



Renewable Energy Project Delivery in Asia-Pacific

From Construction Risk to Integration Risk



Integration risk is displacing construction risk

"Renewable energy projects are no longer principally construction projects — they are systems-integration projects."

Then

Delivery turned on engineering and construction execution — a single contractor could control most of the work.

Now

It turns on coordinating many independent participants across technical, regulatory, commercial and multi-jurisdictional interfaces.

Three ways to buy a project

Each structure decides one thing above all — where integration risk resides.

MODEL 1

EPC Wrap

One contractor for engineering, procurement, construction, commissioning and handover. Simple to finance — a governance model, not just a contract.

INTEGRATION RISK

Contractor (nominally)

MODEL 2

Turnkey Lump Sum

The owner "turns the key" — yet turbines, grid energisation and regulatory approval routinely sit outside the contractor's control.

INTEGRATION RISK

Shared / contested

MODEL 3

Multi-Contracting

The owner contracts specialists directly and becomes the integrator. A capability strategy — not a simplification strategy.

INTEGRATION RISK

Owner

None is inherently superior. Each simply relocates the risk.

EPC "wrap" feels like certainty. It isn't a guarantee.

Dimension	EPC Wrap	Turnkey Lump Sum	Multi-Contracting
Price certainty	High at award	Moderate	Lower but manageable
Cost transparency	Lower	Lower	Higher
Lender familiarity	High	High	Moderate & increasing
Owner control	Lower	Lower	High
Interface burden on owner	Lower	Moderate	High
Contractor capability needed	Very high	Very high	Moderate
Owner capability needed	Moderate	Moderate	Very high
Flexibility to change	Low	Low	High
Where integration risk sits	Contractor (nominally)	Shared / contested	Owner
Frontier-market suitability	Conditional	Conditional	Moderate to high

Table 1 · A practitioner's summary — tendencies, not guarantees. Every row is sensitive to the capability of the parties.

Asia-Pacific is not one market



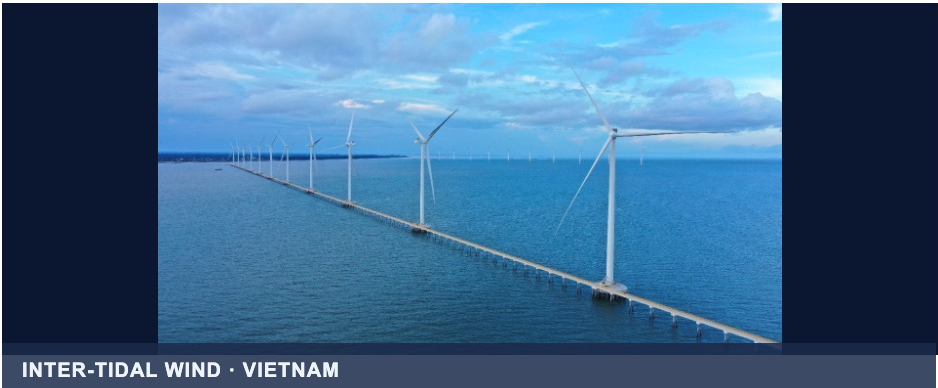
ONSHORE WIND · AUSTRALIA



ONSHORE WIND · INDONESIA



EXTREME CLIMATE WIND · MONGOLIA



INTER-TIDAL WIND · VIETNAM

Six characteristics set the region apart — each reshapes what a procurement model can deliver.

01 Institutional maturity varies

Permitting, grid studies and approvals are established in some markets, still forming in others.

02 Contractor depth is uneven

The industry has expanded faster than the supply of genuine EPC integrators.

03 Dependencies are the critical path

Grid, OEMs and regulators the project does not own increasingly decide the schedule.

04 Regulatory complexity is rising

Environmental, aviation, heritage, transmission and grid approvals multiply, not simplify.

05 Human capital is the scarce resource

Experience lives in people, and it does not scale linearly across projects.

06 Financing shapes procurement

Lender preferences can fix the model before capability is ever assessed.

You can't transfer a risk you can't control

Risk can only be allocated, not transferred absolutely. Owners pay premiums for transfer that never occurs; the residual exposure stays embedded in the project — and lands on whoever is capable of controlling it.

The model is the vehicle. Capability is the engine.

AND THE COST OF GETTING IT WRONG IS RISING

~44%

of new ICC arbitrations in 2024 were construction & energy disputes.

US\$14.5bn

in total disputes across 886 new SIAC cases in 2025. USD 32M average case value.

Integration

failures, not engineering defects, now drive the disputes pipeline.

Five things to carry away

- No delivery model is superior — each relocates integration risk rather than removing it.
- Integration risk has overtaken construction risk as the dominant delivery challenge.
- Capability, not contractual form, is the decisive variable in project outcomes.
- Multi-contracting is a capability strategy, never a cost-reduction shortcut.
- Resource the capability gap before procurement, not after a dispute.

READ THE FULL COMMENTARY

The long-form goes far deeper

- A model-by-model analysis of EPC wrap, turnkey and multi-contracting.
- Six market deep-dives — Australia, Vietnam, Indonesia, Mongolia, South Korea, the Philippines.
- Why disputes are shifting to integration failures, with 2024–25 arbitration data.
- Six practical, resourcing-led recommendations for owners, sponsors and lenders.
- The full risk framework, referencing FIDIC, the OECD and the World Bank.

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