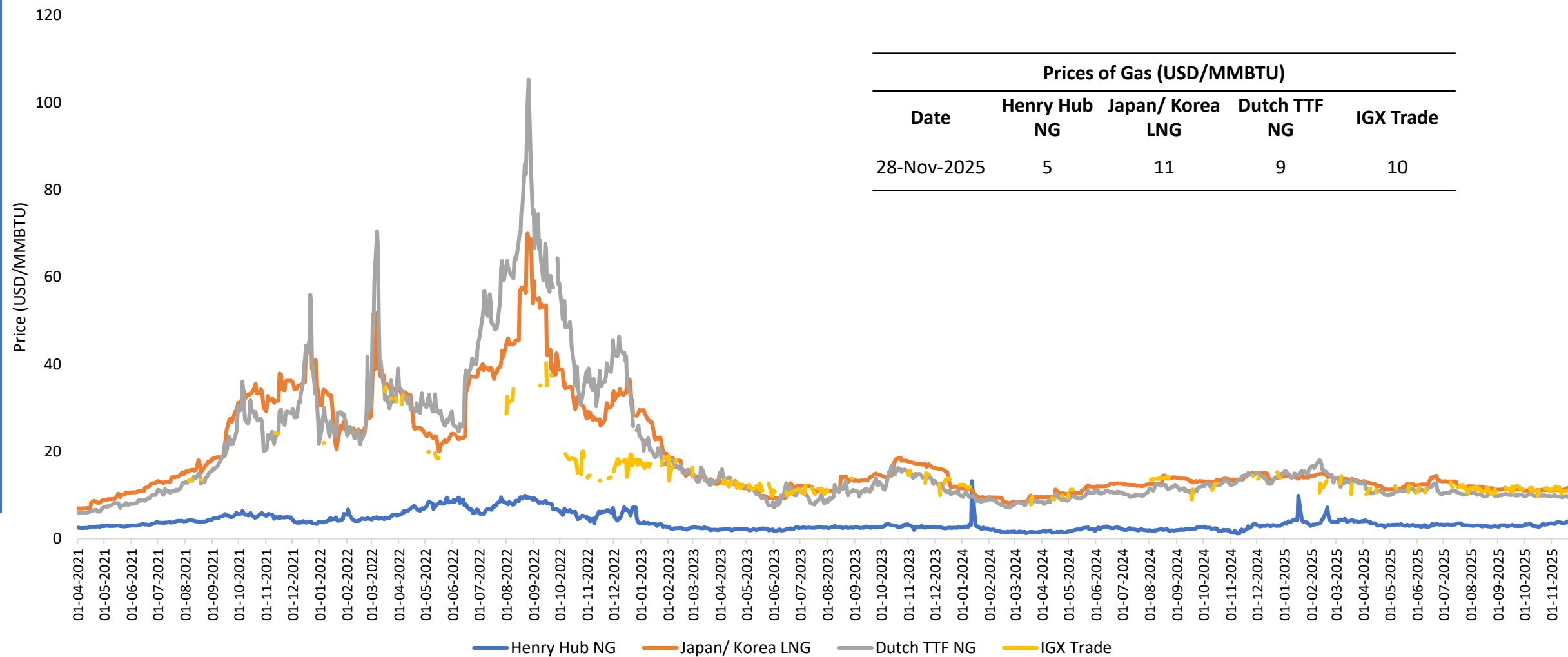
Others include- Trinidad, Cameroon, Egypt, France, Algeria, Belgium, Indonesia, Turkey, Russia, Spain, Malaysia, Brunei, Netherlands, Norway, and others.

Total Import of Liquified Natural Gas (LNG) (MMT)			
Total Import	2023-24	2024-25	2025-26 (up to Oct'25)
LNG	24.00	26.96	15.29



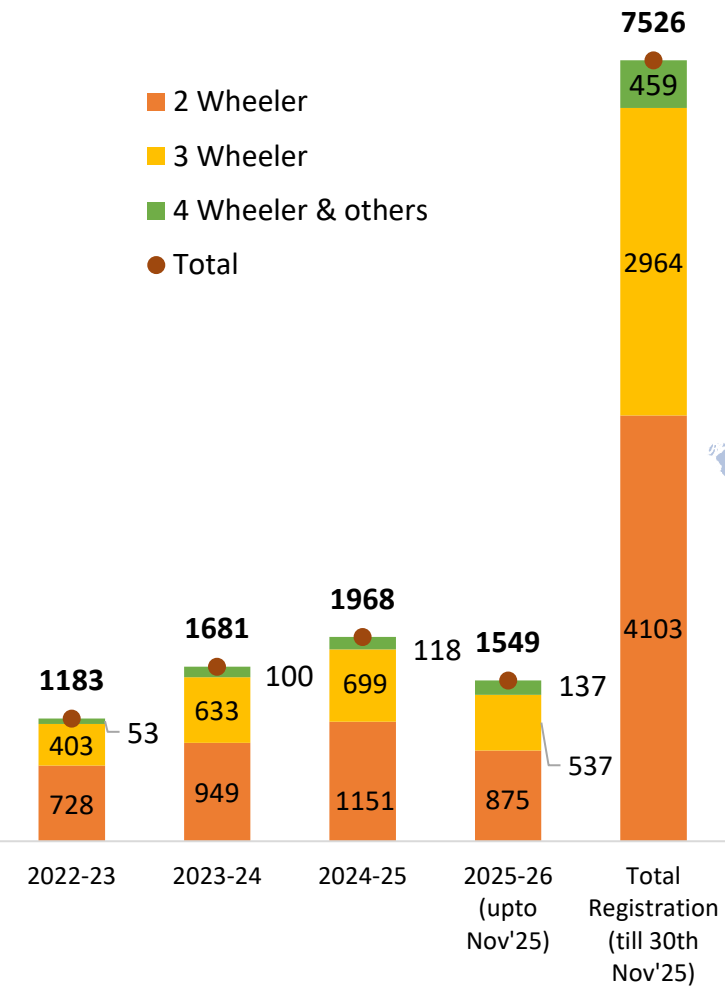
Daily Prices of Gas

Gas Daily Market Price

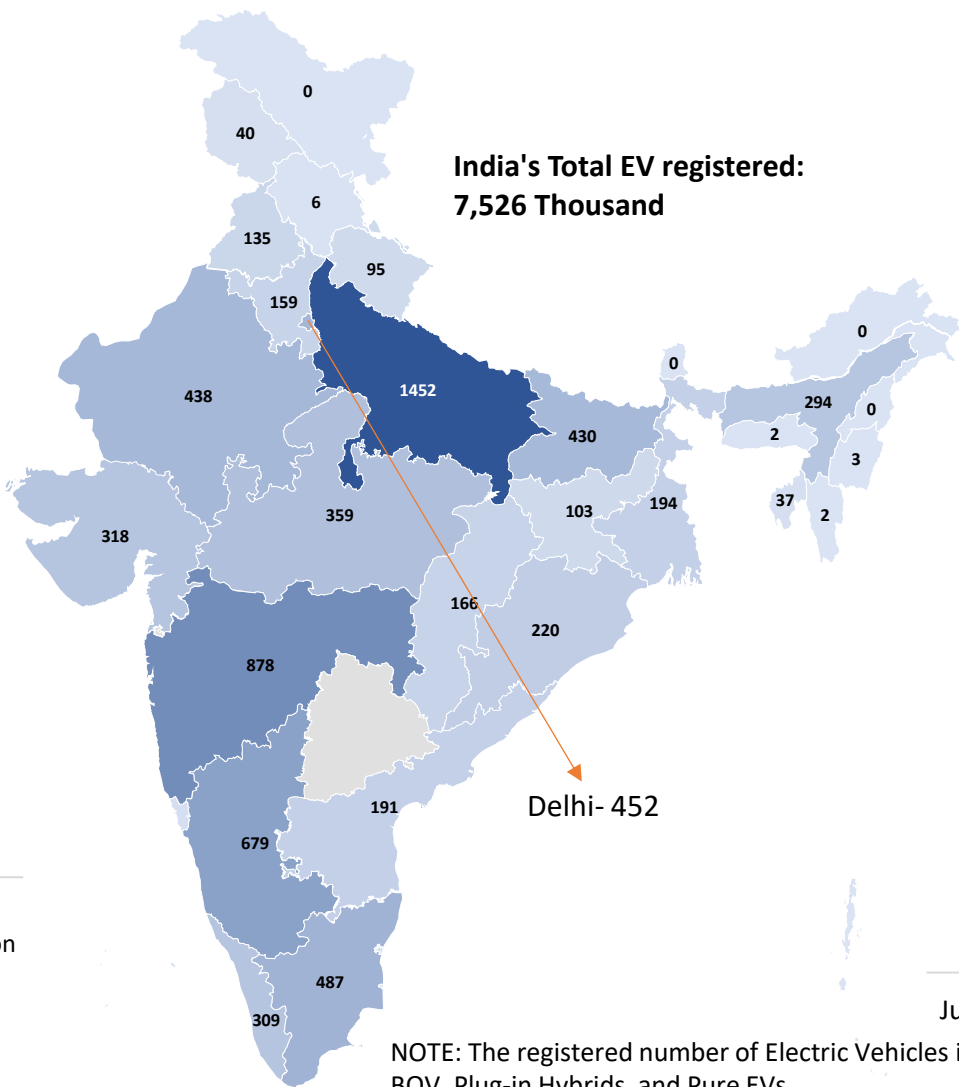


Status of Electric Mobility in India

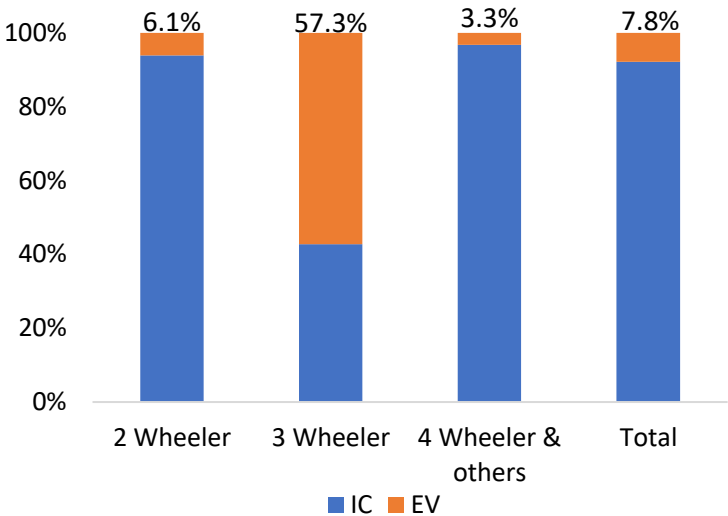
National EV registration
(Number in Thousands)



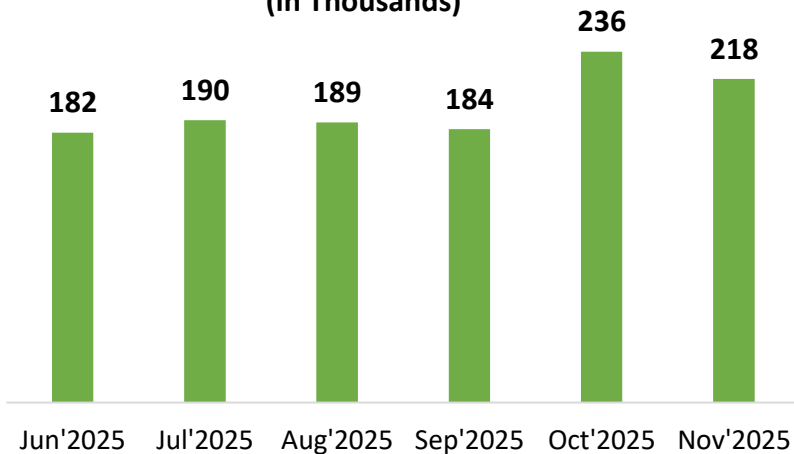
Cumulative State-wise EV registration
as on 30th November 2025 (in Thousands)



EV and ICE sale composition in 2024-25



Provisional Monthly EV registered
(in Thousands)

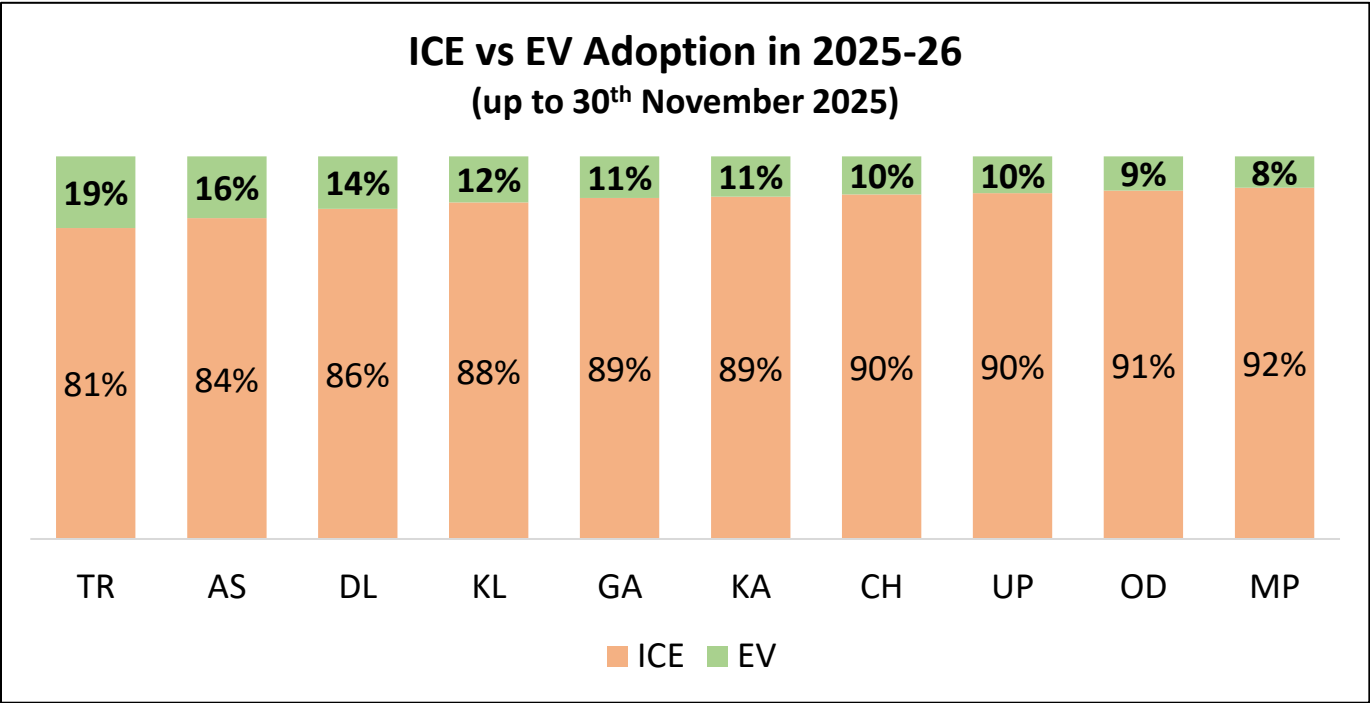
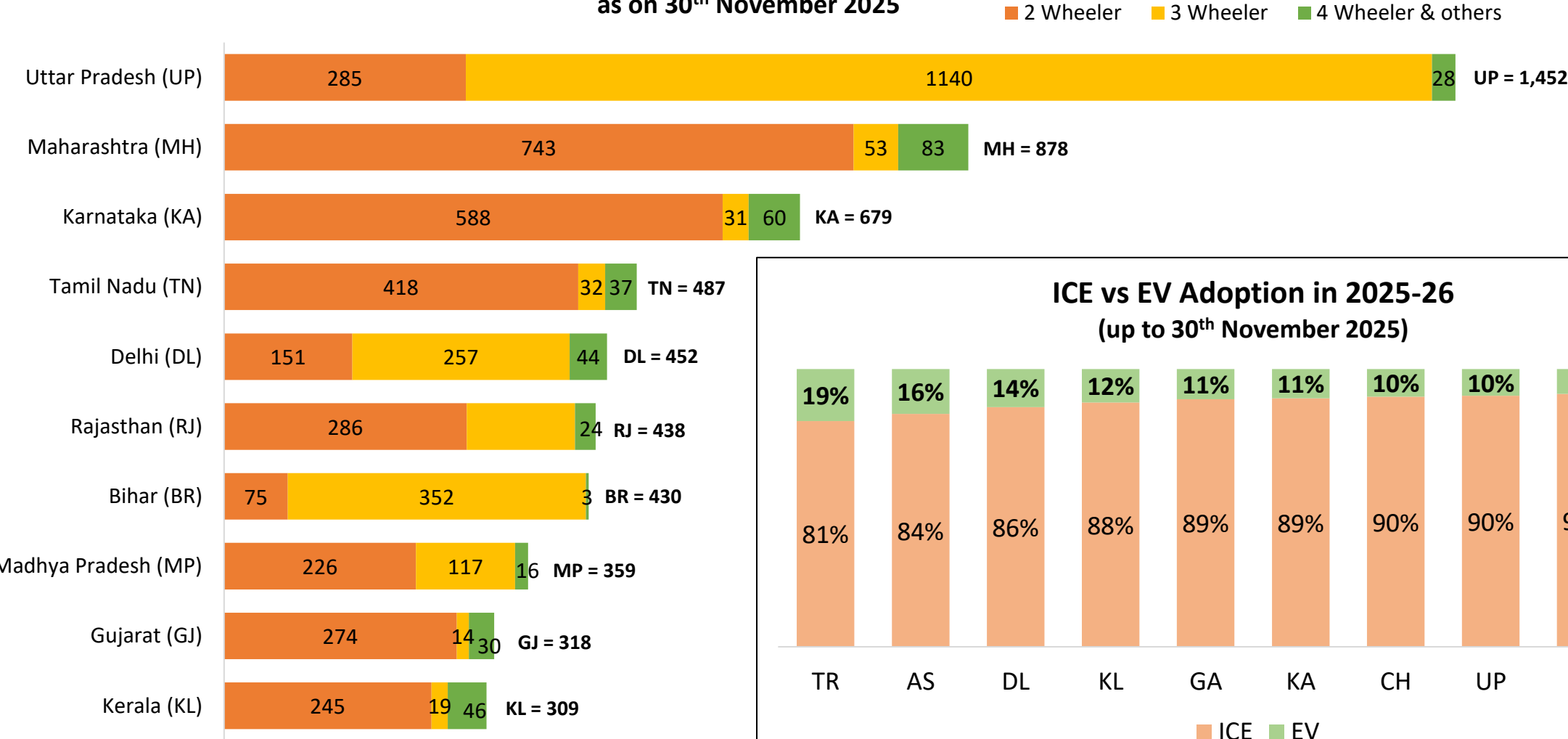


NOTE: The registered number of Electric Vehicles includes Electric BOV, Plug-in Hybrids, and Pure EVs.

Source: VAHAN Dashboard

Status of Electric Mobility in India

States with Highest Electric Vehicles Registered (in Thousands)
as on 30th November 2025



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](#) released 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 (H₂)

[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

- On December 17, 2025, the [Lok Sabha passes the Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India \(SHANTI\) Bill, 2025](#) on 17th December 2025, marking a significant step toward modernizing India's nuclear sector laws. The key highlights are:
 - It consolidates and modernises India's nuclear legal framework.
 - It enables limited private participation in the nuclear sector under regulatory oversight.
 - It strengthens statutory regulation by granting statutory recognition to the Atomic Energy Regulatory Board (AERB).
 - It supports India's clean-energy transition and the long-term objective of achieving 100 GW nuclear energy capacity by 2047.
- On 11th November 2025, [Union Minister Pralhad Joshi announced a ₹100 crore Call for Proposals for pilot projects to fund pilot projects developing innovative technologies for green hydrogen production from biomass and waste materials](#). This allocation is in addition to the ₹100 crore already sanctioned for start-ups under the National Green Hydrogen Mission. The scheme will be implemented through the Biotechnology Industry Research Assistance Council (BIRAC) to promote participation from industries, start-ups, and research institutions.
- Union Minister [Shri Pralhad Joshi inaugurated a state-of-the-art 240 tonnes/day biomass pellet plant in Rewari, Haryana](#), hailing it as a milestone in the state's clean energy journey and its growing role in India's renewable future
- Solar Energy Corporation of India Limited, a Navratna CPSU under the Ministry of New & Renewable Energy, has formally exchanged Government Orders with the Government of Andhra Pradesh for two key renewable energy projects: [a 1200 MWh Battery Energy Storage System \(BESS\) in Nandyal and a 50 MW Hybrid Solar Project](#).



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