

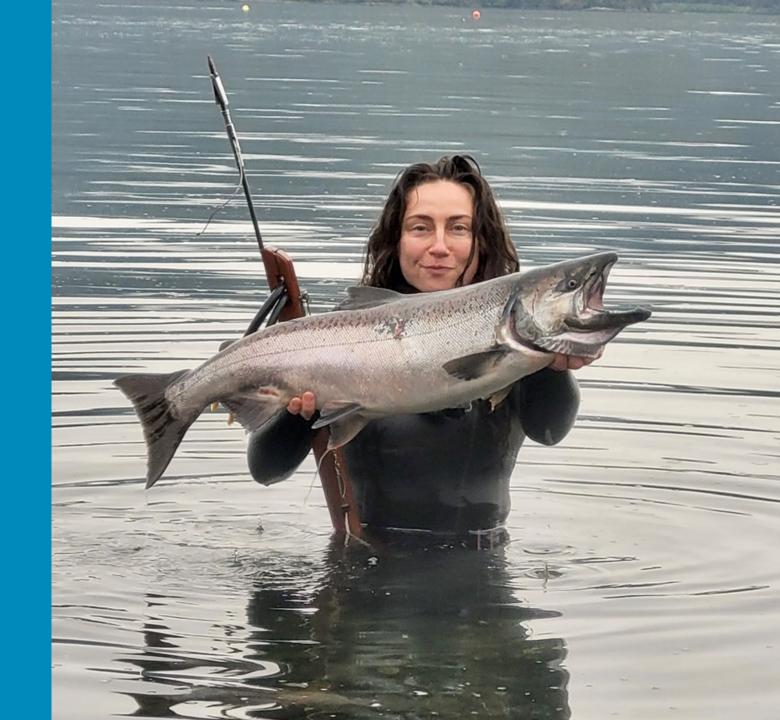
# Wind IPPs to Lower Rural Water and Sewer Bills

Presented by: Katya Karankevich
Rural Energy Program



### Who Am I?

- Katya Karankevich
- Rural Energy Program
- Project Manager
- I like fish



## Rural Energy Program Purpose

- Make water service more affordable in rural Alaska
- Solar, hydro, wind to heat, energy efficiency, heat recovery, biomass, etc.
- 600\$ average annual savings per household in 83 communities measured



# Toksook Bay Wind Expansion

#### • Feasibility study:

Add 1 MW wind + battery energy storage

#### • O&M:

• EWT has annual maintenance package, in-state technician, 25 year warranty

#### • Net revenue:

• ~\$437k in annual net revenue

#### Household subsidy:

• 172 residential households → ~\$1,650 subsidy per family annually





### Why an IPP

- The State's PCE rules have a perverse incentive against utilities adopting RE
- The less fuel a utility uses, the less
   PCE they get
- Residential sees no savings
- If separate entity sold power to utility, PCE sees a fuel provider.
- 80% idea: keep PCE, lower commercial bills and use revenue for further utility lowering



# Chevak Wind Expansion

- Feasibility study:
  - Add 1 MW wind + battery energy storage
- Net revenue:
  - ~\$394k in annual net revenue
- Household subsidy:
  - 140 residential households → ~\$2,818 subsidy per family annually





# Hooper Bay Wind Expansion

#### Feasibility study:

 Add 1 MW wind + battery energy storage

#### • O&M:

• EWT has annual maintenance package, in-state technician, 25 year warranty

#### Net revenue:

• ~\$558k in annual net revenue

#### Household subsidy:

• 146 residential households → ~\$3,824 subsidy per family annually





### Kotzebue Wind to Heat

- Design finished summer 2023
- Sturgeon Electric will install summer 2024
- Electric boiler will capture all available wind excess and send to heat new Water Treatment Plant
- 300kw boiler savings: 12,100 gallons or \$54,300.
- As KEA increases RE recovered heat system from diesel will decrease.





# Tribally Owned Kotz Wind IPP

- ANTHC working with Kotzebue IRA and KEA to update feasibility study through a free technical assistance request.
- New report will outline economic considerations for 2 more EWT 1MW turbines as a Tribally owned IPP, like the previous examples.





### IIJA/IRA opportunities: progress & potential

- DOE OCED Energy Improvements in Rural and Remote Areas:
  - Applied for \$30M of funding for solar PV and hydro projects in partnership with 7 communities
- DOE Grid Resilience and Innovation Partnerships:
  - Partnered with AEA on "Transforming Rural Alaska Microgrids" application
- EPA Climate Pollution Reduction Grants:
  - Tribal Priority Climate Action Plan
  - Eligibility requirement for \$4.6B in implementation grants
- EPA Solar for All:
  - Partnering with TCC to submit an Alaska Tribal Solar for All application for \$100M

### Free Technical Assistance

What does it cover?
Rural Energy Program
energy@anthc.org



# Any Questions?



### Thank You For Your Time

Katya Karankevich

yakarankevich@anthc.org

Direct: 520-900-2500



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