

Agency: Commerce, Community and Economic Development

Grants to Municipalities (AS 37.05.315)

Grant Recipient: Ouzinkie

Federal Tax ID: 920035750

Project Title:

Project Type: New Construction and Land Acquisition

Ouzinkie - Alternative Energy Phase 2

State Funding Requested: \$250,000

House District: 5 / C

Future Funding May Be Requested

Brief Project Description:

Further development of Ouzinkie alternative energy grid

Funding Plan:

| | |
|-------------------------------|--------------------|
| Total Project Cost: | \$300,000 |
| Funding Already Secured: | (\$50,000) |
| FY2025 State Funding Request: | <u>(\$250,000)</u> |
| Project Deficit: | \$0 |

Funding Details:

The city of Ouzinkie received a grant to assess wind electrical generation capacity in the community in 2020. We completed our hydro plant pen stock and switch gear upgrades in 2023-24. Our next step (phase 2) is to increase our water source for the hydro. At the same time we've been accumulating wind data and moving forward with options for solar supplementing our overall power generation. Our goal is 99% fossil free power in Ouzinkie.

Detailed Project Description and Justification:

Ouzinkie has a small hydro-electric generation plant with limited water and production capacity. Much of the time, city power is generated by aging diesel generators. The City of Ouzinkie believes that a combination of increased water capacity for the hydro plant, wind and solar electrical power will enable Ouzinkie to become close to fossil fuel free power generation.

\$ 250,000

3A.- Ouzinkie has a hydro-electric power plant that is being underutilized due to the limited water volume in the dam reservoir. We request funding to undertake a feasibility study to expand our hydro-electric reservoir by removing organic material, trees, stumps, and plant growth. A larger, higher volume reservoir would allow our hydro turbine to run more efficiently for a longer period. Not only would this project provide the much-needed efficiency of hydroelectric power, but it also removes years of organic build up and the debris from the community's potable water source.

Subsequent Project phases are as follows;

2. \$750,000 Install 25-30KW wind turbine.

3. \$1,750,000 Purchase and install solar farm.

For use by Co-chair Staff Only:

**\$50,000
Approved**

12:20 PM 6/14/2024

Project Timeline:

- 1. Funded July 2024
- 2. Engineering: Sept. - Jan. 2025
- 3. Construction April 2025-26

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

City of Ouzinkie

Grant Recipient Contact Information:

Name: Elijah Jackson
Title: Mayor
Address: P.O. Box 109
Ouzinkie, Alaska 99644
Phone Number: (907)680-2209
Email: mayor.jackson@ouzinkie.city

Has this project been through a public review process at the local level and is it a community priority? Yes No

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CAPITAL IMPROVEMENT PROJECT LIST FY 2024-
2028

1. Critical Electrical Distribution Upgrades

\$800,000

The City of Ouzinkie, Alaska has an electrical power generation and distribution system that is over 40 years old. In recent years, Ouzinkie has been able to upgrade and improve the output from our hydro-electric plant and reduce, to some degree, our reliance on diesel power. However, our electrical distribution system limits receiving full benefit from the hydro upgrades due to its deterioration. The aged and damaged transformers, conductors and power poles have made it near impossible to provide the communities residence with safe, reliable, and efficient power. Because of increased fuel costs and generator repairs, the Ouzinkie electrical utility does not have the ability to replace the electrical distribution system and has only been able to undertake emergency repairs.

This is why Ouzinkie initiated a **Power Distribution Survey in April of 2023** and the report identifies numerous damaged transformers and damaged power poles that have exceeded their lifespan and are hazardous to life safety. We know the report to be accurate: when the tops of our electrical transformers rust through, water penetrates the transformers causing extreme loads and short circuits that have caused explosions and downed power lines resulting in large multi-day power outages. These explosions, outages and downed power lines have fortunately not yet started a forest fire on our densely forested island, but with warmer dryer summers and more frequent wind events, it could resemble a tragedy that occurred on another pacific island, Maui.

Replacing our electrical distribution system is Ouzinkie's #1 priority for the safety and wellbeing of our community. Moreover, in talks with Kodiak Electrical Association about Ouzinkie possibly joining KEA's 99% renewable energy grid, upgrading Ouzinkie's power distribution system has become a prerequisite to further discussions.

2. Ouzinkie Harbor repair, maintenance, loading dock, subsistence cleaning station and Senior's unloading area.

\$900,000

Ouzinkie's Boat harbor is now 23 years old and needs maintenance and repairs. Like most boat harbors in Alaska, harbor fees have paid for supervision of the harbor and some emergency work but do not keep up with major maintenance and repairs. In addition, it has become apparent that the long steep ramp down to the Ouzinkie boat harbor inhibits elders' mobility to and from the harbor. In addition, all Ouzinkie residents must transport most of their groceries and all of their subsistence foods up the long ramp to their vehicles. A loading/unloading dock as well as a subsistence foods processing area (fish cleaning station) would address our elders concerns and our community needs.

Like Boat harbors all around Alaska, Ouzinkie boat harbor was constructed with materials that are wearing out. We need the sacrificial "zincs" replaced, some pilings upgraded and some of the wood on the floats repaired.

Moreover, we've come to see that our harbor design should have included a standard freight and passenger loading dock which is alongside the boat launching ramp in many Alaska communities. (See

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the Kodiak, Kake, Yakutat, Whittier, Seward, Homer, Valdez ...etc. community loading dock/boat launch facilities.)

Ouzinkie's tidal fluctuations can be as much as 20 feet, so a loading dock is especially needed at low tide. (See, for example, the Anton Larsen Bay loading dock.) A small loading dock alongside the Ouzinkie boat launch with a subsistence processing table would greatly assist our subsistence hunters and fishermen and community members that are currently toting large carcasses as well as thousands of pounds of seafood up the lengthy and narrow boat harbor ramp. Remember, Ouzinkie has no store, so all of our subsistence foods and most of our groceries, dry goods, materials and other freight are transported by water and offloaded manually. Finally, because of the proposed loading dock is in proximity to where the Alaska Marine Highway ferries dock, our loading dock project would include a bathroom like those constructed at the Kodiak Boat Harbor for use by those waiting for the ferry as well as those using the loading dock.

3. Renewable Energy Projects

Ouzinkie is working hard to reduce the community's dependency on diesel power generators and to create a resilient microgrid made up of renewable energy sources. Following, in addition to our electrical distribution system upgrade identified above, are three steps toward accomplishing our renewable energy goal.

\$ 250,000

3A.- Ouzinkie has a hydro-electric power plant that is being underutilized due to the limited water volume in the dam reservoir. We request funding to undertake a feasibility study to expand our hydro-electric reservoir by removing organic material, trees, stumps, and plant growth. A larger, higher volume reservoir would allow our hydro turbine to run more efficiently for a longer period. Not only would this project provide the much-needed efficiency of hydroelectric power, but it also removes years of organic build up and the debris from the community's potable water source.

\$ 450,000

3.B.- Ouzinkie is also working to install a wind turbine. Our recently completed one-year feasibility study shows that Ouzinkie is in an area with high wind generation potential. Adding a 25-30kw wind turbine generator to our electrical distribution system would greatly assist our hydro-electric generation capacity and any future solar power generation (3C below). These smaller turbines are easier to install, operate and maintain. – all important factors for remote Alaska communities.

\$ 1,750,000

3.C. - Along with our existing hydroelectric power and planned wind generation, the City of Ouzinkie believes that adding solar will be the final piece for our renewable energy grid. The Tribe, City and Native Corporation have teamed up with ANTHC in applying for a Department of Energy (DOE) grant to fund a solar array project in our community. A feasibility study was conducted in

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2023 by ANTHC's Rural Energy Program. The study found that solar along with a lithium-ion battery storage system was the most cost-effective system and had the lowest ongoing operation and maintenance needs. Hopefully we are successful in this grant opportunity, but if we are not, we are seeking funding through State and Federal grants and/or appropriations. Application Results Pending March/April 2024.

4. Health & Safety Equipment Replacement **\$400,000**

Several of the City of Ouzinkie's pieces of construction equipment are no longer working, and the repair costs now exceed the value of the equipment. The City of Ouzinkie needs a dump truck and a sanding plow truck. A municipal dump truck is vital in maintaining a sanitary municipal waste program and the truck will also assist in virtually all of our community's construction projects. A sanding plow truck has become a recurring need in our community. With the quick changing variable winter weather conditions our roads have become so icy that they are not safe to travel on by car, four-wheeler or even by foot, leaving many residents stranded at home.

5. Anton Larsen Bay Road Extension **\$8,000,000**

Year around boat access to the Anton Larsen Bay Road has public safety and emergency preparedness components as well as recreational and economic efficiency/development elements. The prevailing Kodiak weather pattern, especially in the winter, is from the Northeast. This pattern often brings fog, rain, wind and large seas. During N.E. "blows" vessels often cannot travel to Kodiak via Spruce Cape and frequently smaller bush airplanes, and sometimes the U.S. Coast Guard, cannot fly to small communities like Ouzinkie, Port Lions, Afognak Island Russian Village, Danger Bay Logging settlement, and numerous, hunting, sport fishing, and commercial fishing camps and recreation and cultural development sites. However, access to Kodiak is possible by boat via Anton Larsen Bay as the route lies in the leeward of the N.E. winds. Nevertheless, access to Anton Larsen Bay is stopped during most of January, February, March and sometimes April due to Anton Larsen Bay freezing over. Year-around Anton Larsen Bay Road saltwater access would give residents of Ouzinkie, Port Lions as well as the whole west side of Kodiak Island access to Kodiak for emergencies during bad N.E. weather and give Kodiak residents access to the west side of Kodiak Island. In addition, the route is closer to these communities and Kodiak residents would use the extended "year around" road access to increase economic and recreational opportunities during the winter.

The Native Village of Ouzinkie has committed to maintaining the proposed road extension to the standard that the State of Alaska currently maintains the existing Anton Larsen Bay Road. Total construction costs can be broken down as follows: \$500,000 rock and gravel, \$2,000,000 pioneer road, \$4,500,000 primary road construction, \$1,000,000 site development and boat launch.