

Peace River Generating Stations Projects Update



Construction of the intake tower – that passes water through the dam to the generating station - at Gordon M. Shrum (GMS) Generating Station in 1967.

Located on the Peace River, near Hudson's Hope, are two of BC Hydro's largest generating facilities: Gordon M. Shrum (GMS) and Peace Canyon (PCN). The GMS Generating Station and nearby Peace Canyon Generating Station supply a large amount of power to all of British Columbia, playing an important role in our hydroelectric system.

To ensure continued reliable, affordable and clean power, a number of projects are underway, or will start soon, at the generating stations. These projects are part of our investment of over \$2 billion per year to upgrade our aging assets and build new infrastructure. The electricity we generate and deliver to customers throughout the province powers our economy and quality of life.

PCN Protection Upgrade Project

To ensure increased reliability and system stability, we'll be upgrading the protection and control equipment for PCN generating units 1 to 4. The current electromechanical systems, which were installed in the 1980s, are past their useful life and will be replaced with modern, state-of-the-art systems. The work will include installation of new digital protection and control panels for the generator exciter and transformer systems.

There are two stages for equipment replacement timed to fit with annual maintenance schedules; the construction for generators 3 and 4 started in April 2019 and will be completed this year, and construction for generators 1 and 2 is planned to start in March 2020.

VISITOR CENTRE

**W.A.C. Bennett Dam – open until
September 2**

The W.A.C. Bennett Dam is one of the world's largest earth-fill structures. It holds back the Williston Reservoir, which is so large that it can be seen from space. To enjoy the spectacular view, we welcome you to our visitor centre.

It offers fun and educational exhibits that showcase dam construction, wildlife in the area, how we turn water into electricity, and a First Nations Gallery.

bchydro.com/visitorcentres

GMS G1-10 Control System Upgrade

We're replacing unit controls for generating units 1 to 10 and retro-fitting governors for generating units 6 to 10. These control the water flow through the turbine to regulate the shaft speed of the generator. Also due for replacements are the exciters for generating units 9 and 10 – these control the current through the generator field winding to regulate the output voltage of the generator.

Additionally, we'll update controls for intake systems; controls for plant auxiliary systems; GMS plant central control room; and remote operation controls for GMS and PCN generating stations. When completed in 2024, Site C Generating Station will also be controlled from GMS as part of this upgrade.

Upgrade work has been completed for generating units 1 to 5 and generating units 9 and 10. The unit controls upgrade and governor retrofit work for generating unit 6 is scheduled to be completed in October 2019. All upgrade work for this project is expected to be completed by mid-2023.

GMS HVAC System Upgrade

At GMS, we'll be upgrading the 50-year old heating, ventilation and air conditioning (HVAC) system. The HVAC system provides conditioned air to building occupants and temperature regulation for generating equipment.

Targeted replacement of components of the current system is expected to improve reliability, maintainability and safety, and is currently planned to take place between 2022 and 2023.

PCN HVAC System Upgrade

At PCN, we're also strategically upgrading the HVAC system as the heating, cooling and ventilation needs aren't being efficiently met by the existing system. Major components need to be replaced and this work is being sequenced after the GMS HVAC project to enable transferring of lessons learned.

We're planning for construction at PCN between 2024 and 2025.

GMS G1-5 Exciter Transformer Replacement

Exciter transformers are necessary to power the exciters which control the magnetic field in the generator and the output voltage. The exciter transformers in generating units 1-5 needed to be replaced.

Exciter transformers for units 1 and 2 were replaced in 2018 and units 4 and 5 this year, with unit 3 scheduled for replacement in August 2019.

Looking for Site C Project Information?

Please visit: sitecproject.com

Please contact BC Hydro Community Relations at **250 561 4858** or bob.gammer@bchydro.com, or BC Hydro Indigenous Relations at **604 528 3290** or anne.pigott@bchydro.com for more information on the above projects.



An exciter transformer being installed at GMS.



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