

Dramatic Growth Creates New Opportunities for Transco Customers

Article by Frank Ferazzi, Vice President & General Manager, Eastern Interstate Pipelines

Back in 1981, when I began my career with Transcontinental Gas Pipe Line Corporation (Transco), I recall the pipeline's entire capital budget was \$284 million.

In those days \$284 million was a lot of money. Back then, the 30-year-old Transco pipeline's capacity was a modest 4 billion cubic feet per day, with about 75 percent of our supply originating in the Gulf of Mexico. Natural gas production in the Gulf was strong and we were very busy growing our facilities to keep up with the rapidly changing needs of our customers.

A few things have changed since then. Today, my hair is a little grayer, and I have less of it. Our capital budget is a bit higher (about \$1.3 billion in 2015). The Transco pipeline is now the largest natural gas pipeline system in the country, with a daily design capacity of about 11 billion cubic feet per day.

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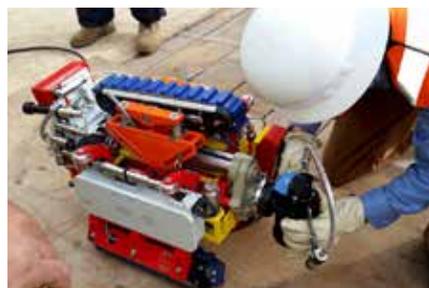
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[Read the full story on page 3.](#)



Robotic Pigs Help Solve Unpiggable Pipeline Puzzle

Thirty years ago, Williams' Transco pipeline helped pioneer the use of modern "smart pig" inline inspection technology. Today, the pipeline finds itself on the cutting edge once again, this time piloting an innovative new tool that may help the industry finally solve the "unpiggable" pipeline puzzle.

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Back in 1981, when I began my career with Transcontinental Gas Pipe Line Corporation (Transco), I recall the pipeline's entire capital budget was \$284 million.

In those days \$284 million was a lot of money. Back then, the 30-year-old Transco pipeline's capacity was a modest 4 billion cubic feet per day, with about 75 percent of our supply originating in the Gulf of Mexico. Natural gas production in the Gulf was strong and we were very busy growing our facilities to keep up with the rapidly changing needs of our customers.

A few things have changed since then. Today, my hair is a little grayer, and I have less of it. Our capital budget is a bit higher (about \$1.3 billion in 2015). The Transco pipeline is now the largest natural gas pipeline system in the country, with a daily design capacity of about 11 billion cubic feet per day.

It's easy to dwell on how much has changed, but one thing that has remained constant is our commitment to service and meeting the needs of our customers.

Our industry is experiencing unprecedented growth thanks to the rising popularity of

natural gas and the emergence of new, major shale basins. While the Gulf accounted for 75% of Transco's supply back in 1981, today that number is closer to 15%. In 2015 we received more supply from the Marcellus Shale than the Gulf of Mexico. We've turned our system upside down to facilitate opportunities for our customers to take advantage of bi-directional flow.

The supply shift is fueling system expansions like our Leidy Southeast project, which will be placed into full service later this year, and our Atlantic Sunrise expansion, which we expect to begin constructing next year. In fact, Transco has seven major expansions that will be placed into service in 2017.

For producers and shippers, these projects are significant because they create much-needed takeaway from the capacity-constrained Marcellus. It's interesting to note that once Atlantic Sunrise is placed into service in 2017, we will have increased our Marcellus takeaway capacity to nearly 7 billion cubic feet per day.

Projects like Rock Springs expansion and the recently completed Virginia Southside project are helping meet the needs of power

generators who are increasing their reliance on cleaner-burning natural gas. Serving the growing power generation market remains a key area of emphasis for Transco which we are committed to meeting in the coming years.

It's an exciting time for the natural gas pipeline industry – and a very busy time for all of us at Transco. Natural gas clearly has emerged as an important fuel for America's future growth. It has captured the nation's attention as an affordable, clean-burning fuel that is ensuring energy security, helping to grow our economy, and contributing to an improved environment.

I have worked in the natural gas industry nearly four decades, and witnessed significant changes in gas supplies, market demand, and regulatory focus. I can honestly attest, the opportunity we have today to deliver Transco customers with reliable service options is unprecedented.

During this upcoming year, I look forward to continuing to provide our Transco customers world-class service from the nation's fastest-growing pipeline system. [w](#)



Energy Transfer Equity Agrees to Combine with Williams



Article by Alan Armstrong
President & CEO
Williams

In September Williams and Energy Transfer Equity (ETE) announced that they had entered into an agreement under which ETE will acquire Williams. The Williams Board determined that combining with ETE will deliver significant benefits to our shareholders while maintaining Williams Partners' ability to serve its customers in a mutually beneficial manner.

We will continue our strategy to connect the best supplies of natural gas and natural gas products to the best markets. We expect to be an even more valuable partner to you, as Williams will be part of a larger and more diversified family of companies, operating in different geographies and businesses.

The combined company will allow us to better serve the changing needs of our partners. Upon closing the transaction, which we expect to occur in the first half of 2016, we will be better positioned to help address the current market challenges that we are all facing in today's environment.

Until this transaction closes, we will continue to operate as an independent company and our relationship with you remains one of our top priorities. This announcement will not have any impact on day-to-day operations and it remains business as usual at Williams. Your Williams

contacts will remain the same, and because Williams and ETE already know each other well, we are confident that it will be a smooth integration upon closing the transaction. As we work to complete this transaction and combine our two companies, we want you to know that our number one objective is to continue to provide safe and reliable solutions.



ENERGY TRANSFER

In the meantime, if you have any questions, please do not hesitate to reach out to your regular Williams representative. As always, thank you for your business and continued partnership. We look forward to continuing to serve you for years to come. [W](#)

Robotic Pigs Help Solve Unpiggable Pipeline Puzzle

Thirty years ago, Williams' Transco pipeline helped pioneer the use of modern "smart pig" inline inspection technology. Today, the pipeline finds itself on the cutting edge once again, this time piloting an innovative new tool that may help the industry finally solve the "unpiggable" pipeline puzzle.

Williams recently worked with Diakont Advanced Technologies to deploy a robotic crawler to inspect a previously unpiggable section of the Transco pipeline under the Hudson River in New York. The robotic crawler uses rugged track systems to move through difficult pipe geometries, inspecting lines inaccessible to traditional smart pig tools.

According to James Harrison, manager, Asset Integrity, the robotic tool helps solve a problem that has been plaguing the pipeline industry for decades.

"The smart pig is one of the most crucial tools we have to ensure pipeline integrity. Unfortunately, not all pipes are piggable," James says.

"This new robotic crawler tool gives us access to pipe sections which had never before been candidates for inline inspection."

James says the pipeline inspections went smoothly and showed the Transco pipeline sections under the Hudson River to be in excellent condition.

"The industry has needed a tool like this for a long time," he says. "Once again, it is very exciting for us to be on the front end of such a ground-breaking technology." [W](#)

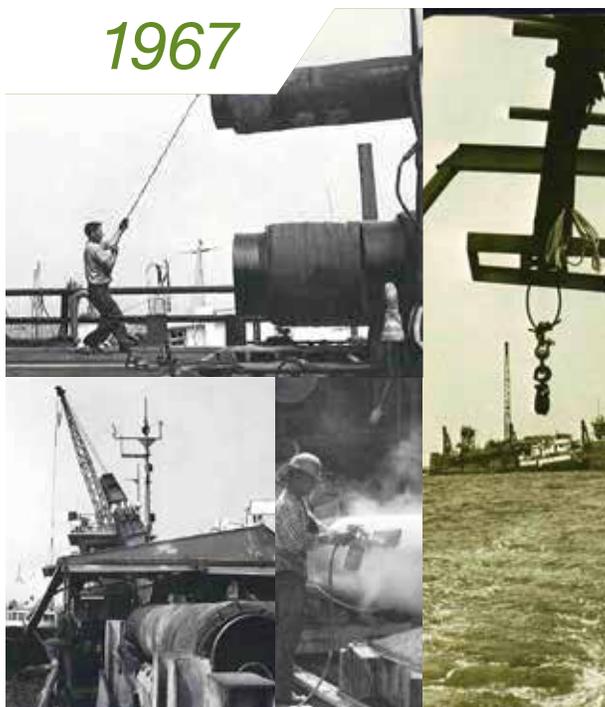


TRANSCO CUSTOMER *Connection*



Retro Reflection: New York Bay Construction

1967



Back in 1967, Transcontinental Gas Pipeline laid the country's longest bay pipeline in the New York Bay (34 miles). The project cost was \$26 million. Here is an excerpt from *Transgas*, our employee publication, in October 1967:

"Transco's lower New York Bay underwater crossing, the company's fifth entry into the New York Metropolitan area, will be the longest bay crossing in the country at 34 miles. The 26-inch line is designed to deliver additional volumes of natural gas to Transco's growing New York City market areas. It also makes gas available for use by New Jersey customers."

2015



In May 2015, Williams placed into service its Rockaway Delivery Lateral and Northeast Connector Pipeline, continuing its long tradition of providing reliable service to New York City. The Rockaway Lateral is Transco's sixth New York delivery point, providing approximately 647,000 dekatherms per day of natural gas to National Grid's gas distribution system in Brooklyn, New York – serving 1.8 million customers in Brooklyn, Queens, Staten Island and Long Island.

Business Briefs

Project Development

Williams Files New York Bay Expansion Project with FERC



New York City

In July Transco filed an application with the Federal Energy Regulatory Commission for its New York Bay expansion project to deliver additional natural gas to New York City in time for the 2017-2018 heating season.

The New York Bay Expansion is designed to deliver an additional 115,000 dekatherms a day of natural gas into National Grid's distribution system through the Rockaway Delivery Lateral and the Narrows meter station. That's enough gas to meet the needs of 500,000 homes and will supply National Grid's immediate and growing needs for the 2017-2018 winter.

The New York Bay expansion project, which is estimated to cost as much as \$130 million, will include installation of additional horsepower at three existing Transco compressor facilities, in addition to uprating Transco's existing Lower New York Bay lateral and replacing approximately 0.25 miles of 42-inch pipe in Middlesex County, N.J. The project will also include

modifications to existing Transco meter and regulator stations in Middlesex County, N.J., Chester County, Pa. and Richmond County, N.Y. Earlier this year, Transco placed into service two other major New York City natural gas pipeline projects, the Rockaway Delivery Lateral and the Northeast Connector project. [w](#)

FERC Approves Gulf Trace Project to Deliver Gas to Cheniere's LNG Export Facility

In October the Federal Energy Regulatory Commission approved an application for Gulf Trace, a 1.2 million dekatherm per day expansion of the Transco pipeline system to serve the Cheniere Energy Partners, L.P. Sabine Pass Liquefaction project being developed in Cameron Parish, La. The Sabine Pass LNG export terminal will

connect U.S. natural gas supplies with global LNG markets.

The Sabine Pass export terminal is currently under construction and first LNG is expected in late 2015. Once complete, the Sabine Pass liquefaction terminal will be the first large-scale LNG export facility in operation in the U.S., with six LNG trains and expected nominal production capacity of 27 million tonnes per annum. Sabine Pass Liquefaction's project is supported by long-term contacts with several LNG off-take shippers and is expected to provide LNG for export to diverse markets overseas.



Artistic rendering of Sabine Pass export terminal

The Gulf Trace project is designed to make Transco's production area mainline and southwest Louisiana lateral systems bi-directional from Station 65 in St. Helena Parish, La. to Cameron Parish, La. In addition to the pipeline reversal, a new, 7-mile 36-inch lateral pipeline, the expansion of an existing compressor station and a new greenfield compressor station are planned in order to provide firm transportation service to the Sabine Pass LNG facility. [w](#)

Business Briefs Continued

Pipeline Construction

Construction Underway on Rock Springs Expansion

Construction is underway in Pennsylvania on Williams' Rock Springs expansion. This project is designed to fuel a new electric power-generating facility in Cecil County, Md.

The Rock Springs pipeline project involves the construction of an 11.17-mile pipeline, 20-inch pipeline lateral connecting Williams' existing Transco natural gas pipeline to the Old Dominion Electric Cooperative's Wildcat



Maryland pipe yard used for Rock Springs construction

Point Generating Facility.

Also as part of the project, Williams is constructing an electric motor-driven compressor and metering facility at the terminus of the lateral in Cecil County, as well as other piping and valve modifications to existing facilities.

The Rock Springs project is scheduled to be placed into service in August 2016. [w](#)

Leidy Southeast Project Nears Completion



Construction at Transco Station 517 in Benton, Pa.

Construction is winding down on the Leidy Southeast expansion, which is scheduled to be placed into full service by year's end.

The Leidy Southeast expansion project will increase the Transco pipeline's capacity by 525,000 dekatherms of natural gas per day from the existing Grugan Interconnect on Transco's Leidy Line in Clinton County, Pa., and the existing MARC I Interconnect in Lycoming County, Pa., to various delivery points on Transco's Mainline as far south as Transco's existing Station 85 Zone 4 and 4A Pooling Points in Choctaw County, Ala.

The project involves the construction of approximately 30 total miles of additional pipe looping in Pennsylvania and New Jersey and the addition of 71,900 horsepower (hp) at four compressor stations in Pennsylvania and New Jersey. [w](#)

Transco Completes Virginia Southside Expansion

In September Williams placed into service a major expansion of its Transco natural gas pipeline to fuel new electric-power generation in Virginia and serve increasing local distribution demand in North Carolina.

The approximately \$300 million Virginia Southside expansion is providing 270,000 dekatherms per day of incremental transportation capacity. The expansion consisted of approximately 100 miles of new, 24-inch diameter pipeline extending from the Transco mainline in Pittsylvania County, Va., and into Halifax, Charlotte, Mecklenburg, and terminating in Brunswick County, Va.



Virginia pipeline construction

Transco placed the majority of the pipe parallel to its own existing pipeline, alongside an existing utility corridor. In addition, Transco added more than 21,000 horsepower of compression at Station 165 in Pittsylvania County, Va. [w](#)

Business Briefs Continued

Pipeline Operations

Leidy Line Update

On June 9, 2015 Transco experienced an unexpected failure of the 24" Leidy line "B" between Station 517 and Station 520 on its Leidy Line. In conjunction with current restoration activities and consistent with the operating plan outlined with Pipeline and Hazardous Materials Safety Administration (PHMSA), Transco will continue operating segments of its Leidy system at a reduced maximum pressure. Those segments include, Leidy line "A" and Leidy line "B" from Station 515 to the western terminus of the Leidy system. Certain segments that cannot be effectively operated at reduced pressure have been isolated from the in-service segments to assist with the restoration efforts. Transco currently estimates these Operating Conditions and the associated restoration activities will continue into the 2nd quarter of 2016.

Contingent on system utilization, the restoration activities and associated lower maximum operating pressures may impact primary firm transportation services during periods of high capacity utilization. If reductions to primary firm transportation services are required, Transco anticipates that those reductions could occur at several locations on the Leidy system including constraints at or near Stations 520, 517, and 515, and that Transco would evaluate and limit as required, receipt transactions moving from west to east through these locations. Transco estimates that during those periods of high capacity utilization, limits on primary firm transportation services moving west to east through Station 515 could be up to 200 Mdt/d. Absent gas being received in similar

quantities and at locations along the Leidy system as typically experienced, increasing limitations on primary firm transportation services moving west to east through Stations 517 and 520 could be required. Transco will continue to communicate updates on restoration efforts through 1Line. We recognize the possible impact to customers and will continue to work expediently to complete restoration activities with safety as our top priority. [w](#)

Environmental Projects Win SGA Awards

Williams won two environmental excellence awards from the Southern Gas Association for efforts to boost the populations of two vulnerable species, the Piedmont bog turtle and the Greater Sage Grouse.

The awards were presented at the SGA's annual Environmental, Safety & Health, and Training Conference in Louisville, Kentucky. The awards recognize significant impacts in protecting the environment.



Piedmont bog turtle

Williams won the SGA Environmental Excellence Award in the Partnership category for funding a three-year study about the decline of the Piedmont bog turtle. The study was conducted by the Department of Herpetology at Davidson College, the U.S. Fish and Wildlife Service and the Catawba Land Conservancy.

Williams also won the SGA Environmental Excellence Award in the Stewardship category for funding of a Wyoming Game and Fish project to boost the habitat of the Sage Grouse.

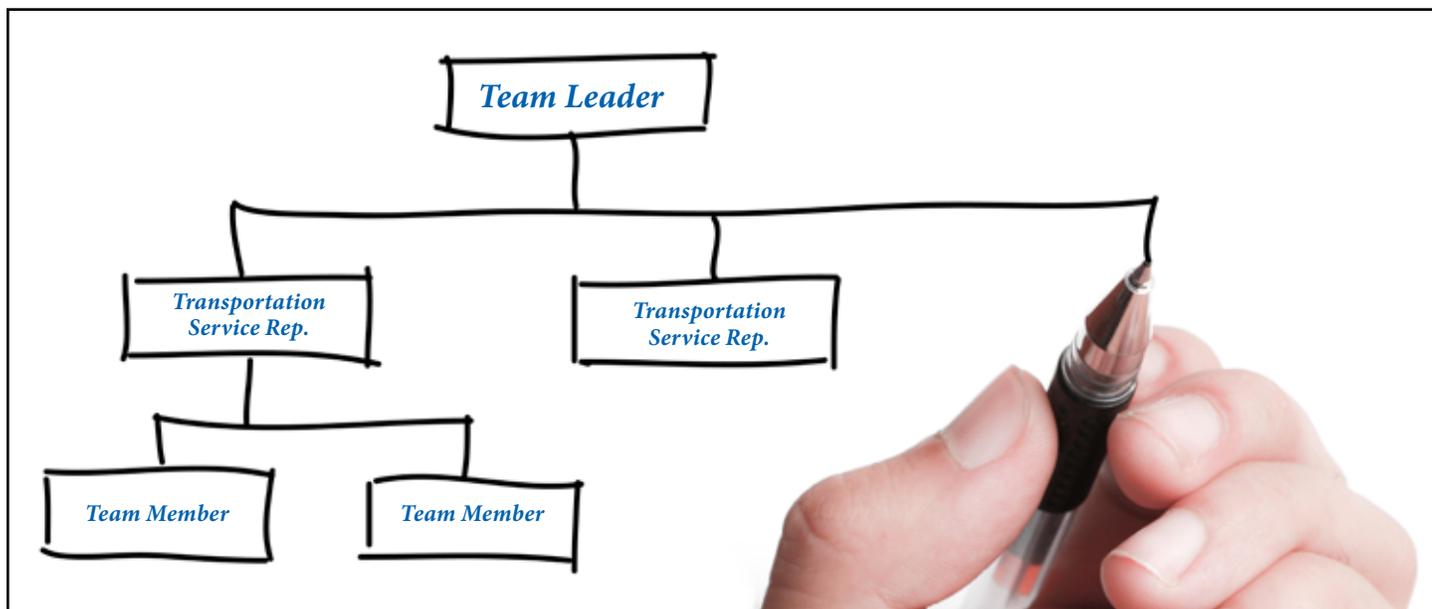
Williams has taken steps to minimize operations impact on the Sage Grouse, including modifying pipeline routes and minimizing surface disturbances during construction. [w](#)

Winter Operations Meetings



Williams would like to thank the many Transco customers who attended the annual Winter Operations Meeting in Houston (Oct. 21), Newark, N.J. (Nov. 3), Charlotte, N.C. (Nov. 4) and Atlanta, Ga. (Nov. 5). The meetings provided attendees with an update on Transco operations, flow patterns and upcoming construction. Click [here](#) to view the presentation. [w](#)

People on the Move



Transportation Services has two new faces in the South: Martha Janousek, who has 20 years of regulated pipeline experience, and Greg Morris who transferred from Access. Keith Higginbotham's Customer Service representatives now includes two familiar faces that support the Production Area – Kenneth Torregano, who previously worked in Gas Control as a lead and Mark Polidor

who transferred from Gulf West. Through these adjustments in personnel, the Eastern Interstates staff is cross-trained and better focused to meet our customers' needs.

Terry Fitch, Manager of Transportation Services South, will be retiring in early 2016. Linette Schneider will move from the North team to the Manager of the South team after the beginning of the new year.

Jordan Kirwin will become the Transportation Services North Manager. Terry was an integral part of Transco for over 33 years serving various roles. His experience, leadership and friendship will be missed by all. We wish him good luck on his second try to retire. Please contact Linette Schneider at (713) 215-4344 with any questions you would have discussed with Terry. [W](#)

In Memoriam



We are deeply saddened that Kerry Blodgett passed away Nov. 17 after a short and courageous battle with cancer. Kerry, who was 61, had a career at Williams that spanned over 25 years. Kerry worked evenings for the Transportation Services North team. Kerry's dedication to excellence and commitment to maintaining high standards gained him respect from his customers, peers and superiors. Prior to

working for Williams, Kerry served for 17 years in the U.S. Army where he received numerous commendations including the Meritorious Service Medal. Kerry's immediate family includes his three sons, daughter in-law and three grandchildren. A reception following his memorial was hosted by his coworkers and in lieu of flowers his family asked for toys and clothing donations to Houston's Second Baptist Church. [W](#)

Who Should I Call?

Transportation Services Rep

- New BA set-up
- IT and Pooling contracts
- Nominations
- Scheduling cuts
- Confirmations
- PDA's
- Allocations
- Imbalance resolution
- Billing, invoicing

Scheduling Desk

- 1Line password reset
- Unlock my 1Line account
- General 1Line site navigation

Either

- Mutual assists
- Agency
- Constraint information
- Mergers and acquisitions
- Operational issues

Click [here](#) to learn more about *Who Should I Call?*

Customer Services Rep

- Firm transportation and storage contracts
- Capacity release
- Transportation Marketing and open seasons
- Abandonment notification
- Interconnect agreements
- Condensate transportation agreements
- Termination of agreements
- Boarding agreements
- Asset sales
- Discounts
- Customer surveys