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## EXECUTIVE SUMMARY

The 2024 Annual Plan provides NGTL's<sup>1</sup> customers and other interested parties an overview of potential NGTL System facilities. The 2024 Annual Plan describes NGTL's outlook to the end of the decade for receipts, deliveries, peak expected flows, proposed facilities, and Design Flow requirements supporting future proposed facilities. This 2024 Annual Plan is based on NGTL's 2024 Design Forecast of receipts and deliveries.

This Annual Plan includes a longer-term view of potential facilities that could serve aggregate system requirements with a range of targeted in-service dates out to 2030. These facilities are presented to provide an updated understanding of the potential scope and scale. The need and schedule for some facilities is subject to additional commercial support and all NGTL facilities are subject to NGTL final investment decision.

Any new facility projects identified since the release of the 2023 Annual Plan NGTL are summarized in the December release of the *Facility Status Update (NGTL 2024 Update)*. NGTL's Tolls, Tariff, Facilities and Procedures (TTFP) Committee has also been notified of these facilities.

In accordance with the Integration Agreement between NGTL and ATCO Pipelines (AP), NGTL provides commercial services under the NGTL Tariff across facilities of the NGTL System and the AP System. NGTL follows facility planning processes to identify facilities required for the combined assets in the NGTL and AP footprints. For an overview of these processes, see the *Facilities Design Methodology* document and the *Guidelines for New Facilities* document. NGTL files facility applications with the Canada Energy Regulator (CER) for facility additions on the NGTL System within the NGTL footprint. AP files facility applications with the Alberta Utilities Commission (AUC) for facility additions on the AP System within the AP footprint.

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<sup>1</sup> On March 1, 2024, NGTL GP Ltd. (NGTL GP), as general partner on behalf of NGTL Limited Partnership (NGTL LP) (collectively NGTL) became the successor of NOVA Gas Transmission Ltd.

The facilities identified in this Annual Plan were presented to the TTFP Committee on December 10, 2024. Subsequent updates to these facilities and notifications prior to filing for their applications will be presented to the TTFP as required. These updates, as well as any new facilities proposed after issuance of this Annual Plan, will be shown in the *Facility Status Update (NGTL 2025 Update)*, which can be accessed at <http://www.tccustomerexpress.com/871.html>.

Table E-1 lists the 13 facilities identified in this 2024 Annual Plan.

**Table E-1: Proposed and Potential Facility Additions**

Project Area	Facility	Annual Plan Reference	Description	Target In-Service Date	Regulator	Capital Cost (\$ Millions)
<b>Potential Aggregate System Facilities</b>						
Peace River	GPML Loop (McLeod South)*	Section 2	21 km NPS 48	April 2027	CER	321
Peace River	GPML Loop (Greenview)	Section 2	15 km NPS 48	April 2028	CER	205
Peace River	GPML Loop (Colt)	Section 2	20 km NPS 48	April 2028	CER	404
Peace River	GPML Loop (Karr North)	Section 2	16 km NPS 48	2028-2030	CER	238
Peace River	GPML Loop (Karr South)	Section 2	25 km NPS 48	2028-2030	CER	332
Peace River	GPML Loop (Deep Valley North)	Section 2	14 km NPS 48	2028-2030	CER	254
Peace River	GPML Loop (Deep Valley South)	Section 2	23 km NPS 48	2028-2030	CER	379
Peace River	GPML Loop (Hornbeck Section)	Section 2	13 km NPS 48	2028-2030	CER	238
Peace River	GPML Loop (McLeod North)	Section 2	13 km NPS 48	2028-2030	CER	211
Peace River	Wolf Lake Unit and Cooler Additions	Section 2	30 MW	2028-2030	CER	362
Peace River	Vetchland Unit and Cooler Additions	Section 2	30 MW	2028-2030	CER	352
<b>Proposed ATCO Facilities for Greater Edmonton Area Demands</b>						
Central	Yellowhead Mainline (ATCO)	Section 2	226 km NPS 36 Control Stations	Nov 2027	AUC	2,541
Central	Peers Unit Addition (ATCO)	Section 2	18 MW	Nov 2027	AUC	272
<b>Total</b>						<b>6,109</b>

\* Commercial support completed

The need and timing for any of the potential aggregate system facilities are contingent on further technical analysis, in some cases subject to additional commercial support and all NGTL facilities are subject to NGTL final investment decision.

The potential Peace River Project Area facilities would be required to transport aggregate system supply out of the area.

The proposed facilities for the Greater Edmonton area are required to meet growing delivery requirements in their respective regions and are supported by incremental contracts.

This 2024 Annual Plan includes the following sections:

Executive Summary

Chapter 1: Design Forecast

Chapter 2: Design Flow and Mainline Facilities

Chapter 3: Extensions, Lateral Loops and Meter Stations

Appendix 1: Glossary of Terms

Appendix 2: Facility Status Update

Appendix 3: System Map (expected in March 2025)

Appendix 4: Unit Transportation Costs

Electronic versions of the Annual Plan, the *Facilities Design Methodology* document, and the *Guidelines for New Facilities* document can be accessed at

<http://www.tccustomerexpress.com/871.html>.

Customers and other interested parties are encouraged to communicate their suggestions, comments, and questions to NGTL regarding the 2024 Annual Plan to:

Joanne Unger, Director, Capacity Management (403) 920-5281

Cory Costanzo, Director, Forecasting & Fundamentals (403) 920-7158

## 1.0 DESIGN FORECAST

### 1.1 INTRODUCTION

This Annual Plan is based on the 2024 Design Forecast of receipts and deliveries for the NGTL System. An overview of the 2024 Design Forecast was presented at the December 10, 2024 TTFP meeting.

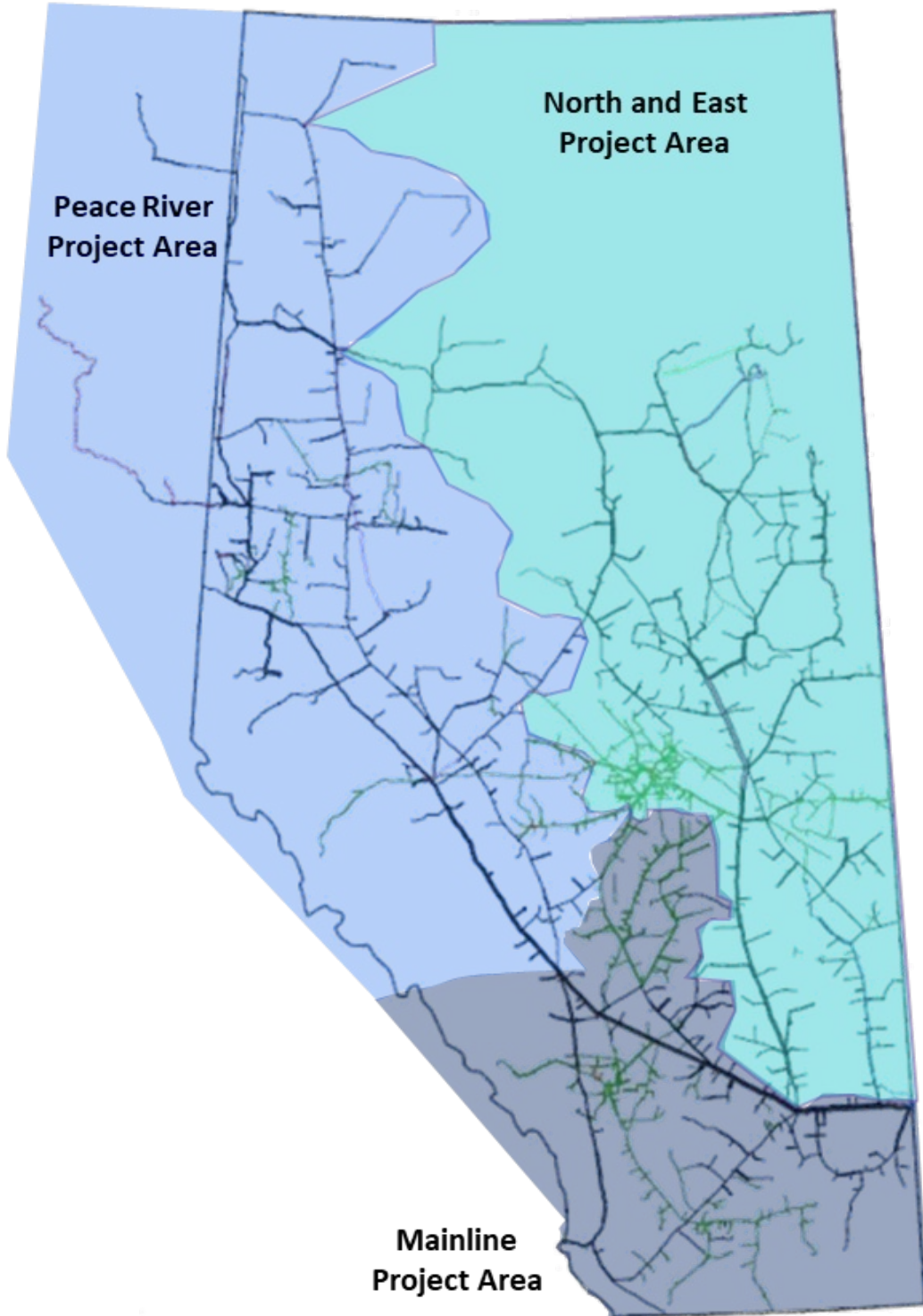
This section describes:

- economic assumptions used in developing the 2024 Design Forecast
- receipt and delivery forecasts for the NGTL System
- supply contribution, including winter withdrawal from storage facilities, used in the design process

For further information on forecasting methodology, see Facilities Design Methodology, Section 4.4: Design Forecast Methodology, which can be accessed at <http://www.tccustomerexpress.com/871.html>

In order to highlight the regional forecast differences on the NGTL System, this section references the three Project Areas as per the NGTL tariff. Figure 1-1 depicts the three Project Areas.

Figure 1-1: NGTL Project Areas





## 1.2 ECONOMIC ASSUMPTIONS

### 1.2.1 General Assumptions

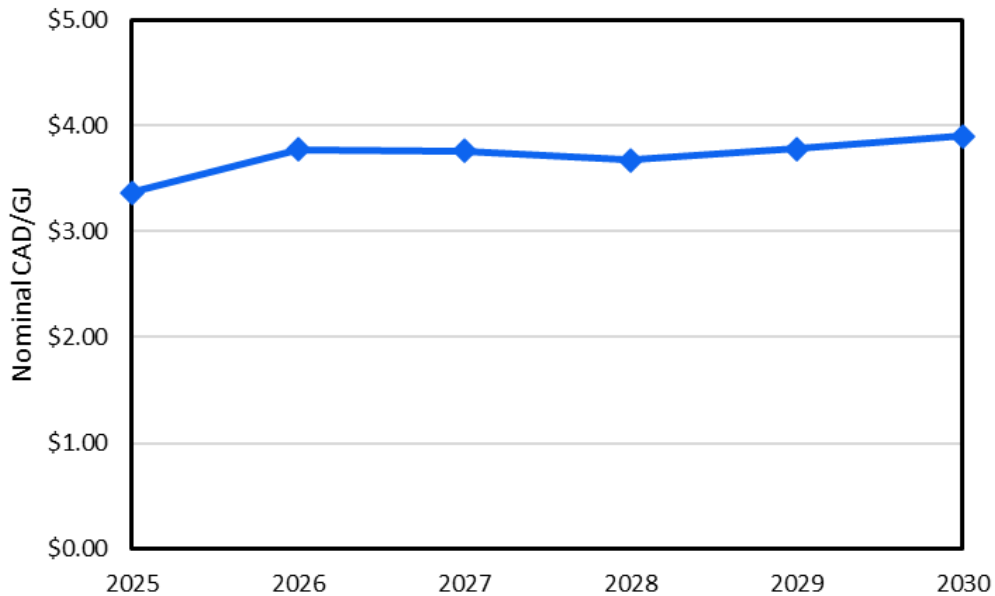
The following assumptions, developed in early 2024, reflect broader trends in the North American economy and energy markets, and underlie the forecast of receipts and deliveries:

- Owing to the abundance of natural gas resource, supply growth will be constrained by domestic demand, LNG exports, adoption of alternate technologies, and factors such as policy and ability to attain regulatory approvals.
- In the US, industrial demand growth is primarily concentrated in the Gulf Coast and growth in the electric sector is observed across several US census regions. Oil sands and petrochemical projects will lead the domestic industrial gas demand growth in Western Canada.
- In Alberta, new natural gas fired generation capacity of over 2000 MW was added to the electrical grid in 2024.
- LNG export projects are being developed in both the U.S. and Canada. North American LNG exports are expected to reach around 19 Bcf/d in 2025, a growth of over 10 Bcf/d from 2020 levels.
- Associated gas supplies from oil plays and liquids rich gas plays will continue to be strong, supported by strong oil prices, exerting downward influence on North American natural gas prices.
- New natural gas supply must continually be developed to maintain and/or grow the supply in the basin due to the natural declines of existing supply wells.
- NIT/AECO prices are expected to average \$3.70 CAD/GJ over the forecast period.
- The average annual outlooks of receipts, deliveries, and NGTL System throughput volumes reported in this section are understood to be within a range of outcomes due to factors such as changing market conditions and variances in the pace of WCSB supply and infrastructure development.

**1.2.2 Average Natural Gas Price Forecast**

TC Energy considers commodity pricing when determining the economic viability of future natural gas production. The 2024 natural gas price forecast range developed by TC Energy is shown in Figure 1-2.

**Figure 1-2: Average Nominal NIT Price**

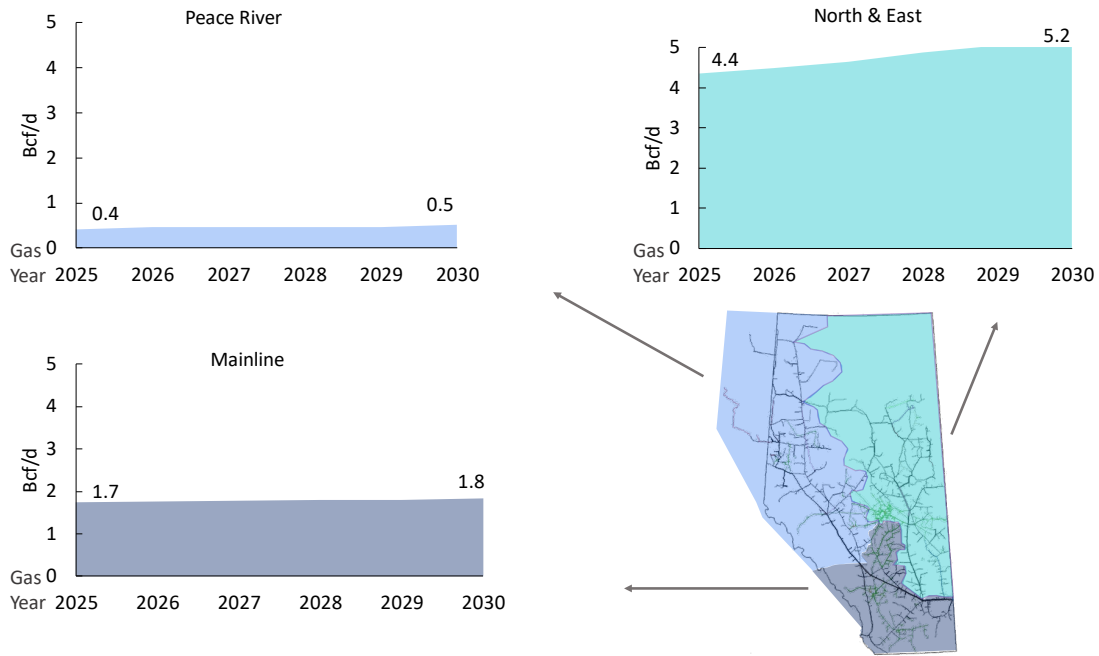


**1.3 GAS DELIVERY FORECAST**

Several sources of information were considered in developing the gas delivery forecast. First, operators of downstream facilities such as connecting pipelines, local distribution companies (LDCs), and industrial plants were requested to provide a forecast of their maximum, average, and minimum requirements for deliveries from the NGTL System over the next 10 years. The forecasts were analyzed and compared with historical flow patterns at NGTL Delivery Points. In cases where NGTL’s analysis differed substantially from the operator’s forecast, NGTL contacted the operator and either the operator’s forecast was revised or NGTL adjusted its analysis. In cases where the operator did not provide a forecast, NGTL based its forecast on historical flows and growth rates for specific demand sectors.

Deliveries to intra markets on the NGTL System are forecast to rise due to increased demand in the oil sands sector, gas-fired electrical generation and growing petrochemical investments.

**Figure 1-3: System Intra Deliveries by Project Area**



### 1.3.1 Average Annual Delivery Forecast

Forecast deliveries are expressed as an average daily flow. The Average Annual Delivery Forecast is the aggregate forecast of deliveries for the NGTL System. The Average Annual Delivery Forecast, for Gas Years 2025 through 2030 are listed by Delivery Type in Table 1-1 and further detailed by Project Area in Table 1-2.

**Table 1-1: System Average Annual Delivery Forecast by Delivery Type**

Delivery Type	2024 Design Forecast (10 <sup>6</sup> m <sup>3</sup> /d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Export	211.3	217.1	222.7	222.7	227.3	241.6
Intra System	184.5	190.4	195.2	202.2	207.5	212.5
<b>Total System</b>	395.8	407.5	417.9	424.9	434.8	454.2
Delivery Type	2024 Design Forecast (Bcf/d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Export	7.5	7.7	7.9	7.9	8.0	8.5
Intra System	6.5	6.7	6.9	7.1	7.3	7.5
<b>Total System*</b>	14.0	14.4	14.8	15.0	15.4	16.0
* Fuel is included						
Note: Totals for Receipt & Delivery may not align due to rounding.						
Volumes expressed as an average daily flow for each gas year, at 101.325 kPa and 15°C.						

**Table 1-2: Intra System Deliveries – Average Annual Delivery Forecast by Project Area**

Project Area	2024 Design Forecast (10 <sup>6</sup> m <sup>3</sup> /d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Peace River	11.7	13.1	13.0	13.4	13.3	14.6
North and East	123.4	127.1	131.5	138.0	143.0	146.2
Mainline	49.3	50.1	50.6	50.7	51.2	51.7
<b>Total</b>	184.5	190.4	195.2	202.2	207.5	212.5
Project Area	2024 Design Forecast (Bcf/d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Peace River	0.4	0.5	0.5	0.5	0.5	0.5
North and East	4.4	4.5	4.6	4.9	5.0	5.2
Mainline	1.7	1.8	1.8	1.8	1.8	1.8
<b>Total*</b>	6.5	6.7	6.9	7.1	7.3	7.5
* Fuel is included						

### 1.3.2 Maximum Day Delivery Forecast

Peak deliveries (Maximum Day Delivery) are also forecast for the NGTL Delivery Points and are based on historical flows.

A summary of the 2024 Design Forecast winter and summer Maximum Day Delivery by Project Area for Intra System Deliveries is provided in Table 1-3 for winter and Table 1-4 for summer.

**Table 1-3: Winter Maximum Day Intra System Delivery Forecast**

Project Area	2024 Design Forecast (10 <sup>6</sup> m <sup>3</sup> /d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Peace River	33.4	35.0	35.1	35.0	35.1	31.9
North and East	185.6	192.6	198.3	207.2	213.6	212.7
Mainline	98.9	100.4	101.2	101.3	102.2	103.2
<b>Total</b>	317.9	328.0	334.6	343.4	350.9	347.8
Project Area	2024 Design Forecast (Bcf/d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Peace River	1.0	1.2	1.2	1.2	1.2	1.2
North and East	6.0	6.6	6.8	7.0	7.3	7.5
Mainline	3.3	3.5	3.5	3.6	3.6	3.6
<b>Total*</b>	10.3	11.2	11.6	11.8	12.1	12.4
* Fuel is included						

**Table 1-4: Summer Maximum Day Intra System Delivery Forecast**

Project Area	2024 Design Forecast (10 <sup>6</sup> m <sup>3</sup> /d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Peace River	31.2	32.8	32.9	32.7	32.8	29.7
North and East	168.9	173.5	178.6	185.2	190.5	190.4
Mainline	75.8	77.2	77.9	77.8	78.8	79.7
<b>Total</b>	275.9	283.4	289.4	295.7	302.2	299.8
Project Area	2024 Design Forecast (Bcf/d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Peace River	1.1	1.2	1.2	1.2	1.2	1.0
North and East	6.0	6.1	6.3	6.5	6.7	6.7
Mainline	2.7	2.7	2.8	2.7	2.8	2.8
<b>Total*</b>	9.7	10.0	10.2	10.4	10.7	10.6
* Fuel is included						

#### 1.4 RECEIPT FORECAST

NGTL develops a Receipt Forecast on an average annual basis using information collected from several sources, including upstream information from customers, historical flows, industry publications and government agencies.

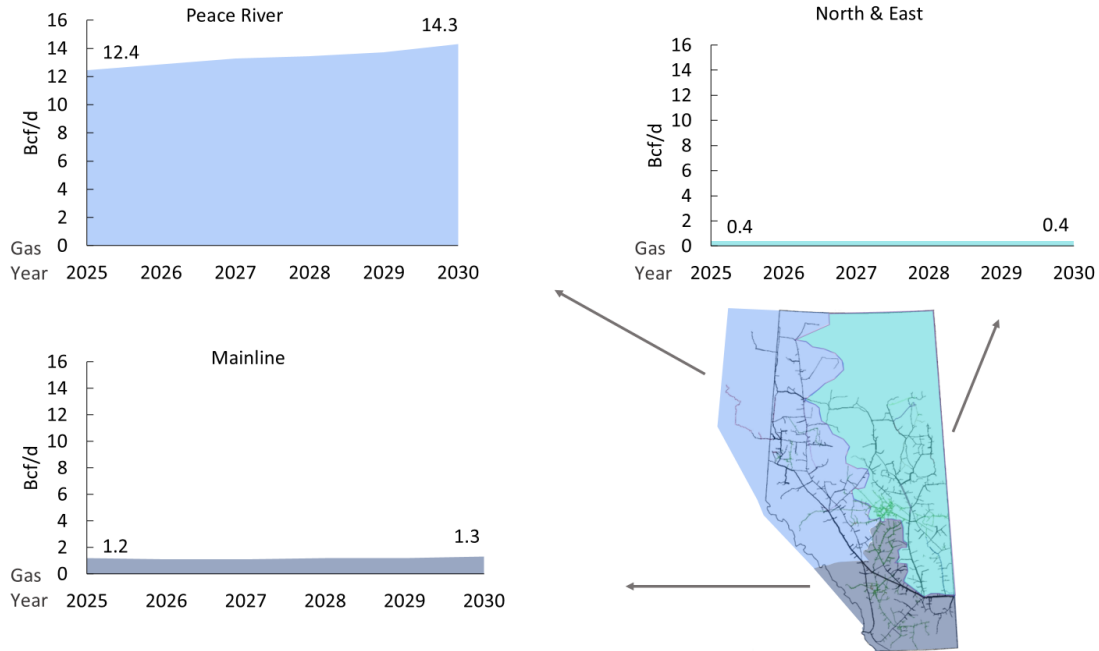
- NGTL uses activity-based forecasting methods and models to generate forecasts of future production. Factors such as gas price, liquids content in the gas, economics, total number of drilling locations available, well production profiles, pace of development, material and equipment availability, potential capital requirements, land access constraints, and gas gathering capacities are considered when developing a forecast of supply.

For conventional production, there has been little to no development in the last few years. NGTL anticipates that conventional supply will continue to decline. This production decline will be noticed mostly in the northeast and east parts of the basin, which are areas outside of the Peace River Project Area.

The decline rate of legacy gas and the more recent supply from shale and tight sandstone reservoirs varies across the basin and from year to year. In 2023, aggregate basin production from existing wells declined by approximately 24%.

Exploration activity focused on shale and tight sandstone reservoirs has resulted in increasing Montney and Deep Basin gas volumes entering the NGTL System, primarily from the Peace River Project Area. The incremental shale gas and tight sandstone gas supply is expected to more than offset existing basin production declines and will gradually increase system supply to 16 Bcf/d by 2030.

Figure 1-4: System Receipts by Project Area



Gas supplied from storage facilities was not included in the data presented in this section. For information pertaining to gas supply from Commercial Storage Facilities, see Section 1.6.

**1.4.1 Average Receipt Forecast**

The Average Receipt Forecast is the aggregate receipts forecast for the NGTL System for the 2025 through 2030 gas years. A summary of System Average Receipts by Project Area is expressed as an average daily flow and shown in Table 1-5.

**Table 1-5: System Average Receipts**

Project Area	2024 Design Forecast (10 <sup>6</sup> m <sup>3</sup> /d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Peace River	352.6	364.7	376.5	381.2	389.1	405.3
North and East	10.0	10.2	10.5	11.5	11.8	12.1
Mainline	33.2	32.5	32.4	32.7	33.7	36.4
<b>Total</b>	<b>395.8</b>	<b>407.5</b>	<b>419.4</b>	<b>425.4</b>	<b>434.5</b>	<b>453.8</b>
Project Area	2024 Design Forecast (Bcf/d)					
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Peace River	12.4	12.9	13.3	13.5	13.7	14.3
North and East	0.4	0.4	0.4	0.4	0.4	0.4
Mainline	1.2	1.1	1.1	1.2	1.2	1.3
<b>Total</b>	<b>14.0</b>	<b>14.4</b>	<b>14.8</b>	<b>15.0</b>	<b>15.3</b>	<b>16.0</b>

**1.5 SUPPLY DEMAND BALANCE**

**Figure 1-5: System Deliveries by Destination**

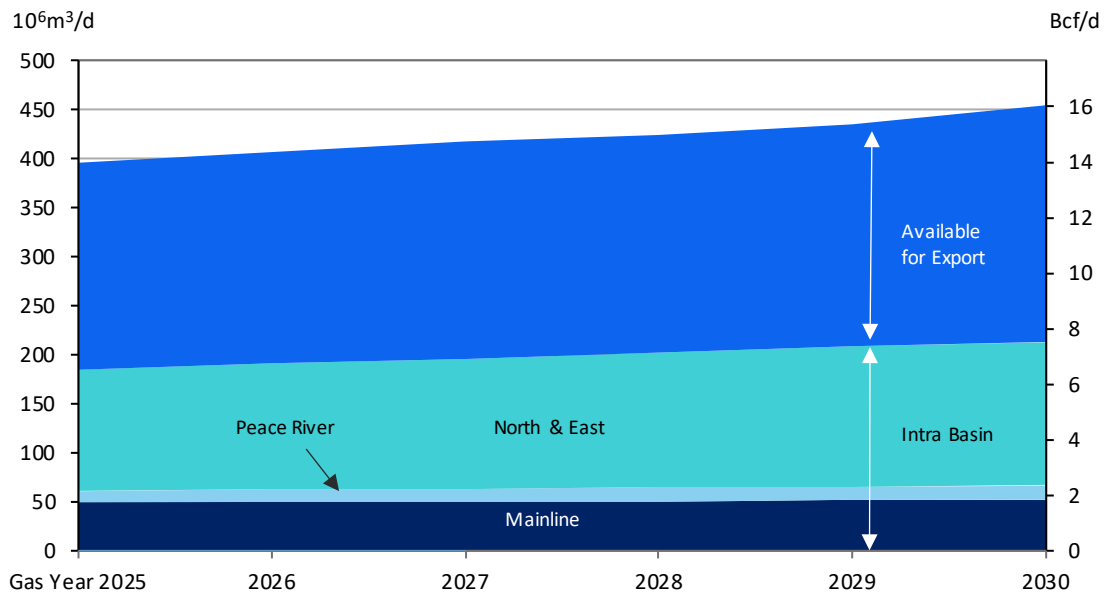
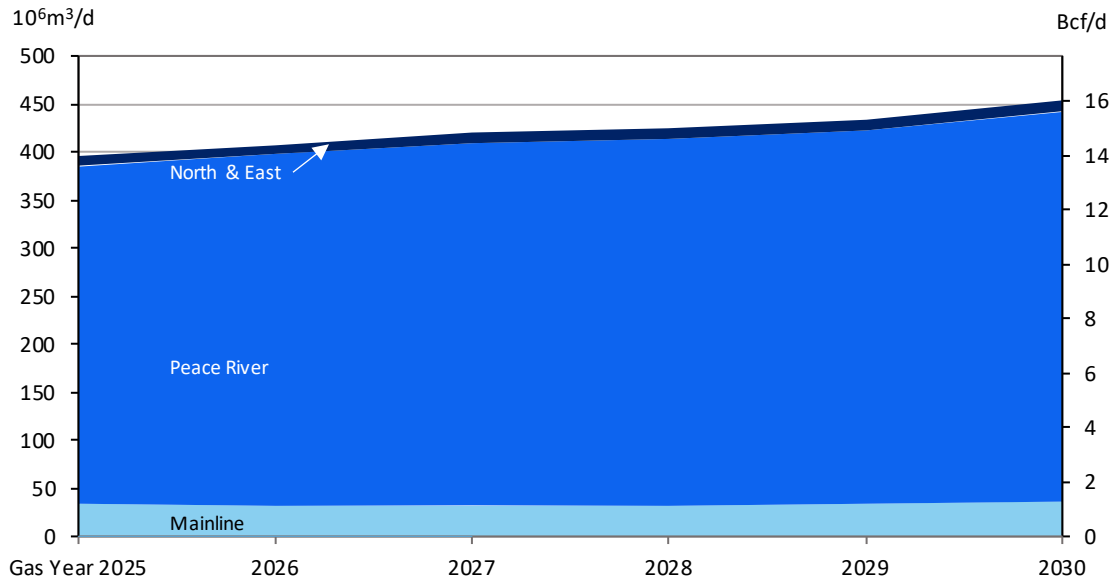




Figure 1-6: System Receipts by Project Area



The average annual outlooks of receipts, deliveries, and NGTL System throughput volumes reported in this section are understood to be within a range of outcomes due to factors such as changing market conditions and variances in the pace of WCSB supply development.

**1.6 STORAGE FACILITIES**

**1.6.1 Commercial Storage**

There are nine commercial storage facilities connected to the NGTL System (AECO ‘C’, Big Eddy, Carbon, Chancellor, Crossfield East #2, January Creek, Severn Creek, Warwick Southeast, and Aitken Creek Meter Stations). The total deliverability from storage facilities is significant, but actual maximum day receipts from storage are dependent on a number of factors, including market conditions, level of working gas, compression power at each storage facility, and NGTL System operations.

For design purposes, a supply contribution from storage facilities is used to meet peak day winter delivery requirements and provide for a better correlation between forecast design flow requirements and historical actual flows for the winter period. Historical withdrawals during recent winter periods for each storage facility were used to determine a reasonable

expected rate of withdrawal for future winter seasons. For the receipt meter capacity for each of the connected commercial storage facilities, see Table 1-6.

**Table 1-6: Receipt Meter Capacity from Commercial Storage Facilities**

Storage Facility	Receipt Meter Capacity from Commercial Storage Facilities	
	10 <sup>6</sup> m <sup>3</sup> /d	Bcf/d
AECO C	40.9	1.4
Big Eddy	43.0	1.5
Aitken Creek (B.C.)	37.6	1.3
Carbon	16.4	0.6
Chancellor	32.8	1.1
Crossfield East 2	16.0	0.6
January Creek	20.0	0.7
Severn Creek	8.4	0.3
Warwick Southeast	7.6	0.3
<b>Total</b>	<b>222.7</b>	<b>7.8</b>
Note: Storage is considered an interruptible supply source. Totals have been rounded.		

**1.6.2 Peak Shaving Storage**

The Fort Saskatchewan Salt Caverns are a peak shaving storage facility in the greater Edmonton area within the ATCO Pipeline footprint, in the North of Bens Lake Design Area of the NGTL System. Similar to commercial storage facilities, the total deliverability from the peak shaving storage facility is significant, and the actual maximum day receipt from this storage also depends on a number of factors, including market conditions, level of working gas, compression power at the storage facility and NGTL System operations.

For design purposes, a supply contribution from the peak shaving storage facility is used to meet peak day winter delivery requirements and provide for a better correlation between forecast Design Flow requirements and historical actual flows for the winter period. The

maximum withdrawal rate and the maximum working inventory of the storage facility are used as the upper limits for the supply contribution provided.

## 2.0 DESIGN FLOWS AND MAINLINE FACILITIES

### 2.1 INTRODUCTION

This section contains the potential and proposed natural gas transportation mainline facilities that may be necessary to meet the Design Flow requirements. Included is information regarding facility size, routes, locations, and cost estimates.

The Design Flows are presented for Design Areas where new mainline facilities may be required. Design flows are based on the 2024 Design Forecast presented in Section 1, and were determined using the methodology described in *Facilities Design Methodology*, Section 3.5: Mainline Facilities Flow Determination. This document can be accessed at <http://www.tccustomerexpress.com/871.html>. Design charts for key areas are presented to provide an understanding of how the NGTL System is evolving.

This section includes a comparison of historical flows to the Design Flows. Additionally, the expected design capability is shown for the Gas Year when facilities are required in each applicable Design Area. Where there is a shortfall between Design Flow and the design capability, a potential facility solution is identified. A facility application to the regulator for construction and operation is triggered by Firm Transportation (FT) contracts in excess of design capability and submitted to ensure the facility is in place in time to meet the FT requirements. Aggregated FT contract levels are also presented to indicate commercial support of the proposed facilities.

This section of the Annual Plan presents potential facilities that serve aggregate system requirements. Presentation of the potential and proposed facilities in this manner is intended to improve the clarity of their requirement and commercial contractual support. Contractual support for some of the potential aggregate system facilities is still pending finalization. As such, these facilities' scope and in service timing are subject to change.

An overview of the Design Flows and proposed facilities resulting from the 2024 Design Forecast, as well as the potential facilities for incremental flow, were presented to the TTFP

on December 10, 2024. Subsequent updates to these facilities and notifications prior to filing for their applications will be presented to the TTFP as they occur. These updates, as well as any new facilities proposed after issuance of this Annual Plan, will be shown in the *Facility Status Update (NGTL 2025 Update)*, which can be accessed at <http://www.tccustomerexpress.com/871.html>.

For a summary of the status of mainline facilities that have been proposed, applied for, under construction or placed in-service since the 2023 Annual Plan, see *Appendix 2: Facility Status Update*.

## 2.2 AGGREGATE SYSTEM REQUIREMENTS

As described in Section 1, average aggregate system demand continues to grow. From the figures provided in Table 1-1, system demand is forecast to grow from 14.0 Bcf/d to 16.0 Bcf/d from Gas Years 2025 to 2030. Also described in Section 1 is the continued supply growth in the Peace River Project Area to meet the increasing aggregate system demand. From the figures provided in Table 1-5, average supply in the Peace River Area is forecast to grow from 12.4 Bcf/d to 14.3 Bcf/d from Gas Years 2025 to 2030.

The forecasted annual average daily flowrates described in Section 1 are translated into peak day Design Flows and used for sub-area facility design. Figure 2-1 shows illustrative<sup>2</sup> system Design Flows which reflect the forecasted trend in average annual total system supply and demand, as well as the historical and future aggregate system FT-R and FT-D levels as of November 1 annually. As can be seen in the chart, aggregated Design Flows are forecast to increase, along with system FT-R and FT-D contracts levels. In addition to the secured contracts, there is expressed customer interest for additional firm contracting subject to commercial arrangements (illustrated as the orange and purple shaded areas in Figure 2-1).

The system receipts that meet these growing system deliveries come from three sources:

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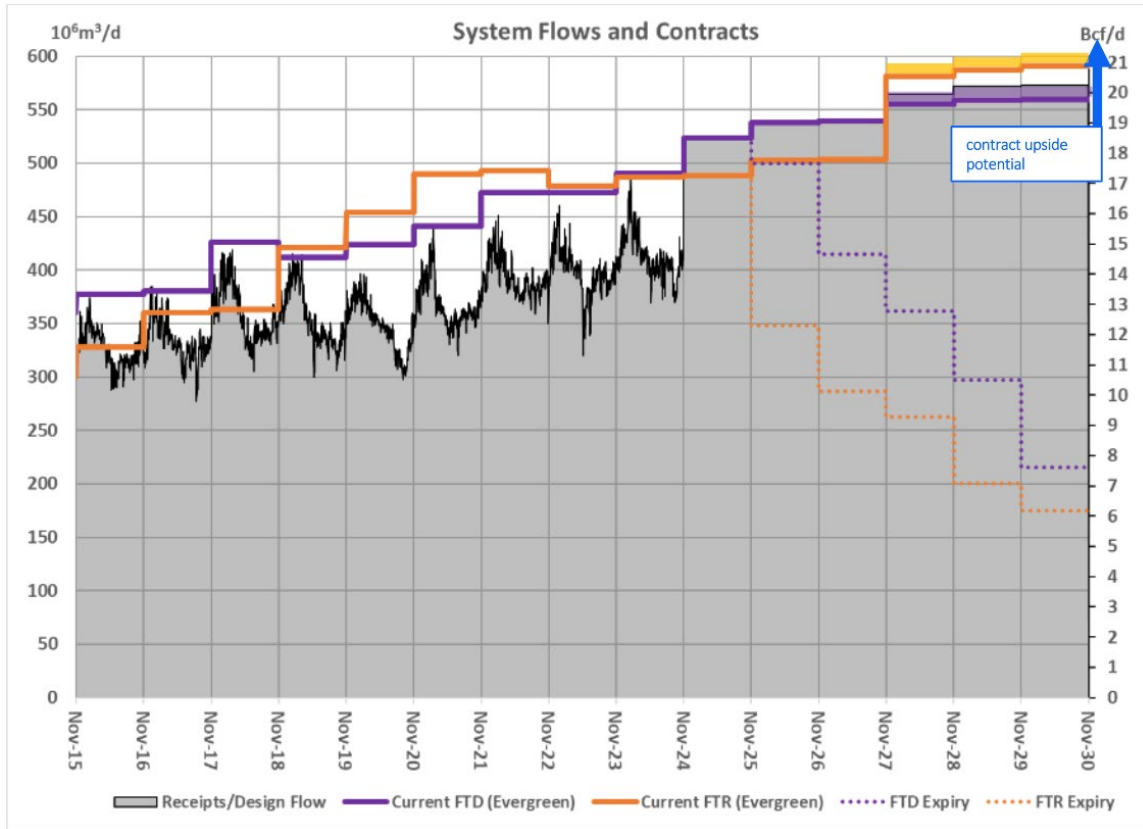
<sup>2</sup> For assessing facilities requirements, the Integrated Alberta System is divided into sub-areas with seasonal design flows that best reflect the flow pattern of each specific area. As such, there is no single design flow for the entire system however this illustrative chart provides a sum of all the sub-area flows.

1. Storage withdrawals, which have no associated FT-R contracting and are not driving additional facilities
2. Receipts from unconstrained areas outside the Peace River Project Area, which have minimal associated FT-R contracting and are not driving additional facilities
3. Growing receipts from the Peace River Project Area, where additional FT-R contracting is required to commercially support the additional facilities.

Although Figure 2-1 depicts aggregate system FT-R, the additional facilities that meet the growing aggregate system requirements are required only for the growing receipts in the Peace River Project Area. As such, it is only the FT-R in the Peace River Project Area that represents the commercial contract support for receipts at the aggregate system level. As provided later in Figure 2-2 in Section 2.4.1, FT-R contracting in the Peace River Project Area continues to exceed the increasing receipt Design Flows in that particular area, thereby commercially supporting potential and proposed facilities.

Figure 2-1 also depicts the hypothetical FT expiry profiles if all contracts non-renewed. Although all previously proposed facilities continue to be required and contractually supported, contract renewals are closely monitored to ensure this remains true. Should contractual support change, NGTL will appropriately adjust facility plans and/or repurpose capacity.

Figure 2-1: Illustrative Aggregate System Flows, Design Flows, and Contracts



### 2.3 FACILITIES FOR AGGREGATE SYSTEM REQUIREMENTS

As described in Section 2.2, supply in the Peace River area is expected to represent an increasing share of aggregate System supply, upward of 89%. Since this area represents such a large portion of total system supply, ensuring that flows out of the Peace River Area and into the various demand markets attached to the NGTL System is critical to the overall balancing of NGTL aggregate System requirements.

The design condition for the Peace River Area is very interdependent with total system conditions. The prevailing design condition for the Peace River Area is therefore best represented by a Total System Flow-Within condition: When total system deliveries are at their maximum and total system receipts, a vast majority of which are from the Peace River Area, also peak. System facilities must be capable of transporting enough gas out of the

Peace River Project Area to meet expected peak deliveries throughout the rest of the system.

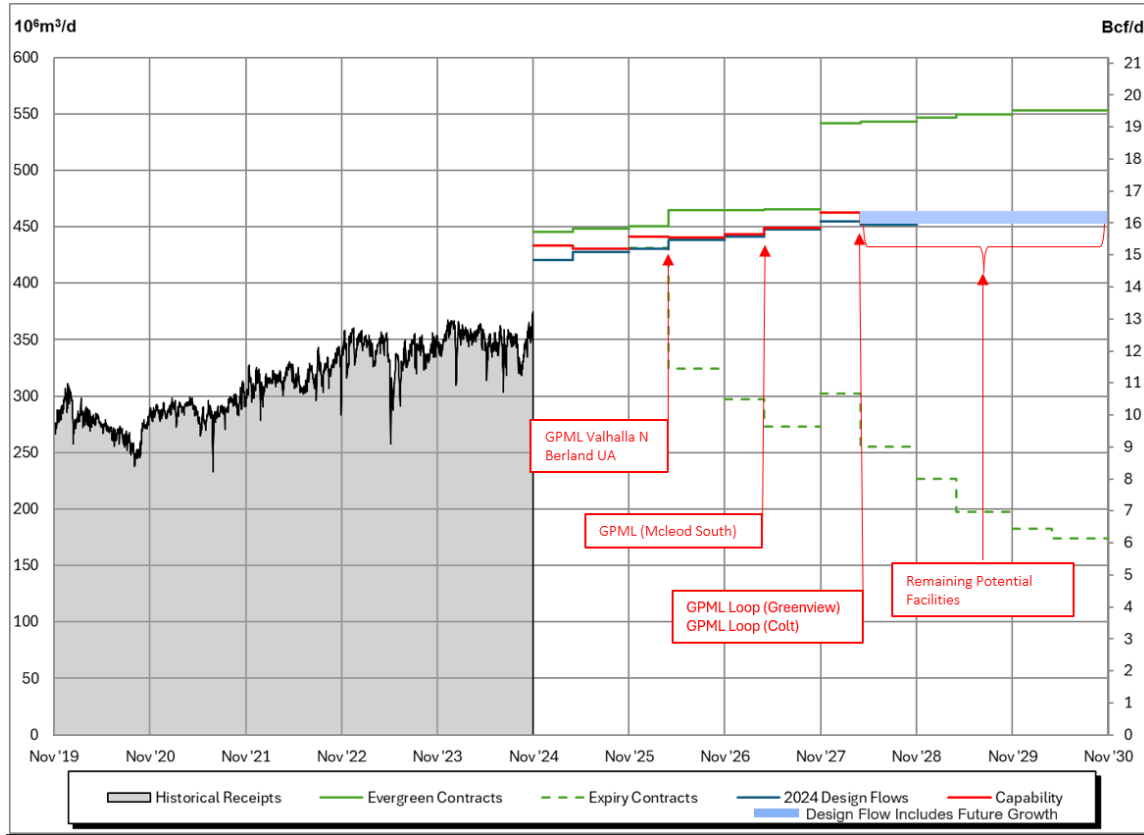
### **2.3.1 Design Flows – Peace River Project Area**

The Design Flows for the Total System Flow-Within design condition in the Peace River Project Area are the maximum expected local receipts in the area. The forecast continued receipt growth in the area can be accommodated by 11 potential facilities.

Figure 2-2 shows historical receipts, receipt Design Flow, contract levels and design capability for the Peace River Project Area. Receipt Design Flow rises throughout this forecast period, attributable to increasing supply in the Peace River Project Area. Although the Design Flow is forecasted to rise from 15.9 Bcf/d to 16.6 Bcf/d from April 2028 to November 2030, the pace at which it will grow, and any potential facilities required will be defined by customer needs and commercial support. The refinement of customer needs and potential facilities over this period is represented by the light blue band in Figure 2-2. The potential facilities are required to keep the design capability above the rising Design Flow as highlighted in red in Figure 2-2. Further details on the potential facilities are provided in Section 2.3.2.



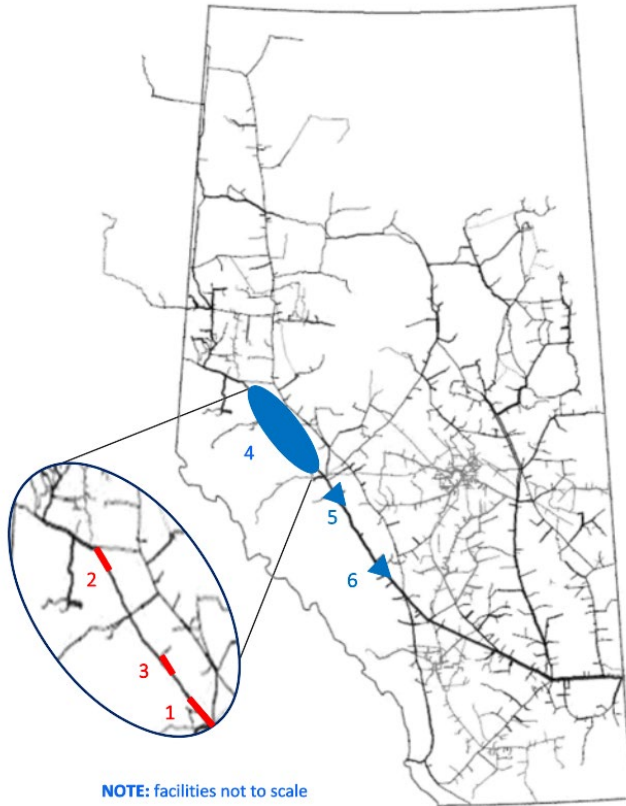
Figure 2-2: Peace River Project Area Design Chart



### 2.3.2 Potential Facilities for Aggregate System Requirements

Figure 2-3 shows the locations of the potential facilities required to meet the Peace River flows in the Total System Flow-Within design condition. These facilities increase the receipt capability for the Peace River Project Area, enabling aggregate system supply to meet aggregate system demand.

**Figure 2-3: Potential Facilities for Aggregate System Requirements**



The need and scheduling for these potential facilities are contingent on further technical analysis, in some cases subject to additional commercial contractual support and in all cases dependant on NGTL final investment decision.

Should they proceed, applications may need to be filed with the CER as early as Gas Year 2025 and targeted to be in-service between 2027-2030. For details on the potential facilities, see Table 2-1.

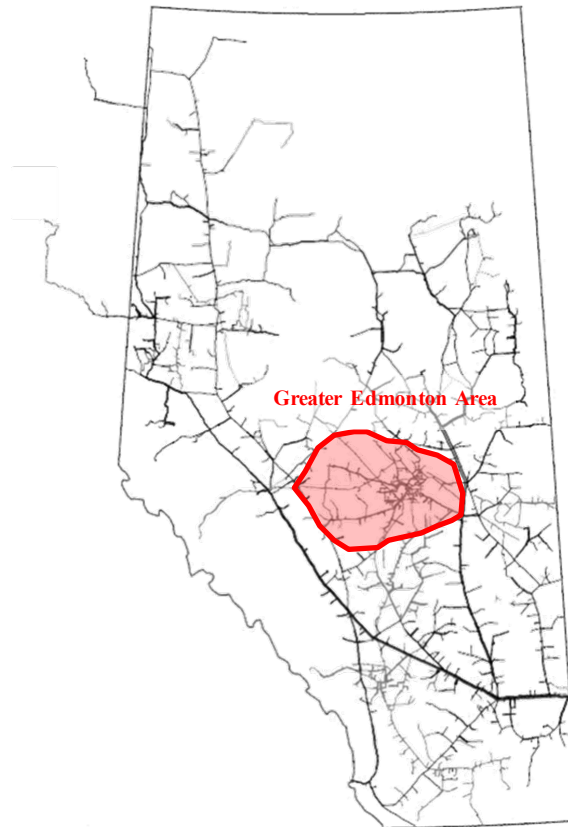
**Table 2-1: Potential Facilities for Aggregate System Requirements**

Map Location	Potential Facility	Description	Target In-Service Date	Forecast Cost (\$Millions)
1	GPML Loop (McLeod South)*	21 km NPS 48	April 2027	321
2	GPML Loop (Greenview)	15 km NPS 48	April 2028	205
3	GPML Loop (Colt)	20 km NPS 48	April 2028	404
4	GPML Loop (Karr North)	16 km NPS 48	2028-30	238
4	GPML Loop (Karr South)	25 km NPS 48	2028-30	332
4	GPML Loop (Deep Valley North)	14 km NPS 48	2028-30	254
4	GPML Loop (Deep Valley South)	23 km NPS 48	2028-30	379
4	GPML Loop (Hornbeck Section)	13 km NPS 48	2028-30	238
4	GPML Loop (McLeod North)	13 km NPS 48	2028-30	211
5	Wolf Lake Unit and Cooler Additions	30 MW	2028-30	362
6	Vetchland Unit and Cooler Additions	30 MW	2028-30	352
			<b>Total</b>	<b>3.296</b>

*\* Commercial contractual support completed*

#### **2.4 FACILITIES FOR GREATER EDMONTON AREA DEMANDS**

Two proposed facilities are required to meet the aggregate delivery requirements in the Greater Edmonton area. Deliveries in this area, shown in Figure 2-4, are a mix of power generation, other industrial, and residential/commercial deliveries. The supply required to meet Greater Edmonton area demands is currently transported through several major corridors with the most significant ones on the eastern side of Edmonton. The proposed facilities will create an additional major corridor on the western side of Edmonton which is a shorter distance to Peace River system supply.

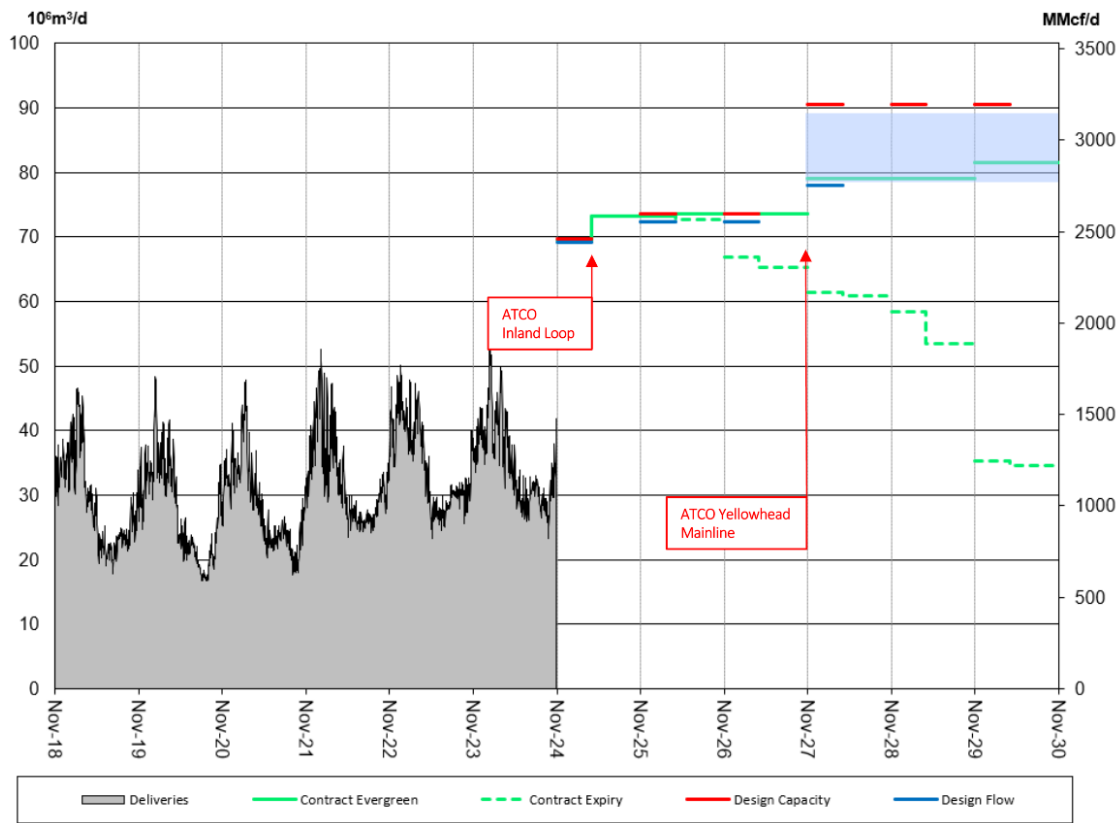
**Figure 2-4: Greater Edmonton Area**

### 2.4.1 Design Flows – Greater Edmonton Area

The prevailing design condition for the Greater Edmonton area is the Flow-Within Condition: When local area deliveries are at their maximum and local area receipts are at their minimum. As local area receipts continue to decline and demands increase, facilities are required to transport in more receipts from outside the area to satisfy demand requirements. Figure 2-5 shows historical flows, Design Flows, contract levels and design capability for the Greater Edmonton area. As can be seen, delivery Design Flow rises throughout this forecast period, attributable primarily to significant industrial growth and supported by incremental FT-D contracting. The proposed facilities are highlighted red in Figure 2-5 to provide a correlation to the increase in design capability and indicate its requirement.

Since the proposed facilities create an additional major corridor into the Greater Edmonton Area, it will provide a significant step change in design capacity. This increased capability from the proposed facilities is required for the forecast Design Flows and supported by incremental contracts. These facilities will also provide additional capability that could be utilized for additional future flow increases. There are pending contracts and expressed customer interest for additional firm contracting pending commercial arrangements that could increase the current Design Flows further. This potential increase is represented by the light blue band in Figure 2-5.

**Figure 2-5: Greater Edmonton Area Design Chart**

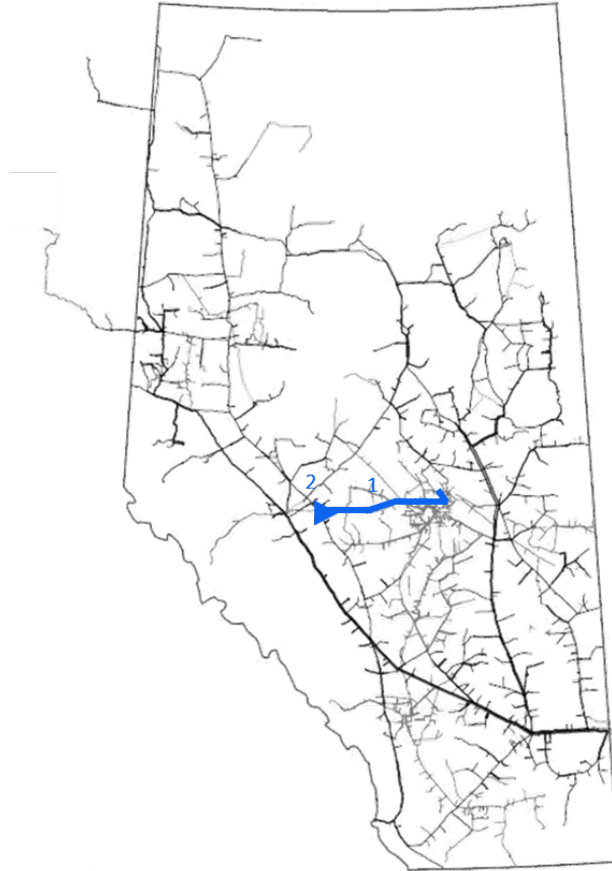


**2.4.2 Proposed Facilities for Greater Edmonton Area Demands**

Figure 2-6 shows the location of the proposed facilities required for Greater Edmonton area demands. These ATCO facilities will create a new major corridor capable of operating at

a higher pressure than the existing western corridors. This will provide an additional direct and efficient corridor for Peace River system supply to meet Greater Edmonton area demands.

**Figure 2-6: Proposed Facilities for Greater Edmonton Area Demands**



The Need Assessment Application for the proposed facilities was filed by ATCO with the AUC in September 2024 and the proposed facilities are targeted to be in-service for November 2027. For details on the proposed facilities, see Table 2-2.

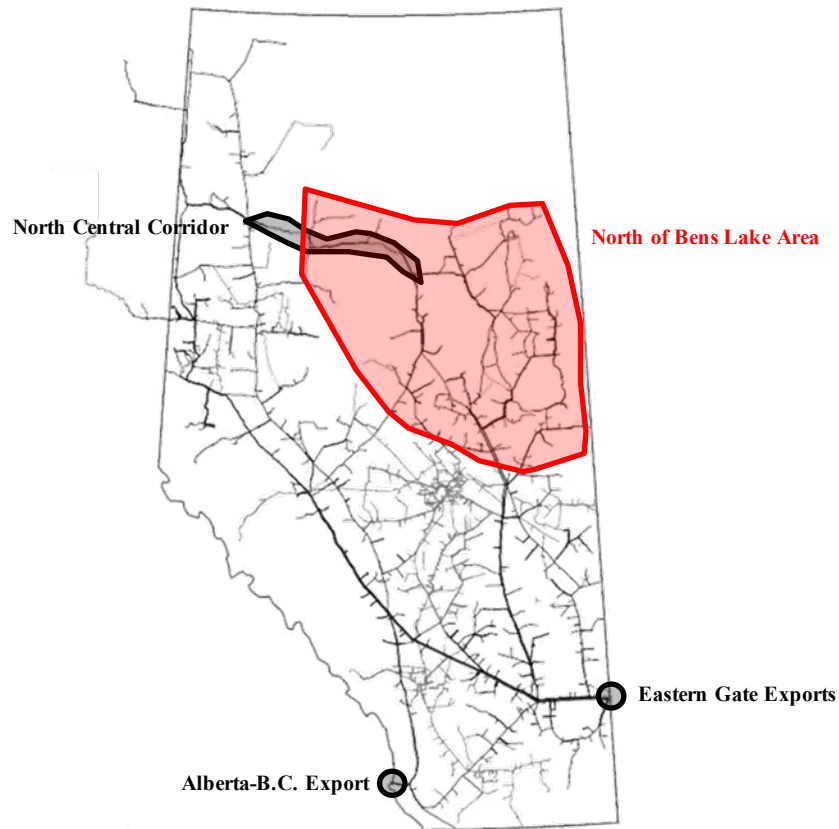
**Table 2-2: Proposed Facilities for Greater Edmonton Area Demands**

Map Location	Proposed Facility	Description	Target In-Service Date	Forecast Cost (\$Millions)
1	Yellowhead Mainline (ATCO)	226 km NPS 36 Control Stations	Nov 2027	2,541
2	Peers Unit Addition (ATCO)	18 MW	Nov 2027	272
			<b>Total</b>	<b>2,813</b>

**2.5 OTHER KEY AREAS**

Design charts for other areas are presented in this section. The intent is to provide an understanding of the impact of previously proposed facilities in these other areas, and relay how the NGTL System is evolving in general. Figure 2-7 shows the locations of these key areas.

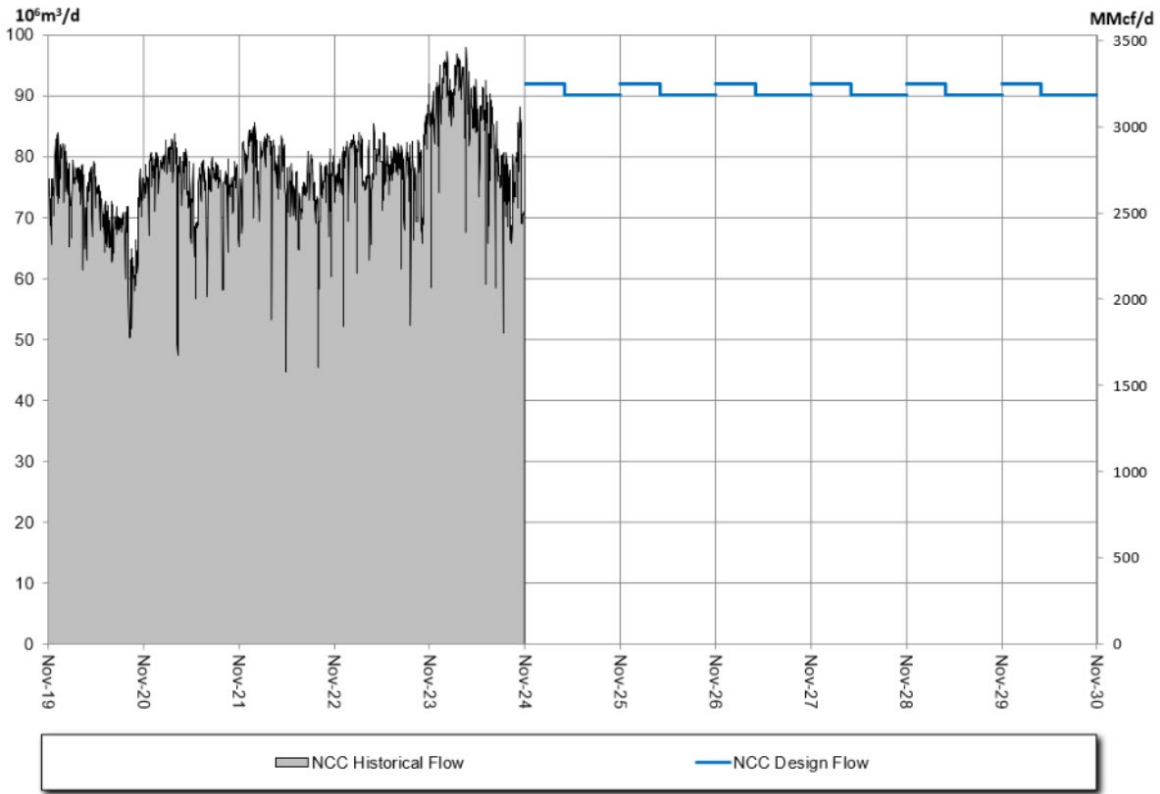
**Figure 2-7: Key Areas**



**2.5.1 Design Flows – North Central Corridor (NCC)**

The NCC is the primary corridor feeding demands in northeast Alberta, which includes major oilsands deliveries. NGTL’s recent North Corridor Expansion Project increased NCC capability to help satisfy these growing deliveries, and this capability is expected to continue to be fully utilized going forward.

Figure 2-8: NCC Design Chart

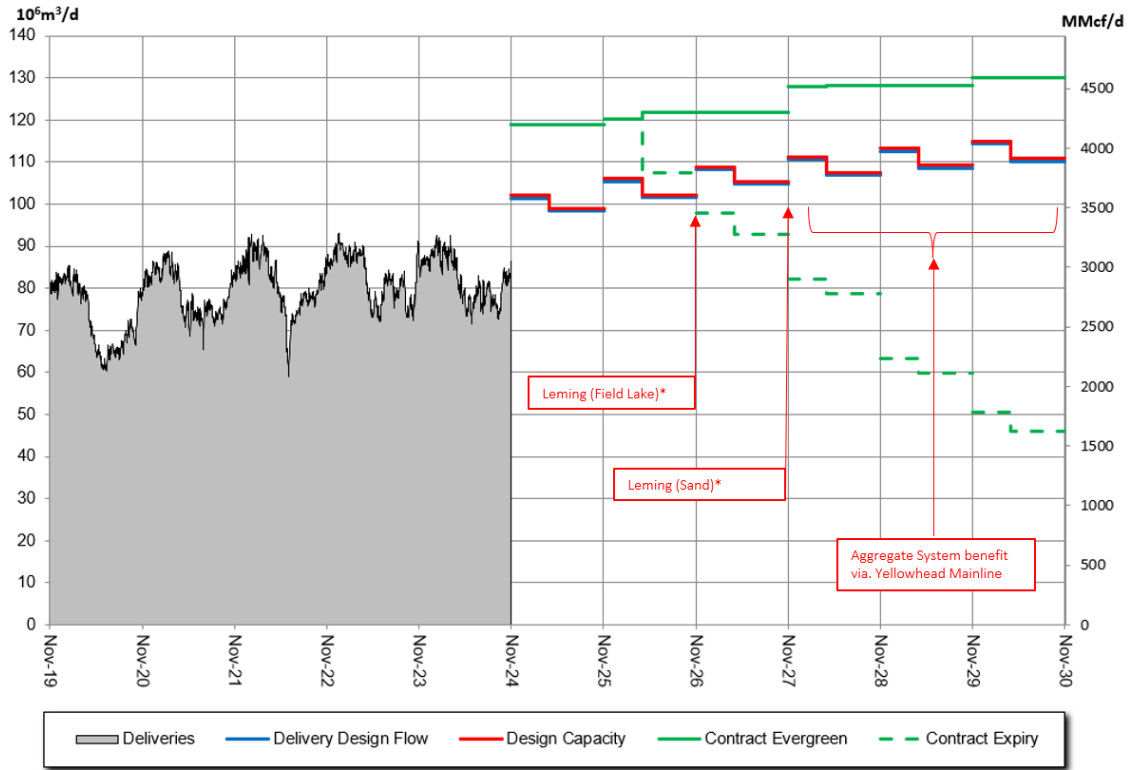


**2.5.2 Design Flows – North of Bens Lake Area**

The North of Bens Lake area in northeast Alberta includes major oilsands deliveries. In 2023 NGTL’s North Corridor Expansion Project increased NCC capability to help satisfy growing deliveries in this area. Longer-term, growth in this area is projected to subside.



Figure 2-9: North of Bens Lake Design Chart

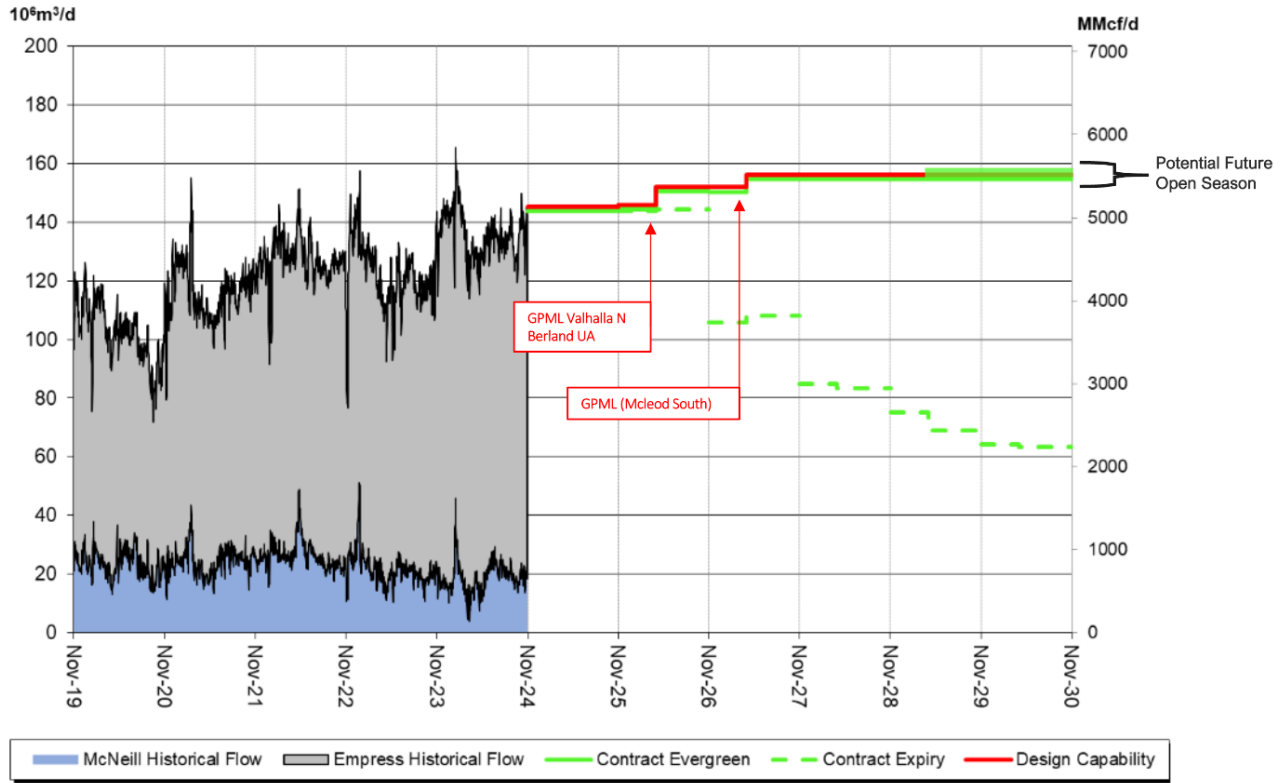


\*Targeting an April ISD due to seasonal constructability

### 2.5.3 Design Capability – Eastern Gate Exports (EGAT)

EGAT exports comprises the deliveries to the Empress and McNeill export points. The green band starting in April 2029 in Figure 2-10 represents potential additional contracting from potential future open season(s).

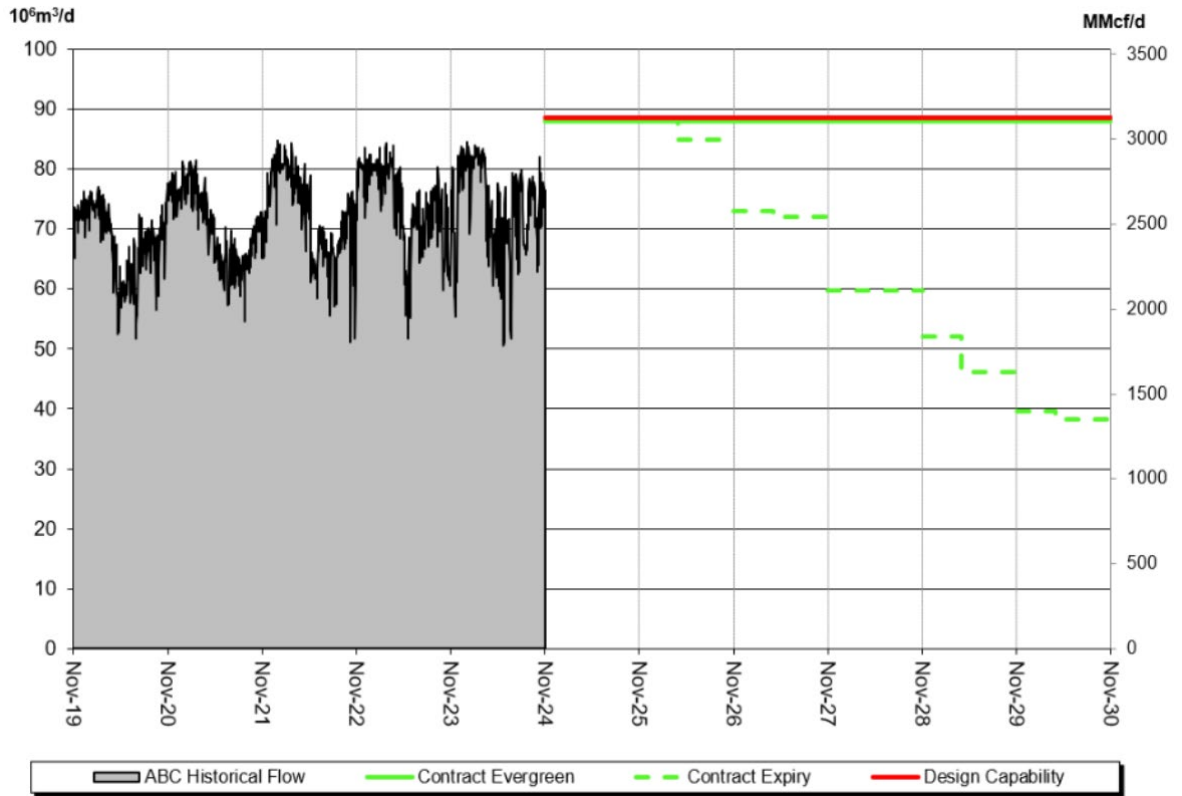
Figure 2-10: EGAT Design Chart



### 2.5.4 Design Capability – Alberta-British Columbia Export Point (ABC)

The ABC export point is where NGTL delivers to the Foothills B.C. system. In 2023 the West Path Delivery project increased ABC export capability to meet the contracted export flowrates.

Figure 2-11: ABC Design Chart



### 3.0 EXTENSION FACILITIES, LATERAL LOOPS AND METER STATIONS

No additional extension facilities, lateral loops or receipt and delivery meter stations have been identified for this Annual Plan.

For a summary of the status of facilities that have been proposed, applied for, under construction or placed in-service since the 2023 Annual Plan, see *Appendix 2: Facility Status Update*.

#### **Planned Meter Stations**

Meter station projects are identified and planned to meet customer requests for service on an ongoing basis throughout the year. As new meter station projects are triggered the TTFP will be informed and the new meter station projects will be included in the *Facility Status Update (NGTL 2025 Update)*, which can be accessed at <http://www.tccustomerexpress.com/871.html>

**Appendix 1: Glossary of Terms**

The following definitions are provided to help the reader understand the Annual Plan. The definitions are not intended to be precise or exhaustive and have been simplified for ease of reference. These definitions should not be relied on to interpret NGTL's Gas Transportation Tariff or any Service Agreement. Capitalized terms not defined here are defined in NGTL's Gas Transportation Tariff.

**Allowance for Funds Used During Construction (AFUDC)**

The capitalization of financing costs incurred during construction of new facilities before the facilities are included in rate base.

**Annual Plan**

A document outlining NGTL's planned facility additions and major modifications.

**Average Annual Delivery**

The average day delivery determined for the period of one Gas Year. All forecast years are assumed to have 365 days.

**Average Day Delivery**

The average day delivery over a given period, determined by summing the total volumes delivered divided by the number of days in that period. It is determined for either a Delivery Point or an aggregation of Delivery Points.

**Average Receipt Forecast**

The forecast of average flows expected to be received onto the NGTL System at each receipt point.

**Coincidental**

Occurring at the same time.

**Delivery Meter Station**

A facility that measures gas volumes leaving the NGTL System.

**Delivery Point**

The point where gas might be delivered to customer by company under a Schedule of Service, which shall include but not be limited to Group 1 Delivery Point, Group 2 Delivery Point, Group 3 Delivery Point, Extraction Delivery Point and Storage Delivery Point.

**Delivery Design Area**

The NGTL System is divided into five delivery design areas used to facilitate delivery service within or between Delivery Design Areas:

Northwest Alberta and Northeast BC Delivery Area

Northeast Delivery Area

Southwest Delivery Area

Southeast Delivery Area

Edmonton and Area Delivery Area

**Demand Coincidence Factor**

A factor applied to adjust the system maximum and minimum day deliveries in a design area to a value more indicative of the expected actual peak day deliveries.

**Design Area**

Project areas (Peace River Project Area, North and East Project Area and Mainline Project Area) can be further subdivided into design and sub design areas. This subdivision allows the system to be modelled in a way that best reflects the pattern of flows in each area of the system when determining facility requirements.

**Design Capability**

The maximum volume of gas that can be transported in a pipeline system considering design assumptions. Usually presented as a percentage of Design Flow requirements.

**Design Flows**

Forecast of Peak Expected Flow required to be transported in a pipeline system considering design assumptions.

**Design Forecast**

Forecast of the most current projection of receipts and deliveries over a five-year design horizon.

**Expansion Facilities**

Facilities that will expand the existing NGTL System to/from the point of customer connection, including any pipeline loop of the existing system, metering and associated connection piping and system compression.

**Extension Facilities**

Facilities that connect new or incremental supply or markets to the NGTL System.

**Firm Transportation**

Service offered to customers to receive gas onto the NGTL System at Receipt Points or deliver gas off the NGTL System at Delivery Points with a high degree of reliability.

**Flow-Through Design Condition**

For the purposes of facility design, a condition for a specified area when deliveries are at their minimum and receipts are at their maximum in that area.

**Flow-Within Design Condition**

For the purposes of facility design, a condition for a specified area when deliveries are at their maximum and receipts are at their minimum in that area.

**Gas Year**

A period beginning at 800 hours (08:00) Mountain Standard Time on the first day of November in any year and ending at 800 (08:00) Mountain Standard Time on the first day of November of the next year.

**Interruptible Transportation**

Service offered to customers to receive gas onto the NGTL System at Receipt Points or deliver gas off the NGTL System at Delivery Points, provided capacity exists in the facilities, that is not required to provide firm transportation.

**Lateral**

A section of pipe that connects one or more Receipt or Delivery Points to the mainline.

**Liquefied Natural Gas (LNG)**

Natural gas that has been cooled down to liquid form for ease of transport.

**Loop**

The paralleling of an existing pipeline by another pipeline.

**Mainline**

A section of pipe, identified through application of the mainline system design assumptions, necessary to meet the aggregate requirements of all customers.

**Maximum Day Delivery**

The forecast maximum volume, included in the design, to be delivered to a Delivery Point.



**Maximum Operating Pressure**

The maximum operating pressure at which a pipeline is operated.

**Minimum Day Delivery**

The forecast minimum volume, included in the design, to be delivered to a Delivery Point.

**NPS**

Nominal pipe size, in inches.

**Non-coincidental**

Non-simultaneous occurrence.

**Peak Expected Flow**

The peak flow expected to occur at a point or points on the NGTL System. For a design area or sub design area, this is the coincidental peak of the aggregate flow. For a single receipt point, it is equivalent to field deliverability.

**Project Area**

For design purposes, the NGTL System is divided into three project areas – Peace River Project Area, North and East Project Area and Mainline Project Area.

**Receipt Meter Station**

A facility that measures gas volumes entering the NGTL System.

**Receipt Point**

The point on the NGTL System at which gas may be received from customer by company under a Schedule of Service.

**Storage Facility**

Any commercial facility where gas is stored, that is connected to the NGTL System, and that is available to all customers.

**Summer Season**

The period starting April 1 and ending on October 31 of any calendar year.

**System Average Receipts**

The forecast of aggregate average receipts at all Receipt Points.

**Transportation Design Process**

The process that includes qualifying a customer's applications for service, designing additions to the system, sourcing all required facilities and installing facilities to meet firm transportation requests.

**Winter Season**

The period starting November 1 of any year and ending on March 31 of the following year.

**Appendix 2: Facility Status Update**

The Facility Status Update (NGTL 2025 Update) is available as an Adobe Acrobat PDF or MS Excel version with sort and search functionality. It is maintained as a separate document(s) which can be accessed at <http://www.tccustomerexpress.com/871.html>

### Appendix 3: System Map

The System Map, including the 2024 Annual Plan facilities, is expected to be available in March 2025 and can be accessed at <https://www.tccustomerexpress.com/855.html>

**Appendix 4: Unit Transportation Cost Data**

This expanded Appendix 4 is being provided pursuant to Order TG-001-2020 through which the Canada Energy Regulator (CER) directed NGTL to extend its narrative accompanying unit cost of transportation data that the National Energy Board initially directed NGTL to provide as part of its Annual Plan in Order TG-004-2018.

Specifically, the CER directed NGTL to extend the narrative to include the following:

- a) A commentary on whether NGTL considers the trend in unit transportation costs to be a reasonable proxy for the general trend in transportation tolls for the same period. If not, NGTL must explain the reasons for the divergence. The Commission encourages NGTL, where appropriate, to use scenarios to illustrate the influence of market forces on pipeline transportation costs; and
- b) NGTL's views on the future competitiveness of its tolls and its perspective on emerging market factors that might affect the long-term viability of NGTL and the competitiveness of the WCSB.

This Appendix 4 provides unit transportation cost data for three historical years and the six forecast years covered in the 2024 Annual Plan.

## Unit Transportation Cost Data (2022 to 2030)

	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>A: Revenue Requirement (\$ million)</b>	2,960 <sup>1</sup>	3,358 <sup>1</sup>	3,723 <sup>2</sup>	4,012 <sup>3</sup>	4,130 <sup>4</sup>	4,265 <sup>4</sup>	4,561 <sup>4</sup>	4,684 <sup>4</sup>	4,925 <sup>4</sup>
<b>B: Throughput <sup>5</sup> (10<sup>9</sup>m<sup>3</sup>)</b>	139	139	143 <sup>2</sup>	153 <sup>6</sup>	149 <sup>6</sup>	153 <sup>6</sup>	156 <sup>6</sup>	160 <sup>6</sup>	167 <sup>6</sup>
<b>C: A/B Unit Cost (\$ million/10<sup>9</sup>m<sup>3</sup>)</b>	21.3	24.2	26.0	26.2	27.7	27.9	29.2	29.3	29.5
Sources: 1. NGTL Quarterly Surveillance Reports for the period ending December 31. 2. NGTL 2024 Final Rates Application. [C29388] 3. NGTL 2025 Interim Rates Application. [C32183] 4. Based on an illustrative escalation of NGTL's 2025 Revenue Requirement and forecast capital additions using simplified assumptions for cost escalations and in-service dates. 5. Based on the sum of all NGTL deliveries excluding storage injections. 6. Based on NGTL's 2024 Design Forecast.									

NGTL views the forecast unit transportation costs to be a reasonable proxy for the general trend in system average transportation tolls for the 6-year period covered in this Annual Plan. There may, however, be some divergence over time due to uncertainty associated with a multitude of factors, market outcomes and capacity scenarios that can influence future transportation costs and/or tolls, including the following:

- WCSB supply/demand changes and the related change in system capacity requirements;
- Location of supply relative to system demand, which influences the extent of facilities required;
- Capacity expansion cost (e.g., depending on system requirements at the time, expansion costs could be higher or lower for an equivalent volume of firm contracts);
- Firm contracting levels (e.g., can influence system capacity requirements, and billing determinants for tolls);
- Supply/Demand characteristics (e.g., base vs. peak loads, which influence pipeline transportation costs);
- Government policy (e.g., can impact costs, firm contract levels or both, and relatedly, pipeline transportation costs);

- 
- Environmental/Social considerations (e.g., concerns over wildlife impacts or landowner considerations and associated cost impacts);
  - Technology improvements (e.g., efficiency gains leading to cost reductions);
  - Services development (e.g., new services that attract and retain volumes to the system providing a net benefit to the system); and
  - Repurposing facilities (e.g., change in utilization in response to changes in requirements).

The WCSB is one of the largest supply basins in North America and provides access to vast relatively low-cost reserves, with an estimated resource of 1105 Tcf<sup>3</sup> which represents 21% of the total North American gas resource. Production of this resource is particularly economic due to the liquids uplift that producers realize, especially for wells drilled in the Montney formation. Connecting to this supply allows NGTL and its customers to maintain access to diverse intra-basin and downstream markets in order to compete with other basins and to compete for market share within the basin.

NGTL regularly assesses the competitiveness of its tolls and the WCSB's competitive access to downstream markets, inclusive of transportation costs. In addition to pipeline transportation toll levels, competitive access to downstream markets is influenced by many other factors including NGTL's multiple service offerings, flexibility of supply and demand options, and the reliability of supply, among others. NGTL notes that customers have subscribed for the full export capacity currently available on the NGTL System as well as for expansion projects to serve both intra-system and downstream demand. This demand for transportation on the NGTL System demonstrates the near-term and longer-term competitiveness of the NGTL System and the WCSB.

The upward trend in unit transportation cost (in nominal terms) shown above reflects that new facilities need to be added over time in order to maintain the connectivity between the WCSB and the various markets served by NGTL, which is essential to maintaining the long-term viability of the NGTL System and the competitiveness of the WCSB. This includes facilities required to

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<sup>3</sup> Canada's Energy Future 2023, Figure 19: Remaining marketable natural gas resources at year-end 2021 in Canada, by type, all scenarios

connect the increasing supply to meet increasing demand. In addition, as new facilities typically cost more than older facilities, periods of larger-scale facility additions frequently coincide with periods of an increased trend in unit transportation cost. As part of its active management of costs, NGTL assesses the long-term needs of potential and proposed facilities, which ensures facilities being added are required over the long term to continue to meet the needs of the NGTL System customers in the most efficient manner.

Future tolls are also dependent on contracting decisions of customers, which may deviate from the forecast throughput data used in the unit cost data provided above. For example, actual contract levels in future years will depend on individual customer renewal decisions over the period, which may in turn be impacted by a range of factors. Overall, however, NGTL expects continued robust demand for natural gas and transportation services on the NGTL System for the time frame considered for the Unit Transportation Cost Data. Natural gas is an essential commodity in the integrated North American economy, used as a fuel for heating and generation of electricity, as well as a feedstock for industrial processes. In addition, North American gas is increasingly exported to global markets via LNG with a large-scale project currently being developed in western Canada. Emerging factors that could impact long-term demand include climate policies – such as carbon pricing, clean fuel standards, and incentives for renewable energy. These factors may create both opportunities and challenges for gas demand, but their impact is expected to be gradual. Natural gas remains an efficient energy source with the lowest carbon intensity among fossil fuels and is expected to play a key role in implementing environmental policies in the various markets served by the NGTL System. Challenges, however, may result from policies that disproportionately impact domestic gas supply compared to competing gas supply. NGTL will continue to incorporate new information into its assessment of long-term supply and demand and proactively manage the NGTL System in order to support its long-term viability and the competitiveness of both the NGTL System and the WCSB.