

Addressing Indirect Land Use Change in the NEMA LCFS

Options for Discussion with Stakeholders

September 29, 2010

This presentation presents options for consideration and discussion with LCFS stakeholders.

These are not recommendations for an LCFS program framework.

Context

- Governors and commissioners have indicated that the LCFS program must address indirect land use change (iLUC) emissions
- A LCFS program objective is to reduce the carbon intensity of fuels by encouraging the introduction of second generation biofuels, electricity, compressed natural gas, and other emerging transportation fuels that are anticipated to have low or zero iLUC.
- No decisions have been made regarding the iLUC approach that will be used; commissioners do not expect to make recommendations to Governors until late fall or early 2011 and will consider the iLUC issue within the context of the regulatory framework for the entire program

Background

- The LCFS accounts for the full lifecycle emissions of GHGs of competing fuels; these include both direct and indirect emissions
- Increasing the amount of land devoted to crops used as feedstock for biofuels leads to land-use changes on a global scale
- The associated indirect land-use change effects can have a significant impact on the lifecycle GHG benefits achieved by an LCFS

3 Possible Options for Addressing iLUC

1. Quantitative
2. Qualitative
3. Uncertainty Factor

3 Options: Common Elements

- All options address inclusion of biofuels in LCFS only; similarly, all 3 options would allow any biofuels to be sold in the region, without restrictions.
- Under any option, LCFS may include a process to allow fuel providers to demonstrate the use of feedstocks and/or practices that prevent or minimize the risk of iLUC impacts.
- No decisions have been made at this time; states are still gathering information and encouraging discussion.

Quantitative Option

- Assign a point estimate value for iLUC emissions to each biofuel pathway that is added to the direct emissions value to generate a total CI score
- Total CI scores of biofuels would then be used directly to calculate credits or deficits, as in CA LCFS
- Could use iLUC values derived from either or both of the CA and EPA programs (or full lifecycle CI scores from either program)
- CARB has assembled an Expert Workgroup to evaluate shortcomings of and improvements to their quantitative modeling approach, as well insights on alternative approaches to estimating iLUC impacts.

Qualitative Option

- Biofuels that have high risk of iLUC emissions would be ineligible for use as low carbon fuels, with no positive or negative impact on compliance with regional LCFS (i.e., no credits or deficits would be generated by the use of these fuels)
- Waste-based biofuels with low or zero risk of iLUC emissions would be eligible for credits based on direct emissions only (as in other options)
- Emerging fuels with uncertain risk of iLUC emissions (e.g., fuels made from forest-based feedstock, some forms of cellulosic ethanol, etc.) would be evaluated as they are developed

Uncertainty Factor Option

- Include uncertainty factors in CI scores for biofuels to account for the risk that fuel feedstocks which compete with other land uses (e.g., food crops) will result in land use changes that are toward the upper end of the ranges reported as possible by CA, EPA, and academic researchers
- Biofuel CI scores would be the sum of direct emissions, indirect emissions, and an uncertainty factor
- Biofuel CI scores (including uncertainty factors) would then be used directly to calculate credits or deficits.

Next Steps

- Comments and a follow-up call
- Report to Steering Committee on the meeting
- Meetings with other stakeholder groups
- Joint stakeholder meeting planned for late fall