Building the Clean Energy Transition in Washington

Low Carbon Energy Facility Siting Workgroup - Advisory Group

Sarah Vorpahl, PhD
MANAGER, FEDERAL ENERGY POLICY AND STRATEGIC ALIGNMENT

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We strengthen communities

- Housing Homelessness
- Infrastructure
- Business Assistance
- Energy
- Planning
- Community Facilities
- Crime Victims & Public Safety
- Community Services
WASHINGTON STATE 2050

Net-Zero Vision

A blueprint for how we can meet our state’s climate goals to nearly eliminate the use of climate-threatening fossil fuels by 2050, while growing a prosperous economy and maintaining affordable and reliable energy supplies.
Innovation Clusters
What is an Innovation Cluster?

A formalized, industry-led, member-based organization working together to:
• Drive innovation
• Overcome barriers
• Access new market opportunities
• Attract talent and capital.
What is the Innovation Cluster Accelerator?

The Innovation Cluster Accelerator is a multi-year cluster development program to strengthen industry ecosystems and accelerate economic development.

We will develop, support and scale 9 high-impact Innovation Clusters beginning in 2021 and expand the program over the coming decade.
First cohort clusters

**Washington Autonomous Vehicle Cluster (WAV-C)**, led by Kitsap Economic Development Alliance - accelerating the advancement of unpiloted and autonomous vehicles, with an initial focus on the growing need for waterborne craft.

**Pacific Northwest Aerospace Cluster (PNWAC)**, led by [Pacific Northwest Aerospace Alliance](#) – Promote the growth and global competitiveness of the PNW aerospace industry, industry transformation of our aerospace manufacturing sector.

**Sustainable Aviation Technologies and Energies (SATE)**, led by [Aerospace Futures Alliance](#) – advancing aviation’s global fight against climate change by leading the research, development and deployment of sustainable aviation fuels, electrified aircraft and hydrogen-powered aviation.
First round clusters

**Washington VERTical**, led by the Port of Benton – accelerating the transition to clean, renewable and non-emitting energy production sources by 2025 through advanced nuclear power technologies.

**Carbon Reduction in the Built Environment Cluster**, led by The Clean Tech Alliance – advancing development and adoption of clean technologies in residential buildings; non-residential buildings such as industrial operations, educational facilities, health care centers and community buildings; and engineering construction such as bridges, ports, electricity and road

**Consortium for Hydrogen And Renewably Generated E-Fuels (CHARGE)**, led by WSU’s JCDREAM – transforming Washington into a global hub for clean hydrogen and e-fuel production with the goal to eliminate fossil fuels from heavy-duty transport, aviation, shipping and other economic sectors which are difficult to decarbonize through traditional electrification.
First round clusters

Enterprise Digital Growth Ecosystem (EDGE) Cluster, led by the 5G Open Innovation Lab – using edge computing and 5G to digitally transform agriculture, energy and utilities, healthcare, manufacturing and transportation and logistics.

Advanced Technology Cluster, led by the Washington Technology Innovation Association – using quantum computing and distributed ledger technologies (blockchain) to grow advanced technologies and maintain Washington’s technology leadership.

Evergreen Bioscience Innovation Cluster, led by Greater Spokane, Inc. – working to make the Intermountain Northwest and Washington State a magnet for companies providing and consuming expert life and health science contract research, development, and manufacturing services of medicines and medical devices by enhancing workforce development and services to pharmaceutical and medical
**Washington Maritime Blue** is a non-profit, strategic alliance formed to accelerate innovation and sustainability in support of an inclusive blue economy. Maritime Blue works to create a world-class, thriving, equitable and sustainable maritime and ocean industry through knowledge sharing, joint innovation, entrepreneurship, commercialization, business and workforce development.
Washington State’s Strategy for the Blue Economy

The first, and only, US statewide strategy for the Blue Economy was delivered in January 2019 by Governor Inslee’s Maritime Innovation Advisory Council and Washington State Dept. of Commerce after 18 months of stakeholder engagement.
Opportunities for partners to engage

Clusters are actively being built – including WAV-C!
- Join as a member
- Explore serving as a board member
- Reach out and share areas of potential overlap/partnership
- Make connections

Partner
- Joint innovation projects
- Projects to solve industry challenges – i.e. workforce, policy, start-up support
- EDA Build Back Better Regional Challenge example – leverage clusters to pursue funding
Federal Infrastructure Package
Clean Energy Fund
Clean Energy Fund

- Since 2013, $211M appropriated by legislature
- Competitive grants to develop, demonstrate, and deploy clean energy technologies
- Catalyze public-private collaborations

Conduct research and development
Demonstrate feasibility
Implement at scale
Clean Energy Fund

- **Grid Modernization**: support the integration of renewable energy sources, distributed energy resources and microgrids.
  - Prioritizes and incentivizes projects that demonstrate partnership between utility applicants and Tribes and projects that benefit Tribal Communities
  - $3.9M – 2021 Grants Awarded (18 projects)

- **RD&D (Research, Development and Demonstration)**: for new and emerging clean energy technologies that advance the state’s climate goals
  - Prioritizes and incentivizes projects that benefit vulnerable populations and Tribes and provides a reduced match requirement for Tribes
  - $8.5M – 2022 Grants Awarded (10 projects)
Clean Energy Fund

• **Grants to Nonprofit Lenders:** lenders provide low cost financing for clean energy projects.
  - Request for applications under development, working on inclusion of Tribal Lending Institutions
  - **$5.3M** - RFA published early June 2021

• **Transportation Electrification:** innovative approaches to electrify transportation systems through the installation of electric vehicle charging infrastructure.
  - Priority for projects that demonstrate meaningful and enduring benefits to communities and populations
  - **$2M** Tribal and rural carve out in next round
  - **$9.8M** – 2021 Grants Awarded (14 projects)
  - Next round of grants 2022
Clean Energy Fund – New!

• *New!* Rural Energy Innovation: develop a strategy and pipeline of projects that align with the 2021 state energy strategy and meet the needs of both rural and Tribal communities
  • Example projects - enhance energy efficiency, demand response, energy storage, renewable energy, beneficial electrification, resilience, organic waste management, and biological carbon sequestration.
  • $950,000 set aside for Tribes
  • *Program development in 2021; $4.75M in competitive grants authorized*

• *New!* Clean Buildings: for next-generation clean buildings projects to advance the goals of the 2021 state energy strategy.
  • These projects would demonstrate grid-enabled, high-efficiency, all-electric buildings.
  • *Program development in 2021; $10M in funding authorized*
Clean Energy Fund projects span Washington

CEF 1
CEF 2
CEF 3
CEF 4
Regional Manufacturing Shovel Ready Sites

$2.5 million

23. Regional Manufacturing Pre-Develop.

Funding is provided for pre-development planning grants to local governments and Tribes seeking to develop large manufacturing sites. (General Fund-State) (One-Time)
Questions
Thank you!

Sarah Vorpahl
MANAGER FEDERAL ENERGY POLICY AND STRATEGIC ALIGNMENT
sarah.vorpahl@commerce.wa.gov
(360) 688-6000

www.commerce.wa.gov