



Clean Fuels Program 2017 Rulemaking Draft Fiscal Impact Statement

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Short summary

DEQ proposes to amend the Oregon Clean Fuels Program (CFP) rules under division 253 of chapter 340 of the Oregon Administrative Rules. The proposed rule changes would complete the implementation of Senate Bill 324 (2015) by adopting more refined rules for managing and containing the costs of compliance with the CFP. DEQ is proposing to add provisions for a Credit Clearance Market (CCM) as an additional cost containment mechanism. In addition, DEQ proposes to amend the CFP rules under division 253 of chapter 340 of the Oregon Administrative Rules to:

- Update several provisions relating to electricity's use as a transportation fuel;
- Add electricity used for certain public transit applications to the program;
- Reclassify renewable hydrocarbon diesel as a regulated fuel because some types of renewable hydrocarbon diesel may have carbon intensities that exceed the clean fuel standard;
- Restrict the transfer of obligation to importers of finished fuels for in-state transactions below the rack;
- Add market monitoring provisions;
- Amend and rename the Emergency Fuel Supply Deferral to include the ability to respond to market disruptions that might cause undue burdens to regulated parties or Oregon fuel consumers;
- Update definitions;
- Streamline and clarify several administrative processes; and
- Update several tables to reflect the latest information.

Brief history

The 2009 Oregon Legislature passed House Bill 2186 authorizing the Oregon Environmental Quality Commission to adopt rules to reduce lifecycle emissions of greenhouse gases from Oregon's transportation fuels by 10 percent over a 10-year period.

The EQC adopted phase 1 rules on Dec. 7, 2012 that required Oregon transportation fuel producers and importers to register, keep records and report the volumes and carbon intensities of the transportation fuels they provide in Oregon.

The EQC adopted phase 2 rules on Jan. 7, 2015 that required Oregon transportation fuel importers to reduce the average carbon intensity of fuels they provide in Oregon by 10 percent over a 10-year period.

The 2015 Oregon Legislature passed Senate Bill 324 that removed the Dec. 31, 2015 sunset date in House Bill 2186 (2009) and further amended the authorizing statute, ORS 468A.275, for the Oregon Clean Fuels Program.

The EQC adopted updated rules on Dec. 9, 2015 to implement SB 324 (2015).

The EQC adopted temporary rules on April 21, 2016 to correct a miscalculation in the clean fuel standards and certain carbon intensity values. Permanent rules for the correction were adopted on August 18, 2016.

Registered parties

The Clean Fuels Program currently has 121 businesses that are registered to participate, representing:

- *Importers of Blendstocks* - These are businesses that import fuel components which can be blended with another fuel component or used alone. There are currently 50 businesses registered as importers of blendstocks.
- *Importers of Finished Fuels* - These are businesses which only import fuels that can be used directly in a motor vehicle, such as clear gasoline, gasoline blended with 10 percent ethanol, clear diesel and diesel blended with 5 percent biodiesel. There are currently 48 businesses registered as importers of finished fuels, 33 businesses are large (500,000 gallons per year and greater) and 15 are small (less than 500,000 gallons per year). Small importers of finished fuels are largely exempted from the program, except for the requirement to register and annual file a report through the agency's greenhouse gas reporting program. To note, this is not the same criteria which is used later in this document to analyze the fiscal and economic impact to small businesses.
- *Oregon Producers of Transportation Fuels* - There are currently two registered Oregon producers of biofuels. One produces ethanol from corn and one produces biodiesel from used cooking oil.
- *Credit Generators* - These are businesses that provide or produce clean fuels (natural gas, renewable natural gas, propane, electricity and hydrogen). These businesses are not required to participate with the program, but must register in order to generate credits if they choose to. Importers of blendstocks and Oregon producers may also generate credits due to the nature of fuels they provide, but an entity registered as a credit generator is doing so solely because it provides clean fuels. There are currently 21 businesses registered as credit generators.

Fiscal and economic impact

The Oregon Clean Fuels Program is a technology-neutral, market-based regulatory approach to reduce carbon pollution from transportation fuels and promote the commercialization of innovative low-carbon alternative and conventional fuels. The program does not mandate the use of any particular type of fuel or technology. Instead, it creates a performance standard to reduce the average carbon intensity of fuels sold by 10 percent over 10 years. The program allows for many strategies to be employed for meeting the clean fuel standards by giving each regulated party the flexibility to consider its particular circumstance, perspective and business needs when devising its strategy to meet the standard.

The scope of this fiscal and economic impact statement is limited to the impact of the proposed rule changes contained in this rulemaking, it does not re-assess the existing CFP in its entirety. The proposed

rule changes fall into four broad categories: a) cost containment; b) market monitoring; c) electricity provisions; and d) miscellaneous regulatory improvements along with two discrete rule changes. The proposed rule revisions are based on discussions and input from DEQ's CFP 2017 Rulemaking Advisory Committee. Here is a brief description of the proposed rules:

- **Cost containment** – There are two proposed rule changes related to containing the potential costs associated with complying with the clean fuel standards: 1) the addition of a credit clearance market; and 2) removing the monthly fuel price deferral. The credit clearance market creates a process where credits can be acquired by regulated parties that need them at the end of a compliance period if they do not generate or purchase a sufficient number of credits to meet their compliance obligations. A maximum price that credits can be purchased for through the credit clearance market will act as a cap for the regular credit market during the rest of the year, as regulated parties may roll over unfilled deficits if they cannot purchase credits at or below that maximum price. The credit clearance market is a much more effective and transparent way to manage the costs associated with the clean fuels program than the monthly fuel price deferral, so DEQ is proposing to remove that deferral.
- **Market monitoring** – There are three proposed rule changes related to improving DEQ's ability to monitor the clean fuels credit market: 1) specifying recordkeeping and inspection requirements for credit transfers; 2) adding provisions to enable the investigation and response to cases of potentially improper credit generation, transfers, fraud, or acts of market manipulation; and 3) amending the emergency fuel supply deferral to also be available to respond to market disruptions. Collectively, these proposed changes will better allow DEQ to monitor credit market prices and trends, and react to instances where abnormal activity might have a negative impact on fuel consumers.
- **Electricity provisions** – There are six proposed rule changes related to electricity used as a transportation fuel: 1) changing the way the carbon intensity values for electricity are calculated; 2) providing more information on how credits will be calculated and generated for residential charging of electric vehicles; 3) adding a backstop aggregator for residential charging of electric vehicles; 4) adding credits from electricity used for public transit vehicles; 5) adding new energy economy ratios; and 6) generating credits from residential electric vehicle charging for 2016 and 2017.

The first three proposed rule changes clarify how credits will be generated and who is able to generate them. For electricity used for charging electric vehicles at residences, a utility is currently designated to generate the credits or it can designate an aggregator to do so on its behalf. If the utility chooses neither, then the proposed rule change would allow DEQ to select a backstop aggregator to receive the stranded credits. The proposed rules establish qualifying criteria, and reporting requirements for a backstop aggregator.

The next two proposed rules would expand the types of electric vehicles that can generate credits and how those credits should be calculated. The proposed rules would add electricity used for public transit such as buses, light rail, street cars or aerial tram as a qualifying transportation fuel and clarifies that the transit agency will be the default credit generator. The proposed rules also add in new energy economy ratios, which are values used to compare the relative energy efficiency of types of vehicles, for the vehicle types described above.

The last proposed rule would allow DEQ to use historical data from 2016 and 2017 to calculate the amount of credits that would have been generated from residential electric vehicle charging over that period. Then, to remain consistent with the proposed hierarchy for credit generation from residential

electric vehicle charging, DEQ would make those retroactive credits available to the electric utility or a designated aggregator first, then to a backstop aggregator.

- *Miscellaneous Regulatory Improvements* – There are five proposed rule changes related to administrative requirements and calculation methodologies: 1) updating definitions; 2) requiring additional information to be submitted for co-processed fuels at existing petroleum refineries; 3) updating the process to obtain a carbon intensity value; 4) requiring compressed natural gas to be reported in therms; and 5) updating several tables to reflect the latest information. These proposed changes are improvements to the current program based on lessons learned from implementing the program since 2016.

There are two additional, discrete proposed rule changes:

- Changing renewable hydrocarbon diesel (RHD) from a clean fuel to a regulated fuel. This proposed change would require that all imported RHD be registered in the clean fuels program and generate credits or deficits based on its individual feedstock carbon intensity values. The current rule only requires registration to generate credits, but some varieties of RHD have carbon intensities that exceed the clean fuel standard, and that therefore result in deficits that will trigger a compliance obligation.
- Restricting the transfer of deficits “below the rack” if the buyer is an importer of finished fuels. The current rules allow for deficits to be transferred from a seller to a buyer at the rack if the buyer is registered as an importer of blendstocks or a large importer of finished fuels. This proposed change will restrict that from happening if the buyer is a large importer of finished fuels; the seller of the fuel will retain the deficits in that situation.

Statement of the cost of compliance

Direct costs to registered parties

All registered parties have direct costs with complying with the clean fuels program. There are administrative costs related to keeping records, submitting reports, responding to investigations and transferring credits. There is also the cost to comply with the clean fuel standards, which requires regulated parties to generate or acquire and retire enough credits to offset the number deficits it generated. Credits can be acquired with low-carbon fuels as they are transacted or separately on the open market. In both cases the implied or discrete prices paid for credits are negotiated between the two counterparties. Regulated parties, such as importers of blendstocks and finished fuels, may also be producers of low-carbon fuels, or have long-term agreements with low-carbon fuel producers that are not indexed to the current price of credits. Thus, the actual cost to comply with the clean fuels standards will vary from party to party, depending on the scope of the administrative costs, how regulated parties source their fuels and other aspects of their business operations.

For this discussion, importers of blendstocks and finished fuels, Oregon producers, and some credit generators are considered large businesses. Some credit generators are considered small businesses.

- For all of the proposed rule changes, registered parties will have to make adjustments to their administrative procedures to comply with the program. The fiscal impact of these changes is minimal.
- For *Electricity Provisions*, there are three parties that might be impacted.

- For transit agencies, there will be credits generated from electric buses, light rail, streets cars and aerial trams. ICF projected between 20,000 – 40,000 credits might be generated from those vehicles between 2018 and 2025. Assuming the current market rate of \$50 per credit, this equates to approximately \$1,000,000 - \$2,000,000 in revenue that can be used to reinvest in those systems or for other purposes.
- For electric utilities or their designated aggregators, they will be eligible to acquire the 2016 and 2017 credits for residential electric vehicle charging if they also choose to generate the credits for 2018. DEQ does not know how many credits will be generated because the information to perform an accurate calculation, namely electric vehicle registration data or the per-vehicle use of electricity, have not been verified.
- For a backstop aggregator, it is difficult to quantify the impact. DEQ does not know which electric utilities will not be registering to participate in the program in the future, nor the number of credits a backstop aggregator will receive. Regardless of the number of credits, the proposed rules will require a backstop aggregator to invest a portion of the revenue from the sale of those credits in projects that support or transform the electric vehicle ecosystem and allow for administrative costs to be funded from credit sales, so the impact to a backstop aggregator itself will be moderate.
- For *Renewable Hydrocarbon Diesel*, the importers of blendstocks might be impacted. Lower carbon RHD will generate credits but the higher carbon RHD would not. The proposed rules will require higher carbon RHD be reported and generate deficits. That change might increase the cost to comply but to what extent will vary from party to party depending on how much higher carbon RHD they chose to supply to Oregon fuel consumers.
- For *Transfer of Deficits*, the importers of blendstock and importers of finished fuels may be impacted. Most sellers of fuels above the rack are importers of blendstocks and they may have more deficits to manage because they will be restricted from transferring them to the importers of finished fuels. Subsequently, the cost to importers of blendstocks might increase while the cost to large importers of finished fuels might decrease, depending on the extent to which the practice for fuel sellers above the rack was to pass the obligation for clear or blended fuels onto fuel buyers below the rack.

Indirect costs to fuel consumers

The cost of complying with the CFP on a per-gallon basis can be calculated using three key pieces of information: 1) the carbon intensity of the fuel, 2) the standard for the year and 3) the price of credits. Here is the equation for that calculation:

$$Cost \left(\frac{\$}{gal} \right) = \left[(fuel\ CI) - (Std) \frac{gCO_2e}{MJ} \right] * (ED) \frac{MJ}{gal} * \left(\frac{1\ ton}{1,000,000\ grams} \right) * (CP) \frac{\$}{ton}$$

Where CI: carbon intensity of the fuel in gCO₂e per MJ
 Std: gasoline or diesel standard in a given year in gCO₂e per MJ
 ED: energy density of the fuel in MJ per gallon
 CP: credit price in dollars per ton

If the carbon intensity of a fuel is higher than the standard, the result can be interpreted as the cost of

compliance. Here is an example calculation for the 10 percent ethanol blended with gasoline (E10) in 2016:

$$\text{Cost} \left(\frac{\$}{\text{gal}} \right) = \left[(98.54) - (98.37) \frac{gCO_2e}{MJ} \right] * (112.63) \frac{MJ}{\text{gal}} * \left(\frac{1 \text{ ton}}{1,000,000 \text{ grams}} \right) * \frac{\$50}{\text{ton}}$$

$\text{Cost} = \$0.000957/\text{gal} = 0.10 \text{ cent per gallon}$

If the carbon intensity of a fuel is lower than the standard, the result can be interpreted as the benefit. Here is an example calculation for the 20 percent used cooking oil biodiesel blended with diesel (B20) in 2016:

$$\text{Benefit} \left(\frac{\$}{\text{gal}} \right) = \left[(84.95) - (99.39) \frac{gCO_2e}{MJ} \right] * (127.50) \frac{MJ}{\text{gal}} * \left(\frac{1 \text{ ton}}{1,000,000 \text{ grams}} \right) * \frac{\$50}{\text{ton}}$$

$\text{Benefit} = \$0.092055/\text{gal} = 9.21 \text{ cents per gallon}$

Both costs and benefits should be considered for this discussion although it is difficult to quantify with any certainty about what the impact on the price of fuels will be.

Fuel suppliers such as importers of blendstocks may generate credits as a result of their own business operations at an internal price that is less than the prevailing market price for credits. Fuel suppliers and credit generators may also enter into long-term price agreements for credits which would insulate them from swings in the market price. The calculations above are idealized, and for this discussion, fuel consumers encompass the general public; large and small businesses; and federal, state or local governments as they all purchase fuel for vehicles.

- For all of the proposed rule changes, fuel suppliers will have to make adjustments to their administrative procedures to comply with the program. The fiscal impact of these changes is minimal.
- For *Cost Containment* – DEQ has spent the last 7 months with the CFP 2017 advisory committee reviewing and discussing the possible addition of one or more mechanisms, or the modification of existing mechanisms, in order to improve the implementation of SB 324 (2015):

“The commission shall adopt by rule provisions for managing and containing the costs of compliance with the standards, including but not limited to provisions to facilitate compliance with the standards by ensuring that persons may obtain credits for fuels used as substitutes for gasoline or diesel and by creating opportunities for persons to trade credits.”

The following excerpt was taken from a discussion paper presented to the CFP 2017 rulemaking advisory committee on November 2, 2016:

Environmental markets are created by governments to allow the private sector to efficiently achieve an environmental goal by averaging out the costs of compliance with a program through the creation of tradeable credits. This allows market forces to work out the most efficient path to getting to the environmental goal of increasing cleaner energy consumption or decreasing pollution.

Oregon’s Clean Fuels Program (CFP) allows regulated parties and credit generators to sell credits created under the program. Now that credits have been generated and transfers are allowed, the environmental market created by the program will help show the cost of reducing carbon intensity

under the program and help ensure the lowest-cost reductions are found across the different fuels in the program.

DEQ administers the CFP credit market in terms of accounting for credit and deficit generation by regulated parties and credit generators, requiring accurate fuel volume and carbon intensity reporting, setting the rules for participation in the credit market, and providing the tracking system for credit transfers. The agency oversees and monitors the credit market both to ensure that it serves the goal of lowering overall compliance costs with the program and that it is as well-functioning and provides as level a playing field for different entities in the market as is possible.

In addition to a well-functioning credit market, stakeholders have also indicated a desire for a new CFP mechanism to further contain the cost of complying with the program. For DEQ, the key question is how to balance the needs of fuel consumers with the impact to clean fuel providers and the environmental goals of the program.

Based on discussions with stakeholders, DEQ is proposing the addition of a credit clearance market. The credit clearance market will act to create a cap on credit prices by providing an alternative mechanism for regulated parties to remain in compliance with the rules if credit prices rise above the maximum price set for the Credit Clearance Market. This approach will strengthen the program by increasing market certainty around the maximum compliance cost for the program, reducing the possibility of credit price spikes, and maintaining the incentive to invest in low carbon fuel production and distribution. Deficits where compliance is deferred by regulated parties after going through the credit clearance market will be assessed a 5% per year interest rate, and must be covered within five years.

DEQ believes that this approach, in concert with the annual fuel supply forecast, will ensure that compliance can be achieved by regulated parties under all possible credit supply outcomes.

The clearance market works by allowing regulated parties to roll over any uncovered deficits at the end of the a compliance period so long as they purchase their pro-rata share of any credits made available for sale through the clearance market. Sellers in the clearance market will agree to sell their credits at a maximum price of \$250 in current dollars for the 2018-2022 compliance years, and \$200 in current dollars for the 2023-2025 compliance years.

The decline in the maximum credit price reflects the structure of the program, where higher credit prices early in the program will result in relatively lower potential per-gallon costs due to the less stringent carbon-intensity standards. As the standards become more stringent towards the program's full 10% target, the lower maximum credit price will moderate that the potential cost per gallon.

DEQ believes that setting the maximum credit price at \$250 and \$200 strikes the proper balance between giving the market enough room to react to changing circumstances and providing the proper degree of fuel price consumer protection. Setting the maximum credit price too low would inhibit the development of the credit market, which would impede the signal to invest in low-carbon fuel production and distribution in Oregon and potentially thwart progress towards the program's carbon-intensity reduction target.

- *For the Electricity Provisions* – The electricity provisions being amended in this rulemaking will likely help lower the costs of the program to fuel consumers by increasing the supply of credits in the market and thus lowering the overall cost of credits in the program.

Impacts to small businesses – businesses with 50 or fewer employees

a. Estimated number of small businesses and types of businesses and industries with small businesses subject to proposed rule.	There are currently 21 small businesses registered with the program, primarily small fuel distributors and small credit generators (electric vehicle chargers and fleets).
b. Projected reporting, recordkeeping and other administrative activities, including costs of professional services, required for small businesses to comply with the proposed rule.	The proposed rule changes would not significantly change the administrative costs for small businesses to comply.
c. Projected equipment, supplies, labor and increased administration required for small businesses to comply with the proposed rule.	The proposed rule changes would not affect these costs.
d. Describe how DEQ involved small businesses in developing this proposed rule.	DEQ convened a 29-member advisory committee that included small businesses and membership organizations that represent small businesses to discuss the proposed rule changes.

Documents relied on for fiscal and economic impact

Document title	Document location
Registration and reporting information from the registered parties	Program files located at: DEQ Headquarters 700 NE Multnomah Street Portland, OR 97232
CFP2017 Rulemaking Advisory Committee meeting materials, including ICF reports	http://www.oregon.gov/deq/Regulations/rulemaking/Pages/cfp2017.aspx

Advisory committee

DEQ received input from the CFP 2017 Rulemaking Advisory Committee on the proposed rules and will also seek input from the same committee for this fiscal and economic impact statement.

As ORS 183.333 requires, DEQ will ask for the committee's recommendations on:

- Whether the proposed rules would have a fiscal impact,
- The extent of the impact,
- Whether the proposed rules would have a significant impact on small businesses; and

- If the committee concludes that the proposed rules will have a significant impact on small businesses, then how DEQ should consider the factors in ORS 183.540 to reduce the economic impact of the rule on small business, to the extent consistent with the public health and safety purposes of the rules.

The following advisory committee work was instrumental to the design of the Oregon Clean Fuels Program.

2015

From July through August 2015, DEQ worked with a 20-member advisory committee that included small businesses. The committee discussed updates to the program proposed in this rulemaking. Membership and meeting summaries are at: [2015 Advisory Committee Information](#).

2014

From June through August 2014, DEQ worked with a 21-member advisory committee that included small businesses. The committee discussed phase 2 design of the Clean Fuels Program. Membership and meeting summaries are at: [2014 Advisory Committee](#).

2013

During the first half of 2013, DEQ conducted extensive outreach to fuel importers and producers across the state to determine who was regulated and non-regulated. This included small businesses. Outreach included a web-based survey, individual phone conversations and in-person meetings in Portland, Eugene, Salem, Medford, Bend and Pendleton.

2012

In May 2012, DEQ convened an advisory committee to focus on the fiscal and economic impact of implementing phase 1. Membership and the meeting summary are at: [2012 Advisory Committee](#).

2009-2010

From November 2009 through November 2010, DEQ worked with a 29-member advisory committee that included small businesses. The committee discussed the design of the Oregon Clean Fuels Program. Membership and meeting summaries are at: [2009 Advisory Committee](#).

Housing cost

As ORS 183.534 requires, DEQ evaluated whether the proposed rules would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel. DEQ determined the proposed rules would have no effect on the development costs because the proposed rules only affect transportation fuels used in Oregon.