Emerging Greenhouse Gas Regulations in Washington and Oregon

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Presentation Agenda

- Washington Clean Air Rule
- Proposed Washington Carbon Tax (I-732)
- Oregon HB 4036 → SB 1547 (Passed)
- Oregon SB 1574 (Failed)
  - ODEQ Greenhouse Gas Market Study
- EPA’s Clean Power Plan (Stayed)
Washington Clean Air Rule
WA Clean Air Rule (CAR)

- Finalized September 15, 2016
- Codified in WAC 173-442
- Takes effect October 17, 2016
- Standards begin in 2017 for:
  - Stationary sources
  - Petroleum product producers
  - Natural gas distributors
- Energy-intensive and trade-exposed (EITE) sources / petroleum product importers to join program in 2020.
What Is an EITE Source?

- Has listed primary NAICS code in CAR
- List includes:
  - 322110: Pulp mills
  - 322121: Paper (except newsprint) mills
  - 322122: Newsprint mills
  - 322130: Paperboard mills
- Can choose not to be treated as EITE source
  - Decision cannot be reversed (even if operational control change)
  - Must notify ECY by January 1, 2017 or by January 1st of first year in baseline period
## CAR Applicability Thresholds

<table>
<thead>
<tr>
<th>Compliance Threshold (MT CO₂e/year)</th>
<th>First Compliance Period (Calendar Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100,000</td>
<td>2017-2019</td>
</tr>
<tr>
<td>95,000</td>
<td>2020-2022</td>
</tr>
<tr>
<td>90,000</td>
<td>2023-2025</td>
</tr>
<tr>
<td>85,000</td>
<td>2026-2028</td>
</tr>
<tr>
<td>80,000</td>
<td>2029-2031</td>
</tr>
<tr>
<td>75,000</td>
<td>2032-2034</td>
</tr>
<tr>
<td>70,000</td>
<td>2035 and beyond</td>
</tr>
</tbody>
</table>
Treatment of GHG from Biomass Combustion

> Per WAC 173-442-040 Exemptions:

- Covered GHG emissions do not include “CO₂ from industrial combustion of biomass in the form of fuel wood, wood waste, wood by-products, and wood residuals...”

> Therefore, biogenic GHG does not contribute to applicability determination or compliance obligation
Reduction Requirements

> Non-EITE sources: +1.7% decrease annually from baseline GHG emission rates
  - From applicability date through 2035
  - Starting in 2036, remains constant at 2035 value

> EITE sources: Ecology to determine efficiency improvement rate
  - Based on relative emissions intensity for each sector (production-based)
  - Varies between 0.7% and 2.7% annual decrease from baseline depending on performance
    - Bottom 25th percentile: decrease from 1.7% to 2.7%
    - Top 25th percentile: decrease from 0.7% to 1.7%
    - Between top 25th and bottom 25th: 1.7% decrease
# Non-EITE Baseline

<table>
<thead>
<tr>
<th>Covered Party</th>
<th>Operated 2012-2016 (at least 3 yrs)</th>
<th>Average GHG Emissions (MT CO$_2$e/yr)</th>
<th>Ecology Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>Yes</td>
<td>≥ 70,000</td>
<td>Assign baseline*</td>
</tr>
<tr>
<td>Category 2</td>
<td>Yes</td>
<td>&lt; 70,000</td>
<td>Assign baseline when emissions reach 70,000 MT or if requested**,***</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N/A or No</td>
<td>≥ 70,000</td>
<td>Assign Baseline**,***</td>
</tr>
</tbody>
</table>

* Category 1 baseline: Avg of 5-year reported/assigned emissions (2012-2016); or at least avg of 3-years (when ECY omitting years that meet reg criteria)

** Category 2 baseline: Avg of reported emissions from 1$^{st}$ 3 consecutive years (after 2012) with avg > 70,000 MT; or when requested by voluntary participant

*** New/modified equipment: Avg 1$^{st}$ 3 years reported emissions under normal operation or ECY benchmarking (90% most efficient facility in all surveyed stationary sources using benchmarking)
EITE Baseline

> EITE sources must report production data along with GHG annual emissions

> ECY calculates output-based baseline for each EITE source
  - Remains constant
  - Using average GHG emissions and production rates for 2012-2016, if available
  - Otherwise, use average from first three consecutive post-2012 years with reported emissions of at least 70,000 MT
Compliance Obligation

- \((\text{Compliance obligation}) = (\text{covered GHG emissions for compliance period}) - (\text{baseline GHG emission rate for each year of compliance period discounted by emission reduction requirement})\)
- If difference > 1, must acquire Emission Reduction Units (ERUs)
## Sample Compliance Obligation (100,000 MT/yr source)

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Baseline Discount Percent</th>
<th>Discounted Baseline (MT/yr)</th>
<th>Reported Emissions (MT/3-yr)</th>
<th>Discounted Baseline (MT/3-yr)</th>
<th>Compliance Obligation (ERUs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1.7%</td>
<td>100,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>3.4%</td>
<td>98,300</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2019</td>
<td>5.1%</td>
<td>96,629</td>
<td>300,000</td>
<td>294,929</td>
<td>5,071</td>
</tr>
<tr>
<td>2020</td>
<td>6.8%</td>
<td>94,986</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>8.5%</td>
<td>93,371</td>
<td></td>
<td></td>
<td>19,858</td>
</tr>
<tr>
<td>2022</td>
<td>10.2%</td>
<td>91,784</td>
<td>300,000</td>
<td>280,142</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>11.9%</td>
<td>90,224</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2024</td>
<td>13.6%</td>
<td>88,690</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>15.3%</td>
<td>87,182</td>
<td>300,000</td>
<td>266,096</td>
<td>33,904</td>
</tr>
</tbody>
</table>
Compliance Options

- ERUs can be created by:
  - Directly cutting emissions
  - Purchasing reductions from other businesses
  - Obtaining ERUs from projects in WA
  - Purchasing allowances from outside of WA
Compliance Reporting

> 3-year compliance reports
  ❖ Demonstrate how CAR reduction requirements satisfied
  ❖ Verified by eligible third-party

> Annual GHG reports will continue to be required
  ❖ Recent updates require reporting of production data, and other measures to allow for CAR implementation
Proposed Washington Carbon Tax (I-732)
Initiative 732: WA Carbon Tax

- On ballot in November
- Starts at $25 per MT CO$_2$,
  - Increase annually by 3.5% plus inflation
  - Cap at $100 per MT (2016 dollars)
- Tax assessed on fossil fuels consumed in state and carbon content of imported electricity
- Tax used to
  - Offset state sales tax rate by 1%
  - Eliminate B&O tax for manufacturers
  - Fund “Working Families Rebate” for low-income households
Initiative 732: WA Carbon Tax

> Tax “swap” phased in over two years

  ◆ Year 1: Carbon tax = $15/MT, Sales tax reduced by 0.5%
  ◆ Year 2: Carbon tax = $25/MT, Sales tax reduced by additional 0.5%

> Natural gas price increase by 15% or more

> Increase in purchased electricity price (depending on source)

> Opponents prefer to incentivize clean energy, rather than new tax
Oregon House Bill 4036/Senate Bill 1547 (Passed)
Clean Electricity and Coal Transition Plan

> SB 1547 is newest iteration of bill, formerly HB 4036

> Mandates Renewable Portfolio Standard (RPS) of 50% by 2040
  
  > Represents increase from current mandate of 25% renewables by 2025

> Requires investor-owned utilities (IOUs) to phase out coal energy by 2035
Clean Electricity and Coal Transition Plan

> Crafted with involvement of PGE and PacifiCorp
  ❖ Head off ballot measures threatened by Renew Oregon, which had wide support
> Will count pre-1995 biomass plants (and associated cogen) as renewables
> Unlimited lifetime for REC’s acquired before end of 2022
> 4% cap on max premium IOUs can pay for mandate-compliant renewables
Clean Electricity and Coal Transition Plan

> Utility regulators warn of increased consumer prices

> PGE:
  ❖ Needs 1,100 MW renewables
  ❖ Forecasts annual rate increase of 1.5%

> PacifiCorp:
  ❖ Needs 1,300 MW renewables
  ❖ Forecasts annual rate increase of <1%
Oregon Senate Bill 1574 (Failed)
Healthy Climate Act (SB 1574)

- Requires EQC to adopt statewide GHG emission goals for 2025, and limits for 2035/2050 by implementing market-based program
- Applicable to facilities with at least 25,000 MT CO$_2$e/yr
- Market would begin January 1, 2020
- Biomass emissions not covered
- Did not pass through full House/Senate
  - Instead, lawmakers requested that DEQ study “market-based approach to controlling GHG emissions”
  - March budget included $230,000 for study
ODEQ GHG Market Study

- Study to be conducted throughout 2016
- Report to be presented to legislature when it reconvenes in February 2017
- Study to consider:
  - Program design elements
  - Linkage to other jurisdictions
  - Interaction with existing state programs
  - Business impacts from existing market-based programs
EPA’s Clean Power Plan
Clean Power Plan

> February 9, 2016: Supreme Court voted 5-4 to stay implementation until “litigation has played out”

> Involved parties include two dozen states, utilities, coal companies, and business organizations

> Final resolution not expected until 2017
Clean Power Plan

> Oregon: Requires reduction in state-wide GHG emissions from all affected fossil fuel-fired EGUs to 871 lbs CO$_2$/net MWh by 2030

> Washington: Requires reduction to 983 lbs CO$_2$/net MWh by 2030

> CPP requires submittal of state plan by September 2016 (but currently under stay)

> DEQ and Ecology will continue to develop plans, but no submittal until after stay
Questions?