

**Attachment 1 – TFO Letter Windy Flats/Peigan Substations including +30/-  
15% Cost Estimate**

July 25, 2012

Alberta Electric System Operator  
2500, 330 5<sup>th</sup> Avenue SW  
Calgary, Alberta T2P 0L4

Subject: South Termination  
South Foothills Transmission Project, Project No. 882

Attention: Ed Mayer  
Project Manager, Project Delivery Team South

Dear Mr. Mayer,

This letter lays out the reasons for AltaLink proposing the new Windy Flats 138S Substation as an option to various upgrades at the Peigan 59S Substation.

The Windy Flats 138S Substation option provides incremental benefits related to the in-service date, transmission facility cost, interconnection timelines, and future generation interconnection flexibility, all as further described below.

- **In-service Date** – The Windy Flats 138S Substation location will result in an earlier in-service date for the completion of the South Foothills Transmission Project and its interconnection with the Calgary South (Foothills) substation and subsequently the completion of the Foothills Area Transmission Development at Calgary. Completing the connection of 1037L/1038L between SATR in the south and the Calgary South (Foothills 237S Substation) substation near Calgary is critical to establishing the transmission path between the wind generation sources in the south and the load centre in the Calgary area.
- **Transmission Facility Cost** – Terminating the project at the Windy Flats 138S Substation is anticipated to have an order of magnitude cost of \$440 million (+30/-15%) while terminating the Project at Peigan 59S Substation is anticipated to have an order of magnitude cost of \$493 million (+30/-15%). Please refer to the enclosed NID Class Estimates for south termination at Windy Flats 138 S Substation and for a south termination at Peigan 59S Substation. Windy Flats 138S Substation is the lower cost option. Terminating at Peigan 59S Substation has an additional cost of \$53 million.
- **Connection Timeline** – The Windy Flats 138S Substation termination can be in-service 18 to 30 months earlier than the Peigan 59S Substation termination. Terminating at Peigan 59S Substation would require a longer process due to routing located on federal land.
- **Future Generation Interconnection Flexibility** – The Windy Flats 138S Substation location is in closer proximity to existing wind farm developments, providing less complex connection requirements for generators, which consequently reduces real connection costs and the carrying costs related to prolonged project timelines.

- Allows existing wind generation Blue Trail wind farm and Ardenvale wind farm to operate at full capacity without overloading 608L.

In AltaLink's view, the combination of the above noted factors, in addition to its experience on the Southwest Transmission Project leads to the conclusion that the Windy Flats 138S Substation location should be the termination point. This conclusion is driven by the urgency to meet and preserve the forecast Q3 2015 in-service date for the South Foothills Transmission Project, provide future system interconnection flexibility and reduce future connecting customer costs.

The Windy Flats 138S Substation option provides the earliest project solution to meet the requested in-service date.

If you have questions regarding the above please contact Lou Delaney at 403-807-3408.

Regards,



Lou Delaney  
Project Manager, Major Projects South  
AltaLink Management Ltd.

cc    Greg Retzer  
      Johanne Picard-Thompson  
      Eóin Cooke

**Estimate Summary for Need Identification Document (NID)**

**Project Name:** South Foothills Transmission Project (SFTP)  
 South Termination at Windy Flats 138S

**Date:** 26-Apr-12

**Accuracy:** 30%/-15%

	System Portion	Customer Portion	Total	Capital Maintenance
<b>Transmission Lines Costs</b>				
Material	\$ 82,481,039	\$ -	\$ 82,481,039	\$ -
Labour	\$ 177,729,000	\$ -	\$ 177,729,000	\$ -
<b>Total-Transmission Line</b>	\$ 260,210,039	\$ -	\$ 260,210,039	\$ -
<b>Substation Facilities Costs</b>				
Material	\$ 21,117,000	\$ -	\$ 21,117,000	\$ -
Labour	\$ 18,781,000	\$ -	\$ 18,781,000	\$ -
<b>Total-Substations</b>	\$ 39,898,000	\$ -	\$ 39,898,000	\$ -
<b>Telecommunication Costs</b>				
Material	\$ 684,000	\$ -	\$ 684,000	\$ -
Labour	\$ 664,000	\$ -	\$ 664,000	\$ -
<b>Total-Telecommunication</b>	\$ 1,348,000	\$ -	\$ 1,348,000	\$ -
<b>Owner Costs</b>				
Proposal to Provide Service	\$ 1,965,000	\$ -	\$ 1,965,000	\$ -
Facility Applications	\$ 24,102,000	\$ -	\$ 24,102,000	\$ -
Right of Way Costs	\$ 24,568,961	\$ -	\$ 24,568,961	\$ -
<b>Total-Owners Costs</b>	\$ 50,635,961	\$ -	\$ 50,635,961	\$ -
<b>Distributed Costs</b>				
Procurement	\$ 3,096,000	\$ -	\$ 3,096,000	\$ -
Project Management	\$ 14,207,000	\$ -	\$ 14,207,000	\$ -
Construction Management	\$ 21,215,000	\$ -	\$ 21,215,000	\$ -
<b>Total-Distributed Costs</b>	\$ 38,518,000	\$ -	\$ 38,518,000	\$ -
<b>Total Direct Costs</b>	\$ 390,610,000	\$ -	\$ 390,610,000	\$ -
<b>Salvage Costs</b>				
TL & SS Labour, Land Remediation & Reclamation	\$ 1,295,000	\$ -	\$ 1,295,000	\$ -
<b>Total-Salvage</b>	\$ 1,295,000	\$ -	\$ 1,295,000	\$ -
<b>Other Costs</b>				
AFUDC (Excluded)	\$ 30,070,000	\$ -	\$ 30,070,000	\$ -
E&S	\$ 18,486,000	\$ -	\$ 18,486,000	\$ -
<b>Total-Other Costs</b>	\$ 48,556,000	\$ -	\$ 48,556,000	\$ -
<b>Total In-Direct Costs</b>	\$ 49,851,000	\$ -	\$ 49,851,000	\$ -
<b>TOTAL PROJECT COSTS</b>	\$ 440,461,000	\$ -	\$ 440,461,000	\$ -

**Estimate Summary for Need Identification Document (NID)**

**Project Name:** South Foothills Transmission Project (SFTP)  
 South Termination at Peigan 59S

**Date:** 26-Apr-12

**Accuracy:** 30%/-15%

	System Portion	Customer Portion	Total	Capital Maintenance
<b>Transmission Lines Costs</b>				
Material	\$ 90,159,000	\$ -	\$ 90,159,000	\$ -
Labour	\$ 191,999,000	\$ -	\$ 191,999,000	\$ -
<b>Total-Transmission Line</b>	<b>\$ 282,158,000</b>	<b>\$ -</b>	<b>\$ 282,158,000</b>	<b>\$ -</b>
<b>Substation Facilities Costs</b>				
Material	\$ 21,266,000	\$ -	\$ 21,266,000	\$ -
Labour	\$ 17,271,000	\$ -	\$ 17,271,000	\$ -
<b>Total-Substations</b>	<b>\$ 38,537,000</b>	<b>\$ -</b>	<b>\$ 38,537,000</b>	<b>\$ -</b>
<b>Telecommunication Costs</b>				
Material	\$ 401,000	\$ -	\$ 401,000	\$ -
Labour	\$ 390,000	\$ -	\$ 390,000	\$ -
<b>Total-Telecommunication</b>	<b>\$ 791,000</b>	<b>\$ -</b>	<b>\$ 791,000</b>	<b>\$ -</b>
<b>Owner Costs</b>				
Proposal to Provide Service	\$ 2,346,000	\$ -	\$ 2,346,000	\$ -
Facility Applications	\$ 29,383,000	\$ -	\$ 29,383,000	\$ -
Right of Way Costs	\$ 23,063,000	\$ -	\$ 23,063,000	\$ -
<b>Total-Owners Costs</b>	<b>\$ 54,792,000</b>	<b>\$ -</b>	<b>\$ 54,792,000</b>	<b>\$ -</b>
<b>Distributed Costs</b>				
Procurement	\$ 3,563,000	\$ -	\$ 3,563,000	\$ -
Project Management	\$ 17,044,000	\$ -	\$ 17,044,000	\$ -
Construction Management	\$ 21,910,000	\$ -	\$ 21,910,000	\$ -
<b>Total-Distributed Costs</b>	<b>\$ 42,517,000</b>	<b>\$ -</b>	<b>\$ 42,517,000</b>	<b>\$ -</b>
<b>Total Direct Costs</b>	<b>\$ 418,795,000</b>	<b>\$ -</b>	<b>\$ 418,795,000</b>	<b>\$ -</b>
<b>Salvage Costs</b>				
TL & SS Labour, Land Remediation & Reclamation	\$ -	\$ -	\$ -	\$ -
<b>Total-Salvage</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Other Costs</b>				
AFJDC (Excluded)	\$ 56,285,789	\$ -	\$ 56,285,789	\$ -
E&S	\$ 17,806,953	\$ -	\$ 17,806,953	\$ -
<b>Total-Other Costs</b>	<b>\$ 74,092,742</b>	<b>\$ -</b>	<b>\$ 74,092,742</b>	<b>\$ -</b>
<b>Total In-Direct Costs</b>	<b>\$ 74,093,000</b>	<b>\$ -</b>	<b>\$ 74,093,000</b>	<b>\$ -</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$ 492,888,000</b>	<b>\$ -</b>	<b>\$ 492,888,000</b>	<b>\$ -</b>