

# Clean Energy Transformation Act (CETA)

Interim Assessment (RCW 19.405.080)

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Glenn Blackmon and Austin Scharff

ENERGY POLICY OFFICE

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Washington State  
Department of  
**Commerce**

# We strengthen communities



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ECONOMIC DEVELOPMENT

# RCW 19.405.080 – Report to legislature

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By January 1, 2024, and at least every four years thereafter and in compliance with RCW [43.01.036](#), the department [of Commerce] must submit a report to the legislature. The report must include the following:

- (1) A review of the standards described in RCW [19.405.030](#) through [19.405.050](#) focused on technologies, forecasts, and existing transmission, and an evaluation of safety, environmental and public safety protection, affordability, and system reliability.
- (2)(a) An evaluation, produced in consultation with the commission, electric utilities, transmission operators in Washington, the reliability coordinator for electric utilities, any regional planning organization serving electric utilities, public interest and environmental organizations, and the regional entity for the western interconnection identifying the potential benefits, impacts, and risks on system reliability associated with achieving the standards described in RCW [19.405.040](#) and [19.405.050](#). The evaluation must assess whether electric utilities have sufficient electric generation resources to meet forecasted retail electric load in addition to adequate transmission capability to implement RCW [19.405.030](#) through [19.405.050](#) without: (i) Violating mandatory and enforceable reliability standards of the North American electric reliability corporation; (ii) violating prudent utility practice for assuring resource adequacy; or (iii) compromising the power quality or integrity of the electricity system. Subject to funding appropriated for this purpose, the department must consult with a national laboratory with expertise in grid reliability, security, and resilience.
- (b) The evaluation should assess the anticipated financial costs and benefits of investments necessary to correct those deficiencies at the lowest reasonable costs as identified by electric utilities, transmission operators in Washington, the regional entity for the western interconnection, or any regional planning organization serving electric utilities. The assessment of these investments in the report is not deemed to be approval of such investments for rate recovery by any authorizing entity.
- (3) An evaluation identifying the nature of any anticipated financial costs and benefits to electric utilities, including customer rate impacts and benefits including, but not limited to:
  - (a) Greenhouse gas emissions of electric utilities;
  - (b) The allocation of risk between customers and electric utilities;
  - (c) The allocation of financial costs among electric utilities in the state and whether retail electric customers are equitably bearing the financial costs of implementing RCW [19.405.030](#) through [19.405.050](#);
  - (d) The timing of cost recovery for electricity generated by nonemitting electric generation or renewable resources;
  - (e) The resource procurement process of electric utilities; and
  - (f) The barriers to, and benefits of, implementing RCW [19.405.040](#) and [19.405.050](#).
- (4) An evaluation of new or emerging technologies that could be considered to be a renewable resource.
- (5) An assessment of the impacts of RCW [19.405.030](#) through [19.405.050](#) on middle-income families, small businesses, and manufacturers in Washington.

# **The Clean Energy Transformation Act (CETA)**

Washington's 100% clean electricity law (2019)



# Clean Energy Transformation Act (CETA)

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- Clean
- Affordable
- Reliable
- Equitable



# CETA's three clean energy standards

Applies to all electric utilities serving retail customers in the state

- 2025: Eliminate coal from retail portfolios
- 2030: Greenhouse gas neutral standard
  - Use electricity from renewable or non-emitting sources in an amount equal to 80% of Washington retail load
  - Alternative compliance options for up to 20%
- 2045: 100% renewable or non-emitting retail electricity supply



# Enhanced emphasis on resource adequacy

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- Utilities must adopt an explicit resource adequacy standard and apply it in resource planning
- Allows temporary suspension to protect reliability
- Regular assessment of reliability and resource adequacy by Commerce

# Planning and compliance rules

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- **Clean energy implementation plans**
  - Utilities prepare at start of each 4-year period, starting in 2022
  - Specific targets and actions
  - Indicators to evaluate equity and distributional impacts
  - Public process for development
- **Compliance or performance reports**
  - Utilities submit at end of each 4-year period, starting in 2026
  - Annual reports on fuel mix and GHG content



# An equitable and affordable transformation

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- Legislative finding that “public interest” includes equitable distribution of benefits
- Among other things, utilities must
  - Consider non-energy impacts in resource decisions
  - Assess impacts on vulnerable populations and highly impacted communities (as defined in statute)
- Standards incorporate equitable distribution goals

# CETA Interim Assessment

RCW 19.405.080



# CETA interim assessment

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- RCW 19.405.080 requires Commerce to review and evaluate the law every four years, starting Jan. 1, 2024.

# Interim assessment elements from RCW 19.405.080

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1. Review of the 2025, 2030, and 2045 clean electricity standards
2. Evaluation of system reliability impacts for 2030 and 2045
3. Financial costs and benefits to utilities and customers
4. Review of new technologies that could be considered renewable
5. Assessment of impacts on middle-income families, small businesses, manufacturers

# Interim assessment context

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- The 2024 assessment occurs before any of CETA's three clean electricity standards take effect.
- It may be difficult at this phase of CETA's implementation to discern any specific and substantial impact of CETA itself.

# Post-CETA developments

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- Washington enacted the Climate Commitment Act, an economy-wide regulation of greenhouse gas emissions that covers electricity generated or imported to the state.
- Federal government enacted historic tax and incentive provisions encouraging the development of renewable and non-emitting energy resources to replace fossil fuels.
- Impacts of CETA cannot be separated from impacts of CCA and federal actions.

# Stakeholder comment process



# Request for information and comment

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- Identify published studies, reports, and other analyses that should be considered in conducting the analysis required by RCW 19.405.080.
- Provide written comment on the CETA assessment topics.



# Written comments received

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- Renewable Hydrogen Alliance
- Snohomish Public Utility District
- Avista
- Puget Sound Energy (PSE)
- Public Generating Pool (PGP)
- Joint Utilities (NW Requirements Utilities, PGP, PSE)
- Bonneville Power Administration
- Renewable Northwest

<https://deptofcommerce.app.box.com/v/CETA-interim-2023>

# Stakeholder workshop Oct. 9

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- Approximately 70 participants
- Reviewed written comments
- No new issues identified

# **1. Interim assessment of the 2025, 2030, and 2045 clean electricity standards**



# 2025 no coal standard

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- **RCW 19.405.030: “Each electric utility must eliminate coal-fired resources from its allocation of electricity”**
  - Accelerated depreciation and rate recovery for any retired generation or associated transmission of Investor Owned Utilities (IOUs)
- **Commerce and UTC adopted rules to clarify treatment of short-term market purchases of unspecified power, and to provide an attestation mechanism for compliance**
- **2021 coal shares of utility power sources:**
  - Avista 16% (Colstrip)
  - PacifiCorp 41% (Colstrip, Jim Bridger)
  - Puget Sound Energy 24% (Colstrip, TransAlta Centralia)
- **Unspecified source purchases are also a potential coal source**

# 2025 no coal standard - comments

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- Concern that the 2025 No Coal Standard is incompatible with wholesale power markets and system purchases
- Utility efforts to develop a coal-free contract product have been unsuccessful
- CETA No Coal Standard prevents utilities from purchasing unspecified source electricity for terms of greater than one month
- Stakeholder suggestions:
  - Extend the existing no-coal standard exemption for short-term contracts to all contracts where the source of the electricity is unknown
  - Exempt retail utilities from having to provide documentation that they did not use coal-fired resources through system power purchases
  - Clarify that existing hedging practices are permissible

# 2025 no coal standard - assessment

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- **CETA constrains design rules for organized markets**
  - Organized markets trade in short-term intervals, such as hour ahead and day ahead
  - CETA does not permit any purchases specified as coal – even within organized markets
  - CETA restriction on unspecified purchases of more than one month term does not affect organized market design
- **CETA does not interfere with hedging practices using standardized one-month forward contracts to limit price risk**
  - CETA allows utilities to make one-month long contracts for future purchases of unspecified power
  - Commerce rule prohibits serial one-month contracts only if their purpose is to evade the no-coal standard
  - Longer duration contracts must identify the power source as non-coal
  - Information on actual multi-month purchases was not provided
- **No agency authority to allow either multi-month unspecified purchases or spot market purchases of coal**

# 2030 GHG neutral standard

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- **RCW 19.405.040: Utilities must use renewable or non-emitting electricity in an amount equal to 100% of Washington retail load**
  - Fossil and unspecified power may be used in an amount up to 20% of load
  - Fossil and unspecified power must be matched with alternative compliance instruments
- **Commerce rule clarifies “use” standard for 80% portion (WAC 194-40-410)**
  - Requires forward-looking hourly analysis to show that at least 80% of load can be met with renewable or non-emitting supplies. Supplies must be available for delivery to the utility’s Washington customers
- **Statewide aggregate fuel mix in 2021 exceeds 20% fossil and unspecified:**
  - Coal – 9%
  - Natural gas – 13%
  - Unspecified power – 13%

<https://www.commerce.wa.gov/wp-content/uploads/2023/08/2022-FMD-Report.pdf>

# 2030 GHG neutral standard - comments

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- Concern that Dept. of Ecology has not identified emissions reduction project types that could qualify for alternative compliance credit
- Need for more robust bulk power transmission capacity to deliver renewable electricity to loads
- Need to monitor adequacy of resource supplies and secure implementation of the region's new resource adequacy program



# 2030 GHG neutral standard - assessment

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- **Energy transformation projects (ETPs)**
  - Ecology adopted ETP rules in 2021 (Chapter 173-444 WAC)
  - Ecology has not identified specific categories or projects
  - Utility commenters did not identify specific categories or projects
  - ETPs may not be a financially viable compliance approach
    - ETPs require expensive protocol development and verification
    - ETPs must compete on cost against unbundled renewable energy certificates
    - With CCA and the Clean Fuels Standard, the range of eligible emissions sources is greatly restricted
- **Widespread consensus on the pressing need for:**
  - Expanded transmission capacity
  - Faster siting and interconnection of renewable generating projects
  - Timely implementation of the binding phase of the Western Resource Adequacy Program
  - Active participation and advocacy by Washington agencies (UTC, Commerce, Ecology) and stakeholders in western electricity market development efforts

# 2045 100% clean electricity standard

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- **RCW 19.405.050: Renewable and non-emitting sources must supply 100% of all sales of electricity to Washington retail electric customers by 2045**

# 2045 100% clean electricity standard - comments

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- Need to clarify treatment of market transactions – short-term power purchases in the wholesale electricity market
- Utilities expect to rely on new and emerging technologies to maintain adequate capacity
- Aware of no study demonstrating feasibility of 2045 standard

# 2045 100% clean electricity standard - assessment

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- **Wholesale power market design**
  - Market rules are being developed with state 100% clean electricity requirements in mind
  - Commerce's 2045 rule provides a vision for this design: A market that trades exclusively in clean electricity
- **New and emerging technologies**
  - Existing technologies are available: demand response, diverse wind/solar with transmission, combustion turbines fired with non-fossil fuels
  - Innovations to support Washington's long-term climate and clean energy requirements: battery chemistries, offshore wind, advanced geothermal, heat pumps, grid management, many others
- **Feasibility: With existing technologies, 100% clean is feasible**
  - 2021 State Energy Strategy
  - 2023 Net Zero Northwest
  - Other economy-wide decarbonization studies

## 2. Evaluation of system reliability



# Regional resource adequacy assessments

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- **Northwest Power and Conservation Council**
  - [Pacific Northwest Power Supply Adequacy Assessment for 2027](#) (Jan. 2023)
- **Western Electricity Coordinating Council**
  - [Western Assessment of Resource Adequacy](#) (Nov. 2022)
  - [Northwest Power Pool](#) (Nov. 2022)

# NW Power and Conservation Council

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- **Conclusions:**

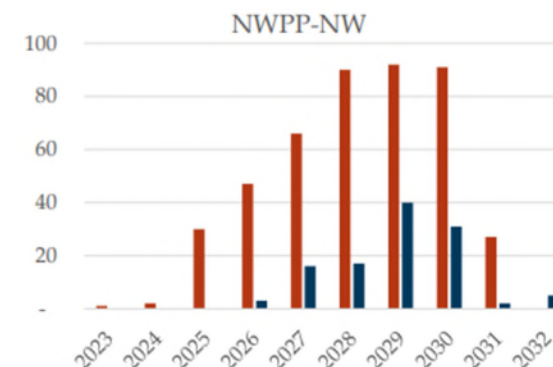
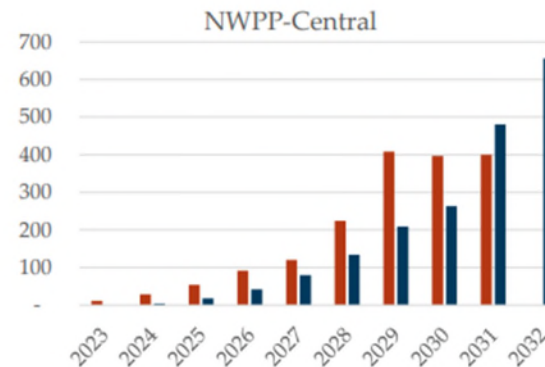
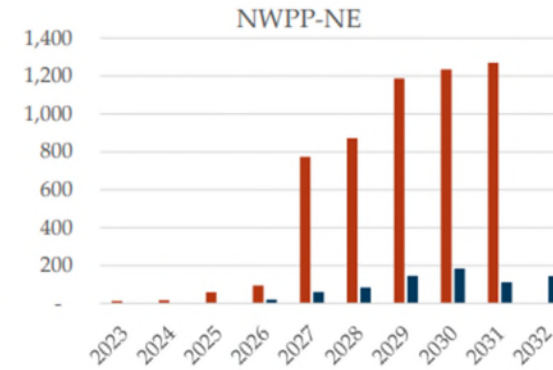
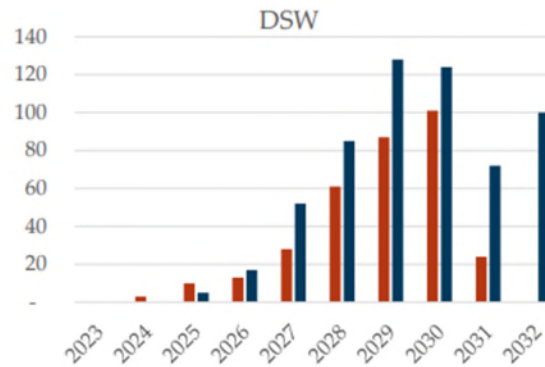
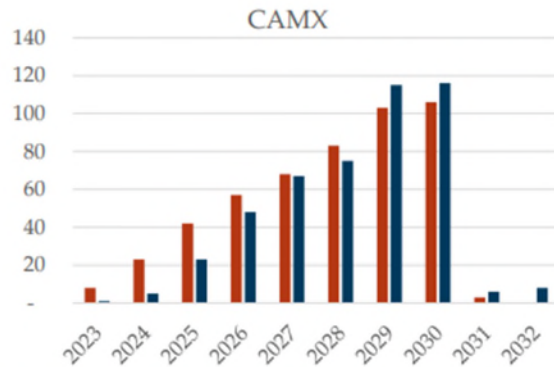
- Under expected future conditions, the reference resource strategy delivers an adequate supply with a loss of load probability (LOLP) of less than 5%.
- For the regional power supply to be adequate in 2027, the region will need to develop new resources at least as quickly as the 2021 Power Plan outlines. The 2027 regional power supply would not be adequate if the region relied solely on existing resources, existing reserve levels, and with no new energy efficiency measures.
- 2021 Power Plan resource strategy is effective at eliminating nearly all summer shortfalls, when resource needs peak in the rest of the Western grid.

# WECC: Western Assessment of Resource Adequacy

## Demand-at-Risk Hours Results

**Subregional Demand-at-Risk Hours  
2023-2032  
(with New Resources and Imports)**

■ 2021 Assessment ■ 2022 Assessment



NWPP-NW includes WA



# WECC: Western Assessment of Resource Adequacy

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- While there has been some improvement in near-term (2–3 years) resource adequacy risk, it has not been eliminated.
- Consider actions such as retirement delays and expedited building of resources.
- For the overall West, likelihood and magnitude of resource adequacy risk have increased compared to previous analyses.
- Long-term, the risk increases over the next 10 years.
- Both demand variability and supply variability drive resource adequacy risk, and variability increases over the next decade.

# Resource adequacy - assessment

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- Existing resources are not sufficient, utilities are investing in new resources
  - Clean generating resources
  - Transmission
  - Demand-side resources: Conservation, demand response, virtual power plants
  - Enhanced grid management capabilities
- Western Resource Adequacy Program is a key element of maintaining resource adequacy
  - Concern that implementation of binding phase is delayed
- Variability is a factor on both demand and supply side.
- Analysis must use more robust metrics and longer time horizons.

# **3. Financial costs and benefits to utilities and customers**



# Financial costs and benefits to utilities and customers - assessment

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- Premature to assess impacts of 2030 and 2045 standards.
- Costs and benefits are attributable to multiple policies.
- Other drivers of resource investment choices could include:
  - Technology cost changes
  - Federal tax credits for clean electricity technologies
  - Demand changes due to business and consumer preferences for clean energy in transportation and buildings
  - Other regulatory requirements, notably Washington Climate Commitment Act
- No announced plans to use CETA's cost threshold provision.
- Legislature has addressed cost recovery for investor-owned utilities.
- Economy-wide energy models find additional spending on electricity will be offset by reduced spending on gasoline, natural gas, and other fossil fuels.

# **4. New or emerging technologies that could be considered renewable**



# Conceptual definition of renewable energy

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- **U.S. Energy Information Administration:**
  - Renewable energy is energy from sources that are naturally replenishing but flow-limited; renewable resources are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time.

Source: <https://www.eia.gov/energyexplained/renewable-sources/>

# CETA's definitions of renewable

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- "Renewable resource" means

- Water
- Wind
- Solar energy
- Geothermal energy
- Renewable natural gas
- Renewable hydrogen
- Wave, ocean, or tidal power
- Biodiesel fuel that is not derived from crops raised on land cleared from old growth or first growth forests
- Biomass energy

- "Biomass energy" includes:

- Organic by-products of pulping and the wood manufacturing process
- Animal manure
- Solid organic fuels from wood
- Forest or field residues
- Untreated wooden demolition or construction debris
- Food waste and food processing residuals
- Liquors derived from algae
- Dedicated energy crops
- Yard waste

Source: RCW 19.405.020

# New or existing technologies that could be considered renewable

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- **Comments**
  - Facilitate access to resources already defined as renewable.
- **Assessment**
  - No recommended changes to CETA list of renewable resources.



# **5. Impacts on families, small business, manufacturers**



# Impacts on families, small business, manufacturers – comments

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- PSE estimates actions in 2021 implementation plan will cost \$6/month per residential customer in 2025.
- CETA directs utilities to assess energy burden but does not identify funding source or program design for energy assistance.

# Impacts on families, small business, manufacturers – assessment

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- No identifiable specific impacts on these groups, consistent with discussion in (3) above.
- RCW 19.405.120 places energy assistance responsibility on individual utilities
  - Commerce study said utility-by-utility approach may lead to uneven results and low participation levels.
  - Many utilities are reluctant to spread costs across utilities and wish to maintain existing programs.
  - At Legislature's direction, Commerce is exploring framework for statewide approach.

# Conclusion



# Conclusion

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- CETA reflects the Legislature's vision of 100% clean electricity as the cornerstone of Washington's energy and climate laws.
- The extended deadlines – 2030 and 2045 – reflect the investment and engineering challenges of this transition.
- Since 2019, clean electricity has become even more important as consumers and businesses shift from fossil fuels in transportation, buildings, and industry.
- Utilities and policy makers have acted to make investments, develop markets and programs, strengthen resource adequacy, and reduce barriers to new facilities.

# Thank you!

Glenn Blackmon

DIRECTOR, ENERGY POLICY OFFICE

Glenn.Blackmon@commerce.wa.gov

360 556.7888

Austin Scharff

SENIOR ENERGY POLICY SPECIALIST

Austin.Scharff@commerce.wa.gov

(360) 764-9632



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Department of  
**Commerce**

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