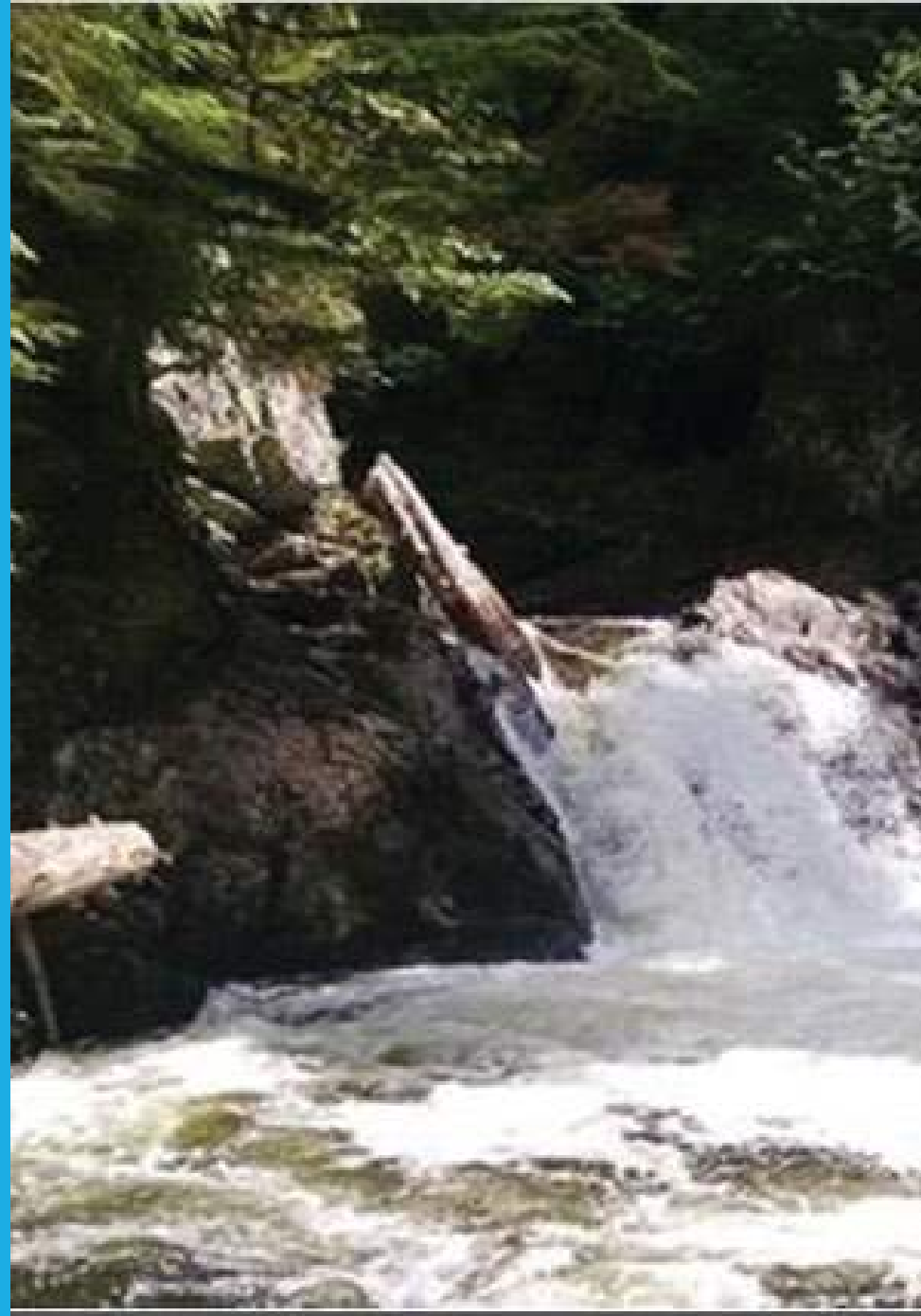
Excess Renewables and Electrification

THROUGH THE LENS OF

THAYER CREEK HYDROELECTRIC PROJECT

Background

- Owned by Kootznoowoo, Inc
- Partner – Inside Passage Electric Cooperative
- Run-of-the-River
- Enough hydroelectric generation to replace almost ALL diesel generation
  - 128,500 gallons of diesel
- Cost reduction benefits shared across all IPEC communities
- Economic Development Opportunities/Jobs Creation
- Total project costs: $39,647,000
- **Excess Hydro for Electrification – potential to displace 130,000 gallons of heating oil**



Project Update

- USFS Construction Permit has been issued
- Mitigation Plan for Historical Preservation is routing for signatures
- On Track for Summer 2025 Construction – Barge Landing
- Grants have been received to fully fund the project
- Department of Energy and Bureau of Indian Affairs grants (~$33 M) are PAUSED
- Alaska Energy Authority and Denali Commission are funding HEROS.
- Kootznoowoo is working with the Alaska Delegation on the future of Thayer Creek Project

Electrification Opportunities in Angoon

- Thayer Creek output - about 4 X the current load
- Electrification of Heating
  - Heat Pumps
  - Electric Heaters with hot water storage at large community loads
  - Residential Resistance Heaters with storage
- Other electrification
  - EV's
  - Manufacturing/Processing
  - Marine Transportation?
  - ??

Electrification Challenges

- Excess renewables are not always available - Interruptible
  - Highest levels in September through November and January
  - Lowest levels in February and March
  - What is the plan when excess renewables are not available?
- Heating
  - Risky to not have a backup heating system
  - Understand number of heat pumps that the system can support
- Policy
  - Regulatory Commission of Alaska’s interpretation of Electricity to Heat discourages installing excess renewables to heat

Next Steps

- Resolve the spending PAUSE
- Policy Collaborations
  - Rates structures that encourage economic development
  - Excess electricity to heat sales
  - Creative ways to share excess electricity benefits with all community members
- Technology Development
  - Controlling/prioritizing the automatic dispatch of excess electricity.