

APPLICATION CHECKLIST

Use this checklist as a tool to ensure that you have all of the components of the application package. Please note, this checklist is for your use only and does not need to be included in the package.

<input type="checkbox"/>	Application
<input type="checkbox"/>	Transmittal Letter
<input type="checkbox"/>	Tax Liability Statement
<input type="checkbox"/>	Letters of Support (If Applicable)
<input type="checkbox"/>	Business Plan (Appendix)
<input type="checkbox"/>	Historical Financial Statements (3 years) (Appendix)
<input type="checkbox"/>	Budgeted Projections (Appendix)
<input type="checkbox"/>	Loan/Loan Guarantee Application (if Applicable, Appendix)
<input type="checkbox"/>	Other Appendices (If Applicable)

When the package is completed, send an electronic version to sustainableenergy@nd.gov and 2 hard copies by mail to:

Clean Sustainable Energy Authority
North Dakota Industrial Commission
State Capitol – 14th Floor
600 East Boulevard Ave Dept 405
Bismarck, ND 58505-0840

For more information on the application process please visit:
<http://www.nd.gov/ndic/csea-infopage.htm>

Questions can be addressed to Al Anderson (701) 595-9668.

Clean Sustainable Energy
Authority

North Dakota Industrial
Commission

Application

Project Title:

Commercial Deployment of Carbon Dioxide Capture &
Geological Sequestration in McLean County

Applicant:

Carbon America Developments, LLC
and
Midwest AgEnergy Group

Date of Application:

March 1st, 2022

Amount of Request

Grant: \$0
Loan: \$34,467,061

Total Amount of Proposed Project:

\$68,934,121

Duration of Project:

18 Months

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ABSTRACT

Objective:

The objective of this project is to bring a CO₂ capture and sequestration project into commercial operations in central North Dakota. This project will capture emissions from the Blue Flint Ethanol facility and permanently store them underground within secure saline formations. The successful completion of this project will demonstrate that CO₂ can safely and efficiently be stored in McLean County. Once this is demonstrated, this project will enable larger scale projects in the future, locally and globally. This project will also enhance the financial viability of ethanol production and other associated businesses in the region, and further demonstrate North Dakota's leadership in deployment of carbon capture and sequestration.

Expected Results:

This project will result in a carbon capture compression and dehydration facility being constructed and fully brought into operation. This project will also design and complete a CO₂ injection well, a monitoring well within the injection formation, and a CO₂ transport line to connect the capture facility to the injection well. The project team will secure the appropriate permits and regulatory approvals necessary to advance the project and monetize the revenue streams. A baseline and operational environmental monitoring program will also be deployed. In addition to demonstrating of the feasibility of carbon capture technologies and protecting the environment by reducing carbon emissions, this project will support several additional stages of economic development through its lifetime. During construction, the project will inject millions of dollars into the economy and provide jobs associated with the build out of new assets. Upon completion and commencement of operations, the project will protect existing energy jobs, provide new jobs operating and maintaining the facilities, provide additional tax revenue to the local community as well as the State, and income to local property owners.

Duration:

The project is expected to require 18 months to complete.

Total Project Cost:

Total project costs are approximately \$68,934,121. In this application, we are asking the Clean Sustainable Energy Authority for a \$34,467,064 loan which is 50% of the total project costs. Carbon America Developments, LLC, Midwest AgEnergy Group, or their affiliates, will supply the balance of the capital required to complete the project.

Participants:

Carbon America Developments is a wholly owned subsidiary of Carbon America, Carbon America will own the project through Carbon America Developments. Carbon America Developments will be managing the project through subsidiaries North Star Sequester Company (NSSC) and North Star Capture Company (NSCC) with technical and regulatory assistance provided by project partners and

consultants including Midwest AgEnergy and the Energy and Environmental Research Center (EERC). Various qualified contractors and service providers will be used for design and construction services including Fagen Inc. and Salof LTD. Midwest AgEnergy (MAG) will transfer project assets to NSCC and NSCC and continue to operate the Blue Flint Ethanol (BFE) facility. MAG will also be involved in the steering committee of the project's development, as well as operations post-commercial operations date (COD).

PROJECT DESCRIPTION

Objectives:

The objective of this project is to bring a CO₂ capture and sequestration project into commercial operations in central North Dakota. This project will capture CO₂ emissions from the Blue Flint Ethanol facility and permanently store them underground within secure saline formations. The successful completion of this project will demonstrate that CO₂ can safely and efficiently be stored in McLean County. Once this is demonstrated, this project will enable larger scale projects in the future, locally and globally. This project will also enhance the financial viability of ethanol production and other associated businesses in the region, and further demonstrate North Dakota's leadership in deployment of carbon capture and sequestration.

The production of renewable fuels has had a marked impact on the economy of the state of North Dakota. The ethanol industry contributes \$623 million annually to the state's economy and over \$11 million in taxes while providing over 10,000 high-quality jobs to rural regions of the state. These facilities also provide a value-added market to agricultural producers. Multiple reports demonstrate that ethanol production increases corn basis values back to corn producers by 45 cents per bushel across all bushels produced in the United States.

There are numerous markets for biofuels that have aggressive carbon reduction goals. This translates into a financial opportunity for renewable fuel producers who can reduce the carbon intensity of the fuel they produce. Ethanol production via fermentation of grains produces a relatively pure stream of CO₂. The ability to capture and permanently sequester this CO₂ stream is the single largest opportunity to reduce the carbon intensity (CI) of fuel produced. This CI advantage, along with the 45Q tax code benefit, greatly enhances the financial incentives to permanently sequester CO₂. Success in such an endeavor would ensure market access and enhance the financial stability of existing biorefineries, their feedstock suppliers, and spur economic development in a variety of industries that have Environmental Social and Corporate Governance (ESG) criteria.

The Blue Flint Ethanol (BFE) facility is co-located with the Coal Creek Station, a 1200 MW coal fired power plant in McLean County ND. McLean County is known to contain over 1.5 billion tons of economically recoverable lignite. A project that demonstrates carbon dioxide storage in close proximity to vast coal reserves enhances the long-term value of those reserves in a carbon constrained economy.

Significant due diligence and project planning has already been performed. The key activities remaining to ultimately bring CO₂ sequestration into commercial operation include:

1. Finalize engineering and design; build Capture Compression & Dehydration Facility (CCDF)

2. Finalize Design and Complete Injection Well
3. Finalize Design and Complete Monitoring Well
4. Finalize Design and Construct a CO₂ transport line (gathering line) from CCDF to Injection Well
5. Secure Regulatory approvals necessary to advance project and monetize benefits.
6. Complete and Implement Baseline Environmental Monitoring Program

Methodology:

To bring CO₂ sequestration into commercial application a diverse set of tasks must be completed. For the past several years MAG and their project partners have been evaluating the potential for permanent CO₂ storage in a safe and cost-effective manner. We have followed a stage gate process identifying potential project risks and gathering information to inform us on project viability. MAG has invested over \$10 million to date. We believe the project is sufficiently developed to move to commercial scale operations. Project activities we have already completed that demonstrate feasibility and warrant advancement to project execution phase include:

1. *Feasibility Assessment of subsurface potential for CO₂ storage through evaluation of existing well data.* MAG commissioned EERC to evaluate offset wells and inform on potential formations suitable for CO₂ storage. Several formations were identified for additional evaluation.
2. *2D Seismic survey and source testing to determine best seismic source for data acquisition in a combination of mined and undisturbed soils.* Due to the complex surface conditions including mined and virgin soils, a test was required to determine the most effective manner to collect seismic data. MAG contracted Breckenridge Geophysical to complete the survey and EERC to evaluate the data and recommend seismic acquisition protocols most suitable for this environment.
3. *FEL 2 Level Engineering on Capture and Compression Plant.* MAG commissioned one of the largest and most respected EPC firms to evaluate the CO₂ emissions from fermentation scrubber at ethanol plant and determine most practical manner to capture, compress, dehydrate and pump liquified CO₂ to an injection well. This phase produced a Process Flow Diagram, General Arrangement Drawings, Major Equipment List, and capital construction cost estimate, as well as a Mass Energy Balance for future operations enabling estimates of operational expenses.
4. *3D Seismic survey over approximately 9 square miles surrounding the Blue Flint location.* MAG engaged an external firm to conduct a 3D Geophysical Seismic survey over a little more than 9 square miles surrounding the ethanol facility. The processed data was evaluated by EERC to ensure continuity of potential target formations and evaluate viable locations for drilling of a stratigraphic test well that could potentially be re-purposed as an injection or monitoring well.
5. *Drilling of a Stratigraphic Test well to collect subsurface core samples and logs required to accurately model the quality and capacity of CO₂ storage reservoirs.* MAG commissioned an external firm to design and drill a stratigraphic test well approximately 2 miles from the Blue Flint Ethanol facility. The formations believed to be amendable to CO₂ storage were cored and logged. The well was cased through the Inyan Kara formation and temporarily abandoned. MAG commissioned the EERC to define formation porosity and permeability based on physical samples and logs collected. The information was put into subsurface modeling and simulations

to characterize the potential size of CO₂ plume, capacity of target formations for storage, and define any leakage risk points. Approximately 80% of the technical information required to submit a Class VI injection permit was completed as part of this phase.

6. *Capture Plant Engineer Procure & Construct (EPC) Proposal.* MAG engaged Fagen Inc, supported by IC Thomasson and Associates Engineering, and Salof Inc. to put together a fully integrated solution on Capture Compression and Dehydration facility. Engineering required to get to lump sum price has been completed as part of this task as well as development of Mass Energy Balance, Process Flow Diagrams, General Arrangement Drawings, Civil, Structural, and Electrical engineering, Utility Interconnects, and development of P&ID drawings. MAG has a \$15.6 million contract with Salof and has made a 15% down payment on the contract under a limited notice to proceed to ensure and maintain negotiated fixed-price equipment contract pricing.
7. *Financial Modeling-* A financial model has been created which incorporates the capital and operational expenses along with the value creation from low carbon fuel standards and section 45Q tax credits associated with CO₂ storage project adjacent to the Blue Flint Ethanol facility. Modeling indicates this is an attractive project to pursue. It also suggests implementation prior to anticipated inflation of construction costs and predicted erosion of low carbon fuel values is required to achieve a reasonable return threshold.

Through the activities described above, geological experts have concluded there are at least two deep saline formations available which can safely and permanently sequester carbon dioxide for this project. Carbon America Developments and their project partners are currently advancing with injection into the Broom Creek formation, similar to both the Red Trail Ethanol and Project Tundra carbon capture sequestration projects also being developed in North Dakota presently.

To bring CO₂ sequestration into commercial application, a diverse set of tasks must be completed. The following five bullets provide a high-level description of the key project tasks/deliverables identified and methodology we plan to utilize to ensure completion. Additional information on tasks is provided in the Facilities Section, Techniques Section, and various appendices.

1. *Finalize Design and Complete Injection Well.* MAG has already drilled one well and left it in a condition such that it could be re-purposed as an injection well. Upon confirmation of pore space rights, Carbon America Developments will complete the well as an injector. Detailed engineering and design work on injection well specifications will be followed by permitting and ultimately well completion. A company headquartered in western ND has commenced work on detailed engineering.
2. *Finalize Design and Complete Monitoring Wells.* Carbon America Developments will drill two new wells to be utilized for monitoring. Detailed engineering and design work on the monitoring well specifications for the Broom Creek will be followed by permitting and ultimately well completion, also in conjunction with the company based out of western North Dakota. Secondly, a Fox Hills US Drinking Water (USDW) well will be drilled by a company headquartered near Bismarck, ND.
3. *Complete gathering (distribution) line from CCDF to injection well.* Liquefied CO₂ from the CCDF would be pumped via a buried pipe to the injection well head. This phase of the project will

complete final detailed engineering and design work required to procure the gathering line and any leak monitoring system materials, and to subsequently complete the construction of the gathering system.

4. *Secure Regulatory Approvals necessary to inject CO₂ and monetize project benefits.* There are several critical regulatory approvals required to inject CO₂ and be able to fully realize the financial drivers of the project. For this project they include:
 - *Obtain Storage Facility Permit (SFP) -Class VI permit from North Dakota Industrial Commission (NDIC) Department of Mineral Resources (DMR).* ND is the first state to receive primacy over Class VI (CO₂ injection) wells from the EPA. We believe this will enable timely review of our substantially complete application. At this time, we have completed or are finalizing all required components of a Class VI storage permit and will be prepared to submit in a matter of months. We have sought guidance from NDIC to ensure compliance with expectations and ensure appropriate planning. Major permit components include:
 - Pore Space Access
 - Geological Exhibits and Explanations
 - Area of Review
 - Supporting Permits and Plans (Include financial assurance, testing and monitoring, worker safety, emergency response, plugging and post-closure)
 - Injection Well and Storage Operations Procedure
 - CO₂ Storage Modeling and Simulations
 - Quality Assurance and Surveillance Plans
 - *Submit Monitoring Reporting and Verification (MRV) Plan to EPA.* To be eligible for 45 Q tax benefits a CO₂ sequestration project must provide a MRV plan to the EPA. There is significant overlap with the regulatory requirements of the Class VI permit application.
 - *California Air Resource Board (CARB) Permanence Protocol.* To fully monetize the value of low carbon fuel produced at MAG biorefineries, pathways into specific low carbon markets must be obtained reflecting CO₂ sequestration. The most prevalent of these markets is the CARB Low Carbon Fuel Standard. The Permanence Protocol has many similarities with the SFP but also contains additional requirements.
5. *Complete Baseline Monitoring Program.* The regulatory approvals described above all include various requirements for soil and groundwater sampling to be conducted prior to injection of CO₂. Water samples from the deepest underground source of drinking water (USDW) formation need to be collected and analyzed both prior to and during injection operations. Appropriate groundwater wells currently in operation proximate to the injection well or CO₂ plume will be sampled to establish a baseline prior to commencing injection. Characterization of gasses present in soils surrounding the project will also be completed.

Anticipated Results:

We anticipate successful execution of the five key tasks identified above, resulting in a fully operational commercial project. Through design, construction, and operation the project will:

- Inject millions of dollars into the local economy
- Protect existing jobs in the energy industry
- Provide additional jobs in construction and operational phases
- Yield environmental benefits associated with reduced carbon emissions
- Provide tax revenue to the county and State
- Provide income to property owners provide proof of successful operations and inform design of future storage projects to include the adjacent Coal Creek Station, the largest power plant in North Dakota and a critical resource to the local and state economy

The subsequent **Standards of Success** section elaborates on the anticipated results of this project.

Facilities:

MAG owns and operates the Blue Flint Ethanol facility near Underwood, ND. Blue Flint purchases about 25 million bushels of corn from approximately 500 local corn producers and produces over 70 million gallons of ethanol each year along with about 200,000 tons of dry distillers' grains and about 10 tons of corn oil. A byproduct of fermentation at the facility is carbon dioxide (CO₂). Blue Flint produces about 200,000 tonnes per year of CO₂, which is currently scrubbed and released to the atmosphere. MAG has explored many opportunities to put this CO₂ to beneficial use and believes geological sequestration now provides the best opportunity for the biorefinery, the State, and the environment. The CCDF will be located on Blue Flint plant property. More information about MAG facilities is provided in APPENDIX B.

The Capture Compression and Dehydration Facility will utilize a proven and bankable Salof liquefaction design. The Plant is designed to capture CO₂ vapor which is discharged during the production of ethanol. The CO₂ Liquefaction Plant will compress, dehydrate and liquefy the CO₂ before again compressing to a super-critical state and superheating the CO₂ to meet pipeline specs. The plant is designed to meet these design conditions under worst case design supply temperature and pressure conditions. In addition, the plant is normally able to operate at a 50% turndown ratio. An overview and process flow for the liquefaction plant is provided in APPENDIX B.

The injection and monitoring wells will be designed with a 16" conductor to 80', and 10 3/4" surface casing to 1330' in the Pierre Shale to isolate all USDWs. A 7" casing will extend beyond the target formations, and all casing will be cemented to surface. For the production string, appropriate CO₂-resistant materials will be selected, with the shoe to be placed at 4900' in the Amsden formation to cover both the Broom Creek and Inyan Kara formations.

The CO₂ gathering (transmission) line will connect the CCDF with the injection well. The line, estimated to be approximately two miles long, will have ample capacity to deliver the full volume of CO₂ liquified to the well head and be equipped with the appropriate level of leak detection equipment. The final specifications for pressure and flow are to be based off pressure required for injection, pump capacity at CCDF facility, and hydraulic, route length, and line friction calculations. The line will be a buried line following the safest commercially viable route sensitive to local stakeholder and environmental issues.

Resources:

Carbon America Developments and Midwest AgEnergy Group will be reliant on various project partners, technical experts (both internal and external), professional contractors, and service providers to complete the project.

Subsurface technical expertise along with modeling and permitting assistance will be provided by or contracted through the EERC.

The CCDF will utilize engineering, design, and construction subcontractors such as Fagen, I.C. Thomasson, and Salof.

The gathering line and well drilling components will be awarded via competitive bid process of competent and pre-qualified professional contractors.

Techniques to Be Used, Their Availability and Capability:

The CCDF facility utilizes proven technology that has been deployed at multiple ethanol facilities in the US which sell CO₂ for industrial purposes. For this project, the technology needs to be modified slightly to accommodate a higher CO₂ capture percentage at the scrubber than deployed at other locations. The design incorporates additional measurement and variable frequency drives to accommodate the cyclic variable of CO₂ production in batch fermentation process used at Blue Flint Ethanol and minimize electrical energy consumption requirements. APPENDIX C contains a redacted proposal from Fagen Inc describing the project execution plan for CCDF construction.

Design and operation of CO₂ injection and monitoring wells have been demonstrated on other projects. Class II wells are similar in nature and design and are common throughout western ND. This project will incorporate the required criterion of a Class VI well into site and formation specific design to provide safe and compliant injection and monitoring wells. Interconnection of CCDF and well head will utilize commonly deployed technologies from the oil and gas pipeline industry as appropriate for this service.

The regulatory approval process for a Class VI permit in ND has been demonstrated on two other projects. This project will follow as similar application template and incorporate learnings gleaned from other applicants into our submittal.

Environmental and Economic Impacts while Project is Underway:

Environmental Impacts

A construction permit for CCDF will be required. Review has confirmed little environmental impact is expected from construction as it will be located within an existing industrial facility.

Environmental impacts during the drilling/completion of injection and monitoring well drilling are similar to that of drilling an exploratory oil well. Established best management practices already being used in ND for drilling wells for oil production or waste disposal will be employed. A closed loop mud system will be utilized, and all solid and liquid wastes will be collected and disposed according to ND regulations.

Surface disruption will be required to bury the CO₂ transport line. The route will be evaluated to avoid any environmental or culturally sensitive areas. Best management practices will be followed to minimize impacts during construction.

Economic Impacts

Maintaining continuous operations at Blue Flint Ethanol during challenging market conditions has a significant impact on the economy of central ND. MAG employs just under 100 staff and has annual payroll of about \$10.5 million per year. Corn purchases at Blue Flint Ethanol will likely be \$150 million in 2022.

In addition to the economic impacts of sustained ethanol production, this project will require nearly \$70 million of capital investment to reach commercial operations. During construction, businesses providing skilled contract work will be needed. Industries such as hospitality and tourism will see additional customers as contract workers will be required for hotel, fuel, food, and amenities. The project will also include real property components, which will generate additional value to support local county and school districts. Once installed and operating the additional equipment will require about \$6 million per year in new operating and maintenance related activities.

Ultimate Technological and Economic Impacts:

Commercial Scale operation proves technology viability – Blue Flint produces approximately 200,000 tonnes per year of CO₂. Much larger sources of CO₂ exist in central ND. This project will undoubtedly produce valuable knowledge which will enable future endeavors, potentially with direct future project expansion. The process for securing injection well permits, pore space amalgamation, and injection well design and operations from this project will provide a template for potential future projects.

Improved viability of ethanol plants - The US fuel ethanol industry is challenged by the supply/demand fundamentals for fuel ethanol. The US Energy Information Administration estimates that domestic ethanol production capacity stands at 17.5 billion gallons per year. Domestic demand for fuel ethanol averaged 14.1 billion gallons per year in the three years prior to 2020, when COVID disrupted the markets. During that same period, US exports of non-beverage ethanol averaged 1.5 billion gallons per year. This leaves over 10% of industry production capacity subject to shut-ins in an average year. For MAG plants to remain viable in an oversupplied market it is critical to differentiate our products and to create new customers for our products beyond the commodity demand for fuel ethanol. We believe decreasing carbon intensity of ethanol through CCS is the best opportunity to differentiate the commodities we produce from those of other producers and position our company assets to operate at full capacity for years to come.

Economic Impact to farmers providing corn to Blue Flint Ethanol- Blue Flint Ethanol and the sister plant in ND have contributed much to farm economics. Since 2007, the year before Blue Flint Ethanol commenced operations, corn production in ND has virtually doubled. Prior to the introduction of ethanol demand, farmers had no reliable market for corn beyond their own feed use and volatile export demand. Swings in export demand created a boom-and-bust cycle in ND corn prices. That cycle discouraged farmers from expanding their corn acreage and denied them the opportunity to diversify their agronomic and price risk. In this setting, Blue Flint Ethanol has provided a vital outlet for western ND farmers' output. The ND Ethanol Council estimates that our ND plants consume 40-60% of ND's corn crop each year. Locally, Blue Flint Ethanol consumes an average of 74% of the corn produced in the

North Central, Northwest and West Central crop districts in ND. We compare corn settlement records at Blue Flint Ethanol to the USDA Prices Received report that is issued monthly. Over the last eleven years, Blue Flint Ethanol has paid an average of \$0.09 per bushel more than the ND corn price received by farmers. That means there has been an extra \$19 million in crop revenue injected into the local economy over those eleven years. In summary, Blue Flint Ethanol provides a reliable market that pays a price premium to western ND farmers. This has become a vital cog in the local farm economy by creating high quality corn demand and supplying high quality feed at competitive prices to local livestock producers.

Economics to Surface/Pore space ownership - In ND, the subsurface pore space is considered the property of the surface owner. Therefore, to inject CO₂, financial consideration must be given to the surface owner. Additional consideration will be made for surface use rights such as well site access, rights of way, and access to monitoring facilities. These payments to property owners will serve as an investment in the rural economy. In a carbon-constrained future, CCS projects are believed to be one mechanism by which ND could continue to supply energy from our diverse fuel sources to the nation.

Why the Project is Needed:

Completion of this project will demonstrate the ability to safely store CO₂ in formations within the eastern most portion of the Williston Basin. Prior to the feasibility efforts of this project, there was little known about the geology in this area. The formations' thickness, quality, and suitability for injection were uncertainties we have assessed and mitigated such that we are now confident in advancing the project. The factors of thinner formations, thinner cap rock, and scarcity of knowledge of continuity of formations all present opportunities for this project to address and demonstrate that CO₂ can be stored in this area of the state. We believe this will be a critical factor for additional potential projects for this area both now and into the future.

MAG has been developing this project since 2019 and has invested over \$10 million into feasibility. During this time, MAG and Carbon America Developments have refined the capital and operating costs associated with the project. We now have a project ready to advance to completion.

As we have advanced the project and refined business model, we have experienced significant price increases in costs of materials of construction, labor resource costs, and lead time on equipment deliveries. Skilled wage rates have increased at about 3.5% each of the last two years and structural steel has increased about 30% over the last six months according to DNR Magazine. Copper has seen a 90% increase over the last year based on COMEX copper index. The producer price index for stainless steel pipe is up 28% year on year and carbon steel pipe has gone up 58% in last six months based on data published by Bureau of Labor Statistics. These cost and schedule impacts affect the projected return on investment for the project.

The return on investment for this project will come from two sources. The first is Section 45Q tax credits and the second is monetization of low carbon fuel or other voluntary carbon reduction credits. There are several risks associated with both income sources for this project. As it relates to Section 45Q tax credits, this program could be altered to reduce the benefit or additional regulations put in place that

could result in loss of this income source. In addition, MAG's business structure cannot currently utilize the 45Q benefits internally, therefore Carbon America Developments is currently working with multiple potential tax equity partners to effectively monetize the credits. Another risk associated with project cash flows is indirect exposure to the low carbon fuel standard (LCFS) credit values and the potential development of larger scale CO₂ capture and storage projects from renewable fuel plants. If completed, these projects could have a negative impact on this project's return-on-investment projections by increasing the supply of lower carbon fuel and thereby putting downward pressure on the premium for low carbon fuels. There are limited markets that pay premium prices for low carbon fuels. The current market will support approximately 1.5 billion gallons of low carbon renewable ethanol. Should additional projects move forward and bring to market billions of additional gallons of low carbon renewable ethanol, we will have made significant progress towards reducing carbon emissions into the environment, but concurrently will also have substantially commoditized and diminished the financial value of low carbon fuels through oversupply.

We are requesting loan support to assist in ensuring that we can continue to advance the project to completion while minimizing some of the financial risk that supports the investments needed to complete this important project. We believe this project is at an ideal time in its life cycle to validate support by the Clean Sustainable Energy Authority as a model of how we can improve the state's economy, support and sustain high paying jobs, create new jobs, all while improving the environment.

STANDARDS OF SUCCESS

Emissions reduction and reduced environmental impacts - Measuring success against an emission reduction goal for this project is straightforward from a measurement standpoint when compared to other projects. EPA specifies measurement techniques and calculations to ultimately track the amount of carbon dioxide stored. This project will sequester approximately 200,000 tonnes of CO₂ per year from fermentation, which is the equivalent to taking about 43,500 cars off the road each year. Over its planned lifespan this project will prevent more than 4 million tonnes of CO₂ emissions from reaching our atmosphere. We believe opportunity exists to expand the project and provide even larger reductions if incentives and regulations to minimize CO₂ emissions are maintained or increased.

Increased energy sustainability - Ethanol is a renewable fuel. It is already the most widely accepted and cost-effective alternative to increase sustainability in liquid transportation fuels. The CO₂ emitted from the fermentation process is the same CO₂ that corn originally captured from the atmosphere during photosynthesis. Therefore, CCS from ethanol fermentation could be viewed as removing CO₂ from the atmosphere while concurrently producing a sustainable liquid transportation fuel. There is approximately a 40% reduction of carbon intensity of the ethanol production process when deploying carbon capture.

Value to North Dakota- In 2021, MAG's cost of sales exceeded \$400 million. Most of that money is spent in the local ND economy. MAG employs just under 100 people, slightly over half of which work at

the Blue Flint facility near Underwood. According to RFA calculations¹ the Blue Flint facility supports over 1,000 full time jobs. The Blue Flint facility has utilized waste steam off a turbine generator of the adjacent power plant for over 15 years. Providing low carbon intensity transportation fuel has been a foundational element of the business model for MAG. A sequestration project will solidify the financial future for the organization, its employees, and the local suppliers who rely on MAG to be a purchaser or supplier of goods and services.

The Ethanol industry has substantial economic effects on the overall economy of ND. About half of the corn grown in ND is utilized in ethanol production. The North Dakota ethanol industry contributes \$623 million annually to the state's economy. In addition, state and local tax revenues contribute more than \$11 million annually.² North Dakota ethanol plants employ more than 230 workers directly in high-paying positions. The industry also supports nearly 10,000 jobs across all sectors of the economy. Both Agricultural and Energy leaders recognize the value of this project to ND. Letters of support can be found in Appendix D.

The results of this project will provide a full-scale CO₂ sequestration project in McLean County. McLean County is home to an estimated coal reserve of 1.5 billion tons of economically mineable lignite.³ A project that successfully demonstrates that carbon dioxide storage is possible situated near vast coal reserves enhances the value of those assets in a carbon constrained world. Technologies continue to emerge that will continue to enhance the value of lignite as both an economical energy source and a low carbon energy option.

Lignite coal is a critical resource for North Dakota's economy. The Lignite Energy Council reports that the North Dakota lignite industry is responsible for about 14,000 jobs in the state and \$5.7 billion in economic activity.⁴ The potential of future carbon legislation and/or regulations could significantly impact the ability for coal to contribute to North Dakota's economy and the livelihood of people working in the industry.

Explanation of how the public and private sector will make use of the project's results, and when and in what way- Governor Burgum has set a goal for the state of ND to be carbon neutral by 2030. "Of all the opportunities, perhaps none has more potential than carbon capture and storage," he said on May 15, 2021⁵. Successful execution of this project will exemplify steps and strategies others can follow to help ND reach this goal through "innovation not regulation". This innovative commercial scale project will provide a clear roadmap for similar projects currently under development.

¹

https://www.dropbox.com/sh/2gp9bhatpembiyf/AACvnbX94r8_zFOtkVc_q_zga?dl=0&preview=ND_Infographic.pdf

² https://b3358ed0-933b-4e3a-a5f5-66189e78bb29.filesusr.com/ugd/1fd290_8317e15b7a7f4cedb1285a6dc740087c.pdf

³ (https://www.dmr.nd.gov/ndgs/documents/Publication_List/pdf/RIseries/RI-104.pdf)

⁴ (<https://lignite.com/coal-strong/benefits-of-north-dakotas-homegrown-lignite-coal/>)

⁵ <https://www.naturalgasintel.com/north-dakota-governor-sets-carbon-neutral-goal-by-2030/>

The potential commercialization of the project's results. This IS a commercial project.

How the project will enhance the research, development and technologies that reduce environmental impacts and increase sustainability of energy production and delivery of North Dakota's energy resources– This project will be a full-scale demonstration that sequestration can occur on what is perceived to be the boundary of suitable geology. This project will improve upon existing CCDF design to improve the percentage of CO₂ captured as well as the energy efficiency of this design. This project will provide injection well, monitoring well, and CO₂ distribution line designs that can be utilized in future similar projects.

How it will preserve existing jobs and create new ones- The completion of this project will help ensure rural ND, where population is on the decline, has access to high paying jobs. It ensures the existing MAG workforce of nearly 100 employees have sustained employment. Construction of the compression plant, CO₂ transport line, and injection and monitoring well facilities will require several hundred contractors over the one to two years required to complete the project. Following the completion of this project, the operating assets will need additional labor services and contractors to operate, maintain, monitor, inspect, and perform workover services. This will create new jobs for both skilled and unskilled labor.

BACKGROUND/QUALIFICATIONS

*Please provide a summary of prior work related to the project conducted by the applicant and other participants as well as by other organizations. **This should also include summary of the experience and qualifications pertinent to the project of the applicant, key personnel, and other participants in the project.***

Carbon America Developments is a wholly owned subsidiary of Carbon America. Carbon America was created to transform the carbon capture and sequestration industry by lowering costs and rapidly increasing deployment. Carbon America was formed in January 2020 as a spin-off from its parent company which was established in 2010 to develop and commercialize technologies with transformative potential for the global climate. We are backed by multiple investors with very deep capital positions to include Canada Pension Plan Investment Board (over \$540bn in assets under management), Energy Impact Partners, LP (over \$2.0bn in assets under management), ArcTern Ventures, and the Grantham Foundation. Our mission is to capture and sequester as much carbon dioxide as possible, as quickly as possible. To achieve this, we have built a team combining world class engineers, subsurface experts, project developers, and financiers into a vertically integrated CCS company. Carbon America has several mid-development projects underway, with anticipated first commercial operations in late 2023. In addition, we are actively pursuing 10+ projects in various stages of development.

Carbon America chooses from a range of capture technology options, manages the transportation and logistics, researches, optimizes, selects, oversees, and takes on the liabilities of secure geologic sequestration sites. In addition, we also manage all the critical enabling

activities, such as tax equity, permitting, project financing, sequestration site management, and qualification for incentives, so that our CO₂ source partners don't have to.

This vertical integration means we turn the complex, multi-faceted undertaking of CCS into comprehensive, simple solutions for our partners and their communities.

Carbon America Developments, along with MAG has completed multiple feasibility level efforts to demonstrate safe and permanent storage of CO₂ adjacent to its Blue Flint Ethanol facility is plausible. Under the direction of Adam Dunlop, the Regulatory and Technical Services Director, MAG has successfully completed:

1. *Feasibility Assessment of Subsurface potential for CO₂ storage through evaluation of existing well data*
2. *2D Seismic survey and source testing to determine best seismic source for data acquisition in a combination of mined and undisturbed soils*
3. *FEL 2 Level Engineering on Capture and Compression Plant*
4. *3D Seismic survey over approximately 9 square miles surrounding the Blue Flint location.*
5. *Drilling of a Stratigraphic Test well to collect subsurface core samples and logs required to accurately model the safety and capacity of CO₂ storage reservoirs*
6. *Capture Plant Engineer Procure & Construct (EPC) Lump Sum Estimate*

Additional technical expertise to the project will be provided by various contractors, service providers and prospective project partners. Detailed information including organizational descriptions and expertise of key project partners and service providers can be found in the following appendices:

- APPENDIX A - Carbon America
- APPENDIX B - MAG
- APPENDIX E - EERC
- APPENDIX G - Fagen Inc.
- APPENDIX H - Salof LTD

MANAGEMENT

*A description of **how** the applicant will manage and oversee the project to ensure it is being carried out on schedule and in a manner that best ensures its objectives will be met, **and a description of the evaluation points to be used** during the course of the project.*

MAG and Carbon America Developments have deployed a stage gate process throughout the feasibility phases to bring the project up to the current execution phase. The project's aggressive timeline will require management of multiple aspects of the project to occur concurrently. This could be viewed as adding additional risk to project. For example, in a more perfect timeline, a Class VI permit would be obtained prior to investing in long lead time equipment. Our assessment shows that cost inflation of labor and materials described in the *Why Project is Needed* section, along with the significant delay of financial benefits of an operating project, present a higher risk.

Most components of the project are inter-related and have material influence on the design and timeline of other tasks. To manage associated risks and prevent rework, a detailed project management plan and schedule are being created to illustrate the interrelationship of project tasks, sequence of activities, and duration of tasks. An actively managed risk register will be maintained and referenced by the steering committee in cases where variances are observed.

Key decision and evaluation points for the early stage (Phase 1) of project execution will include:

1. Final selection of injection horizon and assimilation of any outstanding data requirements
2. Approval of EPC design and schedule in coordination with contracted CCDF provider
3. Injection and Monitoring wells final design
4. Storage Facility Permit (SFP) pre-submittal review for final completion
5. Internal approval of design of baseline monitoring plan

Based on evaluations and decisions of Phase 1 the project will advance to Phase 2. Key decision and evaluation points during Phase 2 of project execution will include:

1. Execution of CCDF construction plan
2. Request for Proposals and contractor selection for injection and monitoring wells
3. SFP submittal and public hearing
4. Finalize design/Execute contract for construction of CO₂ gathering line
5. Execution of sample collection for Baseline monitoring plan
6. EPA Subpart RR MRV Plan Submittal

The final phase of the project will involve completion, commissioning, and proving satisfactory operations of new assets. Key decision and evaluation points during Phase 3 of project execution will include:

1. Commissioning and performance guarantee testing of CCDF
2. Completion and testing of injection and monitoring wells
3. Receipt of Class VI permit and approval of MRV plan
4. Commissioning and testing of CO₂ flow line
5. Commencement of monitoring strategies for operational project

TIMETABLE

Please provide a project schedule setting forth the starting and completion dates, dates for completing major project tasks/activities, and proposed dates upon which the interim reports will be submitted.

MAG and Carbon America Developments has assembled an overall project timeline based on schedules and proposals for the various tasks described in the Methodology and Project Description sections. This compilation has the injection commencing in Q2 2023. We believe this to a very aggressive - yet achievable timeline.

Three tasks are primarily associated with the critical path to project completion: completing CCDF, regulatory approvals/permitting, and baseline monitoring. The CCD facility has long lead time equipment for compression which is sourced overseas creating the potential for shipment delays. The regulatory approval timeline assumes that all applications are deemed complete on original submissions and don't require extensive rework or significantly longer turn times than current applications require to process. One year of baseline monitoring is required prior to commencing injection. Significant delay in the commencement of sample collection could extend the time to startup.

A detailed project timeline is provided in APPENDIX A on page 35.

BUDGET

Total project costs are estimated at \$68,934,121 of which \$10,618,682 has spent been spent to date. A line-item budget has been provided in Appendix A on page 35 and a detailed line-item budget has been provided as a separate attachment titled "North Star Project Budget.xlsx". We are asking the CSEA to support us with a \$34,467,061 loan which is 50% of the total budgeted project costs. Of note, that request is reduced to \$31,467,061 if the \$3,000,000 in grant funding the project has received to date is part of the 50% cap. If the 50% cap is only on remaining spend, and the grant funding is not part of the 50% cap, the requested loan totals \$29,161,266. Lastly, if the 50% cap is only on remaining spend and the grant funding is part of the 50% cap, the requested loan totals \$27,661,266. Midwest AgEnergy Group, Carbon America Developments, LLC, or a combination of both will supply the balance of cash required to complete the project. Significant cost increases recently viewed in construction cost proposals have challenged the overall project economics.

Item	Project Expense Categories	Total Cost	Spent to Date	Remaining Spend
1	CaptureCo	\$ 42,209,768	\$ -	\$ 42,209,768
2	TransportCo + SequesterCo	\$ 26,221,721	\$ 10,611,589	\$ 15,610,133
3	Other	\$ 502,632	\$ -	\$ 502,632
Total		\$ 68,934,121	\$ 10,611,589	\$ 58,322,533

If Grant Funding IS NOT part of the 50% cap...		% of Total Project Cost	
Project Total Cost	\$ 68,934,121.30		
NDIC Loan Request	\$ 34,467,060.65		50%
Applicant Cash Total	\$ 34,467,060.65		50%

If Grant Funding IS part of the 50% cap...		% of Total Project Cost	
Project Total Cost	\$ 68,934,121		
CSEA Grant Funding Received to Date	\$ 3,000,000		4.4%
NDIC Loan Request	\$ 31,467,061		45.6%
Applicant Cash Total	\$ 34,467,061		50.0%

If Grant Funding IS NOT part of the 50% cap and only remaining spend is eligible		% of Eligible Remaining Spend	
Project Total Cost	\$ 68,934,121		
Applicant Cash Spend prior to Application	\$ 10,611,589		
Total Remaining Eligible Spend	\$ 58,322,533		
NDIC Loan Request	\$ 29,161,266		50.0%
Applicant Remaining Cash Spend	\$ 29,161,266		50.0%

If Grant Funding IS part of the 50% cap and only remaining spend is eligible		% of Eligible Remaining Spend	
Project Total Cost	\$ 68,934,121		
Applicant Cash Spend prior to Application	\$ 10,611,589		
CSEA Grant Funding Received to Date	\$ 3,000,000		
Total Remaining Eligible Spend	\$ 55,322,533		
NDIC Loan Request	\$ 27,661,266		50.0%
Applicant Remaining Cash Spend	\$ 27,661,266		50.0%

Please use the space below to justify project expenses and discuss whether the project's objectives will be unattainable or delayed if less funding is available than requested.

Project costs have been assembled from proposals, quotes, and discussions from professional resources and are generally allocated towards tasks identified in the project objectives section. Task 1 encompasses all costs directly associated with the capture site including capture equipment, EPC costs to build the site, insurance, independent engineers, legal fees associated with the tax equity deal and debt financing, and upfront fees for the tax equity transaction and debt financing. Task 2 encompasses all costs directly associated with the transportation and sequestration of the carbon dioxide. These costs include permitting, legal, seismic surveys, reservoir modeling, baseline monitoring, permitting, and bonding, porespace payments to landowners, surface land and title costs, surface use payments to landowners, drilling and completion of all wells required to inject the carbon dioxide and monitor the carbon dioxide, surface facilities, the gathering system, insurance required by both regulatory bodies and tax equity investors, and upfront fees associated with debt financing. Task 3 is composed of legal

costs related to development and negotiation of the definitive agreement between MAG and Carbon America Developments. Task 4 includes \$200,000 budgeted for public outreach, \$90,000 allocated for unplanned costs, and \$172,632 of costs associated with business development travel. There is a fully broken down and itemized budget spreadsheet attached with this submission titled "North Star Project Budget.xlsx".

The collateral for this loan lies in North Star Capture Company, LLC and North Star Sequestration Company, LLC. The most fungible collateral backing a loan is the \$15,585,000 of carbon dioxide capture equipment purchased from Salof LTD and owned by North Star Capture Company, LLC. Salof LTD has provided carbon dioxide capture equipment to over 40 ethanol plants since 1993 and numerous other sources of carbon dioxide emissions outside of the ethanol industry. Appendix K includes a list of the ethanol plants that Salof LTD has sold carbon dioxide capture equipment to along with a host of other information on Salof's experience and capabilities in carbon dioxide capture.

CONFIDENTIAL INFORMATION

An applicant may request confidentiality for any information in the application packet which the applicant wants to be kept confidential (such as business plans, historical financial information, and budgeted projections.)

Carbon Capture America Inc., Carbon America Developments LLC, and Midwest AgEnergy Group included confidential information including an overview of the companies and their business plans, historical financial statements, project budget projections for the North Star project, and certain information provided to us by third parties in the appendices, and these appendices have been marked as confidential.

PATENTS/RIGHTS TO TECHNICAL DATA

Any patents or rights that the applicant wishes to reserve must be identified in the application. If this does not apply to your proposal, please note that below.

Not Applicable.

STATE PROGRAMS AND INCENTIVES

Any programs or incentives from the State that the applicant has participated in within the last five years should be listed below, along with the timeframe and value.

Neither Carbon America or applicant Carbon America Developments have previously participated in any state programs or incentives; however, Midwest AgEnergy Group has.

In the past 5 years, MAG and its subsidiaries have participated in the following state programs and incentives:

- JSDC Incentive Grant: \$665,000 - documents executed July 2014; funded 2015; proceeds recognized into income in 2019
- NDIC's Grant to study BPC market analysis: \$83,810 – approved July 2018, funded 2018 (Jul and Oct), recognized into income in 2018

- NDIC Renewable Energy Fund Grant for 3D phase of CCS: awarded (to project partner Great River Energy) Nov 2019, funded \$619,347 through 2020 recognized into income 2020
- Agricultural Products Utilization Commission (APUC) grant to study feasibility of utilizing wheat straw as a process fuel to a Biomass boiler for Blue Flint Ethanol; awarded \$155,000 in July 2020.
- NDIC LRC Grant to drill stratigraphic test well: awarded 2020; \$3,388,000 + up to \$250,000 (amend #1); \$2,903,349 funded in March 2021; \$734,651 remains available; to 3/31/21
- NDIC Renewable Energy Program Grant for Seismic Survey to Advance Potential CO₂ Storage in Eastern North Dakota; awarded \$324,460 in 2021. Survey activity is currently underway.
- NDIC CSEA Grant for Commercial Deployment of Carbon Dioxide Capture & Geological Sequestration in McLean County: \$3,000,000 awarded in December 2021

Transmittal Letters



Making climate change history

February 16, 2022

Clean Sustainable Energy Authority
North Dakota Industrial Commission
State Capitol- 14th Floor
600 East Boulevard Ave. Dept 405
Bismarck ND 58505-0840

RE: Transmittal Letter for Carbon America application for Clean Sustainable Energy Authority loan.

To Al Anderson and the Clean Sustainable Energy Authority:

Please find enclosed an application for a loan from the Clean Sustainable Energy Authority to assist Carbon America Developments, LLC and Midwest AgEnergy in bringing a geological sequestration project into commercial operations in McLean County. Our project intends to capture and permanently sequester in deep saline formations about 200,000 tons per year of carbon dioxide from the Blue Flint Ethanol facility.

The potential use of CSEA loan dollars provides Carbon America Developments, LLC and Midwest AgEnergy a unique opportunity to advance our project on an aggressive schedule and serve as potential template for potential future larger projects. It could also provide an excellent example of utilization of CSEA dollars to advance shovel ready projects.

Carbon America Developments, LLC, Midwest AgEnergy's co-applicant for this loan, is a wholly-owned subsidiary of Carbon Capture America Inc. *dba* Carbon America.

If you have any questions regarding the application, please contact Michael Matson of my staff. He can be reached at (281)220-7385 or mike@carbonamerica.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Frazier", written in a cursive style.

Scott Frazier

CEO

Carbon America

5525 WEST 56TH AVE
SUITE 200
ARVADA, CO 80002
720-204-3736
CARBONAMERICA.COM



2841 3rd St SW
Underwood, ND 58576
(701) 442-7500

February 28, 2022

Clean Sustainable Energy Authority
North Dakota Industrial Commission
State Capitol – 14th Floor
600 East Boulevard Ave Dept 405
Bismarck, ND 58505-0840

RE: Transmittal Letter for Midwest AgEnergy Group application for Clean Sustainable Energy Authority grant.

To Al Anderson and the Clean Sustainable Energy Authority:

Please find enclosed an application for a loan from the Clean Sustainable Energy Authority to assist Midwest AgEnergy Group in bringing a geological sequestration project into commercial operations in McLean County. Our project intends to capture and permanently sequester in deep saline formations about 200,000 tons per year of carbon dioxide from the Blue Flint Ethanol facility.

Also included is a certificate of good standing within the state of North Dakota.

A potential loan from the CSEA would be a significant portion of ensuring completion of the CO2 storage project at Blue Flint Ethanol. This project is important to the long-term success of Blue Flint and will serve as a template for potential future larger projects.

If you have any questions regarding the application, please contact Adam Dunlop of my staff. He can be reached at 701-442-7503 or adunlop@midwestagenergy.com.

Sincerely:

A handwritten signature in black ink, appearing to read "Jeff Zueger".

Jeff Zueger
CEO
Midwest AgEnergy

State of North Dakota SECRETARY OF STATE



Certificate of Good Standing of MIDWEST AGENERGY GROUP, LLC

SOS Control ID#: 0000130509

Certificate #: 021418728

The undersigned, as Secretary of State of the state of North Dakota, hereby certifies that, according to the records of this office,

MIDWEST AGENERGY GROUP, LLC

a Limited Liability Company - Business - Domestic was formed under the laws of NORTH DAKOTA and filed with this office effective August 28, 2013. This entity has, as of the date set forth below, complied with all applicable North Dakota laws.

ACCORDINGLY, the undersigned, as such Secretary of State, and by virtue of the authority vested in him by law, hereby issues this Certificate of Good Standing.

DATE: February 28, 2022

A handwritten signature in cursive script, reading "Alvin A. Jaeger".

Alvin A. Jaeger
Secretary of State

Tax Liability Statement

**Industrial Commission
Tax Liability Statement**

Applicant:

Application Title:

Program:

- Lignite Research, Development and Marketing Program
- Renewable Energy Program
- Oil & Gas Research Program
- Clean Sustainable Energy Authority

Certification:

I hereby certify that the applicant listed above does not have any outstanding tax liability owed to the State of North Dakota or any of its political subdivisions.

Signature

Title

Date

Industrial Commission
Tax Liability Statement

Applicant:

Midwest AgEnergy Group, LLC

Application Title:

Commercial Deployment of Carbon Dioxide Capture & Geological Sequestration in McLean County

Program:

- Lignite Research, Development and Marketing Program
- Renewable Energy Program
- Oil & Gas Research Program
- Clean Sustainable Energy Authority

Certification:

I hereby certify that the applicant listed above does not have any outstanding tax liability owed to the State of North Dakota or any of its political subdivisions.



Signature

Michael Grosz
Vice President and Chief Financial Officer
Midwest AgEnergy Group, LLC

Title

2/28/22

Date

Letters of Support



STATE OF NORTH DAKOTA
DEPARTMENT OF AGRICULTURE
600 E BOULEVARD AVE, DEPT 602
BISMARCK, ND 58505-0020

DOUG GOEHRING
COMMISSIONER

February 18, 2022

Mr. Al Anderson
Executive Director
Clean Sustainable Energy Authority
State Capitol 14th Floor
600 East Boulevard Ave. Dept 405
Bismarck ND 58505-0840

RE: Support of Carbon America CSEA Loan application for completion of CO₂ Underground Storage

Dear Mr. Anderson:

I am writing in support of the loan application from Carbon America that will allow for completion of their project at Midwest AgEnergy's Blue Flint Ethanol facility to sequester CO₂ into permanent underground storage. As the North Dakota Agriculture Commissioner, I recognize this project is important to the long-term viability of Blue Flint Ethanol, and holds strong potential for positive impacts on the farming community by supporting the growth of a consistent market for corn and other agricultural products.

Midwest AgEnergy has invested significant resources into feasibility studies, a stratigraphic test well, and subsurface modeling to demonstrate that this project will be successful in achieving safe long term underground storage of CO₂. Their project is well developed and positioned to be at the forefront of demonstrating underground CO₂ storage in central North Dakota. Carbon America has a strong history of thoughtful innovation in the field of CO₂ sequestration.

We support Carbon America's Clean Sustainable Energy Authority loan application that will aid in assisting completing and commissioning a Class VI storage well and associated capture, compression and dehydration equipment needed to complete the project. The success of this project will be incredibly valuable to the agricultural producers in North Dakota and provide proof of concept to advance future carbon storage efforts across our state in all energy sectors. Developing long-term strategies to mitigate CO₂ emissions, such as this project, is an integral part of our nation's energy and agriculture future. I give this project my support and look forward to its completion. If you have any questions, please feel free to contact me.

Sincerely,


Doug Goehring
North Dakota Agriculture Commissioner



PO Box 2136 • 1415 12th Ave SE
Jamestown, ND 58401
800-366-8331 • 701-252-2341
ndfu.org

February 16, 2022

Mr. Al Anderson, Executive Director
Clean Sustainable Energy Authority
State Capitol 14th Floor
600 East Boulevard Ave. Dept 405
Bismarck ND 58505-0840

RE: Support of Carbon America CSEA Loan Application for Completion of CO2 Underground Storage

Dear Mr. Anderson:

North Dakota Farmers Union (NDFU) represents more than 50,000 farm and ranch families and their energy and agriculture supply cooperatives. We are the largest general farm organization in the state.

This project is important to the long-term viability of Midwest AgEnergy's Blue Flint Ethanol and the farming economy in North Dakota. We want to express our support for the loan that will allow Carbon America to permanently sequester CO2 from the Blue Flint Ethanol facility underground.

Midwest AgEnergy has invested significant resources into feasibility studies, a stratigraphic test well and subsurface modeling to demonstrate this project will be successful in achieving safe, long-term underground storage of CO2. Their project is well developed and positioned to be at the forefront of demonstrating underground CO2 storage in central North Dakota. Carbon America has a strong history of thoughtful innovation in the field of CO2 sequestration, and we have observed Midwest AgEnergy's strong dedication to stewardship of our natural resources and community outreach efforts. The two organizations working in tandem will ensure a successful future for the North Dakota farming economy.

We support Carbon America's Clean Sustainable Energy Authority loan application which will aid in completing and commissioning a Class VI storage well and associated capture, compression and dehydration equipment needed to complete the project. The success of this project will be incredibly valuable to the agricultural producers in North Dakota and provide proof of concept to advance future carbon storage efforts in our state across all energy sectors.

Developing long-term strategies to mitigate CO2 emissions, such as this project, is an integral part of our nation's energy and agriculture future. We encourage your support of this project and look forward to its completion.

Sincerely,

NORTH DAKOTA FARMERS UNION


Mark Watne
President

