

TRIBAL ENGAGEMENT

The tribes have strong spiritual & cultural ties to salmon and other aquatic species in the region that includes thousands of years of use for tribal religious/cultural ceremonies, subsistence, and for commercial purposes.

Project would be located in the Usual and Accustomed (U&A) fishing area for the region's Native American Tribes who were signatory to the Treaty of Point Elliott.

The team is meeting with Tribal Nations to get feedback and share information throughout the project. We started outreach in 2022 and will continue throughout the duration of the project.

Once OPALCO has submitted our draft license agreement, government to government consultations will occur with tribes and FERC.

ENVIRONMENTAL STEWARDSHIP



Rosario Strait is home to several protected species under the Endangered Species Act, Marine Mammal Protection Act, and Magnuson-Stevens Act. Minimizing risks to marine wildlife is always a primary concern to OPALCO, and limiting possible impacts to protected species and habitats is a key objective of this project.

OPALCO is working closely with its Tribal, State, and Federal partners to mitigate risks to wildlife and ensure project success while protecting the region's sensitive resources.

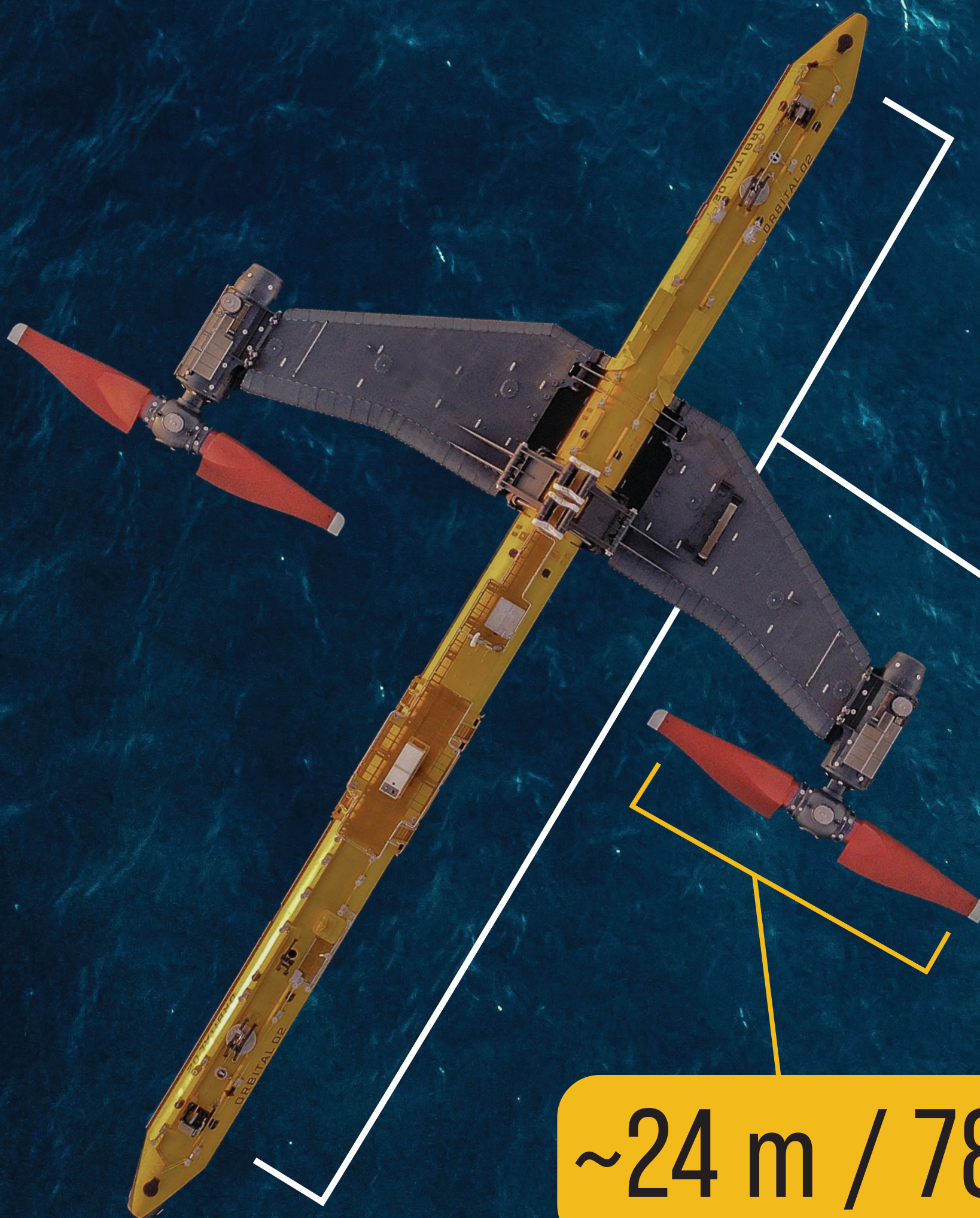
THE TECH*

Collaboration with **Orbital Marine**, a company based in Scotland with a tidal device currently deployed in the Orkney Islands.

One 2MW turbine aimed to provide utility-scale, clean energy

Moored via anchors in powerful tidal streams

Underwater turbines rotate in a steady, rhythmic motion with the tides to generate electricity



85 m /
278 ft

~24 m / 78 ft

* Estimates based on current technology, final design may change

LOCATION

ROSARIO STRAIT

Spring Tide maximum tidal energy:

3.14 m/s

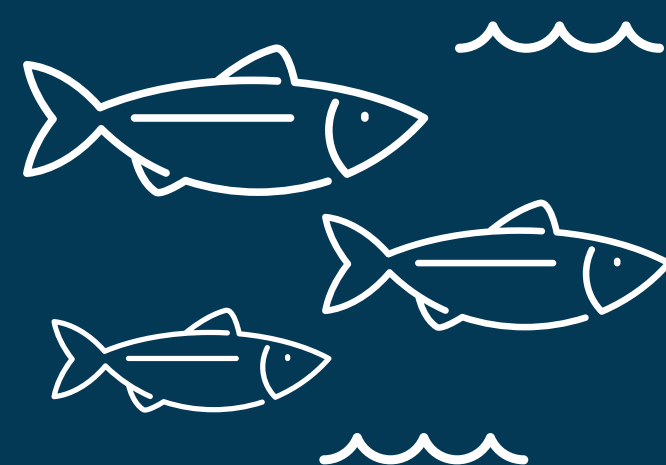
Neap Tide minimum tidal energy:

1.80 m/s



Close to pre-existing infrastructure for grid integration

Lower abundance of sensitive marine species such as orca whales, humpback whales, and rockfish.



Alternate route for vessel traffic, ferry crosses southern tip only

ALTERNATE LOCATIONS EXPLORED:

Middle Channel

- Strong tidal energy
- BUT**
- No existing infrastructure
- High abundance of endangered species

Spieden Channel

- Major vessel & ferry route
- No existing infrastructure
- High abundance of endangered species
- Weaker tidal energy

San Juan Channel

- Existing infrastructure
- Low abundance of endangered species
- BUT**
- Weaker tidal energy
- Major ferry route

FAQs

HOW MUCH WILL THIS COST OPALCO MEMBERS?

This is a grant funded project with the goal being nominal costs to OPALCO members. Current costs to OPALCO are through in-kind labor.

WHY IS OPALCO EXPLORING THIS PROJECT?

As impacts of climate change and legislation drive up the costs of green power, OPALCO is committed to exploring local, renewable energy sources. With water being 800 times the density of air, tidal stream energy is to the northwest what solar is to the southwest. While solar is minimal in the winter, tidal power is strong and predictable year-round, but more importantly, it can be firmed with a small fraction of the storage solar or wind would require.

WHAT IS THE CURRENT GRANT FOR?

This is a competitive feasibility grant through DOE for \$3M. This phase of the project is determining if the project could be successful. Feasibility being studied in this phase of the project include environmental site study and environmental risk register. The end result of this phase is a Draft License Application to Federal Energy Regulatory Commission. Tribal, stakeholder, and community outreach are key components.

HOW LONG UNTIL WE GET TIDAL GENERATION UP & RUNNING?

There are still many, many steps before we could get this project operating and producing energy. In the best case, it would take at least 5 more years.

ABOUT

Department of Energy (DOE) Competitive Grant
Phase 1 Funding - Feasibility Study

One 2 MW output floating tidal generation device



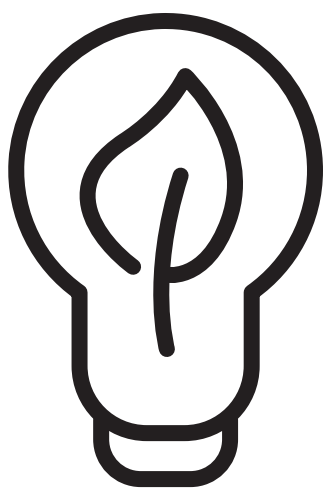
Ability to power ~400 homes in OPALCO service territory

5 Million kWh of annual generation
about 2% of OPALCO's annual load



10 year pilot license/ 20 year unit life span

OUR GOALS



1. GRID RELIABILITY

Resilience and independence for residents of San Juan County

2. CONSISTENT GENERATION

Meet demand for electricity with renewable energy, regardless of the weather

3. LOCAL RENEWABLE ENERGY PRODUCTION

Integrate a carbon free reliable energy source to the OPALCO grid

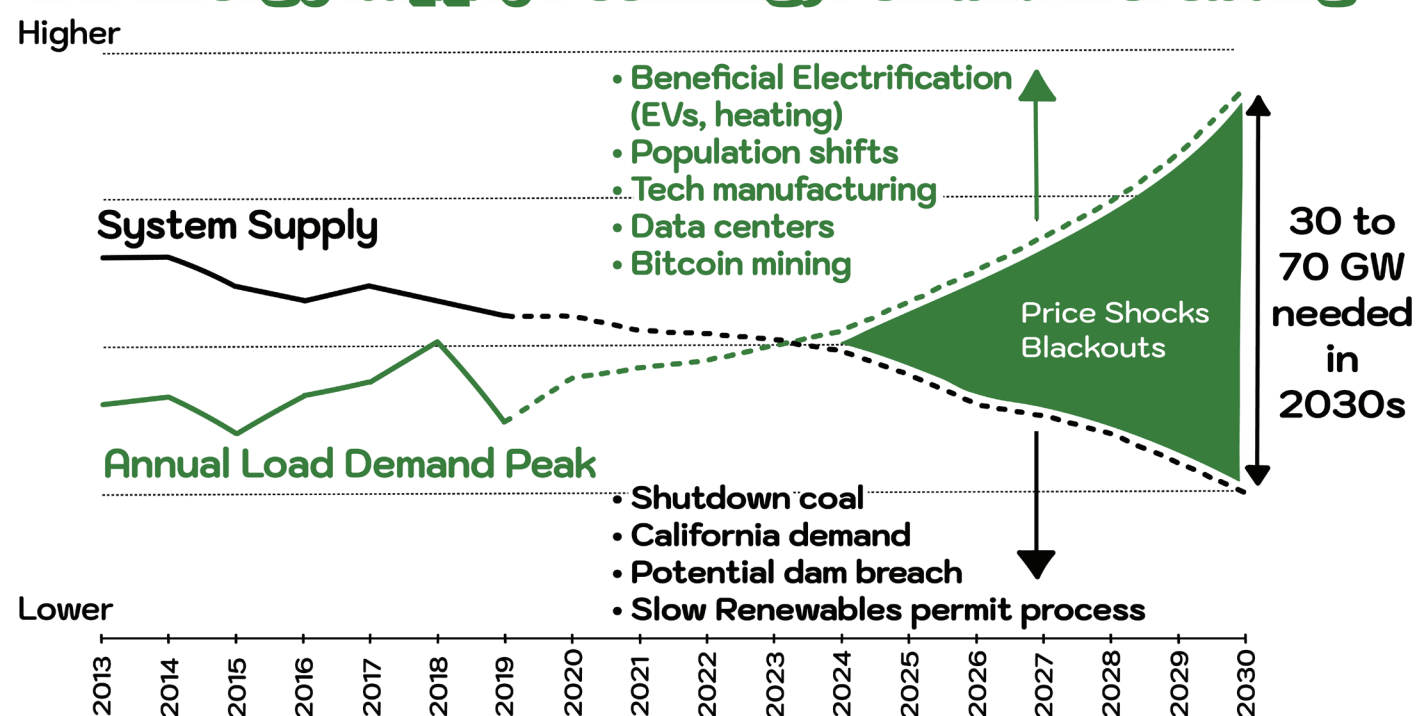


Why Local, Renewable Generation?

Increase in Demand

- More customer demand for carbon free resources to power cleaner, more efficient electric options like EVs and heat pumps
- WA State mandates to get rid of fossil fuels from our energy sources
- Increase in energy intensive data centers

NW Energy Supply Declining, Demand Increasing



Regional Energy Supply at Capacity

- Regional hydro system maxed out - no new hydro
- Renewable energy projects are delayed or cancelled due to public pushback & permitting challenges
- At least 30 GW of new renewable energy supply will be needed to meet the rapidly growing demand
- The Northwest has only been able to build out 1 GW over the last 8-year period. The amount of new power solutions to keep our grid reliable is staggering.
- Rolling blackouts and market price shocks will increase until supply can meet demand

HOW CAN WE PREPARE?



DID YOU KNOW?

Rooftop solar alone won't meet our future energy needs. Rooftop solar in our county, when maxed out and with increased demand, will only supply about 5% of our local energy needs.



DELAY ALERT!

Each year we delay the Bailer Hill Microgrid:
4 million LBS OF CO2 is emitted into the environment

We need utility scale projects like the Decatur Microgrid and the proposed Bailer Hill Microgrid.

It's important for us to explore innovative projects like the 2MW tidal generation project OPALCO is doing feasibility studies on right now.

We NEED your support to get these projects permitted and installed!



The US must cut emissions by 50% by 2030 to reverse the global climate catastrophe

