

The world's first commercial post combustion coal-fired CCS project

SaskPower

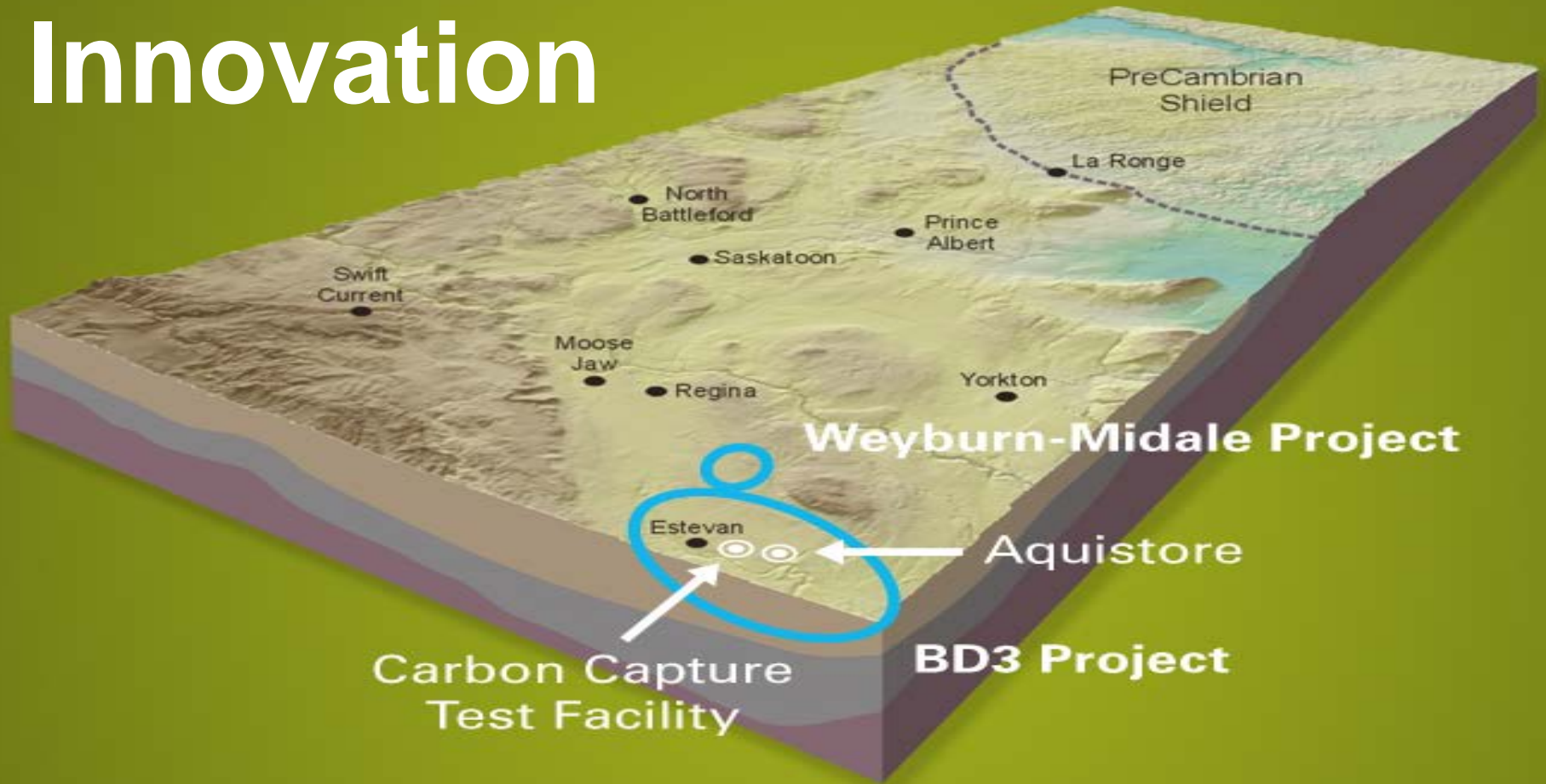


***Carbon Sequestration
Leadership Forum***

November 7, 2013

***Twitter:
@SaskPowerCCS***

Centre of Innovation

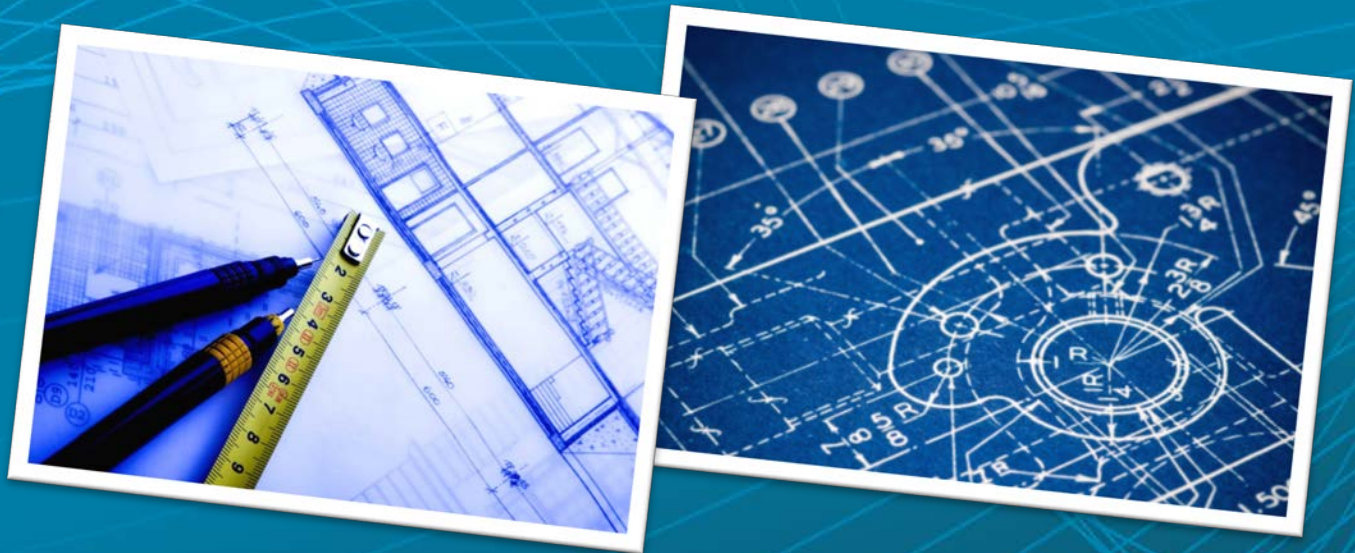


THE REALITY IN SASKATCHEWAN, CANADA.

- 490,000 customers
- 151,000 km of transmission line
- 4,104 MW generating capacity

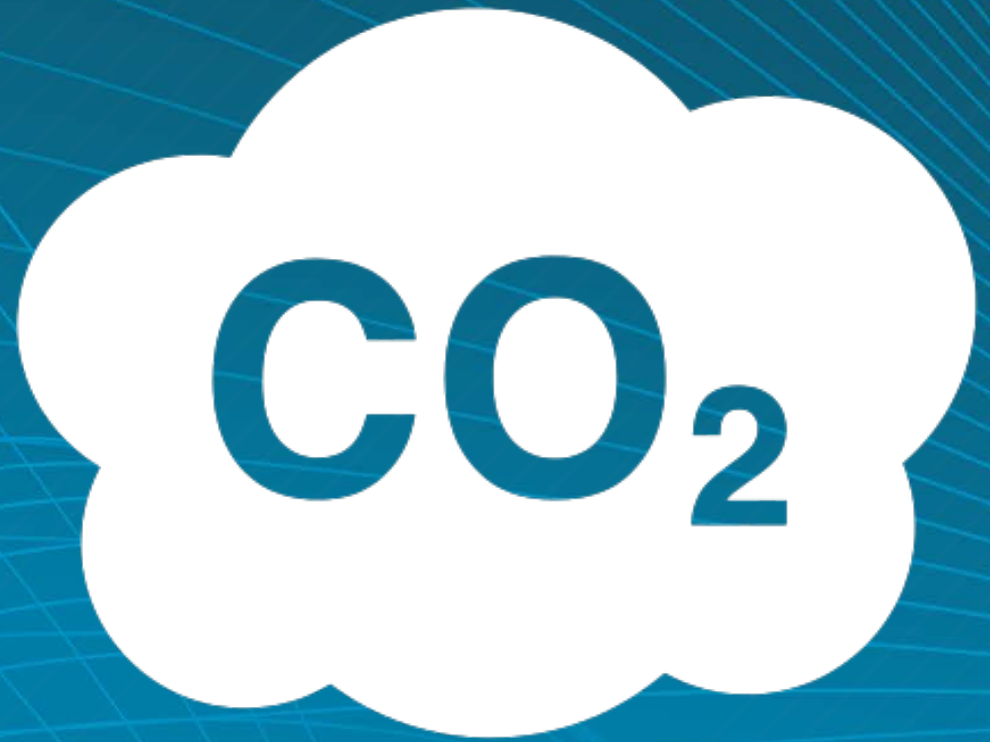


Imagine ...
the CCS Facility of the
FUTURE



90%

**of CO₂ captured from
an emissions stack.**

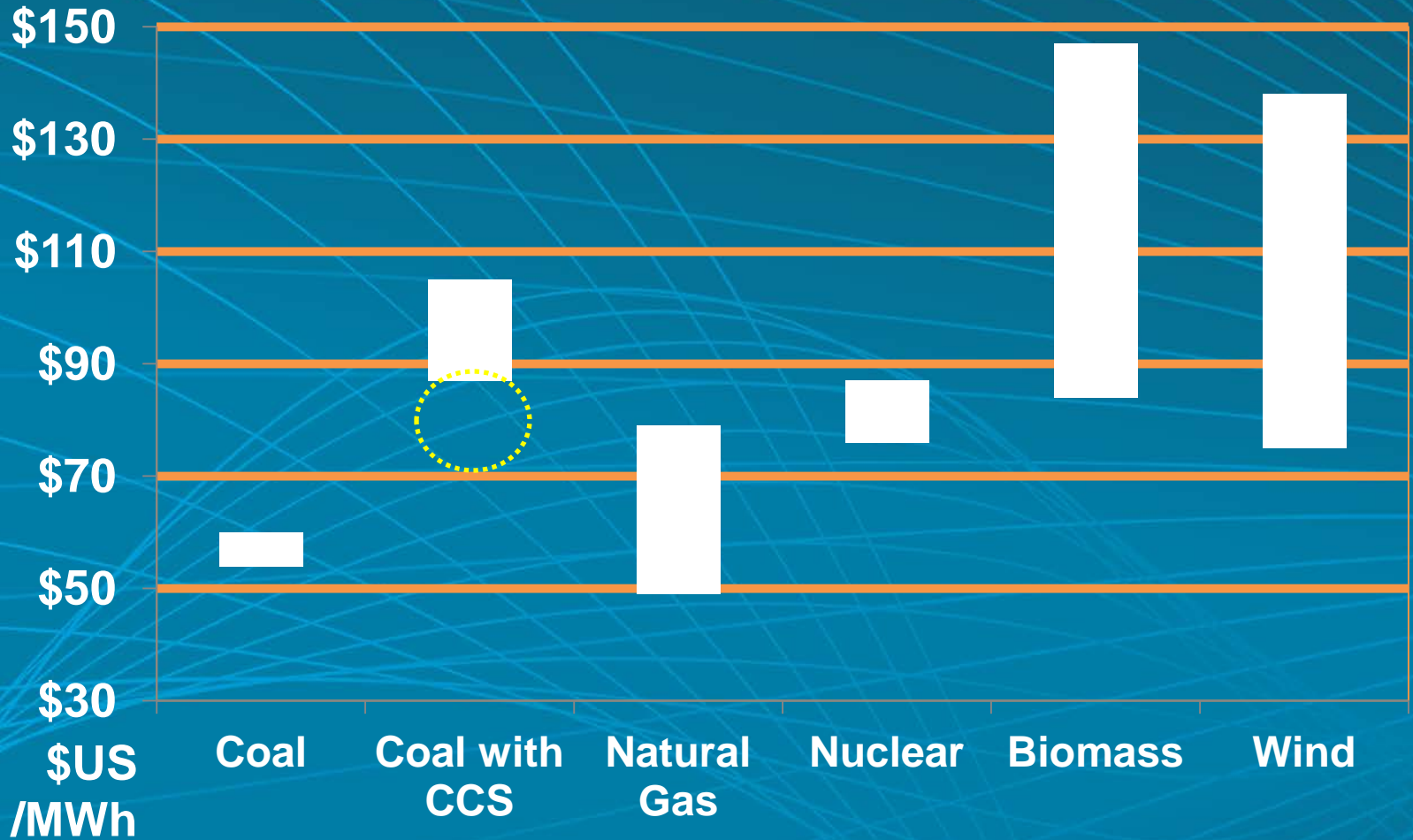


**1 Million Tonnes
of CO₂ Per Year.**



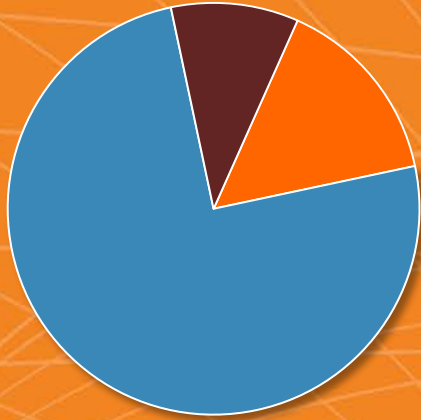
**CO₂ Equivalent to
250,000 Vehicles
Off the Road
Every Year.**

Generation

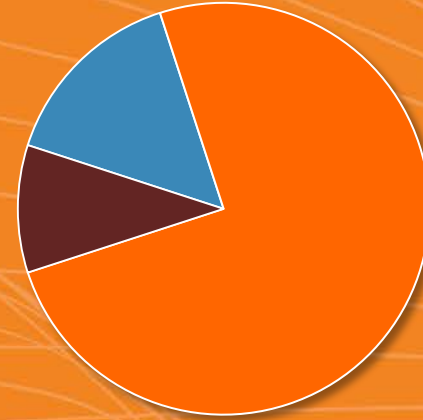


**SaskPower's
Experience.**

**Baseload Natural Gas
Cost of Electricity**



**BD3 Carbon Capture
Cost of Electricity**



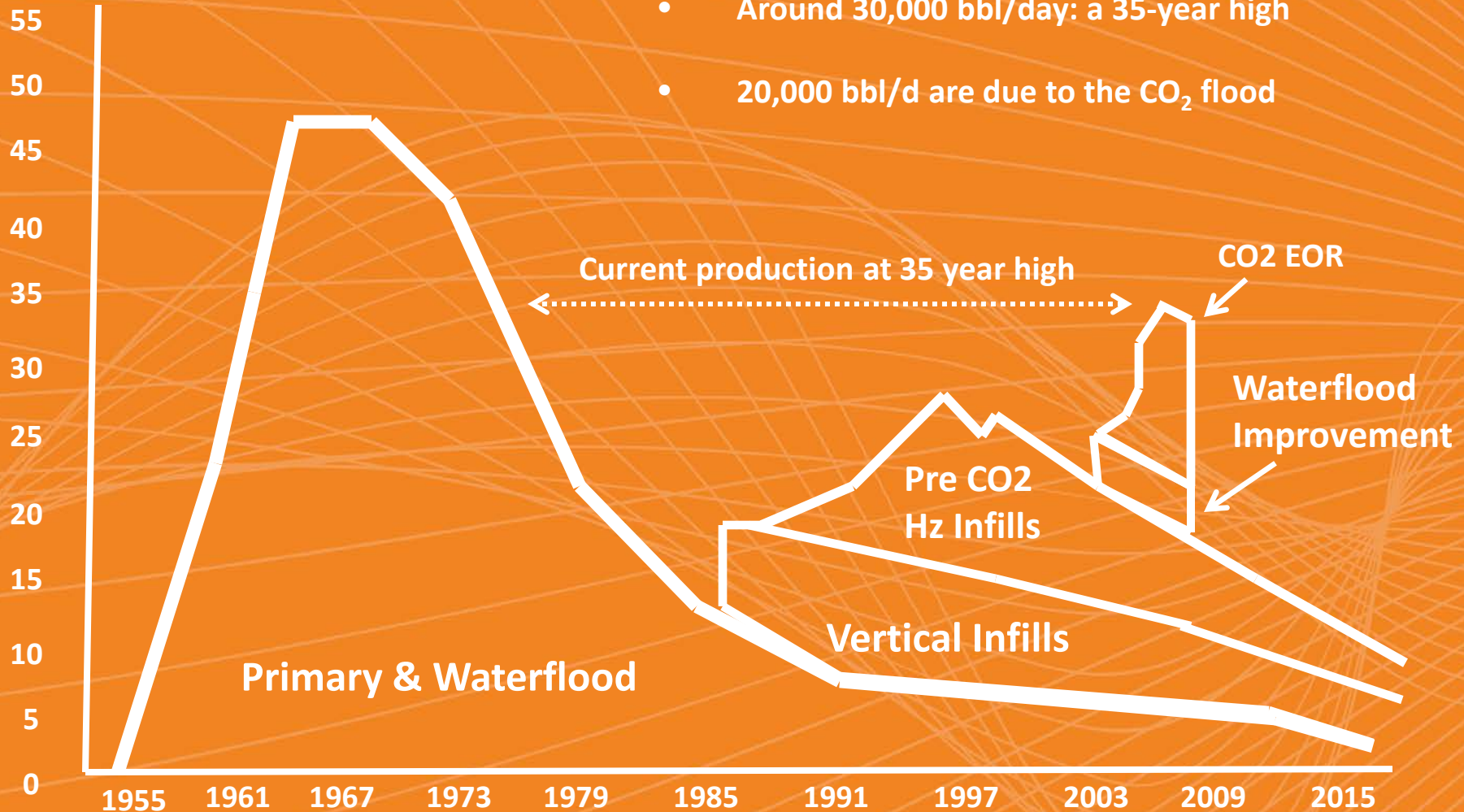
**SaskPower's
Experience.**

Repurposing By-Products.

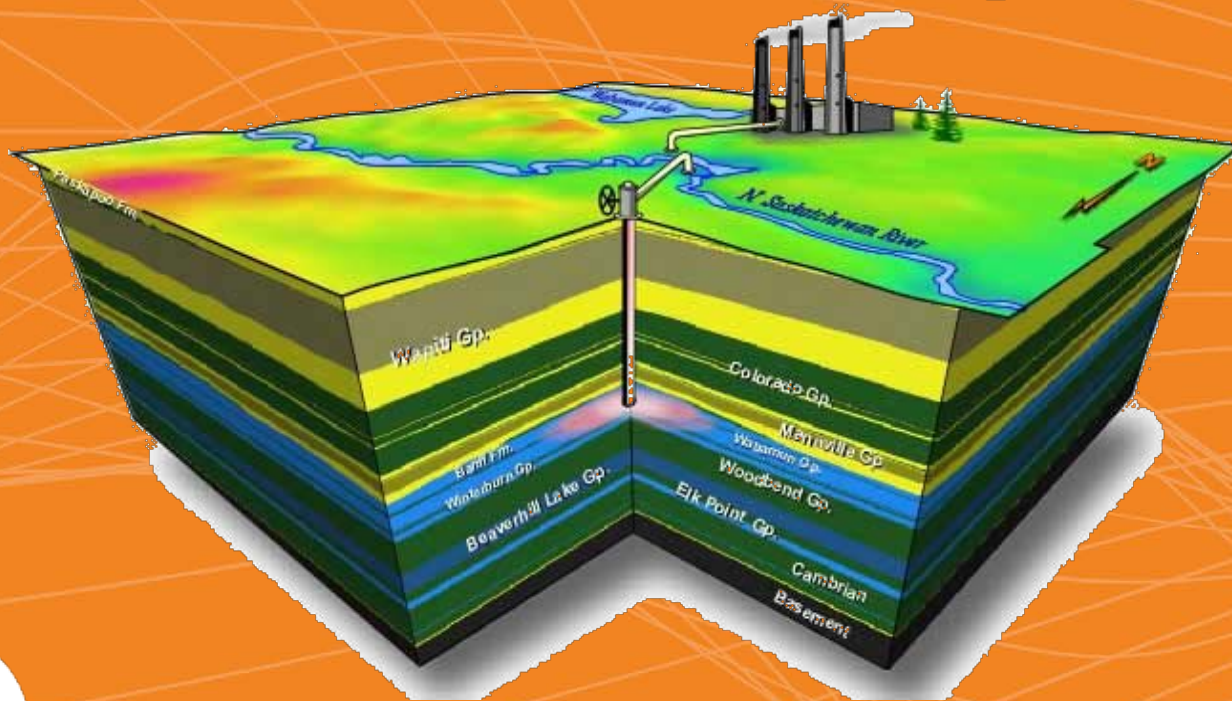


Utilization: EOR

- Around 30,000 bbl/day: a 35-year high
- 20,000 bbl/d are due to the CO₂ flood



Storage.



Aquistore

cenovus
ENERGY



The World's First Commercial Coal-Fired CCS Facility

Carbon Capture Test Facility

- For Commercial validation of amine PCCC systems
- Primary train: 120 tonnes per day
- Secondary train: 7.5 tonnes per day
- Catch and release
- Developed in collaboration with Hitachi Ltd.
- Primary train dedicated to Hitachi technology 2015 and early 2016
- Primary train open for non-Hitachi work mid 2016
- Secondary train available as needed



Synergistic Relationship

	CCTF alone	CCTF with BD ICCS
Installed Cost		✓
Direct Energy Demand	✓	✓
CO ₂ Quality	✓	✓
Operating Procedures/impact	✓	✓
Indirect Energy (host impact)	✓	✓
Trace Emissions	✓	✓
Efficacy, Operability	✓	✓
Consumables and Maintenance	✓	✓
Uncertainty in all of Above	✓	✓

LEADING COLLABORATION IN:



Boundary Dam Integrated CCS Demonstration

- Knowledge Sharing Consortium



Shand Carbon Capture Test Facility

- Evaluation Services
- Test Center Network



Technology Advancement and Basic Research

- In Progress

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Coal-fired CCS Project**

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