

APPENDIX C TFO CAPITAL COST ESTIMATES

138 kV/144 kV Option

Project Name & No.	138kV single circuit, 165MVA from Nilrem 574S to AML/ ATCO Service Boundary		P1473	TRANSMISSION PROJECT ESTIMATE SUMMARY
Prepared by:	AltaLink			
AACE Class: (future use)	N/A	Estimate Basis	OOM	
High Range	30%	Low Range	-30%	
Date of Estimate:	August 30, 2016	Base Year Used*	2016	
	SYSTEM	CUSTOMER	TOTAL	ASSUMPTIONS
TRANSMISSION LINE				
Material	\$ 4,911,972	\$ -	\$ 4,911,972	
Labour	\$ 32,879,012	\$ -	\$ 32,879,012	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL TRANSMISSION LINE	\$ 37,790,984	\$ -	\$ 37,790,984	
SUBSTATION				
Material	\$ 903,238	\$ -	\$ 903,238	
Labour	\$ 2,923,115	\$ -	\$ 2,923,115	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL SUBSTATION	\$ 3,826,353	\$ -	\$ 3,826,353	
TELECOMMUNICATION				
Material	\$ 21,122	\$ -	\$ 21,122	
Labour	\$ 98,093	\$ -	\$ 98,093	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL TELECOMMUNICATIONS	\$ 119,216	\$ -	\$ 119,216	
OWNERS				
Pre-PPS cost	\$ 628,072	\$ -	\$ 628,072	
Proposal to Provide Service	\$ 974,563	\$ -	\$ 974,563	
Facility Applications	\$ 2,885,106	\$ -	\$ 2,885,106	
Regulatory & Compliance	\$ 50,000	\$ -	\$ 50,000	
Land Rights - Easements	\$ 1,287,491	\$ -	\$ 1,287,491	
Land - Damage Claims	\$ 184,680	\$ -	\$ 184,680	
Land - Acquisitions	\$ -	\$ -	\$ -	
Other	\$ -	\$ -	\$ -	
TOTAL OWNERS COST	\$ 6,009,911	\$ -	\$ 6,009,911	
DISTRIBUTED				
Procurement Management	\$ 785,817	\$ -	\$ 785,817	
Project Management	\$ 3,121,828	\$ -	\$ 3,121,828	
Construction Management	\$ 4,628,772	\$ -	\$ 4,628,772	
Contingency	\$ 5,536,631	\$ -	\$ 5,536,631	11%
Escalation	\$ 3,653,586	\$ -	\$ 3,653,586	3.1%
TOTAL DISTRIBUTED	\$ 17,726,634	\$ -	\$ 17,726,634	
SALVAGE				
Transmission Line Labour			\$ -	
Substation Labour			\$ -	
Telecom Labour				
Land Remediation and Reclamation			\$ -	
TOTAL SALVAGE	\$ -	\$ -	\$ -	
OTHER COSTS				
AFUDC	\$ 8,501,799	\$ -	\$ 8,501,799	6%
E&S/Overhead	\$ 5,501,937	\$ -	\$ 5,501,937	8.9%
TOTAL OTHER	\$ 14,003,735	\$ -	\$ 14,003,735	
TOTAL PROJECT	\$ 79,476,833	\$ -	\$ 79,476,833	

* \$2016 escalated to year 2021

Project Name & No.	138kV single circuit, 165MVA from Hansman Lake 650S to Edgerton 899S		P1473	TRANSMISSION PROJECT ESTIMATE SUMMARY
Prepared by:	AltaLink			
AACE Class: (future use)	N/A	Estimate Basis	OOM	
High Range	30%	Low Range	-30%	
Date of Estimate:	August 30, 2016	Base Year Used*	2016	
	SYSTEM	CUSTOMER	TOTAL	ASSUMPTIONS
TRANSMISSION LINE				
Material	\$ 3,614,786	\$ -	\$ 3,614,786	
Labour	\$ 27,293,974	\$ -	\$ 27,293,974	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL TRANSMISSION LINE	\$ 30,908,760	\$ -	\$ 30,908,760	
SUBSTATION				
Material	\$ 2,768,321	\$ -	\$ 2,768,321	
Labour	\$ 6,485,486	\$ -	\$ 6,485,486	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL SUBSTATION	\$ 9,253,807	\$ -	\$ 9,253,807	
TELECOMMUNICATION				
Material	\$ 70,793	\$ -	\$ 70,793	
Labour	\$ 189,299	\$ -	\$ 189,299	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL TELECOMMUNICATIONS	\$ 260,091	\$ -	\$ 260,091	
OWNERS				
Pre-PPS cost	\$ 623,504	\$ -	\$ 623,504	
Proposal to Provide Service	\$ 974,562	\$ -	\$ 974,562	
Facility Applications	\$ 2,409,303	\$ -	\$ 2,409,303	
Regulatory & Compliance	\$ 50,000	\$ -	\$ 50,000	
Land Rights - Easements	\$ 932,659	\$ -	\$ 932,659	
Land - Damage Claims	\$ 133,737	\$ -	\$ 133,737	
Land - Acquisitions	\$ -	\$ -	\$ -	
Other			\$ -	
TOTAL OWNERS COST	\$ 5,123,765	\$ -	\$ 5,123,765	
DISTRIBUTED				
Procurement Management	\$ 785,817	\$ -	\$ 785,817	
Project Management	\$ 3,121,809	\$ -	\$ 3,121,809	
Construction Management	\$ 4,631,388	\$ -	\$ 4,631,388	
Contingency	\$ 6,186,515	\$ -	\$ 6,186,515	10%
Escalation	\$ 3,433,390	\$ -	\$ 3,433,390	3.1%
TOTAL DISTRIBUTED	\$ 18,158,920	\$ -	\$ 18,158,920	
SALVAGE				
Transmission Line Labour			\$ -	
Substation Labour			\$ -	
Telecom Labour				
Land Remediation and Reclamation			\$ -	
TOTAL SALVAGE	\$ -	\$ -	\$ -	
OTHER COSTS				
AFUDC	\$ 7,874,397	\$ -	\$ 7,874,397	6%
E&S/Overhead	\$ 5,364,204	\$ -	\$ 5,364,204	8.9%
TOTAL OTHER	\$ 13,238,600	\$ -	\$ 13,238,600	
TOTAL PROJECT	\$ 76,943,945	\$ -	\$ 76,943,945	

* \$2016 escalated to year 2021

Project Name & No.	Provost to Edgerton & Nilrem to Vermilion Transmission Development Option 1-A-165MVA West Drury Location		P1781	TRANSMISSION PROJECT ESTIMATE SUMMARY
Prepared by:	ATCO Electric			
AACE Class: (future use)	N/A	Estimate Basis	NID	
High Range	30%	Low Range	-30%	
Date of Estimate:	November 9, 2016	Base Year Used	2016	
	SYSTEM	CUSTOMER	TOTAL	ASSUMPTIONS
TRANSMISSION LINE				
Material	\$ 3,110,421	\$ -	\$ 3,110,421	
Labour	\$ 11,424,318	\$ -	\$ 11,424,318	
TOTAL TRANSMISSION LINE	\$ 14,534,739	\$ -	\$ 14,534,739	
SUBSTATION				
Material	\$ 2,649,446	\$ -	\$ 2,649,446	
Labour	\$ 7,937,643	\$ -	\$ 7,937,643	
TOTAL SUBSTATION	\$ 10,587,089	\$ -	\$ 10,587,089	
TELECOMMUNICATION				
Material	\$ 388,942	\$ -	\$ 388,942	
Labour	\$ 49,255	\$ -	\$ 49,255	
TOTAL TELECOMMUNICATIONS	\$ 438,197	\$ -	\$ 438,197	
OWNERS				
Pre-PPS Cost	\$ 165,000	\$ -	\$ 165,000	
Proposal to Provide Service	\$ 300,000	\$ -	\$ 300,000	
Facility Applications	\$ 1,689,431	\$ -	\$ 1,689,431	
Regulatory & Compliance	\$ 50,000	\$ -	\$ 50,000	
Land Rights - Easements	\$ 747,327	\$ -	\$ 747,327	
Land - Damage Claims	\$ 47,655	\$ -	\$ 47,655	
Land - Acquisitions	\$ 300,000	\$ -	\$ 300,000	Drury 2007S Land purchase
Other	\$ -	\$ -	\$ -	
TOTAL OWNERS COST	\$ 3,299,413	\$ -	\$ 3,299,413	
DISTRIBUTED				
Procurement Management	\$ 515,417	\$ -	\$ 515,417	
Project Management	\$ 1,275,840	\$ -	\$ 1,275,840	
Construction Management	\$ 2,307,173	\$ -	\$ 2,307,173	
Contingency	\$ 6,985,300	\$ -	\$ 6,985,300	
Escalation	\$ 3,234,321	\$ -	\$ 3,234,321	0% escalation for 2016, 2.5% for 2017, 5.1% for 2018, 7.7% for 2019, 10.4% for 2020 and 13.1% for 2021
TOTAL DISTRIBUTED	\$ 14,318,051	\$ -	\$ 14,318,051	
SALVAGE				
Transmission Line Labour	\$ -	\$ -	\$ -	
Substation Labour	\$ -	\$ -	\$ -	
Land Remediation and Reclamation	\$ -	\$ -	\$ -	
TOTAL SALVAGE	\$ -	\$ -	\$ -	
OTHER COSTS				
AFUDC	\$ 5,643,896	\$ -	\$ 5,643,896	
E&S/Overhead	\$ 6,476,623	\$ -	\$ 6,476,623	
TOTAL OTHER	\$ 12,120,519	\$ -	\$ 12,120,519	
TOTAL PROJECT	\$ 55,298,008	\$ -	\$ 55,298,008	

Preferred Development Option

Project Name & No.	240kV single circuit (H-Frame), 485MVA from Nilrem 574S to AML/ ATCO Service Boundary		P1473	TRANSMISSION PROJECT ESTIMATE SUMMARY
Prepared by:	AltaLink			
AACE Class: (future use)	N/A	Estimate Basis	OOM	
High Range	30%	Low Range	-30%	
Date of Estimate:	August 30, 2016	Base Year Used*	2016	
	SYSTEM	CUSTOMER	TOTAL	ASSUMPTIONS
TRANSMISSION LINE				
Material	\$ 6,572,083	\$ -	\$ 6,572,083	
Labour	\$ 35,643,347	\$ -	\$ 35,643,347	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL TRANSMISSION LINE	\$ 42,215,431	\$ -	\$ 42,215,431	
SUBSTATION				
Material	\$ 903,238	\$ -	\$ 903,238	
Labour	\$ 2,925,094	\$ -	\$ 2,925,094	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL SUBSTATION	\$ 3,828,332	\$ -	\$ 3,828,332	
TELECOMMUNICATION				
Material	\$ 21,122	\$ -	\$ 21,122	
Labour	\$ 98,124	\$ -	\$ 98,124	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL TELECOMMUNICATIONS	\$ 119,247	\$ -	\$ 119,247	
OWNERS				
Pre-PPS cost	\$ 628,072	\$ -	\$ 628,072	
Proposal to Provide Service	\$ 974,563	\$ -	\$ 974,563	
Facility Applications	\$ 2,885,106	\$ -	\$ 2,885,106	
Regulatory & Compliance	\$ 50,000	\$ -	\$ 50,000	
Land Rights - Easements	\$ 3,862,473	\$ -	\$ 3,862,473	
Land - Damage Claims	\$ 554,040	\$ -	\$ 554,040	
Land - Acquisitions	\$ -	\$ -	\$ -	
Other	\$ -	\$ -	\$ -	
TOTAL OWNERS COST	\$ 8,954,253	\$ -	\$ 8,954,253	
DISTRIBUTED				
Procurement Management	\$ 785,817	\$ -	\$ 785,817	
Project Management	\$ 3,121,828	\$ -	\$ 3,121,828	
Construction Management	\$ 4,628,772	\$ -	\$ 4,628,772	
Contingency	\$ 7,120,203	\$ -	\$ 7,120,203	10%
Escalation	\$ 3,985,940	\$ -	\$ 3,985,940	3.1%
TOTAL DISTRIBUTED	\$ 19,642,560	\$ -	\$ 19,642,560	
SALVAGE				
Transmission Line Labour			\$ -	
Substation Labour			\$ -	
Telecom Labour				
Land Remediation and Reclamation			\$ -	
TOTAL SALVAGE	\$ -	\$ -	\$ -	
OTHER COSTS				
AFUDC	\$ 9,224,513	\$ -	\$ 9,224,513	6%
E&S/Overhead	\$ 6,298,876	\$ -	\$ 6,298,876	8.9%
TOTAL OTHER	\$ 15,523,389	\$ -	\$ 15,523,389	
TOTAL PROJECT	\$ 90,283,213	\$ -	\$ 90,283,213	

* \$2016 escalated to year 2021

Project Name & No.	240kV single circuit (H-Frame), 485MVA from Hansman Lake 650S to Edgerton 899S		P1473	TRANSMISSION PROJECT ESTIMATE SUMMARY
Prepared by:	AltaLink			
AACE Class: (future use)	N/A	Estimate Basis	OOM	
High Range	30%	Low Range	-30%	
Date of Estimate:	August 30, 2016	Base Year Used*	2016	
	SYSTEM	CUSTOMER	TOTAL	ASSUMPTIONS
TRANSMISSION LINE				
Material	\$ 4,955,087	\$ -	\$ 4,955,087	
Labour	\$ 30,333,692	\$ -	\$ 30,333,692	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL TRANSMISSION LINE	\$ 35,288,778	\$ -	\$ 35,288,778	
SUBSTATION				
Material	\$ 2,768,321	\$ -	\$ 2,768,321	
Labour	\$ 6,483,846	\$ -	\$ 6,483,846	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL SUBSTATION	\$ 9,252,166	\$ -	\$ 9,252,166	
TELECOMMUNICATION				
Material	\$ 70,793	\$ -	\$ 70,793	
Labour	\$ 183,683	\$ -	\$ 183,683	
Supply & Install	\$ -	\$ -	\$ -	
TOTAL TELECOMMUNICATIONS	\$ 254,476	\$ -	\$ 254,476	
OWNERS				
Pre-PPS cost	\$ 623,504	\$ -	\$ 623,504	
Proposal to Provide Service	\$ 974,562	\$ -	\$ 974,562	
Facility Applications	\$ 2,409,303	\$ -	\$ 2,409,303	
Regulatory & Compliance	\$ 50,000	\$ -	\$ 50,000	
Land Rights - Easements	\$ 2,814,994	\$ -	\$ 2,814,994	
Land - Damage Claims	\$ 401,211	\$ -	\$ 401,211	
Land - Acquisitions	\$ -	\$ -	\$ -	
Other	\$ -	\$ -	\$ -	
TOTAL OWNERS COST	\$ 7,273,574	\$ -	\$ 7,273,574	
DISTRIBUTED				
Procurement Management	\$ 785,817	\$ -	\$ 785,817	
Project Management	\$ 3,121,809	\$ -	\$ 3,121,809	
Construction Management	\$ 4,631,388	\$ -	\$ 4,631,388	
Contingency	\$ 7,074,658	\$ -	\$ 7,074,658	10.5%
Escalation	\$ 3,690,029	\$ -	\$ 3,690,029	3.1%
TOTAL DISTRIBUTED	\$ 19,303,702	\$ -	\$ 19,303,702	
SALVAGE				
Transmission Line Labour			\$ -	
Substation Labour			\$ -	
Telecom Labour				
Land Remediation and Reclamation			\$ -	
TOTAL SALVAGE	\$ -	\$ -	\$ -	
OTHER COSTS				
AFUDC	\$ 8,444,916	\$ -	\$ 8,444,916	6%
E&S/Overhead	\$ 6,023,757	\$ -	\$ 6,023,757	8.9%
TOTAL OTHER	\$ 14,468,674	\$ -	\$ 14,468,674	
TOTAL PROJECT	\$ 85,841,370	\$ -	\$ 85,841,370	

* \$2016 escalated to year 2021

Project Name & No.	Provost to Edgerton & Nilrem to Vermilion Transmission Development Option 2 - 485MVA (240kV SC - Drury West Location)		P1781	TRANSMISSION PROJECT ESTIMATE SUMMARY
Prepared by:	ATCO Electric			
AACE Class: (future use)	N/A	Estimate Basis	NID	
High Range	30%	Low Range	-30%	
Date of Estimate:	November 9, 2016	Base Year Used	2016	
	SYSTEM	CUSTOMER	TOTAL	ASSUMPTIONS
TRANSMISSION LINE				
Material	\$ 4,416,026	\$ -	\$ 4,416,026	
Labour	\$ 17,314,227	\$ -	\$ 17,314,227	
TOTAL TRANSMISSION LINE	\$ 21,730,253	\$ -	\$ 21,730,253	
SUBSTATION				
Material	\$ 2,649,446	\$ -	\$ 2,649,446	
Labour	\$ 7,937,643	\$ -	\$ 7,937,643	
TOTAL SUBSTATION	\$ 10,587,089	\$ -	\$ 10,587,089	
TELECOMMUNICATION				
Material	\$ 388,942	\$ -	\$ 388,942	
Labour	\$ 49,255	\$ -	\$ 49,255	
TOTAL TELECOMMUNICATIONS	\$ 438,197	\$ -	\$ 438,197	
OWNERS				
Pre-PPS Cost	\$ 165,000	\$ -	\$ 165,000	
Proposal to Provide Service	\$ 300,000	\$ -	\$ 300,000	
Facility Applications	\$ 1,689,431	\$ -	\$ 1,689,431	
Regulatory & Compliance	\$ 50,000	\$ -	\$ 50,000	
Land Rights - Easements	\$ 1,071,661	\$ -	\$ 1,071,661	
Land - Damage Claims	\$ 47,655	\$ -	\$ 47,655	
Land - Acquisitions	\$ 300,000	\$ -	\$ 300,000	Drury 2007S Land purchase
Other	\$ -	\$ -	\$ -	
TOTAL OWNERS COST	\$ 3,623,747	\$ -	\$ 3,623,747	
DISTRIBUTED				
Procurement Management	\$ 515,417	\$ -	\$ 515,417	
Project Management	\$ 1,275,840	\$ -	\$ 1,275,840	
Construction Management	\$ 2,307,173	\$ -	\$ 2,307,173	
Contingency	\$ 6,985,300	\$ -	\$ 6,985,300	
Escalation	\$ 3,852,920	\$ -	\$ 3,852,920	0% escalation for 2016, 2.5% for 2017, 5.1% for 2018, 7.7% for 2019, 10.4% for 2020 and 13.1% for 2021
TOTAL DISTRIBUTED	\$ 14,936,650	\$ -	\$ 14,936,650	
SALVAGE				
Transmission Line Labour	\$ -	\$ -	\$ -	
Substation Labour	\$ -	\$ -	\$ -	
Land Remediation and Reclamation	\$ -	\$ -	\$ -	
TOTAL SALVAGE	\$ -	\$ -	\$ -	
OTHER COSTS				
AFUDC	\$ 6,693,146	\$ -	\$ 6,693,146	
E&S/Overhead	\$ 7,697,390	\$ -	\$ 7,697,390	
TOTAL OTHER	\$ 14,390,536	\$ -	\$ 14,390,536	
TOTAL PROJECT	\$ 65,706,472	\$ -	\$ 65,706,472	