



10-Year Transmission System Plan 2005 - 2014

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AESO Stakeholder Conference

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Presentation Overview

- 10-year plan overview
- Highlights of plan
- 20-year transmission outlook plan
- Questions??



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2.0 Transmission Regulation and Reliability Criteria

- AESO must make assumptions about demand forecast and generation development
- Must meet NERC/WECC reliability criteria and standards
- Transmission development must be proactive; lead load growth and generation development
- Existing interconnections capable of transfers at 'design' levels
- Facilitate competitive wholesale market
- Use of RAS and TMR to be short-term solutions



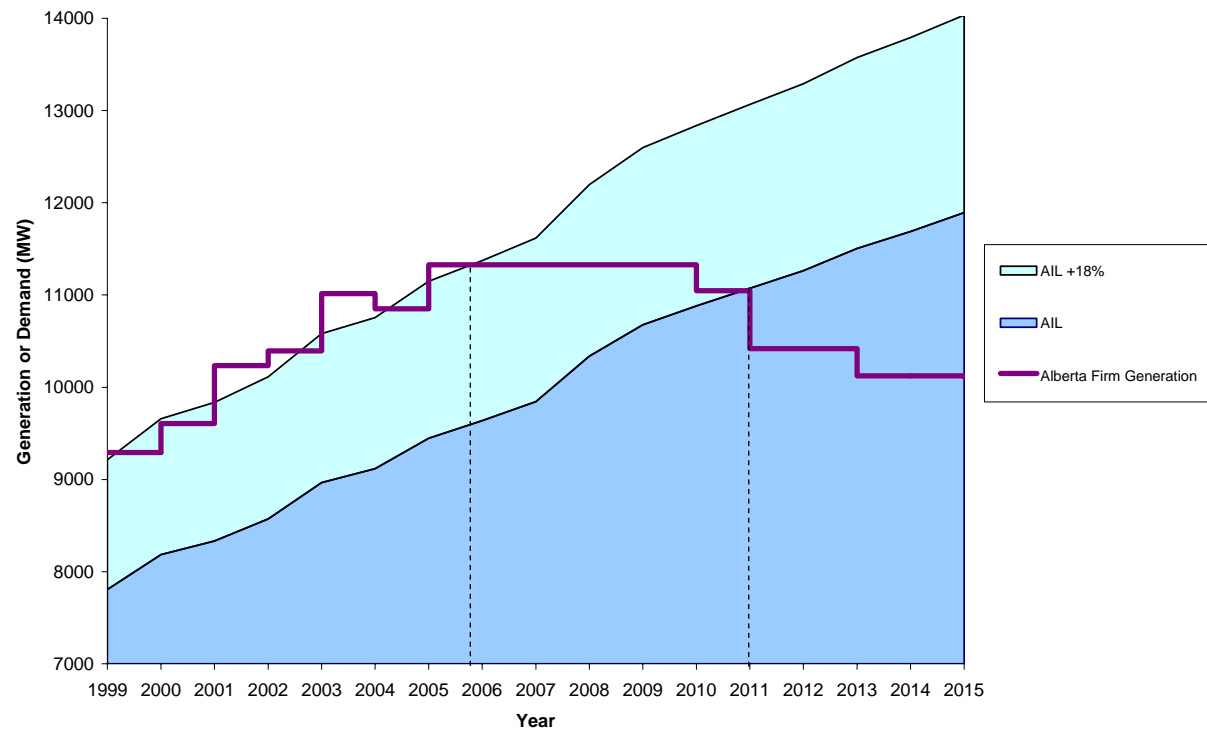
4.0 Input Data and Assumptions - Highlights

- Alberta Internal Load (AIL) Growth
 - 2003 Recorded: 8,967 MW; 62,714 GWh
 - 2004 Recorded: 9,236 MW
 - 2014 Median Forecast: 11,946 MW; 84,059 GWh
 - 2004 – 2014 Growth: demand - 2.6%/yr; energy – 2.7%/yr
- Generation
 - 2004 Net Installed Capacity: 11,909 MW
 - 2005 – 2014 Retirements: 1,533 MW
 - 2005 – 2014 New Additions: 3,378 MW



4.0 Input Data and Assumptions (cont'd)

Figure 4.5-1: Alberta Internal Peak Demand Forecast and Alberta Firm Generation Capacity



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4.0 Data Input and Assumptions (cont'd)

Table 4.5-1: Alberta Internal Peak Demand Forecast and Alberta Firm Generation Capacity

Year	Alberta Internal Load (MW)	Alberta Firm Generation (MW)	"Generation in Excess of Demand" Margin (%)	Generation Required for 18% Margin (MW)
1999	7,808	9,291	19.0	0
2000	8,185	9,606	17.4	0
2001	8,334	10,235	22.8	0
2002	8,570	10,393	21.3	0
2003	8,965	11,015	22.9	0
2004	9,321	10,851	16.4	148
2005	9,594	11,326	18.1	0
2006	9,974	11,326	13.6	443
2007	10,315	11,326	9.8	846
2008	10,597	11,326	6.9	1178
2009	10,738	11,326	5.5	1345
2010	11,002	11,047	0.4	1935
2011	11,259	10,418	0.0	2868
2012	11,493	10,418	0.0	3144
2013	11,694	10,122	0.0	3677
2014	11,946	10,122	0.0	3974



5.0 Bulk Transmission System

- Discussion of strategic issues
 - Alignment of generation and transmission lead times
 - Staged development
 - Acquisition of rights-of-way
 - Management of stranded investment risk



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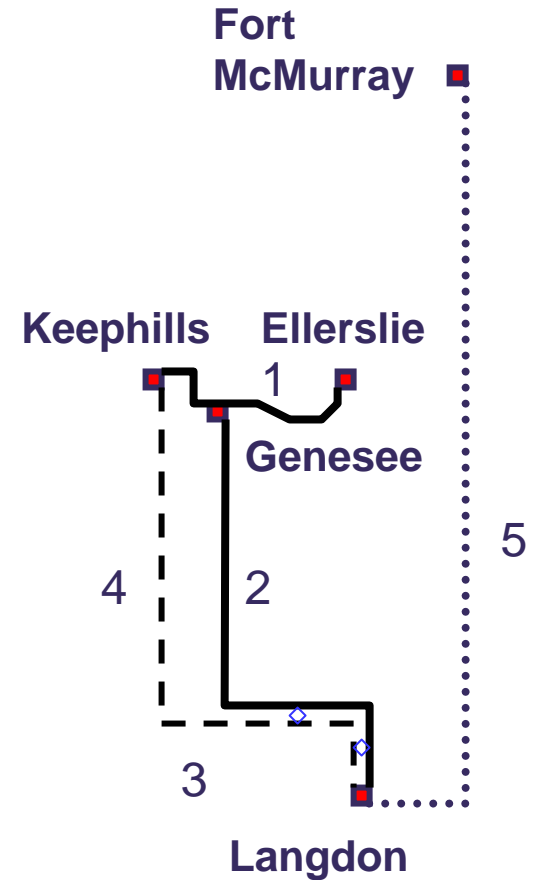
5.0 Bulk Transmission System (cont'd)

1. Applications filed for:

- (1) Conversion of south Keephills – Genesee – Ellerslie line to 500 kV
- (2) Build Genesee – Langdon 500 kV line
- (3) Install Calgary Area Reactive Support

2. Future developments:

- (4) 2nd Edmonton – Calgary 500 kV
- (5) Fort McMurray – Calgary Line



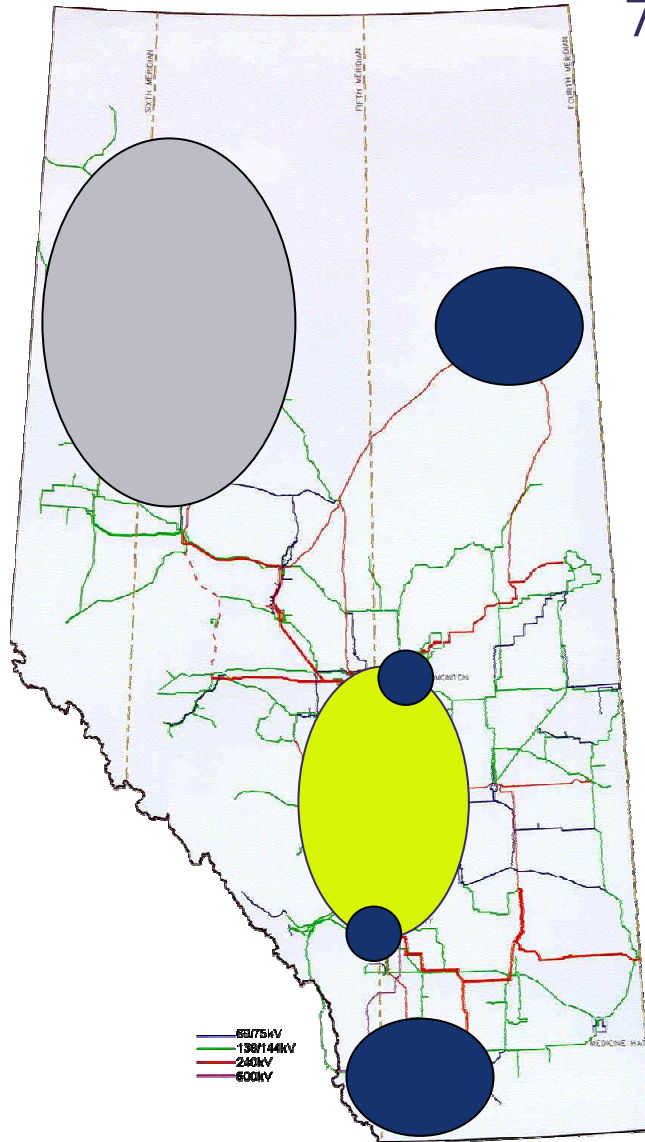
6.0 Transmission Interconnections with Neighbouring Jurisdictions

- Existing interconnection design capability
 - Alberta – B.C.: 1,200 MW import; 1,000 MW export
 - Alberta – Sask.: 150 MW import; 150 MW export
- Outline of plan to get existing interconnections back to design capability
- New merchant interties
 - Northern Lights
 - Alberta – Montana
 - System studies with NWPP



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7.0 Regional Transmission

- Northeast
- Northwest
- West Central
- East Central
- Southwest
- Southeast
- Edmonton Area
- Calgary Area



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20-Year Transmission Outlook Plan - Stakeholder Consultation

- January to mid March 2005
 - One-on-one and small groups
 - Gather input: discuss assumptions, scenarios
- March 2005 (2nd half)
 - Prepare and issue 1st Draft
- April 2005 (1st half)
 - Comment period for 1st Draft



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20-Year Transmission Outlook Plan - Stakeholder Consultation (cont'd)

- April 2005 (2nd half)
 - One-on-one, small groups
 - Review input, seek further input
- May 2005 (1st half)
 - Prepare and issue 2nd draft
- May 2005 (2nd half)
 - Comment period for 2nd draft
- June 2005
 - All stakeholders, Transmission Advisory Committee
 - Prepare and issue final plan by July 1, 2005

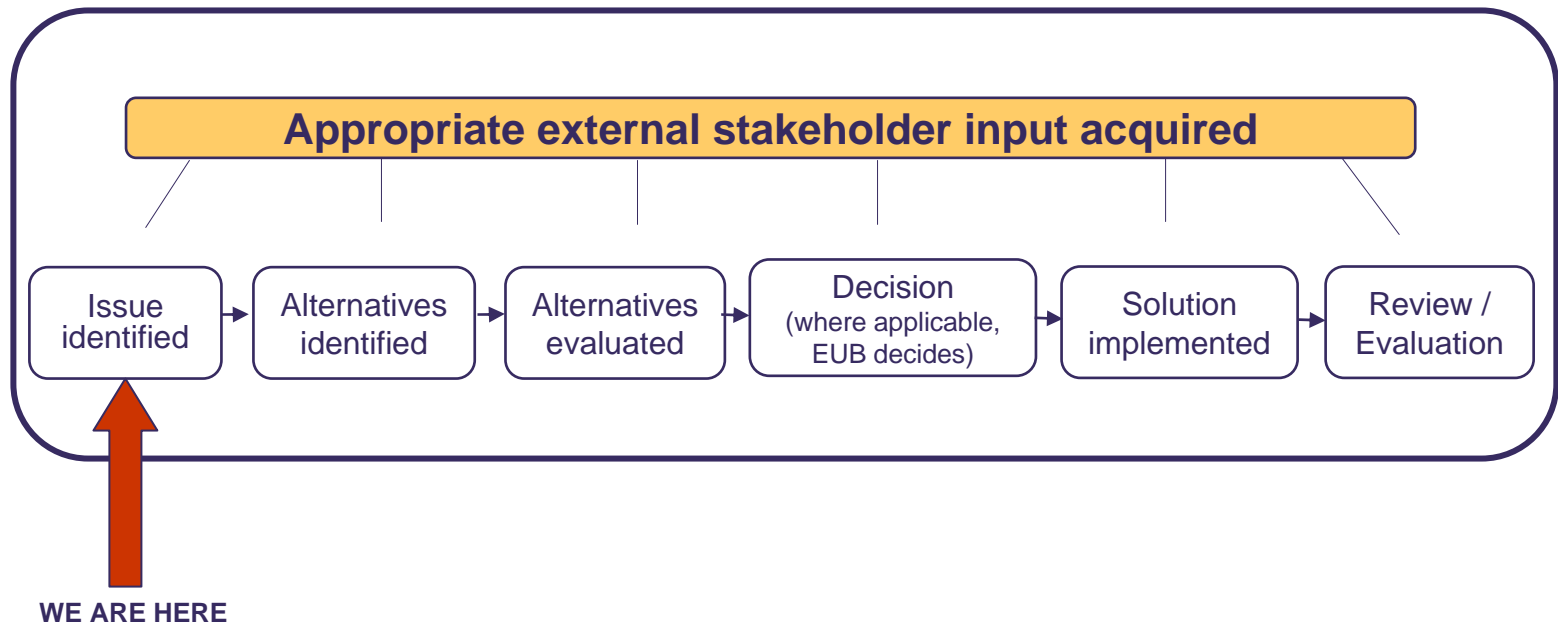


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The AESO Consultation Process

20-Year Transmission Outlook Plan



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