

Proposed East 300 Upgrade Project (Project) Frequently Asked Questions and Tennessee Gas Pipeline Company, L.L.C.'s (TGP) Responses

A. General Project Questions and TGP's Responses

1. What are the proposed Project facilities?

The proposed Project facilities are described in TGP's certificate application filed with the Federal Energy Regulatory Commission (FERC) on June 30, 2020. Project facilities include: (1) new electric-driven Compressor Station 327 to be located in West Milford Township, Passaic County, New Jersey, (2) upgrades to existing Compressor Station 325 in Wantage Township, Sussex County, New Jersey, and (3) upgrades to existing Compressor Station 321 in Clifford Township, Susquehanna County, Pennsylvania. The Project does NOT include installation of new mainline pipeline.

2. What is a compressor station?

The U.S. Energy Information Administration (EIA) estimates there are more than 1,200 compressor stations on interstate pipeline systems operating in the United States. These facilities are integral in the transportation of natural gas through pipelines. They are designed to provide the necessary energy to move natural gas through a pipeline system by compressing natural gas by increasing its pressure. Compressor stations are placed along a pipeline route at varying intervals based on the diameter of the pipeline, the volume of gas to be moved, and the terrain. Newly built compressor stations are designed with state-of-the-art technology to control emissions and ensure efficient operations.

3. In general, how are locations selected for compressor stations?

The location of compressor stations depends on several parameters, including: the calculated pressure drop in the pipeline resulting from the planned volume of gas being transported, location of deliveries, type of compressor units, physical parameters of the pipeline, and other factors specific to the area where the station is to be located (elevation profile of the pipeline, atmospheric pressure, etc.). A flow model is generated that takes into account these parameters and generates location options based on operating parameters and efficient use of required fuel and horsepower. Environmental considerations are also included in the evaluation of alternative site locations. When selecting a compressor station site, TGP attempts to identify potential locations where constructionwill have a minimal impact to the surrounding environment.

4. What quality is the natural gas being transported through a compressor station?

The natural gas that TGP transports on its existing pipeline system (including the two compressor stations to be modified), and will transport through the new compressor station, is referred to as "pipeline quality" natural gas. The natural gas has already been treated and processed prior to its entry into the pipeline network and is the same gas that is consumed directly by the public in homes, businesses and schools.

5. Will the new and modified compressor stations emit benzene into the air?

As noted above, the gas transported by TGP is pipeline quality gas, meaning it has already been processed prior to its entry into the interstate pipeline network so the impurities have been removed. Benzene, Hydrogen Sulfide (H₂S), and other hazardous air pollutants that may be present as a result of production have been almost completely removed prior to custody transfer into the TGP pipeline system.

6. Do compressor stations emit "exhaust" or "release" methane gas during operations and if so, will there be an odor?

Compressor stations do not "exhaust" or "release" methane gas under normal operations. Planned natural gas venting is sometimes required during maintenance activities to ensure proper operation of safety systems and other equipment. Natural gas venting in an emergency is very rare and lasts only a brief period of time. Either way, when natural gas is vented, it is done under controlled conditions specifically designed to allow depressurization to be done safely. Since natural gas is lighter than air, any release of natural gas dissipates and does not collect near ground level.

Methane, the primary component of natural gas, is colorless, odorless, and tasteless. TGP's 300 Line system is currently odorized at Compressor Station 321 in Pennsylvania heading east into New Jersey including the new compressorstation. This practice is utilized to enhance the safety of the general public during the unlikely event of an inadvertent release of natural gas.

7. Do compressor stations produce a lot of noise?

No. For new compressor stations and for modifications or upgrades of existing compressor stations), the FERC requires that the noise level during normal operations can be no greater than 55 decibels on a day/night average sound level (dBA Ldn) at the closest noise sensitive area (NSA). A noise sensitive area would include occupied residences, schools, hospitals, and other locations. Fifty-five decibels is equivalent to a quiet conversation indoors or a refrigerator running in the same room as you. The interiors of compressor buildings that house the compressor Electric Motor Driveand equipment are acoustically treated to minimize and dampen noise. Below is a sound level chart for familiar noise sources.

	Measured	Sound Level with	
	Sound Level	+10 nighttime penalty	
SOURCE	dBA	dBA Ldn	
Bedroom of a	30	36	Ldn is the <i>day-night averag</i>
country home			sound level defined as the 24
Soft whisper at 5 ft.	30	36	hour A-weighted equivalen sound level, with a 10-decibe
Quiet office or living room	40	46	penalty applied to nighttime levels (USEPA "Levels
FERC Sound Limit	48.6	55	Document).
Moderate	50	56	
rainfall			Nighttime is defined as the
Inside average urban home	50	56	hours between 10:00 p.m. and 7:00 a.m. the following day.
Quiet street	50	56	
Normal	60	66	
conversation at 3 ft.			
Noisy office	60	66	
Noisy restaurant	70	76	The Ldn levels in the right hand column assume
Highway traffic at 50 ft.	75	81	continuous, 24-hours of th sound levels in the left han
Loud singing at 3 ft.	75	81	column.
Busy traffic intersection	80	86	
Electric dryer	80	86	
Loud shout	90	96	
Freight train at 50 feet	95	101	
Modified motorcycle	95	101	
Jet taking off at 2000 feet	100	106	
Amplified rock Music	110	116	
Jet taking off at 200 feet	120	126	
Air-raid siren	130	136	

8. Does Tennessee coordinate with local safety officials?

In compliance with the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) pipeline safety standards, Tennessee has an emergency plan for each compressor station which includes procedures to minimize the hazards of a natural gas emergency. Tennessee has and will continue to maintain liaison with appropriate fire, police, and public officials to learn about their resources, coordinate mutual assistance, and provide training and continuing education for the public and government officials.

9. Will the proposed compressor stations be manned following completion?

The compressor station operations are monitored continuously (24 hours per day/seven days per week) by TGP's gas control center located in Houston, Texas. Operations personnel typically staff compressor stations Monday through Friday during normal business hours. Compressor stations are sometimes manned full-time (24 hours per day/seven days per week) during significant weather events, such as snowstorms.

10. How will TGP monitor the compressor station against intrusion?

Similar to the existing compressor stations that will be modified as part of the Project, TGP will install a security fence around the perimeter of the new compressor station with locked gates for entry. The new compressor station will have card readers and security cameras for entry control, andwill have intrusion alarms on key buildings that communicate to local area operations personnel, as well as TGP's gas control center (these security measures are in place in existing TGP compressor stations). Additional security cameras may be installed based on design and security considerations at the site of the new compressor stations.

B. Specific Questions Regarding New Compressor Station 327 and TGP's Responses

1. What are the specific facilities to be installed at proposed Compressor Station 327?

At new Compressor Station 327, TGP plans to install a new, 19,000 horsepower, electric motor driven compressor unit which will be located in an acoustically insulated compressor building. Additional facilities include: office building, gas coolers, gas filtration, an Emergency Generator, and safety & control systems.

2. What is the location of new Compressor Station 327 and how large is the proposed Compressor Station 327 site.

TGP plans to site new Compressor Station 327 on property identified as Block 4601, Lot 17 in the Township of West Milford, Passaic County, New Jersey. The property was formerly owned and used by Tilcon, Inc. as a quarry and has since been used for other industrial and commercial purposes such as temporary contractor/pipe yards for several projects, and most recently for storage and recycling. In selecting the property for the proposed compressor station, TGP has avoided impacts to natural resources to the greatest extent possible.

The total site is approximately 44 acres. The operational footprint of the new compressor station will be approximately 12 acres.

3. What efforts will be undertaken to avoid or mitigate any potential impacts to the Monksville Reservoir and water quality? What, if any, short-term and long-term water quality monitoring will the Company conduct?

TGP will utilize the Best Management Practices (BMPs) outlined in the FERC's Upland Erosion Control, Revegetation, and Maintenance Plan, the FERC's Wetland and Waterbody Construction and Mitigation Procedures, and the Project's Environmental Construction Plan, including the Spill Prevention and Response Plan, to avoid and minimize adverse effects to drinking water sources and groundwater quality and supply. Additionally, environmental Inspectors will be employed during construction to ensure that TGP's BMPs are implemented and that the Project complies with applicable regulatory permits and approval conditions. TGP and its contractors will adhere to practices including specifications for erosion control devices, and dewatering, as well as restrictions on refueling and storage of hazardous substances. TGP anticipates that implementation of its BMPs will allow for construction and operation of the Project without adversely affecting groundwater water quality or supply, any public watershed, or potable surface water supply areas in the Project area.

4. Will the project pollute the Monksville Reservoir given its proximity to the reservoir

The Monksville Reservoir is located approximately 1,200 feet east of the proposed location of new Compressor Station 327. TGP will implement measures that ensure the Project construction and operation will have no impact on Hewitt Brook, Hewitt Brook Tributary 2, or Monksville Reservoir. TGP will implement erosion and sediment control devices during construction and operation of Compressor Station 327, hydrostatic test water will be discharged into holding tanks and trucked offsite, and TGP will comply with the stormwater management rules N.J.A.C. 7:8-1.1 et seq. during operation of Compressor Station 327. Hewitt Brook, Hewitt Brook Tributary 2, and Monksville Reservoir will not be impacted by construction or operation of Compressor Station 327. This was further confirmed by FERC staff, which concluded in the Environmental Assessment for the Project (issued February 2021) that, based on TGP's proposed mitigation measures, the Project would not have direct impacts on waterbodies, and no significant impacts

on surface water quality, water intakes, or the Monksville or Wanaque Reservoir.

5. Will proposed Compressor Station 327 have lighting? What is the lighting type and intensity, and will theybe on at night?

The new compressor station will have lighting installed. At night, the compressor station will be monitored remotely, but the compressor station does require a certain amount of yard lighting at night when operating personnel may need to be present for safety reasons. TGP is proposing to install special directional light fixtures that will direct the light toward the buildings and ground. The directional lighting shields the bub from view so that only indirect light will be visible outside the property line.

6. Will there be impacts to air emissions from new Compressor Station 327:

Since an EMD compressor unit will be installed and used at Compressor Station 327, the only emissions sources would be the new emergency generator and pipeline liquids storage tank. Tennessee would also implementmeasures to minimize fugitive emissions.

7. What happens if there is an emergency at proposed Compressor Station 327?

The safety of our neighbors and the environment is a top priority for the company. The proposed new compressor station will be designed to include sophisticated gas detection, fire detection and emergency shutdown (ESD) systems in the unlikely event of an operational disruption or emergency. These detection systems quickly trigger shut-off valves that cause gas to bypass the compressor station. Once the compressor station is operated safely. TGP will follow routine operation and maintenance procedures to ensure the compressor station is operated safely. TGP will also work on an annual basis with appropriate fire, police, and public officials to coordinate resources and responsibilities of each organization so that all organizations know how to respond in the unlikely event of an emergency.

8. Will there be an increase of traffic in the area of proposed Compressor Station 327?

During construction, TGP estimates an average of one round-trip per day for trucks delivering equipment and materials, and approximately thirty-five to forty vehicles per day for construction workers commuting to the Project site. Construction activities are anticipated to occur six days per week for approximately nine months. Increased traffic associated with equipment and material deliveries and workers commuting to the proposed site will have minimal impact to motorists using roadways in the vicinity. The existing driveway to the site will be used with no improvements needed. TGP will have flagmen at the entrance of the site to ensure minimal disruption to those people who live and work in the vicinity of the site. Motorists accessing residences or other facilities near the site may experience short-term and minor delays as construction-related traffic enters and exits the driveway. Potential traffic interruptions duringconstruction will be temporary and short term. No long-term impacts to traffic are anticipated as routineoperations will be similar to other businesses operating in the area.

C. Questions/Requests for Information from May 13, 2021 Informational Session No. 2 (West Milford, New Jersey) and TGP's Responses

1. Additional Information Regarding Venting/Blowdown Events at Compressor Stations

Venting is an infrequent event at compressor stations during which small amounts of natural gas are emitted in the following operational conditions:

- <u>Compressor Blowdowns (planned)</u>: Planned natural gas venting is sometimes required during maintenance activities to ensure proper operation of safety systems and other equipment. These events may occur when a compressor station is stopped and isolated gas between the suction/discharge valves of the compressor station is vented to the atmosphere via a blowdown vent prior to conducting the prescribed maintenance and the next station startup. Controlled blowdowns for specific equipment, which will contain lesser gas volumes, may also occur for prescribed maintenance activities or if the compressor unit will not be run for an extended period of time. In either scenario, TGP takes care to minimize the number of events, quantity of gas released and duration of the blowdown activity.
- <u>Emergency shutdowns (unplanned)</u>: Emergency shutdowns (ESD) are rare events that last only a brief period of time (three minutes or less, pursuant to Kinder Morgan operational and maintenance procedures), and are initiated by Station Protection Systems or manually initiated by an employee in case of an emergency. When a station ESD is initiated, all or a partial amount of gas in the station yard is vented to the atmosphere.

Either way, when natural gas is vented, it is done under controlled conditions specifically designed to allow depressurization to be done safely. Since natural gas is lighter than air, any release of natural gas dissipates and does not collect near ground level.

As previously noted, the natural gas that TGP transports on its existing pipeline system, and will transport through the Project facilities, including new Compressor Station 327, is referred to as "pipeline quality" natural gas. Pipeline quality gas is gas that ultimately is consumed by the public, including homes, businesses, and schools, among other end-users. This natural gas has already been processed prior to its entry into the interstate pipeline network so the impurities have been removed. Substances such as Benzene, Hydrogen Sulfide (H₂S), and other hazardous air pollutants that may be present as a result of natural gas production, have been almost completely removed prior to custody transfer into TGP's pipeline system.

2. Additional Information Regarding Sound Level Requirements for Compressor Stations

For new compressor stations and for the addition of compression at existing compressor stations, the Federal Energy Regulatory Commission ("FERC") requires that the noise level must not exceed a day/night sound level (Ldn) of 55 decibels (dBA) at any pre-existing noise sensitive area (see 18 Code of Federal Regulations, Section 380.12 (k)(4)(v)(A)). A noise sensitive area includes occupied residences, schools, and hospitals. Fifty-five decibels is equivalent to a quiet conversation indoors or a refrigerator running in the same room as you. The interiors of compressor buildings that house compressor units and equipment are acoustically treated to minimize and dampen noise. Noise considerations are discussed in detail in Section 9 of the Environmental Assessment ("EA") for the Project, issued February 19, 2021 in Docket No. CP20-493-000. Section 9 of the EA includes information on the FERC's noise level limit for compressor stations, how that noise level limit was

derived, and the anticipated noise levels related to the construction and operation of new Compressor Station 327.

3. Information Regarding Plans for Wastewater at New Compressor Station 327

The operation of the new Compressor Station 327 will not generate wastewater, including noncontact or contact cooling water or process wastewater. The compressor station will not contain floor drains that discharge to groundwater in any quantity.

New Compressor Station 327 will include an individual subsurface sewage disposal system with a design flow less of than 2,000 gallons per day, which will be designed to strictly conform to New Jersey state standards.

4. Information Regarding the Tonnage of Volatile Organic Compounds ("VOCs") Related to Operations at New Compressor Station 327

As background, since an electric motor drive ("EMD") compressor unit will be installed at new Compressor Station 327, there will be no direct emissions from the operation of the compressor. Compressor stations do not "exhaust" or "release" methane gas under normal operations. As discussed above, planned natural gas venting is sometimes required during maintenance activities to ensure proper operation of safety systems and other equipment. Natural gas venting in an emergency is very rare and lasts only a brief period of time. When natural gas is vented, it is done under controlled conditions specifically designed to allow depressurization to be done safely. Since natural gas is lighter than air, any release of natural gas dissipates and does not collect near ground level.

The Project's EA included information regarding the estimates of the Project's potential annual emissions, including VOCs. As set forth in Table 14 from the EA, emissions at new Compressor Station 327 are estimated to be negligible.

Table 14 Potential Operational Emissions for CS 327 (tons per year) ª										
Emission Source	NOx	со	voc	PM 10	PM2.5	SO ₂	Total HAP	CO ₂ e		
New CS 327										
emergency generator	0.17	0.15	0.04	< 0.01	< 0.01	< 0.01	0.03	36		
pipeline liquids tank and truck loading			0.11							
fugitive releases			0.04				0.01	513		
venting releases			0.25				0.06	3,181		
Total for Station	0.17	0.15	0.44	< 0.01	< 0.01	< 0.01	0.1	3,730		
^a Sum of columns may not add to total due to rounding.										

To reduce the volume of natural gas released to the atmosphere, the proposed EMD compressor unit to be installed at new Compressor Station 327 will be equipped with a seal gas boosting system that will allow Tennessee, for a short period of time, to keep the compressor unit pressurized and not vent natural gas. Please note that this feature can only be used when the compressor unit is taken off-line to respond to fluctuations in market demand for natural gas. If the compressor unit is taken off-line for maintenance purposes, or is expected to be off-line for an extended period of time, the compressor unit will need to be vented for safety and equipment integrity purposes.

5. Information Regarding Impacts to Residents Near Compressor Stations

In response to questions regarding potential impacts to residents located near compressor stations, TGP is posting a study that addresses how the regulatory and permitting processes for interstate natural gas transmission compressor station are robust, and how these processes protect the health and safety of the public living near compressor stations, "How the Regulatory Process Protects Those Living Near Natural Gas Compressor Stations", dated December 29, 2016, prepared by Trinity Consultants for the INGAA Foundation, Inc. Section 6 of this study includes Frequently Asked Questions Regarding the Protection of the Health and Safety of Those Living Near Natural Gas Compression stations and responses are helpful to review as they provide information that address many of the questions and concerns that were raised during the May 13, 2021 Informational Session.

As it relates to the Project, TGP is proposing to install an electric motor driven (EMD) compressor unit at new Compressor Station 327, which eliminates potential emissions from the power operation of the compressor unit and greatly reduces operational emissions from the compressor station.

6. Information Regarding Chemicals to be Stored at New Compressor Station 327

A brief description of chemicals to be stored at Compressor Station 327 includes:

- 1) Janitorial/household cleaning items in nominal quantities to facilitate cleaning of the office building and other work areas.
- 2) Approximately five (5) gallons of glycol/antifreeze for use in TGP's work vehicles.

The quantities of these items will be used to support station and local operations. No drum storage of oil or other chemicals at the compressor station is planned at this time.

7. Information Regarding Restoration Activities for Past Projects in West Milford, New Jersey

TGP has met all restoration and mitigation obligations imposed by the FERC and the New Jersey Department of Environmental Protection for the 300 Line Project that was constructed in West Milford, New Jersey in 2011.

With regard to specific questions regarding Lake Lookover, as part of TGP's 300 Line Project, TGP installed a 30-inch diameter pipeline loop parallel and adjacent to its existing 24-inch diameter pipeline across Bearfort Waters Lake in West Milford, New Jersey. Bearfort Waters Lake is upstream of Lake Lookover, Mount Laurel Lake, and Upper Greenwood Lake. TGP took significant measures during construction to prevent sedimentation from entering the lower lakes, including installing and maintaining erosion control devices ("ECDs") around the crossing of Bearfort Waters Lake. TGP

received all necessary approvals from the FERC and the Hudson Essex Passaic Soil Conservation District for its soil erosion and sediment control plans.

Numerous significant and unusual rain events, including Hurricane Irene, that occurred throughout 2011 overwhelmed ECDs at times, which caused turbid water to enter the lakes downstream of Bearfort Waters Lake on occasion. TGP's construction had a minor and temporary impact on the lower lakes and there were no long-term impacts to Bearfort Waters Lake or to Lake Lookover and the other downstream lakes.

The FERC found that TGP complied with all mitigation and restoration activities in the vicinity of Bearfort Waters Lake. In March 2012, FERC staff inspected the restoration and stabilization of the 300 Line Project right-of-way in the immediate area of Bearfort Waters. The inspection found no instances of noncompliance or problem areas. The report documenting the inspection noted that the banks at the pipeline crossing location and the adjacent pipeline right-of-way were stable. Also, there was no visible turbidity at Bearfort Waters or Lake Lookover at the time of the inspection. Photographs of the two waterbodies were included as part of the inspection report (a copy of which is posted, along with photographs of Mount Laurel Lake from January 2021.

8. Information Regarding the Pressure of Natural Gas in the Pipelines and Compressor Station

New Compressor Station 327 is designed to operate as part of TGP's interstate natural gas pipeline system that traverses West Milford, New Jersey, which has a maximum allowable operating pressure ("MAOP") of 1170 psi. Section 10 of the EA notes that there is no proposed increase in the maximum allowable MAOP as a result of the Project.

- D. Questions received from Sussex County in preparation for the September 8, 2021 Informational Session (Sussex County, NJ) and TGP's responses
- 1. No New Jersey residents benefit from these compressor stations. Why is TGP using NJ as a way station to benefit NY? Who actually benefits from this project? What does NJ get from the project? Is there justification for this project?

Tennessee is constructing the Project to meet the demands of its shipper, Consolidated Edison Company of New York, Inc. ("Project Shipper") for 115,000 dekatherms per day of additional firm transportation capacity.

The Project is anticipated to have short-term and long-term positive impacts on the local economy. These benefits are identified and discussed in a report entitled *Economic Impacts of the East 300 Upgrade Project in Pennsylvania and New Jersey*, prepared by Rutgers University, Edward J. Bloustein School of Planning and Public Policy, a copy of which will be provided upon your request.

2. Many portions of the pipeline system are over fifteen years beyond the useful lifespan of steel pipelines. How will Tennessee Gas Pipeline address this negligence? If this project is approved, when will we expect TGP to dig up our communities again to replace these aging pipes? Will TGP reimburse the damage done to our communities?

The statement that the pipeline is beyond its useful life is simply untrue. The FERC staff noted in the Environmental Assessment for the Project that "[t]he existing Tennessee system is already designed to safely handle the additional gas volumes that would be transported through the system by the proposed Project, with no proposed increase in the maximum allowable operating pressure.

3. How many full-time workers are employed and working on site at the current compressor station under normal operating conditions?

As discussed during the September 8, 2021 Sussex County meeting, four full-time personnel are currently assigned to Compressor Station 325, with one person onsite during routine business hours.

4. How does TGP compensate residents for the significant loss of home values?

As discussed in Section 5.2.5, Resource Report 5, submitted with the certificate application, Tennessee is not aware of any instances of a decrease to property value or the inability of a homeowner to obtain a mortgage for a property in the vicinity of a compressor station. There are dozens of existing compressor stations along Tennessee's existing system in the Northeast U.S. and many individuals have bought, sold, and built homes immediately in the vicinity of compressor stations. While numerous studies about

natural gas pipelines' effects on property values have been conducted, available studies about compressor stations' effects are few. One study conducted in 2015 investigated property values surrounding compressor stations at seven locations in New York state. The study concluded that the compressor station sites had no discernable effect on property values within 0.5 mile of each site. (Real Property Services, LLC. 2015) See the full study here: https://www.kindermorgan.com/ WWWKM/media/Documents/Projects/East-300-Impact-on-Property-Values-Surrounding-Compressor-Stations.pdf

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Will TGP be monitoring the temperature of the wetlands that their pipelines run through? How will TGP track loss of wildlife, including plants and animals? There are no pipeline facilities included as part of this Project. There are also no wetlands that would be impacted by the Project at CS 325 or CS 327.

6. Will there be notifications in advance of large releases including blowdowns within a minimum distance of 1.25 miles of the compressor and notification of accidental releases?

For planned blowdown events, local emergency response officials will be notified in advance of the blowdown. For unplanned blowdown events, local emergency response officials may be notified after the event dependent upon the nature of the event, but immediate focus will be on required notification to governing agencies and issue resolution, if required. For additional information, see Section C.1.

7. Will compressor station emission levels be available to the public for review?

The operating permit for CS 325, where the Potential to Emit levels are documented, and annual emission inventory, where actual emissions are reported, are available through NJDEP.

8. What quantities of which specific pollutants do you anticipate the expanded compressor station to emit, and what measures could be taken to prevent or reduce those toxic emissions?

The specific estimated quantity of each pollutant is included in FERC's Environmental Assessment and Final Environmental Impact Statement.

9. Will you install electric turbines rather than gas turbines to reduce on site greenhouse gas emissions and toxic emissions in the most significant way possible?

TGP discussed its analysis of the electric compression alternative in Resource Report 10 of its certificate application filed with the FERC. TGP determined that electric driven compression at existing CS 325 was not a viable alternative to the proposed natural gas-fired turbine engine.

10. How often does Tennessee Gas Pipeline conduct testing of air and water quality to ensure safety of residents and how does Tennessee Gas Pipeline compensate residents for the significant loss of home values?

Emission stack testing for NOx & CO are conducted annually in accordance with the current permit.