4/22/2019

Dear LCFS Team:

Thank you for the opportunity to comment on the staff Low Carbon Fuel Standard (LCFS) cost containment concepts from the public workshop on April 5, 2019.

The current credit clearance market mechanism creates a "soft" credit price cap; "soft" because the mechanism leaves open possible cost impacts from the program that could extend beyond the capped price, due to, e.g., an expectation of extended credit shortages. Additional steps are warranted in order to: a) safeguard against higher potential costs, b) improve price expectations – an important driver for investment and compliance planning, and c) protect program viability, by increasing the number of circumstances governed by established program rules (and shrinking those that might call for an intervention in the program). The proposed concepts mark an important step in that direction; they "harden" the price cap, without, however making it an absolute price ceiling. As such, it is worth considering when and how ARB would act if a credit shortage beyond the proposed provisions, however unforeseen now, were to occur. The comments below touch on this and several other program aspects, in no particular order.

- *Implications for cost containment for the duration of the program.* The workshop presentation included several scenarios showing how non-metered residential electricity advance credits might impact the flow of ZEV base credits, but not how they might factor into the overall compliance picture out to 2030, which is necessary to assess the proposal's effectiveness. Advance credits up to a proposed cumulative 10 million can significantly bolster near-term protection against a possible credit shortage by relying on a future pool of non-metered residential electricity charging credit generation. The ARB presentation illustrated how these credits are likely to be reliably generated in the future even under relatively slow EV roll-out scenarios, given California's strong push to promote ZEV adoption. However, can later-year credit generation recoup the need to repay advance credits, given the more stringent future standards, and with a margin of error to cover various contingencies, and still meet 2030 compliance? For example, the proposed cumulative 10 million advance credits appears to exceed the credits in the "credit bank" in a high demand/low ZEV world, under parameters used by ARB's illustrative scenarios for the recent rulemaking. (Variability in these parameters may yield a wider range of possible outcomes.) The proposal's "time stamp"– advancing 2026-2030 credits into the 2020-2025 compliance period – leaves open the question of more definitive cost containment for the latter part of the current program, as well as any extension.
- *Consideration of the link between LCFS credits and (declining) CI standards*. LCFS credits represent program-rated GHG emissions reductions relative to a moving (declining) CI standard. Currently, banked credits can be used without limit against future targets, opening up a potential "wedge" whereby the CI rating of the fuel pool actually in use can exceed the CI standard, even as program compliance is met through banked credits (earlier "overcompliance"). This proposal would open up a different kind of wedge, working in the

other direction, whereby use of advance credits necessitates additional GHG savings from the future fuel pool in order to hit CI targets, all else equal. A consideration of the time profile of GHG savings, and CI rating of the fuel pool under program compliance as a result of the proposal would be warranted in any rulemaking.

- *Consideration of technology neutrality*. Non-metered residential electricity credits occupy a unique spot in the LCFS program, due to the regulated nature of the electric utilities and the say the ARB along with other regulatory bodies therefore has regarding methods for credit generation and ownership and use of credit value. Given California's ZEV policies taken as a whole, residential electricity also provides a relatively reliable future pool of credits than other low carbon fuels, subject more directly to changing market conditions and private sector control. For technology neutrality, it would still be worthwhile to consider and lay out the necessary elements to consider advancing credits from a future pool of credit generation, regardless of source. The criteria would provide a useful check against the appropriateness of advancing non-metered residential utility credits, and perhaps open advance credit as an option to other low carbon fuel providers should they deem it worthwhile and meet the criteria.
- *Stance of program relative to metering of residential electricity*. The cost containment concepts depend for their effectiveness upon a reliable pool of non-metered residential electricity credits. At the same time, a push toward energy efficiency and carbon saving throughout the economy in this century points to a need for greater detail residential electricity metering. The LCFS, or any other important state decarbonization program, would ideally send an incentive to increase metering, and not create a disincentive toward metering making substantial inroads. While this is not likely to be an issue in the timeframes currently considered, it would be useful for ARB to acknowledge that the current proposal is not to be construed as a long-term solution to cost containment, should the LCFS continue, without a close look at such potential cross-incentives. For the LCFS or its stakeholders to rely for program stability long-term on less accurate metering of residential electricity would not be desired, and signaling intent at the beginning of the use of the mechanism could prevent this being misconstrued later.
- *LCFS as example for other programs*. Other jurisdictions have used California's LCFS as a blueprint for similar policies. However, not all have the same degree of policy push toward ZEVs as California does, while many do share concerns about cost containment. Because the California approach may not be so easily replicated elsewhere, cost containment aspects of these programs may emerge as more of a patchwork – useful to keep in mind regarding joint impact on low carbon fuel flows and markets, as well as any informal or formal linkage considered among the programs.

Sincerely,

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