

Nuyakuk Falls Diversion Hydro Investigation & Potential

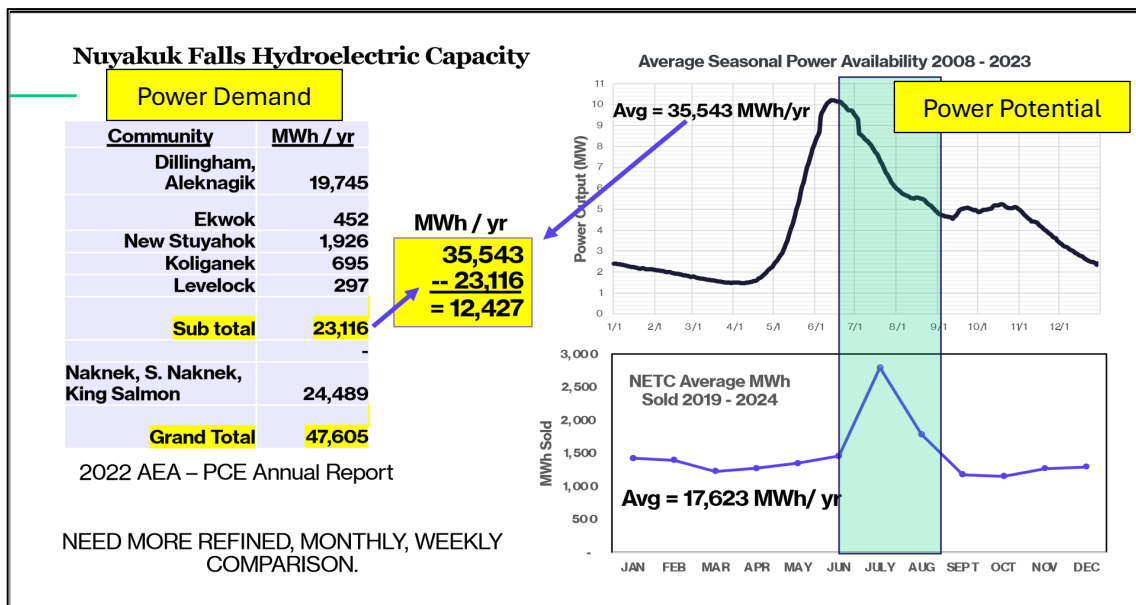
External factors beyond our control effect diesel security, availability and cost. This in turn influences the cost of Energy – which in turn effects the cost of our everyday goods & services. Evaluations of wind & hydropower projects have occurred in the past. All have been rejected as alternatives to diesel power due to insufficient potential to provide members’ baseload power needs, the cost, or significant environmental impacts.

In 2017 the NETC identified the Nuyakuk River Falls as a potential hydropower source. The river makes a near 180° turn and drops 26 feet from the top to the bottom of the falls. River discharge has been measured since 1953 by the USGS. Using 30% of the flow (ADNR restriction applied) indicates a potential to generate 35,000 Megawatt-hours by diverting water from upstream of the falls through a penstock to drive conventional fish-friendly turbines. **No dam or impoundment is required.**

The 1,507 members of the NETC consume approximately 1.3 million gallons of diesel to generate 19,000 MWh electricity annual baseload. Peak demand occurs during the salmon processing season which coincides with the river’s high-water discharge. Approximately 60-mile transmission line required.

Area village electric cooperatives in Ekwok, New Stuyahok, Koliganek, and Levelok consume an additional 200,000 gallons of diesel to generate 4,000 MWh for their 852 members. Additional 75-mile transmission line required.

Total ~135-mile transmission lines to establish a regional grid.



Benefits:

- Creating a reliable, controllable baseload power source.
- Eliminating the transportation and handling of millions of gallons of diesel in Bristol Bay waters and the rivers.
- Eliminating the expense of smokestack emissions' monitoring & fines.
- Eliminating the volatility of diesel pricing and long-term security.



Project milestones:

2017 – present: Over 100 project public, agency & NGO scoping meetings

2018 FERC preliminary permit obtain to investigate project

- ADNR required 70% of water must remain in the natural flow

2019: Resolutions of support – BBNA, Curyung Tribal, Dillingham, Aleknagik, Naknek

2019 – AS 41.21.167(c) modified by HB99 & SB91 to allow proposed investigations

2020 to present: Investigation study designs approved and implemented

\$7.5M = AEA, Denali Commission & NETC funding

Expert teams: Engineer, Fish, Cultural, Water, Terrestrial

Technical Work Groups review & input: Agencies + Academics + Public + NGOs

Intensive studies completed

Fish – Adult counting tower, radio tracking, life cycle modeling

Fish – Smolt sonar travel route mapping; capture & sampling

Vegetation, Cultural sites, Recreation, Noise, ...

Hydrology – Flow curve & predictions. Power potential.

Recreation, Subsistence, Transmission corridor, Cultural resources

2023 - ISR Interim Study Report submitted, reviewed, approved

2024 (Dec 2) – USR – Updated Study Report – submitted for review

2025: Comment period Dec 2 to ~~Feb 19~~, March 21, 2025

Jan 15 & 16, 2025 – USR public presentations

March 21, 2025 – USR comments due

April 20, 2025 – Response to Comments

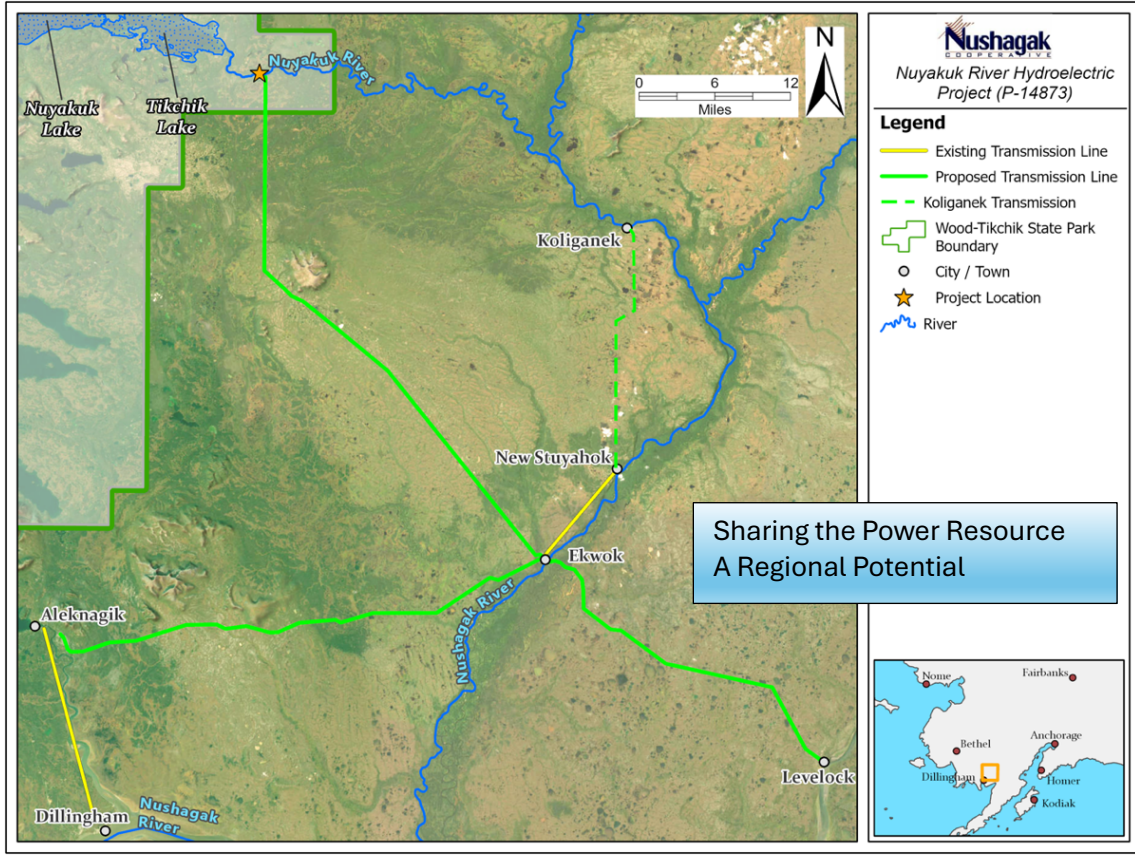
May 2025 – FERC final determination of adequacy

2025 - NETC Board decision on whether to pursue permitting & funding

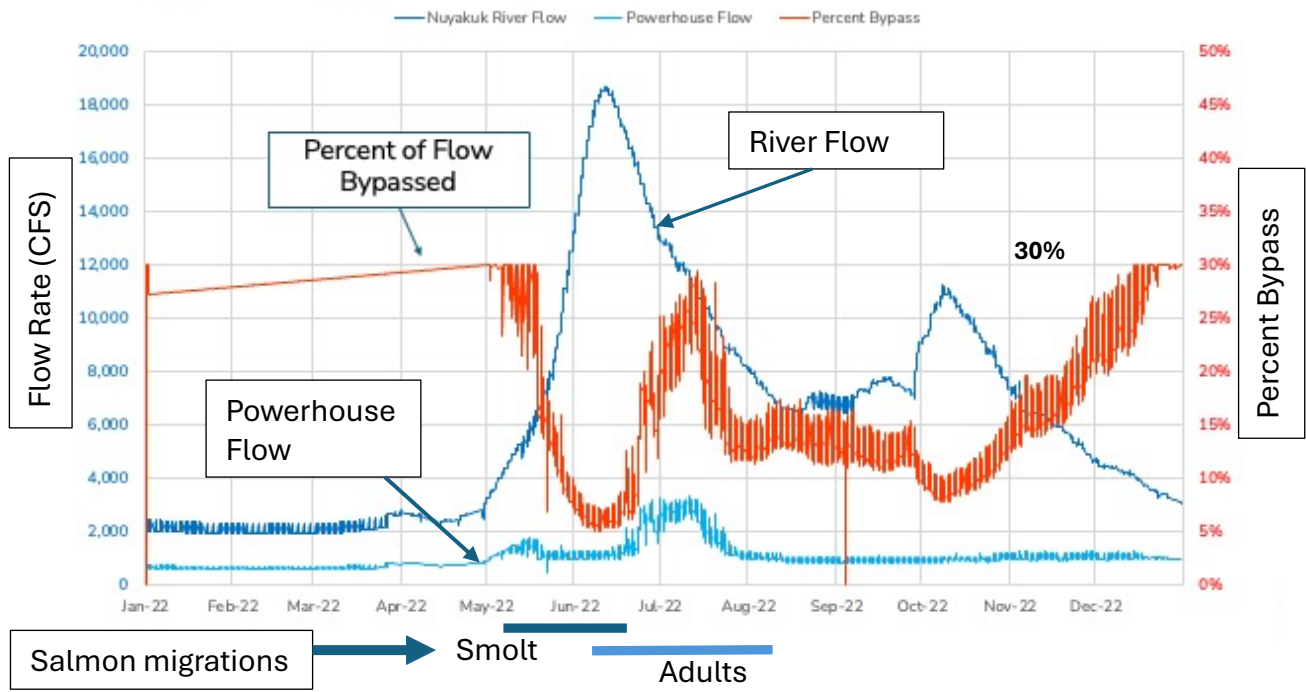
ALL meeting minutes, reports, and documents available:

https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20241202-5084

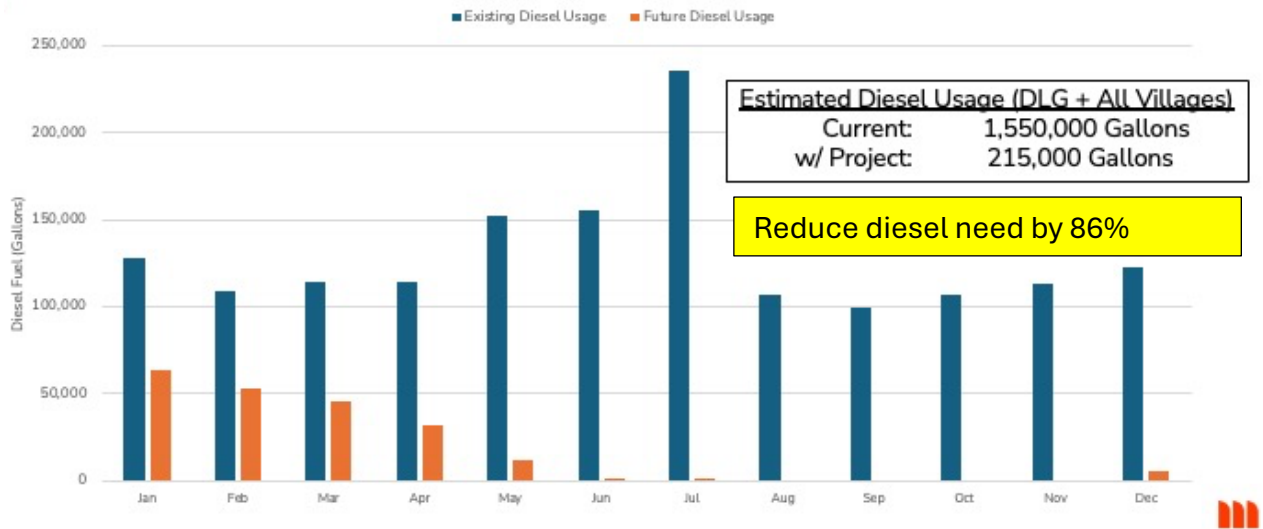
<https://www.nuyakukhydro.com/>



Project Operations



Diesel Fuel Usage Comparison



Annual Diesel Cost Savings

1,298,500 gallons saved / year

Combined Six Villages	Current Gallons 1,513,000	Projected Gallons 214,500	Savings / year \$5,099,000
City/Village	Current Diesel Usage (Gallons/Year)	Projected Diesel Usage w/ Project (Gallons/Year)	Cost Savings (\$/Yr) ²
Dillingham/Aleknagik	1,300,000	180,000	\$3,752,000
New Stuyahok/Ekwok	111,000	18,000	\$732,000
Levelock	40,000	6,500	\$373,000
Koliganek ¹	62,000	10,000	\$242,000

¹ Assumes that transmission line option to Koliganek is approved.

² Assumes reduction in plant operating expenses in addition to fuel expenses for villages