

**Tenaska Responses to Questions  
from Warren County Area Planning Commission Meeting on Oct. 17, 2023**

**How long will Tenaska operate the project?**

As proposed, the Hickory CCS Hub would have a 30-year operational (injection) life, followed by a monitoring phase of 20 to 50 years. Warren County is located on a massive geological formation that enables nearly unlimited CO<sub>2</sub> storage, which one geologic agency compared to dropping a marble into a bathtub full of water.

**How will you monitor the wells and storage space?**

The deep underground storage sites where CO<sub>2</sub> is being injected are chosen specifically for their proven geologic ability to hold water, oil or gas for millions of years. The CO<sub>2</sub> will reside in porous rock and is sealed in place by layers of cap rock. These storage sites are monitored 24/7, 365 days a year by pressure sensors that can detect upward migration of CO<sub>2</sub> and immediately implement measures to address it. If this happens, we will – as required by our permits – stop injecting CO<sub>2</sub>. We will then work to identify and repair the leak. In these rare instances, leaks are generally found in the casing near the injection site and are easy to repair. Regardless, we will work with local first responders to ensure they have the training and equipment needed to respond to any unexpected situations related to this project. In addition to the continuous monitoring, the permit will require Tenaska to model the area of injection and verify that the CO<sub>2</sub> is flowing in the areas that are permitted.

**How quickly will you respond in an emergency?**

The operations team will monitor the pipeline and storage space 24/7/365 and can respond to emergencies within minutes. Before operations can begin, we will be required to have an Emergency Response Plan, which we will develop in consultation with local emergency response agencies. Local emergency response personnel usually are tasked with securing an area, communicating with residents and coordinating with the operator. Our operations team would be responsible for mobilizing personnel and equipment to respond to an emergency and, if needed, make repairs. The system will be equipped with remotely operated isolation valves and emergency shut-off systems. This will allow the system to be isolated before emergency responders arrive on location.

**How long and what are the option terms?**

Option terms for injection and monitoring well agreements with landowners span 30 years and are based on the amount of CO<sub>2</sub> injected. This is followed by a fixed rate for the monitoring phase. The financial terms of those agreements are confidential with each landowner, and Tenaska will uphold that aspect of binding agreements with landowners.

**Why not inject on site where emissions are produced?**

It is not geologically feasible to develop storage sites at each location where CO<sub>2</sub> emissions are produced. A more efficient approach is Tenaska's regional hub-and-spoke model, which has a much smaller footprint than other CCS projects that involve multiple states and thousands of miles of pipelines. Tenaska's model would connect CO<sub>2</sub> emitters within a 50- to 100-mile radius in Indiana to storage sites in Warren County. Initial geologic data indicates the underground geology in Warren County is suitable for storage, but Tenaska would like to conduct seismic tests to confirm geologic viability. Regional industries have indicated they are looking for a solution to their emissions challenges amid increasingly stringent environmental regulations and climate mandates that jeopardize their ability to stay in business.

**How many Indiana companies are customers?**

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We are early in the planning stages for this project and first need to confirm geologic feasibility through seismic testing. That said, we are having positive discussions with regional businesses interested in this CCS solution. These industries include ethanol, food processing, power generation, steel production and others.

**Does Tenaska have a plan to sell CO2?**

Our plan for this location is focused on permanent CO2 storage. It is extremely difficult, if not impossible, to remove CO2 from underground storage once injected.

**How much government funding/subsidies are you getting?**

Tenaska has built a business thesis around the need for carbon capture and storage and is investing its own capital into the project. We are not receiving and not seeking any government subsidies, tax credits or incentives in connection with this project. Based on the incentives available today, any tax credits involved in this project would go to the emitters of CO2 to offset the capital cost of the equipment they would need to capture the CO2, dehydrate and purify it, and compress it into a liquid form so it can be delivered to the pipeline for transport to the storage space.

**What kind of experimental project is this?**

CCS is not an experimental project or technology. CCS projects have been in operation for nearly 50 years and, to date, approximately 300 million metric tonnes of CO2 have been captured and safely injected underground. Currently, there are 29 CCS facilities in operation around the world that have the capacity to store 40 million metric tonnes of CO2 per year, which equates to removing 8 million passenger cars from the road. CCS facilities in operation today capture CO2 from a wide range of emission sources, including gas processing, ethanol, fertilizer, steel, cement and hydrogen production facilities, as well as power generation.

**What impurities are in the pipeline and how do you ensure there aren't any?**

We will have rigid standards on CO2 purity and will accept only CO2 that is 98% pure. No hydrogen sulfide will be allowed in the pipeline of injection wells. Most of the gas that is not CO2 is nitrogen.

**What is Tenaska's liability if there is a leak or rupture?**

The Hickory CCS Hub would be responsible for any rupture or leak involving the pipeline, injection wells or storage space.

**How safe is the pipeline and storage space?**

Pipelines continue to be the safest means of transport, with over 5,000 miles of CO2 pipeline infrastructure in operation across the United States today. There have only been a few instances of leaks on these lines, with the most notable being in Mississippi in 2020. There are a number of design and operational specifications that distinguish our project. The first being the purity of the CO2 that we will transport. CCS pipelines must meet the safety requirements laid out by the Pipeline and Hazardous Materials Safety Administration (U.S. Department of Transportation). CCS storage fields are regulated by the U.S. Environmental Protection Agency (EPA)'s Underground Injection Control Program, which sets and monitors regulations for injection well

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siting, construction and operation to ensure drinking water and human health are protected. There is additional permitting and safety regulation by:

- Indiana Department of Natural Resources
- Indiana Department of Environmental Management
- Indiana Utility Regulatory Commission

**What's the difference between this project and the pipeline that ruptured in Mississippi?**

There are key differences between Tenaska's project and the CO2 pipeline that ruptured in Mississippi. Our project will transport CO2 that is 98% pure, while the Mississippi pipeline contained hydrogen sulfide in levels harmful to humans that aggravated the impacts of the release. Another distinguishing design factor is component parts, as we are using a different composition of carbon steel that can better withstand the kinds of external stresses that caused the incident in Mississippi. In addition, the operator of the Mississippi pipeline allowed the flow of CO2 and hydrogen sulfide to continue for more than 20 minutes before shutting down the pipeline. Our pipeline will be designed to shut down within minutes of a detected rupture or leak. Also, the operator of the Mississippi pipeline did not communicate with local emergency responders, whereas we have already had an initial meeting with the Warren County emergency management office and will ensure they are involved and consulted throughout the development and operation periods.

**What is the impact on property values?**

Our experience from 35+ years of business is that lease agreements and similar financial arrangements that provide royalty payments to landowners actually increase property values because the land carries a passive revenue stream.

**What happens if there is a pipeline leak?**

Unlike oil and natural gas, CO2 is not flammable or explosive. CO2 is not toxic to humans when released into the ambient air unless the release involves rapid release in high quantities. In the unlikely event that CO2 were to be inadvertently released, there is no risk of fire, explosion or contamination. CO2 pipelines are closely and safely managed by the Pipeline and Hazardous Materials Safety Administration (PHMSA), and CO2 pipeline safety data is publicly reported by PHMSA. CO2 has been safely and reliably transported in the U.S. via pipelines since 1972, when the first CO2 pipeline was constructed in Texas. In the 50 years since that pipeline began operations, there have been no fatalities associated with the transportation of CO2 via pipeline anywhere in the world.

**When would the storage space be full?**

The operational (injection) lifespan of the project is 30 years. At the end of operations, we would decommission the pipeline and storage space by plugging the wells with cement and restoring the well sites to their previous condition. Monitoring of the storage site would continue for 20 to 50 years.

**Why is this project needed?**

Indiana industries are looking for ways to reduce their CO2 emissions in the face of environmental standards and climate mandates that threaten their ability to stay in business. Capturing CO2 emissions at the source, transporting CO2 to storage sites like the one proposed

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in Warren County, and safely injecting it a mile underground – deep beneath layers of rock formations and far from water sources – is a proven solution to their problem. These industries are important to Indiana’s economy, providing stable jobs and tax revenue to communities.

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