



Shell Oil Company
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Houston, TX 77079

July 3, 2018

Sam Wade
Chief, Transportation Fuels Branch
California Air Resources Board
1001 "I" Street
Sacramento, CA 95812
Delivered via website

Subject: Shell comments to CARB regarding the 15-day Notice of Proposed Amendments to the Low Carbon Fuel Standard (LCFS) issued June 20, 2018

Dear Mr. Wade:

Shell Oil Company ("Shell") is pleased to offer comments relating to key policy enhancements that are captured in the 15-day package of proposed amendments to the Low Carbon Fuel Standard (LCFS) regulation, issued on June 20, 2018. Shell specifically would like to express our support for two elements of this program, which cover both the manufacture of liquid fuels for transportation that California requires today and in the foreseeable future; and, a provision to accelerate development of hydrogen fueling infrastructure that ultimately will play a major role in the State's ongoing quest to reduce its greenhouse gas (GHG) emissions. These are both areas in which Shell is respected for our global technical expertise and thought leadership on their future.

The products that Shell has safely and reliably made at our Martinez refinery for over 100 years will be needed in California for many more by the vast majority of its citizens. Continuing to make these fuels in California is the right approach for both the State's economy and reliability of its fuel supply. The Refinery Investment Credit Program (RICP) under LCFS, as amended in this rulemaking package, enables investments to reduce the carbon intensity (CI) of the fuels that Shell produces in California today. The changes that have been proposed by the ARB are pragmatic and will make the RICP workable. We look forward to considering ways for such changes to unlock project opportunities at our Martinez refinery once implemented. Every additional project the proposed changes may ultimately incent, at Shell's refinery and others in the State, will create new jobs and accelerate GHG emission reductions as

well. Many of these projects also will offer criteria pollutant co-benefits. Any such outcome clearly would be a “win-win-win.”

The Hydrogen Refueling Infrastructure (HRI) Pathway is an important step to help the State meet Governor Brown’s formidable goal of the deployment of five million electric vehicles (EVs) in California by 2030, per Executive Order B-48-18. The HRI Pathway proposed in the 15-Day Package will enable the near-term buildout of a critical mass of hydrogen fueling stations to support Executive Order B-48-18.

Californians who must travel longer distances, have limited access to charging at home or work, or prefer refueling over recharging would be well served by fuel cell electric vehicles (FCEVs). Hydrogen also holds significant promise for fueling heavy-duty vehicles. This an important differentiator from other EV platforms, and the ARB is prudent to provide support to FCEVs via the HRI Pathway given these practicalities.

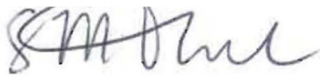
The HRI Pathway has benefitted from eight months of public input and is consistent with Executive Order B-48-18 and LCFS policy intent. The proposed pathway is appropriately constrained to hydrogen fuel, and the unique aspects thereof, and in size and duration and with eligibility requirements to protect against unintended adverse consequences, while nonetheless supporting the low-carbon, clean-air, and EV goals of the State of California. The proposal could be made even more effective without undue impact to the overall LCFS policy with the following amendments:

- Completing well in advance of 2026 the planned evaluation to determine whether HRI application eligibility should be extended beyond 2025 would provide certainty and stability to the market.
- Using an eighteen-hour (18-hour) period, from 0500 to 2300, or 24-hour period according to an established typical fueling profile to determine Design Nameplate Capacity would better align with serving customer demand.
- Requiring company-wide hydrogen supply to be a weighted average CI of forty percent (40%) below the current year gasoline standard pathway (with EER adjustment) for dispensed fuel and a renewable content of forty percent (40%) or greater would ensure development of hydrogen supply that exceeds the requirements of SB 1505 (Lowenthal, 2006), while allowing flexibility in increasing renewable content, decreasing carbon intensity, and developing station capacity.
- Recognizing renewable electricity as such whenever it is used in a hydrogen pathway – including production, compression, liquefaction, distribution, and dispensing – would more accurately reflect choices in electricity supply that impact hydrogen pathway carbon intensity.
- Allowing a maximum quantity of HRI Pathway credits of three and a half percent (3.5%) of overall program deficits would give appropriate running room to enable success with hydrogen infrastructure and supply decarbonization without undue adverse impact to the overall LCFS policy.
- Removing the requirement to report station costs and revenues would avoid commercial difficulty in contracting activities that would inhibit private investment and diminish the efficacy of the HRI Pathway.

- Setting the threshold for qualifying capacity expansion at thirty-five percent (35%) utilization and re-setting the fifteen-year (15-year) crediting period for incremental increases in capacity would avoid a potential unintended result of over-building new station capacity while neglecting existing "mid-life" stations.

We appreciate the consideration that staff has taken to craft thoughtful, effective policy on both the RICP and HRI Pathway proposals, and we look forward to supporting the staff's process and efforts to finalize the LCFS updates over the coming weeks.

Sincerely,

A handwritten signature in black ink, appearing to read "Sara O'Neill". The signature is fluid and cursive, with the first name "Sara" being more prominent and the last name "O'Neill" following in a similar style.

Sara O'Neill
Manager, US West Coast Government Relations