Version 5.0

September 30, 2024



Contents

1.0	INTRODUCTION & DISCLOSURE	
2.0	VERSION HISTORY	5
3.0	ALBERTA'S GAS MARKETPLACE	6
3.1	Transmission Pipeline Systems	
3.2	Distribution Pipeline Systems	
3.3	Natural Gas Commodity	
	·	
4.0	ATCO PRODUCER SERVICE	
4.1	Producer Service	
4.2	Producer Service Rate Schedule	8
5.0	NEW PRODUCER SERVICE CONNECTION PROCESS	9
5.1	Overview	
5.2	Producer Service Request	
5.3	Feasibility Evaluation, Class 5 Estimate & Class 4 Estimate	
	5.3.1 Feasibility Evaluation	
	5.3.2 Class 5 Estimate	
	5.3.3 Class 4 Estimate	
5.4	Optional Letter Agreement & Class 3 Estimate	11
	5.4.1 Letter Agreement	
	5.4.2 Class 3 Estimate	
5.5	Commitment Agreement	11
5.6	Custom Service Execution	
5.7	Producer Service Agreement	12
6.0	PIPELINE INTERCONNECT & METER STATION FACILITY REQUIREMENTS	1/
6.1	Overview	
6.2	ATCO Meter Station & Pipeline Facilities	
6.3	Provision of Land, Access and AC Power for ATCO Facilities	
6.4	Gas Quality Monitoring & Verification Equipment	
0.4	Cas Quality Monitoring & Verification Equipment	
7.0	PRODUCER ACCOUNTS	16
7.1	Overview	16
7.2	Account Balancing & Monitoring	16
7.3	Account Components	18
7.4	Gas Settlement Variance	18
7.5	Producer Nomination Process	19
7.6	Nomination Timelines for Accounts	19
7.7	Account Transfers on the Transmission System	19
7.8	Imbalance Purchase/Sale	20
8.0	AGENTS	24
0.0	/\ULINIU	

9.0	BILLING	21
10.0	OPERATIONS	22
10.1	Overview	22
10.2	Gas Quality Monitoring & Shut Out Procedures	22
	10.2.1 Gas Quality Specifications	
10.3	RNG Monitoring & Verification	23
	10.3.1 Three Phases of Verification	
11.0	CREDIT & PRUDENTIAL REQUIREMENTS	25
11.1	Credit & Prudential Requirement	25
11.2	Acceptable Forms of Credit Assurance	25
11.3	Prudential Requirements Maintenance	25
11.4	Drawing on Credit	25
11.5	Confidentiality	25
12.0	CONTACT INFORMATION	26
12.1	Emergencies	26
12.2	Producer Service Requests & Producer Inquiries	26
12.3	Producer Billing & Transactions	26
12.4	Producer Accounts, Nominations, & Account Balancing	26
12.5	Producer Meter & Gas Quality Issues	26
13.0	REFERENCES & RELATED MATERIALS	27
13.1	ATCO Gas' Rates	27
13.2	Terms & Conditions – Producers & Delivery Customers	27
13.3	Delivery Service Lines	
13.4	Government Legislation & Regulations	27
13.5	Alberta Gas Market Overview	27
13.6	Utility Consumer Advocate Alberta	
13.7	Alberta Utilities Commission	27
14.0	GLOSSARY	28
15.0	APPENDIX A – CONFIDENTIALITY AGREEMENT	32
16.0	APPENDIX B – AGENCY APPOINTMENT AGREEMENT	33

1.0 INTRODUCTION & DISCLOSURE

The Producer Guide was developed by ATCO Gas (ATCO), an operating division of ATCO Gas & Pipelines Ltd. to be used by Producers considering, planning, evaluating, or utilizing the Producer Service for the delivery (injection) of Gas on to the Gas Pipeline System, including Renewable Natural Gas (RNG) and conventional natural Gas. This Producer Guide also applies to any party who will be acting as an Agent on behalf of the Producer for transactions including, but not limited to, consultation, planning, and Account Balancing.

This Producer Guide serves as supplemental material to the Terms and Conditions which defines the relationship between ATCO as a Gas Distributor, and Producers. The Terms and Conditions and this Producer Guide can be accessed at https://gas.atco.com/en-ca/products-services-rates/rates-billing-energy-savings-tips/rates-billing.html.

While every effort is made to accurately reflect ATCO's' Producer Service in this Producer Guide, in the event of conflict between this Producer Guide and the Terms and Conditions / the Rate Schedules, the provisions of the Terms and Conditions / the Rate Schedules shall prevail.

ATCO is committed to following the practices outlined in this Producer Guide to provide a consistent framework for engaging with Producers. However, as these practices cannot cover every situation that arises, it may be necessary to deviate from the Producer Guide in certain circumstances. ATCO reserves the right to modify this Producer Guide, from time to time and without notice, to reflect changes to the Gas utility industry or the changing needs of industry participants.

If you have questions about this Producer Guide, reach out to ATCOKeyAccountsGas@ATCO.com or your Commercial Account Manager.

All capitalized terms shall have the meanings ascribed to them as per the definitions found in the <u>Glossary</u>. Unless otherwise specified, words importing the singular include the plural, and vice versa, and words importing gender include all genders.

2.0 VERSION HISTORY

ATCO's Producer Guide is updated from time to time and all Producers and potential Producers are expected to be familiar with and operate according as per the details in the newest Producer Guide version. **Table 1** outlines the versions which have been published to date.

Table 1 – Producer Guide Version History

Version	Date Published	Notes
V 1.0	June 14, 2021	Original Publication
V 2.0	Sept 22, 2023	
V 3.0	May 3, 2023	
V 4.0	Jan 1, 2024	
V 5.0	September 30, 2024	

3.0 ALBERTA'S GAS MARKETPLACE

3.1 Transmission Pipeline Systems

The predominate high-pressure transmission pipeline operators in Alberta are TC Energy's subsidiary NGTL and ATCO Pipelines, an operating division of ATCO Gas and Pipelines Ltd., distinct from ATCO Gas. Commercial integration between NGTL and ATCO Pipelines sees the two systems operating under one rate and service structure in Alberta, known as the "NGTL System". As such, NGTL holds all customer contracts related to NGTL's Gas Transportation Tariff, including but not limited to NGTL's tolls and charges, the rate schedules, service agreements, schedules of service, general terms and conditions and appendices which can be found at https://tccustomerexpress.com.

3.2 Distribution Pipeline Systems

The distribution of Gas is governed by the Gas Distribution Act – see <u>References & Related Materials</u>. In most areas in Alberta with Gas service, a single Gas Distribution company holds a franchise agreement for the area; this company is known as the franchise owner. The franchise owner is responsible for providing safe and adequate Gas distribution service to consumers in their franchise area.

ATCO enables Producers to inject Gas onto its Gas Pipeline System such that Producers can access Gas marketplaces where ATCO charges delivery and receipt rates for the use of the system and manages the operations and maintenance of its Gas Pipeline System.

For more information on the services that distributors provide, refer to Roles, Relationships and Responsibilities Regulation, A.R. 186/2003 and other applicable regulations developed by Alberta Energy as referenced in References & Related Materials.

3.3 Natural Gas Commodity

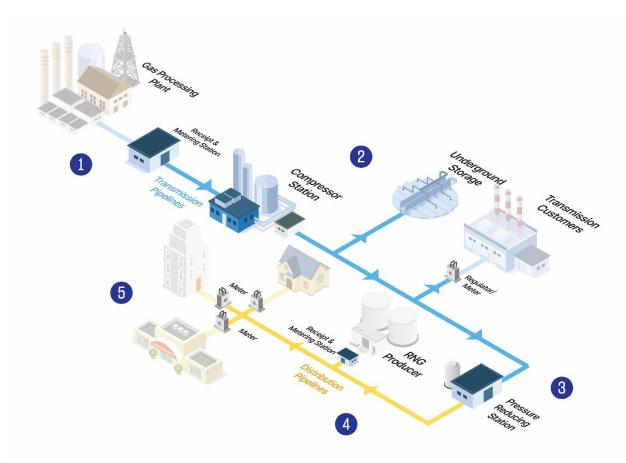
In Alberta, the transportation of Gas on the transmission side is transacted at major Gas trading hubs, including NIT and Empress.

In Alberta's competitive Gas marketplace, the (1) distribution of Gas and the (2) purchasing of the Gas commodity within the distribution system are separate functions to allow consumer choice.

The Gas commodity which is delivered through the distribution network is sourced from the competitive Gas marketplace. Delivery customers have the option to purchase the Gas commodity from the DSP, Retailers, or self-retail and secure the Gas commodity themselves.

The DSP and Retailers compete for Customers and manage Gas commodity supply contracts outside of Gas distribution companies. It is the DSP's and Retailer's responsibility to purchase Gas and provide it to the Gas distribution company to arrange delivery of the Gas commodity to end-use Customers.

Figure 1 illustrates each component of the Gas marketplace in Alberta.



Gas Production

Gas is produced and injected onto the high pressure, Alberta Integrated Transmission System (also known as the Nova Gas Transmission System, or NGTL System). Gas Producers sell their commodity to various customers, including gas retailers.

Transmission System

ATCO Pipelines and TC Energy's subsidiary Nova Gas Transmission Ltd. (NGTL) own and operate Transmission high pressure pipes which deliver and receive gas at points across Alberta. This system is known as the Alberta Integrated Transmission System, or the NGTL System.

Figure 1 - Alberta's Gas Marketplace

Pressure Reducing Station

Pressure reducing stations step pressures down from high to low to be delivered through local gas distribution networks.

4 Distribution System

ATCO Gas delivers gas to customers, transporting gas through low pressure distribution pipes to each site's gas meter.

Gas Retailer

Customers buy gas (the commodity) from an energy retailer of your choice.

We don't sell the gas, but we do deliver it to you!

4.0 ATCO PRODUCER SERVICE

4.1 Producer Service

ATCO Producer Service allows Producers to inject Gas onto the Gas Pipeline System. ATCO will build receipt Stations and piping connections to the Gas Pipeline System required to serve Producers. Producers are required to meet minimum and maximum receipt pressures and Gas quality requirements – see Gas Quality Specifications.

The injected Gas can be transacted/transferred to any party with an Account on the Gas Pipeline System, or to any party on with an Account on the Transmission System at NIT on TC Energy Customer Express – see Producer Accounts for more details.

Producers must fulfill several requirements to the satisfaction of ATCO before ATCO will provide Producer Service to the Producer. These requirements are discussed in subsequent chapters and in the Terms and Conditions.

4.2 Producer Service Rate Schedule

The Rate Schedule includes a fixed charge and a demand charge which reflects the recovery of costs on the Gas Pipeline System required to receive Gas from Producers.

The demand charges on the Producer Service may be affected by the details of a Producer Service Agreement; see Producer Service Agreement (PSA) for more details. The Rate Schedule is subject to change. For current rates, please see the ATCO's website ATCO.com.

5.0 NEW PRODUCER SERVICE CONNECTION PROCESS

5.1 Overview

ATCO will complete multiple levels of system analysis to determine if the requested Service Connection and associated Producer Service can be accommodated, and if so, what Specific Facilities are required to be built.

Service Connections for Producer Service connected to the Gas Pipeline System require the amount of Gas Load being injected into the local system to be less than or equal to the Gas offtake from that specific system. For this reason, ATCO may not be able to provide Producer Service as requested at all locations.

Figure 2 is an overview of the required steps to receive Producer Service from ATCO.

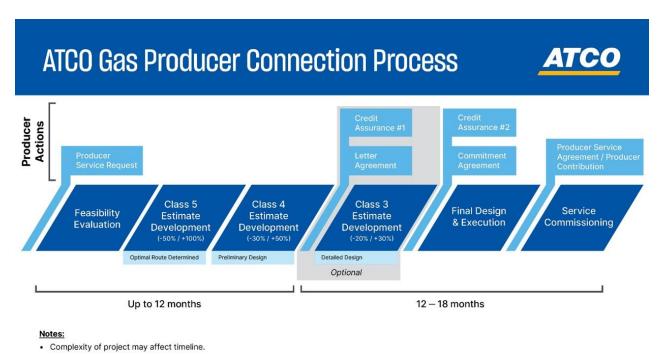


Figure 2 – ATCO Gas Producer Connection Process

5.2 Producer Service Request

Those interested in ATCO's Producer Service, should contact ATCOKeyAccountsGas@ATCO.com. A Commercial Account Manager will contact the Requestor and provide a Producer Service request form. The Requestor will be required to complete and return the form with details of their requested Service Connection including, but not limited to:

- Company name and address
- Proposed facility site location
- Production type (biogas / RNG or conventional) and feedstock type

- Production Gas volume request (hourly maximum & annual expected total)
- Seasonal production Gas loads (if applicable)
- · Requested maximum outlet pressure
- Requested in-service date

5.3 Feasibility Evaluation, Class 5 Estimate & Class 4 Estimate

There will be a minimum of three levels of analysis, each progressively more detailed than the previous, resulting in a refined cost estimate of a Custom Service. The three levels are (1) Feasibility Evaluation, (2) Class 5 Estimate, and (3) Class 4 Estimate. At each level, ATCO will perform an analysis to determine costs for the Custom Service and the amount of Gas ATCO can accept on to the system at the requested Point of Receipt year-round.

The results of the system analyses will be discussed with the Requestor at each stage. If the Producer Service cannot be provided as requested, ATCO may return with alternatives or limits to what can be provided. At any point during these analyses, the Requestor can terminate their request without repercussion or costs.

5.3.1 Feasibility Evaluation

Once ATCO has received the Producer Service request form, a feasibility evaluation will be conducted. The feasibility evaluation looks at the system to determine at a high-level if the system can accept the requested Gas load year-round.

A high-level cost for the Custom Service will be determined.

5.3.2 Class 5 Estimate

The class 5 estimate will analyze alternative routes to provide a new Service Connection for Producer Service and determine the optimal route and Specific Facilities required.

A cost estimate of -50% / + 100% for the Custom Service will be provided.

5.3.3 Class 4 Estimate

The class 4 estimate determines a preliminary design for the optimal route and the Specific Facilities.

A cost estimate of -30% / + 50% for the Custom Service will be provided.

Once the ATCO class 4 estimate (-30% / +50%) is completed, the Requestor has three options:

 Execute a Letter Agreement (optional). ATCO then creates a class 3 estimate (-20% / +30%) for the Custom Service. Requestor is responsible for any costs associated with the creation of the estimate. Full details below.



- 2. Execute a Commitment Agreement. ATCO then commences the Custom Service to build the Specific Facilities for the requested Producer Service. The Requestor commits to capital recovery payment option(s) and Credit Assurances. Full details below.
- 3. Terminate the Request

5.4 Optional Letter Agreement & Class 3 Estimate

5.4.1 Letter Agreement

If the Requestor would like a more refined estimate before choosing to commit to the execution of the Custom Service as proposed in the class 4 estimate, they have the option to request ATCO to create a class 3 estimate (-20% / +30%). If this route is chosen, the Requestor will be required to:

- 1. Execute a Letter Agreement, as defined as a legally binding contract authorizing ATCO to incur costs associated with the preparation of the class 3 (-20% / +30%) estimate for the Custom Service.
- 2. Provide Credit Assurances for ATCO's estimated cost to develop a class 3 estimate.

5.4.2 Class 3 Estimate

ATCO will create a class 3 estimate (-20% / + 30%). This estimate may include site visits, more detailed engineering and design work and reviews of environmental requirements.

ATCO will complete the analysis and discuss the results with the Requestor. Once the Requestor is provided the ATCO class 3 estimate (-20% / +30%), the Requestor has two options:

- Execute a Commitment Agreement. ATCO then commences with the Custom Service to build the Specific Facilities for the requested Producer Service. Requestor commits to capital recovery (payment) option(s) and Credit Assurances. The costs to create the class 3 estimate will be included in the total Custom Service cost.
- 2. Terminate the Request.

5.5 Commitment Agreement

Should the Requestor choose to move forward with the Custom Service at the class 4 estimate (or a class 3 estimate if that option was exercised), the Requestor must execute a Commitment Agreement with ATCO for the execution of the Custom Service. The Commitment Agreement consists of the following:

- 1. Agreement which forms the Terms and Conditions of which the Custom Service will be managed.
- 2. Schedule "A" Customer Request, Requested In-Service Date, Work, Specific Facilities & Customer Facility.
- 3. Schedule "B" Custom Service Cost Estimate, Capital Cost Recovery & Payment Schedule
- 4. Schedules "C" & "D" Credit Assurances & Form Letter of Credit



Upon execution of the Commitment Agreement, ATCO will start incurring costs and will require Credit Assurances from the Requestor for the estimated costs for the Custom Service. ATCO reserves the right to execute on any provided Credit Assurances.

5.6 Custom Service Execution

ATCO executes the Custom Service according to the Commitment Agreement including land acquisition, design, material procurement and construction of Specific Facilities as agreed to in the Commitment Agreement. This will require regular meetings with the Requestor to coordinate as required.

Amendments to the Commitment Agreement can be made and are administered as per the amendment terms of the Commitment Agreement.

If the Commitment Agreement is terminated for any reason ATCO will recover all realized and committed costs less salvage proceeds as per the terms of the Commitment Agreement.

Before service commences, the Requestor is required to perform several functions, outlined in the <u>Producer Service Agreement, Producer Accounts</u>, and <u>RNG Monitoring & Verification</u> sections.

5.7 Producer Service Agreement

A Producer is required by ATCO to sign a PSA in respect to receive Producer Service. The purpose of a PSA is to allow ATCO to recover the costs associated with a Custom Service and commit to the Terms and Conditions. Some of the fields on the PSA are:

- Billing Commencement Date
- 2. Applicable Rate Schedule
- 3. Service Requested:
 - a. Maximum Daily Contract Demand (GJ/D)
 - b. Maximum Receipt Pressure (kPa)
 - c. Minimum Receipt Pressure (kPa)
- 4. Contract Term
- 5. Producer Contribution
- 6. Supplementary Charges

All or a portion of the costs of the Custom Service will be recovered over a contract term via the Producer's Maximum Daily Contract Demand and applicable Rate Schedule. The Producer can request a change to the Maximum Daily Contract Demand no more than once per calendar year. ATCO will work with the Producer to accommodate the request as possible.



The PSA ensures ATCO will recover the costs of the Custom Service on a discounted cashflow basis over a contractual term of up to 15 years at ATCO discretion. PSAs will be executed before Gas flows, and potential amendments may be needed as cost true ups are completed within three months of the in-service date. Costs will be based on as-builts. The total Custom Service cost must be recovered through the PSA's Maximum Daily Contract Demand amount, Producer Contribution (payment) or Supplementary Charges (a charge added to the Producer's monthly service bill).

6.0 PIPELINE INTERCONNECT & METER STATION FACILITY REQUIREMENTS

6.1 Overview

The following sections outline the functionality, land requirements, AC power requirements, location and ownership boundaries of facilities required to serve the Producer's facility.

6.2 ATCO Meter Station & Pipeline Facilities

The Station will contain Gas filtration, metering, pressure regulation, Gas specification monitoring and emergency shutdown equipment, as necessary. The Station will also include pressure regulation and a recirculation loop to be utilized in the event of a Station Shut Out due to Gas quality. An on-site Remote Terminal Unit provides flow computation and Station control parameters which are communicated in real time to ATCO via a SCADA system.

The exact design specifications and cost of the meter Station and interconnect will be determined based on location, delivery volumes, the source of Gas, and other considerations determined during customer intake discussions with the Producer. The Station and all facilities downstream of ATCO's site will be owned and operated by ATCO. Facilities upstream of ATCO's Station will be owned and operated by the Producer.

The Producer's facility must also include overpressure protection devices to ensure the maximum allowable operating pressure (MAOP) of the pipeline connecting the Producer's facility and the ATCO meter Station and piping within the ATCO meter Station is not exceeded. To avoid such an over pressure condition, the Producer must provide suitable pressure relief devices, or pressure limiting devices, to protect the ATCO Station equipment and piping. Further, the Producer may be required to periodically confirm that these devices remain in place and have been inspected and maintained to ensure proper working order.

6.3 Provision of Land, Access and AC Power for ATCO Facilities

The Station and SCADA facilities require a parcel of land approximately 30m x 30m with road access, as well as a 30 amp 120/240v or 120/208v AC power service (connected loads are minimal and will be provided as part of the engineering analysis process). To minimize facility costs and any resulting required Producer Contribution, ATCO will request that the Producer provide land within or adjacent to the production facility along with AC power, at no charge to ATCO. A demonstration of the land required can be seen in **Figure 4**. The site must be accessible 24-7 with adequate security to prevent inadvertent intrusion. In the event the Producer is unable or unwilling to provide land for ATCO's facilities, ATCO will acquire land at market rates and include this cost in the overall Custom Service cost. ATCO will provide, at no cost to the Producer, onsite Gas quality monitoring data via a Producer installed ethernet connection from the Producer facility to the ATCO facilities.



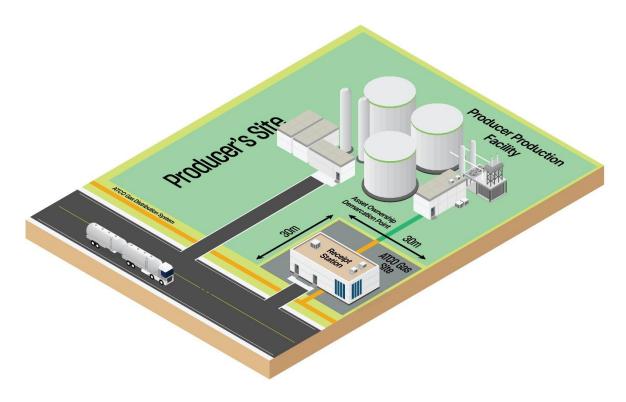


Figure 4 – Land & Site Demonstration

6.4 Gas Quality Monitoring & Verification Equipment

Gas quality monitoring and verification equipment is required to provide a means of ensuring the safe and reliable delivery of Gas to end-use customers. ATCO will install and maintain analytical equipment within the Station and process control facility to verify Gas quality. This typically includes but may not be limited to:

- · Gas chromatograph
- Oxygen analyzer
- Sulfur chromatograph
- Water vapor analyzer

- Temperature analyzer
- CO2 analyzer
- Mercury analyzer
- Chlorine Gas analyzer

ATCO recommends that Producers install and maintain their own set of analytical equipment and not rely on ATCO's instrumentation for control of its process. The Producer will generally require the same equipment, and coordination is recommended with respect to process control set points, and analytical strategy should align wherever possible to avoid discrepancies.

Additional information on Gas quality monitoring and verification can be found in the Operations section.

7.0 PRODUCER ACCOUNTS

7.1 Overview

This section provides an overview of Accounts. Each Producer has an individual Account, which includes all sites in aggregate, which tracks the receipt/delivery balance between Gas volumes injected into the Gas Pipelines System and the deliveries to other Accounts on the Gas Pipeline System and Accounts on the Transmission System.

Producer's Accounts on the Gas Pipeline System are administered in the context of the hierarchy of Accounts and Accounts on the Transmission System. ATCO's Gas Management team will assist the Producer in the setting up of their Account with ATCO.

All Gas supply delivered onto the Gas Pipeline System will reflect in an Account; this Gas must be (1) transferred through an ATCO Account Transfer or (2) transferred to an Account on the Transmission System, or (3) consumed directly by the account owner.

7.2 Account Balancing & Monitoring

Producers are responsible for Account Balancing, i.e. maintaining their Account each Gas Day within the Imbalance Window specified in the Terms and Conditions. The Imbalance Window is a range of positive and negative imbalances within which Producer's Accounts are considered balanced.

ATCO Gas recognizes that while the actions taken to balance within the imbalance window are done so using the best available estimate for the previous gas day (Backcast), there may still be difference between the Backcast and actual measurement – This settlement variance is made up for through the gas settlement process outlined in section 6.4).

The Terms and Conditions govern Imbalances outside the Imbalance Window through Imbalance Purchases/Sales. The Imbalance Window for the Gas Pipeline System is: ±5% of the daily Backcast with a minimum Imbalance Window of:

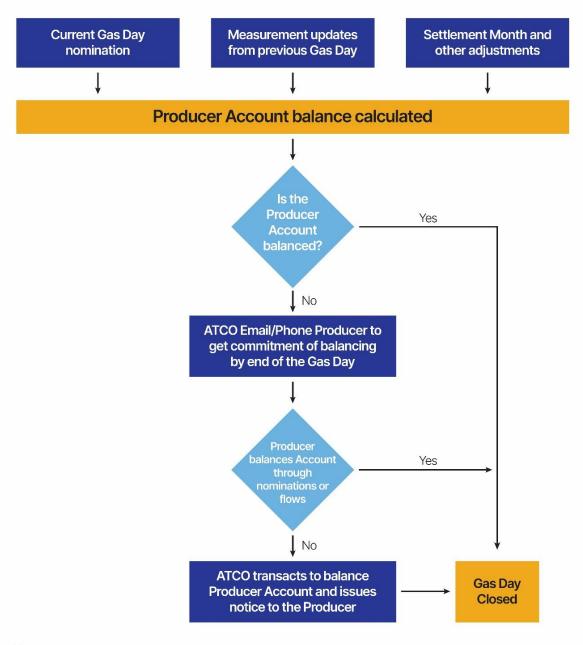
- ±500 GJ when the daily Backcast is less than or equal to 5,000 GJ.
- ±1,000 GJ when the daily Backcast is greater than 5,000 GJ

In the event the Imbalance Window needs to be decreased, ATCO will change the Imbalance Window percentage applicable to Accounts. A notification will be provided to the Producer by 12:00 noon for changes effective the following Gas Day. Imbalance Purchase/Sale for daily Energy amounts outside the Imbalance Window is described in further detail in Imbalance Purchase/Sale section.

The Terms and Conditions also outline the monitoring rules to ensure Account balance compliance among Account holders. If a Producer does not provide a Nomination within a Gas Day and that action has not been authorized by ATCO, then ATCO will take action to balance that Account by Imbalance Purchase/Sale.

ATCO's Account monitoring process logistics are as shown in **Figure 5**.





Notes:

- After each Gas Day of non-balancing, ATCO will transact to balance the Account and issue a notice to Producer
 of the reason.
- After 30 days if the Producer regularly fails to balance their Producer Account, ATCO may terminate Producer Service and provide electronic notice to the Producer that their Producer Account is permanently closed. ATCO will transact until adjustments related to settlement have finalized at which point ATCO will apply Imbalance Purchase and Sales Charges on all required transactions to the Producer's Account.
- In the event of non-payment ATCO shall have the right to recover charges

Figure 5 – Account Balancing Process Diagram

7.3 Account Components

Producer's Account contains the components noted below with the Imbalance determined each Gas Day using the following formula:

Imbalance (GJ) = daily receipt (GJ) - daily delivery (GJ) - if applicable, daily Rider P recovery (GJ) - daily Imbalance Purchase (GJ) + daily Imbalance Sale (GJ) + daily adjustment (GJ)

Where:

- Receipt means Gas injected into the Gas Pipeline System at all Points of Receipt
- Delivery means the Nomination out of the Producer's Account to another Account or to an Account on the Transmission System through an ATCO-OP Account Transfer.
- Rider P recovery means the recovery of Unaccounted for Gas which is calculated as Rider P percent times the physical receipt. Rider P is applicable when Producers nominate Gas to their Account on the Transmission System.
- Imbalance Purchases/ Sales discussed further in the Imbalance Purchase/Sale section.
- Adjustments mean any variance attributable to a previous period which is brought forward into the current Gas Day including but not limited to:
 - The previous Gas Day's closing Account balance.
 - The daily allocation of the prior Month(s) settlement variance.
 - The daily allocation of any other appropriate Energy adjustment(s) when applicable to the Account.

7.4 Gas Settlement Variance

Gas Settlement Variance, is the variance between the billing volumes, determined at month end, and the daily production volumes, which are determined in the first (1st) month following the Settlement Month and is included in each Producer's Account in the second (2nd) month following the Settlement Month. The Gas settlement adjustment is calculated by dividing the settlement quantity by the number of Days in the Settlement Month, rounded to the nearest GJ, with any required correction for rounding included in the last Gas Day of the month.

In the event of a measurement adjustment after billing volumes have been finalized, the adjustment will be processed in the Month following the current Month by dividing the settlement quantity by the number of Days in the Settlement Month, rounded to the nearest GJ.

7.5 Producer Nomination Process

The Producer is responsible for calculating and setting their monthly Nominations. These Nominations must be submitted to ATCO, and they will then flow through to TC Energy before the last working day or in accordance with the off-taker agreement.

When estimating these Nominations, producers should consider:

- The average flow rate for the current Month.
- The Unaccounted-for Gas percentage.
- Adjustments for true ups from the previous Month's inventory differences.
- Cumulative Imbalances that may have accrued over time.

Producers must maintain their Account positions within the Imbalance Window to avoid Imbalance Purchases/Sales.

Once the monthly Nominations are established, the Producer must relay these Nominations to ATCO. Subsequently, ATCO will forward the Nominations to TC Energy, ensuring a streamlined process.

7.6 Nomination Timelines for Accounts

The Nomination timelines for SD Nominations are 08:00 to 20:00 MST each calendar Day

The Nomination timelines applicable to YD Nominations are

- YD Nominations for Gas Day 1 using ATCO-OP transfers will be accepted until 7:45 AM MST on calendar Day 2.
- YD Nominations for Gas Day 1 using ATCO Account Transfers will be accepted until 10:30 AM MST
 on calendar Day 2. As applicable, the YD balancing Nomination timelines for ATCO-OP Account
 Transfer to the Transmission System are specified in NGTL's terms and conditions and/or business
 practices. Contact TC Energy for further information.

7.7 Account Transfers on the Transmission System

An ATCO-OP Account Transfer is used to exchange Gas supply from a Producer's Account to an Account on the Transmission System. The Producer will request ATCO originate an ATCO-OP Account Transfer Nomination specifying the amount, date, and recipient Account on the Transmission System; ATCO will facilitate this Nomination and As shown in **Figure 6**, the Producer's ATCO-OP Account Transfer Nomination will appear in the specified Account on the Transmission System as a Title Transfer between the recipient's Account on the Transmission System and ATCO's Account on the Transmission System.

The Accounts on the Transmission Systems are accessible through TC Energy's Customer Express system. All ATCO-OP Account Transfers will appear as Title Transfers at NIT.



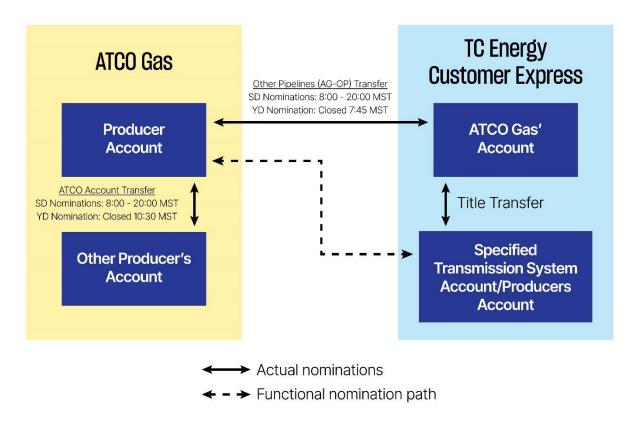


Figure 6 - ATCO-OP Account Transfer Nomination Path

7.8 Imbalance Purchase/Sale

If a Producer's Imbalance is outside the Imbalance Window at the end of the daily Account Balancing timeline given in <u>Account Balancing & Monitoring</u> section, the Energy amount outside the Imbalance Window will automatically be deducted from or added to the Account through an Imbalance Purchase/Sale.

When there is an <u>excess</u> of Gas supply in an Account at the conclusion of a Gas Day, the Energy amount outside the Imbalance Window will be deducted from the Account by Imbalance Purchase at the price specified in Schedule B of the Terms and Conditions.

When there is a <u>deficiency</u> of Gas supply in an Account at the conclusion of a Gas Day, the Energy amount outside the Imbalance Window will be added to the Account by Imbalance Sale at the price specified in Schedule B of the Terms and Conditions.

8.0 AGENTS

There are ongoing duties a Producer is required to perform as part of the Producer Service. A Producer may decide for a third-party to act as its Agent to perform these functions including load settlement as described in subsequent sections. For a Producer to appoint an Agent, a completed Agency Appointment Agreement must be completed and returned to ATCO – see <u>Appendix B – Agency Appointment Agreement</u> for a form of the agreement. Agents and Producers must ensure they have made the appropriate contractual arrangements outside of ATCO to recognize this unique business relationship and meet any applicable regulations and quidelines.

9.0 BILLING

Producers are billed utilizing ATCO's customer information system. Charges are applied based on contractual volumes in the PSA, various rate riders, and if applicable, supplementary charges. If an Imbalance Purchase / Sale occurred this will show up on the regular Producer Service Bill as well. For current rates, please see the posted rates on ATCO's website ATCO.com.

A monthly Producer bill and statement will be issued the first calendar week of the following month of charges. The bill will reflect amounts owing and payments received. Payment terms are 15 Days after invoice is issued and late payments terms will be described on the invoice. The invoice and statement will be sent via email to an email address as specified by the Producer.

Note: If you are receiving natural Gas from the Gas Pipeline System, your monthly bill for Gas delivery will be sent to you from your Retailer.

10.0 OPERATIONS

10.1 Overview

Once construction and commissioning of the Producer and ATCO facilities are complete, the Producer's Account has been set up, and the facilities are on-stream, receipt of Gas on to the Gas Pipeline System will enter the on-going operations phase. As outlined in the Pipeline Interconnect & Meter Station Facility
Requirements section, the design of the Producer and ATCO facilities along with regularly scheduled inspections and Gas sampling and analysis are required to ensure safe, reliable operation of the system. Ongoing Gas sampling and analysis requirements are contained in the ATCO's Producer Monitoring and Verification Program, which is briefly described in the following sections. For a copy of ATCO's Producer Monitoring and Verification Program Guide, please reach out to ATCOKeyAccountsGas@ATCO.com.

10.2 Gas Quality Monitoring & Shut Out Procedures

Producers are required to meet the Gas specifications as Outlined in **Table 2**. These are subject to ATCO's discretion as required to maintain an adequate level of safety throughout the Gas Pipeline System.

10.2.1 Gas Quality Specifications

Table 2 - Gas Quality Specifications

Parameter	Abbreviation	Min/Max	Value	Unit	Frequency
		Major Co	mponents		
Heating Value	HV	Min	36.27	MJ/m3	Continuous
Wobbe Number	WN	Min	47.65	MJ/m3	Continuous
Carbon Dioxide	CO2	Max	2	% vol.	Continuous
Oxygen	O2	Max	0.4	% vol.	Continuous
Nitrogen	N2	Max	1.6	% vol.	Ongoing
Total Inert (N2, CO2, O2)		Max	4	% vol.	Continuous
Hydrogen	H2	Max	1	% vol.	Continuous
Water Vapor	H2O	Max	65	mg/m3	Continuous
Hydrocarbon Dew Point		Max	-10	Celsius	Continuous
Delivery Temperature		Max	30	Celsius	Continuous
Hydrogen Sulfide	H2S	Max	7	mg/m3	Continuous
Total Mercaptans		Max	6	mg/m3	Continuous
Total Sulfur	S	Max	115	mg/m3	Continuous
	1	Trace Co	nstituents		
Ammonia	NH3	Max	7	mg/m3	Spot sampled
Siloxanes	Si	Max	0.5	mg/m3	Spot sampled
Florine Total	FI	Max	10	mg/m3	Spot sampled
Chlorine Total	CI	Max	10	mg/m3	Spot sampled
Particulate/Bacteria			Commercially Free Of		Spot sampled

Parameter	Abbreviation	Min/Max	Value	Unit	Frequency
Mercury	Hg	Max	0.08	mg/m3	Spot sampled
Arsenic	As	Max	0.19	mg/m3	Spot sampled
Copper	Cu	Max	0.6	mg/m3	Spot sampled

All major components will be subject to real-time analytical testing whereas trace constituent tests will be conducted at an off-site laboratory unless real-time instrumentation equipment can be substituted. A Shut Out of the Producer production facility can occur as a result of either: the detection of an on-line monitored component being found out of specification as outlined below in which case the Shut Out is automatic via the on-site Remote Terminal Unit and emergency shutdown valve, or, as a result of off-site laboratory monitored trace component being found out of specification, in which case the Shut Out would occur manually or remotely by ATCO. For details of the conditions which will result in a facility Shut Out, please refer to the ATCO's Producer Monitoring and Verification Program.

If either an on-site automatic Shut Out or an off-site lab detected manual Shut Out is initiated, the production facility will remain Shut Out until on-site verification of acceptable Gas quality is confirmed and a manual reset of the valve is completed by ATCO operations personnel.

Supply disruptions are a serious issue and could affect ATCO's downstream customers. Producers are required to have protocols in place in the event of a conditioning system failure.

Gas which has been Shut Out will undergo additional scrutiny. If a laboratory test indicates that values are outside of allowable parameters, the Gas will be tested on a more frequent basis from previous monitoring periods. The Gas will be Shut Out until all Gas quality standards are met. ATCO will require a report outlining the cause of failure, steps required to rectify the situation and an updated process/operation plan to avoid reoccurrence. Once Gas Quality standards are met, ATCO will endeavor to return the Station to operation as soon as reasonability possible. Note that call out rates may apply.

10.3 RNG Monitoring & Verification

Ensuring appropriate Gas quality for RNG Producers requires a period of careful examination before RNG is introduced into the pipeline to ensure reliability of the conditioning system and confidence in a dataset of quality product delivery. The ATCO's Producer Monitoring and Verification Program includes specific requirements for the 3 different types of biogas: Landfill/Wastewater Treatment biogas, Industrial Waste/Municipal Waste Program biogas and Agricultural Waste/ Live Animal Manure biogas. The specific requirements for each type of biogas production are outlined in the ATCO's Producer Monitoring and Verification Program but general aspects are described in the following sections.

10.3.1 Three Phases of Verification

The three phases of verification testing are summarized in **Figure 7** and detailed below. After the three phases of verification testing and monitoring are complete, a perpetual sampling and monitoring regime is followed as per ATCO's Producer Monitoring and Verification Program.

 Prestart up - Occurs prior to RNG entering the Gas Pipeline System to ensure the conditioning system is functioning appropriately. This length of time is variable and is dependent on the conditioning system performance.



- 2. RNG verification period A period ranging from 1 to 4 weeks where RNG is produced but is not entering the Gas Pipeline System. The duration of the RNG verification period will depend on multiple factors, including but not limited to the type of RNG production process, RNG Gas quality, RNG sample turn around period, and time required to coordinate between RNG Producer, ATCO and any external stakeholders.
- Monitoring Periods Monitoring periods and specific monitoring requirements and frequencies depend on the type of RNG production process and the performance of the facility during each monitoring period.

If a Producer has a change in their type of feedstock ATCO must be notified and further testing will be required (which may include full restart testing) as outlined in the ATCO's Producer Monitoring and Verification Program Guide.

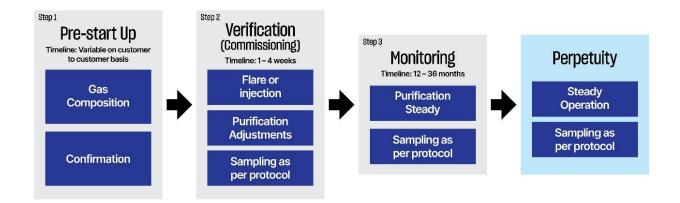


Figure 7 - RNG Monitoring & Verification

11.0 CREDIT & PRUDENTIAL REQUIREMENTS

11.1 Credit & Prudential Requirement

As per the Terms and Conditions, ATCO can require Producers to financially backstop costs associated with:

- Costs as outlined in a Letter Agreement or Commitment Agreement with a Producer.
- ATCO's investment and billing amounts related to a PSA.

Credit Assurance is required at the time of signing a <u>Letter Agreement</u> or <u>Commitment Agreement</u>. A milestone structure to provide Credit Assurance at specific points in time may be possible upon discussion.

11.2 Acceptable Forms of Credit Assurance

Acceptable forms of Credit Assurance to ATCO include but are not limited to:

- 1. Letters of Credit from a Schedule 1 Canadian Bank or a financial institution acceptable to ATCO.
- 2. Cash Deposits.
- 3. Guarantee from an approved guarantor subject to ATCO's discretion.

11.3 Prudential Requirements Maintenance

For ATCO to hold sufficient Credit Assurances for the installation costs of the Specific Facilities, or any amounts required to be backstopped as part of the PSA, the Producer may be required to replace, renew, increase, supplement, or confirm any provided Credit Assurances upon reasonable written request of ATCO.

If the Producer has failed to provide or maintain sufficient Credit Assurances – including but not limited to replacing, renewing, increasing, supplementing, or confirming existing Credit Assurances at ATCO's request - ATCO reserves the right to suspend installation of Specific Facilities and/or the Producer Service and reserves the right to discontinue Producer Service entirely to the Producer.

11.4 Drawing on Credit

ATCO will monitor the Producer's financial obligation on a routine basis to confirm sufficient coverage over the Producers financial obligations. If the Producer fails to pay any amounts owed, ATCO reserves the right draw-on all or a portion of the Producer's Credit Assurance to cover the unpaid amounts.

11.5 Confidentiality

If required by the Producer, a Confidentiality Agreement between ATCO and Producer can be executed. All information provided by the Producer as protected by the Confidentiality Agreement, including any financial information will be treated as confidential under the Confidentiality Agreement. The Confidentiality Agreement will be in a form similar to the example as set out in Appendix A or as negotiated by ATCO and Producer.



12.0 CONTACT INFORMATION

12.1 Emergencies

Website: ATCO.com

Phone (from within Alberta): 1-800-511-3447 Phone (from outside of Alberta): 1-888-511-7550

12.2 Producer Service Requests & Producer Inquiries

Email: ATCOKeyAccountsGas@ATCO.com

12.3 Producer Billing & Transactions

Email: RetailerContact@ATCOgas.com

Phone: 310-5678

12.4 Producer Accounts, Nominations, & Account Balancing

Email: GasCoordination@ATCO.com

Phone: 780-420-7199

12.5 Producer Meter & Gas Quality Issues

Phone: 1-877-469-4380

13.0 REFERENCES & RELATED MATERIALS

References and related materials on ATCO's current rates and applicable regulations are provided below

13.1 ATCO Gas' Rates

ATCO Gas Rates and Billing

13.2 Terms & Conditions – Producers & Delivery Customers

ATCO Gas Terms & Conditions

13.3 Delivery Service Lines

In the event a Producer requires a separate service line to provide Gas delivery service to their production facility, the Producer must submit a new service line application – Quick Connect

13.4 Government Legislation & Regulations

Gas Utilities Act - https://open.alberta.ca/publications/g05

Roles, Relationships and Responsibilities Regulation - https://open.alberta.ca/publications/2003_186

Code of Conduct Regulation - https://open.alberta.ca/publications/2015 058

Other applicable regulations - https://www.alberta.ca/natural-gas-acts-and-regulations

13.5 Alberta Gas Market Overview

https://ucahelps.alberta.ca/natural-gas-energy-market.aspx

13.6 Utility Consumer Advocate Alberta

https://ucahelps.alberta.ca/

13.7 Alberta Utilities Commission

https://www.auc.ab.ca/

14.0 GLOSSARY

- "Account" as provided in the Terms and Conditions
- "Account Balancing" as provided in the Terms and Conditions
- "Account on the Transmission System" as provided in the Terms and Conditions
- "Agent" as provided in the Terms and Conditions
- "Agency Appointment Agreement" as provided in the Terms and Conditions
- "ATCO" means ATCO Gas, an operating division of ATCO Gas and Pipelines Ltd. or its successor
- "ATCO Account Transfer" means a transfer of Gas supply between one Account to another Account within the Gas Pipelines System of ATCO
- "ATCO-OP Account Transfer" means an ATCO Other Pipeline Transfer and it is a transfer of Gas supply to/from an Account in ATCO IRIS from/to an Account on the Transmission System and is implemented via ATCO's Account on the Transmission System as depicted in the <u>Account Transfers on the Transmission</u>

 System section
- "AUC" as provided in the Terms and Conditions
- "Backcast" as provided in the Terms and Conditions
- "Billing Commencement Date" as provided in the Terms and Conditions
- "Business Day" as provided in the Terms and Conditions
- "Commitment Agreement" means a legally binding contract authorizing ATCO to proceed with the Custom Service
- "Credit Assurances" means the required forms of security which includes letter of credit and/or cash deposit
- "Custom Service" means ATCO's scope of work to build the Specific Facilities for a Producer Service
- "Day" means a period of twenty-four (24) consecutive hours
- "DSP" means the Default Supply Provider that is a Gas Distributor, or a person authorized by a Gas Distributor, that provides Gas services to Customers under rates, tolls or charges, and terms or conditions approved by the AUC
- "Energy" as provided in the Terms and Conditions

- "Final Monthly Settlement" means the third and final calculation of settlement for the Settlement Month that is performed by the 15th Business Day of the fourth month following the Settlement Month as described in Rule 028
- "Gas" as provided in the Terms and Conditions
- "Gas Day" as provided in the Terms and Conditions
- "Gas Distributor" as provided in the Terms and Conditions
- "Gas Distribution Act" means the document known as The Gas Distribution Act which enables an authorized individual to set the standards for the design, construction, operation, and maintenance of rural gas utilities and low-pressure distribution system
- "Gas Pipeline System" as provided in the Terms and Conditions
- "GJ" as provided in the Terms and Conditions
- "Imbalance" as provided in the Terms and Conditions
- "Imbalance Window" as provided in the Terms and Conditions
- "Imbalance Purchase/Sale" as provided in the Terms and Conditions
- "Initial Monthly Settlement" means the first calculation of settlement for the Settlement Month that is performed by the 5th Business Day of the month immediately following the Settlement Month as described in AUC Rule 028
- "Interim Monthly Settlement" means the second calculation of settlement for the Settlement Month that is performed by the 15th Business Day of the second month following the Settlement Month as described in AUC Rule 028
- "Letter Agreement" a legally binding contract authorizing ATCO to incur costs associated with the preparation of the class 3 estimate for the Custom Service
- "Load" as provided in the Terms and Conditions
- "Maximum Daily Contract Demand" as provided in the Terms and Conditions
- "Maximum Receipt Pressure" as provided in the Terms and Conditions
- "Minimum Energy Imbalance Window" means as defined in Schedule B of the Terms and Conditions and in the Account Balancing & Monitoring section
- "Minimum Receipt Pressure" as provided in the Terms and Conditions
- "Month" as provided in the Terms and Conditions



- "NIT" means NOVA Inventory Transfer a trading hub located in Alberta and is the commercial mechanism that overlays the NGTL pipeline network
- "Nomination" as provided in the Terms and Conditions
- "NGTL" means NOVA Gas Transmission Limited, a wholly owned pipeline of TC Energy or its successor that operates the Transmission System in Alberta
- "Point of Receipt" as provided in the Terms and Conditions
- "Producer" as provided in the Terms and Conditions
- "Producer Contribution" as provided in the Terms and Conditions
- "Producer Guide" as provided in the Terms and Conditions
- "Producer Information" as provided in the Terms and Conditions
- "Producer Service" as provided in the Terms and Conditions
- "Producer Service Agreement" or "PSA" as provided in the Terms and Conditions
- "Producer Usage Information" as provided in the Terms and Conditions
- "Rate Schedule" as provided in the Terms and Conditions
- "Retailer" means a person who sells or provides retail gas services directly to Customers and who is entitled to enroll Customers for Distribution Access Service under ATCO's Retailer Terms and Conditions for Gas Distribution Service, and includes Self-Retailers
- "Requestor" means a person or entity requesting Producer Service from ATCO
- "Rider P" as provided in the Terms and Conditions for Unaccounted for Gas
- "Remote Terminal Unit" is a computer remotely located within the ATCO Station for the purpose of volumetric flow computation and Station control parameters
- "SCADA" is the Supervisory Control and Data Acquisition system used by ATCO Gas and Pipelines to monitor and control its pipeline system
- "Service Connection" as provided in the Terms and Conditions
- "Settlement Month" is the calendar month to which the Initial Monthly Settlement, Interim Monthly Settlement and Final Monthly Settlement relate
- "Shut Out" means Gas flow is stopped to not allow Gas to the Gas Pipeline System
- "Site" as provided in the Terms and Conditions



- "Specific Facilities" as provided in the Terms and Conditions
- "Station" means Regulation, Measurement and Odorization Station in reference to the functionality of the ATCO facilities
- "TC Energy's Customer Express" is NGTL's system for all customers to monitor and balance their Account on the Transmission System
- "Terms and Conditions" means the Producer Terms and Conditions for Gas Distribution Service as can be accessed at ATCO.com, unless otherwise stated
- "Title Transfer" means a transfer between customer Accounts on the Transmission System on TC Energy's Customer Express
- "Transmission System" as provided in the Terms and Conditions
- "Unaccounted for Gas" as provided in the Terms and Conditions
- "YD Nomination" means a Nomination occurring during a calendar Day for transactions applicable to the Gas Day commencing on the previous calendar Day

15.0 APPENDIX A – CONFIDENTIALITY AGREEMENT

Attention: [Producer Legal Name]

Re: Producer Receipt Services & Producer Financial Information

During our business dealings with your Company ATCO Gas and Pipelines Ltd. (ATCO Gas) must obtain, for credit evaluation purposes, detailed financial information regarding your Company and its business activities. This financial information will include, but not necessarily be limited to, with your prior authorization: (a) your financial statements and other pertinent financial information and (b) independent confirmation from your bank(s) and other financial institution(s) regarding your financial circumstances.

ATCO Gas recognizes that some or all of this information may be confidential and, to the extent that it is, we hereby undertake to maintain such information in confidence and will not disclose it to any person or entity other than our employees, officers, directors, advisors and Agents who have a need to know and who have been advised of the confidentiality of the information and have agreed to be bound by this undertaking.

This undertaking will not apply to any confidential information which: (a) was in the public domain at the time of disclosure to us; (b) thereafter passes into the public domain by acts other than the acts of or caused by ATCO Gas; (c) is thereafter disclosed to ATCO Gas by third parties provided that ATCO Gas does not know, or has no reasonable basis to know, that the information was received or disclosed unlawfully; or (d) is required by law (including any applicable court order, government or regulatory authority order, rule, regulation or procedure) to be disclosed.

ATCO Gas agrees that monetary damages may be an insufficient remedy for any actual or anticipatory breach of this undertaking and therefore, in addition to any other remedy which may be available to you, injunctive relief is an appropriate remedy to prevent the unwarranted disclosure of confidential information. However, in no event shall you be entitled to indirect, consequential punitive or exemplary damages from ATCO Gas.

This agreement and undertaking shall be governed by the laws of the Province of Alberta and ATCO Gas agrees to attorn to the jurisdiction of the Courts of the Province of Alberta.

Agreed to by both parties:

[PRODUCER LEGAL NAME]	ATCO GAS AND PIPELINES LTD.		
Per:	Per:		
Date:	Date:		
[Producer Representative Name]	[ATCO Representative Name]		
[Producer Representative Title]	[ATCO Representative Title]		



16.0 APPENDIX B – AGENCY APPOINTMENT AGREEMENT

TO: ATCO Gas and Pipelines Ltd. ("the Company")

10035-105 Street

Edmonton, Alberta T5J 1C8

I/We [Producer Legal Name] ("the Producer") hereby appoint [Agent Legal Name] ("the Agent") as the Producer's sole and exclusive Agent to:

- 1. Request and receive the Producer Information and Producer Usage Information including, without limitation interval, meter data, financial billing data, site configuration data, and site and service information, from the Company on behalf of the Producer; and
- Deal with the Company on behalf of the Producer with respect to all Producer Receipt Services
 provided by the Company to the Producer including, but not limited to, metering, meter reading,
 Account Balancing, billing and invoicing for Producer Receipt Service at the site

(Collectively referred to as "Arrangements")

The Agent agrees to enter into such further agreements with the Company as the Company deems necessary to permit the Company to deal with the Agent on behalf of the Producer.

The Producer acknowledges and agrees to be bound by the terms and conditions of any agreement between the Agent and the Company with respect to the Producer Information and/or Producer Receipt Service. The Producer further acknowledges, agrees to, and hereby does, ratify and confirm all actions taken by the Agent on the Producer's behalf.

The Agent acknowledges and agrees to act in accordance with the terms and conditions of any agreement between the Producer and the Company with respect to the Producer Information, Producer Usage Information, and/or Producer Receipt Services including, but not limited to the Company's Producer Terms and Conditions for Gas Distribution Service, as they are approved by the AUC, from time to time ("Terms and Conditions").

The Company may rely exclusively upon, and deal exclusively with, the Agent with respect to all Arrangements on the Producer's behalf as if the Arrangements had been made by the Producer.

The Producer confirms and agrees that:

- 1. Producer is responsible for the payment of all amounts pursuant to the Terms and Conditions
- 2. Producer shall make all payments required pursuant to the Terms and Conditions and pursuant to any Arrangements made by the Agent on behalf of the Producer, when due.

The Producer and Agent, jointly and severally covenant to indemnify and save harmless the Company, and its directors, officers, employees, Agents and representatives ("Indemnified Parties") from any and all damages, costs, expenses (including, but not limited to, attorney fees on a solicitor and own client basis), losses or claims incurred by such Indemnified Parties directly or indirectly resulting or arising from the



Company's reliance upon the Agent's authority hereunder, and/or from the acts or omissions of the Agent in exercising its authority hereunder.

This Appointment and the Agent's authority to act hereunder shall be and remain in full force and effect until the Producer notifies ATCO Gas Ltd. in writing that the Producer has revoked its appointment of the Agent as its Agent.

[PRODUCER LEGAL NAME]	[Agent Legal Name]	
Per:	Per:	
Date:	Date:	
[Producer Representative Name]	[Agent Representative Name]	
[Producer Representative Title]	[Agent Representative Title]	