



Building a sustainable pathway as the *Inland Northwest Energy Innovation Cluster**

GSI Economic Development Committee

July 2025

Background and Organizational Formation



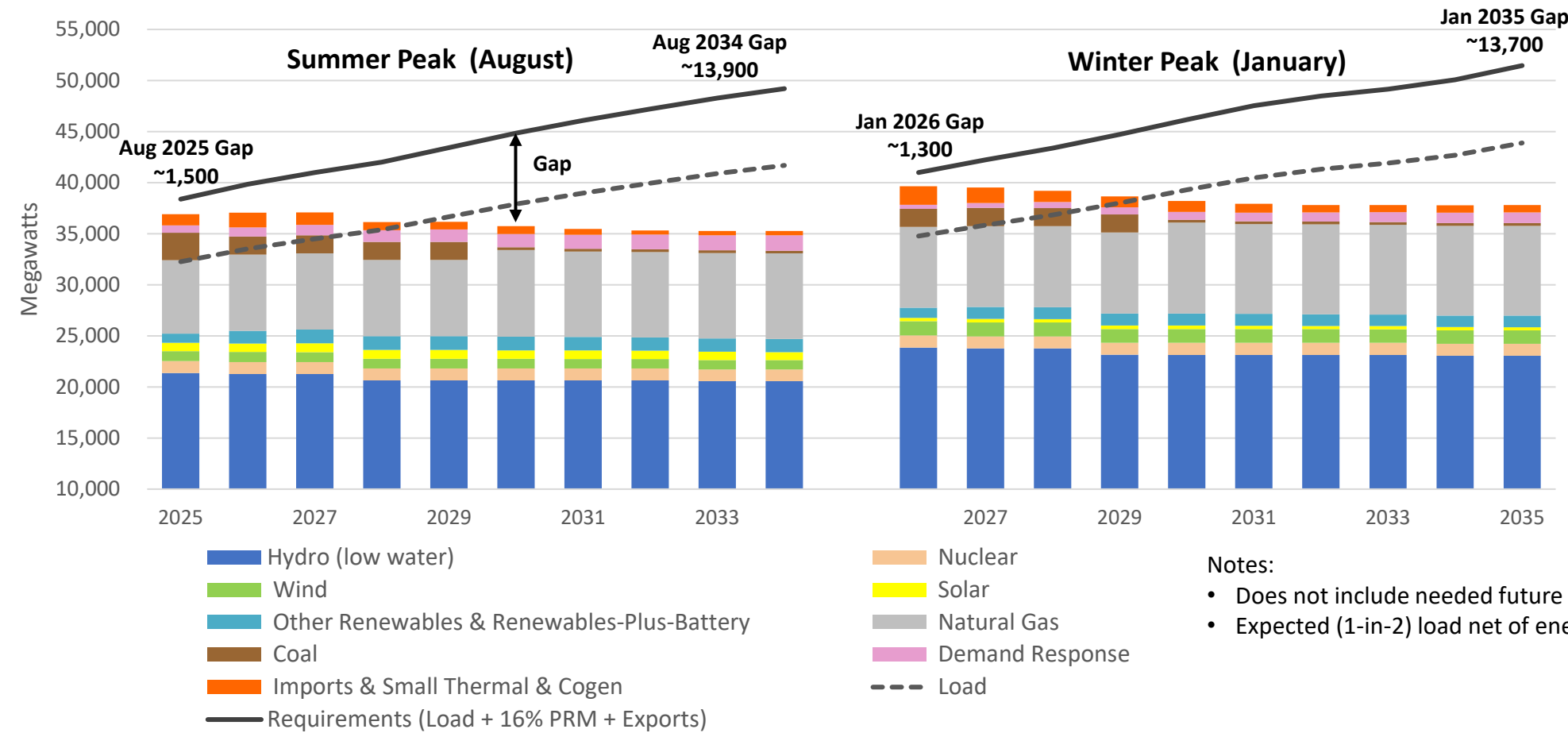
- Urbanova, founded in 2016, has a successful track record in collaborative energy and civic innovation demonstration projects

Public-Private-Academic-Community Partnership Non-Profit

- Awarded National Science Foundation Regional Economic Engines Development Award (2023-2025)
- Launched the Inland NW Center for Energy and Decarbonization (INTENT, LLC)
- Awarded WA Commerce Innovation Cluster Accelerator Program (ICAP)
- Merging efforts as the “Inland Northwest Energy Innovation Cluster”
 - Rebranding and rebuilding board/membership in late 2025
 - Strategic Partnerships: Over 50 entities including Avista Corporation, Edo Energy, Open Energy Solutions, POWER Engineers, Pacific Northwest National Labs, Washington State University, Spokane Workforce Council, and GSI

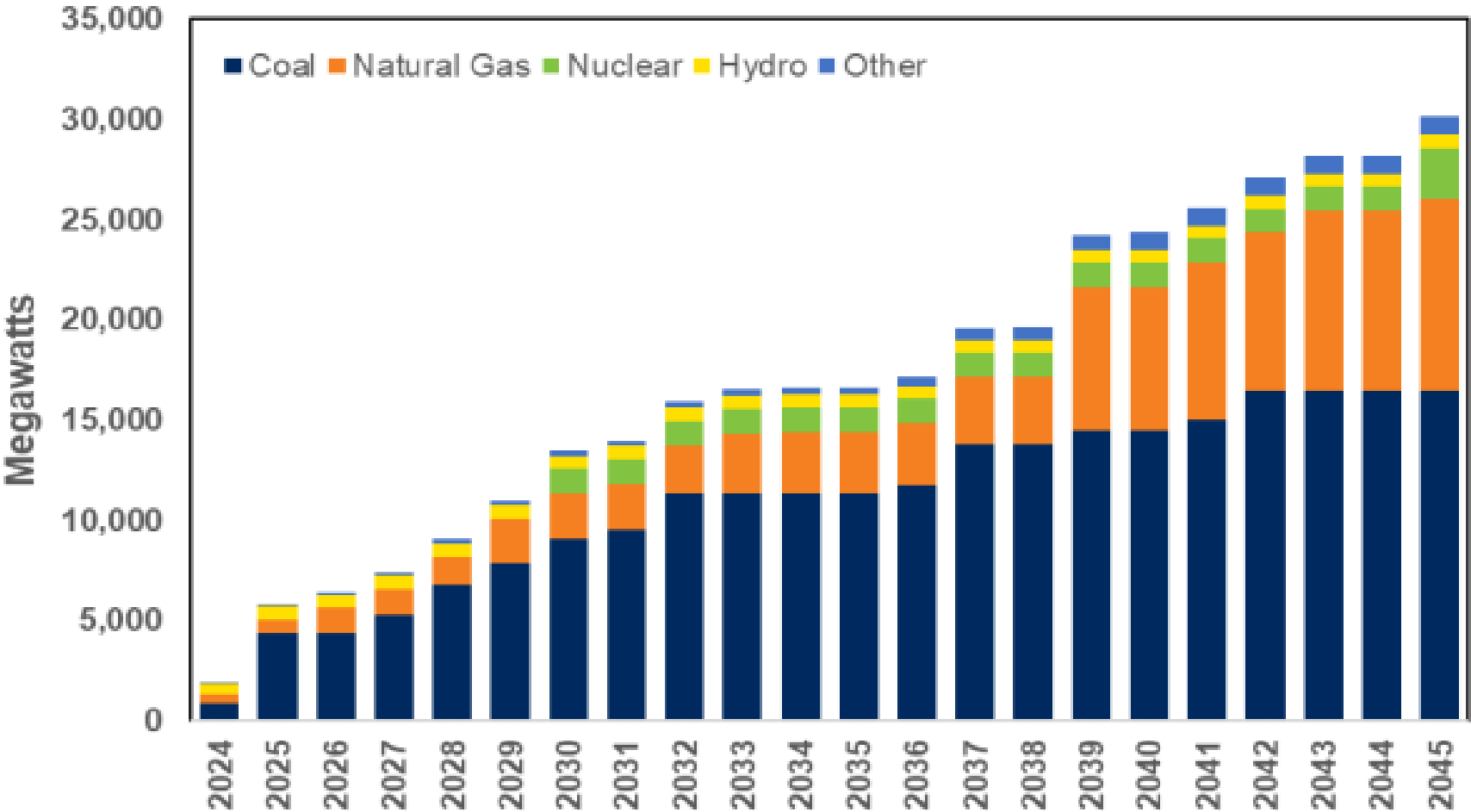
The Challenge – Rising Load Growth

Forecasted resource gaps in winter and summer peak hours



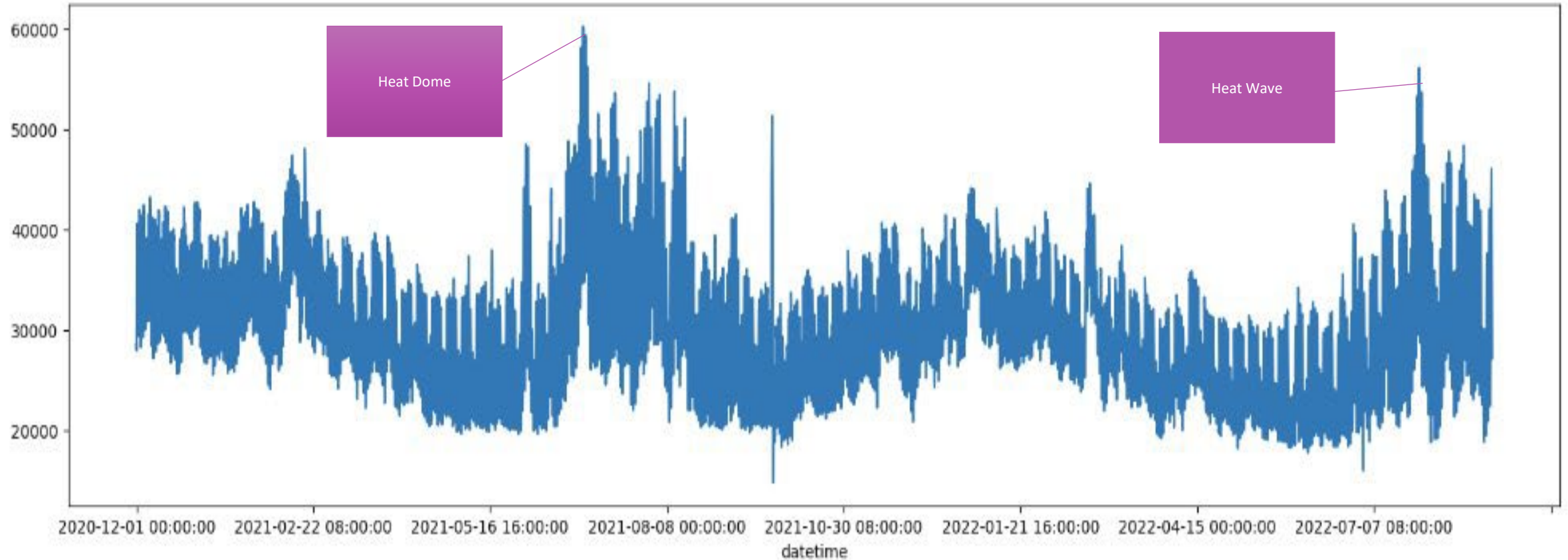
The Challenge – Resource Retirements

Avista Cumulative Resource Retirement Forecast



The Challenge – Transmission Constraints

Customer Contribution to Feeder Load

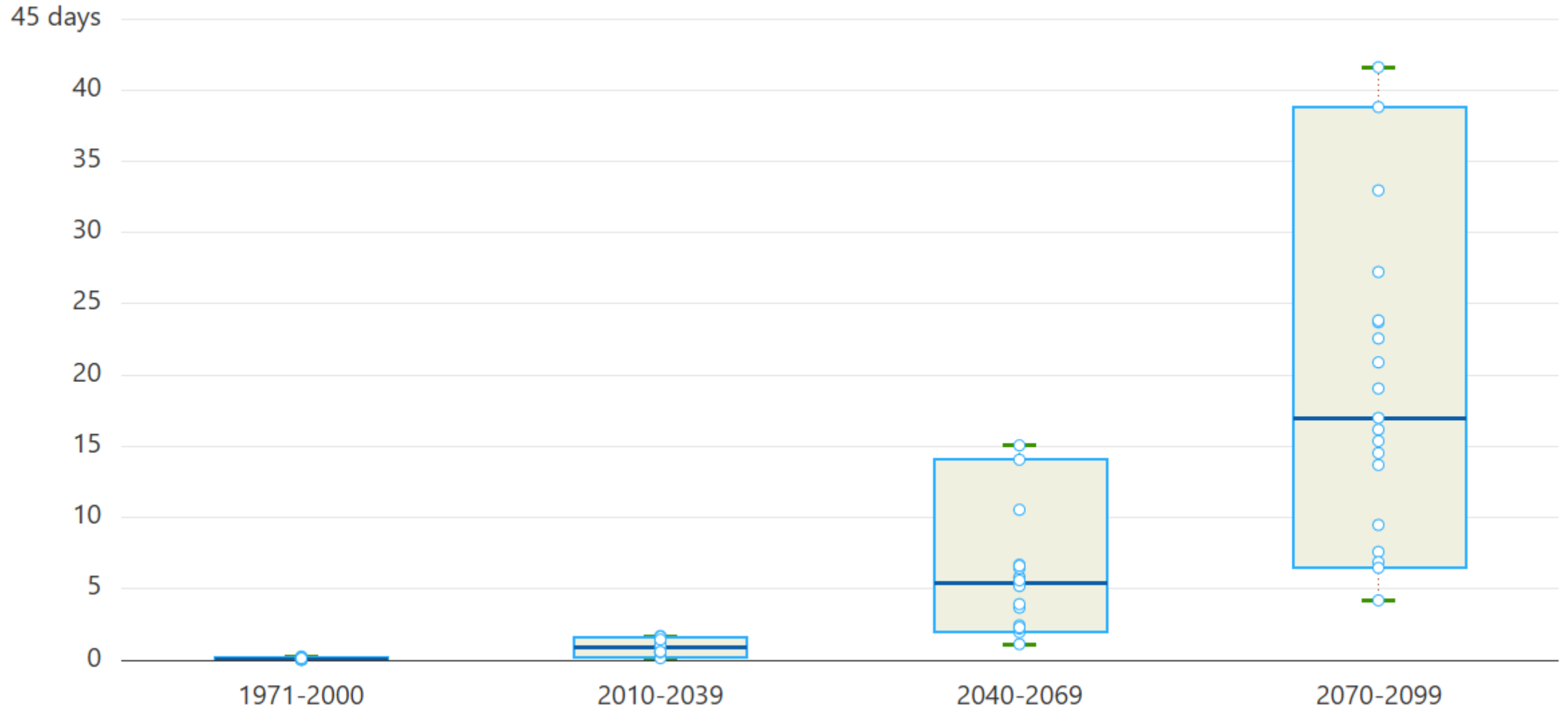


The Problem

- **Increase in peak demand** from new types of loads (e.g., electrification of HVAC & transportation, new data centers, etc.)
- Growing number of utilities with increasing **variable renewable energy (VRE)** generation sources.
- Challenges in building **new infrastructure** (e.g., regulation, queue of existing upgrades/expansions) relative to Demand Side Management (DSM) solutions.
- **Extreme, persistent weather events** creating a need for **schedulable and dispatchable** sources of flexibility on the distribution grid

The Challenge – More Frequent Extreme Weather

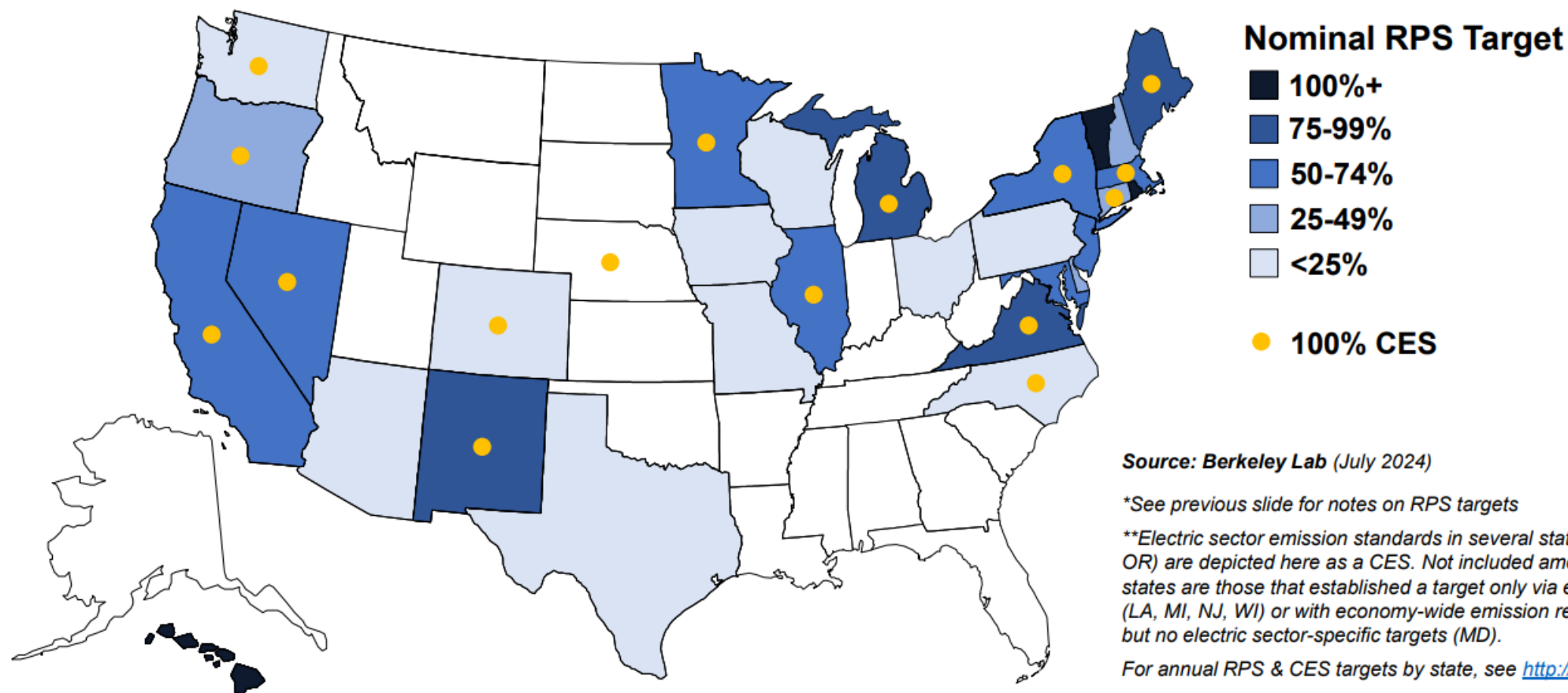
Days with Heat Index $\geq 100^{\circ}\text{F}$



The Challenge – Policy Targets

16 States Have Established a Broader 100% CES **

Typically in combination with an RPS



Needs and Opportunities – Innovation

The Need

Access to local energy and stable infrastructure is a strategic priority

Resilience is becoming increasingly investible

Regional Opportunity

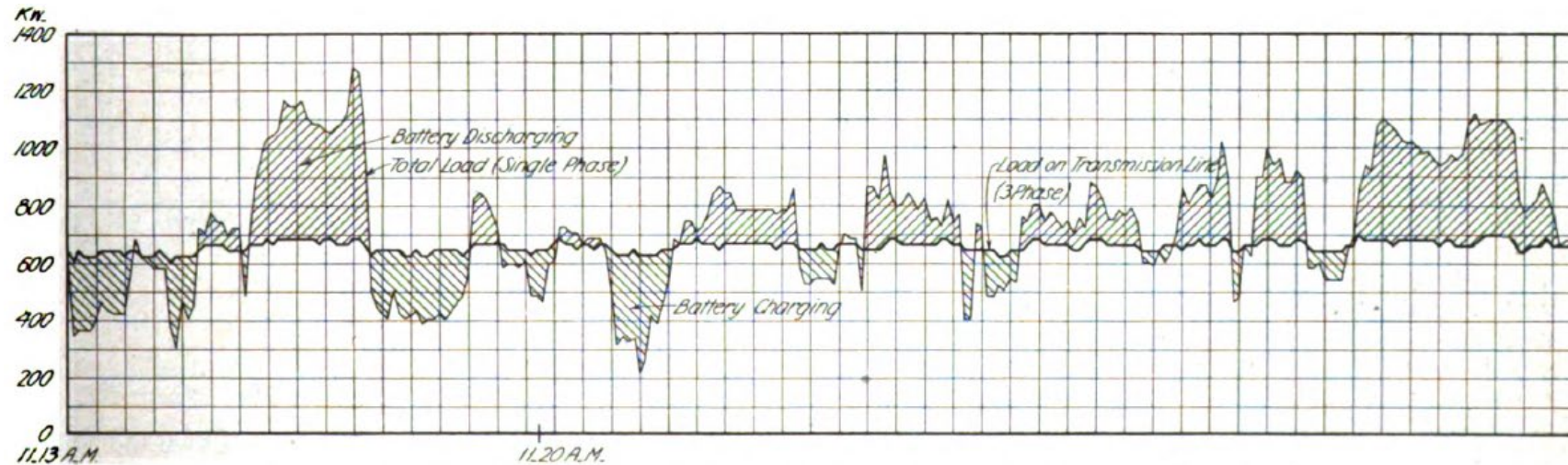
New sustainable sources – nuclear, SAF, geothermal, strategic materials, etc

Energy resilience – Gridtech, DER, etc

Resource efficiency – monitoring, realtime adjustments, decarbonization, etc.

Deployment for adaptability – diverse, distributed resources

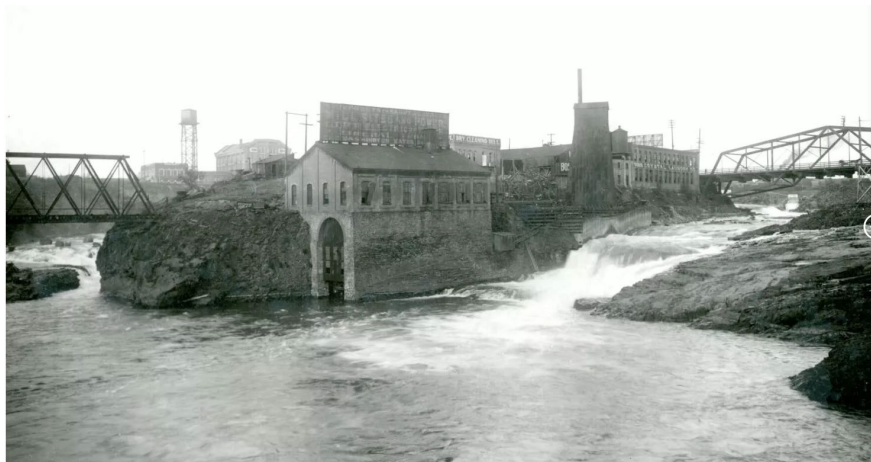
118 Years Ago, in Spokane



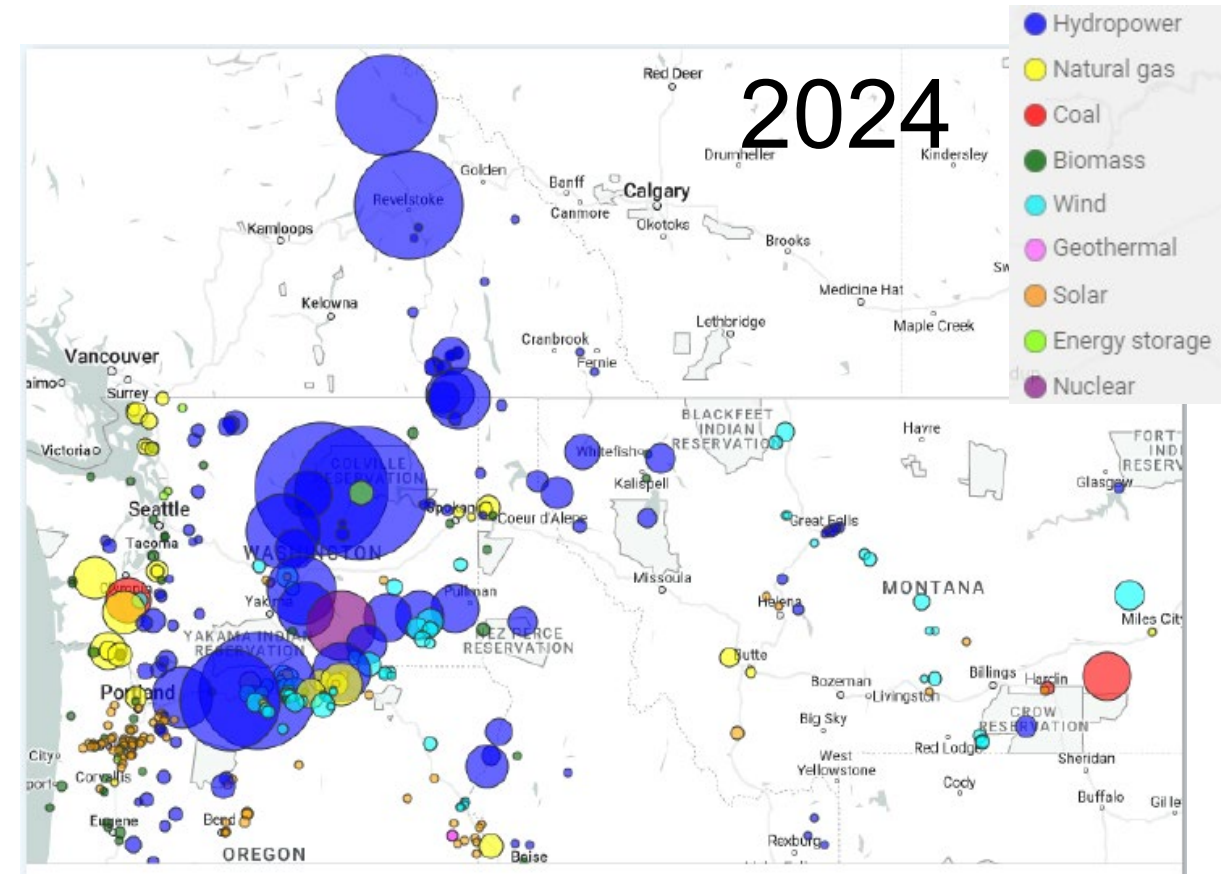
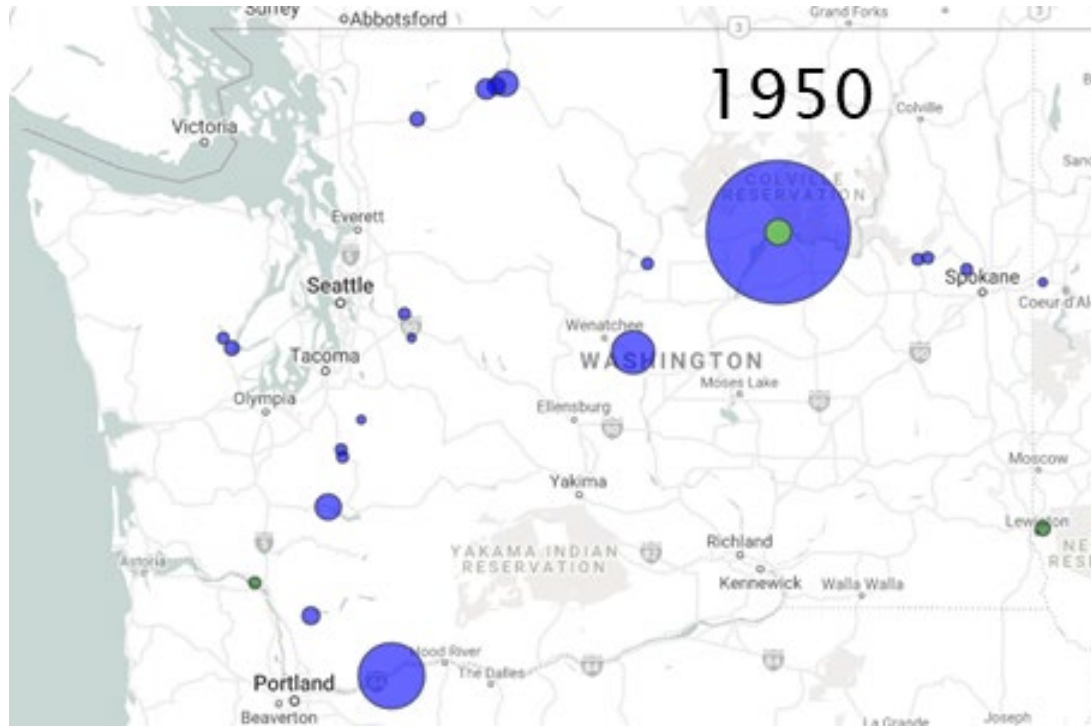
Spokane & Inland Power—Power Curves, Showing Smoothing Effect of Storage Battery.

Electric Railway Review, October 1907:

“Since opening the system has operated with power purchased from the **Washington Water Power Company**. The output of this company’s plant is 60-cycle, three-phase, 4,000 volt current. In the purchase of this current for the Inland Empire System the charges are based on the maximum demand during each month, and for this reason **it became very desirable to employ some means to flatten the railway load curve**”



WA State is located in the middle of a growing energy mix (hydro, nuclear, natural gas, wind, and solar)



Leveraging the Region's "Energy Hub"

Significant growth in renewable & nuclear energy projects, solidifying the region as a hub for innovative energy solutions.

POLITICS & GOVERNMENT

Energy Northwest, Amazon ask Richland to buy into \$4B small modular nuclear reactors

By Wendy Culverwell

Updated February 18, 2025 10:16 AM | 2

LOCAL

Gov. Inslee approves huge Horse Heaven wind farm stretching 24 miles south of Tri-Cities

By Annette Cary

Updated November 05, 2024 2:46 PM | 14

Tri-City Herald

'Big step.' Gov. Inslee approves largest solar project to date in Washington state

Annette Cary

Sat, January 11, 2025 at 5:00 AM PST · 5 min read



A proposed \$1.7 billion wind and solar project generates hopes and fears in South Central Washington state

May 5, 2021 | Updated Wed., May 5, 2021 at 8:44 p.m.



The view of the Wild Horse Wind Facility, Oct. 27, 2011, near Vantage, Wash. A proposed site combining wind and solar energy in South Central Washington is drawing a lot of attention from local residents (DAN PELLE)

NEWS

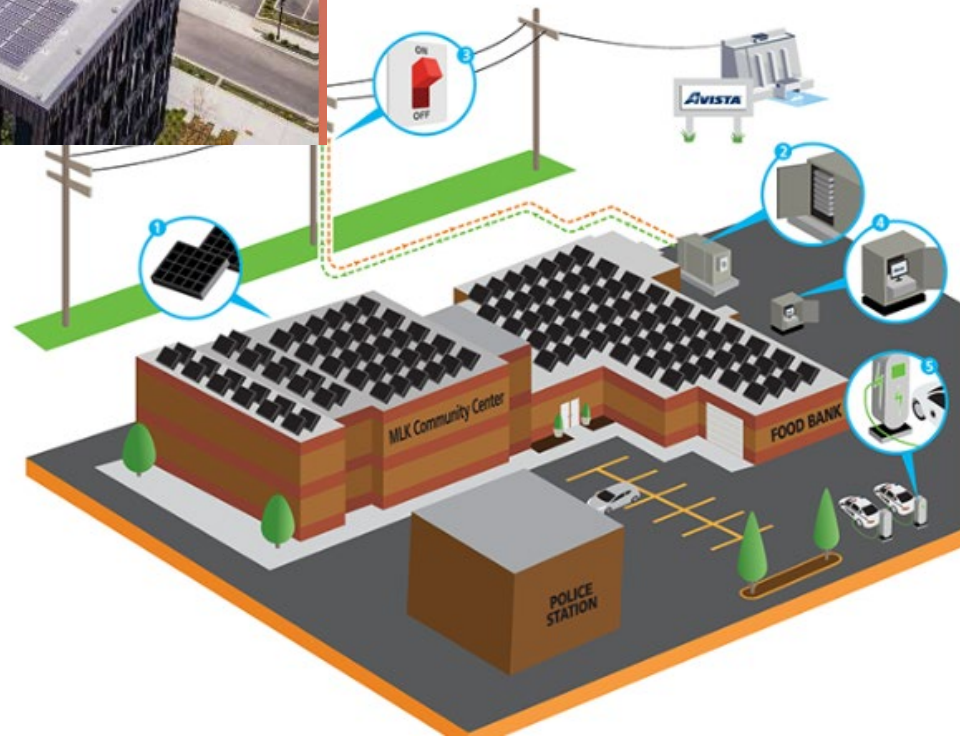
What could be nation's largest solar project planned by feds at Eastern WA nuclear site

Like Comment

Jul 26, 2024 224 views

By: Annette Cary, Tri-City Herald (Kennewick, Wash.)

Microgrid and Energy Management

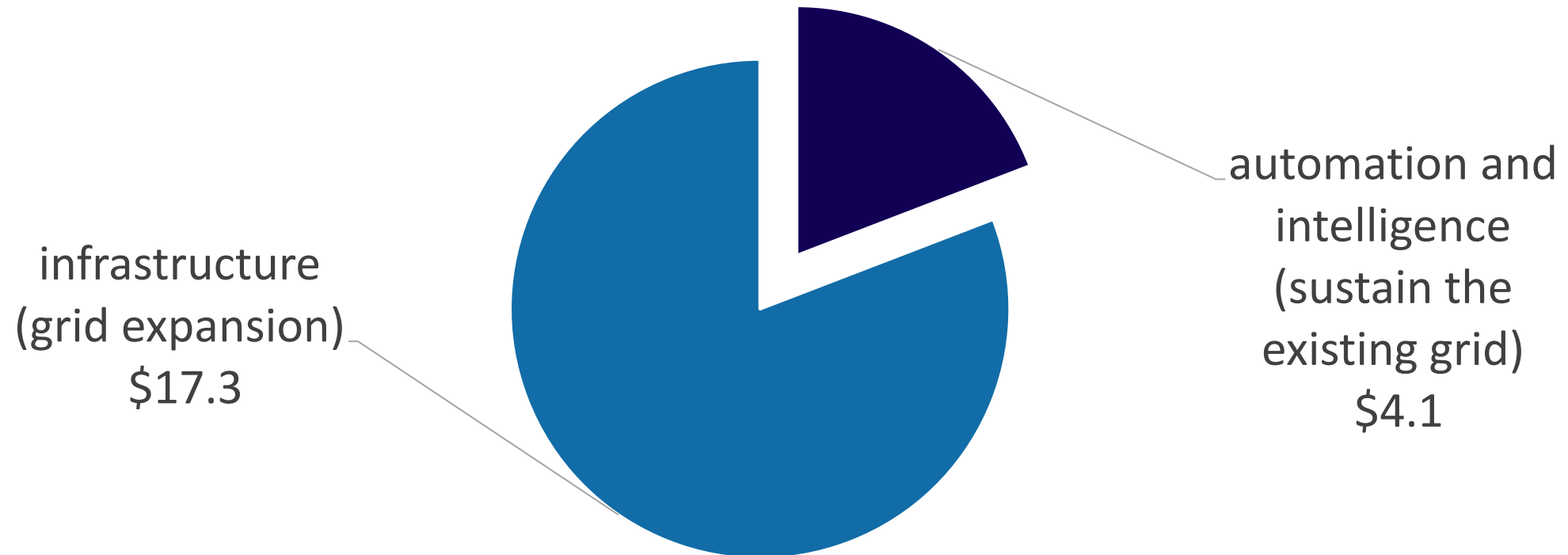


MLK Center Resiliency Project

- SOLAR PANELS:** Produce clean, renewable electricity to run the Center and charge the batteries when grid power is out.
- BATTERY STORAGE:** Powers essential operations during unexpected outages, enabling the Center to function as an emergency community hub providing critical relief services. Battery storage also lessens the strain on Avista's grid, boosting resilience.
- GRID INTERFACE SWITCH:** Disconnects the Center from Avista's grid when there is a power outage, allowing the microgrid batteries to sustain the center independently.
- MICROGRID CONTROLLER:** Manages the different modes and provides control/monitoring of the microgrid.
- EV CHARGERS:** Excess electricity can be utilized during an outage to power two electric police cars stationed at MLK.

New Energy Outlook

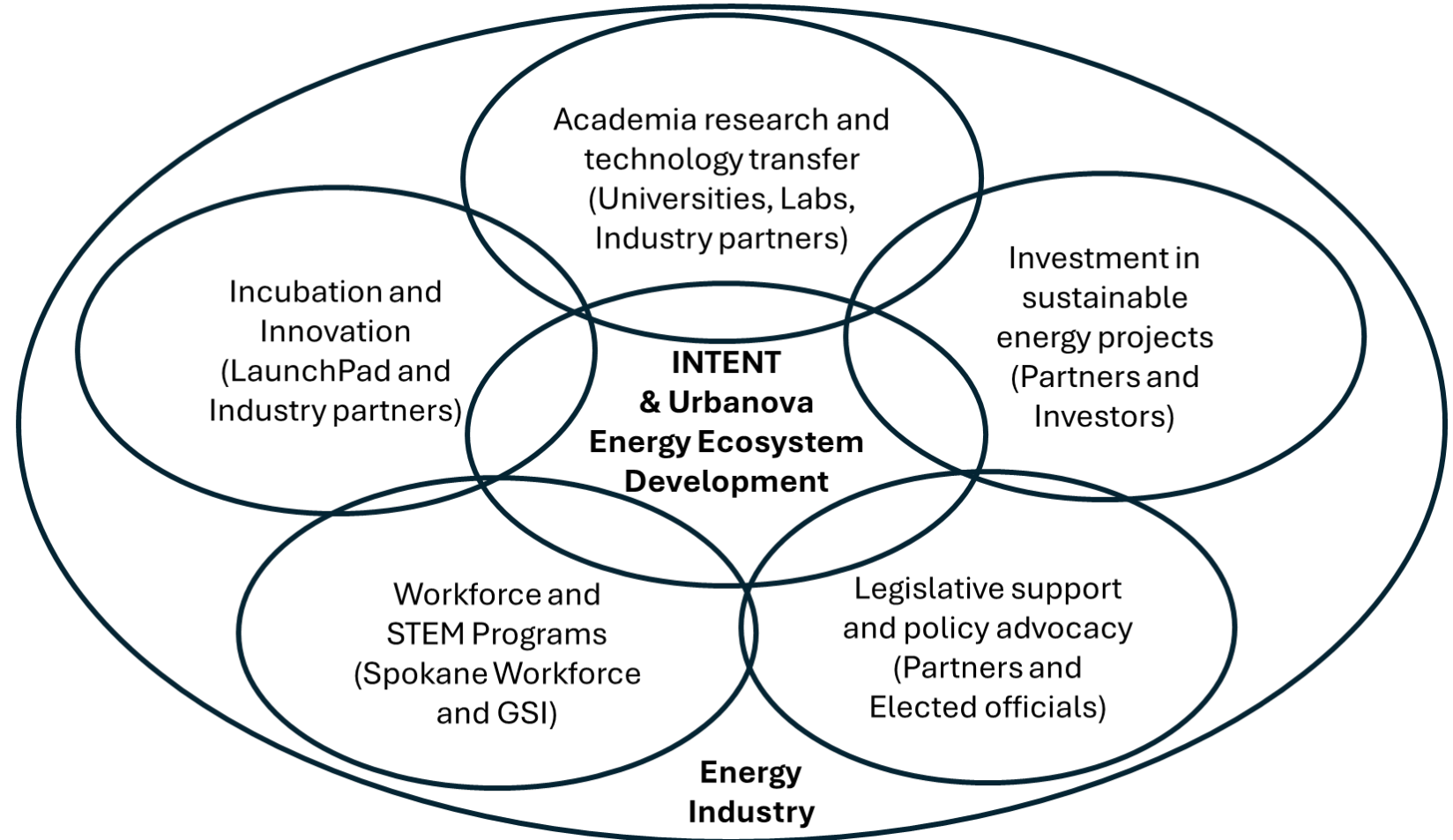
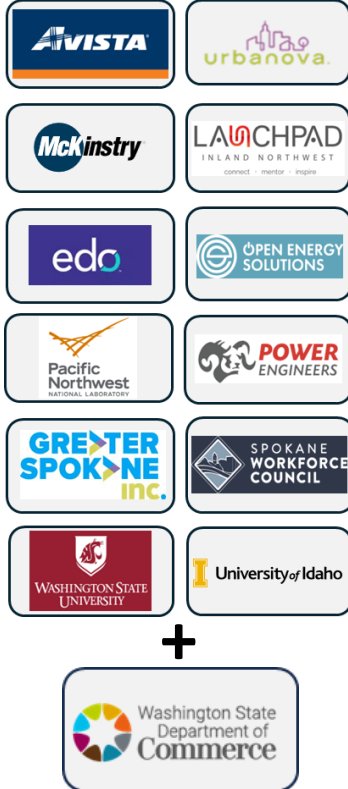
\$21.4 Trillion Grid Investing Opportunity

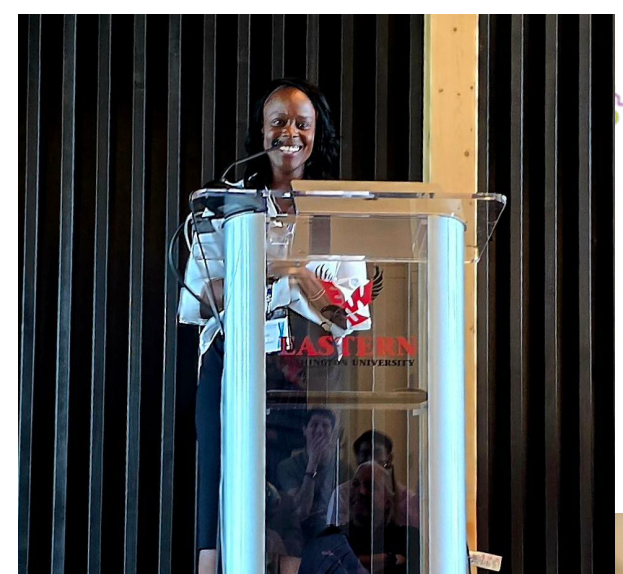


<https://about.bnef.com/insights/finance/global-net-zero-will-require-21-trillion-investment-in-power-grids/>

Value in dedicated key partnerships

Key Partners





REGIONAL ENERGY INNOVATION SUMMIT

Washington State University - SPOKANE

urbanova

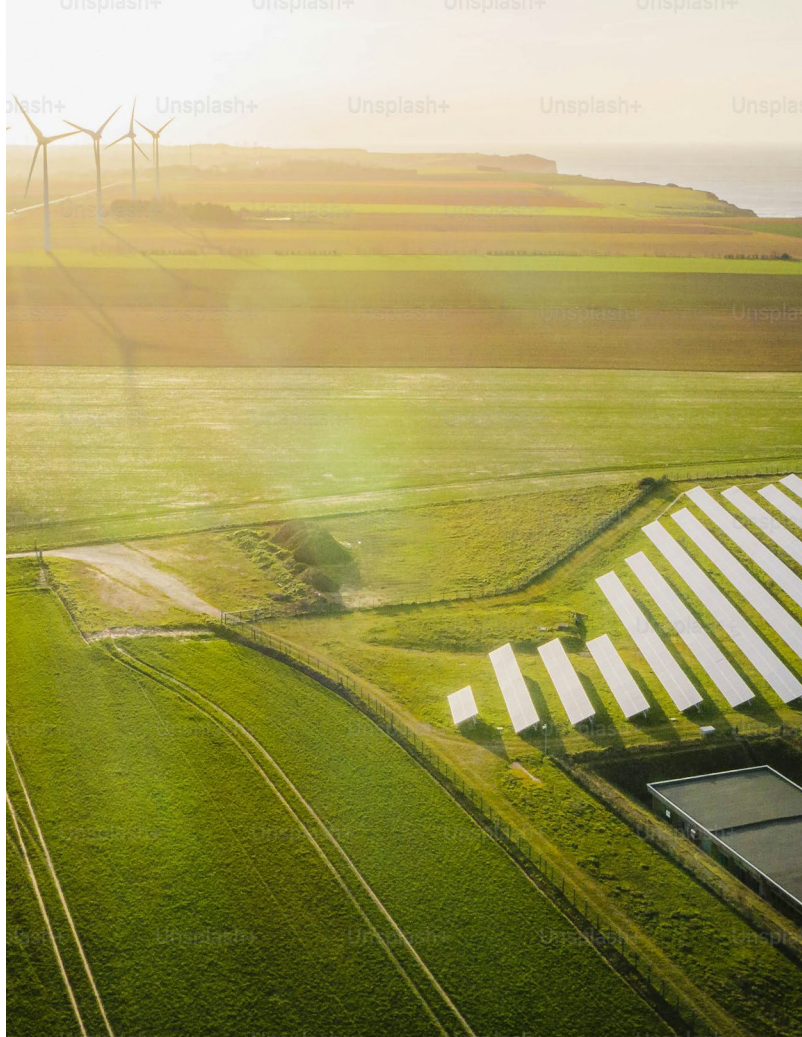
Regional Energy Innovation Summit

July 8 & July 9, 2025

Washington State University - Spokane

The banner features a dark blue background with a network of light blue hexagons. On the left, there is a photograph of a power transmission tower and a wind turbine. The text is centered and uses a mix of white and yellow fonts.





Industry:

- CarbonQuest Carbon-Capture Platform
- Itron Innovation Lab (Grid Digital Twin)
- Edo Energy Distributed-Energy Management Platform
- Avista Innovation Lab and Digital Exchange

Investment:

- E8 Decarb 8 Investment Platform
- Fuse Launch Accelerator & Fuse Fund

Research Pilots:

- VERTical/WSU Food & Ag Energy Nexus Pilot
- PNNL Microgrid Resilience Pilot
- University-District “Micro-Transactive” DER Pilot

Workforce:

- U of I “I-CREW” STEM Pipeline Pilot
- EWU Energy Resilience Research Collaborative
- Spokane Regional Energy Workforce Study

Why an Energy Innovation Cluster?



Address Challenges by Accelerating Clean Energy Solutions and Advancing Policy and Technology Innovations

Value for Partners and Members:

- ☐ Expanded collaboration opportunities – convene regional/national experts
- ☐ Market the region for its energy innovation
- ☐ Connect energy experts to resources for renewable-rich grid