

PANTOKRATOR

A better way

Opportunities in



India's Energy Transition

Market Update

PANTOKRATOR

A better way



Andre Shortell

Managing Partner,
Co-Founder



Rajaram Venkatraman

Senior Adviser

October 2025



October 2025



Coming soon



36.6GW Solar

Added in 2025, total capacity = 132GW¹

\$68Bn

Energy transition investment in 2025²

~50GW Stranded

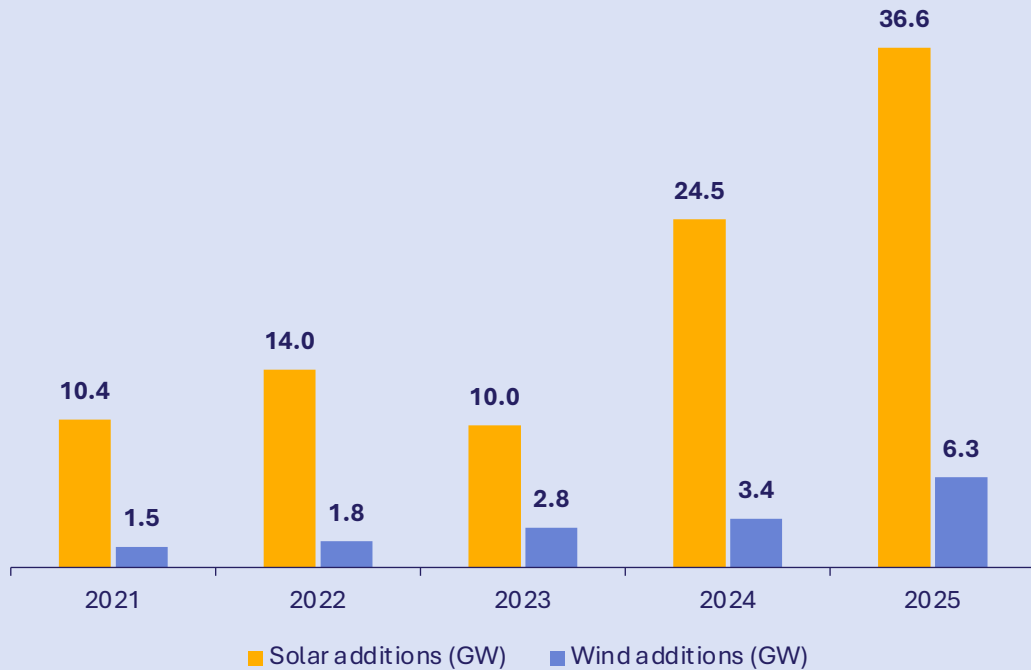
RE capacity awaiting offtake / PPA signing³

\$40+Bn BESS

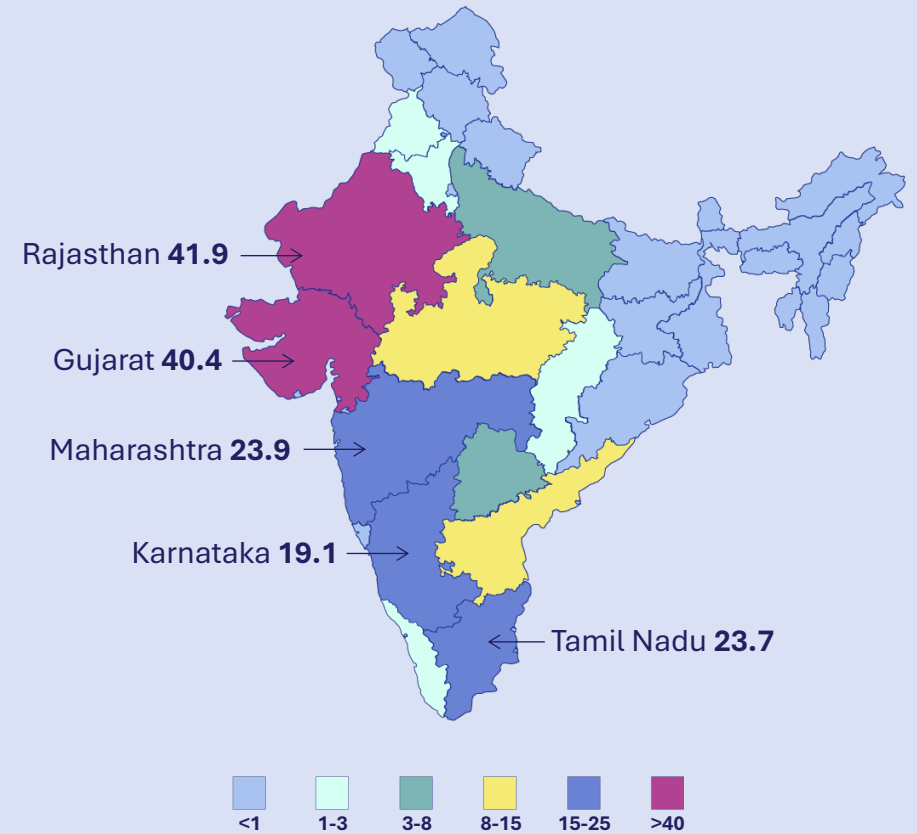
Investment by 2032⁴

Renewable energy capacity is accelerating

Solar + wind capacity additions (GW)¹

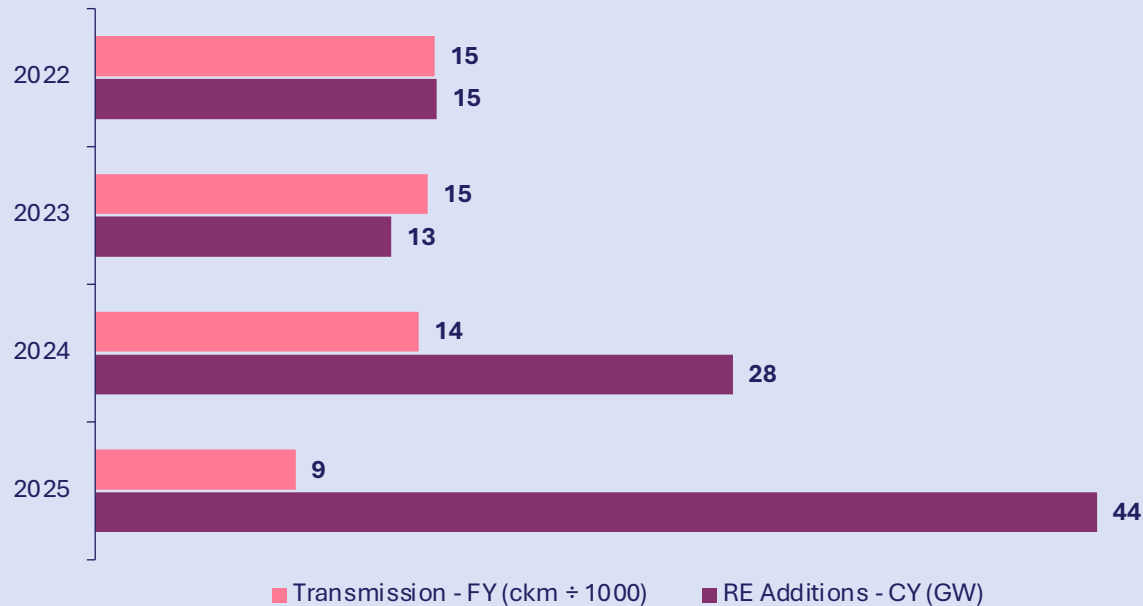


Total installed solar + wind capacity by state as of Dec 25 (GW)²

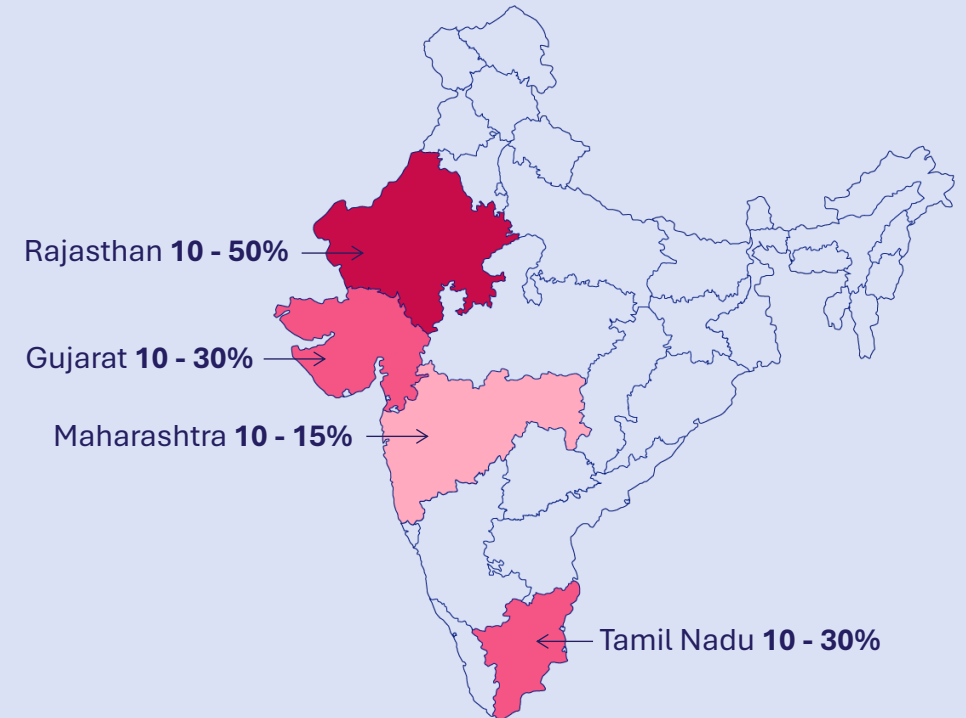


Curtailment increasing rapidly

Investments in transmission are falling behind

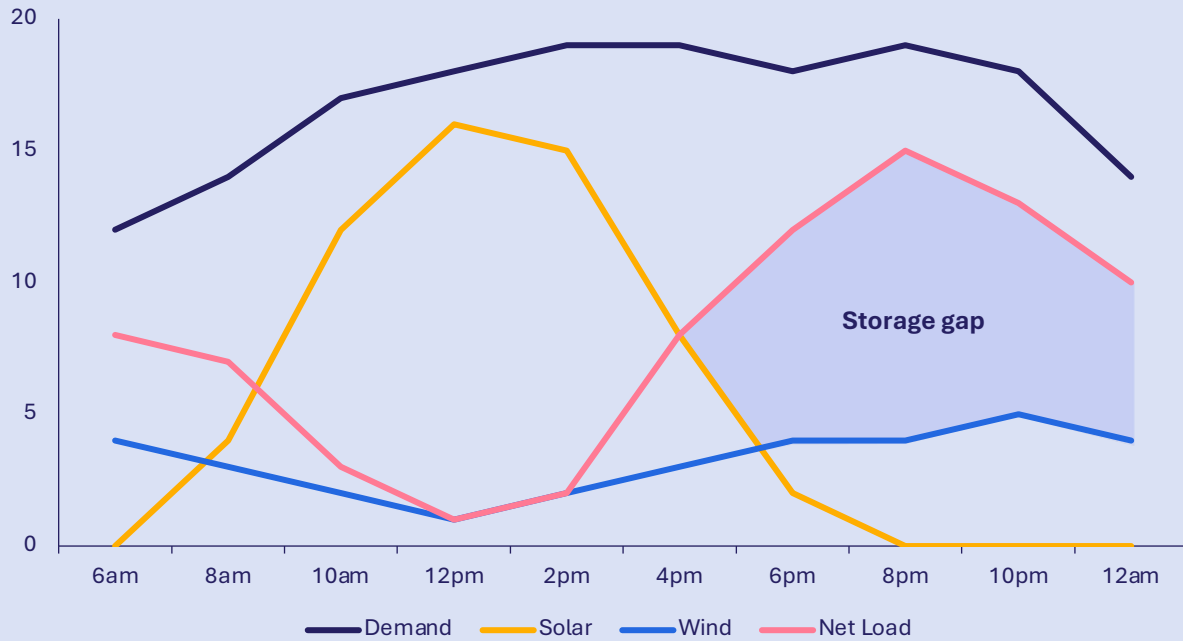


Reported peak-hour curtailment in 2025²

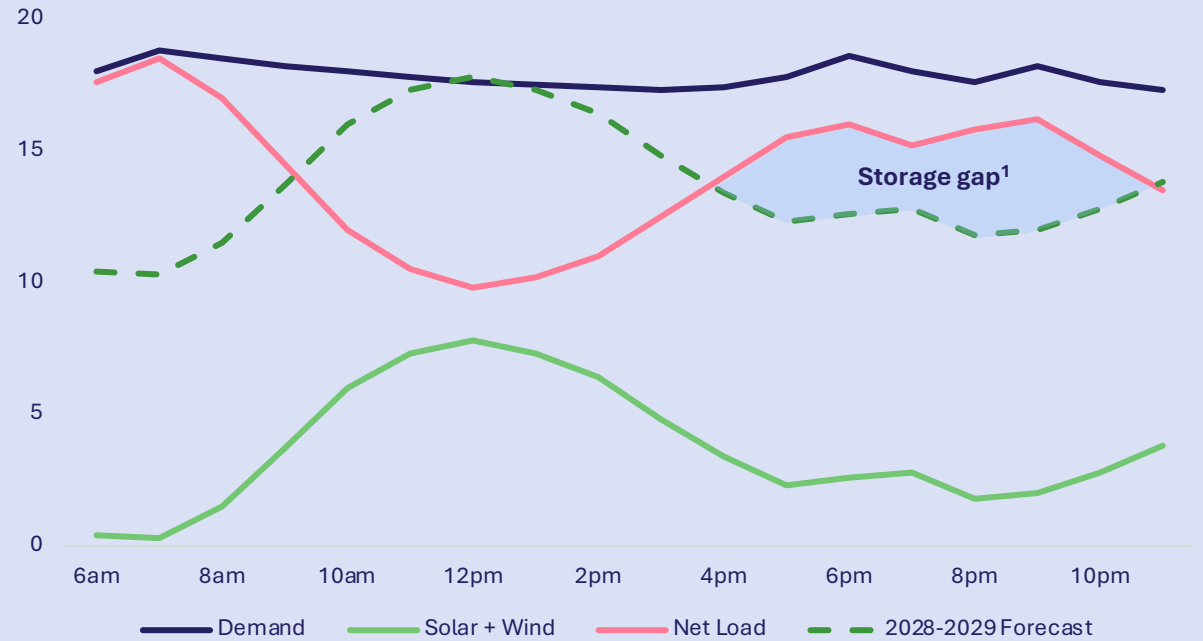


Storage needs vary by state

Rajasthan (GW)



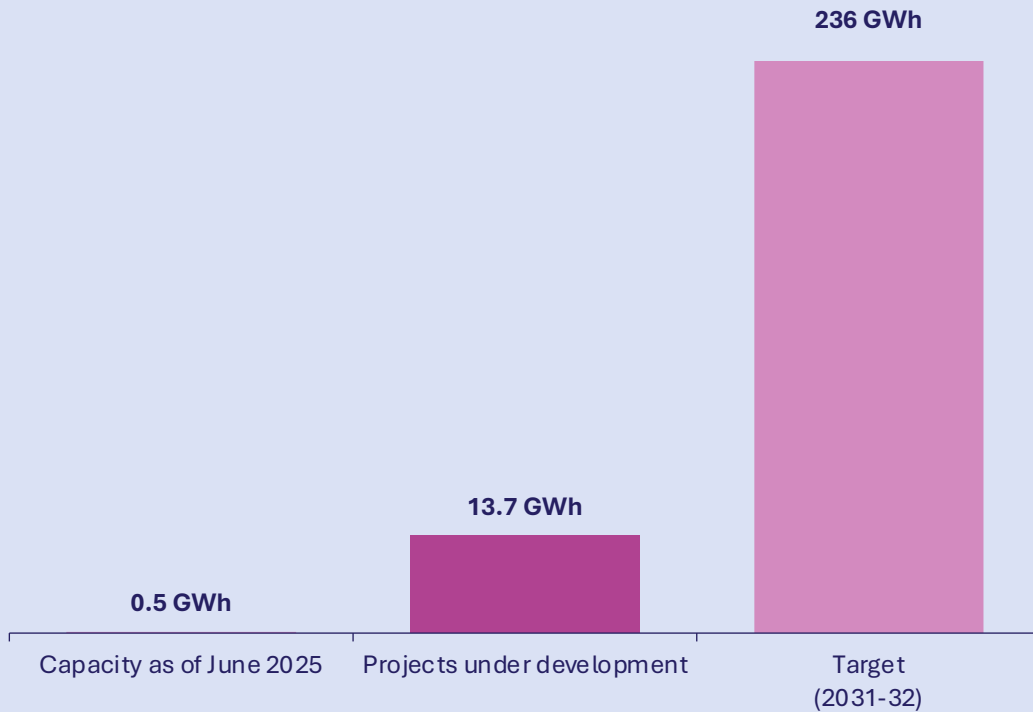
Tamil Nadu (GW)



→ Hybrid (solar+wind) reduces mismatch; **storage eliminates it**

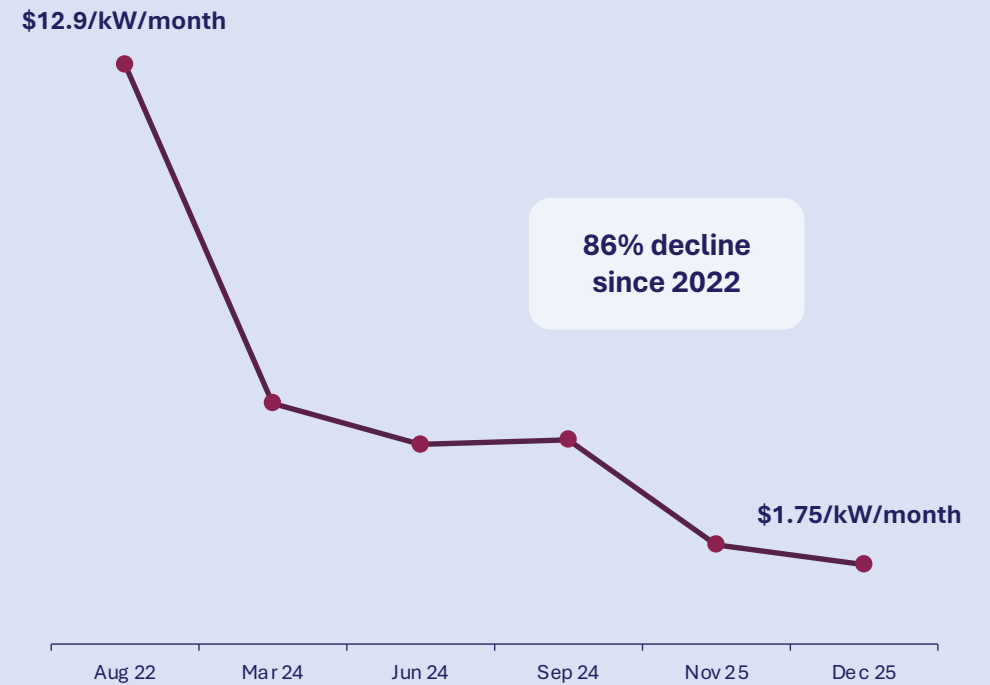
Target of 236 GWh BESS by 2032 = \$40+Bn investment requirement

BESS capacity: 2025 vs 2031-2032 target¹



India standalone BESS auction tariffs²

2-hour standalone BESS (capacity charge)



BESS major initiatives

Recent auction awards and projects

Developer	Project / Location	Power / Energy Capacity	Status
Adani	Khavda, Gujarat	1,126 MW / 3,530 MWh (~3.5 GWh)	Under deployment; targeted by Mar 2026
ENGIE	Gujarat (GUVNL)	280 MW / 560 MWh	Awarded Nov 2025; COD targeted 2027
JSW Energy	Kerala (SECI)	125 MW / 500 MWh	BESSA signed with KSEB (Apr 2025)
JSW Energy + Reliance Power	SECI (ISTS)	1 GW / 2 GWh	Awarded (Sep 2024)
NTPC	11 thermal stations (India-wide)	1.7 GW (tendered)	Tender issued (Aug 2025)
PM Green	WBSEDCL – Goaltore (West Bengal)	250 MW / 1 GWh	Awarded (Jan 2026)
Tata Power Renewable Energy	Kerala (NHPC / KSEB)	30 MW / 120 MWh	BESPA signed (Jul 2025)

Case study: large domestic build out

Battery Gigafactory

Jamnagar, Gujarat: operations targeted from 2026



40

GWh initial capacity

100

GWh scaled capacity

\$10bn

Clean energy committed

Selected domestic manufacturing

Vikram Solar

5 GWh BESS manufacturing plant by FY27 (Tamil Nadu)

Amara Raja Energy & Mobility

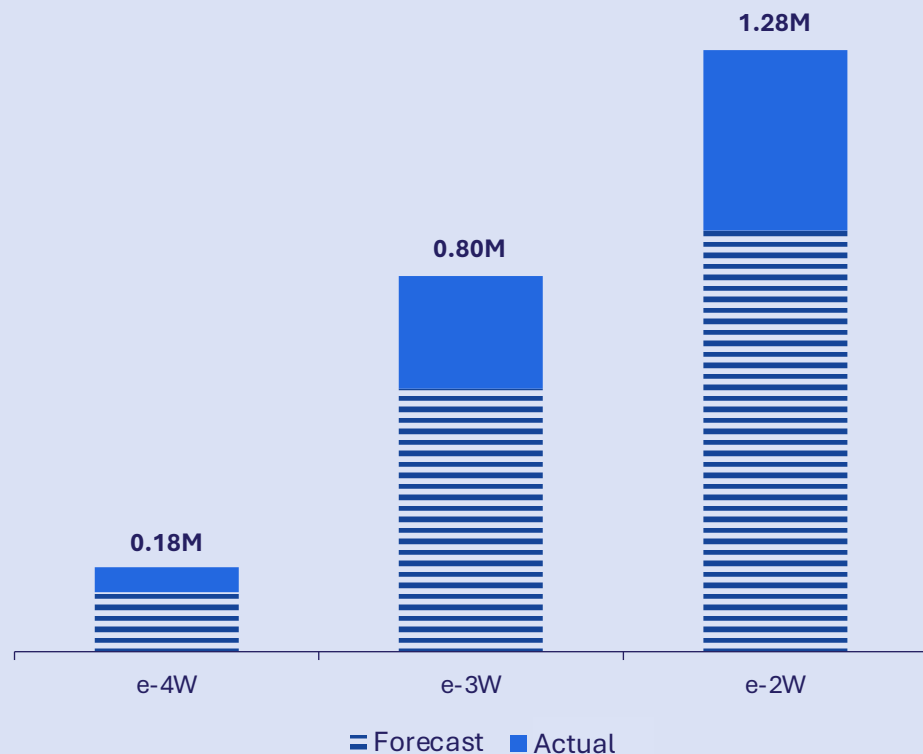
Li-ion battery pack assembly (India) + giga-corridor buildout

Exide Industries / Nexcharge

Li-ion battery manufacturing (India) via Nexcharge JV

EVs: 2W/3W exceeding forecasts, localizing batteries increasing

CY 2025 EV Registrations by Segment vs Forecast¹

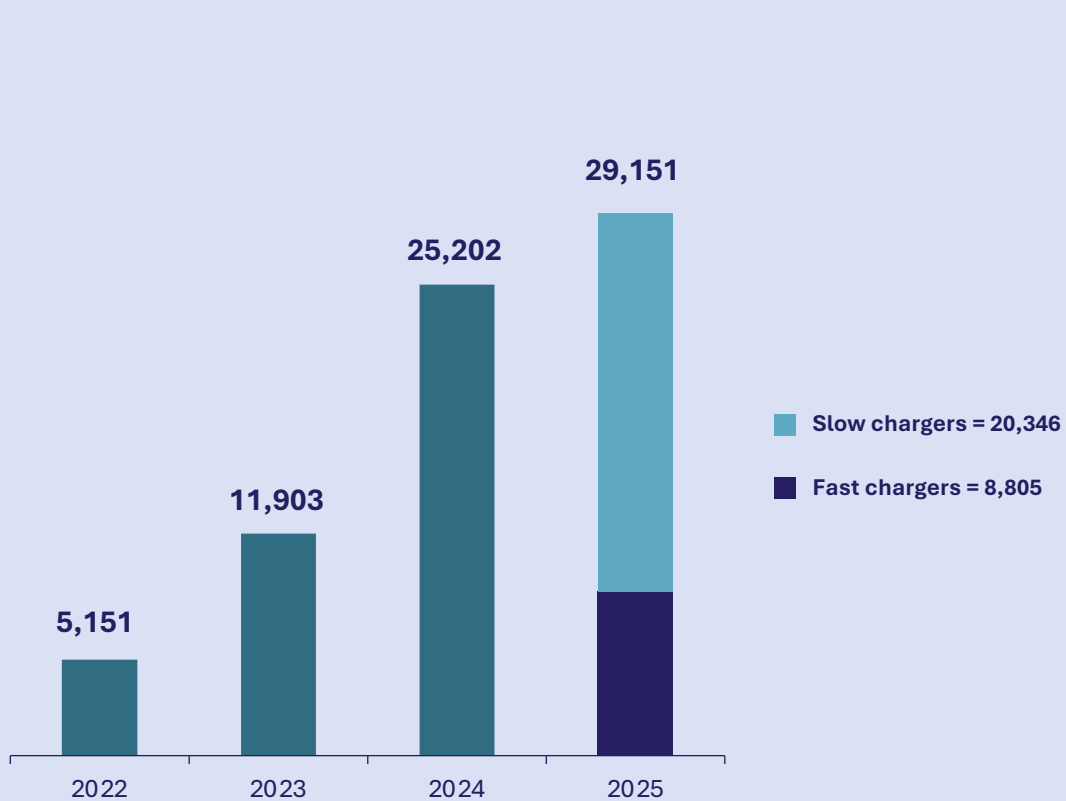


Domestic cell supply is ramping up, but lagging demand²

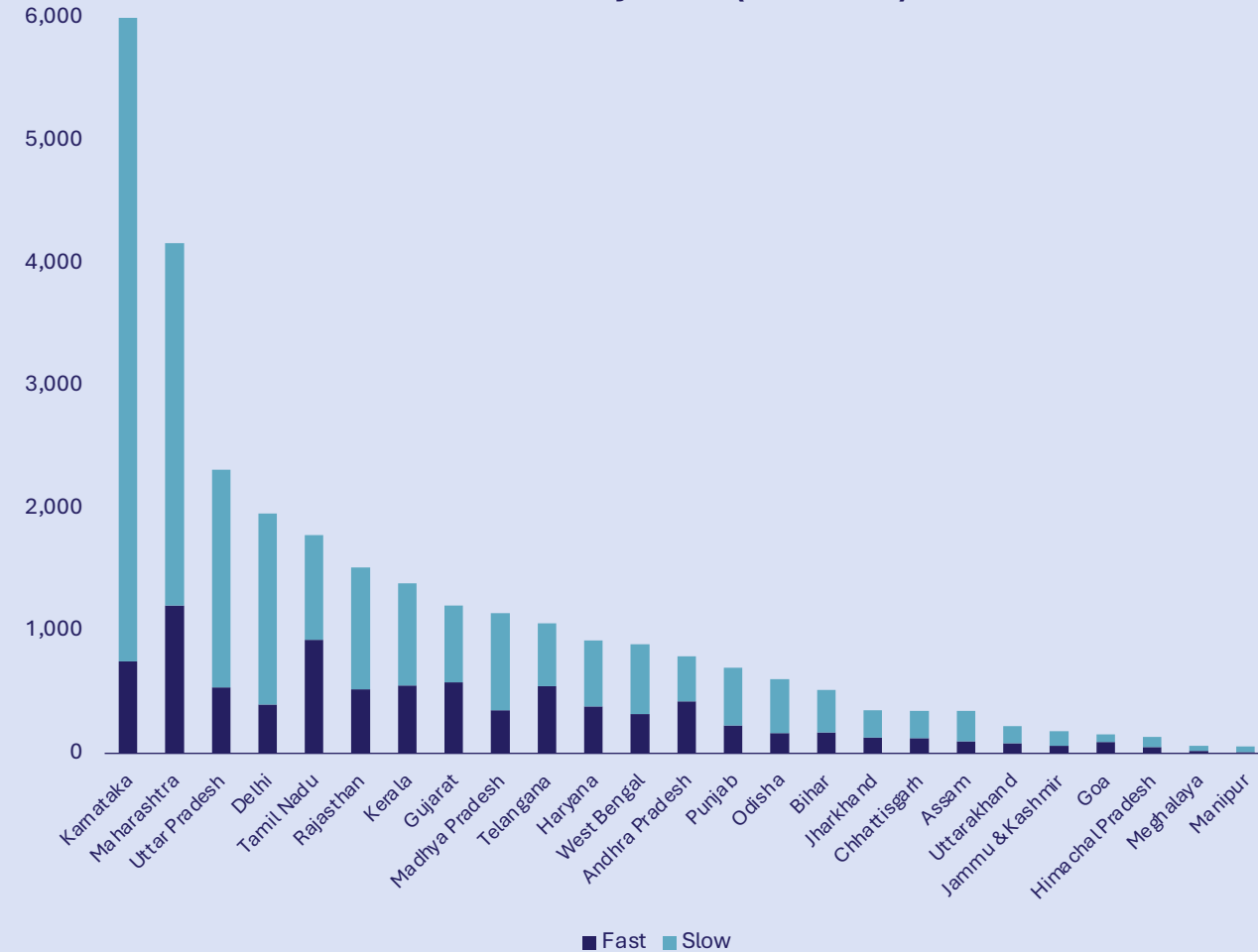
Developer	Project / Location	Power / Energy Capacity	Status
Ola Electric	Krishnagiri, Tamil Nadu	1.4 GWh (operational); 5 GWh planned	Operational; ramp to 5 GWh targeted by Mar 2026
Reliance	New Energy Giga Complex, Jamnagar (Gujarat)	40 GWh initial (planned); 100 GWh scaled (planned)	Under construction / planned; operations targeted from 2026
Tata Agratas (Tata Group)	Sanand, Gujarat	20 GWh (phase 1)	Under construction; targeted 2026
TDSG JV (Suzuki/Denso/Toshiba)	Gujarat (location disclosed; JV manufacturing)	18 million cells / annum	Operational / ramping (JV established; production ramp ongoing)
Exide Energy Solutions	Bengaluru / Karnataka	6 GWh (phase 1 planned)	Under construction; commercial production targeted by FY2026
Amara Raja	Telangana	~1 GWh planned (phase 1)	Announced / under development; phased buildout through FY2027

Fast chargers are 30% of public market, and expected to grow

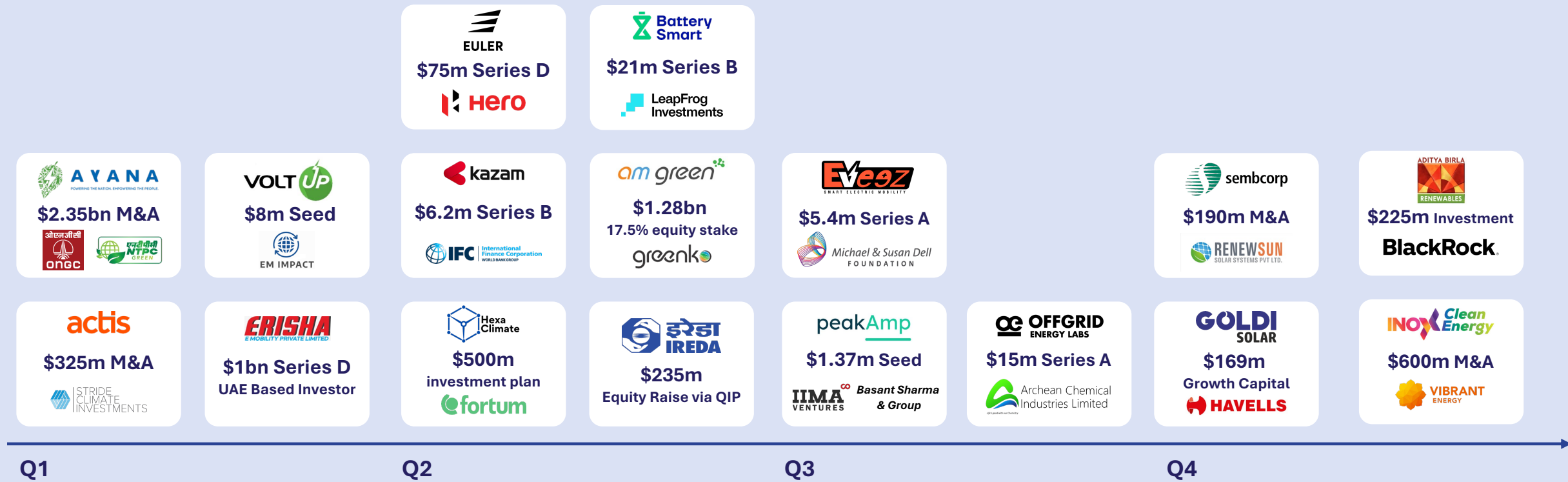
Total public charging stations (Dec 2025)¹



Fast vs slow by state (Dec 2025)²



Key investments & deals 2025



Outlook

RE buildout quickening

Local solar cell and module manufacturing.

BESS needs to scale fast

Storage tenders expand; costs fall, making firm renewables increasingly bankable.

Economics of 2/3w EV

50-75% reduction in operating (fuel costs) driving demand 4 wheelers to pick up due to wider choice

Capital costs relatively high

But more PEs, infras, strategics, supporting larger platforms.

Electrification accelerates

Data centres, industry, and mobility drive demand for reliable clean power.

Bottlenecks will persist

Grid access and build out, permitting, and health of DISCOMs decide pace of growth more than access to capital or technology.