

Alberta's Electricity Regime Overhaul

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*Implications of the Current and
Evolving Regulatory Environment
for Power Generation*

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Alberta Electricity Regime Background & Drivers for Change

Current Framework / Drivers for Change

- Current Energy-only Market
 - Uniform wholesale price
 - Hourly settlement
- Current Transmission Policy
 - Zero-congestion planning
 - “Load pays”

- Drivers for Change

1. Changing supply mix
2. Pace of supply integration and transmission impacts
3. Decarbonization policy



History of Policy Shifts and Changes

- Began in mid-2023 with a series of Alberta Government directions, regulations, orders and consultations
- Three main categories of changes:
 1. Alberta Utilities Commission (AUC) renewables inquiry and resulting regulatory changes
 2. Restructured energy market
 3. Transmission policy





Renewables Inquiry and Resulting Regulatory Changes for Generators

Alberta Utilities Commission Renewables Inquiry

- Renewable Generation Approvals Pause
 - In effect from August 3, 2023, to February 29, 2024
- AUC Renewables Inquiry
 - Scope bifurcated into Module A and Module B
 - AUC submitted reports for each module
 - No policy recommendations



3 Key Resulting Policy and Regulatory Developments

1. Establish an “Agricultural First” approach to land use
2. Establish requirements to protect “pristine viewscapes”
3. Establish reclamation security requirements



1. “Agricultural First” Approach to Land Use

- *Electric Energy Land Use and Visual Assessment Regulation* enacted on December 6, 2024
- Requires wind/solar proponents with projects on “high-quality” agricultural land to conduct an “agricultural impact assessment”
- AUC granted the discretion to require wind/solar proponents with projects in “White Area” to submit an irrigability assessment



2. Viewscapes

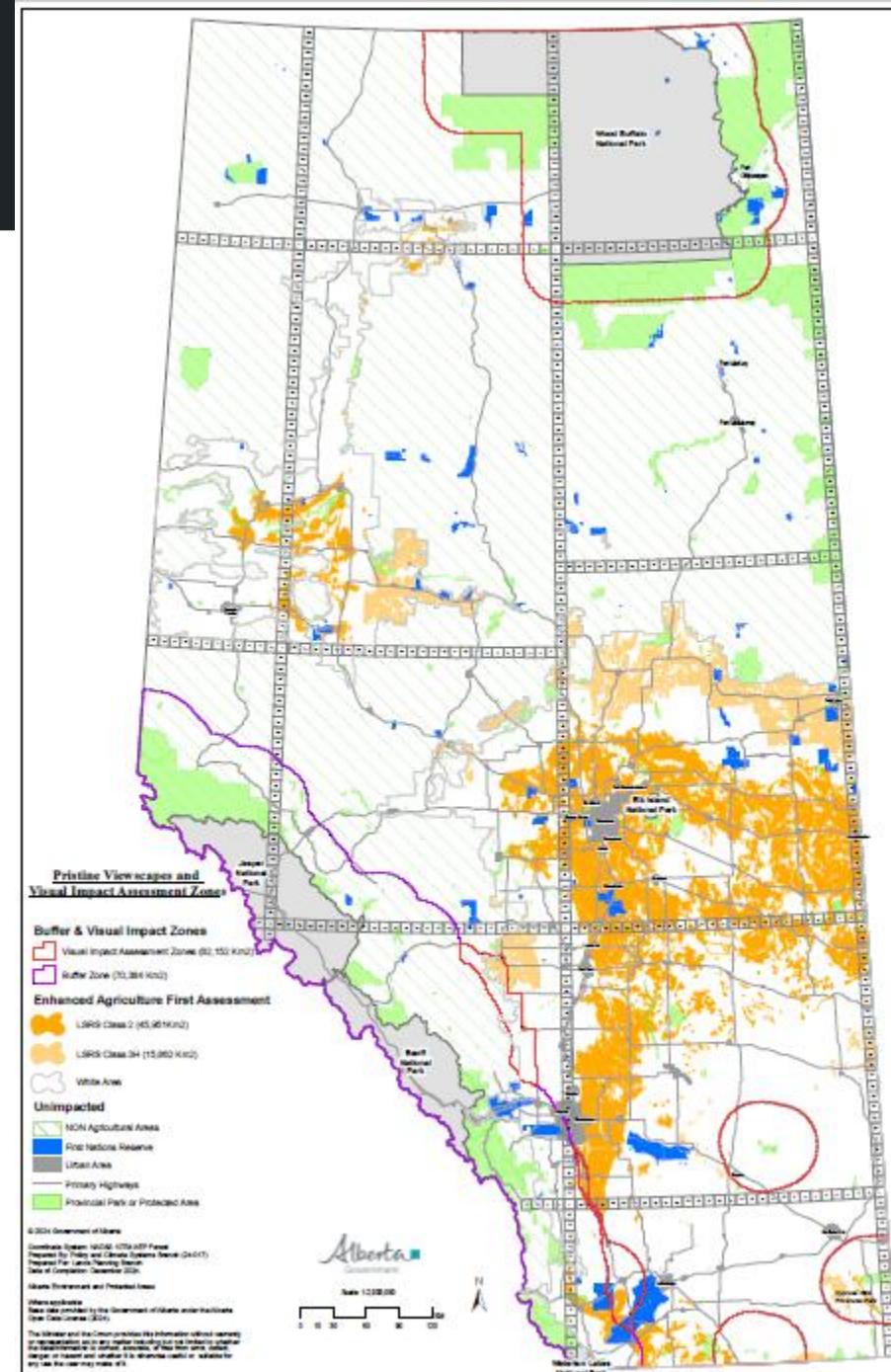
Electric Energy Land Use and Visual Assessment Regulation establishes:

Buffer Zone

- New wind projects prohibited
- All renewable and non-renewable projects must submit visual impact assessment (VIA)

VIA Zones

- All renewable and non-renewable projects must submit VIA



3. Reclamation Requirements

- Regulatory amendments passed in December 2024:
 - Wind and solar projects now require a registration under EPEA and must therefore satisfy reclamation and associated security requirements
- Key features:
 - Provide security to the Alberta Government or to the registered landowner
 - Applies to new and existing wind and solar projects



AUC Implementation

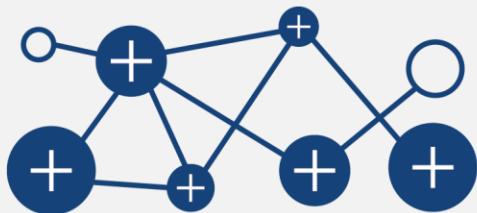
- AUC Rule 007 amendment consultation ongoing – many new, significant regulatory requirements for renewable and non-renewable generators
- Application to “in-flight” projects – moving goalposts
- Key AUC findings:
 - Agrivoltaics plans, cropping analysis and demonstrating dual-use
 - Visual impacts assessed from key viewpoints (e.g., world heritage/tourism site)
 - Reclamation security
 - Significant uncertainty in salvage value estimates used to reduce reclamation liability
 - Types and timing of security vary per project – standardization likely under new Code



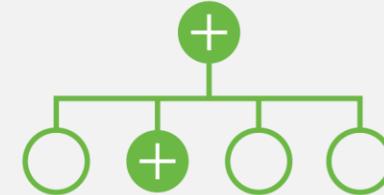


Market and Transmission Policy Changes

AESO Mandate



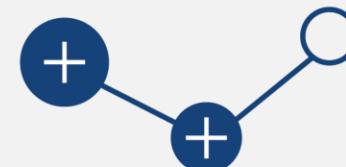
MANAGE AND PLAN
the grid 24 hours a day



PLAN AND OPERATE
the market



PLAN THE FUTURE
of the system and its infrastructure



CONNECT CUSTOMERS
to the grid

GoA Direction to AESO

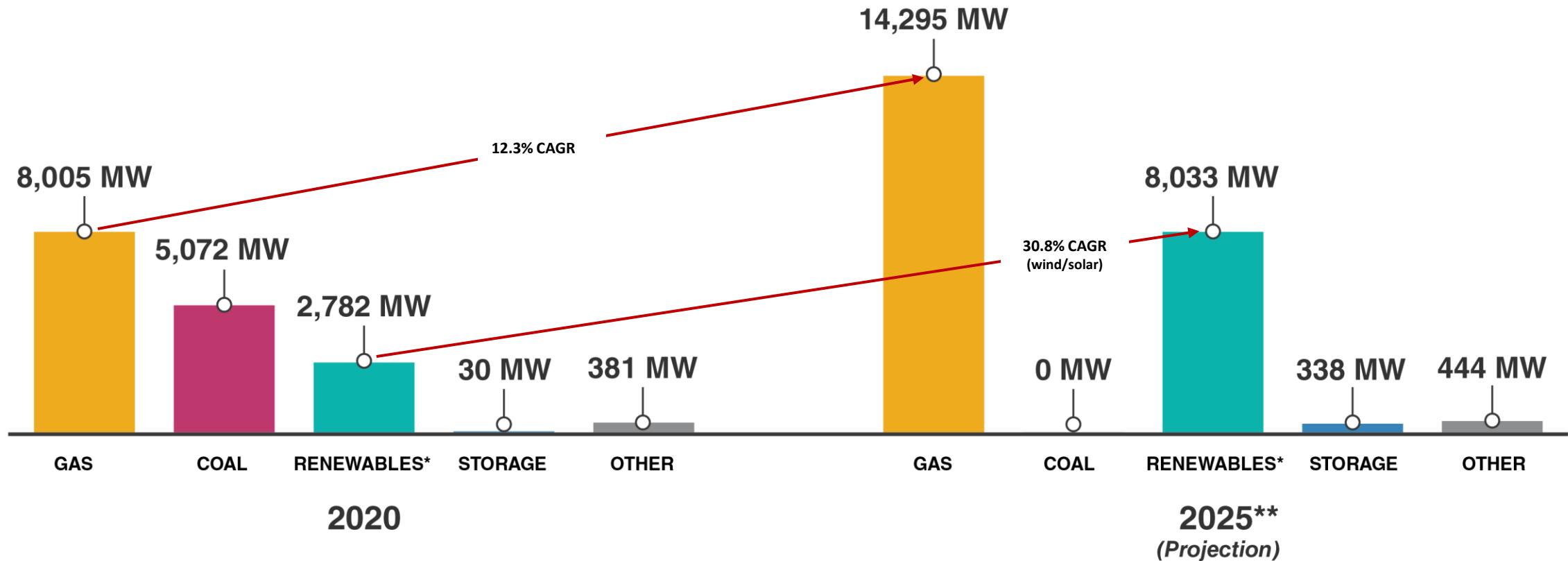
Specifically, the government directs AESO to advance the REM technical design, with the following decisions:

- Move forward with the introduction of a mandatory day-ahead market.
- Allow the price of energy to be determined by the strategic offers of market participants, while using market mitigation to limit the potential for excessive exercise of market power.
- Maintain a province-wide uniform price for electricity.
- Maintain the following components of REM as outlined in the AESO's Advice to the Minister on January 31, 2024: Security Constrained Economic Dispatch, shorter settlement intervals, review of the price floor and ceiling as well as the co-optimization of energy and ancillary services.

Moreover, with respect to transmission planning and ISO tariff design, on a go forward basis government has decided to:

- move away from the current zero-congestion transmission planning standard to an optimally planned transmission planning standard; and
- allocate new transmission infrastructure costs and all ancillary services costs based on cost causation principles.

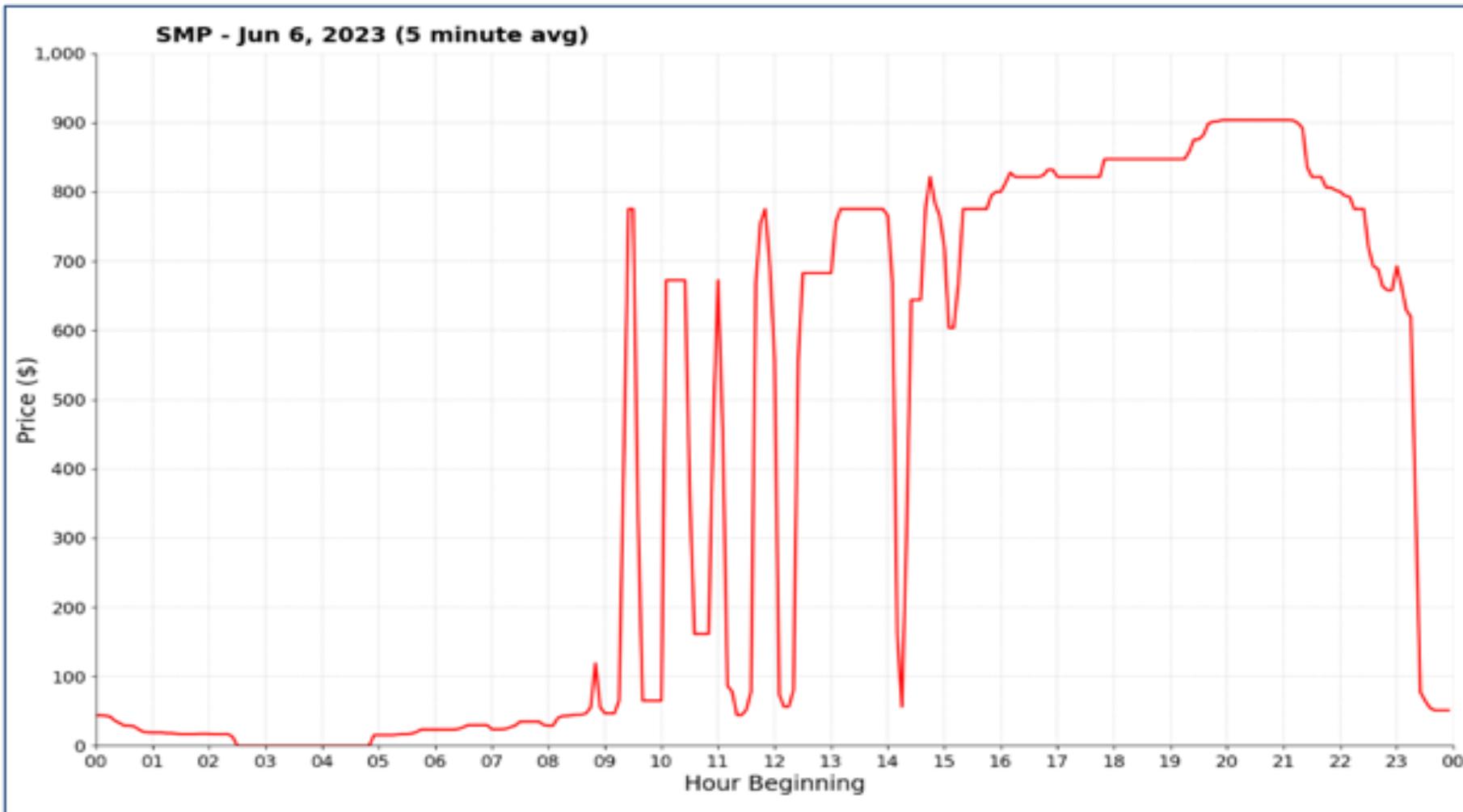
Why Change the Alberta Market?



*Renewables include wind, solar and hydro.

**Includes active installed capacity, plus capacity currently under construction and expected to be completed by the end of 2025.

Why Change the Alberta Market?

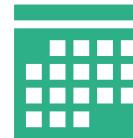


Restructured Energy Market – Key Design Elements



Updated Pricing Range

Higher price and offer caps to send stronger market signals, phased in to balance affordability



Day-Ahead Reliability Market

Enhance DA OR market to increase participation and competition



Market-Based Congestion Management

More efficient market signals from LMP



Guardrails on Market Power

Ensures affordable outcomes for consumers by implementing safeguards against excessive market power



New Ramping Product

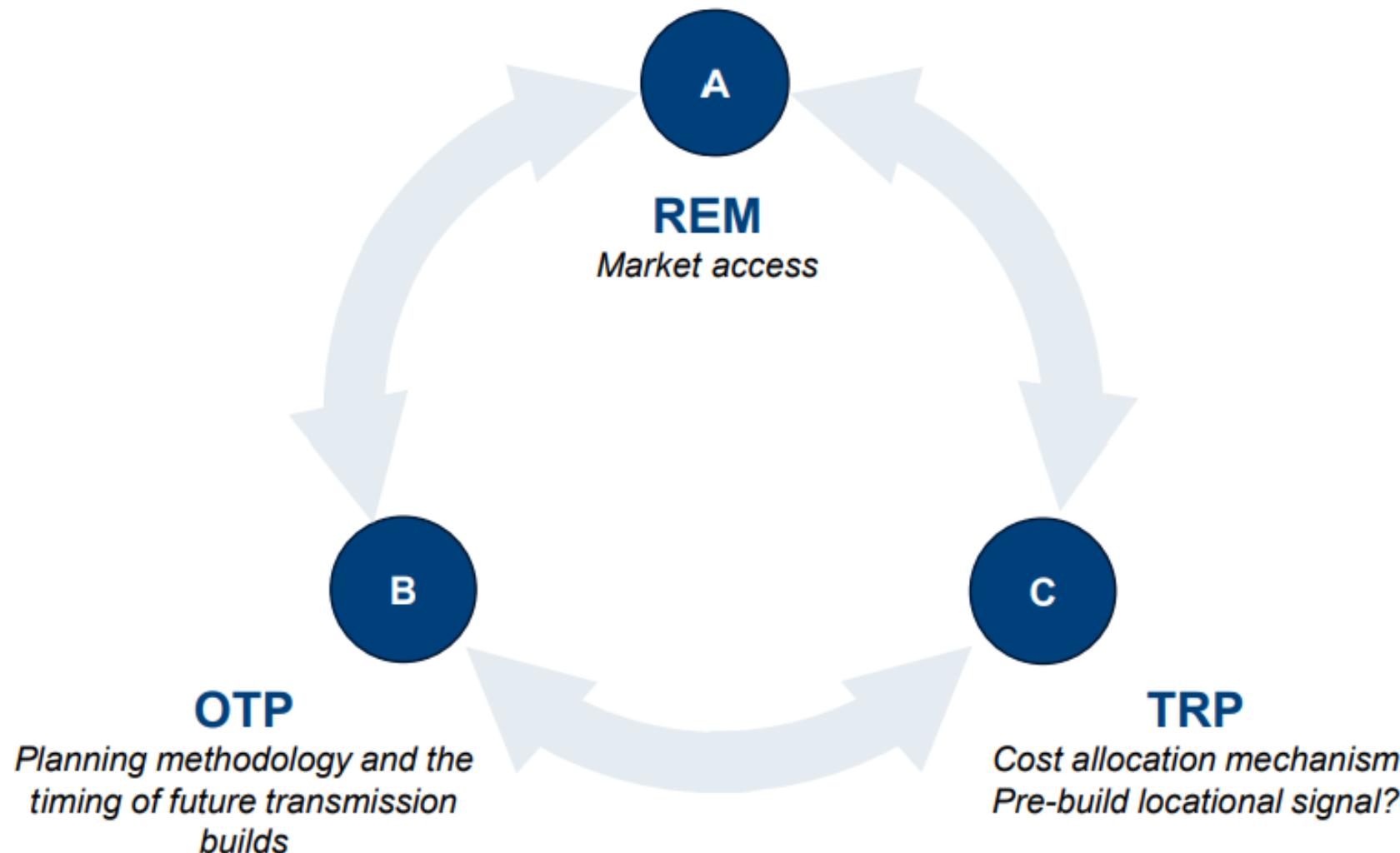
New ramp product to support reliability and better meet system flexibility needs



Reliability Unit Commitment

A reliability backstop that maintains self-commitment and promotes competition between assets

REM – OTP – TRP Interdependencies





Implications of Changes

Implications for Generation Development

- Ongoing changes in approval requirements, market design, and transmission policy are creating uncertainty for generation project proponents.
- Policy unpredictability is slowing development of both generation and load projects in Alberta.
- Federal and provincial policies—including carbon pricing, emissions caps, CCUS incentives, EV mandates, and energy efficiency rules—are reshaping electricity demand and supply dynamics and are contributing to uncertainty.
- Renewables facing regulatory headwinds with uncertainty over transmission and ancillary cost allocation. AUC decisions show growing scrutiny, with several projects delayed or denied, contributing to hesitancy among developers/investors.



PPA (Power Purchase Agreement) Implications

- Evolving regulatory landscape will have significant implications on existing PPAs and will influence PPA negotiations going forward.
- The effect of the recent and forthcoming regulatory changes on existing PPAs will largely be determined by the change in law provisions and associated remedies within each agreement, for which there is often significant variability.
- Certain aspects of the proposed regulatory changes (namely the introduction of negative pricing) would represent a major shift in the economic assumptions that underly most existing PPAs.
- Other changes (i.e. introduction of LMP) may materially increase or decrease costs for parties under existing PPAs and would create new commercial considerations for future PPA negotiations.



PPA Implications (cont.)

- Depending on what changes become law, this could result in material impacts to existing PPAs, such that parties may seek to renegotiate or even terminate such agreements.
- In the interim, generators and customers are likely to reexamine their existing PPAs to better understand what exposure, if any, the proposed regulatory changes may have on their agreements, and whether change in law provisions can be triggered.
- However, due to the scope and scale of proposed changes, and the potential for competing contractual interpretation, it is impossible to define the potential economic impact under most PPAs.



PPA Implications (cont.)

- In respect of projects that have been financed, the generator will be subject to various restrictions and negative covenants, so any changes to existing PPAs between generator and customer will also require lender review and involvement, which could prove timely and expensive. In extreme circumstances, may result in lenders seeking to exercise acceleration/enforcement rights.
- From a high level, the current uncertainty with respect to final market design is also impacting the ability/desirability of parties to negotiate any new PPAs, resulting in diminished commercial demand for PPAs over the medium term.
- As certainty over the regulatory regime is achieved, PPA activity is likely to bounce back, however, parties will be particularly focused on change of law clauses and associated remedies, as well as the economic impacts of the new regulatory changes.





Other Trends Affecting Generation Development

Data Centres

- Data Centre demand within Alberta has grown significantly within the last year, with ~16,000 MW of system access requests – the addition of which would more than double Alberta's highest ever recorded demand.
- The demand also raises a resource adequacy problem. Federal emissions regulations mandate the retirement of significantly modified boilers ~3,000MW after a set period of operation.
- Transmission tariff and interconnection process changes will offer some clarity on how much, where and when proponents can connect.



Novel Generation

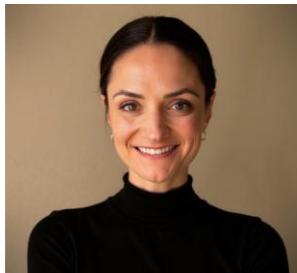
- Decarbonization goals and the increased participation of intermittent renewables have significantly reduced the average emissions on the grid, but this has come at the expense of stability – both in a financial and operational sense.
- The changes in the new market design reflect this market dynamic of enhancing stability, with shorter settlement periods, and establishing reserve products for ramping.
- Small modular reactors, batteries, and other storage technologies can potentially fill this need.
- Some proponents have looked at hybridizing existing assets (hydro+battery / wind+battery) as a means to shift or flatten volatility.



Thank You



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