KEEYASK

Project Manager Update



2020 SUMMARY EDITION

A publication on behalf of Manitoba Hydro as the Keeyask Project Manager

Keeyask responds to the worldwide pandemic

This has been a year unlike any other in recent memory; the "normal" significant challenges of constructing a mega-project in the North was compounded by the worldwide pandemic. We entered the year with a lot of positive momentum gained from a successful 2019 construction season and in March the world and our project encountered the COVID-19 virus.

The Keeyask Project continues to operate with the safety and well-being of our entire workforce as a first priority and this continued as we collectively navigated through COVID-19. Our primary goal was to reduce the risk of the COVID-19 virus coming to site, spreading around the workforce, and possibly spreading to and from the surrounding communities.

Manitoba Hydro and Keeyask workers were not alone in managing the response to COVID-19. Every step of the way we were following the advice and guidelines of the provincial health authorities and setting up and maintaining working relationships with staff at all levels and in the relevant regions of Manitoba Health, Seniors and Active Living. Further, there were weekly meetings with the KCNs to review response plans and coordinate procedures.

Our response to COVID is the ultimate team sport and we are all dependent on one another as we manage its spread together. COVID has required everyone to sacrifice something and at Keeyask our workforce has risen to this challenge. There are two instances that emulate this. First, when the site went into

lockdown in March, 700 workers volunteered to forgo time off and stay at the site continuing the work for a 6-8 week period – being away from home, family, and friends. In the end, a few workers were even at site for more than 100 days.

Secondly, when the outbreak in late October occurred, and the project had to implement stricter measures, the workers at site responded and following the increased measures as well as the process to test, isolate and trace, we were able to control the outbreak very quickly and effectively.

A big thank you to everyone and your families for your efforts in 2020. As we look ahead into 2021, The reality is we will be battling COVID-19 at Keeyask as long as the virus continues to circulate in our country. Our response plan will continue to follow the process to test, isolate, contact trace, and repeat as often as necessary. Measures at site will continue to be adapted to the COVID situation to support continuing the work safely. Most importantly, we will continue to work together, to advance our Keeyask Project.





Major milestones achieved in the face of a challenging year

2020 was a big year for the Keeyask Project. The primary focus shifted from concrete and earthworks, to installation of the turbines & generators and balance of plant systems. Some of the major milestones planned and completed in 2020 included:

- Water-up of the Intake and Tailrace, which began in late February 2020 and was completed on April 12.
- All major concrete placements in the Powerhouse were completed in late April. Minor concrete work will continue.
- The assembly of Unit 1 was completed and turned over to Manitoba Hydro for commissioning on April 30.
- Impoundment started on August 31

 following the close of the Migratory
 Bird Act window and was completed
 on Sept. 5. All water retaining
 structures are holding up to the final water levels as planned.
- Unit 1 commissioning began on August 31 with the turbine being turned by water pressure for the first time.
- Continuing to progress construction despite the on-going challenges presented by the COVID-19 pandemic.

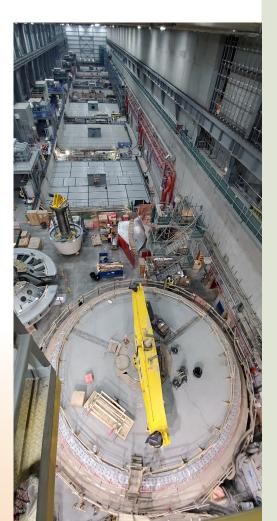
The project team has worked diligently to bring the units on-line as early as possible and have been targeting an October 2020 ISD for the past 2 years. Entering 2020, the previous successful construction seasons provided an opportunity to advance the first unit in-service earlier than October 2020.

Unfortunately, significant challenges were experienced in the first half of 2020 including the COVID-19 pandemic and a blockade of the project site. The impact of these challenges caused commissioning of the first unit not to start until August 31, meaning the opportunity for further schedule advancement is no longer possible.

The commissioning of a generator unit involves a mechanical run - where testing is conducted to check the functionality of the governor and bearings as well as check for unexpected vibrations. This testing discovered vibration issues and the mechanical run was placed on hold; as of early December 2020, a temporary solution was identified to allow commissioning activities to resume.

Despite all of these significant challenges, it is currently expected that the first unit will be brought into service within the first three months of 2021.

The Keeyask Project is currently on track to meet the \$8.7B control budget and a first unit in-service date earlier than the control schedule of August 2021. Manitoba Hydro is committed to find ways to continue to maintain or lower costs as there is still a lot of work and risks remaining.





An important part of marking the progress and changes at Keeyask

Ceremonies at site play an important part in the complete picture that is building Keeyask. On behalf of the partner communities, Employee Retention and Support Services (ERS) conducts ceremonies throughout the year and at particular milestones.

The ceremonies and celebrations remind everyone to be thankful and to appreciate the blessings, gifts, and abundance that we are provided with – and to love, honour, and respect all life.

Due to COVID-19 in 2020, the KCN partners were restricted from visiting site for ceremonies so ERS conducted the celebrations and ceremonies with them in mind; although they could not attend in person, they were there in spirit as the ceremonies were performed.

Some of the ceremonies that were observed in 2020:

- Watering Up February 3, 2020,
- Spring ceremony March 20, 2020,
- Summer Ceremony and
 National Indigenous Peoples Day
 June 21, 2020,
- Impoundment Ceremony
 - August 12, 2020, and
- Fall Ceremony October 30, 2020, amongst other celebrations.

Impoundment is a major milestone completed, but monitoring its effects will continue

Water-up of the intake and tailrace began on February 26, 2020 and was completed in mid-April 2020. As part of this process, areas kept dry during construction were raised to the prevailing water levels on Gull Lake and temporary structures like cofferdams began to be removed.

Reservoir Impoundment at Keeyask started in late afternoon on August 31, 2020 and was completed in five days, reaching a peak water level on Gull Lake



of about 158.92 metres (521.4 feet) late Saturday afternoon, September 5, 2020. Water level data show that there have been no changes in water levels on Split Lake and Clark Lake due to the impoundment of the Keeyask Generating Station reservoir. The rise of water levels upstream – within the expected area – averaged 0.5 metres (about two feet) per day. The water level in the Keeyask forebay (Gull Lake) is within the normal operating range of 158-159 metres (518.4 to 521.7 feet).

It is expected that the forebay water level will fluctuate within this range going forward.

During the impoundment process, Manitoba Hydro and partner First Nations monitoring staff worked together to undertake monitoring activities. Manitoba Hydro will continue to work with the communities to understand and share knowledge of project effects from both Indigenous and technical science perspectives.

Environmental monitoring adjusted or delayed, but continued in the face of challenges

Some of the 2020 Keeyask environmental monitoring studies were adjusted or delayed this year due to the increase in COVID-19 pandemic protocols and restrictions at the Keeyask site and in the local communities; despite these challenges, most monitoring studies were still successfully carried out.



Keeyask environmental monitoring in 2020 included technical science studies on sturgeon and other fish movement; water quality; and the monitoring of caribou and other large mammals, birds, and of wetlands. The partner First Nations continued to implement their ATK monitoring programs, including land-based monitoring and cultural camps, caribou monitoring, monitoring of ice and water level conditions, and heritage activities.

Monitoring in 2020 also included a collaborative monitoring approach by the Partnership - with community monitors and technical science staff working together - during key construction activities. This collaborative activity focused on jointly monitoring caribou, ice conditions, and water levels during winter water-up activities in March and April; and wildlife and water levels during reservoir impoundment in late August/early September.

Leading up to, and during, water-up activities, the Keeyask Caribou Coordination Committee led a caribou monitoring

network – which included observations from partner First Nations members out on the land, ATK monitoring staff, Provincial Wildlife Branch staff, Keeyask site staff, and aerial surveys under the technical science monitoring plans. This effort continued into mid-March, when most of the migratory caribou had moved on from the Keeyask area.

During impoundment, daily helicopter, boat, and truck surveys were done to see if there were any unexpected effects on wildlife and water levels in the area. ATK monitoring staff participated in many of the helicopter surveys and were able to see changes to the landscape firsthand during this major Project event. No unexpected effects were noted during this joint monitoring.

Keeyask environmental monitoring will continue in 2021, and will do so into the station operations. Long-term operations monitoring is planned for key topics including sturgeon and caribou.

Lisa Mayham, Jaimee Cook, Billy Beardy and Justice Stove receive Keeyask Workers' Opportunity Fund bursaries

Congratulations to Lisa Mayham & Jaimee Cook, both community members of Tataskweyak Cree Nation and Billy Beardy & Justice Stove, members of York Factory First Nation, for each being awarded a bursary from the Keeyask Workers' Opportunity Fund (KWOF) in the spring of 2020.

Lisa was completing technical school in Brandon and planned to find work as a Level 3 Ironworker.

Jaimee was attending Yellowquill College in the Business Certification Program - her interest in business inspired by working for her uncle in Split Lake, Manitoba and further developed when at Keeyask, working for Northern Maintenance Services (NMS).





Lisa Mayham, community member of TCN

Working at Keeyask gave Billy the experience to see many different parts of the project – from which he honed his interest in putting things together as an Apprentice Millwright for Voith, working on turbine and generator assembly. Billy was working towards his Industrial Mechanic/Millwright Level 2 certification at University College of the North (UCN) in The Pas.

Justice Stove was working as a Project Cost Clerk in the Finance Department with Sodexo. In May Justice began part time distance learning courses at the University of Manitoba. Justice planned to go to university full-time starting in September of 2020. She would like to major in Sociology and minor in Psychology, to work towards a career in Social Services.

Individuals can apply for the fund through their community Job Seeker Manager, supervisor, KCN site representative, or Manitoba Hydro Site Liaison.





Available in accessible formats upon request.