

Infrastructure and the energy transition: Making decisions and building in a state of uncertainty

October 7, 2026

The energy transition is transforming the way major infrastructure projects are designed, financed, approved, and built. Decisions made today will have repercussions for decades to come, as technologies, markets, regulatory frameworks, and the geopolitical climate continue to evolve. In this context, the ability to manage uncertainty is crucial.

For decades, energy infrastructure has advanced in a relatively predictable environment. The technologies were proven, the business models were well-established, and the risks could be assessed based on relatively stable parameters.

Today, the projects that will shape the coming decades must be designed with several simultaneously changing variables in mind:

- Emerging technologies
- Growing energy demand
- The decarbonization of the economy
- Weather events
- The availability of capital
- Changes in regulatory frameworks
- Social acceptability
- A new geopolitical climate

Yet infrastructure evolves at a different pace; it requires substantial capital investment and shapes economies for decades.

This discrepancy is one of the major challenges of the energy transition. We have to make decisions today that will have repercussions for 50, or even 100, years—and yet the data needed for us to make them remains uncertain.

Waiting for the uncertainty to pass isn't necessarily the least risky strategy.

The cost of inaction must now be an integral part of risk analysis.

The energy transition: Managing uncertainty in infrastructure projects

The energy transition will likely not be driven by one single technology.

Electrification, energy efficiency, renewable energy, dual-energy systems, renewable gases, storage, and carbon capture and removal technologies can play different roles depending on the sector, region, and time horizon.

This is changing the way we approach infrastructure investments.

Historically, many infrastructure projects were evaluated individually with the goal of minimizing the risk associated with each one as much as possible. Now, the pace of technological advancement calls for a greater focus on solution portfolios.

Some technologies are already mature, while others aren't yet. Some will quickly reach commercial scale, while others will develop differently than we currently anticipate.

The energy system's resilience will therefore depend less on identifying a definitive solution now than on combining different approaches and maintaining enough flexibility to adapt.

A project may involve greater technological uncertainty while still creating value system-wide, particularly through:

- Diversification
- Additional capacity
- Security of supply
- Reduction in emissions
- Greater resilience

Risk analysis, therefore, is no longer solely about seeking to reduce the risk associated with carrying out a project. It must also take into account the risk to the system as a whole of failing to carry it out.

Energy transition, competitiveness, and infrastructure resilience

While decarbonization remains a key driver of infrastructure transformation, it is no longer the only one.

Energy security, supply chain resilience, access to reliable and competitive energy, and geopolitical tensions are now playing an increasingly important role in investment decisions.

In Canada, the abundance of certain resources, the expertise developed in the energy and infrastructure sectors, access to largely renewable electricity in several provinces, and the geological potential for carbon storage could become significant industrial advantages.

The energy transition must therefore be viewed not only as an obligation to reduce emissions, but also as an economic transformation that has the potential to redefine competitiveness.

For companies and investors, this changes the nature of strategic thinking.

Decisions regarding energy, infrastructure, and decarbonization now directly affect:

- Investment strategies
- Asset location
- Supply chains
- Market access
- Long-term resilience

Turning innovation into fundable infrastructure

Turning energy innovation into actual infrastructure involves more than just inventing a technology.

It's also important to:

- Find a site
- Protect energy security
- Obtain the necessary authorizations
- Structure the financing
- Negotiate trade agreements
- Establish risk-sharing mechanisms
- Build lasting relationships with the communities involved

In other words, the next stage of the energy transition is as much a matter of **implementation** as it is of innovation. The issue of “bankability” then becomes central.

Early-stage projects that use emerging technologies are often costly and difficult to finance. Their implementation then makes it possible to build expertise, standardize processes, and gradually reduce costs.

The challenge, therefore, is to create enough predictability to allow investors to commit, without prematurely locking in technological or regulatory models.

Social acceptability: Integrating stakeholders into the project architecture

The development of major infrastructure projects requires particularly close collaboration among developers, governments, regulatory bodies, lenders, investors, and advisors. Acceptability isn't something that's achieved at the end of a project.

Even when a project is technically sound and economically viable, its success also depends on our ability to build a long-term relationship with the communities involved. This aspect takes on greater importance in a context where trust in institutions is eroding and information spreads rapidly.

Consultation should therefore not be viewed as an administrative step that takes place at the end of a project's development.

For large-scale infrastructure projects, relationships with stakeholders are an integral part of the project's very architecture.

This approach is particularly important in relationships with Indigenous communities. Early engagement and models that enable meaningful participation in project design, benefits, and governance can profoundly change the dynamics of project development. The same logic applies to local communities.

Trust is not based on a promise of zero risk. It relies more on transparency regarding the:

- Risks
- Profits
- Unknowns
- Mechanisms for resolving problems as they arise

This aspect is all the more important given that the public already sees a connection between infrastructure, the economy, and the climate. According to the [Global Infrastructure Index 2026](#), **72% of respondents believe that investing in infrastructure creates jobs and boosts the economy, while 59% believe that such investments make a significant contribution to combatting and mitigating the effects of climate change.**1

However, this favourable perception cannot be taken for granted. For the organizations leading these projects, the quality of the dialogue and stakeholder engagement is in itself a key aspect of project risk management.

Regulatory frameworks capable of supporting the transformation

Regulatory frameworks play a vital role in protecting public interest. They must be able to adapt to the pace of the changes they oversee.

The challenge is to develop processes that are sufficiently predictable, coordinated, and agile to

enable developers and investors to understand the rules of the game and make long-term decisions.

Effective regulation must pursue several objectives simultaneously:

- Protecting the environment and communities
- Maintaining the security of infrastructure
- Creating predictability for investors
- Enabling the integration of new technologies

When approval cycles become much longer than cycles of technological innovation or investment, the risk is no longer merely administrative: **it becomes economic.**

Legal considerations also come into play early in the project: risk allocation, the contractual framework, financing, regulations, and governance all help create the conditions necessary for the project's implementation.

Major infrastructure projects: Moving from ambition to implementation

The coming years will likely see no shortage of climate goals, capital, and innovation. The key factor will be the ability to turn them into operational infrastructure.

This process requires that several conditions be met:

- A long-term vision
- Capital and financing
- Government decisions
- Technologies
- Regulations
- Partnerships
- Community engagement and stakeholder relations
- Effective risk allocation

In this new environment, the law is no longer confined to the periphery of a project, after business decisions have been made. It helps lay the groundwork for the project to exist.

The projects that move forward will be those whose developers have managed to address uncertainty clearly enough to enable the various stakeholders to move forward together.

The energy transition thus imposes a new discipline on infrastructure builders: that of thinking in the very long term while retaining the ability to adapt; of accepting risk without compromising on rigour; of exploring multiple solutions rather than seeking a single answer; and of building trust as methodically as the assets themselves.

In a world where uncertainty is becoming the norm, the ability to implement projects is itself becoming a strategic advantage.