



# Oregon Clean Fuels Program Update

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# Since 2016, the Clean Fuels Program has...

Reduced about 6 million tons of GHGs on a lifecycle basis

Supported the displacement of over 1 billion gallons of fossil fuels

Lowered the carbon intensity of ethanol and biodiesel by about 20%

Increased the blend rate of biodiesel & renewable diesel to about 12%

Enabled the state's utilities to invest almost \$20 million in EV projects

# Types of Clean Fuels and Applications



Ethanol  
Biodiesel  
Renewable diesel  
Fossil and renewable CNG  
Fossil and renewable LNG  
Fossil and renewable LPG  
Sustainable aviation fuel  
Electricity  
Hydrogen



# Clean Fuels Produced in Oregon

## Columbia Pacific BioRefinery

Proposed: 95 mil gallons of renewable diesel/naphtha



40 mil gallons of ethanol made from corn



Proposed: 600 mil gallons of renewable diesel made from waste & virgin oils



15 mil gallons of biodiesel made from used cooking oil



Proposed: renewable hydrogen



Renewable natural gas captured from dairy manure



Under Construction: 15 mil gallons of renewable jet fuel made from woody biomass

## Infrastructure:

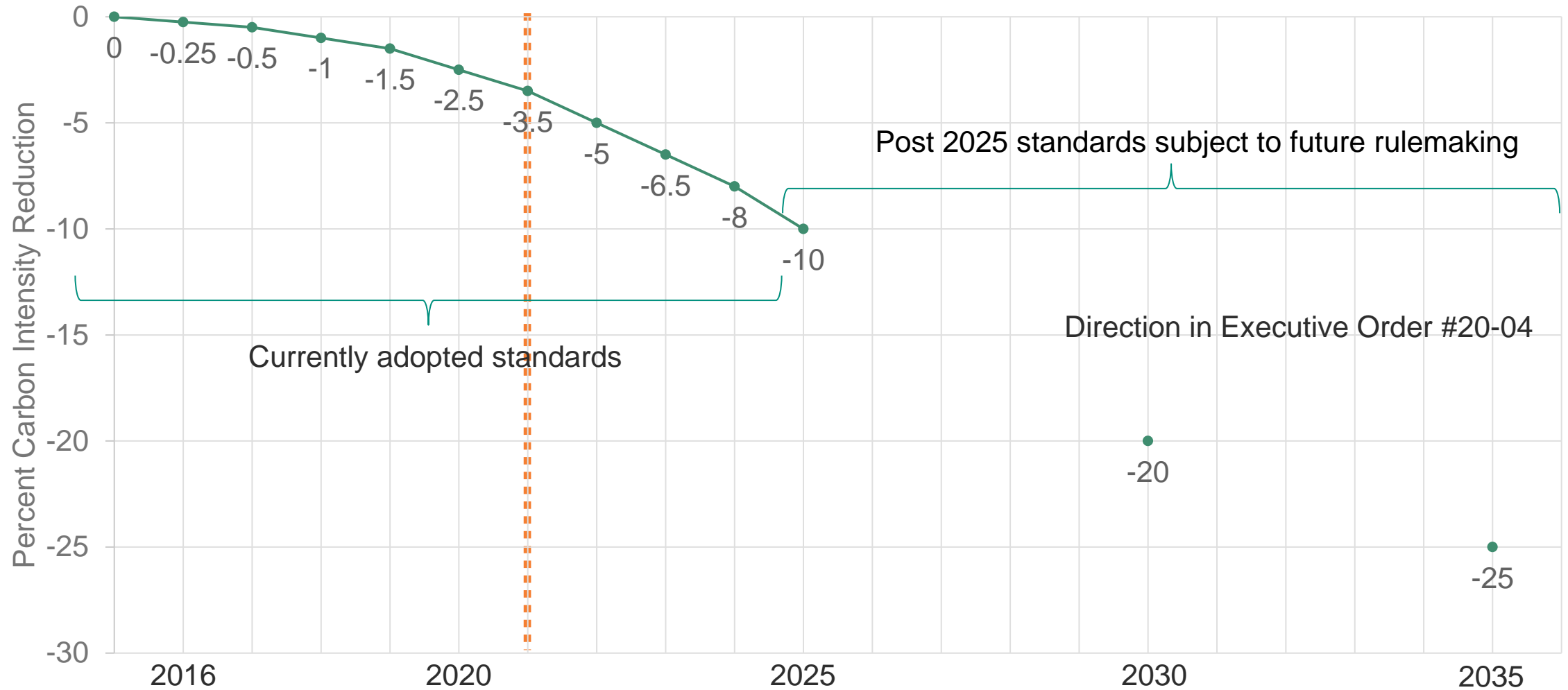
- ❖ 2,000+ EV chargers
- ❖ ~2 dozen CNG dispensers,
- ❖ ~2 dozen LPG dispensers



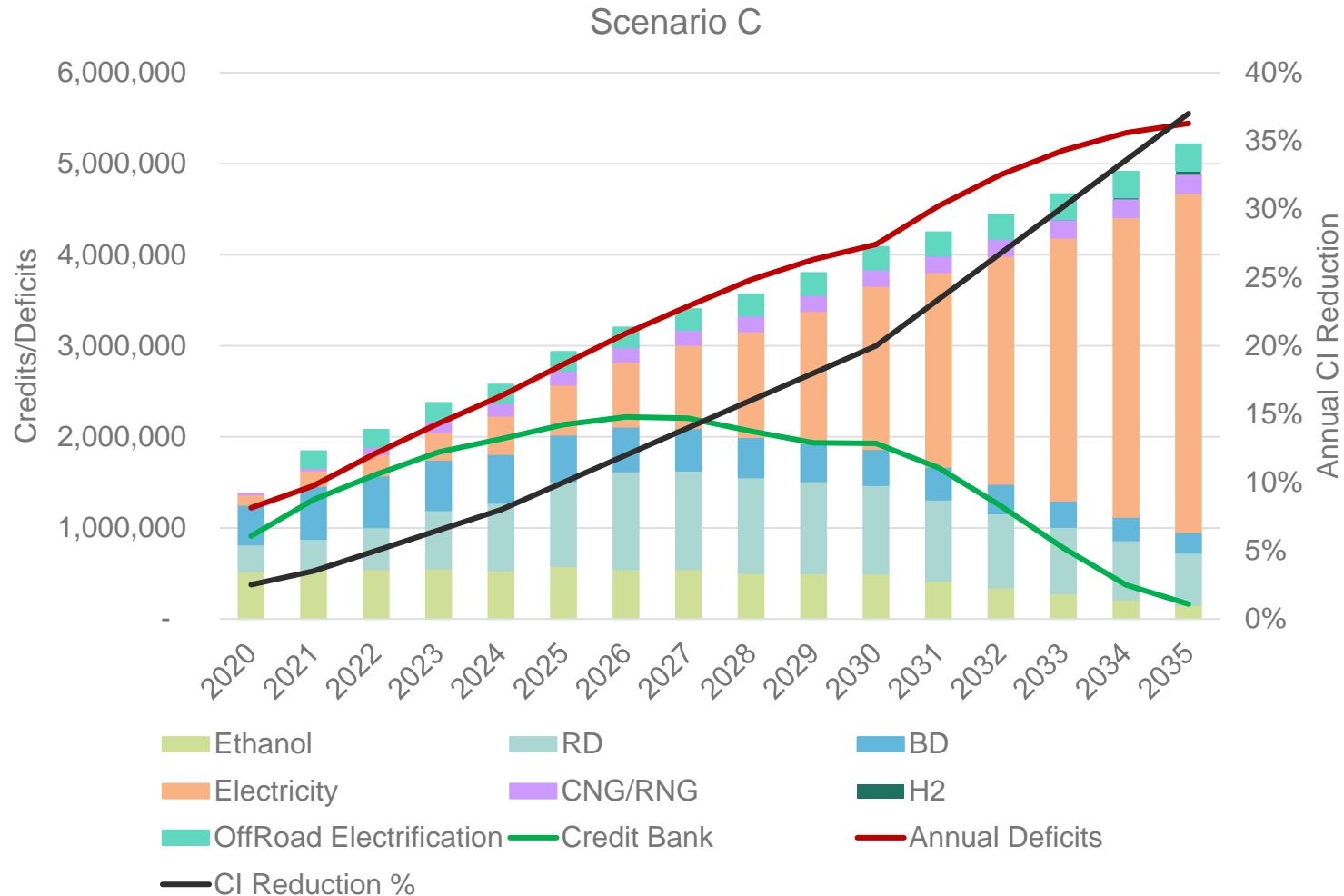
# The Clean Fuels Market and Its Impact

- There are many ways to comply with the program:
  - generate their own credits
  - get the credits when they buy the biofuels
  - buy credits in the CFP market
- The Clean Fuels Market is worth approximately \$200 million.
- Credit prices increasing over the past 4 years; currently about \$125
- In 2021, about \$94 million worth of credit transfers were reported to CFP.
- For 2020, CFP cost was 3.7 cents per gallon of E10 and 4.2 cents per gallon of B5.
  - Conservative calculation: assumes regulated parties buy all their obligations through the credit market
  - This is the most expensive way to comply, and does not account for lower fuel costs associated with many of the alternative fuels.

# Oregon Clean Fuels Standards



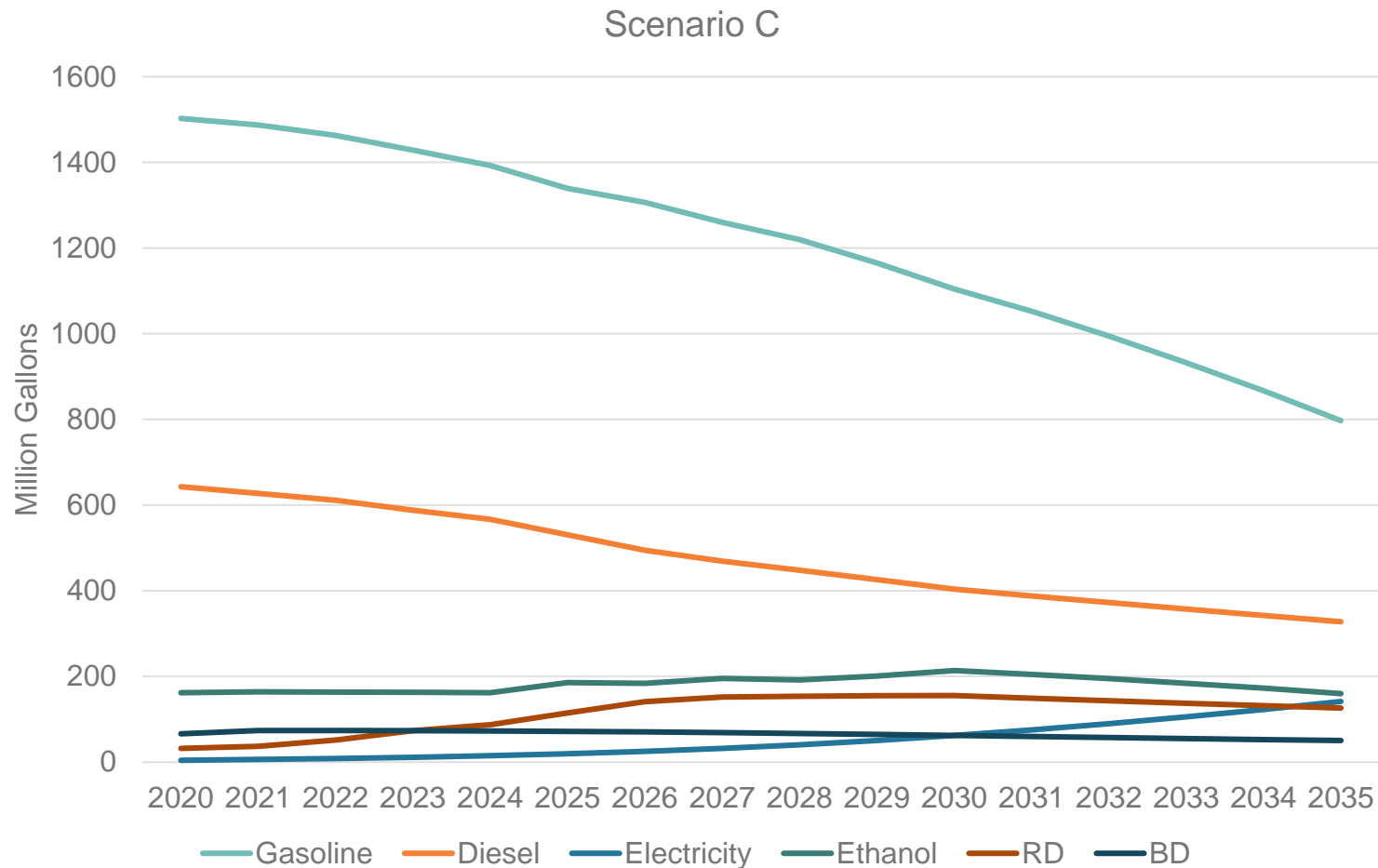
# Potential Future of the Clean Fuels Program



## Key Takeaways:

- Advanced Clean Cars 2 & Advanced Clean Trucks will drive credit generation beginning around 2028
- Electricity both generate credits, and displaces deficits
- In 2035, 37% CI reductions are possible using a combination of biofuels and electricity
- Between 2026-2035: 37 million tons of tailpipe GHGs reduced
- Post-2035, credit generation will outpace deficit generation

# The Future of Gasoline and Diesel



## By 2035:

- Gasoline consumption will decrease by about 47%
- Diesel consumption will decrease by about 49%
- Biofuels play a declining role since they are typically blended with gasoline/ diesel or used as replacements, but they are still needed until electricity takes over
- Renewable diesel blend rate peaks at 25% but higher blends are probable



# Decarbonizing the Transportation Sector

