

Important note

- Outage information in this presentation (slides 11 to 19) is **NOT** applicable beyond the May 7, NGTL/Foothills Customer Operations (WebEx only) meeting.
- For current outage information, please refer to the [Daily Operating Plan \(DOP\)](#) on TC Customer Express



NGTL System and Foothills Pipe Lines Ltd.

Customer Operations Meeting

May 7, 2020



Welcome and Thank You for Joining Us

Participating via WebEx:

- Please sign-in through WebEx application including your full name and company
- To reduce background noise and improve audio quality, all WebEx participants will be placed on mute
- Please submit your questions via the chat function and we will answer them at the best possible opportunity

Our Focus During COVID-19

- Protect our teams, partners and communities
- Ensure no interruption to our customers
- Secure supply of critical equipment and services with our partners

Notice something is off?

Please reach out: [Marketing Reps](#) or 403.920.PIPE

Safety moment - Mental health tips during COVID-19

- Get the facts about COVID-19 from reliable sources such as Alberta Health Services or Health Canada
- Focus on the positive
- Maintain your regular routines as much as possible
- Get enough rest and sleep
- Stay connected

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

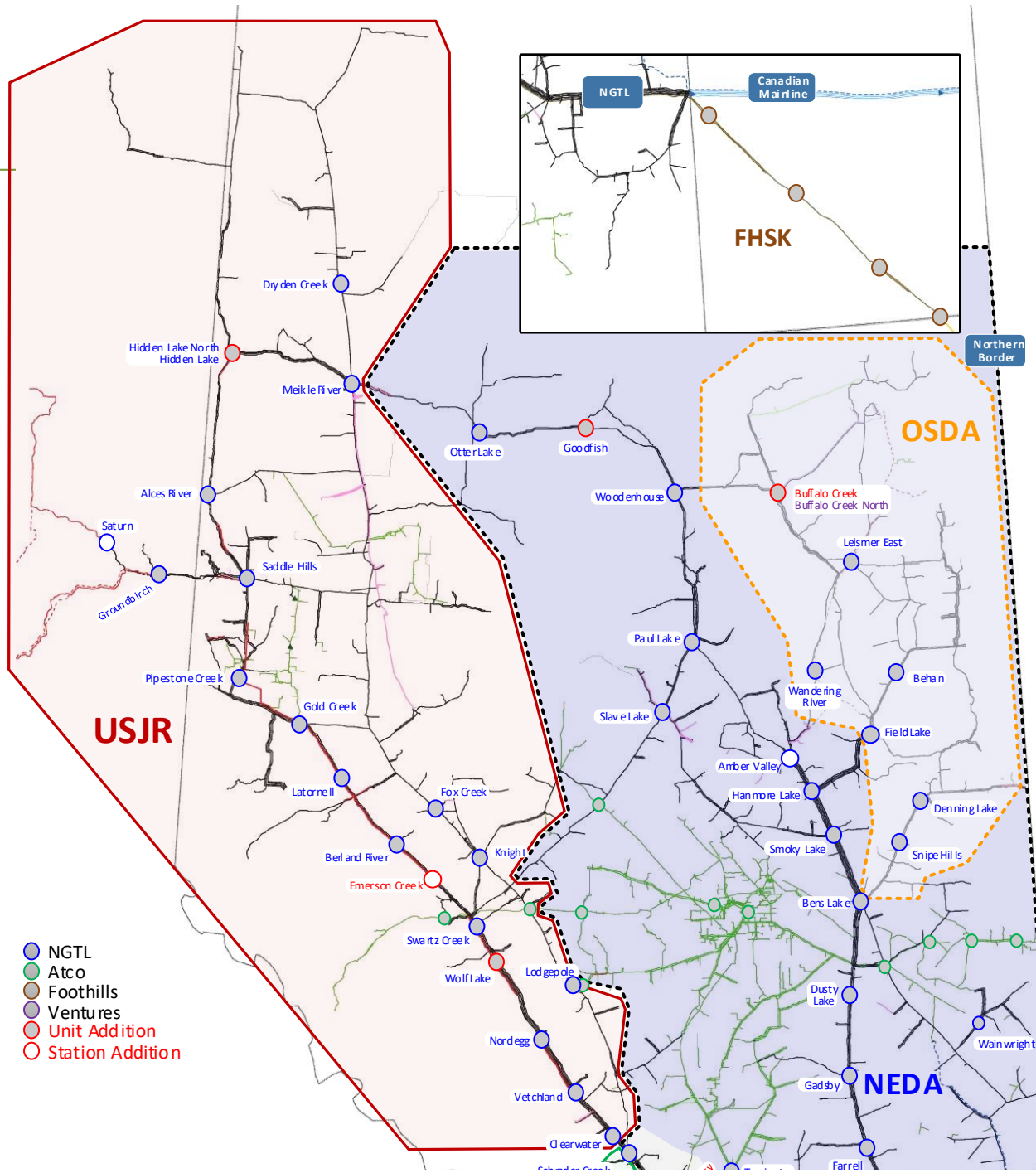
Agenda

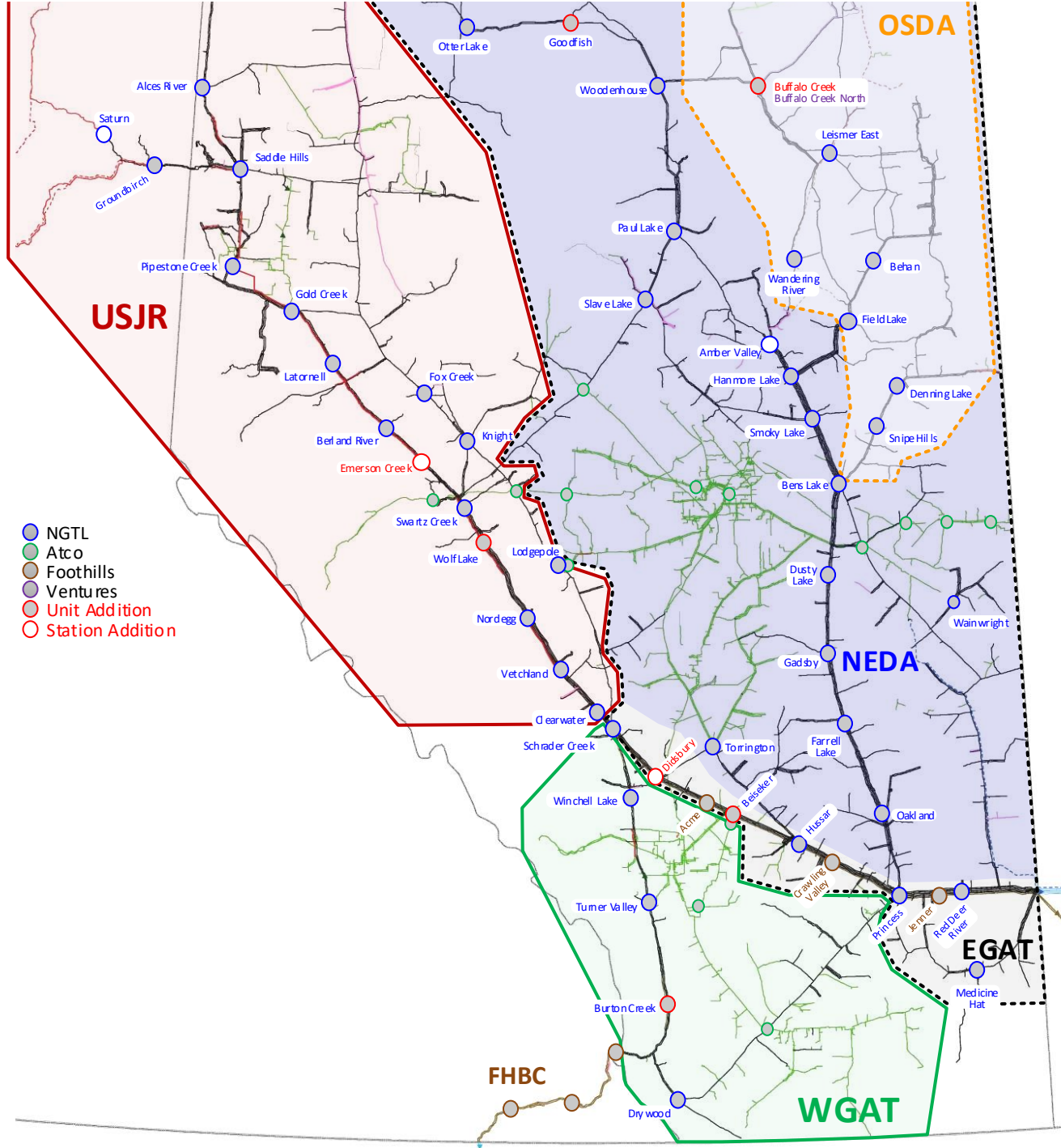
1. Review outages in Daily Operating Plan (DOP)
2. Customer Operations Action Team – Update on TC Customer Express enhancements



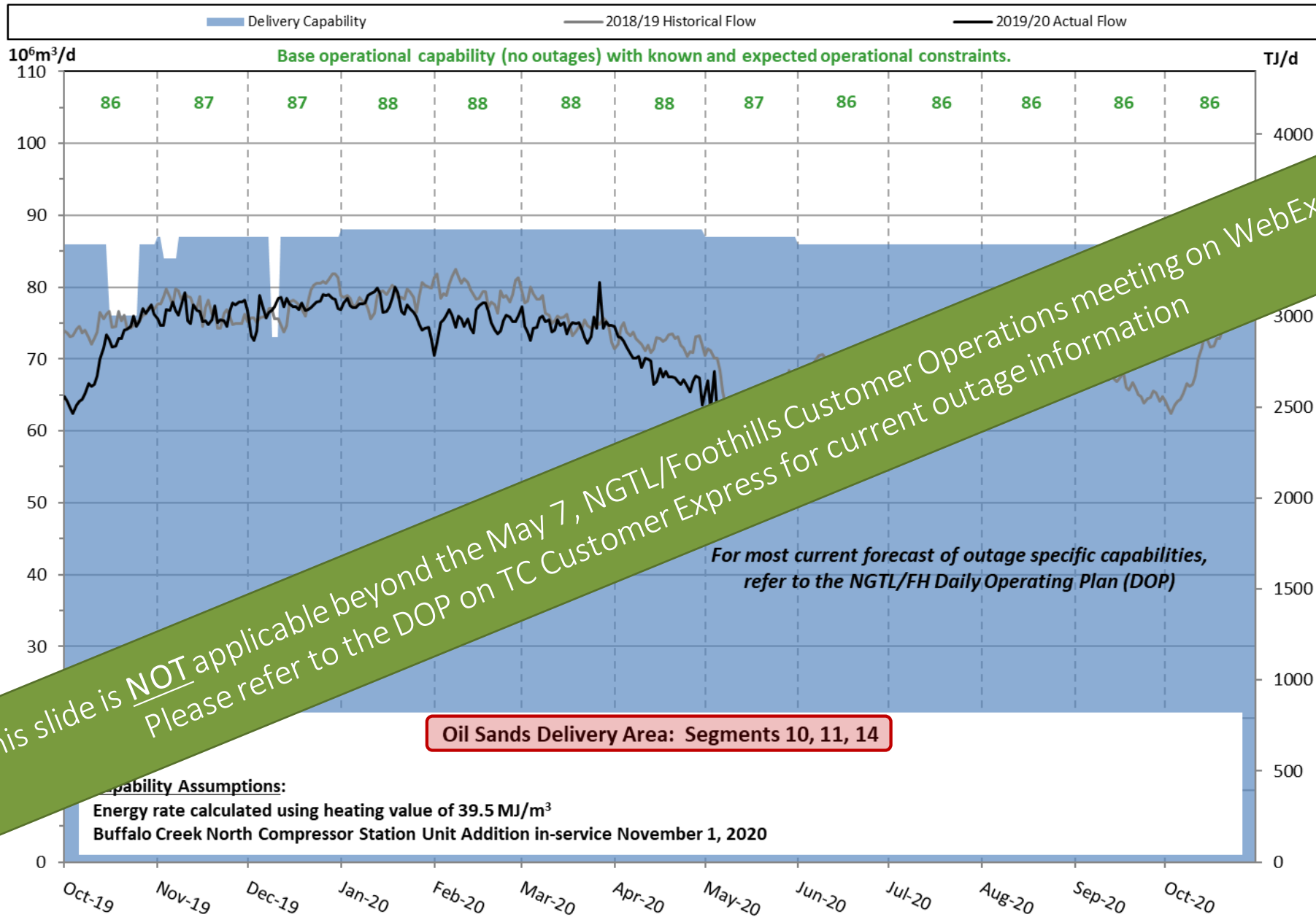
2020 Outage Review

From DOP as of Wednesday, May 6





- NGTL
- Atco
- Foothills
- Ventures
- Unit Addition
- Station Addition



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

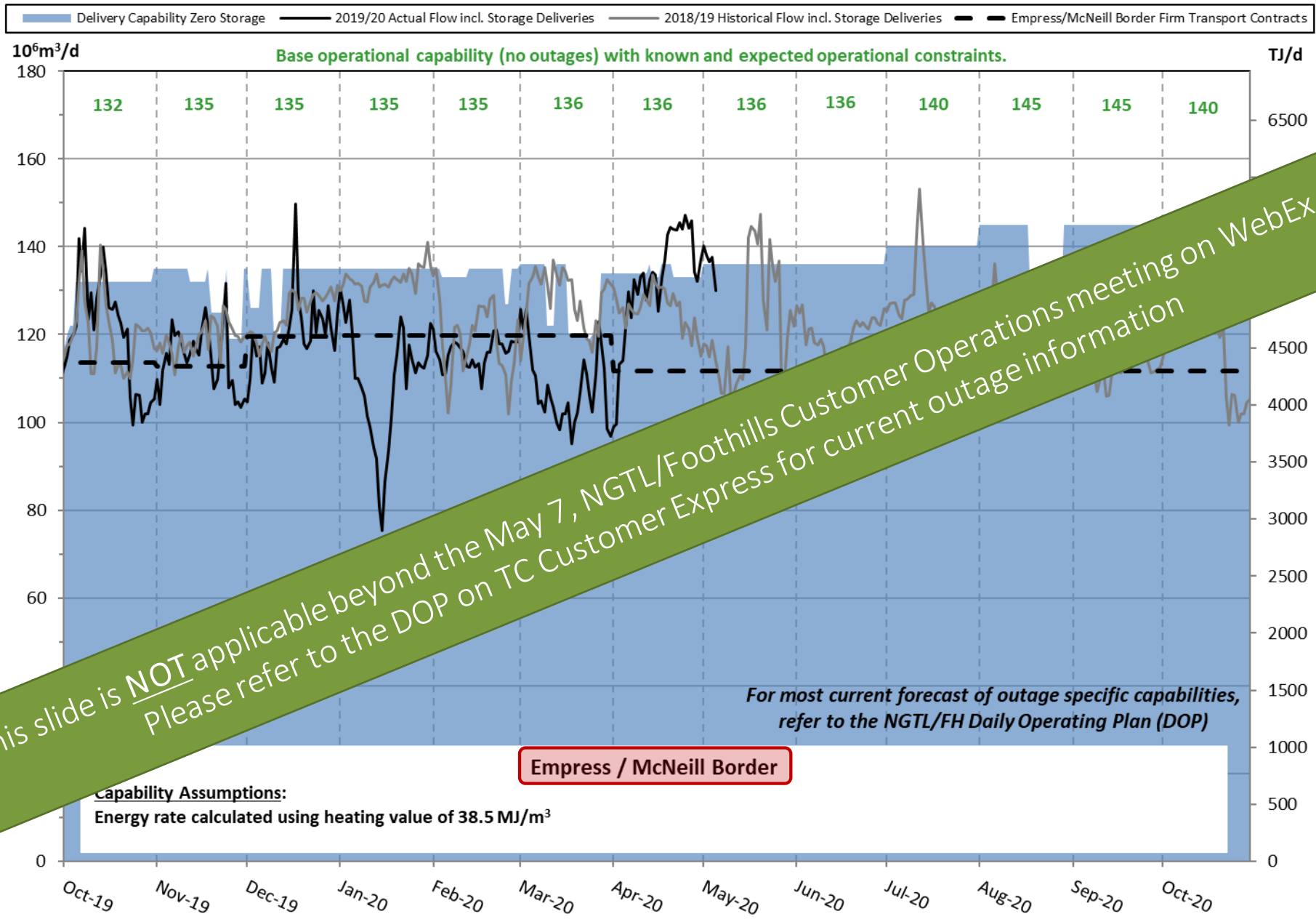
No
impact to FT

Potential
impact to FT

Partial
impact to FT

**There are currently no
impacts to OSDA and NEDA with potential**

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



Last Updated: May 6, 2020

East Gate Delivery Area (EGAT) Foothills Zone 9 (FHSK)

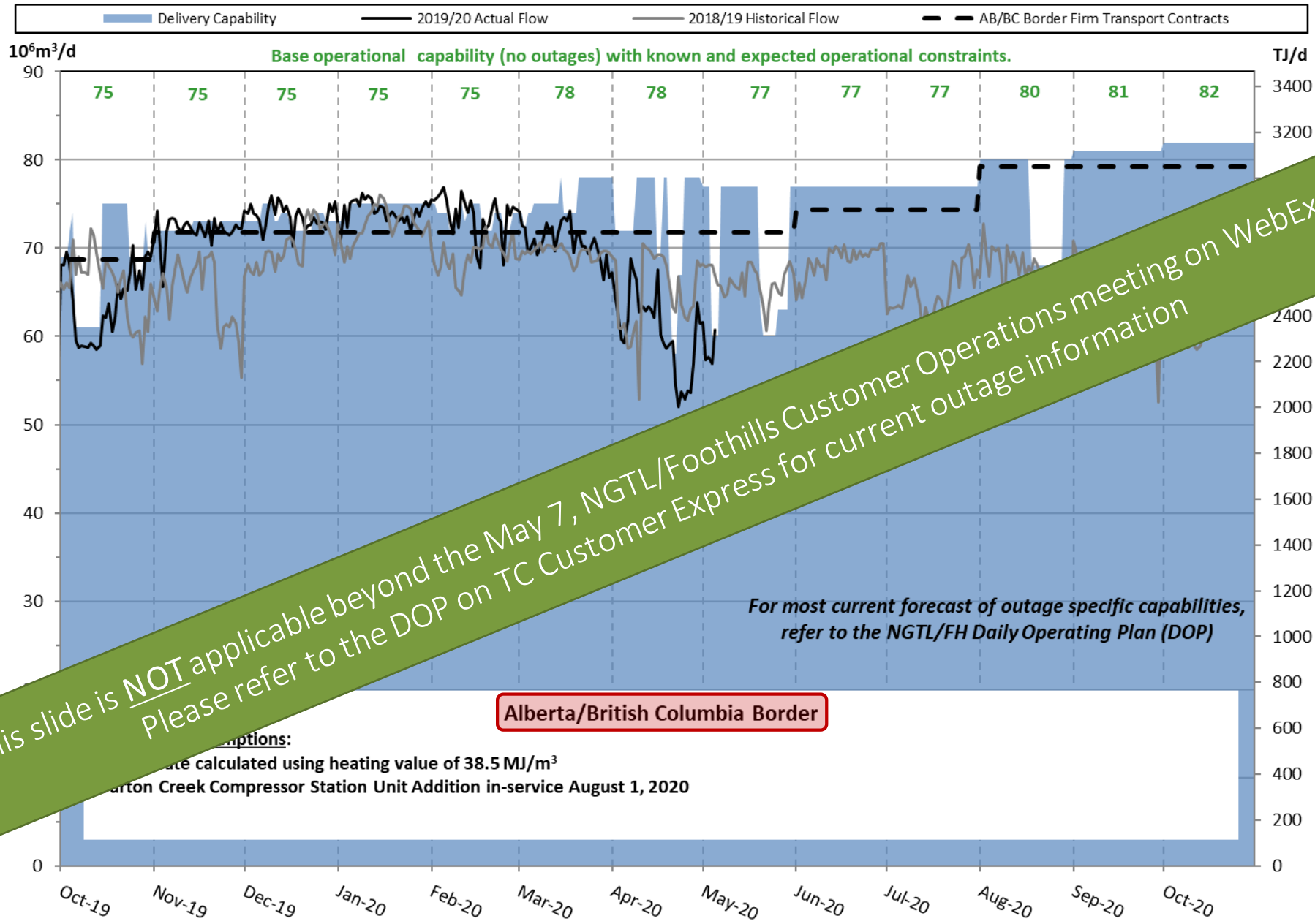
No
impact to FT

Potential
impact to FT

Partial
impact to FT

Outage ID	Start	End	Capability/ Allowable (10 ³ m ³ /day)	Service Allowable Location/Area	
15782678	AUG 18, 2020	AUG 28, 2020	128,000	No impact to FT-D anticipated: Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28	Empress and EAS ML Loop - Pipeline Maintenance
15862705	SEP 28, 2020	OCT 25, 2020	135,000	No impact to FT-D anticipated: Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28	NPS 42 Central Alberta System Mainline Loop - Pipeline Maintenance
15695808	OCT 12, 2020	OCT 21, 2020	130,000	No impact to FT-D anticipated: Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28	Beiseker - Compressor Station Modifications
15786231	OCT 15, 2020	OCT 21, 2020	130,000	Potential impact to FT-D: McNeill Border Foothills SK	NPS 42 Foothills Zone 9 (Shaunavon to Monchy)- Pipeline Maintenance

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West Gate Delivery Area (WGAT) Foothills Zone 8 (FHBC)

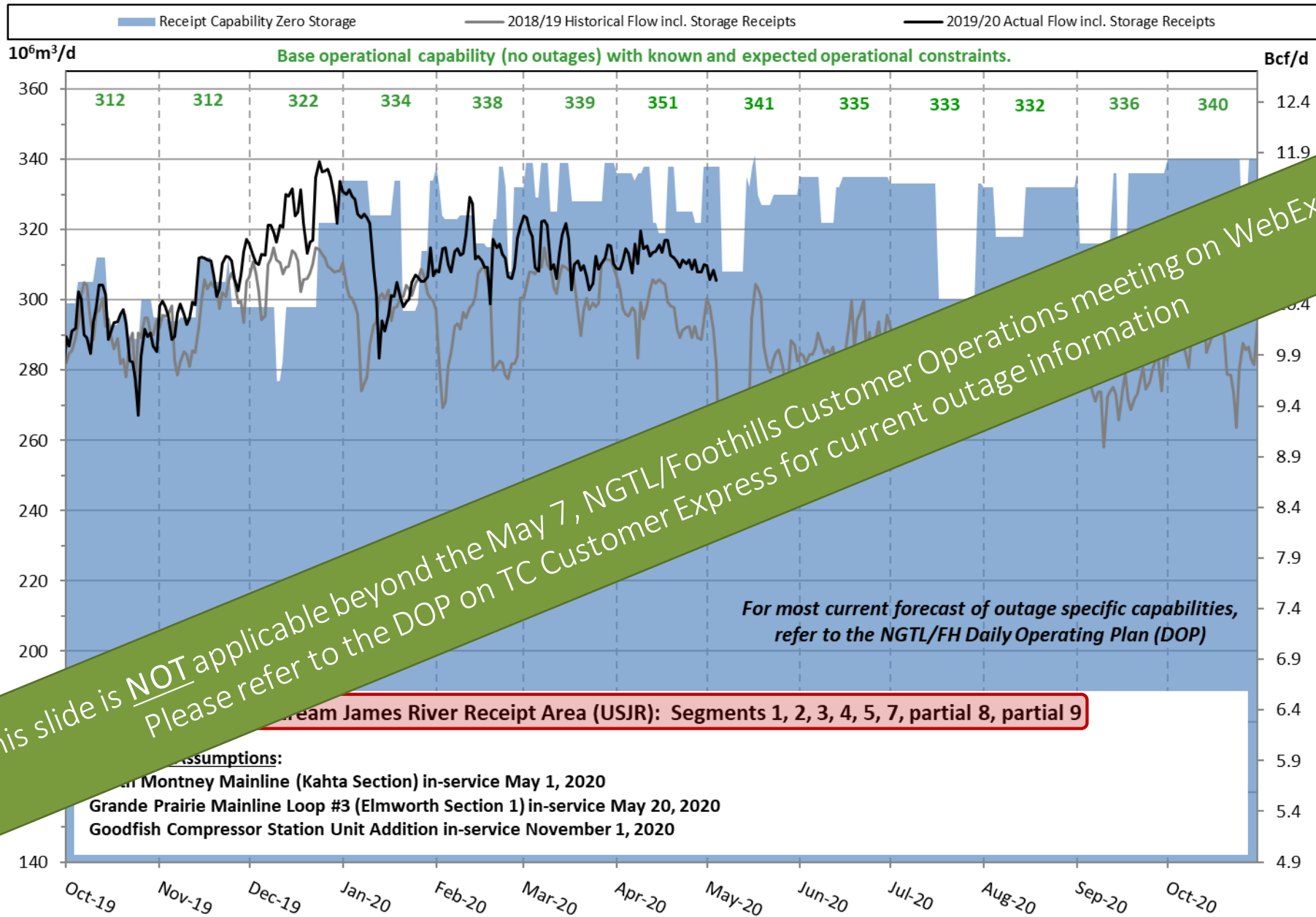
No
impact to FT

Potential
impact to FT

Partial
impact to FT

Outage ID	Start	End	Capability/ Allowable (10 ³ m ³ /day)	Service Allowable Location/Area	Outage
14360038	MAY 20, 2020	MAY 29, 2020	63,000	Partial impact to FT-D: Alberta/BC and Alberta/Montana Borders	Burton - Compressor Station Maintenance
15782762	MAY 21, 2020	MAY 25, 2020	60,000	Partial impact to FT-D: Alberta/BC Border Segments 22 - partial 21	System Mainline - Pipeline Maintenance
15782794	AUG 18, 2020	AUG 28, 2020	68,000	Partial impact to FT-D: Alberta/BC and	Western Alberta System Mainline - Pipeline Maintenance
15714166	MAY 20, 2020	MAY 25, 2020	65,000	Partial impact to Foothills	Elko - Compressor Station Maintenance

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Upstream James River Receipt Area (USJR)

No impact to FT

Potential impact to FT

Partial impact to FT

Outage ID	Start	End	Capability/ Allowable (10 ³ m ³ /day)	Service Allowable Location/Area	Outage Description
15782447	MAY 06, 2020	MAY 13, 2020	308,000	Potential impact to FT-R: USJR	[TSP Eligible] NPS 42 - Pipeline Maintenance
15714005	MAY 06, 2020	MAY 15, 2020	335,000	Potential impact to FT-R: USJR	[TSP Eligible] Station Maintenance
15782799	JUL 17, 2020	JUL 29, 2020	300,000	Partial impact to FT-R: USJR	Line Loop - Pipeline
15777973	SEP 15, 2020	SEP 17, 2020	300,000	Potential impact to FT-R: Segments 1, 2, 3, 4, 5 (Upstream of Swartz) and partial 9 (Upstream of Swartz) USJR	Berland River - Compressor Station Maintenance
15714476	OCT 26, 2020	OCT 27, 2020	318,000	Potential impact to FT-R: USJR	[TSP Eligible] Vetchland - Compressor Station Maintenance

Outage ID	Start	(Duration) End	Capability/ Allowable (10 ³ m ³ /day)	Service Allowable Location/Area	Outage Description
15554152	APR 27, 2020	MAY 07, 2020	174,000-219,000	Potential impact to FT-R: Segments 2, 3, 4 and partial 7 (Upstream Gold Creek)	[TSP eligible] Meikle River B - Compressor Station Maintenance
15778054	MAY 06, 2020	MAY 13, 2020	174,000-219,000	Potential impact to FT-R: Segments 2, 3, 4, 5 and partial 7 (Upstream of Berland River)	[TSP eligible] Latornell A1 - Compressor Station Maintenance
16547112	MAY 06, 2020	MAY 13, 2020	181,000	Potential impact to FT-R: Segments 2, 3, 4 and partial 7 (Upstream Gold Creek)	[TSP Eligible] Alces River B - Compressor Station Maintenance

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Note: DOP refinement in progress to combine reporting of these types of outages into one table.

Upstream James River Receipt Area (USJR)

No
impact to FT

Potential
impact to FT

Partial
impact to FT

Outage ID	Start	(Duration) End	Capability/ Allowable (10 ³ m ³ /day)	Typical Flow (10 ³ m ³ /day)	Location/Area	Outage Description
16547121	MAY 18, 2020	MAY 31, 2020	176,000	150,000-180,000	Potential impact to FT-R: Segments 2, 3, 4 and partial 7 (Upstream of Latornell)	[TSP eligible] Pipestone Creek - Compressor Station Maintenance
15778169	JUN 01, 2020	JUN 05, 2020	186,000	140,000-180,000	Potential impact to FT-R: Segments 2, 3, 4 and partial 7 (Upstream Gold Creek)	[TSP eligible] Pipestone Creek - Compressor Station Maintenance
15778214	JUN 08, 2020	JUN 12, 2020	179,000	150,000-180,000	Potential impact to FT-R: Segments 2, 3, 4 and partial 7 (Upstream Gold Creek)	[TSP eligible] Goodfish - Compressor Station Maintenance
15778167	JUN 08, 2020	JUN 14, 2020	189,000	150,000-180,000	Potential impact to FT-R: Segments 2, 3, 4 and partial 7 (Upstream Gold Creek)	[TSP eligible] Hidden Lake - Compressor Station Maintenance
14434331	JUN 20, 2020	JUN 26, 2020	185,000	150,000-180,000	Potential impact to FT-R: Segments 1, 2, 3, 4 and partial 7 (Upstream of Gold Creek)	[TSP eligible] NPS 30 Grande Prairie Mainline Loop - Pipeline Modifications
15778057	JUL 17, 2020	JUL 23, 2020	179,000	150,000-180,000	Potential impact to FT-R: Segments 2, 3, 4 and partial 7 (Upstream Latornell)	[TSP eligible] Pipestone Creek - Compressor Station Maintenance
15782671	AUG 03, 2020	AUG 09, 2020	179,000	153,000-186,000	Potential impact to FT-R: Segments 1, 2, 3, 4 and partial 7 (Upstream of Latornell)	[TSP eligible] NPS 30 Grande Prairie Mainline Loop - Pipeline Maintenance
15782796	AUG 18, 2020	AUG 24, 2020	175,000	174,000-219,000	Partial impact to FT-R: Segments 1, 2, 3, 4, 5 and partial 7 (Upstream of Berland River)	[TSP eligible] NPS 36 Northwest Mainline - Pipeline Maintenance
15781939	SEP 17, 2020	SEP 27, 2020	212,000	174,000-219,000	Potential impact to FT-R: Segments 2, 3, 4, 5 and partial 7 (Upstream of Berland River)	[TSP eligible] NPS 36 Western Alberta System Mainline Extension - Pipeline Maintenance

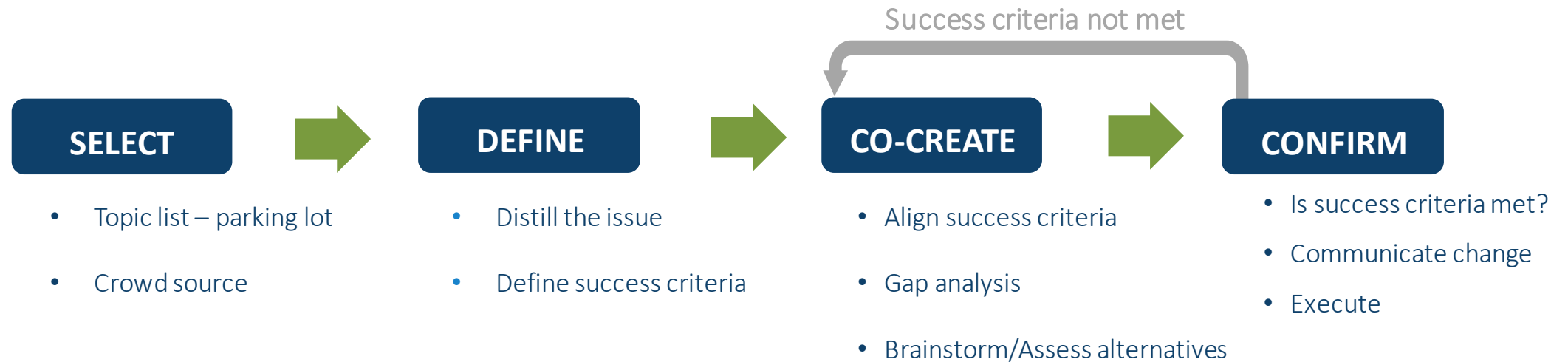
This slide is NOT applicable beyond the May 7, NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information



Customer Operations Action Team

Update on TC Customer Express enhancements

COAT Problem Solving Approach

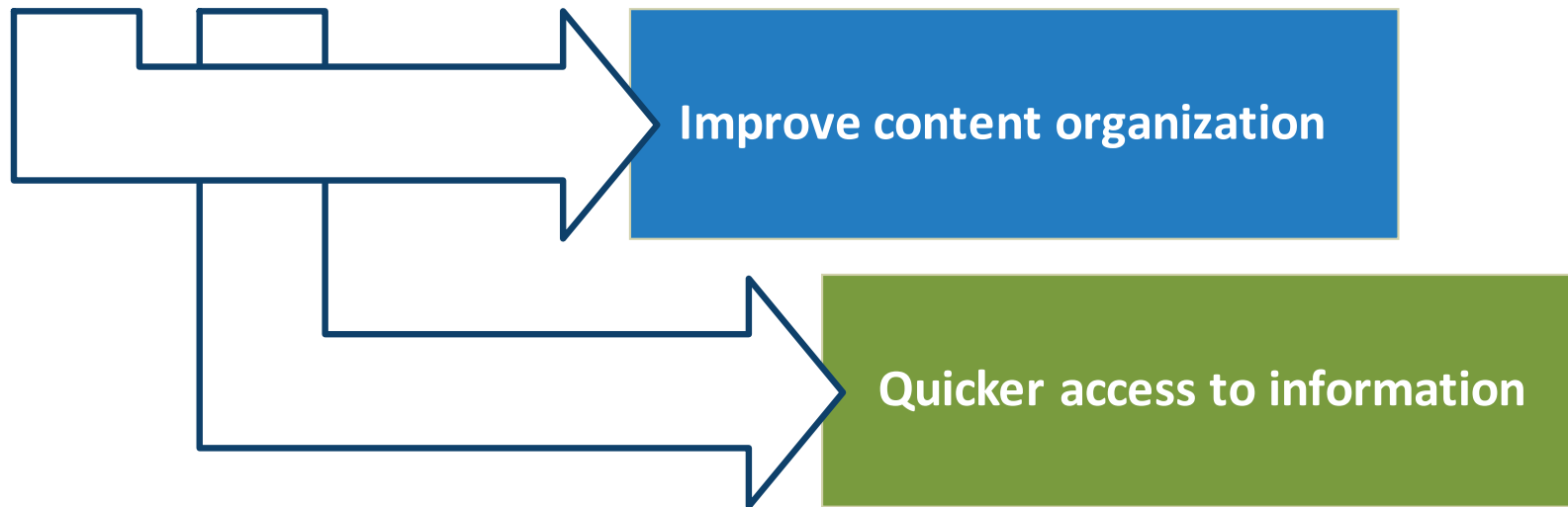


TC Customer Express enhancements

1. Reorganize content on TC and NGTL Customer Express landing pages
2. “Last updated” date on Customer Express
3. Show data history – Multi-day Gas Day Summary Report (GDSR)
4. Linepack graph added to NGTL Dashboard

1. Reorganize content on TC & NGTL Customer Express landing pages

Customer feedback



1. Reorganize content on TC Customer Express landing page

Current state

Customer Express - Your one stop source for commercial information on our Canadian pipelines


What's New

- ▶ Canadian Mainline GCTS Nominations Training Now Available
- ▶ Introducing TC Energy
- ▶ North Bay Junction Long Term Fixed Price
- ▶ Approved Mainline 2020 Abandonment Surcharges
- ▶ NGTL System 2019 Annual Plan
- ▶ TC Energy Announces \$1.2 Billion West Path Delivery Program
- ▶ Customer Witness Inspection

Tools **Pipelines**

- ▶ Conversion Tool
- ▶ CO2 Service Charge Calculator
- ▶ Customer Witness Inspection
- ▶ Mainline Diversion Calculator XLS
- ▶ NGTL FT-P Service Evaluation Tool
- ▶ Presentations
- ▶ Toll Calculator

Launch Toll Calculator



Pricing & Tolls

- ▶ NGTL System
- ▶ Canadian Mainline
- ▶ Foothills System - BC
- ▶ Foothills System - SK
- ▶ Great Lakes Pipeline Canada

1. Reorganize content on TC Customer Express landing page

Enhancement

The screenshot shows the TC Customer Express landing page. A green callout box in the top right corner contains the text: "TC Express Landing Page - Most visited pages - Top downloads". A red-bordered box at the bottom highlights the "USEFUL LINKS" section, which is organized into two columns: "NGTL / Foothills" and "Mainline". Each column has sub-sections for "PAGES" and "DOWNLOADS".

information on our Canadian pipelines

▶ Click Before You Dig

★ WHAT'S NEW

▶ Canadian Mainline GCTS Nominations Training Now Available

▶ Introducing TC Energy

▶ North Bay Junction Long Term Fixed Price

▶ Approved Mainline 2020 Abandonment Surcharges (PDF)

▶ NGTL System 2019 Annual Plan

🔧 TOOLS

▶ Conversion Tool

▶ CO2 Service Charge Calculator

▶ Customer Witness Inspection

▶ Mainline Diversion Calculator

▶ Toll Calculator

USEFUL LINKS

NGTL / Foothills		Mainline	
PAGES	DOWNLOADS	PAGES	DOWNLOADS
▶ NGTL System	▶ Capability and Historical Flows Charts USJR (PDF)	▶ Canadian Mainline	▶ Mainline Future Contract Demand Energy Report (PDF)
▶ Daily Operating Plan	▶ NGTL/FH Base Capabilities (csv)	▶ Gas Day Summary Report	▶ Mainline Contract Demand Energy Report (PDF)
▶ Gas Day Summary Report	▶ Capability and Historical Flow Charts Empress-McNeil (PDF)	▶ Mainline Operational Status Bulletin	▶ Mainline Tolls (PDF)
▶ Current System Report	▶ Capability and Historical Flow Charts AB-BC (PDF)	▶ NrG Notices	▶ Mainline- Schedule Compliance Tolls (PDF)
▶ NrG Notices			

1. Reorganize content on the NGTL Customer Express landing page

Current state

Enhancement

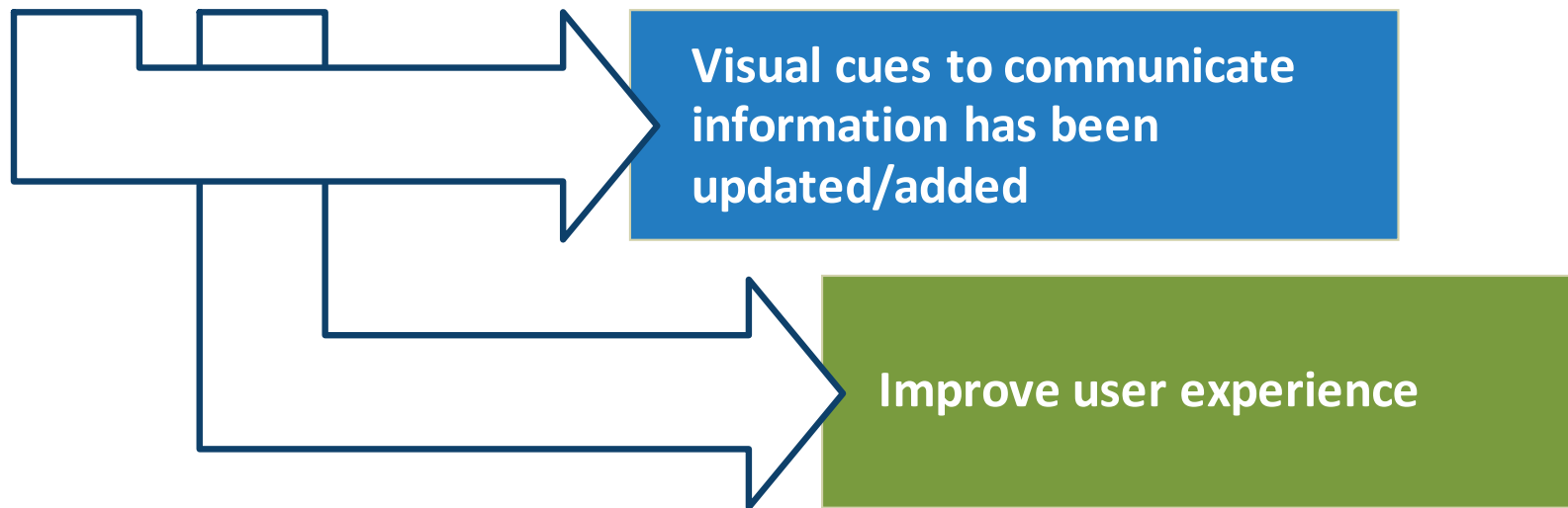
<p>System Operations</p> <ul style="list-style-type: none"> ▶ NGTL Current System Report ▶ Capacity Bulletin Board 🔒 ▶ Customer Activities 🔒 ▶ Flowing Gas – Month End 🔒 ▶ Gas Day Summary Report ▶ Notices – All / Critical / Non-Critical ▶ Open Season ▶ NGTL/FH Daily Operating Plan (formerly STOP) ▶ System Maps ▶ TransCanada's NrG Highway 🔒 	<p>Reports</p> <ul style="list-style-type: none"> ▶ Alberta Borders Heat Values ▶ NGTL Fuel Usage and Measurement Variance ▶ NGTL Station Percent Utilization ▶ CO2 Management Service ▶ Credit and Financial Procedures (PDF) ▶ Monthly PA CSO Contacts - May 2, 2020 (XLS) ▶ Location Daily Contacts - May 4, 2020 (XLS) ▶ Plant Turnaround Information Request Form (DOC) ▶ Gas Balance Schedules and Recovery ▶ System Utilization ▶ System Summary of Receipts and Deliveries
<p>Rates</p> <ul style="list-style-type: none"> ▶ Final and Interim Rates and Charges ▶ Tool for FT-P Service ▶ National Energy Board Notice of Public Hearing re: NGTL Rate Design and Services Application 	<p>The Pipeline</p> <ul style="list-style-type: none"> ▶ Front Line IMs ▶ Facilities ▶ Organizational Chart ▶ Procedures ▶ Presentations

<p>🔥 Daily Operations</p> <ul style="list-style-type: none"> ▶ Capacity Bulletin Board 🔒 ▶ Customer Activities 🔒 ▶ Flowing Gas - Month End 🔒 ▶ Gas Day Summary Report ▶ Multi-Day Gas Day Summary 🔒 ▶ NGTL Current System Report ▶ NGTL/FH Daily Operating Plan ▶ Notices - All / Critical / Non-Critical ▶ NrG Highway 🔒 ▶ Open Season 	<p>📅 Monthly Reporting</p> <ul style="list-style-type: none"> ▶ Border Heat Values, Empress, McNeill & A/BC UPDATED: Apr 8, 2020 ▶ CO2 Management Service UPDATED: Feb 18, 2020 ▶ NGTL Fuel Usage and Measurement Variance (MVAR) Percentage UPDATED: Apr 20, 2020 ▶ NGTL Station Percent Utilization - Report UPDATED: Apr 21, 2020 new ▶ NGTL System Utilization UPDATED: Apr 15, 2020 ▶ System Receipts and Deliveries UPDATED: Apr 21, 2020 new
<p>🔧 Tools</p> <ul style="list-style-type: none"> ▶ Front Line IMs ▶ Location Daily Contacts (XLS) ▶ Monthly PA CSO Contacts (XLS) 	<p>👤 References</p> <ul style="list-style-type: none"> ▶ Facilities ▶ Final Interim Rates and Charges ▶ Organizational Chart ▶ Procedures ▶ Presentations ▶ Tariff

TC Express Landing Page
- Same links, reorganized

2. “Last updated” date on Customer Express

Customer feedback



2. “Last updated” date on Customer Express

Current state

Reports

- ▶ Alberta Borders Heat Values
- ▶ NGTL Fuel Usage and Measurement Variance
- ▶ NGTL Station Percent Utilization
- ▶ CO2 Management Service
- ▶ Credit and Financial Procedures (PDF)
- ▶ Monthly PA CSO Contacts - May 2, 2020 (XLS)
- ▶ Location Daily Contacts - May 4, 2020 (XLS)
- ▶ Plant Turnaround Information Request Form (DOC)
- ▶ Gas Balance Schedules and Recovery
- ▶ System Utilization
- ▶ System Summary of Receipts and Deliveries

Enhancement

Monthly Reporting

Last updated dates for all Reports

- ▶ Border Heat Values, Express, Monnet & ABO

UPDATED: Apr 8, 2020

- ▶ CO2 Management Service

UPDATED: May 7, 2020

new

- ▶ NGTL (MVAR) “new” tag appears for seven days after report is updated

UPDATED: Apr 20, 2020

- ▶ NGTL Station Percent Utilization - Report

UPDATED: Apr 21, 2020

- ▶ NGTL System Utilization

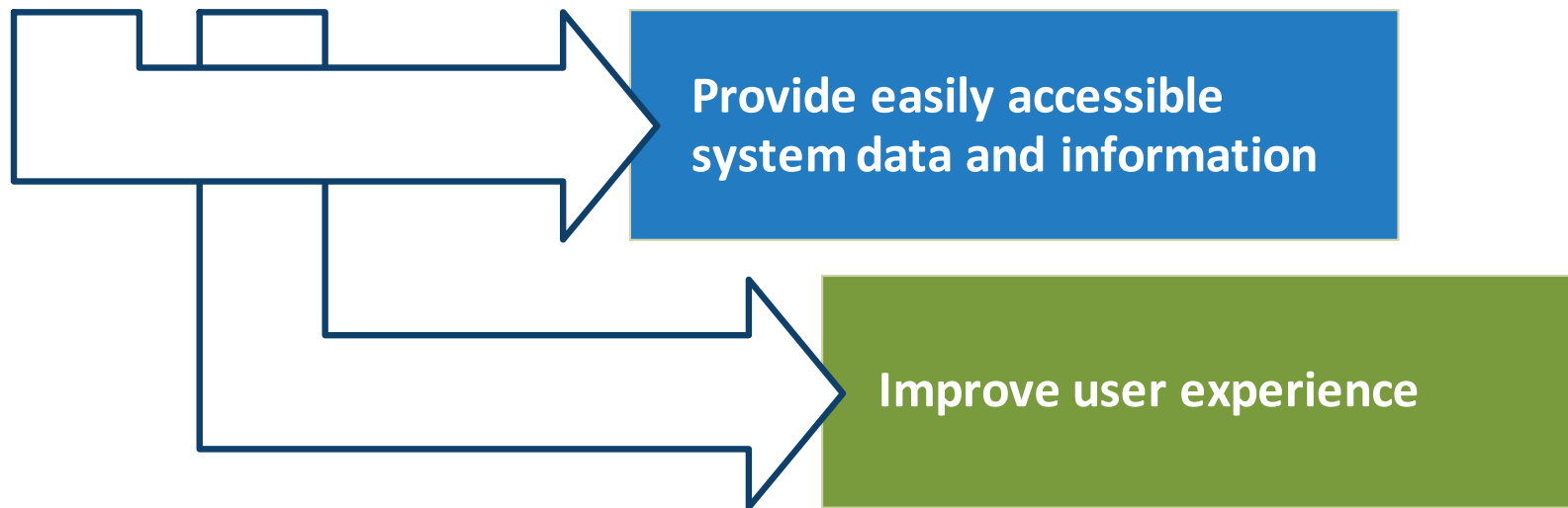
UPDATED: Apr 15, 2020

- ▶ System Receipts and Deliveries

UPDATED: Apr 21, 2020

3. Show data history – Multi-day GDSR

Customer feedback



3. Show data history – Multi-day GDSR

Current state

Gas Day Summary Report

Please enter the parameters below and click 'Run Report'

- NGTL
- Mainline (VALID TO JULY 31, 2019)
- Mainline Estimates** (VALID TO JULY 31, 2019)
- Metric
- Imperial

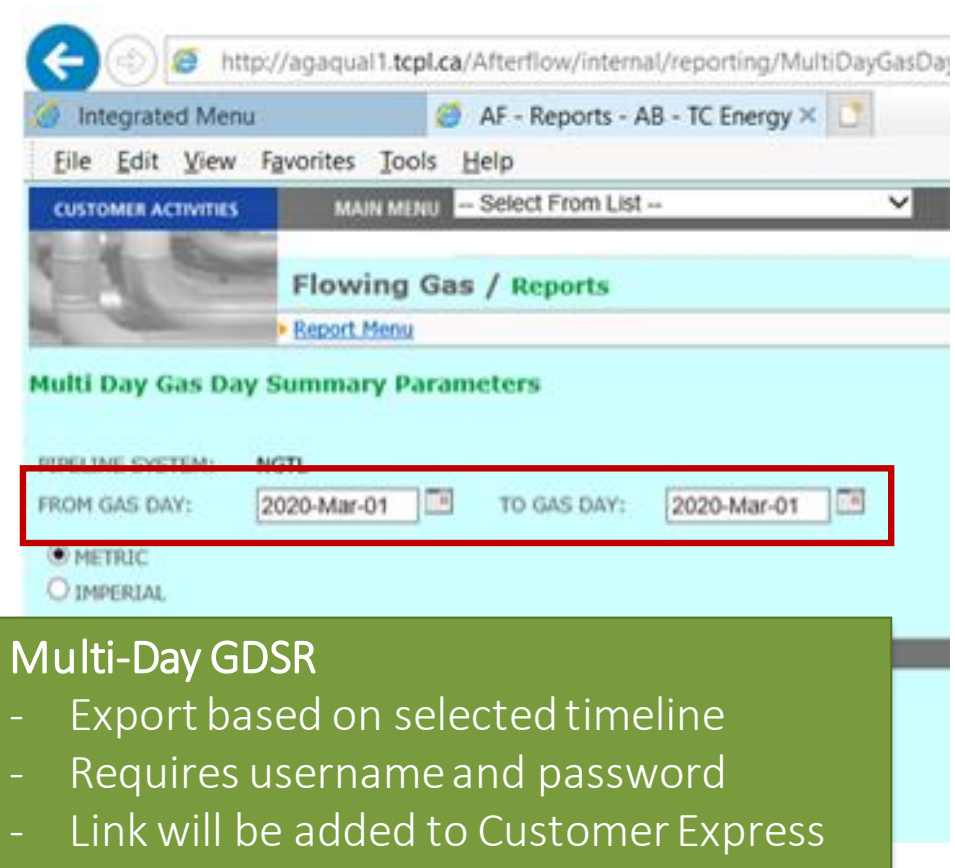
Gas Day (yyyymmdd):

GDSR

- Limited to exporting one day at a time
- Public
- Will continue to be available on Customer Express

**Mainline Estimates (Based on Evening Cycle Scheduled Quantities)

Enhancement



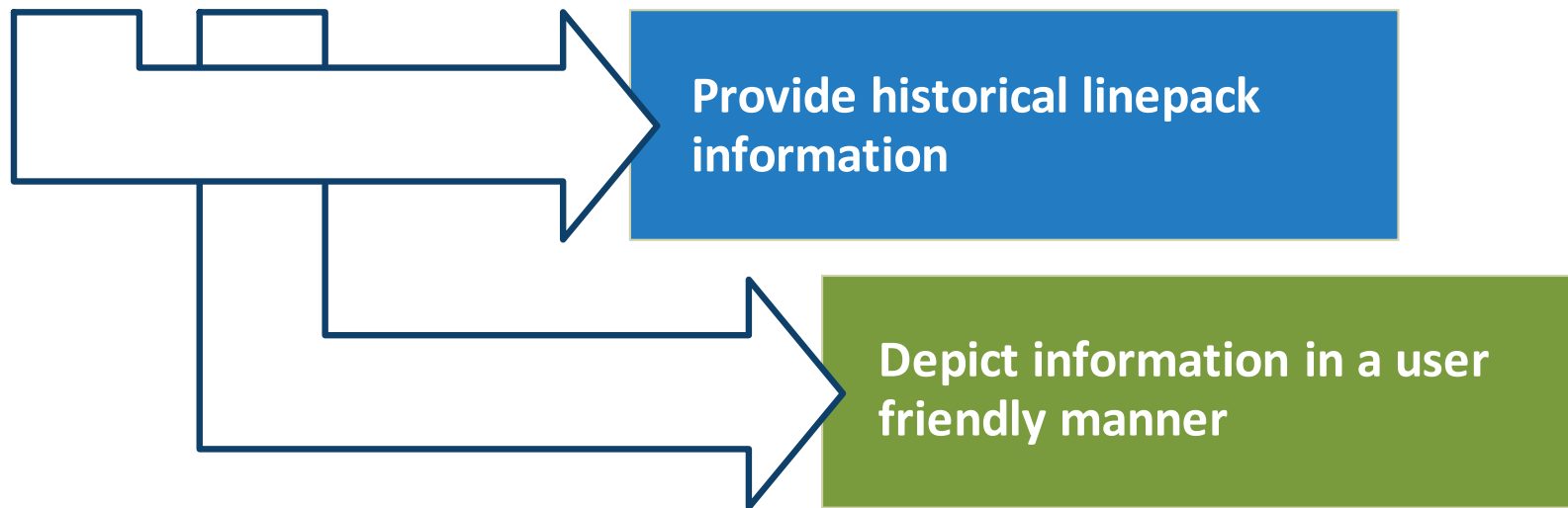
The screenshot shows a web browser window with the URL <http://agaqual1.tcpl.ca/Afterflow/internal/reporting/MultiDayGasDay>. The browser's address bar and tabs are visible. The page content includes a navigation menu with 'Integrated Menu' and 'AF - Reports - AB - TC Energy'. Below the menu, there are sections for 'CUSTOMER ACTIVITIES', 'MAIN MENU -- Select From List --', and 'Flowing Gas / Reports'. The main content area is titled 'Multi Day Gas Day Summary Parameters' and contains the following form elements: 'PIPELINE SYSTEM: NGTL', 'FROM GAS DAY: 2020-Mar-01', and 'TO GAS DAY: 2020-Mar-01'. A red box highlights the date selection fields. Below these fields, there are radio buttons for 'METRIC' (selected) and 'IMPERIAL'.

Multi-Day GDSR

- Export based on selected timeline
- Requires username and password
- Link will be added to Customer Express

4. Linepack graph added to NGTL Dashboard

Customer feedback



4. Linepack graph added to NGTL Dashboard

WGAT	74	100%	34%	74
Foothills SK		100%	100%	
Foothills BC		100%	100%	
OSDA		100%	100%	
Greater USJR	339	100%		

* *NrG bulletins* supercede any of this information
 ** *Authorized allowable percentage based on Evening Cycle Authorizations*
 NOTE: - Heating value assumed is 38.5, TC's default average

NGTL Dashboard

- Linepack and Linepack Target graph
- Linepack graph: snapshot for the last 7 days

LINEPACK	E3M3/DAY	E6M3/DAY	MMCF	APR 22, 2020 - APR 28, 2020	
Current Linepack	502,900	502.9	17,754	550	
Linepack Target	525,000	525.0	18,533	540	
4 Hour ROC	-1,262	-1.3	-45	530	

Linepack data updated every 30 minutes
Last Updated: February 13, 2020 1:20:00 PM MST

Chart data shows end-of-gas day value per GDSR

SD AND OBA

Next steps

- **Go live date – 2nd / 3rd week of May**
 - NrG bulletin will be sent out a week in advance informing customers of Go-Live date for enhancements
- **Follow-up session on enhancements at June Customer Operations meeting**

Contact information

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meetings

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403-920-7915