



Permian Highway Pipeline (PHP) Project Frequently-Asked Questions

Project Specifications

1) **What is the Permian Highway Pipeline Project?**

The Permian Highway Pipeline (PHP) Project ("Project") is designed to transport up to 2.1 billion cubic feet per day (Bcf/d) of natural gas through approximately 430 miles of 42-inch pipeline from the Waha, Texas, area to the U.S. Gulf Coast and Mexico markets. Kinder Morgan Texas Pipeline (KMTP) will build and operate the pipeline. The Project will provide much-needed takeaway capacity for natural gas in the Permian Basin in West Texas.

2) **Who is Kinder Morgan?**

Kinder Morgan is one of the largest energy infrastructure companies in North America, owning an interest in or operating approximately 84,000 miles of pipelines and 157 terminals. Kinder Morgan's pipelines transport natural gas, gasoline, crude oil, carbon dioxide (CO₂) and more.

In the state of Texas, Kinder Morgan operates approximately 26,000 miles of natural gas, CO₂, crude and refined products pipelines, as well as 15 terminals handling liquid and bulk goods. Kinder Morgan employs over 4,970 people in Texas and is headquartered in Houston.

3) **What product is this pipeline transporting?**

PHP is designed to transport natural gas, and only natural gas, through its pipeline. This Project is backed by several long-term, binding transportation contracts with key customers looking to move natural gas from the Permian basin to the Texas Gulf Coast.

If there was ever a desire to use the pipeline to transport any product other than natural gas, a new regulatory review and approval process would be required. Numerous facility and mechanical modifications would also be required prior to transporting a new product in the pipeline. Lastly, landowner's easement agreements would need to be negotiated to reflect the change in product.

4) **What are the local and statewide benefits of the PHP project?**

- **Jobs:** The PHP Project will directly generate an estimated 2,500 local construction jobs and 18 full-time positions following the project's completion.
- **Tax Revenue:** When complete, the new facilities constructed as part of the Project will generate approximately \$42 million in increased annual tax revenue to state and local taxing bodies.
- **Environmental Benefits:** The Project will provide a much-needed outlet for natural gas in the Permian Basin of West Texas. Natural gas is produced as a by-product of the crude oil drilling process in the Permian Basin. Currently, an estimated 400 million cubic feet per day (Mcf/d) of natural gas is flared in the Permian Basin due to a lack of natural gas pipelines that are capable of transporting the gas out of the region to the market. Flaring is projected to increase in the area unless new pipelines are constructed. The PHP Project will reduce flaring and associated CO₂ and methane emissions released into the atmosphere by providing 2.1 billion cubic feet per day (Bcf/d) of natural gas takeaway capacity from the Permian.
- **Strengthening Texas's Economy and Infrastructure:** The booming oil and gas production in the Permian Basin provides major economic benefits not just for West Texas, but for the entire state. Oil and gas severance taxes in Texas provide a large amount of funding for the TXDOT's highway fund, as well as the Permanent University Fund, which provides approximately half of the funding for Texas A&M University and the University of Texas systems. In 2018, the oil and natural gas industry paid more than \$14 billion in state and local taxes and state royalties—this equates to \$38 million a day to fund schools, roads, universities and first responders throughout the entire state. Developing the PHP Project will allow continued oil and gas production to drive the state's economy and provide a massive source of tax dollars.

The PHP project alone, and the oil and gas production it will enable, will provide almost \$1 billion in additional oil and gas production tax revenue each year to the state and counties for schools, first responders and other vital needs, and individual leaseholders will receive more than \$2 billion per year in new oil and natural gas royalties.

5) What regulatory agencies will oversee the project?

A number of federal and state agencies will be involved with the oversight and approval of the PHP Project, including, but not limited to, the Railroad Commission of Texas, Texas Commission on Environmental Quality, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Texas Historical Commission, Texas General Land Office, and Native American Tribes and Native American tribes as applicable.

6) Why are you pursuing this particular route—i.e. why go through the Hill Country?

In order to facilitate the transportation of additional natural gas supplies throughout Texas, Kinder Morgan Texas Pipeline (KMTP) developed a proposed pipeline route that provides interconnections with other existing pipeline systems, and is located in an operationally feasible area that minimizes the pipeline's impact on the environment. Kinder Morgan's engineers and environmental specialists developed this route after close examination of publicly available information, as well as aerial, environmental, cultural and civil survey data.

The current Hill Country route is the best route from an environmental and constructability perspective. Moving it north or south would increase environmental impacts and add mileage, which would likely increase the number of impacted landowners. Going north of Austin would impact a significantly greater number of landowners and create additional environmental impacts due to the rocky soil that would require extensive blasting. The current route crosses the northern edge of the Edwards Aquifer; moving it south closer to or around San Antonio would greatly increase the mileage directly through the center of the Edwards Aquifer.

7) When is the project expected to be placed into service?

Pending regulatory approvals, the project is expected to be in service in 2020.

8) What is the usual width of the pipeline right of way?

A pipeline normally requires a permanent right-of-way that is 50-feet wide. During construction, an additional 75-feet of temporary workspace next to the permanent right-of-way will be required. We will also need additional temporary workspace in certain areas such as road, railroad, river, and wetland crossings to store construction materials and accommodate safe and environmentally responsible construction activities and store construction materials. Once construction is complete, the temporary workspace will be returned to the landowner after it is restored to its original condition.

9) What is the maximum operating pressure of the PHP Project?

The maximum operating pressure will be approximately 1,440 psig (pounds per square inch gauge). This is a standard pressure for a natural gas transmission pipeline.

10) Would the natural gas in the pipeline be in a liquid or gaseous form?

The natural gas that will be transported through PHP will be in a gaseous state—NOT a liquid state. Pressurizing natural gas does NOT turn it into a liquid unless it is exposed to extremely cold temperatures (approximately -170 degrees Fahrenheit).

11) Is it true that the PHP project will be one of the longest pipelines in Texas?

No, the Permian Highway Pipeline will not be one of the longest pipelines in the State of Texas. There are many other pipelines, both existing and under construction, which are considerably longer than PHP.

Landowners

12) How is Kinder Morgan approaching the land acquisition process for this project? Is eminent domain being utilized to construct the project?

Statutory eminent domain actions, while still resulting in just compensation to the landowner, are a last resort. Kinder Morgan only goes to court if all attempts to obtain easements for right-of-way are

unsuccessful and mutually beneficial agreements with landowners cannot be reached. At all times, our overarching goal is to arrive at mutually beneficial terms and conditions regarding the fair market value of property with landowners, so that eminent domain and condemnation can be avoided. Eminent domain is necessary to ensure that no single landowner can block infrastructure of benefit to the public at-large. Without eminent domain for energy infrastructure only those communities that happened to be near energy sources would benefit from fuel and power.

When determining fair market value, Kinder Morgan will review market data to confirm that the value being offered for the right-of-way is consistent with current usage, factoring in sales of comparable properties, including: location of the property in question; its size in relation to other area properties; any unique current uses or property attributes (i.e., farming/agricultural use, trees, part of an orchard, etc.); existing and area zoning; and, other pertinent real estate and commercial market factors. Additionally, land and property studies and/or appraisals are sometimes commissioned to aid in determining fair market value.

Eminent domain is a clearly regulated process in the State of Texas and a court will determine whether the condemnation is proper, and the amount of compensation owed to the landowner.

13) Can landowners utilize the right-of-way after construction is completed?

Yes. Following completion of pipeline construction and restoration of the right-of-way, the landowner still may use the land over the pipeline for most purposes, including agriculture and cattle grazing. The landowner may plant smaller shrubs, flowers, bushes and grasses on the right-of way. Working with the company, landowners can also build access roads across the pipeline easement. Landowners are not permitted to construct buildings or structures, or plant deep-rooted trees in the permanent right-of-way, as this may impede with safe operation and continued monitoring of the pipeline.

Safety

14) How safe is transporting natural gas through underground pipeline? What measures does Kinder Morgan or its partners take to ensure safe operations of the pipeline?

Statistics gathered by the National Transportation Safety Board, a federal agency, indicate that pipelines make up less than one one-hundredth of one percent (.01%) of all transportation accidents in the United States. There are approximately 300,000 miles of natural gas transmission pipelines throughout the United States that deliver safe, reliable natural gas to American families and businesses. Kinder Morgan meets and exceeds hundreds of regulations and procedures to regularly monitor, test and inspect the mechanical and operational integrity of our pipelines. We keep communities safe in large part because we monitor our pipelines 24 hours a day, seven days a week and 365 days a year. Our safety efforts include: electronic surveillance systems, visual inspections of right-of way, as well as internal inspections using sophisticated computerized equipment called “smart pigs”.

It also is important to not confuse natural gas *distribution* pipelines with natural gas *transmission* pipelines when looking at accident statistics. *Distribution* pipelines are the small (often less than 1” diameter) conduit lines that run into homes and businesses and are typically operated by local utilities. Whereas *transmission* pipelines are the larger (typically 24” to 42” pipelines) that move natural gas over long distances and serve large industrial customers and local utilities not individual homes and businesses. The PHP Project is an example of a *transmission* pipeline. *Distribution* pipelines have higher rates of incidents because there is a higher likelihood of human error (such as a homeowner accidentally striking the small distribution pipeline going into the side of their home, failing to maintain a leaking gas meter, etc...), whereas transmission pipelines have very low rates of incidents, injuries and fatalities since they are buried deep in the ground and have minimal interaction with human activities.

15) What is the evacuation zone of PHP?

According to the Department of Transportation, pipelines are the safest method of energy transportation. In the rare event of an incident, Kinder Morgan will provide information on the incident based on size, scope and other factors to local authorities and first responders to appropriately evaluate the situation. Not all incidents result in an evacuation. Any evacuations would be determined by first responders utilizing input from Kinder Morgan.

Local Impacts

16) Is the presence of a natural gas pipeline, such as the PHP Project, likely to negatively impact tourism, particularly in the Texas Hill Country region?

No, PHP will have no impact on tourism. Just like the several other pipelines in the Hill Country, including natural gas pipelines, this pipeline will be largely unnoticed by the public once it is placed in service and the right-of-way restored. This has proven to be the case with the Kinder Morgan Texas Pipeline (KMTP), which is a 2,100-mile intrastate natural gas pipeline that goes through several Hill Country counties including Gillespie, Blanco and Hays and has been operating there for several decades.

17) Is this the first natural gas pipeline being built in the Texas Hill Country?

No. The Texas Hill Country is already home to several major pipeline systems which provide the energy that the Hill Country, Austin and San Antonio regions rely upon. In Gillespie, Blanco, Hays and Caldwell counties alone there are already over 930 miles of existing underground pipelines operating safely and efficiently.

- **Gillespie County:** ~180 miles of existing pipelines (~26 miles are Kinder Morgan pipelines)
- **Blanco County:** ~100 miles of existing pipelines (~25 miles are Kinder Morgan pipelines)
- **Hays County:** ~200 miles of existing pipelines (~13.5 are Kinder Morgan pipelines)
- **Caldwell County:** ~450 miles of existing pipelines (~21 are Kinder Morgan pipelines)

The Environment

18) Why is there not a comprehensive environmental impact statement (EIS) for this project?

Kinder Morgan will conduct a thorough environmental analysis as part of the Project, and is committed to protecting significant cultural resource sites and environmentally sensitive areas. Since this is an intrastate pipeline project, it is not regulated by the Federal Energy Regulatory Committee (FERC) and is not required to complete a formal environmental impact statement (EIS).

HOWEVER, Kinder Morgan **must obtain permits** from the U.S. Army Corps of Engineers (USACE) and clearances from the U.S. Fish & Wildlife Service (USFWS), both of which require extensive environmental assessments that include similar components of a formal EIS.

- For the USACE permit for crossing Waters of the U.S. (WOTUS), the applicant (Kinder Morgan) must, in the words of the USACE, *“demonstrate that all appropriate and practicable steps have been taken to avoid and minimize impacts to aquatic resources. For unavoidable impacts of permitted activities, compensatory mitigation is required to replace the loss of wetland, stream, and/or other aquatic resource functions. Compensatory mitigation can be accomplished through the restoration, creation, enhancement, and/or preservation of aquatic resources, either by the permittee’s individual project, or the use of mitigation banks or other consolidated mitigation efforts.”*
- For the USFWS, clearances for this project addressing threatened and endangered species, Kinder Morgan must, in the words of the USFWS, *“describe the current habitat conditions within the action area,”* for species that “may be present.” *“For critical habitat, identify the primary constituent elements that occur in the action area. For a description of the primary constituent elements, refer to the rule in the Federal Register that designated the critical habitat. Describe how the action may affect each protected resource - This section should document your conclusion and supporting rationale. Document your analysis of the what, when and how the protected resources will be exposed to and how such individuals or habitat are likely to respond to this exposure. Remember that you must consider effects that may occur later in time (e.g., after completion of initial construction). If species experts were contacted, include a summary of the conversations/conclusions reached. Include the references for the literature that your analysis relied upon.”*

As a component of the USACE/USFWS permitting process, Kinder Morgan will submit a Biological Assessment (BA) that will assess the impacts to all listed species potentially found along the pipeline route. This BA will be filed with both the USFWS and the USACE. The USFWS will then respond to the BA with a Biological Opinion (BO) as to the effect the project will have on each species. The USACE will use the BO during the permitting process.

A formal EIS is not the only possible way to perform an environmental review of the project's impacts. Performing a formal EIS in addition to the environmental analyses required under the projects other federal permits, would be partially duplicative.

19) Will PHP be performing a geological assessment?

PHP is using SWCA and Cambrian Environmental to perform a geological assessment for the PHP project. This assessment includes a thorough desktop analysis of the entire project. This analysis will be followed by "on the ground" karst surveys of the Edwards Aquifer Karst, Trinity Aquifer Karst, and Edwards / Trinity Plateau Karst. Surveys generally conform to the "Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones" as written by the Texas Commission on Environmental Quality (TCEQ).

20) How will Kinder Morgan protect wetlands and culturally important sites?

We start by selecting a route that avoids sensitive areas whenever possible. This route is based on detailed professional field surveys, desktop studies and the review of available literature and databases that locate sensitive features. We also mark wetlands and culturally important sites that need to be avoided during construction.

Should there be any wetlands or culturally important sites that cannot be avoided, we exercise the utmost care around these sites during construction. We choose only qualified and experienced professional pipeline builders to minimize the impact of construction activities. In addition, we will have a specially trained environmental inspector at the site to ensure the protection of environmentally sensitive areas and endangered species. Following construction, we thoroughly restore the land as close as possible to, if not better than, it's original condition.

It is also very important to note that if any major water body crossings are required for this project, it is typically our practice to horizontally directionally drill (HDD) those water bodies along the proposed route, when possible, safe and practical. This highly technical, and very expensive method of installing a pipeline, minimizes environmental impacts.

21) Is the construction of the project a threat to the Edwards Aquifer?

No. The PHP Project will transport natural gas, which is lighter than air (meaning it rises) and does not sink into the ground or water table. In the extremely unlikely event of a leak, the gas will not remain on the ground or impact the aquifer.

Kinder Morgan has held meetings, and continues to be in close communication, with groundwater districts and advocacy groups including the Edwards Aquifer Authority and Barton Springs Edwards Aquifer Conservation District regarding the project.

22) How is Kinder Morgan planning on mitigating impacts to endangered species such as the Golden Cheeked Warbler? Will Kinder Morgan be investing in mitigation measures along the pipeline route?

Kinder Morgan is working with the U.S. Fish & Wildlife Service to determine appropriate mitigation for Golden Cheeked Warbler to offset any potential impacts along the pipeline route.

23) The Texas Hill Country is a unique geographic region. Does Kinder Morgan understand that?

Much like other regions throughout the U.S., the Texas Hill Country is a unique geographic region and poses its own challenges for pipeline construction. Kinder Morgan has a proven track record of safely operating pipelines in other sensitive areas like the Rocky Mountains, San Francisco Bay, Lake Pontchartrain and the swamplands of Louisiana, the Badlands of North Dakota, and the granite of New Hampshire. Local conditions and geographic features are always taken into account throughout the project planning process, and we employ skilled construction, environmental, and project management personnel familiar with constructing pipelines in challenging areas

24) How will Kinder Morgan address the karst geography in the Texas Hill Country region?

Kinder Morgan is working with a karst expert in locating major subsurface features that may directly influence groundwater, and we are developing a response and mitigation plan for construction activities in these areas. Kinder Morgan will work closely with local groundwater districts in the region on the implementation of this plan. The response and mitigation will include a period of construction shutdown in

the event a void is found during construction that would be problematic to continued construction or would be of influence to groundwater quality. Voids encountered will be addressed in accordance with TCEQ guidance, and in line with our construction methods and proposed pipeline material. This will not only protect PHP from potential subsidence issues in the future, but also the aquifer from groundwater influence.

25) Is Kinder Morgan developing a natural gas storage cavern to support this project?

No, there are no plans for a natural gas storage cavern to support this pipeline. Kinder Morgan is working with a karst expert to locate major subsurface features that may directly influence groundwater. This expert is NOT surveying to locate a potential site for a natural gas storage cavern – their role is to help the company develop a construction plan that minimizes any impact to this unique area.

26) What is Kinder Morgan doing to address the possible spread of oak wilt?

PHP will not contribute to the spread of oak wilt. Oak wilt is transmitted in two ways, one via direct root interaction that develops in oak stands, and the other via a beetle that carries spores during certain times of the year and can infect healthy trees.

Our construction contractors plan to mulch any trees we cut. We do not plan to leave cut timber at the edge of the workspace for landowners. The cut trees will be chipped/mulched and the mulch placed on the edge of the work space. During restoration the mulch will be spread across the construction area, except in wetlands and any other areas where specifically prohibited.

In order to help prevent the spread of oak wilt, Kinder Morgan will commit to paint any wounds or cuts on trees along our construction corridor.