APPENDIX H

Participant Involvement Program

1.0 Participant Involvement Program (PIP)

The AESO conducted a Participant Involvement Program (PIP) throughout the development of its Needs Identification Document (NID) to address the need for transmission reinforcement in Central East (Cold Lake, Vegreville and Provost area) Alberta.
The AESO's PIP ran from May 2009 to April 2010, and was designed to notify, consult or engage a variety of stakeholders with interests in transmission development in Central East (Cold Lake, Vegreville and Provost area) Alberta. These stakeholders were identified as:

- Residents, occupants, landowners and businesses in Central East (Cold Lake, Vegreville and Provost area) Alberta;
- Elected and administrative government officials at local, municipal and provincial levels;
- Industry; and
- First Nations and Métis settlements with interests in Central East (Cold Lake, Vegreville and Provost area) Alberta.

The AESO used a variety of methods to notify, consult and engage members of these groups about:

1) The need for transmission development in Central East (Cold Lake, Vegreville and Provost area) Alberta; and
2) Transmission alternatives for meeting this need.

Table H-1 presents a complete account of the methods used by the AESO to notify, consult or engage stakeholders for this application.

Table H-1: Communications methods used by the AESO

Communications Vehicle	Notification	Consultation
Mailouts (by postal code)	X	X
Newspaper ads	X	X
Earned media (news coverage)	X	
Web postings	X	
Meetings and presentations		X
Open Houses		X
Communications (via email, mail, and telephone)		X

The AESO used these communications methods to carry out a variety of PIP activities aimed at sharing information with stakeholders and gathering their feedback. Table H-2 describes in greater detail the PIP activities that the AESO executed in support of this application.

Table H-2: PIP activities described

PIP activity	Description	Target Audiences	Number	Date
Newspaper ads placed in Central East (Cold Lake, Vegreville and Provost area) Alberta newspapers	(1) Open house advertisement (2) Notice of Filing advertisement	Residents, occupants, landowners and businesses	12 local newspapers	(1) September to October, 2009 (2) April to May, 2010
Earned media (news coverage)	Articles on AESO need and consultation efforts	Residents, occupants, landowners and businesses	10	July to October, 2009
Mailouts by postal code	(1) Need overview and Open House schedules (2) Stakeholder mailout advising on preferred alternative and application to be filed with AUC	Residents, occupants, landowners and businesses	Approximately 35,633 pieces in September mailout and approximately 34,953 pieces in subsequent April mailout	(1) September 2009 (2) April 2010

PIP activity	Description	Target Audiences	Number	Date
Items posted to AESO website	(1) Presentation to Counties (2) Presentation at December 9, 2009 stakeholder session (3) Need overview (4) Central East Region Transmission Development - Need Assessment (5) Update to stakeholders April, 2010 (6) Open houses for transmission development in Central East Region (Cold Lake, Vegreville, Provost area) (7) Open house newspaper ads (8) Important changes of location-News Ad (9) Posterboard presentation at Open Houses	All stakeholders (with internet access)	9	September 2009 to April 2010
Meetings	Presentations on need	Elected and administrative government officials; First Nations; other	10 Meetings	May to October, 2009
Open houses	Sharing information on need and transmission alternatives	All stakeholders (near event locations)	92 stakeholders (self-registered)	September 24 to October 14, 2009

PIP activity	Description	Target Audiences	Number	Date
Addressed mail and email	Stakeholder mailout advising on need and open house dates and locations Stakeholder mailout advising on recommended alternative and application to be filed with the AUC	MLAs, CAOs, Town, County and M.D. Councils, First Nations and Métis settlements; advocacy groups		(1) September to October, 2009 (2) April, 2010

1.1 Description of Participant Involvement Program Products and Activities

AESO Need Overview

The AESO developed a background document that describes the need for transmission reinforcement in Central East (Cold Lake, Vegreville and Provost area) Alberta. The need overview explains the primary drivers for transmission development in Central East (Cold Lake, Vegreville and Provost area) Alberta are the growing demand for electricity from oilsands development and pipelines, and the need to interconnect proposed gas fired electricity generation as well as wind farms in the study region.

A copy of this document was posted to the AESO website: http://www.aeso.ca/downloads/Need_Overview_for_Central_East_Alberta_Project.pdf. This need overview was advertised in the AESO weekly Stakeholder newsletter on September 10 and 17, 2009. Please find the need overview in Attachment 'Exhibit A'.

Advertising

Between September and October, 2009, the AESO advertised in local newspapers to notify readers of:

- The need for transmission development in Central East (Cold Lake, Vegreville and Provost area) Alberta; and
- Open house dates, locations and times.

Table H-3 shows the dates and publications in which the AESO advertised the need for transmission development and notice of the open houses.

Table H-3: Newspaper Advertising Schedule (2009)

Publication	Date of Publication
Cold Lake Sun	Tuesday, September 15
Bonnyville Nouvelle	Tuesday, September 15
St. Paul Journal	Tuesday, September 15
Two Hills County Chronicle	Tuesday, September 15
Vegreville Observer	Wednesday, September 16
Lloydminster Booster	Monday, September 21
Viking Weekly Review	Tuesday, September 22
Wainwright Edge	Friday, September 25
Provost News	Wednesday, September 23
Camrose Canadian	Thursday, September 24
Castor Advance	Thursday, October 1
Sedgewick Community Press	Tuesday, September 30

The advertisements for open houses provided a general overview of the need, a map of areas potentially affected and toll-free contact information for the AESO. The advertisements also notified readers of the dates and times of the open houses. Copies of these newspaper advertisements were posted to the AESO website (http://www.aeso.ca/transmission/17999.html).

The AESO also informed stakeholders of the upcoming filing of the Needs Identification Document in May, 2010.

See Attachment 'Exhibit B' for copies of the advertisements.

Stakeholder Calendar

Information about the open houses was displayed on the Stakeholder Calendar displayed on the AESO website. Dates, times and locations were shown on the calendar http://stakeholder_calendar.aeso.ca/stakeholder_calendar/home.do?action=read.

Open houses

The AESO held 11 open houses throughout Central East (Cold Lake, Vegreville and Provost area) Alberta between September 24 and October 14, 2009. Ninety-two (92) people registered (sign-in at entry); more than this attended as some arrived in pairs or groups with only one person signing the registration and others opting not to sign-in. AESO employees participated in these events. Additionally, representatives from ATCO Electric and AltaLink Management Limited also participated. Table H-4 lists the open house locations and the registered attendance at each location. See Attachment 'Exhibit C' for poster boards displayed. The posterboards were also displayed on the website http://www.aeso.ca/downloads/CentralEastAllDisplays.pdf.

Stakeholders attending each event were asked to register and complete surveys before leaving. These surveys allowed the AESO to gather stakeholders' feedback on the need and the alternatives to meet this need.

Table H-4: Open house locations and attendance by stakeholders

Open House Attendance (measured by signed registrations)	
Location	**Attendance**
M.D. of Bonnyville,Cold Lake, Energy Centre	1
M.D. of Bonnyville, Bonnyville, Bonnyville Centennial Centre	15
County of St. Paul, St. Paul, Recreation Centre	5
County of Two Hills, Two Hills, Brosseau Community Hall	14
County of Minburn, Vegreville, The Brass Lantern	9
County of Vermilion River, Lloydminster, Best Western Hotel	3
Beaver County, Viking, Caledonia Motor Inn	5
M.D. of Wainwright, Wainwright, Wainwright Communiplex	14
M.D. of Provost, Provost, Provost Culture and Recreation Centre	3
County of Paintearth, Castor	9
Flagstaff County, Sedgewick, Sedgewick Community Hall	14
Total Attendees	92

Stakeholders were generally given an overview on the layout of the open house and were encouraged to study the poster boards describing the project. AESO staff members were available to answer questions on need. Representatives from ATCO Electric and AltaLink Management Limited were available to answer questions as well. All stakeholders were asked to complete Participant Surveys at the end of their visit.

Stakeholder Meetings

Throughout the development of this application, the AESO met with elected and administrative officials from Towns, Municipal Districts and Counties listed below:

- County of Paintearth
- Beaver County
- Flagstaff County
- M.D. of Provost
- County of Vermilion River
- M.D. of Bonnyville
- County of St. Paul
- M.D. of Wainwright
- County of Two Hills
- County of Minburn

The AESO also held a presentation to update all interested stakeholders on December 9, 2009.

See Attachment 'Exhibit D' for a copy of the presentations delivered during these meetings.

In addition to meetings, the AESO sent information to MLAs representing constituents in the transmission study area including:

- Bonnyville-Cold Lake, Mrs. Genia Leskiw
- Lac La Biche-St. Paul, Hon. Ray Danyluk
- Fort Saskatchewan-Vegreville, Premier Ed Stelmach
- Lloydminster-Vermilion, Hon. Lloyd Snelgrove

Further, the AESO sent information directly to the following Municipalities, First Nations and Métis settlements:

- Cold Lake First Nation
- Frog Lake First Nation
- Kehewin Cree First Nation
- Onion Lake First Nation
- Saddle Lake First Nation
- Elizabeth Métis Settlement
- Fishing Lake Métis Settlement

Postal Code Mailout (unaddressed mail)

In September, 2009, the AESO developed a letter providing information about the project, upcoming open houses and contact information for mailout by postal code (unaddressed mail). This letter, along with the AESO need overview was mailed to approximately 35,633 addresses

(includes residences, businesses, schools, farms and hospitals) throughout Central East (Cold Lake, Vegreville and Provost area) Alberta. This letter was also posted to the AESO website at http://www.aeso.ca/downloads/811_cold_lake_oh_invitation_Sep_5_2009.pdf on September 9, 2009. The letter was advertised in the AESO weekly Stakeholder newsletter on September 10 and 17, 2009.

In April, 2010, the AESO developed a second letter providing stakeholders with an update on the project, as well as contact information, for mailout by postal code (unaddressed mail). This letter was mailed to approximately 35,633 addresses (includes residences, businesses, schools, farms and hospitals). A copy of this document was posted to the AESO website (http://www.aeso.ca/transmission/17999.html) in April, 2010.

See Attachment 'Exhibit E' for a copy of the letters sent to stakeholders.

Technical Document

The AESO posted a Needs Assessment technical document on the website. This document described the AESO's assessment of the need. A copy of this document was posted to the AESO website.
http://www.aeso.ca/downloads/811_Central_East_Region_Transmission_Development_Need_Assessment_11MAY09.pdf.

Public responses to AESO PIP

The AESO received a variety of comments and enquires from stakeholders on the need to reinforce Central East (Cold Lake, Vegreville and Provost area) Alberta's transmission system and the alternatives the AESO developed to meet this need. This feedback was included in letters, emails and phone calls received by the AESO from stakeholders.

The largest source of stakeholder feedback came from Council meetings, Participant Surveys and informal conversations between AESO staff and stakeholders at open houses held September 24 to October 14, 2009. The surveys provided the AESO with feedback on both stakeholders' opinions about the need for transmission in Central East (Cold Lake, Vegreville and Provost area) Alberta and the transmission alternatives proposed by the AESO for addressing this need. Conversations at these open houses and the meetings described also afforded the AESO opportunities to learn stakeholder preferences for transmission development in Central East (Cold Lake, Vegreville and Provost area) Alberta.

The AESO has responded to all enquiries and concerns received as a result of PIP activities. To our knowledge, all concerns relating to the NID, have been resolved.

Stakeholder Communication Tools

In addition to the PIP activities described above, the AESO also provides stakeholders with a dedicated, toll-free telephone line (1-888-866-2959) and a dedicated email address (stakeholder.relations@aeso.ca). AESO contact information, along with the AESO's mailing address (2500, 330 5th Ave, SW, Calgary) and website address (www.aeso.ca), and a privacy statement that describes how the AESO honours Alberta's Personal Information Protection Act, was included on all AESO communications related to this application.

1.2 Issues and Concerns Raised

Open houses and meetings were the primary sources of feedback from stakeholders about the project.

Stakeholder Issue/Concern	AESO Response
• Requested more information on the need and possible solutions	The AESO provided copies of the need overview to stakeholders, and open house poster boards had maps clearly delineating the different options
• Expressed concern that the transmission lines might be built for exporting electricity outside of Alberta	The AESO provided information to stakeholders on the need driving this project, particularly the load as well as wind and gas generation expected to come up in Central Eastern Alberta
• Requested more information on the transmission technology that would be used for the new lines, as well as questions on the current transmission technology in place	The AESO explained the role of the transmission facility owner in determining what transmission technology would be used for new lines, and also displayed a poster board at open houses showing potential transmission technology to be used in the project
• Health, safety, environment and public preference with respect to aesthetic considerations and property values	The AESO provided Health Canada brochures to stakeholders that spoke to health concerns related to EMF, and advised stakeholders that the TFO is responsible for routing transmission lines, which will affect aesthetic considerations and property values
• Siting and the regulatory process, along with references to the location of generation	The AESO advised stakeholders about the TFO's role in routing transmission lines, and provided information about the regulatory process as requested, including providing a poster board at the open houses that clearly illustrates the regulatory process
• Regulatory matters such as other applications in the region and also rate of growth in Alberta	The AESO provided the status and project information for other applications in the area, such as the Hanna project, as well as the rate of growth in Alberta
• Capital costs of each alternative	The AESO provided as much information as was available on costs for each alternative
• Other cost factors such as line losses	The AESO provided information on costs regarding line losses
• Commented on the AESO's participant involvement process	The AESO took into consideration comments by stakeholders on the participant involvement process and modified the process accordingly by mailing an update on the project prior to filing the NID

The AESO responded to all concerns regarding potential reinforcements in Central East (Cold Lake, Vegreville and Provost area) Alberta that it received as a result of the PIP in a reasonable and appropriate manner.

Open house visitors and meeting participants generally expressed satisfaction with the opportunity to learn more about the need for transmission; however, they expressed a preference for discussing the project when potential project routes were available.

An indication of preference among the options was presented by the County of St. Paul which recommended the existing 72 kV right-of-way in their County be considered as much as feasible for proposed upgrades. This suggestion has been taken into account in the development of alternatives for the St. Paul area.

- The AESO received little stakeholder concern regarding proposed transmission developments to address the needs outlined;
- The AESO's review of stakeholder feedback reveals the need for transmission development in Central East (Cold Lake, Vegreville and Provost area) Alberta is recognized and accepted;
- The AESO's review of stakeholder feedback reveals primary concerns expressed are routing or siting related and therefore not expressions of opposition to the proposed transmission developments in Central East (Cold Lake, Vegreville and Provost area) Alberta to address the needs outlined;

Participant Involvement Program

Attachments

EXHIBIT A

Transmission Reinforcement in the Central East (Cold Lake, Vegreville and Provost) Area

For more information please contact the AESO at 1-888-866-2959,
www.aeso.ca or stakeholder.relations@aeso.ca

Who is the AESO?

Alberta's transmission system, also referred to as the Alberta Interconnected Electric System (AIES), is planned and operated by the Alberta Electric System Operator (AESO). The transmission system is comprised of the high-voltage lines, towers and equipment (generally 69 kV and above) that transmit electricity from generators to lower voltage systems that distribute it to cities, towns, rural areas and large industrial customers. Our job is to maintain safe, reliable and economic operation of the provincial transmission grid.

Where is the AESO's planning study region?

The AESO's planning study region runs from Cold Lake south through the Battle River, Wainwright and Vegreville areas, and east to the Provost area. The Central East region also covers Lloydminster, at the border with Saskatchewan. Larger communities in this region include Cold Lake, Bonnyville, Vermilion, Kitscoty, Lloydminster, St. Paul, Elk Point, Vegreville, Wainwright, Hardisty, Sedgewick, Strome, Jarrow, Edgerton, Castor, and Killarney Lake.

Why is transmission development required in the Central East (Cold Lake, Vegreville and Provost) area?

Transmission system reinforcement is needed in the study region to meet growing demand for electricity from oil sands development and pipelines, and to interconnect proposed gas fired electricity generation as well as wind farms in the study region.

The AESO has received applications to interconnect over 500 megawatts (MW) of wind power and natural gas generation projects in Central East Alberta. Further, the AESO long term forecast shows demand for electricity in the Cold Lake and Wainwright areas increasing by more than five percent per year and 12 percent per year respectively. Oilsands development and pipelines, required for transporting oilsands products for upgrading, drive this growth in demand. The existing transmission system in this region, however, is at capacity and cannot carry any additional electricity. In addition, parts of the system are subject to low voltages under certain conditions. System reinforcement, therefore, is needed to meet increasing demand for electricity and to interconnect new generation.

Where will the new lines be proposed?

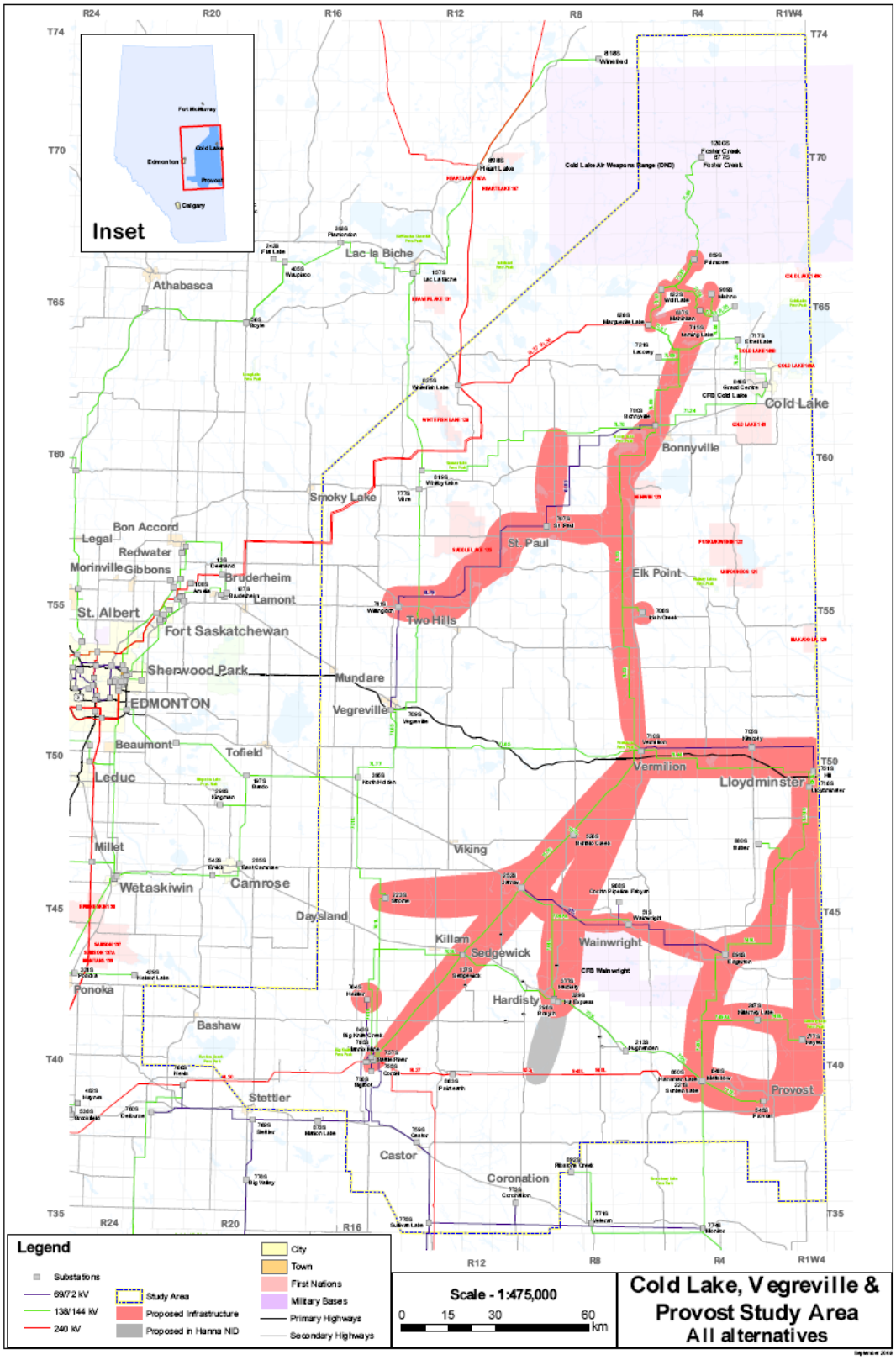
The AESO identified a number of alternatives for reinforcing the transmission grid in this region. Consultation with stakeholders will help identify a preferred solution for reinforcing the system. This preferred solution will form part of our Needs Identification Document (NID), which we will submit to the Alberta Utilities Commission (AUC) later this year. We will also submit individual NIDs separately to the AUC to interconnect wind power projects as well as gas fired generation.

The transmission facility owners, AltaLink and ATCO Electric, service the communities, industry, and farms in the Cold Lake, Vegreville and Provost region. Should the AUC approve our NID, we will assign the larger system reinforcement and each new interconnection to either AltaLink or ATCO Electric, to build and maintain the required transmission facilities. Additional public consultation will be required as part of this process. Once, completed, siting and routing proposals will be submitted to the AUC in the form of a Facility Application for approval.

What's happening right now?

Since the region is vast, we have developed alternatives to address both broader and local transmission issues. So far, our planning study has produced alternatives for system reinforcements in the area to address the challenges facing the transmission system. After gathering stakeholder insights on our alternatives, our study will identify areas where transmission lines and other related facilities could be added to improve the system.

The targeted in-service date for these facilities is 2012. The map below shows broadly where transmission lines may be needed. No individual routes have been identified below; this will be done in a later process also requiring public consultation.



The AESO is committed to protecting your personal privacy in accordance with Alberta's Personal Information Protection Act. Any personal information collected by the AESO with regard to this project may be used to provide you with further information about the project, may be disclosed to the Alberta Utilities Commission (and as a result, may become public), and may also be disclosed to the eligible Transmission Facility Owner. If you have any questions about how the AESO will use and disclose your personal information collected with regard to this project, please contact us at 888-866-2959 or at stakeholder.relations@aeso.ca.

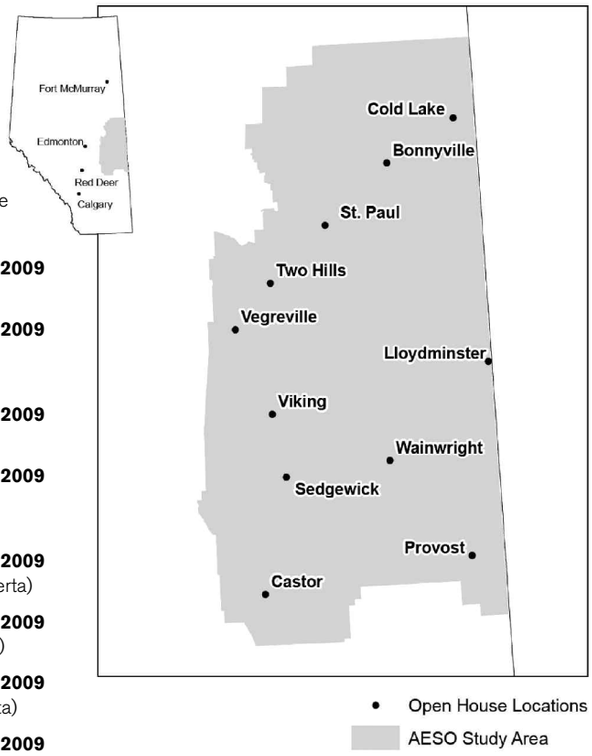
EXHIBIT B

You're invited...
... We're listening

The Alberta Electric System Operator (AESO) is meeting with members of the community to provide information and hear your feedback on the need to reinforce the transmission system in the Cold Lake, Vegreville, Provost area (Central East Alberta). Construction of new transmission lines is being considered within the grey study area of the map. After receiving community input, the AESO will make recommendations on need and preferred routing and file a Needs Identification Document with the Alberta Utilities Commission.

Information will be available on options being considered for reinforcement. Two transmission facility owners, AltaLink and ATCO Electric, will also be in attendance to answer your questions.

Please join us at any of the sessions listed below between 4 pm and 8 pm. At each Open House, various representatives will be available to show you the alternatives and listen to your opinions and advice.



Cold Lake **September 24, 2009**
Cafeteria Area, Energy Centre

Bonnyville **September 28, 2009**
Bonnyville Centennial Centre
(4313 50th Avenue, Bonnyville, Alberta)

St. Paul **September 29, 2009**
Senior Centre (4921 45th Avenue, St. Paul, Alberta)

Two Hills **September 30, 2009**
Brosseau Community Hall
(Highway 36 at North Saskatchewan River)

Vegreville **October 1, 2009**
The Brass Lantern (6041 50th Avenue, Vegreville, Alberta)

Lloydminster **October 5, 2009**
Best Western (5411 44th Street, Lloydminster, Alberta)

Viking **October 6, 2009**
Caledonia Motor Inn (5354 56th Avenue, Viking, Alberta)

Wainwright **October 7, 2009**
Ramada Inn (1510 27th Street, Wainwright, Alberta)

Provost **October 8, 2009**
R&R Inn (5603 35A Street, Provost, Alberta)

Sedgewick **October 13, 2009**
Sedgewick Community Hall

Castor **October 14, 2009**
Castor Community Hall (4805 50th Avenue, Castor, Alberta)

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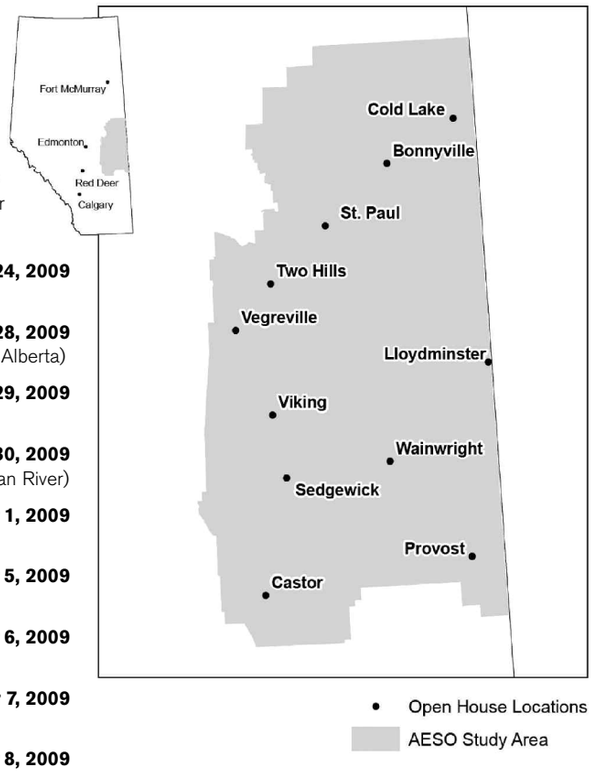

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IMPORTANT CHANGES OF LOCATION

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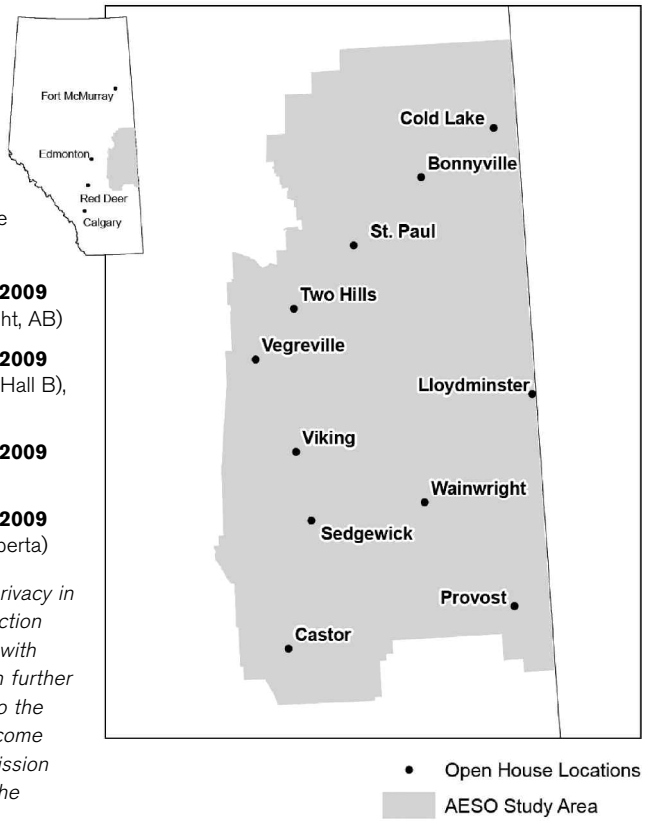

Wainwright **October 7, 2009**
Wainwright Communiplex (700 - 2nd Avenue, Wainwright, AB)

Provost **October 8, 2009**
Provost Culture and Recreation Centre, Alberta Room (Hall B), 5113 - 43rd Street (Provost, AB)

Sedgewick **October 13, 2009**
Sedgewick Community Hall

Castor **October 14, 2009**
Castor Community Hall (4805 50th Avenue, Castor, Alberta)

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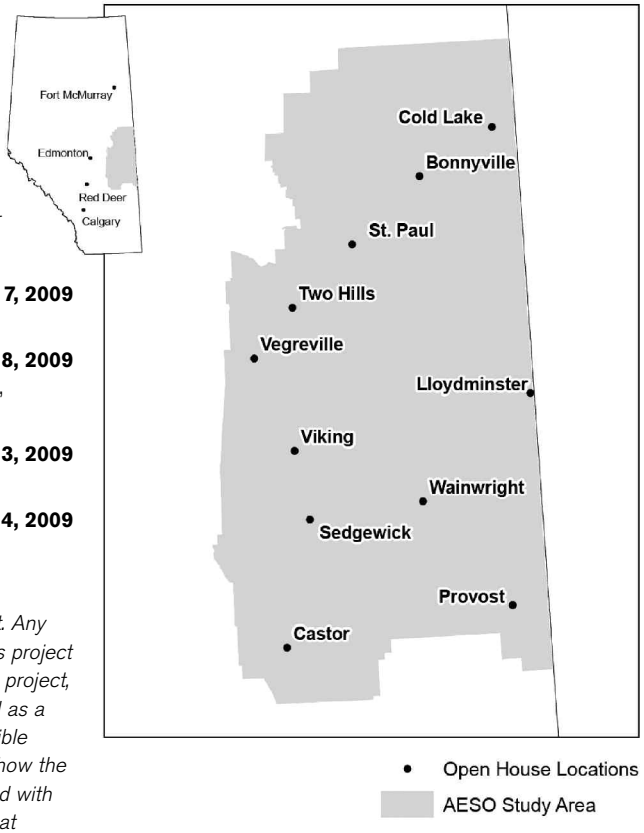

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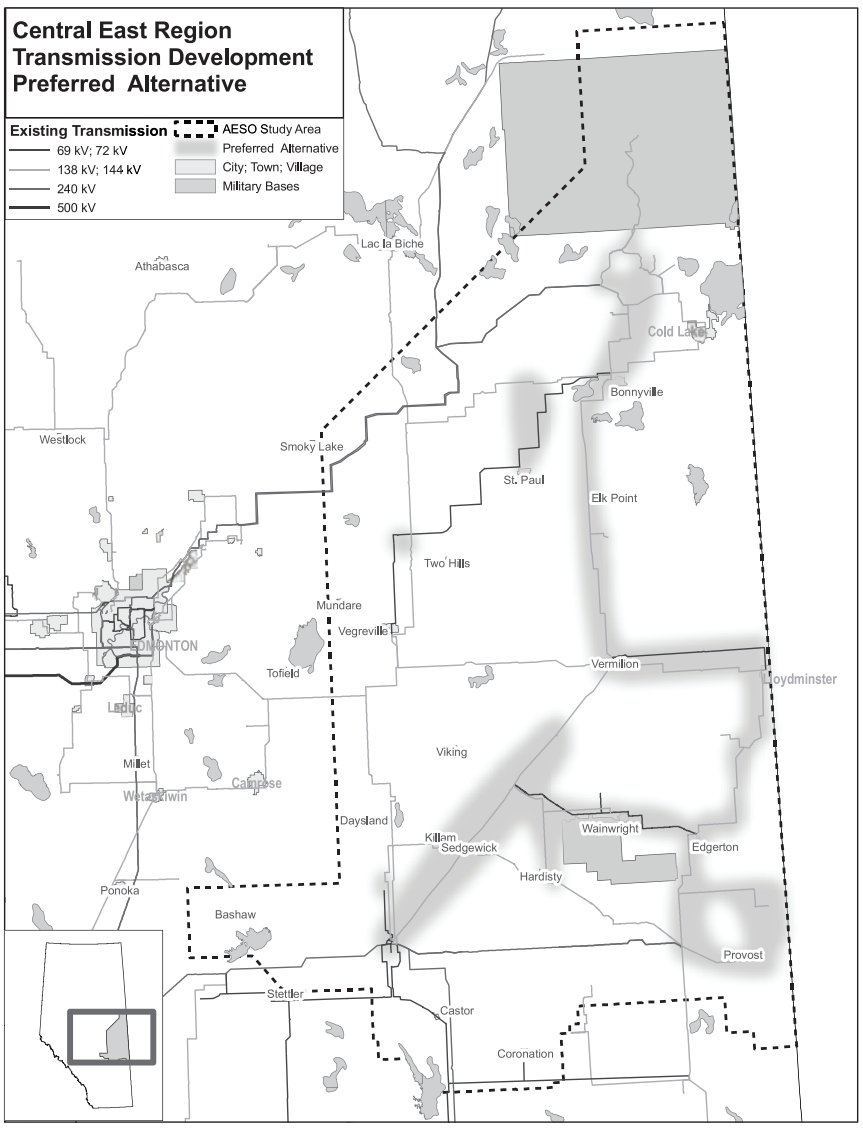
Notification of Regulatory Filing for Transmission Reinforcement in Central East (Cold Lake, Vegreville and Provost) area of Alberta

The Alberta Electric System Operator (AESO) advises you of its intention to file a Needs Identification Document with the Alberta Utilities Commission to reinforce the transmission system in Central East (Cold Lake, Vegreville and Provost) area of Alberta.

The AESO has identified the need for reinforcing the existing transmission system in Central East (Cold Lake, Vegreville and Provost) Alberta. Transmission system reinforcement is needed in the study region to meet growing demand for electricity from oilsands development and pipelines, and to interconnect proposed gas fired electricity generation as well as wind farms in the study region.



This map shows the study area in central east Alberta. The shaded parts represent areas of potential transmission reinforcement.

The AESO presented this need, and plans to address it, to residents near the proposed sites and other stakeholders during a variety of consultation activities held from May 2009 to April 2010. The AESO weighed key factors that included feedback gathered from stakeholders, land impact assessment, technical and estimated capital cost to select a preferred transmission plan for the Central East Region. The AESO's preferred plan is shown in the map above. It consists of upgrading a number of 138 kV and 144 kV lines in several parts of the region which include Cold Lake, St. Paul, Provost, Wainwright areas. All these are required to meet the projected demand for electricity and facilitate interconnection of gas fired and wind development projects in the region. The AESO is required to apply to the Alberta Utilities Commission for its review and approval of AESO's preferred transmission plan.

The AESO intends to file its application (the Needs Identification Document) on or after the week of May 17, 2010.

Please visit our web site, www.aeso.ca for more information, or contact the AESO at 1-888-866-2959 or stakeholder.relations@aeso.ca. A copy of the Needs Identification Document is available for download on or after May 6, 2010 at http://www.aeso.ca/transmission/20569.html.

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ALBERTA ELECTRIC SYSTEM OPERATOR

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Integrated Marketing Communications

Artist: 2N

Production Only
Docket: 103088
Date: Apr 28, 2010
Size: 6.12"
Proof: 2
1 of 3
Publication(s):
Cold Lake Vegreville
LLMB Camrose

EXHIBIT C

Welcome

The AESO welcomes you to its Open House on the need to reinforce the electricity system in the Central East (Cold Lake, Vegreville, Provost) area.

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Our Principles for Public Involvement in Transmission System Planning

1. Every member of the public must have an opportunity to comment on the plans.

2. The public must have an opportunity to be informed in a timely manner of the direction, plans, status of issues and decisions related to a project.

3. The experience and expertise offered through public involvement is used to improve the quality and implementation of decisions.

4. The public involvement process and the rationale for decisions are transparent.

A STAKEHOLDER is
Anyone who has a “stake”
in the outcome of the project

The AESO is:

A not-for-profit statutory company, operating in the public interest.

Independent of any company or person with a material interest in the electric industry.

AESO Key Functions:

- Operate the wholesale electric market
- Plan the transmission system
- Arrange access for demand and generation
- Direct day-to-day operation of the transmission system

Transmission System Planning at the AESO

- 20-Year Transmission System Outlook – generation and load focused; high level conceptual transmission alternatives
- 10-Year Transmission System Plan – roadmap for transmission development and context for Needs Identification Documents
- Individual Needs Identification Documents

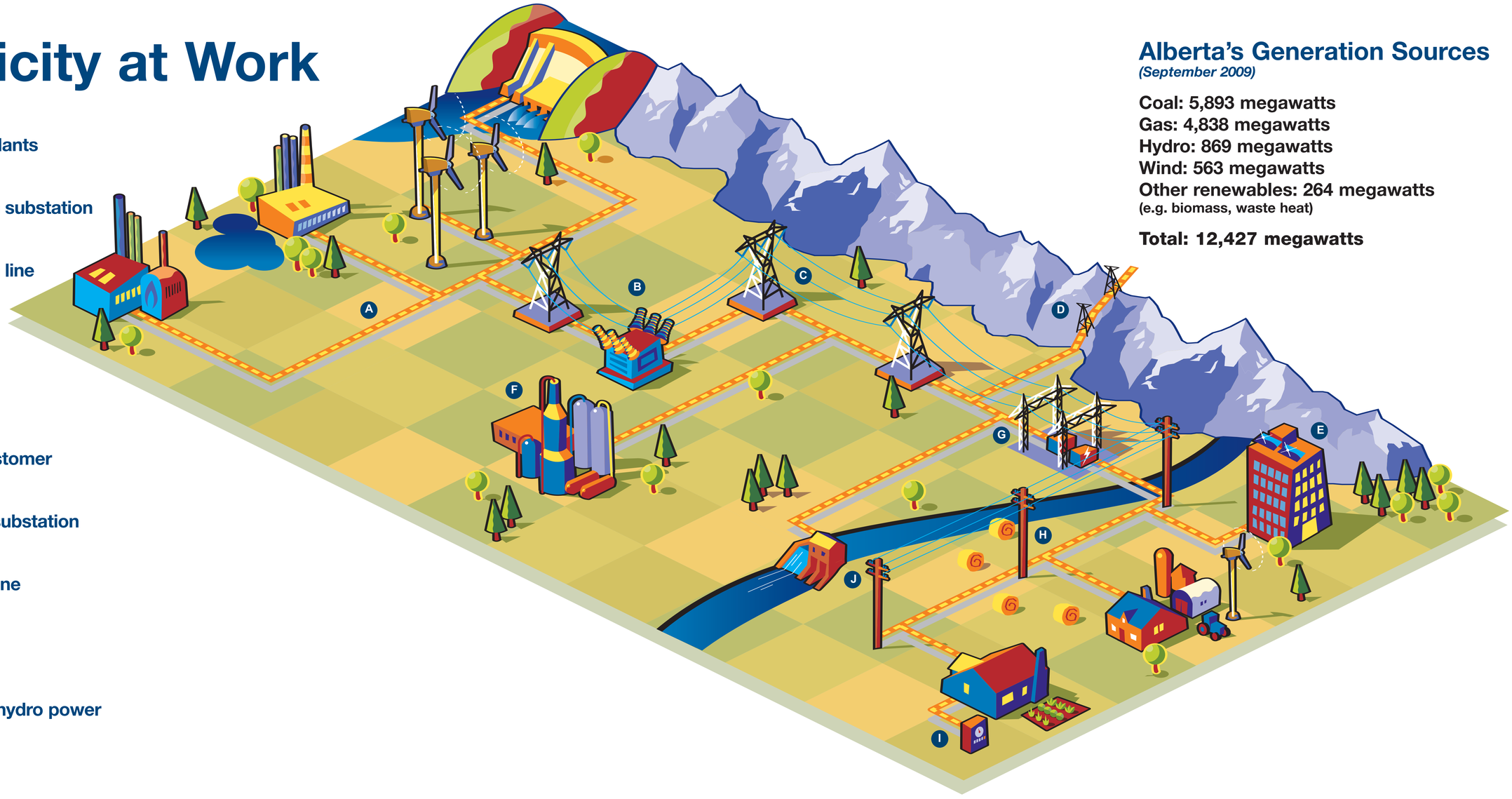
The AESO's Transmission System Planning Process

Two main drivers of transmission planning:

1. Load growth (demand)
2. Generation development (supply)

Electricity at Work

- **A** Generating plants
- **B** Transmission substation
- **C** Transmission line
- **D** Intertie
- **E** Solar panels
- **F** Industrial customer
- **G** Distribution substation
- **H** Distribution line
- **I** Power meter
- **J** Run-of-river hydro power



Alberta's Generation Sources
(September 2009)

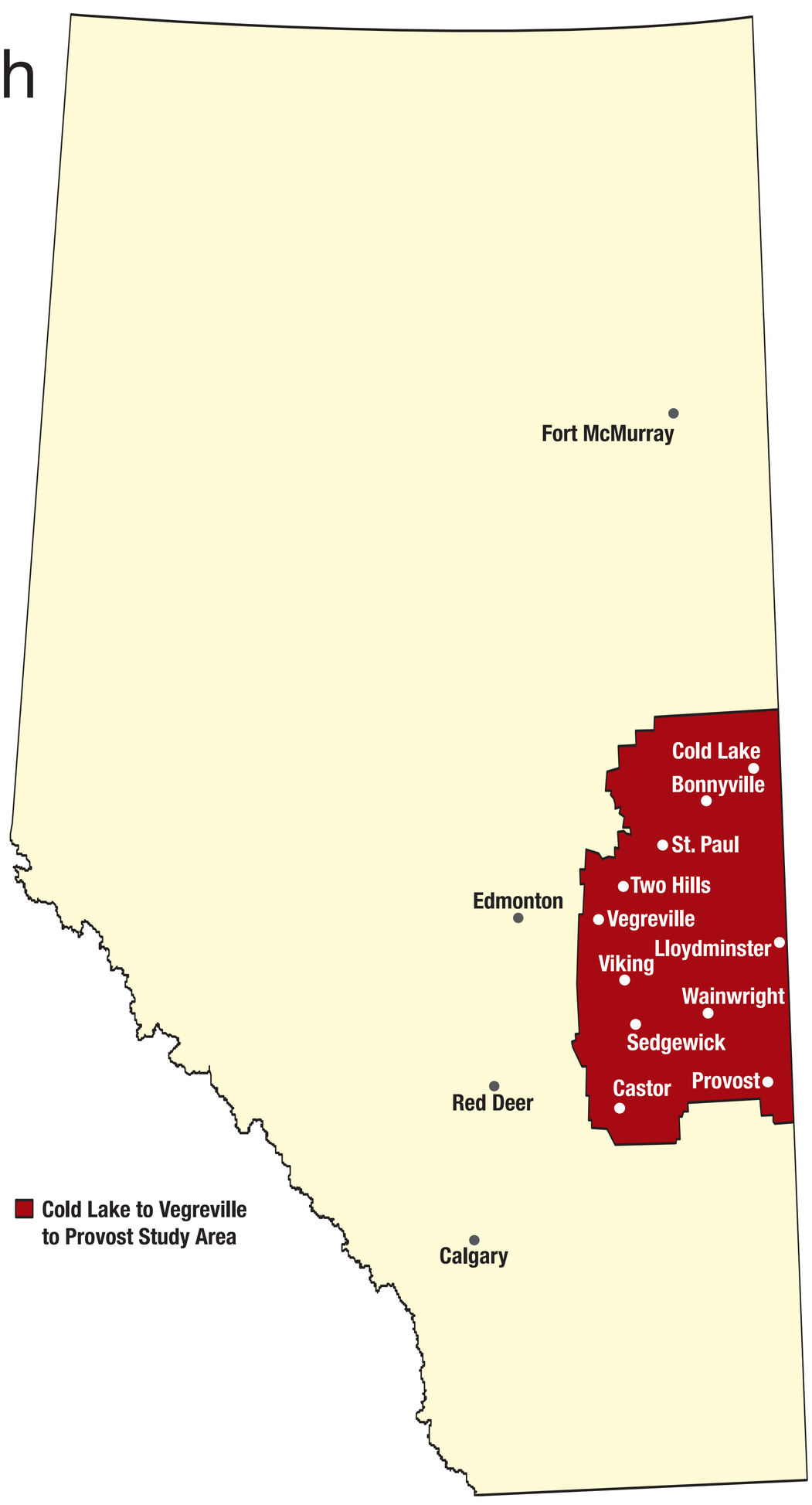
Coal: 5,893 megawatts
Gas: 4,838 megawatts
Hydro: 869 megawatts
Wind: 563 megawatts
Other renewables: 264 megawatts
(e.g. biomass, waste heat)

Total: 12,427 megawatts

Central East (Cold Lake, Vegreville, Provost) Study Area

Cold Lake to Vegreville to Provost study area roughly comprised of:

- County of Paintearth
- M.D. of Provost
- M.D. of Wainwright
- Beaver County
- County of Vermilion River
- County of Two Hills
- County of Minburn
- County of St. Paul
- M.D. of Bonnyville
- Flagstaff County



Overview of Need – Central East (Cold Lake, Vegreville, Provost) Area

The transmission system in this area lacks the capacity to support additional demand or to integrate new generation

- Demand for electricity in this region is growing rapidly
- Demand growth areas:
  - Cold Lake, Wainwright and Provost areas
  - Demand is expected to double over the next 10 years
- Gas generation and wind interest in this area: Over 500 MW

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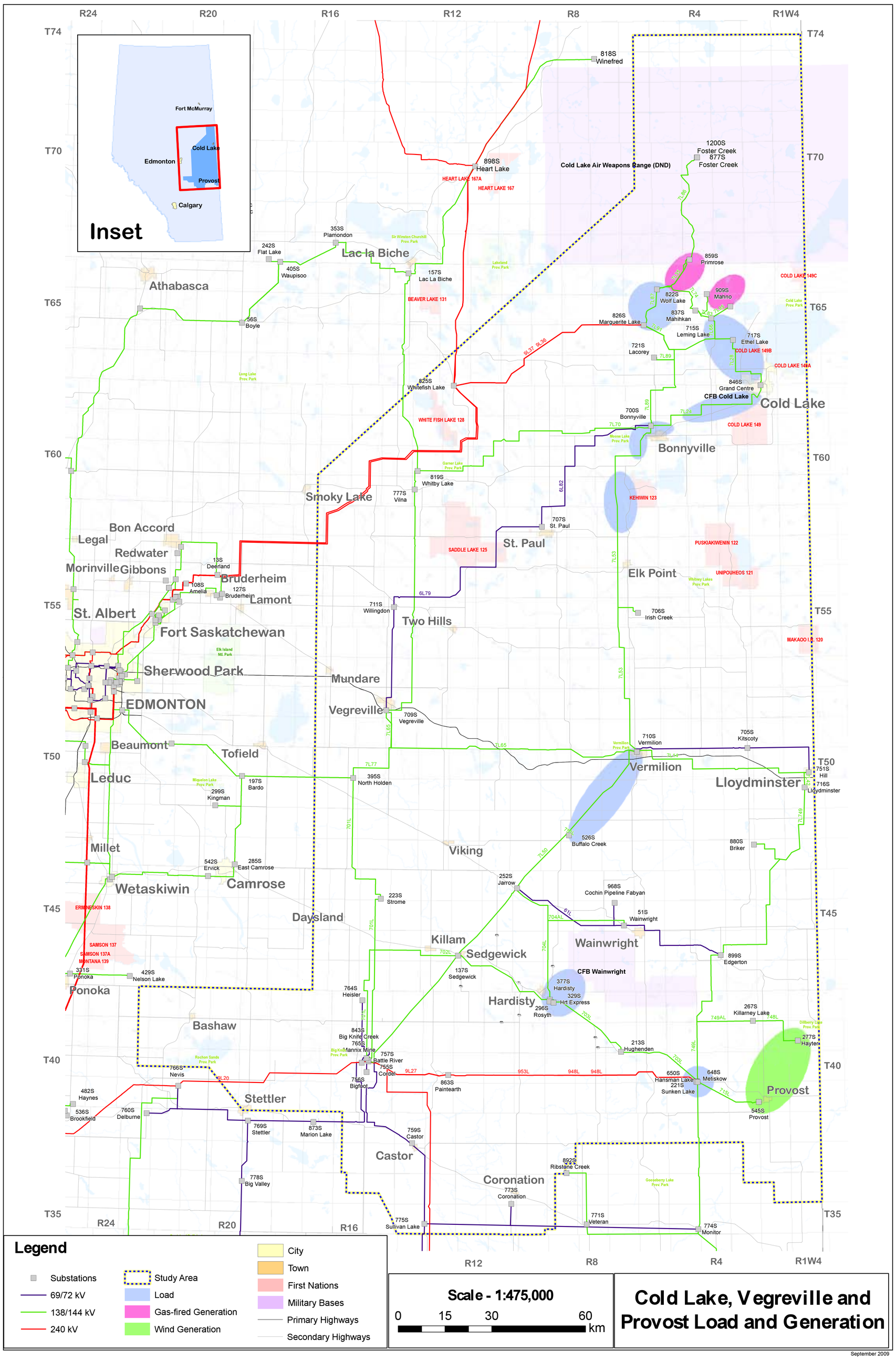
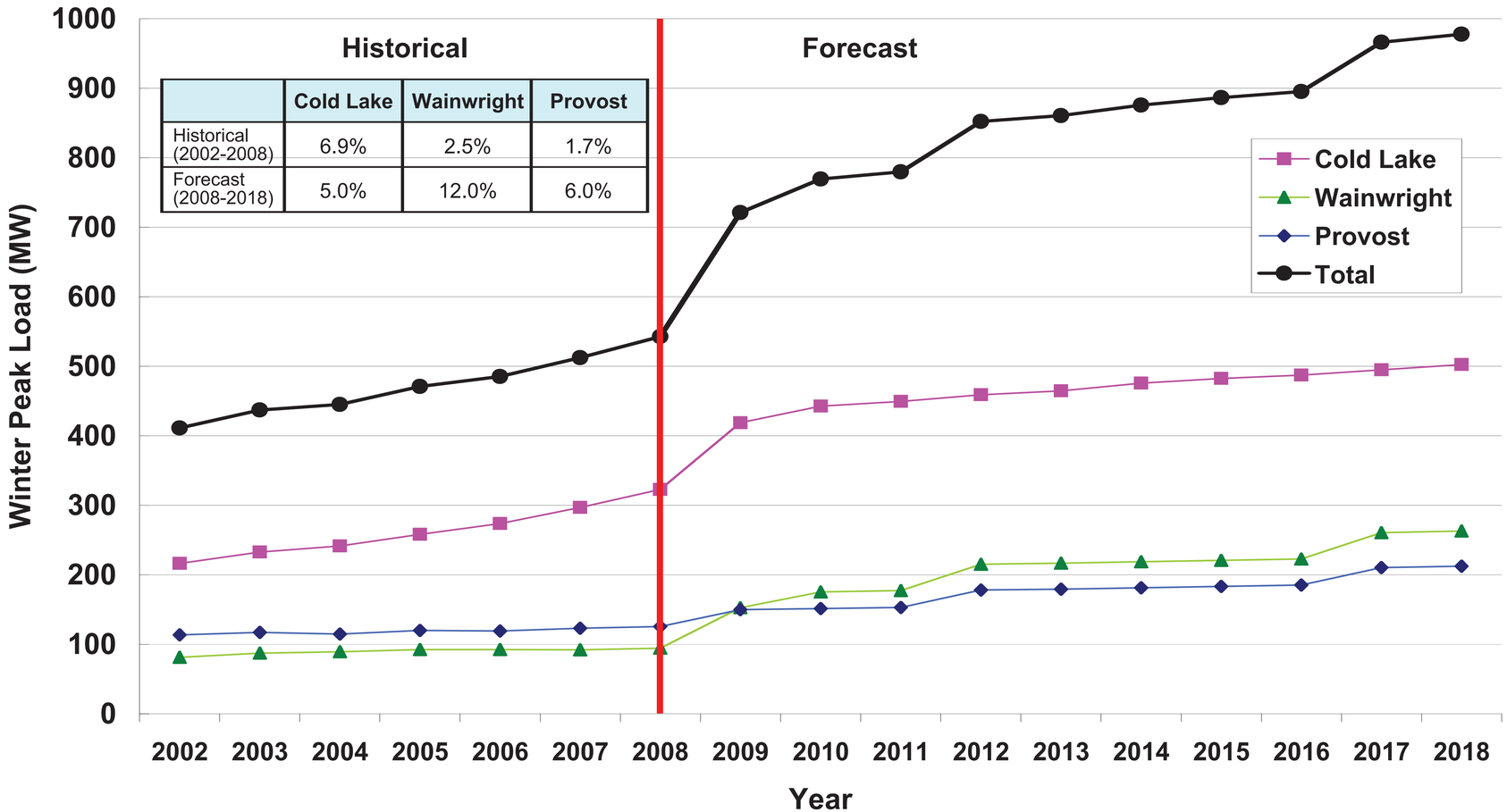
Map of Load (Demand) and Future Generation (Supply) in the Central East (Cold Lake, Vegreville, Provost) Area



September 2009

Load (Demand) Forecast: Cold Lake, Wainwright and Provost (Fast growing areas)

	Cold Lake	Wainwright	Provost
Historical (2002-2008)	6.9%	2.5%	1.7%
Forecast (2008-2018)	5.0%	12.0%	6.0%



Integrating Wind Energy

Challenge

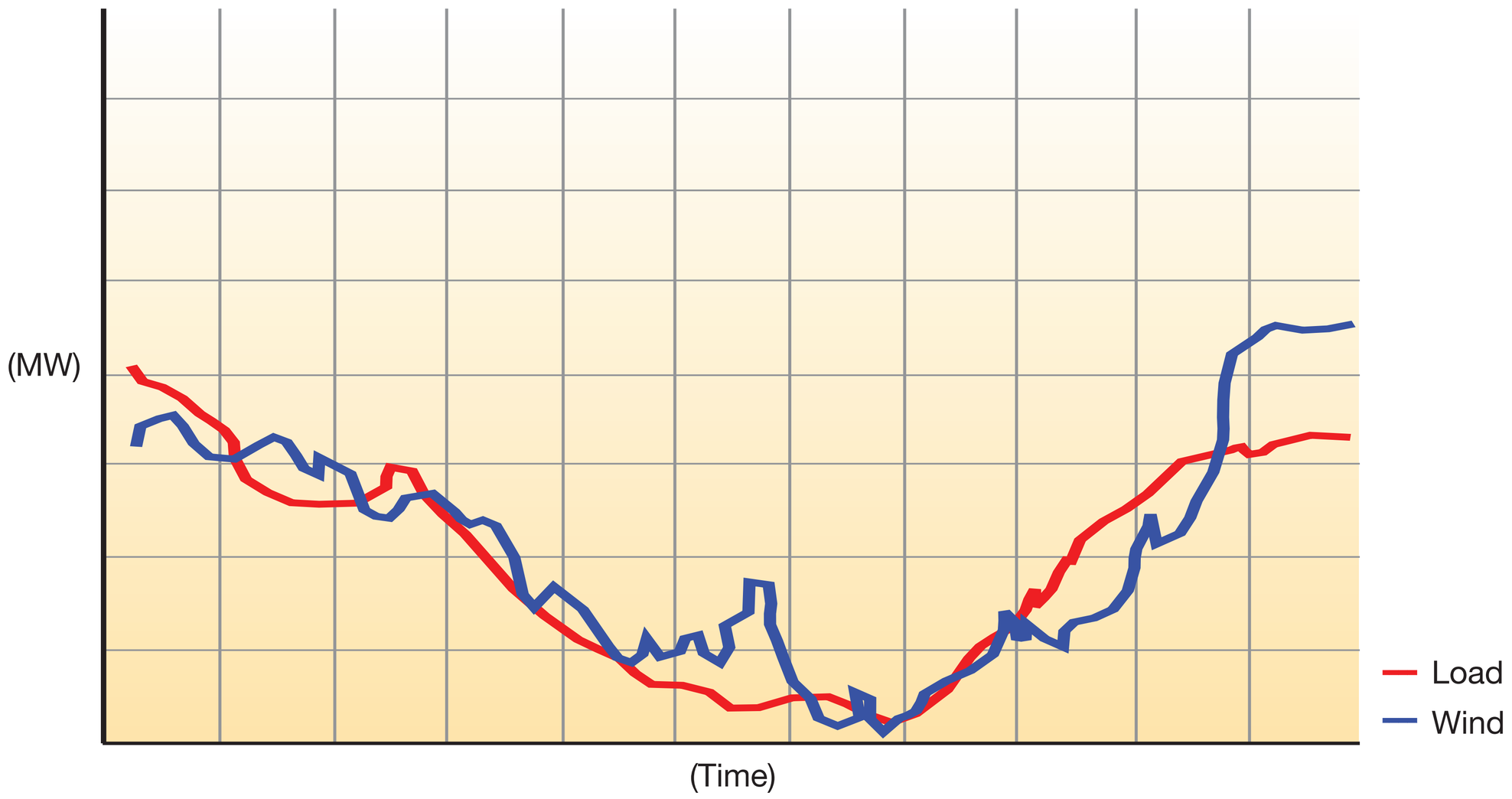
- Wind energy is variable and can be unpredictable

AESO Measures to Integrate Wind

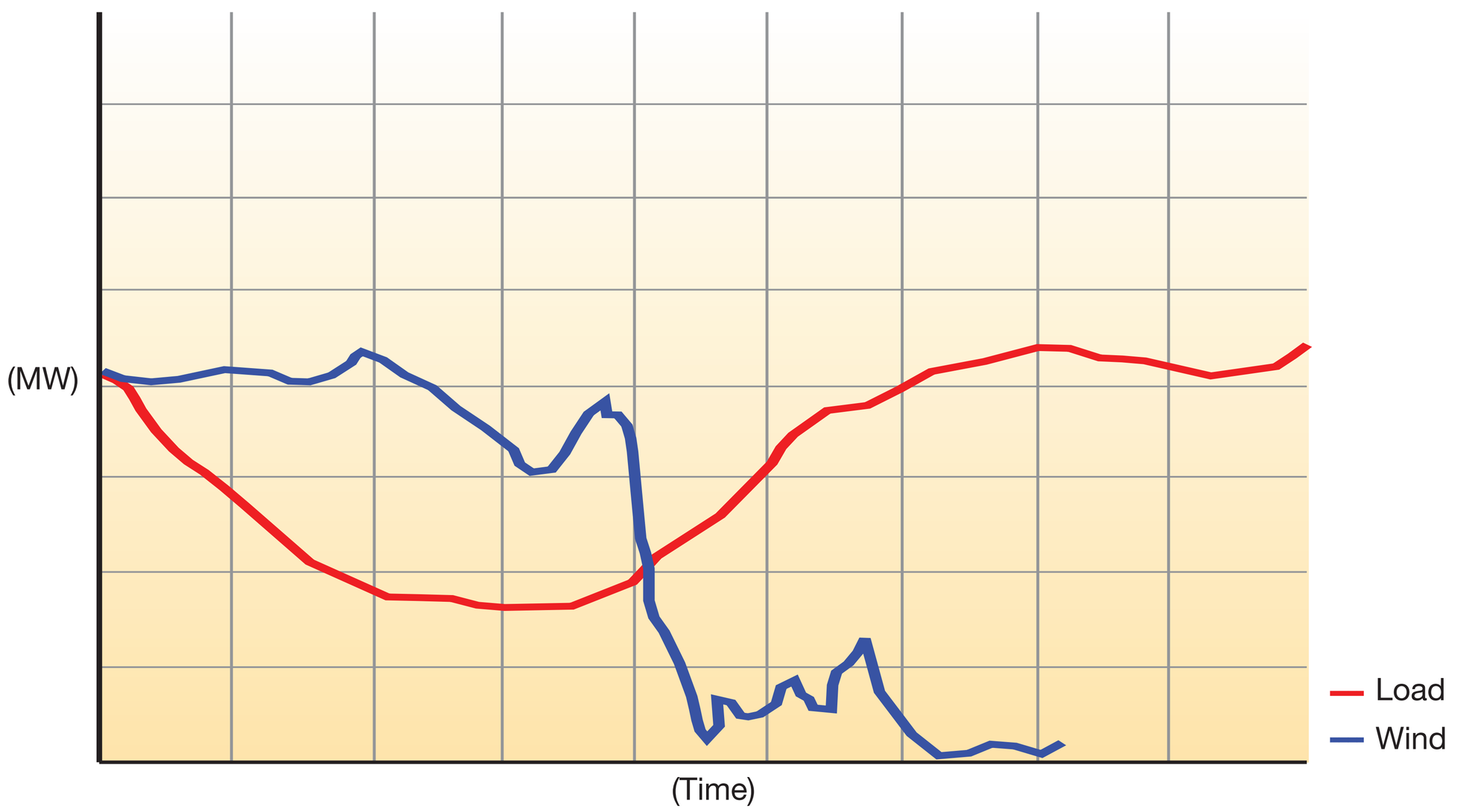
- The Market & Operational Framework
- The AESO wind power interconnection process
- Generation projects queue
- AESO Needs Identification Documents (NID)
  - South Alberta Transmission Reinforcement (NID approved September 2009)
  - Hanna Region Reinforcement (NID submitted Summer 2009)

Wind Variability

Wind power and load (demand) correlating well

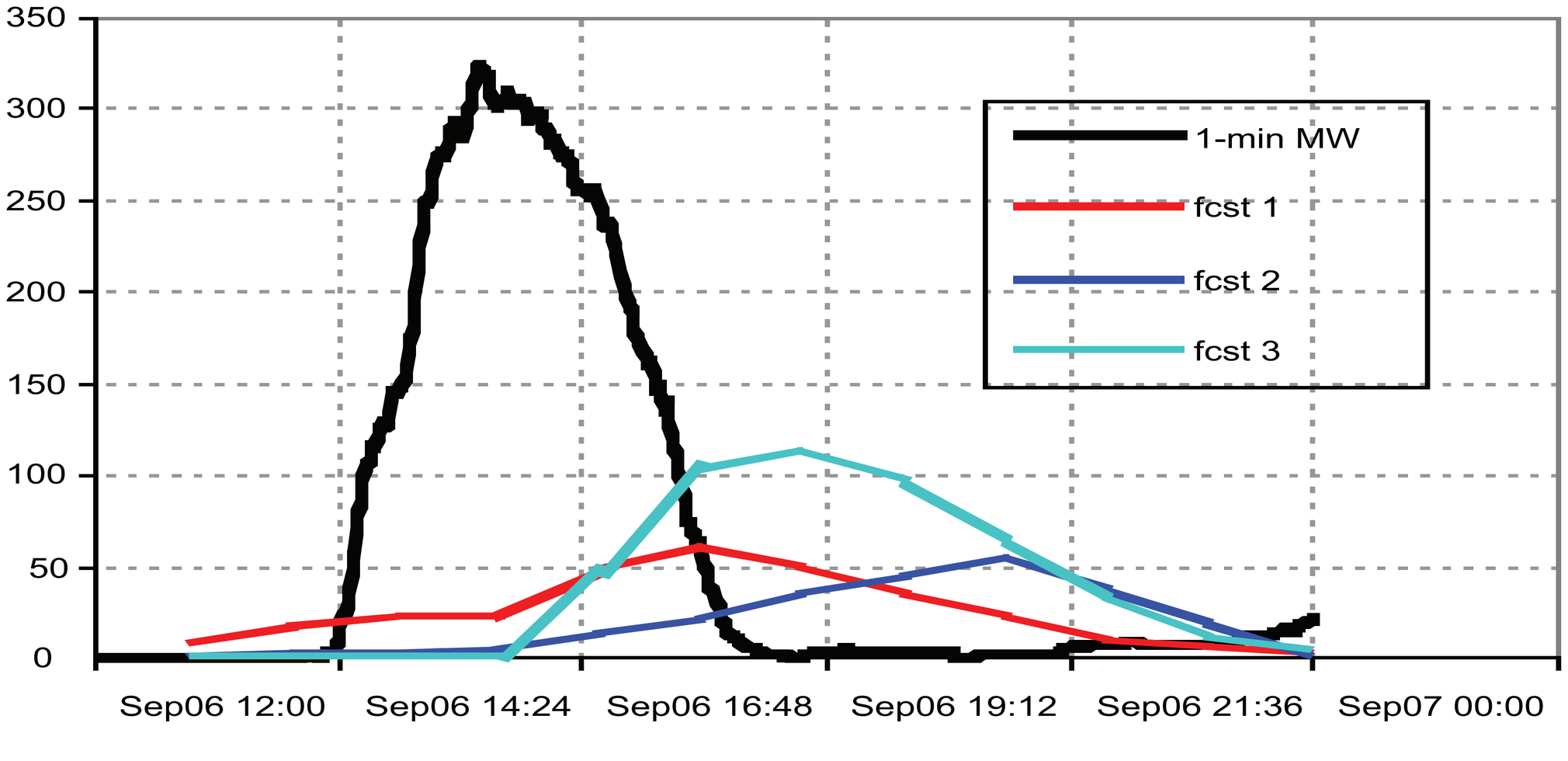


Wind power and load (demand) not correlating well

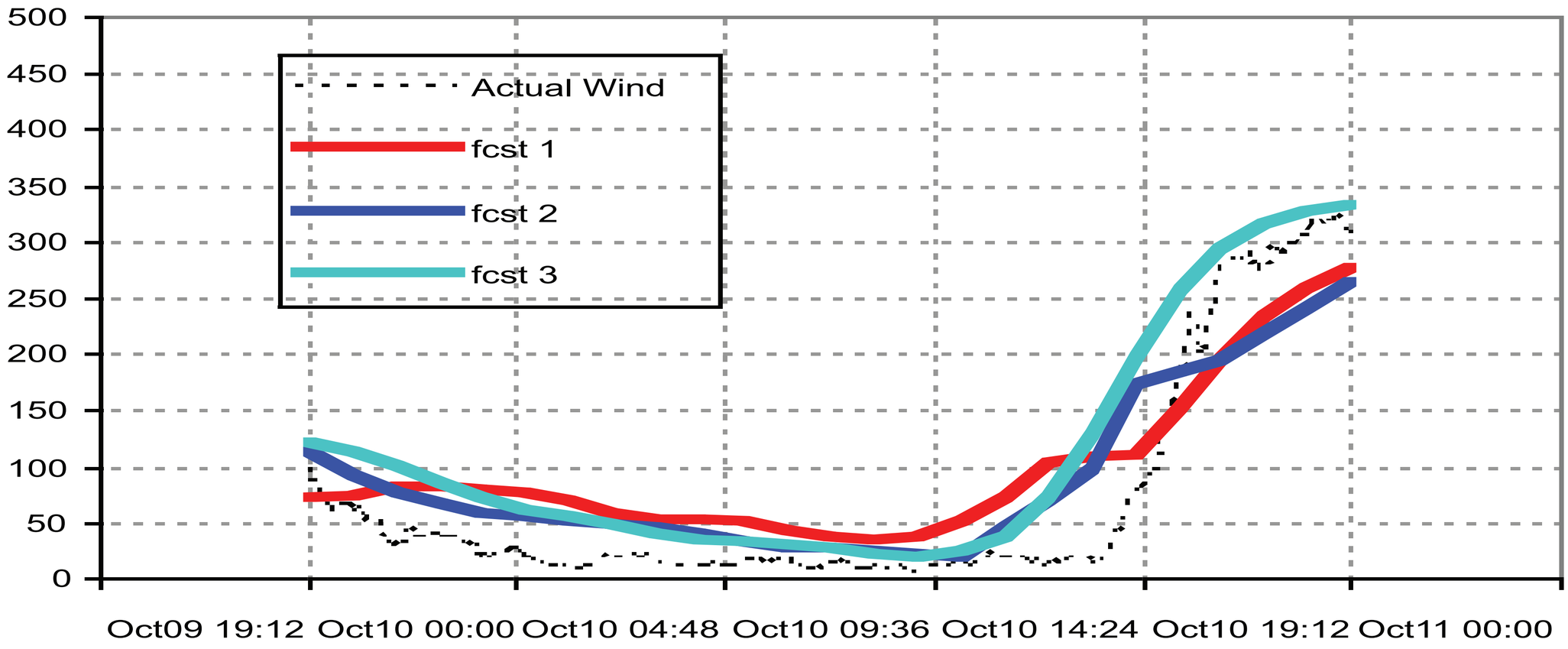


Wind Energy and the AIES

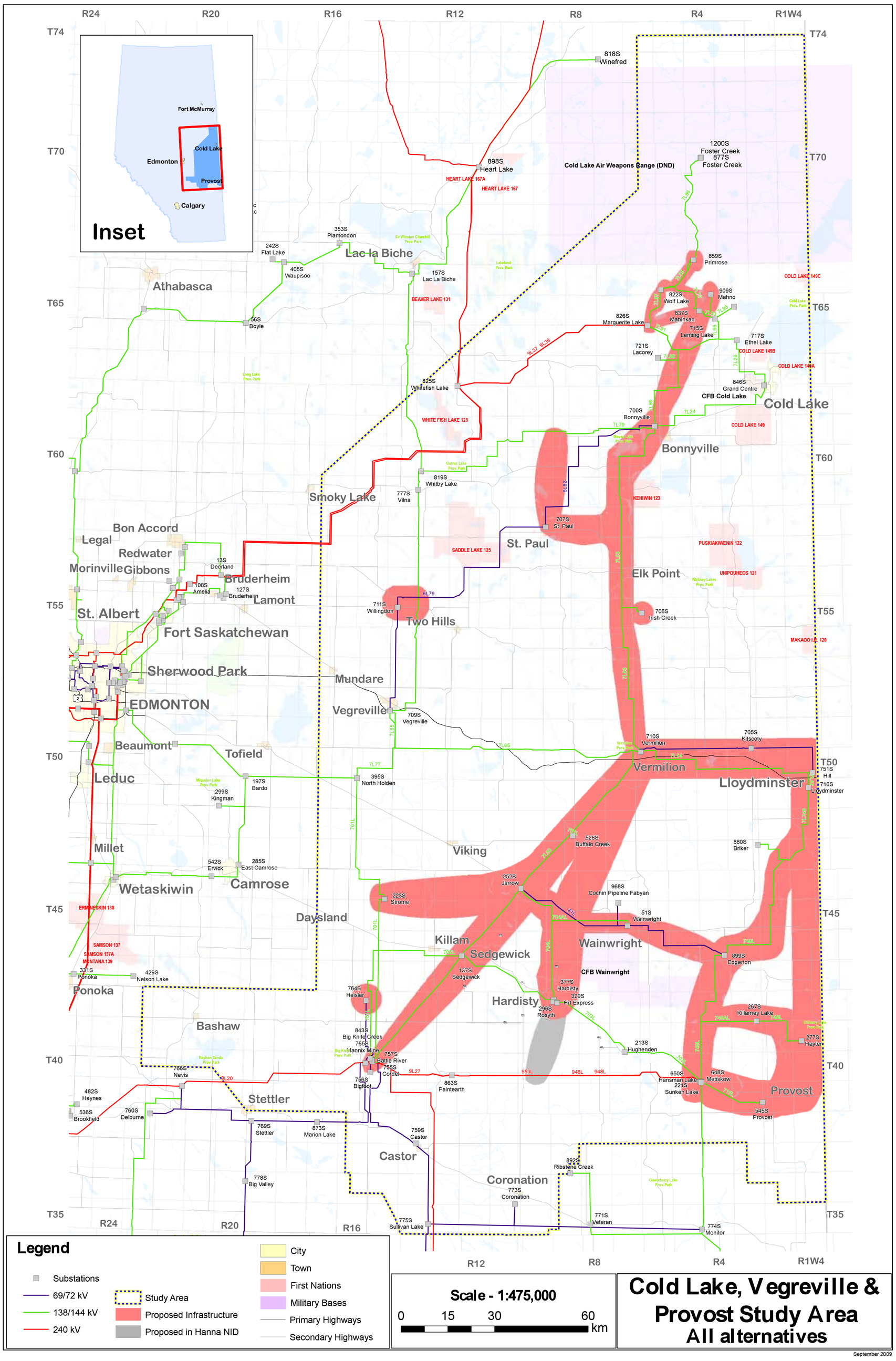
Wind forecast 06 September 2007



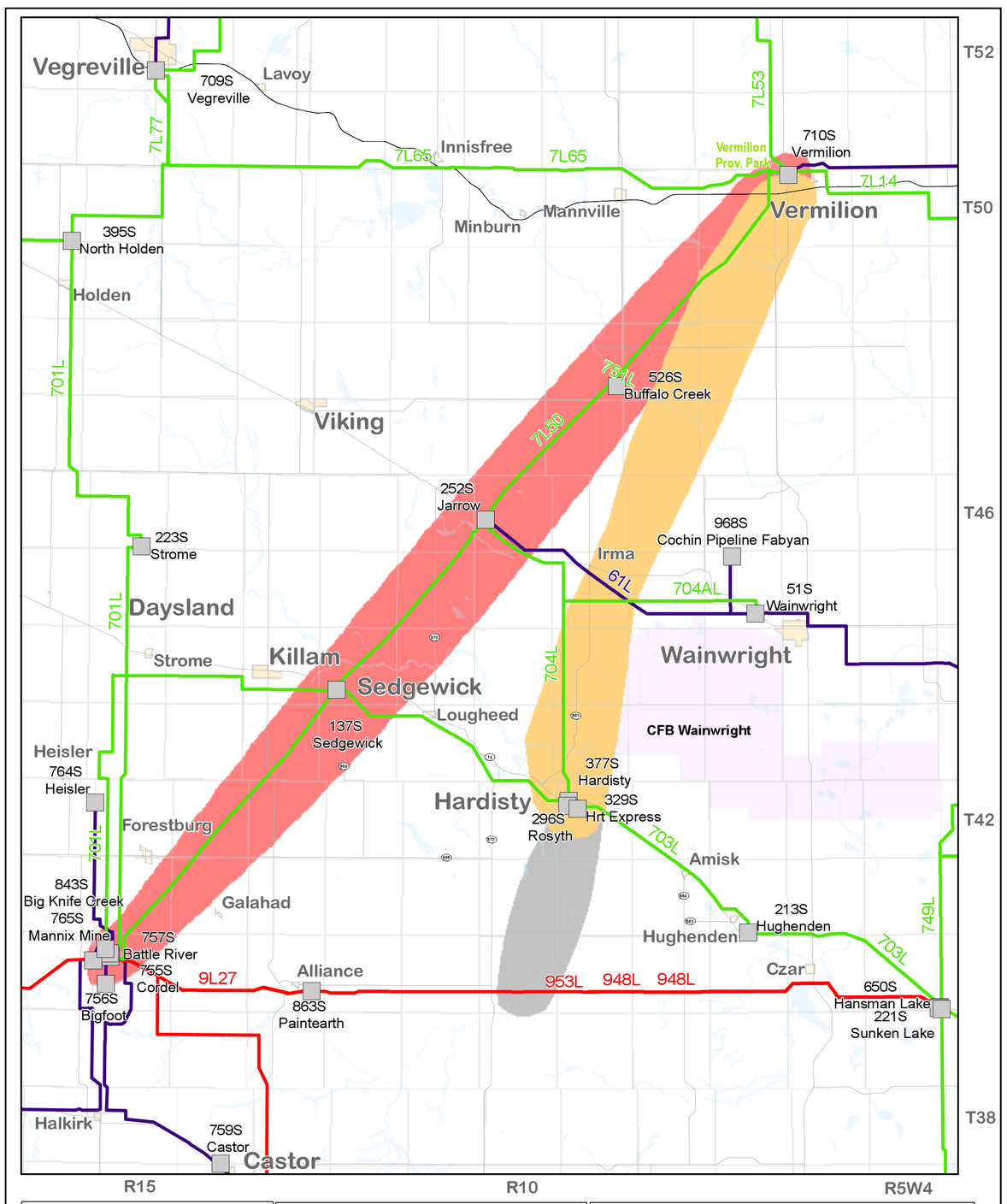
Wind forecast 10 October 2007



All Alternatives for Central East (Cold Lake, Vegreville, Provost) Study Area



September 2009



Proposed Alternatives

1. **7L50 Rebuild**
   Rebuild 144 kV 7L50 on existing corridor
   Rebuild 144 kV 7L50 on adjacent corridor
   Build a new 240 kV line from Nilrem 574S to new Vermilion substation

2. **Wainwright Area**
   Rebuild 138 kV 704L and 704AL lines
   Build a new 138 kV line from Edgerton 899S to Wainwright 51S
   In and out conversion of Wainwright 51S on 704L
   In and out conversion of Jarrow 252S on 704L

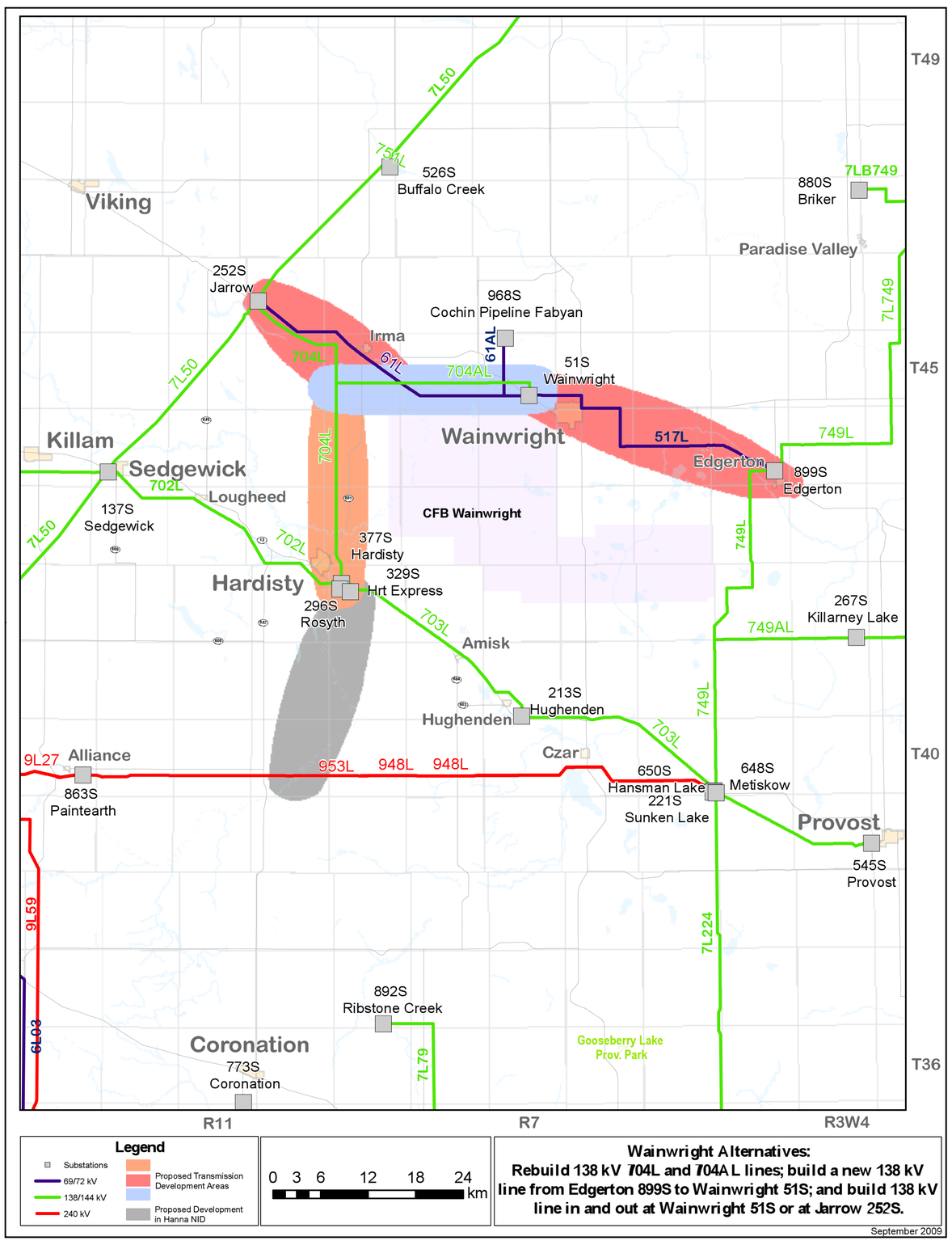
3. **Strome Area**
   Build a new 144 kV line from Strome 223S to Jarrow 252S
   Build a new 144 kV line from Jarrow 252S to Buffalo Creek 526S
   Upgrade Heisler 764S from 72 kV to 144 kV substation and tap off of 144 kV 7L701 line
   Build a new 240 kV line from Nilrem 574S to new Vermilion substation

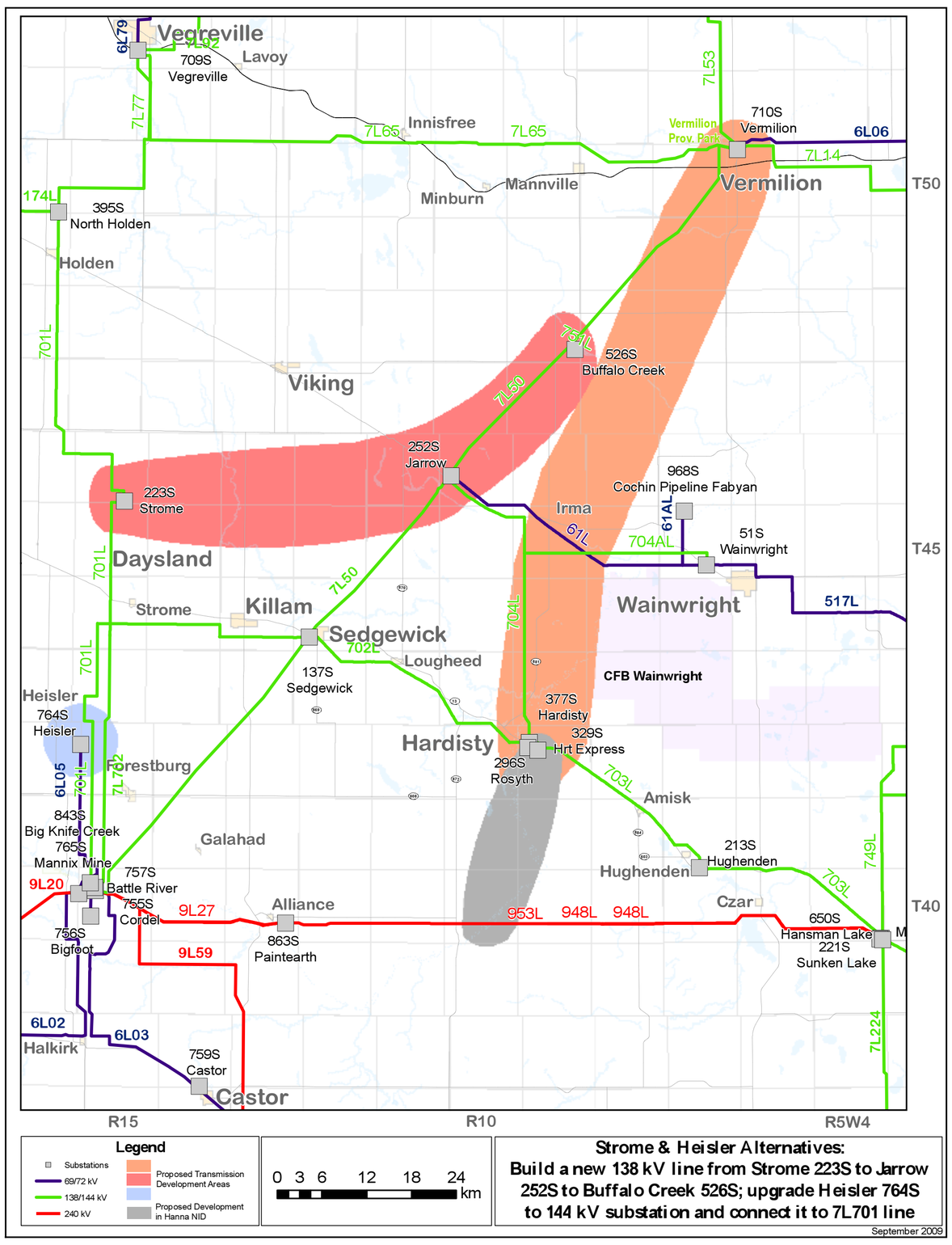
4. **Killarney Lake/Provost Area**
   Build new 138 kV line from Provost 545S to Hayter 277S
   In and out conversion of Killarney Lake 267S on 749L
   Upgrade 138/144 kV 749L/7L749 line

5. **Cold Lake Area**
   Build new 144 kV line from new Mahihkan substation (near existing Mahihkan 837S) to Bonnyville 700S
   Build new 144 kV line from new Mahihkan substation (near existing Mahihkan 837S) to Marguerite Lake 826S
   Upgrade 144 kV lines (7L35, 7L74, 7L87, and 7L83)

6. **St. Paul Area**
   Connect St. Paul 707S as an in and out 144 kV substation off of 7L70
   Connect St. Paul 707S as an in and out 144 kV substation off of 7L53 and upgrade 7L53
   Convert 72 kV Willingdon 711S to a 144 kV substation and connect it to 7L92 line
   New capacitor bank at Irish Creek 706S

7. **Lloydminster Area**
   Build a new 240 kV Hayter substation
   Build a new 240 kV line from Hansman Lake 650S to Lloydminster 716S via new Hayter substation
   Upgrade 144 kV Lloydminster 716S to a 240 kV substation
   Upgrade 138/144 kV 749L/7L749 line
   Connect 72 kV Kitscoty 705S as an in and out 144 kV substation off of 7L14





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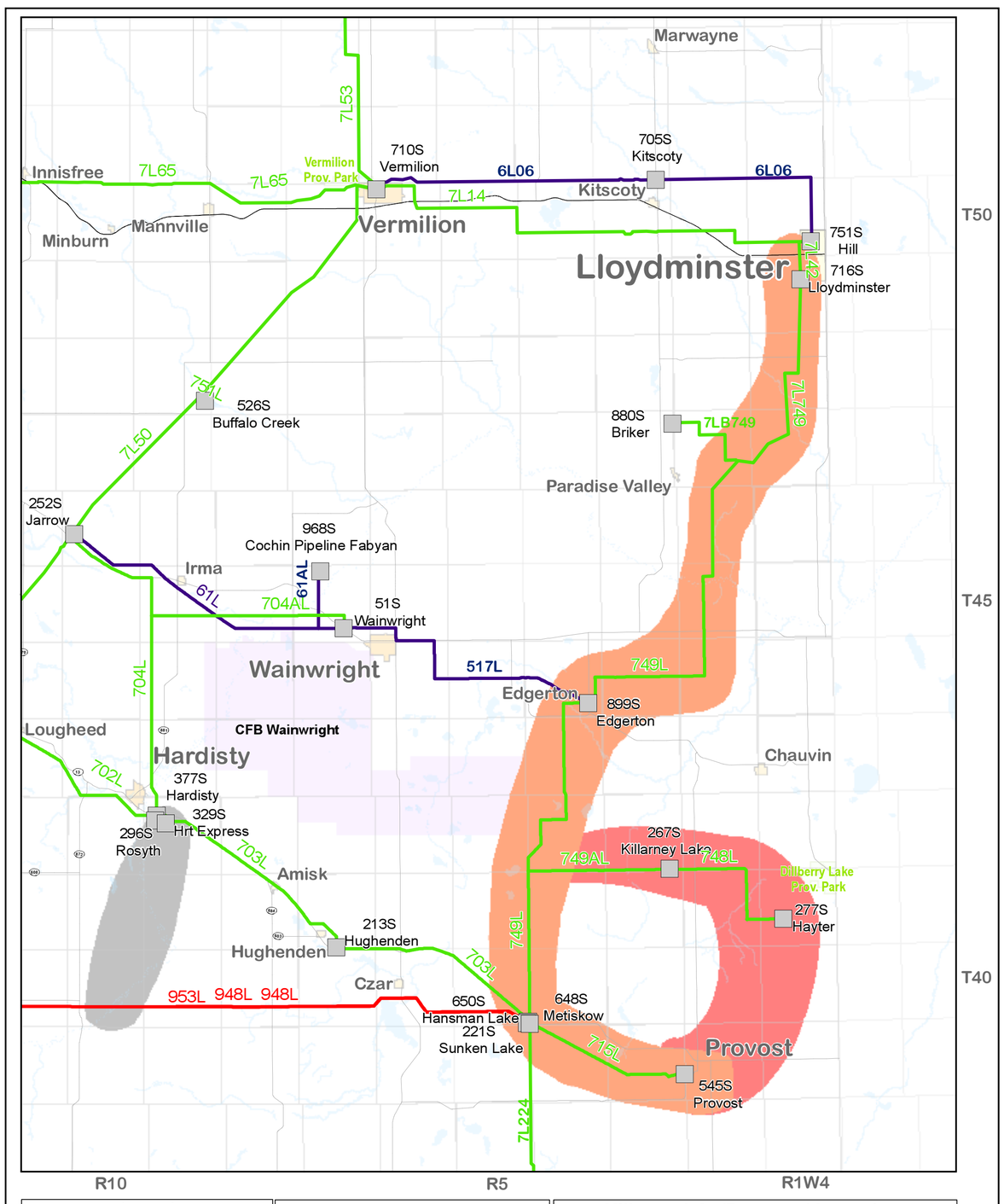
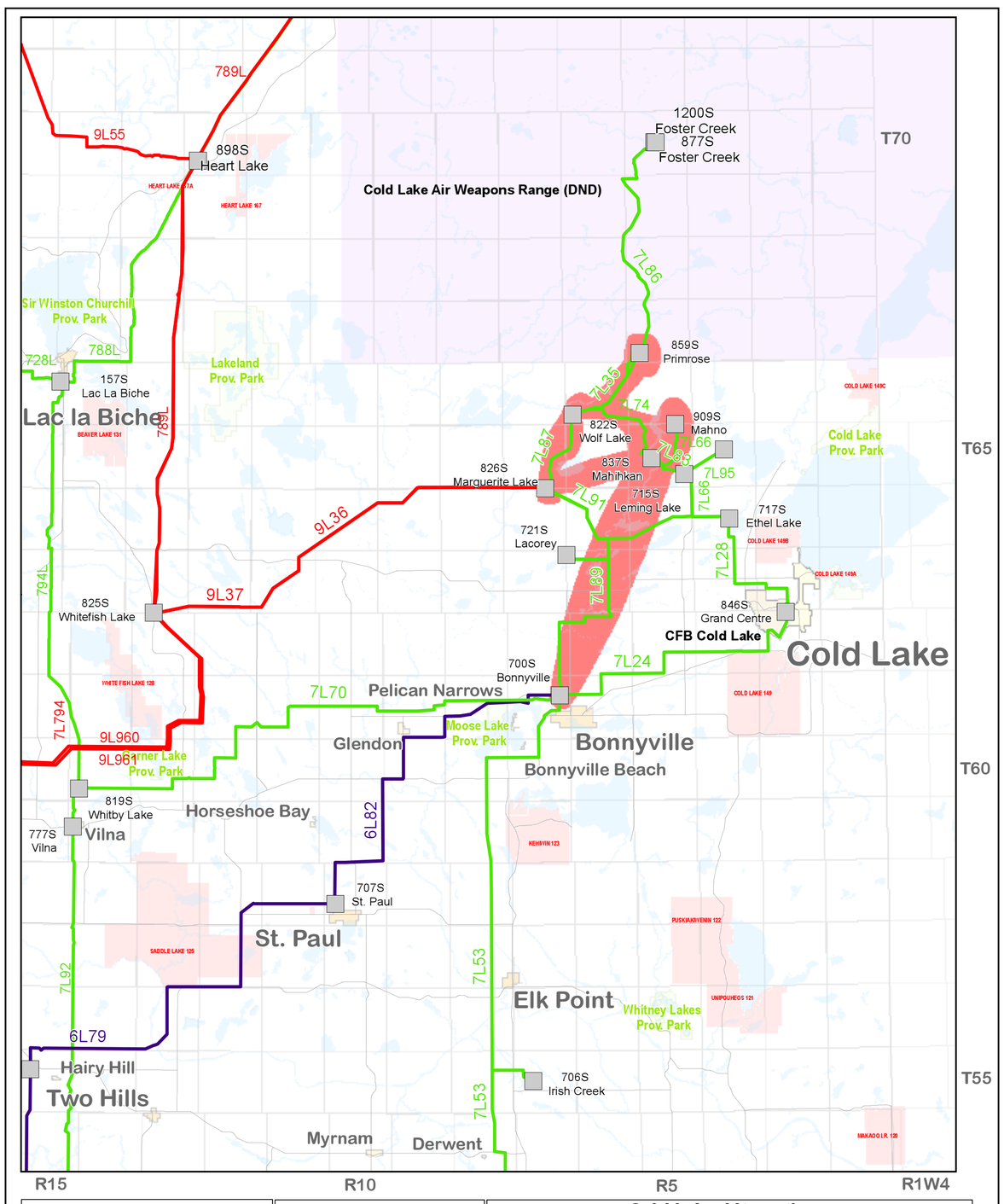


Legend
Substations
69/72 kV
138/144 kV
240 kV
Proposed Transmission Development Areas
Proposed Development in Hanna NID

0 3 6 12 18 24 km

Killarneylake/Provost Alternatives:
Build In and Out at 267S Killarney Lake & build new 138 kV line from Provost 545S to Hayter 277S; upgrade 138/144 kV lines

September 2009

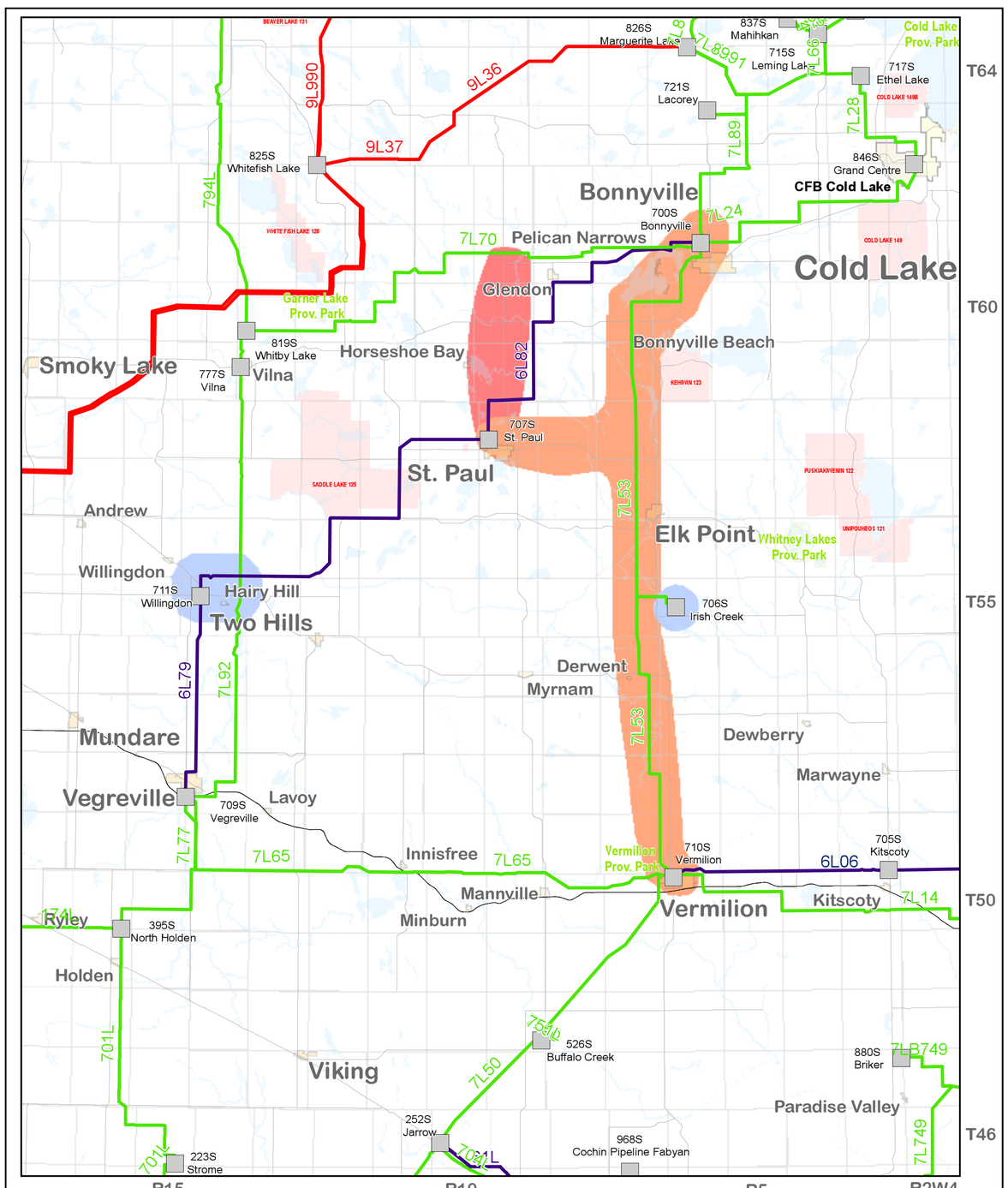


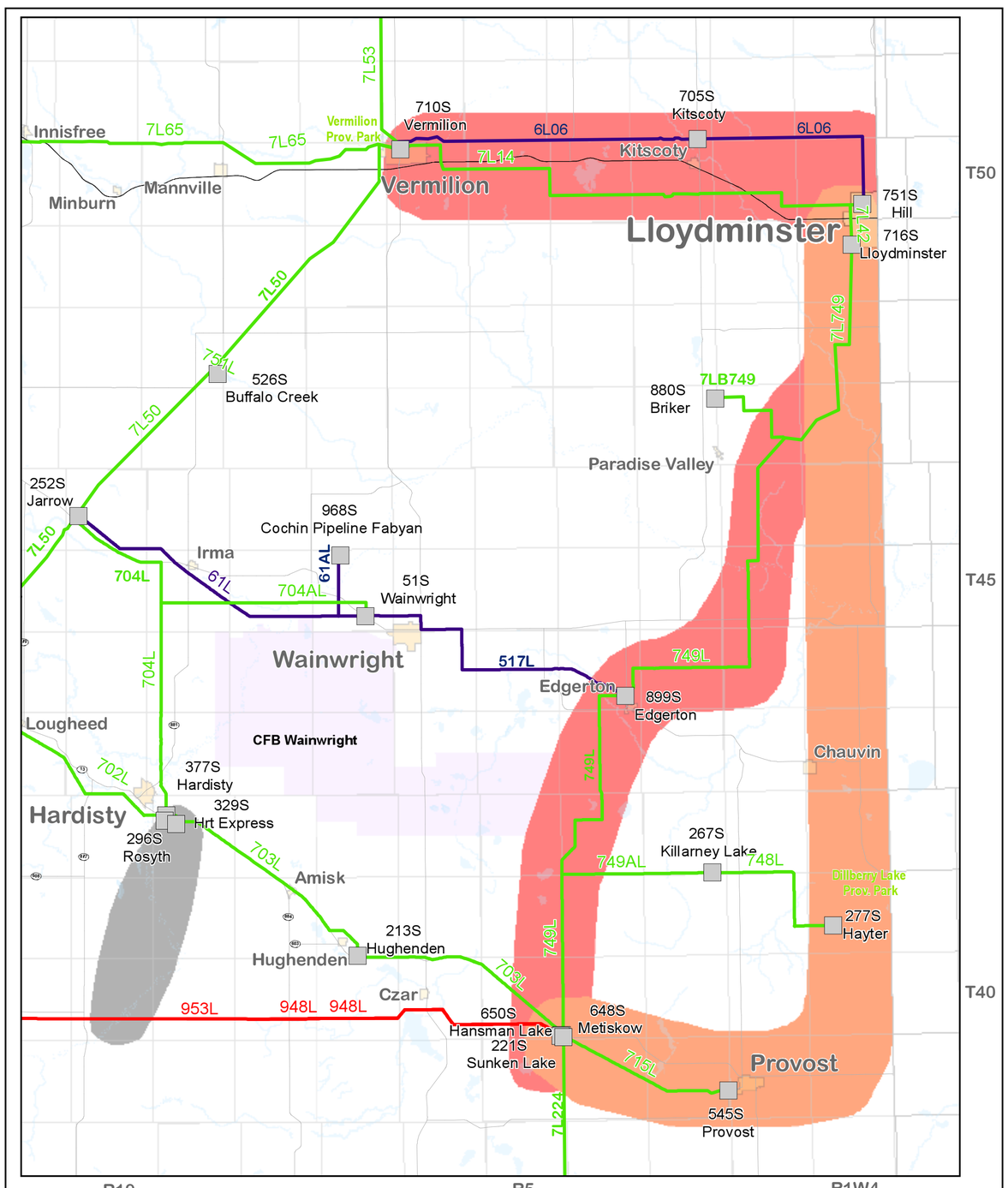
Legend
Substations
69/72 kV
138/144 kV
240 kV
Proposed Transmission Development Areas

0 3 6 12 18 24 km

Cold Lake Alternatives:
Upgrade 144 kV lines and build new 144 kV lines from new Mahihkan Sub to Bonnyville 700S and from new Mahihkan Sub to Marguerite Lake 826S

September 2009





Legend
Substations
69/72 kV
138/144 kV
240 kV
Proposed Transmission Development Area
Proposed Development in Hanna NID

0 3 6 12 18 24 km

Lloydminster Alternatives:
Build a new 240 kV line from Hansman Lake 650S to Lloydminster 716S via new Hayter substation; upgrade 138/144 kV lines.

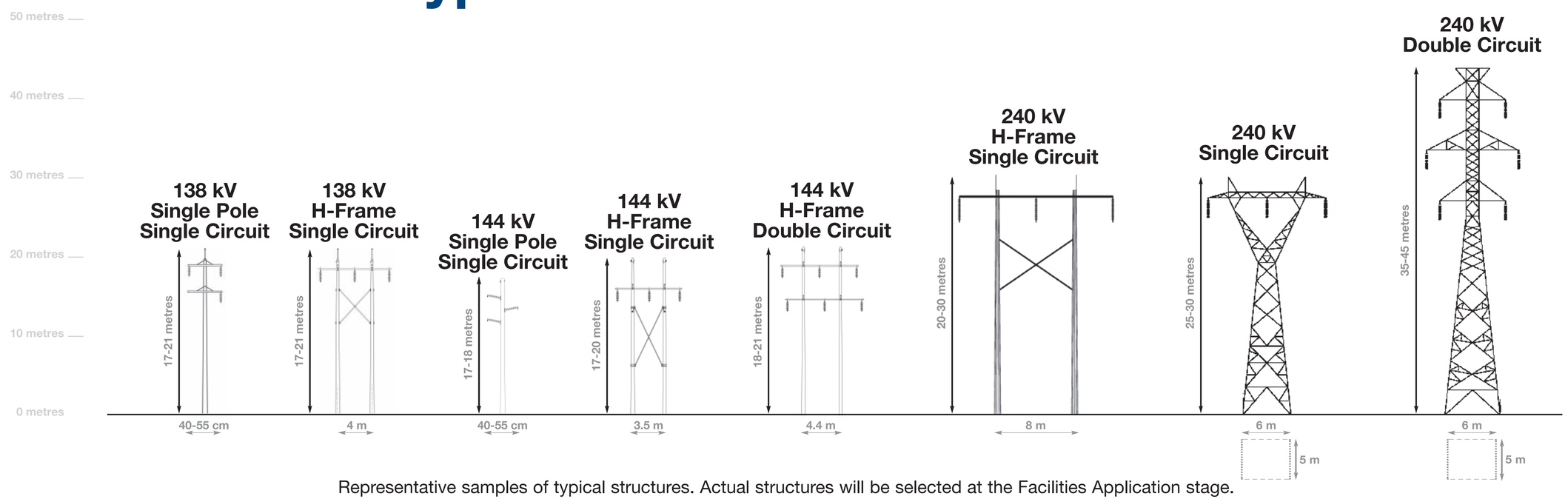
September 2009

Central East (Cold Lake, Vegreville, Provost) Area Transmission System Alternatives

- Investigated 240 kV AC, 144 kV AC and 138 kV AC options

AC – Alternating current

Types of Possible Structures



Representative samples of typical structures. Actual structures will be selected at the Facilities Application stage.

Involving Albertans

Information provided to:

- Residents living in Central East, Alberta
- Area First Nations and Metis
- Industry stakeholders
- Local area government representatives (municipal and provincial)

Activities:

- Mailed information to over 36,000 addresses in the Central East (Cold Lake, Vegreville, Provost) area
- Open Houses (September 24 – October 14, 2009)
- Meetings

Information on the AESO's consultation efforts:

- The AESO website
- Newspaper advertisements
- Transmission projects phone line 1-888-866-2959

www.aeso.ca

TFOs and their Roles

AltaLink and ATCO Electric are the transmission facility owners (TFOs) whose service areas fall within the Central East (Cold Lake, Vegreville, Provost) area.

Once the TFOs have determined their recommended specific routes, they must file Facilities Applications with the Alberta Utilities Commission for approval to construct and operate the required transmission facilities.

Route Selection

When evaluating potential routes, TFOs consider the following factors:

- Agricultural
- Residential
- Environmental
- Cost
- Electrical
- Visual
- Other Special Situations

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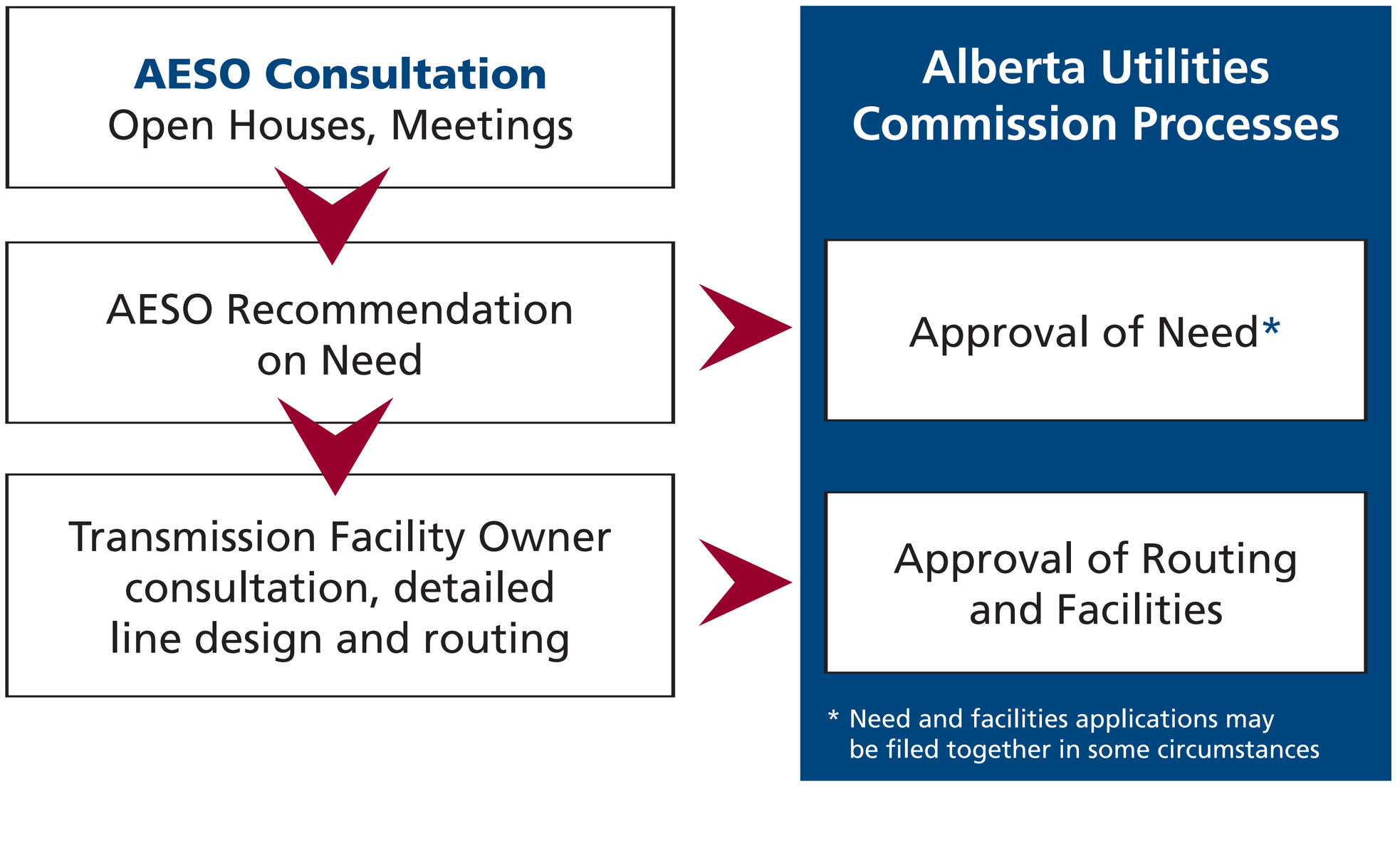
Regulatory Process for Transmission System Development



Alberta's Transmission Development Process

1. The Need: the AESO studies the need for transmission development, determines a preferred alternative and applies to the Alberta Utilities Commission for approval

2. The Facilities (lines, towers and substations): To meet the need, the Transmission Facility Owner applies to the Alberta Utilities Commission for approval to construct and operate facilities

Central East (Cold Lake, Vegreville, Provost) Area Transmission Plan: Project Schedule 2009

No.	Description	Year 2008 Oct	Nov	Dec	Year 2009 Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov
1	Technical Studies (PV & QV Losses, Dynamic Analysis)*														
2	Participant Involvement Program (PIP)														
3	Social/Land Impact Assessment														
4	Capital Cost Estimates (NID Class)														
5	Economic Analysis														
6	Prepare NID Document														
7	File NID Application														

* Includes alternative screening.

EXHIBIT D

Transmission Development Plan: Cold Lake to Vegreville to Provost Region

Doug Downs

AESO Manager Communications

October 2009

Reliable **Power**

Reliable **Markets**

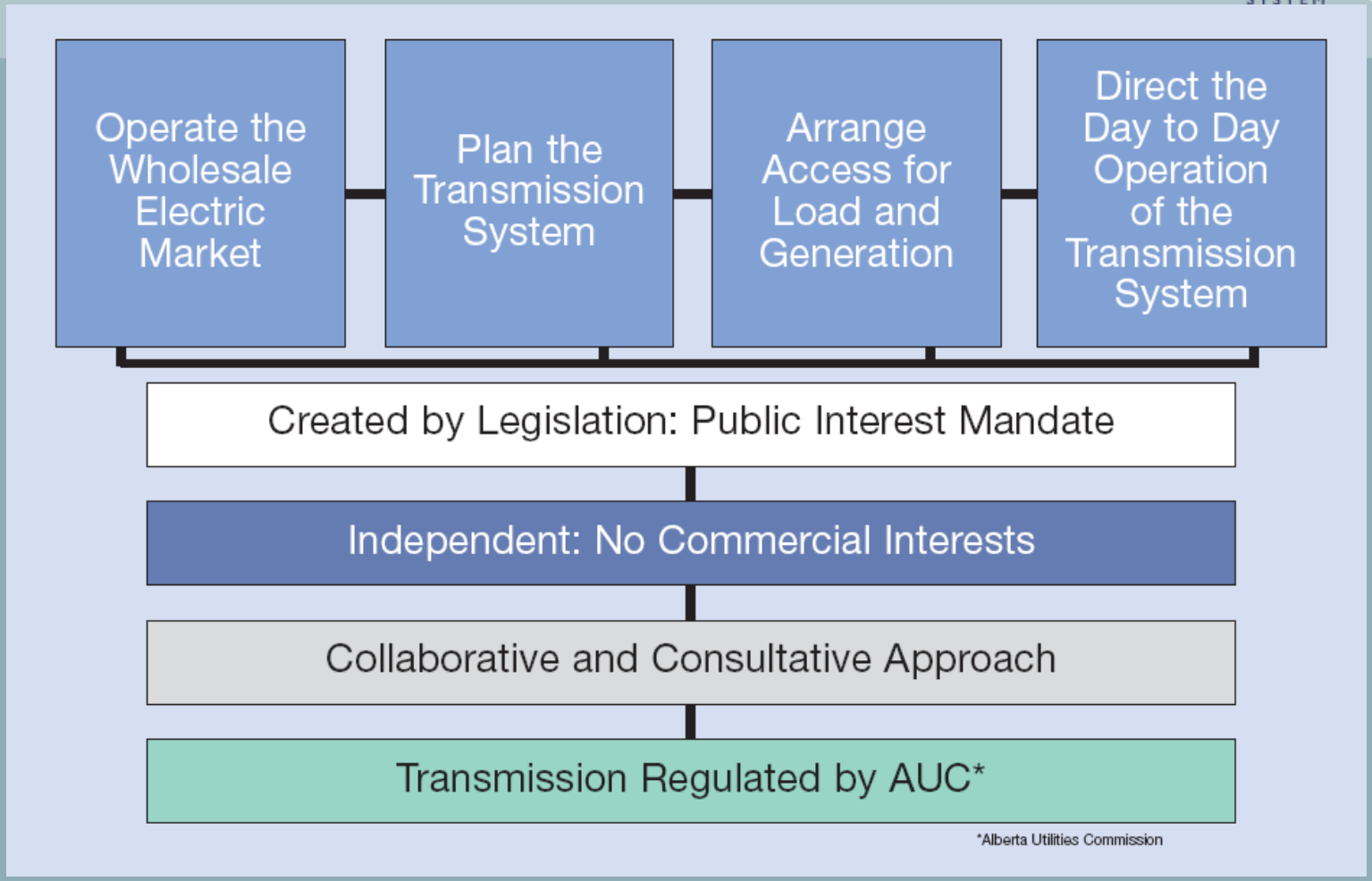
Reliable **People**

aeso
ALBERTA ELECTRIC SYSTEM OPERATOR

Outline of Presentation

- Overview of:
  - **Alberta Electric System Operator (AESO)**
  - **Regulatory Process for Transmission Development**
  - **Alberta's Electricity Industry**
  - **Transmission Planning Process**
- Need for Transmission Development in Alberta (Cold Lake to Vegreville to Provost Region)
  - **Study Region**
  - **Study Drivers**
- Transmission Development Alternatives
- Next Steps
    - **Participant Involvement Program (PIP)**
    - **Land Impact Assessment (LIA)**
    - **Needs Identification Document (NID) Application**
- Timelines

AESO – Our role

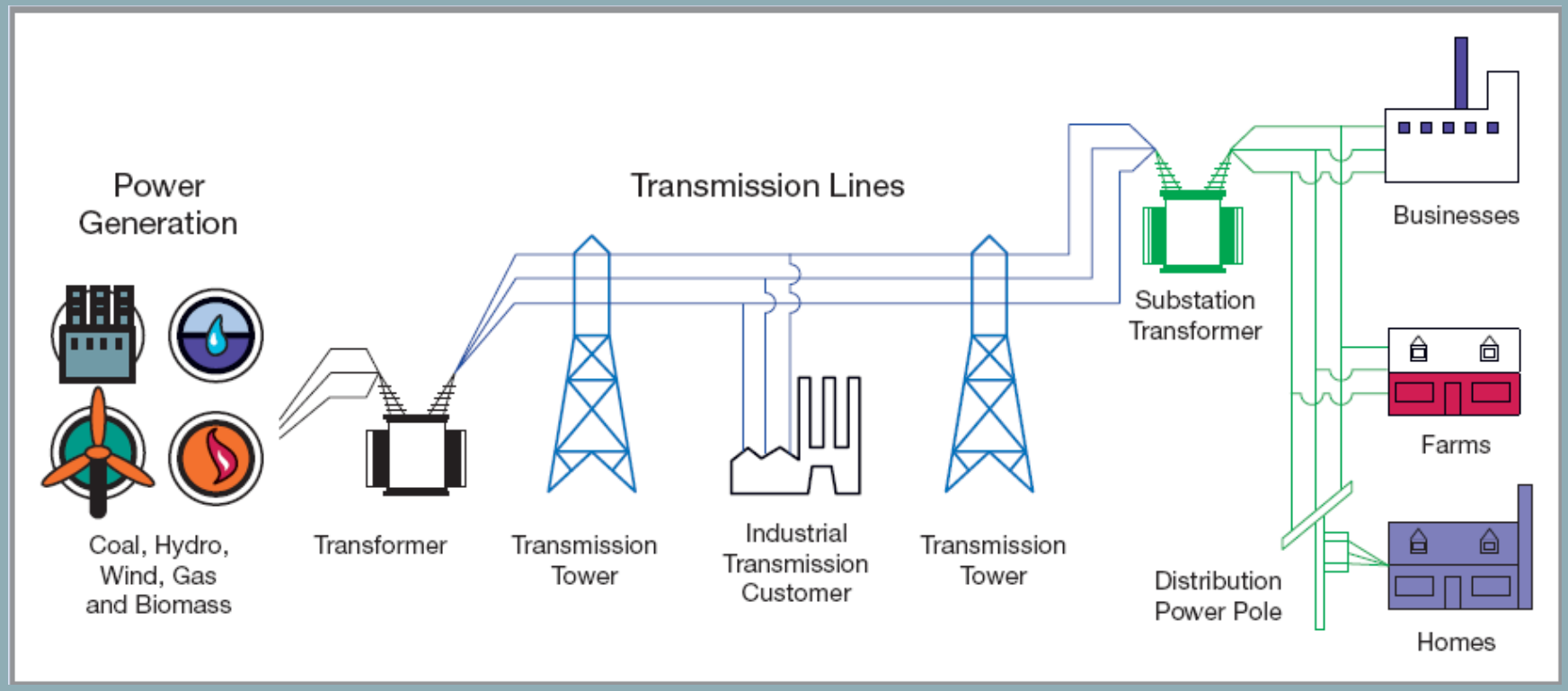


AESO Vision

The AESO will be seen as a key contributor to the development of Alberta and the quality of life for Albertans, through our leadership role in the facilitation of fair, efficient and openly competitive electricity markets and the reliable operation and development of the Alberta Interconnected Electric System (AIES).

The Big Picture

The flow of power



The Big Picture (Cont'd)

Alberta's Electricity Generation

Coal-Fired Plants		5,893 MW
Natural Gas-Fired Plants		4,699 MW
Hydro Power		869 MW
Green Power	Wind Power	497 MW
Green Power	Other Renewables	214 MW
Total Installed Generating Capacity		**12,172 MW**

Transmission Interconnections

British Columbia	Import: 0-780 MW; Export 0-800 MW
Saskatchewan	Import: 0-150 MW; Export 0-60 MW

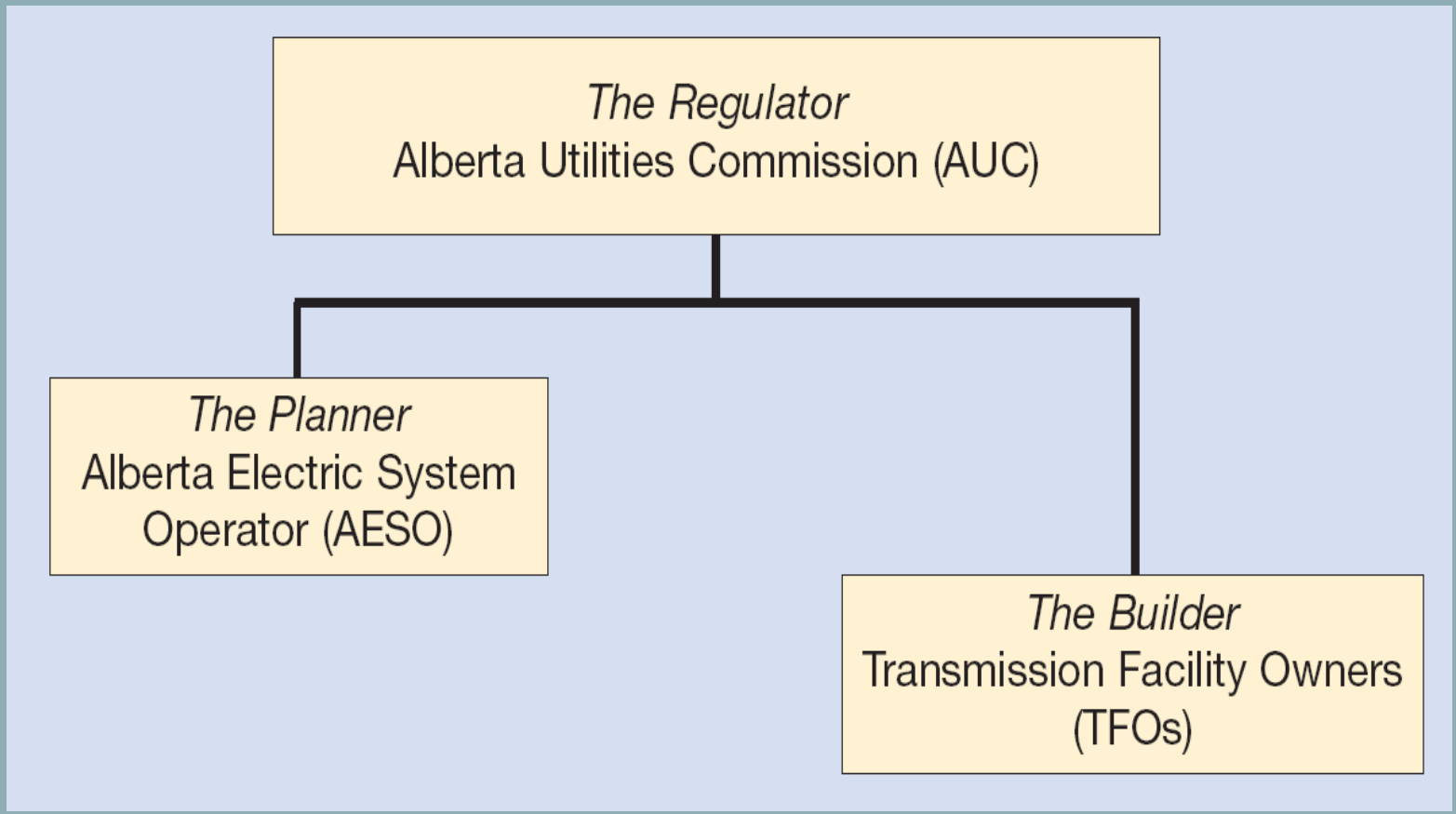
The Big Picture (Cont'd)

Alberta's Electrical System

High Voltage Lines: 69 kV, 138/144 kV, 240 kV and 500 kV

Transmission Lines	21,000 km
Interties to B.C.	Up to 780 MW
Interties to Saskatchewan	Up to 150 MW
Merchant Line to Montana	Up to 300 MW
Peak Demand	9,701 MW
Generation Capacity	12,172 MW
Number of Generating Units	Over 280

Regulatory Process: The Players



Transmission Two-Stage Process

- AESO
  - determine the need for transmission development
  - submit a **Needs Identification Document (NID)**, to the Alberta Utilities Commission (AUC) for approval that will include a recommendation for transmission reinforcement
- Transmission Facility Owner (TFO)
  - detailed routing and specific siting
  - detailed engineering
  - separate consultation process
  - submit a **Facilities Application** to the Alberta Utilities Commission (AUC) for approval

Overall Transmission Planning Framework

Transmission Planning Process: Planning Considerations

- Social impacts of project/transmission plan
  - Social/Landowner
  - Environmental
  - Land Use
- Technical: Technical performance
- Economic: Capital costs and line losses

Transmission Reinforcement in the Areas from Cold Lake to Vegreville to Provost – The Need

Transmission Development: Cold Lake to Vegreville to Provost Region

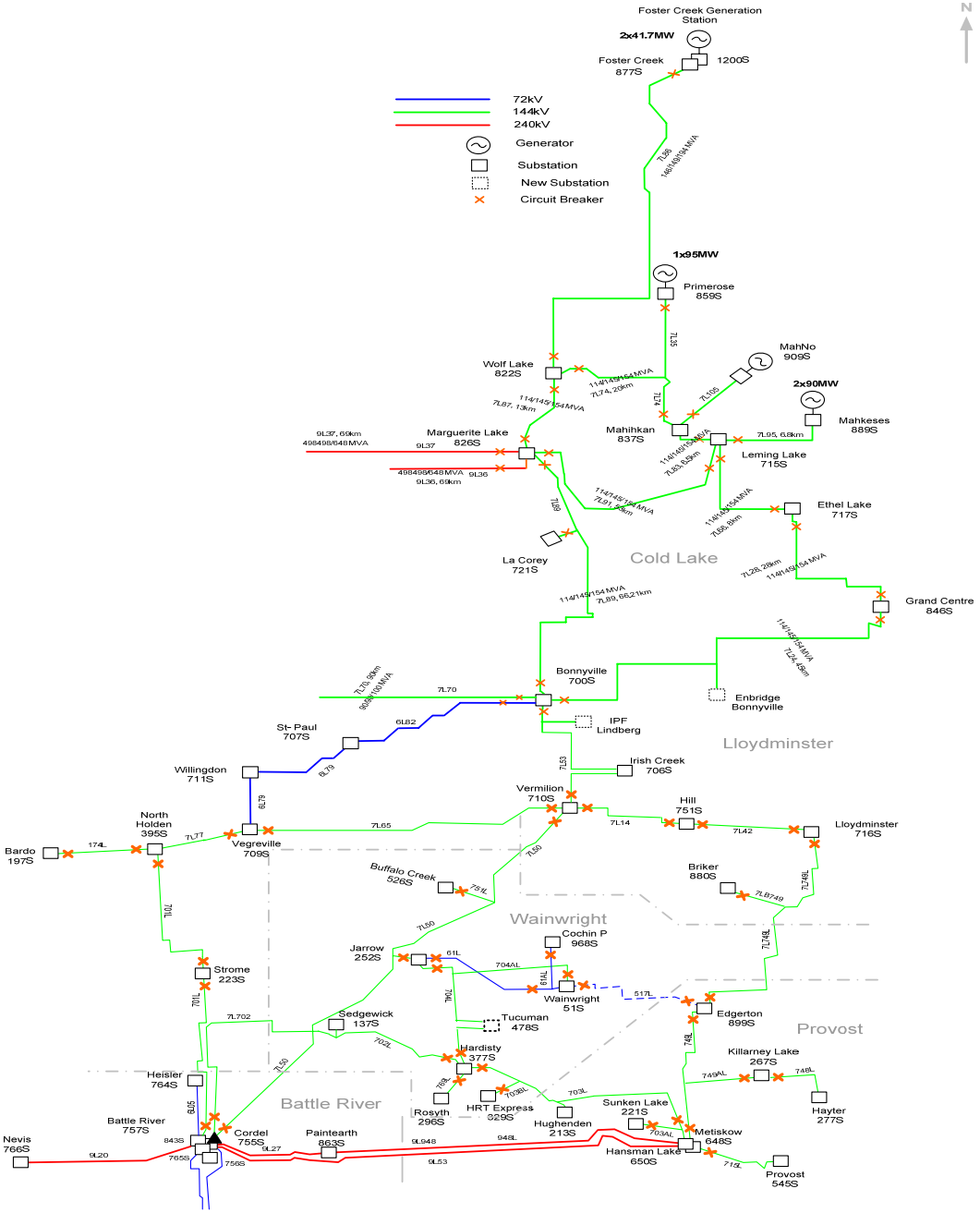
Cold Lake to Vegreville to Provost Region – Study Area

Central East (Cold Lake, Vegreville, Provost) Study Area

Cold Lake to Vegreville to Provost study area roughly comprised of:

- County of Paintearth
- M.D. of Provost
- M.D. of Wainwright
- Beaver County
- County of Vermilion River
- County of Two Hills
- County of Minburn
- County of St. Paul
- M.D. of Bonnyville
- Flagstaff County

Transmission System: Study Region



Overview of Need – Cold Lake to Vegreville to Provost Region

The transmission system in this area lacks the capacity to support additional demand or integrating new generation

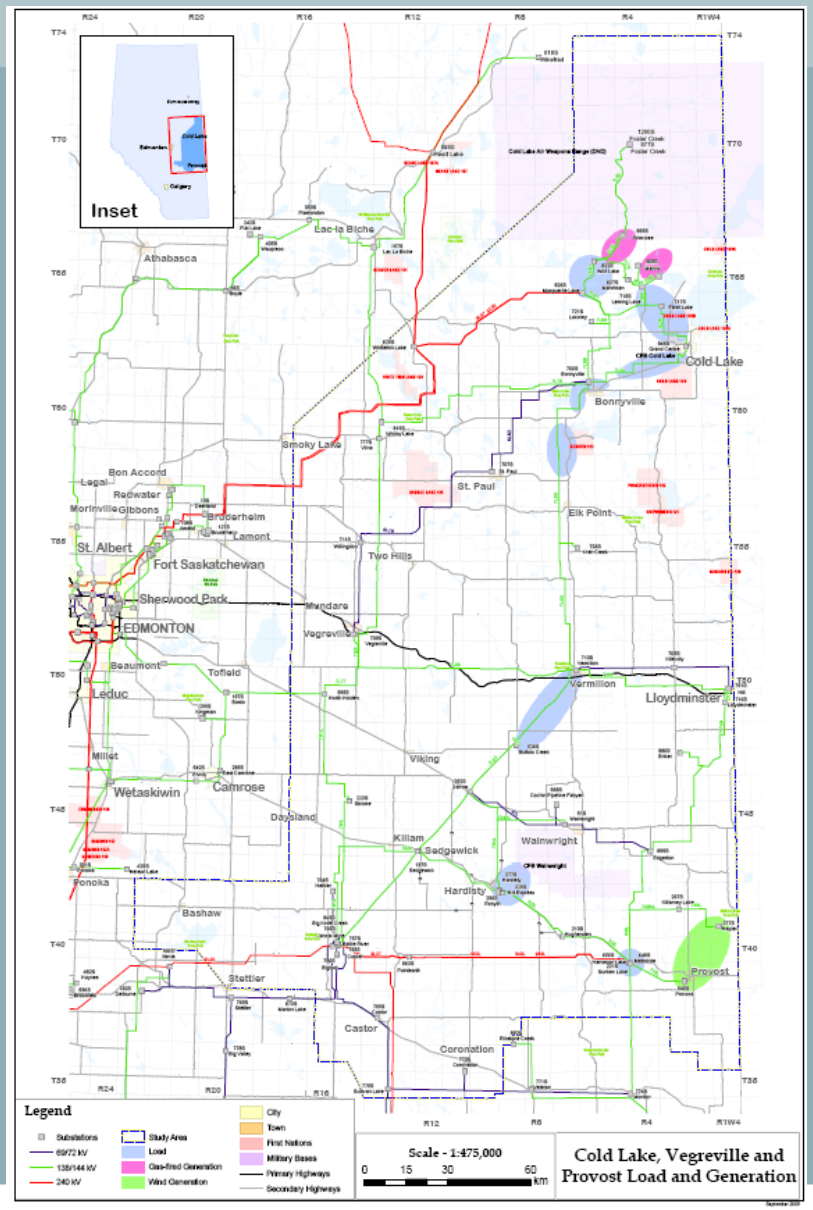
- **Demand for electricity in this region is growing;**

Load Growth Areas:

  - **Cold Lake, Wainwright and Provost areas**
  - **Load is expected to double over the next 10 year period**

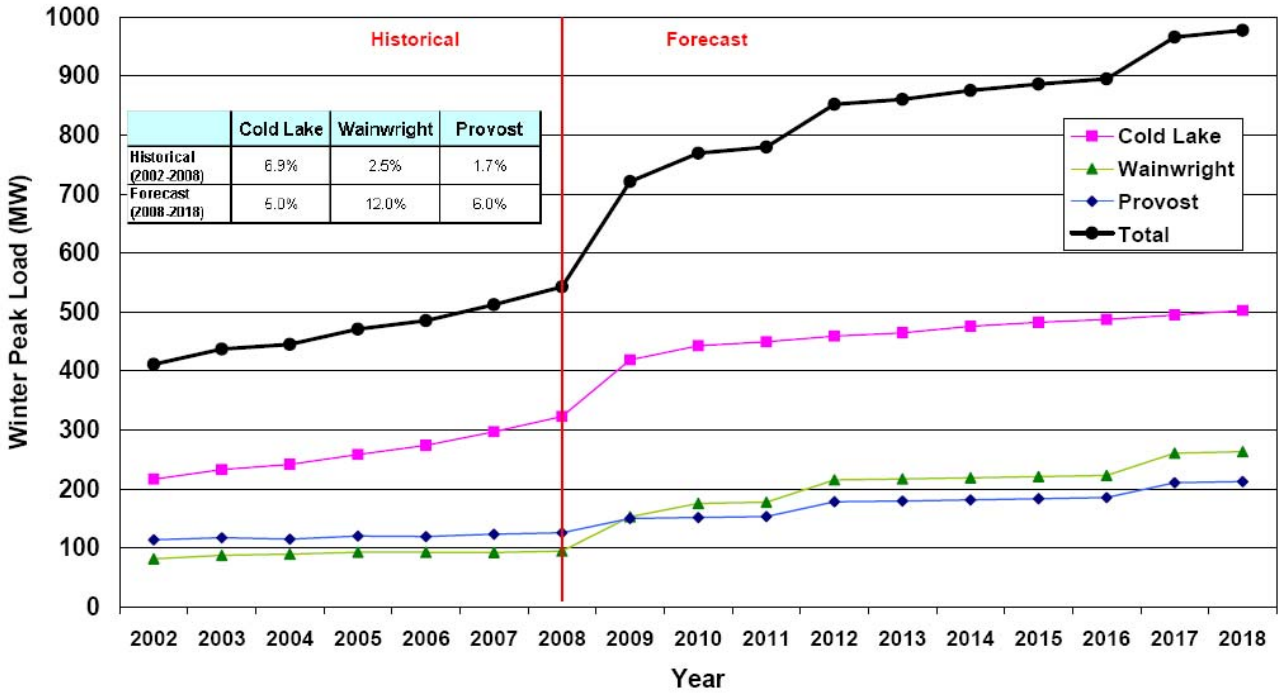
- **Gas generation and wind interest in this region: Over 500 MW**

Map of Load and Generation in Cold Lake to Vegreville to Provost Region



Overview of Need – Load Forecast

Load Forecast: Cold Lake, Wainwright and Provost (Fast growing areas)



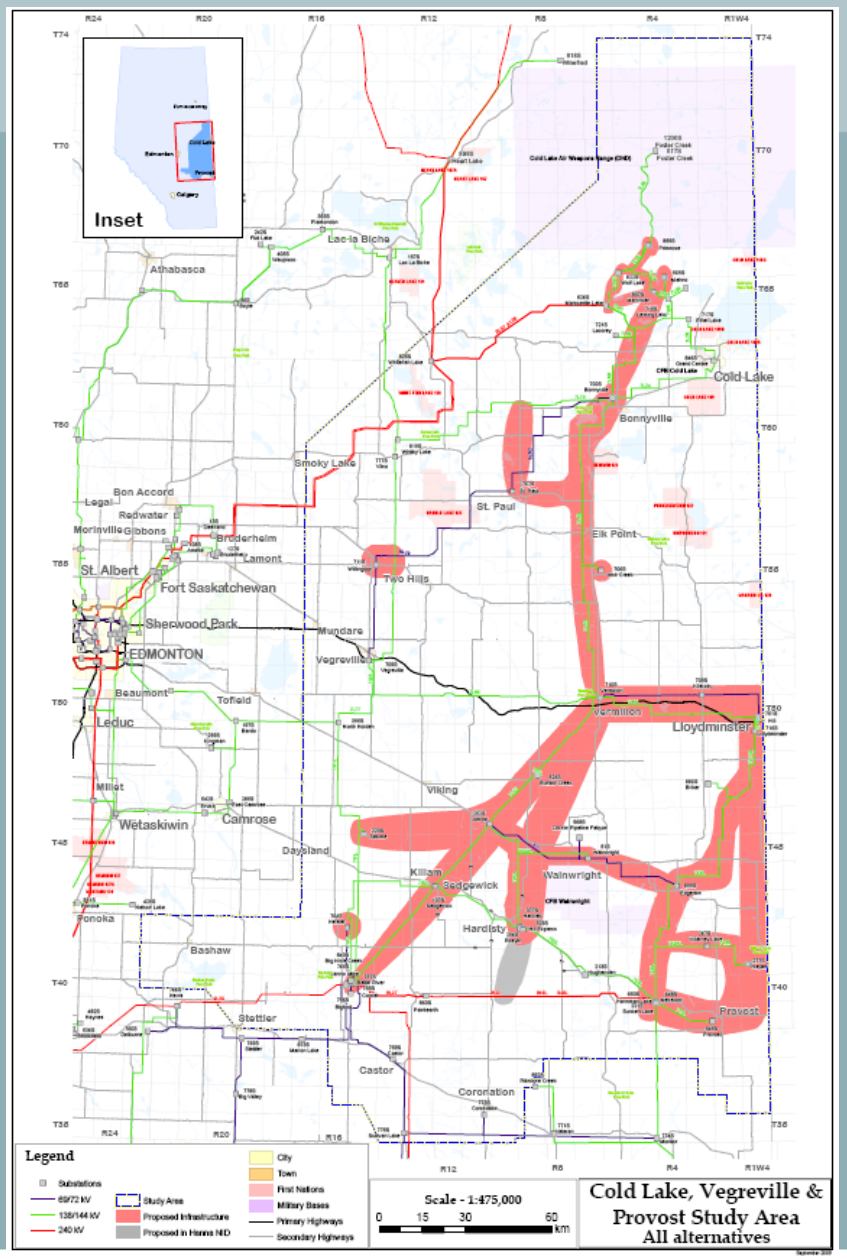
	Cold Lake	Wainwright	Provost
Historical (2002-2008)	6.9%	2.5%	1.7%
Forecast (2008-2018)	5.0%	12.0%	6.0%

Cold Lake to Vegreville to Provost Region: Transmission System Alternatives

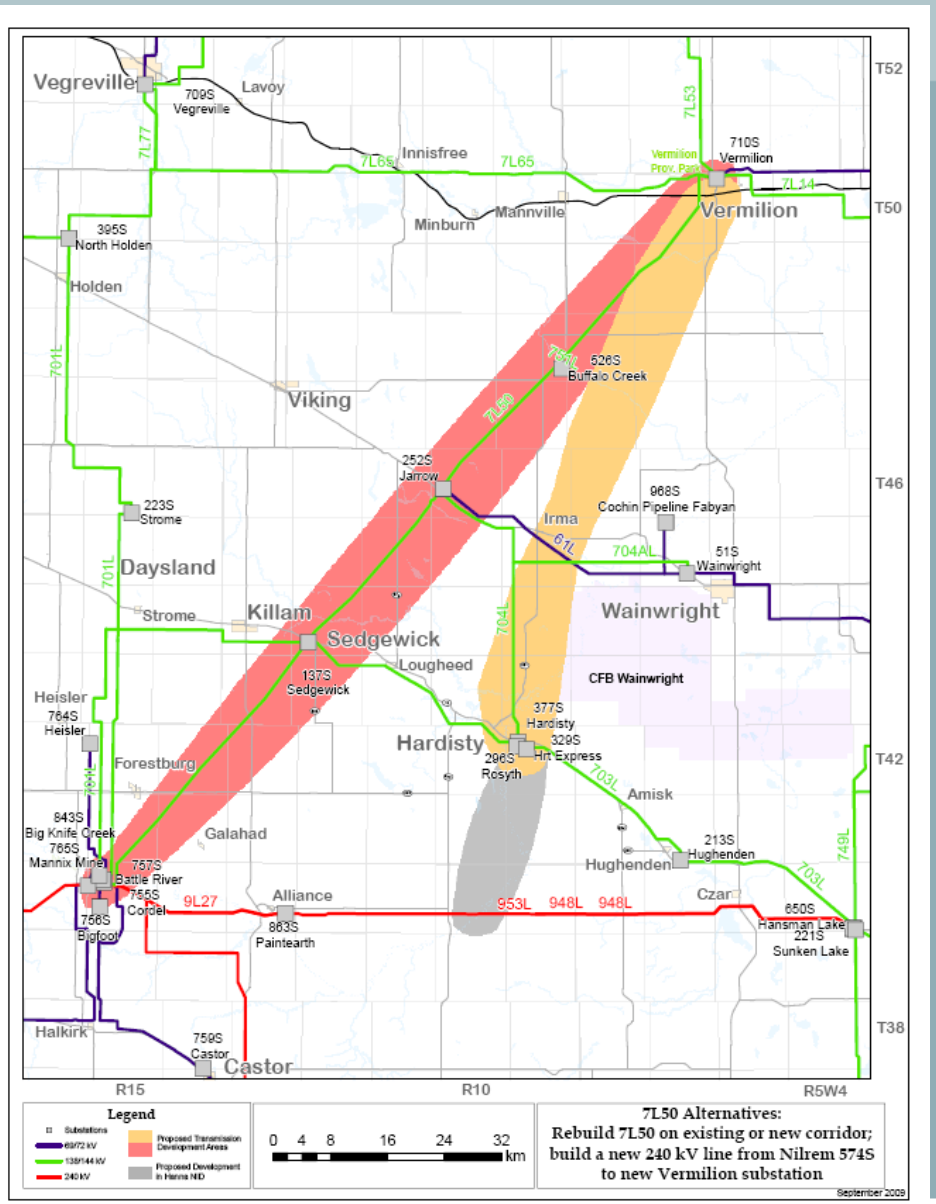
Developed alternatives for different geographical areas in the study region:

- 7L50 Rebuild
- Wainwright Area
- Strome Area
- Killarney Lake/Provost Area
- Cold Lake Area
- St. Paul Area
- Lloydminster Area

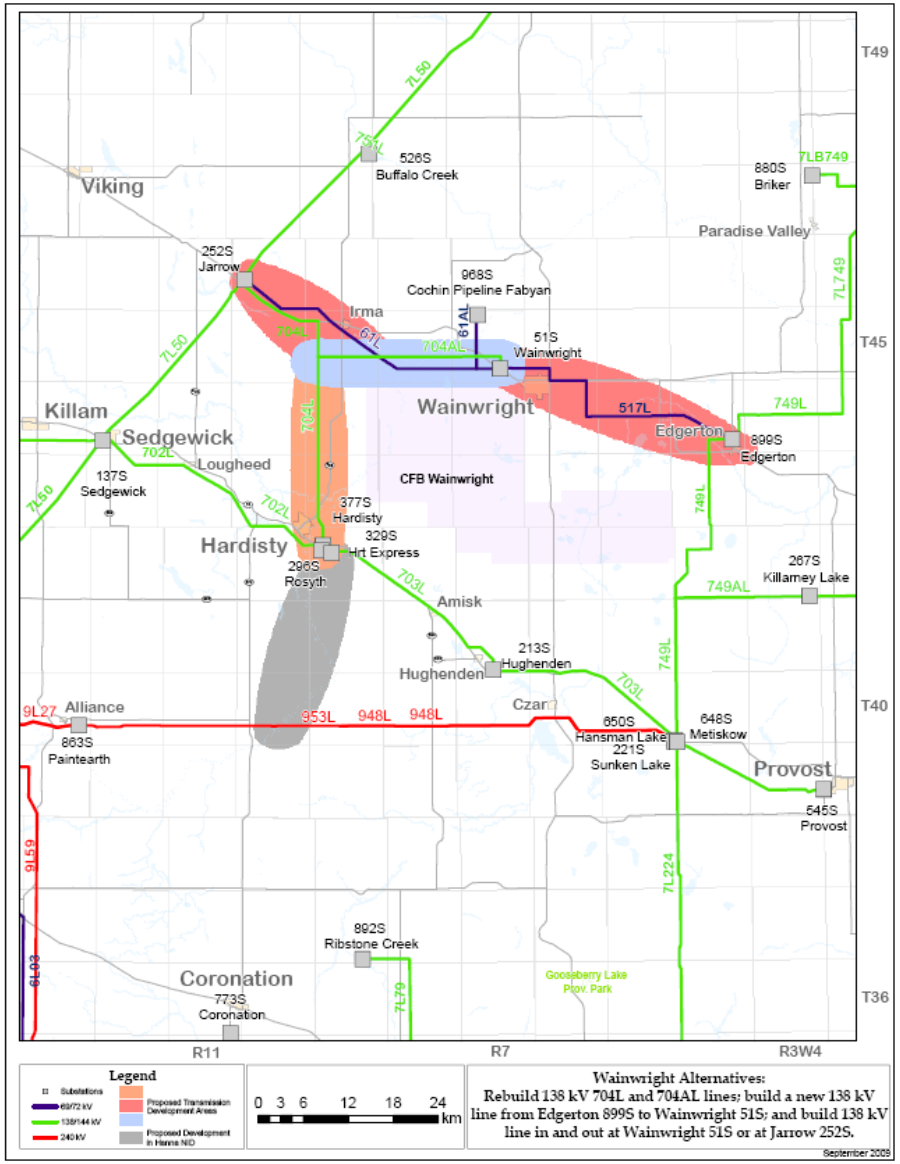
All Alternatives in the Study Area



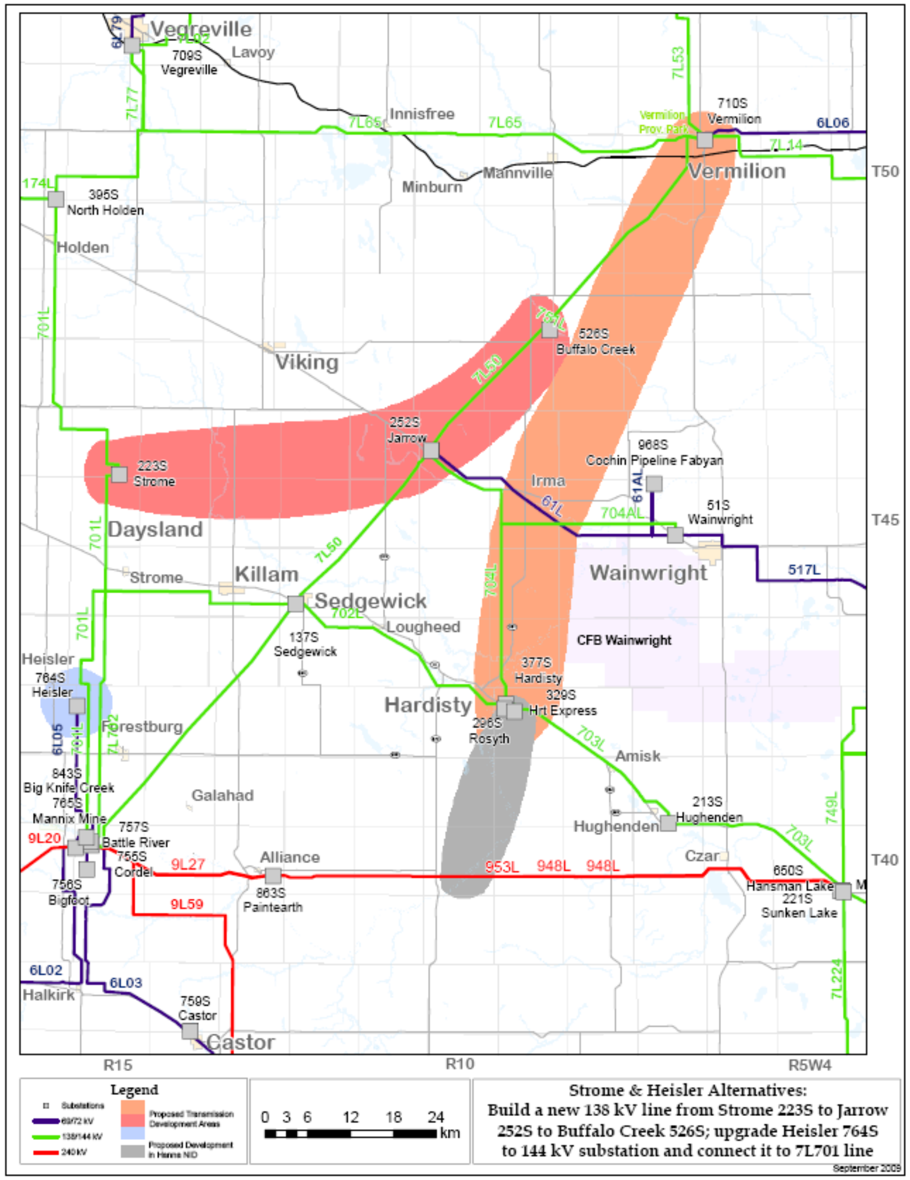
7L50 Rebuild



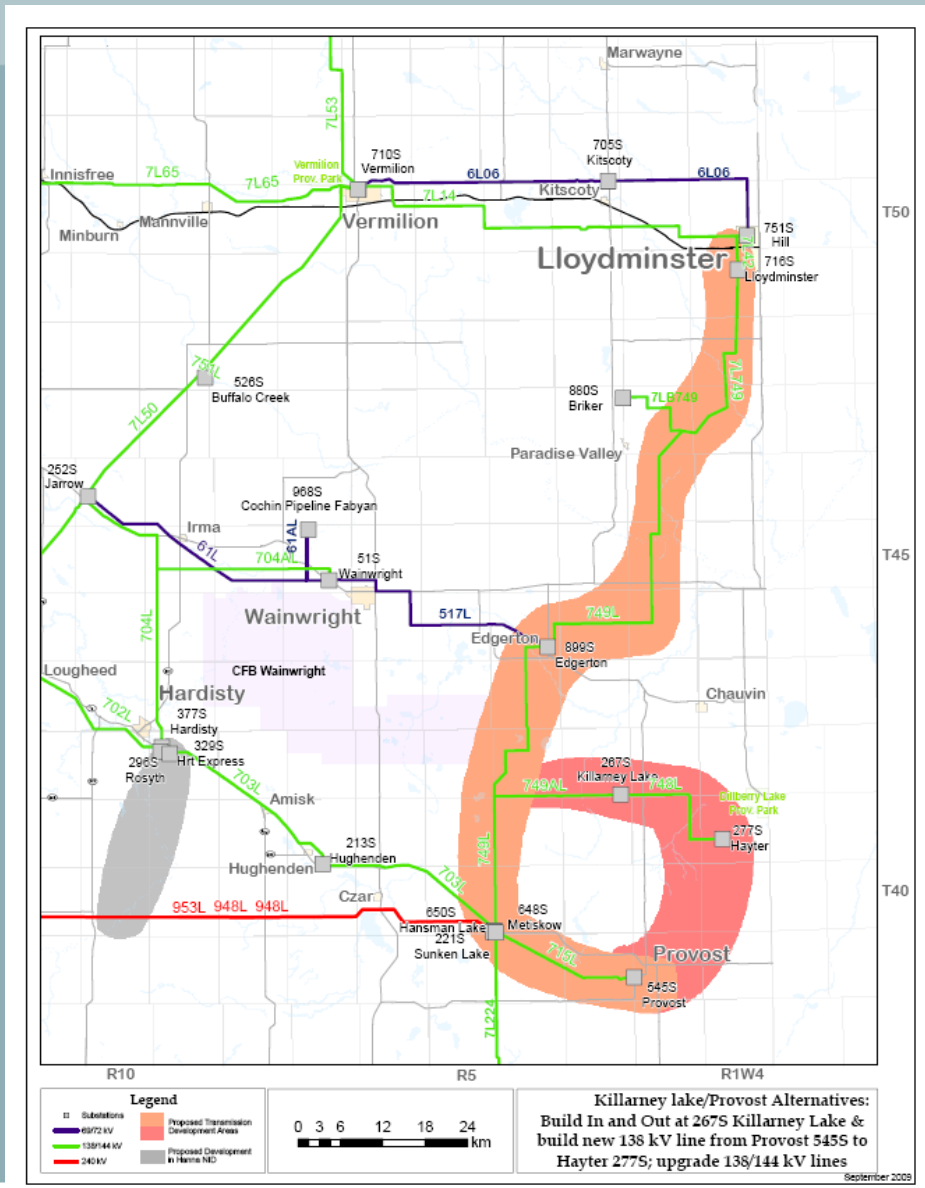
Wainwright Area



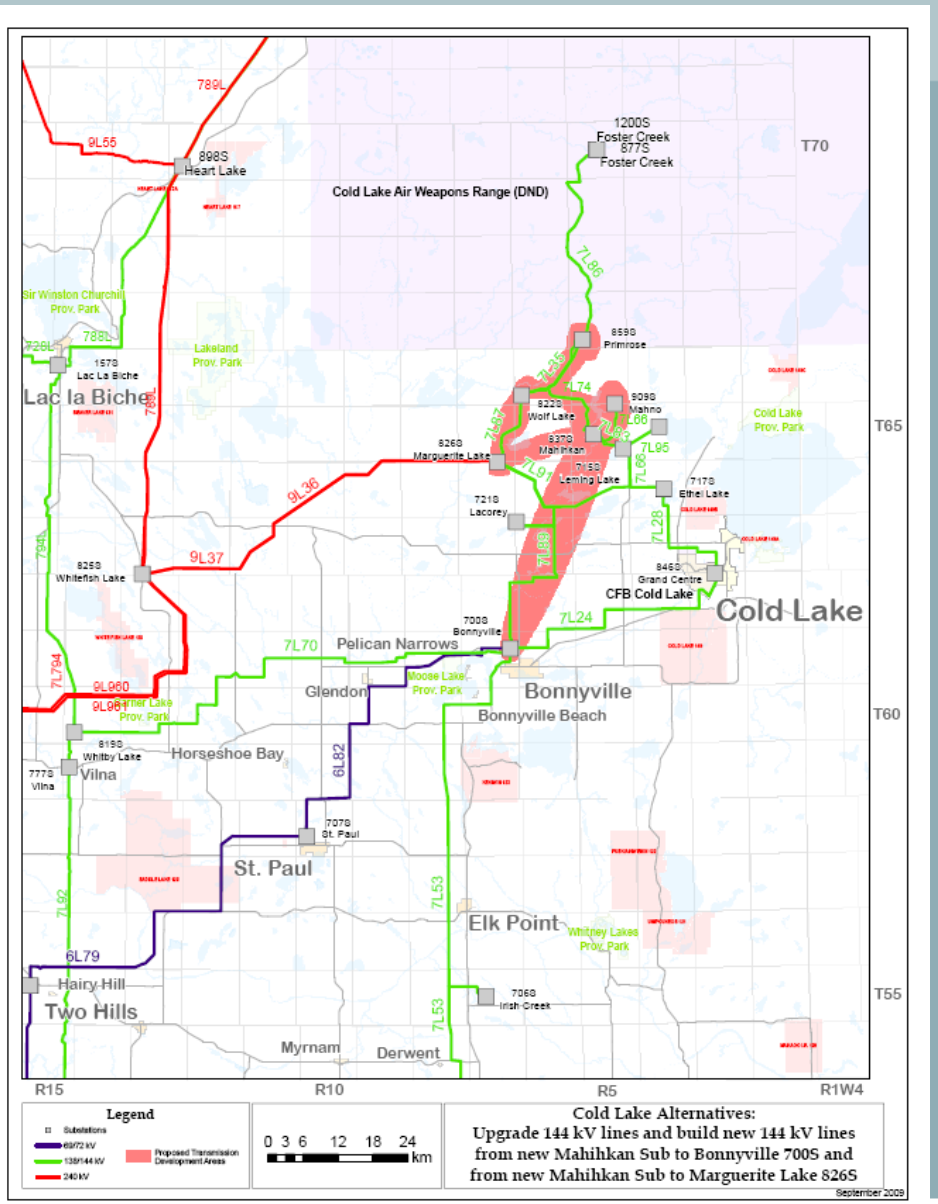
Strome Area


Vegreville
709S
Vegreville
Lavoy
Innisfree
7L65
7L77
7L53
710S
Vermilion
6L06
7L14
Vermilion
T50
Minburn
Mannville
174L
395S
North Holden
Holden
701L
Viking
526S
Buffalo Creek
7L50
252S
Jarrow
968S
Cochin Pipeline Fabyan
223S
Strome
Irma
61L
61AL
704AL
51S
Wainwright
T45
Daysland
Strome
Killam
Sedgewick
702L
Wainwright
517L
137S
Sedgewick
Lougheed
CFB Wainwright
Heisler
764S
Heisler
377S
Hardisty
329S
Hrt Express
Hardisty
296S
Rosyth
Forestburg
6L05
7L702
703L
Amisk
843S
Big Knife Creek
765S
Mannix Mine
Galahad
213S
Hughenden
Hughenden
9L20
757S
Battle River
755S
Cordel
9L27
Alliance
Czar
749L
T40
953L
948L
948L
650S
Hansman Lake
221S
Sunken Lake
756S
Bigfoot
863S
Paintearth
9L59
6L02
Halkirk
6L03
759S
Castor
Castor
7L224
R15
R10
R5W4
Legend
Substations
69/72 kV
138/144 kV
240 kV
Proposed Transmission Development Areas
Proposed Development in Hanna NID
0 3 6 12 18 24
km
Strome & Heisler Alternatives:
Build a new 138 kV line from Strome 223S to Jarrow 252S to Buffalo Creek 526S; upgrade Heisler 764S to 144 kV substation and connect it to 7L701 line
September 2009

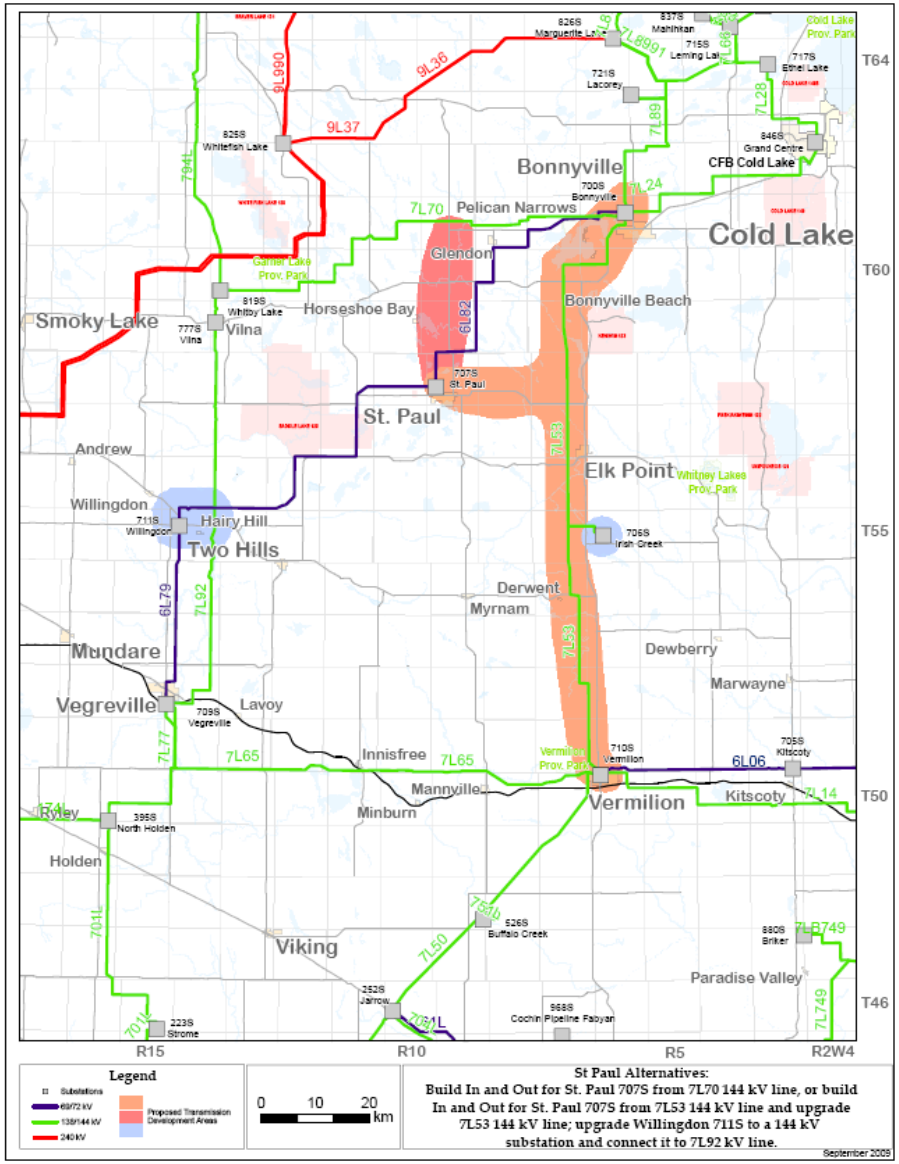
Killarney Lake/Provost Area



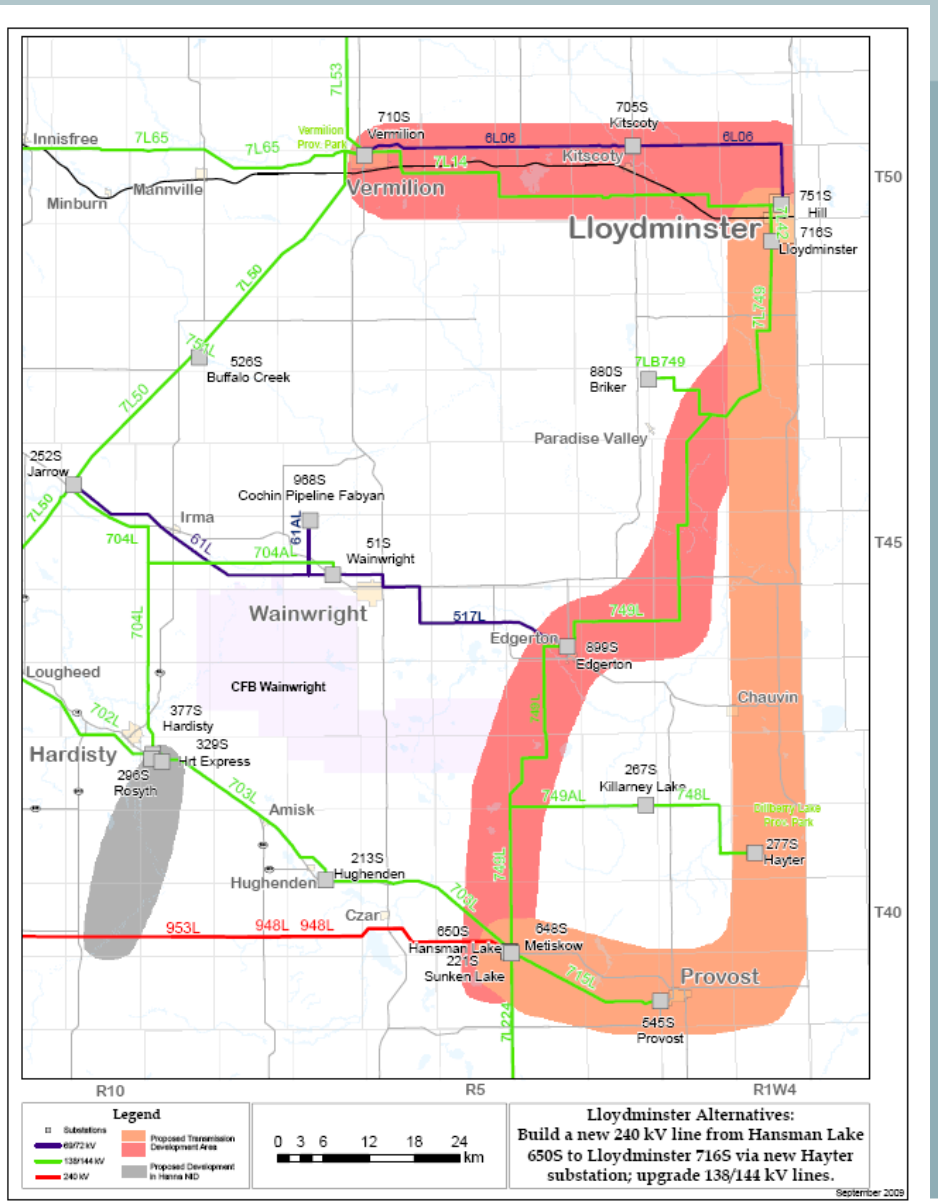
Cold Lake Area



St. Paul Area


Bonnyville
Cold Lake
Pelican Narrows
Glendon
Bonnyville Beach
Horseshoe Bay
Smoky Lake
Vilna
St. Paul
Andrew
Elk Point
Willingdon
Hairy Hill
Two Hills
Derwent
Myrnam
Dewberry
Marwayne
Mundare
Vegreville
Lavoy
Innisfree
Vermilion
Kitscoty
Mannville
Minburn
Ryley
Holden
Viking
Paradise Valley
Cold Lake Prov. Park
Garner Lake Prov. Park
Whitney Lakes Prov. Park
Vermilion Prov. Park
CFB Cold Lake
T64
T60
T55
T50
T46
R15
R10
R5
R2W4
Legend
Substations
69/72 kV
138/144 kV
240 kV
Proposed Transmission Development Areas
0 10 20 km
St Paul Alternatives:
Build In and Out for St. Paul 707S from 7L70 144 kV line, or build In and Out for St. Paul 707S from 7L53 144 kV line and upgrade 7L53 144 kV line; upgrade Willingdon 711S to a 144 kV substation and connect it to 7L92 kV line.
September 2009

Lloydminster Area



Needs Identification Document

Preparation of Needs Identification Document

Recommendation of Cold Lake to Vegreville to Provost Region System Plan Based on:

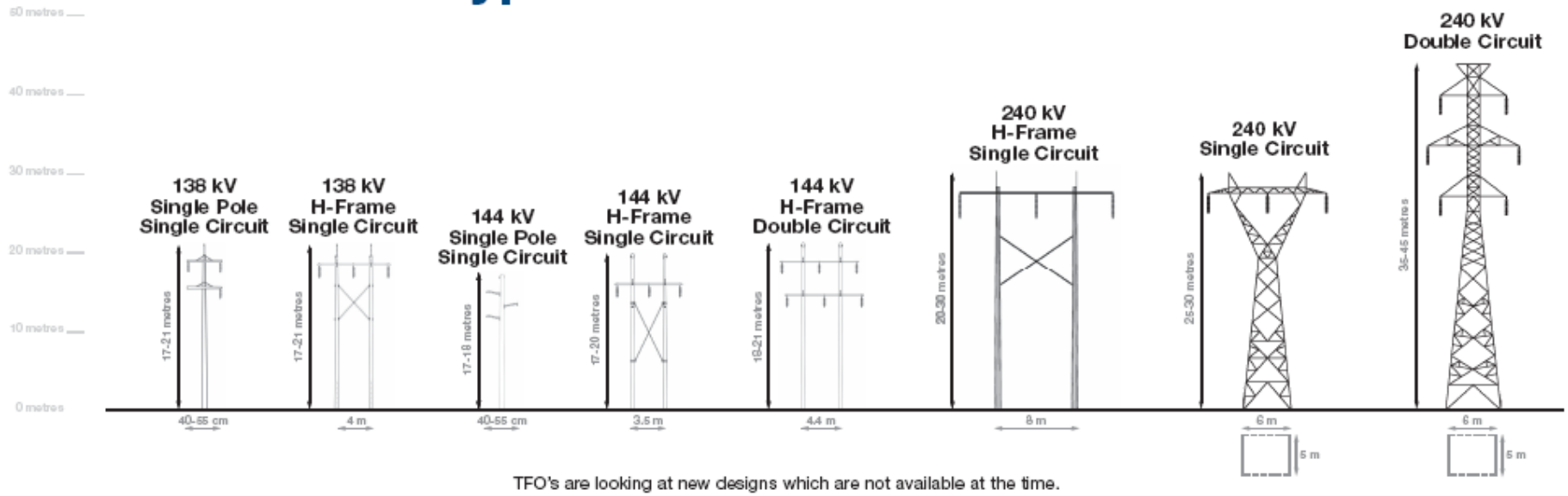
- Social Factors
- Technical Performance
- Economics: Capital Costs and Energy Losses

Types of Possible Towers

- Investigated 240 kV AC, 144 kV AC and 138 kV AC options

AC – Alternating current

Types of Possible Towers



TFO's are looking at new designs which are not available at the time.

Participant Involvement Program (PIP)

Activities:

- **Information provided to**:
  - **Municipal Districts and Counties**
  - **First Nations**
  - **DOE/AUC**

Next Steps

- Continue with Participant Involvement Program (PIP)
- Open Houses September/October
- Land Impact Assessment
- Technical Studies
- Screen Alternatives
- Determination of preferred alternatives
- Preparation of Needs Identification Document

Project Schedule

Central East Region Transmission Development: Project Schedule

No.	Description	Year 2008			Year 2009											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	Technical Studies (PV & VQ, Losses, Dynamic Analysis)*		–	–	–	–	–	–	–	–	–	–	–	–	
2	Participant Involvement Program								–	–	–	–	–	–	
3	Social/Land Impact Assessment						–	–	–	–	–	–	–		
4	Capital Cost Estimates (NID Class)						–	–	–	–	–	–	–		
5	Economic Analysis												–	–	
6	Prepare NID Document											–	–	–	
7	File NID Application														Δ

* Includes Alternative Screening

Contact us

General AESO Inquiries on Transmission Reinforcement in the Areas from Cold Lake to Vegreville to Provost:

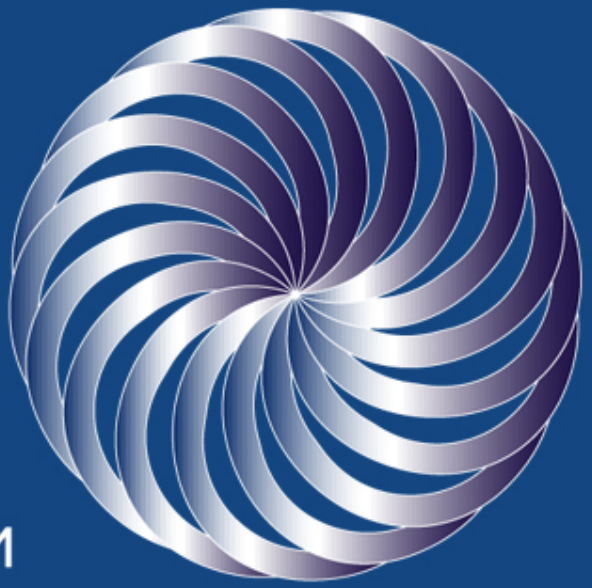
Marina Lakhani, Coordinator, Corporate Communications

403-539-2783

marina.lakhani@aeso.ca

aeso

ALBERTA
ELECTRIC
SYSTEM
OPERATOR



Central East Region Transmission Development (Cold Lake to Vegreville to Provost)

Ramaiah Divi, P.Eng

December 9, 2009

Reliable **Power**

Reliable **Markets**

Reliable **People**

aeso
ALBERTA ELECTRIC SYSTEM OPERATOR

Outline

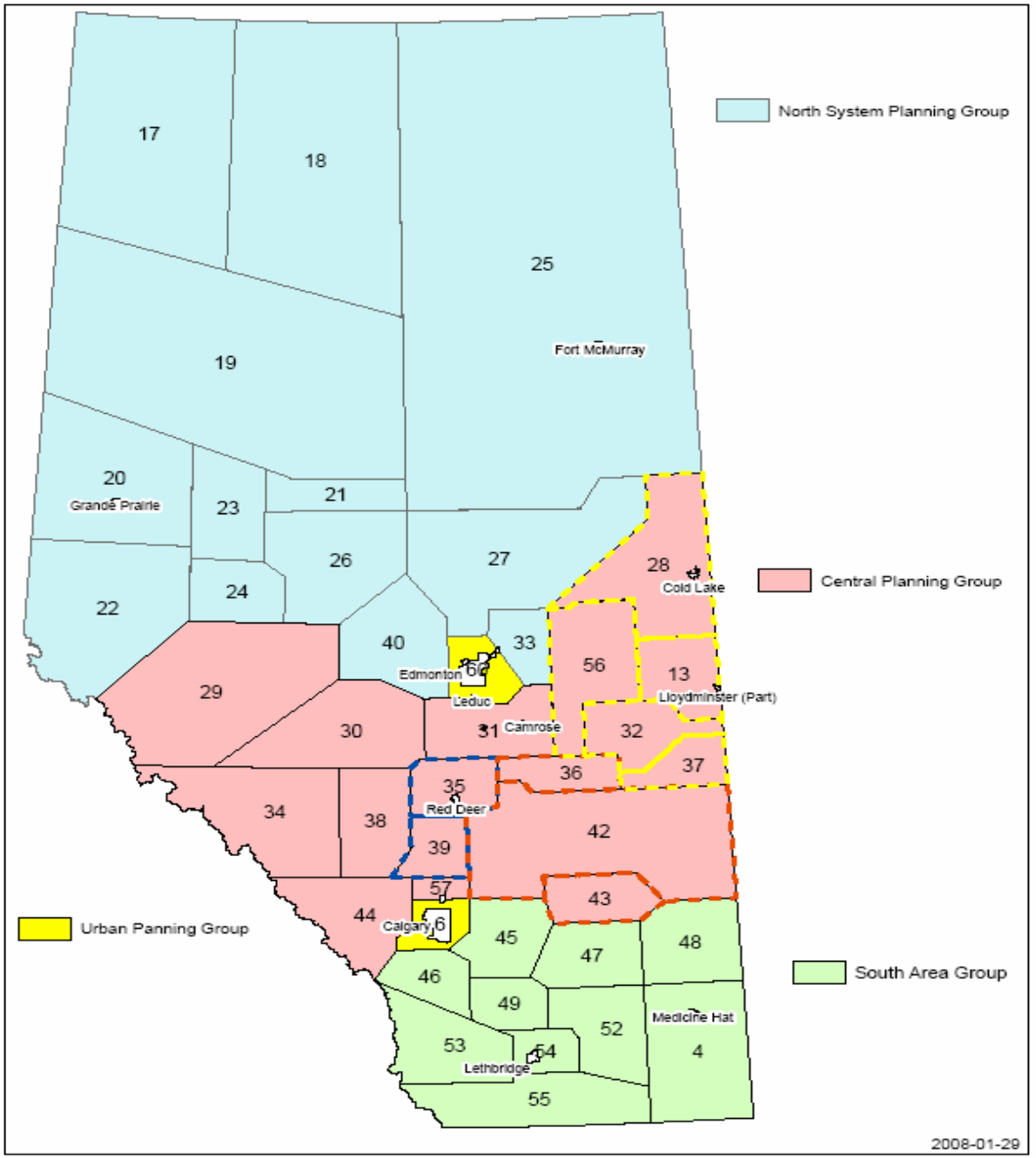
1. Study Region
2. Study Drivers
3. Study Objective
4. Assumptions & Methodology
5. Study Results
6. Project Status
7. Next steps

1. Yellow Border: Central East Study Area

2. Red Border : Hanna Study Area

3. Blue Border: Red Deer and Didsbury Study Area

4. West Central Study Area



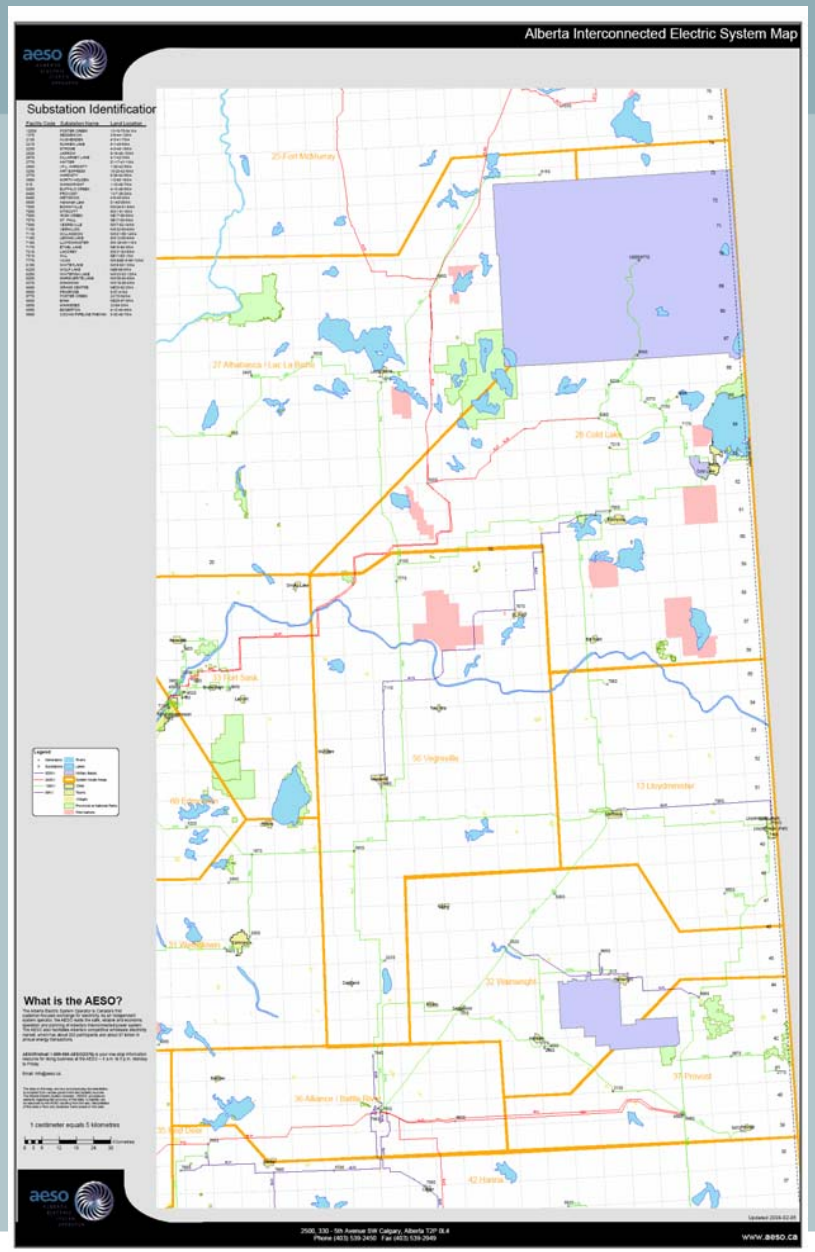
Central System Area Planning Studies

Central East Study Region

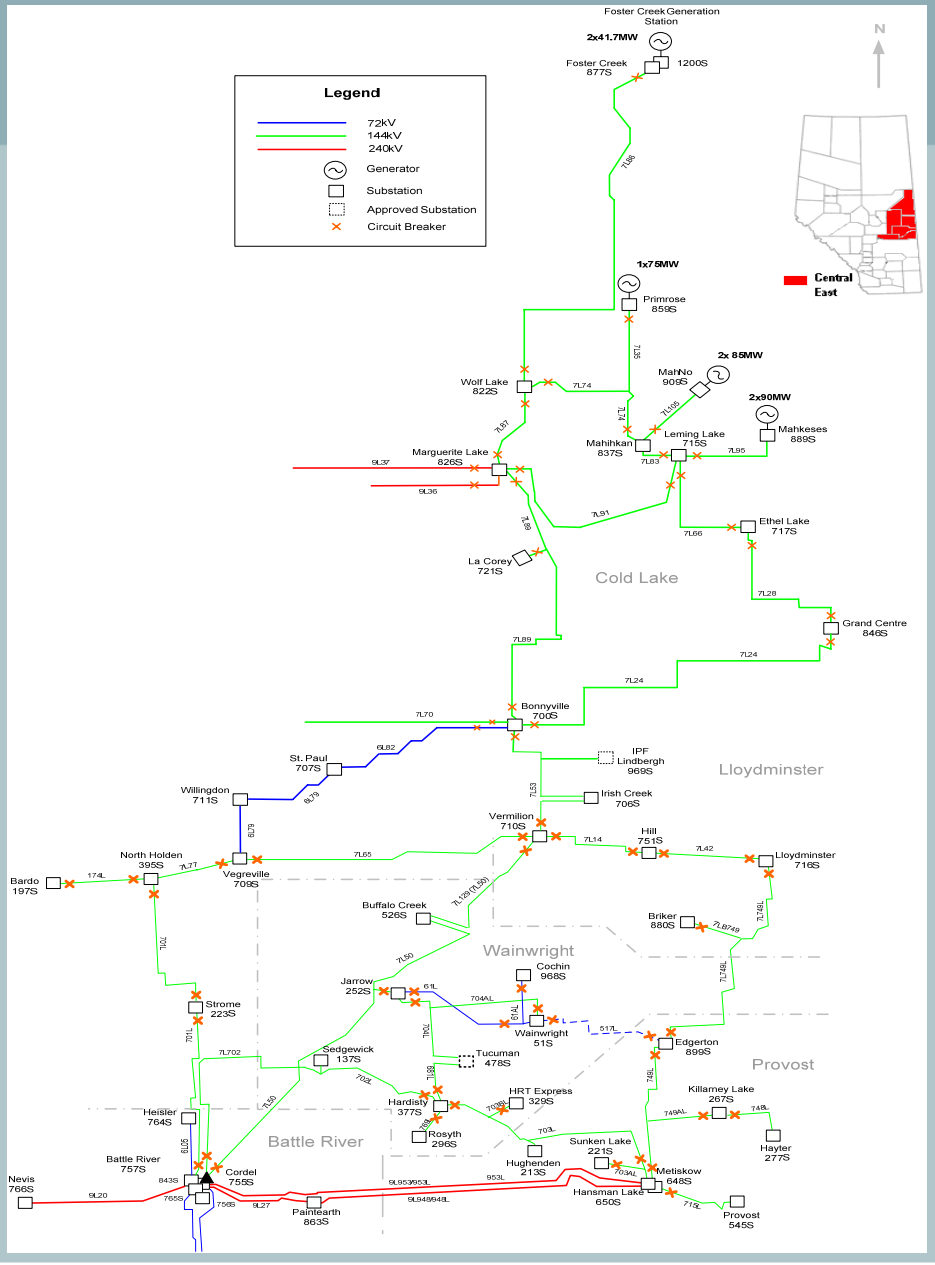
The study region includes the following AIES planning areas:

- **Lloydminster (Area 13)**
- **Cold Lake (Area 28)**
- **Wainwright (Area 32)**
- **Battle River (Area 36)**
- **Provost (Area 37)**
- **Vegreville (Area 56)**

Central East Study Region



Existing System: Schematic



Study Drivers – The Need

- **Load Growth: High**
  - **Cold Lake, Wainwright and Provost areas**
  - **Load is expected to double over the next 10 year period**
- **Potential gas-fired generation and wind Interest is approximately 500 MW**
  - **Cold Lake area (gas-fired generation)**
  - **Provost area (wind projects)**

Study Drivers – The Need

- **System Issues:**
  - **Existing transmission system in the Central East region does not have enough capacity**
  - **The region experiences thermal overloads under normal system conditions in 2012 and 2017**
  - **The region experiences low voltages**
- **Operational Issue in the Cold Lake area (Thermal Protection Scheme)**

It is not feasible to connect proposed gas-fired generation and wind farms without system reinforcements.

Thermal Protection Scheme (TPS)

TPS Installed in 2004

- **Monitor the Following Lines for Over Loads**
  - **7L66 (Leming Lake 715S to Ethel Lake 717S)**
  - **7L89 (Marguerite Lake 826S to Bonnyville 700S)**
  - **Thermal Relay at Marguerite Lake monitors the loading of 7L89**
  - **Thermal Relay at Leming Lake monitors the loading of 7L66**
- **TPS Operations To Date: No incidents to report**

Study Objective

Develop a long-term transmission plan for the study region (2008 – 2017) that meets the following:

- **Forecasted load demand**
- **Integration of proposed gas generation and wind farms**
- **Mitigate existing thermal protection schemes**
- **AESO Transmission Reliability Criteria**

Study Assumptions
&
Methodology

Study Assumptions

Bulk Transmission System in 2017

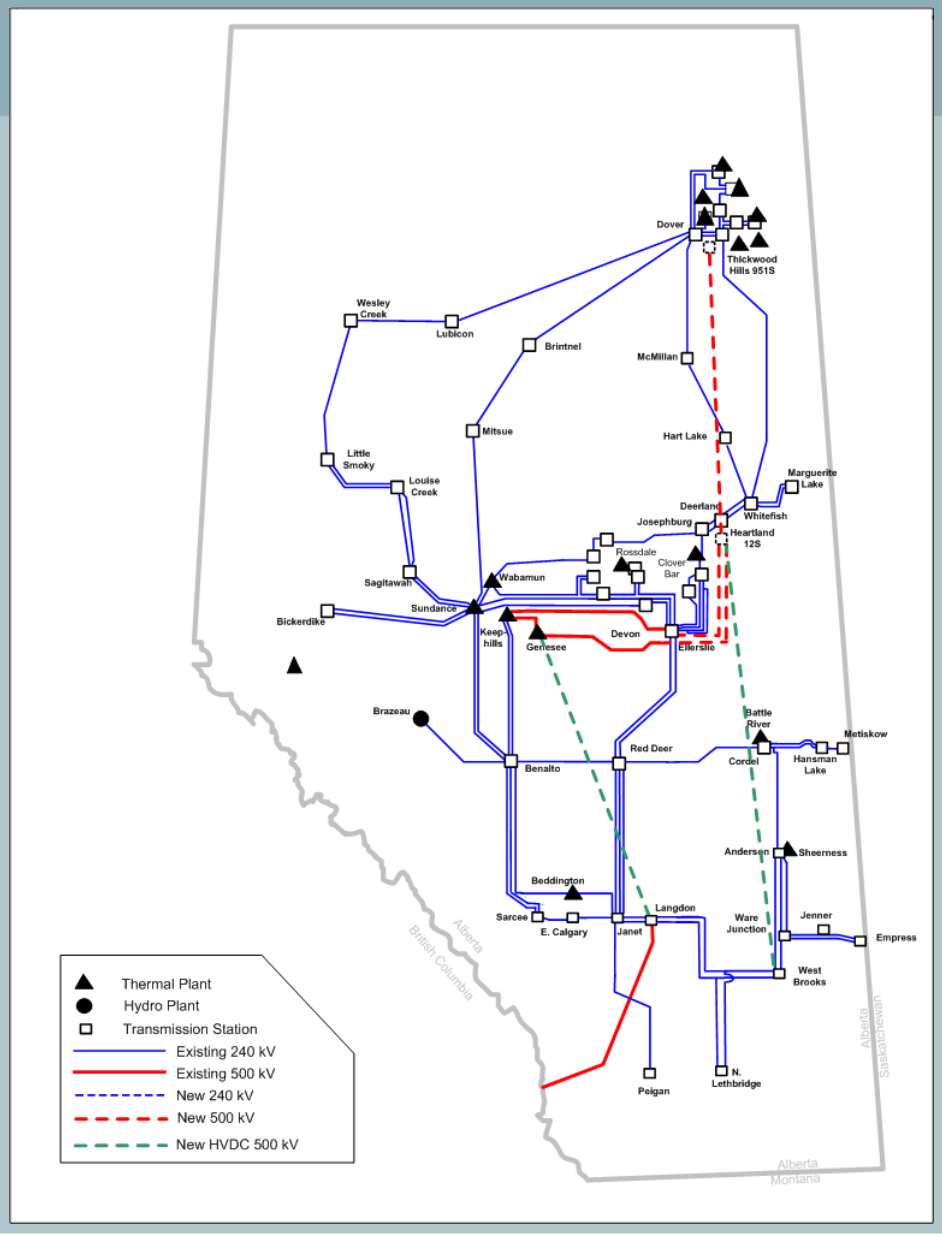
- 500 kV HVDC from Genesee to Langdon
- 500 kV HVDC from Heartland to West Brooks
- New Thickwood 500 kV Substation
- New Heartland 500 kV Substation
- 500 kV AC line from Ellerslie to Thickwood via Heartland
- 500 kV Keephills to Thickwood
- 240 kV Ellerslie to Eastwood is converted to 500 kV

Study Assumptions

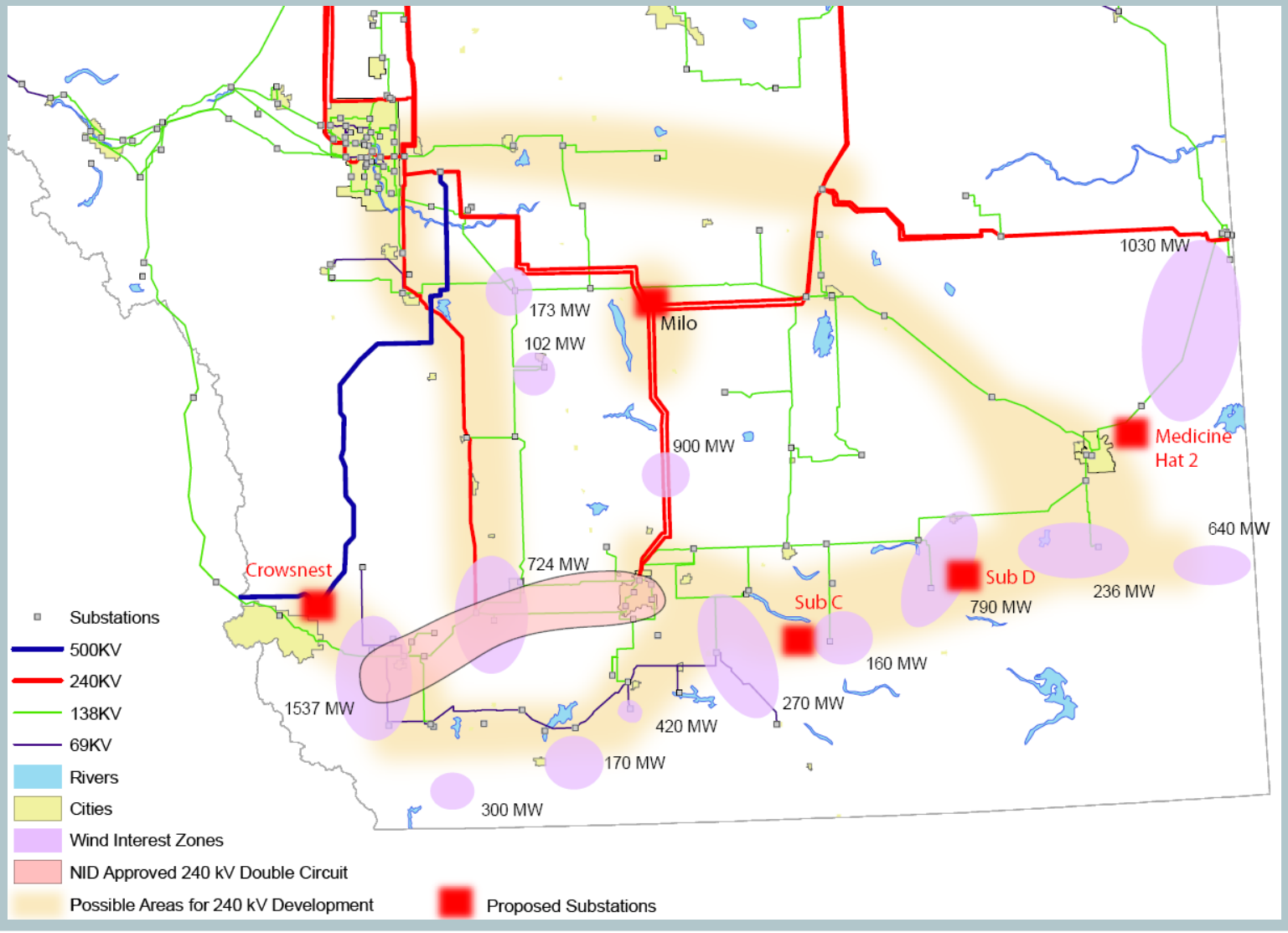
Regional Transmission System in 2017

- **Southern Alberta Transmission Reinforcement - 240 kV looped system**
- **Hanna Region Transmission Development**

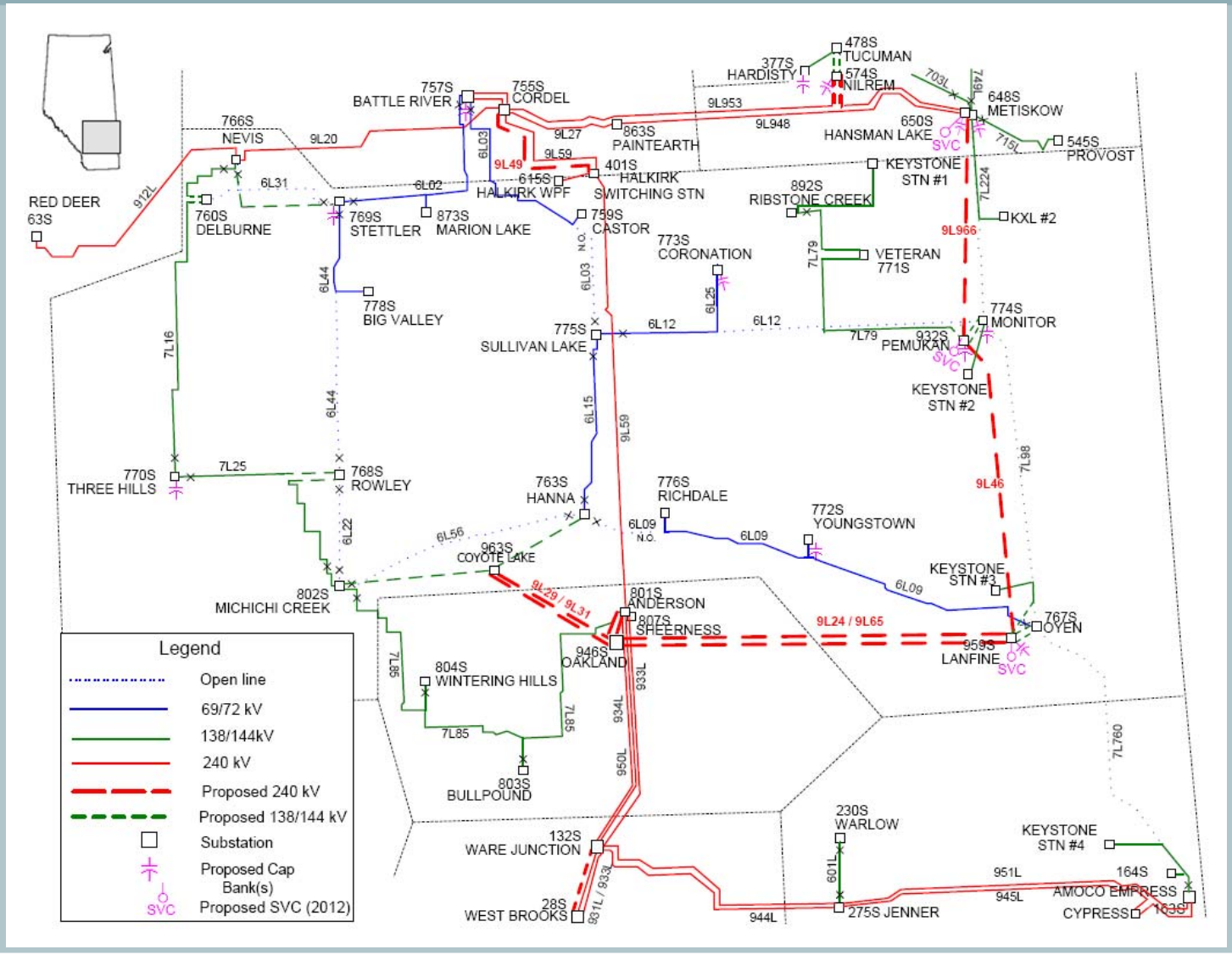
Bulk Transmission System in 2017



South Alberta 240 AC Loop



Hanna Region Development

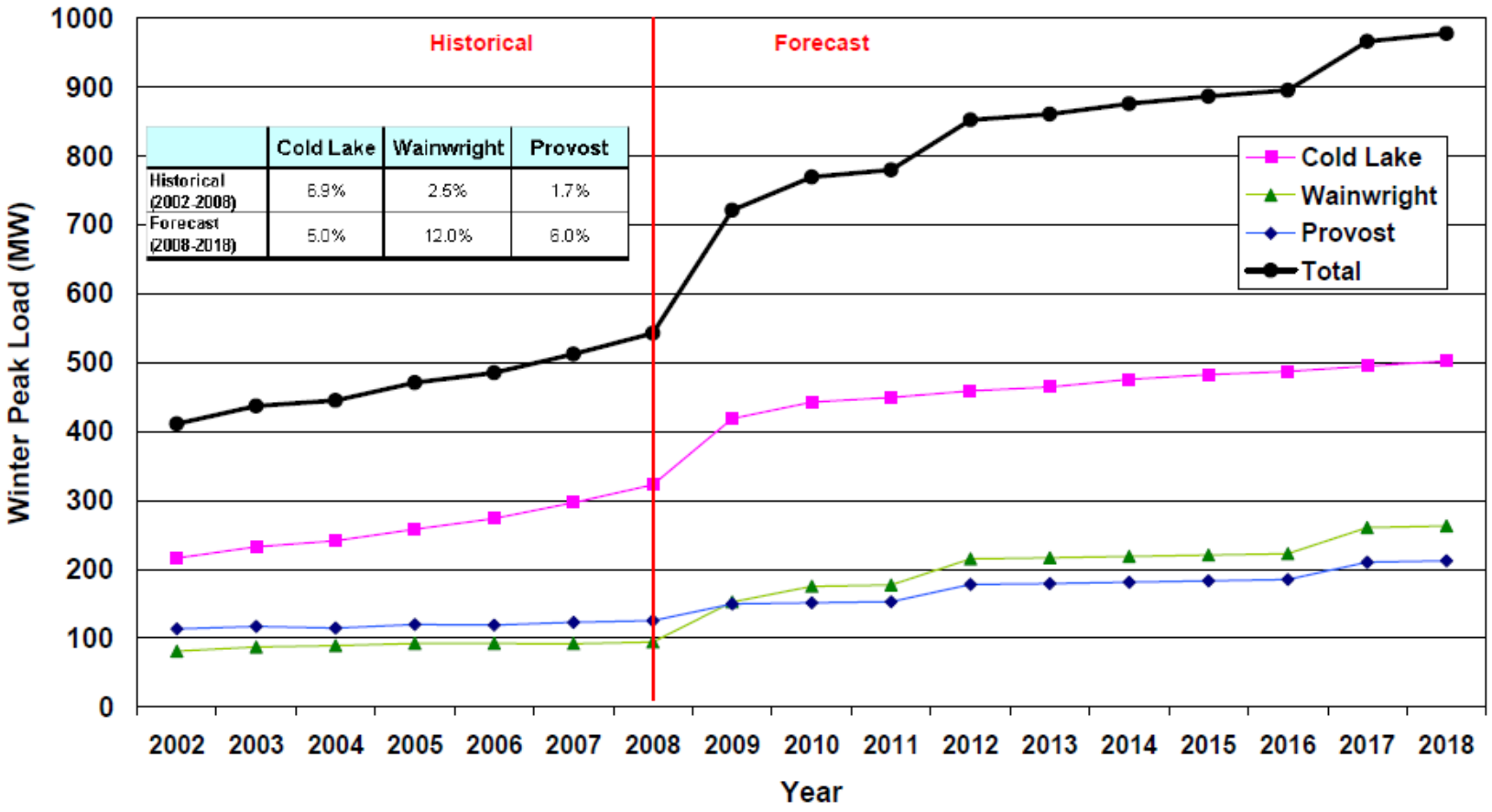


Load & Generation Scenarios

- **Study Years:**
  - **2012**
  - **2017**
- **Load Scenarios:**
  - **Winter Peak (WP)**
  - **Summer Peak (SP)**
  - **Summer Light (SL)**
- **Generation Scenario 3**

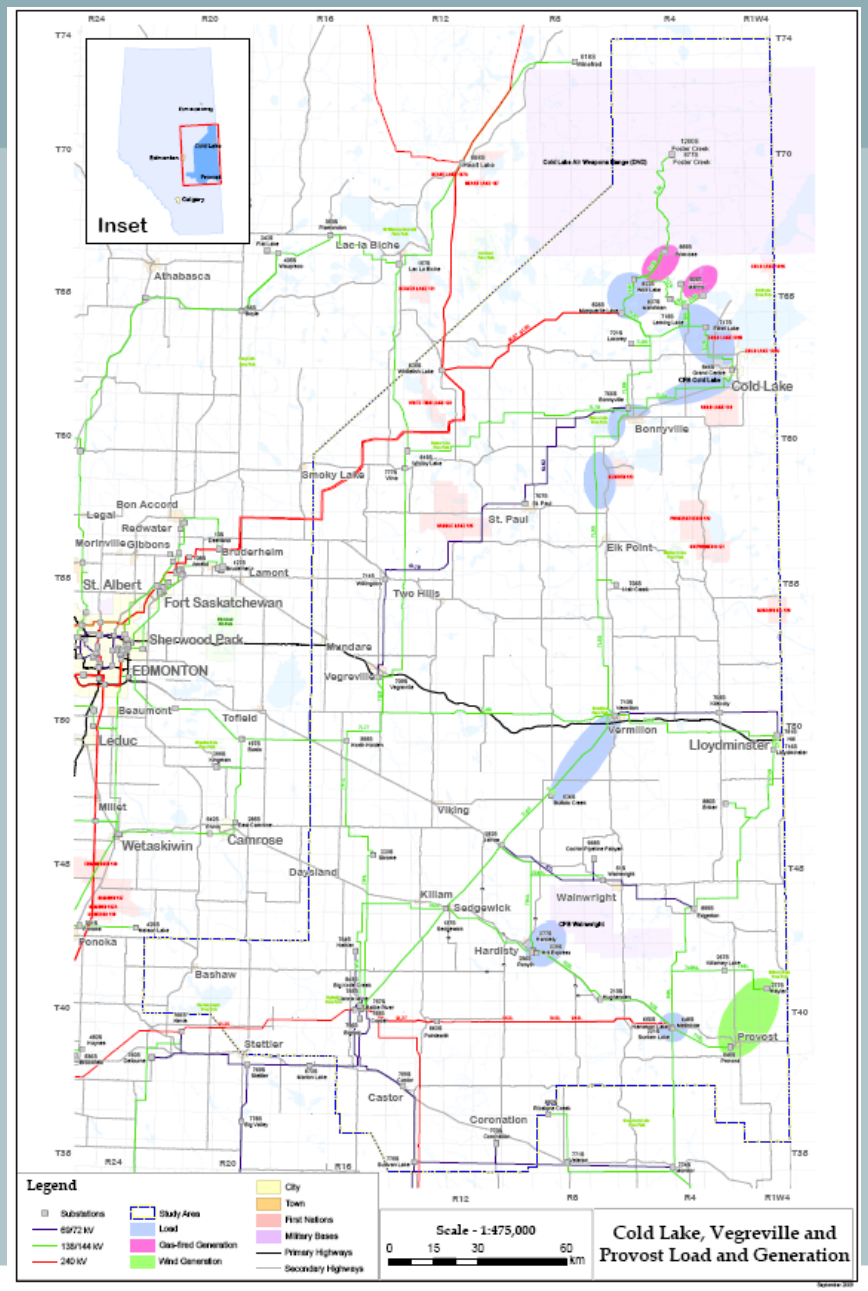
Load Forecast

Load Forecast: Cold Lake, Wainwright and Provost (Fast growing areas)



	Cold Lake	Wainwright	Provost
Historical (2002-2008)	6.9%	2.5%	1.7%
Forecast (2008-2018)	5.0%	12.0%	6.0%

Load and Generation



Generation Scenario 3 (2008-2017)

Plants	MW
Coal	1,500
Cogeneration	1,760
Combined Cycle	720
Hydro (Installed)	100
Hydro (Effective)	50
Other Small Additions	100
Simple Cycle	620
Wind (Installed)	1,600
Wind (Effective)	320
Total Effective Additions	5,070

Study Methodology

- **Develop both 144 kV & 240 kV alternatives to meet regional need (load growth and gas/wind generation of about 500 MW)**
- **Perform technical studies to evaluate the proposed alternatives**

Existing and Proposed Generation

#	Generation Plant/Project	Fuel Type	Existing Capacity (MW)	Capacity by 2012 (MW)
1	Battle River #3	Coal	148	148
2	Battle River #4	Coal	148	148
3	Battle River #5	Coal	368	378
4	Mahkeses #1	Natural Gas	90	90
5	Mahkeses #2	Natural Gas	90	90
6	Foster Creek #1	Natural Gas	80	80
7	Foster Creek #2	Natural Gas		
8	Primrose	Natural Gas	85	85
8	Confidential project*	Natural Gas		85
9	Confidential Project*	Natural Gas		170
10	Confidential projects*	wind farms		280
Total Generation (MW)			1009	1554

Evaluation of Alternatives:

Study Results

Options Considered

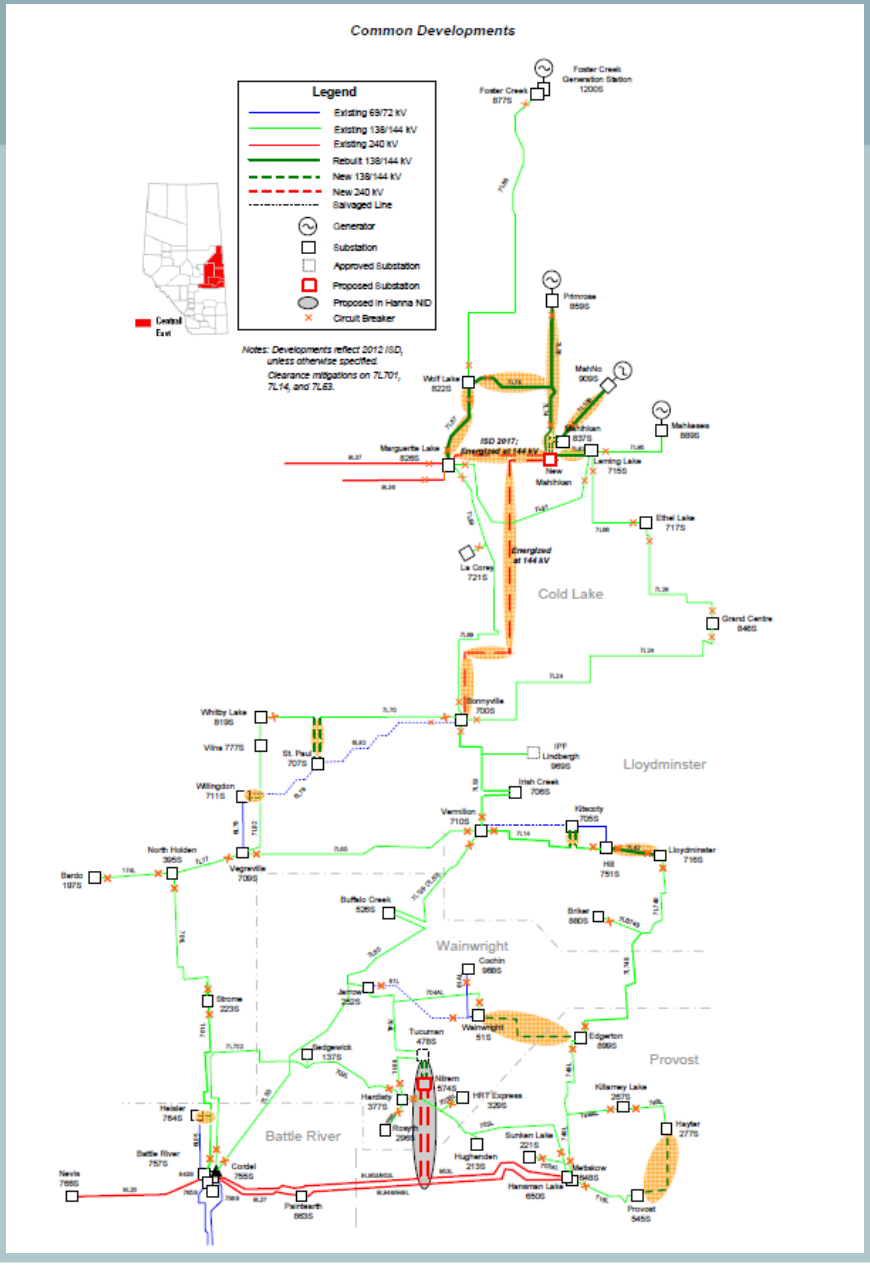
144 kV Option:	**Alternative 1**
240 kV Option:	**Alternatives 2 and 3**
Conductor size (for 240 kV):	**Twin bundle 795 MCM**

Transmission System Reinforcement

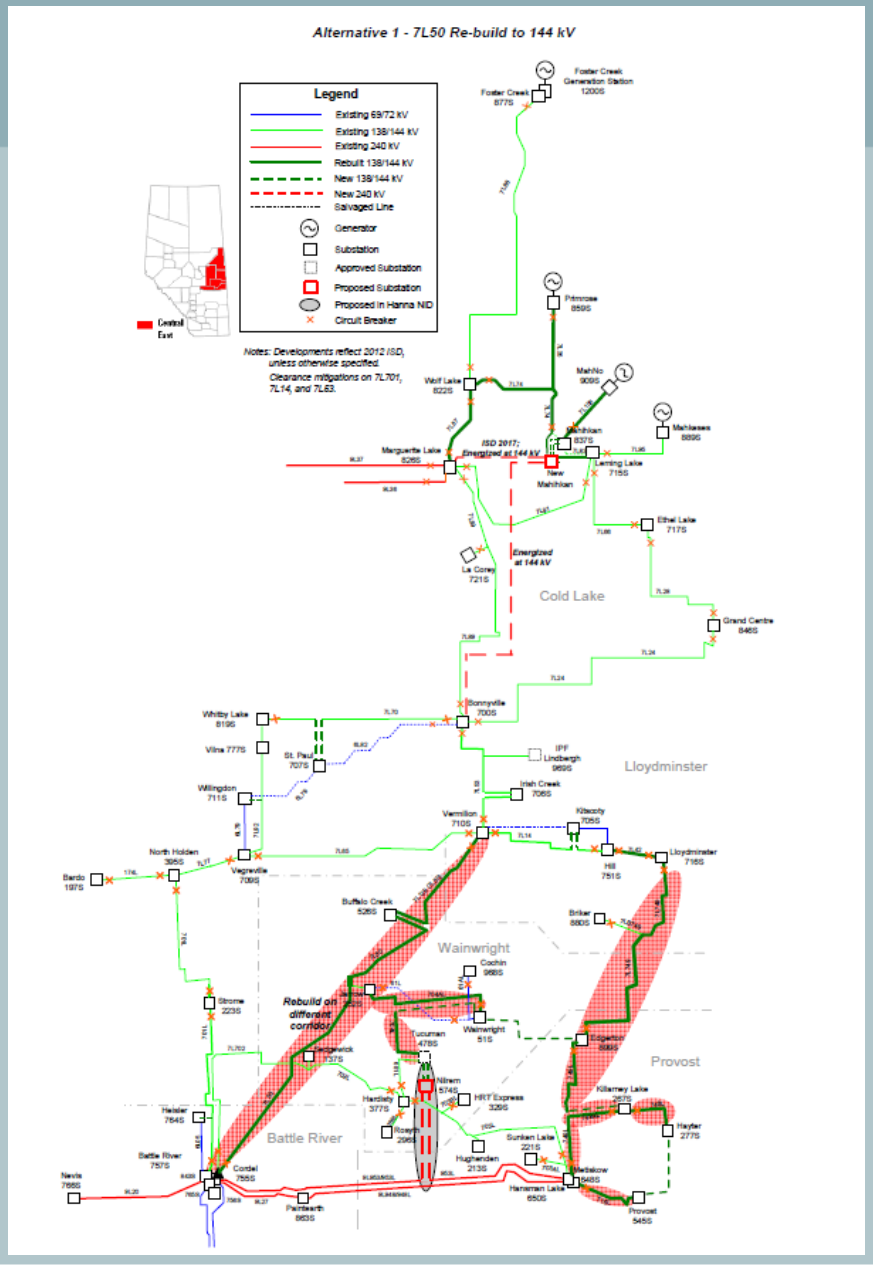
Developed alternatives for different geographical areas in the study region:

- **Wainwright Area**
- **Killarney Lake/Provost Area**
- **Cold Lake Area**
- **St. Paul Area**
- **Lloydminster Area**

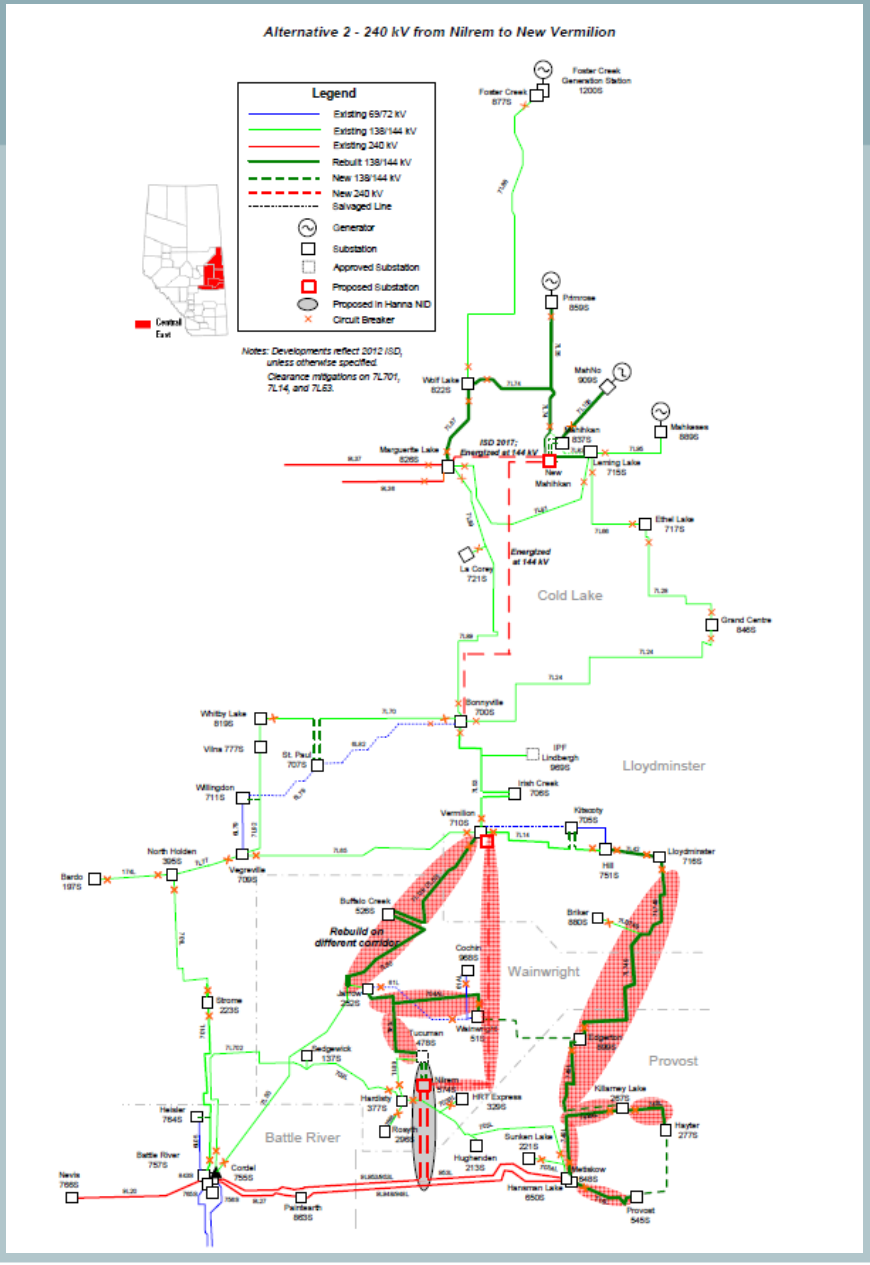
Common Developments



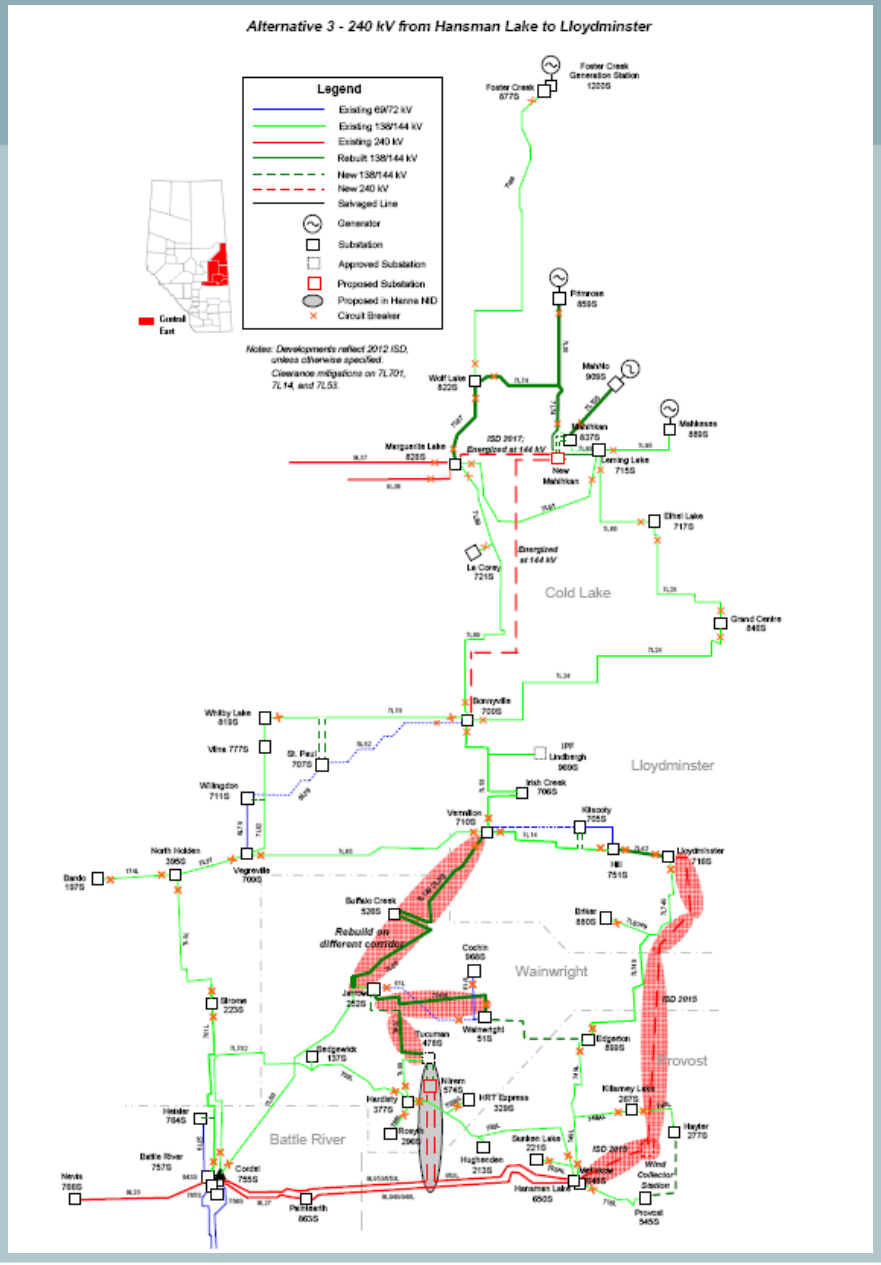
Alternative 1: Re-build 7L50 to 144 kV



Alternative 2: New Vermilion 240 kV



Alternative 3: Lloydminster 240 kV



Alternative Comparisons

Description	Alt 1	Alt 2	Alt 3
240 kV D/C (single side strung) line length (km)	0	100	140
144 kV S/C line length (km)	200	85	85
Capacity to meet load growth beyond 2017	Yes	Yes	Yes
Feasibility of integrating wind & gas generation	Yes	Yes	Yes

Project Status

Need Assessment:	**Posted on AESO's website (May 2009)**
Participant Involvement Program:	**Completed**
Land Impact Assessment:	**90% done**
Capital Cost Estimates :	**90% done**
Screening of Alternatives :	**90% done**
Selection of Preferred Alternative:	**Underway**
Evaluation of Losses:	**Underway**
Preparation of NID:	**Underway**

Project Schedule

Central East Region Transmission Development: Project Schedule

No.	Description	Year 2009												Q1 2010
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	Technical Studies (PV & VQ, Losses, Dynamic Analysis)*			—	—	—	—	—	—	—	—	—	—	
2	Participant Involvement Program					—	—	—	—	—	—			
3	Social/Land Impact Assessment			—	—	—	—	—	—	—	—	—		
4	Capital Cost Estimates (NID Class)			—	—	—	—	—	—	—	—			
5	Economic Analysis											—	—	
6	Prepare NID Document									—	—	—	—	—
7	File NID Application													Δ

* Includes Alternative Screening

Next Steps

- Approval from the AESO's Board for filing the NID and issue Directions
- Issue Directions to AltaLink and ATCO to prepare and file Facilities Application

Questions

Please provide comments/questions to

Marina Lakhani

Marina.Lakhani@aeso.ca

EXHIBIT E

September 4, 2009

Dear Stakeholder:

Re: Open Houses in support of potential transmission development in Central East Alberta (Cold Lake, Vegreville and Provost Area) September 24 to October 14, 2009

The Alberta Electric System Operator (AESO) is responsible for the safe, reliable and economic planning and operation of the Alberta Interconnected Electric System (AIES). We are currently planning to integrate proposed generation into the transmission system in the Cold Lake, Vegreville and Provost area, and to meet growing demand for electricity from oil sands development and pipelines in the area.

The AESO will be holding Open Houses in the following communities:

Thursday	September 24	Cold Lake	Cafeteria Area, Energy Centre
Monday	September 28	Bonnyville	Bonnyville Centennial Centre
Tuesday	September 29	St. Paul	Senior Centre
Wednesday	September 30	Two Hills	Brosseau Community Hall
Thursday	October 1	Vegreville	The Brass Lantern
Monday	October 5	Lloydminster	Best Western Hotel
Tuesday	October 6	Viking	Caledonia Motor Inn
Wednesday	October 7	Wainwright	Ramada Inn
Thursday	October 8	Provost	RnR Inn
Tuesday	October 13	Sedgewick	Sedgewick Community Hall
Wednesday	October 14	Castor	Castor Community Hall

Open houses will be held from **4 pm to 8 pm**.

Should you wish to discuss our planning efforts further, please direct comments and questions to:

Doug Downs
AESO – Alberta Electric System Operator
2500, 330 - 5th Ave SW, Calgary, AB T2P 0L4
1-888-866-2959
stakeholder.relations@aeso.ca

We are committed to a consultation process founded upon principles of fairness and transparency.

Sincerely,

Ramaiah Divi, P. Eng.
Manager, Central System Planning

Transmission Reinforcement in Central East Alberta (Cold Lake, Vegreville and Provost area)

For more information please contact the AESO at 1-888-866-2959, www.aeso.ca or stakeholder.relations@aeso.ca

Who is the AESO?

Alberta's transmission system, sometimes referred to as the Alberta Interconnected Electric System (AIES), is planned and operated by the Alberta Electric System Operator (AESO). The transmission system is comprised of the high-voltage lines, towers and equipment (generally 69 kV and above) that transmit electricity from generators to lower voltage systems that distribute it to cities, towns, rural areas and large industrial customers. Our job is to maintain safe, reliable and economic operation of the provincial transmission grid.

Where is the AESO's planning study region?

The AESO's planning study region runs from Cold Lake south through the Battle River, Wainwright and Vegreville areas, and east to the Provost area. The Central East region also covers Lloydminster, at the border with Saskatchewan. Larger communities in this region include Cold Lake, Bonnyville, Vermilion, Kitscoty, Lloydminster, St. Paul, Elk Point, Vegreville, Wainwright, Hardisty, Sedgewick, Strome, Jarrow, Edgerton, Castor, and Killarney Lake.

Why is transmission development required in Central East Alberta (Cold Lake, Vegreville and Provost area)?

Transmission system reinforcement is needed in the study region to meet growing demand for electricity from oilsands development and pipelines, and to interconnect proposed gas fired electricity generation as well as wind farms in the study region.

The AESO has received applications to interconnect over 500 megawatts (MW) of wind power and natural gas generation projects in central east Alberta. Further, the AESO long term forecast shows demand for electricity in the Cold Lake and Wainwright areas increasing by more than five percent per year and 12 percent per year respectively. Oilsands development and pipelines, required for transporting oilsands products for upgrading, drive this increase in demand. The existing transmission system in this region, however, is at capacity and cannot carry any additional electricity. In addition, parts of the system are subject to low voltages under certain conditions. System reinforcement, therefore, is needed to meet increasing demand for electricity and to interconnect new generation.

Where will the new lines be proposed?

The AESO identified a number of alternatives for reinforcing the transmission grid in this area. Consultation with stakeholders will help identify a preferred solution for reinforcing the system. This preferred solution will form part of our Needs Information Document (NID), which we will submit to the Alberta Utilities Commission (AUC) later this year. We will also submit individual NIDs to the AUC to interconnect wind power projects as well as gas fired generation.

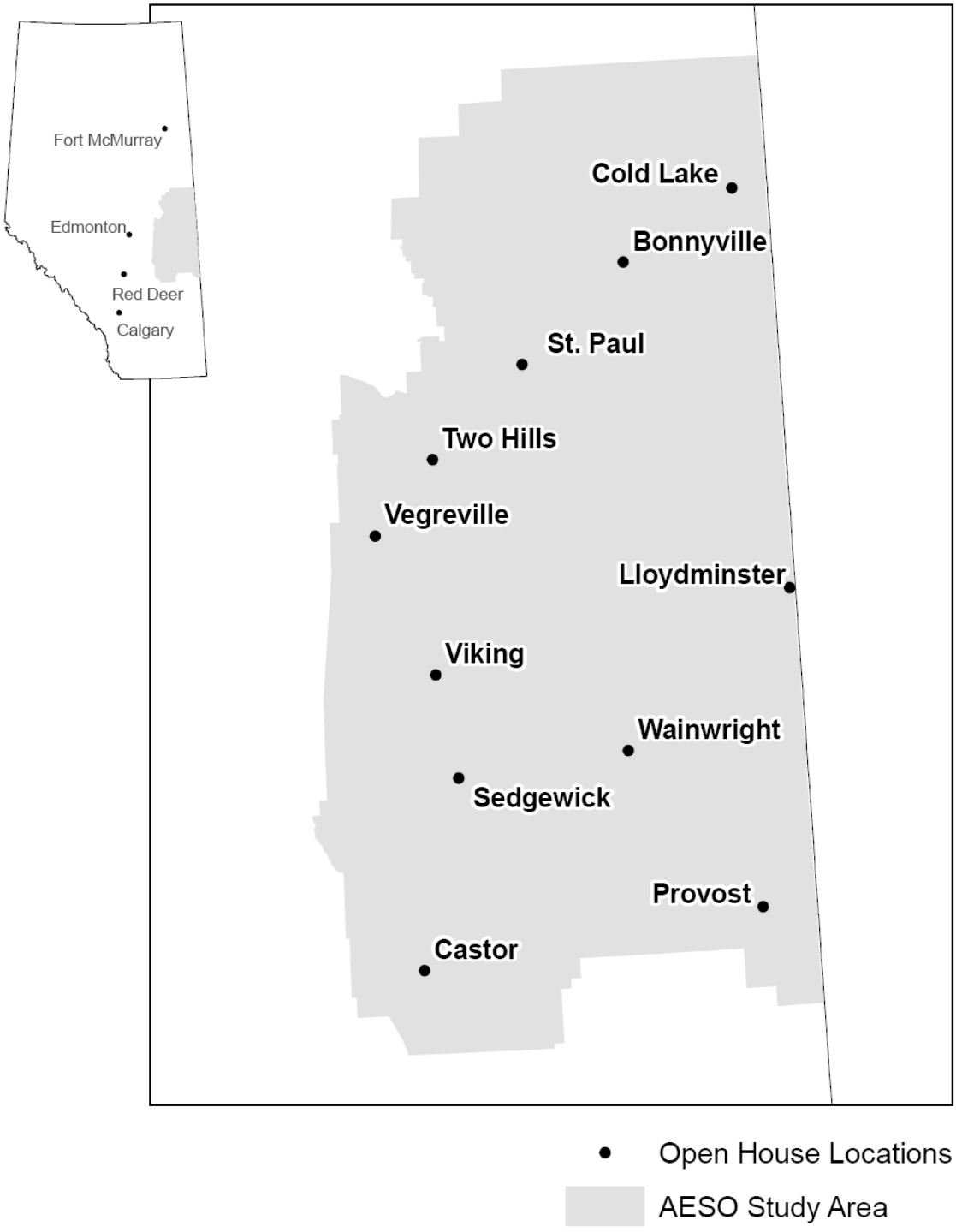
The transmission facility owners, AltaLink and ATCO Electric, service the communities, industry, and farms in the Cold Lake, Vegreville and Provost area. Should the AUC approve our NID, we will assign the larger system reinforcement and each new interconnection to either AltaLink or ATCO Electric, to build and maintain the required transmission facilities. Additional public consultation will be required as part of this process. Once, completed, siting and routing proposals will be submitted to the AUC for approval.

What's happening right now?

Since the region is vast, we have developed alternatives to address both broader and local transmission issues. So far, our planning study has produced alternatives for system reinforcements in the area to address the challenges facing the transmission system. After gathering stakeholder insights on our alternatives, our study will identify areas where transmission lines and other related facilities could be added to improve the system.

The targeted in-service date for these facilities is 2012.

The map below shows the shaded area where the AESO has identified potential areas for transmission system reinforcement.



The AESO is committed to protecting your personal privacy in accordance with Alberta's Personal Information Protection Act. Any personal information collected by the AESO with regard to this project may be used to provide you with further information about the project, may be disclosed to the Alberta Utilities Commission (and as a result, may become public), and may also be disclosed to the eligible Transmission Facility Owner. If you have any questions about how the AESO will use and disclose your personal information collected with regard to this project, please contact us at 888-866-2959 or at stakeholder.relations@aeso.ca.

April 9, 2010

Dear Stakeholder:

Update to stakeholders re: potential transmission development in the Central East (Cold Lake, Vegreville, Provost) region

In May of 2009, the AESO began a public consultation program for transmission development in the Central East (Cold Lake, Vegreville, Provost) region, to listen to people's viewpoints and to incorporate their feedback into our planning process. Close to 100 people attended 11 Open Houses in the study region and we have also met separately with 10 County Councils and staff to get their viewpoints. This document outlines what we have concluded and the next steps.

The reinforcement of the transmission system in the Central East (Cold Lake, Vegreville, Provost) region is needed to mitigate existing reliability issues for consumers in central and east Alberta, meet growing demand for electricity from oil sands development and pipelines, and to interconnect proposed gas fired electricity generation as well as wind farms in the study region.

What we heard through consultation

We appreciate all the viewpoints and perspectives that have been expressed. During our public consultation, we heard that stakeholders were generally satisfied with the opportunity to learn more about the need for transmission, and also wished to be consulted by the transmission facility owners (TFOs) when potential Project routes were further developed. The AESO's review of stakeholder feedback reveals the need for transmission development in central eastern Alberta is generally accepted.

Next Steps

The AESO will file a Needs Identification Document (NID) with the Alberta Utilities Commission (AUC) in early May 2010, regarding the need for this project.

Detailed siting work will be done by the transmission facility owners (the TFOs - ATCO Electric and AltaLink Management Limited) in and near the shaded areas shown on the map on the next page. Additional public consultation will be conducted by the TFOs as part of this process. Once consultation is completed, siting and routing proposals will be submitted to the AUC for approval as part of the Facilities Application.

The AESO proposes to develop transmission reinforcement in the Central East region through a two-stage approach. The proposed developments in stage I and stage II are outlined below:

Stage I: Target In-service Date (ISD): Fourth Quarter (Q4) 2012

1. Bonnyville/St. Paul Areas:
   - Re-build the existing 72 kV Willingdon 711S substation to 144 kV level by connecting it to the existing 144 kV 7L92 line;
   - Convert the existing 72 kV St. Paul 707S substation to 144 kV level by connecting it to the existing 144 kV 7L70 line;
   - Demobilize (meaning this equipment will no longer be used for transmission purposes at this site) all 72 kV equipment from Bonnyville 700S substation; and
   - Restore 144 kV 7L53 line to its full thermal conductor rating.

2. Cold Lake Planning Area:
   - Build a new 144 kV switching station (Bourque 970S) near the existing Mahihkan 837S substation;
   - Build a new 144 kV double circuit line to connect Bourque 970S to Mahihkan 837S substation;

- Build a new 240 kV double circuit, one side strung line from Bourque 970S to Bonnyville 700S. This line will be initially operated at 144 kV level; and
- Re-build 144 kV 7L74, 7L83, and 7L87 lines with larger conductors.

3. Provost Planning Area:
   - Re-build 144 kV 7L749 from Edgerton 899S to Lloydminster 716S using a larger conductor;
   - Build a new 138 kV single circuit line from Provost 545S to Hayter 277S; and
   - Re-build 138 kV 748L, 715L, 749L, and 749AL lines using larger conductors to reinforce the existing system in the Provost area for potential wind integration.

4. Wainwright Planning Area:
   - Build a new 138 kV single circuit line on the existing 69 kV right of way from Wainwright 51S to Edgerton 899S; and
   - Re-build 138 kV 704L and 704AL lines between Wainwright 51S, Tucuman 478S, and Jarrow 252S substations. Wainwright 51S will be connected through double circuit lines.

5. Lloydminster & Battle River/Alliance Planning Areas:
   - Restore 144 kV 7L14 and 7L701 lines to their respective full thermal conductor ratings;
   - Install a new 144 kV 25 MVAr capacitor bank at Vermilion 710S;
   - Upgrade the existing 72 kV Heisler 764S and Kitscoty 705S substations to 144 kV level by connecting them to nearby 7L701 and 7L14 lines, respectively; and
   - Salvage 72 kV 6L06 line from Kitscoty 705S to Vermilion 710S and demobilize (meaning this equipment will no longer be used for transmission purposes at this site) 72 kV equipment from Vermilion 710S.

Stage II: Target ISD: First Quarter (Q1) 2017

- Re-build the aging 138/144 kV 7L50 line from Battle River 757S to Buffalo Creek 526S using a larger conductor; and
- Build a new 240 kV double circuit, one side strung line from Bourque 970S to Marguerite Lake 826S. The line will be initially operated at 144 kV.

If you have any questions or suggestions regarding the need for transmission system reinforcement in the Cold Lake area or the AESO's application regarding this need, please contact:

Doug Downs
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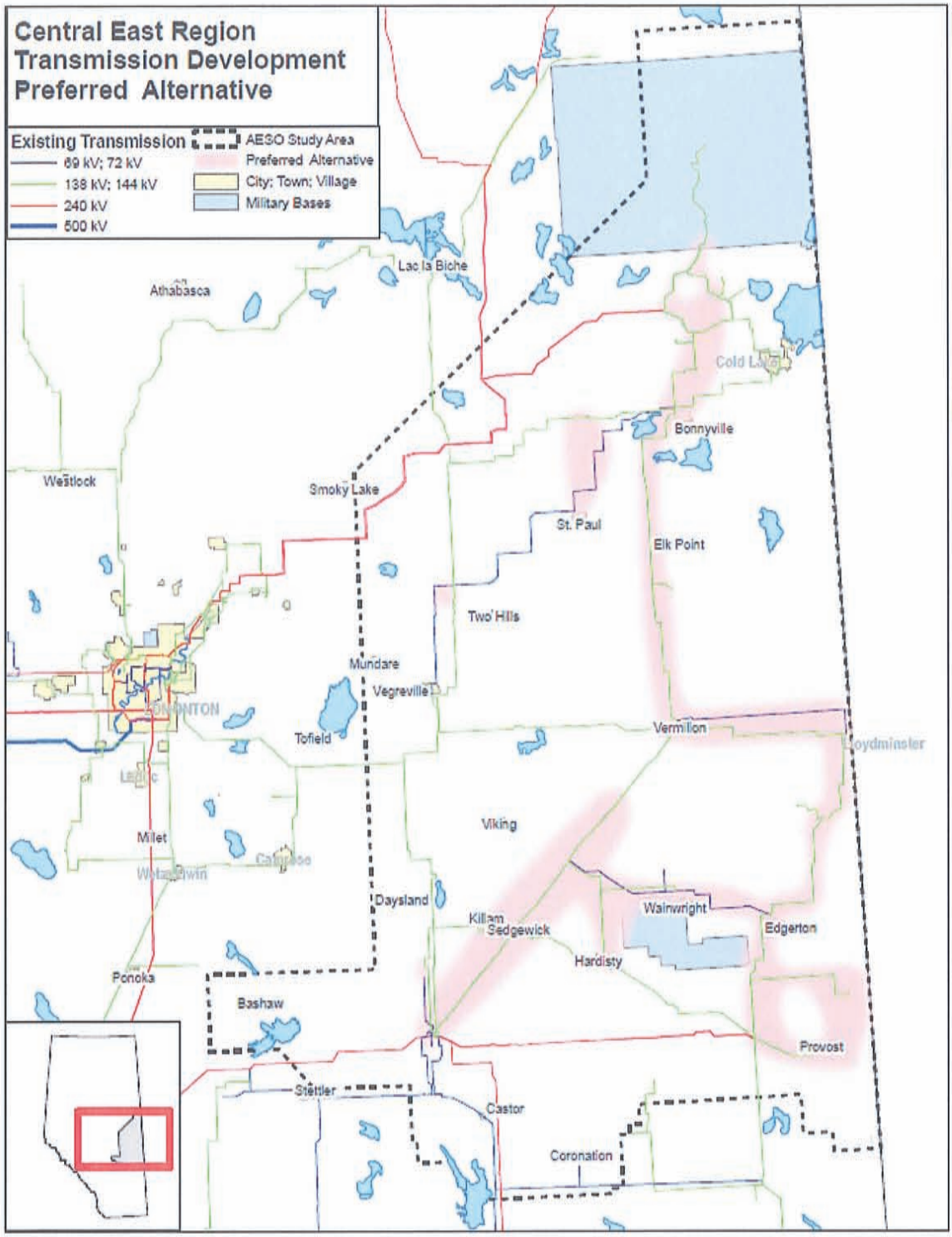
Calgary, Alberta T2P 0L4

Sincerely,

Dean Patterson, C.E.T, PMP
Program Manager, Central Area



Note: Specific routing for this project has not been determined. The transmission facility owners assigned to this project will develop potential routes during the Facilities Application stage.

The AESO is committed to protecting your personal privacy in accordance with Alberta's Personal Information Protection Act. Any personal information collected by the AESO with regard to this project may be used to provide you with further information about the project, may be disclosed to the Alberta Utilities Commission (and as a result, may become public), and may also be disclosed to the eligible Transmission Facility Owner(s). If you have any questions about how the AESO will use and disclose your personal information collected with regard to this project, please contact us at 1-888-866-2959 or at stakeholder.relations@aeso.ca .