

Sustainable aviation and renewable fuels: Washington state overview

CETI Decarbonization Forum

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Washington State
Department of
Commerce

We strengthen communities



HOUSING AND
HOMELESSNESS



INFRASTRUCTURE AND
BROADBAND



SMALL BUSINESS
ASSISTANCE



ENERGY



PLANNING AND TECH
ASSISTANCE



COMMUNITY SERVICES



CRIME VICTIMS AND
PUBLIC SAFETY



ECONOMIC
DEVELOPMENT

Office of Renewable Fuels

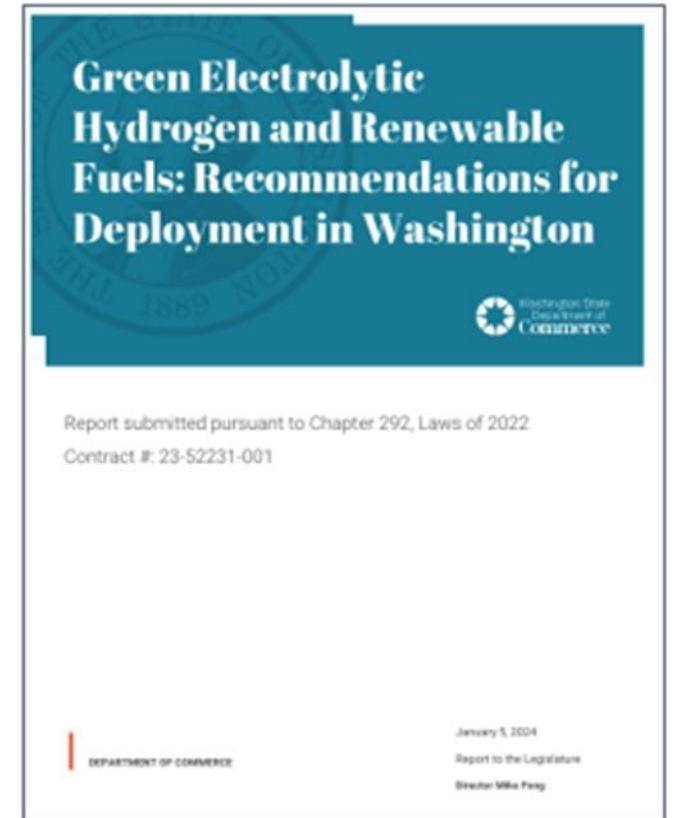
- Established in RCW 43.330.565 and assigned duties in RCW 43.330.570
- The Office aims to accelerate a comprehensive market for green electrolytic hydrogen and renewable fuels, including alternative jet fuel, in Washington through partnerships, research, workforce development, and community engagement.

2021 State Energy Strategy key takeaways

- Adopt a low-carbon fuel standard to support transportation decarbonization.
- Replacing liquid fuels is necessary to meet state emissions targets and is one of the most effective uses of clean hydrogen.
- Excess renewable generation could be used to produce hydrogen and renewable fuels, but new transmission and generation capacity is needed.

Green Electrolytic Hydrogen and Renewable Fuels Legislative Report

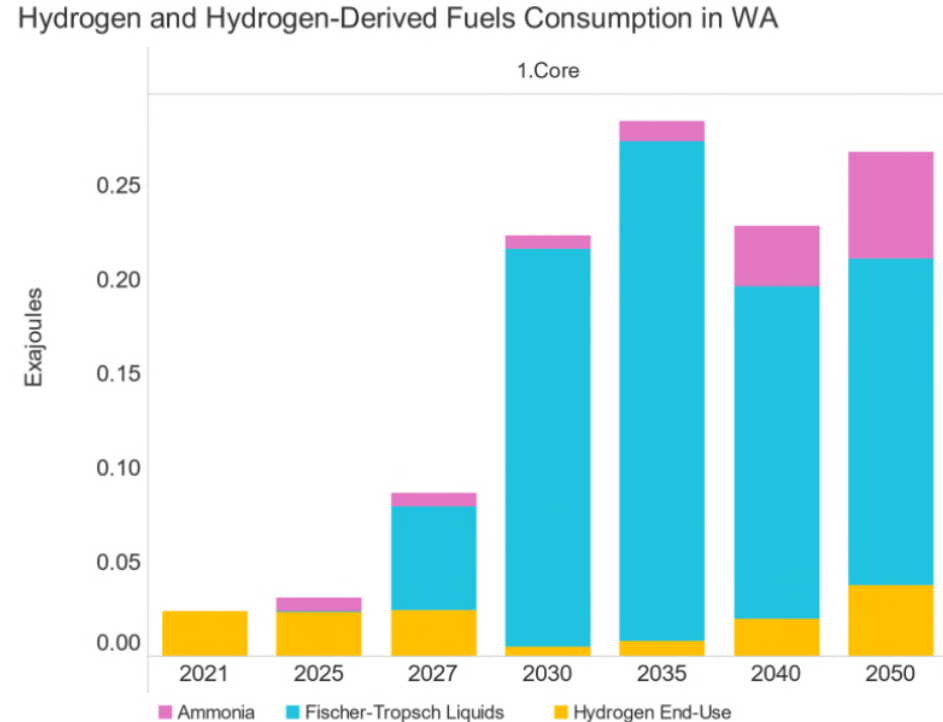
- Production must be developed in coordination with expanded renewable electricity capacity.
 - Report projects new in-state renewable electricity capacity will be needed for hydrogen production: 3.4 GW by 2030 and 36.8 GW by 2050.
- Importing hydrogen and renewable fuels from other states may develop as part of a cost-effective approach.
- Coordinated siting and permitting processes and reforms are needed for green hydrogen and new renewables.
- Projects must consider the unique environmental justice concerns of hydrogen and renewable fuels to reduce disproportionate environmental health burdens and distribute project benefits equitably.



Hydrogen consumption in Washington

- Report projects that in-state hydrogen consumption is initially dominated by petroleum refining and bulk chemical production and later by hydrogen-derived fuels.

Figure 3. Core Case hydrogen and hydrogen-derived fuels consumption in Washington

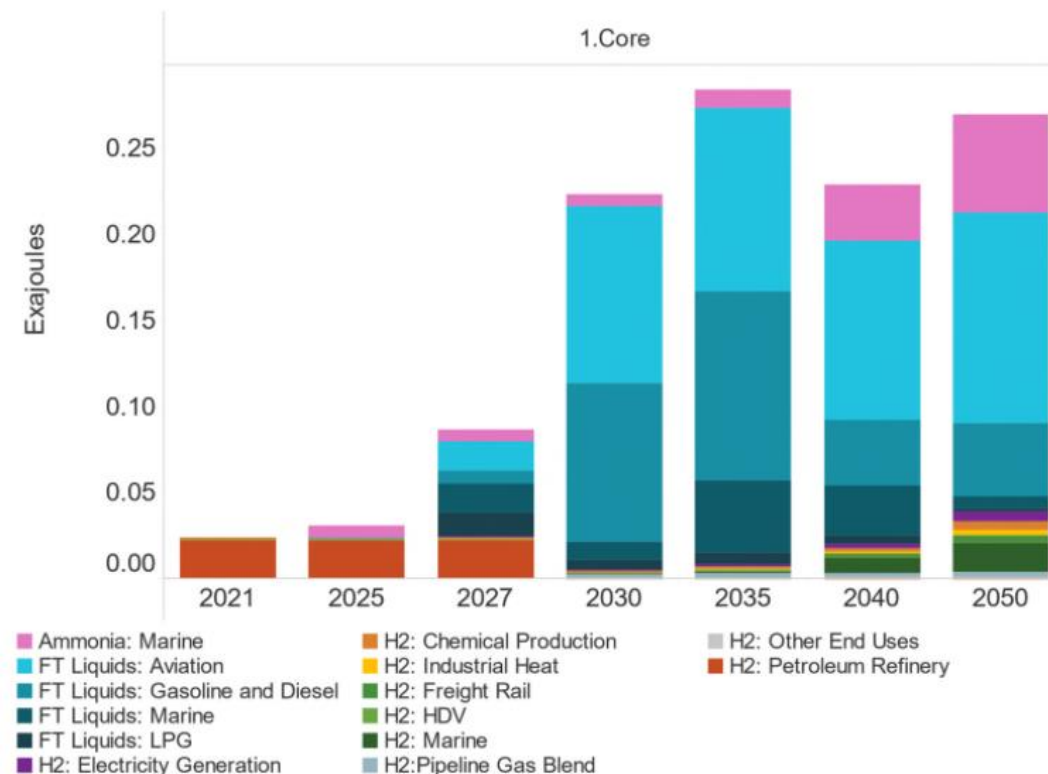


Hydrogen demand in Washington

- State expects **significant growth** in green and renewable hydrogen demand between now and 2050
- Demand is expected to span a variety of sectors
 - **Near-term**: Displacing fossil-derived hydrogen in oil refining
 - **Mid-term**: Production of hydrogen-derived clean fuels
 - **Long-term**: Clean fuels and direct use of hydrogen for peak power decarbonization, industrial heat, and in rail/heavy duty vehicles

Figure 4. Core Case hydrogen and hydrogen-derived fuels use in Washington

Hydrogen and Hydrogen-Derived Fuels in WA by End Use



2024 Biennial Energy Report

- Support implementation of recommendations in the Green Electrolytic Hydrogen and Renewable Fuels legislative report.
- Explore tax incentives and other market development policies to encourage the use of hydrogen and renewable fuels in strategic sectors.
- Evaluate feedstock supply and in-state production opportunities and impacts of renewable fuels.
- Develop additional projects to use hydrogen and renewable fuels in aviation, industry, heavy-duty transportation, and maritime industries.
- Prioritize equity and environmental justice in the clean energy transition.

Washington energy policy landscape

- Ch. 19.405 RCW – Clean Energy Transformation Act
- Ch. 70A.65 RCW – Climate Commitment Act
- RCW 82.04 – SAF manufacture (production and blending) and use tax credits; preferential business & occupation tax rate
- Ch. 82.89 RCW – Retail sales and use tax deferral for eligible investment projects, including clean fuels production facilities
- Ch. 70A.535 RCW – Clean Fuel Standard & Program
- RCW.43.21C.535 – Programmatic Environmental Impact Statement (PEIS) SAF being developed by Department of Ecology
- RCW 43.31.645 Creation of sustainable aviation fuel account

Other potential Commerce funding opportunities:

- Clean Energy Fund grants
- 2026 Clean Energy Research, Development and Demonstration Program
- H2 Technical Assistance Program

Manufacturing incentives



- Sales and use tax exemption for manufacturing and research & development (R&D) machinery and equipment (all counties)
- B&O tax credit for new jobs created in rural counties
- Sales/use tax deferral - Manufacturing and R&D - up to \$400,000 in qualifying counties with population of less than 650,000
- Governor's Strategic Reserve Fund Awards for high-impact opportunities (managed by OEDC)
- Evergreen Manufacturing Growth Grant (2025-2027)

2025-2027 biennial budget

- Continued funding for:
 - The Office of Renewable Fuels
 - Implementation of ESSB 5447 (alternative jet fuel bill)
 - ORF technical assistance program for strategic end uses of hydrogen
 - WSDOT Sustainable Aviation Grant Program
 - Sustainable maritime fuels strategic framework development
- New funding for:
 - Cascadia Sustainable Aviation Accelerator and Institute
 - Snohomish County preconstruction of temporary SAF R&D center at Paine Field

Environmental Justice Toolkit for Hydrogen Project Developers

Released July 2025

Objective: Provide practical recommendations and actionable guidance for hydrogen developers in project planning to promote:

- Robust community and tribal engagement
- Better collaboration and partnership between developers, tribes, and communities
- Improved equity and environmental justice outcomes of hydrogen projects

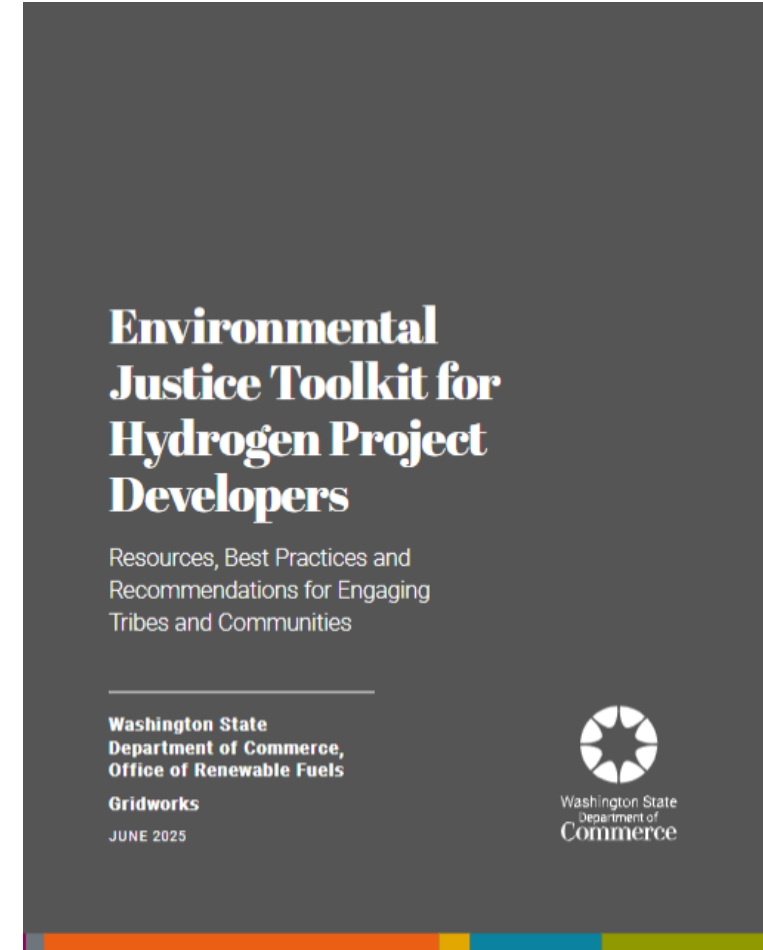
Informed by research, interviews, and advisory committee

Key elements:

- The case for meaningful engagement and collaboration & EJ context in Washington
- Recommendations and best practices for engaging tribes and communities
- Guidance and template for creating a Community Benefits Plan
- Guidance on identifying and mitigating common EJ concerns in hydrogen projects

Links

- [Webpage](#) (more information under “Resources”)
- Full document: [Environmental Justice Toolkit for Hydrogen Project Developers \(PDF\)](#)



PNW Low-Carbon Hydrogen Analysis



Released July 2025

Objective: Conduct a study examining the hydrogen policy, regulatory, and industry ecosystem in British Columbia and Washington State, engage key stakeholders and Tribal/First Nations to understand opportunities and challenges to growth of a regional low-carbon hydrogen market, and identify areas where WA and BC can better align to make it easier to move hydrogen products, technologies, and business interactions across the border.

Key Elements

- Engagement with industry, tribes/First Nations, academia, government, etc.
- Jurisdictional scan
- Regional low-carbon hydrogen supply and demand analysis
- Assessment of regional strengths and alignment opportunities
- Cross-border case studies
- Key findings and recommendations

Resources

- [PNWER press release](#)
- [Webpage](#)
- Full report: [Pacific Northwest Low-Carbon Hydrogen Analysis \(PDF\)](#)

Technical Assistance program



Funded through 2025-27 Operating Budget (ESSB 5167) to be launched by June 30, 2027

Objective: Provide technical assistance for strategic end users of green electrolytic hydrogen, renewable hydrogen, and hydrogen-derived fuels across Washington.

Initial ideas:

- Focus support on public benefit agencies (transits, public utilities), tribal nations, industrial partners
- Partner with technical support provider(s) to provide deep support for a set of participants throughout the program period
- Elevate insights, findings, and outcomes of technical support in public-facing tools, resources, and case studies.

Status:

- Reviewing 60 responses to Request for Information (closed Jan 7, 2026)
- Program is in design and contracting decisions are in progress
- Program launch expected late Q1 2026 – will identify technical assistance opportunities and projects.

Supporting partnerships and collaboration

- Alternative Jet Fuel Work Group
- Cascadia Sustainable Aviation Fuel Center
- Sustainable Maritime Fuel Collaborative
- PNWH2 Hub





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www.commerce.wa.gov



Thank you!

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