platform

BY MUNIR PATEL

De-Risking the Horizon

A CFO's Guide to Asset Resilience in Large-Scale Energy Infrastructure

Large energy projects run on long timelines, deep supply chains and a lot of capital that goes out the door well before anything earns a dollar. One missed variable can change the economics: a permit that slips, a design error, a contractor that goes under, a storm at the wrong moment. For a CFO, any one of those can shake lender and investor confidence and put real pressure on the balance sheet.

Our view is that risk shouldn't be treated as a compliance item or a line in the project budget. It's a capital decision, and it deserves the same discipline you bring to funding the asset.

The goal is resilience, and it comes in two forms. **Operational resilience** is the asset's ability to take a hit and get back to work. **Financial resilience** is the company's ability to absorb a hit without missing a covenant, putting its credit rating or dividend at risk, pausing other capital projects, or going back to the market at a bad time.

The yardstick we'd suggest is Total Cost of Risk. It goes well beyond premium. It adds up the premiums you pay, the losses you keep yourself, the capital tied up in escrows, holdbacks, letters of credit and collateral, and the cost of the financing terms you end up with. A lower premium that leaves you carrying more of the rest isn't a saving. Looked at alongside your asset management plan, which already weighs lifecycle costs, Total Cost of Risk shows whether your risk decisions are lowering the total cost of ownership or quietly adding to it.

This guide walks through four phases (development, design, build and operate) and what each tool does for financial resilience. One note on who it's for. If the project is financed on a project basis, lenders will require some of this cover, and the question is how to do it efficiently. If you're funding from the balance sheet, most of it is optional, and the question is which risks you'd rather not carry. We flag where the answer differs.

FRAMEWORK AT A GLANCE

Phase	Main exposure for the CFO	Typical instruments	What it does for you
Development	Cancellation, sunk costs, hidden liabilities	Political risk insurance, pollution legal liability, technology performance insurance, R&W insurance	Protects early capital, supports financing, frees up cash otherwise held in escrow
Design	A design error that surfaces years later	Project-specific or contractor professional liability, cyber	One dedicated limit, fewer disputes over blame, schedule and IP protected
Build	Physical loss, delayed start-up, contractor or subcontractor failure	Builders' risk, delay in start-up, wrap-up liability, performance security (bonds, SDI, letters of credit, guarantees)	Keeps the start date and DSCR on track; puts outside balance sheets behind the contract
Operate	Outage, latent defects, cyber event	Property and business interruption, contingent BI, parametric, inherent defects insurance, OT cyber	Protects cash flow, distributions and debt service over the long term

DEVELOPMENT

Protecting Cash While the Outcome Is Still Uncertain

Development is when projects are most vulnerable to cancellation. This protects early investments and reduces lender concerns.

Political risk insurance (PRI). PRI is built for projects with a cross-border element: foreign assets, foreign investors or lenders, or sovereign counterparties. It responds to things like expropriation, arbitrary government action, a government not honouring a contract, and political violence. It generally isn't a fix for ordinary permitting delays or regulatory change on a domestic project, so be clear about which of your risks it actually addresses. Where it fits, lenders tend to treat it as a genuine credit enhancement.

Pollution legal liability (PLL). Contamination nobody knew about can stall a project before work begins. PLL covers cleanup costs, legal defence, and third-party injury or property claims from pollution conditions that already exist as well as new ones. For a CFO, the value is certainty: an environmental unknown becomes an insured, bounded cost instead of an open-ended one.

Technology performance insurance (TPI). If you're scaling technology that hasn't run at commercial scale before, lenders will ask whether it can generate the cash flow to service the debt. TPI backs the performance of the technology and gives them comfort. Sometimes a lender requires it before offering any terms; in other cases it simply improves the terms you get.

Representations and warranties (R&W) insurance. When you buy land, a company or an existing asset, the seller makes a long list of statements about it, covering financials, title, tax, compliance, environmental matters, contracts and more. R&W insurance covers your loss if those statements turn out to be wrong, which goes well beyond a failure to disclose. The practical benefit for a CFO is that it can reduce or replace the large escrow or holdback a seller would otherwise leave in place, so cash is released sooner and your capital isn't sitting idle. It can also make your bid more attractive, since the seller walks away with more proceeds and less lingering liability. Your claim goes to an insurer instead of a seller you may still want to do business with. Issues known before signing are excluded, so diligence still matters.

Worth asking: Which of our development risks are genuinely insurable, and which should we simply carry in the budget?

DESIGN

Getting Ahead of Problems That Won't Show Up for Years

In front-end engineering design (FEED), the risks move from legal and political to technical. A flaw in the structural, process or electrical design may not appear for years, and the cost of fixing it climbs quickly once construction is underway. Insurance can't fix a bad design, but it can make sure money is there if one surfaces.

Design liability. Who stands behind the design depends on how the project is contracted, and a CFO should know which model is in play. On many power projects, the owner buys a single project policy that responds to both the design work and the construction. On other projects, particularly traditional EPC contracts, design liability sits with each consultant's and contractor's own professional liability policy. That second approach has two weaknesses. The limit is usually shared with everything else the firm is working on, and when something goes wrong it can turn into a dispute over whose fault it was before anyone pays.

Project-specific professional liability (PSPL) addresses both. It provides one limit dedicated to your project, covers all the design professionals working on it, and stays in place through construction and for an extended period afterwards. Where a contractor takes on design responsibility, matching cover for the contractor (contractor professional protective indemnity, or CPPI) belongs in the package. So does cover for consequential losses, such as lost revenue from delay, that follow a design error.

Cyber cover for design data. Design now lives in cloud-based modelling platforms and digital twins. That brings exposure to ransomware, data theft and loss of proprietary technical information. Cyber liability insurance helps make sure an attack on those platforms doesn't hold up the schedule or put your intellectual property at risk.

Worth asking: Who is carrying design risk on this project, and is the limit dedicated to us or shared with the consultant's other work?

BUILD

Protecting the Most Capital-Intensive Stretch

Construction is where the most money is at risk at once. Supply chain delays, labour shortages and physical damage all threaten both the schedule and the budget. Two kinds of protection do the work here.

Insurance responds to accidents and damage. Performance security responds to someone failing to deliver what they promised.

Insurance

Builders' risk. Builders' risk (also called course of construction, or COC) covers physical damage to materials and the work in progress. For a CFO, the damage itself is often the smaller problem. The bigger one is what a delay does to the start date.

Delay in start-up (DSU). Think of DSU as business interruption cover for a project that isn't operating yet. If an insured physical loss during construction pushes back your commercial operation date, DSU pays the costs your revenue would have covered: debt service, fixed costs and, depending on the wording, lost earnings during the delay. That helps protect your debt service coverage ratio (DSCR) until the asset is running. It typically responds only to delay caused by an insured physical loss, so a late permit or a supplier problem is a separate conversation.

Wrap-up liability. Instead of chasing certificates from every contractor and subcontractor, a wrap-up program puts the owner, general contractor and subcontractors under one liability policy, typically covering general liability and pollution liability. Limits are consistent, there are fewer gaps between policies, and there is less finger-pointing between insurers after a loss. In the U.S., wrap-ups can also include workers' compensation. In Canada, that risk sits with the provincial workers' compensation boards.

Performance security: making the contract promise bankable

Performance security is any instrument that guarantees a party will deliver what it promised on the asset. Your contract already makes the EPC contractor responsible for completion, and if a subcontractor fails you would still look to the EPC. But that recourse is only as good as the EPC's balance sheet on the day you need it, and a large subcontractor failure can strain even a strong contractor. Performance security puts a third party's balance sheet behind the promise. With contractor insolvencies and tight supply chains in the news, it's something lenders pay close attention to.

Surety performance bonds. If the EPC contractor defaults, the surety either pays to finish the work or arranges for someone else to complete it. Read the wording closely. Make sure it doesn't limit recovery of consequential or impact costs such as delay, which can be the largest part of a loss.

Labour and material payment bonds. These guarantee that subcontractors and suppliers get paid. Unpaid parties can register liens against the asset or the owner, which can breach credit agreements and freeze lender draws.

Liquid (on-demand) surety. A conventional bond usually involves an investigation before anyone pays. Liquid surety is structured to respond faster, closer to the way a letter of credit works, which matters when a few weeks of delay can stall a site.

Subcontractor bonds. These are bonds issued on behalf of key subcontractors and suppliers and held by the EPC or general contractor. They are worth having where a single critical package, such as specialty equipment or a long-lead item, could derail the schedule.

Subcontractor default insurance (SDI). SDI is bought by the general contractor, not the owner. It covers the contractor's direct and indirect costs when a subcontractor or supplier defaults, and it tends to respond more consistently, and sometimes more quickly, than a bond. It is most common on building projects (vertical assets), so it may not be relevant to every energy asset. Why should a CFO care about a policy someone else buys? Because it affects whether your contractor can absorb a subcontractor failure and still deliver on schedule. It's a fair question to put to the EPC: how are you protecting yourself?

Letters of credit and parental guarantees. A letter of credit is a bank's commitment to pay on demand. A parental guarantee is a parent company's promise to stand behind a subsidiary, which matters when the contracting entity is a project company with little balance sheet of its own. Both are widely used and neither is free. Letters of credit use up the contractor's credit capacity, and that cost usually finds its way into bid prices.

Worth asking: How strong is the EPC contractor once you look past the contract, and which subcontractors or suppliers could stop this project if they failed?

OPERATE

Protecting Long-Term Cash Flow

Once the asset is commissioned, the focus moves from capital exposure to cash flow. The goal is to protect long-term yield, keep operating costs predictable, and defend the physical and digital asset through decades of weather and cyber risk.

Property and business interruption (BI). Commercial property insurance covers physical damage. BI replaces lost revenue and continuing fixed costs while the asset is down, which helps protect investor distributions and debt service. Two details worth checking: whether the indemnity period is long enough for a realistic restoration given equipment lead times, and whether the limit reflects the revenue the asset actually earns.

Risks beyond your fence line. Revenue can stop because of what happens at a key supplier, an interconnection or a customer's facility, not just on your own site. Contingent business interruption addresses those dependencies. Parametric cover is a useful companion for weather exposure. It pays out when a defined trigger such as wind speed or temperature is reached, instead of after a loss has been adjusted, so cash arrives faster.

Latent defects (inherent defects insurance, or IDI). IDI covers major structural or engineering failures that appear after handover because of hidden design or construction faults, without requiring you to prove negligence against a contractor that may no longer exist. It is best established on buildings and other vertical structures. For a power plant or process facility, ask early whether the market will offer it and for which parts of the asset. It also has to be arranged at the very start of construction. A Technical Inspection Service (TIS) is part of the process and gives the owner, lender, designer and contractor an independent check that the work matches the design. Cover typically begins at construction completion and can run 10 to 12 years.

Operational technology (OT) cyber. Control systems such as SCADA run the plant, and an attack on them can cause physical damage or a forced shutdown. Make sure your cyber and property policies work together, so that a cyber event that damages equipment or stops production is picked up by one policy or the other and not excluded by both.

Worth asking: If our control systems were attacked tomorrow and a turbine was damaged, which policy would respond?

Three Decisions That Cut Across Every Phase

How much risk to keep. Every placement has a retention. Setting deductibles and retentions deliberately, and deciding whether a captive makes sense, is how you trade premium against volatility. It is a balance sheet decision, so it belongs to finance and not only to risk or procurement.

Whether contracts and insurance line up. The indemnities, liability limits and insurance requirements in your contracts should match what is actually being bought. A contract that promises protection the insurance market won't back creates gaps you only discover after a loss.

When to go to market. Capacity for large projects is limited and moves in cycles, and products like IDI and R&W need lead time. Engaging the market before contracts are signed gives you more room to negotiate.

WHERE THIS LEAVES THE CFO

The CFOs who get the most from risk transfer treat it as part of how they structure capital, not a purchase made after the big decisions are done. A phase-by-phase plan, backed by deliberate choices on retention, contract terms and timing, can give lenders and investors more confidence, support better financing terms, and keep a single bad event from becoming a balance sheet event. No program removes risk. Done well, it makes the risk that remains something you chose to carry.

The best time to start is during feasibility, before contracts are signed and financing terms are set. At that point, a broker with energy and infrastructure experience can help line up your contract indemnities with what the market will actually support, so that when capital goes out the door, the protection behind it is already in place.



Questions? Contact:

Munir Patel, Managing Director
Head of Natural Resources
mpatel@platforminsurance.com
587-777-4407

About Platform

Platform is a national employee-owned risk advisor helping Canada's physical economy turn risk into resilience. Our differentiated value comes from our deep industry expertise, risk intelligence and disciplined execution.

We are a business built on our people and culture. It's at the heart of everything we do.

www.platforminsurance.com

info@platforminsurance.com

416-434-4322

platform