STATEMENT OF THE
NATIONAL MILK PRODUCERS FEDERATION
CONCERNING

CREATING JOBS WITH CLIMATE SOLUTIONS:
HOW AGRICULTURE AND FORESTRY CAN HELP LOWER COSTS IN A LOW-CARBON ECONOMY

TESTIMONY FOR THE U.S. HOUSE OF REPRESENTATIVES

AGRICULTURE, NUTRTIION and FORESTRY COMMITTEE
SUBCOMITTEE ON RURAL REVITALIZATION, CONSERVATION, FORESTRY and CREDIT

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Thank you for the opportunity to provide this written testimony as part of your subcommittee hearing: *Creating Jobs with Climate Solutions: How agriculture and forestry can help lower costs in a low-carbon economy.* The dairy industry can play an important role in the coming climate market by providing reliable, permanent and immediate greenhouse gas (GHG) reductions through methane capture from manure and other best management practices. These reductions will serve as an important cost containment mechanism for the economy as a whole while creating an important market for conservation within the livestock and agriculture industries.

Consider this example from one of our Michigan producers. Velmar Green runs Green Meadow Farms in Elsie, Michigan. He has 3,000 cows and in addition to selling energy he is looking into selling his carbon credits as well. The water that is left over is reused for irrigation or cleaning the barn. The left over fiber is used either for composting or fertilizer for the 7,000 acres he farms. Velmar started his digester this winter with the help of a $2 million grant from the Public Service Commission, $1 million from a partner who specialized in the generator technology and with $1 million of his own money.

The point being that while anaerobic digesters can provide multiple environmental and energy production benefits, this is not a cheap technology. Mr. Green stated that a substantial part of the power generation cost lies in connecting power lines to the power company. Currently, Velmar is getting about 10 cents per kilowatt hour for his energy thanks in part to his partner with the generator that negotiated with the electric company. Keep in mind, this price does not recognize or reward the fact that this power is a low carbon source of emissions.

Without a market to reward the value of these projects they will remain small, niche projects – only available in states that subsidize the technology or require power companies to accept the power. Contrast this scenario with a vibrant GHG market that simultaneously is sending a market signal to the power company to seek out and utilize lower carbon forms of power generation, while also sending a market signal to dairy and other livestock producers that there is a premium value on the power they can produce – and a long-term market reward for such power. Only then will there be the right incentives for the private market to move toward building the needed infrastructure to support biogas use on a massive scale. Until the market signal is sent, power companies will remain reluctant, if not in outright opposition to promising power sources like these because the environmental value of the biogas is not recognized by the market or their competitors.

We commend your subcommittee for investigating the role that the livestock and agriculture sectors can play in reducing the cost of complying with required GHG reductions by the larger economy. It is in all our interest to make sure that we are able to keep costs down so as to avoid damaging our economy as we transition into a climate market. Our industry can provide great assistance as environmental service providers and we ask that you keep in mind some of these opportunities as you set policy on this issue.

Recognize the Unique Value of Methane Captured from Manure

Greenhouse gas reduction experts have definitively established that the animal agriculture sector can generate some of the "cleanest" and most verifiable greenhouse gas emission reduction credits. In terms of measurement, permanence and additionality through the capture of methane emitted from stored manure, these emission reductions provide a concrete and sound path to climate change mitigation efforts. While the volume of methane emissions are far less than the most prevalent greenhouse gas, CO_2, which accounts for 75% of the global total, the potency of methane in terms of global warming potential is far higher. Specifically, methane is 21 times more potent than CO_2 – so for every 1 ton of methane avoided, it is as if 21 tons of CO_2 were avoided as an emission to the atmosphere.

To provide some context for the potential of the livestock industry's ability to mitigate reductions, consider the following quote from the June 14, 2007 *Wall Street Journal*: "The methane produced by the manure of a typical 1,330-pound cow translates into about five tons of CO_2 per year. That is about the same amount generated annually by a typical U.S. car, one getting 20 miles per gallon and traveling 12,000 miles per year. Without a market that rewards livestock producers for capturing and reducing methane emissions, it would remain too costly to implement on an industry-wide basis. However, a climate market that allows these creates value for making these reductions could offer the opportunity to bring lower-cost permanent reductions of this potent greenhouse gas – a process which will also have other environmental dividends for air and water quality.

Additionally, the use of anaerobic digesters to capture methane from manure, can not only avoid a methane emission that would otherwise occur as the standard industry practice, but it also creates a new low-carbon energy source – biogas, which can be substituted for natural gas in generating electricity or creating power to fuel a bio-fuel plant, for example.

Greenhouse gas emission reductions through methane capture requires only that the methane be flared in order to permanently convert methane to the much less potent CO_2. The use of methane as a biogas can bring even greater credits and cost mitigation opportunities to the climate market.

For all these reasons, methane and capture from manure should be considered a highly valuable early offset reduction opportunity and every effort should be made to facilitate the growth of the capture market for these gases as a new energy commodity for livestock operations.

Furthermore, it is worth noting that the scientific community recognizes that nitrous oxide emissions also take place from anaerobically digested manure, and that as a result the potential also exists for the capture and destruction of this potent greenhouse gas. While further research is going to be needed to quantify the specific amounts of nitrous oxide generated and captured by anaerobic digestion, it is a potent greenhouse gas 300 times more potent than CO_2 and therefore such research efforts and subsequent valuation in the credit markets should be supported by any climate change legislation that Congress adopts.

Recognize the Unique Value of Substituting Manure for Commercial Fertilizer

The simple substitution of animal manure for commercial fertilizer as a nutrient source for crop production saves energy and results in a net reduction in greenhouse gas emissions in the form of reduced energy consumption and CO2 emissions from fertilizer manufacture and transport, and in the form of reduced nitrous oxide emissions from manure relative to those from commercial fertilizer. The proper use of animal manure for crop production is one of the original and most critical forms of recycling, serving a fundamental role in our food production systems ever since we have included livestock and livestock products in our diets. This represents a practical and straightforward method to offset greenhouse gas emissions and should be recognized accordingly. This legislation should maximize the opportunities to capture the fullest greenhouse gas reduction benefits possible from this practice.

Recognize the Significant Potential for Soil Carbon Sequestration in Pastureland

Another important way in which the livestock industry is unique from agriculture as a whole is in the vast amount of pasture land that is owned and leased by livestock operators. The USDA notes that applying proper grazing management practices can actually increase the amount of soil carbon stored in soils over lands left idle – since more growth of grasses on the land equates to more carbon stored in the soil.

Furthermore, if pasturelands are seeded with deep-rooted perennial grasses for use as cattle forage – such as switchgrass, compass plant and big blue stem, the amount of soil carbon stored in the ground can range from 3.5 to 5 tons of additional carbon per acre according to USDA's Agriculture Research Service. Keeping in mind that the average rate of soil sequestration for the conservation practice of no-till planting is .5 metric tons of carbon per acre per year you can see how valuable pastureland carbon sequestration can be. These carbon gains are made because grasses like those mentioned can have root systems of up to 8 feet deep into the soil. Again, this livestock type of soil carbon sequestration may generate less concern about permanence since the grasses planted can be grazed and will continue to grow back annually with no need for tilling practices that would otherwise release some of the stored carbon. Also, USDA notes that carbon stored in this manner may be fixed more permanently since it is stored deeper in the soil and therefore, less likely to be returned to the atmosphere.

Ensure that Livestock Operations Will Not Be Regulated Under the Cap

We appreciate the stated intent by many lawmakers in the House and Senate that climate legislation should offer livestock agriculture promising opportunities to contribute to the solution of climate mitigation markets as voluntary offset providers. It is critical that these market opportunities remain just that – opportunities or incentives to help obtain from us the significant contributions we can make to greenhouse gas offsets.

It is our understanding that livestock operations and farms are not covered by the Lieberman-Warner bill's definition of a covered facility. Specifically, we refer to the section relating to an entity producing for sale or distribution of more than 10,000 carbon dioxide equivalents of

chemicals in a year. We hope our understanding is correct that neither this provision nor any other portion of the covered facility definition applies to us.

We appreciate your foresight in understanding that the important contributions our industry can make will only come into being if our livestock producers are able to use the reward of a new market opportunity to provide the proper incentives for this work to occur.

Recognize the Standard of Proportional Additionality

As Duke University's Nicholas School for Environmental Solutions points out in their comprehensive field guide to measuring and monitoring GHG reductions from agriculture and forestry, additionality should be viewed in proportion to the industry standards of a given time, not the individual practices of early actors – who are often punished for doing the right thing. As such, the use of anaerobic digesters and the capture of methane from manure are clearly not the industry standard – and therefore, in considering how credits are to be determined, these practices should be considered to be additional – on the industry level. Also, it is important to note that while additionality questions regarding soil carbon refer to how much carbon has already been put in the soil – and the amount of credit which should be conferred for a new offset credit, methane emissions are different. In the case of methane captured from manure, the emissions that are captured and transformed from methane to CO_2 are from an ongoing source of emissions. Therefore, if an anaerobic digester exists, it makes sense that no credits would be awarded for the previous methane emissions avoided, but it is also completely justifiable to recognize the emissions reductions that will be made after the GHG cap is put in place. Otherwise, you create a disincentive for the use of existing anaerobic digesters and the result could be an increase in methane emissions.

Again, we thank you for the opportunity to submit this testimony as part of your hearing today. We look forward to working with you to expand the opportunities for agriculture offsets within mandatory climate legislation and make sure that the best outcome is reached for the climate, for the economy and for our industry.