

## Backgrounder: Muskrat Falls Project Progress

Overall, construction on the Muskrat Falls Project is progressing as planned and scheduled. Major milestones were achieved during the first full year of construction and are expected to continue for all components of the project in the 2014 construction year.

### Engineering and Construction

Detailed engineering for the Muskrat Falls Project is substantially complete (>98%) and construction has started as planned on all major work sites for the project, including Muskrat Falls, Soldiers Pond, Churchill Falls, the Strait of Belle Isle, and the transmission routes. Contracts are in place for the majority of work, with all major contract awards expected by the end of 2014.

### Employment and Business Benefits

Significant employment and economic benefits from the Muskrat Falls Project are already being realized across the province, with approximately 85% of the project's workforce from Newfoundland and Labrador and more than \$455 million in expenditures to businesses in the province to date (as of April 2014). Nalcor is adhering to the commitments made in the Benefits Strategy with the Government of Newfoundland and Labrador.

Work on the project is also taking place around the globe at manufacturing sites across Europe, Asia, North and South America, to ensure the best value and quality is achieved for the project.

### Project Financing and Federal Loan Guarantee

Arrangements to secure the Federal Loan Guarantee, long-term debt financing and equity financing were successfully completed in December 2013. Achieving this milestone provides certainty with respect to how the Lower Churchill Project will be financed and the costs of this financing over the next 40 years. The loan guarantee will result in projected savings of over \$1 billion in interest costs for ratepayers and contribute to stable electricity rates for consumers in the province.

### Muskrat Falls Hydroelectric Generating Facility

- Fabrication and manufacturing of the turbines and generators is progressing ahead of the planned schedule. The quality is good and we have teams on the ground confirming this.



*Aerial view of the Muskrat Falls construction site*

- The roller compacted concrete (RCC) and rock fill cofferdams were successfully completed on schedule in 2013. The completion of this work was essential to provide protection of the excavated powerhouse and spillway area from elevated river levels caused by ice in the Churchill River during winter.
- Reservoir clearing is progressing ahead of schedule.
- Required site infrastructure, such as the accommodations complex, dining hall and administrative buildings, has been established to support construction at Muskrat Falls.
- The main civil works contractor, Astaldi Canada, began mobilizing to site as anticipated at the end of 2013. Astaldi started formwork/concrete placement in the spillway in June and is preparing for major concrete placement and constructing formwork for the Powerhouse cover system.
- North Spur work is progressing as planned.



*Horizontal directional drilling in the Straits*

**Labrador-Island Link and Strait of Belle Isle marine cable crossing**

- Successfully completed horizontal directional drilling (HDD) for three boreholes on the Newfoundland side of the Strait of the Belle Isle for the marine cable crossing. Drilling has started in Forteau on the Labrador side, with all boreholes expected to be complete this summer, well in advance of the required date.
- Manufacturing of the subsea cables is underway and ahead of schedule with type testing well advanced and showing positive results.
- Construction activity for the new switchyard, converter station and synchronous condenser facility at Soldiers Pond on the Avalon Peninsula began in April 2014. Approximately 70-80 people are working at Soldiers Pond to carry out site development and preparation for construction of the new electrical infrastructure.
- Clearing work on the HVdc transmission line is now underway.



*HVAc transmission tower undergoing testing*

## Labrador Transmission Assets

- Transmission line construction between Muskrat Falls and Churchill Falls is underway. The first foundation for the transmission towers was installed in mid-June.
- Almost all of the material for the HVac line has arrived in the marshalling yard in Labrador and is now being forwarded to the contractor.
- Equipment for the Labrador Transmission Assets was delivered to Happy Valley-Goose Bay on schedule and available for use by contractors.
- At Churchill Falls, necessary infrastructure has been established, and earthworks and construction on transmission infrastructure is underway and progressing as planned.