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Comments Regarding LCFS Re-Adoption Proposals

Mandatory Re-evaluation of All Carbon Intensity (CI) Values

Under the current regulations, new producers under the Low Carbon Fuel Standard (LCFS) may either submit a Method 1 application and register under a pathway CI calculation that was developed internally by ARB – provided there is one available that fits their fuel production process – or establish a new fuel pathway that is specific to their facility as part of a Method 2 application. Since under the Method 2 application all processes of the registered fuel pathway need to be analyzed and modeled in detail as well as supported by documentation, Method 2 applications are generally more information and resource intensive than Method 1 applications.

ARB has suggested options for incentivizing development of “next generation fuels” and streamlining the process through which CI values are established. The new registration process would effectively replace the current Method 1 and 2 application processes and instead introduce a two-tiered system based on the type of fuel being registered. First-tier fuels would include “conventionally produced first generation fuels”, such as starch- and sugar-based ethanol, biodiesel, renewable diesel, natural gas and electricity, while “next generation fuels”, such as biomethane, cellulosic alcohols, hydrogen, drop-in fuels, etc., would fall into second-tier fuels.

The registration process of first-tier fuels would be streamlined by cutting off decimal places of the CIs and establishing “CI-bins” which would determine the final value based on the CI-range into which the fuel falls. CI’s of second-tier fuel pathways, on the other hand, would be evaluated on a case-by-case basis and a thorough life cycle analysis will need to be performed. This would mean that second-tier fuels are likely to receive a CI that is more tailored to the specific production process, but the fuel producer would need to **submit substantially more supporting information and documentation** throughout the application process.

In the proposal, **ARB would also require re-evaluation of all currently established fuel pathways** registered in the program.

It is EM’s opinion that mandatory re-evaluation of all currently established CI’s would have a negative effect on the program’s progress and pose an unnecessary burden on its implementation.

In addition, ARB proposes to implement an alternative to - or an updated version of - the currently used Greenhouse gases, Regulated Emissions, and Energy use in Transportation (CA-GREET) life cycle analysis model used for establishing CI values. To date, ARB has not provided detailed information on exactly which model is proposed for use in the calculation of CI’s and how the update or replacement of the



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model would affect CI values. While EM does not oppose the change, we believe **it should be an option and not a requirement to update the CI for pathways already approved.**

In the course of the last year, EM has successfully finalized eight pathways under the LCFS for the use of LNG and CNG derived from landfill gas. This was achieved in strong cooperation with ARB staff and is the result of an extensive and methodical analysis of these production pathways. The resulting CI values have been reviewed and approved by ARB and serve as the basis for the evaluation of EM's mid and long-term plans for the development of renewable natural gas based fuel supply to the California market. The requirement of re-evaluating our company's already established CI values adds to the uncertainty of EM's current and future business plans affected by the LCFS.

It is our opinion that a re-evaluation of CI values is a risk factor that motivates companies to rely less on the California fuels market when evaluating future renewable fuel development and marketing opportunities. In order to achieve its goals and maximize its beneficial effect on the California fuels market, the LCFS needs to be seen as a stable, reliable, long term solution. Any actions that could have a negative influence on how the program is perceived by potential developers and marketers in the renewable fuel market need to be carefully evaluated.

To reduce the potentially adverse effects of the mandatory re-evaluation of CI's, EM proposes to **allow for some of the currently established CI values to remain unchanged (grandfathered) after re-adoption of the program**, provided certain criteria are met. EM believes that ARB's proposed two-tiered producer facility registration process provides an ideal opportunity for further incentivizing the development of next-generation renewable fuels. Through allowing grandfathering of CI's that were established through a Method 2 process and which would fall into the second-tier after adoption of the new facility registration approach, a clear signal would be sent to developers of and investors in low-carbon fuels that the LCFS is and will remain a stable, risk-free environment for maximizing the value of their future product.

It is EM's opinion that the successful completion of a Method 2 application process already provides sufficient assurance that the resulting CI under the current regulations represents an accurate and reliable assessment of the fuels' GHG emissions and is the result of a detailed, pathway-specific analysis. Based on the above, it is our view that the option of grandfathering currently established CI's of future second-tier renewable fuels would not have a negative impact on the accuracy of CI values and would provide the benefit of sending a strong, encouraging signal to developers of and potential investors in next-generation renewable fuels.

Cost Containment Provisions

ARB proposed several mechanisms that aim to control the maximum cost of compliance under the LCFS. All of these proposals effectively establish a "price cap" for LCFS credits.



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While EM recognizes the need for market certainty and supports solutions that contribute to the creation of a stable, low-risk program, it is our view that this may only be achieved through providing these benefits to all stakeholders. While a price cap protects deficit-generators under the program, key parties essential to achieve the goals set forth by the LCFS – the renewable fuel producers, developers and marketers – need to be able to operate with similar assurances. This could be achieved by introducing mechanisms that create a “price floor” for LCFS credits – a minimum price threshold that any LCFS credit sales would need to reach.

Since a price floor, in EM’s opinion, may be easily implemented in the reporting procedure of LCFS credit transactions (e.g. a simple check of the LCFS Reporting Tool’s corresponding field), no legislative action or active involvement of ARB in the trade of credits would be necessary. A minimum price for LCFS credits would greatly increase investor trust in projects supplying renewable fuel to the California market since it would effectively establish the minimum level of value added to low-carbon fuels by the program.

EM also believes that a reasonable price collar could not be of any harm to stakeholders since the LCFS credit marketplace has been successfully operating, up until recent events, at different price levels without any damage to the fuel producers or consumers. Current markets, like the Connecticut Class III REC market, have used price floors to give price certainty in oversupplied markets. This would help producers survive during what appears to be years of oversupply until we get past 2020 when demand actually may exceed supply.

Modification of Compliance Curves

ARB expects the LCFS regulatory standards to remain at 2013 levels through 2015 and proposes a “curve-smoothing” for compliance levels in the years following 2015. This would result in the compliance levels gradually returning to those determined in the LCFS regulations as opposed to recovering to the originally planned levels after 2015.

It is EM’s opinion that the **curve-smoothing would have multiple undesirable effects on the program** as a whole, potentially endangering achievement of its goals.

Post-2015 regulatory standard levels that are below those expected could result in an undesirably high amount of accumulated LCFS credits. The excessively high amount of banked credits could affect the LCFS credit prices, potentially endangering operations of renewable fuel suppliers to the California fuel market.

Additionally, due to low regulatory compliance level standards, parties regulated under the LCFS would not use their annually generated credits, but instead accumulate and bank them potentially until 2020 or beyond to use against their 10% (or higher) requirement. This, however, would effectively **preclude the California fuel industry from reaching the goal of 10% GHG emission reductions** due to the fact



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that the requirements would be met mostly through the use of previously generated credits. The California fuel industry could fail to realize its potential for evolving into a leading low-carbon transportation fuel industry.

“Curve-smoothing”, through effectively cutting compliance levels, would also send a clear and negative signal to potential developers in and investors of the California renewable fuel industry. The main incentive under LCFS for the development of low-carbon fuel solutions lies in the revenue stream from the sale of LCFS credits. Lowering compliance levels lowers these expected revenue streams and increases risks associated with future benefits from the LCFS program.

Effectively, all curve smoothing will do is increase the large bank of credits that will be used toward future compliance. ARB has said that they will be happy if they meet the 10% goal in 2020, but that would not actually occur. It is more likely that they hit 5% or 6% and meet the remaining gap with banked credits that were the result of reduced mandates as a result of the court case and potential “curve shaping,” which is not the intent of the program.

EM recognizes that it is in the interest of all stakeholders to create a long term, sustainable renewable fuels program in California and that this may require some degree of flexibility in the approach used to achieve the goals set forth in the LCFS. However, we firmly believe that a direct and immediate reduction of carbon reduction requirements is not only unnecessary, but – as detailed in the above – will do serious harm to the LCFS program as a whole. Due to the many risks and pitfalls involved in the modification of the program’s core values, any steps involving adjustment of compliance levels should be strictly limited to a regulatory framework whose aim is to provide long term stability to the LCFS credit market. This framework should combine cost containment and other mechanisms and only apply any modification to compliance levels as a “last resort”. As such, discussion of **“curve shaping” should only occur lock-step with cost containment** and should not be offered as a continued free pass to compliance entities.

As an example of introducing modification of compliance levels as an element of a system of checks and balances to the LCFS credit market, we would suggest following two approaches:

- If the “Credit Clearance” tool for cost containment under the re-adopted LCFS is implemented, we would suggest that a temporary reduction of the following year’s compliance levels only be applied if the amount of credits pledged for the clearance period by suppliers does not reach X% (e.g. 1%) of the total carried over deficits. In this scenario, it is reasonable to assume that the LCFS credit market is undersupplied and thus a temporary downward adjustment of compliance levels may be warranted to preserve the program and mitigate negative effects on stakeholders. This should of course be accompanied by measures that ensure that compliance entities are not deliberately holding off on purchasing credits in order to increase the amount of carried over deficits, which would lower their obligations for the next year. Such measures could include a reasonably high price cap in the clearance period (to incite pledging of credits) and a limitation



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on the maximum amount of carried over deficits (e.g. Y% of the regulated entities' total yearly deficit).

- As an additional part of a price floor mechanism (please see details in previous section), annual compliance levels could be increased if the weighted average price for LCFS credits in any given year do not exceed the price floor by a predetermined amount. For example, if the price floor for LCFS credits is \$25 and the weighted average price for LCFS credits in CY 2016 does not exceed \$30, that would mean that sufficient supply of cost competitive renewable fuels is available on the CA market, and thus compliance levels could be adjusted upward to follow the development of the state's renewable fuels industry.

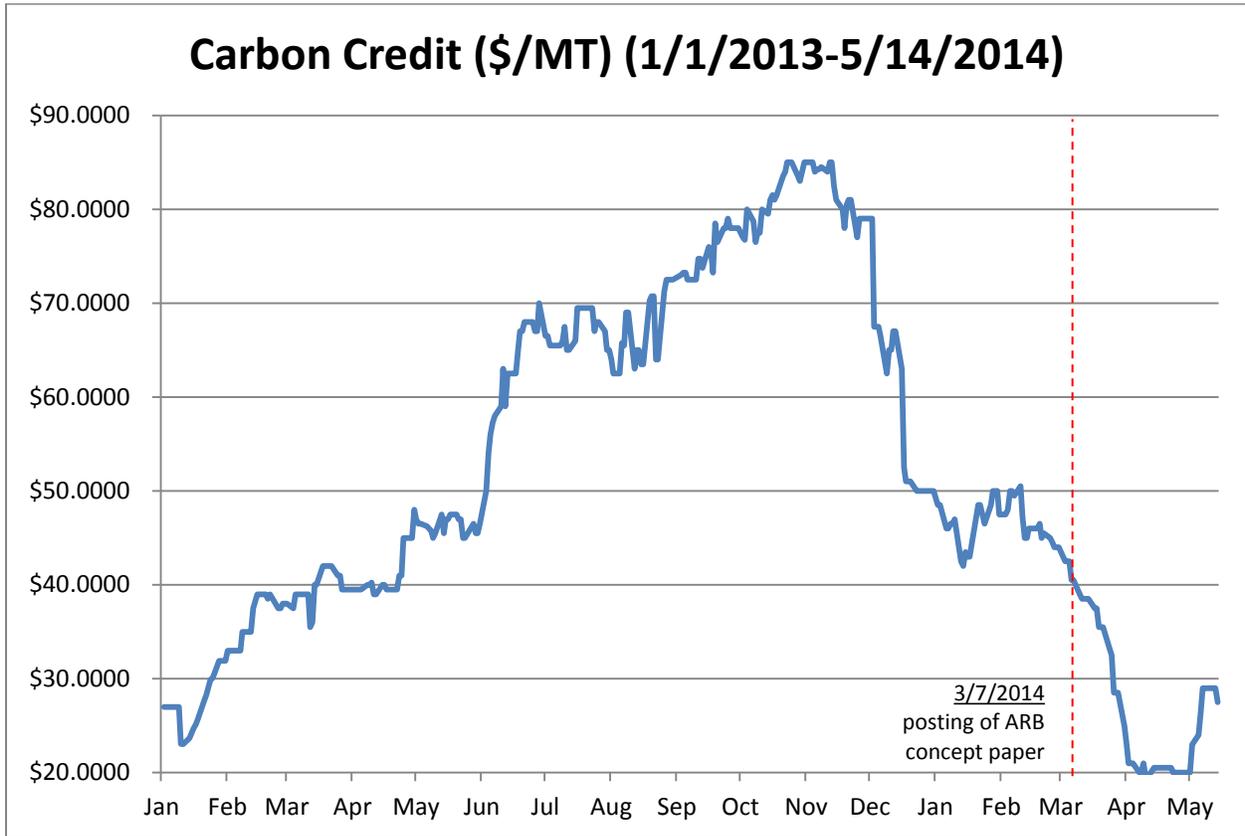
Conclusion

The changes proposed by ARB as part of the re-adoption process of the LCFS were first posted on the [ARB website](#) on 3/7/2013 and publically discussed by ARB staff on 3/11/2014 during a public workshop. It is EM's opinion that the drastic changes in the LCFS marketplace since the announcement reflect our concerns regarding the effects of the proposed changes.

The chart below shows pricing of LCFS credits in the last year. EM believes that the current steep negative trend of LCFS prices can be attributed to the effects of ARB's proposals suggesting to market participants that LCFS credits are expected to be in oversupply and that stabilization of the program is unlikely to come about in the near future.



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Source: OPIS