

Building Sector Decarbonization in WA

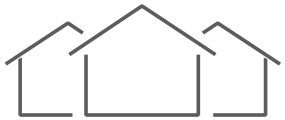
EMILY SALZBERG

MAY 31, 2022

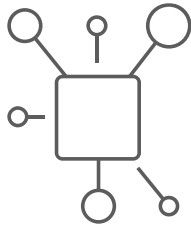


Washington State
Department of
Commerce

We strengthen communities



**HOUSING
HOMELESSNESS**



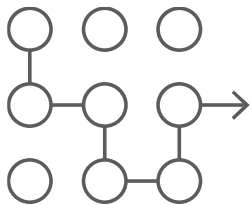
INFRASTRUCTURE



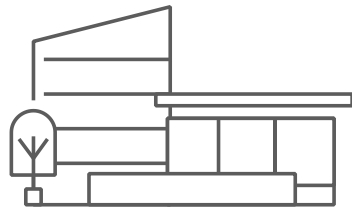
**BUSINESS
ASSISTANCE**



ENERGY



PLANNING



COMMUNITY FACILITIES



**CRIME VICTIMS &
PUBLIC SAFETY**



**COMMUNITY
SERVICES**

2021 WA State Energy Strategy

- Align strategy with clean electricity laws
 - Energy Independence Act (I-937, 2006)
 - Clean Energy Transformation Act (SB 5611, 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 emissions limits (HB 2311, 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](#)

Decarbonizing the building sector

84%
electric by 2050




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

Previous legislative priorities:

- Energy codes
- **Building performance standards**
- Targeted electrification
- Clean heat planning
- Programs and incentives
- EQUITY as foundational

Energy code context – WA state

- IECC with amendments
- 70% by 2031 over 2006 baseline RCW [19.27A.160](#)
- About 45% of the way there for residential
- Further to go for non-residential
- Local authority, res vs non res
- Recent legislative actions



WA State Energy Code

2021 non-res updates

- Electric heat pumps and HPWH for most space and water heating, some exemptions
- Solar readiness for commercial
- Other efficiency improvements spanning from dehumidification efficiency of indoor growing facilities to building air leakage
- Effective July 2023

2021 residential development

- Proposal development underway
- Effective July 2023

Clean buildings – Tier 1

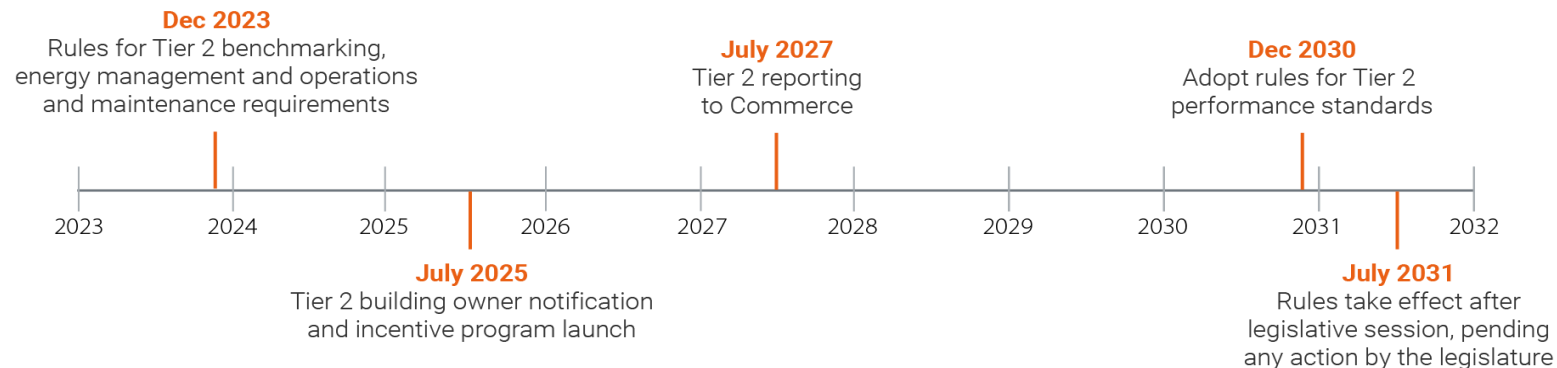
- Performance standards for existing large buildings over 50k sf
 - Energy management
 - Operations and maintenance
 - Benchmarking
 - Targets
- Incentive program
- Mandatory compliance



Clean buildings – Tier 2

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

Clean Buildings Expansion Timeline



Energy Efficient Appliances

Appliance standards represent a cost-effective strategy to protect consumers and businesses and strengthen Washington's clean energy economy.

- New in 2022: Adopted and updated standards for EVSE, air purifiers, commercial ovens, and more
 - HB 1619 standards expected to save Washington over \$344 million (2020\$) in net present value savings.
- Water heater communications standard (CTA-2045) temporarily suspended for supply chain issues
- Currently standards for 18 products in state statute

State supported incentives

- [Clean Energy Fund](#), Building Electrification Program
- [Clean Buildings Incentive](#)
- [Weatherization](#)
- [Community Energy Efficiency Program](#)
- [Energy Retrofits for Public Buildings](#)
 - [Energy Efficiency Grants](#)
 - [Solar Grants](#)
 - [State Project Improvement Grants](#)

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