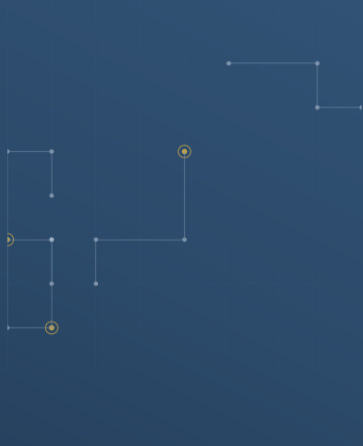


India's Energy Stack

The digital layer emerging behind India's next energy investment cycle

As India adds renewables, storage, EVs and distributed energy at unprecedented scale, an emerging digital layer – the India Energy Stack (‘IES’) is being designed to provide a common digital infrastructure for an increasingly complex energy ecosystem. Its specifications, commercial models and conformance pathways are still under development.



THE SHIFT

For years, India's energy story was largely about adding capacity – more solar, more wind, more generation. A second transformation is now taking shape underneath it. The Ministry of Power, through REC Limited, is developing the IES – a Digital Public Infrastructure designed to create common standards for identity, data exchange and energy transactions across an increasingly decentralized power system.

As renewables, storage, EVs, smart meters and Distributed Energy Resources (‘DER’) scale, IES aims to connect previously fragmented systems and enable new ways for energy to be generated, exchanged and consumed. Following the release of its Version 0.4 architecture in March 2026, the initiative has moved into sandbox development and pilots, including peer-to-peer energy trading and regulatory data exchange – making India's energy transition increasingly a story of a combination of digital and physical infrastructure, with the digital layer still being built.

BY THE NUMBERS

283 GW

non-fossil capacity installed, Mar 2026, en route to 500 GW by 2030.

57% of the way to the 500 GW 2030 target

Source: [PIB, Apr 2026](#)

5.9 GWh

Cumulative battery storage installed, Mar 2026 – Q1 2026 alone added a record 4.6 GWh.

4.6 GWh of the 5.9 GWh total was added in Q1 2026 alone

Source: [Mercom India Research, 2026](#)

888 GWh

~1 GWh of the 888 GWh needed is installed as of July

storage capacity the grid will need by 2035–36 (174 GW), vs ~1 GWh of Battery Energy Storage System (‘BESS’) installed as of July 2026.

Source: [Central Electricity Authority, 2026](#)

66%

YoY growth in EV retail sales

YoY growth in EV retail sales (all segments), Jul 2026. ~8% of vehicles sold were electric in India.

Source: [Fortune India, 2026](#) ; [Down to Earth, Jul, 2026](#)

72.4m

Smart meters installed nationwide against a 203 million RDSS sanctioned.

36% of the 203m Revamped Distribution Sector Scheme (‘RDSS’) meter target

Source: [Renewable Watch, 2026](#) ; [PIB, Feb 2026](#)

6.4%/yr

IEA demand growth to 2030

IEA-projected electricity demand growth to 2030 (+570 TWh in 5 years).

Source: [International Energy Agency, Electricity 2026](#)

WHERE THE OPPORTUNITY IS

A - DIGITAL INFRASTRUCTURE OPPORTUNITIES EMERGING AROUND IES

01 Interoperability & conformance design

Engage early as specifications, conformance pathways and implementation models continue to evolve.

02 DER data exchange & orchestration

Forecasting and coordination across millions of new distributed assets.

03 Cybersecurity & trusted data exchange

Consent and security architecture as data-sharing rules mature under the DPDP Act.

B - ENERGY TRANSITION OPPORTUNITIES ACCELERATED BY THE SAME SYSTEM TRANSFORMATION

04 Storage integration & Virtual Power Plants (‘VPP’)

Software layered on a fast-scaling BESS fleet.

05 EV-grid integration

Smart charging as EV penetration compounds.

06 Battery supply chain & critical minerals

Minerals, refining and offtake pathways still forming.

WHY AUSTRALIA

Australia has developed significant operating experience managing a grid with high penetration of distributed, consumer-owned energy assets – challenges India is now beginning to address at much greater scale. That operating experience, not a finished solution, is what Australian firms bring to the table.

INDIA–AUSTRALIA STRATEGIC ENGAGEMENT MATRIX

FOCUS AREA	INDIA'S IMMEDIATE NEED	AUSTRALIAN STRATEGIC ADVANTAGE	HIGH-YIELD COMMERCIAL PATHWAY
DIGITAL FOUNDATIONS <i>(IES & data security)</i>	Establish secure data standards and rule-based data sharing under the DPDP Act for the emerging IES v0.4 ecosystem.	Deep experience in large-scale DER data governance, consent architecture and data-sharing (e.g. AEMO systems).	Premium IES advisory (architecture); joint development of secure data-exchange platforms; funded conformance pilots.
DER ORCHESTRATION & VPPs	Forecast and orchestrate millions of decentralized, consumer-owned energy assets (solar, batteries, EVs).	World-leading grid-management expertise at some of the highest global DER penetration rates.	Licensing of grid-orchestration software; direct supply of VPP controls; strategic tech partnerships.
STORAGE INTEGRATION & MINERALS	Build grid storage capacity toward 888 GWh (174 GW) by 2035–36; secure the critical-minerals value chain.	World's largest lithium producer; top-5 global for cobalt and rare earths, with grid-scale storage operating experience.	Minerals-processing JVs (KABIL–CMFO); critical-minerals offtake agreements; storage software & controls supply.
EV-GRID INTEGRATION & RDSS	Optimize the impact of a fast-scaling EV fleet and maximize value from the 250m-meter RDSS rollout (6.4%/yr demand growth).	Operational knowledge from smart charging, V2G pilots and large-scale smart-meter data analytics.	Supply of smart-charging & V2G solutions; data analytics as a managed service; grid-optimization collaboration with DISCOMs.

Australia is the world's largest lithium producer (~43% of global production) and ranks among the top five global producers of cobalt and rare earths (Source: [Australian Government, 2026](#)). The Australia–India Critical Minerals Investment Partnership (KABIL–CMFO) identified its first five priority lithium and cobalt projects for joint due diligence in 2023 (Source: [Observer Research Foundation, 2026](#)) and continues to deepen; the India–Australia Rooftop Solar Training Academy opened at Gandhinagar, Gujarat, in July 2026 (Source: [PIB, Jul 2026](#)).

WHAT AUSTRALIAN FIRMS SHOULD BE ASKING NOW

01 Are IES specifications stable enough yet to build against?

02 Are we positioned to influence conformance pathways, not just supply into them?

03 Which DISCOMs are financially strong enough to be viable counterparties?

04 Does VGF/PLI-linked procurement change how we should structure entry?

05 How does DPDP Act compliance change our data-handling obligations?

06 Where will value actually accrue – technology supply, implementation partnerships, market participation, or long-term managed services?

WHY THE WINDOW IS OPENING NOW

IES v0.4

Draft architecture & strategy documents, March 2026.

Source: [REC India, 2026](#)

RDSS

203.3m smart meters sanctioned; 72.4m installed nationwide as of Jun 2026.

Source: [PIB, Mar 2026](#)

DPDP Act, 2023 (India)

Rules notified Nov 2025; phased implementation through May 2027.

500 GW by 2030

Non-fossil capacity target; 283 GW installed as of Mar 2026.

Source: [PIB, Apr 2026](#)

India–Australia Energy & Resources Partnership

Rooftop Solar Training Academy opened, Gujarat, Jul 2026; renewables, storage & critical-minerals cooperation reaffirmed.

Source: [PIB, Jul 2026](#)

The next investment cycle in India's energy sector will be won as much through coordination as through construction.

As India's grid becomes more decentralized and digitally interconnected, opportunity will extend beyond supplying physical infrastructure – toward the standards, analytics and trust frameworks that let it operate as one system. MGC Global can help Australian firms assess market relevance, track policy and regulatory developments and map capability, partnership and entry pathways into India's energy transition.

Get ahead of India's Energy Transition →