



May 7, 2010

Arthur Marin  
Executive Director  
Northeast States for Coordinated Air Use Management  
89 South Street, Suite 602  
Boston, MA 02111

**RE: Low Carbon Fuel Standards – Draft Data and Assumptions for  
Economic Analysis of the Northeast/Mid-Atlantic LCFS, Part 1**

Dear Art:

On behalf of the Consumer Energy Alliance, I would like to thank you for the opportunity to submit written comments regarding NESCAUM's current development of a framework and model legislation for a Northeast – Mid-Atlantic Low Carbon Fuel Standard.

Consumer Energy Alliance (CEA) is a nonprofit, nonpartisan organization that supports the thoughtful utilization of energy resources to help ensure improved domestic and global energy security and stable prices for consumers. We seek to help improve consumer understanding of our nation's energy security, including the need to reduce reliance on imported oil and natural gas, maintain reasonable energy prices for consumers, properly balance our energy needs with environmental & conservation goals and continue efforts to diversify our energy resources.

CEA is made up of more than 140 affiliated organizations and over 275,000 grassroots members and our mission is to expand the dialogue between the energy & consuming sectors to improve overall understanding of energy security and the thoughtful development and utilization of energy resources to help create sound energy policy and maintain stable energy prices for consumers.

As you and the staff at NESCAUM develop an economic and cost-benefit analysis regarding the potential adoption of a regional low carbon fuel standard, we urge you to consider the following comments:

GHG Reductions from Low Carbon Recovery Systems

It is important that carbon intensity reductions in the production of heavy oil and oil sands through the incorporation of Low Carbon Recover Systems be incorporated into the analysis conducted by NESCAUM staff.

Despite repeated claims about the high GHG intensity of fuels derived from the Canadian oil sands, the energy used in oil sands production – as well as GHG intensity – has declined by 39% since 1990 and a recent study conducted by Jacobs Consultancy has found that overall lifecycle GHG emissions of fuels derived from the oil sands are comparable to conventional oil production (both domestic and imported slates).

Further, the development of new in-situ extraction methods are currently under development and testing that will significantly reduce GHG emissions levels. These Low Carbon Recovery Systems – including technologies that heat bitumen with electric current instead of steam, use underground combustion to warm the bitumen and reduce or eliminate the use of steam by adding solvents to the extraction process.

These advances in extraction processes, as well as enactment of GHG regulations by the Government of Alberta in 2007 requiring a 12% reduction in GHG intensity will provide significant additional reductions that are projected to drive the lifecycle GHG emissions from oil sands productions below the levels of conventional imports.

CEA believes that the costs and benefits of such developments should be analyzed and considered as part of NESCAUMS comparative analysis.

#### LCFS Carbon Reduction Benefits

NESCAUM staff assumes that the 11 State region under consideration is “closed” and intends to evaluate only GHG emissions that will happen within the region and will not take into consideration “leakage” (the transfer of high carbon emitting activities to another area as a response to the imposition of state or regional regulations).

However, neither a Northeast – Mid-Atlantic regional LCFS nor a nationwide LCFS would actually have a discernable effect on carbon emissions – either nationally or world-wide. In the event that a region-wide LCFS is implemented, producers and refiners will simply shift the supplies of fuels derived from heavy oil and oil sands to other markets. Assuming that the heavy oil and oil sands generally delivered to the Northeast and Mid-Atlantic are transported to other markets via ship and are replaced by fuels derived from Middle Eastern crude delivered to the region via ship, there will actually be a net increase in global GHG emissions.

CEA urges NESCAUM staff to include GHG emissions “leakage” and the increased transportation-related emissions into account when calculating the GHG emissions reduction benefits of a region-wide LCFS.

#### Technology Deployment Estimates

NESCAUM’s request for input regarding estimates of technology deployment raises critical issues regarding the implementation of a regional LCFS as any state contemplating the imposition of a Low Carbon Fuel Standard will have to make a policy decision regarding the use of corn-based ethanol as a compliance option. As we have seen in the development of California’s LCFS, this policy decision has been wrapped into a debate over the use of indirect land use factors in determining the lifecycle GHG value for corn-based ethanol.

If indirect land use factors are not considered in determining the lifecycle GHG value for corn-based ethanol (ie., corn-based ethanol will be allowed as a compliance option for the LCFS) then most experts agree that utilization of higher blend rates will be the cheapest available compliance mechanism to meet the LCFS. However, use of ethanol as the primary compliance mechanism raises significant logistical issues within the transportation sector.

If NESCAUM recommends an LCFS that requires a 10% reduction in the GHG content of the gasoline supply over 10 years (as all major LCFS proposals have called for) and accepts the EPA estimates that corn ethanol has a lifecycle GHG value roughly 20% lower than gasoline, fuel sellers will need to blend enough ethanol into the fuel mix to ensure a 40% ethanol blend (E-40). Further, if NESCAUM assumes that the fuel baseline contains a 10% ethanol blend (E-10) – which is currently the standard fuel mix throughout the Northeast and Mid-Atlantic, then fuel sellers will need to achieve a 50% ethanol blend (E-50) in order to meet the 10% GHG reduction.

Although ethanol can be blended at a 50% rate – an E-50 blend will require the use of flex fuel vehicles that are able to handle the corrosive effects of the ethanol and gasoline stations will have to replace all of their regular gasoline pumps with new pumps designed to handle the E-50 blend.

According to the US Department of Transportation, there are currently 28.5 million cars registered in the 11 states that are currently working with NESCAUM to develop its regional LCFS proposal<sup>1</sup> – and less than one percent of those cars are flex fuel vehicles.<sup>2</sup> Turning the fleet over to flex fuel vehicles will take a dramatic change in the current manufacturing plans of all major auto producers – both domestic and imports. Last year, only 1.4% of all cars sold in the United States were flex fuel vehicles (we do not have the percentage of cars sold into the Northeast and Mid-Atlantic region) – and those cars are projected by US DOT to last an average of 13 years of service.<sup>3</sup> Even if all of the automobile producers were to produce 100% flex fuel vehicles beginning in 2010, there would still be a large number of non-flex fuel vehicles on the road in 2020 that would be damaged by use of an E-50 blend.

The same situation arises for gasoline pumps. In order to handle gasoline with an ethanol blend over 10%, gasoline storage tanks and pumps that are currently utilized by gasoline stations will need to be replaced with special tanks and equipment – which are currently projected to cost between \$50,000 and \$200,000 per location.<sup>4</sup> Given that there are currently only 101 E-85 ethanol pumps in the 11 state region (including none in Maine, Vermont, New Hampshire and Rhode Island)<sup>5</sup>, tremendous logistical hurdles will need to be overcome in order to ensure that the 20,660 gas stations in the region are capable of handling the E-50 blend that will be necessary to meet the LCFS.<sup>6</sup>

However, it appears (based upon the assumptions that NESCAUM staff has published for comment) that indirect land use factors are going to be considered in determining the lifecycle GHG value for corn-based ethanol (as in California), then corn-based ethanol will not be a compliance option and fuel sellers will be forced to buy credits generated through the use of natural gas vehicles, electric vehicles or the production and blending of cellulosic ethanol.

As the NESCCAF Report details, successful implementation of a LCFS designed to achieve a 10% GHG reduction through the use of advanced fuels (cellulosic ethanol) and/or advanced technology vehicles (natural gas and electric) will require a very rapid commercialization of technologies that are presently in the pre-commercial stage and that while the outlook of these technologies is promising, the volumes that

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<sup>1</sup> US DOT, Federal Highway Administration (<http://www.fhwa.dot.gov/policyinformation/statistics/2007.mv1.cfm>).

<sup>2</sup> US DOT, FHA (<http://www.nhtsa.dot.gov/cars/rules/rulings/CAFE/alternativefuels/index.htm#content>).

<sup>3</sup> US DOT, NHTSA (<http://www-nrd.nhtsa.dot.gov/Pubs/809952.pdf>).

<sup>4</sup> National Association of Convenience Stores ([http://www.nacsonline.com/NACS/Magazine/PastIssues/2007/January2007/Pages/cover\\_story.aspx](http://www.nacsonline.com/NACS/Magazine/PastIssues/2007/January2007/Pages/cover_story.aspx)).

<sup>5</sup> E85 Refueling Location Search (<http://www.e85refueling.com/>).

<sup>6</sup> US Department of Commerce, Economics and Statistics Administration, Census Bureau.

would be required in order to meet a 10 percent LCFS by 2020 greatly exceed the volumes that have been produced to date.<sup>7</sup>

We would respectfully add that the volumes necessary to meet a 10 percent LCFS are not only substantially higher than volumes produced to date – they also greatly exceed current projections of possible production by 2020 as well.

CEA urges that NESCAUM appropriately evaluate the significant cost implications of reliance on unproven technologies that are not commercially available when evaluating when conducting a cost-benefit analysis of a regional LCFS that includes indirect land use values in calculating the lifecycle GHG value of corn-based ethanol.

Conversely, CEA urges that NESCAUM appropriately evaluate the significant cost implications of relying on corn-based ethanol as the primary compliance method for meeting a regional LCFS that does not include indirect land use values in calculating the lifecycle GHG values of corn-based ethanol – including the infrastructure changes and forced use of flex-fuel vehicles necessary to comply with an effective E-50 mandate.

### **Conclusion**

On behalf of the Consumer Energy Alliance, I appreciate the opportunity to provide these comments and look forward to working with you and the NESCAUM staff as you continue your deliberations on the development of a Northeast – Mid-Atlantic Regional Low Carbon Fuel Standard.

If you have any questions about the points that we have raised in these comments, please feel free to call me directly at 202-674-1750.

Sincerely,



Michael Whatley  
Vice President

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<sup>7</sup> NESCCAF, “Introducing a Low Carbon Fuel Standard in the Northeast: Technical and Policy Considerations” (July 2009), p. xx.