THE ISLAND WAY

Welcome!

THE ISLAND WAY

Your Co-op Communications Team

- Suzanne Olson, Public Relations Administrator
- Krista Bouchey, Communications Specialist
- Russell Guerry, Manager of Engineer and Operations
- Jay Kimball, Consultant
- Ryan Palmateer, Consultant

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Zoom Meeting Protocol

Mute yourself unless talking

Use your first and last name (ask us if you need help changing your name)

Save your questions until Q&A time

Chat that you have a question and our staff will put you in the queue

Chat directly to Ryan Palmateer if you are having technical difficulties

Agenda

- Introductions and Zoom Ground Rules – please have a blank piece of paper and a sharpie available
- What is the Stewards Program?
- Big Picture: The Transition to a Carbon Free World
- Data Dive: Microgrids First for Local Resiliency
- Q&A

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OPALCO STEWARDS

Who? A hub of well informed members who support OPALCO's goals and activities.

What? More information on the topics you're most interested in. Occasional calls to help spread the word.

Expectations? Keep up-to-date with info we send; come to us with questions and feedback; share with your network.

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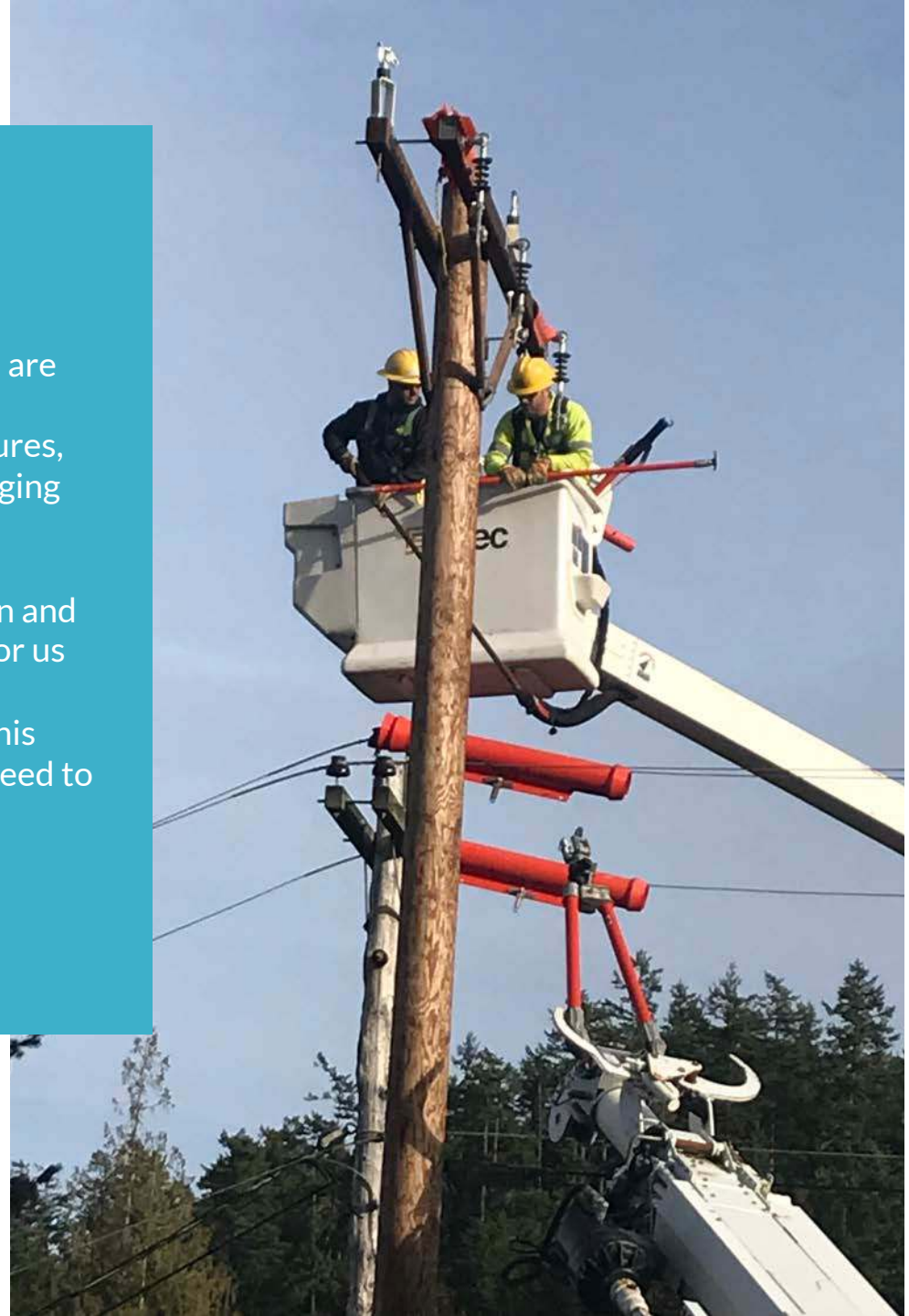
BIG PICTURE

The rate of change in the energy world is dramatic and the consequences are already piling up: legislative (CETA) mandates, drier and hotter weather patterns, the regular toll of fire season, climate migration, coal plant closures, political plays to control regional power supply, capacity constraints on aging infrastructure causing rolling blackouts and the rising cost of power.

We are facing a major transition away from fossil fuels and toward a clean and sustainable energy future. Obtaining financial assistance will be critical for us to achieve our goal to transition to local renewable generation. Without Federal and State support, rate payers in the region will have to pay for this expensive and necessary shift over the coming decades. In addition, we need to safeguard our island aesthetics as we seek land to build it on.

We need to let our members know what is ahead and help them prepare.



OPALCO ENERGY PLAN

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ENERGY TRANSITION

Renewable Power – Local and Regional

- **Clean Energy Transformation Act (CETA):** OPALCO will meet ~30% of its power needs with local solar + energy storage (battery) projects by 2040. Post 2030, tidal generators may be part of the mix.
- **Challenges:** funding, land for renewables, changing island aesthetics - how much is too much? We will build as much as members will support.
- **Increasing Resilience and Independence**:
    - We will always rely on the mainland to meet our total demand for power and also to "firm up" our renewable (intermittent) resources when the wind doesn't blow and the sun doesn't shine.
    - OPALCO is building local energy resilience to keep the the islands energized during increased mainland outages.

2021 PROJECTS + ACTIVITIES

- Community Solar Project #2: San Juan Island
- EV Infrastructure
- Rooftop Solar Workshops with Sustainable Connections (w/grant success)
- Support Community Transition Events
- Island Way Communications Campaign
- System Upgrades: Sectionalize and Replace Equipment

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REGIONAL ISSUES

Shifting Supply + Demand, Competition

Clean Energy Transformation Act (CETA)

- Plant closures
- Carbon costs
- Mandates for utilities

CLIMATE IMPACTS

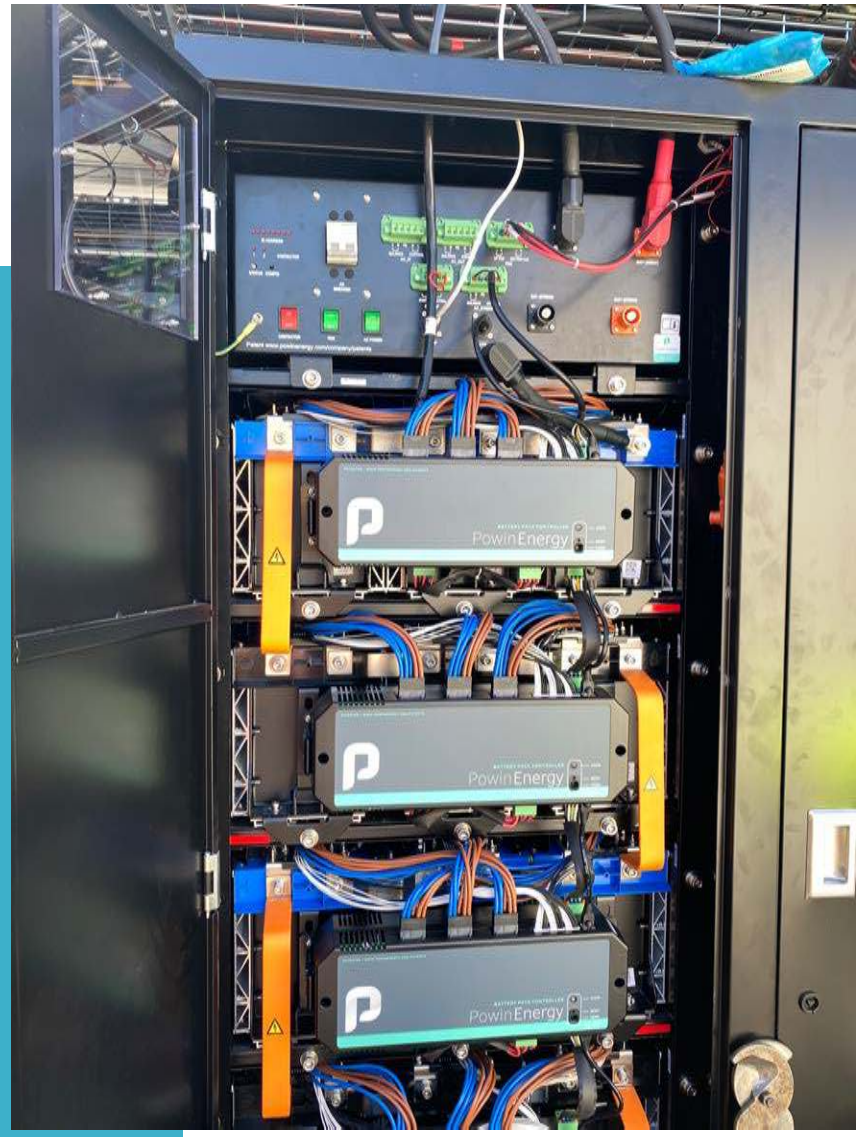
- Changing weather patterns
- Fire season

COMPETITION, SUPPLY + DEMAND

- Preferential power (PSE)
- Threats to regional supply
- Columbia River Treaty with Canada

Regional Transmission Organization (RTO)

- PNGC: 15 Co-ops Strong
- Establish a RTO/ISO: fair and open transmission access
- Shore up BPA's ability to compete in a changing environment
- Support rational policies that enable u to achieve 100% carbon neutrality by 2033



OPALCO'S PLAN

1. Build as much **community solar** as members are willing to pay for: microgrids to provide power to essential services in village population centers. (Member $$)

2. **Leverage grants** for renewable projects and energy (battery) storage. (Government $$)

3. If needed, build **utility-scale renewable projects** in the islands and/or invest in regional projects. (Borrowing and Rates $$)

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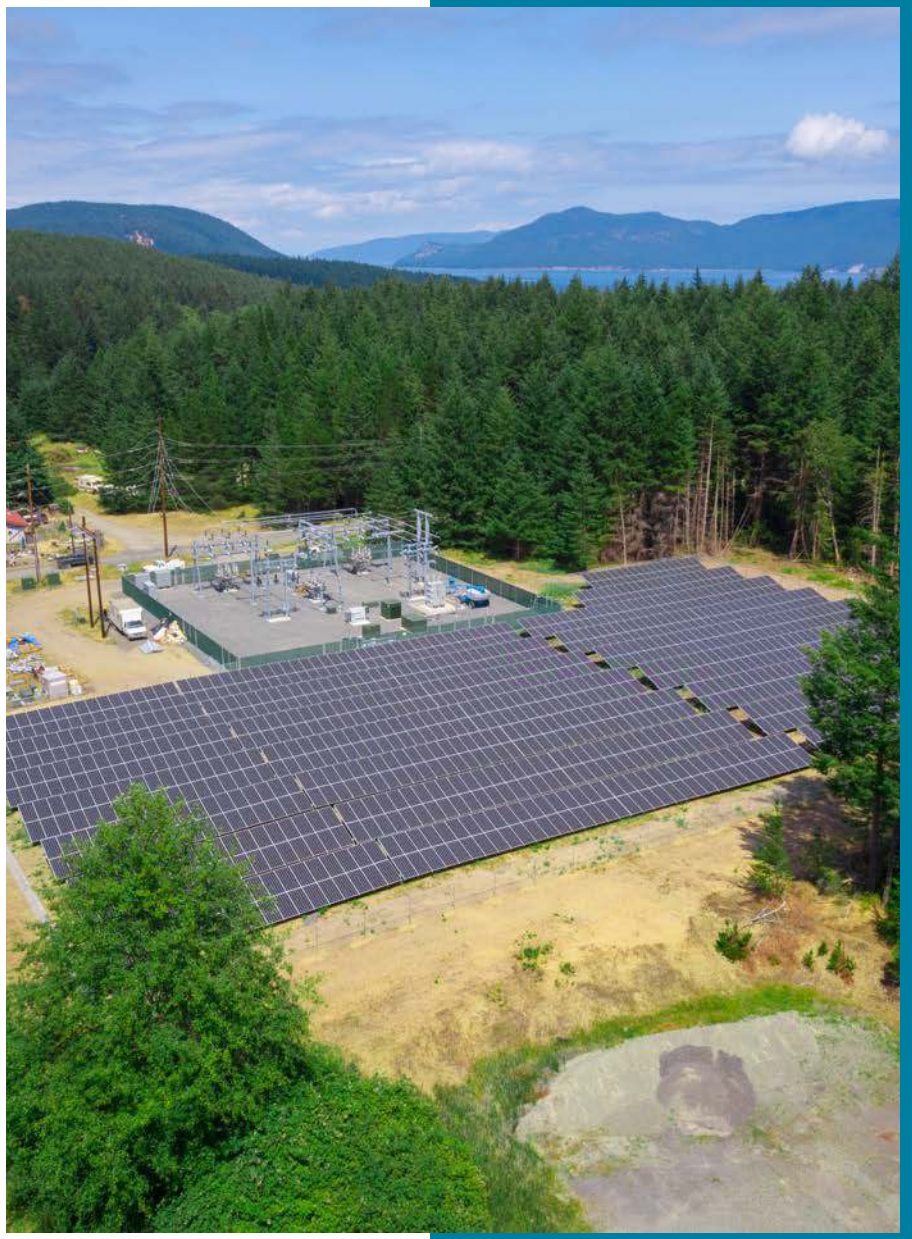
DETERMINING OUR ENERGY FUTURE

What will it mean in the coming years, to sustain our island communities? To recognize change and find our way through it? **Where will we find the power we need?** Only here, only in ourselves. This is the task that has come to us. But we aren't alone. We have the advantage of the most advanced energy technology on the planet—if we choose to seize it. We have a utility model that's equal parts cooperation and independence—if we choose to trust it and magnify its strengths. And, we have a **long-standing habit of thinking off the coast of the expected**—if we choose to unite and use it to **shape the future** we want.



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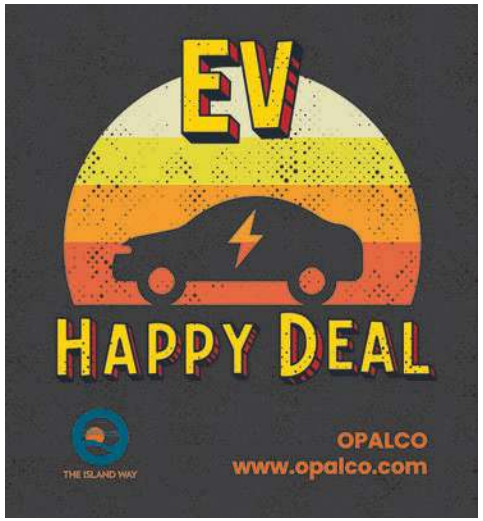
MEMBERS (YOU)

MEMBER ENGAGEMENT + INVESTMENT

- Maximize **efficiency + conservation** (Rebates)
- **Electrify heating and transportation** (Switch it Up!)
- Invest in local **community solar**
- Easements (or donations) for **land** to site renewable projects

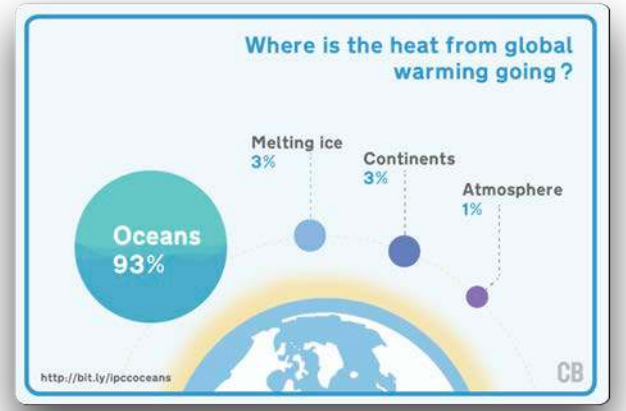


- **EV Happy Deal** – EV charger installed, EV tabs+ sales tax covered, low income qualified: 12 months of charging (BEF grant of $50k)
- **Member Stories** – do you have one to share?
- **Energize Youth Campaign** – scholarships, youth voice, co-op internships
- **Broad communication outreach** – all channels + some new ones. COVID safe.

Climate Impact

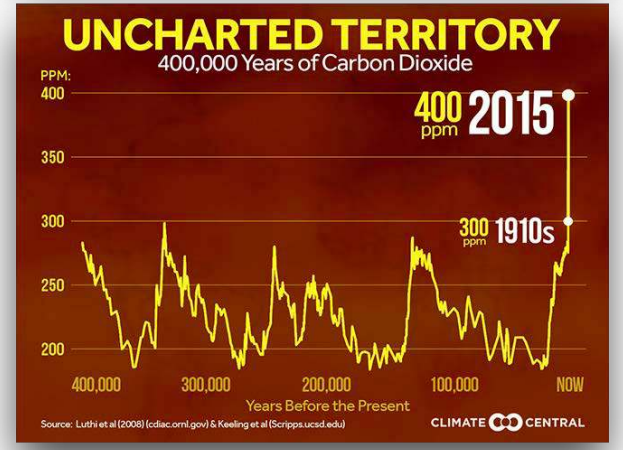
Land and Ocean Heating

- Half of the increase since 1865 occurred in the past 20 year



Ocean Acidification

Extreme Weather



Ecosystem Collapse

- As many as 1 million species are now at risk of extinction, many within decades.
  (UN Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services)

Major Sources of Carbon

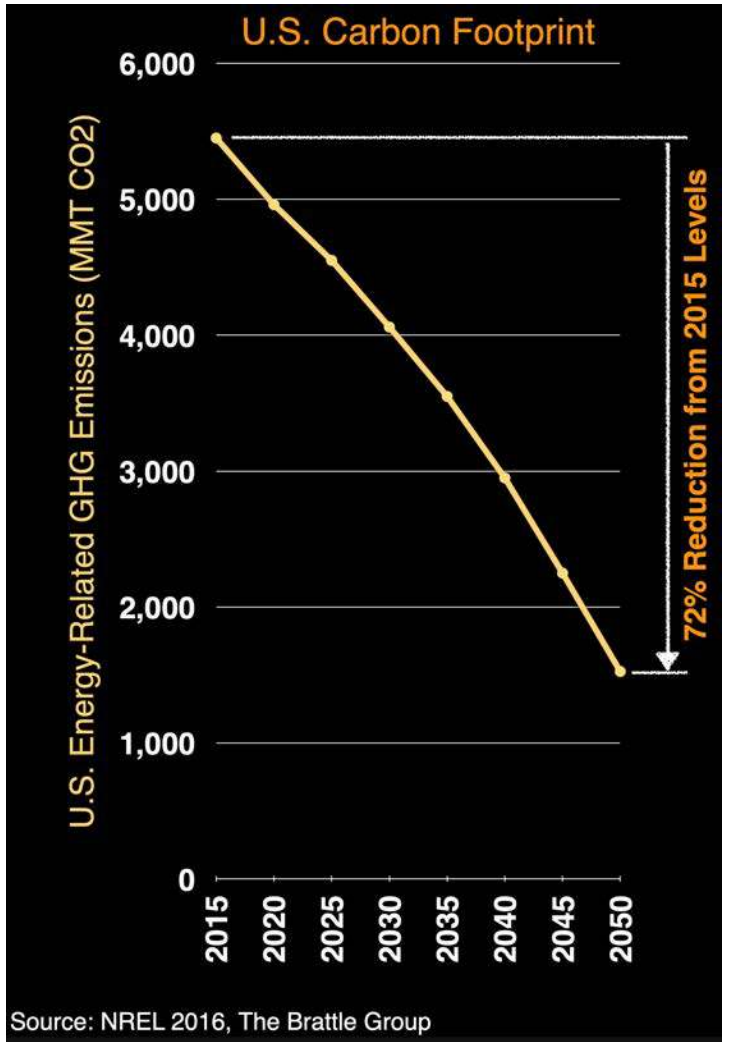
By 2050, most transportation and heating will be electric, reducing CO_2 emissions by 72%

Transportation

- 45% of WA & SJC emissions come from transportation
- 64% of WA DOT fleet emissions come from diesel ferries

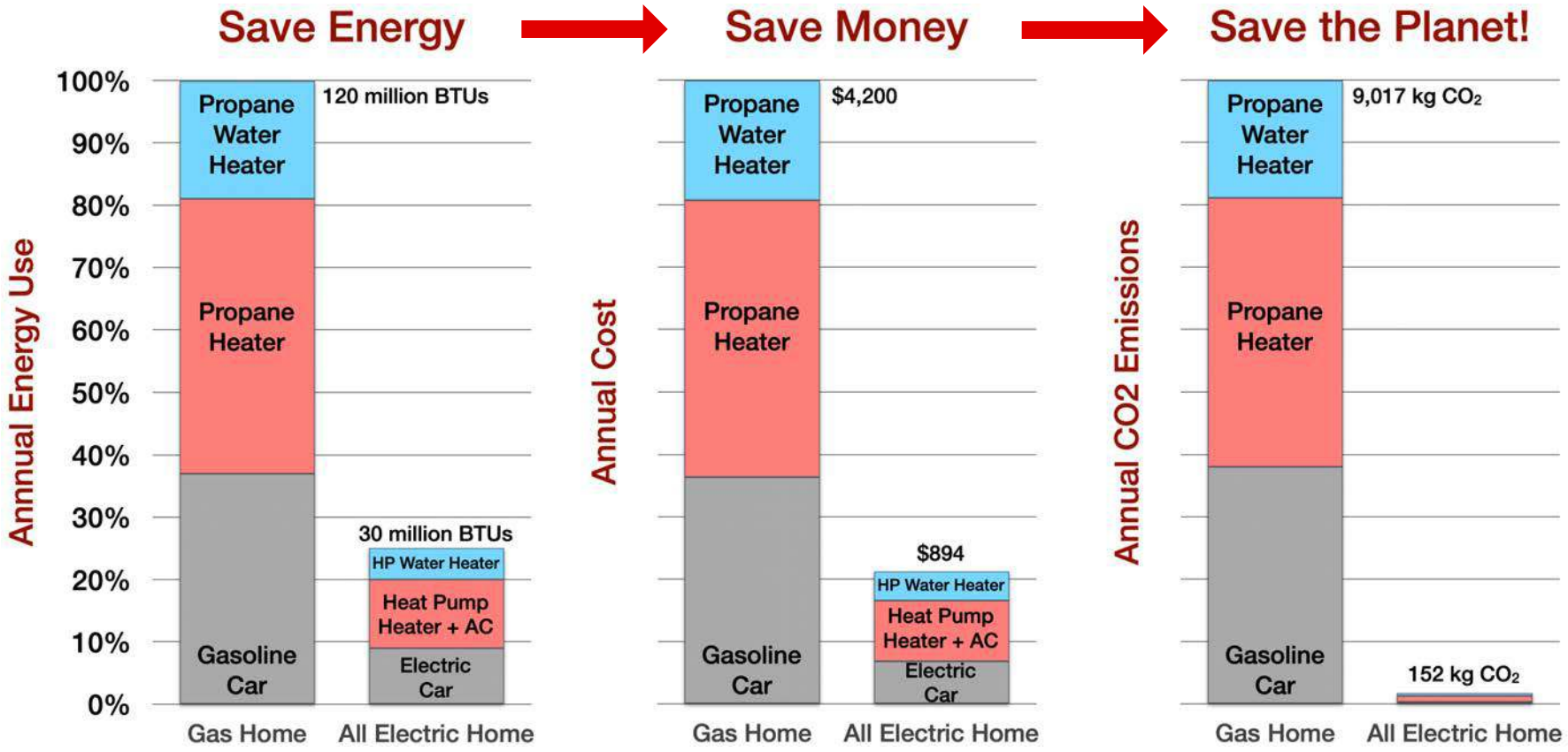
Heating (space heating, water heating)

- 29% of county CO_2 emissions come from fossil fuel heating (propane, fuel oil, wood)



Switch from Fossil Fuels to Electric

Decarbonize The Planet Fast!



Typical SJC home (40 million BTU), and driving (10,000 miles per year, 26 MPG)

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What would it take to be energy independent from the mainland?

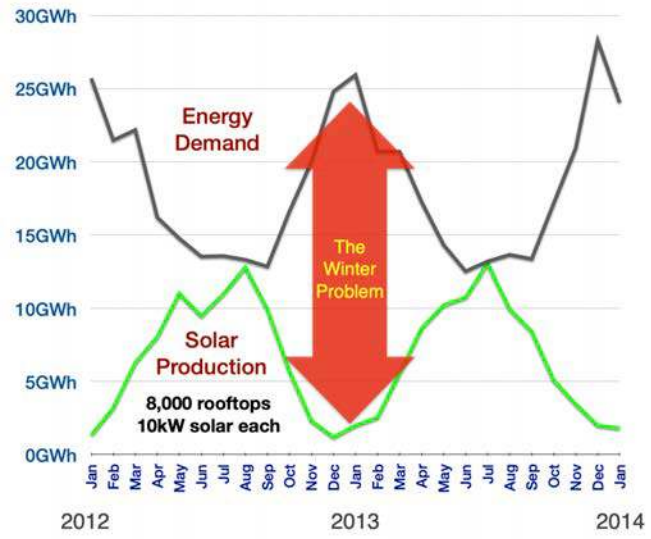
San Juan County Energy Use

Electricity

- 10,000 homes and 1,000 businesses
- Peak consumption over 60 MW, annual 220 GWh
- Load doubles in winter, when solar is one-fifth

Fossil Fuels

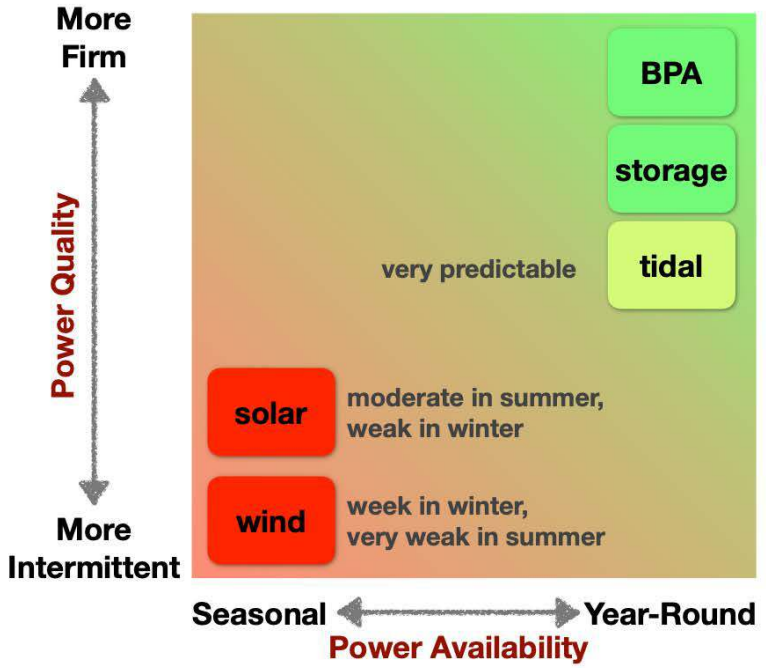
- 2,700,000 gallons gasoline = 18 GWh for EVs
- 1,900,000 gallons propane = 12 GWh for heat pumps



Local Renewable Energy Requirements

Solar + Storage

- $204 million for solar arrays, on 1,220 acres of land
- $12.5 billion for storage, on 83 acres of land
- 70X increase in member wholesale energy cost
- Fossil Free (no gasoline, propane or wood)



Increasing Local Energy Resilience

This decade will be challenging…

- Climate driven extreme weather events
- Clean Energy Transformation Act (CETA)
- Rolling blackouts from energy shortages

  Outages cost county economy about $3 million per day.

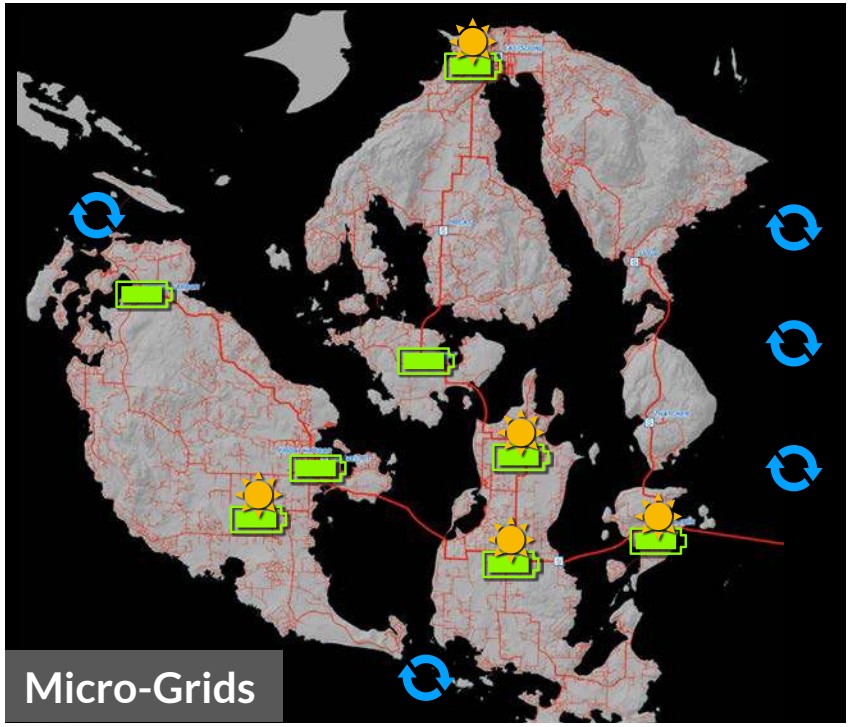
OPALCO Solutions

Increased Local Renewable Energy

- Community Solar + Storage: as much as members want
- Tidal Energy: as much as members want

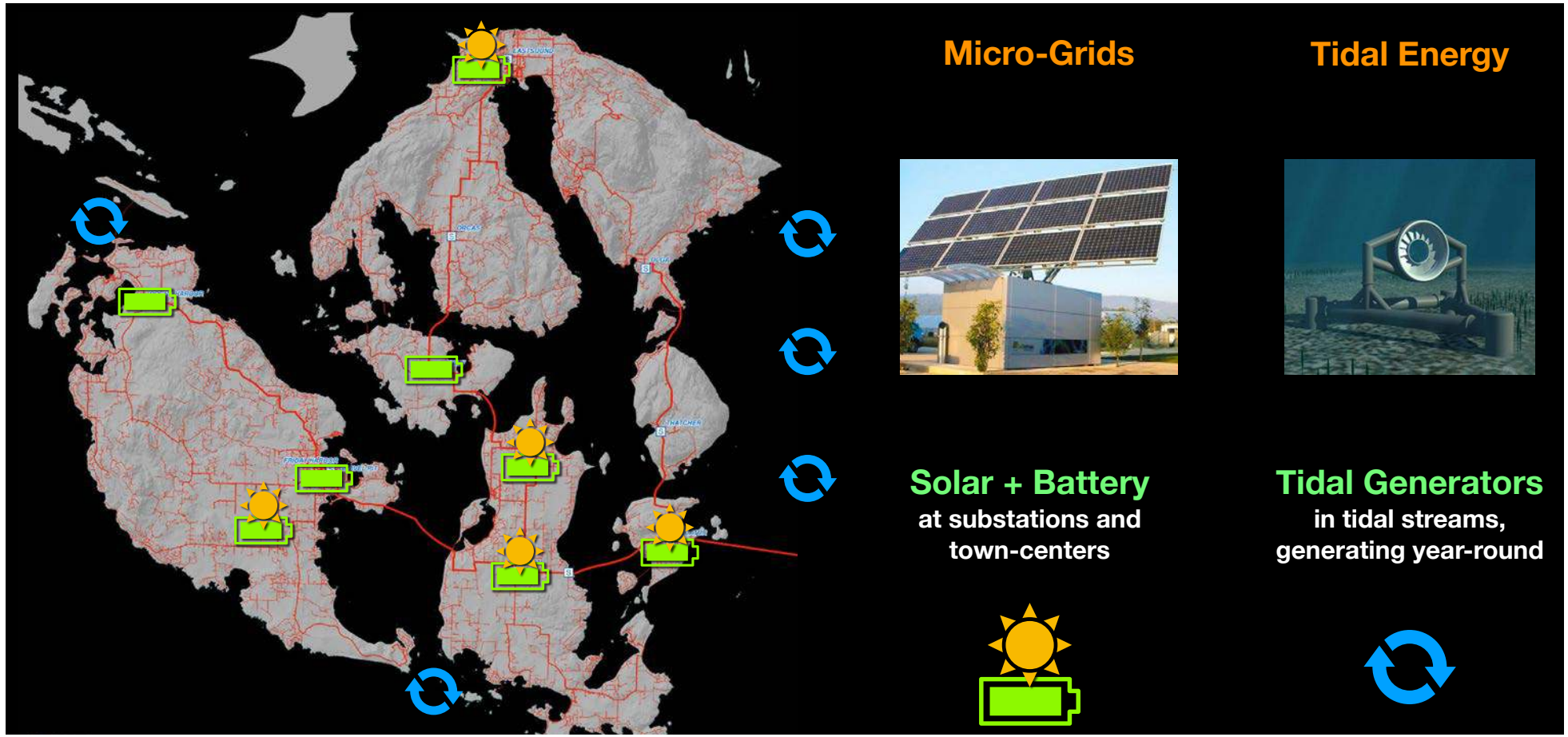
Micro-Grids

- Innovative $1 million WA Clean Energy Fund grant
- Reduces costs of operations and extends equipment life
- Increases reliability during outages
- Rapid eFerry charging



What's a micro-grid? How does it help members?

- Micro-grids consist of energy generators like solar and tidal, with battery storage
- Microgrids can be more expensive than mainland power, but:
  - economic for critical systems and populations centers, during outages
  - help reduce operational expense – extending equipment life, reducing peak demand charges
  - storage "firms" intermittent solar, rapidly charges eFerries, avoiding peak demand charges



Questions?

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NEXT STEPS

- Come to us with your questions and ideas
- Participate in Co-op events and activities
- Share the story. Host a chat session
- Do all you can to prepare for the transition

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What we share is stronger than what we face

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