Clean Coalition

Unleashing the all-important Community Microgrid market segment

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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.

Clean Coalition Community & Solar Microgrids

Creating Groundbreaking Models

The Clean Coalition designs and stages cutting-edge Community Microgrid & Solar Microgrid projects that can be replicated in any utility service territory. By showcasing the value and feasibility of these projects, and the vast potential for siting distributed energy resources in the built environment, we're helping proliferate clean local energy and community resilience.

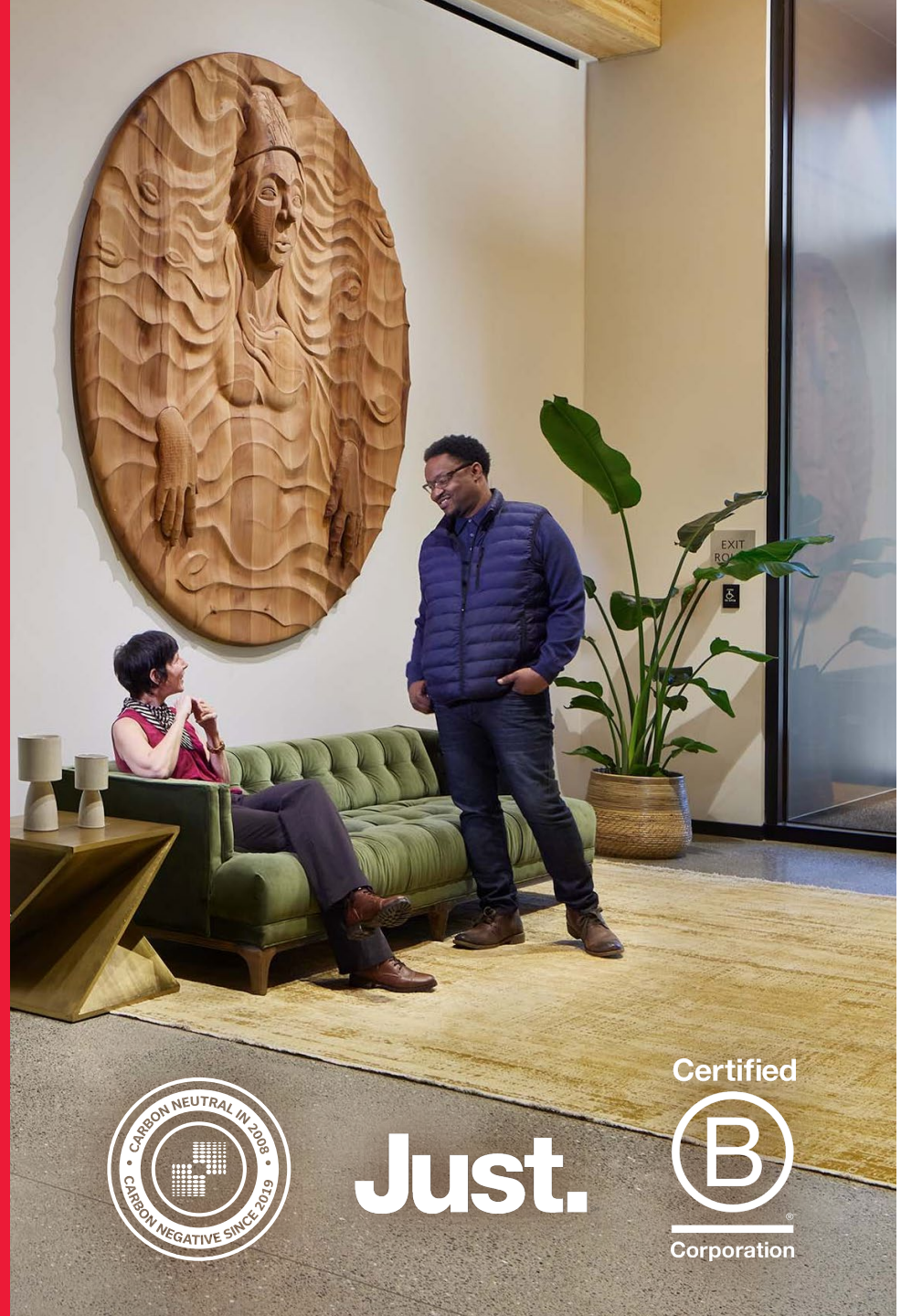
Facilitating Real-World Projects

At the Clean Coalition, we base our work on concrete project experience. The projects we design highlight the regulatory and policy issues that are impeding the development of clean local energy projects, and the tools and best practices needed to overcome those barriers.

430
STAFF

10
OFFICES

58
YEARS



PAE

VISION

A world with clean air, energy, and water for all.

MISSION

To build a sustainable future in one generation by:

— Accelerating change through technical excellence and innovation.
— Inspiring our clients to achieve their highest goals.
— Collaborating to do our best and most creative work.
— Sharing our knowledge and values.

OUR SERVICES

- MECHANICAL
- ELECTRICAL
- PLUMBING
- ENERGY DISTRICT PLANNING
- RENEWABLE ENERGY
- ANALYSIS AND MODELING
- GREENHOUSE GAS CONSULTING
- TECHNOLOGY

WWW.PAE-ENGINEERS.COM | (415) 544-7500

GREENVILLE VISION

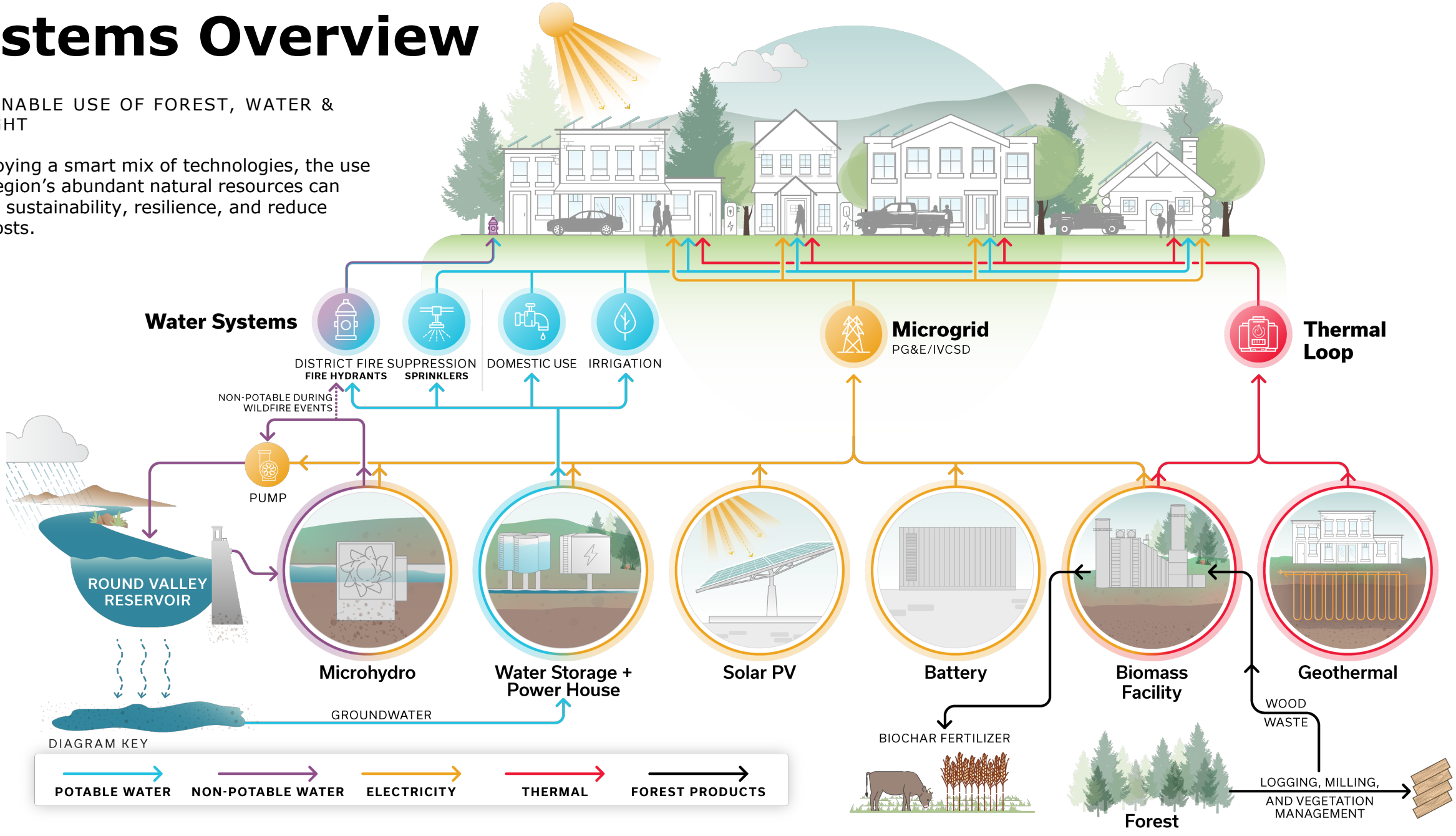
To be the Most Resilient Small Town in America!

To promote and foster **healthy communities**, a **healthy environment**, a **healthy economy**, and **resilient energy and water systems**.

Systems Overview

SUSTAINABLE USE OF FOREST, WATER & SUNLIGHT

By deploying a smart mix of technologies, the use of the region's abundant natural resources can improve sustainability, resilience, and reduce utility costs.



PAE Resiliency Tool

PAE developed a tool that helps clients better understand their energy resilience goals and the capabilities of the systems chosen by showing the impacts of their load and generation decisions.

EXAMPLE STUDY REPORT

All Buildings

SCENARIO 1: CODE-MINIMUM VS.
SCENARIO 2: HIGH PERFORMANCE

SCENARIO 1 | CODE MINIMUM MODELED BESS	SCENARIO 2 | HIGH PERFORMANCE MODELED BESS
4 MW | 95 MWH	3 MW | 74 MWH
25 Tesla Megapacks	19 Tesla Megapacks

LOAD: FULL LOAD **OUTAGE DURATION: 3 DAYS**

Key Takeaways

- Large BESS needed to support all buildings
- Battery size is less than half in summer months when loads are smaller and PV production is higher
- Size and scale of battery system is beyond typical microgrid installations

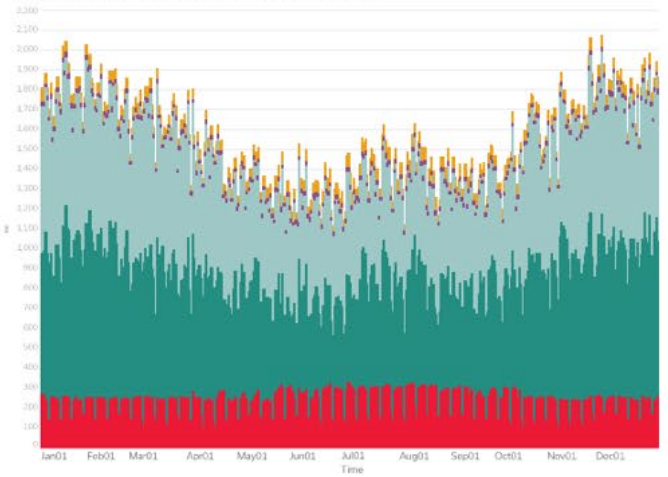
BUILDINGS
- Fields Apartments
- Fields Clubhouse
- Future Community Center (Hub)
- Future Apartments
- Future Public Safety Center

ENVELOPE & HVAC
- Comparing Code-Minimum Design to High-Performance Design

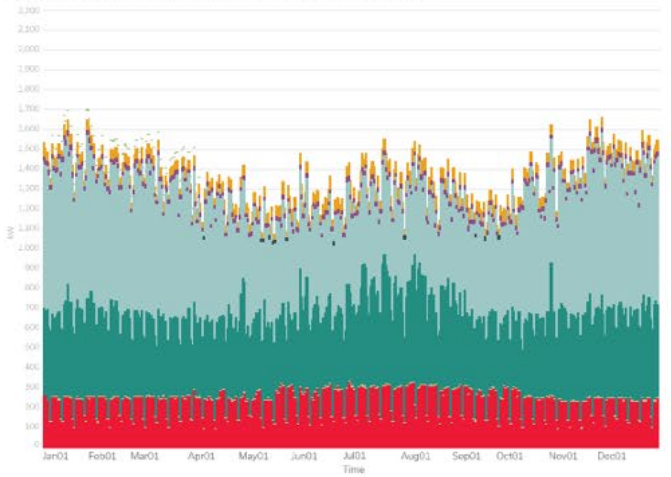
SOLAR PV
- Fields Apartments
- Fields Clubhouse
- Future Community Center (Hub)
- Future Apartments
- Future Public Safety Center

CUMULATIVE HOURLY ELECTRICITY LOAD

SCENARIO 1 | CODE-MINIMUM DESIGN



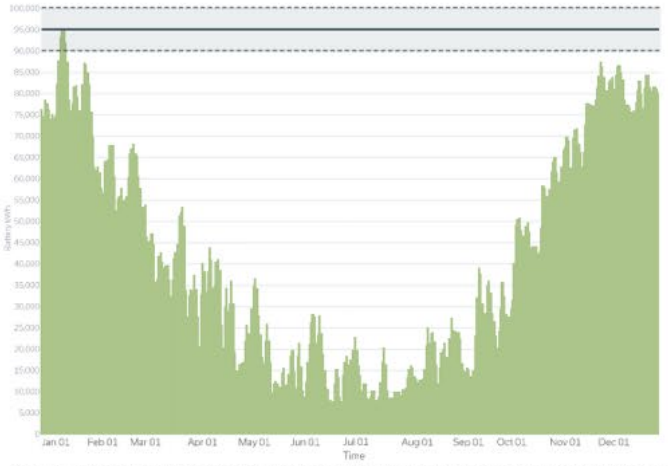
SCENARIO 2 | HIGH-PERFORMANCE DESIGN



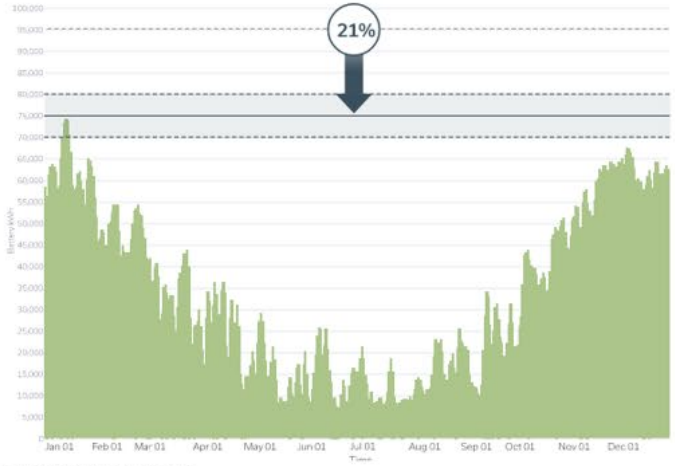
KEY
- The Fields Clubhouse
- Fields Apartments
- Future Community Center Hub
- Future Apartments
- Future Public Safety Center

BATTERY CAPACITY REQUIRED TO ACHIEVE FULL RESILIENCY

SCENARIO 1 | CODE-MINIMUM DESIGN



SCENARIO 2 ||HIGH-PERFORMANCE DESIGN



BESS Model Ranges: Energy models are based on averaged weather and load models and are intended to provide insight into the expected operating patterns of a building. Extreme events, instantaneous peaks from unusual coincidental loads, etc are not captured in energy models. The model outputs reported here are intended to show relative orders of magnitude between operating scenarios, acknowledging there is known range of variation between modeled and actual operating profiles.

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Microgrid Resources Coalition

Western States Policy Roundup & Pathways for Microgrids in Communities

Zoe Bennett

Senior Policy Analyst

Reimagine Power

California Climate & Energy Collaborative

San Jose, CA

July 9-10, 2025

Microgrids & Decentralization Achieves Core Policy Objectives

- Decarbonization
- Resiliency
- Reliability
- Innovation
- Community Empowerment
- Sustainability

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Microgrids & Distributed Energy Resources

Clean, Affordable, Reliable, Equitable, and Safe

California Snapshot

- **CEC Distributed Energy Backup Assets (DEBA) Program**
  - **DEBA:** Grant funding opportunity pending for DERs and Microgrids – CEC awaiting guidance
  - $50M allocated in Prop 4 Climate Bond for DEBA – Budget Trailer Bill pending in Legislature
- **CEC Demand Side Grid Support (DSGS) Program**
  - **DSGS:** Compensates existing electric customers for demand reduction & load shifting performance
  - Budget for new program funding 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 is August 29th
- **CPUC Microgrid Incentive Program (MIP)**
  - **$200M** funding available – split between 3 IOUs for "Front of Meter" Multi-Property Microgrids
  - SB 453 (Stern) - Requires CPUC to review IOU MIP funding allocations and redirect funds if necessary

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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

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Oregon Snapshot

- **NEW Community Microgrid Legislation Package – Successfully PASSED in June 2025 !!!**
  - **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
  - **HB 2065:** Allows 3rd party consultants to conduct microgrid interconnection studies
- **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 – now open with applications due August 2025
- **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 in August 2025
- **Oregon Department of Energy (ODOE) State Energy Strategy**
  - **HB 3630 (2022):** Directs ODOE to develop a comprehensive strategy to meet state energy needs
  - **Final State Energy Strategy Report due November 2025** - Stakeholders advocating for microgrids to be included as key solution to enhance electric system reliability and local energy resilience

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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

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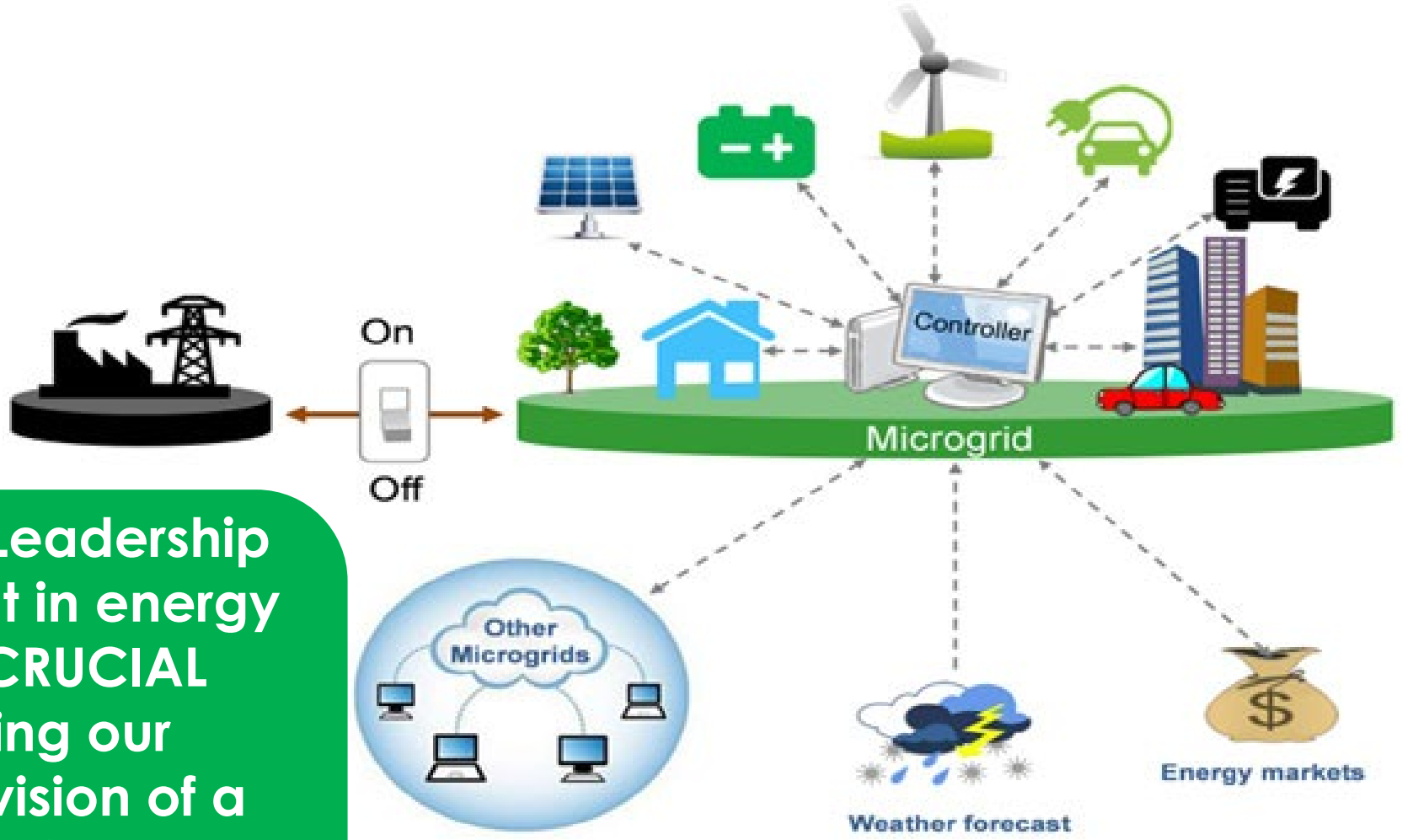

Local Govt Leadership engagement in energy policy is CRUCIAL to realizing our collective vision of a robust microgrid market & community-centric energy system for ALL

Q&A – Thank You!

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Appendix

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

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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

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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

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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

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