

# Carbon Landscape

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# Objective

- What is the best approximation for anticipated **GHG emission reduction policies in Washington and Oregon** for transmission planning applications using the 2032 WECC Anchor Data Set (ADS)?
- Relative variable cost assumptions for thermal resources will significantly impact simulated transmission flows
  - Will gas plants in Oregon actually be significantly cheaper to run for export in the 10+ year time horizon than similar plants in Washington and California?

# Carbon Pricing & Clean Energy Programs

- **California**
  - Cap-and-Trade Program
    - Covers in-state generation + electricity imports
    - Program currently only extends through 2030
  - Clean electricity standard
    - 60% clean electricity by 2030
    - 100% clean electricity by 2045

# Carbon Pricing & Clean Energy Programs

- **Washington**
  - Clean Energy Transformation Act (CETA)
    - No coal by 2026
    - 100% carbon-neutral by 2030
      - At least 80% carbon-free w/ ability to mitigate for up to 20% fossil-fuel
    - 100% carbon-free by 2045
  - Climate Commitment Act (cap-and-invest program)
    - Covers in-state generation + electricity imports
    - Starts January 2023 and extends through 2045
    - Potential future linkage w/California

# Carbon Pricing & Clean Energy Programs

- **Oregon**
  - No coal by 2035
  - Clean electricity standard (IOUs, ESSs)
    - 80% emission reduction by 2030
    - 90% emission reduction by 2035
    - 100% emission reduction by 2040
- **Colorado, Nevada and New Mexico**
  - Also have aggressive clean energy and emission reduction standards, but no explicit price on carbon for electricity sector

# BPA System Sales

- **BPA**
  - By statute, BPA cannot sell from a specific generation unit to a specific utility. All sales are from BPA's system.
    - Asset Controlling Supplier (ACS) emission factor is widely used for state reporting and cap-and-trade/invest. E.g., CA, WA, and OR all use an ACS emission factor for BPA.
  - However, BPA has significant generation located in Washington but that isn't dedicated to Washington load

# Recommendation for ADS

- **California & Washington**
  - Assume the cap-and-trade/invest programs are linked by 2030 with the same price on carbon
  - Price guided by forecasted CA carbon allowance price
  - Applies to in-state generation
- **Oregon**
  - Assume similar GHG price used for California and Washington
  - Potential alternative for sensitivity analysis: lower price in Oregon