

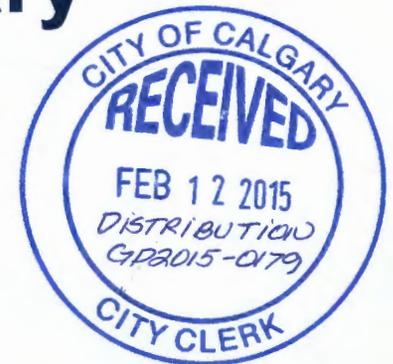


Transmission Plans for Calgary

Mike Deising, Director
Corporate Communications

Galen Lam, P. Eng., Technical Specialist
Transmission Planning and Performance

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- About the AESO
- Our Approach to Planning the Transmission System
- Current Projects
- Possible Future Projects
- Questions

Overview



About the AESO



- Not-for-profit corporation established by the 2003 *Electric Utilities Act* as the “Independent System Operator”
- Operates in the public interest
- May not own or hold an interest in any transmission facility, electric distribution system or generating unit
- Has visibility of all market and transmission activities and data
- No government ownership or funding



The AESO's Core Functions



System Operations

Direct the reliable 24/7 operation of Alberta's power grid

Market Services

Develop and operate Alberta's real-time wholesale energy market to facilitate fair, efficient and open competition

Transmission System Development

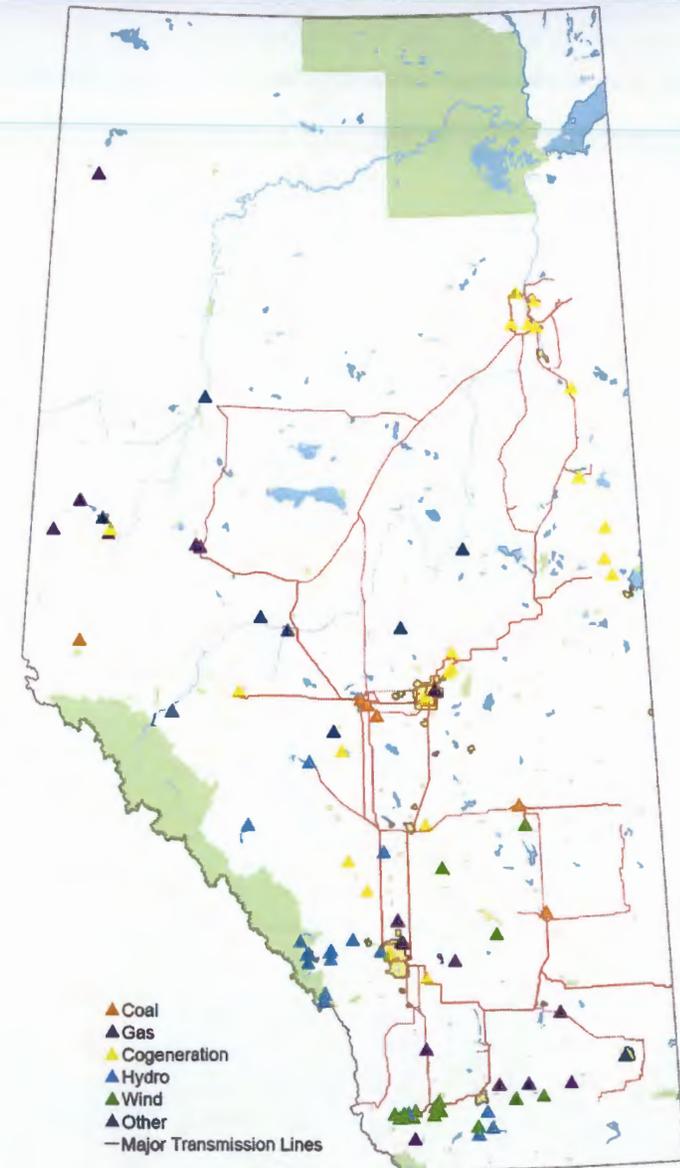
Provide continued reliability and facilitate the competitive market and investment in new supply

Transmission System Access

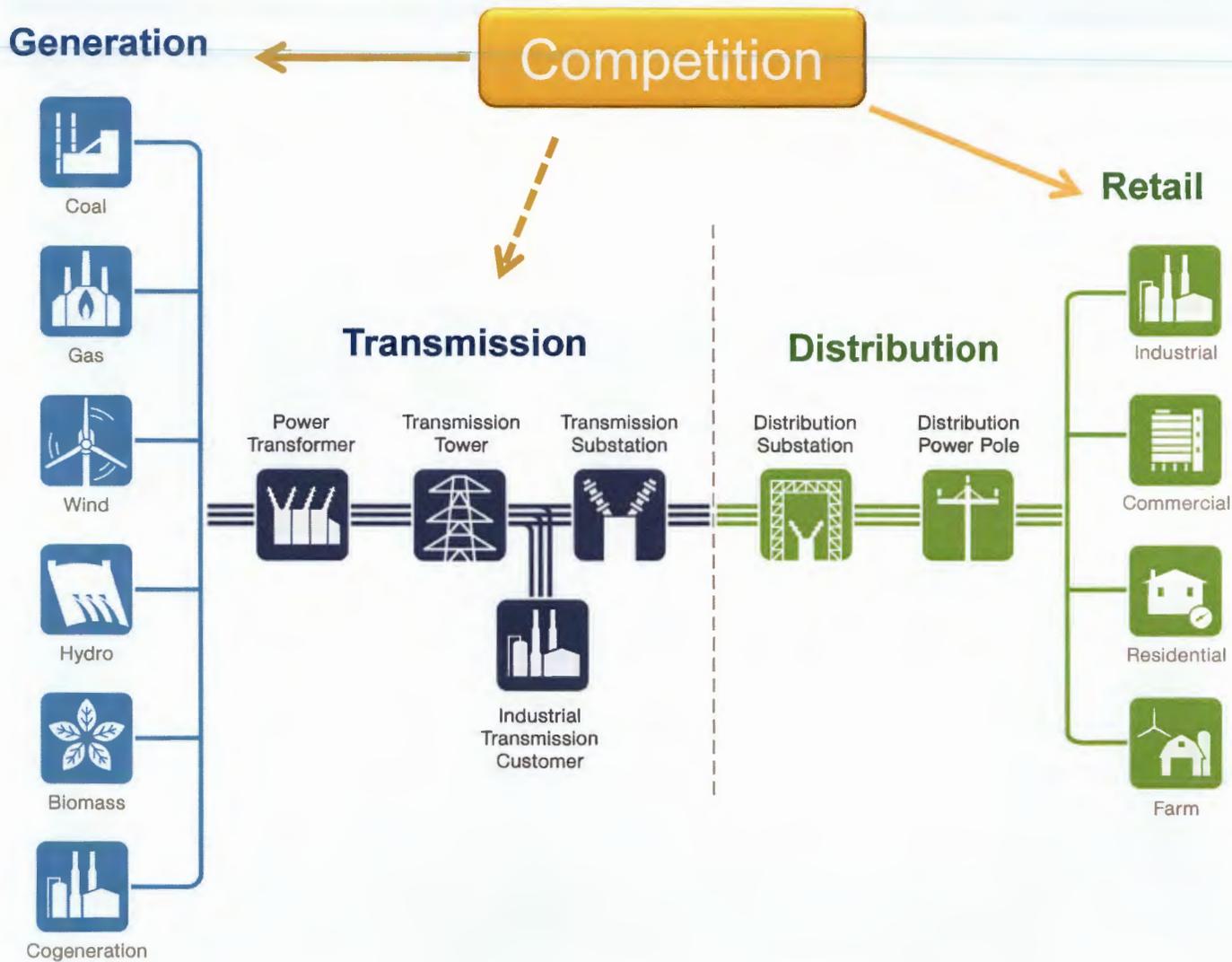
Provide access for both electricity generators and large industrial customers

Alberta's Power System – A Snapshot

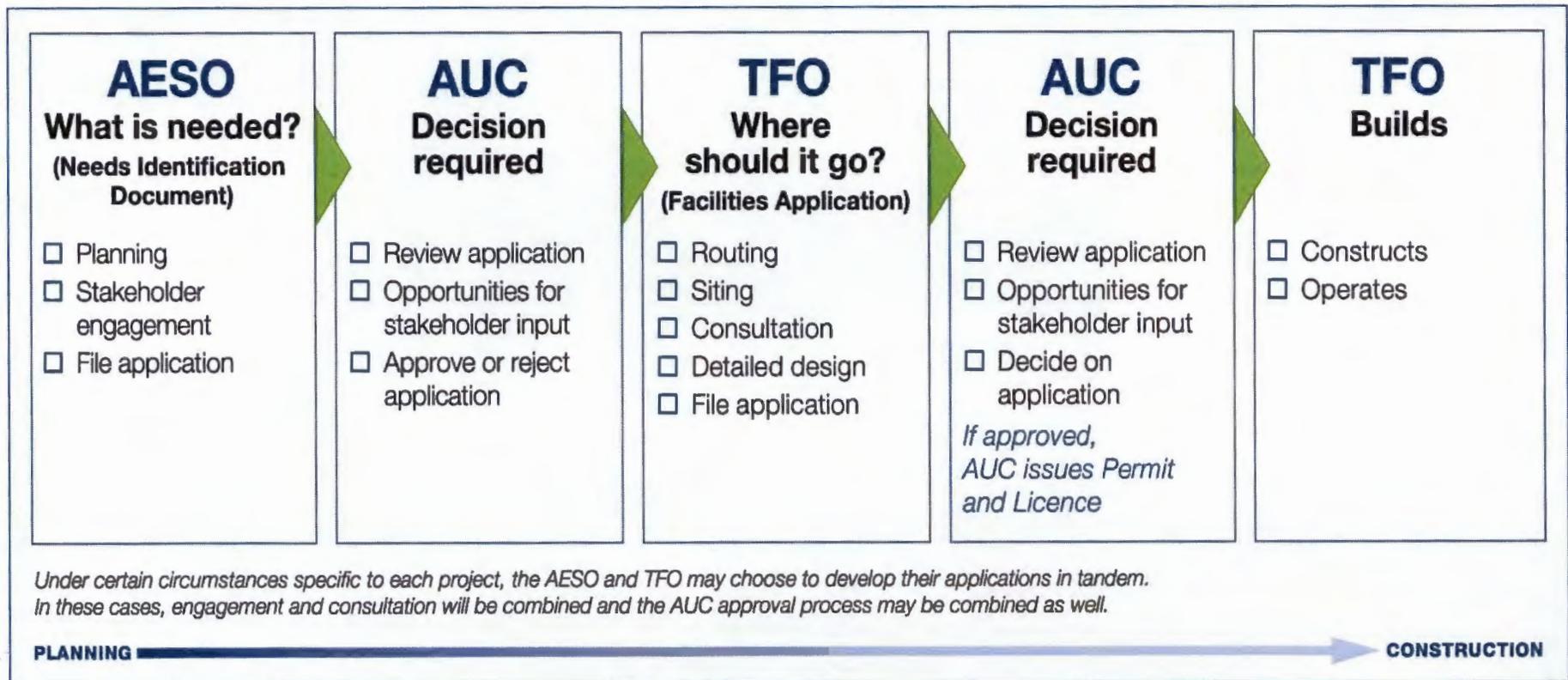
- 16,159 MW total generation capacity as of January 2015
- 11,229 MW peak demand set in January 2015
- Surpassed 1,300 MW of wind production in January 2015
- 26,000 km of transmission lines



Power Industry in Alberta

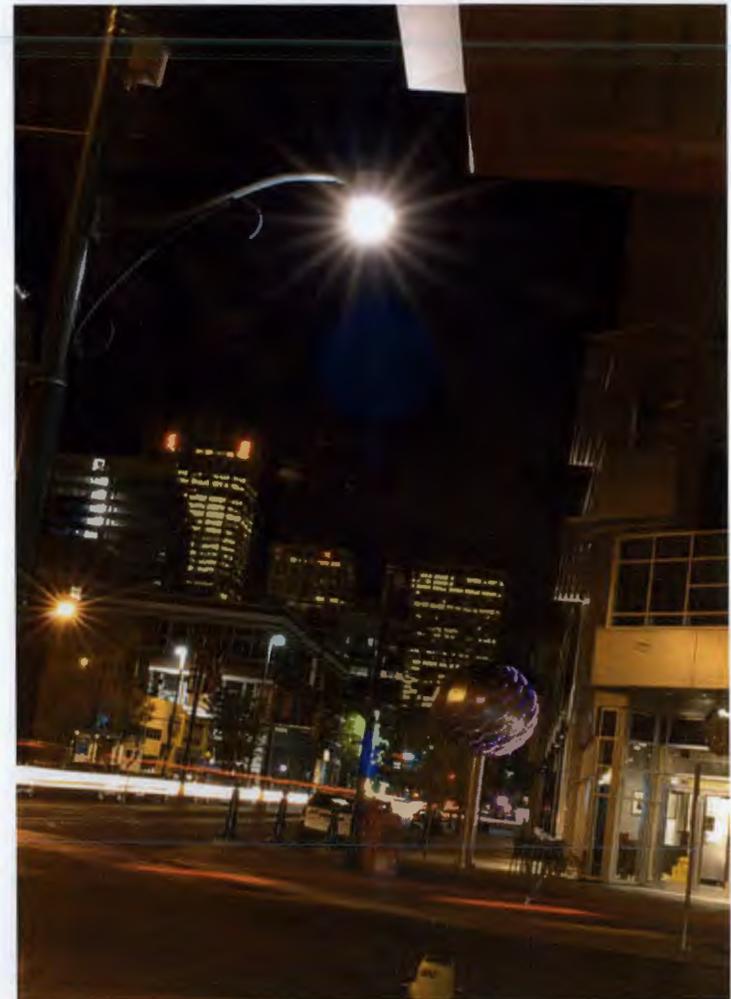


Regulatory Approval Process

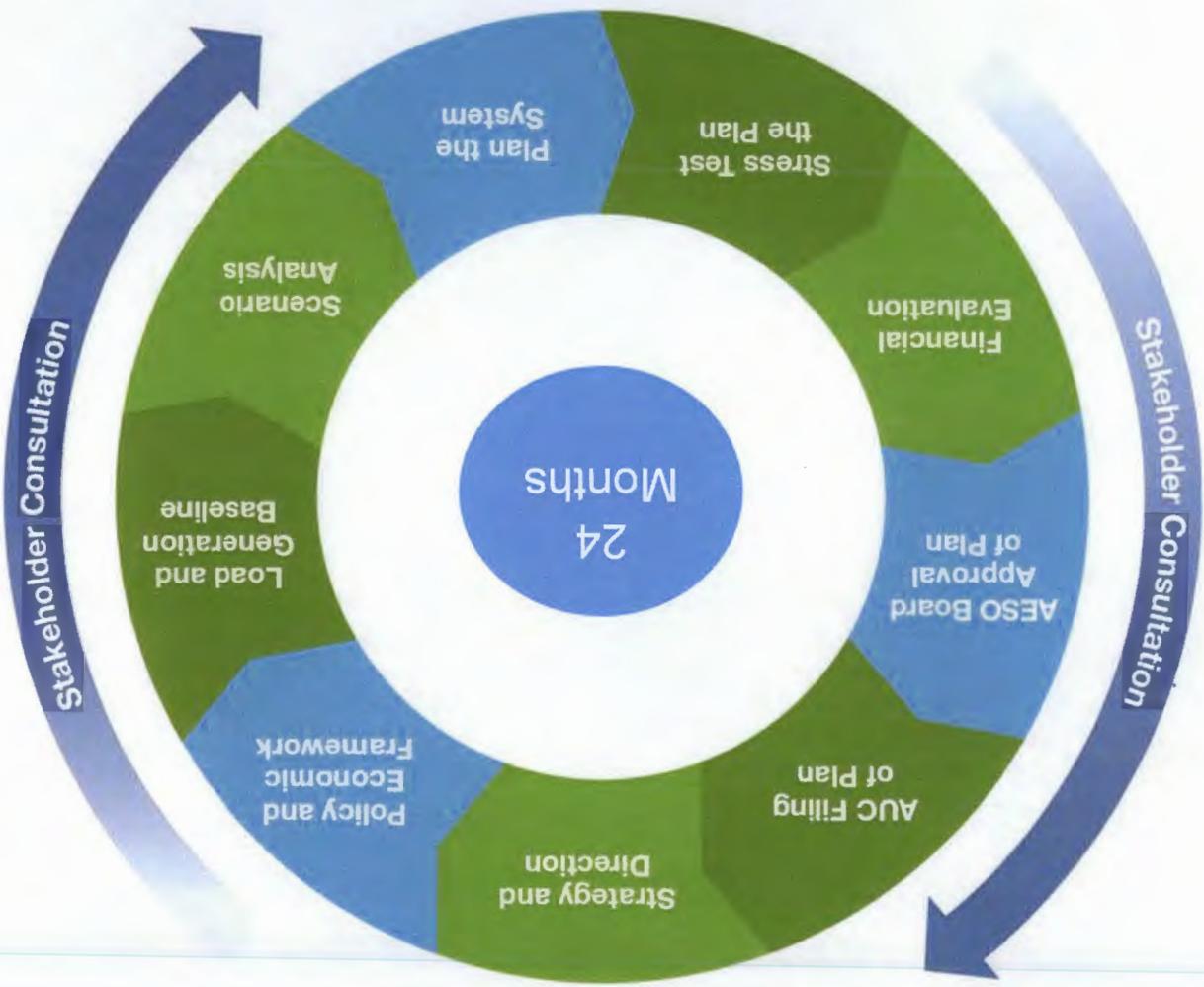


AESO Approach to Transmission Planning

- We work to ensure that appropriate transmission facilities are in place to meet the current and future electricity needs of Albertans
- The AESO's long-term transmission plans are purposefully flexible
 - System upgrades can be planned in stages
 - Able to accommodate changes in transmission infrastructure and existing/forecast demands for new transmission access



Long-term Transmission Plan



AESO Long-term Transmission Plan Development Process

- LTP filed every 2 years
- 20-year planning horizon
 - Near-term (Year 5)
 - Medium-term (Year 10)
 - Long-term (Year 20)



Key Planning Objectives



- Plan to meet reliability performance requirements
- Plan for an unconstrained transmission system
- Maintain connections to other provinces
- Consider high-level land impacts, municipal plans, and ALSA (Alberta Land Stewardship Act) regional plans
- Adjust previously planned facilities and need timing based on latest information
- Fulsome alternative assessments for each identified need

- All evaluations are based on the AESO's Long-term Outlook of power generation and demand for power

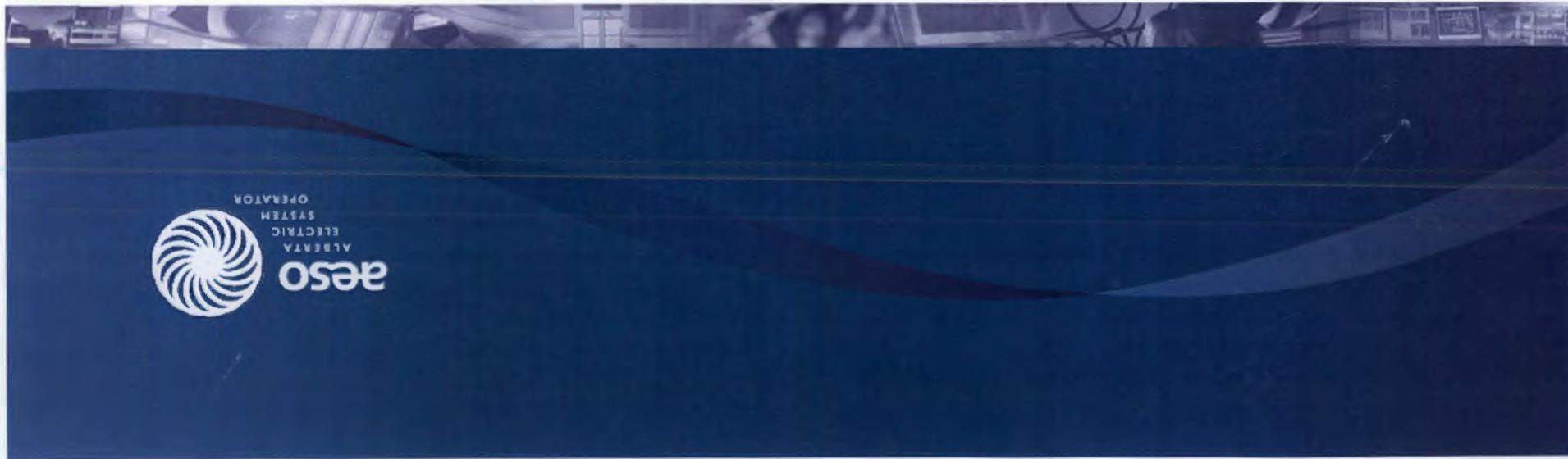


AESO Transmission Planning Process





Calgary Transmission Development



Electricity Demand is Growing

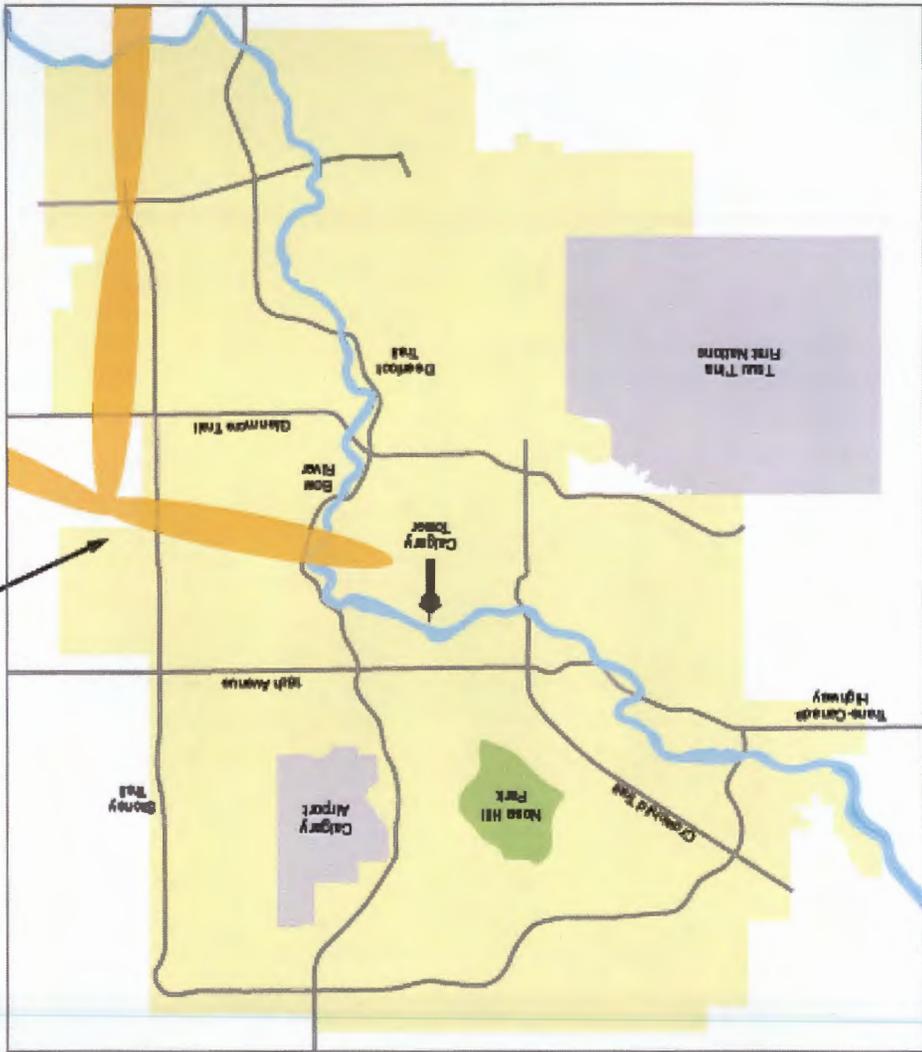


- Electricity demand in Calgary is expected to increase by about 50% over the next 20 years
 - From approximately 1,600 MW today to about 2,400 MW in 2035
 - This is equal to a 2% average annual increase
- Comparing growth in demand
 - Northeast (includes oilsands) 3.4%
 - Edmonton 2.1%
- Several new transmission projects are needed to support growth in Calgary

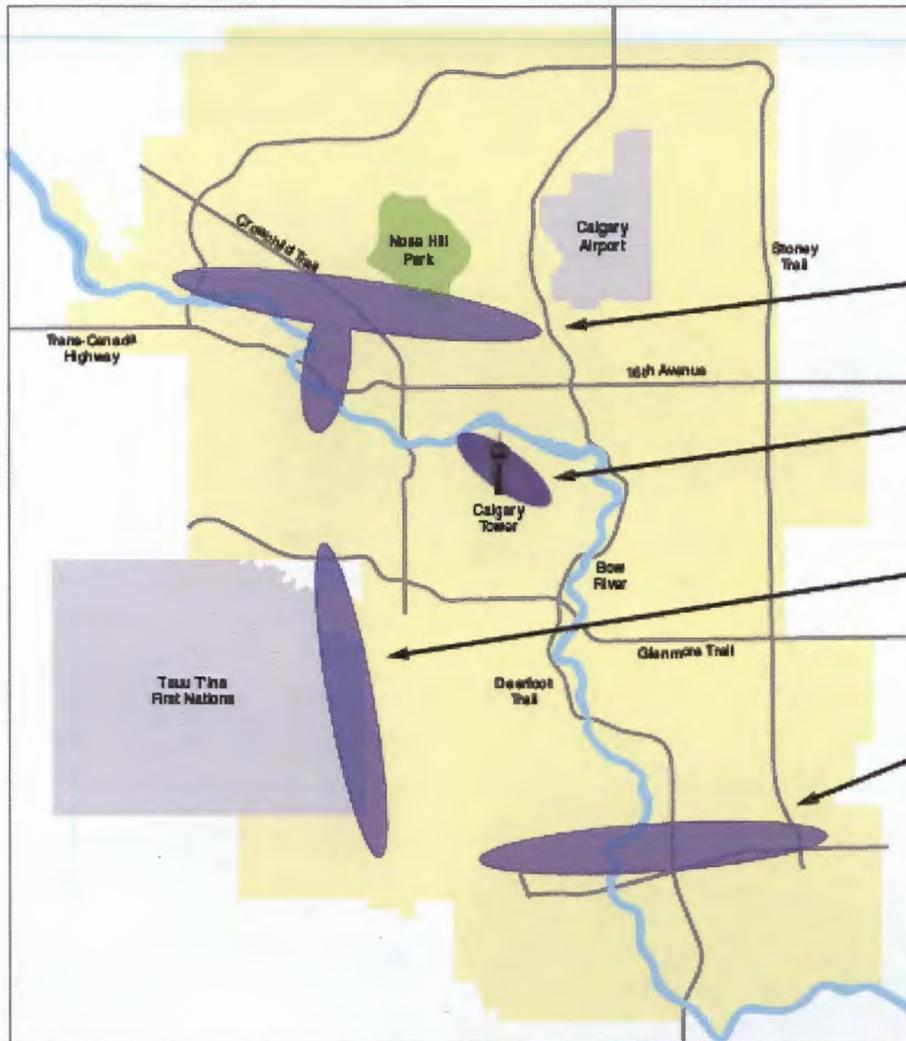
Key Projects Under Construction



Under Construction ●
Foothills Area Transmission Development East



Key Projects with Applications in Progress



● Applications in progress

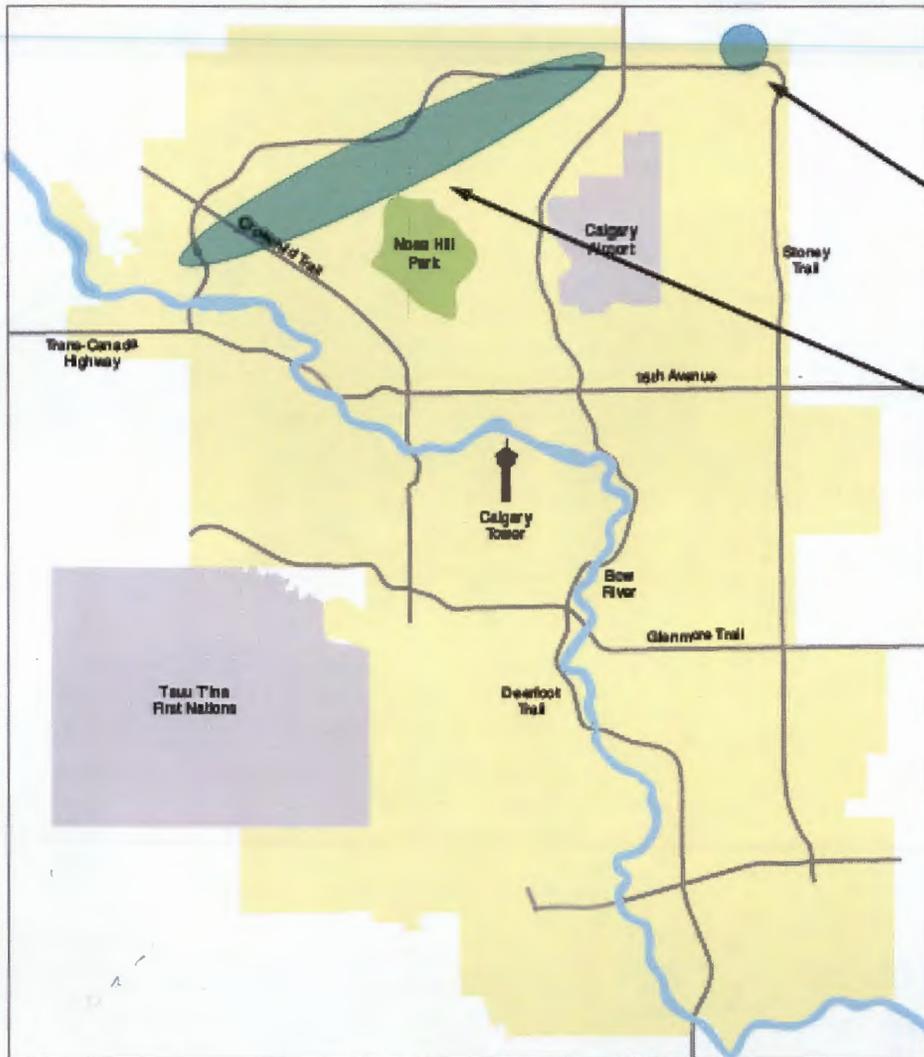
North Calgary 69kV
Transmission Development

Downtown Calgary
Transmission Reinforcement

Southwest Ring Road
Utilities Relocation

Foothills Area
Transmission Development
South Calgary
(FATD 3rd Circuit)

Key Future Projects



● Next 3-5 years

Beddington
Substation Upgrades

North Calgary 138kV

In Closing



- AESO is a source of information and assistance
- We are available to help answer questions
 - Both yours and those of your constituents
- We view the City of Calgary as a key stakeholder





**Thank you
Questions?**