



City Council Report

Date: April 1, 2024
To: City Council
Through: Marc Heirshberg, Deputy City Manager
From: Scott Bouchie, Energy Resources & Sustainability Director
Anthony Cadorin, Energy Resources Program Manager
Subject: Natural Gas Transportation Service Agreement with Kinder Morgan Inc.
Citywide

Purpose and Recommendation

The Energy Resources Department recommends bidding for, negotiating, and entering into a Transportation Service Agreement (“TSA”) with Kinder Morgan, Inc. for additional natural gas transportation capacity at its Clausen Gate Station.

Background

City of Mesa (Mesa) operates a natural gas utility that provides service to two major service areas: 1) the Mesa System which is approximately 90-square miles primarily within City limits, and 2) the Magma System which is approximately 236-square miles located southeast of the City in Pinal County. Mesa’s combined natural gas system is comprised of 1,481 miles of distribution mains¹ and serves 43,770 customers on the Mesa System and 29,026 customers on the Magma System². Both the Mesa System and the Magma System have experienced rapid growth over the past decade creating an increasing need for natural gas supplies and the transportation of those supplies to Mesa’s city gate stations.

Mesa’s historic annual natural gas supply requirements have ranged between 2.8 and 3.9 million Dekatherms (DTh), depending most significantly on weather. This natural gas is purchased through a series of five (5) separate contracts and then the natural gas is transported from those delivery points to Mesa’s city gate stations on Kinder Morgan’s El Paso Natural Gas interstate transmission system (EPNG).

EPNG’s system provides natural gas from two areas of the southwest; the Permian Basin and the San Juan Basin. The Permian Basin is located in western Texas and southeast New Mexico and the natural gas from the Permian Basin is transported into Arizona via EPNG’s south mainline system. The San Juan Basin is located in northern New Mexico and the natural gas from the San Juan Basin is transported into Arizona via EPNG’s north mainline system and then transported southwards along two “crossovers” which flow gas south near Williams and Lake Havasu City.

¹ As of Mesa’s last annual report, issued March 2023

² Active Customer Information System billing customer accounts as of December 2023



Figure 1) The El Paso Natural Gas transmission system

From the mainline system, natural gas must then be transported on a series of smaller lateral pipelines into the Phoenix area where Mesa's city gate stations then can accept the natural gas. Kinder Morgan has expressed that the regional capacity to move natural gas into the Phoenix area is constrained, and generally no additional capacity is available given the current system layout and operation.

Mesa's existing transportation contracts attempt to reserve enough pipeline capacity on EPNG's pipeline (measured in Dekatherm per day or Dth/day) to allow Mesa to transport enough gas to cover design day weather events with a low likelihood of penalties. Currently, Mesa has contracted reserved pipeline capacity of 9,568 to 32,134 Dth/day on EPNG's system, depending on the month, but generally, it is highest in the winter months and lowest in the summer months. If Mesa uses more gas than its contracted pipeline capacity, EPNG can assess a penalty on the excess volumes. As Mesa's gas customer count, and therefore demand, continues to grow, additional pipeline capacity on the interstate and regional gas transportation system will be necessary.

Mesa can acquire additional pipeline capacity (or achieve similar results) through various methods, which include:

1. Bidding on expiring contracts for pipeline capacity
2. Requesting a new contract on any existing, currently available pipeline capacity
3. Requesting a new contract through system expansion.
4. Participating in, or constructing, a natural gas storage facility.³
5. Generating renewable natural gas that is supplied directly onto our system to

³ Various forms of storage are used throughout the industry, however, storage is not common (yet) on the west coast due to the abundance of supply and the capital cost involved. Mesa remains committed to searching for any such opportunities though, should an economical, reliable opportunity arise.

offset the need for additional pipeline capacity.

In discussions with Kinder Morgan, they have identified a way of expanding regional capacity to the Clausen Gate Station at a potentially reasonable cost by:

1. Separating the Clausen Gate Station from the City's other gate stations in terms of resource scheduling ("Delivery Code Split").
2. Creating a "paper meter" point on the mainline to allow Mesa to schedule gas from the mainline to the Clausen Gate Station.
3. Create a new mainline tap on line 2026 and upgrade the Clausen Gate Station to handle additional natural gas volumes.

This additional regional capacity will then be offered through Kinder Morgan's "open season" process whereby Mesa will have to bid against any other interested parties (bidding is based on the term of the contract, as the pricing is set pursuant to the Federal Energy Regulatory Commission rate process).

Discussion

Because of the lack of natural gas capacity available on existing pipelines, opportunities to secure additional capacity are extremely limited in today's market. The pipeline companies have discussed "greenfield" pipeline projects (where a brand new pipe is run all the way from the basins to the markets where natural gas is needed), however, these projects, if approved, will likely take five years or more to complete given the rigorous Federal Energy Regulatory Commission process that they must successfully go through, which includes lengthy public input.

This proposal by Kinder Morgan represents a reasonable way to secure natural gas capacity for Mesa's systems going forward in the near term (but additional solutions will be required if Mesa's systems grow to the levels calculated in Mesa's natural gas master plan). The Clausen Gate Station expansion does present certain challenges in that:

1. This capacity expansion will only allow for "Delivered Gas" purchases. Delivered Gas is natural gas that is purchased downstream of the basins where another entity (a natural gas "Marketer") uses its own transportation capacity rights. Delivered Gas will have to be acquired to make use of the new paper meter point on the pipeline, and will be more expensive than supplies purchased at the basins. There may be opportunities in the future to secure additional capacity back to the basins, however, at this point, the expanded Clausen Gate Station will only allow for the purchase of Delivered Gas.
2. Because the Clausen Gate Station must be separated from the other five gate stations, this will create additional issues with the daily operations of Mesa and Mesa's gas scheduling agent. The challenge is that the Clausen Gate Station is connected to the other gate stations through Mesa's natural gas distribution system, so the Clausen Gate Station doesn't act in isolation; there are complex interactions between all the gate stations.
3. The Clausen Gate Station is physically comprised of a component owned and operated by Kinder Morgan and a component owned and operated by the City. The infrastructure upgrade to Mesa's side of the Clausen Gate Station

will have to be designed and constructed by Mesa's Engineering Department in order to handle the additional flows from the Kinder Morgan side of the Clausen Gate Station.

4. Because this capacity will be subject to the open season process, Mesa must bid for the capacity but may not ultimately acquire any additional capacity in the case that it is outbid by another interested party.

In addition to Clausen Gate, Mesa is pursuing local renewable natural gas projects that will generate natural gas locally and inject the natural gas directly into the system. This will offset some of the need for interstate transmission (i.e. that from EPNG) and provide a carbon-free source of natural gas as well. But renewable natural gas opportunities are limited in quantities and can take a significant amount of time and capital to develop.

Lastly, Mesa is continuing to engage Kinder Morgan and Transwestern Pipeline Company, LLC to explore additional opportunities for capacity to support the growing systems.

Alternatives

Mesa is taking an "all of the above" approach to securing natural gas transportation capacity for current customers and for future growth of its natural gas systems. The Clausen Gate Station expansion is just one step that will need to be implemented in addition to other strategies which will be brought to council as they are developed.

Alternatively Mesa could not implement the Clausen Gate Station expansion, however, this will likely result in limiting the future expansion of the system, or alternatively, the potential for significant penalties to Mesa in the coming years.

Fiscal Impact

The costs of any resulting natural gas transportation capacity will generally be recovered through the purchased natural gas cost adjustment factor (PNGCAF) and are adjusted as frequently as monthly as costs increase or decrease throughout the year. Staff is also reviewing the rates to determine how to most appropriately allocate costs of capacity that disproportionately benefits certain customers.

Coordinated With

Any subsequent negotiations of a TSA as a result of this authorization will be coordinated with the City Attorney's Office.