Washington State 2025
SOLAR SUMMIT

Advancing Solar in a Time of Uncertainty

October 24, 2025 | South Seattle Community College

Session 5

Microgrids: From Backup to Backbone

Moderator: Markus Virta, Cascadia Renewables

Featuring: Alex Corey, Snohomish Public Utilities District;

Allie Detrio, Reimagine Power;

Ben Schwartz, Clean Coalition

Microgrids as Grid Infrastructure

From Backup to Backbone

CASCADIA
RENEWABLES

Update from Last Year

Core Observations

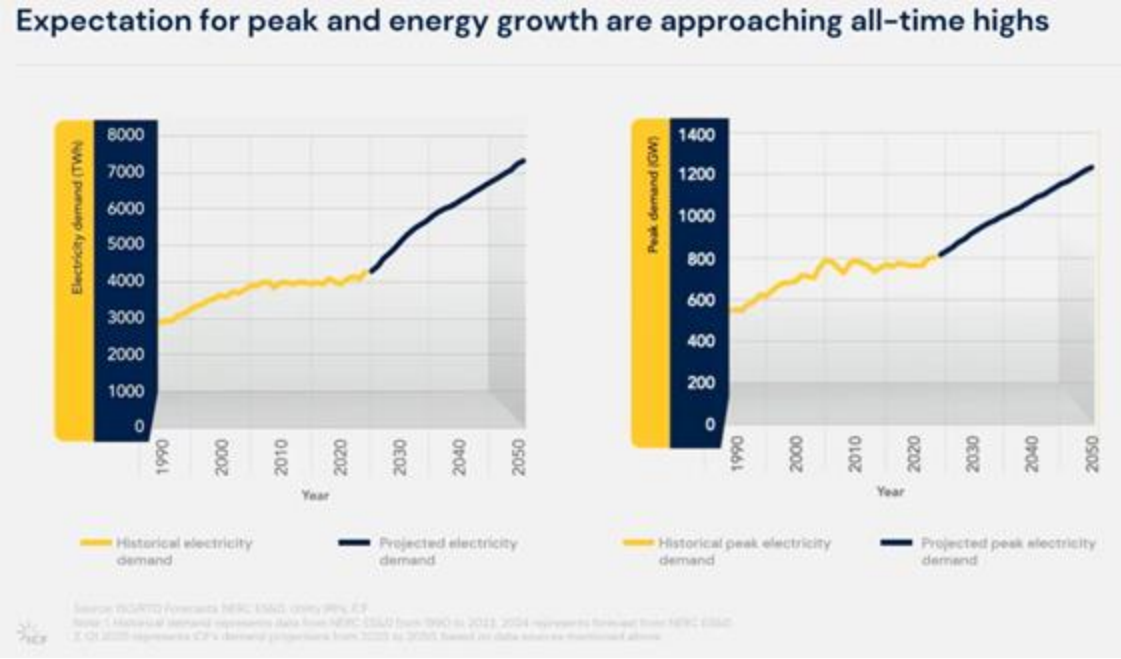
1. The grid is under increasing stress, putting reliability and affordability at risk.

2. Climate change is making these challenges worse.

3. There's no strong market signal for resilience—yet utilities are starting to recognize the need for local, distributed, firm power.

4. Microgrids can provide local, firm power, supporting communities resilience and grid reliability/flexibility.

National Load Growth Forecasts



Core Observations

1. The grid is under increasing stress, putting reliability and affordability at risk.

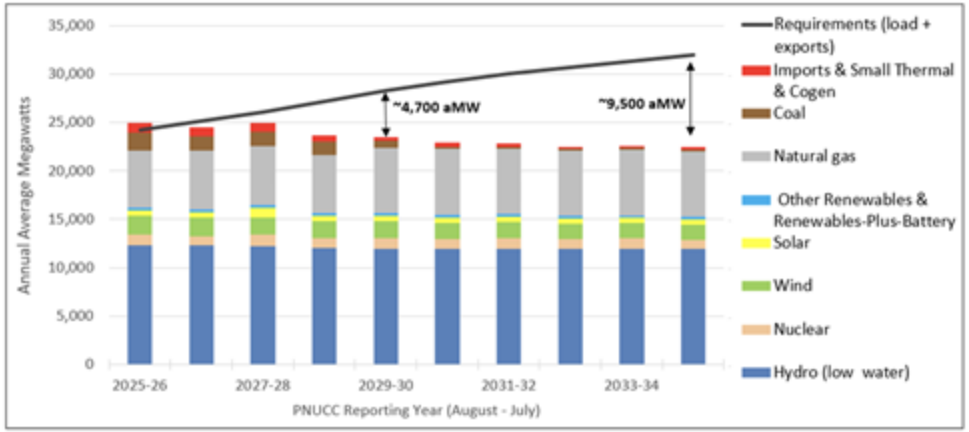
2. Climate change is making these challenges worse.

3. There's no strong market signal for resilience—yet utilities are starting to recognize the need for local, firm power.

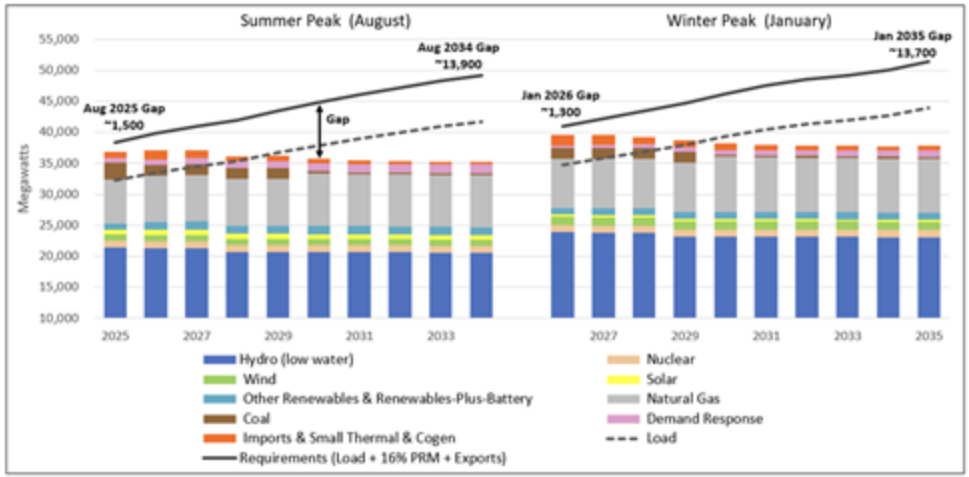
4. Microgrids can provide local, firm power, supporting communities and the grid, creating a more equitable and resilient energy future.

2025 PNUCC NW Regional Forecast

ENERGY



DEMAND



Core Observations

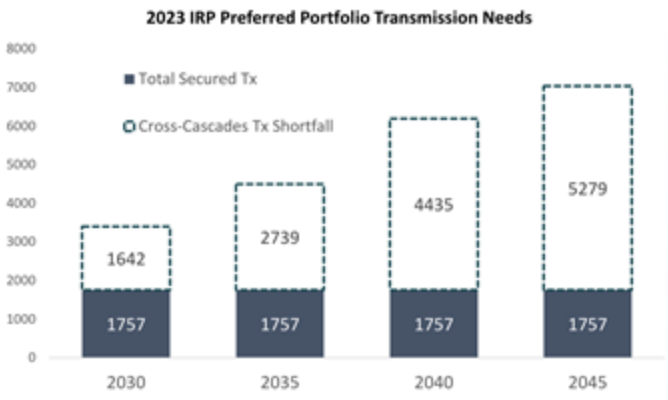
1. The grid is under increasing stress, putting reliability and affordability at risk.

2. Climate change is making these challenges worse.

3. There's no strong market signal for resilience—yet utilities are starting to recognize the need for local, distributed, firm power.

4. Microgrids can provide local, firm power, supporting communities resilience and grid reliability/flexibility.

Regional Transmission & Distribution Shortfalls



Source: PNUCC '24 NW Regional Forecast

Energy Imports in our region have skyrocketed but a 2023 BPA cluster study signals no additional cross Cascades transmission capacity until at least 2035+.

Energy resilience and reliability will continue to become more valuable.

Core Observations

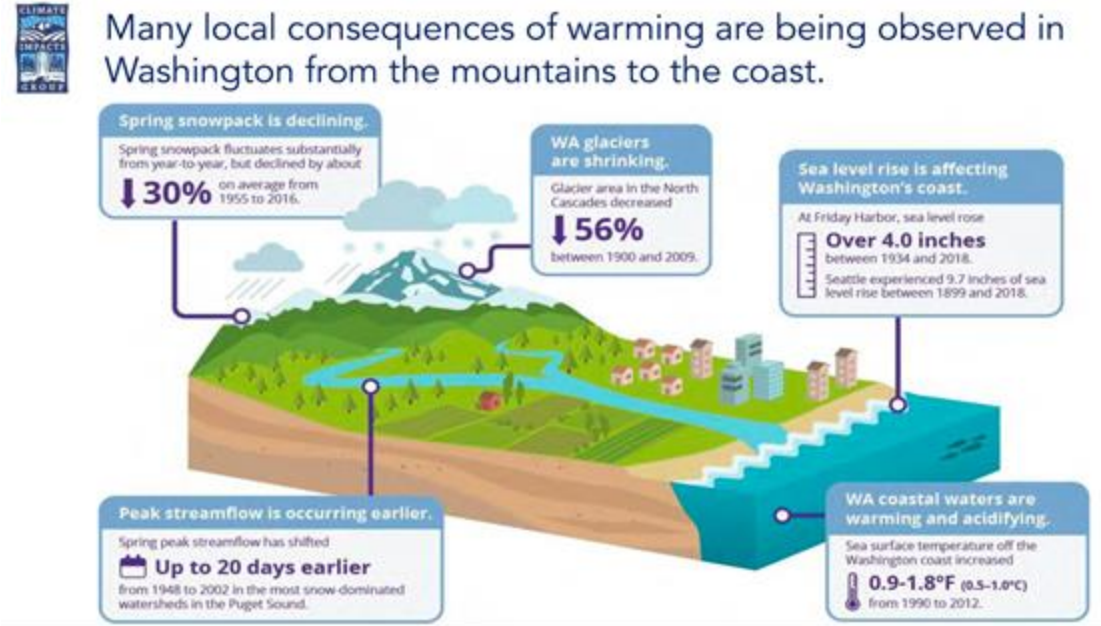
1. The grid is under increasing stress, putting reliability and affordability at risk.

2. Climate change is making these challenges worse.

3. There's no strong market signal for resilience—yet utilities are starting to recognize the need for local, distributed, firm power.

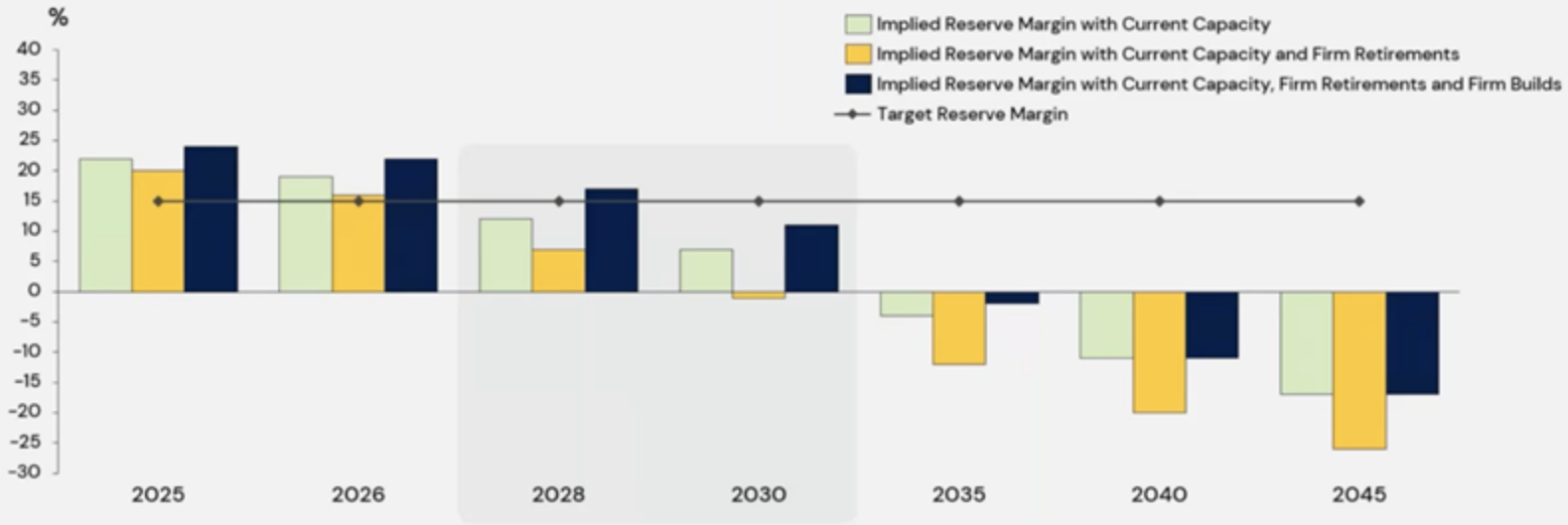
4. Microgrids can provide local, firm power, supporting communities resilience and grid reliability/flexibility.

Regional Climate Impacts



Timely builds and/or flexibility in demand will be critical to maintain reliability

Illustrative U.S. reserve margins based on current capacity, firm retirements, and firm builds



Source: ICF, U.S. Energy Information Administration (Form EIA-860M)

Notes:(1) Existing Capacity reflects effective load carrying capacity (ELCC) available as of 1/1/2025 from the ISOs; capacity over time reflects ICF's views of ELCC evolution.
(2) Firm Retirements include plants that have filed deactivation requests or have announced their retirement plans.
(3) Firm Builds reflect projects that have executed Interconnection Agreements, are under construction, have cleared in a capacity auction, or meets two of the following three criteria: (i) fully permitted; (ii) fully financed; (iii) has a PPA for at least 50% of the output. (4) Reserve margins shown above do not consider the potential for economic builds and retirements.

CASCADIA RENEWABLES

Let’s start by agreeing on some common definitions

Single Node Microgrids

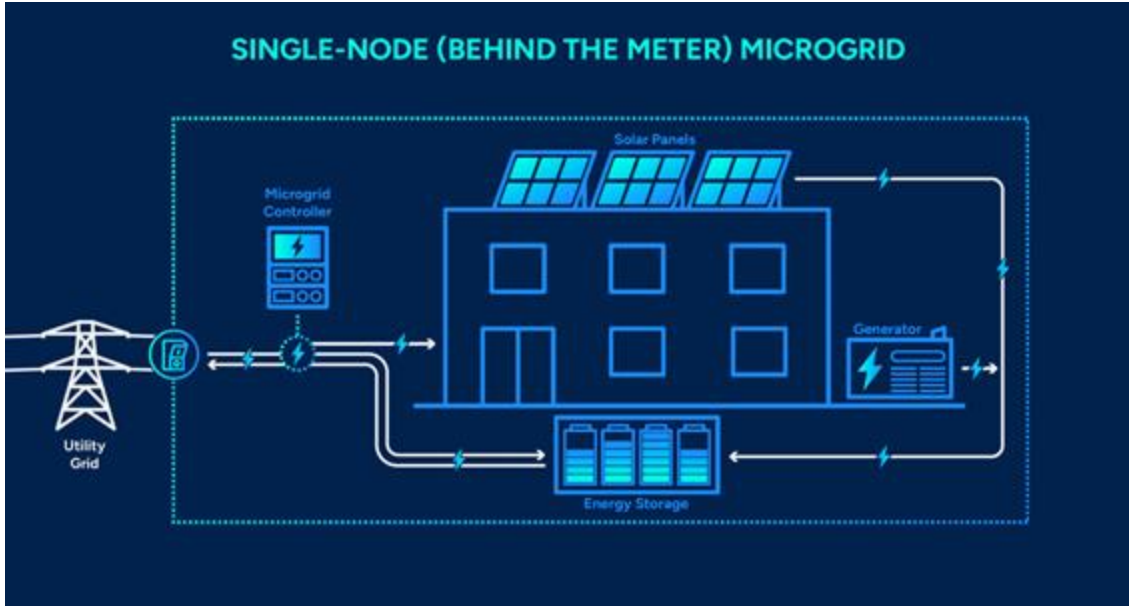
From Backup to Backbone

Simple Explanation:

- A single-node microgrid serves one location like a building or campus.
- It can operate with or without the grid ("island mode").
- **Common components:** solar, battery, motorized breakers, generator, and a smart controller.
- Boosts resilience, lowers energy bills, and supports clean energy.

Key Point:

Single-node microgrids are powerful and independent. They don't *require* connection to other microgrids (or even the utility grid) to be effective.



Multi-Node Microgrids

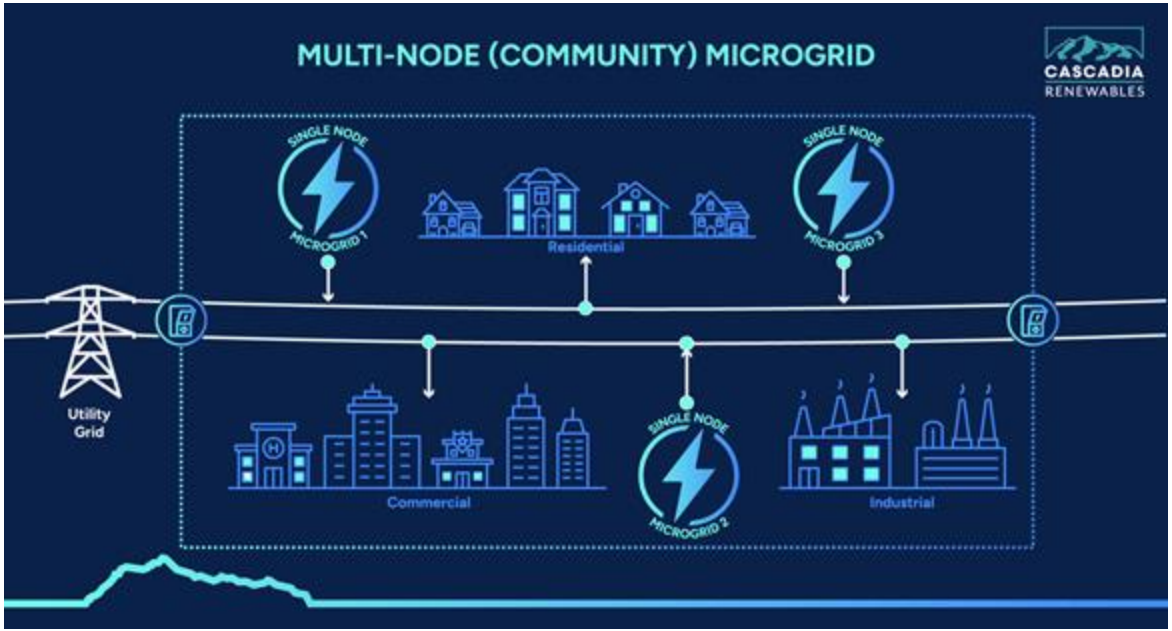
From Backup to Backbone

Simple Explanation:

- A multi-node microgrid links multiple distributed energy resources (DERs) across a utility network.
- Shares energy between sites—helping balance supply and demand.
- Requires more coordination with utilities, regulators, and communities.
- Offers broader benefits: community-wide resilience and grid support.

Key Point:

Multi-node microgrids are built on the foundation of single-node systems. But not every single-node system will grow into a multi-node microgrid.



Reliability Vs Resilience - What's the Difference?

Energy Reliability

- **Definition**: The ability of the electric grid to deliver continuous power *under normal conditions*.
- **Goal**: Minimize **frequency** and **duration** of power interruptions.
- **Key Metrics**: SAIDI (System Average Interruption Duration Index), SAIFI (System Average Interruption Frequency Index).
- **Focus**:
  - Equipment maintenance
  - Grid hardening
  - Operational planning
  - Outage prevention
  - Resource Adequacy

Think of reliability as keeping the lights on day to day.

Energy Resilience

- **Definition**: The ability of the grid to **withstand, adapt to, and recover from** major disruptions, natural disasters, cyberattacks, or prolonged outages.
- **Goal**: Ensure **rapid recovery** and **continuity of critical services** *during and after* extreme events.
- **Key Metrics**: Time to recover, value of resilience, value of lost load (VOLL), social burden, community vulnerability.
- **Focus**:
  - Backup power (e.g., microgrids, storage)
  - Islanding capability
  - Emergency prioritization
  - Community energy hubs

Think of resilience as responding to and maintaining critical services in the event of an emergency.

Well optimized microgrids enable both energy Reliability and Resilience.

How we distinguish Microgrids

For the sake of this presentation

1 - Microgrids = load + DERs + control + protection.

2 - DERs ≠ microgrids without islanding.

3 - VPPs = aggregated DERs + central dispatch.

4 - Microgrids can join VPPs, but retain local control.

5 - Microgrids serve contiguous, islandable load;
VPPs coordinate non-contiguous assets for grid services.

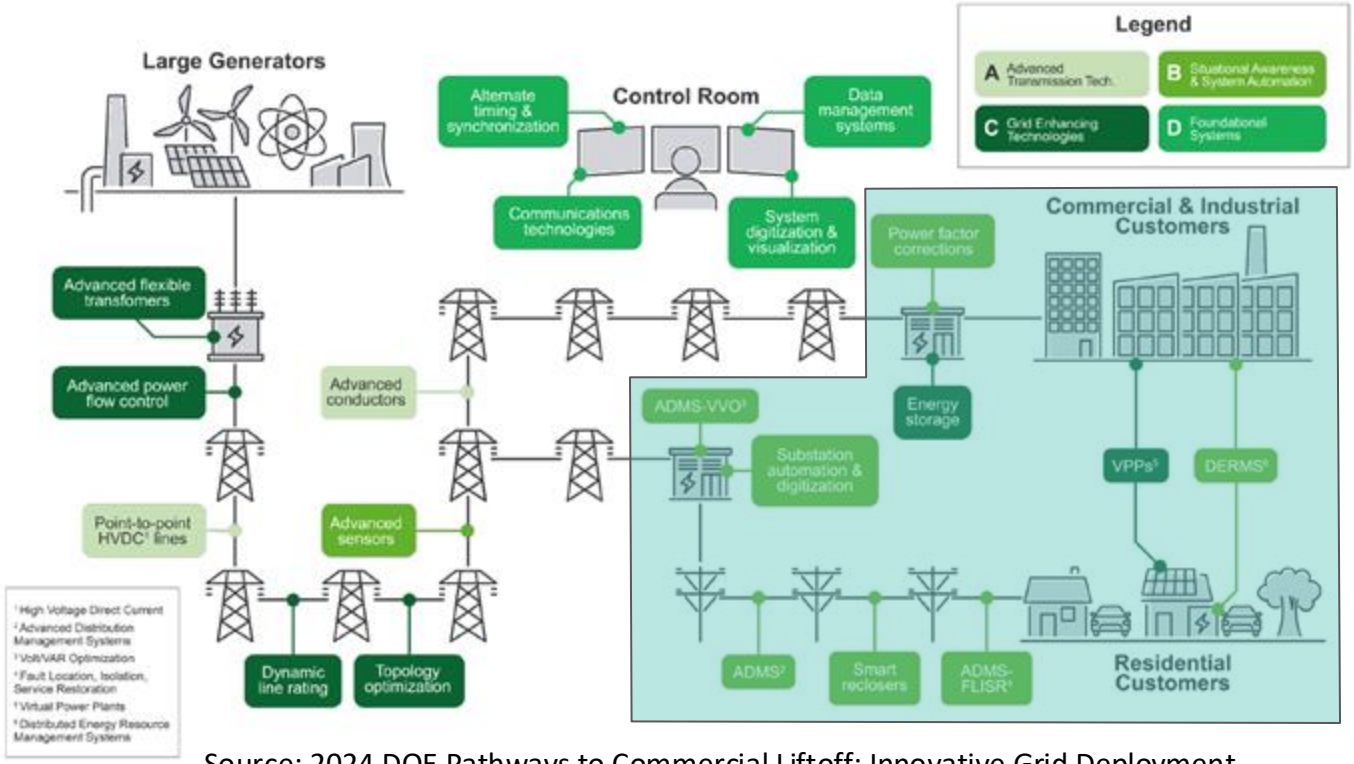
Microgrids

From Backup to Backbone

Microgrids are inherently the most effective near load. This is because they balance demand and supply for electricity behind and infront of the meter serving both the microgrid system owner, their neighbors, and the bulk power system.

A well optimized microgrid will defer transmission AND distribution system upgrades while supporting community energy abundance.

The distribution network is ? THE DANCE ?



Source: 2024 DOE Pathways to Commercial Liftoff: Innovative Grid Deployment

Microgrids – From Backup to Backbone

Solar WA - October 24, 2025

Alex Chorey, SnoPUD Energy Storage & Emerging Technologies

The Path to a Decentralized Grid

Customers want to:

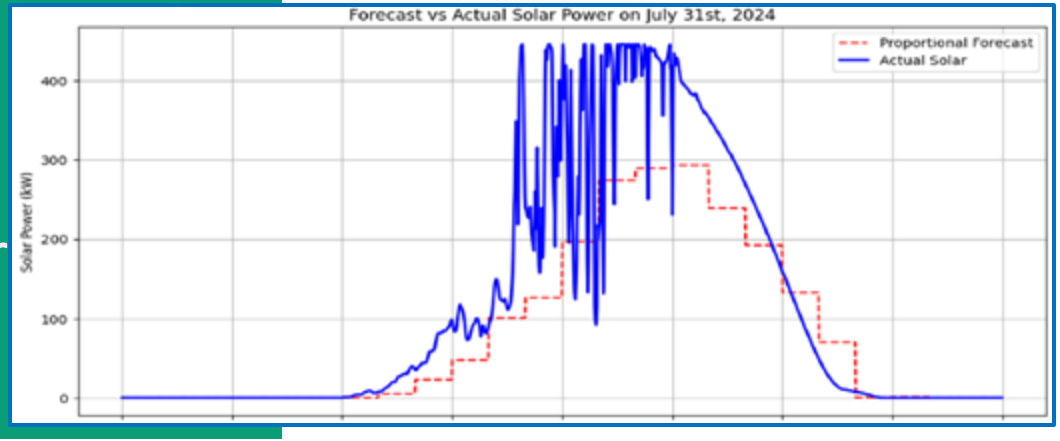
1) Save Money – **Rooftop Solar**

1) Keep the lights on – **Energy Storage**

1) Do Something Cool – **Microgrids** & Grid-edge Integration

How is SnoPUD Using Microgrids?

- Test bed for new technologies
  - V2X
  - Battery Chemistries
- Intermittent Generation Smoothing
- Grid Support / Capital Defer



Utility Challenges for Customer Microgrids

Easy - Technical

- Meet current standards – UL 1741, IEEE 1547, UL 9540
- Basic Grid Support – Volt/VAR contribution

Moderate – Operational

- Clear operational agreements
- Utility planners need to be more flexible

Difficult – Assigning Value

- These projects are expensive
- Markets are different for every utility

Clean Coalition

Valuing resilience for facilitates and at a grid scale:

Value of Resilience 123 (VOR123) & the Resilient Energy Subscription (RES)

Ben Schwartz
Policy Manager
626-232-7573 mobile
ben@clean-coalition.org

Mission

To accelerate the transition to renewable energy and a modern grid through
technical, policy, and project development expertise.

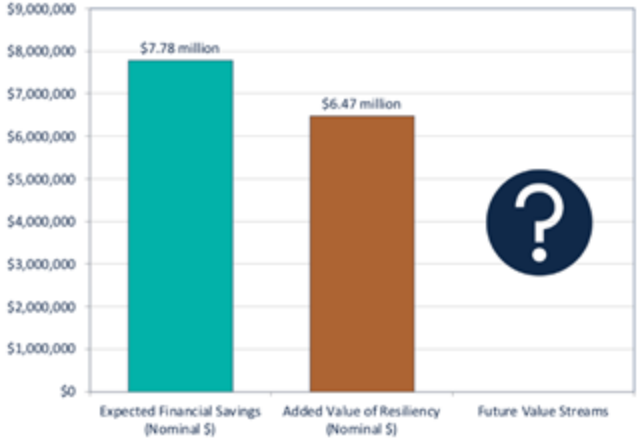
Renewable Energy End-Game

100% renewable energy; 25% local, interconnected within the distribution grid and ensuring resilience without dependence on the transmission grid; and 75% remote, fully dependent on the transmission grid for serving loads.

Valuing resilience

The Clean Coalition developed a straightforward value-of-resilience methodology, VOR123, which makes it possible to quantify the value of renewables-driven resilience **at any facility type, in any location**.

- VOR123 helps customers understand the premiums that are appropriate for indefinite renewables-driven backup power to critical loads, almost constant backup power to priority loads, and backup power to all loads a lot of the time.



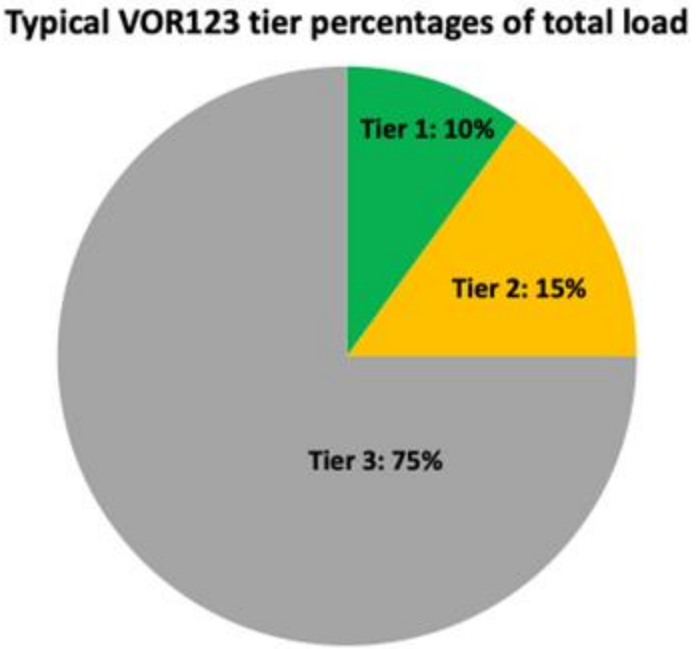
The key to VOR123 is tiering loads — because different loads have different values.

- Based on this tiering system, the Clean Coalition arrived at **25% as the typical VOR123 adder** that a site should be willing to pay for resilience.
- This 25% adder was validated using four approaches: Cost-of-service, Department of Energy multiplier, market-based, and avoided diesel generator cost
- We also applied VOR123 to the Solar Microgrids for the Santa Barbara Unified School District (SBUSD), which is getting significant resilience benefits for free.

VOR123 depends on tiering electricity loads

The Clean Coalition's VOR123 approach standardizes resilience values for three tiers of loads, regardless of facility type or location:

- **Tier 1, usually about 10% of the total load, are mission-critical, life-sustaining loads** that warrant 100% resilience.
- **Tier 2, or priority loads, usually about 15% of the total load**, should be maintained as long as doing so does not threaten the ability to maintain Tier 1 loads.
- **Tier 3 are discretionary loads** that make up the remaining loads, usually about 75% of the total load. Maintained when doing so does not threaten Tier 1 & 2 resilience.



The Resilient Energy Subscription addresses three Community Microgrid financing challenges

A straightforward fee-based market mechanism ($/kWh) that finances the enhancement and expansion of Community Microgrids

The RES helps finance Community Microgrids while properly valuing their significant resilience benefits, addressing these three challenges:

1. **Establishing** initial Community Microgrids to provide resilience to Critical Community Facilities (CCFs).
2. **Enhancing** Community Microgrids to offer resilience opportunities within the initial Community Microgrid footprint.
3. **Expanding** Community Microgrids to larger footprints that can guarantee resilience to a wider list of facilities and include additional communities.

Critical Community Facilities (CCFs) in a Southern California community.

Resilient Energy Subscription (RES) defined

Allows any facility within a Community Microgrid to procure this unparalleled energy resilience

- A facility pays a simple monthly $/kWh fee — separate from any existing rate tariffs — on top of their normal electricity rates for guaranteed daily delivery of locally generated renewable energy during grid outages.
- Usually reserved for a facility's most critical loads, though the subscription is based on a facilities' willingness to pay.
- Facilities should expect to pay an additional 1% for each percent of load backed up.

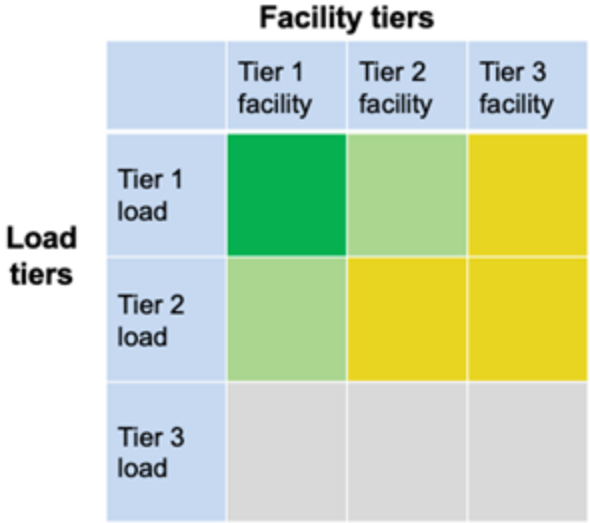
Facilitates the deployment and expansion of Community Microgrids

- Allows the Community Microgrid owner-operators to recover the cost-of-service (COS) required to meet contracted RES obligations.
- Modeled with an 8% rate of return, ensuring a higher rate of return than for typical distribution assets.
- COS is determined by the capital expenditures (capex) associated with Community Microgrid assets, operational expenditures (opex) associated with operations and maintenance (O&M), and an appropriate rate of return.

Higher subscription rates will drive down the RES fee and enable expansion

VOR123 for a Community Microgrid

- The top emphasis is to provision 100% resilience for Tier 1 loads at Tier 1 facilities (the darker green square in the chart).
  - Tier 1 facilities include CCFs such as fire stations and emergency shelters — and can also include grocery stores, data centers, pharmacies, gas stations, EV charging stations, etc…
  - The cost of provisioning resilience at Tier 1 facilities should be included in the RES fee.
- The second emphasis is for Tier 1 loads at Tier 2 facilities and Tier 2 loads at Tier 1 facilities (the lighter green squares).



= Critical for the entire community, such as Tier 1 loads at Tier 1 facilities like fire stations

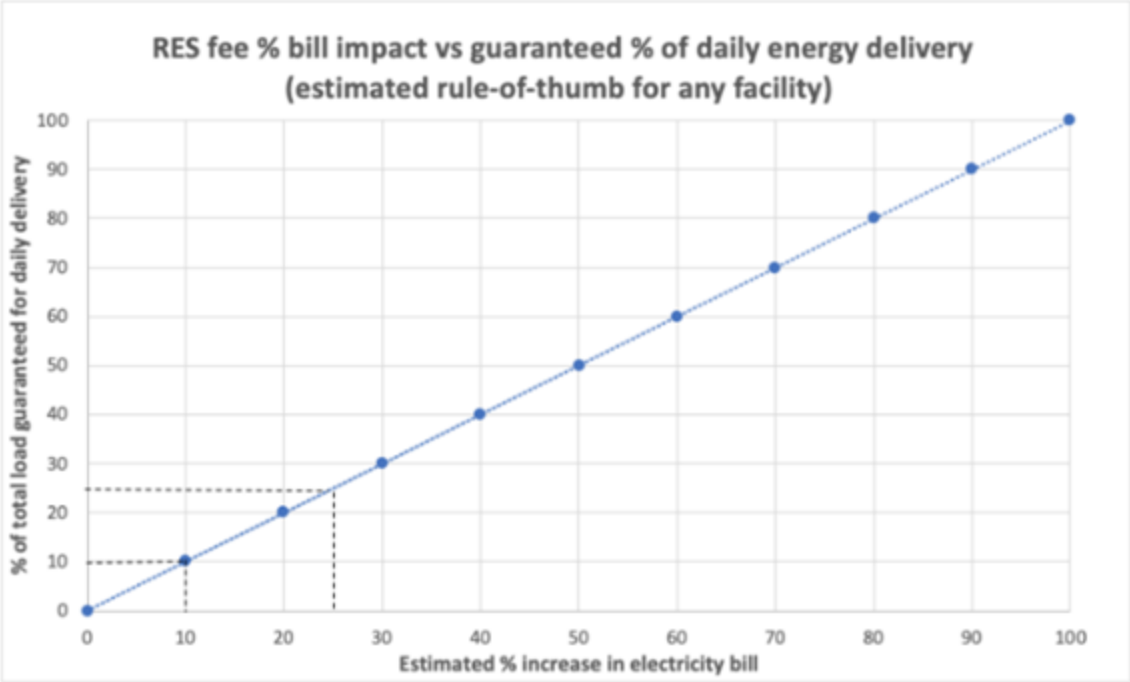
= Priority for the entire community, such as Tier 2 loads at Tier 1 facilities and Tier 1 loads at Tier 2 facilities like multi-unit housing facilities that can provide safe and easy sheltering in place

= Priority for individual facilities but not the entire community

= Discretionary loads that are not impactful to the community, whether on or off

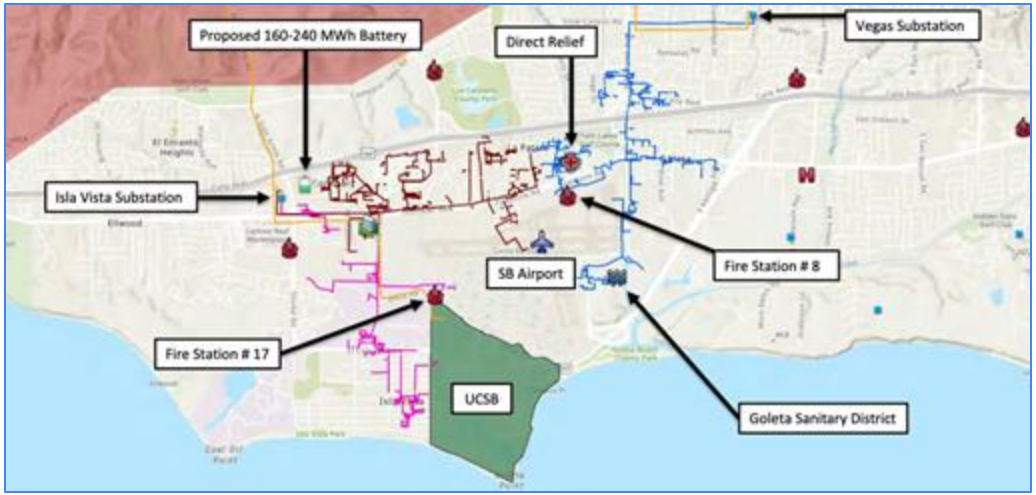
COS for expanding a Community Microgrid via RES

- Once an initial Community Microgrid is established for serving the CCFs, incremental COS will be low for expanding the Community Microgrid via the market-based RES.
- Each 1% of load that a facility secures via a RES will result in an approximately 1% electricity bill increase:



Financing Community Microgrid expansion: RES

- RES allows a utility to plan strategically for resilience by aggregating RES allocations as they are contracted by facilities across the Community Microgrid footprint.
  - Simple market forces determine the expansions of Community Microgrids and the additional facilities covered.
  - As Community Microgrids expand, costs and fees will trend lower, and RES fees will be recalculated periodically to account for reductions.
  - This is similar to how costs associated with the traditional transmission and distribution grids are regularly recalculated.



Potential for a Community Microgrid in the Santa Barbara, California region.

Facilities with existing solar subscribing to RES

- Facilities within a Community Microgrid that have their own solar can also subscribe to RES:
  - A RES contract will ensure that the facility maintains electrical service during grid outages, from the Community Microgrid.
  - The facility's solar will stay active during a grid outage, and the self-generation will cover at least a portion of the facility's resilience requirements.
  - The facility will enjoy uninterrupted self-generated solar while also receiving RES-contracted energy as needed from the Community Microgrid (unless energy availability is low from the Community Microgrid **and** the facility's RES allocation has been exceeded on a given day).
- Examples of facilities with existing solar that can subscribe to RES are the solar-only installations planned for the Santa Barbara Unified School District (SBUSD).

While some of the SBUSD sites will enjoy unparalleled resilience from Solar Microgrids, the sites with solar only can also benefit from this resilience via the RES. Image source: Engie Systems.

Analyzing RES feasibility

Key Question

- Is RES feasible for both Community Microgrid owner-operators and subscribed facilities?

RES feasibility analysis framework

- RES feasibility can be understood as a mutual benefit:
    1. **For Community Microgrid owner-operators**: Income from RES subscription fees that ensures a positive return on the Community Microgrid COS.
    2. **For RES subscribers**: Value-appropriate, guaranteed locally generated resilient energy.
- *If both these conditions are met, RES is feasible.*

RES feasibility: Subscriber perspective

- RES affordability is defined in terms of % increase in the subscriber's electricity bill, per the % of subscriber load guaranteed by the RES.
- This ratio can be defined as follows:

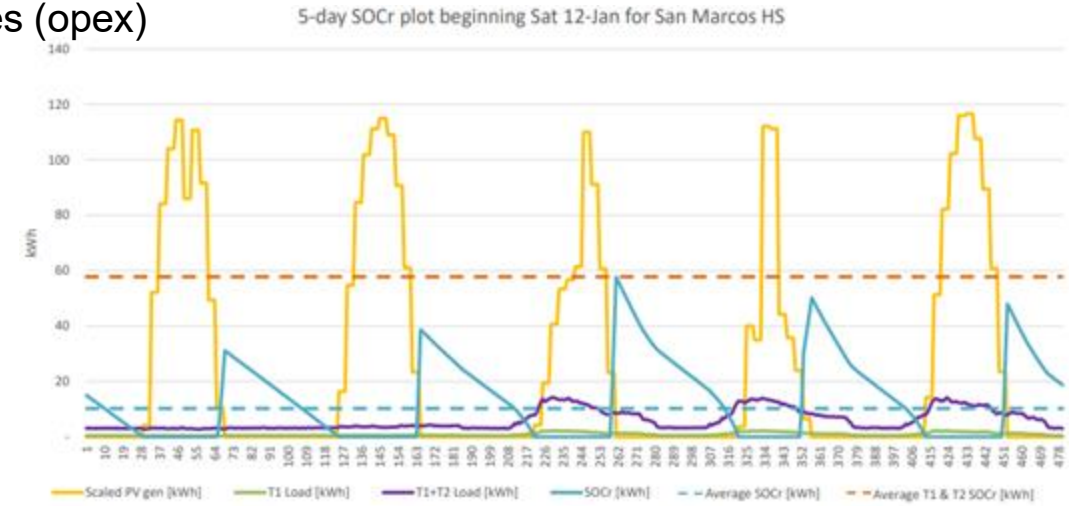
$$\frac{\%\ \text{increase in bill}}{\%\ \text{load guaranteed}} = \frac{\text{RES fee (\$/kWh)*}}{\text{Electricity bill blended rate (\$/kWh)}}$$

- Clean Coalition analysis shows that a RES fee of $0.20/kWh is feasible.
- A typical electricity bill blended rate is $0.20/kWh.
- **This yields a ratio of 1.0**
  - The RES allocation is the guaranteed delivered energy within any 24-hour period, based on the worst-case solar+storage capacity of the Community Microgrid. The amount of delivered energy is measured and renews each 24-hour period during multi-day grid outages.
  - The RES fee is calculated as the total guaranteed deliverable energy per month and is billed monthly.

RES feasibility: Community Microgrid owner-operator perspective

- ROE for the Community Microgrid owner depends on the following factors:
  - Microgrid financial inflows:
    - RES fees*
    - Energy sold to the utility on an everyday basis
    - Solar and battery energy storage system (BESS) financial incentives
  - Microgrid financial outflows:
    - Microgrid capital expenditures (capex)
    - Microgrid operational expenditures (opex)

* Income from RES fees depends on the maximum guaranteed daily energy from the Community Microgrid. The Clean Coalition calculates this quantity using its state-of-charge for resilience (SOCr) methodology, which analyzes BESS capacity against actual solar generation and site load profiles.



RES feasibility:
Community Microgrid owner perspective

Clean Coalition

Analysis factors from a real-world design for a Community Microgrid in Southern California:

Factor	Amount	Units
RES fee	0.20	$/kWh
Tariff for energy sold to utility	0.10	$/kWh
Daily site load guaranteed by RES	2,300	kWh
PV+BESS financial incentives	1,800,000	$
PV size	1,500	kW
PV capex	3,000,000	$
BESS size	2,000	kWh
BESS capex	1,400,000	$
Microgrid hardware + MC2*	500,000	$
PV annual opex	7,000	$/year
BESS annual opex	5,000	$/year
Microgrid MC2 annual opex	15,000	$/year

* MC2 = Monitoring, Communications, and Controls for a microgrid.

RES feasibility: Community Microgrid owner-operator perspective

Clean Coalition

Microgrid financial outflows:

	Year:	Capex	Opex
PV		$3,000,000	$7,000
BESS		$1,400,000	$5,000
Microgrid hardware + MC2		$500,000	$15,000
PV+BESS incentives		-$1,800,000	
Total annual expense:	1	$3,100,000	$27,000
	2	$-	$27,000
	3	$-	$27,000
	4	$-	$27,000

Microgrid financial Inflows:

	RES fees
RES fee ($/kWh)	$0.20
Guaranteed daily load (kWh)	2,300
Total annual income:	$165,000
	$165,000
	$165,000
	$165,000

	Sales to utility
Tariff to utility	$0.10
Annual PV sold (kWh)	2,400,000
	$236,000
	$236,000
	$236,000
	$236,000

30-year analysis

With these expenses and income, the Community Microgrid owner will see an internal rate of return (IRR) of at least **9%.**

Thank you for listening

- Thank you!

REIMAGINE POWER

Microgrid Resources Coalition

From Backup to Backbone: Paving New Pathways for Microgrids in Policy

Allie Detrio
Chief Strategist
Reimagine Power

Washington State Solar Summit
Seattle, WA
October 24th, 2025

Microgrids Achieve Core Policy Objectives

Community Empowerment	Resiliency	Reliability
Innovation	Decarbonization	Sustainability

REIMAGINE

Microgrids & Distributed Energy Resources

Clean, Affordable, Reliable, Equitable, and Safe

Oregon Grant Programs

- **Community Renewable Energy (CREP) Grant Program**
  - **HB 2021 (2021):** Supports planning and construction of new community renewable energy and resilience projects, including microgrids
  - **$64.7M** total budget for program - $40.5M has been reserved as of June 2025
  - **$12M** available for Round 4 Summer Grant Opportunity – grants will be awarded January 2026
- **Grid Resilience Grant Program**
  - Supports utility projects that strengthen electric grid resiliency, mainly utilized for undergrounding projects but available for DER and microgrid deployment opportunities
  - **$11.5M** available for Round 2 funding – Applications due January 2026
- **County Energy Resilience (CER) Grant Program**
  - **HB 3630 (2023):** provides each County with up to $50k to develop community energy resiliency plan
  - **19 out of 36 total counties** have applied and received funding; CER Plans due end of 2025

REIMAGINE POWER

Oregon State Energy Strategy

- **State Energy Strategy:** Oregon Department of Energy (ODOE) is directed to develop a final report due to the Governor & Legislature by November 2025
  - The Energy strategy originated from **HB 3630***: a multi-pronged bill passed as part of the 2023 Climate Resilience Package
  - Stakeholders advocating for microgrids to be included as a potential solution for state energy needs, including grid reliability and local energy resilience
  - First draft published mid-August 2025 outlines pathways to achieving clean energy, affordability, reliability, and resiliency goals, highlighting the value of microgrids for accomplishing these goals in the energy transition

*HB 3630 also established the **County Energy Resilience Planning Program**

- Provides each county with up to $50k to develop a community energy resiliency plan
- 19 out of 36 total counties have applied and received funding; CER Plans due in August 2025

REIMAGINE POWER

Oregon New Legislation 2025

NEW Community Microgrid Legislation Package – Successfully PASSED in June 2025 !!!

- **HB 2064** creates new guidelines and regulations for community microgrid development from the PUC and designates geographic microgrid zones (adopted into HB 2066)
- **HB 2065** allows a third-party consultant to conduct microgrid interconnection studies
- **HB 2066:** Directs the Oregon Public Utilities Commission (OPUC) to establish a regulatory framework for the development, ownership, and operation of microgrids for third-party customers and communities

These landmark bills position Oregon to be a leader in microgrid development at the forefront of the clean energy transition. This microgrid policy framework will guide the maturation from a grant-based emerging market into a fully operational commercial viable one for microgrids to proliferate in OR

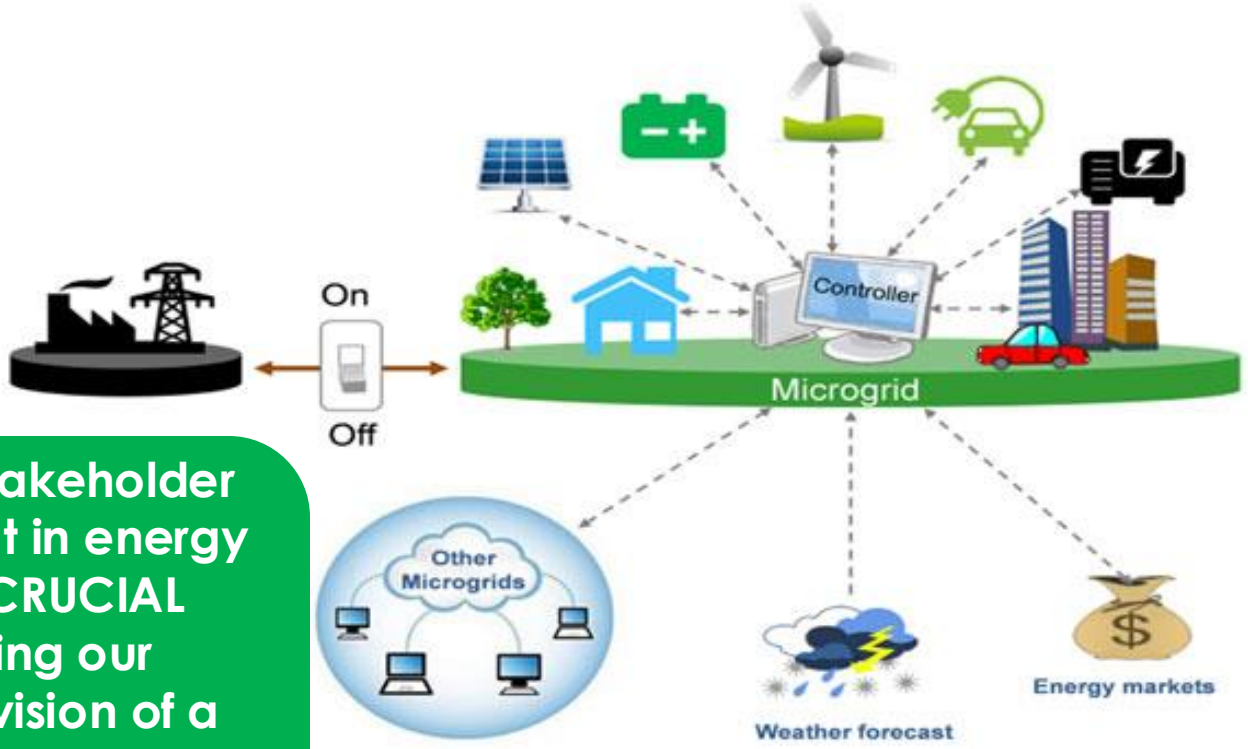
REIMAGINE POWER

Policy Pathways for Microgrids in Communities –

21st Century Modernization of Grid For the Future

Community Power System Evolution

- Create an open access Distribution System Operator (DSO) with Performance Based Regulation (PBR)
- Create a clear regulatory framework that expressly permits the development of microgrids – with flexibility for customers to pursue a variety of configurations
- Develop tariffs and interconnection processes that promote local electron sharing between neighbors and within communities
- Develop value-based compensation mechanisms and price signals for customers to provide grid support and load management services to the electric system
- Consider incentives or public benefit payments to critical, essential, and community-designated facilities for microgrids that provide resiliency
- Promote an interconnected, community-centric, transactive energy future for all



Proactive stakeholder engagement in energy policy is CRUCIAL to realizing our collective vision of a robust microgrid market & community-centric energy system for ALL

Q&A – Thank You!

Allie Detrio

Chief Strategist
Reimagine Power
allie@reimagine-power.com
415.825.0133

REIMAGINE POWER

Microgrid Resources Coalition

Markus Virta, Co-Founder & Managing Partner
Cascadia Renewables
markus@cascadiarenewables.com
360.201.2067

Alex Chorey, Energy Storage & Emerging Tech
Snohomish County PUD
AMChorey@snopud.com
425.418.8171

Ben Schwartz, Policy Manager
Clean Coalition
ben@clean-coalition.org
626.232.7573

Allie Detrio, Chief Strategist & Senior Advisor
Reimagine Power & Microgrid Resource Coalition
allie@reimagine-power.com
415.825.0133

Thank you!

APPENDIX SLIDES

Grand Orcas Community Microgrid plan for the entire OPALCO territory

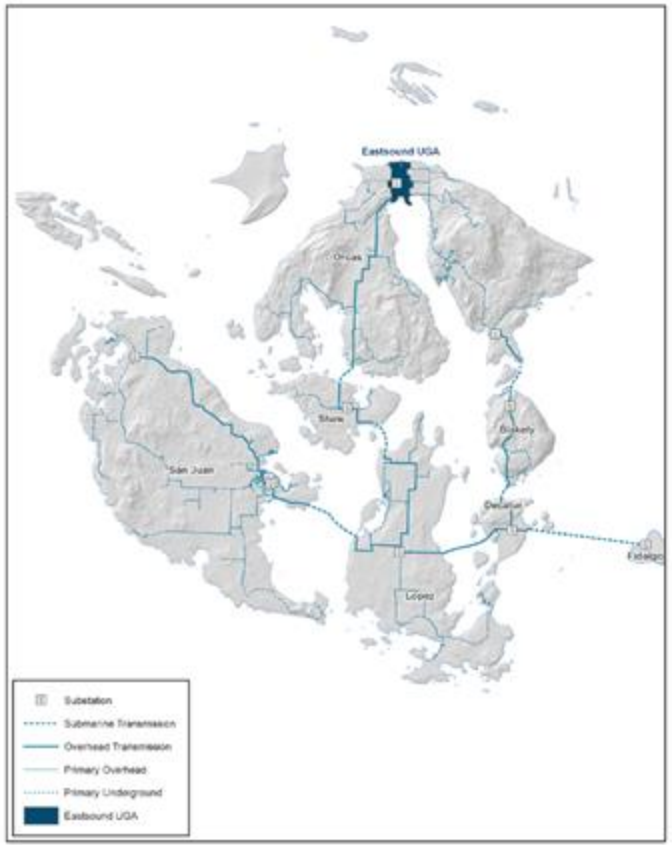


Figure 1: OPALCO's service territory covers San Juan County and includes 20 islands. Eastsound is shaded towards the top of Orcas Island and represents the initial Orcas Community Microgrid location. Over time, the Community Microgrid will expand to cover all of Orcas and then eventually the entire OPALCO service territory.

Eastsound Tier 1 & 2 facilities map

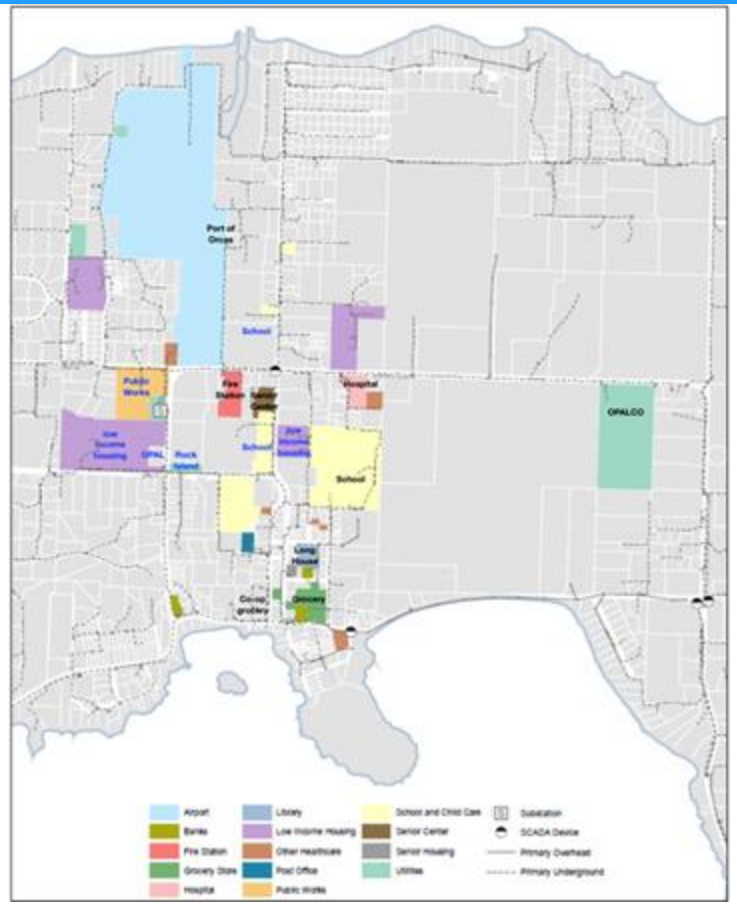
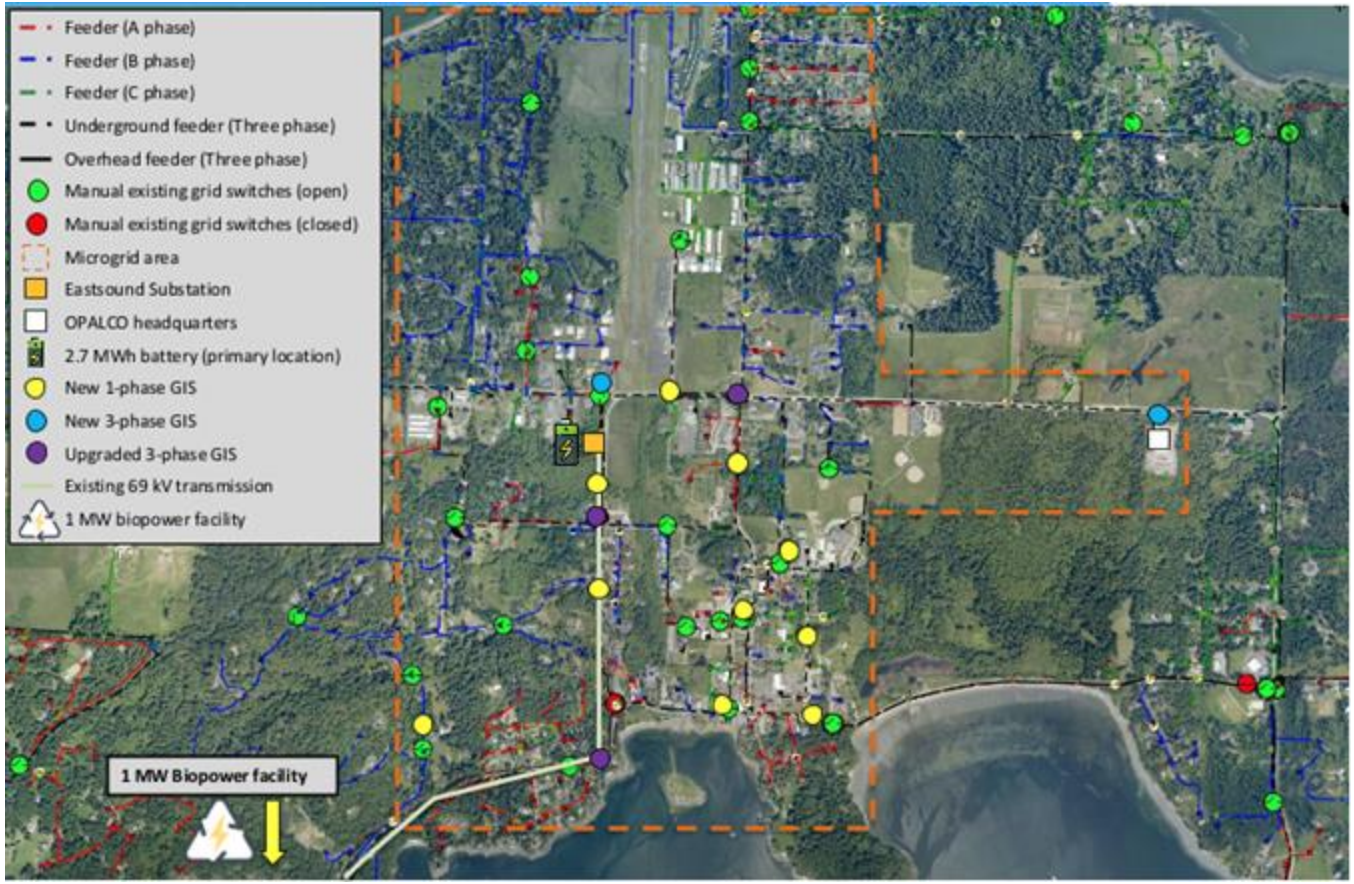


Figure 2: Eastsound facilities that are being provisioned with priority Community Microgrid resilience in the initial Orcas Community Microgrid design are shaded. Tier 1 Critical Community Facilities (CCFs) are shaded and labeled with black text, while Tier 2 CCFs are shaded in blue text. Figures 3 and 4 further depict the initial Orcas Community Microgrid in block diagram form.

OCM map for Orcas Island



RES feasibility analysis results

- Clean Coalition analysis shows that:
  - A **value-appropriate** RES subscription ratio of 1.0 (1% bill increase per 1% guaranteed load coverage) for the subscriber is feasible.
  - A **positive IRR** of 9% for the Community Microgrid owner is feasible.
- *Therefore, the RES is financially feasible for all stakeholders.*
- RES allows Community Microgrids to be deployed at scale and expanded, as more facilities desire resilient energy guarantees.
- RES provides a revolutionary and straightforward approach for financing Community Microgrids and delivering unparalleled resilience to communities.

POWER

Appendix

REIMAGINE

California Programs

- **CEC Distributed Electricity Backup Assets (DEBA) Program**
  - **DEBA:** Grant funding opportunity pending for DERs and Microgrids – CEC awaiting guidance
  - $46M allocated in Prop 4 Climate Bond for DEBA
- **CEC Demand Side Grid Support (DSGS) Program**
  - **DSGS:** Compensates existing electric customers for demand reduction & load shifting performance
  - Budget for new program funding past 2025 has been cut, destabilizing future program certainty
- **CEC Community Energy Reliability & Resiliency Investment Program (CERRI)**
  - **$170M** available over next 5 years in coordination with Federal DOE & IIJA funding guidelines for community resilience and grid hardening investments
  - Round 2 Funding Now Available – Deadline for Applications was August 29th
- **CPUC Microgrid Incentive Program (MIP)**
  - **$200M** funding available – split between 3 IOUs for "Front of Meter" Multi-Property Microgrids

REIMAGINE POWER

California Demand Flexibility Bills

- **SB 541 (Becker)** Electricity: Load Shifting
  - Directs state agencies to create load-shifting goals to encourage demand-flexibility solutions for reducing strain on the energy grid
  - Status: Passed legislative houses, **vetoed by Governor**
- **AB 740 (Harabedian)** Virtual Power Plants (VPPs): Load Shifting
  - Directs the CEC to develop a strategy to scale up VPPs to balance electricity demand
  - Status: Passed legislative houses, **vetoed by Governor**
- **AB 44 (Schultz)** Energy: Electrical Demand Forecasts
  - Directs the CPUC to develop technical protocols for load-serving entities to reduce their electricity demand forecasts
  - Status: Passed legislative houses, **vetoed by Governor**
- **AB 1117 (Schultz)** Rates: Optional Dynamic Rate Tariffs
  - Requires the CPUC to create optional dynamic electricity rate tariffs for IOU customers
  - Held in second house appropriations; **failed for 2025 session**
- **AB 1408 (Irwin)** Electricity: Interconnections
  - Requires utilities and CAISO to evaluate the use of surplus interconnection capacity for renewable energy projects
  - Status: Passed legislative houses, **vetoed by Governor**

REIMAGINE POWER

Colorado Snapshot

- **HB 22-1249 (2022) - Electric Grid Resilience & Reliability Roadmap**
  - Directed the Colorado Energy Office, in partnership with other state departments, to develop a roadmap for improving the electric grid's resilience and reliability through microgrid deployment
  - Colorado Microgrid Roadmap – Final Version Published January 2025
- **SB 24-218 (2024) – Energy Distribution Modernization law PASSED**
  - Creates process for single application interconnection and energization for DER customers, as well as other directives to enhance distribution system capacity including expanding VPP and DER aggregation
  - Directs creation of VPP and DER aggregator program for Xcel customers, including a performance-based compensation tariff, by February 2025
- **HB 22-1013 (2022) – Microgrids for Community Resilience Program**
  - Establishes a grant program to support utilities, anchor institutions, and local governments establish microgrid resources for community resiliency
  - Has awarded ~$14 million in funding to over a dozen projects across the state

REIMAGINE POWER

Midwest Snapshot

- **Ohio**
  - Partially deregulated market allows for large users to aggregate resources across property lines, as long as they do not require the use of an existing utility's electric lines
  - **Cuyahoga County Microgrid Utility**: The nation's first community-operated microgrid utility, planned to be in operation by the end of 2027, will deliver 63 MW solar + 10 MW storage to commercial entities. The utility plans to expand to critical facilities and residents after initial implementation
- **Michigan**
  - Hybrid system of both restructured and vertically integrated elements, including IOUs, municipal utilities, and electric co-ops
  - Passed ballot measure in Ann Arbor establishing the **Sustainable Energy Utility**: a fee-based municipal utility offering local solar + storage, microgrids, geothermal, and on-bill financing

REIMAGINE POWER

Designing the Grid for the Future

Energy Market Evolution

- Diversification of market participants, technologies, and solutions
- Performance-based regulation
- Value-based compensation
- Incentivize facilitation of many transactions at the grid edge

Strategic Decentralization and Grid Modernization

- Microgrid/DER optimization and digital transformation
- Energy affordability and infrastructure cost management
- Climate and wildfire risk mitigation
- Increase points of interconnection and creation of a nodal network of microgrids

Embracing Consumer Investment and Empowering Communities

- Grid services revenue = customers and communities building wealth
- Finance resiliency at the community level
- Acknowledge intrinsic benefits of localization and maximize value of customer investments

Microgrids & Distributed Energy Resources

Clean, Affordable, Reliable, Equitable, and Safe

Reimagining the Power Sector

- Boutique consulting firm specializing in microgrids, advanced clean energy technology, resiliency and sustainability policy in the West
- Headquartered in San Francisco, offices in Sacramento, East Bay, LA & Raleigh
- Founded in 2019, currently has team of 9 full and part-time consultants
- Clients include microgrid and clean energy developers, cleantech startups, trade associations, sustainability nonprofits, public agencies, private entities

REIMAGINE

Reimagine Power Services

Advocate

Energy Policy Education

Stakeholder Engagement & Community Relations

Lobbying & Advocacy

Advisor

Specialized Clean Energy Expertise

State Gov Affairs

Regulatory Affairs

Energy Markets

Tariffs & Rate Design

Navigator

Project Development

Interconnection

Monetization Opportunities

Customer Engagement

Strategy

Business & Market Development

Growth Initiatives

Marketing & Communications

Outreach & PR

Intelligence

Boots on the Ground Expert Insights

Customized Policy Tracking

Research & Analysis

Executive Briefings

Thought leadership

Presenter

Author

Facilitator

Public Speaker

About the MRC:

Founded in 2013, the MRC is a national association of leading microgrid owners, operators, developers, suppliers, and investors seeking to advance microgrids through:

- Education and stakeholder engagement
- Policy advocacy
- Market development activities

MRC mission:

- Ensure market access
- Fair compensation for services
- Level playing field for deployment and operations
- Empower customers and communities

Microgrid Resources Coalition

Washington State 2025
SOLAR SUMMIT
Advancing Solar in a Time of Uncertainty
October 24, 2025 | South Seattle Community College

Session 5

Microgrids: From Backup to Backbone

Moderator: Markus Virta, Cascadia Renewables

Featuring: Alex Corey, Snohomish PUD;

Allie Detrio, Reimagine Power;

Ben Schwartz, Clean Coalition