

NGTL System and Foothills Pipelines Ltd.

CUSTOMER OPERATIONS MEETING





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- To reduce background noise and improve audio quality, all WebEx participants will be placed on mute when entering the meeting
- Please submit your questions via using the raise hand function and coming off mute or the chat function and we will answer at the best possible opportunity



Cyber Safety Moment: Cybersecurity on the go



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- Ensure your device is not set-up to automatically connect to public Wi-Fi networks.
- Avoid logging into sensitive accounts unless you have a VPN (like your bank account) or sending sensitive information.



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- Malicious actors can use USB ports for their gain by preinstalling malware onto your device when you plug it in to a USB Port
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Unattended Property:

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Forward Looking Information

- This presentation includes certain forward-looking information. Statements that are forward-looking are based on certain assumptions and on what we know and expect today and generally include words like anticipate, expect, believe, may, will, should, estimate or other similar words.
- The information provided is for informational purposes only and is not to be relied upon for any other purpose whatsoever. The information is based upon certain assumptions that may or may not be accurate, and therefore is subject to various risks and uncertainties. TC Energy shall not be liable for damages sustained as a result of any use or reliance on such information.
- The outages listed in this presentation are not an exhaustive list. Outage date, duration, and impact may be subject to change. Refer to the Daily Operating Plan (DOP) for all planned outages with potential service impact.

No impact to FT Refers to outage periods where FT impact is not expected

Potential impact to FT

Refers to outage periods where there is potential of FT impact

Partial impact to FT

Refers to outage periods where FT impact is expected

*Changes in the DOP from last month's presentation are highlighted in yellow



Outage information in this presentation may not be accurate beyond the August 3, 2023, NGTL/Foothills Customer Operations (WebEx only) meeting



For current outage and capability information, please refer to the most recent Daily Operating Plan (DOP), the Dashboard and bulletins

Important Notes



This meeting covers broad operational and project-related topics that impact operations on the NGTL and Foothills systems. For information on focused Commercial, Operational and Regulatory topics, please contact your Marketing Representative

Outage Communication Tools: Order

 Overview of previous months' outages Customer Ops Meetings High level outlook of upcoming known and impactful outages Presentations posted here Published daily around 3:30pm MST Longer term outlook of upcoming outages DOP TC Energy - NGTL/FH Daily Operating Plan (tccustomerexpress.com) Updated daily at 8:30am MDT Dashboard Provides current and next gas day capacity NGTL System (tccustomerexpress.com) Issued as soon as information is known. Bulletins Includes Weekend Border Capability Forecast *Make sure you are subscribed to bulletins, including those in the Updates and Statements from 'Other' category TC on wildfires and other TC Energy - Bulletins (tccustomerexpress.com) events: TC Energy - Statements

Each level of communication supersedes all information provided in communications above it.

Agenda



- 1. Project Updates
- 2. Review of July Operations
- 3. Review of Upcoming DOP Outages



Project Updates



Project Updates: ISD Summary (since July 6, 2023 update)

NGTL Projects:						
Intra-Basin Expansion	Saturn (ISD Nov 2023) Saddle Hills Unit Addition (ISD April 2024) Emerson Creek Compressor Station (ISD April 2024)					
WestPath 2023	Turner Valley, Lundbreck and Longview (ISD Nov 2023)					

FH Projects:	
Elko Section Loop	ISD Nov 2023 *risk of 50% capacity achieved by Nov 2023 (slide 11 for further details)

<u>Availability of capacity remains subject to</u>: Ground conditions, weather & road access/conditions, heated labour market, environmental and regulatory requirements and LTO approval by the CER



Other Project Updates: NGTL (since July 6, 2023 update)

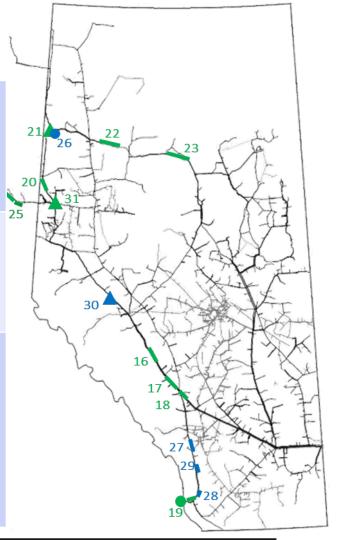
Intra-Basin Expansion

ISD April 2024

Stripping and grading Saturn (Map I.D. #24) activities complete. **ISD Nov 2023** Road and watercourse crossing bores continue. On track. Emerson Creek • 55% construction complete, on track. Compressor Station (Map I.D. #30) ISD April 2024 Saddle Hills 38% construction complete, on track. **Unit Addition** (Map I.D. #31)

West Path 2023 (ISD Nov 2023)

Turner Valley (Map I.D. # 27)	 Mainline construction activities are in progress
	Road bores are in progress
	Work at the valve sites are underway
Lundbreck (Map I.D. #28)	 Stripping and grading activities are near completion
	 Stringing and bending activities have commenced
Longview (Map I.D. # 29)	 All pipe has been lowered in. Backfill and tie-in activities are in progress
	Road and utility bores are complete
	Watercourse crossings are in progress
	Work at valve sites are underway





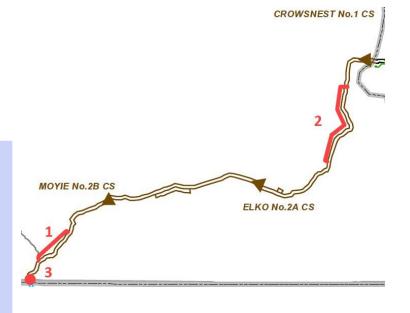
Other Project Updates: FH (since July 6, 2023 update)

West Path 2023

Yahkin-service (Map I.D. # 1)

Elko (Map I.D. # 2) ISD Nov 2023

- Pipe installation at watercourse crossings continue
- Blasting activities through mountainous terrain continue
- Stringing, bending complete. Mainline welding near completion
- All other mainline activities are in progress
- Contingency valve currently being installed to allow project to achieve 50% capacity for November 1, 2023 (CER approval received on June 30th)





Review of July Operations



NPS 48 EDS/CAS/EAS Mainline Loop 3/4 - Pipeline Maintenance



Background:

Planned:

• NPS 48 EDS/CAS/EAS Mainline Loop 3/4 – Pipeline Maintenance: July 14-24

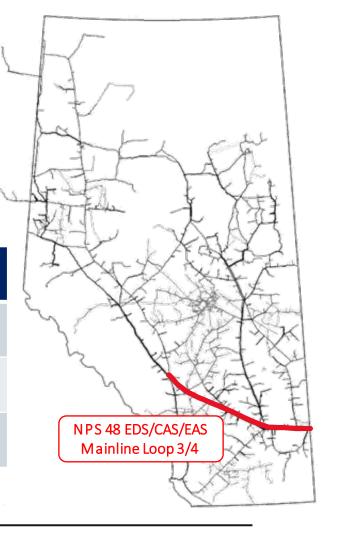
• Capability communicated in DOP:

• EGAT: $142 \cdot 10^6 \text{ m}^3/\text{d}$

Service Allowable:

• EGAT: Partial IT-D, 100% FT-D

Bulletin Date	Effective Date	Service Allowable	Comments
	July 14	EGAT: 100% IT-D, 100% FT-D	Maintenance started as scheduled (nominations lower than capability leading into the outage)
July 14	July 15 (08:00 MST)	EGAT: Partial IT-D, 100% FT-D	Total nominations observed to be above capability
July 24	July 25 (08:00 MST)	EGAT: 100% IT-D, 100% FT-D	Pipeline maintenance completed on July 23 System reconfiguration completed on July 24



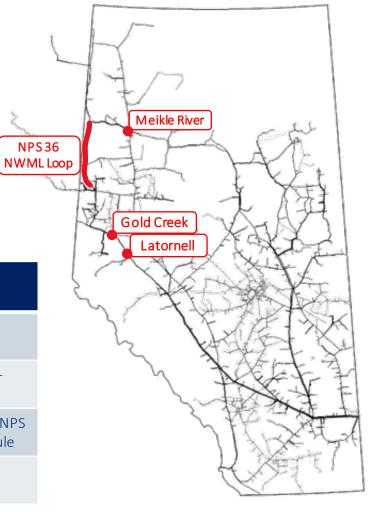
USJR – Unplanned and Planned Outages



Background:

- Planned:
 - Meikle River C3 and C4 Compressor Station Maintenance: July 24-28
 - NPS 36 Northwest Mainline Loop Pipeline Maintenance: July 25-29
- Unplanned:
 - Latornell A2 Compressor Station Maintenance: July 20-28
 - Gold Creek B2 Compressor Station Maintenance: July 24-28
- Capability communicated in DOP:
 - USJR: 347 106m³/d (Meikle River C3 and C4 + NPS 36 NWML + Latornell A2)
 - USJR: 340 10⁶m³/d (Meikle River C3 and C4 + NPS 36 NWML + Latornell A2 + Gold Creek B2)
 - EGAT: 142 10⁶m³/d

Bulletin Date	Effective Date	Service Allowable	Comments
July 24	July 25 (08:00 MST)	USJR: 0% IT-R, 100% FT-R	Unplanned Latornell A2 outage in addition to planned Meikle River C3 and C4 + NPS 36 NWML Loop outages
July 25	July 26 (08:00 MST)	USJR: 0% IT-R, 100% FT-R EGAT: 0% IT-D, 100% FT-D	Unplanned Gold Creek B2 outage in addition to Latornell A2 + Meikle River C3 and C4 + NPS 36 NWML Loop outages
July 28	July 29 (08:00 MST)	USJR: 0% IT-R, 100% FT-R	Unplanned Gold Creek B2, Planned Meikle River C3 and C4 + NPS 36 NWML Loop outages expected to be completed on schedule
July 29	July 30 (08:00 MST)	USJR: 100% IT-R, 100% FT-R	Outages all completed and returned to service (Only unplanned Latornell A2 outage remains)





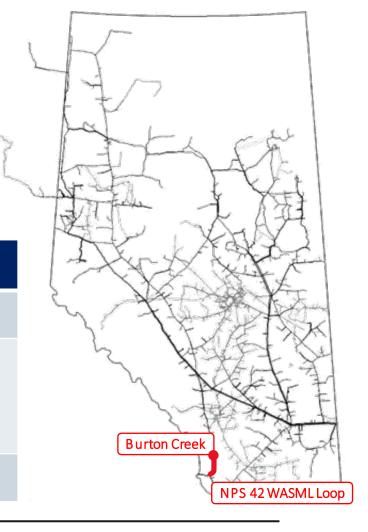
West Gate – Unplanned and Planned Outages



Background:

- Unplanned:
 - Burton Creek Compressor Station Maintenance: July 25-29
- Planned:
 - NPS 42 Western Alberta System Mainline Loop Pipeline Maintenance: July 31-Aug 3
- Capability communicated in DOP:
 - WGAT: 68 10⁶m³/d (Burton Creek)
 - WGAT: (Unrestricted)
 - WGAT: 73 10⁶m³/d (NPS 42 Western Alberta System Mainline Loop)

Bulletin Date	Effective Date	Service Allowable	Comments					
July 26	July 27 (08:00 MST)	0% IT-D, Partial FT-D (68) (AB-BC + AB-MN)	Unplanned Burton Creek Compressor Station outage starts					
July 28	July 29 (08:00 MST)	100% IT-D, 100% FT-D	Burton Creek Compressor Station returned to service. WGAT unrestricted for the weekend					
July 28	July 31 (08:00 MST)	0% IT-D, Partial FT-D (73) (AB-BC + AB-MN)	NPS 42 WASML Loop pipeline maintenance starts					
Aug 2	Aug 4 (08:00 MST)	100% IT-D, 100% FT-D	NPS 42 WASML Loop pipeline maintenance completed					

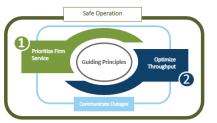




August Outage Highlight



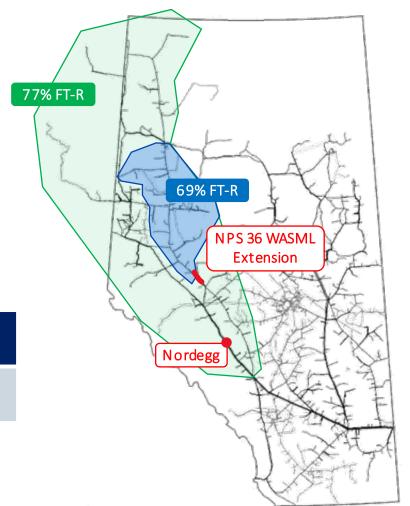
NPS 36 Western Alberta System Mainline Extension - Pipeline Maintenance Nordegg B3 and B5 – Compressor Station Maintenance



Background:

- Planned:
 - NPS 36 WASML Extension Pipeline Maintenance: Aug 8-13
 - Nordegg B3 and B5 Compressor Station Maintenance: Aug 8-13
- Capability communicated in DOP:
 - USJR: 340 10⁶m³/d
 - Local (Partial Segments 2 and 5): 16 10⁶ m³/d
- Service Allowable:
 - USJR (excluding Partial Segments 2 and 5): 0% IT-R, 77% FT-R
 - Local (Partial Segments 2 and 5): 0% IT-R, 69% FT-R

Bulletin Date	Effective Date	Service Allowable	Comments
Aug 2	Aug 7 (13:00 MST)	USJR: 0% IT-R, 77% FT-R Local: 0% IT-R, 69% FT-R	Bulletin Issued



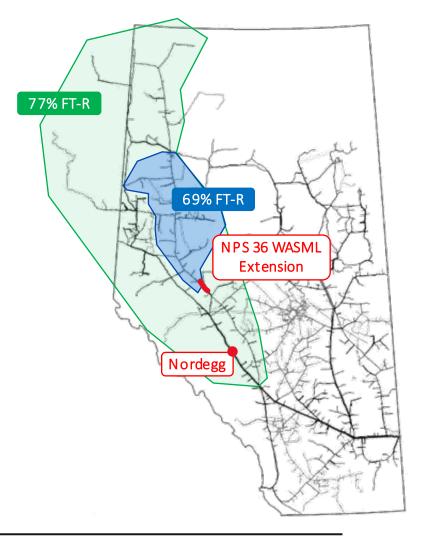


NPS 36 Western Alberta System Mainline Extension - Pipeline Maintenance Nordegg B3 and B5 – Compressor Station Maintenance



Why couldn't this outage be managed with EGAT IT-D?

- Local area flows are currently above expected local outage capability
 - Supply response not expected to be all within partial segments 2 and 5
- Inadequate EGAT IT-D to safely manage the outage
 - USJR supply has recovered back to near the peak levels that were observed prior to wildfires
 - The expected required reduction of supply in USJR is greater than what is currently flowing as EGAT IT-D

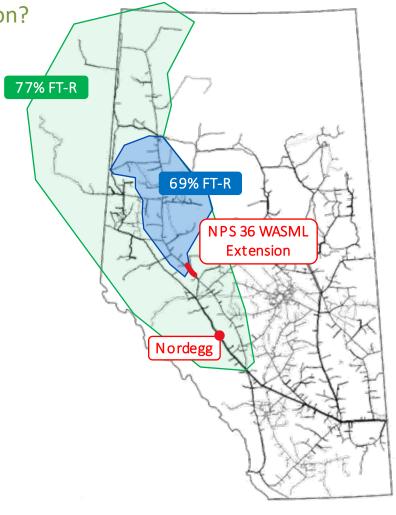


NPS 36 Western Alberta System Mainline Extension - Pipeline Maintenance Nordegg B3 and B5 – Compressor Station Maintenance



Why does the local area (Partial Segments 2 and 5) have a deeper FT-R restriction?

- Western Alberta System Mainline (WASML) Extension is a single non-looped pipeline
 - Supply in the local area typically can flow north to the North Central Corridor (NCC) path or south through the WASML Extension
 - This outage will result in the inability to flow local supply south
- Grande Prairie Mainlines (GPML) operate at higher pressure than the WASML Extension
 - All crossover paths between the GPML and WASML must be closed
 - We cannot flow low pressure gas from the WASML to the higher pressure GPML
 - Capability for the local supply will be limited to the northbound capacity to the NCC



Review of DOP Outages

(From DOP as of Wednesday, August 2)



2023 Outages

- All known planned outages at this time have been added to the DOP
- Start and end dates, durations, capability, area of impact may be revised as new information becomes available or further optimization opportunities are identified

Outages and/or maintenance work is posted to the DOP if there is reasonable expectation that the event could or will result in a change to service authorization levels.

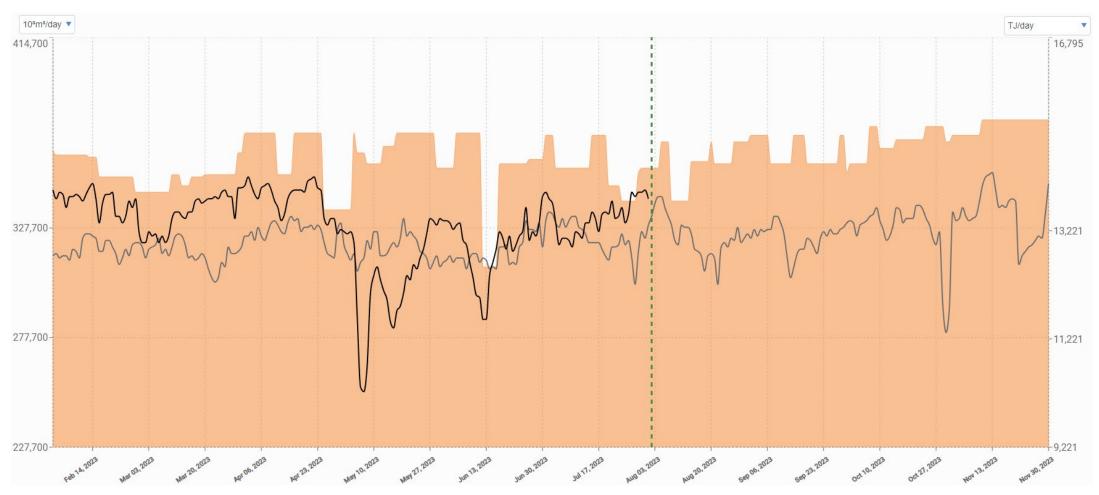
Optimization efforts are on-going, and we will continue to focus on safety, optimizing system capacity and minimizing outage impacts.

Daily Operating Plan (DOP): Facility Assumptions

Date	Expansion Facilities
November 2023	Intra-basin Expansion:

Upstream James River





Upstream James River Receipt Area (USJR)

No impact to FT Potential impact to FT

Partial impact to FT

Outage Description	Start	End	USJR Outage Capability (10 ⁶ m³/d)	USJR Impact (10 ⁶ m³/d)	Area Outage Ca pability (10 ⁶ m³/d)	Outage Area Typical Flows (10 ⁶ m³/d)	Service Allowable Location/Area
Latornell A2 – Compressor Station Maintenance	20-Jul-23	4-Aug-23	355	15	N/S	3701-750	Potential impact to FT-R USJR
Nordegg B3 & B5 – Compressor Station Maintenance	8-Aug-23	13-Aug-23	346	21	N/A	320 - 350	Partial impact to FT-R USJR
NPS 36 WAS Mainline Extension – Pipeline Maintenance	8-Aug-23	13-Aug-23	340	27	N/A	320 - 350	Partial impact to FT-R USJR Potential for higher local Impact Partial Segments 2 and 5
NPS 48 Grande Prairie Mainline Loop 2 – Pipeline Modifications	14-Aug-23	19-Aug-23	358	9	N/A	320 - 350	Potential impact to FT-R USJR
Alces River – Compressor Station Maintenance	21-Aug-23	26-Aug-23	357	10	230	180 - 220	Potential impact to FT-R USJR U/S Latornell
Otter Lake – Compressor Station Maintenance	7-Sep-23	13-Sep-23	357	13	230		Potential impact to FT-R USJR U/S Latornell
NPS 24 North Central Corridor – Pipeline Maintenance	<mark>8-Sep-23</mark>	13-Sep-23	360	10	233	180 - 220	Potential impact to FT-R USJR U/S Latornell
Saddle Hills B3 – Compressor Station Maintenance	18-Sep-23	27-Sep-23	357	13	230	180 - 220	Potential impact to FT-R USJR U/S Latornell
Meikle River D5 – Compressor Station Maintenance	30-Sep-23	6-Oct-23	353 (Sep) 357 (Oct)	17	226	180 - 220	Potential impact to FT-R USJR U/S Latornell



Upstream James River Receipt Area (USJR)

No impact to FT Potential impact to FT

Partial impact to FT

Outage Description	Start	End	USJR Outage Capability (10 ⁶ m³/d)	USJR Impact (10 ⁶ m³/d)	Area Outage Ca pability (10 ⁶ m³/d)	Outage Area Typical Flows (10 ⁶ m³/d)	Service Allowable Location/Area
Clearwater – Compressor Station Maintenance	10-Oct-23	14-Oct-23	364	10	N/A	320 - 350	Potential impact to FT-R USJR
Latornell A1 – Compressor Station Maintenance	10-Oct-23	23-Oct-23	368	6	N/A	320 - 350	Potential impact to FT-R USJR
NPS 42 Grande Prairie Mainline Loop – Pipeline Modifications	30-Oct-23	9-Nov-23	367 (Oct) 370 (Nov)	7	N/A	320 - 350	Potential impact to FT-R USJR

This slide may not be accurate beyond the August 3 NGTL/Foothills Customer Operations meeting on WebEx.

Please refer to the DOP on TC Customer Express for current outage information.



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Alberta-B.C. Border

(includes both NGTL and Foothills BC outages)





West Gate Delivery Area (WGAT)

No impact to FT Potential impact to FT

Partial impact to FT

Outage Description	Start	End	Ca pability (10 ⁶ m³/d)	Impact (10 ⁶ m³/d)	Service Allowable Location/Area
Winchell Lake – Compressor Station Maintenance	8-Aug-23	10-Aug-23	73	10	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segment 22 and Partial 21
NPS 48 BC Mainline Loop – Pipeline Modifications	8-Aug-23	10-Aug-23	<mark>70</mark>	<mark>13</mark>	Partial Impact to FT Foothills BC
Moyie – Compressor Station Maintenance	21-Aug-23	25-Aug-23	69	14	Potential Impact to FT Foothills BC
Winchell Lake A2 – Compressor Station Maintenance	21-Aug-23	25-Aug-23	81	2	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segment 22 and Partial 21
NPS 36 FPL Zone 8 Segment 2A – Pipeline Maintenance	26-Aug-23	31-Aug-23	78	5	Potential Impact to FT Foothills BC
NPS 36 Western Alberta System Mainline – Pipeline Maintenance	6-Sep-23	12-Sep-23	75	8	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
Crowsnest B – Compressor Station Maintenance	13-Sep-23	15-Sep-23	75	8	Potential Impact to FT Foothills BC
Elko – Compressor Station Maintenance	18-Sep-23	22-Sep-23	68	15	Potential Impact to FT Foothills BC
Turner Valley A3 – Compressor Station Maintenance	18-Sep-23	20-Sep-23	79	4	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 48 Western Alberta System Mainline Loop 2 – Pipeline Modifications	18-Sep-23	28-Sep-23	79	4	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders

Note: Outages located in the USJR area show up in the WGAT table in DOP to indicate a broad area restriction could be applied to reduce flows through the bottleneck but have been excluded from this slide to avoid duplication



West Gate Delivery Area (WGAT)

No impact to FT Potential impact to FT

Partial impact to FT

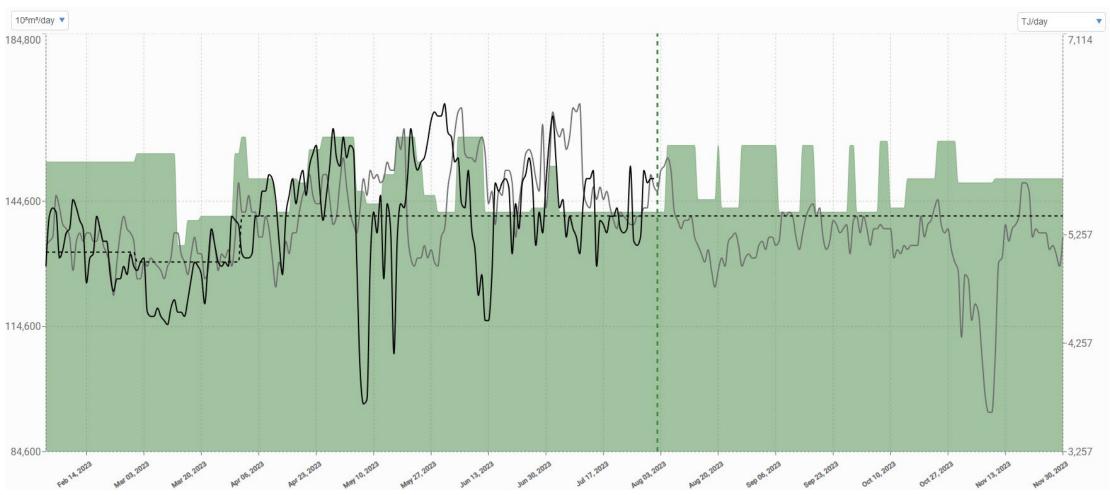
Outage Description	Start	End	Capability (10 ⁶ m³/d)	Impact (10 ⁶ m³/d)	Service Allowable Location/Area
NPS 36 Western Alberta System Mainline (Seg 1) – Pipeline Modifications	1-Oct-23	11-Oct-23	64	19	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segment 22 and Partial 21
NPS 36 Western Alberta System Mainline (Seg 2) – Pipeline Modifications	1-Oct-23	11-Oct-23	64	19	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 48 BC Mainline Loop – Pipeline Modifications	1-Oct-23	11-Oct-23	64	19	Potential Impact to FT Foothills BC
Crowsnest K – Compressor Station Maintenance	2-Oct-23	11-Oct-23	75	8	Potential Impact to FT Foothills BC
Turner Valley A1 & A2 – Compressor Station Maintenance	20-Oct-23	31-Oct-23	76	7	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
Turner Valley – Compressor Station Maintenance	22-Oct-23	31-Oct-23	70	13	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 42 Western Alberta System Mainline Loop – Pipeline Modifications	1-Nov-23	9-Nov-23	87	1	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 36 Western Alberta System Mainline – Pipeline Maintenance	16-Nov-23	22-Nov-23	75	13	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segment 22 and Partial 21

Note: Outages located in the USJR area show up in the WGAT table in DOP to indicate a broad area restriction could be applied to reduce flows through the bottleneck but have been excluded from this slide to avoid duplication



East Gate





East Gate Delivery Area (EGAT)

No impact to FT Potential impact to FT

Partial impact to FT

Outage Description	Start	End	Capability (10 ⁶ m³/d)	Impact (10 ⁶ m ³ /d)	Service Allowable Location/Area
Clearwater – Compressor Station Maintenance	10-Oct-23	14-Oct-23	143	16	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Clearwater A1 & A5 – Compressor Station Maintenance	16-Oct-23	20-Oct-23	155	4	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Clearwater A6 – Compressor Station Maintenance	6-Nov-23	19-Nov-23	150	9	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Jenner – Compressor Station Maintenance	13-Nov-23	30-Nov-23	150	9	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28

Note: Outages located in the USJR area show up in the EGAT table in DOP to indicate a broad area restriction could be applied to reduce flows through the bottleneck but have been excluded from this slide to avoid duplication



Oil Sands Delivery Area





Northeast Delivery Area (NEDA) Oilsands Delivery Area (OSDA)

No impact to FT Potential impact to FT

Partial impact to FT

There are currently no outages planned that are specific to OSDA or NEDA



MARKETING REPS

<u>Customer Express Contacts</u> (tccustomerexpress.com)

CONTACTS

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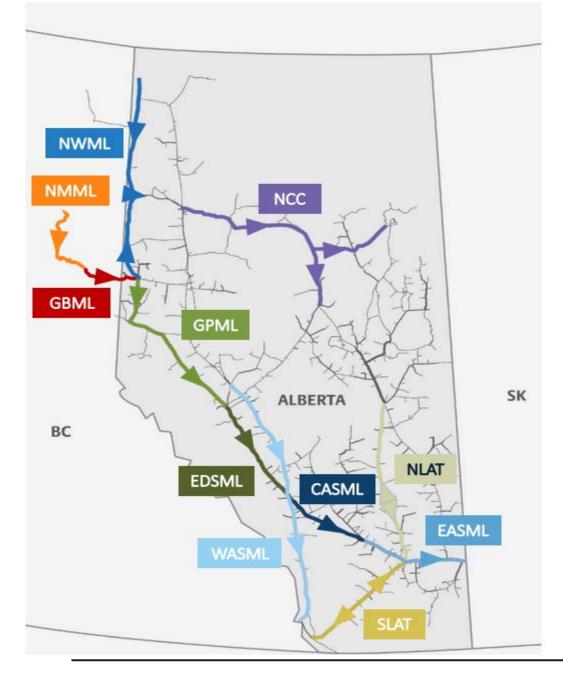
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Glossary of Terms

- •• DOP: Daily Operating Plan DOP
- .: NGTL: Nova Gas Transmission Ltd.
- •:• FH: Foothills Pipeline System (BC or SK)
- : ILI: Inline Inspection
- Transportation Services
 - IT-R: Interruptible Transportation Receipt
 - IT-D: Interruptible Transportation Delivery
 - FT-R: Firm Transportation Receipt
 - FT-D: Firm Transportation Delivery

·: Operational Areas

- USJR: Upstream James River
- WGAT: West Gate
- EGAT: East Gate
- OSDA: Oilsands Delivery Area
- NEDA: North-East Delivery Area



Commonly Referenced Flow Paths

- North Montney Mainline (NMML)
- Groundbirch Mainline (GBML)
- Northwest Mainline (NWML)
- North Central Corridor (NCC)
- Grande Prairie Mainline (GPML)
- Edson Mainline (EDSML)
- Western Alberta System Mainline (WASML)
- Central Alberta System Mainline (CASML)
- Eastern Alberta System Mainline (EASML)
- South Lateral (SLAT)
- North Lateral (NLAT)