



JOHN HART GENERATING STATION REPLACEMENT

PROJECT DESCRIPTION

In 2014, BC Hydro contracted InPower BC (a special purpose SNC-Lavalin project company) to carry out the design, construction, financing, testing, commissioning, maintenance, and life cycle rehabilitation of the John Hart facility, and the decommissioning and disposal of designated portions of an existing BC Hydro facility and associated remediation.

The existing John Hart Generation facilities were in commercial operation since 1947. The new infrastructure replaces the original 126-MW station and increases capacity to 132-MW, representing approximately 17% of total generating capacity on Vancouver Island. New infrastructure includes three 1.8-km penstocks with a tunnel and construction of an underground replacement generating station, a new water intake, and a new water bypass facility.

The new facilities also incorporate an Environmental Flow Release System, which provides a continuous environmental flow of 4 - 10m³/s into the Spillway channel and a Low Level Outlet system capable of passing at least 124m³/s after a Maximum Design Earthquake event at Drawdown Operating Conditions.

PROJECT INFO

| | |
|-----------------------|---------------------|
| Client | BC Hydro |
| Capital Cost | CAD \$1.09 billion |
| Contract Value | CAD \$697.9 million |
| Location | Campbell River, BC |
| Duration | 2014-2019 |

WORKING WITH FIRST NATIONS

SNC-Lavalin worked with the North Vancouver Island Aboriginal Training Society to help assist 104 local First Nations people to gain employment on the project. Some of the achievements included employing a local First Nation member, Mackenzie K., in a work placement as an environmental biologist:

“Since I’ve started, I have had the opportunity to work with some incredible people. Though I work mainly for SNC-Lavalin and their environmental staff, I have had the opportunity to work with Safety, Quality, and some of the independent monitors like Mainstream Biological Consulting. I have gotten to see the physical project in its entirety and had the opportunity to see bits and pieces of it from all different aspects like Safety and Quality as well as Geotechnical. SNC-Lavalin has provided me with a company car and a network of supervisors and co-workers should I ever have any questions or be unsure of something.”

Mackenzie K. John Hart Project - Third year environmental biologist student.

During the project, we engaged with the We Wai Kai First Nation of the Cape Mudge Indian Band, Wei Wai Kum of the Campbell River Indian Band, and the K’omoks First Nation to achieve First Nations economic development and engagement.

SNC-Lavalin delivered a number of First Nations consultations in the region with BC Hydro as part of the overall project First Nations Services Delivery Plan, which was produced as part of the Project Agreement 30 days after the contract execution date. It included commitments to:

- › Provide training and education funds and economic development opportunities related to the project;
- › Manage the strategy, planned activities, timetable, and scope of commitment that supported and facilitated SNC-Lavalin, project contractors, and subcontractors complying with BC Hydro’s Aboriginal Contract and Procurement Policy and First Nations Requirements;
- › Regularly report the status of SNC-Lavalin’s compliance with and performance toward meeting First Nations Requirements;

Working with Indigenously-Owned Businesses

During project excavation, approximately 300,000m³ of waste rock was removed. We consulted the First Nations and one of them decided to take the rock. This led to a project-direct award, through a First Nation joint venture with A Woods Contracting, to truck the rock off-site. The 1.1 million tonnes of rock was trucked from the site and used by First Nations to pursue other economic opportunities.

As part of the Project Agreement, SNC-Lavalin had a responsibility to make available to the K'omoks First Nation the opportunity to provide services during the construction period in the aggregate total of CAD \$3 million in revenue. Project work included areas such as facility security services, safety management, first aid support services, and traffic management. Throughout the project SNC-Lavalin was able to exceed this target, and as of December 2018 had provided \$34.8 million worth of procurement and service opportunities to the K'omoks First Nation.

By the end of 2018, the contractor and subcontractors had bought goods and services worth CAD \$6.3 million from the We Wai Kai and \$34.8 million from the K'omoks.

Indigenous Employment

In addition to working with indigenously-owned businesses in the area, SNC-Lavalin (directly and through its subcontractors) employed First Nations people, including environmental technicians, drivers, labourers, first-aid attendants, carpenters and carpenter apprentices, traffic controllers, administrative clerks and their assistants, machine operators, student engineers, electricians and electrical apprentices, cement masons, miners, various journeymen, mechanics, scale operators, bridgemen, and a project manager. The table below summarizes aboriginal person-hours employed directly by the project and subcontractors.

TABLE 1: ABORIGINAL PERSON-HOURS ON THE JOHN HART PROJECT

| FIRST NATION EMPLOYED | CUMULATIVE PERSON-HOURS AS OF DEC. 31, 2018 |
|---|---|
| Wei Wai Kum First Nation, Campbell River Indian Band | 15,476 |
| We Wai Kai First Nation, Cape Mudge Indian Band | 35,035 |
| K'omoks First Nation | 11,256 |
| Homalco Indian Band | 1,488 |
| Other | 52,443 |
| Total | 115,698 |

Indigenous Training, Mentorship, & Development Opportunities

Education, training, and mentorship opportunities are crucial to maintaining positive and lasting relationships and contributing to the development of the communities we work in. On the John Hart Project, we provided more than 5,603 education and training hours to First Nations employed on the project.

TABLE 2: FIRST NATIONS EDUCATION, TRAINING, AND MENTORSHIP HOURS ON THE JOHN HART PROJECT

| FIRST NATION | TYPES OF TRAINING/CERTIFICATION | TRAINING HOURS |
|--|--|------------------|
| Wei Wai Kum First Nation, Campbell River Indian Band, and We Wai Kai, Cape Mudge Indian Band | Project HSE orientation, safety orientation, tunnel safety, confined space, new worker, site safety, driver, fit test, fall protection, site safety, safe start 1 & 2, circular saw safety, compound miter saw safety, underground mine refuge, and MineARC refuge | 385 hours |
| K'omoks First Nation and Homalco Indian Band | Project HSE orientation, fall protection, safe start 1 of 5, confined space, and fit test | 42 hours |
| Other First Nations | Project HSE orientation, underground mine refuge, safe start 1 of 5, fall protection, and fit test | 136 hours |
| Total | | 463 hours |

AWARDS

John Hart is a groundbreaking hydropower project on Vancouver Island, receiving accolades from the community and industry for its environmentally friendly and sustainable features and is Canada's first public-private partnership (P3) of a design-build-finance-rehabilitate hydroelectric project of this size and complexity. We have received the following awards for our work on this project:

- › **In 2019**, SNC-Lavalin won the Award of Excellence from the Association of Consulting Engineering Companies British Columbia (ACEC-BC);
- › **In 2018**, SNC-Lavalin and BC Hydro won the "Outstanding Project" award from the Canadian Hydropower Association for the John Hart Generating Station Replacement Project; and
- › **In 2018**, SNC-Lavalin won the Innovation Project of the Year from the Tunnel Association of Canada.