

## AESO Transmission System Projects

Date: April 1, 2006

Please refer to the end of this report for terminology definitions

Project Number	Project Name	TFO	Project Description & Need	Planned ISD	NID Estimate (\$'s x 1000)	NID Filed	NID Approved	PPS Estimate (\$'s x 1000)	P&L Application Filed	P&L Application Approved	Forecast Cost (\$'s x 1000)	Actual or Forecast ISD	Project Status
<b>Category A: Projects Greater Than \$10 Million</b>													
246	Cordell-Metiskow / Hansman Lake	ATCO&AML	Project is required to maintain reliability of supply to growing load in the Metiskow/Provost area. Facilities involve a new 105km- 240kV line from Cordell to Metiskow, 240kv breaker additions at Cordell and the new 240/138kV Hansman Lake substation.	2004-Aug	\$35,000 (2003 \$)	07-Aug-03	24-Feb-04	\$36,260	03-Aug-04	18-May-05	\$46,000	31-Mar-06	Under Construction
301	Michichi Creek-Three Hills	ATCO	Project required to maintain reliability of supply to growing load in the Drumheller/Three Hills area. Facilities include a 70km-138kV transmission line from Michichi Creek to Three Hills, substation modifications at Michichi Creek and Three Hills and salvage of some existing 72kV circuits.	2004-Jun	\$9,530 (2003\$)	07-Aug-03	05-Mar-04	\$14,100	24-Mar-05	29-Jun-05	\$13,350	16-Feb-06	Complete: Awaiting final costs.
388	500kV North/South Transmission Line	AML & EPCOR	Project required to relieve congestion and maintain reliability. Part 1-South-KEG 500 kV Conversion	2007-Oct	\$39,872 (2004 \$)	10-May-04	22-Apr-05	\$71,300	Pending	Pending	\$71,300	31-Oct-07	Direct assigned to AML and EPCOR <b>Estimate Notes:</b> NID estimate does not include E&S and transformer amendment <b>Project Details:</b> AESO website @ <a href="http://www.aeso.ca/5998.html">http://www.aeso.ca/5998.html</a>
388	500kV North/South Transmission Line	AML & EPCOR	Project required to relieve congestion and maintain reliability. Part 2-Genesee to Langdon 500kV Line	2009-Sep	\$299,124 (2004 \$)	10-May-04	22-Apr-05	Pending	Pending	Pending	\$373,000	1-Sep-09	Work initiated with AML and EPCOR. Line routing and landowner consultation underway. <b>Estimate Notes:</b> NID estimate does not include E&S. Forecast cost is NID estimate adjusted to 2009 \$'s and includes E&S <b>Project Details:</b> AESO website @ <a href="http://www.aeso.ca/5998.html">http://www.aeso.ca/5998.html</a>

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416	SW 240kV Transmission	AML	Project required to provide access for growing wind generation in the Pincher Creek area. Goose Lake to Peigan and Peigan to N. Lethbridge 240 kV lines and upgrades of existing 138 kV stations.	2006-Apr	\$68,100 (2004 \$)	31-Mar-04	17-May-05	\$91,035	21-Dec-05	Pending	\$94,587	28-Feb-07	<u>Facility Applications in Progress:</u> Facility Application Dates Pincher - Peigan: 21-Dec-05 Drywood: 12-Jan-2006 Magrath: 12-Jan-2006 Thermal Upgrade: 16-Jan-06 Stirling/820L: 08-Feb-2006 Peigan-Lethbridge: 1-Mar-06 <u>Applications to be Filed</u> Reconductor 170L 138 kV Line-170L/725L <u>Approved Applications:</u> Magrath: 6-Feb-2006 Thermal Upgrade: 15-Feb-06 <u>Estimate Notes:</u> NID estimate does not include E&S and AFUDC
416	SW 240kV Transmission - String 2nd - 240 kV line from Peigan 59S to N. Lethbridge 370S	AML	Project required to provide access for growing wind generation in the Pincher Creek area. Goose Lake to Peigan and Peigan to N. Lethbridge 240 kV lines and upgrades of existing 138 kV stations.	2007-May	\$8,900 (2004\$)	17-Feb-06	Pending	Pending	Pending	Pending	\$8,900	01-May-07	Filed amendment to EUB for Approval of 2nd 240 kV circuit <u>Estimate Notes:</u> NID estimate does not include E&S and AFUDC
466	Downtown Edmonton 240 kV Supply	EPCOR	Project is required to maintain reliability to downtown Edmonton. Facilities include a 240kV cable from Castle Downs to Victoria Substation.	2008-Q1	\$34,900 (2005 \$)	08-Apr-05	14-Jul-05	Pending	Pending	Pending	\$34,900	1-Jun-08	Reviewing EPCOR PPS
485	Rebuild 517L and substation modifications near Wainwright/Edgerton	AML	Project required to reduce overloading in the area	2007-Q2	\$14,000 (2005\$)	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Awaiting Need Filing. AltaLink preparing estimates and scope documents
<b>Category B: Projects \$5 Million to \$10 Million</b>													
434	Calgary Area Capacitor Banks	AML	New capacitor banks in the Calgary area to meet reliability requirements. Located at Sarcee, East Calgary and Janet substations.	2006-Feb	\$8,900 (2004 \$)	25-Nov-04	08-Jun-05	\$8,588	15-Sep-05	20-Oct-05	\$9,122	13-Apr-06	260 MVAR at Janet in service on Feb 28. 68MVAR at East Calgary in service on Mar 9. 200MVAR at Sarcee is under construction will be in service on Apr 13.
<b>Category C: Projects \$1 Million to \$5 Million</b>													
447	788L Upgrade	AML	Upgrade 138kV line between Lac LaBiche and Heart Lake to meet ratings requirements.	2005-Mar	\$1,352 (2004 \$)	01-Dec-04	15-Feb-05	\$1,352	18-Feb-05	02-Mar-05	\$1,870	31-Mar-06	Facilities under construction.
<b>Category D: Projects Less than \$1 Million</b>													

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255	AESO - PMU Installation at Sundance 310P	AML	WECC reliability requirement. Installation of Phasor Measurement Unit to meet power system monitoring needs.	2004-Dec	\$139 (2004 \$)	16-Apr-04	03-Jun-04	\$139	-	-	\$320	30-Jun-05	Complete. Awaiting Final Costs.
256	AESO - PMU Installation at Langdon 102S	AML	WECC reliability requirement. Installation of Phasor Measurement Unit to meet power system monitoring needs.	2004-Dec	\$168 (2004 \$)	16-Apr-04	03-Jun-04	\$168	-	-	\$218	30-Jun-05	Complete. Awaiting Final Costs.
257	AESO - PMU Installation at Amoco Empress 163S	AML	WECC reliability requirement. Installation of Phasor Measurement Unit to meet power system monitoring needs.	2004-Dec	\$129 (2004 \$)	16-Apr-04	03-Jun-04	\$129	-	-	\$181	30-Jun-05	Complete. Awaiting Final Costs.
379	Lethbridge - Close Eastern Loop	AML	Lethbridge - close eastern 138kV Loop for reliability.	2005-Dec	\$245 (2005 \$)	24-Feb-05	28-Apr-05	\$319	22-Aug-05	18-Oct-05	\$344	1-Apr-06	Under Construction
431	Janet Capacitor Bank Breaker	AML	New 138kV Capacitor Bank Breaker to maintain reliability	2004-Dec	\$518 (2004 \$)	17-May-04	29-Jul-04	\$334	-	18-Feb-05	\$365	13-Mar-05	Complete. Awaiting Final Costs.

**Definitions:**

ISD: In-Service-Date

PPS: Proposal to Provide Service

NID: Needs Identification Document

P&L: Permit and License

TFO: Transmission Facility Operator

AML: AltaLink Management Ltd.

EPCOR: EPCOR Transmission

WECC: Western Electric Coordinating Council

(-): Information unavailable at time of publication