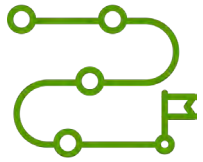
Aishihik Generating Station Relicensing Project

January 2026

With thanks and gratitude

- Yukon Energy recognizes that the project takes place on the Traditional Territory of the Champagne and Aishihik First Nations (CAFN).
- Yukon Energy recognizes that the original construction and continued operation of the AGS has impacted the land and water, as well as traditional ways of life for CAFN Citizens.
- Because of this, Yukon Energy has had, and is having, discussions with CAFN and Yukon government to promote, develop and maintain a positive long-term relationship based on partnership, respect and reconciliation, and to find a better way forward.

Agenda

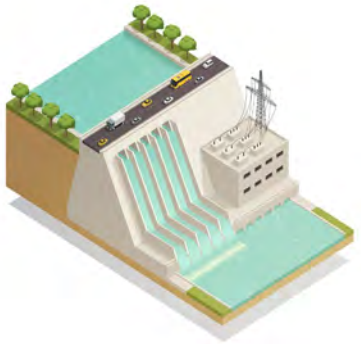


- Introductions
- Electricity in the Yukon
- Project overview
- Working together
- The relicensing process
- Monitoring and studies
- Engagement

Feedback methods

- Today:
  - Ask questions or provide comments
- Other methods:
  - Yukonenergy.ca/aishihik
  - AGSRelicensing@intergroup.ca

Electricity in the Yukon



Generation

Transmission

Distribution

User

yukon energy
the power of yukon

ATCO Electric
YUKON

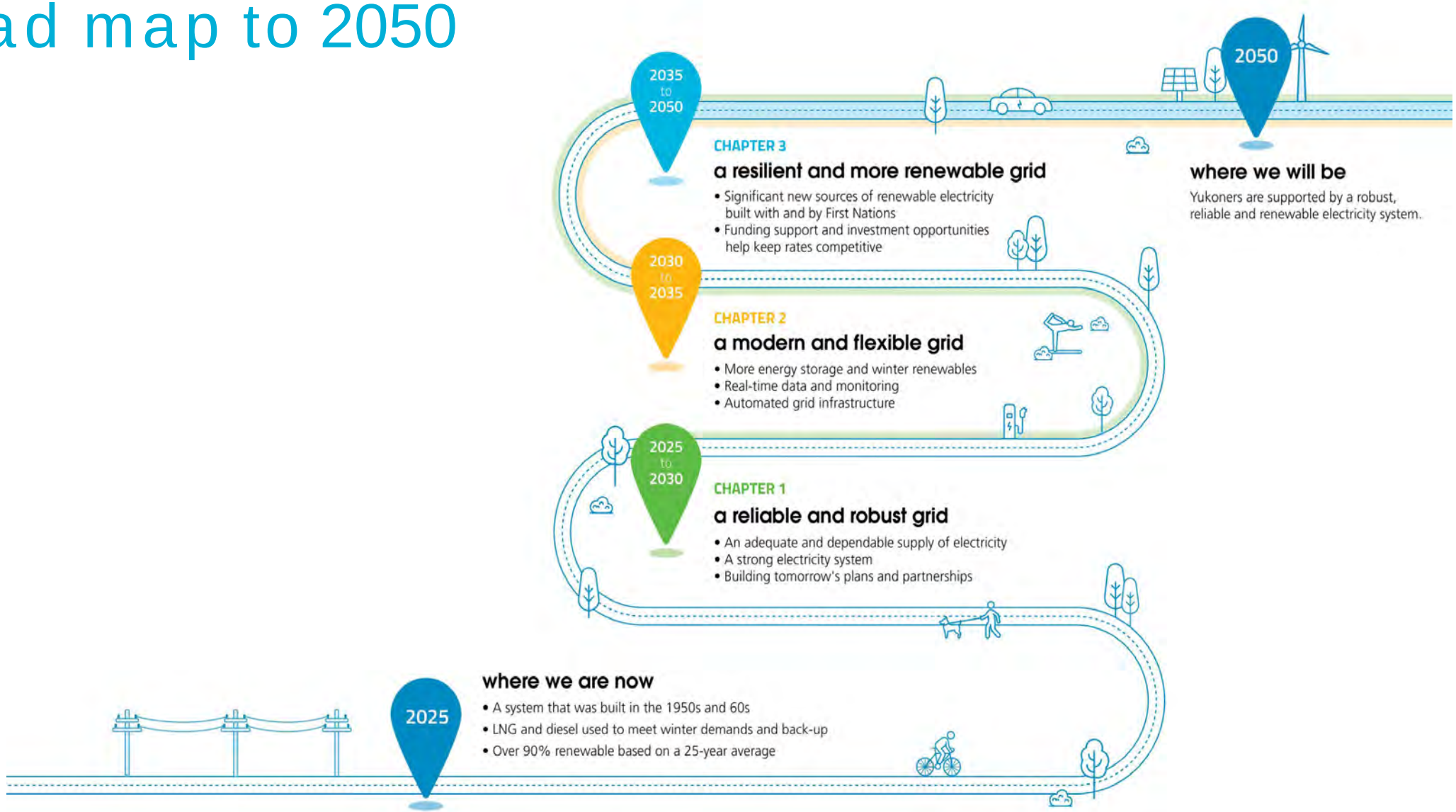
yukon energy
the power of yukon

The Yukon's electricity grid

On 25-year average, **over 90% renewable**

Our vision for the future

a road map to 2050



The need

This relicensing project will help us to:

Meet growing electricity demand reliably across the Yukon

+ 40 % increase

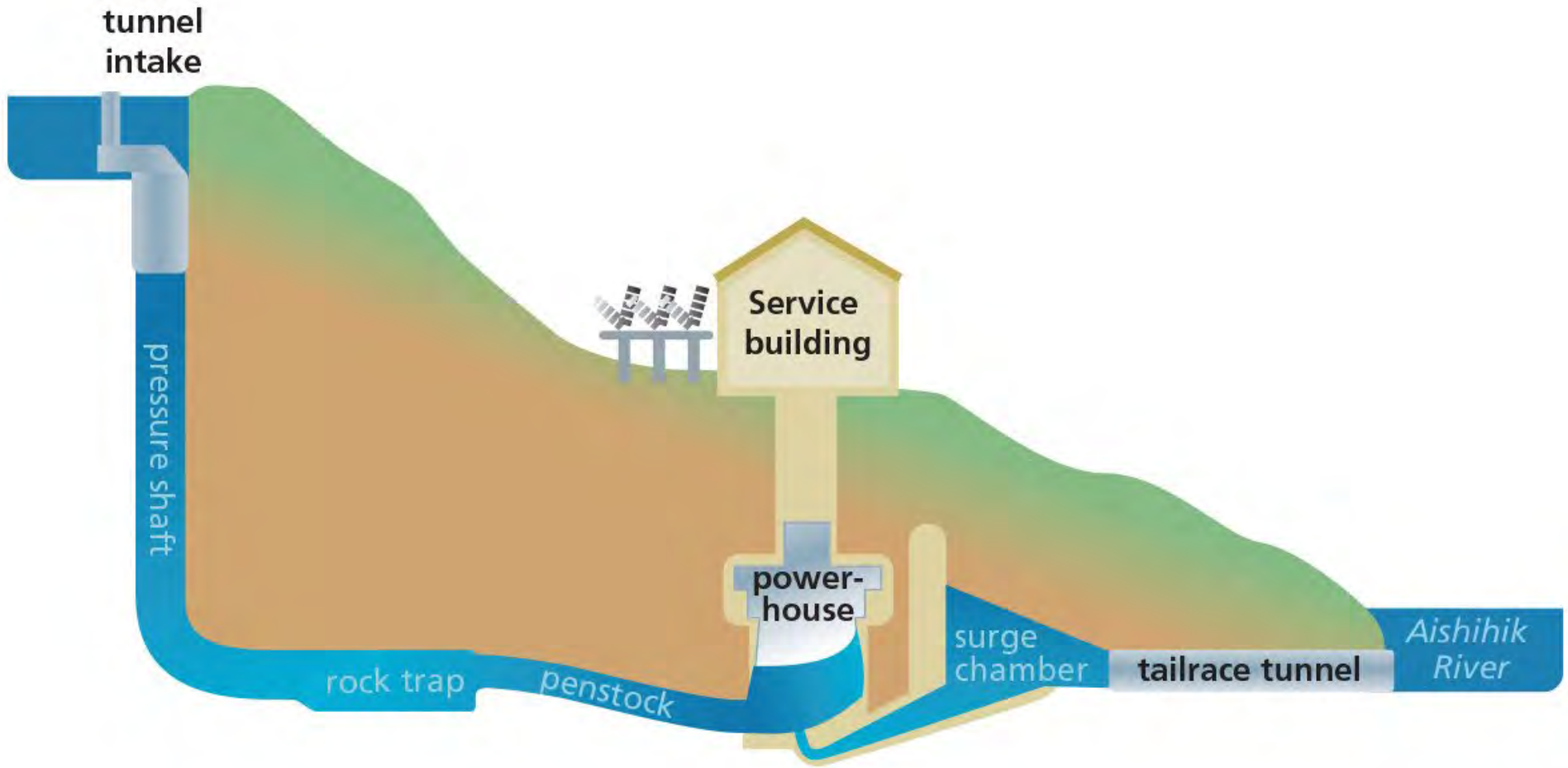
in demand between 2020 and 2030

*Yukon Energy will use a mix of generating assets to meet growing demand. Yukon Energy will continue to operate the Aishihik Generating Station within its licence terms.

Project overview

A video overview of the Aishihik Generating Station is available here.

Aishihik Generating Station



AGS Contribution to Yukon's Electricity System

30-40%

In the winter

Project Overview

2022:

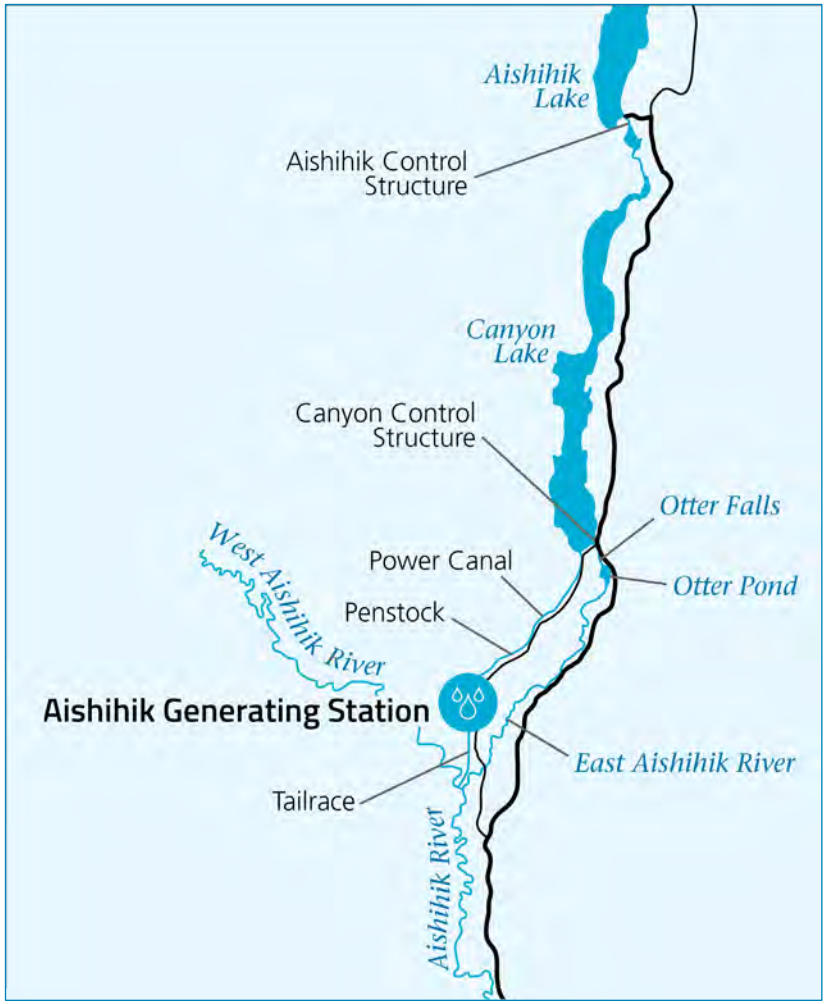
- Yukon Energy granted a 5-year water use licence

Today:

- Seeking 25-year renewal of water use licence that expires December 31, 2027.
- New Fisheries Act Authorization (FAA)

Ongoing:

- Monitoring and adaptive management



What's in Yukon Energy's 5-year water use licence now

STORAGE RANGE

- The full supply levels and low supply levels of Äshèyi Män/Aishihik and Ädäts'ür Män/Canyon lakes
- 10-year rolling average on Äshèyi Män/Aishihik Lake

OPERATING RESTRICTIONS

- Minimum flows downstream of the two control structures
- Nadedlin/Otter Falls flow restrictions/timing

DAM SAFETY

- Annual dam safety inspections
- Facility and infrastructure maintenance

ADAPTIVE MANAGEMENT AND MONITORING

- Yukon Energy's day-to-day work which includes environmental monitoring & responding to changing climate

What is Yukon Energy proposing in its new licence?

- 25-year licence term
- Continued monitoring and adaptive management

Working together

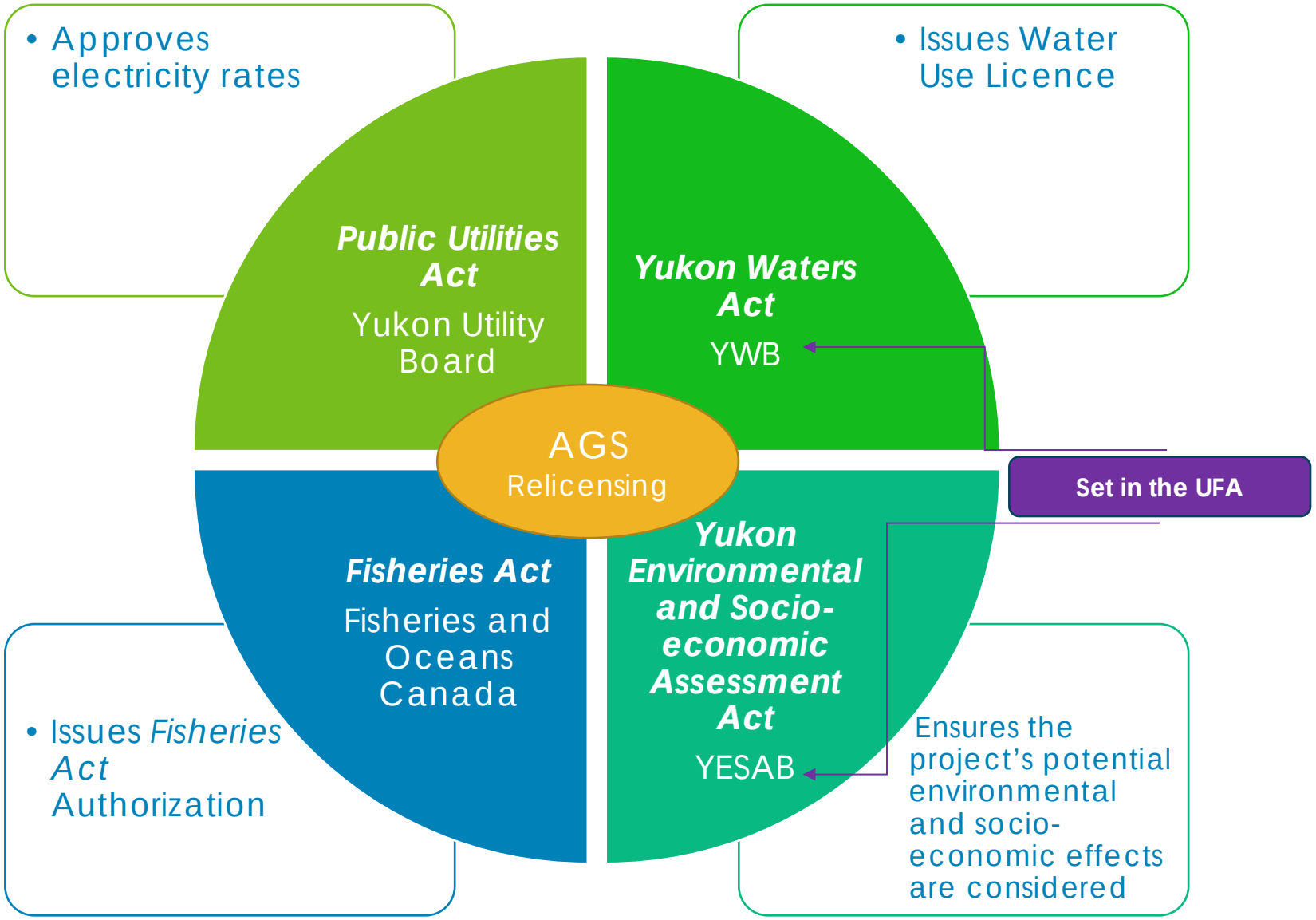
Working together

Yukon Energy, Champagne and Aishihik First Nations and Yukon government working together to implement Monitoring and Adaptive Management Plan and relicense facility

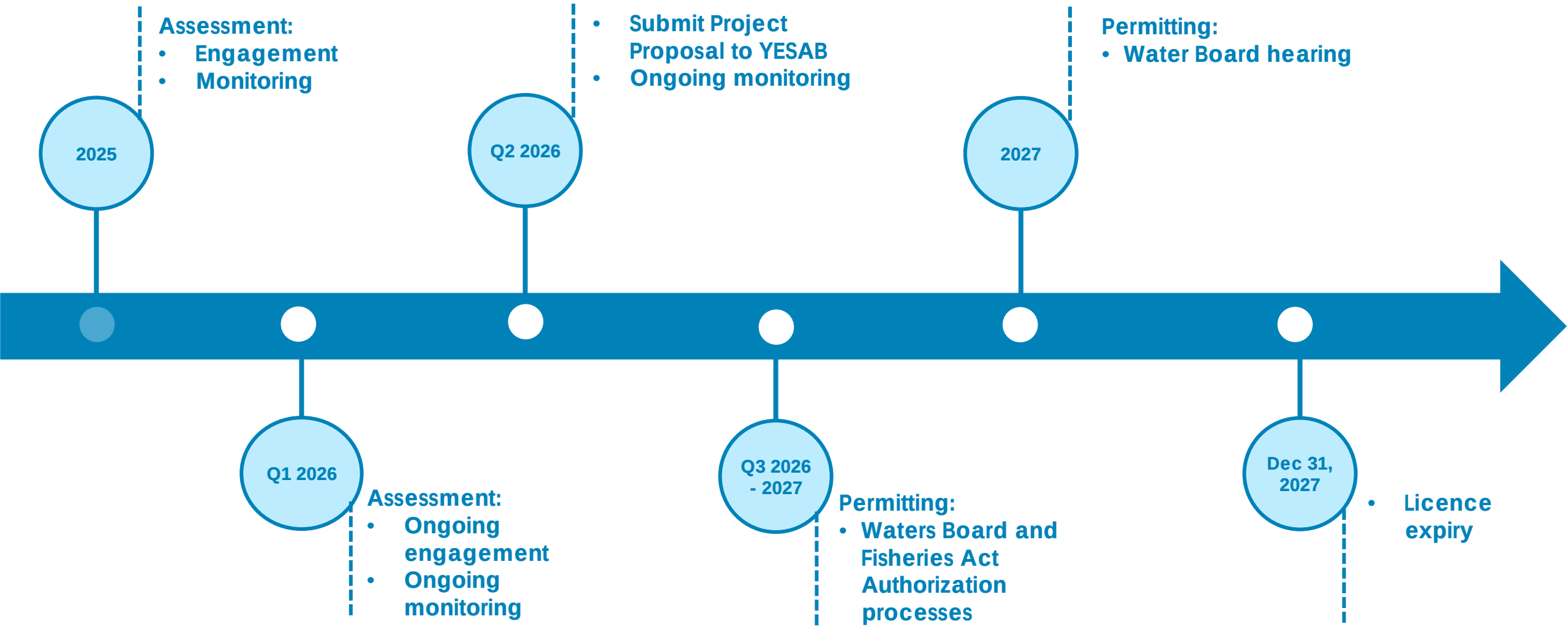
CHAMPAGNE AND AISHIHIK FIRST NATIONS

The relicensing process

Relicensing Requirements



Overall schedule



Monitoring & studies

Valued Environmental and Socio-economic Components (VESECs)

- The Project Proposal will explore and identify how the Project interacts with VESECs
- VESECs may include:
  - Aquatic resources including fish and fish habitat
  - Wildlife and wildlife habitat
  - Birds and bird habitat
  - Land and resource use, including traditional use and values
  - Social well-being
  - Heritage resources
  - Local and regional economy
- Ongoing dialogue between YEC & CAFN on identifying values

Monitoring & Adaptive Management Programs

Topics of interest include:

- Fish & Fish Habitat
- Aquatic mammals
- Moose
- Wetland habitat
- Aishihik River ice monitoring
- Downstream ice modeling
- Floodplain lands/property improvements monitoring
- Heritage resources
- Public health, safety and access
- Äshèyi community-based monitoring (CAFN program)

Engagement

Engagement Opportunities

Online:
Yukonenergy.ca/aishihik

Email:
AGSRelicensing@intergroup.ca

Feedback will help to inform YESAB Project Proposal.

Questions?

AISHIHIK GENERATING STATION (AGS)

5 Year Monitoring and Adaptive Management Plan (MAMP) • 2025 Update

ENVIRONMENTAL CONDITIONS

Monitoring of environmental conditions is included in the 5-year MAMP in the form of weather, water level, ice and water temperature tracking. This monitoring is done throughout the Äshèyi (Aishihik) area including along Ädäts'ür Män (Canyon Lake) and Äshèyi Män (Aishihik Lake).

The goal of this monitoring is to provide information on water level, ice on and off dates and water temperature to support all other biophysical monitoring components and understand project influences across the Äshèyi (Aishihik) area.

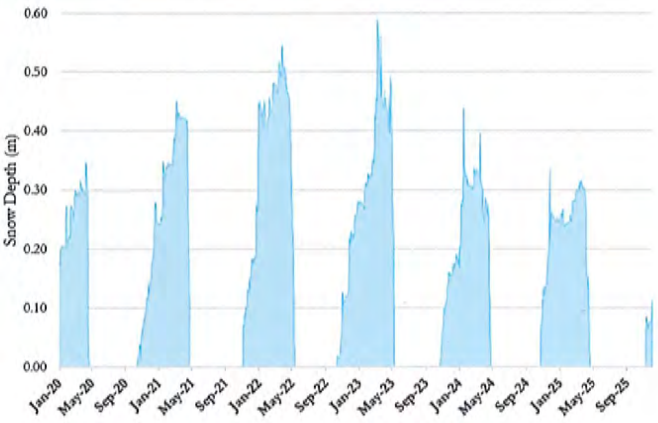
Climate, Ice and Water Temperature Monitoring

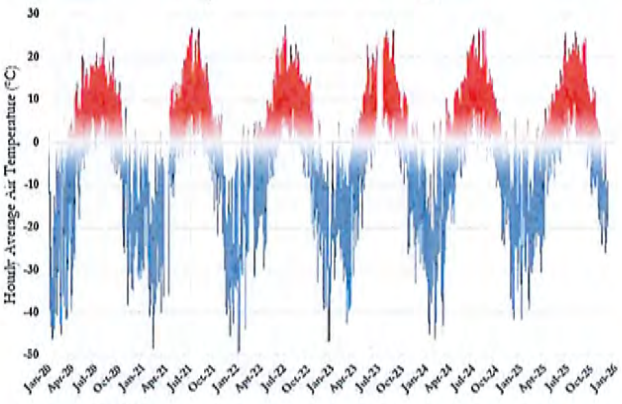
WHAT WE DID

- Continuous monitoring of air temperature, wind and precipitation at the north end of Äshèyi Män (Aishihik Lake). Five time-lapse cameras track ice-on and ice-off timing at critical fish habitats.
- Deployed temperature loggers near shore and offshore on Ädäts'ür Män and Äshèyi Män to record water temperature at varius depths.

WHAT WE LEARNED

- Since 2020, winters have generally remained colder than the 30-year normal.
- Freeze-up consistently begins in late October. Breakup is highly variable: shallow areas on Ädäts'ür Män begin thawing as early as March , while Äshèyi Män typically clears of ice in late May.
- Snowpack was greatest in the 2022/2023 winter, and has been reducing every winter since.
- Minimum temperature recorded in the 5 year monitoring period was -49.5 in Jan of 2022 and maximum temperature was 27.5 in July of 2024.





First day of ice off on May 25, 2024 on Äshèyi Män

Meteorological station on Äshèyi Män

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AISHIHIK GENERATING STATION (AGS)

5 Year Monitoring and Adaptive Management Plan (MAMP) • 2025 Update

WILDLIFE MONITORING

Monitoring of wildlife included dzäna (muskrat) population monitoring and breeding chät (ducks) monitoring. This monitoring is done throughout the Äshèyi (Aishihik) area including along the Tthe Yänlin (Aishihik River), Ädäts'ür Män (Canyon Lake) and Äshèyi Män (Aishihik Lake).

The goal of this monitoring is to further understand how wildlife are influenced by water level management and to help inform furture decisions.

Female Green-winged Teal with ducklings (brood

Chạt (Waterfowl Surveys)

WHAT WE DID

- Conducted three rounds of ground-based monitoring at 105 ponds dring spring and summer to count breeding pairs and broods using, boats, kayaks, and foot travel (2024).

WHAT WE LEARNED

- Surveys recorded 5,016 birds from 86 species during 2024. Ducks which use shallow water (dabbling ducks) were more common than those which use deeper water (diving ducks).
- Ponds that are not connected to Äshèyi Män (Aishihik Lake) had more breeding chät (waterfowl) than those which are connected.

Dzäna (Muskrat Surveys)

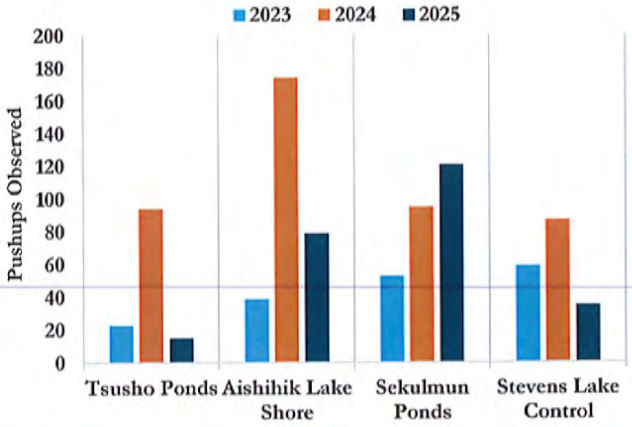
WHAT WE DID

- Aerial surveys for pushups in the Äshèyi (Aishihik) area including Tthechäl Chu (Sekulumun River) wetland and control areas near Stevens Lake.
- Surveys were done in late April/early May when the snow melted off the ice (2023 to 2025).

WHAT WE LEARNED

- Muskrat activity varies annually. Pushup presence tell us where muskrats survived the previous winter.
- Highest activity in the Tthechäl Chu (Sekulumun River) wetlands and Äshèyi Män (Aishihik Lake) shoreline.
- Similar trends in pushup count in the control and AGS influenced environments.

Dzäna (Muskrat) pushups on the ice at the Tthechäl Chu (Sekulmun River) wetland (April 25, 2025)



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AISHIHIK GENERATING STATION (AGS)

5 Year Monitoring and Adaptive Management Plan (MAMP) • 2025 Update

FISH SAMPLING DOWNSTREAM OF THE AGS

Monitoring of fish populations is included in the 5-year MAMP in the form of beach seining, backpack electrofishing and angling. This monitoring is done downstream of the confluence of the AGS tailrace on the Aishihik River and on the East Aishihik River

The goal of this monitoring is to monitor fish populations, distribution and health in the Tthe Yänlin (Aishihik River and East Aishihik River).

WHAT WE DID

- Sampling for fish on Tthe Yänlin (Aishihik River) between the AGS and the Alaska Highway using beach seining during 2024 and 2025.
- Sampling for fish on Tthe Yänlin (East Aishihik River) using electrofishing, angling, minnow trapping and snorkel surveys during 2024 and 2025.
- Identified all fish captured to species and recorded lengths and weights. Rapid assessment of fish for parasites and other abnormalities.

WHAT WE LEARNED

- The most common fish species captured in the Tthe Yänlin (Aishihik River) included slimy sculpin, T'äwa (Arctic grayling), Tatsat (longnose sucker), and Sakay (round whitefish).
- Most fish captured in the Tthe Yänlin were small juveniles; this may be due to our sampling methods as larger fish are able to escape.
- Low, clear water on the Tthe Yänlin during 2024 and 2025 resulted in lower capture rates because our sampling was less effective.

- The most common fish species captured in the Tthe Yänlin (East Aishihik River) included slimy sculpin, T'äwa (Arctic grayling), Mbeda (rainbow trout) and Tatsat (longnose sucker).
- Mbeda (rainbow trout) are a focus of this monitoring and we captured a wide range of sizes from small juveniles to adults. This tells us that the fish are spawning and growing well.

Beach seining and snorkel surveys on the Tthe Yänlin (Aishihik River)

Juvenile T'äwa (Arctic grayling) captured on the Tthe Yänlin (Aishihik River)

Juvenile Mbeda (rainbow trout) captured on the Tthe Yänlin (East Aishihik River)

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AISHIHIK GENERATING STATION (AGS)

5 Year Monitoring and Adaptive Management Plan (MAMP) • 2025 Update

WETLAND MONITORING

Monitoring of wetlands in the Äshèyi (Aishihik) area is included as part of the 5-year MAMP due to the importance of these areas to a number of wildlife, bird and fish species.

The goal of this monitoring is to further understand how wetlands are influenced by water level management and to help inform for the long-term MAMP including the potential for adaptive management.

Fish Overwintering and Connectivity

WHAT WE DID

- Visited the Tthechäl Chu (Sekulmun River) wetland during late winter to test the winter and determine if fish could survive. The amount of oxygen in the water is helpful to test to understand this.
- Set up time lapse cameras in Tthechäl Chu (Sekulmun River) wetland to understand how water levels on Äshèyi Män (Aishihik Lake) influence the ability for fish to move in and out of the wetlands at different times of year.

WHAT WE LEARNED

- Conditions in the Tthechäl Chu (Sekulmun River) wetland during late winter are not ideal for fish to survive across the water elevations on Äshèyi Män .
- Using a portable sonar, we did see fish under the ice in the wetlands; these appear to be tàle (northern pike) which are able to survive in water with low amounts of oxygen in the water.
- Connectivity with the Tthechäl Chu (Sekulmun River) and wetland ponds is not possible when water levels on Äshèyi Män are low.

Wetland Health

WHAT WE DID

- Monitoring wetlands by looking at water, sediment, plants and aquatic invertebrates (water bugs) to determine health. This information tells us if the wetlands can be used by wildlife, birds and fish.
- Using a drone to map areas of emergent vegetation. These are important areas for muskrats and ducks for food and cover.
- The types and number of different kinds of wetland plants have remained similar over the last 5 years.

WHAT WE LEARNED

- Most wetland ponds are similar to healthy Yukon wetlands in other places.
- Some changes in the amount of emergent vegetation have been seen over time with some areas having more and some having less.

Drone image from the Tthechäl Chu (Sekulmun River) wetland

Wetland channel near the Tthechäl Chu (Sekulmun River)

Wetland in the Äshèyi (Aishihik) area

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Aishihik Generating Station

5-Year Monitoring and Adaptive Management Plan (MAMP)

2025 Update

Downstream Tän (Ice) Processes and Floodplain Nän (Land) Monitoring

In yúk'è (winter) water flow from Aishihik Hydro affects river ice conditions and increases overflow icing within the floodplain along Tthe Yänlin (Aishihik River).

Monitoring of ice conditions is done during the winter to:

- Build a further understanding of river ice formation in Tthe Yänlin
- Provide information to improve the river ice model being developed by Yukon University
- Assess effectiveness of the current flow management measures to guide the development of long-term management measures

Figure 1. Ice cover formation monitoring

Figure 2. Overflow ice in the floodplain

Figure 3. Mid winter river ice on Tthe Yänlin

What We are Doing

- Continuous monitoring of winter air temperature, Aishihik Hydro flows, ice formation and water levels in Tthe Yänlin
- Monthly ice level survey at 9-mile
- Mid-winter river ice cover mapping on Tthe Yänlin
- Mid-winter river ice thickness surveys
- End-of-winter overflow ice thickness and extent surveys at four locations
- Turbidity grab samples

What We Learned

- River ice conditions are influenced by air and water temperature, river flow and changes in river flow
- Floodplain icing is greater during periods of partial or fluctuating ice cover, and when river flows change
- An ice cover helps reduce the amount of overflow ice in the floodplain
- Stable ice cover forms on the river when there are long periods of cold temperatures and relatively low and/or stable flows

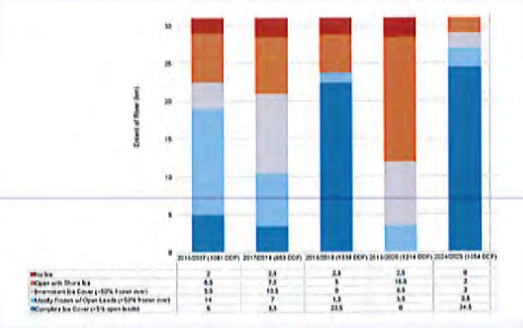

Figure 4. Tthe Yänlin mid-winter ice cover

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Aishihik Generating Station

5-Year Monitoring and Adaptive Management Plan (MAMP)

2025 Update

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Tän (Ice) Monitoring at Tthe Yänlin (Canyon)

In yúk'è (winter) river ice conditions and overflow along the Tthe Yänlin (Aishihik River) floodplain at Tthe Yänlin (Canyon) community has potential to affect properties.

Routine monitoring is conducted to document ice conditions and support the management and reduction of winter flooding risk.

The goals of this monitoring are to:

- Track the ice cover growth and ice levels at the bridge
- Measure the distance of overflow ice to building and driveway at CAFN parcel S-21
- Inspect flood protection berms for signs of erosion or spring-time flooding
- Document the amount of floodplain ice in the two fields at CAFN parcel R-73

Figure 1. Weekly ice level monitoring at CAFN parcel R-73

Figure 2. Weekly ice level monitoring at the historic Canyon Creek Bridge

What We are Doing

- Weekly ice measurements and observations at:
  - Historic Canyon Creek Bridge
  - CAFN parcel S-21
  - CAFN parcel R-73
- End-of-winter ice extent mapping at CAFN parcels S-20, S-21 and R-73
- Annual winter flood protection berm inspection and survey at CAFN parcel S-411

What We Learned

- Ice levels and extent of overflow ice varies year to year.
  - More ice was observed in winter 2023/24 (High Aishihik Hydro winter flow, higher variable flow)
  - Less ice was observed in winter 2024/25 (Low Aishihik Hydro winter, lower flow variability)
- No ice has been observed on CAFN parcel S-21 since 2021
- No damage has been noted at CAFN parcel S-411 berm from river erosion. The S-411 property and berm is not currently at risk of erosion.
- In high snowpack years, ponding of snowmelt water behind the berm has been seen.

Figure 3. CAFN parcel S-411 Berm Inspection and Erosion Monitoring

Äshèyi Män Land Monitoring

Objectives:

- Check whether shoreline protection measures around Äshèyi Män are working as intended.
- Inventory erosion, slope instability, and permafrost thaw affecting village and heritage lands.
- Compare current conditions to the 2019 assessment to support long-term land management.

What did we do?

- Re-inspected 37 shoreline sites at Old and New Aishihik Village.
- Collected ground and aerial photos and observations.
- Used a drone to survey and map shorelines and slopes.
- Measured summer depth to frozen ground (depth to permafrost) at select locations.

What did we find?

- Shoreline protection berms are working and limiting wave erosion.
- Slopes above the shorelines remain unstable in places due to erosion from gravity, thaw and runoff processes.
- Summer thaw depths measured in 2025 were up to 30 cm deeper than those measured in 2019 at some locations.
- Changes are gradual and minor, consistent with long-term climate warming.

What can we do next?

- Repeat drone surveys every 3 to 5 years to track change to the shorelines and hillslopes.
- Monitor and reduce standing water behind berms, as ponding can speed up thaw

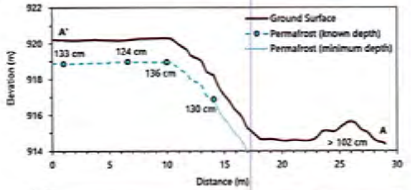
▲Erosion protection berm north of New Aishihik Village (AL21 to AL24).

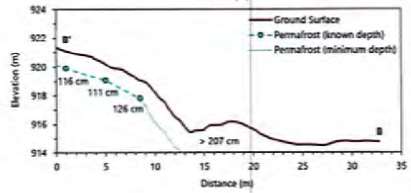
▲Eroding slope above the riprap at the northern heritage site (AL14 to AL16).

◀Fallen trees caused by thermal erosion and subsidence due to ponding (AL19).

▶Split tree caused by differential ground movement (AL32).

▼Ground elevation and permafrost depth profiles for Transects A-A' and B-B' in August, 2025.





▼Äshèyi Män field data map; shoreline erosion data from Lake Shoreline Erosion and Permafrost Degradation (2018) report.

Tthe Yänlin Geomorphic Evolution Monitoring

Objectives:

- Map and evaluate recent changes in river form from 2017 to 2025 for **Tthe Yänlin, East Aishihik River, and the lower portions of Shär ŧù Chu.**
- Place recent changes in a historical context.
- Assess whether conditions are trending toward improved channel complexity

What did we do?

- Mapped river and side channels based on 2025 aerial imagery and lidar.
- Measured channel size and shape, including width, area, and sinuosity (i.e., how much the river meanders).
- Compared 2025 conditions to historical channel metrics (1947 to 2017).

What did we find?

- Most sections (or reaches) of the river exhibit minor, gradual changes since 2017.
- Some sections show local bank erosion and new cutoffs, where the river created a new, straighter path and abandoned a meander bend.
- The river appears to be trending away from the large cutbank at KM2.0
- Overall, observed changes are within historical variability since AGS operations began.
- The river size, shape, and pattern remains different from that observed before the AGS.

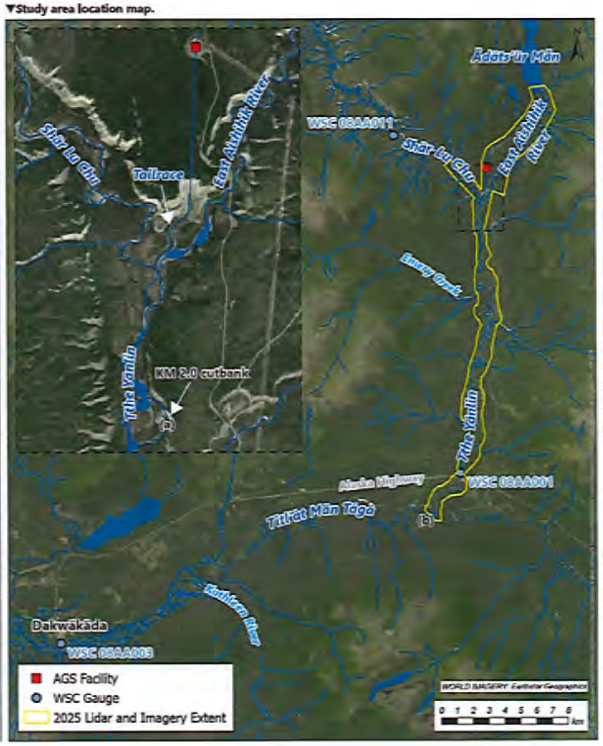
What can we do next?

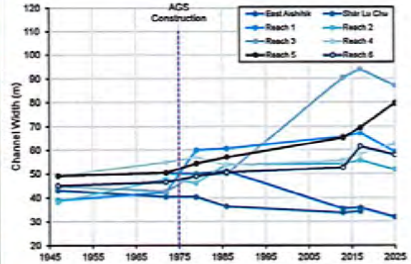
- Repeat lidar and aerial mapping every 5 years to track long-term changes and assess if recent trends may reflect gradual changes in river processes.
- Improve water flow and level monitoring to better understand changes to river form.

▲Erosion of an outside meander bend upstream of cutbank (August 26, 2025).

▲Looking upstream at a cutoff at the confluence of Tthe Yänlin with Titl'ät Män Tágà (August 26, 2025).

▼Study area location map.





▲Average channel width by reach since 1947.

AISHIHIK GENERATING STATION (AGS)

5 Year Monitoring and Adaptive Management Plan (MAMP) • 2025 Update

PLANNING FOR 2026

EDI is currently working with Yukon Energy and Champagne and Aishihik First Nations to confirm the monitoring which will be done in the Äshèyi (Aishihik) area during 2026. The following information provides some of the highlights of the monitoring planned along with the areas where this will occur and the time of year.

Tthe Yänlin (Aishihik River) during August 2024

Drone image of Äshèyi during August 2024

Äshèyi Män (Aishihik Lake) and Ädäts'ür Män (Canyon Lake) areas

- Dzäna (Muskrat) pushup survey during late April
- Late winter wetland survey in the Tthechäl Chu (Sekulmun River) wetland during late April
- Environmental conditions monitoring year-round
- Fish population surveys on both Äshèyi Män and Ädäts'ür Män to check in on populations of Łùshäw (lake whitefish), mbet (lake trout), and other fish.
- Łù (fish) habitat monitoring at the north end of Äshèyi Män.

Tthe Yänlin (Aishihik River) area

- Flow ramping study downstream of the AGS during the open water season.
- Mapping of riparian vegetation along the river during late summer.
- Water quality monitoring downstream of the AGS throughout the year.
- Łù (fish) habitat monitoring downstream of the AGS during the open water season.
- River ice and effects to property monitoring downstream of the AGS during the winter.

2026 OPPORTUNITIES

There are opportunities for Champagne and Aishihik First Nations citizens to be involved in the 2026 monitoring as field technicians. For additional information contact Ben or Zabrina at the following:

EDI

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bschonewille@edynamics.com
(867) 334-2683

CHAMPAGNE AND AISHIHIK FIRST NATIONS

Zabrina Leslie
zleslie@cafn.ca
(867) 456-6888 ext 353

RECORD OF MEETING

Date of Meeting: January 19, 2026

Time: 5:30 - 8:00 pm

Location: Sternwheeler Hotel, Whitehorse

In Attendance:

Project team: Zabrina Leslie (CAFN), Melina Hougen (CAFN), Tom Buzzell (YEC), Lisa Wiklund (YEC), Travis Ritchie (YEC), Jared Lapierre (YEC), Kimberly Milligan (YG), Lindsay Dehart (YG), Charlie Hawes (Stantec), Forest Pearson (Stantec), Nathan Aasman (Ensero), Johnathan Lowey (EDI), Ben Schonewille (EDI), Ryan Bradley (NHC), Jennifer Olson (IG) and Kate Hicks (IG).

Community members: 11 participants.

Summary: Project representatives met with community members in Whitehorse to share information about the Aishihik Generating Station Relicensing Project, answer questions, and gather input. The session included opening remarks, a presentation by Tom Buzzell, and a question-and-answer period. Storyboards were set up around the room, with technical experts available to answer questions and discuss project details with participants.

Questions/Comments are organized by theme and where there was overlap, they were combined:

Regulatory Process for Aishihik Generating Station (AGS) Relicensing

Is Yukon Energy applying for a Fisheries Act Authorization and water use license at the same time?

Yes, the *Fisheries Act* Authorization has expired, but Yukon Energy is working with the appropriate regulatory bodies to determine how to proceed.

What happens if the AGS does not get relicensed?

If Yukon Energy does not receive a licence before the current one expires, temporary solutions could be explored, such as a 60-day extension.

For people who are not technical experts, is the relicensing project just a formality?

Yukon Energy needs a licence to continue to operate. This process helps us understand and mitigate effects. It is important to talk to local people.

After the water use licence is issued, that doesn't mean the end of coordination and monitoring?

Correct, Yukon Energy will continue to work with CAFN and Yukon Government to implement the Monitoring and Adaptive Monitoring plan (MAMP). This includes commitments over the licence term. The MAMP will be ongoing, reviewing new issues and effects.

What is the history of relicensing AGS?

The water use licenses for the AGS have had a range of durations. Yukon Energy is aiming for a long-term licence (i.e., 25-year) term. Past licences are:

- 1977-2000 (HY77-001)
- 2002-2019 (HY-99-011)
- 2019-22 (3 years) (HY19-016)
- 2022-27 (5 years) (HY22-016)

There is currently a 5-year licence. What changed to increase the term to 25-years?

When the 5-year licence was issued, the Yukon Environmental and Socio-economic Assessment Board Designated Office evaluation noted there was insufficient information to recommend a 25-year licence and therefore it recommended a 5-year licence term.

Aishihik Generating Station Operations:

Does Aishihik store energy in the summertime?

Yes, Yukon Energy stores water in the summer to use in the winter.

Has it been challenging to raise water levels in Aishihik Lake?

Not if the snowpack is good and precipitation is good. The lake provides multi year storage, it is currently at the lower part of the storage range.

Aishihik Generating Station Infrastructure

I have heard about the Mayo Dam needing to be replaced. Are there similar issues with AGS?

The spillway (Wareham Spillway) needs replacement. Yukon Energy has asset management plans in place. Hydroelectric assets are considered to be multigenerational. Yukon Energy will continue to extend their lifespans, unless a better option becomes available.

The AGS is the youngest of three generating stations, and no major capital works are planned within this relicensing term.

The 25-year licence does not assume earth works will take place?

This relicensing includes maintenance activities, but no major capital works are currently planned. If major capital works were required, Yukon Energy would conduct additional assessments and authorizations.

If a forest fire destroys the transmission line that connects to the AGS, what redundancies are in place?

We plan to have enough generation to meet demand without our largest generating asset in the winter (the AGS) plus its transmission line that connects the facility to the grid. That is why we rent diesel generators. This scenario referred to as N-1. While there is not a redundant transmission line, we would

work with wildland fire to protect the line to the extent possible. That is what we have done in the past. There is also a sprinkler system at the AGS.

Aishihik Generating Station Monitoring and Adaptive Management Plan

Would running a 25-year MAMP cost less than a 5-year MAMP?

Yes, because of amortization. Yukon Energy could spread costs of monitoring over 25 years instead of 5 years. This allows Yukon Energy to recover expenses gradually rather than concentrating them into a shorter timeframe.

A participant commented on how healthy the wetlands used to be. In recent years, moose have not been returning, and I've had several unsuccessful hunts in the area. I'm concerned about why they aren't returning to the area. Is there something in the water or permafrost melt? What's deterring them from returning?

Moose is one of the identified value components for the assessment and will be monitored as part of the Monitoring and Adaptive Management Plan. There are technical consultants here who can provide information about monitoring results from the past five years.

What is Yukon Energy doing to mitigate historical impacts (i.e., those from the 1970s) or if Yukon Energy only looking to limit current impacts?

The Monitoring and Adaptive Management Plan allows us to mitigate current impacts to the environment.

Energy Demand by Mines

Does any of the energy from Aishihik Generating Station go to the mines up north?

Yes, some of the electricity Yukon Energy generates goes to industrial customers, including mines. Industrial customers are curtailed when necessary. When demand peaks, like it did this winter, mines are the first to be curtailed (or asked to self-generate) when we don't have enough power to meet residential and commercial demand.

Is energy being generated for the Faro mine?

The Faro Mine is a remediation site. It would not be the first industrial user to be curtailed during peaks in demand, but if the need were great enough, we would ask them to disconnect from grid power and self-generate.

This winter the Yukon reached a new peak for demand. Were the mines online at that time?

No, Yukon Energy had asked all mines to curtail use. The peak was from residential and commercial customers.

Future Energy Demand

How much more electricity demand is Yukon Energy anticipating due to developments like new subdivisions with electric heating?

Yukon Energy is planning for a potential 40% increase in demand between 2020 and 2030, with population growth and associated electricity use. Yukon Energy is not asking to generate more electricity using the AGS. Projects like the Whitehorse Power Centres will help to meet new demand.

Climate change is occurring throughout the territory by way of forest fires and droughts. Is Yukon Energy considering alternative energy solutions?

Yes, and we are not the only ones. We are hoping to work with First Nations on future energy projects, as we have learned that it is not possible to advance large-scale projects without their support.

In the past there were discussions about the Gladstone Diversion Concept, which would have brought water from Kluane Lake to Sekulmun Lake. Is this concept still being considered?

It is not currently being considered in light of the low water levels in Kluane Lake, which would make it hard to remove water from that system, First Nations indicated they were not interested in exploring the concept.

Rates

The Yukon Utilities Board was mentioned in the presentation. Is this relicensing project included in the current rate application (GRA)? What is the budget for the relicensing?

Yes, the relicensing costs for this facility were included in Yukon Energy's 2025-2027 General Rate Application at $9.8 million.

How much does it cost for diesel generation? Do these costs go on our electricity bills?

Diesel generation is required until additional renewable energy sources can be brought online, and these costs do contribute to electricity use. The Whitehorse Power Centres Project is estimated to cost over $100 million. The Government of Yukon has recently announced rate relief for residents to help offset rising electricity costs. At the same time, existing energy infrastructure is becoming more expensive to operate, with additional costs associated with monitoring and maintenance. Yukon Energy is working to use available resources as efficiently as possible.

What is the difference between industrial and commercial users?

Commercial users include businesses like Walmart and Canadian Tire. Industrial users include mine sites like Victoria Gold. Yukon Energy has different agreements with those users.

Comments:

- One community member has a cabin close to Aishihik Lake and is concerned with water levels at Otter Falls and visual impacts.
- Comment noting appreciation that the assessment includes downstream effects and the use of Southern Tutchone place names.
- Question about whether upgrades to the road to Aishihik Village are included in the project proposal; staff advised that they are not.
- Comment acknowledging that the Aishihik Generating Station (AGS) is an important resource for the electrical system.
- Observation that Canyon Lake appears to fuller.
- Concern raised regarding potential impacts on ratepayers, including a comment questioning Yukon Energy's characterization of the Mayo B project as "free."
- A suggestion that Yukon Energy consider diversifying generation assets, including additional wind generation for winter energy needs.

RECORD OF MEETING

Date of Meeting:

Time: 5:00 - 8:00 pm

Location: Da Kų Cultural Centre, Haines Junction

In Attendance:

Project team: Zabrina Leslie (CAFN), Joe MacGillivray (YEC), Tom Buzzell (YEC), Travis Ritchie (YEC), Jared Lapierre (YEC), Kimberly Milligan (YG), Lindsay Dehart (YG), Charlie Hawes (Stantec), Forest Pearson (Stantec), Johnathan Lowey (EDI), Ben Schonewille (EDI), Ryan Bradley (NHC), Jennifer Olson (IG) and Kate Hicks (IG).

Community members: 29 Participants

Note: Another meeting occurred at the same time, some participants arrived later, resulting in overlapping questions.

Summary: Project representatives met with community members in Haines Junction to discuss the project. The session included opening remarks, a presentation by Tom Buzzell, and a question-and-answer period. Poster boards were set up around the room, with technical experts available to answer questions and discuss project details with participants.

Questions/Comments are organized by theme and where there was overlap, they were combined:

Regulatory Process for Aishihik Generating Station Relicensing

Why is Yukon Energy applying for a long-term (i.e., longer than five years) water use licence? A 25-year licence brings us to the middle of this century and it raises concerns that changes to effects or new effects could occur during the licence. Some changes can occur within shorter time frames.

The regulatory process and level of work are the same for both a 5-year and a 25-year licence. A shorter licence term increases process time and associated costs. While shorter terms add additional process, they can offer benefits by allowing new causes and effects to be identified. However, a longer-term licence provides time for the MAMP to show measurable results and can better identify long-term issues.

It should be acknowledged that any substantial change in operations or system configuration would trigger a new regulatory process with YESAA and the Yukon Water Board since Yukon Energy must comply with the terms and conditions of the water use licence in effect.

There are multiple commitments among CAFN, Yukon Energy, and the Government of Yukon outside the water use licence that provide mechanisms for the Parties to discuss any issues that may arise and changes over time.

Longer licence terms also reduce costs associated with repeated regulatory processes. Regulatory processes can cost millions of dollars, with costs ultimately borne by ratepayers. A longer (25-year)

licensing term allows costs to be amortized over the lifespan of the asset. Shorter licence terms (e.g., 5-year) concentrate costs into a shorter period, increasing rate impacts. Spreading costs over a longer term reduces near-term pressure on ratepayers.

The presentation referred to Yukon Water Board hearings. Have previous licence terms and conditions been met?

Water use licences include multiple conditions; Yukon Energy is actively working to meet all terms and conditions. The Government of Yukon has a compliance and inspections group responsible for enforcement.

The Monitoring and Adaptive Management Plan process also provides a forum to discuss licence conditions and compliance through ongoing dialogue between CAFN, Yukon Energy and the Government of Yukon.

Aishihik Generating Station Operations

Is the Aishihik Generating Station producing the same amount of energy this year with low water levels? Is it still providing 30-40%?

The Aishihik Generation Station is producing less energy than a typical winter, less than 30%.

What kind of turbines are currently in use in the AGS?

The AGS uses Francis turbines.

What impact does cold weather and associated operations have on Aishihik Lake?

There is no intention of operating the AGS more intensively. The current plan is to apply for a renewal of the existing licence conditions. Yukon Energy is proposing to build new projects to meet increased demand, like the Whitehorse Power Centres project. Approximately 30% of Yukon's winter power currently comes from the AGS. The current Proposal seeks approval to operate at today's demand levels, not futures ones.

Is there an opportunity for battery storage at AGS?

In the last four years, low rainfall and snowfall have limited water availability. In earlier years, battery storage could have been feasible with higher water levels. At present, a battery at the AGS would not be effective.

Aishihik Generating Station Monitoring and Adaptive Management Plan (MAMP)

Are CAFN citizens being included in employment and monitoring programs?

Yes. Examples include:

- Maintenance work on roads and camps has involved CAFN-owned companies, such as Castle Rock Enterprises.
- Beavers have been trapped in coordination with CAFN trappers.
- Environmental monitoring programs have included CAFN participation for the past 18 years, typically involving up to six citizens at a time.

There is a commitment to continue engaging CAFN in relevant work.

There were multiple questions about the role of the Monitoring and Adaptive Management Plan

The plan is adaptive. Valued environmental and socio-economic components (VESECs) can be updated over the 25-year licence term. If a problem is identified, it can be added to the monitoring list. Items that have been monitored and successfully mitigated can be removed from the list.

Environmental and Social Considerations

Valued Environmental and Socio-economic Components (VESECs) are addressed in the Management and Adaptive Monitoring Plan (MAMP). What does Social Well-being include? What studies are being used? Are VESECs being assessed individually or collectively?

VESECs are assessed individually.

The scope for Social Well-Being is still being finalized with CAFN. Examples of topics currently included are CAFN involvement in decision-making; citizen confidence in land, water, and resources; and the project's current and future effects on these aspects. It's a collaborative effort. We're currently relying on information from previous relicensing project proposals, CAFN submissions to YESAB and the Yukon Water Board, CAFN's Traditional Knowledge Study, and the Social Impact Study.

Fluctuating water levels seem to be affecting the Canyon Heritage Bridge pilings. The Government of Yukon has applied to remove the heritage bridge, with plans to dismantle and burn it. These impacts are linked to AGS operations. Are there any plans to repair or protect the bridge?

The bridge is owned by the Government of Yukon, not Yukon Energy. It is impacted by ice during winter, particularly when water elevations rise close to the bottom of the bridge. Over time, water exposure naturally deteriorates the wood. Yukon Energy monitors how its operational decisions may be affecting the bridge and is working to avoid effects or adaptively manage them.

The Government of Yukon is considering what to do with the bridge, whether to invest tax dollars into its preservation or to decommission it. Yukon Energy is unsure of what the final decision will be. Ultimately, the fate of the bridge rests with the Government of Yukon.

Aishihik Generating Station Relicensing Project Future Engagements and Information

How many additional engagements are planned? Some citizens were unable to make today's open house and so more engagement would be useful.

Citizens are welcome to share their feedback via email or the online form on Yukon Energy's website. Close to the submission data for the YESAA Project Proposal, Yukon Energy can return to the community to share more information about anticipated effects and how community views were considered in the assessment.

The YESAB and Yukon Water Board processes will also provide opportunities for public and government engagement.

Will questions and answers from engagement sessions be posted online?

Yukon Energy is planning to compile an engagement summary package, including presentation materials, notes, questions and answers and post it online. In addition, the YESAA Project Proposal will include a chapter on engagement outlining what was heard and how input was considered and addressed.

Agreements and Relationships with Champagne and Aishihik First Nations

What is the status of agreements or arrangements between CAFN and Yukon Energy related to impacts from the dam, including compensation or support provided to affected community members?

There are existing agreements between CAFN, Yukon Energy and the Government of Yukon.

How has the relationship between CAFN, Yukon Energy, and the Government of Yukon evolved over the past five years? Twenty years is a long timeframe.

The relationships between the Parties requires ongoing effort. While not perfect, current processes provide ways to escalate issues if needed.

Regarding the licence term, it was noted that relationship-building should be continuous and not dependent on the length of the licence. All parties should work collaboratively regardless of licence duration.

How does the Aishihik Generating Station (AGS) provide benefits for CAFN?

There are existing agreements between CAFN, Yukon Energy, and the Government of Yukon. The work discussed tonight is a part of the regulatory process, and as the project moves through YESAB, CAFN citizens have an opportunity to engage directly with the assessment process. This allows CAFN to identify issues or concerns and reflects benefits established through land claims, including the ability to influence decision-making.

At a minimum, these efforts help keep the lights on. Reducing spending on regulatory processes, energy, and diesel ultimately benefits all ratepayers.

<u>Comments</u>

There will always be different players at the table as people retire. CAFN citizens have long maintained a strong relationship with the land and water. CAFN knowledge needs to be honoured.

First Nation governments should be able to have agreements with Yukon Energy that do not involve Yukon Government.

While Yukon Energy generates revenue, the benefits are not clearly seen by CAFN members. Things are becoming more difficult, and impacts on waterways are affecting ways of life.

Future Energy Demand

How is Yukon Energy going to address future energy demand as the population grows? The AGS, which is in CAFN's Traditional Territory, is supplying energy for new residents and its operations are affecting CAFN Citizens and their Traditional Territory.

Whitehorse is one of the fastest growing cities in Canada, and there are lots of people moving to Yukon. It should be noted that Yukon Energy is applying for a renewal of the existing operating conditions. It is not planning on changing the way the AGS operates.

Are the diesel generators in Haines Junction still operational? There was a power outage in December.

The diesel generators are owned and operated by ATCO. Questions about its diesel generators should be directed to them.

Considering the December power outage and how backup generators did not activate, what happens with new houses that only have all-electric heating?

The Government of Yukon is in discussions with First Nations and communities about additional forms of heat/or back up. Yukon Energy continues to plan its generation to meet increasing winter peak demand.

What is happening with the Government of Yukon's Micro-generation project?

The program is currently paused. The pause began in December 2023 to allow the Government of Yukon and the utilities time to assess what system upgrades are needed to ensure the grid remains reliable and stable as more renewable energy comes online.

Phase 1 of the Intermittent Renewable Integration Study for the Yukon Integrated System is now complete and available on Yukon Energy's website.

Could grid stability issues be solved by a connection to British Columbia?

Access to a steady power source from another jurisdiction could improve stability. Battery storage in Whitehorse, once online, is expected to provide faster system response, and should also help.

Is the interconnection with BC a priority for Yukon Energy?

Yukon Energy is focused on meeting winter peak demand through local generation. Yukon Development Corporation and the Government of Yukon are examining broader interconnection options as part of long-term planning, working with First Nations.

What is Yukon Energy doing to expand renewable energy projects in Yukon?

Based on previous experience, Yukon Energy has learned that future projects need to involve First Nations as partners or owners with discussions occurring at a government-to-government level. Yukon Energy is interested in pursuing more renewable energy projects but they should be developed in partnership.

What if CAFN developed its own power generation asset? Being out on the land, you can see what is happening and the impacts on the area.

Reducing reliance on the AGS would require building another asset, which does not necessarily need to be located physically in Haines Junction.

What is Yukon Energy doing to help educate residents about reducing their energy usage and teaching them about the effects the AGS has on CAFN Citizens and their traditional practices?

Yukon Energy is working on demand-side management, including measures to control heating loads. Government of Yukon and ATCO are looking at smart meters in residences. Yukon Energy is also using social media to share information about emergency kits, emergency centres, and warming centres.

Haines Junction will be the first community in which ATCO implements smart meters, which will help reduce peak demand.

What energy alternatives is Yukon Energy looking at? Geothermal potential in Haines Junction was previously explored, along with the warm springs at Kloo Lake.

The Government of Yukon is looking at future energy development along with Yukon Development Corporation leading the creation of a long-term vision and working with First Nations to develop new projects. In the past, Yukon Energy led new project development but learned quickly, through examples such as Moon Lake Pumped Storage and the Southern Lakes Enhanced Storage, that projects are not successful without First Nation support.

If *the AGS fails, what other sources of energy are there?*

We plan to have enough generation to meet demand without our largest generating asset in the winter (the AGS) plus its transmission line that connects the facility to the grid. That is why we rent diesel generators. This scenario referred to as N-1. We also have other sources of electricity like the other two hydro facilities in the territory, along with our diesel and LNG generators.

<u>Comments</u>

One community member noted that many meetings occur between the Government of Yukon and Yukon Energy without community members present. They were concerned about a perceived gap in communication, as the Government of Yukon supports converting homes to electric heating while Yukon Energy encourages the community to reduce energy use.

Wood stoves have been removed from homes due to insurance requirements. The CAFN Government has previously removed wood stoves from community houses, which limits backup options. Woods stoves and diesel back-up generators can help lighten the load of the AGS.

The Government of Yukon is providing financial incentives for people to switch to electric heating. Some community members question why government funds are being used to increase electricity use.