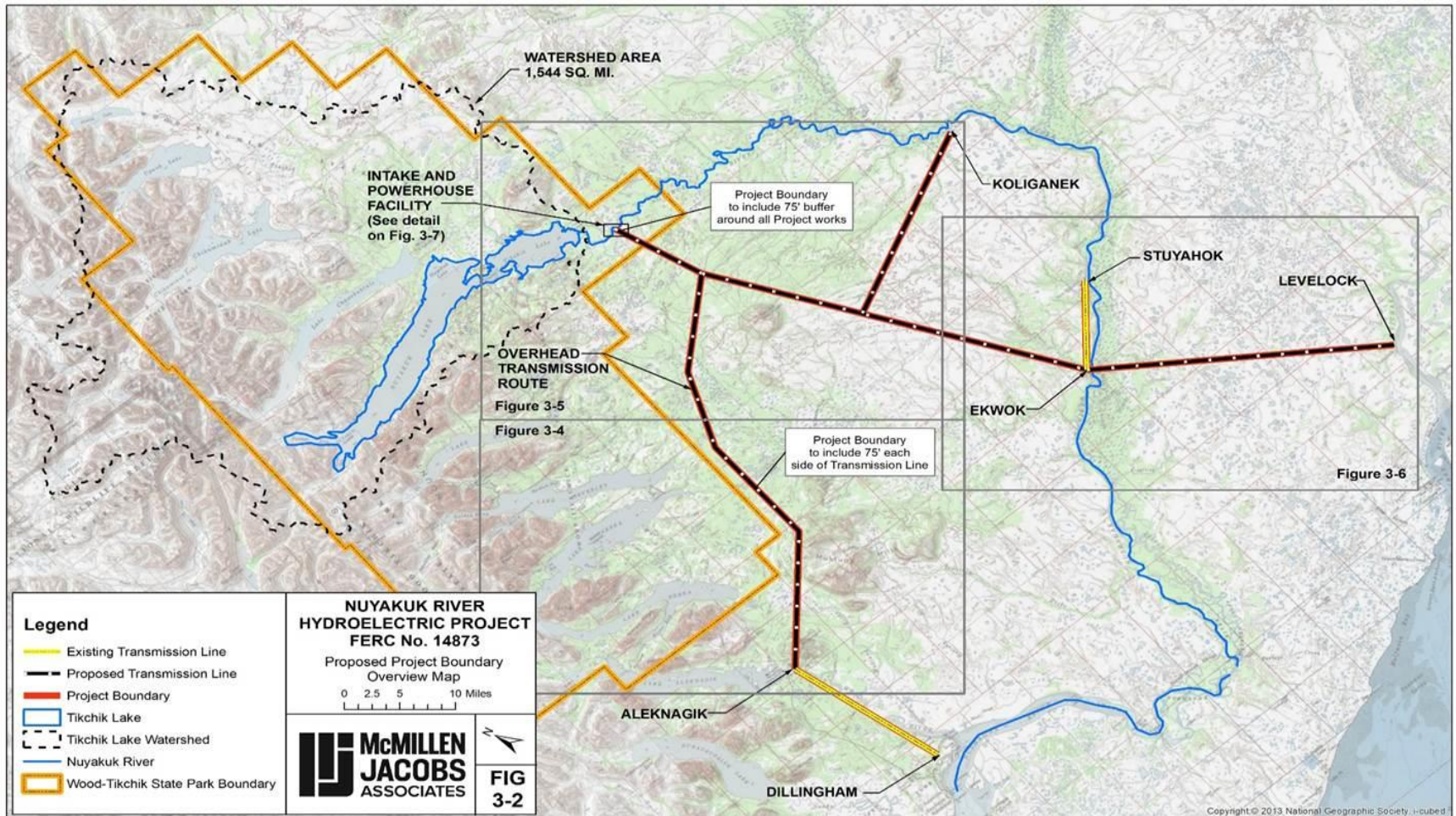


Nuyakuk River Hydroelectric Project

Southwest Alaska Municipal Conference 2020



Project overview

- 12 MW Run of River Hydro project
- 58,600 MWH's of production annually
- Provide power to six communities, Koliganek, New Stuyahok, Ekwok, Levelock, Aleknagik and Dillingham
- Project will initially save up to 1,500,00 gallons of diesel annually; 2,350,000 gallons annually at full capacity
- Provide increased broadband access to the region

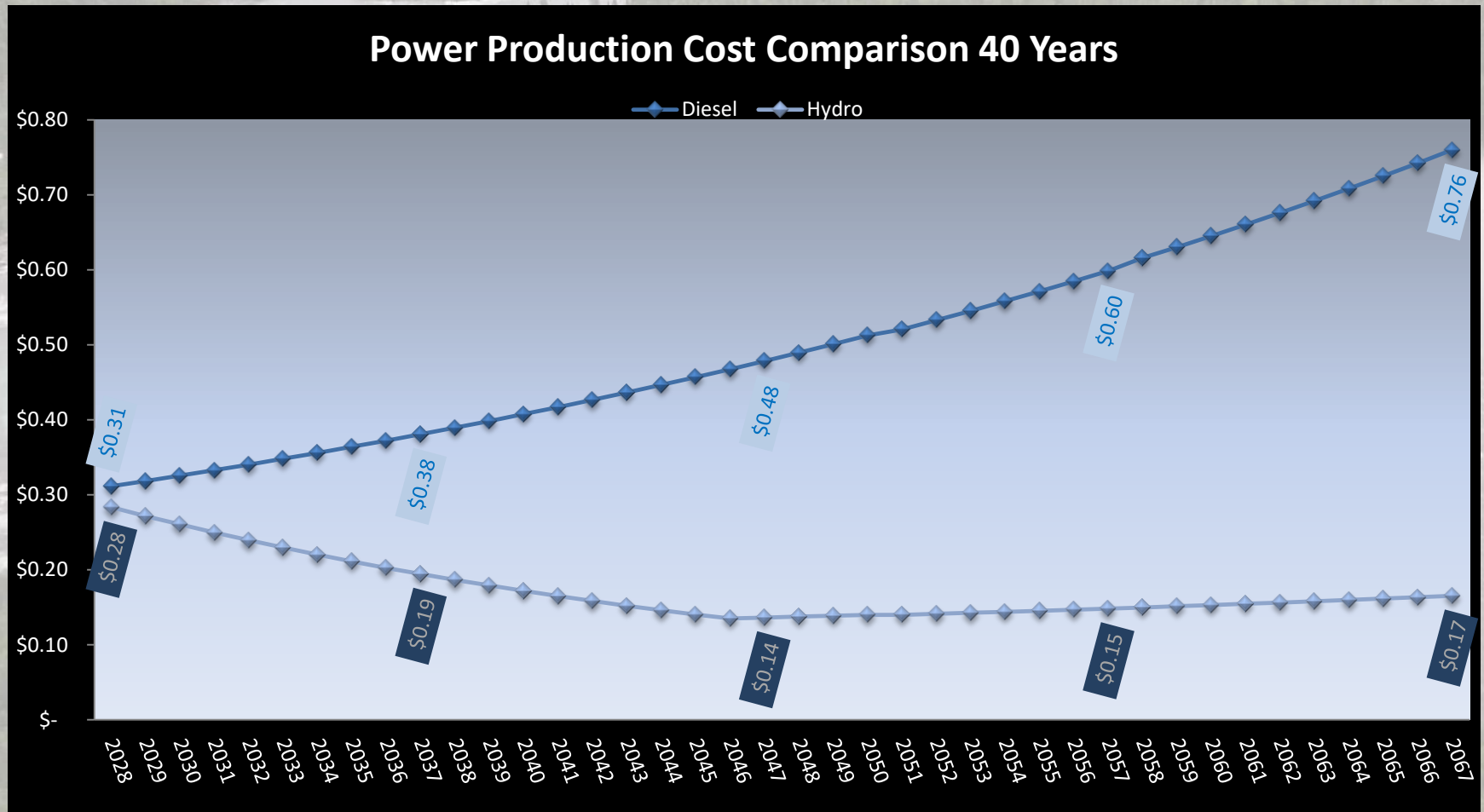
Why hydro???

- Proven long term solution
 - 56 operational hydro generation facilities in SOA
 - 476 MW of capacity
 - 1.85M MWH's annually
 - 24 Run of River
 - Dewy Lakes, Juneau , 115 years
 - Gold Creek, Juneau, 105 years
 - Beaver Falls, Ketchikan, 72 years
 - FERC typically issues 40 year licenses
 - Operational lifetime expectations of over 100 years

40 Year Financial forecast

- Compare power production costs diesel/hydro
- Variables include
 - Capitalization costs
 - Operational costs
 - Reinvestment timelines/costs for both
 - Inflation
 - System growth

Power production cost per KWH

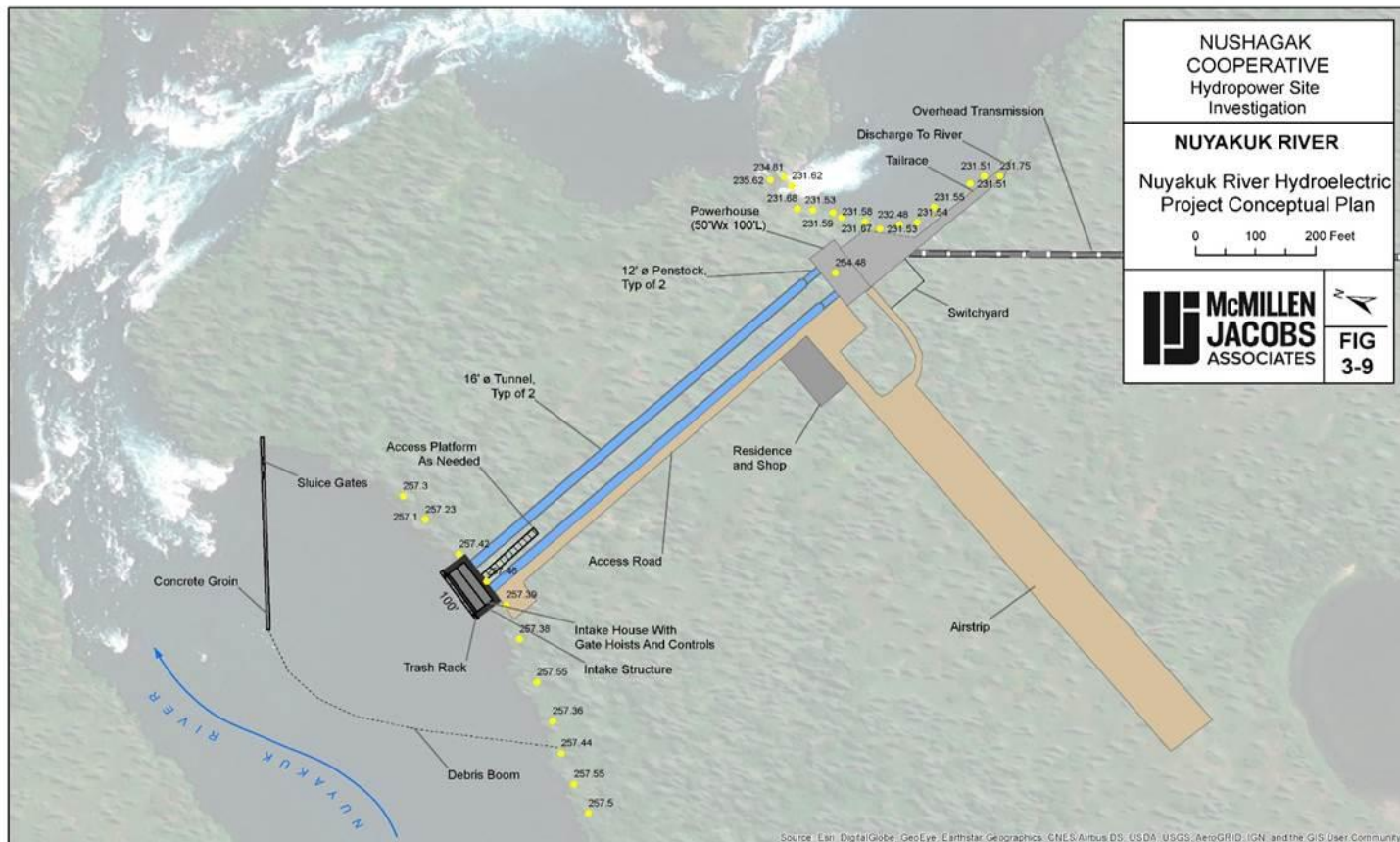


40 year forecast results

Power Production 40 year cost comparison			
	Diesel	Hydro	% Savings
2028	\$0.31	\$0.28	9%
2037	\$0.38	\$0.19	49%
2047	\$0.48	\$0.14	72%
2057	\$0.57	\$0.15	74%
2067	\$0.76	\$0.17	78%

- Initial power production costs comparable with Hydro about .03/KWh less expensive, a 10% reduction
- Initial diesel displacement 1.5m gallons/year reaching 2.35m gallons/year at full production
- 40 year accumulated power production savings \$112.5m
- 40 diesel displacement 85.7m gallons

Power Plant Concept



Project to date

- Project conception reviewed and approved for feasibility study by the NETC Board of Directors November 2017
- By December 2019 NETC has provided 95 project presentations, 31 of them in region
- FERC ILP process underway, study plan development phase
 - FERC Project # 14873

Projected timeline

- August – November 2020, Study Plan Determination issued by FERC
- 2020-2023 Study seasons
- Late 2023 NETC files FERC License Application
- Early 2024 FERC issues Operating License
- 2024-2026 Permit , Right of Way, water rights acquisitions
- 2026 – 2028 Construction

Broadband access

- This project will increase broadband capacity to eight communities, Dillingham, Aleknagik, Koliganek, New Stuyahok, Ekwok, Levelock, Manakotak and Clark's Point
- Current broadband capacity to these communities less than 1GB/s
- This project will bring 100GB/s to these communities

More information

- www.nushtel.com
 - Web based information including FAQs
- https://elibrary.ferc.gov/idmws/docket_search.asp
 - Search docket “P-14873” for all the information FERC has on this project including public comments
- Contact Nushagak Cooperative
 - Bob Armstrong, barmstrong @nushagak.coop
 - Bob Himschoot, bhimschoot@nushagak.coop