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.

2021 Washington State Energy Strategy

GLENN BLACKMON, PH.D, MANAGER, ENERGY POLICY OFFICE
FEBRUARY 10, 2021
We strengthen communities

- 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

• 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

- **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

State GHG Emissions Reduction Targets

- Return to 1990 levels (8.5% below 2018)
- 45% below 1990 levels
- 70% below 1990 levels
- Net zero and 95% below 1990 levels
FIGURE 10. FINAL ENERGY DEMAND 2020-2050

- **COVID-19**: 10% drop in demand in 2020 due to COVID impact
- **Electrification**: 90% growth in electricity sector over 2020 levels, displacing fuels
- **Transport Fuels**: Demand for fuels remains in 2050
- **Buildings**: Higher demand for gas due to less electrification
- **Behavior**: Fewer energy services drive demand lower

Final Energy Demand in Buildings, by Scenario

Pipeline Gas

Electricity

Tbtu

Year

Reference
Electrification
Gas in Buildings

Tbtu

Year

Reference
Electrification
Gas in Buildings
Emissions from Fossil Natural Gas - Buildings Sector

- Reference
- Electrification
- Gas in Buildings
Cost Impacts and Economic Effects

Average Annual Energy Expenditure (%GDP/yr)

Change in Labor Income, Compared to Reference Case

- Electrification
- Transport Fuels
- Gas in Buildings
- Constrained Resources
- Behavior Change
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

- 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

- 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

• 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

- 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

• 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!

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