

CHALLENGE STATEMENT #10

Regulatory processes that can adapt to change as the energy transition evolves

What is the systemic barrier?

Alberta's regulatory system and its processes were designed for a centralized, large-scale electricity generation system with well-understood risks. The drive to decarbonize electricity grids as well as ensure a reliable and affordable supply is giving rise to new energy solutions, generation sources, business models, and use cases that current processes are not effectively equipped to anticipate, adapt to, or enable in a timely manner. This is because, while new solutions bring potential benefits, there tends to be limited data, models or predictability of those potential benefits to meet current regulatory requirements for project approval.

This challenge goes beyond the volume of change required simply to continue to grow the existing system. The shift required is more fundamentally around managing the uncertainty of the energy transition while continuing to enable forward progress. While a regulatory system that is proactive and can manage increasing uncertainty is needed, any new approach will also need to provide procedural clarity and eligibility requirements to enable investment and economic development. These constraints currently create complex tensions that, if not addressed, create a risk of inaction and fleeing capital, putting the system further and further behind.

Why is this critical to achieving our vision?

[Alberta's Electricity Future's vision](#) seeks to enable a more service-oriented delivery design, facilitate greater multi-directional connections, attract new industries, and ensure predictable and equitable rates. In short, it is a future system that delivers value beyond electrons.

Achieving this vision will require us to develop, test, and scale new business models, technologies and innovations, investment models, services, etc. The data gathering, tracking, and analysis required to assess these opportunities is complex and resource intensive. By current standards, there may be minimal conventional data available to support the approval of emerging opportunities, but as standards change their benefits may come into clearer view. However, building the foundational knowledge and experience regionally to be able to seize these opportunities will require a regulatory framework that can embrace

some uncertainty. Further to that, regulatory risks need to be minimized to ensure critical investments are made to successfully transition Alberta's energy systems and grow the economy for the benefit of all consumers.

What surface-level barriers are related to this systemic barrier?

Surface level barriers are often what actors see or experience as a result of a systemic barrier. Such barriers provide insights into areas that can be improved should the systemic barrier be resolved.

The following are examples of surface level-barriers related to traditional regulatory processes not being equipped to account for uncertainty driven by energy transition.

- **Regulators are being asked to rule on complex issues that extend beyond their traditional mandates**
- **There are limited publicly available modeling tools or datasets utilities can use for evaluating emerging opportunities.**
- **Model results may not consider future scenarios or possible outcomes depending on when the model was created and the information available during development**
- **Regulators use proven cost-benefit assessments to approve investments, new solutions have not been proven, causing a chicken-and-egg barrier to new solution approvals**
- **Regulators may require Alberta-specific proof before approving new programs or solutions which have been proven in other jurisdictions**
- **Risk-reward calculations have not been revised to reflect either mitigated risks or additional benefits, leading to excess caution over innovation**
- **Utilities cannot experiment with solutions and iterate with their customers, for fear of unrecoverable costs and significantly wasted time and resources**
- **The system is not encouraged to utilize diverse solutions to meet the bulk and distributed systems' operational needs**
- **The authority to make or change regulations must be expressly delegated through enabling legislation**
- **There is lack of clarity on the planning timelines that need to be considered and modelled**