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## PEG BOARD MEMBERS

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Jason P. Stewart (Chester)

Linda H. Short (Chester)

Rocky A. Hudson (Lancaster)

David Knight (Lancaster)

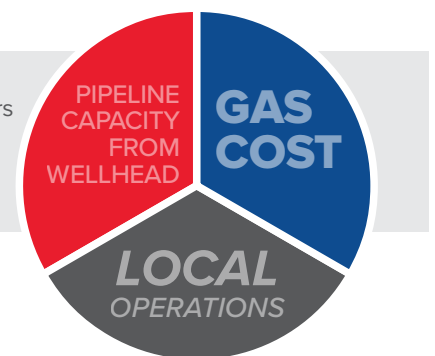
## The Tools of the Trade

PEG USES TO MITIGATE GAS COST

Patriots Energy Group (PEG), the joint action agency for the Gas Authorities in Chester, Lancaster and York, provides many gas cost options to help mitigate supply and/or price disruptions in the natural gas industry. PEG's goal is to provide the three Gas Authorities with reliable capacity and supply at the lowest possible cost. With the complexity of the natural gas system, consideration must be given to all factors including commodity cost, local operating cost, and limited pipeline capacity. To help achieve price stability PEG utilizes a toolkit that ensures supply while mitigating cost.

### WHAT'S IN THE COST?

- 1/3** of the cost related to pipeline capacity to bring it from the wellhead to PEG members
- 1/3** of the cost related to physical gas cost
- 1/3** of the cost for local distribution operations



### 1 Hedging of Gas Cost

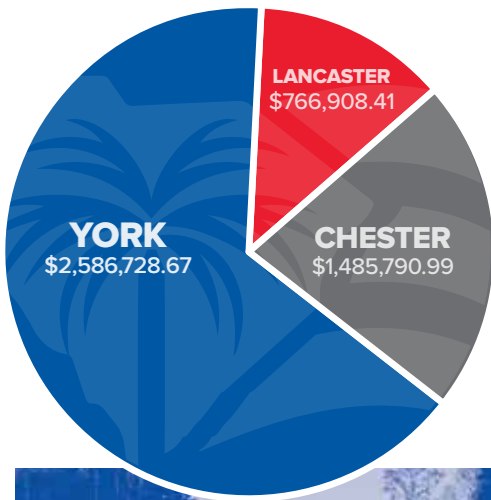
A hedge is an investment that is made with the intention of reducing the risk of adverse price movements in an asset. We mitigate our exposure to natural gas prices through hedging. Hedging allows us to manage our natural gas costs while reducing the potential impact of volatile and/or potentially rising natural gas prices. We are able to lock in gas cost when they are low, which enables us to provide price stability. At the present time, the prices our members have locked in are lower than the market price today through 2026.

### 2 Storage Injection & Withdrawals

PEG has space reserved in storage fields on the interstate pipeline network where natural gas is stored in the summer then withdrawn during the winter when the load peaks. By injecting the gas while the summer prices are lower and withdrawing during the winter, when prices would normally be much higher, PEG is able to mitigate cost and provide price stability.

### 3 Prepay Transactions

Tax exempt utilities use the proceeds from the sale of tax-exempt bonds to prepay for long-term supplies of natural gas. A prepaid gas deal is a structured transaction in which one or more municipal utilities, through a special-purpose entity often called a “joint-action agency”, uses proceeds from the sale of tax-exempt bonds to prepay for a supply of gas that will be delivered over a long period, such as 15-30 years. The joint action agency that issues the bonds uses the proceeds to buy the prepaid gas and then resells it to the exempt utilities that participated in forming the joint action agency or outside tax exempt entities. Both the utilities and gas suppliers can benefit from such deals. The utilities benefit from a long-term gas supply with a creditworthy gas supplier. The structure usually enables the municipal utilities ultimately purchasing the gas to buy gas at a discount from the market price when the gas is actually delivered. The gas supplier benefits from a low-cost source of capital that is repaid through the long-term delivery of gas to what is viewed as a stable market.



### TOTAL PRE-PAY ESTIMATED SAVINGS

SEPTEMBER 2020 - AUGUST 2021

TOTAL SAVINGS  
**\$4,839,428.07**

*PEG members have roughly 90% of its gas supply in prepay transactions. The 2020-2021 fiscal year estimated savings is \$4.84 million. PEG's prepay transactions go out to 2048 providing significant cost savings to customers.*

### 4 Releasing Excess Capacity

Most PEG contracts are long-term contracts for capacity on the pipeline which is paid year round. During the summer when less capacity is needed a portion is released on the market, returning a small portion of the capacity investment. In the winter more capacity is required for our system. There are some opportunities to release capacity in the winter, when it is more valuable. This small amount of revenue promotes rate stability.

### 5 Purchasing Delivered Service

Since the long-term capacity is less than 100% of required gas, PEG also contracts for “delivered services” during the winter months. Delivered service is purchased at the First of Month (FOM) index gas cost plus a margin (capacity cost) for gas taken every day - FOM + margin does not allow for price disruptions, and the FOM is NYMEX closing price for the month. These services are bundled to include both gas and capacity which is cheaper than year-round service helping to mitigate higher cost to customers.

### 6 Purchasing Peaking Service

During the winter months, PEG also contracts for a 10-day 'peaking service' which includes both gas and capacity. This delivered service is at a fixed price determined at the time the agreement is completed. Agreeing to the price ahead of the need secures the rate mitigating price hikes or higher cost to customers.

*These are just examples of the tools utilized by PEG to provide stability and competitive rates to customers.*



G A S A U T H O R I T Y

Each Gas Authority brings natural gas from the wellhead to a gathering system, then to an interstate/intrastate pipeline to be redelivered to their individual gas systems. The infrastructure of the individual gas systems is the last and most important link to delivering natural gas to the ultimate customers. Each Gas Authority continually looks, evaluates and adds to their local infrastructure.

### Annually PEG and PEG Members Analyze Potential Peak Day Volumes

PEG members must have enough assets in place, infrastructure, capacity and gas supply, to meet the estimated gas load on peak days — coldest or consecutive coldest days of the year. PEG and PEG members regularly analyze their peak day volumes required each and every year.

In 2019, PEG and PEG members commissioned a study by AECOM, a premier engineering and infrastructure consulting firm, for a 15-year Peak Day Engineering and Strategic Plan study, which includes Peak Day requirements plus future infrastructure projects. Municipal Gas Authority of Georgia (MGAG), PEG's supply and capacity manager, also provides a 5-year study of Peak Day requirements. PEG members extended the future Peak Day requirement out to 30 years for long-term infrastructure and capacity purposes.



# Complexity of the Natural Gas Industry

GAS SUPPLY AND GAS CAPACITY - THE LARGEST EXPENSE FOR A GAS UTILITY

## GAS SUPPLY

Natural gas is made up of two specific commodities. The first is the physical component of natural gas. You can buy it, you can sell it, you can trade it and you can hedge it. The monthly price is based on the NYMEX closing price of gas that is traded on the NYMEX exchange. Natural gas is known as one of the most volatile commodities on the market. The price of gas fluctuates based on temperatures, supply, extreme weather (hurricanes), exporting of natural gas, storage levels and supply disruptions (like the February 2021 freeze in the Southwest).

Each and every day the amount of natural gas the system requires must be scheduled from natural gas suppliers. Using a toolkit of options to purchase the gas, PEG can lock in gas supply and price daily, monthly, seasonally, annually, or even in multiple years. As a public utility, PEG is able to use tax-exempt financing to purchase (30) years of natural gas supply which in turn secures a discount under the NYMEX price.

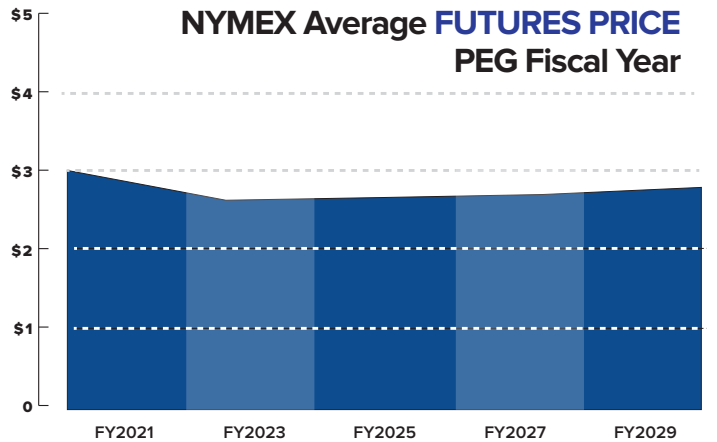
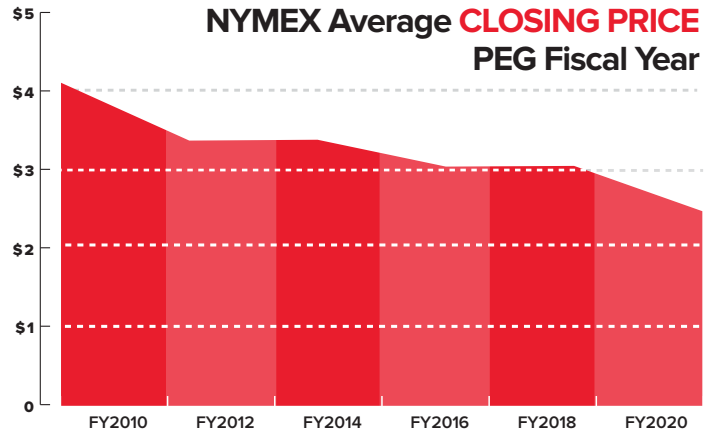


By securing the capacity and pricing up front, PEG manages the risk of extreme weather or other events that escalate the daily commodity cost. In February of 2021, extreme weather events in the Southwest caused natural gas prices to skyrocket

from \$3 per MMBtu\* to over \$300 per MMBtu, and in at least one case, over \$1,000 per MMBTU.

Although the members experienced some supply disruptions during this period, preplanning helped meet the need without increased costs.

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## I N F R A S T R U C T U R E

Multiple internal and external discussions are held throughout the year on infrastructure projects, capacity and gas supply requirements to meet each member's potential peak day. While we must address our infrastructure and capacity needs daily, advanced planning is necessary as interstate pipelines can take up to 5-years to get Federal Energy Regulatory Commission (FERC) approval of new capacity.

### ENERGY AT WORK

*"America's energy infrastructure is a key driver of job creation, growth and competitiveness throughout the economy. Maintaining a modern, flexible and secure network of electric power transmission and distribution lines, oil and natural gas pipelines, and storage facilities is essential to delivering affordable and reliable energy to U.S. businesses and consumers, promoting growth across all sectors of the economy, and supporting the country's thriving domestic energy industry."*



## GAS CAPACITY

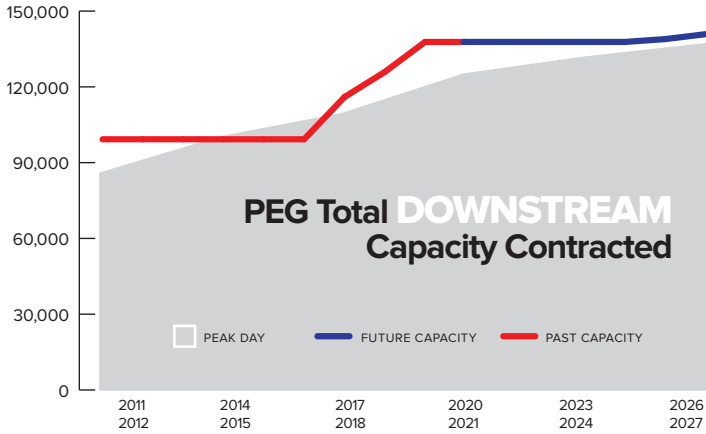
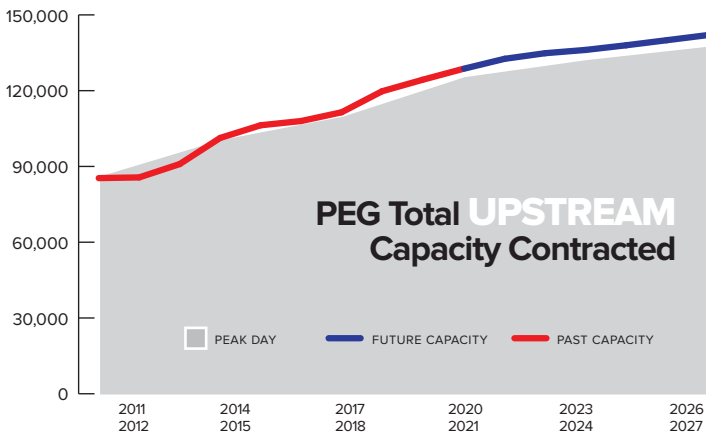
The second element is the capacity on the interstate pipelines that allows us to transport natural gas from the production area in the United States to the State of South Carolina, and then eventually to the service territory of the 3 Gas Authorities. With capacity you can buy it, sell it and trade it.

Most PEG contracts for capacity in the pipeline are long-term. The rights for capacity are paid year-round, even though the capacity is only needed on the coldest days of the year. Since the long-term capacity is less than 100% of requirements, PEG also contracts for delivered services during the winter months. This extra protection is a bundled service which includes both gas and capacity.

The long-term and delivered services are still less than 100% of member requirements so PEG also subscribes to a peaking service which can be called upon 10 days each winter, as needed.

Additionally, PEG has storage space in natural gas storage fields on the interstate pipeline network where capacity can be called upon during the winter time when the load peaks.

As with gas supply, capacity has to be scheduled each and every day. The combination of capacity on our joint action agency Patriots Energy Group (“PEG”) pipeline and Carolina Gas Transmission is equal to the projected peak day (coldest day of the year) of PEG members natural gas system.



## COMBINING OF THE TWO COMMODITIES

On a daily basis PEG combines the two commodities — supply and capacity - with delivered and peaking services, and delivers the natural gas through interstate pipeline networks to South Carolina.

Once it arrives the commodity is separated into two different pipelines — Patriots Energy Group pipeline and Carolina Gas Transmission, a division of Berkshire Hathaway Energy Company pipeline. Due to the tremendous growth and demand for natural gas in our region, the members rent space on Carolina Gas Transmission's system for redelivery to Gas Authority's meter stations. In turn, the gas is distributed through the member utilities infrastructure to residential, commercial and industrial customers in each service territory.

