

API Comments on NESCAUM's "Economic Analysis of the Northeast/Mid-Atlantic Low Carbon Fuel Standard: Draft Data and Assumptions, Part I and II" August 12, 2010

API appreciates the challenge facing NESCAUM in their task to provide the governors of the northeast with an economic analysis of a possible Low Carbon Fuel Standard (LCFS). Additionally, API appreciates that NESCAUM is taking time to: (a) present its analysis to stakeholders, (b) outline the assumptions, and (c) seek input and comments regarding data sources and methodology for an economic analysis of an LCFS program functioning in the northeast. However, we believe it also to be the responsibility of NESCAUM to provide the governors with an assessment that clearly spells out and acknowledges, in particular, those areas where: (a) the supporting data are sparse or non-existent (b) the outcomes are highly sensitive to the underlying assumption(s), and (c) programs with similar objectives under development elsewhere may not be fully applicable to the northeast. Such critical information and transparency must form the basis for any economic analysis. As revealed in our comments summarized below, the details provided by NESCAUM to date on methodology, key assumptions, data sources, and consistency checks fall short in this regard.

API supports the use of the 2010 *Annual Energy Outlook (AEO)* for the baseline, and the use of peer reviewed data and assumptions for other data points. However, it is not clear to us why NESCAUM is making only selective use of the 2010 *AEO* data in its baseline analysis. For instance, NESCAUM assumes that the Federal Renewable Fuels Standard (RFS2) will be met completely, while the 2010 *AEO* projects that production of biofuels will fall short. This discrepancy results in an inconsistency between the energy requirements per EIA and the assumed volumes of transportation fuels. NESCAUM should use the relevant parts of the 2010 *AEO* forecast in full.

Where peer reviewed data and assumptions are concerned, API is pleased to see that NESCAUM has used primarily publicly available data. However, much of these data and the conclusions from other studies are based on unique sets of assumptions made by NESCAUM, which are not discussed in the NESCAUM PowerPoint or tables. For transparency, we suggest that NESCAUM includes a full discussion of assumptions behind all key data inputs employed.

NESCAUM has established three unrealistic scenarios, where targets are met but costs and scale of technologies employed for achieving that reduction are vastly understated. Given the significance of technology breakthroughs that will be required for the success of any of these scenarios, a realistic feasibility assessment is crucial. The scenarios should then be built from the results of the technological assessment. In sum, the analysis should not simply assume that all three policy scenarios are achievable. The technical and economic feasibility of achieving a 10% reduction in carbon intensity in ten years must be realistically studied. The threshold issue of feasibility must be addressed in a way that makes the economic analysis meaningful.

The reason for the decision to evaluate a "High Economic Growth Scenario" and not a "Low Economic Growth" scenario is unclear. Further, the allocation of biofuel alternatives to address a northeast LCFS seem arbitrary and unrealistic by assuming that California receives priority volumes of low carbon biofuels with remainder evenly distributed to the balance of the U.S.

In an effort to better understand the concerns discussed above, API commissioned independent assessments of the NESCAUM PowerPoint presentation and associated tables by CRA International, Inc. and a team consisting of Sierra Research, Inc. and MathPro, Inc. (the later hereafter designated as “Sierra” for brevity). These firms have significant experience in this field and are well positioned to provide meaningful input. Additionally, all firms were in attendance at the August 12th, 2010 webinar where the data were presented. Attached please find these commissioned reports and a brief summary of their comments below.

CRA assessed that the margin of uncertainty was not wide enough in the NESCAUM assumptions, which were overly optimistic. As a result, CRA believes that NESCAUM could not possibly capture a full range of outcomes unless a wide range of options, including pessimistic scenarios are used. Presenting policymakers with an analysis based only on optimistic assumptions would bias the study and mislead policymakers as noted by API above. Additionally, CRA found that NESCAUM’s vehicle penetration rates were unreasonably high and that in each scenario the primary costs of technology and fuels were unrealistically low.

Sierra independently came to many of the same conclusions as CRA. Additionally, Sierra found that the inclusion of existing programs has been miscalculated by NESCAUM. Specifically, it found that while NESCAUM included the contribution toward reaching the target of existing programs, they did not measure the cost of the LCFS against the true portion of the goal it will be meeting. For instance, if the existing programs were able to meet 2% of the goal, the LCFS would actually only be achieving an 8% reduction from the baseline, and thus the costs of the LCFS should be measured against this 8% rather than the full 10%. This is especially important considering that the existing programs may not be met, as discussed above regarding the 2010AEO projections of the Renewable Fuel Standard.

Sierra also has found a number of problems with the actual data provided in the tables as well as erroneous carbon intensity assumptions presented in the “High Oil Price” case. Sierra is equally concerned by the scenario assumptions such as the following NESCAUM statement: “The stated goal of the NE/MA LCFS is to “spur faster development of *highly uncertain* emerging technologies” [emphasis added] (NESCAUM Slide 7). Yet each policy scenario rests on the assumption that a cluster of technologies not yet in commerce (e.g., cellulosic ethanol production, PHEVs) proves technically feasible at commercial scale and is deployed in the region by 2023.”¹ Sierra points out that even the “less favorable” assumptions in the scenarios contain highly favorable assumptions given the limits presented for those technologies. As Sierra explains in depth, the faulty construction of the Scenarios has caused NESCAUM to miss an opportunity to perform an assessment of unintended consequences.

In summary, API appreciates the opportunity to submit commentary and recommendations. The enclosed reports contain additional details and suggestions to improve the NESCAUM analysis. As discussed above and in the attached reports, however, the employed scenario methodology, optimistic assumptions and lack of sensitivity analysis remain key concerns that NESCAUM must address before embarking on economic analysis. API looks forward to discussing these issues with NESCAUM in the near future. We urge NESCAUM to

¹ Sierra Research, Inc. (2010), “Review of NESCAUM’s Draft Data and Assumptions for LCFS Economic Analysis.”

meet, face-to-face, with stakeholders to identify realistic scenarios and input parameters that will result in a meaningful analysis.