

**STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION**

NAVIGATOR HEARTLAND GREENWAY LLC)
) Docket No. 22-____
)
APPLICATION PURSUANT TO)
THE CARBON DIOXIDE TRANSPORTATION)
AND SEQUESTRATION ACT (220 ILCS 75/1 et seq.))
FOR A CERTIFICATE OF AUTHORITY)
TO CONSTRUCT AND)
OPERATE A CARBON DIOXIDE)
PIPELINE AND WHEN NECESSARY TO TAKE)
INTERESTS IN PROPERTY AS PROVIDED BY)
THE LAW OF EMINENT DOMAIN)

APPLICATION FOR CERTIFICATE OF AUTHORITY

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To the Illinois Commerce Commission:

I. INTRODUCTION AND SUMMARY OF THE APPLICATION

1. Navigator Heartland Greenway LLC (“Applicant”) hereby petitions the Illinois Commerce Commission for the issuance to it of a Certificate of Authority pursuant to the Carbon Dioxide Transportation and Sequestration Act (“CO₂ Act”) (220 ILCS 75/1 *et seq.*) authorizing Applicant to construct, install, operate, and maintain the Illinois portions of the Heartland Greenway pipeline system and appurtenant facilities (“Heartland Greenway Pipeline System” or “HGPS”). The Heartland Greenway Pipeline System is the midstream transportation portion of a new interstate carbon capture, pipeline transportation and sequestration system being developed by Applicant’s parent company Navigator CO₂ Ventures LLC (“NCO₂V”) across parts of the Midwest U.S. and collectively referred to herein as “Heartland Greenway” or the “Project”. The Heartland Greenway Pipeline System is generally depicted in **Exhibit C** to this Application. The Project is being developed by NCO₂V, with Applicant being a wholly-owned subsidiary of NCO₂V and the company constructing and operating the interstate Heartland Greenway Pipeline System. Applicant’s affiliated companies are developing the other portions of Heartland Greenway, with Navigator Carbon Services LLC (“NCS”) developing carbon capture and compression systems and HG Carbon Storage LLC (“HGCS”) developing the sequestration facilities. Applicant will receive into HGPS captured carbon dioxide emissions compressed into a dense phase at Project capture facilities, which emissions are currently being emitted into the atmosphere, from emission sources located along the proposed route of HGPS, and safely transport the compressed CO₂ through HGPS to either (1) a permanent and secure underground sequestration site operated by HGCS and/or (2) a terminal for distribution to industrial users of CO₂. Only Applicant’s Heartland Greenway Pipeline System is the subject of this Application.

2. Applicant, NCS and HGCS have contracted with multiple industrial producers across the Project footprint to capture, transport, and store up to 10 million metric tons (“MMT”) of CO₂ annually, with Applicant responsible for the transportation portion of the Project. Once fully expanded, the system will be able to transport and store up to 15 MMT of CO₂ annually. Assuming the receipt of necessary regulatory approvals, construction of the Project is anticipated to commence in the second quarter of 2024, with phased in-service commencing in the first quarter of 2025.

3. The proposed Project scope includes 21 CO₂ collection sites at customer premises, approximately 1,300 miles of new pipeline, three booster stations, mainline valves (“MLVs”) at several locations, and other appurtenances. The proposed HGPS components in Illinois currently consist of approximately 250 miles of pipeline, one booster station, MLVs (location and number to be determined based on final routing and design) and associated appurtenances. The proposed location of the HGPS in Illinois is depicted more specifically in **Exhibit D** of this Application and the location and components of the Project are described in more specificity in Section IV of this Application.

4. Applicant is seeking an order authorizing it to construct and operate the Heartland Greenway Pipeline System in Illinois and, if and when necessary, to take and acquire easements and interests in private property in the manner provided for by the law of eminent domain, as provided in Section 75/20(i) of the CO₂ Act. Authority to use eminent domain is only sought in the event that it becomes necessary to construct and maintain the HGPS facilities described herein in Illinois, and only in accordance with Section 75/20(i)(2). It is Applicant’s intention to acquire all necessary interests in real estate through negotiated voluntary agreements with landowners, and to use eminent domain to acquire easements only

when the landowner refuses negotiation or rejects all reasonable offers and alternatives, and only after Applicant has used reasonable and good faith efforts to acquire the property or easement and has determined that the easement is necessary to avoid unreasonable delay or economic hardship to the progress of activities carried out pursuant to the certificate of authority granted by the Commission, as specified in Section 75/20(i)(2).

5. This Application presents the proposed HGPS route and 200-foot project route width in Illinois, as depicted on **Exhibit D**, and described in **Exhibit E** (legal description of the route), to this Application. However, to provide additional flexibility to respond to contingencies in development of a final route and project route width, Applicant has contacted landowners within a broader corridor than 200 feet, up to ½ mile or more (the “notification corridor”), along the proposed HGPS route in Illinois to obtain permission to conduct surveys on landowners’ properties. Applicant is currently engaged in civil and environmental surveys where landowners have granted survey permission. **Exhibit F** to this Application is a list of the names and addresses of the landowners located within the notification corridor.

6. Applicant is requesting approval of a 200-foot project width around the final approved route of the pipeline in Illinois, as allowed by Section 75/20(d) of the CO₂ Act. Based on the results of its surveying activities and detailed information obtained from landowners, Applicant may submit a revised project route width for approval by the Commission. The final proposed 200-foot project route width will be located within the notification corridor.

7. The HGPS will transport captured CO₂ emissions that are currently being released and emitted by facilities (primarily ethanol processing facilities) along the proposed

route of the Project in Illinois, Iowa, Minnesota, Nebraska, and South Dakota, and will transport the CO₂ to a sequestration field for injection into, and permanent underground storage in, a saline aquifer formation, or to terminal facilities at which the CO₂ may be taken by industrial users of CO₂ for use in their processes and thereby serve as an efficient source of CO₂ for these users. Construction and operation of the proposed pipeline for these purposes, as an integral part of the overall Project, will provide safe and efficient transportation of CO₂ and result in an overall reduction in the amounts of CO₂ that would otherwise be released into the atmosphere. HGPS is an integral component of the Project, which could not be developed absent the pipeline system necessary to transport CO₂ from points of emission to suitable locations for sequestration or use by industrial users. Thus, but for the construction and operation of the HGPS, the Project would not proceed, and the many benefits of the Project described herein would not be able to be realized. This Application often refers to the Project rather than just HGPS given that relationship, but the Application itself is only for the Illinois portion of the pipeline system (i.e., HGPS) of the Project.

8. Operation of the Project will also promote, and benefit participants in, the ethanol industry in Illinois, Iowa, and other Midwest states by providing a cost-effective solution to reducing their carbon emissions and thereby enhancing their long-term environmental and economic sustainability and viability. Further, by supporting the viability and sustainability of ethanol producers, the Project will help to maintain the markets for ethanol feedstocks (e.g., corn) that the ethanol industry provides for farmers and other agricultural participants in Illinois and other Midwest states. Additionally, the Project will result in direct and indirect economic benefits in Illinois and along the HGPS route (from both the initial construction and long-term operation of the Project) through right-of-way

(“ROW”) payments to landowners, construction, operation and maintenance jobs, purchases of components, materials and supplies, and related income, sales, and use taxes. Construction of the Project will positively impact industries that produce components of the Project and will create high paying jobs and economic growth across the Project footprint, including in Illinois.

9. Applicant will develop, construct and operate the Heartland Greenway Pipeline System with the guidance, leadership, experience and direction of the Navigator organization and management team. The Navigator management team is employed by Applicant’s affiliated company NES II LLC (“NES”; and together with Applicant, HGCS, NCO2V and NCS referred to collectively herein as “Navigator”) which provides the services of the Navigator management team for development, construction, and operation of the Project, including HGPS. The Navigator management team, together with third parties contracted by Navigator either currently or to be contracted as part of the Project development provide design, engineering, construction management, finance and operational services and expertise for Applicant’s development of the Project. Navigator is highly experienced in the pipeline industry with a proven management team with over 200 years of combined experience, including technical expertise across pipelines transporting multiple commodities and a strong safety track record. The Navigator management team works with some of the world’s largest energy companies as a trusted, safe and reliable developer/owner/operator of critical infrastructure. Over the past decade, the Navigator management team has acquired or constructed and safely operated approximately 1,300 miles of pipeline and associated infrastructure. The Navigator team will manage HGPS, providing the technical and managerial expertise and resources to design, build, operate and maintain the HGPS in a safe, efficient and environmentally sound manner. Further, Navigator has retained

and is working with third-party experts in the field of CO₂ transportation and sequestration to assist with and validate project routing, design, construction, and operation. The Project, including HGPS, is financially backed by BlackRock, Inc.'s ("BlackRock") \$5.1 billion Global Energy & Power Infrastructure Fund III ("GEPIF III"), which will raise and provide the necessary capital to develop and complete the Project, including HGPS.

10. As shown herein, and as will be further demonstrated in testimony to be submitted by Applicant, this Application has been properly filed; Applicant is fit, willing, and able to construct and operate the pipeline in compliance with the CO₂ Act, Illinois Commerce Commission regulations and orders, and regulations and orders of applicable federal, state, and local agencies; Applicant and the other Navigator companies have entered into agreements with sources of CO₂ emissions that will result in reduction in CO₂ emissions from these sources; Applicant has filed or will file with the Pipeline and Hazardous Materials Safety Administration of the U.S. Department of Transportation ("PHMSA") all forms required by that agency in advance of constructing the CO₂ pipeline; Applicant has filed or will file with the U.S. Army Corps of Engineers ("USACE") all applications for permits required by that agency in advance of constructing the CO₂ pipeline, and will obtain all required permits and approvals from PHMSA, the USACE and all other required permits and approvals prior to commencing construction; Applicant will enter into an Agricultural Impact Mitigation Agreement ("AIMA") with the Illinois Department of Agriculture ("IDOA") to mitigate agricultural impacts associated with construction of the pipeline in Illinois; Applicant possesses the financial, managerial, legal, and technical capabilities to construct and operate the pipeline; and the proposed pipeline is consistent with the public interest, public benefit, and legislative purpose as set forth in the CO₂ Act.

II. DESCRIPTION OF THE APPLICANT AND RELEVANT AFFILIATES

11. Applicant, Navigator Heartland Greenway LLC, is a Delaware limited liability company with its principal offices at 13333 California Street, Suite 202 Omaha, NE 68154. **Exhibit A** to this Application is a certified copy of Applicant's certificate of formation filed with the Secretary of State of Delaware and a certificate in good standing from the Delaware Secretary of State. **Exhibit B** to this Application is a certified copy of Applicant's certificate of authority to transact business in Illinois, from the Illinois Secretary of State and a certificate of good standing from the Illinois Secretary of State.

12. Applicant is a wholly-owned subsidiary of NCO2V. 100% of the membership interests of Applicant are owned by NCO2V. The membership interests of NCO2V are owned by GEPIF III and other investors, including the management team of Navigator. GEPIF III owns 100% of the membership interests of NES.

13. As the sole member of Applicant and in accordance with Applicant's Limited Liability Company Agreement, NCO2V has authority to and is responsible for managing the business and affairs of Applicant. NCO2V has entered into a management and employment services agreement with NES, the scope of which covers both NCO2V and its subsidiaries including Applicant. Through this management and employment services agreement, NES is contracted by NCO2V to provide (among other services) financing, corporate development, purchasing, facilities development, facility operations, marketing, and other management services requested by NCO2V for the Project for NCO2V and its subsidiaries Applicant, NCS and HGCS.

III. STATUTORY AND REGULATORY PROVISIONS

14. Applicant is applying for a certificate of authority pursuant to the CO₂ Act, 220

ILCS 75/1 *et seq.* The CO₂ Act states, in pertinent part:

Section 75/5:

Legislative purpose. Pipeline transportation of carbon dioxide for sequestration, enhanced oil recovery, and other purposes is declared to be a public use and service, in the public interest, and a benefit to the welfare of Illinois and the people of Illinois because pipeline transportation is necessary for sequestration, enhanced oil recovery, or other carbon management purposes and thus is an essential component to compliance with required or voluntary plans to reduce carbon dioxide emissions from "clean coal" facilities and other sources. Carbon dioxide pipelines are critical to the promotion and use of Illinois coal and also advance economic development, environmental protection, and energy security in the State.

Section 75/10:

"Carbon dioxide pipeline" or "pipeline" means the in-state portion of a pipeline, including appurtenant facilities, property rights, and easements, that are used exclusively for the purpose of transporting carbon dioxide to a point of sale, storage, enhanced oil recovery, or other carbon management application.

"Transportation" means the physical movement of carbon dioxide by pipeline conducted for a person's own use or account or the use or account of another person or persons.

Section 75/15:

Scope. This Act applies to the application process for the issuance of a certificate of authority by an owner or operator of a pipeline designed, constructed, and operated to transport and to sequester carbon dioxide produced by a clean coal facility, by a clean coal SNG facility, or by any other source that will result in the reduction of carbon dioxide emissions from that source.

Section 75/20(b):

The Commission, after a hearing, may grant an application for a certificate of authority authorizing the construction and operation of a carbon dioxide pipeline if it makes a specific written finding as to each of the following:

- (1) the application was properly filed;
- (2) the applicant is fit, willing, and able to construct and operate the pipeline in compliance with this Act and with Commission regulations and orders of the Commission or any applicable federal agencies;
- (3) the applicant has entered into an agreement with a clean coal facility, a clean coal SNG facility, or any other source that will result in the reduction of carbon dioxide emissions from that source;

(4) the applicant has filed with the Pipeline and Hazardous Materials Safety Administration of the U.S. Department of Transportation all forms required by that agency in advance of constructing a carbon dioxide pipeline;

(5) the applicant has filed with the U.S. Army Corps of Engineers all applications for permits required by that agency in advance of constructing a carbon dioxide pipeline;

(6) the applicant has entered into an agreement with the Illinois Department of Agriculture that governs the mitigation of agricultural impacts associated with the construction of the proposed pipeline;

(7) the applicant possesses the financial, managerial, legal, and technical qualifications necessary to construct and operate the proposed carbon dioxide pipeline; and

(8) the proposed pipeline is consistent with the public interest, public benefit, and legislative purpose as set forth in this Act....

Under Section 75/20(b)(8), in addition to any other evidence the Commission may consider under that subsection, the Commission shall consider the following:

(A) any evidence of the effect of the pipeline upon the economy, infrastructure, and public safety presented by local governmental units that will be affected by the proposed pipeline route;

(B) any evidence of the effect of the pipeline upon property values presented by property owners who will be affected by the proposed pipeline or facility, provided that the Commission need not hear evidence as to the actual valuation of property such as that as would be presented to and determined by the courts under the Eminent Domain Act;

(C) any evidence presented by the Department of Commerce and Economic Opportunity regarding the current and future local, State-wide, or regional economic effect, direct or indirect, of the proposed pipeline or facility including, but not limited to, ability of the State to attract economic growth, meet future energy requirements, and ensure compliance with environmental requirements and goals;

(D) any evidence addressing the factors described in items (1) through (8) of this subsection (b) or other relevant factors that is presented by any other State agency, the applicant, a party, or other entity that participates in the proceeding, including evidence presented by the Commission's staff; and

(E) any evidence presented by any State or federal governmental entity as to how the proposed pipeline will affect the security, stability, and reliability of energy.

Section 75/20(d):

An application for a certificate of authority filed pursuant to this Section shall request either that the Commission review and approve a specific route for a carbon dioxide pipeline, or that the Commission review and approve a project route width that identifies the areas in which the pipeline would be located, with such width ranging from the minimum width required for a pipeline right-of-way up to 200 feet in width. A map of the route or route width shall be included in the application. The purpose for allowing the option of review and approval of a project route width is to provide increased flexibility during the construction process to accommodate specific landowner requests, avoid environmentally sensitive areas, or address special environmental permitting requirements.

Section 75/20(g):

A final order of the Commission granting a certificate of authority pursuant to this Act shall be conditioned upon the applicant obtaining all required permits or approvals from the Pipeline and Hazardous Materials Safety Administration of the U.S. Department of Transportation, U.S. Army Corps of Engineers, and Illinois Department of Agriculture, in addition to all other permits and approvals necessary for the construction and operation of the pipeline prior to the start of any construction. The final order must specifically prohibit the start of any construction until all such permits and approvals have been obtained.

Section 75/20(i):

(i) A certificate of authority to construct and operate a carbon dioxide pipeline issued by the Commission shall contain and include all of the following:

(1) a grant of authority to construct and operate a carbon dioxide pipeline as requested in the application, subject to the laws of this State; and

(2) a limited grant of authority to take and acquire an easement in any property or interest in property for the construction, maintenance, or operation of a carbon dioxide pipeline in the manner provided for the exercise of the power of eminent domain under the Eminent Domain Act. The limited grant of authority shall be restricted to, and exercised solely for, the purpose of siting, rights-of-way, and easements appurtenant, including construction and maintenance. The applicant shall not exercise this power until it has used reasonable and good faith efforts to acquire the property or easement thereto. The applicant may thereafter use this power when the applicant determines that the easement is necessary to avoid unreasonable delay or economic hardship to the progress of activities carried out pursuant to the certificate of authority.

15. 83 Ill. Admin. Code Part 302 contains regulations that apply “whenever any Owner or Operator seeks to construct, operate or maintain a carbon dioxide pipeline under the [CO₂ Pipeline Act].” 83 Ill. Admin. Code § 302.20. 83 Ill. Admin. Code § 302.30 provides:

a) Prior to any Owner or Operator or its agent initiating contact with any landowner (the record owner of the land as disclosed by the records of the tax collector of the county

where the land is located) to negotiate the acquisition of an easement in property or any interest in property, it shall file with the Illinois Commerce Commission an application containing, in addition to the matters set forth in Section 20(b) of the Act, a brief description of the proposed project, a map of the route or route width showing either the specific route for the carbon dioxide pipeline (including size of site and width of easement to be sought), or the project route width that identifies the areas in which the pipeline would be located, with such route ranging from the minimum width required for the pipeline right-of-way up to 200 feet in width [220 ILCS 75/20(d)], and pipeline length and diameter, and the location of any above ground facilities (compressor stations, valves, etc.).

b) When an applicant files its application for a certificate of authority with the Commission, it shall provide notice to each local government where the proposed pipeline will be located and include a map of the proposed pipeline route. The applicant shall also publish notice in a newspaper of general circulation in each county where the proposed pipeline is located. [220 ILCS 75/20(c)]

c) The applicant shall include with the application, when filed with the Commission, a list containing the name and address of each owner of record of the land along the proposed route, or within a proposed project route width, as disclosed by the records of the tax collector of the county in which the land is located, as of not more than 30 days prior to the filing of the application. Notice of the filing of an application for a certificate of authority shall be provided by the Commission within 30 days after filing to the landowners along the proposed route, or to the potentially affected landowners within a proposed project route width. [220 ILCS 75/20(e)] Notice shall include the time and place scheduled for the initial hearing on the application, and shall include the information required by Appendix A. This subsection's requirements for notice to owners of record shall not be deemed jurisdictional and the omission of the name and address of an owner of record from the list or lack of notice shall in no way invalidate a subsequent order of the Commission relating to the application.

IV. THE NAVIGATOR HEARTLAND GREENWAY PIPELINE SYSTEM INCLUDING PROPOSED ROUTE AND PROJECT ROUTE WIDTH

16. Applicant and other Navigator companies have secured long-term binding contracts, letters of intent, and memoranda of understanding with 21 facilities along the HGPS footprint, one of which is an ethanol facility located in Illinois near Galva, Henry County. These agreements are for capture, transportation, and/or long-term permanent storage of the captured CO₂, and additionally allow the customers access to additional delivery points to be offered on the HGPS as such delivery points are established, for example a delivery point to offloading

facilities for distribution to industrial users of CO₂ for use in their processes. While Applicant has no immediate plans for a CO₂ off-loading facility on HGPS in Illinois, Applicant is continuing to evaluate the feasibility of adding a facility in Illinois in response to requests from its shippers.

17. HGPS consists of a total of approximately 1,300 miles of new pipeline in the states of Illinois, Iowa, Minnesota, Nebraska, and South Dakota, along which there will be three booster stations and numerous MLVs. In Illinois, the proposed HGPS consists of approximately 250 miles of pipeline, one booster station, and necessary appurtenances including MLVs, in parts of Hancock, Adams, Schuyler, McDonough, Fulton, Knox, Henry, Brown, Pike, Morgan, Scott, Sangamon, and Christian Counties. The Illinois pipeline route consists of two segments, (i) part of the HGPS's mainline pipeline, the "Trunkline", and (ii) a lateral pipeline originating in Galva, Illinois, the "Galva Lateral". The Illinois section of the Trunkline is a 20-inch outside diameter steel pipeline that enters Illinois at a point near Hamilton, Illinois, on the Iowa/Illinois State line in Hancock County; the Trunkline then extends, generally, southeasterly and easterly for approximately 151 miles to a point near Taylorville, in Christian County, where it will connect with the facilities of the proposed permanent underground sequestration site and deliver the CO₂ to the sequestration operator at that connection point. The Galva Lateral is a proposed 6-inch outside diameter steel pipeline that will originate at an ethanol facility near Galva, Illinois in southeast Henry County and extend, generally, south-southwest for approximately 99 miles terminating in northeast Adams County at an interconnection point with the proposed Trunkline. The proposed Illinois booster facility will be located on the Trunkline near to, and on the downstream side of, the Galva Lateral interconnection. **Exhibit D** to this Application provides a map depicting the proposed HGPS in Illinois; however, MLV

locations are not depicted on the Exhibit as those locations cannot be determined until the route is finalized. Additionally, in Illinois, the Project includes one NCS capture facility located inside the customer's ethanol plant near Galva and the sequestration site in Christian County, which are also depicted in **Exhibit D**.

18. Applicant is proposing a specific route and a 200-foot project route width for the pipeline in Illinois. As described above, **Exhibit D** to this Application provides a map showing the proposed centerline of the route of the HGPS and other Project components in Illinois. **Exhibit E** to this Application provides a legal description of the Illinois route of the HGPS, both the Trunkline and the Galva Lateral, by county and section. Applicant is currently engaged in civil and environmental surveys along the Illinois section of the route. During the course of these proceedings, Applicant will submit a final project route width, which will be within the notification corridor. Additionally, Applicant will file its final list of affected landowners with the Commission at least 14 days prior to beginning construction in Illinois, in accordance with 220 ILCS 75/20(e).

19. Applicant's key objective in determining the proposed route of the Heartland Greenway Pipeline System, including the Illinois section, is minimizing the collective impact from HGPS along its route. Navigator's team of subject matter experts from multiple disciplines led the effort to establish a primary corridor that accounted for and sought to minimize impacts on populated areas, residences and business locations, public lands, environmentally and culturally sensitive areas, geologic features, other existing infrastructure, long-term pipeline safety, and more. The process commenced utilizing a sophisticated software program that factors in hundreds of pieces of data and information to establish baseline paths. Subsequently, micro routing took place accounting for

environmental factors, constructability, and plume modeling, and was further refined utilizing 2021 aerial imagery and lidar information commissioned by Navigator and accomplished via flyovers along a wide corridor over the tentative routes. Additional route refinement has taken place using information gathered at public informational meetings/open houses, discussions with and information provided by landowners, and on-the-ground civil and environmental and cultural surveys. More information regarding determination of the route and project route width will be provided in Applicant's testimony to be filed in this proceeding.

20. Carbon capture equipment will be installed at each customer's emitting facility by either the customer or NCS, on the customer's property, and will include dehydration equipment to remove water, and cooling and compression equipment that effectively compresses the CO₂ gas to convert it to a dense phase to allow for increased transportation efficiency and volume. The carbon capture system is *not* part of the CO₂ pipeline for which a certificate of authority is being requested in this proceeding. There will be continuous monitoring of the CO₂ stream prior to entering Applicant's pipeline transportation system to ensure that the quality of the CO₂ meets or exceeds the necessary composition quality to ensure safe and efficient transport of the product to the sequestration site. Booster stations will be placed at appropriate locations (including the proposed location in Illinois described above and shown on **Exhibit D**) to ensure internal pipeline pressures are maintained to keep the CO₂ in a dense phase throughout the system.

21. The underground sequestration site, which is *not* part of the CO₂ pipeline for which a certificate of authority is being requested in this proceeding, is a saline aquifer located below parts of Christian County, Illinois, within the Mount Simon geologic formation, and

contains approximately 40 square miles or 25,000 acres of available pore space for permanent sequestration of CO₂. A total of 6 injection wells, 6 in-zone monitoring wells, 6 above zone monitoring wells, and 17 shallow monitoring wells will be installed. The injection wells that will direct the captured and compressed CO₂ more than 5,800 feet beneath the ground surface will receive permits issued under the authority of the U.S. Environmental Protection Agency. The accompanying monitoring wells will be used to observe and document the integrity of the sequestration system and compliance with permit conditions.

22. The design, construction, operation, and maintenance of HGPS is regulated by the PHMSA, Office of Pipeline Safety, pursuant to federal laws and regulations, primarily 49 C.F.R Part 195. Construction, installation, and operation of the HGPS will be done in a manner that complies with all applicable environmental protection statutes and regulations along HGPS's route. Agencies with jurisdiction over applicable environmental protection considerations include the USACE, U.S. Fish and Wildlife Service, Illinois Department of Natural Resources, IDOA, and Illinois Environmental Protection Agency. Non-environmental permits include state, county, and local road crossings and road approaches, railroad crossings, and floodplain certificates. A preliminary list of permits, approvals, and consultation requirements, including the current status and anticipated timeline for those permits, approvals and consultation requirements, is provided as **Exhibit G** to this Application. Applicant commits to constructing in accordance with all permit conditions and only in areas where required permits or approvals have been obtained. In addition, Applicant commits that it has filed or will file with the PHMSA all forms required by that agency in advance of constructing the CO₂ pipeline in Illinois; that it has filed or will file with the USACE all applications for permits required by that agency in advance of constructing the

CO₂ pipeline in Illinois; and that it will obtain all required permits and approvals prior to commencing construction in Illinois, including permits and approvals from PHMSA and the USACE. Additionally, Applicant has submitted a draft AIMA to the IDOA and commits to negotiating and entering a final version of the agreement with the IDOA.

V. **THE HEARTLAND GREENWAY PIPELINE SYSTEM IS CONSISTENT WITH THE PUBLIC INTEREST, PUBLIC BENEFIT AND LEGISLATIVE PURPOSE OF THE CO₂ ACT**

23. Section 75/5 of the CO₂ Act sets forth the following legislative purpose:

Pipeline transportation of carbon dioxide for sequestration, enhanced oil recovery, and other purposes is declared to be a public use and service, in the public interest, and a benefit to the welfare of Illinois and the people of Illinois because pipeline transportation is necessary for sequestration, enhanced oil recovery, or other carbon management purposes and thus is an essential component to compliance with required or voluntary plans to reduce carbon dioxide emissions from "clean coal" facilities and other sources. Carbon dioxide pipelines are critical to the promotion and use of Illinois coal and also advance economic development, environmental protection, and energy security in the State.

24. Applicant's proposed HGPS is fully consistent with this legislative purpose of the CO₂ Act and therefore will be a public use and service, in the public interest, and a benefit to the welfare of Illinois and the people of Illinois, as stated in Section 75/5. The Project will capture, transport CO₂ for sequestration and other carbon management purposes as described in this Application, and therefore will contribute to and support compliance with and achievement of required and voluntary plans to reduce CO₂ emissions from emitting sources in Illinois, Iowa, and other Midwest states. Applicant, NCS and HGCS have entered into agreements with 21 facilities along the HGPS footprint that produce and emit CO₂, to utilize the HGPS, and anticipate entering into agreements with other CO₂-emitting facilities. The HGPS will also provide CO₂ transportation services to walk-up shippers in accordance with Applicant's tariff. The following paragraphs further detail ways in which construction and

operation of the HGPS will be in the public interest and will benefit the welfare of Illinois and the people of Illinois. The following paragraphs refer to the Project generally, as the Project holistically provides these benefits, and but for the construction and operation of the Heartland Greenway Pipeline System the Project would not proceed. Thus, in each place below where the benefits of the Project are described, the Heartland Greenway Pipeline System will be in the same public interest and will in the same manner benefit the welfare of Illinois and the people of Illinois.

Environmental Benefits.

25. It is generally understood that climate impacts of CO₂ emissions are not localized to the source of the emissions or to the airsheds in which the emissions occur, but rather are widespread, even global in nature. Thus, capture, transportation and sequestration of CO₂ from any emitting sources in the area in which the Project will operate benefits the public in all the states, including Illinois, in which the Project operates, as well as in areas beyond the Project's operating area. Many countries, regions, industries, institutions, and individual companies have announced carbon reduction/decarbonization initiatives and objectives. For example, in 2021, the United States announced the Net Zero World Initiative to reach net zero carbon emissions by 2050, and the 2030 Greenhouse Gas Pollution Reduction target to achieve a 50-52% reduction from 2005 levels. The ethanol sector has pledged to reduce greenhouse gas emissions 70% by 2030 and achieve net zero ethanol production by 2050. Broad adoption of carbon capture technology, such as that utilized by the Project, is essential to reaching net zero carbon emission objectives.

26. The Project will facilitate CO₂ capture and emissions reductions that will support achievement of carbon emission reduction goals established both by the specific

facilities served by the pipeline and by governmental entities in the region. Phase I of the Project will capture, transport and permanently sequester over 6 MMT of CO₂ per year across five Midwest states, including 350,000 metric tons of CO₂ per year in Illinois, and when the Project is fully developed it will be capable of capturing up to 15 MMT of CO₂ per year. The following table, prepared using the U.S. EPA’s Greenhouse Gas Equivalencies Calculator, shows the equivalent carbon offsets of the Project in its initial scope in Illinois, its (larger) initial design scope, and its ultimate fully developed capacity, as compared to other potential sources of carbon reduction (e.g., 75.4K in the “Cars” column means that the CO₂ emissions reductions from the initial scope of the Project in Illinois will be equivalent to taking 75,400 gasoline-fueled cars off the road).

Heartland Greenway CO₂ Offset Equivalents					
Project Scope	Capture	Gasoline-fueled Cars	Homes Energy Use/year	Acres of U.S. Forest	Oil Barrels
IL Initial Scope	0.35 MMT	75.4K	44K	0.4 M	0.8 M
Initial Scope	7 MMT	1.5M	882K	8.2 M	16.2 M
Initial design Capacity	10 MMT	2.1M	1.3M	11.8M	23.1 M
Expanded Capacity	15 MMT	3.2M	1.9M	17.8M	34.7 M
Source: U.S EPA Greenhouse Gas Equivalencies Calculator					

Safe and Efficient Transportation and Sequestration.

27. The design, construction, and operation of pipelines, including HGPS, are heavily regulated and subject to regulatory scrutiny and oversight. The Project will connect to ethanol and fertilizer production facilities across parts of the Midwest, including parts of Illinois, which lack immediate proximity to the requisite geological formations for

implementing carbon sequestration, and therefore must find a means to transport CO₂ to a feasible sequestration location. Meeting this need necessitates an interstate pipeline system to transport the CO₂ long distances safely and efficiently. Alternatives to move the amount of CO₂ that the initial design capacity of HGPS will be able to transport, 10 MMT/year, would require greater than 512,000 trucks or 87,000 railcars per year. Of these three modes of transportation, pipelines are the safest, most environmentally friendly, efficient, and reliable mode of transportation for gas and liquids.

28. Further, the permanent sequestration location for the Project, the Mount Simon Formation in Illinois, is one of the most thoroughly studied formations for sequestration, including by the U.S. Department of Energy's Carbon Storage Program. The Mount Simon formation is a proven and active location for successful sequestration, has ample capacity and availability to sequester hundreds of millions of metric tons of CO₂, and is readily accessible in south central Illinois. The Project will enable CO₂-emitting facilities in Illinois, Iowa, and other Midwest states to have timely, safe, and efficient access to this sequestration location.

Supporting Ethanol Industry.

29. The Project will support and strengthen the sustainability and viability of ethanol production facilities, which are important economic engines in Illinois, Iowa, and other Midwest states. Illinois is the third largest annual ethanol producing state in the U.S.; the industry is estimated to have \$5.29 billion per year in economic impact in Illinois and is directly responsible for more than 4000 full-time jobs for Illinois citizens. The ability to capture CO₂ emissions at ethanol facilities and transport the CO₂ to a sequestration location or to locations for other carbon management purposes will assist ethanol facilities to meet required or voluntary carbon reduction objectives, and to do so in a more efficient manner

than other alternatives, thereby supporting the long-term sustainability and viability of these facilities. In addition, capturing and sequestering CO₂, which the Heartland Greenway Pipeline System will facilitate, affords ethanol producers the opportunity to use federal tax incentives, participate in voluntary carbon offsets markets, and receive premium prices for their products that are produced through low carbon-emitting processes. Participating facilities can be eligible for a federal tax credit of up to \$50 per metric ton of sequestered CO₂, adjusted annually for twelve years at an established inflation factor, and ethanol facilities that reduce emissions will have the potential to achieve a premium in Low-Carbon Fuel Standard markets. Thus, the Project will help ethanol facilities in Illinois and other Midwest states remain competitive with other fuel sources and support the long-term viability of this important Midwest industry.

Supporting Illinois and Midwest Agriculture.

30. By supporting the long-term sustainability, viability, and cost-competitiveness of the Midwest ethanol industry, the Project will also strengthen and support Midwest agriculture, including in Illinois. A strong, competitive ethanol industry is beneficial for Midwest agriculture. The ethanol industry is a significant purchaser of Illinois corn, consuming more than 30% of Illinois' corn crop each year. A stable ethanol industry provides Illinois farmers with a reliable market for their corn and underpins the value of 11 million acres of Illinois farmland those crops are grown on.

Other Economic Benefits to Illinois and the Region.

31. In addition to supporting the long-term sustainability and viability of the ethanol and agricultural sectors in Illinois and the Midwest, Applicant's HGPS will provide direct benefits to Illinois and communities located along and near the HGPS footprint,

including: construction employment of skilled workers; ROW payments; sales tax revenues from the sale of goods and services during construction and long term to operate and maintain the pipeline; full time, high-paying, local jobs to operate and maintain the pipeline; and long term support of regional contractors, manufacturers, distributors, and retailers through ongoing purchase of goods and services to operate and maintain the system.

32. The Project, including HGPS and the capture facilities and sequestration facilities to be constructed, is projected to cost approximately \$3.2 billion, with approximately 20% attributable to the portion of the Project in Illinois. The materials to be installed for the HGPS in Illinois are expected to exceed \$140 million and will be subject to sales and use taxes. HGPS will require steel pipe, fittings, valves, pumps and control devices, some of which may be manufactured by or purchased from Illinois businesses. Applicant will use local materials (e.g., gravel, erosion control devices, hand tools, fuel, and concrete) and services (drain tile, hauling/logistics, sanitation) as available. It is estimated there will be 3,500 direct and indirect employment opportunities in Illinois at peak construction, of which 1,600 would be directly employed for construction of the Project, and 30-35 new jobs for operations. Construction will require highly skilled and well compensated union welders, mechanics, electricians, pipefitters, and heavy equipment operators. In addition, ROW payments to landowners in Illinois are projected to be approximately \$32 million. Indirect economic benefits include increased use of local restaurants, lodging, and other retail businesses by those employed on the Project. Local employment and business generation will result in income tax and sales and use tax revenues for the State of Illinois and local governments. Finally, Applicant understands that the pipeline is not assessed for property taxes in Illinois and therefore intends to enter into ongoing community benefit agreements

with local governments along the route in Illinois.

Development of New Business and Industry.

33. Carbon utilization is an existing market in which CO₂ is captured prior to reaching the atmosphere and used in several applications, including livestock processing and the food and beverage industry. Small amounts of CO₂ are currently being captured for sale to local industrial CO₂ markets, including in Illinois, and transported to the purchasers' facilities by trucks. A number of the facilities selling CO₂ for industrial uses are located on or near the HGPS footprint. Applicant will offer off-loading capabilities, allowing existing industrial CO₂ customers to continue to access high quality CO₂ while opening the market to additional users in the region. Additionally, the HGPS can become the backbone infrastructure for new industrial facilities, which can be a source of new jobs and other local economic benefits, which will locate near the pipeline to participate in carbon capture, utilization, and storage and to create new products through low carbon emission processes. An example of an emerging CO₂-based industry is sustainable aviation fuel ("SAF"), a substitute for hydrocarbon-based jet fuel. SAF producers are targeting low-carbon ethanol as a primary feedstock to produce SAF and locating production facilities near the source of feedstock is economically advantageous to these producers. Other low-carbon products in development that can use captured CO₂ include plastics and building products.

VI. APPLICANT IS FIT, WILLING AND ABLE AND POSSESSES THE FINANCIAL, MANAGERIAL, LEGAL, AND TECHNICAL QUALIFICATIONS NECESSARY TO CONSTRUCT AND OPERATE THE CARBON DIOXIDE PIPELINE

34. Applicant is fit, willing, and able to construct and operate the HGPS in compliance with the CO₂ Act, Commission regulations and orders, and regulations and orders of applicable federal agencies, and has the financial, managerial, legal and technical

capabilities to construct and operate the pipeline, as required by Section 75/20(b)(2) and (7) of the CO₂ Act.

35. Navigator is highly experienced in the pipeline industry with a proven management team with over 200 years of combined industry experience in the pipeline and infrastructure industries, including technical expertise across pipelines transporting multiple commodities, and has a strong safety track record. The management team works with some of the world's largest energy companies as a trusted, safe and reliable developer/owner/operator of critical infrastructure. Over the past decade, the Navigator team has acquired or constructed and safely operated 1,300 miles of pipeline and associated infrastructure. This experience includes developing, in a prior company with many of the same management team members, the approximately 670-mile Big Spring Gateway system, which included gathering and transmission pipelines as well as storage and trucking capabilities by the time it was sold. Members of the Navigator management team also managed the purchase of the approximately 260-mile Glass Mountain Pipeline and the expansion of the system by adding approximately 450 miles of pipeline gathering, pipeline transmission and storage capabilities in multiple phases, including expansions to new terminal stations for additional receipts, gathering systems, a loop of the trunk line to expand system capacity, and two interstate refinery supply expansion projects. These projects were successfully executed and managed in accordance with applicable safety and regulatory requirements.

36. Applicant is committed to building and operating the Project, including the HGPS, to meet and exceed regulatory and safety requirements while minimizing the collective impact on the environment, landowners, and the public during construction and ongoing

operations. The Navigator management team will manage the Project providing the technical and managerial expertise and resources to design, build, operate and maintain it in a safe, efficient and environmentally sound manner. Below is an overview of Navigator's key management, technical, financial, legal and commercial personnel, each of whom is employed by NES:

Matt Vining, Co-Founder and Chief Executive Officer: Matt has over 15 years of industry experience. He co-founded Navigator Energy Services, LLC (the initial Navigator management team company, with similar sponsors and many of the same management team) in 2012, which was sold to NuStar in 2017.

Jeff Allen, Executive Vice President and CFO: Jeff has over 20 years of industry experience. He serves as the Executive Vice President and Chief Financial Officer of all Navigator entities and has extensive prior midstream experience.

Laura McGlothlin, Executive Vice President and Chief Commercial Officer: Laura has over 22 years of industry experience. She previously managed the Shell Trading Rockies office and managed a crude oil book of over 150 mbpd.

Kevin Strehlow, Executive Vice President and General Counsel: Kevin has over 15 years of industry experience. He previously served as the Chief Counsel at Sunoco Logistics.

David Giles, President and COO: David has over 16 years of industry experience. David previously served as the Vice President of Strategic Planning and Public Policy for Valero Energy Corporation.

Tyler Durham, Senior Vice President and Chief Development Officer: Tyler has over 16 years of industry experience. He previously served as the Director of Carbon Capture and Sequestration at Schlumberger Oilfield Services & Schlumberger New Energy.

Stephen Lee, Senior Vice President of Engineering: Stephen has over 22 years of industry experience. He previously served as the Director of Special Projects at Plains All-American Pipeline.

Vidal Rosa, Senior Vice President of Operations: Vidal has over 22 years of industry experience. He served as Director of Commercial Development for Oxy Midstream Strategic Development, LLC, where he managed special projects and midstream Joint Ventures.

Christopher Brown, Vice President of Capital Projects: Chris has over 31 years of industry experience. He previously served as Director of Engineering for

Williams Companies.

Monica Howard, Sr. Director Environmental and Regulatory. Monica has over 22 years of industry experience. She has previously served as Sr. Director of Land and Environmental Permitting at Crestwood Midstream.

Ann Welshans, Director ROW. Ann has 15 years of industry experience. She previously served as Project Manager for Universal Field Services.

Additionally, Matt Vining, Jeff Allen, Kevin Strehlow and Stephen Lee are officers of each of Applicant, NCO2V, NCS and HGCS with the same titles and roles, and David Giles is the President and Chief Operating Officer of NCO2V. Furthermore, for the Project, Navigator has retained and is working with leading experts in the field of CO₂ transportation and sequestration to assist and validate HGPS routing, design, construction and operation plans (additional information regarding these experts is provided in ¶44 below).

37. Applicant and its owners and investors have the financial capability to raise and provide the capital needed to fund the development, construction, and operation of the Project, which has an estimated development and construction cost of approximately \$3.2 billion. BlackRock is one of the nation's leading providers of financing for energy infrastructure projects. BlackRock subsidiary BlackRock Alternatives Management, LLC will be primarily responsible for raising the necessary capital. BlackRock, together with its subsidiaries (including BlackRock Alternatives Management, LLC) is a premier provider of asset management, risk management, and advisory services to institutional, intermediary, and individual clients worldwide. As reported on its 8-K filing for the year ended December 31, 2021, as of that date BlackRock and its subsidiaries have \$10.0 trillion of assets under management; and BlackRock's Real Assets platform has approximately \$71 billion in invested and committed infrastructure. BlackRock's Global Energy & Power Infrastructure Funds ("GEPIF") invest in infrastructure facilities around the world over long-term horizons,

with global investments focused on low carbon power, energy and environmental infrastructure, regulated utilities, transportation and logistics, and digital infrastructure. Since 2010, the GEPIF team has made 40 infrastructure investments, on a global basis, in assets and companies that process, transport, and store electricity, hydrocarbons, and other natural resources. Applicant's primary funding source for the Project will be through GEPIF III, which has existing committed equity of \$5.1 billion.

38. The pre-construction development phase of the Project, through receipt of all material permits for construction of the CO₂ transportation and sequestration assets, is being funded through development equity commitments including equity investments by the Navigator management team. The construction phase of the Project will be funded by incremental equity sourced from GEPIF III and other investors along with a project financing facility sourced by a consortium of lenders. On or near the commercial operation date of Heartland Greenway, a long-term debt facility will be put in place to refinance the construction loans. This sequence of development phase, construction phase, and long-term operational phase funding is common for infrastructure projects such as pipelines and renewable energy facilities. Further details on the financing plan will be provided in the testimony to be submitted by Applicant in this proceeding.

39. Applicant possesses the legal qualifications necessary to construct and operate the HGPS. Navigator's General Counsel has 15 years of experience in the pipeline and infrastructure industries. Navigator has also retained experienced outside counsel to assist with federal and state regulatory, environmental and other permitting, and real estate matters. Navigator understands the requirements of the CO₂ Act and the requirements of environmental and other agencies, including PHMSA, USACE, the IDOA, the U.S. Fish and

Wildlife Service, and the Illinois Environmental Protection Agency, from which permits and approvals may be required to construct and operate HGPS, as illustrated by the preliminary permits and approvals list provided as **Exhibit G** to this Application.

40. Applicant has the managerial and technical qualifications necessary to design, construct, and operate the Project to meet or exceed regulatory requirements and industry standards. Navigator has and will continue to consult with independent experts throughout the Project development process, including industry technology leader DNV GL USA (“DNV”) to address safety requirements specific to CO₂ pipelines. The pipeline will have a maximum operating pressure (“MOP”) of 2,200 psig, in accordance with PHMSA regulations, with a normal operational range between 1,300 and 2,100 psig. Applicant will utilize conservative design safety factors and will pressure test the pipeline system at pressures exceeding the MOP, prior to placing the system in-service. The metallurgical and dimensional properties of the steel will be determined in accordance with PHMSA requirements and will account for all pressure ranges, temperature ranges, and risk for both ductile and brittle fracture. Such properties include selection of the wall thickness, yield strength, ductility, and toughness that exceed PHMSA regulations and current industry standards, including API-5L PSL2. Applicant is in the process of finalizing the pipeline metallurgy design and will provide specific design safety factors and steel properties for each pipeline diameter of the HGPS (i.e., for the Trunkline and the Galva Lateral) in its testimony to be filed in this proceeding. The steel pipe fabrication processes will be performed in accordance with Applicant’s specifications and applicable PHMSA requirements and industry standards. The pipe will be inspected and integrity-tested at the pipe mill for quality assurance. The pipe will be externally coated at the factory with 14-16 mils fusion-bonded

epoxy to protect against corrosion. Pipe segments to be installed via trenchless methods will have an additional 30-50 mils of additional abrasive resistant outer coating. All field welded pipe joints will utilize non-shielding field-applied two-part epoxy at girth welds. Coating in a controlled environment, such as at the factory, greatly enhances the efficacy of the process. The new pipe will be transported in accordance with Federal regulations and industry standards to the installation location. The coating will be re-inspected multiple times in the field during each phase of installation.

41. The pipeline will be installed using different techniques (conventional, bore, or horizontal directional drilling [“HDD”]) depending on site-specific conditions and factors along the route. The primary method of installation of the pipeline will be conventional installation via open trench to at a depth of at least five (5) feet in soil and three (3) feet in consolidated rock and with a separation of at least two (2) feet between the pipeline and existing infrastructure such as district drainage and existing utilities and at least one (1) foot from existing or planned private drain tile. As an additional proactive measure to prevent damage by third parties, which are the largest threat to pipeline integrity, Applicant will install warning tape approximately 2 feet above the pipeline, below the plow line. Bore and HDD methods will be used when surface disturbance from trenching is not desired or feasible such as when crossing roads, railroads, and large waterbodies or other sensitive resources or areas. When trenchless installation methods are used, the pipeline will typically be installed at a depth of at least ten feet for a bore and twenty-five to fifty feet or deeper for an HDD and will be not be shallower than the five-foot depth. Additional pipeline protective measures will include an abrasion resistant overcoat, which is applied on top of the fusion-bonded epoxy on pipe to be installed via bore or HDD, to further protect pipeline integrity by adding a

reinforced coating layer to protect against physical encounters in the subsurface trenchless installation.

42. All disturbed areas, except for the booster station and valve sites, will be restored to enable the property to revert to preconstruction land uses. Specific measures will be implemented during construction to enhance and expedite the restoration of disturbed lands to pre-construction condition. Such measures will include topsoil management, soil-segregation, erosion control practices, decompaction and timely restoration. Specifics of these measures will be provided in documents that are in development such as the Stormwater Pollution Prevention Plan and the AIMA to be entered into with the IDOA. Although, as of the date of this Application, the AIMA has not been executed, Applicant has been consulting and coordinating with the IDOA for a number of months and will continue to do so to achieve an executed AIMA that will be filed with the Commission upon availability. In accordance with Section 75/20(b)(6) of the CO₂ Act, Applicant commits that it will not commence construction in Illinois prior to entering into and executing an AIMA with the IDOA.

43. The installation of the pipeline will be subject to regulatory inspection. PHMSA will perform multiple inspections documenting compliance with its regulations and with specifications; and the IDOA is expected to assign inspectors to the construction of the HGPS to monitor compliance with the AIMA. In addition, Applicant will employ on the Project a robust 3rd party inspection program employing utility, welding, coating, safety, agricultural, and environmental inspectors, none of which are affiliated with Applicant and its affiliates or the pipeline contractors, to ensure compliance with applicable specifications, standards, regulatory requirements, and commitments.

44. Navigator has partnered with leading firms in the industry to assist in the overall

design of the Project. DNV, an independent expert in assurance and risk management in the pipeline industry, has been retained to validate Navigator's metallurgical analysis of the line pipe to be installed in the system. DNV will also facilitate a hazard identification and risk analysis including a study, using proprietary software, of the potential vapor cloud air dispersion for controlled and accidental releases of CO₂. Navigator has also retained Integrity Solutions Ltd, for air dispersion modeling using the Areal Locations of Hazardous Atmospheres software for analysis and identification of High Consequence Areas ("HCAs") crossed by, or in proximity to, the proposed pipeline route. Integrity Solutions Ltd supports pipeline operators in making more informed integrity management decisions about their pipelines and related assets, based on integrated data analysis.

45. Both the DNV and Integrity Solutions Ltd analyses are being utilized in the HGPS's detailed design process for the purpose of enhancing public safety. These design methods include but are not limited to increased wall thickness (compared to baseline), placement and spacing of additional isolation valves, utilization of HDD installation methods, increased burial depth, redundant leak detection methods, and redundant communication systems.

46. Navigator has contracted LJA Engineering Inc. ("LJA") as the primary engineering firm to perform the detailed engineering design for the pipeline, MLV settings, launcher and receiver assemblies, booster pump facilities, and CO₂ capture facilities. LJA was founded in 1972 and is a comprehensive full service, experienced, multi-disciplinary engineering firm that specializes in pipeline and facility design. To provide an added level of expertise, Navigator has contracted Trimeric Corporation to work in conjunction with LJA to finalize the overall engineering related to CO₂ capture facilities and to provide additional

quality and technical review of LJA-produced engineering packages. Trimeric Corporation was founded in 2003 and serves industry and government by providing process engineering, chemical engineering, research and development, and other specialized technical services.

47. Selection of the construction contractors is expected to occur after receipt of all material permits necessary to construct the HGPS. However, Navigator has already executed a letter of intent with four trade Unions (Laborer' International Union of North America, International Union of Operating Engineers, International Brotherhood of Teamsters, and United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry) to ensure highly skilled and qualified labor resources to support construction of the Project. Navigator is committed to utilizing highly qualified and experienced resources to perform construction. Employing such skilled workforce further ensures that the pipeline system will be constructed as designed to meet and/or exceed all applicable standards.

48. To ensure safe operation of the line, Applicant will install numerous remote controlled MLVs to allow for prompt response and isolation of line segments in the unlikely event of an emergency. The valves will be placed based on criteria which will include minimum valve spacing along the pipeline route of 7.5 miles in HCAs and 20 miles for non-HCAs, and additional MLVs in accordance with CFR 49 Part 195 Section 195.260. Every valve site and pump station will be connected to an Operations Control Center ("OCC") by modern communication facilities; redundant communication and power systems will be installed to ensure constant connectivity and flow of information, thereby enhancing safe operation. In accordance with PHMSA requirements, the OCC will be continuously manned and monitored (24-hours/day, 365 days/year) by at least 2 individuals at all times. Cathodic-protection systems will be installed to prevent corrosion and preserve the integrity of the

pipeline.

49. Applicant will develop and install a comprehensive leak detection system that consists of both non-continuous and continuous monitoring. The non-continuous components of the leak detection system will consist of aerial patrol (minimum 2 times per month) and in-line inspection tool pigging operations to check for corrosion (initial baseline at installation and subsequently at 3 to 5-year inspection intervals). The continuous components of the leak detection system include compensated mass balance, real time transient model, negative pressure wave, fiber optic sensing cables, and strategically placed CO₂ monitoring devices. Additional details will be provided in Applicant's testimony to be filed in this proceeding.

50. The entire pipeline system will be thoroughly tested and inspected in accordance with or exceedance of applicable regulations and industry standards to validate the integrity of the line prior to commencing operations and flow of any CO₂. These inspections include integrity examinations of the coating during the multiple stages of handling and installing the pipe; performing non-destructive testing of all field welds (well in exceedance of the 10 percent required by PHMSA); successfully hydrostatic testing the pipeline to at least 1.25 times the MOP for eight hours; inspection of the pipeline post-installation utilizing a caliper pig to validate that damage did not occur during installation; and internal inspection of the entire pipeline system prior to introduction of CO₂, utilizing in-line smart inspection tools to establish a baseline that will be utilized to monitor corrosion throughout the operational span of the pipeline system. The pipeline system will only go into service after detailed inspection and review (Pre-StartUp Safety Review) to verify compliance with applicable regulations and construction and installation standards and requirements.

51. The pipeline location will be visibly marked in accordance with federal

regulations, which includes signage at road and highway crossings, commercially navigable waterways, and other locations to alert the public to the presence of an underground line. Posted signage will include owner contact and emergency information. Applicant will also participate in the State and Federal 811 One-Call system for damage prevention and public awareness.

52. Applicant anticipates 80-100 full time employees stationed along the HGPS, including 30-35 in Illinois. As described above, Applicant will install and utilize pipeline control and leak detection systems and advanced computerized control, monitoring, and detection equipment along the pipeline network. The Operation Manual for the Project is being developed and will be finalized prior to operation; however, many components of how the system will be operated are already known.

53. During operations, the pipeline will be subjected to a variety of inspections to verify its continued integrity and compliance with all standards. The system will be examined at regular intervals using internal-inspection technology. To prevent internal corrosion, all captured CO₂ will have to meet strict specifications that are continuously tested for at the capture facilities prior to entering the pipeline system. Controls and safety equipment will be tested and calibrated on a routine basis. It is planned that HGPS will be patrolled and inspected via aerial surveillance every 10 days, weather permitting, but at least every 3 weeks (minimum 2 times per month) and not less than 26 times per year, to detect abnormal conditions and dangerous activities (e.g., unauthorized excavation) along the routes of the lines.

54. HGPS will use an advanced Supervisory Control and Data Acquisition (“SCADA”) system that continuously monitors pressure, temperature, and flow of the CO₂. Information collected by the monitoring devices will be constantly communicated (24

hours/day, 365 days/year) to the OCC. The system is designed and will be installed with back-up power and communication abilities to ensure connectivity is constant in the event an interruption in the primary source is experienced. Utilizing modern pipeline monitoring and control technology, the OCC can safely operate the pipeline system by maintaining the established operating parameters and will be capable of remotely isolating pipeline segments when alerted to abnormal operating conditions or if safety parameters are exceeded. The Computational Pipeline Monitoring System, a subsystem of SCADA, analyzes deviations of flow through the pipeline, improving the ability to identify leaks and other abnormal operating conditions, and is one of several leak-detection capabilities. In addition to the ability to control the system remotely, local automated controls and manual overrides can control and operate the pipeline should remote communications fail.

55. Trained OCC personnel will follow strict procedures to direct actions during normal and abnormal operations to prevent the risk of a release. Applicant is also developing a robust Integrity Management Program, in compliance with PHMSA regulations, that will continually assess the pipeline for potential risks to the system utilizing all available information, identify preventative and mitigative measures to address the risks, specify criteria for remedial actions to address possible integrity concerns raised by the analysis, and implement procedures, as necessary. Such systems and procedures, in addition to detailed operation and maintenance programs, routine inspections, regular employee training, detailed coordination with emergency management and response outfits, and comprehensive public awareness and education efforts, combine to optimize safe operation and minimize the risk of a release. Navigator employees and/or qualified contractors located along the Project in Illinois and other respective states will be strategically hired and based so that they are able to provide

a prompt response for pipeline operations, maintenance, and repairs.

56. Navigator conducts extensive public education and outreach programs, including damage prevention programs that meet or exceed PHMSA requirements and industry requirements concerning public awareness of pipelines and pipeline safety matters; these programs will be employed for the HGPS. Navigator also supports statewide underground utility damage prevention programs, and, as stated earlier, the HGPS will participate in the 811 One-Call System.

57. Operational safety is of the utmost importance to Applicant. Upon completion of construction of the Project, in addition to the remote-control capabilities described above, Applicant and its contractors will maintain emergency response equipment and personnel at strategic points along the route and train their personnel to respond to any pipeline emergencies. In addition, Applicant will coordinate with and train local emergency responders and authorities in preventing and responding to any pipeline-related problems. An emergency response plan for the Heartland Greenway Pipeline System is being prepared and will be in place prior to commencing operation. In development of that plan, Applicant will be coordinating with existing emergency response departments along, and in proximity to, the route to ensure they and any mutual aid parties are informed of the operation risks and equipped to respond in the unlikely event of a release. Throughout operation of the system, Applicant will conduct and host emergency response drills with its employees and local emergency responders, which will include planned drills, desktop events, and simulated field events.

VII. PUBLIC OUTREACH AND EASEMENT ACQUISITION

58. The landowners listed in **Exhibit F** are the landowners within the notification

corridor along the route depicted in **Exhibit D** and described in **Exhibit E**. Applicant has used a multi-step process to ensure proper identification of potentially affected landowners using records from county tax collector, tax assessor, and recorder offices. This process begins with identifying landowners using a third-party geospatial database called ReportAll. ReportAll provides landowner information using county tax assessor records, which are publicly accessible. Applicant then validates and, as necessary, updates this information by (1) searching for and pulling relevant vesting deeds for each property and (2) reviewing relevant records for each property at the county tax collector's office for each county that the HGPS will cross. Within 30 days prior to filing this Application, Applicant arranged for an additional review of the records of the tax collector in each county the HGPS will cross to determine whether any changes or updates were required to the list of landowners located within the notification corridor. As the result of this process, the landowners listed on **Exhibit F** to this Application comprise the landowners of record located within the proposed project route width in Illinois as disclosed by the records of the tax collector in each county in which the HGPS will be located not more than 30 days before the date of filing of this Application. Applicant also intends to take the additional step of conducting a historical title search for the properties on which easements will be sought to ensure it has a complete and accurate record of any relevant interests in those properties.

59. Applicant is seeking a 50-foot permanent easement along the entirety of the pipeline system. Construction of the 20-inch diameter Trunkline segment and the 6-inch diameter Galva Lateral will require an incremental 75-foot and 50-foot easement, respectively, for temporary workspace; the typical construction footprint along the routes will therefore be 125 feet and 100 feet, respectively. Areas of additional temporary workspace will

be required in occasional and specific locations to accommodate crossings of roads, wetlands, railways, waterbodies, existing utilities, and other locations. Applicant will also seek occasional access road agreements from landowners to facilitate construction access to locations where entry down the right-of-way is not feasible. For example, alternate access may be needed in lieu of having a road approach turning onto the right-of-way from a highway. Applicant intends to purchase in fee the approximate 10-acre site for the planned booster station in Illinois. All areas, except for the booster station location and valve locations (each approximately 30-feet wide by 70-feet along the alignment), will be restored to preconstruction conditions as practical, and temporary construction easements will revert to the landowner upon completion of installation and the pipeline being placed in service. The booster station will be fenced in with security fence and monitored gates, and will have areas of foundation, driveways, parking, gravel, and grasses landscaping. Valve locations will be fenced in and graveled. The permanent easement will also revert to pre-construction conditions and use with the necessary restrictions expressed in the easement to ensure safe and reliable operation of the pipeline

60. As provided for in Section 75/20(d) of the CO₂ Act, Applicant is requesting approval of a 200-foot project route width along the final proposed route that Applicant will submit in this proceeding based on the completion of surveying activities and landowner contacts. The 200-foot project route width will allow for minor deviations of the route within that width to accommodate landowner concerns and other site-specific conditions that are encountered. The final proposed route and 200-foot project route width will fall within the notification corridor along the route depicted on **Exhibit D** and described in **Exhibit E**

61. Navigator's experienced team developed and is implementing a right-of-way acquisition plan. Navigator and its agents perform research to identify and locate potentially

affected landowners, share company and Project information with landowners along the HGPS route, solicit landowner input and specific information about their property to use in the routing process, and when possible, adjust the pipeline location and installation method to accommodate landowner interests and concerns. Applicant has retained experienced right-of-way firms to perform good faith negotiations with landowners on behalf of Applicant. Navigator has a robust training program all agents must complete that includes a code of conduct, information on safety and regulations, market analysis details, construction impact and mitigation commitments, among other information. Applicant will compensate landowners at or above fair market values for the land interests acquired and pay for anticipated and experienced damages such as crop losses resulting from construction. Such damages are expected to be minimized by implementing the construction mitigation and restoration measures to be finalized in the AIMA and in individual landowner agreements.

62. Navigator commissioned a detailed HGPS-specific market study that analyzed local property values based on a multitude of factors to guide the base offers Applicant will extend for easements and other land rights. The offers will be presented as an option for an easement, along with the underlying easement agreement itself. These documents will specify the payment terms, the limited rights Applicant is seeking, and the rights retained by the landowner. Based on feedback from informational meetings held with landowners and other members of the public, Applicant is offering optionality in the easement payment terms so that the landowner may elect a more traditional lump sum payment prior to construction, or alternatively elect to receive payments over 20-years with an escalator. All offers will be made in writing, with appropriate legal descriptions and property sketches identifying the intended location of the pipeline and/or extent of easements. Applicant is committed to having multiple direct contacts with each landowner to

provide company and Project information, secure survey permissions, discuss and address concerns, gather relevant property specific information, and present and negotiate offers. Applicant has and will comply with the Commission’s requirements in 83 Illinois Administrative Code Part 302 regarding information and notice provided to landowners and the conduct of its representatives in contacting and negotiating with landowners. Applicant also developed and is communicating materials beyond those required by law regarding facts about the company, the Project, pipeline construction, agricultural impact mitigation, and other topics of interest to landowners. By implementing and adhering to the measures developed in the easement acquisition plan, Applicant is confident that it can acquire most of the necessary land rights through good-faith negotiations.

63. Applicant’s stakeholder outreach included hosting six public informational meetings/open houses in Illinois in proximity to the anticipated areas of the HGPS route in January 2022 to inform landowners and other interested parties of the Project’s benefits, impacts, mitigation measures, and procedures. Specifically, these meetings were held on the following dates at the following locations:

Heartland Greenway - Illinois Information Meetings			
Date	Time	Locations	Locations Address
11-Jan	10-11:30 AM	IL-Knoxville (Henry, Knox Counties)	Knoxville American Legion 749 Henderson Rd. Knoxville IL, 61448
11-Jan	6-7:30 PM	IL-Macomb (Fulton, McDonough Counties)	Spoon River Outreach Center 2500 East Jackson Macomb IL, 61455
12-Jan	10-11:30 AM	IL-Carthage (Hancock County)	University of Illinois Extension Center 550 N Madison Carthage IL, 62321
12-Jan	6-7:30 PM	IL-Mt Sterling (Brown, Schuyler, Adams Counties)	Knights of Columbus Rt 24 West Mt. Sterling, IL 62355
13-Jan	10-11:30 AM	IL-Jacksonville (Pike, Scott, Morgan Counties)	Hamilton's 110 N East St. Jacksonville, IL 62650
13-Jan	6-7:30 PM	IL-Auburn (Sangamon, Christian Counties)	Edgewood Golf Club 16497 Kennedy Rd. Auburn IL 62615
14-Jan	11:30AM – 1PM	<i>IL virtual</i>	https://heartlandgreenway.com/landowner/s/

Landowners within an approximate one-half mile corridor along the potential route received mailed informational packets that included Project description, maps, fact sheet, and notice of these meetings. Public officials, regulators, and other interested entities, such as the Illinois Farm Bureau, received similar communications. Applicant has been seeking and continues to seek voluntary survey permissions from landowners to validate constructability of the route and gather the necessary environmental and cultural information necessary to implement avoidance and mitigation measures and seek the required state and federal permits for the Project. As of the date of this application, Applicant has permission to survey on just over half of the landowner properties on and adjacent to the proposed route and is actively surveying available parcels. Other landowners have indicated they will allow survey access when Applicant's application for a Certificate of Authority is filed with the Commission. Applicant has not initiated contact with any landowners in Illinois for purposes of negotiating the acquisition of an easement or other interest in their property for the HGPS prior to filing this Application.

64. Through the efforts described above, Applicant has already had initial contact with the majority of landowners along the proposed HGPS route in Illinois for purposes of providing preliminary information. Applicant intends to commence negotiations for the right-of-way needed subsequent to filing this Application, in compliance with the provisions prescribed in the 83 Ill. Adm. Code §302.30 pertaining to the timing of negotiations with landowners. The requisite letters and attachment will be mailed to landowners identified in **Exhibit F** (Landowner List) at least 14 days prior to contacting landowners to begin negotiating to acquire easements.

65. Notice letters to the local governments and public officials where the proposed pipeline will be located, and the railroads, pipelines, and utilities whose facilities may be

crossed by, or in close proximity to, the HGPS identified in **Exhibit H** (Notification List), will be sent concurrent with filing this Application or shortly thereafter. Newspaper notices are planned to be published in a newspaper in each county in which the HGPS will be located in the weeks immediately following submittal of this Application. Proofs of publication will be filed with the Commission upon receipt. **Exhibit I** (Copies of Notices) contains the form of notice letters and maps that will be provided that will be sent to local governments, public officials, and other entities referenced above. **Exhibit I** also contains the form of newspaper notice that will be published in a newspaper of general circulation in each county in which the HGPS will be located.

66. It is Applicant's intent and goal to acquire the necessary land rights to construct and operate the HGPS through good-faith voluntary negotiations with all landowners. Applicant has no desire to condemn the easements required for the pipeline and prefers to avoid condemnation, which is ideally reserved for situations such as when absentee owners cannot be located or there are large trusts, and all beneficiaries cannot be located or cannot agree. However, the authority to condemn can be warranted under other certain circumstances, such as when the applicant encounters refusals of contact or refusal to negotiate. Use of condemnation authority could be critical to securing a route that effectively minimizes the collective impact of the HGPS and is optimally located for the environment, the public, pipeline safety, and landowners in the aggregate. Applicant does not and would not utilize condemnation unless and until all reasonable offers and efforts to acquire the easement by agreement had been refused or rejected. Applicant additionally will only utilize condemnation to acquire an easement in the event it is necessary to avoid unreasonable delay or economic hardship to the progress of activities being carried out under the certificate of authority

Applicant is requesting through this Application. Applicant will continue efforts to obtain easements by agreement through the condemnation process, if implemented.

VIII. REQUEST FOR SERVICE LIST ADDITIONS

67. Applicant requests that the persons shown below be placed on the official service list maintained by the Chief Clerk for this proceeding. Pursuant to 83 Illinois Administrative Code §200.1050, Applicant agrees to accept service by electronic means.

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IX. CONCLUSION

For the reasons stated in this Application, Navigator Heartland Greenway LLC as Applicant respectfully requests entry of an order:

(1) granting Applicant a certificate of authority pursuant to the Carbon Dioxide Transportation and Sequestration Act authorizing Applicant to construct and operate a new carbon dioxide transportation pipeline along the route (and within the project route width) in Illinois depicted in **Exhibit D** and described in **Exhibit E** to this Application (as such route may be updated during the course of this proceeding), as a carbon dioxide pipeline, with such order to include authority for a 200 foot project width around the approved route, as permitted by Section 75/20(d) of the Carbon Dioxide Transportation and Sequestration Act;

(2) authorizing Applicant, as authorized by Section 75/20(i) of the Carbon Dioxide Transportation and Sequestration Act , to take and acquire an easement in any property or interest in property for the construction, maintenance, or operation of the carbon dioxide pipeline, in the manner provided for the exercise of the power of eminent domain under the Eminent Domain Act, including the permanent and temporary construction easement rights, as described herein, along the route of the new carbon dioxide pipeline in Illinois, as depicted in **Exhibit D** and described in **Exhibit E** to this Application (as such route may be updated during the course of this proceeding), where and to the extent that Applicant is unable to acquire such easements through voluntary, good-faith negotiations with landowners, with the grant of authority to be restricted to, and exercised solely for, the purpose of siting, rights-of-way, and easements appurtenant, including construction and maintenance, and with such power not to be exercised until Applicant has used reasonable and good faith efforts to acquire the property or easement thereto and when Applicant determines that the easement is necessary to avoid unreasonable delay or economic hardship to the progress of activities carried out pursuant to the certificate of authority; and

(3) granting such other and further relief as may be appropriate in the circumstances of this case.

Respectfully submitted,

NAVIGATOR HEARTLAND GREENWAY LLC

By: 
Stephen Lee, Senior Vice President, Engineering

Of Counsel:

Kevin Strehlow

General Counsel

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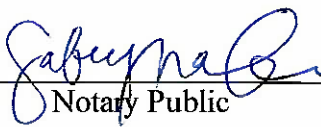
VERIFICATION

Stephen Lee, being first duly sworn on oath, states that he is Senior Vice President, Engineering, of Navigator Heartland Greenway LLC (“Navigator”), the Applicant herein, and Senior Vice President, Engineering, of Navigator CO2 Ventures LLC; that he is authorized to make this verification on behalf of Navigator, acting as an officer of Navigator; that he has read the foregoing Application and is familiar with the matters set forth therein; and that the matters set forth in the Application are true and correct to the best of his knowledge, information and belief.



Stephen Lee, Senior Vice President,
Engineering

Subscribed and sworn to before me
this 25th day of July, 2022



Notary Public

