

APPENDIX C TFO CAPITAL COST ESTIMATES

-ALTALINK

-ATCO

Detail Cost Estimate for AltaLink
(+20/-10%, 2009\$)

Proposal to Provide Services (PPS) - Estimate Summary

Project Name:	Eyre 558S Substation Interconnection Project
Estimate Prepared by:	Philippe Maldiney
Estimate Date:	
	December 6, 2009
Estimate Accuracy:	+20 / -10 %
Revision:	1
	Revision Date: June 8, 2010

	System Portion	Customer Portion	TOTAL
Transmission Line Costs			
Material	\$ -	\$ 1,206,000	\$ 1,206,000
Labour	\$ -	\$ 2,224,000	\$ 2,224,000
Total-Transmission Line	\$ -	\$ 3,430,000	\$ 3,430,000
Substation Facilities Cost			
Material	\$ -	\$ 2,088,000	\$ 2,088,000
Labour	\$ -	\$ 1,562,000	\$ 1,562,000
Total-Substations	\$ -	\$ 3,650,000	\$ 3,650,000
Telecommunication Cost			
Material	\$ -	\$ 85,000	\$ 85,000
Labour	\$ -	\$ 329,000	\$ 329,000
Total-Telecommunication	\$ -	\$ 414,000	\$ 414,000
Owner Costs			
Proposal to Provide Service	\$ -	\$ 76,000	\$ 76,000
Facility Applications	\$ -	\$ 110,000	\$ 110,000
Land Rights - Easements	\$ -	\$ 760,000	\$ 760,000
Land - Damage Claims	\$ -	\$ -	\$ -
Land - Acquisitions	\$ -	\$ -	\$ -
Total - Owner's Cost	\$ -	\$ 946,000	\$ 946,000
Distributed Costs			
Procurement	\$ -	\$ 88,000	\$ 88,000
Project Management	\$ -	\$ 868,000	\$ 868,000
Construction Management	\$ -	\$ 352,000	\$ 352,000
Contingency	\$ -	\$ 2,039,000	\$ 2,039,000
Total - Distributed Costs	\$ -	\$ 3,347,000	\$ 3,347,000
Total - Direct Costs	\$ -	\$ 11,787,000	\$ 11,787,000
Salvage			
Transmission Line Labour	\$ -	\$ -	\$ -
Substation Labour	\$ -	\$ 3,000	\$ 3,000
Land Remediation and Reclamation	\$ -	\$ -	\$ -
Total - Salvage	\$ -	\$ 3,000	\$ 3,000
Other Costs			
AFUDC	\$ -	\$ 16,000	\$ 16,000
E&S	\$ -	\$ 649,000	\$ 649,000
Total - Other Costs	\$ -	\$ 665,000	\$ 665,000
Total In-Direct Costs	\$ -	\$ 668,000	\$ 668,000
TOTAL PROJECT COSTS	\$ -	\$ 12,455,000	\$ 12,455,000

Substation - PPS Estimate

Project Name:	Eyre 558S Substation Interconnection Project
Estimate Prepared by:	Philippe Maldiney & Jim Sandhu
Estimate Date:	December 6, 2009
Estimate Accuracy:	+20 / -10 %
Revision:	1
	Revision Date: June 28, 2010

	System Portion	Customer Portion	TOTAL
S.650S			
Materials			
Transformers<number, size, voltage>	\$ -	\$ -	\$ -
Circuit Breakers <Voltage 1>	\$ -	\$ -	\$ -
Circuit Breakers <Voltage 2>	\$ -	\$ -	\$ -
Capacitor Bank <voltage, rating>	\$ -	\$ -	\$ -
Reactor bank	\$ -	\$ -	\$ -
CTs & PTs <quantity, voltage>	\$ -	\$ -	\$ -
Switchyard buswork, switches, structures, foundations, grounding	\$ -	\$ -	\$ -
Control Building	\$ -	\$ -	\$ -
Protection, Control, Metering	\$ -	\$ -	\$ -
SCADA	\$ -	\$ -	\$ -
<misc>	\$ -	\$ -	\$ -
Subtotal - Material	\$ -	\$ -	\$ -
Labour			
Detailed Engineering	\$ -	\$ 20,000	\$ 20,000
Site preparation & survey	\$ -	\$ -	\$ -
Construction	\$ -	\$ 7,000	\$ 7,000
Commissioning	\$ -	\$ -	\$ -
Subtotal - Labour	\$ -	\$ 27,000	\$ 27,000
Sub Total-Material and Labour	\$ -	\$ 27,000	\$ 27,000
S.558S			
Materials			
Transformers<number, size, voltage>	\$ -	\$ 1,109,000	\$ 1,109,000
Circuit Breakers <Voltage 1>	\$ -	\$ 93,000	\$ 93,000
Circuit Breakers <Voltage 2>	\$ -	\$ -	\$ -
Capacitor Bank <voltage, rating>	\$ -	\$ -	\$ -
Reactor bank	\$ -	\$ -	\$ -
CTs & PTs <quantity, voltage>	\$ -	\$ 38,000	\$ 38,000
Switchyard buswork, switches, structures, foundations, grounding	\$ -	\$ 291,000	\$ 291,000
Control Building	\$ -	\$ 386,000	\$ 386,000
Protection, Control, Metering	\$ -	\$ 100,000	\$ 100,000
SCADA	\$ -	\$ 61,000	\$ 61,000
<misc>	\$ -	\$ 10,000	\$ 10,000
Subtotal - Material	\$ -	\$ 2,088,000	\$ 2,088,000
Labour			
Detailed Engineering	\$ -	\$ 390,000	\$ 390,000
Site preparation & survey	\$ -	\$ 303,000	\$ 303,000
Construction	\$ -	\$ 789,000	\$ 789,000
Commissioning	\$ -	\$ 53,000	\$ 53,000
Subtotal - Labour	\$ -	\$ 1,535,000	\$ 1,535,000
Sub Total-Material and Labour	\$ -	\$ 3,623,000	\$ 3,623,915
Summary			
Total - Material Costs	\$ -	\$ 2,088,000	\$ 2,088,000
Total - Labour Costs	\$ -	\$ 1,562,000	\$ 1,562,000
Total - Substation Costs	\$ -	\$ 3,650,000	\$ 3,650,000

Telecommunication - PPS Estimate

Project Name:	Eyre 558S Substation Interconnection Project
Estimate Prepared by:	Philippe Maldiney & Jim Sandhu
Estimate Date:	December 6, 2009
Estimate Accuracy:	+20 / -10 %
Revision:	1
Revision Date:	June 28, 2010

	System Portion	Customer Portion	TOTAL
T.658T			
Materials			
Tower/Antennae	\$ -	\$ 67,000	\$ 67,000
Radio Equipment	\$ -	\$ 12,000	\$ 12,000
Building (If substation building not utilized)	\$ -	\$ -	\$ -
Fibre (km,type)	\$ -	\$ -	\$ -
<misc>	\$ -	\$ -	\$ -
Subtotal - Material	\$ -	\$ 79,000	\$ 79,000
Labour			
Detailed Engineering	\$ -	\$ 44,000	\$ 44,000
Site preparation & survey	\$ -	\$ -	\$ -
Construction	\$ -	\$ 148,000	\$ 148,000
Commissioning	\$ -	\$ 74,000	\$ 74,000
Subtotal - Labour	\$ -	\$ 266,000	\$ 266,000
Sub Total-Material and Labour	\$ -	\$ 345,000	\$ 345,000
T.650T			
Materials			
Tower/Antennae	\$ -	\$ -	\$ -
Radio Equipment	\$ -	\$ 3,000	\$ 3,000
Building (If substation building not utilized)	\$ -	\$ -	\$ -
Fibre (km,type)	\$ -	\$ -	\$ -
<misc>	\$ -	\$ -	\$ -
Subtotal - Material	\$ -	\$ 3,000	\$ 3,000
Labour			
Detailed Engineering	\$ -	\$ 22,000	\$ 22,000
Site preparation & survey	\$ -	\$ -	\$ -
Construction	\$ -	\$ 8,000	\$ 8,000
Commissioning	\$ -	\$ 4,000	\$ 4,000
Subtotal - Labour	\$ -	\$ 34,000	\$ 34,000
Sub Total-Material and Labour	\$ -	\$ 37,000	\$ 36,911
T.9232R			
Materials			
Tower/Antennae	\$ -	\$ 4,000	\$ 4,000
Radio Equipment	\$ -	\$ -	\$ -
Building (If substation building not utilized)	\$ -	\$ -	\$ -
Fibre (km,type)	\$ -	\$ -	\$ -
<misc>	\$ -	\$ -	\$ -
Subtotal - Material	\$ -	\$ 4,000	\$ 4,000
Labour			
Detailed Engineering	\$ -	\$ 15,000	\$ 15,000
Site preparation & survey	\$ -	\$ -	\$ -
Construction	\$ -	\$ 9,000	\$ 9,000
Commissioning	\$ -	\$ 4,000	\$ 4,000
Subtotal - Labour	\$ -	\$ 28,000	\$ 28,000
Sub Total-Material and Labour	\$ -	\$ 32,000	\$ 32,000
Summary			
Total - Material Costs	\$ -	\$ 86,000	\$ 86,000
Total - Labour Costs	\$ -	\$ 328,000	\$ 328,000
Total - Telecommunication Costs	\$ -	\$ 414,000	\$ 414,000

Transmission Line - PPS Estimate

Project Name: Eyre 558S Substation Interconnection Project
Estimate Prepared by: Philippe Maldiney & Jim Sandhu
Estimate Date: December 6, 2009
Estimate Accuracy: +20 / -10 %
Revision: 1 **Revision Date:** June 28, 2010

	System Portion	Customer Portion	TOTAL
L.7L224R			
Materials			
Foundations	\$ -	\$ -	\$ -
Structures	\$ -	\$ 7,000	\$ 7,000
Hardware	\$ -	\$ 5,000	\$ 5,000
Conductor	\$ -	\$ -	\$ -
Subtotal-Material	\$ -	\$ 12,000	\$ 12,000
Labour			
Detailed Engineering	\$ -	\$ 20,000	\$ 20,000
Survey	\$ -	\$ 4,000	\$ 4,000
R/W Preparation & Brushing	\$ -	\$ 5,000	\$ 5,000
Construction	\$ -	\$ 28,000	\$ 28,000
Commissioning	\$ -	\$ -	\$ -
Subtotal-Labour	\$ -	\$ 57,000	\$ 57,000
Sub Total-Material and Labour	\$ -	\$ 69,000	\$ 69,000
L.402R			
Materials			
Foundations	\$ -	\$ -	\$ -
Structures	\$ -	\$ 832,000	\$ 832,000
Hardware	\$ -	\$ 161,000	\$ 161,000
Conductor	\$ -	\$ 200,000	\$ 200,000
Subtotal-Material	\$ -	\$ 1,193,000	\$ 1,193,000
Labour			
Detailed Engineering	\$ -	\$ 224,000	\$ 224,000
Survey	\$ -	\$ 109,000	\$ 109,000
R/W Preparation & Brushing	\$ -	\$ 78,000	\$ 78,000
Construction	\$ -	\$ 1,757,000	\$ 1,757,000
Commissioning	\$ -	\$ -	\$ -
Subtotal-Labour	\$ -	\$ 2,168,000	\$ 2,168,000
Sub Total-Material and Labour	\$ -	\$ 3,361,000	\$ 3,361,000
Summary			
Total - Material Costs	\$ -	\$ 1,205,000	\$ 1,205,000
Total - Labour Costs	\$ -	\$ 2,225,000	\$ 2,225,000
Total - Transmission Line Costs	\$ -	\$ 3,430,000	\$ 3,430,000

Detail Cost Estimate for ATCO
(+20/-10%, 2009\$)

Proposal to Provide Services (PPS) - Estimate Summary

Project Name: RP-05-851 Eyre 558S Substation Interconnection
Estimate Prepared by: David Ellinger
Estimate Date: 26 February, 2009
Estimate Accuracy: +20 / -10 % (2010 Dollars)
 Refer to the Notes sheet in this workbook and "Proposal to Provide
 Estimating Guidelines: Services"

	System Portion	Customer Portion	TOTAL
Transmission Line Costs			
Material	\$ -	\$ 17,212	\$ 17,212
Labour	\$ -	\$ 85,200	\$ 85,200
Total-Transmission line	\$ -	\$ 102,412	\$ 102,412
Substation Facilities Cost			
Material	\$ -	\$ -	\$ -
Labour	\$ -	\$ 16,100	\$ 16,100
Total-Substations	\$ -	\$ 16,100	\$ 16,100
Telecommunication Cost			
Material	\$ -	\$ 5,000	\$ 5,000
Labour	\$ -	\$ 20,000	\$ 20,000
Total-Telecommunication	\$ -	\$ 25,000	\$ 25,000
Owner Costs			
Proposal to Provide Service	\$ -	\$ 2,000	\$ 2,000
Facility Applications	\$ -	\$ 12,060	\$ 12,060
Land Rights - Easements	\$ -	\$ 6,539	\$ 6,539
Land - Damage Claims	\$ -	\$ -	\$ -
Land - Acquisitions	\$ -	\$ -	\$ -
Total - Owner's Cost	\$ -	\$ 20,599	\$ 20,599
Distributed Costs			
Procurement	\$ -	\$ -	\$ -
Project Management	\$ -	\$ 7,200	\$ 7,200
Construction Management	\$ -	\$ 1,000	\$ 1,000
Warehouse/logistics	\$ -	\$ 2,000	\$ 2,000
Project Services	\$ -	\$ 1,000	\$ 1,000
Contingency	\$ -	\$ 17,531	\$ 17,531
Total - Distributed Costs	\$ -	\$ 28,731	\$ 28,731
Total Direct Costs	\$ -	\$ 192,842	\$ 192,842
Salvage			
Transmission Line Labour	\$ -	\$ -	\$ -
Substation Labour	\$ -	\$ -	\$ -
Land Remediation and Reclamation	\$ -	\$ -	\$ -
Total-Salvage	\$ -	\$ -	\$ -
Other Costs			
INFLATION	\$ -	\$ 12,343	\$ 12,343
ES&G	\$ -	\$ 5,069	\$ 5,069
AFUDC	\$ -	\$ 15,650	\$ 15,650
Total - Other Costs	\$ -	\$ 33,061	\$ 33,061
Total In-Direct Costs	\$ -	\$ 33,061	\$ 33,061
TOTAL PROJECT COSTS	\$ -	\$ 225,903	\$ 225,903

Transmission Line - PPS Estimate

Project Name: RP-05-851 Eyre 558S Substation Interconnection

Refer to the Notes sheet in this workbook and "Proposal to Provide
Estimating Guidelines: Services"

	System Portion	Customer Portion	TOTAL
Line <7L224 tap for connection of 402L>			
Materials			
Foundations	\$ -	\$ -	\$ -
Structures	\$ -	\$ 11,000	\$ 11,000
Hardware	\$ -	\$ 6,000	\$ 6,000
Conductor	\$ -	\$ 212	\$ 212
Subtotal-Material	\$ -	\$ 17,212	\$ 17,212
Labour			
Detailed Engineering	\$ -	\$ 15,200	\$ 15,200
Survey	\$ -	\$ 10,000	\$ 10,000
R/W Preparation & Brushing	\$ -	\$ -	\$ -
Construction	\$ -	\$ 60,000	\$ 60,000
Commissioning	\$ -	\$ -	\$ -
Subtotal-Labour	\$ -	\$ 85,200	\$ 85,200
Sub Total-Material and Labour	\$ -	\$ 102,412	\$ 102,412
Summary			
Total - Material Costs	\$ -	\$ 17,212	\$ 17,212
Total - Labour Costs	\$ -	\$ 85,200	\$ 85,200
Total - Transmission Line Costs	\$ -	\$ 102,412	\$ 102,412

Substation - PPS Estimate

Project Name:

RP-05-851 Eyre 558S Substation Interconnection

Refer to the Notes sheet in this workbook and "Proposal to Provide

Estimating Guidelines: Services"

	System Portion	Customer Portion	TOTAL
Substation < Monitor 774S >			
Materials			
Transformers<1 x 30/40/50 MVA, 144	\$ -	\$ -	\$ -
Circuit Breakers <3 x 144kV>	\$ -	\$ -	\$ -
Circuit Breakers <25 kV Switchgear B	\$ -	\$ -	\$ -
Capacitor Bank <voltage, rating>	\$ -	\$ -	\$ -
Reactor bank	\$ -	\$ -	\$ -
CTs & PTs <144kV>	\$ -	\$ -	\$ -
Switchyard buswork, switches,	\$ -	\$ -	\$ -
structures, foundations, grounding	\$ -	\$ -	\$ -
Control Building	\$ -	\$ -	\$ -
Protection, Control, Metering	\$ -	\$ -	\$ -
SCADA	\$ -	\$ -	\$ -
<misc>	\$ -	\$ -	\$ -
Subtotal - Material	\$ -	\$ -	\$ -
Labour			
Detailed Engineering	\$ -	\$ 10,000	\$ 10,000
Site preparation & survey	\$ -	\$ -	\$ -
Construction temporary AC service	\$ -	\$ -	\$ -
Construction	\$ -	\$ -	\$ -
Commissioning	\$ -	\$ 6,100	\$ 6,100
Subtotal - Labor	\$ -	\$ 16,100	\$ 16,100
Sub Total-Material and Labour	\$ -	\$ 16,100	\$ 16,100
Summary			
Total - Material Costs	\$ -	\$ -	\$ -
Total - Labour Costs	\$ -	\$ 16,100	\$ 16,100
Total - Substation Costs	\$ -	\$ 16,100	\$ 16,100

Telecommunication - PPS Estimate

Project Name: RP-05-851 Eyre 558S Substation Interconnection

Refer to the Notes sheet in this workbook and "Proposal to Provide
Estimating Guidelines: Services"

	System Portion	Customer Portion	TOTAL
Telecommunication Site < Monitor 774S >			
Materials			
Tower/Antennae	\$ -	\$ -	\$ -
Telecom & Telecontrol Equipment	\$ -	\$ 5,000	\$ 5,000
Building (if substation building not utilized)	\$ -	\$ -	\$ -
Fibre (km,type)	\$ -	\$ -	\$ -
Video Monitoring	\$ -	\$ -	\$ -
Subtotal - Material	\$ -	\$ 5,000	\$ 5,000
Labour			
Detailed Engineering	\$ -	\$ 10,000	\$ 10,000
Site preparation & survey	\$ -	\$ -	\$ -
Construction	\$ -	\$ 10,000	\$ 10,000
Commissioning	\$ -	\$ -	\$ -
Subtotal - Labor	\$ -	\$ 20,000	\$ 20,000
Sub Total-Material and Labour	\$ -	\$ 25,000	\$ 25,000
Summary			
Total - Material Costs	\$ -	\$ 5,000	\$ 5,000
Total - Labour Costs	\$ -	\$ 20,000	\$ 20,000
Total - Telecommunication Costs	\$ -	\$ 25,000	\$ 25,000