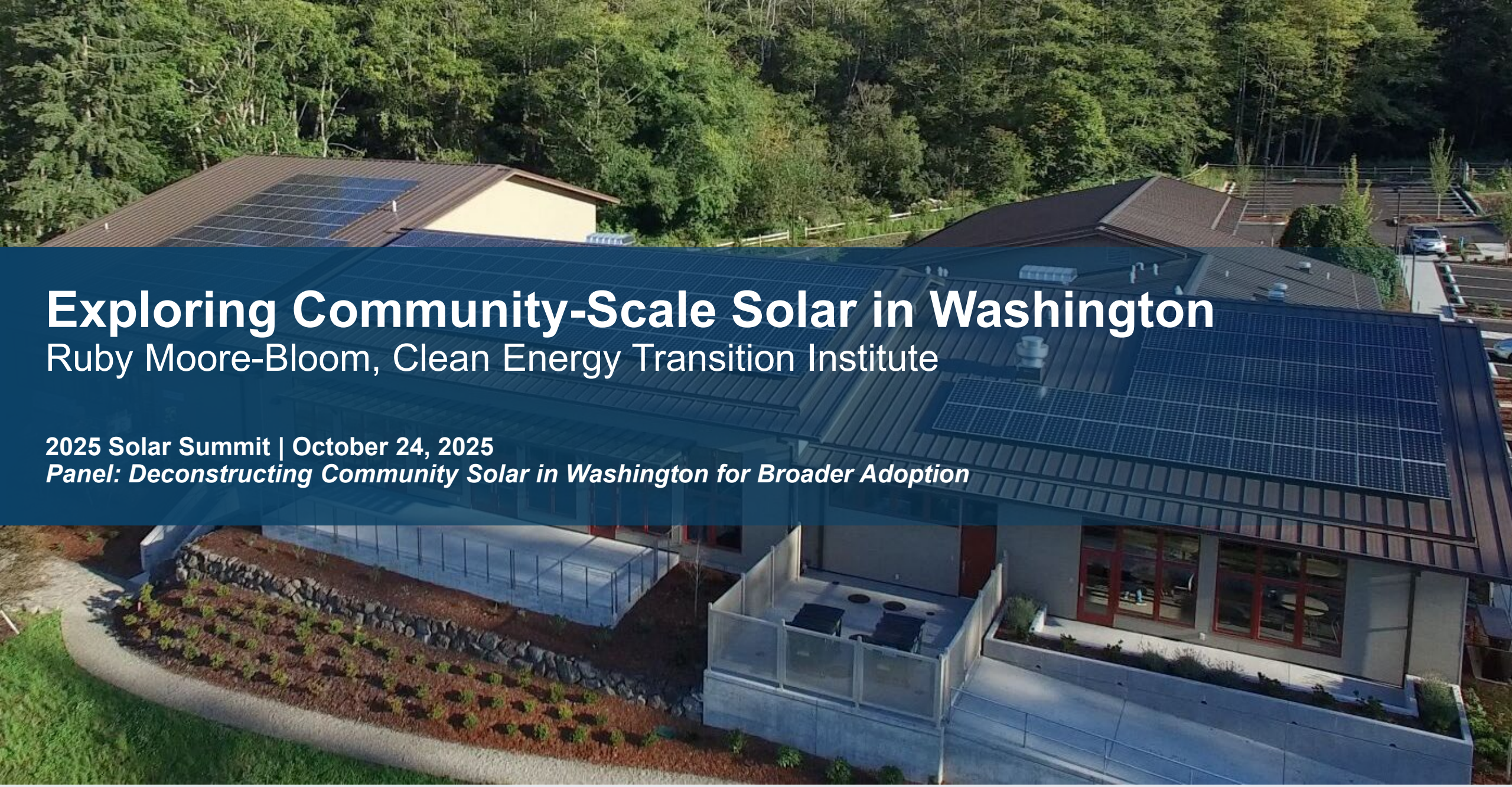


Exploring Community-Scale Solar in Washington

Ruby Moore-Bloom, Clean Energy Transition Institute

2025 Solar Summit | October 24, 2025

Panel: Deconstructing Community Solar in Washington for Broader Adoption

What is the Clean Energy Transition Institute?

- **What We Are:** Independent, nonpartisan Northwest research and analysis nonprofit organization
- **Our Mission:** Accelerate an equitable clean energy transition in the Northwest
- **Our Role**: Frame, translate, demystify decarbonization and the clean energy transition in the Northwest
  - Unbiased analysis to encourage fact-based conversations

What comes to mind when you hear community-scale solar?

Defining Community-Scale Solar

No standard definition! From interviews and literature review:

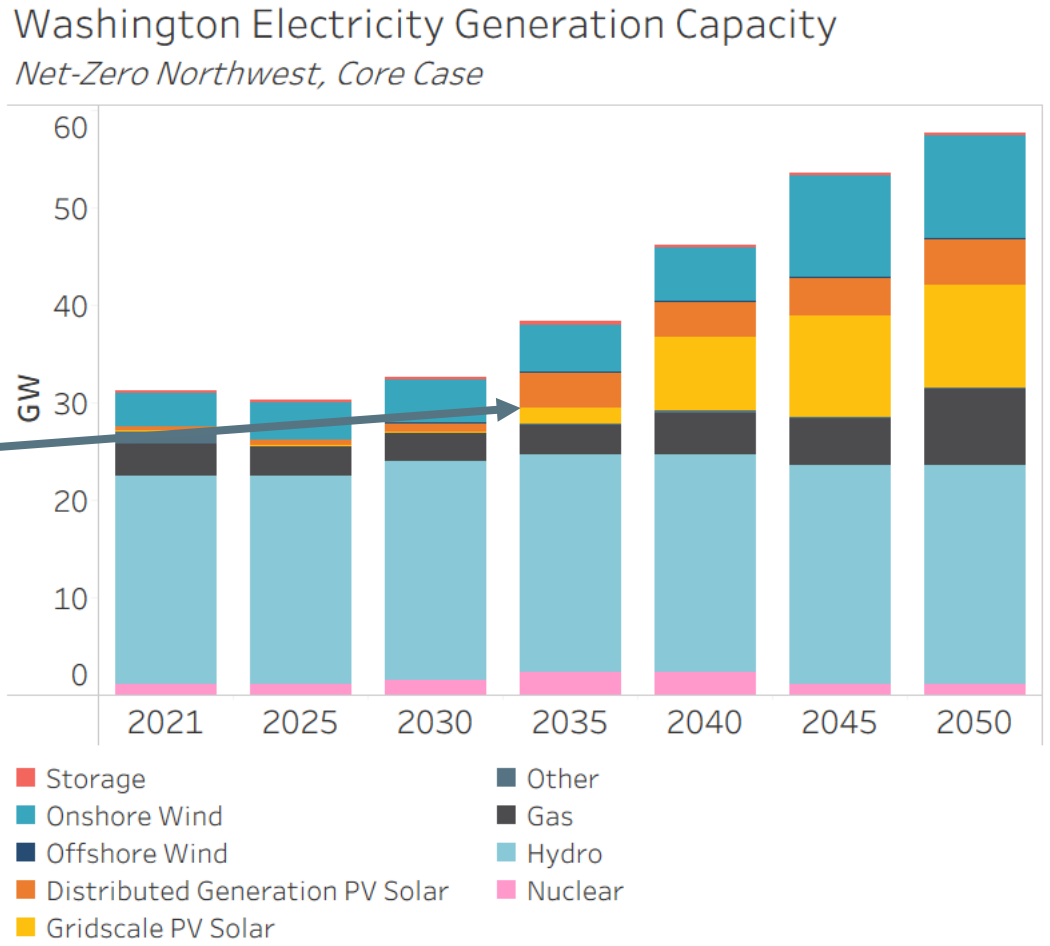
- Purpose is to **benefit/serve local community members**
  - Connected to the **distribution grid** to enable these benefits
- Aims to provide **equitable access** to solar energy, especially for those unable to install their own systems
- Can be **behind or in front of the meter**, located on **rooftops** or the **ground**, and is often **subscription-based** to allow shared access to benefits
- Project size is shaped by policy thresholds, economic feasibility, incentive programs, and hosting capacity
  - For this project, generally defined as 12kW – 1 MW
- Various **ownership models** (building owner, 3rd party, utility)
  - Virtual net metering and shared ownership models are desired but not widely available in Washington

Project Introduction

- Collaboration between CETI and University of Washington researchers exploring community-scale solar in Washington
- Goal was to create interactive visualizations combining data layers related to the potential benefits associated with community-scale solar
- Methodology
  - Five staff interviews
  - Focused literature review
  - Development of data visualizations and accompanying narrative text

Solar can Play Critical Role in Washington's Clean Energy Future

- Significant projected growth in clean electricity demand
- Previous CETI study finds role for both utility-scale and distributed solar



Source: Clean Energy Transition Institute. *Net-Zero Northwest Energy Pathways Analysis,* June 2023, https://www.nznw.org/energy

Emerging Themes

Wide Range of Benefits

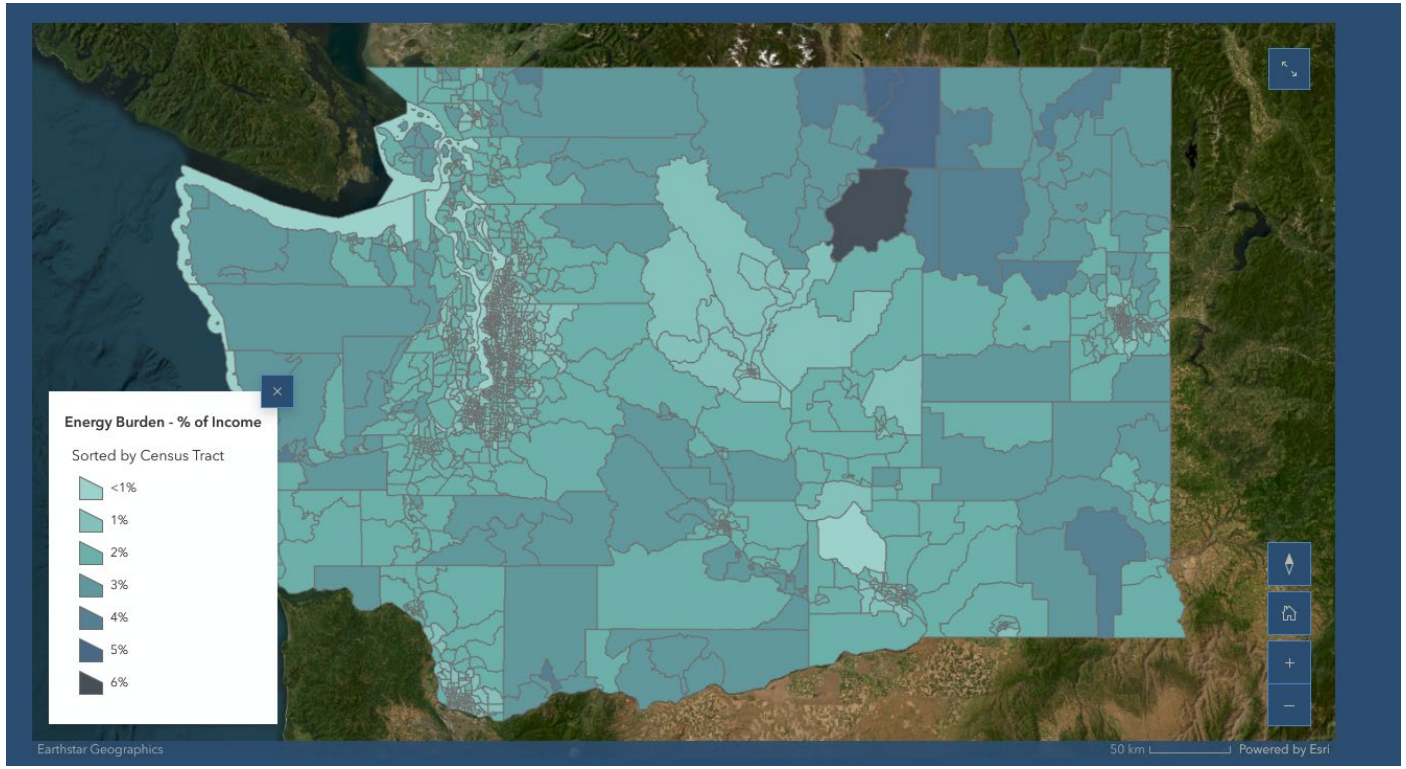
- Economic
  - Lower energy bills, with savings re-invested in communities
  - Creation of local construction and maintenance jobs
  - Lease revenue for landowners
- Energy resilience and reliability
  - When paired with storage, community-scale solar can enable critical services during outages
  - Can support grid reliability and transmission deferral
- Expanded access to solar
  - Renters
  - Low-income households
  - Houses with rooftops not suitable for solar
- Reduced greenhouse gas emissions
- Health and safety
  - Refrigeration
  - Medical devices
  - Improved air quality

Role of Distributed Community-Scale Solar in Washington's Clean Energy Future

- Seen as key part of a resilient, equitable energy transition
- Enables community participation in clean energy goals
- Current policy may be barrier; likely upcoming conversations about how to value solar
- Specific considerations for rural communities
  - Underserved communities are often at the ends of distribution lines and experience more frequent outages

Economic Benefits

- More than 270,000 low-income households in Washington are energy burdened[1]
  - Spend more than 6% of their household income on home energy bills annually
- Community solar can lead to household savings on electricity bills
  - “subscribers to corporate owned community solar services can expect to save between 10%-15% on their household electricity bills…[and up to] about 20% for households with low incomes” [2]

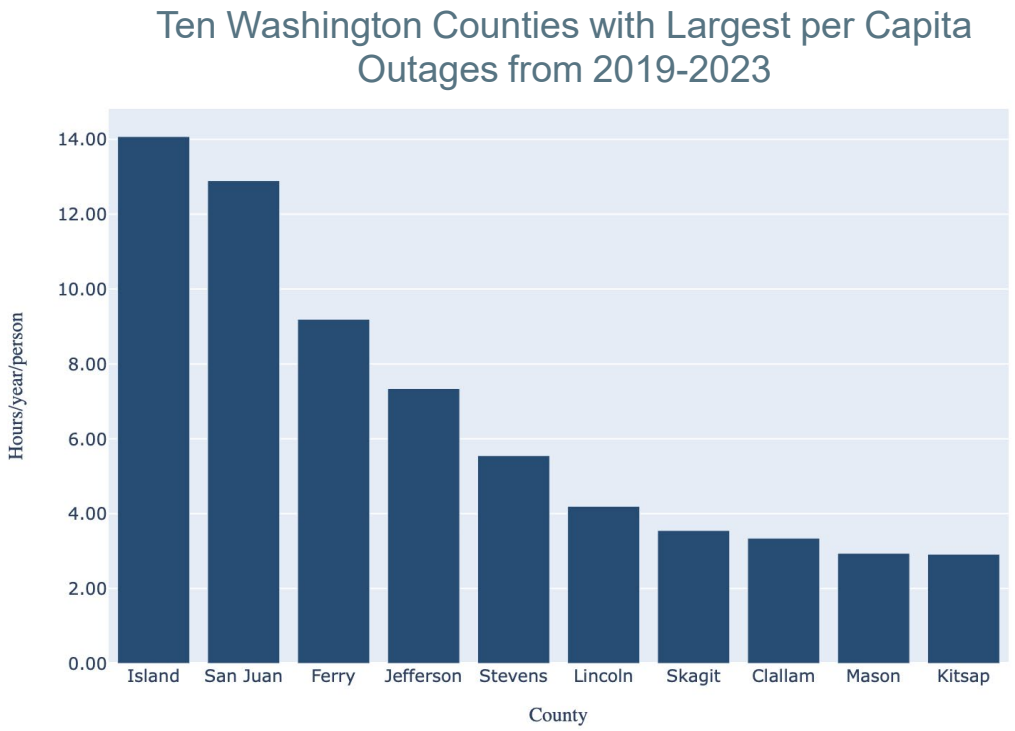


Map showing energy burden (% of annual income spent on energy bills) by census tract in Washington. Source: DOE LEAD Tool, https://www.energy.gov/scep/slsc/lead-tool

1. Washington State Department of Commerce, “Low-Income Energy Assistance 2025 Legislative Report,” May 2025. https://deptofcommerce.app.box.com/s/hbj9xsebcrmb6ckucg3xe55rnq4arwjo
2. University of Washington Urban Infrastructure Lab, “Economic Impact Analysis of Community Solar Programs for the State of Washington,” January 2025. https://uil.be.uw.edu/wp-content/uploads/sites/58/2025/01/Economic-Impact-Analysis-of-Community-Solar-Programs-for-the-State-of-Washington.pdf

Energy Resilience

- Resilience = ability to withstand and recover from disruptions
  - Must be defined at a local level
  - Distinct from reliability, which refers to consistent and predictable power
- Microgrids and resilience hubs are key strategies
  - Microgrid = self-sufficient energy system that can operate in grid-connected or off-grid modes
  - Solar plus storage microgrids can enable critical services during outages



Source: EAGLE-I dataset

Key Challenges and Factors to Maximize Benefits

- Challenges
  - Policy barriers
  - Upfront cost and financing complexity
  - Permitting and interconnection hurdles
  - Siting constraints and community opposition
  - Perception that Washington does not have great solar resources
- Maximize benefits by:
  - Engaging the local community
  - Building to allow for future upgrades
  - Prioritizing the built environment
  - Designing resilience hubs where people already congregate naturally
  - Accessing 3rd party financing, applying for grants

Learn More

Get notified when the project is published:

- Sign up for CETI's newsletter
  www.cleanenergytransition.org/sign-up

- Or send me an email
  ruby@cleanenergytransition.org

Thank you very much

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Example Projects in Washington

- **Merritt Manor Apartments** (2022)
  - *Solar installation on low-income housing development in Olympia that provides energy savings to tenants*
  - 126 kW capacity
- **Vashon United Methodist Church** (2024)
  - *Solar and battery storage installed on a Vashon Island church to provide backup power generation and emergency shelter with savings used to reinvest in its mission*
  - 30 kW capacity and 81 kWh battery storage
- **Canterbury Manor** (2025)
  - *Solar installation on an independent senior community in Bremerton, with savings benefiting residents and supporting the organization's mission*
  - 144 kW capacity