



Low Carbon Fuel Advisory Committee

August 5, 2010
Agenda Items B and C

Low Carbon Fuel Standard Deferrals

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Presentation Purpose

1. There are several deferrals in HB 2186
2. Consumer Cost Safety Net was Discussed at December 2009 Low Carbon Fuel Advisory Committee meeting
3. Today: fuel supply deferrals

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Presentation Overview

1. Presentation (for discussion) on fuel supply deferrals
2. Re-cap of consumer cost safety net (discussed in December 2009)
3. Discussion of deferral package

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Low Carbon Fuel Supply Deferrals

Purpose:

Propose (for discussion) low carbon fuel supply deferrals for ensuring that regulated parties can meet the LCFS in the event of a low carbon fuel supply shortage.

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Low Carbon Fuel Supply Deferrals

From HB 2186

SECTION 6. (2)(a) The Environmental Quality Commission may adopt by rule low carbon fuel standards for gasoline, diesel and fuels used as substitutes for gasoline or diesel.

(b) The commission may adopt the following related to the standards, including but not limited to:

....(D) Standards for the issuance of deferrals, established with adequate lead time, as necessary to ensure adequate fuel supplies;

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Low Carbon Fuel Supply Deferrals

Intended for:

- Extreme situations where a fuel supply disruption makes compliance with the LCFS unattainable
- Disruptions in low carbon fuel supply due to production or transportation problems
- Applied to fuel type (gasoline and diesel)

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Low Carbon Fuel Supply Deferrals

Not intended for:

- Shortages due to price increases (see CCSN)
- In lieu of available/banked credits
- Disruptions caused by regularly scheduled maintenance of production facilities or pipelines
- Disruptions caused by natural disaster (addressed accordingly in an emergency)

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Low Carbon Fuel Supply Deferral Types

- **Short-term**: expedited deferrals for disruptions on the order of weeks to months
- **Long-term**: to address extended disruptions lasting several months to one year
- **Forecasted**: Low carbon fuel supplies are not realized at planned production rates. Shortage anticipated to last several years, could significantly affect regulated parties' ability to comply with LCFS

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Low Carbon Fuel Supply Deferrals:

Process: *Should DEQ issue a deferral?*

- **Notice or petition** (to investigate disruption)
- **Investigation** (cause, volume, duration etc.)
- **Significance Testing** (thresholds for monitoring and issuance)
- **Decision on Deferral** (type and duration)
- **Compliance Adjustment** (deferral-dependent)



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Low Carbon Fuel Supply Deferrals

Process for issuing Short- and Long-Term Deferrals

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Low Carbon Fuel Supply Deferrals: Short- and Long-Term Process

How will DEQ know a low carbon fuel supply shortage exists?

Notification

- Initiated by annual compliance review (DEQ) or petition (regulated parties)
- DEQ will notify regulated parties and public of start of investigation



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Low Carbon Fuel Supply Deferrals: Short- and Long-Term Process

Significance Testing

Is disruption at or above thresholds?

- Fuel supply shortage monitored by DEQ
- **Proposed Significance Thresholds**
 - When shortage \geq **5-25%** of total low carbon fuel supply, shortage flagged and monitored, by DEQ
 - When shortage \geq **10-30%** of total supply, investigation triggered.



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Low Carbon Fuel Supply Deferrals: Short- and Long-Term Process

Investigation

Does disruption qualify for a deferral?

DEQ will Investigate:

- Cause of disruption
- Estimated volume and carbon intensity of disrupted fuel supply
- Estimated date and volume supply will be back online



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Low Carbon Fuel Supply Deferrals: Short- and Long-Term Process

Decision on Deferral

How will DEQ evaluate a supply shortage?

- Assessment of evaluation criteria
- Weight of evidence decision, case-by-case
- Selection of deferral option
- DEQ informs regulated parties and public of deferral decision



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Low Carbon Fuel Supply Deferrals: Short- and Long-Term Process

Decision on Deferral - Evaluation criteria

What options are available to meet the LCFS?

- Alternate, available sources of the same or similar low carbon fuel;
- Alternate sources and volumes of fuels with carbon intensities lower than LCFS;
- Banked credits; and
- Time remaining in the compliance period.



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Low Carbon Fuel Supply Deferrals

Process for issuing Forecasted Deferrals

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Low Carbon Fuel Supply Deferrals

Forecasted Process

Notification (same as Short/Long-Term)

Investigation: DEQ to project low carbon fuel volumes and carbon intensities annually, subject to public review.

- **Evaluation:** Projections compared to low carbon fuel standard for year in question, per LCFS compliance schedule, for **significance test**.

Decision on Deferral

Compliance Adjustment



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Low Carbon Fuel Supply Deferrals Forecasted Deferrals

Investigation (Fuel Supply Projections):

- Trends in alternate fuel transportation use, based on LCFS reporting data
- Planned and existing alternate fuel production facilities
- Planned projects
- RFS2 volumes for cellulosic, advanced biofuels, biomass-based diesel
- Updated carbon intensities of fuel
- Banked credits



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Low Carbon Fuel Supply Deferrals Forecasted Deferrals

Evaluation of Potential Significance

Projections compared to LCFS schedule year

Forecasted Significance Threshold

- If projected CI of future fuel mix is **5-25%** more than standard, DEQ will evaluate need for forecasted deferral.



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Low Carbon Fuel Supply Deferrals:

Decision on Forecasted Deferrals

DEQ to determine:

- What the new compliance obligation will be for that year, taking into account magnitude and duration of shortage, and evaluation criteria.
- Whether any adjustment to the compliance schedule is needed.



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Low Carbon Fuel Supply Deferrals:

Forecasted Deferral Options

If evaluation determines a forecasted fuel supply deferral is warranted, DEQ could:

- 1(F):** Revise the LCFS for specified years.
- 2(F):** Extend program end date beyond LCFS horizon year.
- 3(F):** Revise LCFS *and* extend program beyond LCFS horizon year.



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Low Carbon Fuel Supply Deferrals: Compliance for all deferral types

Dealing with Deficits

Difference between carbon intensity value of available fuel supply and standard for a specific year on the LCFS schedule

$$\text{Deficit} = \text{LCFS(CI)} \text{ for schedule year} \\ - \text{actual carbon intensity of fuel supply}$$



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Low Carbon Fuel Standard – Deferrals



Low Carbon Fuel Supply Deferrals Dealing with Deficits

Deficits could be:

- Paid back in full, same calendar year deferral period occurred
- Paid back within one to three years, depending on extent and duration of deferral
- Forgiven when accrued during a deferral period



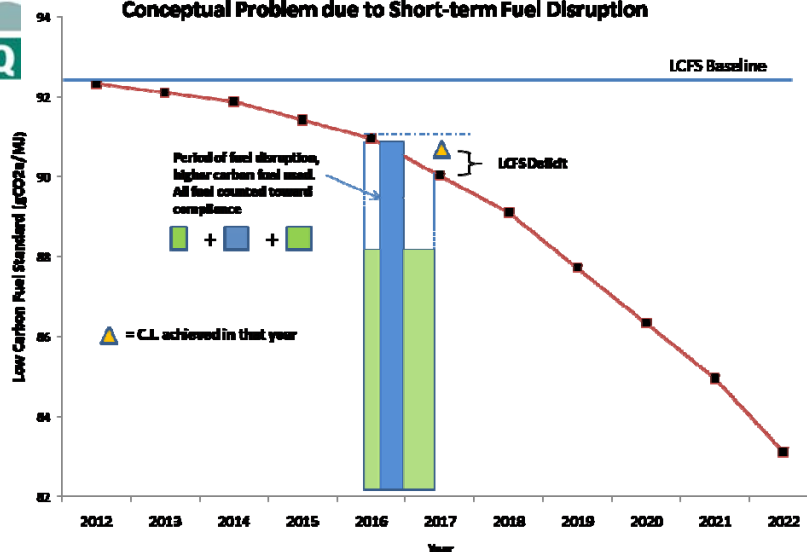
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Low Carbon Fuel Standard – Deferrals



Low Carbon Fuel Supply Deferrals

Oregon LCFS: 10 Year Phase-In Conceptual Problem due to Short-term Fuel Disruption

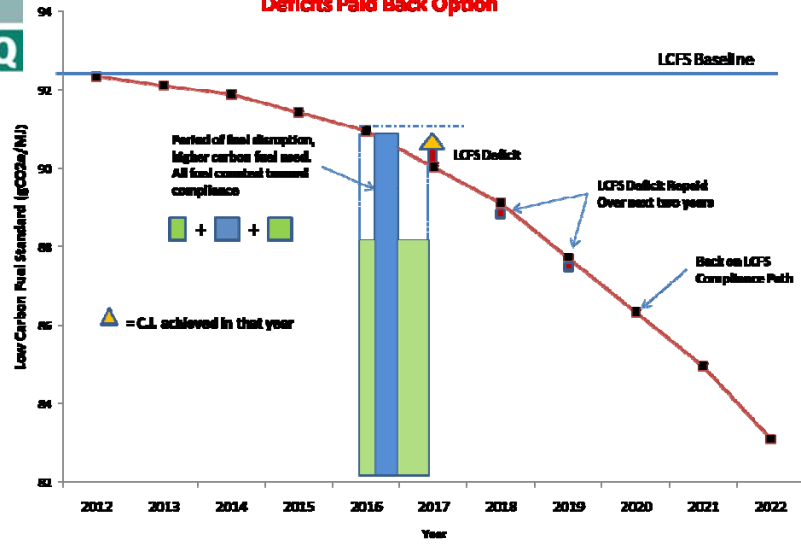


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Low Carbon Fuel Standard – Deferrals

Low Carbon Fuel Supply Deferrals

Oregon LCFS: 10 Year Phase-In
Deficits Paid Back Option

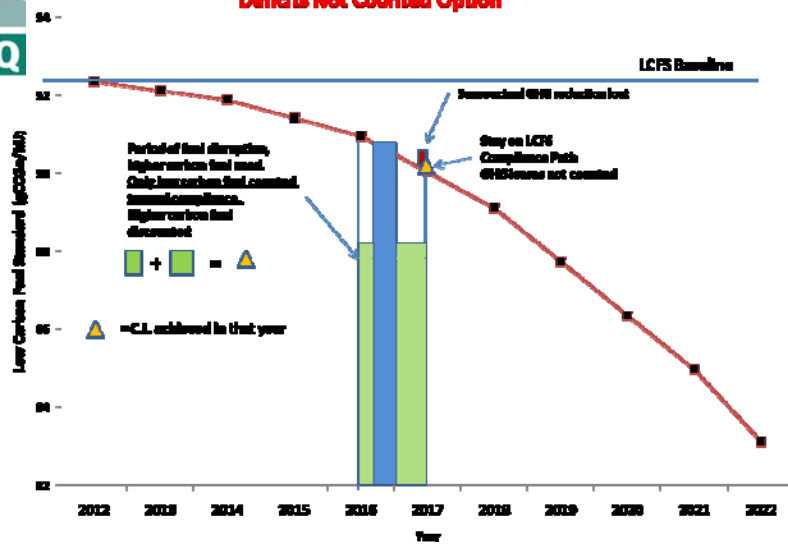


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Low Carbon Fuel Standard – Deferrals

Low Carbon Fuel Supply Deferrals

Oregon LCFS: 10 Year Phase-In
Deficits Not Counted Option

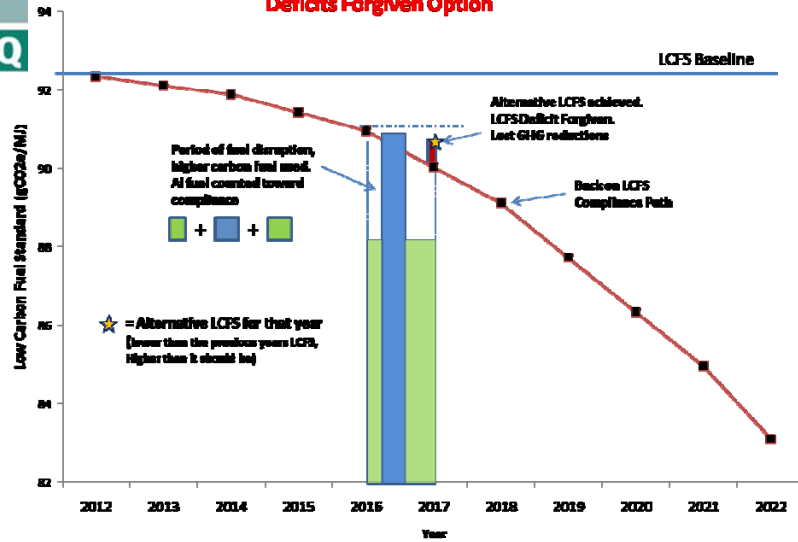


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Low Carbon Fuel Standard – Deferrals

Low Carbon Fuel Supply Deferrals

Oregon LCFS: 10 Year Phase-In
Deficits Forgiven Option

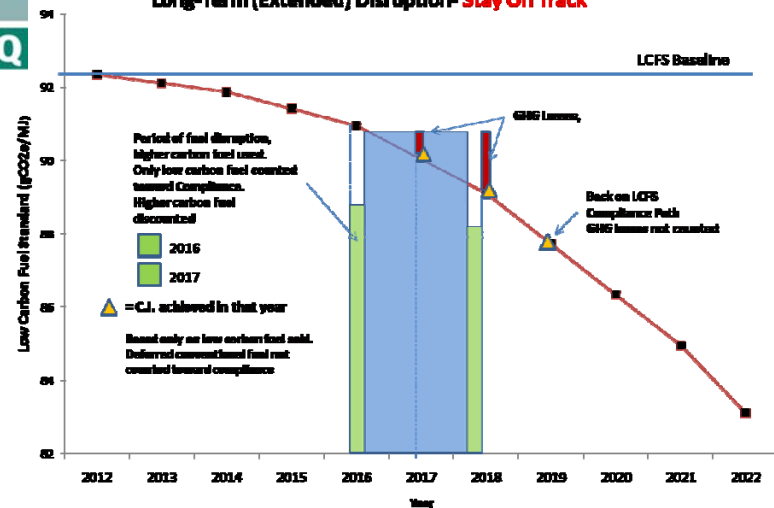


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Low Carbon Fuel Standard – Deferrals

Low Carbon Fuel Supply Deferrals

Oregon LCFS: 10 Year Phase-In
Long-Term (Extended) Disruption- Stay On Track



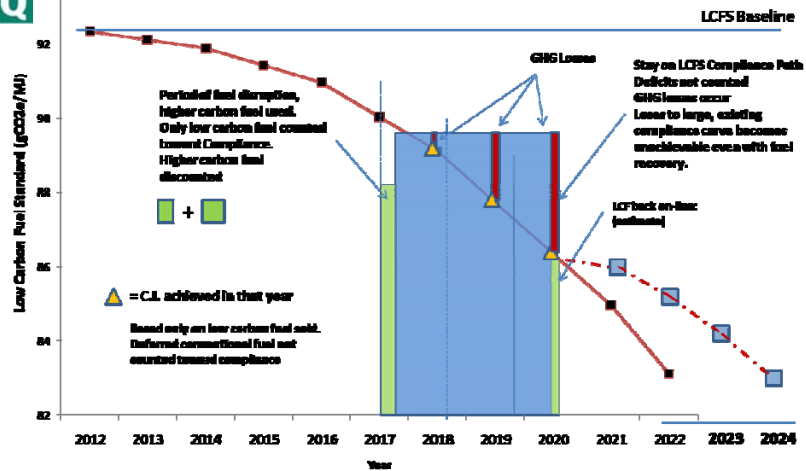
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Low Carbon Fuel Standard – Deferrals



Low Carbon Fuel Supply Deferrals

Oregon LCFS: 10 Year Phase-In
Transition to Forecasted Disruption- Recalculate Compliance Curve



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Low Carbon Fuel Standard – Deferrals



Low Carbon Fuel Supply Deferrals

Unintended consequences

- Effectiveness of LCFS program could be undermined if significant deferrals granted prematurely
- Resource intensive to adequately document and ensure deferrals issued only for disruptions due to interruptions in production and/or transportation.
- Could undermine greenhouse gas reduction goal of program.

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Low Carbon Fuel Supply Deferrals

Unintended consequences (*continued*)

- Excessive deferrals may inhibit or prolong growth of alternate fuels production and use in Oregon, penalize early actors.
- Excessive use of deferrals could act as a disincentive to investments in low carbon fuels.

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Low Carbon Fuel Supply Deferrals

Questions for Advisory Committee

- *At what point does an extended shortage of low carbon fuels necessitate the need to evaluate the overall LCFS program compliance curve and horizon year?*
- *What information would DEQ need to consider in such an evaluation?*
- *What magnitude of greenhouse gas reduction losses would be large enough to warrant a comprehensive program evaluation?*

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Low Carbon Fuel Supply Deferrals

Questions for Advisory Committee *(continued)*

Are significance threshold ranges reasonable?

Short- and Long-Term Deferrals

Significance Testing

- **Proposed Significance Thresholds**
 - When shortage \geq **5-25%** of total low carbon fuel supply, shortage flagged and monitored, by DEQ
 - When shortage \geq **10-30%** of total supply, investigation triggered.

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Low Carbon Fuel Supply Deferrals

Questions for Advisory Committee *(continued)*

Are significance threshold ranges reasonable?

Forecasted Supply Deferrals

Evaluation of Potential Significance

Projections compared to LCFS schedule year:

Forecasted Significance Threshold

- *If projected CI of future fuel mix is **5-25%** more than standard, DEQ will evaluate need for forecasted deferral.*

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Consumer Cost Safety Net

- Discussed at December 2009 Low Carbon Fuel Advisory Committee meeting
- Today: a refresher

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House Bill (HB) 2186

SECTION 6. (2) (d) The commission shall provide exemptions and deferrals as necessary to mitigate the costs of complying with the low carbon fuel standards upon a finding by the commission that the 12-month rolling weighted average price of gasoline or diesel in Oregon is not competitive with the 12-month rolling weighted average price in the PADD 5 region.

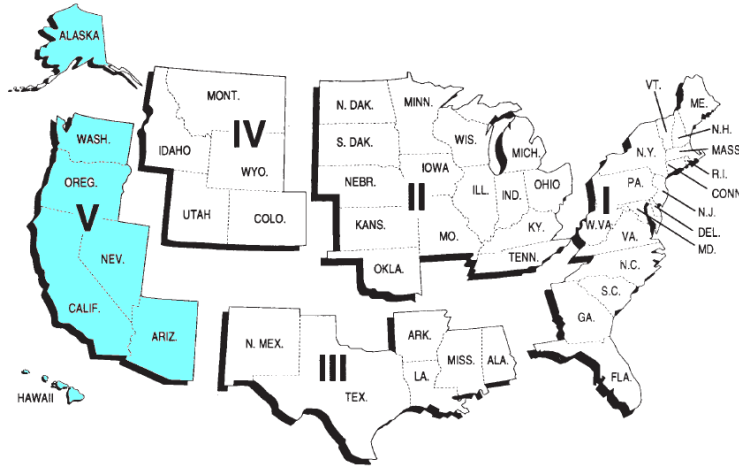
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Low Carbon Fuel Standard – Deferrals



What is a PADD-5?

Petroleum Administration for Defense (PAD) Districts

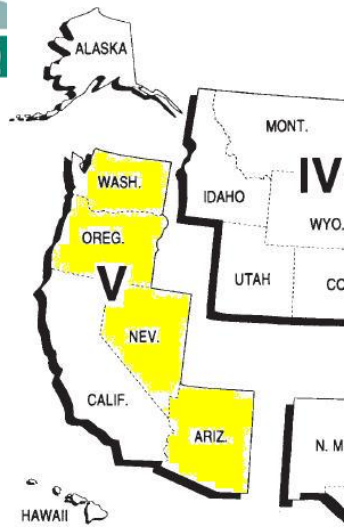


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Low Carbon Fuel Standard – Deferrals



House Bill (HB) 2186: Statutory PADD-5



SECTION 6. (1) (d) “PADD 5 region” means the Petroleum Administration for Defense District 5 states of:

- Arizona,
- Nevada,
- Oregon and
- Washington.

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12-month rolling weighted average

Date	Oregon Avg Monthly Price	Oregon 12-Month Rolling Weighted Avg Price
Jan-06	\$1.77	
Feb-06	\$1.72	
Mar-06	\$1.94	
Apr-06	\$2.28	
May-06	\$2.60	
Jun-06	\$2.55	
Jul-06	\$2.52	
Aug-06	\$2.54	
Sep-06	\$2.36	
Oct-06	\$2.07	
Nov-06	\$2.06	
Dec-06	\$2.19	\$2.22
Jan-07	\$2.14	\$2.25

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House Bill (HB) 2186

Three conditions for using exemptions and deferrals:

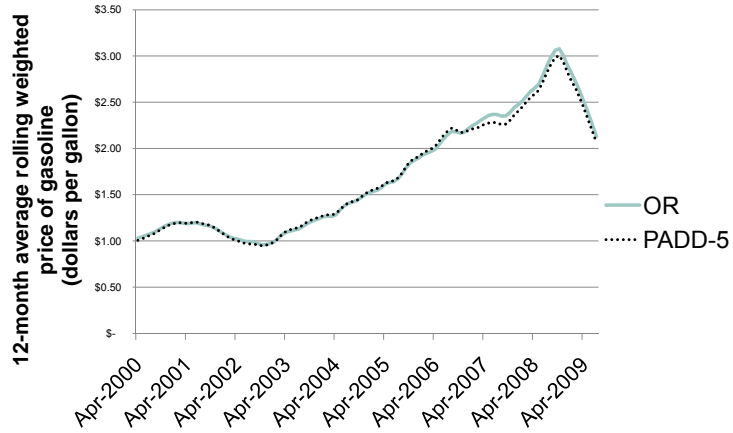
1. Oregon 12-month rolling weighted avg. price of gasoline or diesel is not competitive
2. LCFS caused (or partially caused) the non-competitive price
3. Exemptions and deferrals are necessary to mitigate cost of compliance

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Low Carbon Fuel Standard – Deferrals



12-month rolling weighted average retail gasoline prices:
Oregon and statutory PADD-5

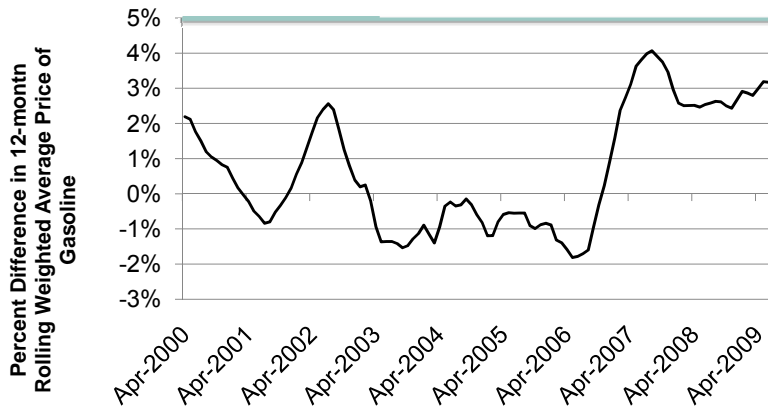


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Low Carbon Fuel Standard – Deferrals



Percent difference: statutory PADD-5 and Oregon 12-month rolling weighted average retail gasoline

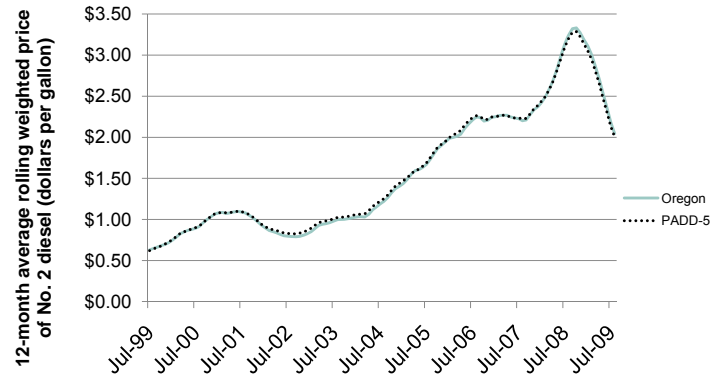


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Low Carbon Fuel Standard – Deferrals



12-month rolling weighted average retail diesel prices: Oregon and PADD-5

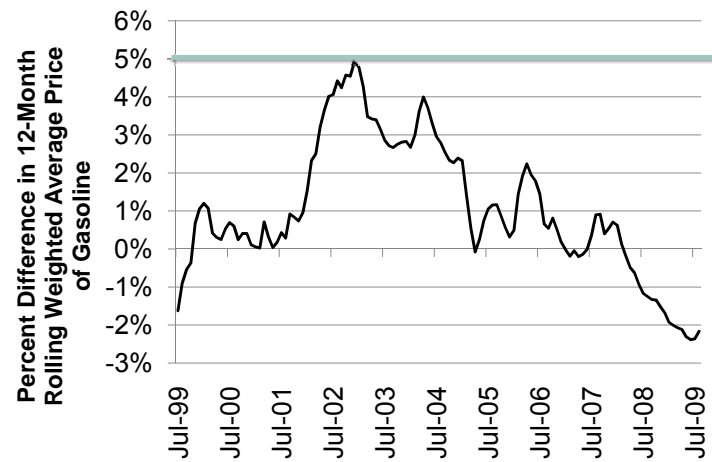


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Low Carbon Fuel Standard – Deferrals



Percent difference: PADD-5 and Oregon 12-month rolling weighted average retail diesel



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Diesel data

1. EIA does not have diesel price data available for AZ or NV.
2. EIA does have diesel available for the actual PADD-5 (which includes OR, WA, AZ, NV, CA, HI, AK)

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Diesel Data available from EIA

Fuel	Volume data available	Price data available
Ultra low sulfur diesel	AZ, NV, OR, WA (data withheld about 1/4 of the time in NV, OR, and WA)	No data available
No. 2 diesel	No data available	OR, WA
No. 2 distillate	AZ, NV, OR, WA (data withheld about 1/2 of the time in NV, OR, and WA)	OR, WA

Data source: Energy Information Administration

- Prime Supplier Sales Volume: http://www.eia.gov/dnav/pet/pet_cons_prim_dcu_nus_m.htm
- No. 2 Distillate Prices by Sales Type: http://www.eia.gov/dnav/pet/pet_pri_dist_dcu_nus_m.htm

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Process

Two ways issue could be brought before the EQC

- When triggered, DEQ investigates and brings a recommendation to EQC
- An entity outside of DEQ can track information, and provide data to DEQ

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Criteria used to determine if LCFS caused the price difference

Causal factors:

- LCFS
- Faulty or incomplete data
- Disasters affecting fuel supply to Oregon only
- Elevated crude oil prices in Alaska or Canada
- Unusual demands
- Change in environmental regs in Oregon
- Arizona discontinues reformulated gasoline

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Criteria used to determine that exemptions and deferrals are necessary

EQC would look at:

- Cause of non-competitive price: if the LCFS did not cause it, then LCFS exemptions and deferrals will not fix it
- Current and future supply of low carbon fuels
- Phase in schedule for low carbon fuel standard

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Proposed Exemptions and Deferrals

- Deferral of low carbon fuel standard for one year
- Exempt or provide a partial exemption for one month to a year:
 - A certain fuel or fuels
 - All regulated parties

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Other issues

- Exemptions and deferrals could penalize early actors
- Rules should provide regulatory certainty
- Exemptions and deferrals could act as a disincentive to low carbon fuel investments
- Unintended consequences?

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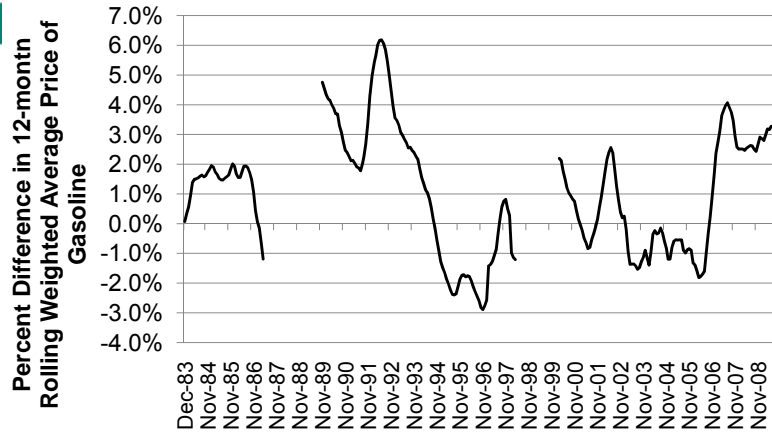
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Low Carbon Fuel Standard – Deferrals



**Percent Difference between OR and Statutory PADD-5
12-month Rolling Weighted Average Retail Price of
Gasoline**

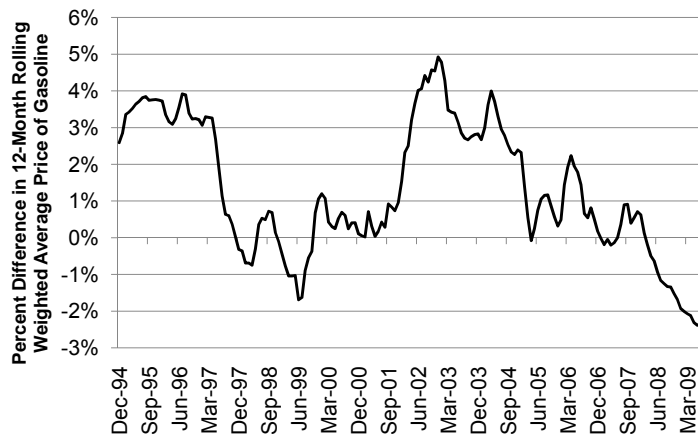


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Low Carbon Fuel Standard – Deferrals



**Percent Difference: PADD-5 and Oregon 12-Month
Rolling Weighted Average Retail Price of No. 2 Diesel**



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