



A Potential Clean Fuel Standard: Background and Introduction



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Outline

1. Brief introduction, climate change and impacts
2. PSCAA climate work overview
3. Overview of a Potential Clean Fuel Standard

We work to *protect* public health, *improve* neighborhood air quality, and *reduce* our region's contribution to climate change.

Our jurisdiction



The basic climate dynamic is simple, but impacts are complex and varying

- Overwhelming international scientific consensus concluded a range of serious impacts to health, environment, economy (2001, 2007, 2014)
- PNW example: wildfires and smoke will increase
- Other examples: more extreme weather/storms, drought, heat illness, sea level rise, acidification, etc.



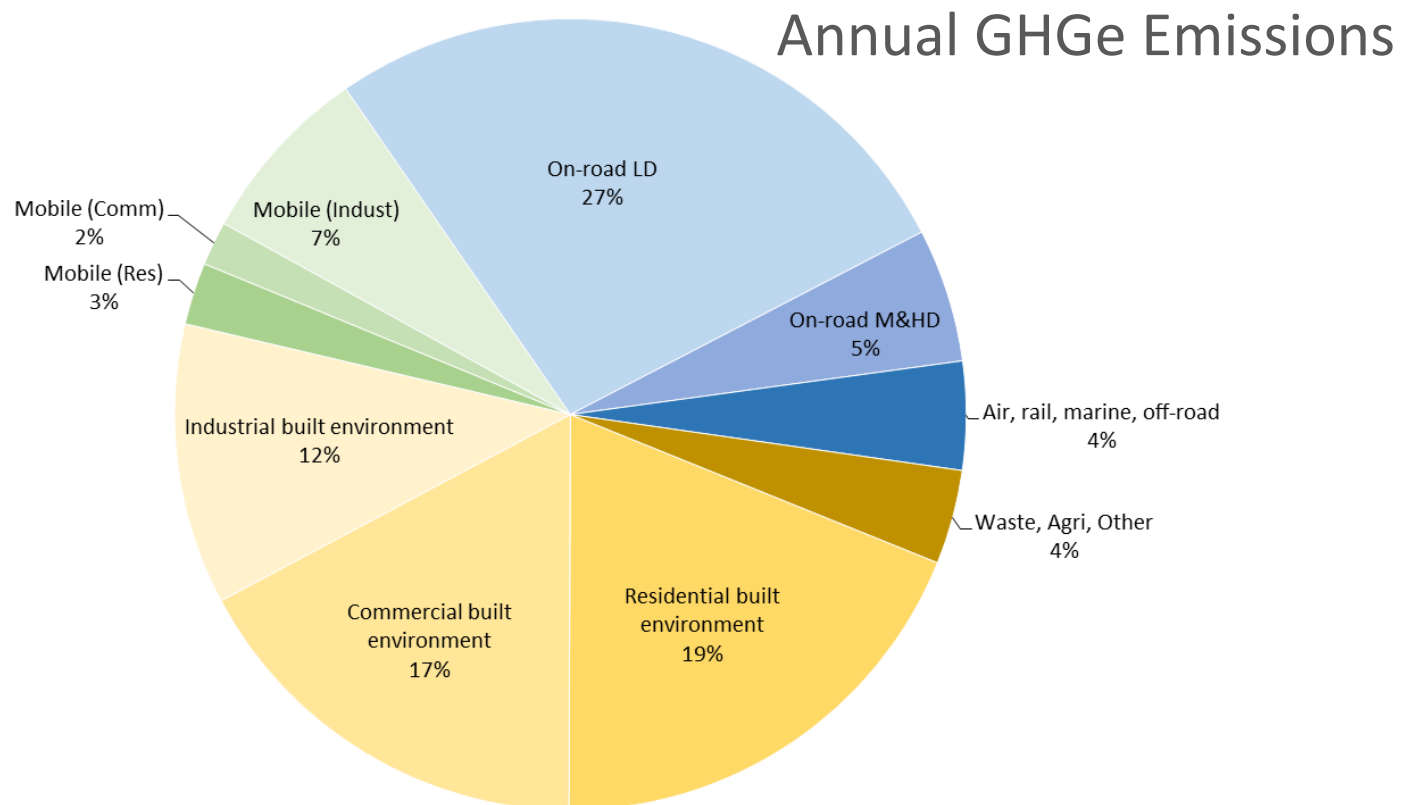
△ = Fires

Why GHG EI, Why Now?

- In 2016, PSCAA Board directed Agency staff to step-up climate work, and to focus on mobile/transportation (Objective 2.1)
- Late 2016, Board adopted strengthened GHG emissions reductions targets
- In 2017, staff developed list of potential strategies, and narrowed to 11 Candidate Actions
- In 2018, refined to 3 general goals/strategies
- Currently discussing ZEV and cleaner fuels with Board and Advisory Council (transit agencies lead on transit issues)

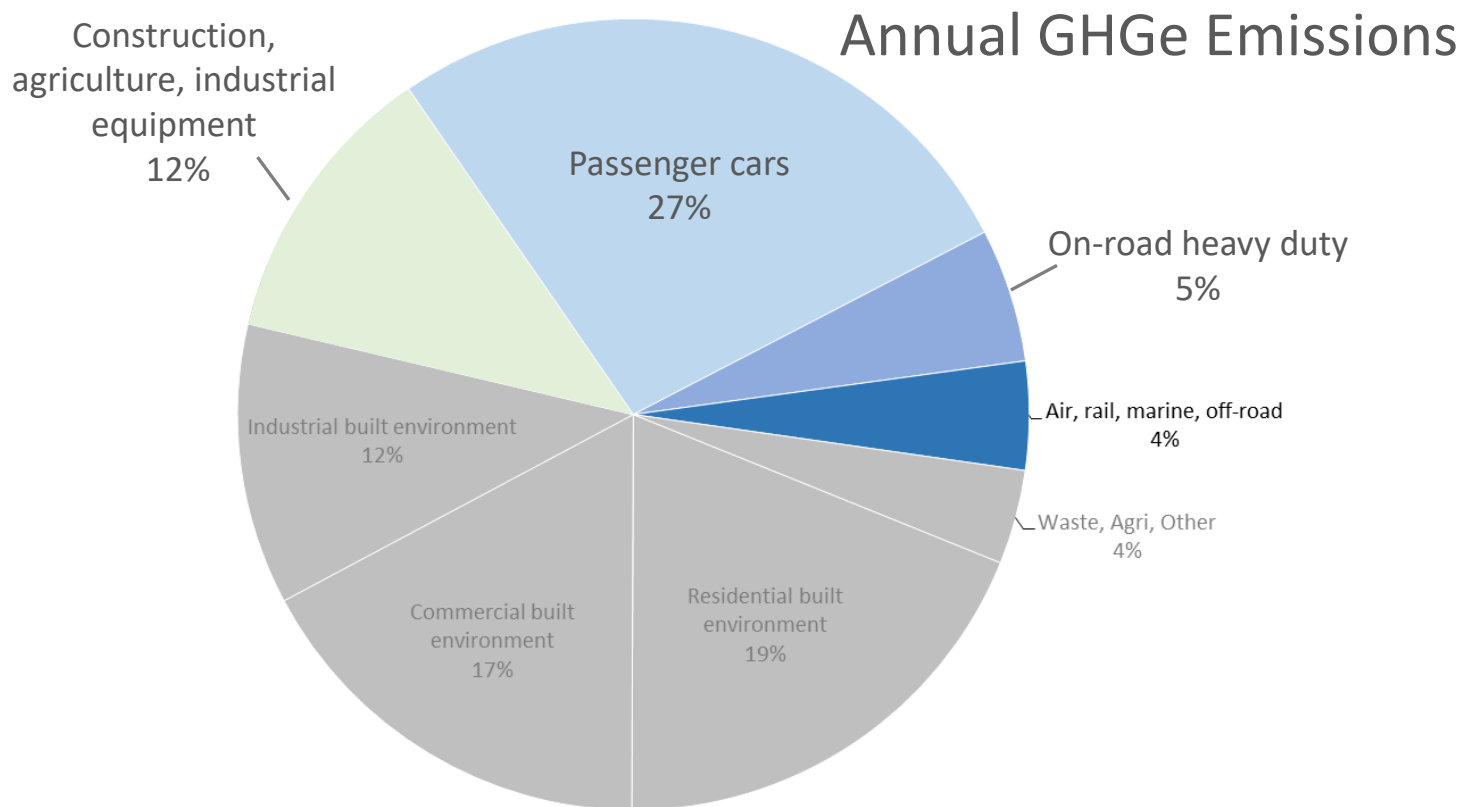
4-County Summary (Snohomish, King, Pierce, Kitsap)

- Counting CO₂, methane, refrigerants
- Biggest sectors are on-road vehicles, home and building heating, and industry



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What is PSCAA doing?

- Talking with our counties and cities
- Identifying and analyzing challenges, e.g.:
 - different dynamics rural vs high density urban
 - car sharing, Uber/Lyft, auton. vehicles
 - education and awareness of EVs, etc
- Current analysis and planning:
 - have basic analysis for a number of broad strategies
 - continuing to analyze electrification (ZEVs), clean fuels, and transit
 - following related issues, such as power grid

What are Cleaner (low carbon) Fuels?

- **bio & renewable diesel**
 - vegetable oils, waste oils
 - lower carbon & less particle pollution
- **ethanol** made from corn, sugar crops
 - lower carbon
- renewable **natural gas** from landfills, manure
 - lower carbon, can replace diesel
- **electrification** – zero emissions



Corn ethanol – OR ETHC216

co-products?

delivery to distributors

tailpipe emissions

refining with nat. gas at
specific facility

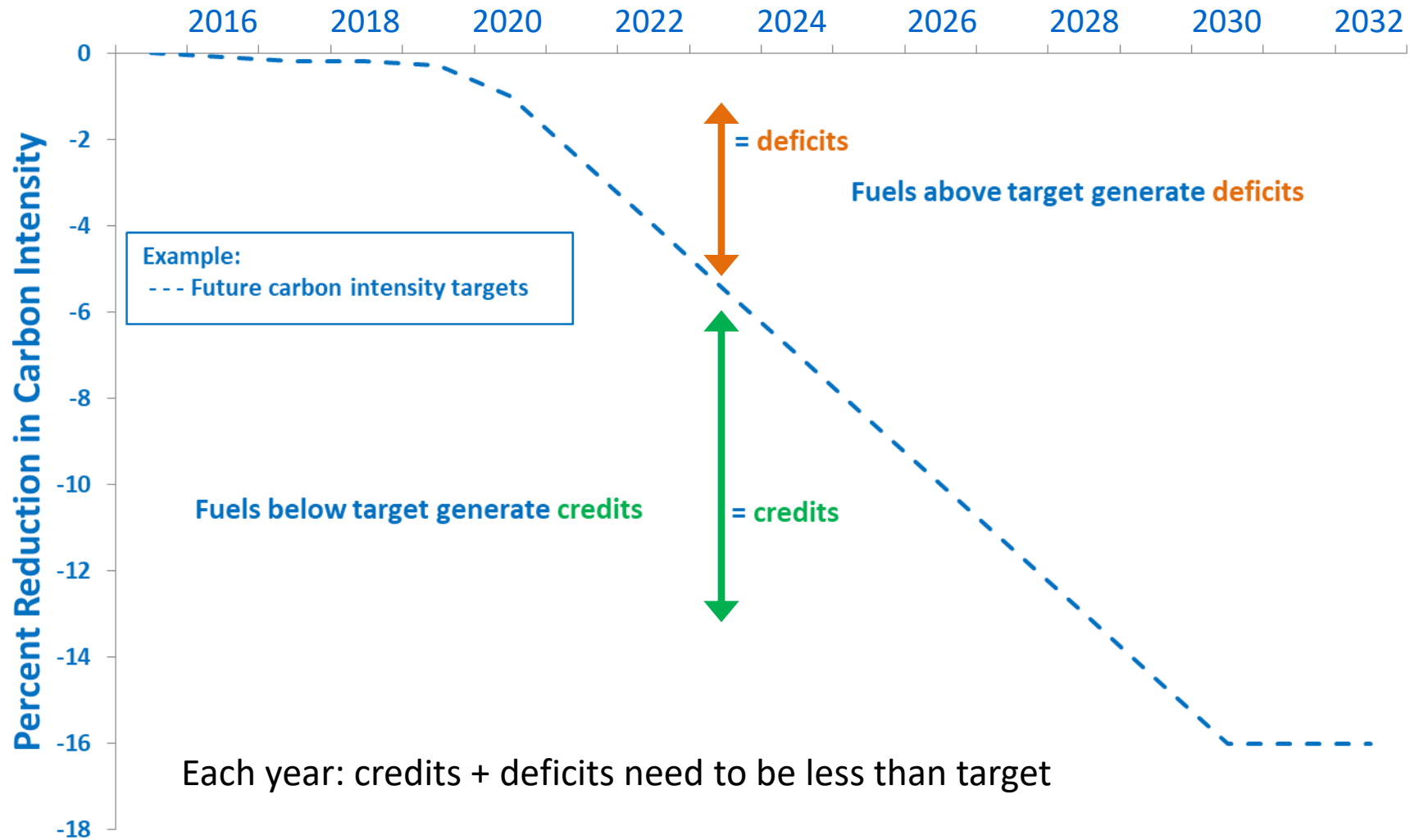
transport to specific refinery

midwest grown corn

land use changes?

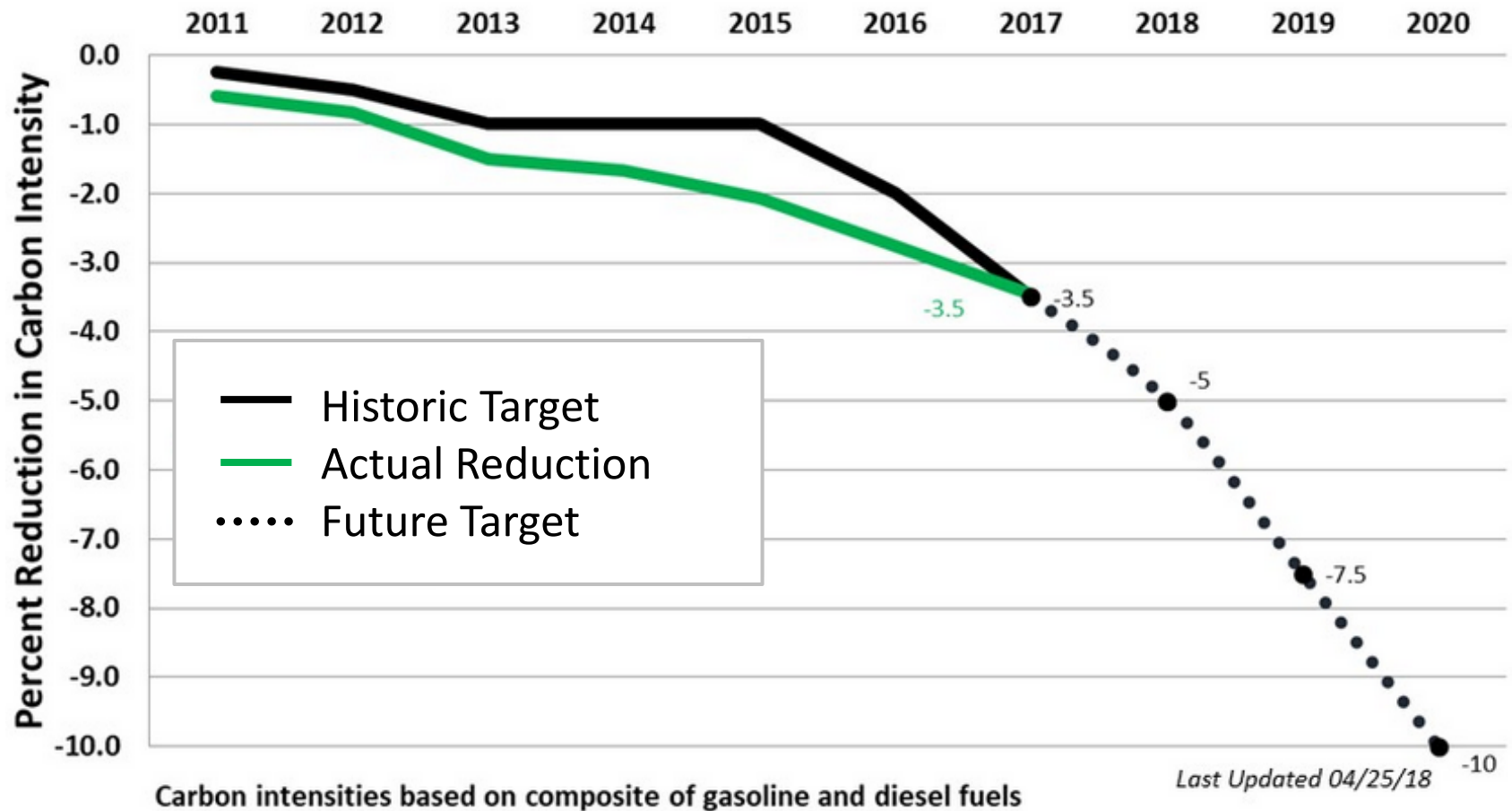


OR/CA Low Carbon Fuel Standard Framework-Hypothetical



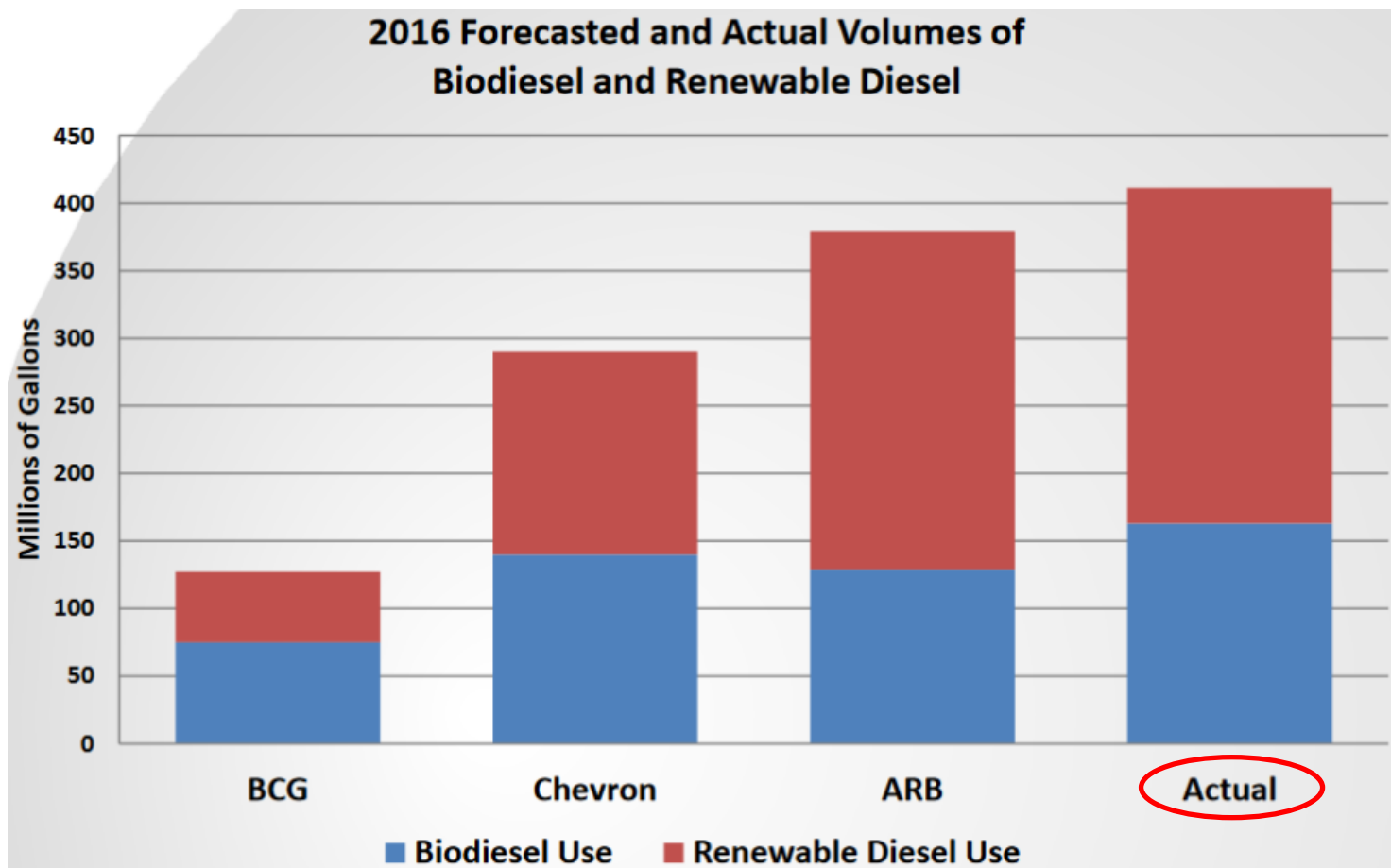
OR/CA Low Carbon Fuel Standard Certainty AND Market Flexibility

CA: 2011-2017 Performance of the Low Carbon Fuel Standard



Low Carbon Fuel Standard: Compliance in CA

Biodiesel and renewable diesel exceeded predictions



Source: CARB. <https://www.arb.ca.gov/board/books/2017/062217/17-6-4pres.pdf>

Clean Fuel Framework – Fuel Price Impacts

- Currently: pump price variability driven largely by crude price (pump price \approx \$1.20 + crude, which has been \$0.80-3.70/gallon over last 15 years)
- CA LCFS includes price caps in structure
- In 2014, WA State projects up to 13 ¢/gallon in 2026, for scale think roughly 25¢/gallon
- Most of a CFS difference stays in state and in the U.S. for growth in agriculture and bio-fuel processors, with less \$ leaving for crude oil, and our communities getting cleaner air
- Long-term benefit vs. short-term cost – looking for ways to minimize impact on hardest hit

- Diesel drives potential cancer risk from air toxics – also contributes to other pollutants
- Gasoline and diesel health risk levels higher in near-road communities
- Reduction in pollutants for most LCFS scenarios
- Near-road communities stand the most to gain from strategies that reduce gasoline and diesel pollution
- Working to find where/how to address equity

November 15

Clean Fuels Feedback Forum

Thank you!

Questions?