Oregon Department of Environmental Quality

Proposed Targets

CFP Expansion 2022 Rulemaking

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The second decade of the Clean Fuels Program will be a critical one for Oregon and the broader transportation sector as we accelerate the transition away from fossil fuels. This memorandum describes DEQ staff intentions for proposing expansion of the program through 2035.

Background

At the RAC #2 meeting, DEQ continued discussions about the potential targets for extending the CFP through 2035. DEQ staff offered a summary of recent legislative and regulatory actions that have influence on how the CFP targets can be achieved. DEQ staff also provided some initial thoughts on what the guiding principles (shown below) should be in proposing targets and solicited specific feedback from RAC members on the potential target and their rationale for those.

The RAC was asked to rank, from highest (1) to lowest (5), the priorities that are most aligned with their consideration of the future CFP targets. Here are the results:

Figure 1. Results from the RAC #3 meeting poll

Breakout discussions

The RAC was then split into smaller groups using the breakout function in Zoom to facilitate detailed discussions about the potential targets. The following questions were asked in each breakout group:

- What priority did you rank highest in the poll and why?
- What elements of the illustrative compliance scenarios do you like/dislike?
- What are the outcomes you anticipate from the new targets? What outcomes do you want to see?

A summary of the feedback is included in the meeting summary for RAC #3[1].

[1] https://www.oregon.gov/deq/rulemaking/Documents/cfp2022m2Sum.pdf

Written comments received

The following organizations provided specific feedback on target setting: 3Degrees, bp, Climate Solutions, Oregon Environmental Council, Oregon Fuels Association, Union of Concerned Scientists, UC Davis, and the Western States Petroleum Association. The comments can be found on the CFP 2022 Rulemaking web page[2]. Here are a few key comments that were particularly helpful to DEQ staff in considering potential targets:

- There are risks of setting the targets too low such as credit prices being too low for investors.
- There is significant upside to more ambitious targets including local community and health benefits, low-carbon fuels innovation, commercialization of low-carbon vehicles, and business investment certainty.
- The current cost containment mechanisms provide stakeholder confidence that the program can remain resilient if actual carbon reduction doesn't occur and provide a safety valve if there are unforeseen credit liquidity challenges.
- Ambitious target setting should be coupled with ambitious broadening of scope and diversity of credit generation opportunities.
- The state should proceed pragmatically and avoid unrealistic targets and focus on reasonable and achievable targets.
- The adoption of the Climate Protection Program creates a backstop to ensure that greenhouse gas emissions reductions will occur and that CFP doesn't have to bear a disproportionate burden.
- Do not increase the standards through 2025 to allow for a smooth transition for low carbon fuel supply growth and time for infrastructure to minimize fuel supply disruptions.

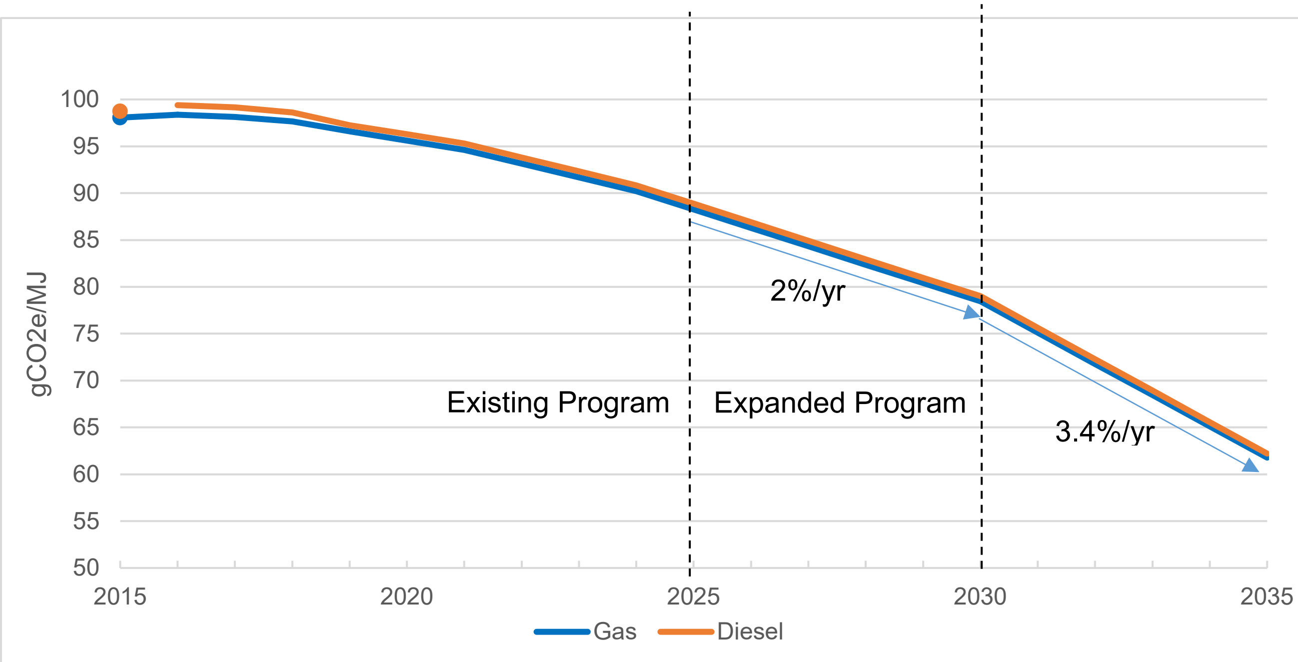
Proposal

DEQ is planning to propose extending and increasing the Clean Fuels Standards to 20% below 2015 levels by 2030 and 37% below 2015 levels by 2035 (shown in Figure 2). These targets are:

- Consistent with Oregon's ambitious long-term carbon reduction goals and strategy, including the targets established in the Climate Protection Program, and supportive of other policies and programs that aim to decarbonize the transportation sector in Oregon,
- Aligned with other low carbon fuel standards on the West Coast, and

[2] https://www.oregon.gov/deq/rulemaking/Documents/cfp2022m2Com.pdf

- Achievable with multiple paths to compliance from different combinations of low-carbon fuels and set at a level that balances the need to incent continued improvements in the liquid fuels while supporting the deployment of mandated zero emission vehicles.



Existing Program	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
% Reduction	0.25%	0.5%	1.0%	1.5%	2.5%	3.5%	5.0%	6.5%	8.0%	10.0%
% Change YoY	0.25%	0.25%	0.5%	0.5%	1.0%	1.0%	1.5%	1.5%	1.5%	2.0%
Proposal for Expanded Program	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
% Reduction	**12.0%**	**14.0%**	**16.0%**	**18.0%**	**20.0%**	**23.4%**	**26.8%**	**30.2%**	**33.6%**	**37.0%**
% Change YoY	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**3.4%**	**3.4%**	**3.4%**	**3.4%**	**3.4%**

Figure 2. Proposed targets and percent (%) reduction and % change year over year (YoY)

Consistent with state's carbon reduction goals

DEQ believes the proposed targets best support the state's broader climate policy framework, providing consistent support for achieving the targets of the Climate Protection Program and Oregon's Zero Emissions Vehicle mandates including the recently adopted Advanced Clean Trucks rule. The pace of change among DEQ's decarbonization programs significantly accelerates towards the end of this decade, and the ambition proposed here for this program best matches that pace of change. Fully implementing and achieving these increased standards will require significant decarbonization through fuel switching, improvements in the carbon intensity of fuels, and accelerating fleet turnover to zero emission vehicles.

Aligned with similar programs and policies

The proposed targets would align Oregon's program with the targets adopted by low-carbon fuel standard programs being implemented in California and British Columbia. Figure 3 below demonstrates the adopted targets in California and British Columbia and the proposed targets in Oregon. All three programs align in 2030 with 20% carbon intensity reduction targets. In addition to low-carbon fuel standards, the three jurisdictions have similar electric vehicle and clean electricity mandates in place. The proposed targets will help to harmonize the three programs and send a consistent policy and market signal along the West Coast.

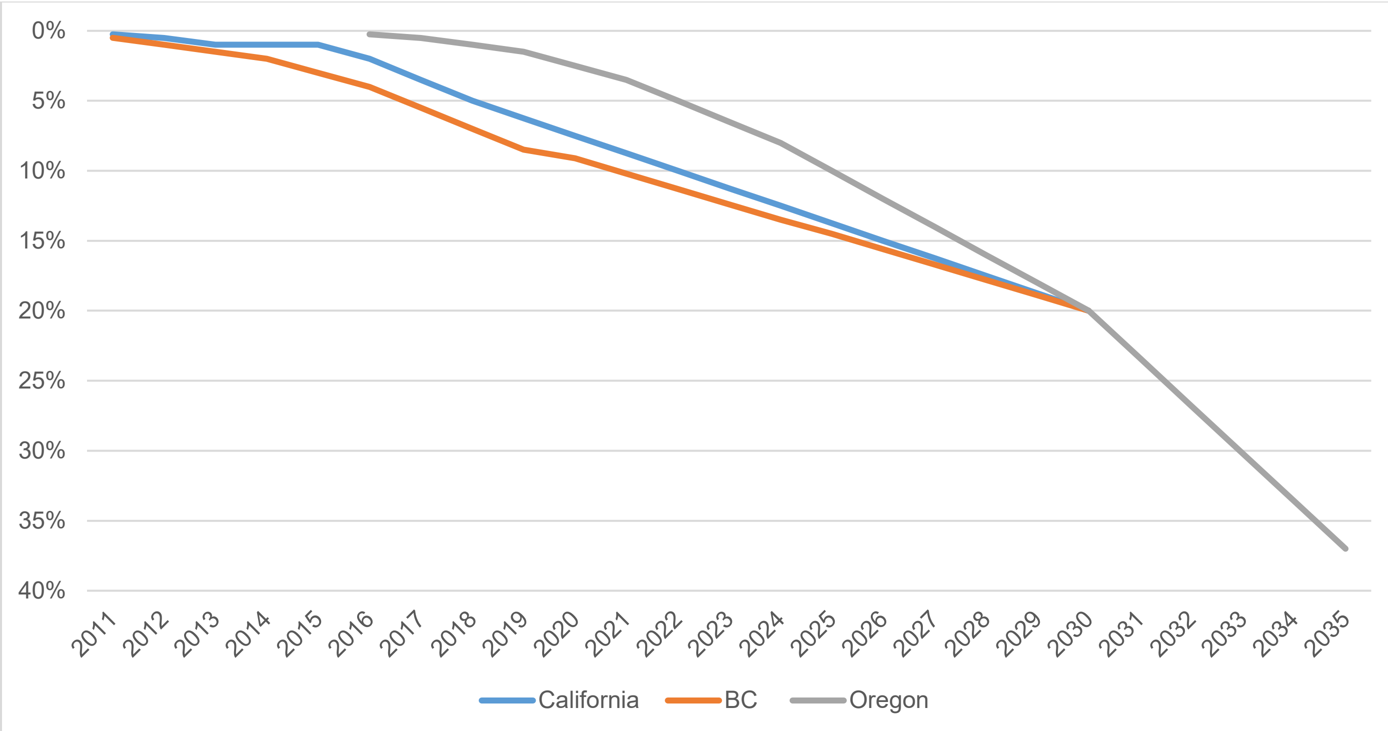
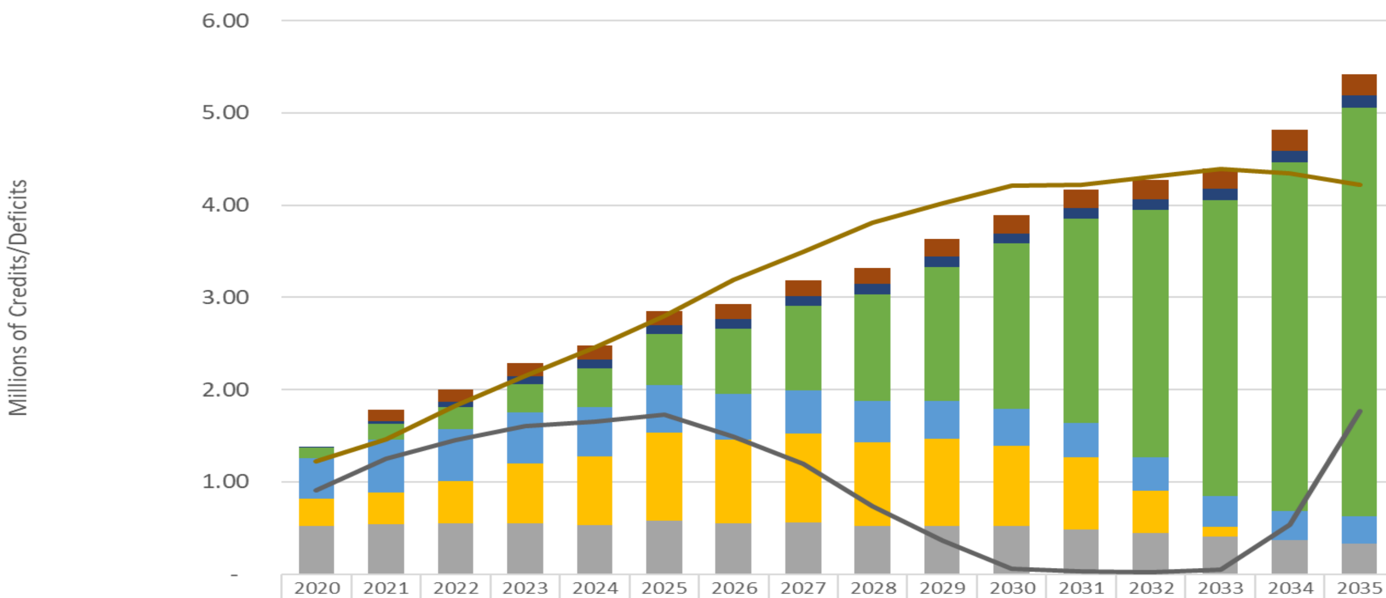


Figure 3. Targets from the Pacific Coast Collaborative LCFS Programs

Multiple paths to compliance - liquid fuels plus electricity

DEQ believes the proposed targets should allow for a wide range of low-carbon fuels to compete as a replacement for gasoline and diesel including ethanol, biodiesel, renewable diesel, renewable natural gas, renewable propane, electricity, hydrogen, and others. This is informed by the Long-Term Illustrative Compliance Scenarios[3] developed by ICF under contract with DEQ. The best example is shown in Scenario C (a combination of multiple fuels), where Scenario A (that relies heavily on a single compliance pathway) provides a useful counterpoint.

In Scenario A below, we see the state's zero emission vehicle mandates leading to a rapid deployment of electric vehicles such that the number of credits from electricity come close to meeting a 25% standard on their own in 2035. This would basically create a future where there would be no need for credits to be generated by any other fuel and would significantly reduce the incentive for other low-carbon fuels and bind the fuels market.



	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
OffRoad Electrification	-	0.13	0.14	0.14	0.15	0.15	0.16	0.17	0.18	0.19	0.19	0.20	0.21	0.22	0.23	0.24
CNG/RNG	0.01	0.02	0.06	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.13
Electricity	0.12	0.17	0.23	0.31	0.42	0.55	0.71	0.91	1.16	1.45	1.79	2.21	2.68	3.21	3.78	4.43
BD	0.44	0.58	0.57	0.55	0.54	0.51	0.49	0.47	0.44	0.42	0.39	0.38	0.36	0.34	0.32	0.30
RD	0.29	0.34	0.46	0.64	0.75	0.95	0.91	0.97	0.91	0.94	0.87	0.78	0.46	0.11	-	-
Ethanol	0.52	0.54	0.55	0.55	0.53	0.58	0.55	0.56	0.52	0.52	0.52	0.48	0.44	0.40	0.37	0.33
Credit Bank	0.91	1.25	1.45	1.61	1.66	1.73	1.49	1.20	0.73	0.36	0.06	0.03	0.02	0.05	0.54	1.76
Annual Deficits	1.22	1.46	1.82	2.15	2.45	2.80	3.19	3.50	3.81	4.02	4.21	4.22	4.31	4.39	4.35	4.22

Figure 3. Compliance graph for Scenario A, from the ICF Final Report on the Illustrative Compliance Scenarios.

In Scenario C below, we see how adding in liquid and gaseous fuels can also contribute additional carbon intensity reductions. The addition of these liquid and gaseous fuels to the electricity shown in Scenario A result in a 37% carbon intensity reduction in 2035. The volumes of these additional low-carbon fuels are aligned with blend rates and carbon intensity values that are supported by data submitted to-date through the CFP by registered fuel suppliers; this is also corroborated by fuels reported in other jurisdictions. In fact, several stakeholders have argued that the assumptions in Scenario C are conservative and will easily be outperformed, especially in the low-carbon diesel substitutes. This overachievement will likely offset any possible underachievement by other fuels and creates a balanced approach to setting long-term targets. In addition, credits from the consumption of sustainable aviation fuel and renewable gasoline were not included in Scenario C.

The modeling of these scenarios indicates that to facilitate the contributions of all of those fuels, it is critical that the 2035 target be greater than 25%. It is commonly understood that while current and future regulations will transition the vast majority of vehicles to zero emission, there will be a continued demand for low-carbon liquid fuels for decades. The

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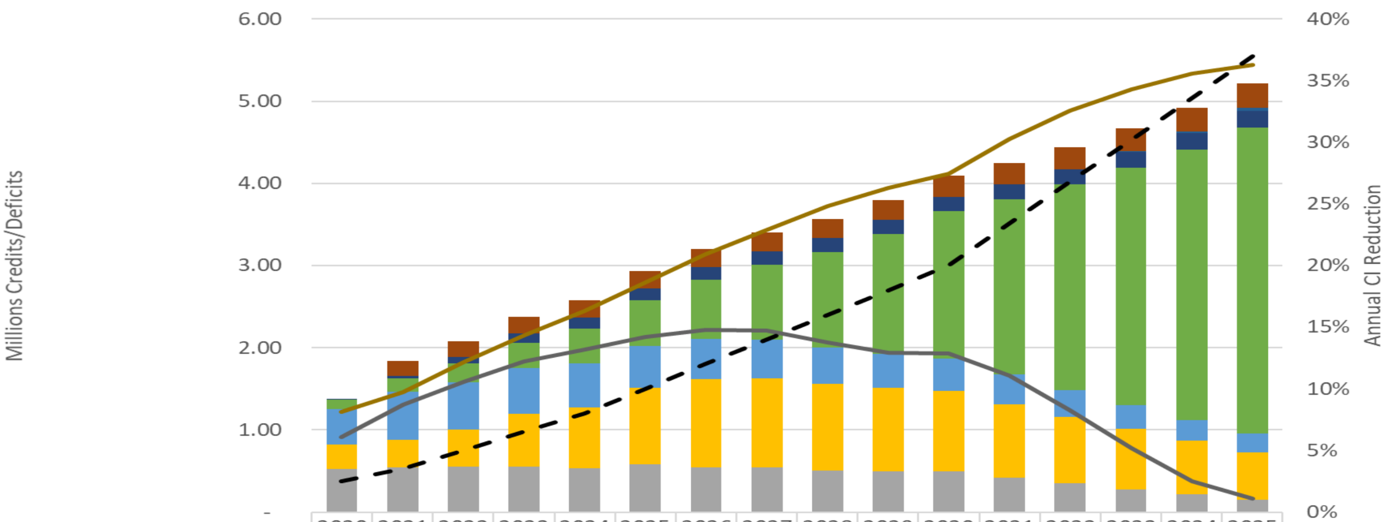
[3] https://www.oregon.gov/deq/ghgp/Documents/cfpIlluCompScenD.pdf

higher target will allow for continued incentives for investments in lower-carbon gasoline and diesel replacements such as ethanol, biodiesel, and renewable diesel, allowing these fuels to maintain their positions in the market.



	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
OffRoad Electrification	-	0.18	0.19	0.20	0.20	0.21	0.22	0.23	0.23	0.24	0.25	0.26	0.27	0.28	0.28	0.29
H2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	0.02	0.04
CNG/RNG	0.01	0.03	0.08	0.12	0.14	0.15	0.16	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.20	0.20
Electricity	0.12	0.17	0.23	0.31	0.42	0.55	0.71	0.91	1.16	1.45	1.79	2.14	2.50	2.89	3.29	3.72
BD	0.44	0.58	0.57	0.55	0.53	0.51	0.49	0.47	0.44	0.42	0.39	0.36	0.32	0.29	0.26	0.23
RD	0.29	0.34	0.46	0.64	0.74	0.93	1.08	1.08	1.05	1.01	0.98	0.89	0.81	0.73	0.65	0.57
Ethanol	0.52	0.54	0.55	0.55	0.53	0.58	0.54	0.55	0.51	0.50	0.50	0.42	0.35	0.28	0.21	0.15
Credit Bank	0.91	1.31	1.59	1.83	1.98	2.13	2.22	2.20	2.06	1.93	1.93	1.66	1.24	0.78	0.37	0.16
Annual Deficits	1.22	1.46	1.82	2.15	2.45	2.80	3.14	3.44	3.73	3.95	4.12	4.54	4.88	5.15	5.34	5.44
CI Reduction %	3%	4%	5%	7%	8%	10%	12%	14%	16%	18%	20%	23%	27%	30%	34%	37%

Figure 4. Compliance graph for Scenario C, from the ICF Final Report on the Illustrative Compliance Scenarios.

Additional Considerations

ICF, under contract to DEQ, published a memo[4] that considers additional credit generation opportunities that may have a material impact on the fuels market through 2035. Credit generating activities such as improvements to upstream agricultural practices, increased use in carbon capture and sequestration technology, and refinery-based improvement projects will likely contribute to greenhouse gas reductions. As outlined by ICF, these activities have the potential to generate significant quantities of credits and DEQ will have to monitor their advancement to ensure that the targets remain appropriate to support a healthy fuels market.

Another important consideration is that there are mechanisms already in established within the program designed to safeguard the supply and cost impacts of transitioning to lower-carbon fuels. These include the annual fuel supply forecast and deferral, as well as the credit clearance market.

Additionally, DEQ plans to conduct a program review for the Oregon Environmental Quality Commissions in 2029. The focus of the program review will be to provide the EQC with progress made in the CFP through the 2028 calendar year and an assessment of whether the 2035 targets remain appropriate or whether modifications are needed.

These mechanisms, along with the continuous monitoring of the CFP market by program staff, will assure that an expanded Clean Fuels Program continues to deliver significant GHG reductions at modest cost to consumers while affording ongoing benefits to the environment, public health and economy of Oregon.

[4] https://www.oregon.gov/deq/rulemaking/Documents/cfp2022m3CreditGeneration.pdf

Next Steps

Written comments on materials presented for RAC #3 will be accepted through April 15th.

The RAC #4 meeting, the last of this phase of the rulemaking process, is scheduled for May 26, 2022. Final proposals for all elements of the rulemaking will be presented at this meeting as well as an analysis of the fiscal and economic impacts of such proposed rules. Comments on materials presented for RAC #4 will be considered and inform the Notice of Proposed Rulemaking which begins the formal comment period of the rulemaking sometime in late June 2022. DEQ intends to propose rule amendments to the Environmental Quality Commission for action at its September 2022 meeting.

Alternate formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.oregon.gov.