



Date: November 2, 2020

To: Governor Tim Walz

From: Commissioner Thom Petersen

RE: Report in fulfillment of Executive Order 19-35 establishing the Governor's Council on Biofuels

I am very pleased to transmit to you the attached memorandum from the Governor's Council on Biofuels. Together with this transmittal memorandum, it comprises our report to you as called for in Executive Order 19-35. The findings, conclusions, and recommendations of the Council represent work over the past nine months involving 13 full Council meetings, seven Executive Committee meetings, and five Infrastructure Subcommittee meetings, most of which were conducted virtually due to the COVID-19 pandemic.

We at the Minnesota Department of Agriculture are grateful to have had the opportunity to work with a group of people as dedicated, thoughtful, and engaged as this Council, the members of which are listed below:

Council Members

Gary Anderson – Eagan, MN
Michael Bull – Northfield Township, MN
John Christianson – Lake Lillian, MN
Elizabeth Crow – Minneapolis, MN
Tim Gross – Duluth, MN
Chris Hanson – Fountain, MN
Rick Horton – Grand Rapids, MN
Kevin Lee – Minneapolis, MN
Lance Klatt – Little Canada, MN
Jeanne McCaherty – Prior Lake, MN
Mick Miller – Morris, MN
Kevin Paap – Lake Crystal, MN
Brian Thalmann – Plato, MN
Gary Wertish – Renville, MN
Bob Worth – Lake Benton, MN

Executive Committee

John Christianson
Chris Hanson
Kevin Lee
Jeanne McCaherty
(I, as MDA Commissioner, chaired)

The Infrastructure Subcommittee, and a technical panel that lent its expertise, also made a significant contribution to the effort, which we want to recognize. Members, and participants in the technical panel, were:

Infrastructure Subcommittee

Minnesota Corn Growers: Amanda Bilek (alternate: Mitch Coulter)

Ethanol Industry: Mick Miller (alternate: Gary Anderson)

Biodiesel Industry: Scott Hedderich (alternate: Mike Youngerberg)

Minnesota Service Station & Convenience Store Association (MSSA): Lance Klatt

Minnesota Petroleum Marketers Association (MPMA): Tim Gross

Minnesota Department of Agriculture: Deputy Commissioner Andrea Vaubel (I served as Deputy Commissioner Vaubel's alternate)

Minnesota Department of Commerce: Greg Vanderplaats (alternate: Jon Kelly)

Minnesota Pollution Control Agency: Assistant Commissioner Kirk Koudelka (alternate: Nate Blasing)

Technical Panel to the Infrastructure Subcommittee

Bret Swan, Minnesota Petroleum Service

Ed Puchtel, Zahl Petroleum Maintenance Co.

Kurt Rademacher, Pump & Meter Services, Inc.

Kristi Moriarty, National Renewable Energy Laboratory

Greg Gust, Minnesota Biofuels Association

Jon Hunter, American Lung Association in Minnesota

Chris Bliley and Mike O'Brien, Growth Energy

We are also grateful to Commissioners Bishop, Anderson Kelliher, Arnold, and former Commissioner Kelley for their participation at Council meetings, as well as participation and contributions of their staff members and staff from the Department of Administration (Fleet Management and Office of Enterprise Sustainability). Finally, I'd like to extend my deep gratitude to Bob Patton and Jordyn Bucholtz of the MDA who worked tirelessly to bring this report together.

We look forward to working with you to implement these recommendations.

Date: November 2, 2020

To: Commissioner Thom Petersen

From: Governor's Council on Biofuels (GCB)

RE: Report on Council Recommendations

The following is a report on the findings, conclusions, and recommendations that resulted from the nine-month-long consensus-building process with the members of the Governor's Council on Biofuels. Topics of discussion included E15 (gasoline blended with 15 percent ethanol) and mid-level blends, biodiesel, and biofuels infrastructure; low-carbon fuel standard (LCFS); biofuels use in the state fleet; public understanding and marketing; vehicles and biofuels; advanced biofuels; and benzene/BTEX.

The findings and conclusions section of this report intends to capture the nuances and concerns present during discussions that are not conveyed in the recommendations section. The recommendations section lists the recommendations that reached consensus among the Council members.

Findings and Conclusions

E15 and mid-level blends, biodiesel, and biofuels infrastructure

1. Due to compatibility standards at the federal and state levels, the ability for Minnesota to move to higher blends of ethanol and biodiesel is highly dependent on upgrading Minnesota fuel-dispensing infrastructure: underground storage tanks (USTs), piping, dispensers, and associated equipment.
2. An Infrastructure Subcommittee was convened by the Council, consisting of the following members representing the following groups and agencies:
 - Minnesota Corn Growers: Amanda Bilek
 - Ethanol Industry: Mick Miller (alternate: Gary Anderson)
 - Biodiesel Industry: Scott Hedderich (alternate: Mike Youngerberg)
 - Minnesota Service Station & Convenience Store Association (MSSA): Lance Klatt
 - Minnesota Petroleum Marketers Association (MPMA): Tim Gross
 - Minnesota Department of Agriculture (MDA): Deputy Commissioner Andrea Vaubel (alternate: Commissioner Thom Petersen)
 - Minnesota Department of Commerce (Commerce): Greg Vanderplaats (alternate: Jon Kelly)
 - Minnesota Pollution Control Agency (MPCA): Assistant Commissioner Kirk Koudelka (alternate: Nate Blasing)
3. The Subcommittee met five times between Tuesday, August 11, 2020 and Thursday, October 15, 2020.

4. As part of the Subcommittee process, the MPCA prepared cost estimates for bringing infrastructure up to compatibility with E15 (such equipment is generally compatible with up to E25), based on information in the MPCA's data and costs provided by fuel-dispensing-equipment installers. High-level conclusions of the cost estimates were that:
 - a. Fifteen percent (15%) of service-station sites were estimated to be compatible with E15, leaving 85% of sites needing replacement of underground storage tanks (USTs), piping, dispensers, and other miscellaneous equipment.
 - b. Costs of bringing those sites up to compatibility standards were estimated to range from approximately \$771 million to \$784 million.
5. In meetings, installers and service-station representatives indicated that, given the current capacity of underground storage tank contactors and supply of tank system equipment, it would take 10 years to upgrade infrastructure in Minnesota to E15/E25 compatibility standards.
6. At its final meeting on October 15, 2020, the Subcommittee members present (one member was unable to attend) came to consensus on two items: (1) a funding package, and (2) minimum compatibility standards for new infrastructure. The members present were unable to come to consensus on a third item, timelines for implementation of content requirements.
7. There were differences of opinion among Infrastructure Subcommittee members, and are differences of opinion among councilmembers, regarding the total cost of upgrading infrastructure and the length of time needed to accomplish upgrading. Differences of opinion center around questions including:
 - a. Whether compatibility standards are needed and reasonable to protect public health and safety and the environment.
 - b. Whether the length of time to upgrade Minnesota's infrastructure to compatibility standards (i.e., at least 10 years) is overestimated. This involves a question whether, if policy changed (content requirements were implemented and/or financial assistance was made available):
 - i. the capacity of the installation service industry and the available supply of equipment would remain fixed; or alternatively
 - ii. the market (of installation services and equipment) would respond and capacity/supply would increase, reducing the length of time needed to bring Minnesota's infrastructure up to compatibility standards.
 - c. Whether different construction/installation procedures, such as replacing individual USTs rather than all of USTs on a site, would reduce cost.
8. The consensus recommendations adopted by the Council put aside, for the time being, disagreement among councilmembers over whether a minimum content requirement for E15 should be implemented and, if so, whether the content requirement could be implemented earlier than the 10-year timeframe.
 - a. Some councilmembers advocated for implementation of an E15 content requirement faster than 10 years based on reasons including: (1) that most of the national fleet consists of vehicles newer than model year 2001 and are therefore compatible with E15; (2) federal regulations now permit year-round use of E15; and (3) E15 is seen as one of the important near-term pathways to decarbonizing the transportation sector.
 - b. Other councilmembers were concerned that E15 content requirements, especially if implemented in a timeframe of less than 10 years, would be impractical, would strain financial resources of retailers (especially independent retailers and small chains), and would put independents/small chains at a competitive disadvantage.
9. The consensus recommendations are intended to:

- a. Provide a stable and reliable source of financial assistance, particularly for independent retailers and small chains;
- b. Provide that new infrastructure is compatible up to E25 while allowing an 18-month window for projects currently underway; and
- c. Provide flexibility in the implementation timeframe for E15 and other compatibility requirements and base the implementation of compatibility requirements on criteria that protect independent and small chains from undue risk or harm.

Low-carbon fuel standard (LCFS)

10. Adoption of a low-carbon fuel standard (LCFS) would advance the goals in Executive Order 19-35 by incentivizing advancement of carbon efficiency improvements of biofuels plants and sources of biofuels feedstocks and by providing opportunities and benefits related to biofuels production for farmers, rural communities, the natural environment, and economically disadvantaged populations. By meeting the six-month deadline (for a proposed plan for LCFS adoption), the State can ensure that this process moves forward in a timely manner. By establishing a working group for LCFS, the State can ensure that this conversation will continue, decision-makers will be equipped to take action, and the tradeoffs for biofuels and cost at the pump for consumers can be evaluated.

Biofuels use in the state fleet

11. Increased use of E85 in state fleet vehicles provides a significant opportunity to reduce the State of Minnesota's fossil fuel emissions and improve environmental and public health, and for state government to lead by example. The intention of an executive order is to make progress toward the State's goals while recognizing and creating flexibility for the challenges regarding data collection and the various needs and missions of individual agencies.

Public understanding and marketing

12. A number of state and national groups engage in education and promotion of biofuels to consumers, and currently MEG Corp (the fuel testing and consulting firm based in Plymouth, Minnesota; MEG Corp runs the Diesel Help Line) is certified to instruct auto service professionals on biofuels, and holds an annual course. A state role can be providing funding and convening a representative advisory group to inform the funding program.
13. Relevant stakeholders to include on the Council are, but are not limited to: marketing professionals, Growth Energy, the Renewable Fuels Association, and racing, boating, and small engine (ATV, lawnmowers, etc.) industries.

Advanced biofuels

14. Developing liquid transportation fuels production in Minnesota is a long term, vital part of the Governor's vision for reducing carbon emissions from the transportation sector.
15. Increasing the use of woody feedstocks in advanced biofuels will help improve forest health and other aspects of the natural environment, while bolstering economically-disadvantaged populations.

16. Consistent with the recommendations of the Intergovernmental Panel on Climate Change, the Biofuels Council believes that Minnesota has bountiful cellulosic natural resources that have enormous potential to help Minnesota achieve its greenhouse gas reduction goals through the use of cellulosic biofuels (biomass-derived hydrogen, methane, gasoline, diesel, and kerosene) to provide lower carbon fuels for the transportation, electricity, industrial, and residential/commercial buildings sectors. In addition to policies such as a clean-fuels standard for transportation fuels, state policy can play a critical role in helping to create and sustain markets in these advanced cellulosic biofuels that help to spur investments, reduce long term capital costs through economies of scale, and contain systems costs by leveraging existing infrastructure, including existing workforces that may be impacted by a statewide transition away from carbon-intense fuels for transportation, electricity, and buildings.

Recommendations

E15 and mid-level blends, biodiesel, and biofuels infrastructure

1. Develop a state funding package with a dedicated funding source, modeled after the Petrofund (possibly named the Infrastructure Fund), with the following features:
 - a. The dedicated funding source and financial assistance program would be administered by a board in conjunction with state agencies (MPCA and Commerce). The board could take into account ability to pay, such as greater assistance to independents/small chains.
 - b. Funds generated could be used to leverage federal funds and funds from private sources through public/private partnership with biofuel interests and other vested parties.
 - c. Grants should be augmented by a low-interest loan or loan guarantee program.
2. Adopt a minimum compatibility standard for new infrastructure:
 - a. Within 18 months, all new fuel storage and delivery systems should, at a minimum, be compatible with ethanol blends up to E25.
 - b. The law should provide that, when there is a new mid-level blend certification for ethanol or biodiesel, the minimum compatibility standards will be revisited.
3. Adopt minimum content standards for gasoline, implemented along a timeline, modeled after the Biodiesel Content Mandate statute (Minn. Stat. 239.77), with the following characteristics:
 - a. Content standards should be set aggressively, but realistically in order to drive the market to increase the availability of equipment and installation services.
 - b. The policy should include mechanisms similar in structure to the Biodiesel Content Mandate statute, with criteria for implementation of the content standard designed to protect independent stations and small chains from harm, including criteria regarding:
 - i. The availability of financial assistance targeted to independent stations and small chains that would be experiencing a competitive disadvantage; and
 - ii. The timely availability of equipment and installation services.
 - c. Moving from a 10 to 15 percent ethanol minimum content standard is a near-term policy priority to accelerate progress toward the Petroleum Replacement Goal of 25 percent biofuel use in gasoline by 2030.

Low-carbon fuel standard (LCFS)

4. Propose and advocate for a low-carbon fuel standard (LCFS)/clean-fuels policy (CFP) that builds on the vision, principles, and considerations of the white paper *A Clean Fuels Policy for the Midwest (2020)* from the Midwestern Clean Fuels Policy Initiative, and on the vision and principles of the Governor's Council on Biofuels. By May 1, 2021, unless the 2021 legislature adopts an LCFS proposal, release a brief proposal detailing a plan for LCFS adoption and by November 1, 2021, release a full proposal for LCFS adoption.
5. Establish a working group that will ensure the process of adoption and policy design includes modeling data from Midwest and national efforts/organizations and advice from a broad spectrum of stakeholders and interests, including those of agriculture and biofuels, such as through a task force.

Biofuels use in the state fleet

6. Issue an executive order
 - a. Directing the Departments of Administration, Transportation, Public Safety, and Natural Resources to revise fuel-use tracking in agencies to include tracking of E15 and mid-grade gasoline-ethanol blends and blends of biodiesel in diesel fuel (e.g., B5, B10, B20, and higher blends);
 - b. Directing agencies, assisted by the Department of Administration's Fleet and Surplus Services and Office of Enterprise Sustainability and the interagency Fleet Council, to use E85 and E15 as much as possible, and to conduct analysis and planning for increased use of biofuels to be submitted to the Sustainability Reporting Tool and the Fleet Council by March 31, 2021, with an update by March 31, 2022 including:
 - i. E85 in flex-fuel vehicle (FFVs),
 - ii. E15 in non-FFV internal-combustion vehicles model year 2001 and newer, and
 - iii. biodiesel use in diesel vehicles;
 - c. Directing the Department of Administration's Office of Enterprise Sustainability to continue to make E85 usage data public through its online dashboard, and, as feasible and practical, to also show E15 usage;
 - d. Directing the Department of Agriculture and the Minnesota Pollution Control Agency with the assistance of the Department of Health to develop concise, fact-based information for employees on the comparative health and environmental benefits of biofuels; and
 - e. Encouraging agencies to pilot technology to increase use of biofuels in fleet and other fuel applications in the enterprise, including:
 - i. Extending the blending of biodiesel to greater levels than mandated in statute;
 - ii. The use of 100% renewable diesel, biodiesel, and blends thereof;
 - iii. Explore strategies to develop the renewable diesel supply in Minnesota.

Public understanding and marketing

7. Create a standing Council on Biofuels Education and Promotion run by the Minnesota Department of Agriculture and comprised of representatives of stakeholder groups responsible for developing and directing a coordinated program of education and promotion of biofuels among consumers and auto-industry professionals in Minnesota. This council should be no larger than 15 people.

8. Establish a regular source of funding for education and promotion of biofuels administered by the MDA with guidance from the Council on Biofuels Education and Promotion.

Advanced biofuels

9. Increase funding for the AGRI Bioincentive Program to provide a stable market and pathway for biofuels development.
10. Establish an Advanced Biofuels Taskforce to provide recommendations, by December 15, 2021, for legislative or administrative state policy (excluding the clean-fuels policy referenced in these recommendations) to advance the goal of developing Minnesota's cellulosic natural resources to lower the carbon intensity of energy use in transportation, electricity, residential and commercial buildings, and industry.