Testimony of Michael Leone of Clean Air Council

Senate Environmental Resources and Energy Committee
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Thank you for the opportunity to speak to you today. Clean Air Council is member-supported, non-profit environmental organization dedicated to protecting everyone's right to breathe clean air. The Council has approximately 8,000 members throughout Pennsylvania.

Overview

The Council believes that the current biofuels proposal is focused more on economic development and energy security than environmental progress. Unfortunately, it falls short on all counts. The Council believes that biofuels, if handled properly, can play an important role in reducing the environmental impact of Pennsylvania's transportation sector. However, if improperly implemented, biofuels can play a significant role in worsening the environmental impact of Pennsylvania's transportation sector. The key factors affecting the environmental success or failure of a biofuels program are the types of fuels that are required or allowed to be used and the methods by which these fuels are produced.

Summary of Key Points

- An effective biofuels policy would build a bridge to a clean energy future, while reducing Pennsylvania's use of imported oil. 10% ethanol, or E10, does not meet these goals.
- A transition to high blend ethanol fuels, such as 85% ethanol (or E85) would be more effective.
- Coal-to-liquids would cause severe environmental problems and should not be included as part of a biofuels program.
- A greenhouse gas standard would ensure that biofuels development does not increase Pennsylvania's contribution to global warming.
- An air pollution standard would ensure that biofuels development does not worsen air quality anywhere in the Commonwealth.
- Biofuels production facilities emit air pollution and the state needs to look carefully at the local air quality impacts of such facilities and develop the needed

regulations and monitoring programs to ensure that local communities are adequately protected.

Coal-to-liquids

Coal is not a biofuel, and should not be included as part of any biofuels program that claims to be environmentally beneficial. Coal-to-liquids (CTL) development would dramatically increase the Commonwealth's global warming pollution and would make it extremely difficult for Pennsylvania to make progress in addressing its share of global warming pollution. CTL production facilities would also increase local air pollution, impairing Pennsylvania's ability to meet air quality standards and threatening public health.

Not only would CTL production damage the environment and public health, but numerous economic and national security experts have concluded that it would fail to provide an economically viable alternative transportation fuel. Former CIA Director James Woolsey, who has been a consistent supporter of biofuels as a means of reducing dependence on foreign oil, has expressed strong skepticism about coal-to-liquids. "Right now, coal-to-liquids looks to me to be pretty darn low on the reasonable list of alternatives," he concluded. Standard and Poor's, one of the foremost credit rating agencies in the U.S., has stated that CTL projects "are likely to be untenable" without long-term taxpayer support. The Council believes at this time that coal-to-liquids development does not work either environmentally or fiscally.

I've submitted with my testimony an informational sheet from Taxpayers for Common Sense, a non-partisan taxpayer watchdog organization, which exposes the staggering financial risks posed by coal-to-liquids technology.

Finally, researchers at Carnegie Mellon's Electricity Industry Center have concluded that coal-to-liquids development would displace less oil than alternative technologies. "A major program to subsidize coal-to-liquids makes no sense, since the goals of energy independence and reducing greenhouse gas emissions can be achieved at lower cost through plug-in hybrid vehicles charged with electricity from reduced carbon sources," they stated. Even the most carbon-intensive scenario using plug-in hybrids has substantially less greenhouse gas emissions than the best possible coal-to-liquids case.

A greenhouse gas standard would help to address these issues. This standard would require that any fuel that is used to meet the biodiesel mandate have 20% lower lifecycle greenhouse gas emissions than conventional fuel. Any biofuels mandate should require that any fuel used to meet the requirement achieve this standard to ensure that efforts to achieve energy independence do not exacerbate the greatest environmental threat facing Pennsylvania: global warming.

Ethanol

Ethanol has the potential to significantly reduce air pollution as well as gasoline consumption. But whether this potential is met will be determined by how the ethanol is produced and how much of it is blended into gasoline.

Low-level ethanol blends, such as the E10 (10% ethanol) standard mandated in the current proposal, can achieve small reductions in emissions of greenhouse gases and some air pollutants. E10 can also achieve a modest reduction in the use of imported oil. But this progress comes at a price. E10 produces more emissions of key air pollutants, particularly precursors to ozone, than conventional gasoline. Increased use of E10 may therefore make it more difficult for some areas of the Commonwealth to achieve and maintain air quality at the standards set by the EPA. Even in the Philadelphia area, where E10 is already in use year-round, air quality standards may be impaired by increased use of E10 in areas lying outside the non-attainment area.

In contrast with low-level ethanol blends such as E10, high-level blends such as E85 (85 % ethanol) substantially reduce emissions of all air pollutants. E85 usage would dramatically reduce global warming pollution, while displacing a much higher percentage of imported oil than E10. Efforts to reduce the use of oil in vehicles will be much more effective if they focus on accelerating the transition to E85 rather than increasing current usage of E10.

The challenge facing us is that E85 requires new infrastructure. Only flexible fuel vehicles, or FFV's, can run on E85. Stations must have storage and distribution equipment that can accommodate such a high-level ethanol blend. We have much work to do to put these technologies in place. Currently, only 9 out of the 4,678 refueling stations in the Commonwealth are equipped to sell E85, according to the American Council on Ethanol. And though the three major U.S. automakers have pledged to produce 2 million FFV's annually by 2010, this remains a small portion of the overall vehicle fleet. Nevertheless, the potential of E85 is so great that any investment should produce significant economic and environmental rewards.

Adding an air quality standard would help to mitigate any adverse air pollution that results from increased ethanol use. Such a standard would require that fuels used to satisfy the biofuels requirement not cause average per-gallon motor vehicle emissions of air pollutants to exceed those of emissions attributable to gasoline sold in the U.S. in calendar year 2006. These emissions should be measured on a lifecycle basis in order to capture all of the pollution generated by the production and consumption of ethanol.

An air quality standard would be easier to implement if the biofuels mandate were more flexible. A mandate requiring that every gallon of gasoline contain 10% ethanol would discourage producers and distributors from satisfying the standard by going above it and selling E85 (85% ethanol) where feasible. A mandate that simply required that ethanol comprise 10% of the total of all gasoline sold in the Pennsylvania would allow distributors to do this. Furthermore, a 10% total standard (as opposed to the 10% per

gallon standard) would allow policymakers to provide extra credit to environmentally-friendly fuels such as E85 and cellulosic ethanol. For example, the Renewable Fuel Standard enacted by Congress in 2005 provides greater credits towards the biofuels mandate for the use of cellulosic ethanol than for corn ethanol; specifically, each gallon of cellulosic ethanol counts as two and a half gallons towards the total gallon standard. The Commonwealth could enact similar rules favoring cellulosic ethanol and E85 over corn ethanol and E10, respectively. By allowing and encouraging distributors to achieve the biofuels mandate through the use of E85 whenever possible, such rules would lower air pollution and simultaneously promote the move to E85.

Production of ethanol, particularly low-level blends such as E10, can actually increase global warming pollution levels if it is done poorly. The greenhouse gas standard referenced earlier should be applied to ethanol as well to ensure that production and consumption of this fuel begins the transition to a clean energy future.

Ultimately, the focus of Pennsylvania's biofuels policy should be E85, not E10. Only E85 will substantially reduce emissions of all air pollutants, including global warming pollution. And only E85 will displace a significant amount of imported oil.

Biodiesel

Clean Air Council supports the use of biodiesel as an alternative to conventional diesel fuel. Biodiesel fuel is not likely to create the same level of air pollution problems as low-level ethanol blends. At higher blends, biodiesel may increase emissions of nitrogen oxides, but it is unlikely to create significant problems meeting air quality standards. Nevertheless, the Council believes that the greenhouse gas and air pollution standards referenced earlier should be applied to biodiesel as well to ensure that environmental progress is not undermined by alternative fuels development.

Facility Emissions

In addition to the pollution released from the tailpipes of vehicles running on alternative fuels, pollution is released by their production facilities. These emissions have the potential to harm public health in the areas surrounding such facilities, and lower air quality standards. A proactive biofuels policy that addresses this issue from the start can ensure that biofuels production does not put public health at risk.

The experience of Midwestern states, where most U.S. ethanol production facilities are located, is instructive in this regard. Initially, many plants reported emitting volatile organic compounds (VOC's) at levels well below 100 tons a year, allowing them to avoid submitting to EPA's more rigorous controls for large pollution sources. In some areas, residents began to complain of foul odors emanating from ethanol facilities. Tests were then performed that found emissions levels as high as 1,000 tons annually at some plants. Among the VOC's being emitted were formaldehyde and acetic acid, both carcinogens.

These pollutants can be controlled so that they have a limited impact on local air quality. Any community being asked to host a biofuels manufacturing facility needs to be assured that regulators will be vigilant in monitoring and controlling facility emissions. A global warming pollution standard may help in addressing this problem, but further action may need to be taken to ensure that ethanol facilities do not have a negative impact on local air quality. Legislators should require that the Pennsylvania Department of Environmental Protection develop tight emissions standards for all biofuels production facilities and continually monitor and report their emissions to prevent unidentified emissions of air pollutants from threatening public health or local air quality standards.

Conclusion

Biofuels have the potential to be a key part of a clean energy future. But only if we manage their development and use wisely will we be able to realize this potential.