Presentation Overview

- BC Transmission Corporation
- The upper Columbia Valley regional transmission system
- Radium Substation 12/25kV Voltage Conversion Project
- Columbia Valley Transmission Project
- Questions
BC Transmission Corporation

- Crown corporation established in 2003
- Plan, build, operate and maintain the Province’s transmission system
- Report to the Minister of Energy Mines and Petroleum Resources
- Regulated by the BC Utilities Commission
Upper Columbia Transmission System

- 69 kV (60L271) radial transmission line between Invermere and Golden
- Supplies Althalmer, Radium, Golden and other substations
- Existing substations are reaching capacity limits and need to be upgraded
- Load expected to exceed the capacity of 69kV transmission line by 2010
Radium Substation
12/25kV Voltage Conversion Project
Radium Substation 12/25kV Voltage Conversion

- Identified in F2010 Capital Plan
- Total capital cost (estimate): $6 million
- Necessary to address load growth in the Radium H/S area
- Will also increase power quality and capacity of the feeders in the region
- Will require approval from BC Utilities Commission
Radium Substation 12/25kV Voltage Conversion

- Project divided into 2 main components
  - Substation Work (estimated ~ $5 million) : Expansion of the substation to accommodate new 25kV bus work; work on the existing equipment i.e. station transformer and voltage regulator
  - Distribution Work (estimated ~ $1 million) : Replacement of the existing 12kV distribution transformers (e.g. pole top transformers); and other miscellaneous equipment
Radium Substation 12/25kV Voltage Conversion

• Project Staging
  - Replace all 12kV distribution transformers with 12/25kV units
  - Expand the Radium substation to accommodate 25kV bus work
  - Install “69/25kV mobile” transformer; convert all feeders to 25kV
  - Convert existing equipment to operate at 25kV
  - Transfer load to the station transformer; remove “mobile” transformer

• Project Schedule
  - Replacement of 12kV distribution transformers is on-going
  - Station work : Spring/summer 2010
  - In-service : October 2010
Radium Substation 12/25kV Voltage Conversion

Project Contacts
Diane Tammen
Community Relation Manager, BC Hydro
Tel. : 250.489.6862
Email : diane.tammen@bchydro.com
Columbia Valley Transmission Project
Columbia Valley Transmission Project

- Identified in F2008 and F2010 Capital Plans
- Total capital cost (estimate): $78 million
- Necessary to address load growth in the Golden area
- Will also increase reliability in the region
- Four alternative solutions identified
- Will require Certificate of Public Convenience and Necessity (CPCN) from BC Utilities Commission
- Will require tenure from Integrated Land Management Bureau (ILMB) for right-of-way and new substation over Crown Land
Columbia Valley Transmission Project

Alternatives

• Transmission line from Mica to Golden
  - O/H via Goldstream Substation
  - Submarine Cable and O/H via Beaver River Substation

• O/H Transmission line from Revelstoke to Golden via Goldstream Substation

• Local Generation
  - Run of River
  - Hydro (Storage/Pump-storage)
  - Biomass
  - Geothermal

• Transmission line from Invermere to Golden
Columbia Valley Transmission Project

Transmission line from Invermere to Golden

- Leading alternative (138kV or 230kV)
- More accessible for construction and maintenance
- Expected to be a lower cost solution
- Travels a shorter distance (~ 130km)
- Lowest terrain and weather hazards
- Expected to be more reliable among alternatives
- Improves reliability to communities in the region
Columbia Valley Transmission Project

Next Steps - Community Consultation

• Will focus on route definition and substation location
• Involve communities between Invermere and Golden
• Involve community and environmental groups
• Couple of rounds of community open-houses beginning in spring 2009
Columbia Valley Transmission Project

Project Schedule

- First Nations consultation: December 2008
- Environmental studies: March 2009
- Community consultation
  - Project introduction meetings: January 2009
  - Community Open-house # 1: April 2009
  - Community Open-house # 2: June 2009
- File CPCN Application: October 2009
- Commence construction: Spring 2011
- In-service: October 2012
Columbia Valley Transmission Project

Project Contacts

Deepak Anand  
Project Manager  
Tel. : 604.699.7241  
Email : deepak.anand@bctc.com

Judy Dobrowolski  
Community Relations Coordinator  
Tel : 604.699.7646  
Toll free : 1.866.647.3334  
Email : judy.dobrowolski@bctc.com  
Web : www.bctc.com
Questions?