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February 2, 2021

### **MEMORANDUM**

**TO: Council Members**

**FROM: Elizabeth Osborne**

**SUBJECT: Washington State Energy Strategy presentation**

### **BACKGROUND:**

**Presenter:** Glenn Blackmon, Manager of the Energy Policy Office, Washington Department of Commerce

**Summary:** Washington is committed to reducing greenhouse gas emissions statewide. The 2021 State Energy Strategy process brought together leadership from many industries and stakeholders from across the political spectrum to consider pathways for achieving emissions reductions. Glenn Blackmon will provide an overview of the strategy, which maps out the most important policies and actions needed to reduce emissions from the transportation, building, industrial, and electricity sectors.

**More Info:** Washington State Energy Strategy, appendices, and additional resources: <https://www.commerce.wa.gov/growing-the-economy/energy/2021-state-energy-strategy/>

# 2021 Washington State Energy Strategy

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GLENN BLACKMON, PH.D, MANAGER, ENERGY POLICY OFFICE

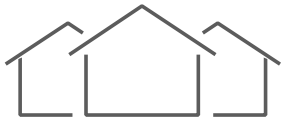
FEBRUARY 10, 2021



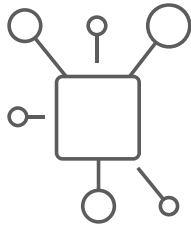
Washington State  
Department of  
**Commerce**

# We strengthen communities

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**HOUSING  
HOMELESSNESS**



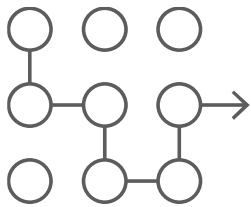
**INFRASTRUCTURE**



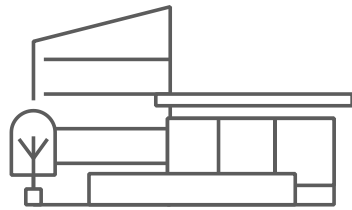
**BUSINESS  
ASSISTANCE**



**ENERGY**



**PLANNING**



**COMMUNITY FACILITIES**



**CRIME VICTIMS &  
PUBLIC SAFETY**



**COMMUNITY  
SERVICES**

# Objectives for the strategy

- 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**



# Specific Directives in 2019 Legislation

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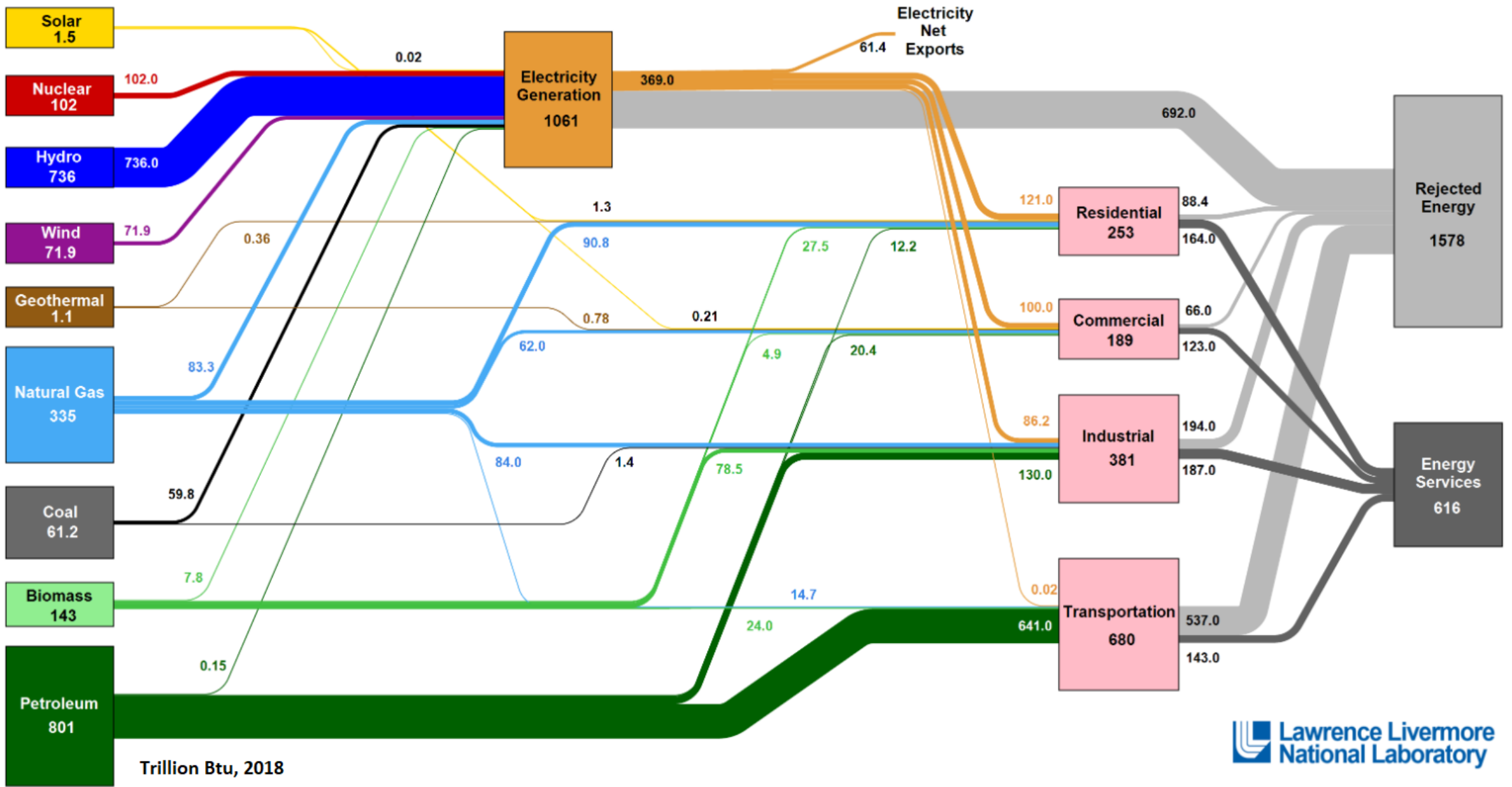
- Align strategy with clean electricity laws
  - Energy Independence Act (I-937, 2006)
  - Clean Energy Transformation Act (SB 5611, 2019)
    - After 2025, no coal in resource mix
    - By 2030, greenhouse neutral electricity supply
    - By 2045, 100% renewable or non-emitting sources
- Align strategy 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.

# 27-Member Advisory Committee

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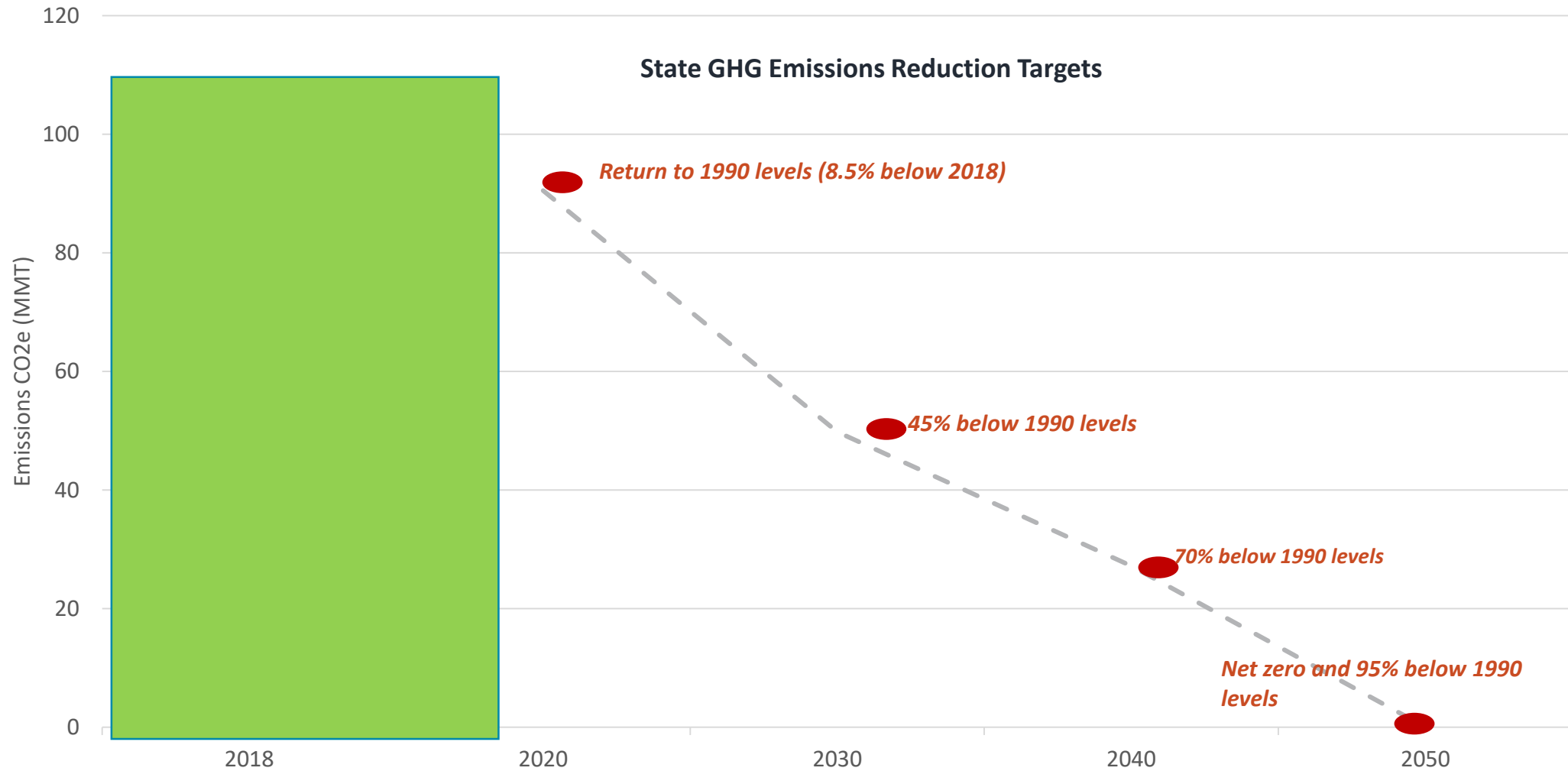
- **Legislators**
  - Sen. Reuven Carlyle
  - Sen. Tim Sheldon
  - Rep. Alex Ybarra
  - Rep. Alex Ramel
- **Government**
  - UTC
  - EFSEC
  - NW Power Council
  - Cities
  - Counties
- **Energy Providers**
  - Private utilities
  - Municipal utilities
  - Public utility districts
  - Natural gas distributors
  - 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





# Meeting State Emissions Reduction Limits



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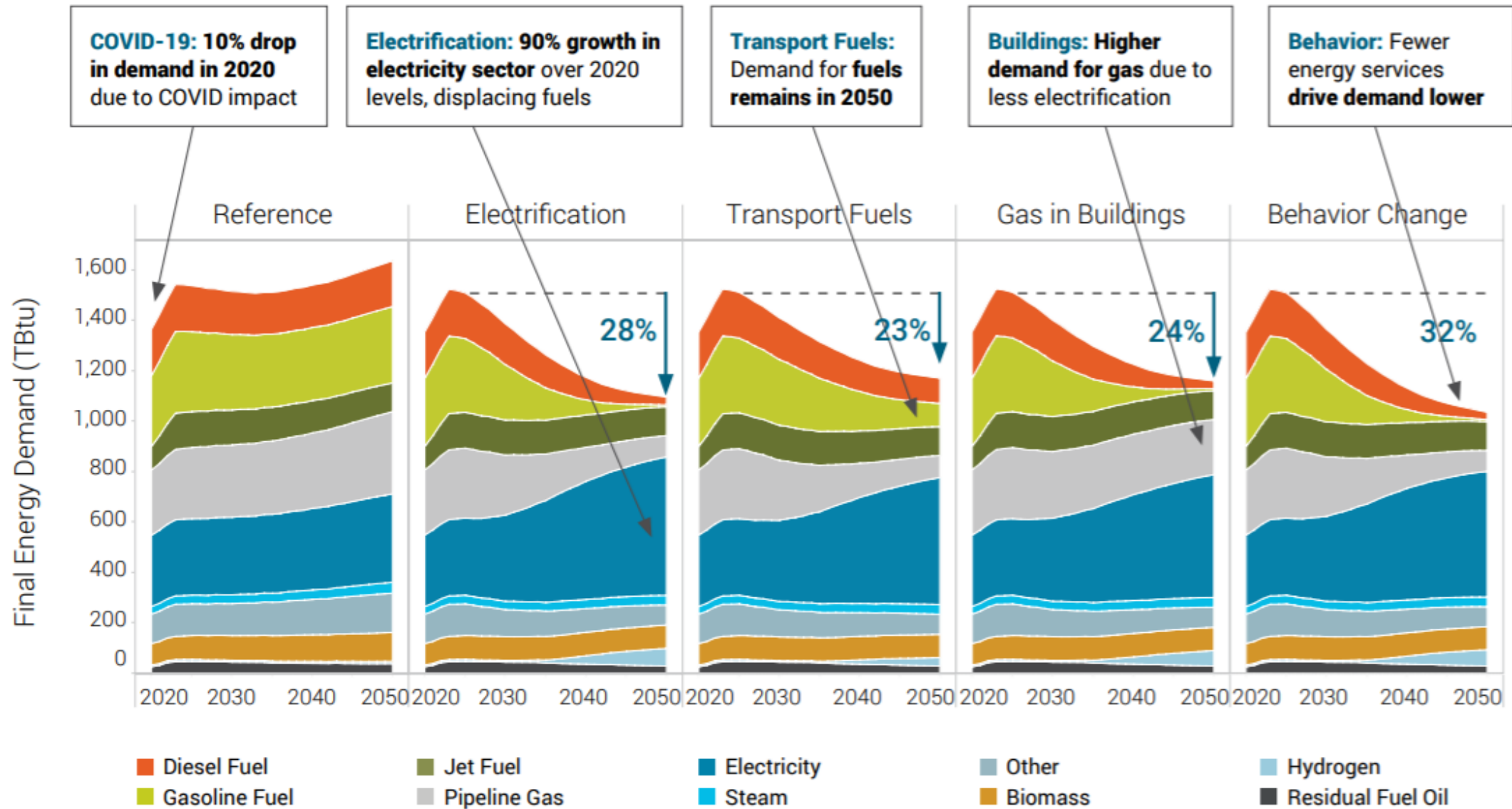
# Washington State Energy Strategy Decarbonization Modeling Final Report

December 11<sup>th</sup>, 2020



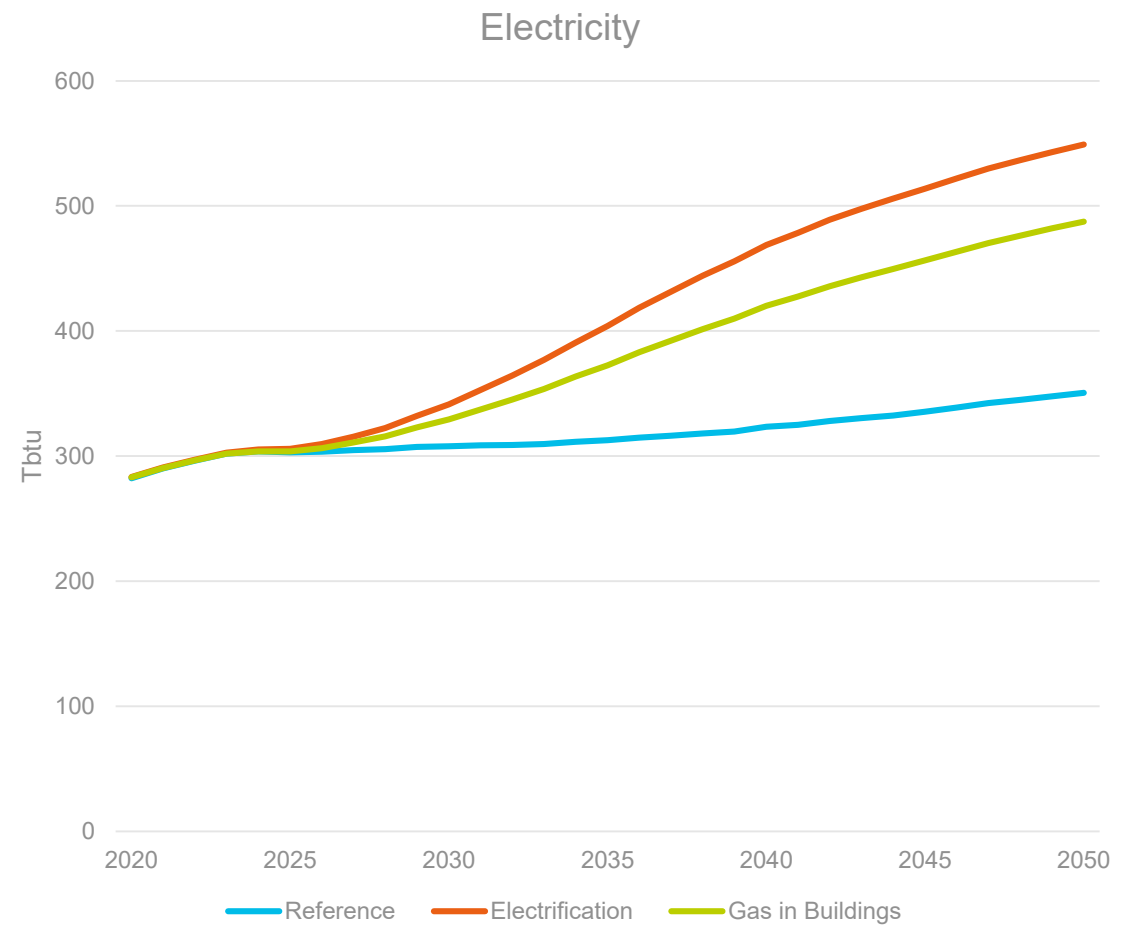
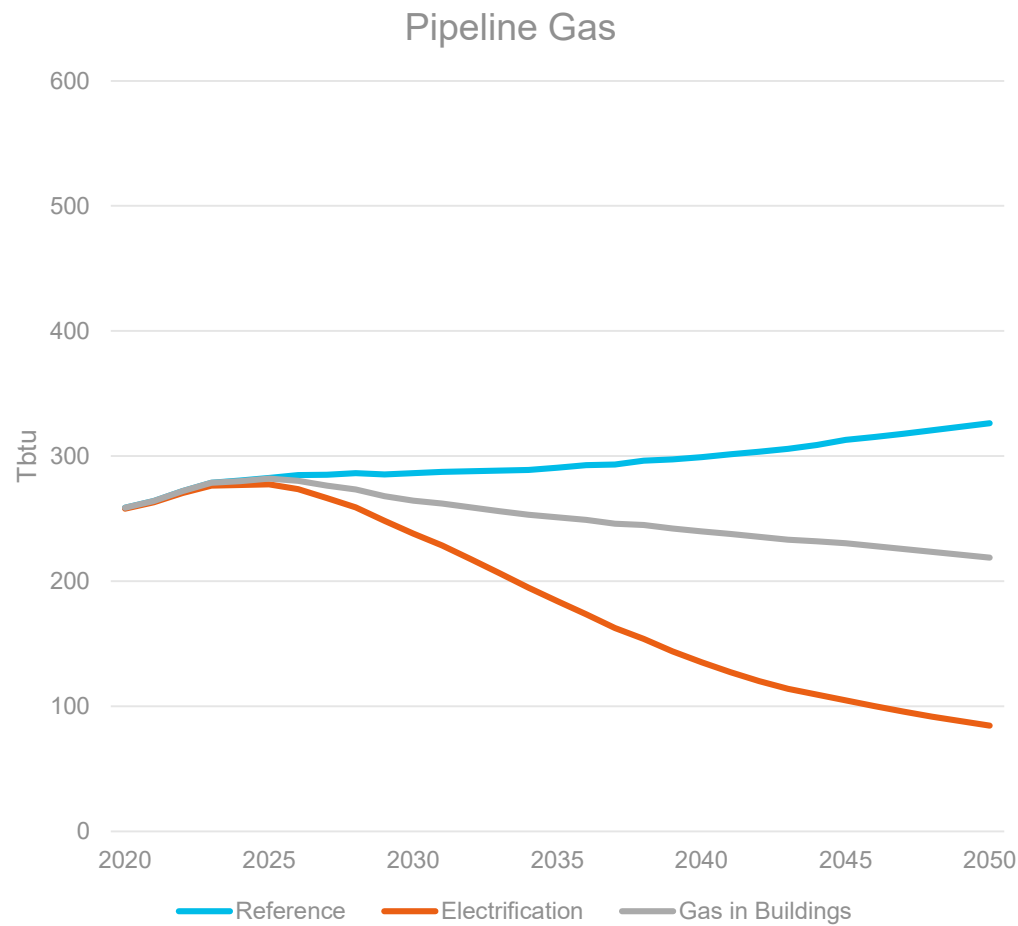
EVOLVED  
ENERGY  
RESEARCH

**FIGURE 10. FINAL ENERGY DEMAND 2020-2050**

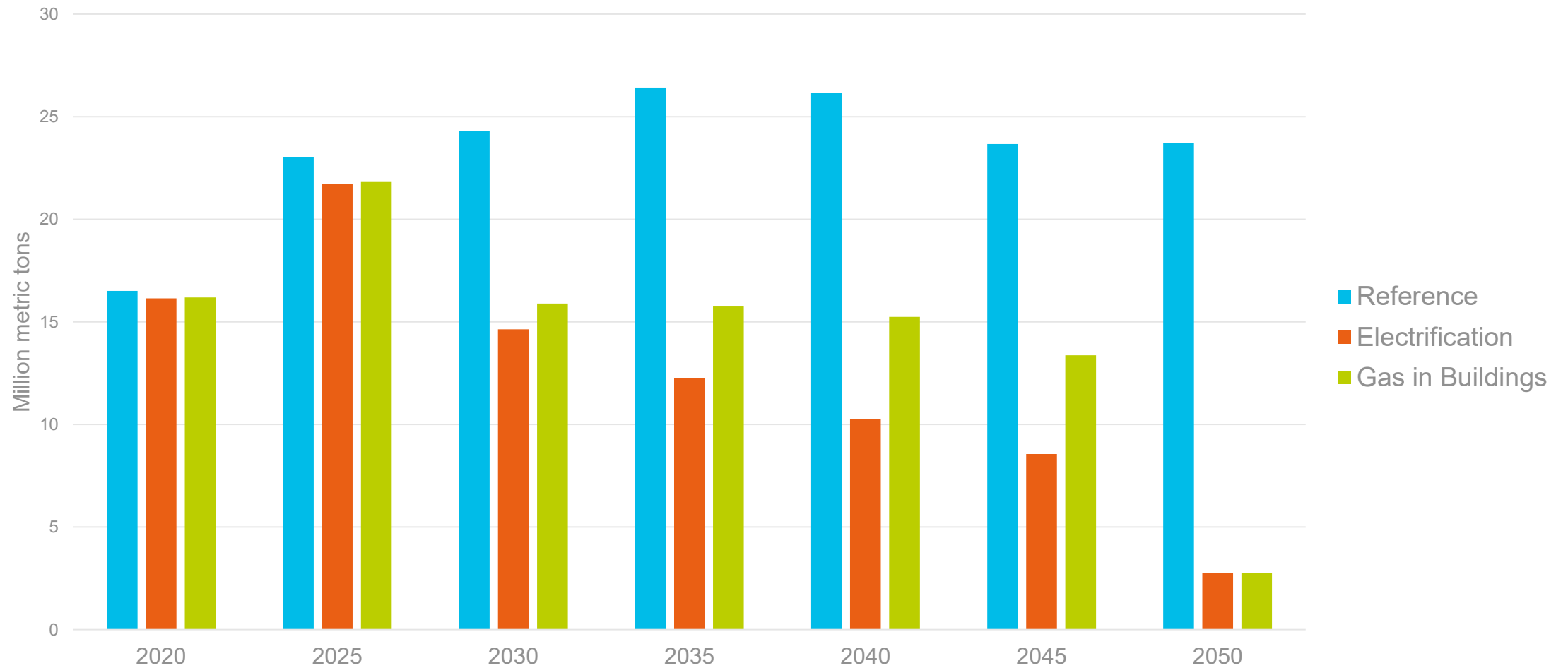


Source: Appendix A – Deep Decarbonization Pathways Modeling Report, December 11, 2020 (p. 28).

# Final Energy Demand in Buildings, by Scenario

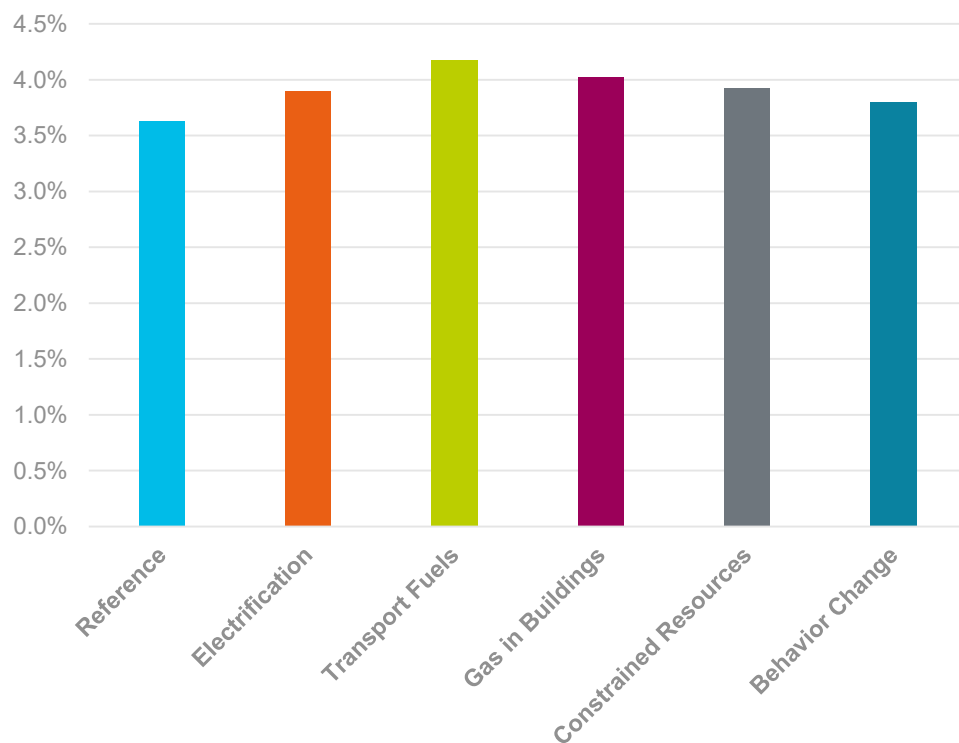


# Emissions from Fossil Natural Gas - Buildings Sector

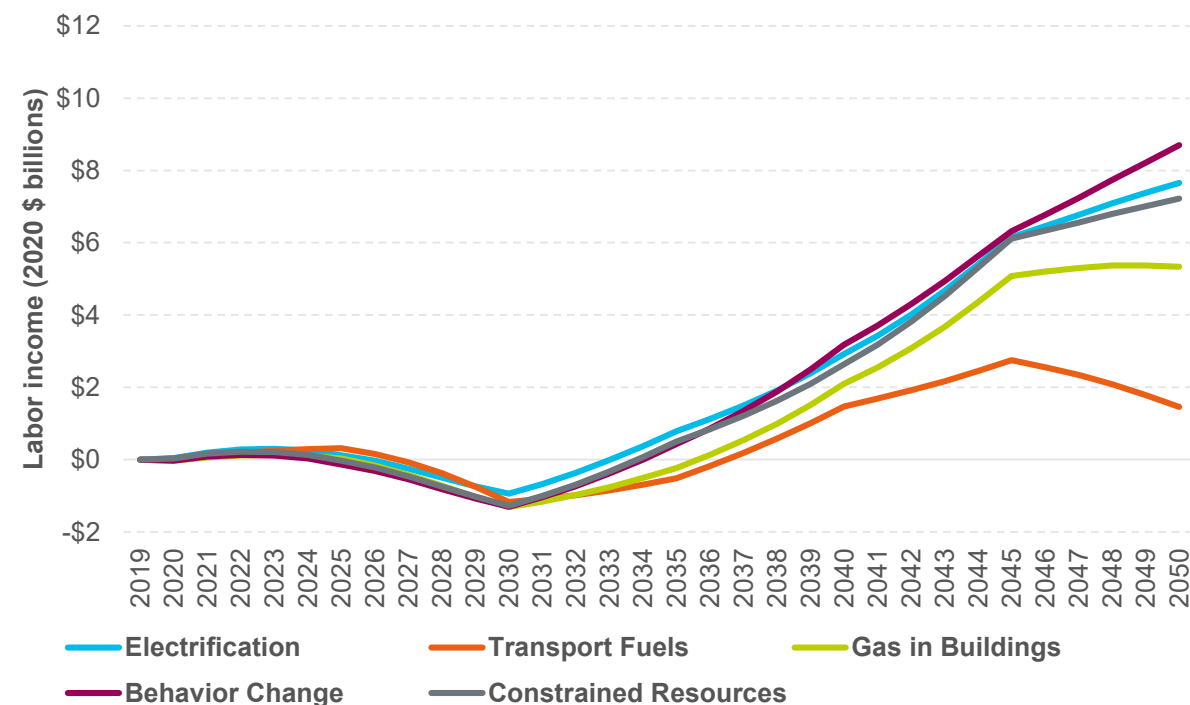


# Cost Impacts and Economic Effects

Average Annual Energy Expenditure (%GDP/yr)



Change in Labor Income, Compared to Reference Case

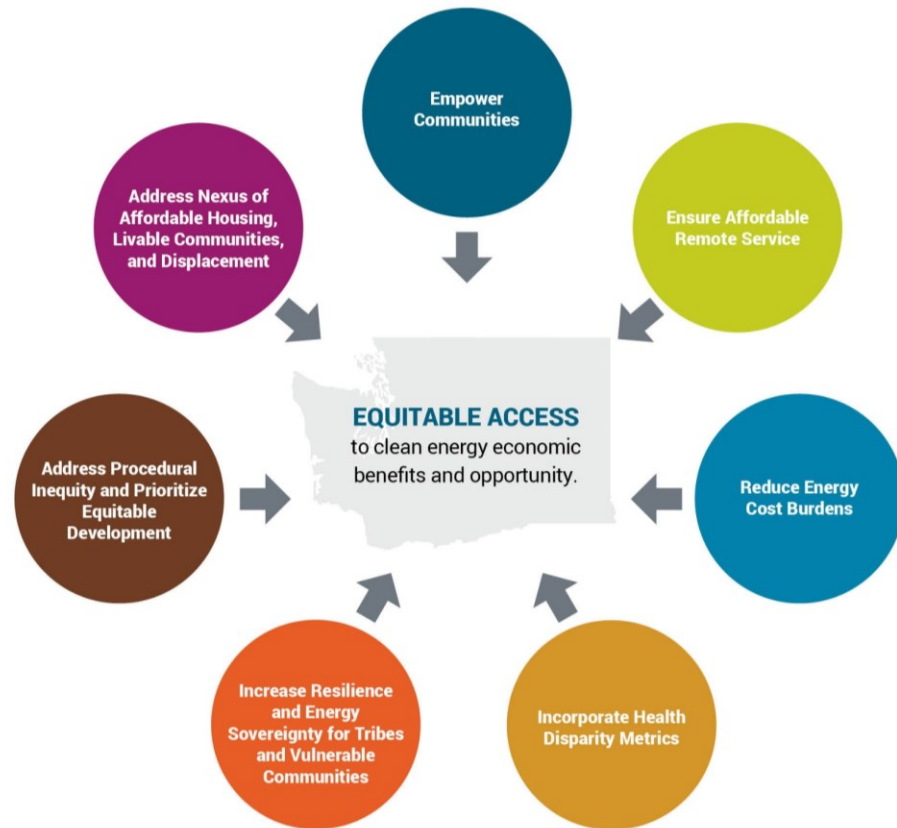






# Key Strategies

# Ensure an 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

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

# Efficient, Equitable Mobility & Clean Fuels

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- Establish specific targets and accountability
- Reduce the need for travel
- Improve fuel economy for all vehicles, planes, ships
- Shift to clean fuels and electrify where possible
- Enact a low-carbon fuel standard

# Clean Electricity Fueling High-Efficiency Buildings

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- Shift from fossil fuels to electricity to power commercial and residential buildings
- Accelerate the path to zero-energy buildings
- Weatherize and retrofit existing building stock
- Reform existing programs, codes, and standards



# Industry and Workforce Actions

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- Develop and implement clean energy industrial policy
- Accelerate research and development
- Develop a clean energy workforce
- Produce clean fuels and hydrogen
- Improve data and analytical capabilities
- Coordinate with other states and countries

# 2021 Strategy – Overarching Themes

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- 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 hydrogen and clean fuels industry
- Comprehensive pricing mechanisms
- Universal broadband access



# Thank you!



Washington State  
Department of  
**Commerce**

[www.commerce.wa.gov](http://www.commerce.wa.gov)



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