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Technology-led Procurement & Supply Chain Platforms

Their Growing Importance in Enabling Renewable Energy Projects

Authored by Sumit Kumar - Founder & Director, Headsup B2B

India added a record 55.3 GW of non-fossil fuel capacity in FY 2025-26 - its highest-ever annual addition - including 44.6 GW of renewable energy and 6.05 GW of wind power, while crossing 50% non-fossil installed power capacity five years ahead of schedule.[1] As renewable energy deployment accelerates, the challenge is increasingly shifting from capacity addition to efficient project delivery.

This reflects a broader shift across the renewable energy industry. The problem is no longer merely setting up generation capacity, but completing projects on deadline despite difficult procurement processes, supply-chain complexities, and fragmented supplier networks.

With rapid investment flowing into green energy, efficient project completion has become almost as important as financing. The strain is already visible in delivery: as of

March 2026, more than 61 GW of solar and nearly 5 GW of wind capacity were under implementation, with a further 37 GW of solar and 1.8 GW of wind tendered - a pipeline that pushes execution, not ambition, to the centre of the conversation.[2] Increasingly, renewable energy deployment is constrained less by ambition than by execution capability.

Procurement is becoming a critical driver of project success

The renewable energy ecosystem relies on a complex network of manufacturers, suppliers, EPC contractors, logistics providers, developers, and asset owners. Delivering projects on time requires tight coordination of critical components such as solar modules, battery storage systems, inverters, cables, transformers, and other electrical equipment.

As deployment accelerates, supply chains are growing more

complex and more exposed to geopolitical tensions, logistical disruptions, material shortages, and trade uncertainties. At the same time, deadlines are tightening.

Any delay in component delivery can disrupt installation schedules, push back commissioning, and raise costs. Procurement is therefore no longer a back-office function. It has become a strategic driver of project delivery, financial performance, and deployment success.

Renewable energy is increasingly an execution challenge

The next generation of renewable energy projects is significantly more complex than traditional solar or wind installations. Hybrid projects combining solar, wind, and battery storage are becoming common, grid integration requirements are expanding, and energy storage is being deployed at scale

to improve reliability and enable round-the-clock renewable power.

More than 70 GW of hybrid, round-the-clock, and firm dispatchable renewable energy projects are currently under implementation or tendered in India, reflecting the industry's shift towards more integrated and complex energy systems.[3]

This transition requires technologies, suppliers, and schedules to be harmonised across the full project cycle. Developers are no longer managing a single type of equipment; they are coordinating multiple suppliers, schedules, technologies, and installation processes simultaneously.

Yet renewable energy supply chains still depend on fragmented supplier networks, manual coordination, and siloed information flows, creating uncertainty exactly where predictability matters most. The more complex the project, the more delivery efficiency determines the outcome.

Technology is helping create a more connected procurement ecosystem

Technology-driven procurement and logistics platforms are helping address some of these challenges by creating a more connected and transparent working environment.

Where earlier tools functioned purely as sourcing platforms, today's procurement platforms are increasingly becoming execution platforms — combining supplier discovery, inventory insights, logistics coordination, procurement planning, project management, and financing in a single environment.

With real-time supply networks, project teams can quickly identify verified suppliers and assess product availability. Digital procurement enables more efficient sourcing and reduces reliance on fragmented communication channels. Through predictive analytics and data-driven planning, organisations can anticipate potential

disruptions, optimise procurement decisions, and reduce delays before they affect project timelines.

The benefit extends well beyond procurement itself. These tools improve coordination between manufacturers, suppliers, EPCs, developers, and project owners, strengthening alignment across the renewable energy value chain.

Technology is an enabler, not a silver bullet

These platforms are not a cure-all, and it is worth being clear about their limits. Software cannot manufacture a transformer that is in global short supply or resolve a polysilicon bottleneck; it can only help teams see and plan around such constraints earlier. Adoption also carries real friction — onboarding costs, integration with legacy EPC and ERP workflows, and a genuine reluctance among suppliers to share commercial and inventory data on shared platforms. The value of a connected ecosystem depends on enough participants choosing to connect to it. Recognising these limits is what separates a useful tool from an over-promised one.

Visibility is becoming as important as cost

For years, procurement decisions were driven primarily by cost. Increasingly, though, renewable energy developers recognise that the lowest-cost supplier does not always deliver the lowest-cost outcome.

Project delays often carry financial consequences that dwarf the initial procurement saving. A single late shipment of equipment can idle installation crews, push commissioning past a tariff or PPA deadline, and trigger liquidated-damages penalties — costs that quickly exceed any upfront discount. As a result, procurement decisions now weigh supplier reliability, fulfilment performance, delivery predictability, and operational consistency alongside price.

Technology platforms provide the visibility needed to make these more informed decisions. Access to timely information allows project teams to detect risks early and respond to disruptions quickly.

Stronger supply chains will drive the next phase of growth

The renewable energy sector has made remarkable progress in expanding capacity. The next challenge is delivering projects with the speed, reliability, and efficiency needed to meet growing energy demand and long-term decarbonisation goals. As projects become larger and more complex, procurement and supply chain performance will play an increasingly decisive role in determining outcomes.

Technology-led procurement and supply chain platforms are helping bridge this gap by improving coordination, strengthening supplier networks, enabling better planning, and reducing operational bottlenecks. As clean energy deployment accelerates, success will depend not only on generating power, but on the ability to source, coordinate, and deliver projects at scale ■

About Author



Sumit Kumar is a serial entrepreneur and execution-driven business builder with over 15

years of experience across enterprise operations, HR technology, and B2B commerce. He is the Founder and CEO of two ventures - Headsup Corporation, an HR consulting and technology firm established in 2018, and Headsup B2B, India's first AI-powered B2B procurement and supply chain platform for the infrastructure and green energy sectors.