

INTERIOR TO LOWER MAINLAND TRANSMISSION PROJECT

WHAT IS CONDUCTOR STRINGING?

Transmission conductors are the sets of wire attached to the towers. They carry electricity to and from the substations. Once the towers are erected, the contractor installs the necessary hardware for the conductors on each tower. On this project, installing the hardware is mostly done by helicopter. There will be three sets of conductors at each tower and each set comprises four conductors. That is over 2,960 kilometres of conductor which is approximately the same distance as flying from Vancouver, BC to La Paz, Mexico.

Once the hardware is installed, the contractor strings preliminary lines that are lighter than the conductors from tower to tower. This is typically done by helicopter. Then, using a ground-based pulley system, the conductors from large cable wheels are attached to the preliminary lines and pulled into place. Conductor ends will need to be joined with the use of an implosive connector, which is a metallic sleeve with a small charge in it that fits around the conductor ends. Using safe and controlled methods the sleeve is detonated joining the conductor ends together. This split-second process creates a flash with smoke and a bang similar to fireworks.

Once the conductors are strung, they are tensioned and clipped into place to maintain the required distance between the conductors and the ground for safety and optimal performance. The transmission line is then inspected to ensure it meets all necessary standards and BC Hydro requirements prior to being put into service.



Helicopters flying in preliminary line.



Crews working on the new conductors.



View of conductors and implosive sleeves prior to implosion.

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FALL 2014 PROJECT UPDATE

Construction of BC Hydro's Interior to Lower Mainland (ILM) Transmission Project continues. Planned to be in service by late 2015, the new 247 kilometre 500 kilovolt transmission line between Merritt and Coquitlam will enable more electricity to be delivered from areas where it is generated — in the Columbia and the Peace regions — to the Lower Mainland and Vancouver Island, ensuring that homes and businesses continue to receive clean and reliable electricity.

In the spring of 2014, after careful evaluation and consideration, BC Hydro decided to construct a section of the ILM project using internal resources. This section, an approximately 19 kilometre stretch near Spuzzum, is one of the most exciting and challenging of the entire ILM project as it involves five major crossings — two railways, a river, the Trans-Canada Highway and an existing transmission line. By BC Hydro undertaking this section of work, the overall project schedule can be optimized to meet the scheduled in-service date.

Current construction activities vary along each section of the project (see the project schedule for more details). In some sections, activities include tree clearing, which will include burning wood debris piles this fall and winter; right-of-way access road improvements; and installation of tower foundations. In other areas contractors are assembling and erecting towers; stringing conductors (transmission line); and completing a new 500 kilovolt series capacitor station near Ruby Creek. Equipment at a capacitor station helps to maintain the voltage in the transmission line, allowing the line to carry more electricity. Work is in progress at the Meridian Substation and the upgrades at the Nicola Substation are complete.



View of the Ruby Creek Capacitor Station.

If you'd like to learn more about the ILM project, please visit bchydro.com/ilm

QUESTIONS?

Please contact us at:

Phone: 604 623 4472

Toll-free: 1 866 647 3334

Email: stakeholderengagement@bchydro.com

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BC Hydro 
FOR GENERATIONS

THE ILM PROJECT'S CONTRACTOR IS MAKING PROGRESS ON A NUMBER OF KEY COMPLETION MILESTONES:

- Clearing of the right-of-way is scheduled for completion in October.
- Tower foundations are scheduled for completion in November.
- Tower erection is 43% completed.
- Stringing of the conductors (the line) is 8% completed.

Overall completion of the project is at approximately 63%.

THE ILM PROJECT INCLUDES:

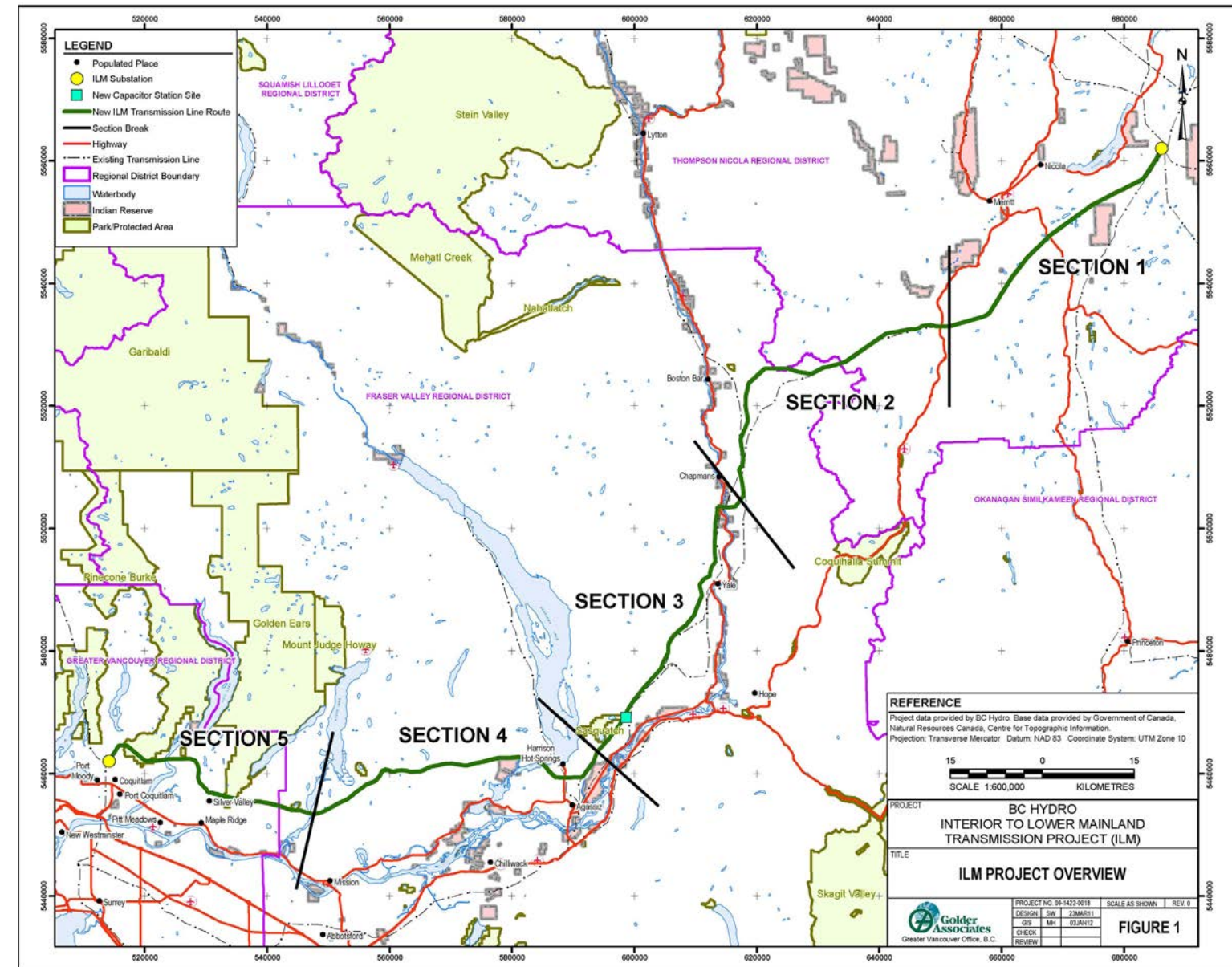
- A new 247 kilometre 500 kilovolt (kV) transmission line between two existing BC Hydro electrical substations — Nicola Substation near Merritt and Meridian Substation in Coquitlam
- A new series capacitor station near Ruby Creek on BC Hydro-owned property
- Upgrades to the Nicola and Meridian substations

TRANSMISSION LINE CONSTRUCTION SCHEDULE AS OF SEPTEMBER 2014

Section	1	2	3a	3	4	5
	Nicola Substation to Salem Creek Logging Road	Salem Creek Logging Road to Spuzzum	Spuzzum	Spuzzum to Hicks Creek	Hicks Creek to Stave Falls	Stave Falls to Meridian Substation
Right-of-way preparation, including land surveys, upgrading existing and constructing new access roads as required, vegetation/tree clearing, equipment set-up	Late June 2012 to July 2014	Late August 2012 to September 2014	August 2013 to September 2014	Mid-May 2012 to September 2014	Mid-September 2012 to October 2014	Mid-September 2012 to September 2014
Construction of transmission line, including installing foundations, constructing towers and stringing conductors	Mid-October 2012 to December 2014	Mid-July 2013 to October 2015	July 2014 to July 2015	November 2013 to August 2015	Mid-September 2013 to November 2015	Late October 2012 to March 2015
Right-of-way restoration begins	March 2015	April 2016	July 2015	October 2015	March 2016	May 2015

This schedule is subject to change.

ILM PROJECT MAP



For construction management purposes, the ILM project has been divided into five sections, starting at Nicola Substation.

QUICK FACTS

- The ILM project is the largest expansion to BC Hydro's 500 kV transmission system in the last 30 years.
- The estimated cost of the project is \$725 million.
- The project includes construction of more than 600 steel transmission towers with an average height of 42.5 metres.
- The new ILM transmission line will be more efficient, reducing the amount of electricity lost in the transmission system, providing enough energy to supply about 80,000 homes each year.