We strengthen communities
Specific Directives in 2019 Legislation

• 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.
Cross-Sector Considerations

• Maintaining reasonable and fair prices and sufficient supply of energy

• Promoting a competitive clean energy economy and workforce development

• Understanding and addressing the needs of low-income and vulnerable populations

• Reaching and responding to both urban and rural communities
27-Member Advisory Committee

- **Legislators**
  - Sen. Reuven Carlyle
  - Sen. Tim Sheldon
  - Rep. Alex Ybarra
  - Rep. Alex Ramel

- **Government**
  - UTC
  - EFSEC
  - NW Power Council
  - Cities
  - Counties

- **Energy Providers**
  - Private utilities
  - Municipal utilities
  - Public utility districts
  - Natural gas distributors
  - Natural gas pipelines
  - Rural electric co-ops
  - Petroleum suppliers
  - Independent power
  - Clean energy industry

- **Energy Consumers**
  - Industrial
  - Commercial
  - Agricultural

- **Stakeholders**
  - Indian tribes
  - Labor
  - Civic organization
  - Vulnerable populations
  - Environment (2)
Energy Strategy Approach
State Energy Strategy Development

- Meta-Analysis
  - National and Washington State-specific context
  - AC input; external interviews; policy research and analysis

- Technical Advisory Process

- State Energy Strategy

- Energy Modeling
  - Results of six scenarios give directional input

- Economic Modeling
  - Economic impact of policies/actions
Transforming Washington’s Energy System

- Washington State’s Priorities
  - Equity, affordability, reliability, competitiveness
- Building on a foundation of past studies and efforts in other states
- Transformational rather than incremental change
- Aggressive action required across all energy sectors

Washington State Emission Targets:
- 2020: 1990 levels
- 2030: 45% below 1990
- 2040: 70% below 1990
- 2050: 95% below 1990
- 2050: Net zero
Historical and Projected GHG Emissions

Meeting State Emissions Reduction Limits

Key Strategies
Implications for Washington State

To meet the state’s 2030 GHG Targets
• Deep energy efficiency to reduce energy use
• Clean electricity grid by 2030
• Electrifying as many energy end uses as practical
• Accelerating clean fuels industry critical
• Regional approach required
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.
Overarching Requirements

• Planning, data analysis and outreach
• Research, development, early deployment of clean technologies
• Investment to ensure equitable and inclusive transition
• Transition the fossil natural gas industry
• Develop clean fuels industry
• Comprehensive pricing mechanisms
Ensure Equitable Transition for Communities

- Apply explicit equity principles
- Ensure impacted communities design solutions
- Invest in equitable and inclusive transition
- Support workers in transition
- Universal broadband access as foundation for transition

Source: Washington State Department of Commerce
100% Clean Electricity, Smart Grid Power Transition

- Enhance reliability and resource adequacy of the electricity grid
- Accelerate new renewables and transmission expansion
- Deploy flexible solutions and smart grid technology to manage load
- Develop market mechanisms for clean power
- Ensure effective implementation of the Clean Energy Transformation Act
Clean Electricity

97% growth in electricity end use demand over 2020 levels by 2050

43% of electricity imported by 2050

36% from WY & MT wind

100% renewable/non-emitting electricity by 2045

19% of total electricity demand from electric boilers and electrolysis by 2050
Clean Fuels Required to Reach Decarbonization

- All liquid fuels fully decarbonized by 2050
- Decreasing fuel consumption over time with electrification and efficiency
- Liquid fuels (gasoline, diesel, jet fuel, others) significantly decarbonized by 2030 with synthetic and biofuels
  - Significant growth in clean fuels industries with few current commercial operations; major challenge
- Emerging opportunities for hydrogen solutions
Decarbonizing the Industrial Sector

• Washington’s significant demand for clean fuel requires an investment in clean fuels industry

• Large quantities of synthetic fuels required in 2030 to reach the target of 45% below 1990 emissions by 2045
  ✓ New industrial flexible loads major emerging industry for producing hydrogen through electrolysis

• Significant fraction of carbon stream used to produce synthetic fuels comes from industrial carbon capture
Partners

- Businesses
- Educational Institutions
- Local Governments
- Frontline Organizations
- State Agencies
- Tribes
- Utilities
Resources

• **Website:** commerce.wa.gov/energystrategy

• **Subject matter leads**
  • [Michael Breish](#) – transportation
  • [Liz Reichart](#) – energy efficiency and the built environment
  • [Emily Salzberg](#) – buildings
  • [Sarah Vorpahl](#) – equity, electricity
  • [Glenn Blackmon](#) – modeling, industry, natural gas
  • [Austin Scharff](#) – workforce
  • [Peter Moulton](#) – fuels
Thank you!

Michael Furze
ASSISTANT DIRECTOR
Michael.Fuze@commerce.wa.gov
360.725.2950

Glenn Blackmon, Ph.D.
MANAGER, ENERGY POLICY OFFICE
Glenn.Blackmon@commerce.wa.gov
360.339.5619

Steven Hershkowitz
RULES AND LEGISLATIVE COORDINATOR
Steven.Hershkowitz@commerce.wa.gov

Jasmine Vasavada
LEGISLATIVE AND POLICY DIRECTOR
Jasmine.Vasavada
360.480.6622