

Decarbonization Washington's Energy Economy



Washington State
Department of
Commerce

We strengthen communities



HOUSING AND
HOMELESSNESS



INFRASTRUCTURE AND
BROADBAND



SMALL BUSINESS
ASSISTANCE



ENERGY



PLANNING AND TECH
ASSISTANCE



COMMUNITY
SERVICES AND FACILITIES



CRIME VICTIMS AND
PUBLIC SAFETY



ECONOMIC
DEVELOPMENT

2021 State Energy Strategy

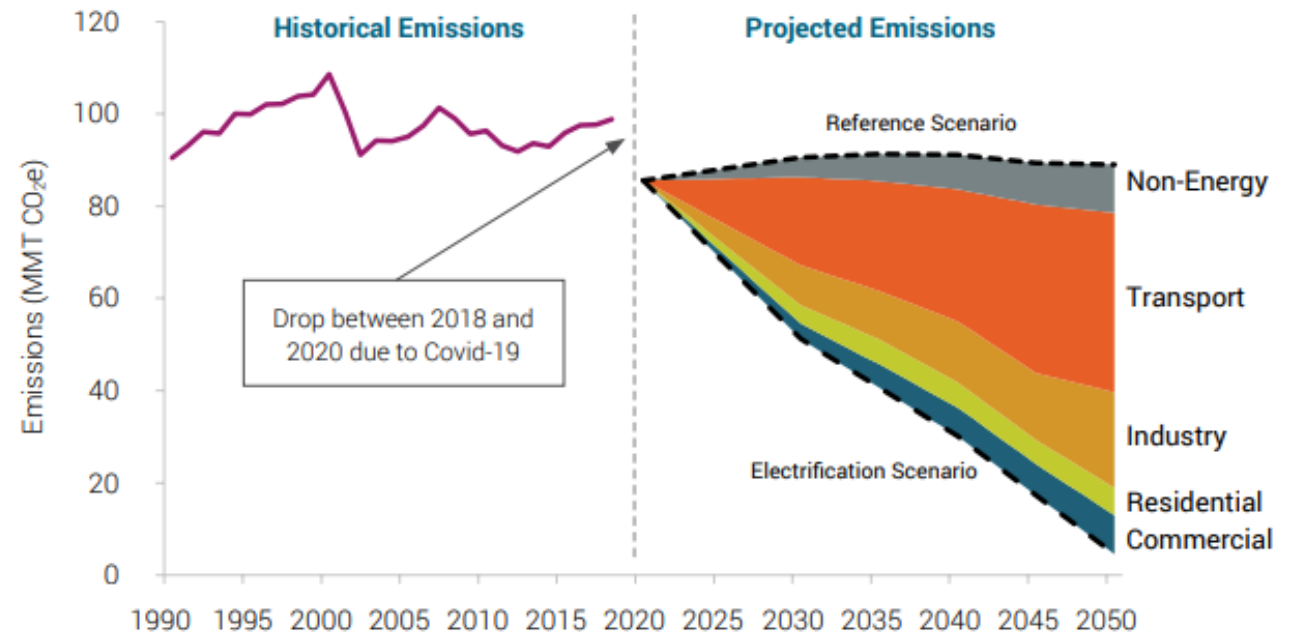
- Align strategy with clean electricity laws
 - Energy Independence Act (I-937, 2006)
 - Clean Energy Transformation Act (Chapter 288, Laws of 2019)
 - After 2025, no coal in resource mix
 - By 2030, greenhouse neutral electricity supply
 - By 2045, 100% renewable or non-emitting sources
- Align strategy with greenhouse gas emission limits (Chapter 79, Laws of 2020)
 - By 2030, 45% below 1990 levels
 - By 2040, 75% below 1990 levels
 - By 2050, 95% below 1990 levels and achieve net-zero emissions

[2021 State Energy Strategy - Washington State Department of Commerce](#)

2021 State Energy Strategy

- An overarching energy vision for the state
- Public process
- Comprehensive decarbonization modeling spanning 30 years

FIGURE 1. HISTORICAL AND PROJECTED GROSS GREENHOUSE GAS EMISSIONS IN WASHINGTON STATE

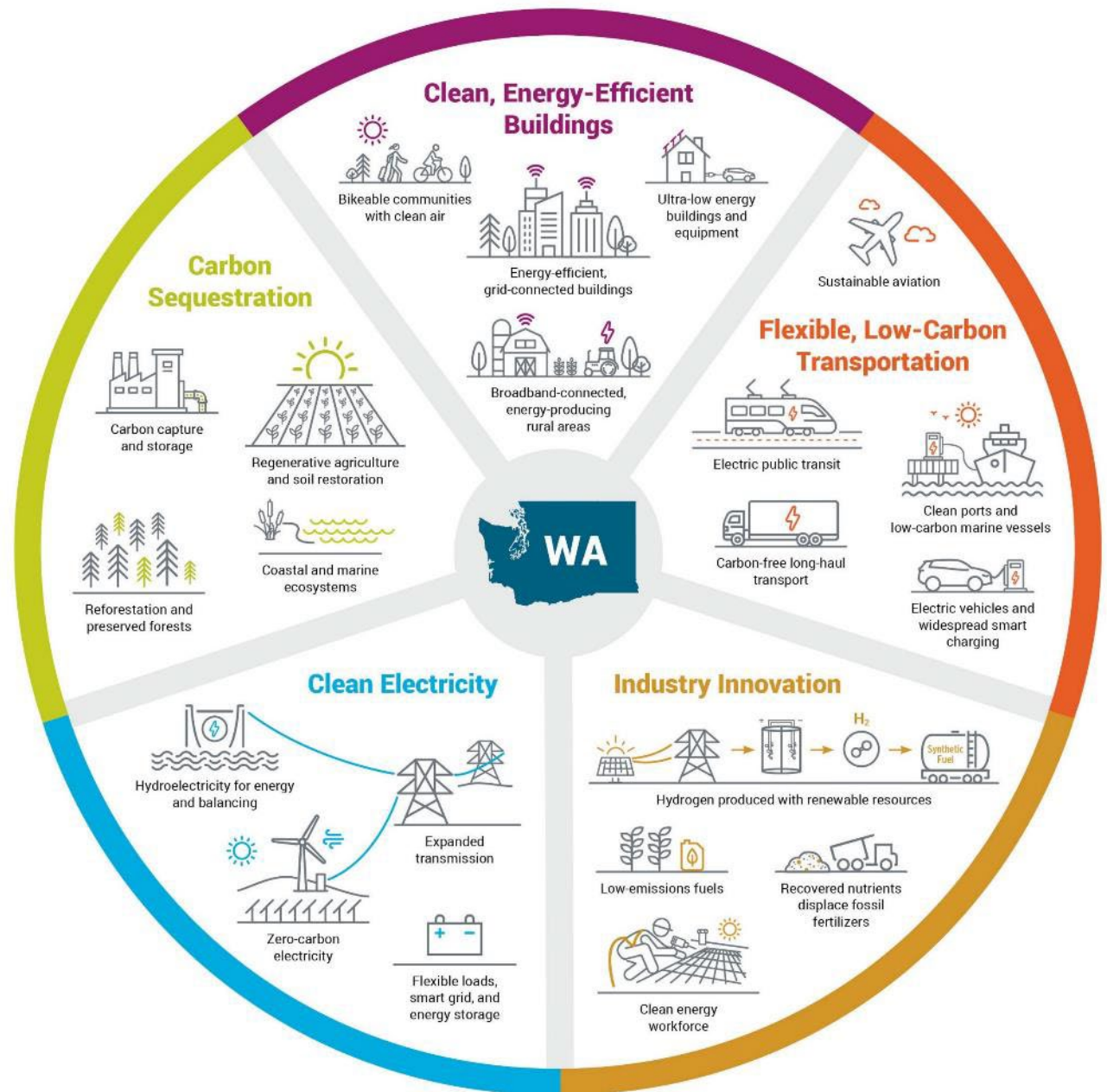


Source: Washington State Department of Ecology for historical emissions (2018 value is preliminary).
Appendix A – Deep Decarbonization Pathways Modeling Technical Report, December 11, 2020 (p. 26).

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.



Equitable Decarbonization



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Environmental Justice

The Legislature passed the Healthy Environment for All Act (HEAL Act) in 2021. It is the first statewide law to create a coordinated and collaborative approach to environmental justice. The purpose of this environmental justice law is to:

- Ensure environmental reviews, funding decisions, and permitting decisions identify and address environmental health disparities.
- Reduce exposure to environmental hazards on tribal lands.
- Track and measure implementation of environmental justice in state agencies.

Building Sector Decarbonization in Washington



Washington State
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Decarbonizing the building sector



Percentage
commercial
and residential
buildings
powered by
electricity

 **Electric space heating**

64%
electric in 2030

82%
electric in 2050

 **Water heating**

64%
in 2030

100%
in 2050

GHG EMISSION
REDUCTIONS



14.8
MMT

2020

9.1
MMT

2030

0
MMT

2050

- Greater efficiency and electrification in buildings: Short- and long-term benefits
 - ✓ Avoids the need for clean fuel investments
- Significant reductions in energy use
- Pipeline gas largely eliminated from heating buildings by 2050

Existing policy

- Energy code for new construction
- Performance standards for existing buildings over 20,000 square feet
- Appliance standards
- State-owned facilities



Spokane

Washington Energy Code

70% more efficient by 2031 over 2006 baseline RCW [19.27A.160](#)

2021 energy codes effective July 2023

- Non-residential updates
 - Electric heat pumps and HPWH for most space and water heating, some exemptions
 - Solar readiness for commercial
 - Other incremental efficiency improvements
- Residential updates
 - Electric heat pumps required for all space and water heating, with few exceptions
 - Increased ventilation above natural gas stovetops
 - EV-capable electric panels in new single-family homes

Clean buildings – Tier 1

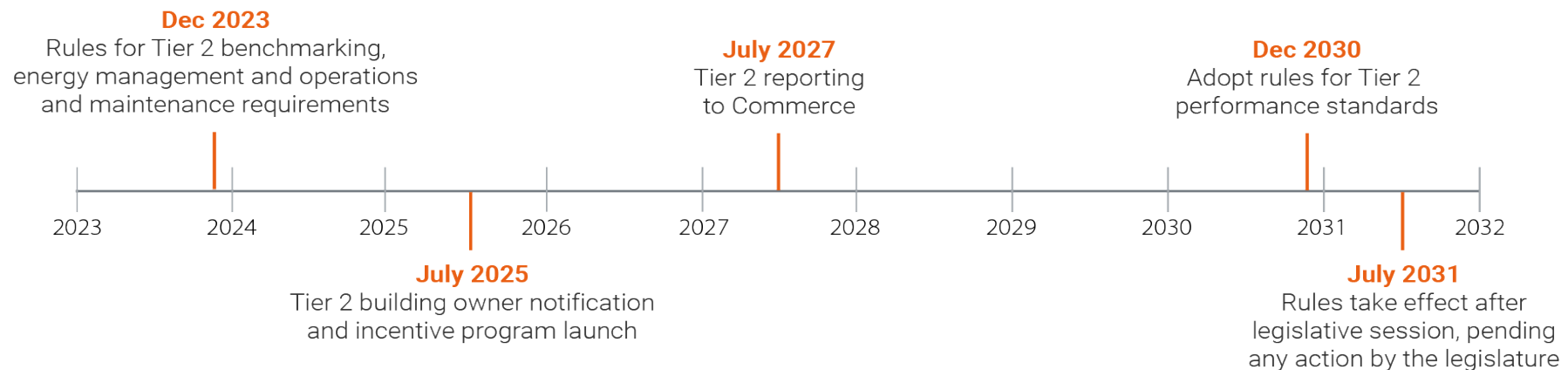
- Performance standards for existing buildings over 50,000 square feet
 - Energy management
 - Operations and maintenance
 - Benchmarking
 - Targets
- Incentive program
- Mandatory compliance



Clean buildings – Tier 2

- Buildings between 20,000-50,000 square feet, including multifamily
- Not a performance standard until 2031
- Focus on benchmarking, energy and operations planning

Clean Buildings Expansion Timeline



Energy efficient appliances

Appliance standards are a cost-effective strategy to protect consumers and businesses and strengthen our clean energy economy. There are standards for **18 products** in state statute.

- **New in 2022:** Adopted and updated standards for EVSE, air purifiers, commercial ovens, and more
 - Chapter 19, Laws of 2022 (BH 1619) standards expected to save at least \$344 million (2020\$) in net present value savings.
- First-in-nation water heater communications standard (CTA-2045) makes every water heater sold in the state a flexible storage opportunity (effective Jan. 1, 2023)

EO 20-01 State agency zero energy projects

SEEP updates the ZE project list quarterly.

- **Completed:**
 - Department of Ecology Eastern Regional Office Annex facility
- **In progress:**
 - 16 projects at 7 agencies (DCYF, DES, DOH, LNI, DSHS, ESD, SOS)
 - Of these: 9 are on track for ZE, 6 are on track for ZE-C, and 1 is not likely to meet ZE or ZE-C standards
 - Some projects still in early predesign or design stages

State supported programs

- Clean Energy Fund Building Electrification Program \$10 million
- Clean Buildings Incentive \$75 million Tier 1, \$150 million Tier 2
- Weatherization \$15 million
- Community Energy Efficiency Program \$5 million
- Energy Retrofits for Public Buildings
 - Energy Efficiency Grants \$4 million
 - Solar Grants \$1 million
 - State Project Improvement Grants \$4.5 million

Federal funding

- **Inflation Reduction Act – \$160 million**
 - Whole home energy performance rebate (“HOMES”)
 - Rebates for modeled or measured energy efficient improvements in low and moderate income homes
 - Rebates for high efficiency electric equipment (“HEERP”)
 - Point of sale rebates for low and moderate income households
 - Tax credits for high efficiency electric equipment
 - Greenhouse gas reduction fund
 - Climate Pollution Reduction Grants
- **IIJA**
 - Technical Assistance for Resilient Codes Implementation (competitive)
 - Low-income weatherization funding (formula)

Policy opportunities

- **Building standards for existing construction – less than 20,000 square feet**
 - Rental and affordable housing
 - Small businesses
- **Energy codes**
 - Authority for local jurisdictions to adopt residential reach code
 - Support for local reach code resources
- **High efficiency electric equipment**
 - Access to cooling
 - Air quality during wildfire and extreme weather events
- **Filling gaps**
 - Technical assistance for C-PACER
 - Training tomorrow's clean buildings workforce