

# AESO Transmission System Projects - Quarterly Report



- see notes at the end of this document for report terminology and definitions

Project #	Project Name	Project Description	Need Description	NID Filed	NID Approved	P and L Filed	P and L Approved	Forecast or Actual ISD	TFO	Year NID Valid	NID Estimate	PPS Estimate	TFO Forecast Cost	Project Status
388	500KV KEG Conversion	Addition of 500kV transformers at Keephills and Ellerslie substations; convert Genesee substation and transmission lines 1203L and 1209L from 240kV to 500kV operation.	North-South 500 kV Transmission Line (EUB Approval # U2005-031)	2004-05-10	2005-04-22	2006-04-13	2006-06-28	2008-06-15	AML	2004	36,152,000	66,331,373	74,697,644	Awaiting TFO Final Costs
									EPCOR	2004	2,562,000	3,065,768	3,065,766	
416	SW 240 kV Transmission	About 30 km of D/C 240 kV line from Goose Lake to Peigan and 59 km of D/C 240 kV transmission line from Peigan to N. Lethbridge. New Goose Lake substation and 240 kV breaker additions at Peigan and N. Lethbridge. Replacement of existing 138/69 kV transformers with 30/40/50 MVA LTC transformers at Drywood 415S, Pincher Creek 396S and Magrath 225S. Salvage of existing Tempest 403S substation and extension of 820L (138 kV line) to Stirling 67S. At Stirling 67S add 138 kV facilities and 138/69 kV - 30/40/50 MVA LTC transformer.	SW Area Upgrade (EUB Approval # U2005-184, U2006-094)	2004-03-31	2005-05-17	2005-12-21		2010-06-30	AML	2004	77,000,000	98,881,662	153,618,030	Awaiting AUC Decision On Facilities Application
									Leth.	2005		26,899	35,906	
									TransAlta	2004		249,000	249,000	

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466	Downtown Edmonton 240 kV Supply	240 kV cable from Castle Downs to new McDougall substation, alterations at Victoria substation and interconnection between Victoria and McDougall substations.	Downtown Edmonton 240 kV Supply (EUB Approval # U2005-161)	2005-04-08	2005-07-14	2006-06-15	2007-02-05	2008-10-29	EPCOR	2005	34,900,000	54,304,760	83,576,258	Awaiting TFO Final Costs
536	SE - Vauxhall - Medicine Hat development	Modifications required in southeast Alberta	System Reliability	2007-09-27	2008-07-11				AML	2006	37,983,896	23,048,000	27,657,000	Project On Hold
537	SE - Lethbridge Area Transmission Development	SE Lethbridge Area Transmission Development	System Reliability	2007-09-27	2008-07-11			2010-03-30	AML Leth.	2006 2006	9,738,004 4,615,812	7,953,000 5,000,351	7,953,000 5,000,351	TFO Preparing Facilities Application
538	SE - Brooks Area Transmission Development	SE - Brooks Area Transmission Development	System Reliability	2007-09-27	2008-07-11			2010-03-30	AML ATCO	2007	21,264,975 120,000	23,423,300 1,477,000	23,423,300 1,477,000	TFO Preparing Facilities Application
539	SE Empress area development	Upgrades to the transmission system in the SE Empress Area.	System Reliability	2007-09-27	2008-07-11			2010-03-30	AML ATCO	2006 2006	30,287,886 4,859,567	43,543,000 4,653,000	43,543,000 4,653,000	TFO Preparing Facilities Application
540	NE - Area Development	NE - Area Development	System Reliability					2010-12-31						Planning Stage
541	Hangington - MacMillan 144 kV System Upgrade	Addition of 1-144 kV breaker, 1-10 MVar cap bank, and 1-25 kV breaker at Hangington 820S motorized disconnects and SCADA at Altar 875S and Crow 860S substations.	Hangington 820S - MacMillan 885S System Improvements (EUB NIF # 1458437)	2006-04-26	2006-05-24	2007-02-01	2007-02-14	2007-07-31	ATCO	2005	1,656,324	2,532,000	2,532,000	Awaiting TFO Final Costs
545	PMU Keephills 320P	Upgrade existing DSM with PMU	System Reliability	2006-10-20	2006-11-16	2007-06-04	2007-07-16	2009-03-31	AML	2006	162,400	226,000	226,000	Under Construction
547	PMU Benalto 17S	Install a new PMU at Benalto. See Project 545 as the NID and PPS have been combined.	System Reliability	2006-10-20	2006-11-16	2007-05-17	2007-05-24	2007-06-15	AML	2006	178,080	230,000	234,000	Commissioning Phase

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570	Lubicon 780S Install 2-30 MVAR cap banks and all associated equipment and material	Lubicon 780S - Install 2 - 30 MVAR cap banks, 3-144 kV breakers and all associated equipment and material. Includes CT changes under project P569	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17	2007-08-10	2007-10-05	2009-03-31	ATCO	2005	3,300,000	4,083,000	4,083,000	Under Construction
575	Little Smoky 813S-install 3-30 Mvar cap banks and all associated equipment and material	Little Smoky 813S Install 3-30 MVAR cap banks, 5-144 kV breakers and all associated equipment and material.	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17	2008-05-28	2008-09-09	2008-12-16	ATCO	2005	6,050,000	5,463,000	5,463,000	Awaiting TFO Final Costs
576	Louise Creek 809S - install 2nd 240/144 kV transformer	Louise Creek 809S Install 1 - 240/144 kV 200 Mva transformer and all associated equipment and material	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17	2007-07-27	2007-08-29	2008-04-24	ATCO	2005	4,000,000	2,699,000	2,699,000	Awaiting TFO Final Costs
577	Cranberry Lake 827S install +/- 30 MVAR SVC and all associated equipment and material	Cranberry Lake 827S Install +/- 30 MVAR SVC and all associated equipment and material P&L received Apr 30/08	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17	2008-02-28	2008-04-30	2009-01-31	ATCO	2005	10,000,000	11,922,000	11,922,000	Under Construction
591	North Calgary 138kV Upgrades	Calgary North 138kV transmission reinforcement.	System Reliability					2011-12-31	ENMAX	2006	8,200,000		8,200,000	Planning Stage
596	Gregg River 476S Decommissioning	Salvage Gregg River 476S and remove a section of transmission line	Decommissioning or Salvage	2007-02-06	2007-03-02	2007-06-11	2007-07-11	2008-07-30	AML	2006	355,925	484,800	561,988	Awaiting TFO Final Costs
598	240 kV line 9L15 - Brintnell 876S to Wesley Creek 834S	Single circuit 240 kV line from Wesley Creek 834S to Brintnell 876S. Install 2-300 MVA 240/144 kV transformers at Wesley Creek 834S, modifications at Brintnell 876S	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17	2007-06-19	2007-11-23	2010-04-01	ATCO	2005	103,000,000	208,329,000	208,329,000	Under Construction

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599	134 km Double circuit 144 kV line 7L131/7L106-Wesley Creek 834S to New Meikle 905S station	Construct 134 km d/c 144 kV line 7L131/7L106-Wesley Creek 834S to a new Meikel 905S. Modifications at Wesley Creek 834S, construct new Meikle 905S station and modifications at Hotchkiss 788S	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17	2008-07-29	2008-12-19	2010-04-01	ATCO	2005	64,000,000	193,189,000	193,189,000	Under Construction
600	105 km 144 kV line 7L133-Sulphur Point 828S to High Level 786S	Build 105km of single circuit 144 kV line 7L133 -Sulphur Point 828S to High Level 786S Modifications at Sulphur Point 828S and High Level 786S.	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17			2011-04-01	ATCO	2005	21,402,000	77,558,000	77,558,000	TFO Preparing Facilities Application
601	High Level 786S-Install +/- 30 MVAR SVC	High Level 786S-install +/- 30 MVAR SVC and all associated equipment and material	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17			2010-05-01	ATCO	2005	11,890,000	12,298,000	12,298,000	Preparing Direction
602	112km single circuit 144 kV line 7L113 - Ring Creek 853S to New Arcenceil 930S station	Construct 112 km single circuit 144 kV line 7L113 from Ring Creek 853S to new Arcenceil 930S. Modifications at Ring Creek and Rainbow Lake 791S	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17			2011-04-01	ATCO	2005	28,536,000	115,518,000	115,581,000	Project On Hold
603	Arcenceil 930S Station - Install -30 +50 MVAR Synch condenser and all associated equipment	Arcenceil 930S - install -30+50 MVAR synch condenser and all associated equipment and material	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17			2011-09-01	ATCO	2005	14,268,000		14,268,000	Project On Hold
604	Arcenciel 930S - install 30 MVAR cap bank and all associated equipment and material	Arcenciel 930S - install 30 MVAR cap bank and all associated equipment and material. Project will be included in P602 - new Arcenciel substation	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17			2011-04-01	ATCO	2005	1,783,000		1,783,000	Project On Hold

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605	Arcenceil 930S- install +/- 30 MVAR SVC and all associated equipment and material	Arcenceil 930S - install +/-30 MVAR SVC and all associated equipment and material. New Arcenceil substation	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17			2011-09-01	ATCO	2005	16,051,000		16,051,000	Project On Hold
606	Little Smoky 813S - install +/- 100 MVAR SVC and all associated equipment and material	Little Smoky 813S - Install +/- 100 MVAR SVC and all associated equipment and material	Northwest Alberta Area Upgrade (EUB Approval # U2006-205)	2006-03-06	2006-08-17			2009-12-01	ATCO	2005	17,240,000	21,554,000	21,554,000	TFO Preparing Facilities Application
625	East Calgary POW Switch	POW switch to be installed on C1 (C3) and pre-insertion resistor to C2 (C4)	System Reliability	2007-06-27	2007-07-27			2008-06-20	AML	2007	434,500	434,500	434,500	Awaiting TFO Final Costs
626	ENMAX South 69kV Conversion	Convert 69 kV transmission in south Calgary to 138 kV	System Reliability					2010-12-15	AML			844,100	844,100	TFO/AESO Preparing Combined Filing
									ENMAX		21,942,094	10,475,758	22,242,094	
629	Heartland Bulk Transmission Development	Edmonton area reinforcement	System Reliability					2011-11-01	AML					TFO/AESO Preparing Combined Filing
									EPCOR					
631	ATCO Electric - St. Paul 144 kV Upgrade	Convert St. Paul 707S from 72kV to 144kV	System Reliability					2999-12-01	ATCO					Planning Stage
640	Ellerslie-Clover Bar 240kV	240kV Upgrades in the Edmonton area	System Reliability	2008-04-08	2008-07-16			2009-09-30	AML	2007	17,155,417		17,155,417	TFO Preparing Facilities Application
									EPCOR	2007	1,899,463		1,899,463	
661	Rainbow Area UVLS	Implementation of settings at 786S, 832S, 828S and 791S for proposed under voltage load shedding scheme.	System Reliability	2007-01-22	2007-05-25			2009-02-28	ATCO	2007	66,900	66,700	66,700	Under Construction
664	ENMAX CBD - Central Business District 138kV Cable Upgrades	Upgrade the existing underground 138kV cables in downtown Calgary between ENMAXXSS-1 and SS-5	System Reliability					2011-06-30	ENMAX	2009	20,347,100		20,347,100	Awaiting TFO PPS Estimate

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665	170L Dynamic Thermal Line Rating	Install dynamic thermal line rating equipment on 170L between 396S Pincher Creek and 59S Peigan	System Reliability	2007-06-08	2007-07-05	2008-02-19	2008-02-21	2008-07-28	AML TransAlta	2007	444,631	362,500 287,500	467,467 287,500	Awaiting TFO Final Costs
670	Conversion of Gainford 165S to 138 kV.	Address system reliability concerns on 124L and Gainford 165S sub	System Reliability	2007-12-18	2008-10-21	2008-08-19	2008-10-21	2009-01-17	AML	2008	2,844,601	2,803,550	2,803,550	Under Construction
671	Yellowhead and Area Transmission Development	Address system reliability concerns in the Drayton Valley, Hinton and Alberta Beach areas. Includes old project 632	System Reliability					2013-06-15	AML	2008	85,000,000		85,000,000	Preparing Need Filing
673	ATCO - Fort McMurray 144 kV Reinforcement	Addition of a new 240/144 kV source near Fort McMurray Cache Creek 912S 144 kV 7L135 line Cache Creek to Hangingstone 820S	System Reliability					2010-12-31	ATCO					Preparing Need Filing
676	SCC Communication Upgrades	Installation of a reliable dedicated voice communications facilities from the AESO's SSC to the TFO's control centres.	System Reliability					2009-10-29	AML					Planning Stage
704	Southern - Alberta Telecom Reliability Enhancement Project	Construction of an alternate tele communication backup link for Southern Alberta	System Reliability	2007-12-05	2008-02-04			2008-12-30	AML	2008	188,800	174,644	174,644	Awaiting TFO Final Costs
705	Hangingstone 820S 25kV Capacitor Bank	Install new 25kV 2x5MVar (10MVar split bank) Capacitor Bank to support system voltage	System Reliability	2007-07-12	2007-08-08	2007-01-14	2008-03-26	2008-12-19	ATCO		1,607,996	1,371,000	1,371,000	Awaiting TFO Final Costs
713	Edmonton-Calgary 500kV Line Delay Mitigation Measures	Edmonton-Calgary 500kV Line Delay Mitigation Measures	System Reliability					2999-12-31	AML					Planning Stage

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732	728L Upgrade	Increase thermal capacity of 728L	System Reliability					2009-12-31						Project On Hold
736	Calgary 240kV System Upgrade	240kV Development SE Calgary Area	System Reliability					2012-12-31	AML ENMAX					Awaiting TFO NID Estimate
737	Edmonton to Calgary Transmission Reinforcement	TBD	System Reliability					2013-06-01	AML					Planning Stage
783	Wainwright Area System Upgrades	In conjunction with the proposed Fortis capacity increases at Wainwright 51S and Edgerton 899S, salvage 69kV equipment and upgrade transmission facilities within the immediate area.	System Reliability					2009-12-31	AML					Planning Stage
784	708L Thermal Capacity Upgrade	Increase the operational thermal capacity of 708L line by the augmentation of the 266.8 ACSR segments to 477 ACSR.	System Reliability					2009-12-31	AML					Planning Stage
785	807L Thermal Capacity Increase	Increase the operational thermal capacity of the 807L line.	System Reliability					2009-12-31	AML					Planning Stage
786	Edmonton Region 240kV Line Upgrades	Upgrade 240kV lines in Lake Wabamun area, Edmonton area, install one phase shifter in Brintnell or Dover area.	System Reliability	2008-08-26				2010-04-01	AML ATCO EPCOR	2008	76,259,479 38,676,448 968,060		76,259,479 38,676,448 968,060	Awaiting AUC Decision On Need
787	Southern Alberta Transmission Development	Re-inforcement of transmission system in Southern Alberta.	System Reliability	2008-12-30				2013-12-31	AML	2008	750,000,000		750,000,000	Awaiting AUC Decision On Need
791	ATCO Construct 240kV Line from Cache Creek to Black Fly	240kV Single circuit line from new Cache Creek 912S substation to Black Fly 934S	System Reliability					2012-06-15	ATCO					Planning Stage

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810	West Central Area Planning Study	Upgrade West Central Area System Sub areas 31- Wetaskawin, 30-Drayton Valley, 29- Hinton/Edson, 34- Abraham Lake, 38- Caroline, 44-Seebe, 57- Airdrie	System Reliability					2012-12-31	ATCO					Planning Stage
811	Central East Area Planning Study	Sub areas 28-Cold Lake, 56-Vegraville, 13- Lloydminster, 32- Wainwright & 37-Provost	System Reliability					2012-06-30	AML ATCO	2008	3,824,340 5,552,000		3,824,340 5,552,000	Planning Stage
812	Hanna Area Planning Study	System Upgrade. Sub areas 36-Alliance Battle River, 42-Hanna, 43- Sheerness	System Reliability					2012-06-30	AML ATCO					Planning Stage
813	Red Deer Area Planning Study	System upgrade Sub Areas 35-Red Deer, 39- Didsbury	System Reliability					2012-06-30	AML					Planning Stage
817	ATCO Slave Lake- High Prairie 144 kV System Upgrade	144 kV transmission system upgrade in the High Prairie Slave Lake - Swan Hills area	System Reliability					2010-06-01	ATCO					Planning Stage
833	Mid & Long Range Airdrie Area System Development	Mid & Long Range Airdrie Area System Development	System Reliability					2009-10-31						TFO/AESO Preparing Combined Filing
834	Livock 939S	Proposed 240-144 kV source substation to serve the Laricina load and 2 ATCO PODs in the region north of Wabasca and NE of existing Britnell substation.	System Reliability					2011-06-01	ATCO					Planning Stage
839	Purchase 3 - 240/144kV 300 MVA transformers for ATCO	Purchase 3-240/144 kV, 300 MVA for future projects in the Northeast ATCO area.	System Reliability	2008-05-14	2008-07-09			2010-06-15	ATCO	2008	9,000,000	9,265,000	9,265,000	Under Construction

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850	South and West of Edmonton Area Upgrades		System Reliability											Planning Stage

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**Notes:**

1. Project Number: This is a number that is assigned by the AESO to each project that could potentially be Direct Assigned to a TFO by the AESO.
2. NID Filed: This is the date that the AESO submits to the AUC a Need Information Document (NID) for approval as per the requirement of Section 34(1) of the Act.
3. NID Approved: This is the date the NID is approved by the AUC.
4. P and L Filed: This is the date that the TFO's Permit and License application (sometimes referred to as the Facility Application) is registered with the AUC. For Projects with mutiple applications, this is the date the first application is registered.
5. P and L Approved: This is the date that the TFO's Permit and License application is approved by the AUC. For Projects with mutiple applications, this is the date the last application is approved.
6. Forecast or Actual ISD: This is the most recent information the TFO has provided to the AESO on the expected ISD. This information is typically provided to the AESO in the PPS (Proposal to Provide Service) or Project Monthly Reports provided by the TFO.
7. TFO: These are the Transmission Facility Owners (TFO) who have provided and are responsible for the estimates, schedule, construction and costs for the project. The TFO's eligible are designated by service territory as defined in ISO Rule 9.1. Eligible TFO's are as follows;

- AML: Altalink L.P.
- ATCO: ATCO Electric Ltd
- EPCOR: EPCOR Transmission Inc.
- ENMAX: ENMAX Power Corporation
- TAU: TransAlta Utilities Corp
- Leth: City of Lethbridge
- RD: City of Red Deer

8. Year NID Valid: This indicates the year of validity of the NID estimate (i.e. an estimate may be completed in 2006 \$'s but should include escalation to put the estimate in the year the Project is expected to go in service)
9. NID Estimate: Is a +/- 30 % estimate that is provided by the TFO and accompanies the NID submitted to the AUC. The AESO uses the estimate to assist with project scope decisions. The TFO's are required to submit the estimate in the format as per the requirements of the ISO Rule 9.1 available on the AESO WEB site.
10. PPS Estimate: Is a +20/-10% estimate that accompanies the TFO's Proposal to Provide Service's (PPS) document. Prior to the AESO Direct Assigning a project to a TFO, the TFO must submit a PPS to the AESO for review. The AESO will review the document c/w the estimate to ensure that the scope of the services provided in the PPS are as per request. The TFO's are required to submit the PPS and estimate in the format as per the requirements of the ISO Rule 9.1 available on the AESO WEB site.
11. TFO Forecast Cost: This is the most recent cost estimate provided by the TFO. This could come from the TFO provided NID Estimate, PPS Estimate, Monthly Project Report (for projects over \$1 million), Project Variance Report or Final Cost Report.
12. Project Status: This provides a brief status of the project.