

March 26, 2025

The Honorable Chris Swedzinski
Co-Chair, Energy Finance and Policy Committee
Minnesota State Capitol
St. Paul, MN

Chair Swedzinski and Committee Members,

Thank you for the opportunity to offer testimony in support of the Minnesota Made Ammonia Act, HF 2103. We write to you from TalusAg, an agriculture technology and energy infrastructure company that produces ammonia from air, water and renewable electricity and is considered green or clean.

Talus is deploying the first network of distributed, modular clean ammonia production systems. These systems will provide local production of essential nitrogen fertilizer for farmers in the Cornbelt and chemicals at or near the point of use. More than 90% of the ammonia that is currently used in Minnesota is imported by truck and is made in large, centralized plants. TalusAg plans to use resources abundant in Minnesota to locally produce carbon free nitrogen fertilizer: renewable electricity, air and water to create ammonia via Hydrogen electrolysis and the Haber-Bosch process. The only emission/byproduct from this process is oxygen. When we use renewable electricity to power our electrolyzers, Talus systems have zero associated direct or indirect carbon emissions. Talus' decentralized approach benefits farmers by providing lower-cost, locally produced fertilizers that are not subject to costly logistics and import supply risks. Talus already uses renewable energy certificates ("RECs") that are tracked, registered and retired on M-RETS REC tracking system to ensure that the grid-based power Talus procures is both clean/renewable and compliant with federal tax credit for producing clean hydrogen, section 45V.

Originally conceived to address food security in the developing world by bringing local production of fertilizer to sub-Saharan Africa, Talus systems were natively engineered to operate off-grid on distributed energy from solar and wind, and importantly, to follow the intermittent generation, ramping up and down rapidly as necessary for efficient operation. With the introduction of the Section 45V tax credits for Clean Hydrogen, Talus upsized our systems for the U.S. market and we are the first company with commercial systems deployed and operational. We have farm scale commercial systems (the TalusOne) operating today in Kenya, and in Boone IA, and our first cooperative sized system (the TalusTen), is under construction in Eagle Grove, IA. We are currently developing a distributed network of green ammonia production systems across the Cornbelt, and we are actively developing 4 projects in Minnesota that, if successful, would bring approximately 45,000 tons per year of local green ammonia production to the state. While these are early stage and much work remains to be done with local utilities, landowners and farmer cooperatives that will buy Talus ammonia fertilizer, we will look forward to sharing more information on these exciting projects in the near future and inviting you to join a ribbon cutting upon commissioning of the first green ammonia production in Minnesota, should that day come.

Acknowledging our philanthropic roots and the vision of our founder and CEO, Hiro Iwanaga, Talus is a public benefit corporation. We seek to create value for all stakeholders in our projects, especially our farmer customers and the communities where we operate. Initiatives that reduce energy costs or increase project revenues, allow us to pass the benefits along to our customers and offer ammonia at costs that are cheaper than the long-term price of ammonia. As of today, the market for ammonia in the U.S. does not provide a premium for low-carbon products. However, there are market participants, including large consumer food companies, airlines, biofuels producers and others that want to secure clean ammonia and grow lower carbon intensity corn.

Just like we evidence our use of renewable energy with Renewable Energy Certificates -- to develop an efficient market for clean ammonia, we need the development of a transparent and credible market for tracking and verifying clean ammonia. M-RETS is a leader in the nation in establishing credible tracking and verification protocols for low carbon commodities, such as electricity -- and we fully support their efforts to bring their expertise to the development of clean ammonia tracking systems. Accordingly, we offer our support for the proposed legislation -- HF 2103.

Sincerely,

A handwritten signature in black ink that reads "Tristan Peitz". The signature is written in a cursive, flowing style.

Tristan Peitz
Head of Business Development
TalusAg

March 27, 2025

Minnesota House of Representatives
Committee on Energy Finance and Policy
Capitol 123
Saint Paul, MN 55155

RE: House File 2103 - Tracking of ammonia, hydrogen, and renewable energy certificates through M-RETS

Dear Chair Swedzinski, Chair Acomb, and committee members,

On behalf of Clean Energy Economy MN (CEEM), we write today in support of House File 2103, which would appropriate \$9 million over two years to enable the tracking of ammonia, hydrogen, and renewable energy certificates through the Midwest Renewable Energy Tracking System (M-RETS). This investment is critical to unlocking the potential of clean ammonia for Minnesota's agricultural and steel industries.

CEEM is an industry-led, nonpartisan, non-profit organization representing the business voice of energy efficiency and clean energy in Minnesota. We are focused on educating Minnesotans about the economic benefits of transitioning to a clean energy economy. Our business membership is comprised of over 70 clean energy companies ranging from start-up businesses to Fortune 100 and 500 corporations that employ tens of thousands of Minnesotans across the state. CEEM stands committed to delivering a 100% clean energy future where all Minnesota businesses and citizens will thrive.

In Minnesota, farmers face high and unpredictable costs for ammonia fertilizer, which is a critical input for their operations. Each year, Minnesota farmers send between \$500 million and \$1 billion out of state to purchase ammonia fertilizer. Price fluctuations are driven by volatile fuel costs and high transportation expenses, as most ammonia is delivered by semi-truck.

Fortunately, the University of Minnesota-Morris has pioneered a method to produce ammonia fertilizer using wind, solar, and other renewable energy sources. M-RETS is uniquely positioned to scale this proven model by certifying ammonia produced with renewable energy, ensuring transparency, and creating a new, verifiable commodity for Minnesota farmers. This will provide greater cost stability and control by utilizing locally produced, clean electricity for ammonia production.

Local, clean ammonia production benefits extend beyond agriculture. Minnesota currently supplies 85% of the iron used in U.S. steel manufacturing. As the steel industry shifts from traditional blast furnaces to electric arc furnaces and direct reduced iron (DRI) pellets, clean ammonia is emerging as a critical input. DRI production requires ammonia produced with clean energy sources such as wind, solar, nuclear, and hydro. By investing in this infrastructure now, Minnesota can stay competitive in green steel manufacturing, while driving economic growth and job creation across the state.

This investment supports a cleaner, more resilient economy by:

- Lowering and stabilizing ammonia fertilizer costs for farmers.
- Reduced reliance on out-of-state ammonia production.
- Strengthening Minnesota's leadership in clean energy innovation.
- Positioning Minnesota's iron and steel industry for long-term success.
- Creating high-quality clean energy jobs and new economic opportunities in communities that need them most.

CEEM encourages your support for this bill, as Minnesota has the expertise, resources, and industry leadership to lead in green ammonia and green steel. We thank Representative Anderson for authoring HF2103 and Chair Swedzinski and Chair Acomb for hearing it in committee today. If you have any questions, please let us know. Thank you.

Sincerely,



George Damian
Director of Government Affairs
gdamian@cleanenergyeconomymn.org



Chandra Her
Senior Policy Associate
cher@cleanenergyeconomymn.org



March 27, 2025

Minnesota House of Representatives
Energy, Finance, and Policy Committee
Capitol 123
Saint Paul, MN 55155

RE: House File 2103 MRETS Green Ammonia

Dear Chairs Acomb and Swedzinski and Committee Members,

The Center for Rural Affairs is a private non-profit organization that advocates for policies that strengthen rural communities in order to create a more vibrant future. We connect rural citizens with opportunities to engage in the decisions that affect their lives. Investments in energy initiatives will help ensure that rural communities continue to thrive.

The Center supports House File 2103, which appropriates \$9 million to the Midwest Renewable Energy Tracking System for technology that enables tradable ammonia, hydrogen, and renewable energy certificates. This strategic investment creates a system to ensure there is no double counting of certificates and maximizes the benefits of the program by ensuring funds are spread more broadly.

This legislation assists in facilitating local investments in fertilizer production, reducing the financial impacts on the state's farms and farm businesses. Local production reduces costs associated with transportation while creating local economic development opportunities in rural areas.

Minnesota continues to make investments in carbon neutral technology, aiding the state's move towards providing 100% carbon-free electricity by 2040. Taking steps to reduce the state's carbon emissions while supporting rural development and agriculture is essential to mitigating and addressing climate change while also providing benefits to rural communities. Having a system to track certificates is important to spread benefits across the state, especially to rural areas.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Cora Hoffer".

Cora Hoffer, Senior Policy Associate
Chaska, MN