

Neighbours

Ranney Falls
Generating Station



A recent photo of the redeveloped Ranney Falls GS site, located in Campbellford, ON.

Ranney Falls Generating Station Unit 3 Project Update

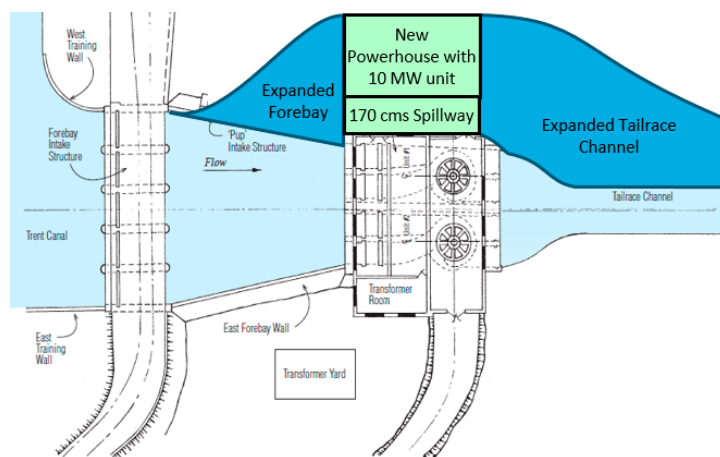


Ontario Power Generation (OPG) would like to provide a community update about our Ranney Falls Generating Station (GS) Unit 3 Redevelopment Project. Once completed the brand new generating unit will be housed in a newly constructed powerhouse, doubling the total station capacity from 10 to 20 MW. This increase will generate enough electricity to supply up to 10,000 homes with clean, renewable power.

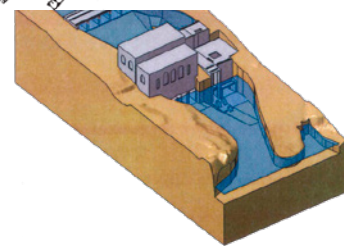
The new powerhouse sits adjacent to the existing original main powerhouse building, which houses the two original 4.8 MW units which were upgraded in 2005.

Although we were anticipating the successful completion of the project this fall, OPG's project contractor recently experienced a technical issue with the unit during final commissioning.

OPG is working with the contractor to resolve the issue, and establish a path forward for a safe and successful install and commissioning in 2021. To resolve the issue, the generator itself will need to be removed from the powerhouse and taken off-site for repair. OPG is committed to the successful completion of this hydroelectric project.



The above engineered drawing provides a concept view of the newly expanded Ranney Falls GS. The expansion of the forebay and headpond, and newly developed spillway have been completed providing significant improvements to water management and spill capacity at the site.



Although the unit commissioning has been delayed, many benefits from the project are already being realized including added flexibility with a new state-of-the-art spillway and expansion of the forebay and tailrace channels.

Ranney Falls GS Redevelopment Project Highlights and Benefits

Below is a summary of the benefits of the project work completed to date:

- A newly constructed powerhouse for the new generating unit;
- Expansion of the forebay and tailrace significantly improving water management capabilities;
- A newly constructed state-of-the-art remotely operated spillway structure to bypass the full station flow to the tailrace channel in emergency situations. This further improves waterway management flexibility at the station while maintaining compliance with Parks Canada's current water management requirements;
- Expansion of new habitat for the Northern Map Turtle; and,
- The creation of a new pollinator garden in partnership with the Municipality of Trent Hills and the Trent Severn Waterway.

OPG and its contractors would not have been able to complete this significant work without the unwavering support of the community, our neighbours, regulators and contract partners throughout the project.

"Parks Canada and members of its Trent Severn Waterway (TSW) team were pleased to support OPG in its effort to bring more green energy to Ontario through its hydro power expansion project at Ranney Falls. Irrefutably this has been a challenging and complex project to execute given the importance of protecting the cultural heritage attributes of the TSW National Historic Site while concurrently accounting for navigational considerations and the imperative of mitigating negative impacts on the environment. Through its development protocols and practices, as well as its ongoing environmental compliance and mitigation efforts, OPG has demonstrated that it is a responsible hydro power developer and partner of the Parks Canada Agency (PCA). Congratulations to OPG and all of the contributing stakeholders and PCA team members on the advancement of this significant multi-year project which will undoubtedly serve to provide the province with a source of clean energy for decades to come following its completion in the coming months."
- Calvin Mercer, Director of Water Power, Parks Canada Agency.

Benefit to the Local Economy



- Over 25 million dollars spent locally to support the project construction between 2017 and 2020.
- Worked hours for civil construction was about 250,000 hours in 2017, 2018, 2019. This consists mainly of labour and skilled trade work force hours from Peterborough and adjacent union halls for the Building Trades Union (BTU) members.
- Number of contract workers per day during the peak of construction was about 70 people.
- Local spending also included a supply of 11,000 cubic metres of concrete from a local supplier located 12km away from the site.
- Supply of services and material from local vendors in Campbellford and Peterborough areas, such as hotels, accommodation, local material suppliers and local garages.
- Crane companies from Peterborough area were utilized at site.
- Hauling of excavated rock and concrete required 34,000 truckloads using local trucking and hauling and facilities.

Once the redevelopment project is complete, it ensures Ranney Falls will continue to produce clean, renewable hydroelectric power along the Trent River for Ontarians well into the 22nd century. Hydroelectric generating stations are crucial to the electricity system because they can provide renewable energy on demand when it's needed most



MPP David Piccini, Northumberland—Peterborough South, toured the site, to see both the original units and the new powerhouse.



Municipality of Trent Hills Mayor Bob Crate, pictured left, poses in front of the newly developed Ranney Falls GS with Project Manager, Iskander Boulos (retired), from the Ranney Gorge Suspension Bridge.

A Tribute to the Past



The newly constructed powerhouse, pictured right, includes rose-coloured masonry stone to match the existing adjacent powerhouse stone installed in 1922.



A Project with an Environmental Focus



Protecting northern map turtles:

OPG has enhanced the overall environmental footprint at the Ranney Falls GS site by expanding and creating new habitat for northern map turtles, an endangered species in Ontario. A mitigation plan was developed by OPG in conjunction with the Trent-Severn Waterway and Environment Canada one year prior to construction. The advance work ensures the turtles are able to return to the place they are born to lay their eggs. A new fence was installed in 2015 to protect the northern map turtle, along with other local turtle species that live in close proximity to the Ranney Falls GS site.

Pictured right is a northern map turtle laying its eggs at the newly expanded turtle habitat downstream of Ranney Falls GS.



The area pictured above, including fencing, is one of two locations that OPG worked together with our partners to mitigate the impact on the northern map turtles natural habitat.

New pollinator garden:

OPG's Ranney Falls redevelopment project team worked in collaboration with the Trent-Severn Waterway and the Municipality of Trent Hills to promote the municipality as a Bee Friendly community. "The team worked together on a Pollinator Partnership to create a pollinator garden adjacent to the Trent Canal to attract bees and butterflies," says Gillian MacLeod, OPG Senior Environmental Advisor for the project. Pollinator habitats are areas that provide foraging, breeding, and refuge for many species of insects, birds, and mammals. Pollinators are also beneficial to local farm productivity as well. "At OPG we are always looking to mitigate and manage impacts." MacLeod said.



Representatives from OPG, the Trent-Severn Waterway, and the Municipality of Trent Hills are working together to plant the new pollinator garden.

The pollinator garden features many plant species including the wild columbine, pictured upper right, and sweet oxeeye, pictured lower right.

A Brief History of Ranney Falls GS

Ranney Falls GS is located in the Town of Campbellford on the Trent-Severn Waterway, which is about 41 km east of the City of Peterborough.

Ranney Falls GS was the seventh of a chain of generating stations supplying power for Ontarians from the Trent River. The main powerhouse, with two original 4.8 MW units, was placed in service in 1922. The site had a secondary powerhouse with a third smaller 0.8 MW generating unit, known as the “Pup”, which was placed into service in 1926.

The Trent Canal system’s history began with the construction of the first lock in 1833 to connect small pioneer settlements. The canal further contributed to the lumber trade industry of the local district through the extensive use of log slides. From 1895 to 1918, additional sections of the canal were built to provide a through route. Today, the Trent Canal is of significant importance for electricity generation. The historic locks and canals also serve to create unique experiences for boaters and tourists.



A collection of historic photos during construction of the original generating station powerhouse in 1922, and after the addition of the Unit 3, known as Pup, in 1926.

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