

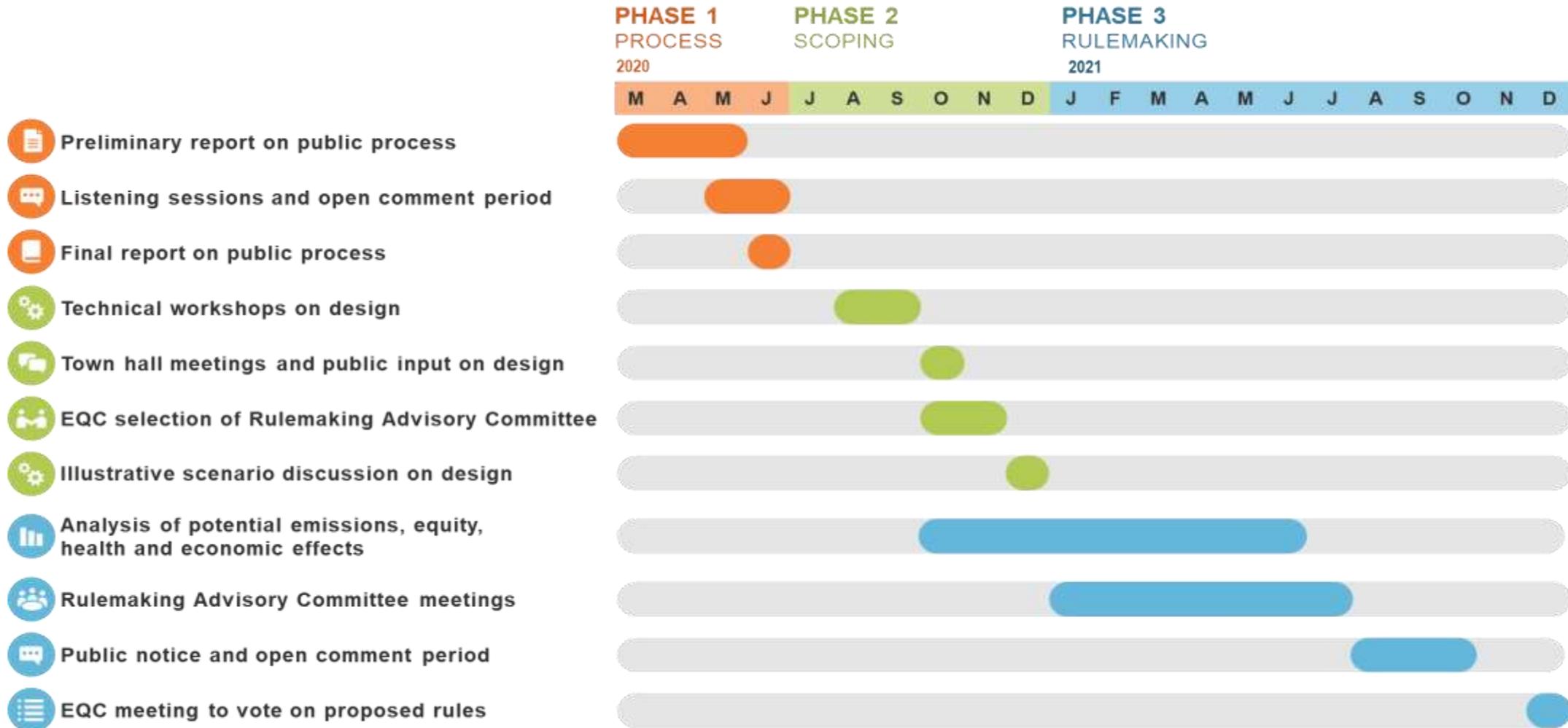
Office of GHG Programs: Climate Protection Program Update

Colin McConnaha and Nicole Singh

Environmental Quality Commission

Nov. 18, 2021

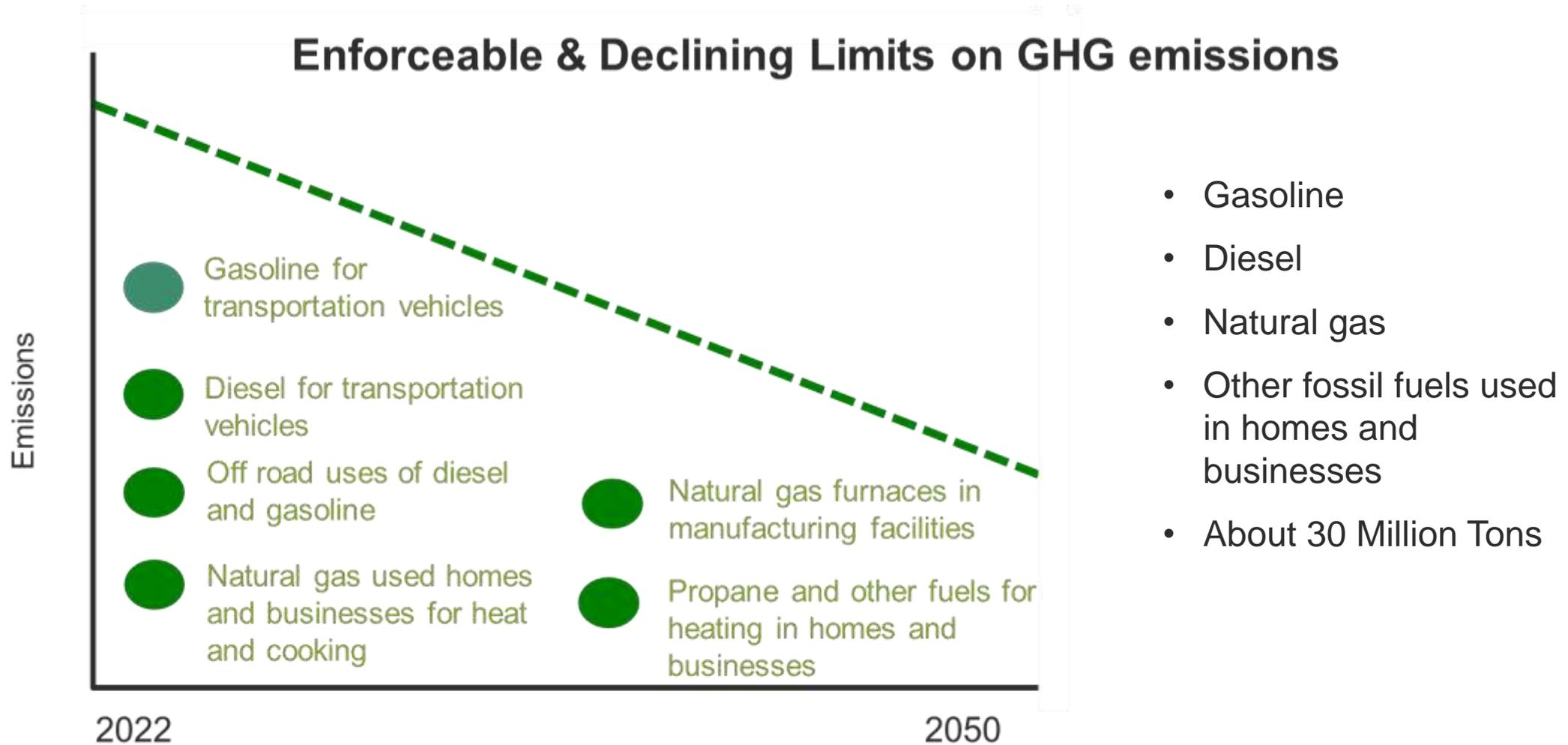
Climate Protection Program (CPP) Development



Climate Protection Program anticipated to start in 2022
 First compliance period 2022-2024



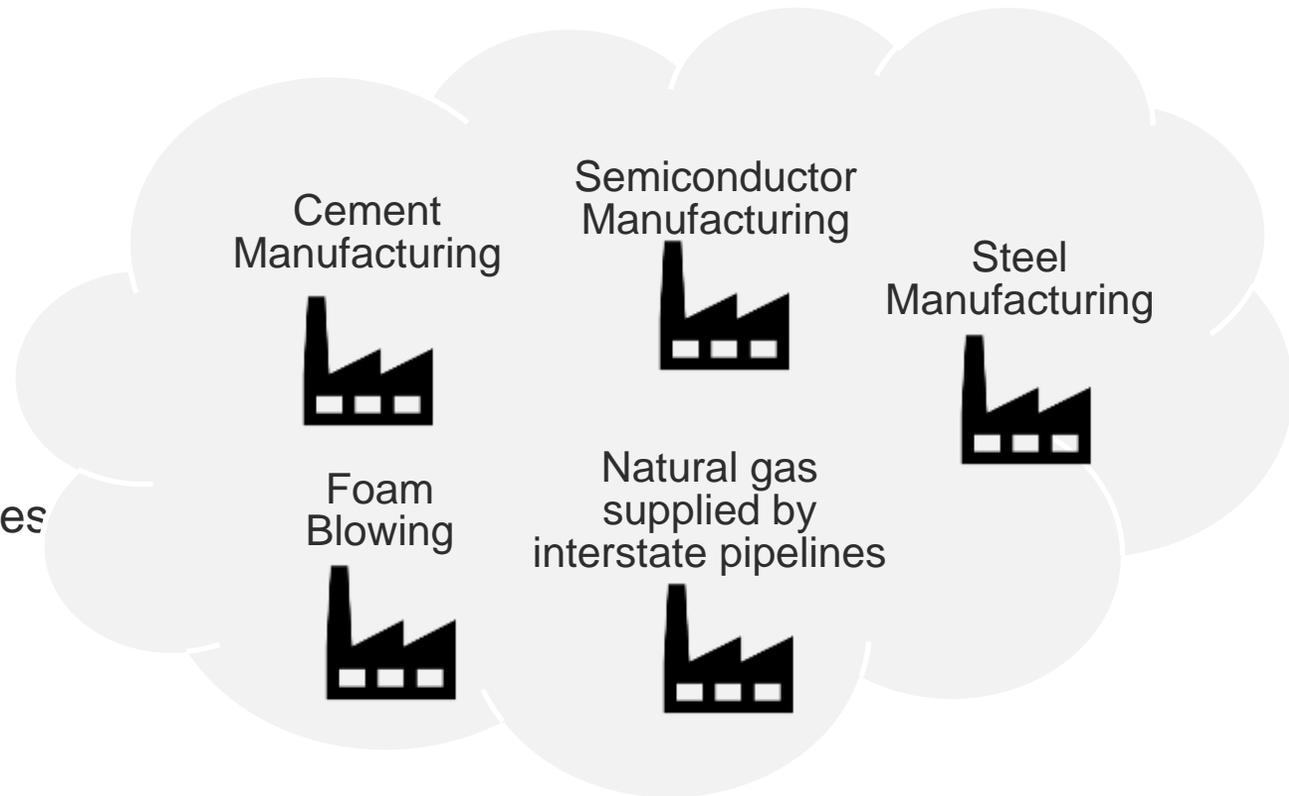
Declining Cap on Fossil Fuel Suppliers



Technology Standard for Certain Industrial Emissions

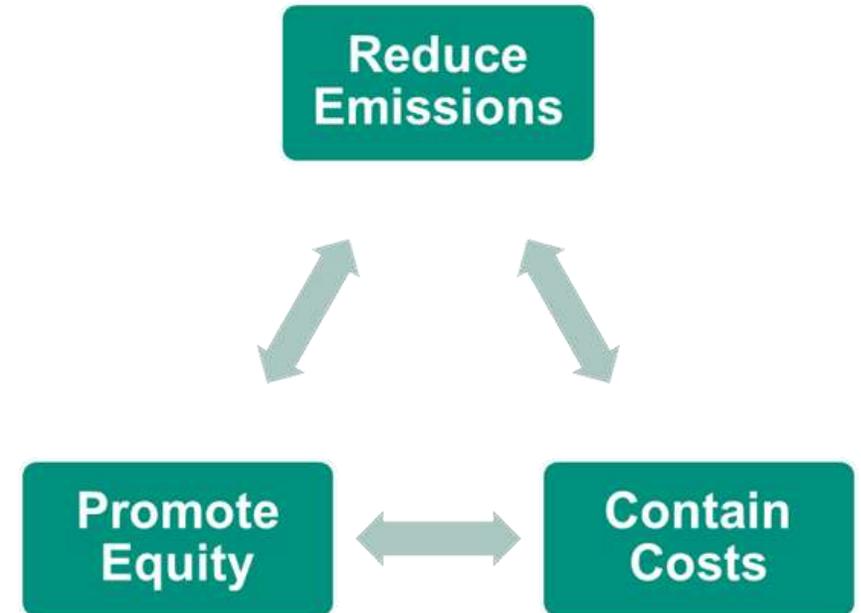
Best available emissions reduction

- 13 manufacturing facilities
- Site specific evaluations of technologies & practices to reduce onsite emissions
- About 1.7 Million Tons
 - ~1.5 million tons from unique industrial manufacturing processes & solid fuel combustion
 - ~200,000 tons from natural gas supplied by interstate pipelines



Program Purposes

- Reduce greenhouse gas emissions
- Achieve co-benefits of reducing other air contaminants
- Enhance public welfare for Oregon communities, particularly environmental justice communities, including communities of color, tribal, low income, and rural communities



Program Scope

- Requires that covered entities reduce greenhouse gas emissions
- Prioritizes reduction of greenhouse gases and other air contaminants in environmental justice communities disproportionately burdened by the effects of climate change and air contamination
- Provides covered entities with compliance options to minimize business and consumer economic impacts
- Allows covered fuel suppliers an option to partly comply via providing funds for investments to reduce emissions in environmental justice communities

Regulated Entities: Fuel Suppliers

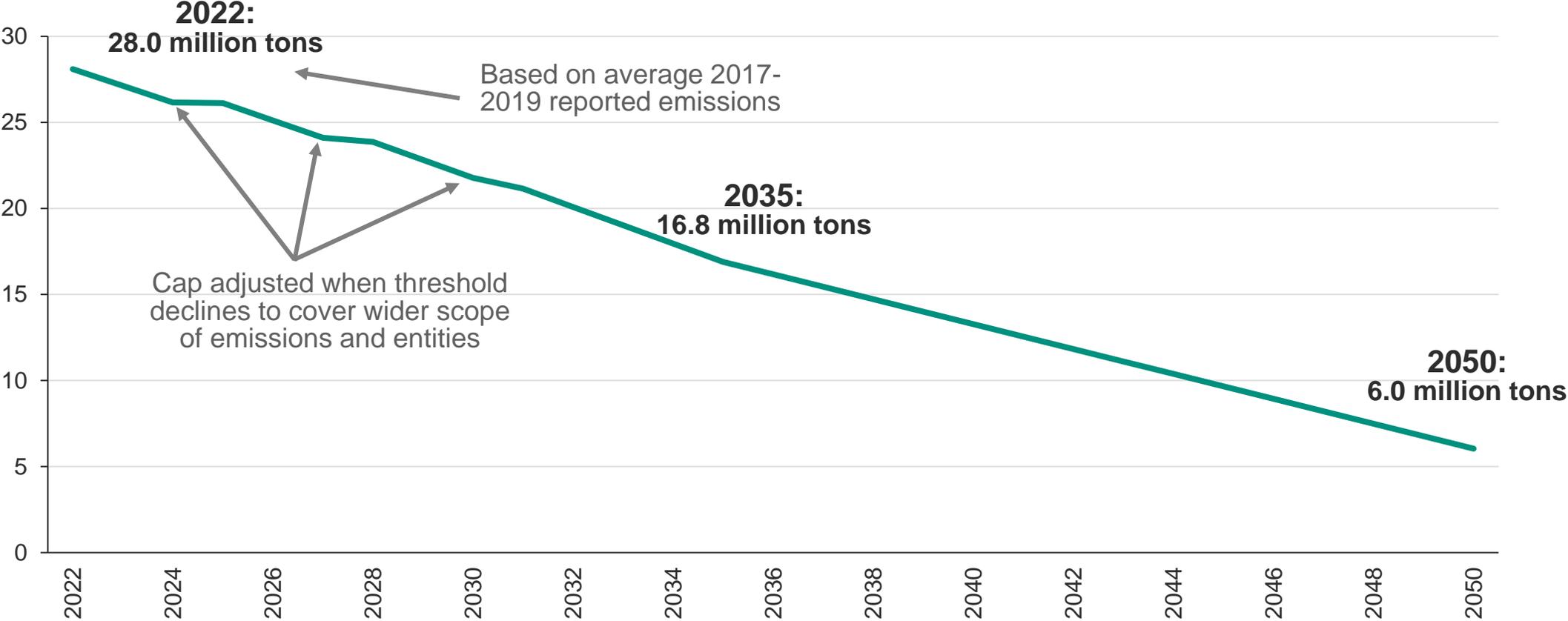
- 3 natural gas utilities that supply nearly all gas throughout Oregon
- All other fossil fuel suppliers (e.g. gasoline, diesel, and propane)
 - Large fuel suppliers regulated first: Initially those >200,000 tons
 - Threshold declines over first 4 compliance periods down to 25,000 tons
- Ultimately cover 99% of all fossil fuels used in Oregon*

*Except natural gas used in power plants

Year	Threshold	Share of Fuel Sector Emissions	Estimated Count of Suppliers
2022 through 2024	200,000 MT CO ₂ e	89%	9
2025 through 2027	100,000 MT CO ₂ e	94%	18
2028 through 2030	50,000 MT CO ₂ e	97%	25
2031 and each year thereafter	25,000 MT CO ₂ e	99%	37

Fuel Suppliers: Emissions Cap

Annual caps on fossil fuel suppliers (Million Metric Tons of Carbon Dioxide Equivalent)



Community Climate Investments (CCIs)

Fuel suppliers invest in projects that reduce GHG emissions to earn CCI credits

- Optional alternative compliance option for CPP
- DEQ, with equity advisory committee, selects and oversees third parties to receive funds and invest in projects to reduce GHG emissions
- Proposed rules set the price to purchase CCI credits for each year of the program



CCI Priorities

- Reduce greenhouse gas emissions by at least one ton GHGs per CCI credits issued
- Reduce emissions of other air contaminants, particularly in and near environmental justice communities
- Promote public health, environmental, and economic benefits for environmental justice communities
- Accelerate the transition from fossil fuels to lower carbon energy sources

EJ communities face more risks



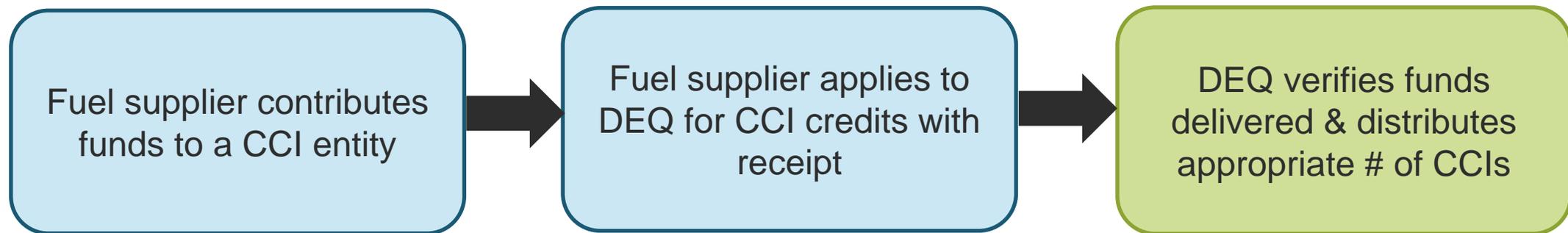
- ↑ Greater pollution exposure
- ↑ Greater impacts of climate change
- ↓ Less representation in public processes
- ↓ Less access to new, clean technologies

CCI Design (1)

- Use of CCIs
 - 10% of compliance obligation from 2022-2024
 - 15% of compliance obligation from 2025-2027
 - 20% of compliance obligation/covered emissions starting in 2028
- Example:
 - Compliance obligation for 2022-2024 is 2,500,000 MT
 - Fuel supplier could use 2,250,000 compliance instruments and 250,000 CCIs (10%)
- 2-year CCI program review
 - Includes evaluation of whether 1 ton of GHGs is being reduced per CCI credit issued

CCI Design (2)

- Pre-established price per CCI credit
 - Promote equitable program benefits
 - Based on EPA social cost of carbon
 - Proposed rules starts at \$81 (\$2021)
 - Increases every year and also adjusted for inflation
- Unlimited banking with an entity specific CCI purchase limit



Fuel Suppliers: Compliance

- Three year compliance periods:
 - First compliance period 2022-2024
 - First demonstration of compliance: November 2025
 - Total covered emissions for three years = total compliance instruments + Community Climate Investment (CCI) credits
- Covered entities:
 - Can't use 2025 compliance instruments for 2022-2024 compliance period
 - Can purchase CCIs in 2025 for 2022-2024 compliance period

Fuel Suppliers: Compliance Illustrative Examples



Liquid fuels supplier A



Liquids fuel supplier B

Keep in Mind:

- Natural gas utilities receive distribution of compliance instruments that follows the cap reductions relative to their 2017-2019 emissions
 - Other fuel suppliers receive compliance instruments from the remainder of the annual caps based on the share of fuels they supplied in most recent past year relative to one another
 - Annual caps are adjusted as more fuel suppliers are covered in later compliance periods
- Simplifying assumptions
 - 2022 compliance distribution is equal to average 2017-2019 emissions
 - Compliance instrument distribution tracks long term reduction trajectory
 - Average annual compliance instrument distribution for each compliance period

Fuel Suppliers: Fuel Supplier Example A

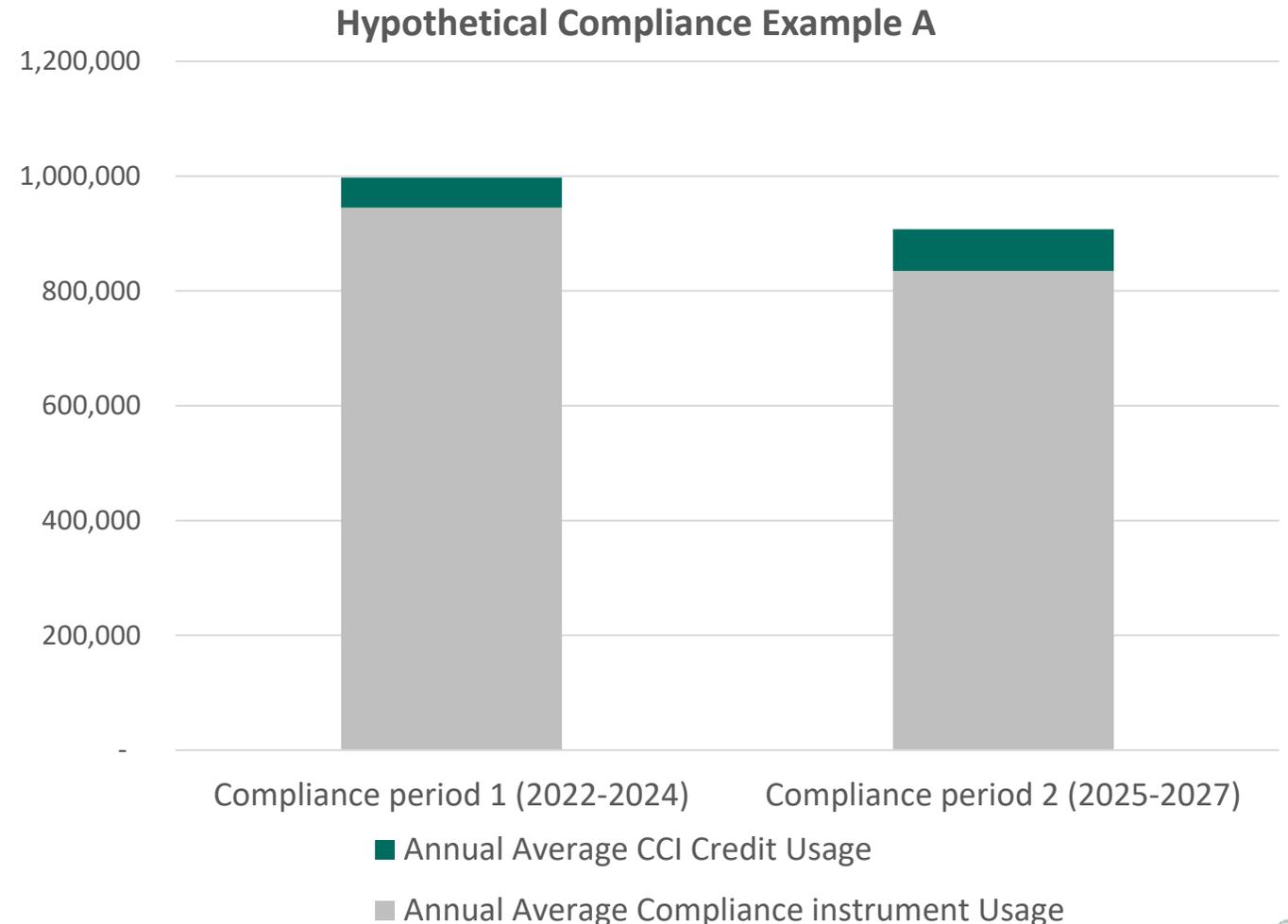


Liquid fuels supplier A

- Reduces Emissions Using Biofuels
- Needs to Use Some CCIs

- Compliance Period #1
 - CIs: 945,000
 - CCIs: 52,500
 - Emissions: 997,500

- Compliance Period #2
 - CIs: 835,000
 - CCIs: 72,500
 - Emissions: 907,500 MT



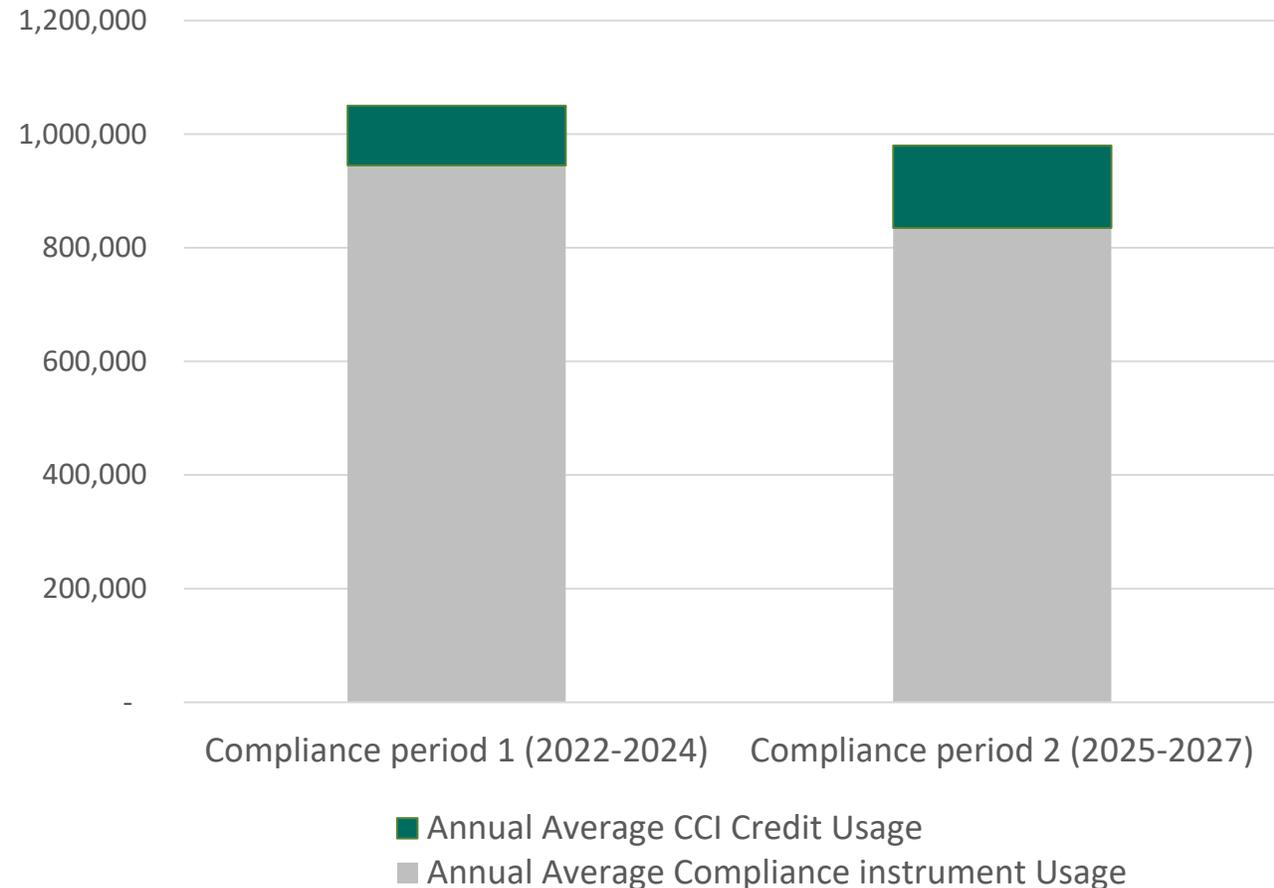
Fuel Suppliers: Fuel Supplier B



Liquids fuel supplier B

- Can Not Reduce Emissions
- Uses Maximum CCIs
- Compliance Period #1
 - CIs: 945,000 CI
 - CCIs: 105,000
 - Emissions: 1,050,000
- Compliance Period #2
 - CIs: 835,000
 - CCIs: 145,000
 - Emissions: 980,000

Hypothetical Compliance Example B



Regulated Entities: Stationary Sources

- Best available emissions reductions approach for site-specific emissions at certain facilities
 - Industrial processes
 - Solid fossil fuels combustion
 - Natural gas from interstate pipelines
 - Does not include fossil fuels covered by the cap
- Site-specific direct regulation; no compliance instruments
- 13 existing sources
 - 25,000 tons/yr of these emission sources
 - Total: 1.7 million tons
- Any new facility expected to have emissions that meet or exceed this threshold



Regulated Entities in CPP: Stationary Sources

- Facilities
 - Provide conduct assessments of available technologies and practices to reduce their onsite emissions
 - New sources submit assessment with any initial permit application
- DEQ
 - Reviews facilities' assessments, conducts agency analysis, consults public
 - Considers requirements of other applicable DEQ air pollution programs to avoid conflicting or contradicting requirements
 - Subsequently issues BAER Determination
 - BAER Determination establishes timeline and strategies that source must implement
 - Requirements added to facilities' air permits

Actions Reducing GHG Emissions

- Oregon's statewide GHG emissions: **~64 million tons***
- CPP would cover **32 million tons**
 - Approximately half of statewide inventory
 - Complementary policies include EV Rebates, ZEV mandates, Clean Fuels, Building codes,
- HB 2021 covers about **17 million tons**
- New landfills regulation covers about **1.5 million tons**
- These programs would cover **79% of Oregon's statewide emissions**
- Remaining emissions primarily:
 - Agriculture
 - Exported electricity
 - Refrigerants

*Avg 2017-2019 annual emissions in CO2 equivalence

Public Comments: Key Themes (1)

- Significant public engagement
- Received approximately 7,600 comments on the proposed rule
- Concern over climate changes impacts for current and future Oregonians
- Need for Oregon to act now to do its part to reduce GHG emissions
- Ongoing support to ensure equity in CPP design
- Overwhelming majority of comments support this type of action...



Public Comments: Key Themes (2)

- ... But most of these comments ask for more ambitious emissions reductions and/or expanding the scope of emissions covered
- Requests for more aggressive emissions cap decline
 - 2017-2019 baseline is higher than a 1990 baseline
 - Latest science says more than 45% by 2035 needed
 - Multiple proposals
- Concerns that natural gas power plants are not proposed to be regulated
 - Not all emissions associated with electricity generation in Oregon are addressed by recent legislation (HB 2021)

Public Comments: Key Themes (3)

- Concern that the Best Available Emission Reductions (BAER) approach might not do enough to reduce emissions from those facilities
 - No explicit reduction targets
 - Timeliness
- Applicability thresholds across the program should be lower



Public Comments: Key Themes (4)

- ... But we also heard
- BAER
 - Burdensome for those facilities
 - Emission reduction options may not be available to these industries
- Concerns about affordable compliance options for fossil fuels suppliers
- Concerns of fossil fuel price increases and impacts for industrial users, small businesses, farms and others
- Small number of entities limits the usefulness of trading



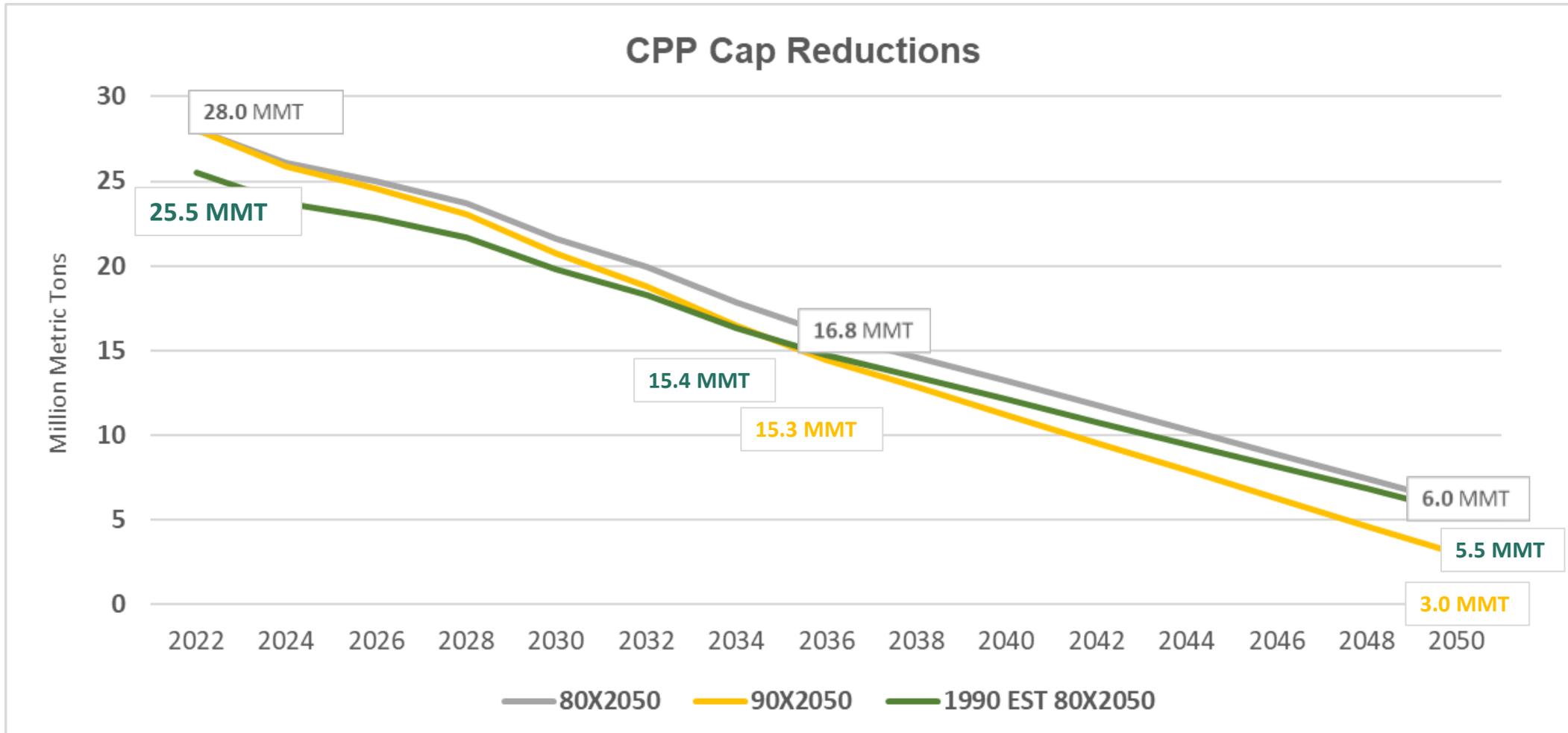
Public Comments: Key Themes (5)

- Change how much CCIs can be used (both lower and higher)
- Ensure the CCI price supports:
 - Capacity building for communities to help direct CCI investments
 - Robust emission reduction monitoring
 - Project planning to support equitable pipeline of projects in all EJ communities in Oregon
 - One ton of emissions reduction on average per credit issued
- Strengthening of CCI priorities for benefits to environmental justice communities
- Expand CCI projects to included sequestration...
- ... But also support for limiting CCI projects to direct emission reductions

Key considerations as staff finalize proposal for EQC

- Align CCI price to a level to better assure program yields intended effects
- Consider other CCI elements, such as banking of CCI credits
- Strengthen focus on benefitting environmental justice communities via CCI investments
- Adjust BAER approach to better ensure emission reductions and timely process
- Review cap reduction trajectory relative to new climate science highlighted in many comments

DEQ Staff Considerations: Emissions Caps



*1990 emissions are not available, 2022 cap based on 1990 emissions is an estimate

DEQ Staff Considerations: Fiscal Analysis

- DEQ commissioned modeling of CPP economic implications
 - Very minor net macroeconomic effects – some small positive net effects
 - Significant improvements to public health - >\$2 billion in avoided health impacts
- Reviewing comments on fiscal effects of proposed rules, for example:
 - OBI commissioned study
 - Gasoline: up to \$0.36 / gallon increase by 2050
 - Diesel: up to \$0.39 / gallon increase between 2035-2050
 - Gas utilities' modeling for PUC investigation
 - Rate increases vary by customer class (residential, commercial, industrial)
 - NW Natural forecast rate changes between -2% (residential in 2050) and 39% (industrial by 2040)

Questions?

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