Natural Gas Midstream 8.1
Optimizing Natural Gas Gathering and Processing Operations

Allegro’s Natural Gas Midstream component allows producers, shippers, and operators to effectively manage their natural gas, condensate, and natural gas liquid (NGL) products. Customers have the ability to capture, view, and value both physical and financial positions associated with their gathering and plant processing operations. These processes are critical to managing a company’s cash flow.

Allegro’s Natural Gas Midstream component supports every step of the natural gas value chain, from the gathering of wellhead production volumes to the processing of natural gas for final delivery to meet wholesale and retail demand. Customers can manage assets across any combination of producers, first purchasers, buyers, sellers or point operators, and gathering and plant operators have the ability to manage multiple producers and shippers on their system. Users gain insight into the best available information gathered from multiple sources.

Natural Gas Midstream improves tracking and accuracy of the fees and penalties incurred for gathering and processing services and the payments due for residue gas, condensate, and NGLs at the plant tailgate. Customers can easily calculate net forward and netback with confidence that all input and output quantities are included. Allegro enables automated settlement processes and improves overall accounting accuracy.

The Allegro platform also enables pro-active risk management with a valuation engine that calculates Value-at-Risk (VaR) and Mark-to-Market (MtM) of forward volumetric positions at the processing plant tailgate.

Natural Gas Midstream can be fully integrated with other Allegro components, including Property, Equity Production, Logistics, Position, Settlement, Valuation, and Net Valuation, which supports automated business processes and improves the accuracy and timeliness of data across an enterprise.

Integrating a company’s complex business processes and real-time data in one system provides producers, shippers, and operators the visibility they need to manage positions and make better strategic decisions.

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<tr>
<th>Features</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Manage any combination of producer, first purchaser, buyer, point operator, shipper, and operator</td>
<td>Single, transparent system drives effective decision making, analysis and reporting, and improves staff productivity</td>
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<tr>
<td>Capture gathering and processing plant referential data and contracts</td>
<td>Enhanced decision making with up-to-date, accurate data with all details captured and housed in Allegro</td>
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<td></td>
<td>Transparency into existing gathering and processing contract terms and contract types to enable more favorable negotiations</td>
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<tr>
<td>Valuation and Mark-to-Market of forward positions at the processing plant tailgate</td>
<td>Enhanced decision making and risk management with forward forecast data, advanced analytics and risk metrics</td>
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### Features vs. Benefits

<table>
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<tr>
<td>Ability to modify plant and plant network attributes and contract terms</td>
<td>Supports analysis of different gathering and processing scenarios to improve cash management</td>
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<td>Create and submit gathering nomination documents and processing plant statements</td>
<td>Customizable report generation to improve transparency and support analysis</td>
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<td>Calculate gathering and processing fees per contract terms</td>
<td>Accurate accounting processes with ability to create settlement records with automated fee calculation and tracking of complex gathering and processing contracts</td>
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The following section details how Allegro’s Natural Gas Midstream component manages natural gas gathering and natural gas processing services from a variety of perspectives.

#### Natural Gas Gathering

From a natural gas gathering perspective, Natural Gas Midstream 8.1 includes the ability to:

- Manage multiple internal companies serving as producer, first purchaser, buyer, point operator, shipper or gathering pipeline operator
- Capture terms for gas gathering contracts and Operational Balancing Agreements
- Calculate penalties for over/under delivery volume commitments and gas quality outside specifications
- Create field condensate positions when condensate is removed from gathering pipeline
- Capture gas analysis on property and point level
- Calculate and maintain shipper and point operator imbalances with gathering operator
- Generate nomination documents and automate delivery to/from shipper, point operator, and gathering operator
- Settle gathering and commodity fees with counterparties

#### For Producers, Gathering Shippers, and Point Operators

The Natural Gas Midstream component allows gathering of producer or shipper’s natural gas from the Custody Transfer Point, or gathering pipeline receipt point, to a natural gas processing plant or pipeline interconnect. Nominations may be submitted by the producer/shipper to the gathering operator. A confirmation of receipt quantity is returned to the producer/shipper for delivery downstream. Gathering fees are captured and losses deducted pursuant to the terms of the gathering contract. Upon actualization, shipper gathering imbalances and point operator operational imbalances are calculated, and position volumes are finalized for settlement.

- Create forecast positions
- Submit nominations
- Receive confirmed nominations
- Receive scheduled volume
- Generate field condensate positions
- Receive actual volume
For Producers, Gathering Shippers, and Point Operators (continued)

- Analyze volume variances
- Settle gas gathering and OBA contracts
- Capturing capability:
  - Gathering and OBA contract terms
  - Property measurement (allocated sales volume)
  - Property gas analysis
  - Quality standards for penalty fees
  - Quantity standards for penalty fees

For Gathering Pipeline Operators

The Natural Gas Midstream component allows gathering operator to gather natural gas owned by producer/shipper from the Custody Transfer Point, or gathering pipeline receipt point, to a natural gas processing plant or pipeline interconnect. Producer/shipper nominations are received by the gathering operator and submitted to the upstream and downstream point operators. Confirmed quantity is received from the point operators and submitted to the producer/shipper. Gathering fees are captured and losses deducted pursuant to the terms of the gathering contracts. Gathering operator submits actual volumes and calculates gathering imbalances with Shippers and operational imbalances with point operators. Service position volumes are finalized for invoice and settlement.

- Create forecast service positions
- Receive producer/shipper nominations
- Submit nominations to point operators
- Receive confirmed nominations
- Allocate total point nominations
- Return confirmed nominations to producer/shipper
- Record pipeline measurements
- Submit scheduled volume to producer/shipper
- Generate field condensate positions
- Record actualized measurements
- Submit actual volume to producer/shipper and point operator
- Analyze volume variances
- Calculate shipper gathering and point operator operational imbalances
- Calculate and adjust gathering pipeline gain/loss
- Capturing capability:
  - Gathering and OBA contract terms
  - Pipeline measurements
  - Quality standards for penalty fees
  - Quantity standards for penalty fees
  - Allocation of total point volume
### Natural Gas Processing

From a natural gas processing perspective, Natural Gas Midstream includes the ability to:

- Manage multiple internal companies serving as producer, shipper or processing plant operator
- Plant operator can manage multiple internal or 3rd party producers/shippers
- Capture gas processing contract types including POP/POL, fixed fee, fixed fuel, fixed recovery, keep whole volume or value, and wellhead purchase
- Manage complex gas processing contract terms by product and component, including operator percentage, take-in-kind party, field and plant fuel factors, recovery factors, volume or value settlements, ownership of lost and unaccounted volume, basis to keep whole, and keep whole percentage
- Define plant network, input/output products, NGL conversion factors, plant recovery factors
- Manage plant bypass gas, fuel gas, flare gas, and lease return
- Capture gas analysis at property, point, and plant inlet and record GPM and Mol %
- Generate plant allocations for theoretical and actual allocations at a property level
- Generate contract allocations for settlement of producer/shipper contracts
- Create gas residue, NGL and condensate positions at plant tailgate
- Create forward forecast positions at property level for valuation and exposure reporting

### For Producers and Processing Shippers

The Natural Gas Midstream component allows processing of producer or shipper’s natural gas delivered to plant inlet into NG residue, NGL products or components, and condensate available at plant tailgate. Plant and contract allocations are generated displaying allocations back to property. Processing fees are captured and plant losses deducted pursuant to the terms of the processing contract. Upon actualization, position volumes are finalized for settlement. Forward forecasts can be created and used for valuation and risk reporting.

- Create property forecast positions
- Generate plant condensate positions
- Generate plant and contract allocation on a daily or monthly basis
- Receive scheduled volume
- Receive actual volume
- Settle gas processing contracts
- Create forward forecast positions
- Capturing capability:
  - Processing contract terms for multiple contract types
  - Property measurement (allocated sales volume)
  - Property gas analysis
  - Plant network
  - Plant losses including shrink
  - Plant conversion and recovery factors
  - Plant operator actual volume
  - Plant tailgate positions
  - Plant and contract allocation by property
The Natural Gas Midstream component allows processing operators to process natural gas received at plant inlet on behalf of producer/shipper. Service and/or physical positions are created based on terms and types of processing contracts. Plant and contract allocations are generated based on physical attributes of plant and plant network with allocations back to property. Processing fees are captured and plant losses deducted from gas volume. Natural gas residue, NGL products or components, and condensate are available for sale at plant tailgate. Plant allocation statements are created and submitted to producer/shipper.

- Calculate plant allocation forecast service positions
- Generate plant condensate positions
- Receive nominations
- Generate plant and contract allocations on daily or monthly basis
- Calculate tailgate quantities of NG, NGLs (theoretical or actual), and condensate
- Settle and invoice processing contracts
- Capturing capabilities:
  - Processing contract terms for multiple contract types
  - Plant network
  - Plant measurements
  - Inlet and tailgate gas, liquids, and condensate analysis
  - Plant losses including shrink
  - Plant conversion and recovery factors
  - Plant operator actual volume
  - Plant tailgate positions
  - Plant and contract allocation by property