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## **Customer Meeting**

### **October 12, 2023**

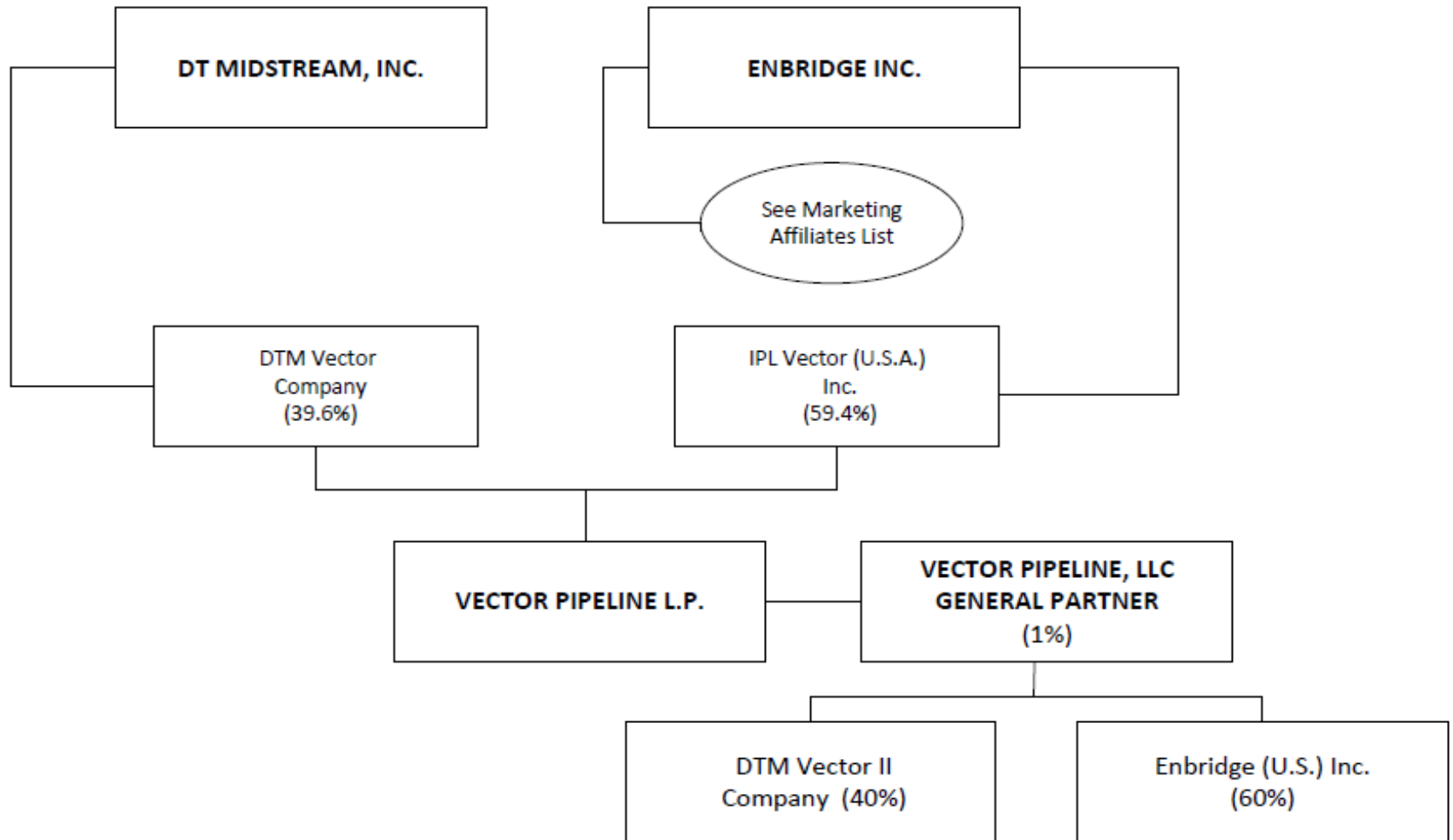
**The Lodge at Torrey Pines**

**La Jolla, CA**



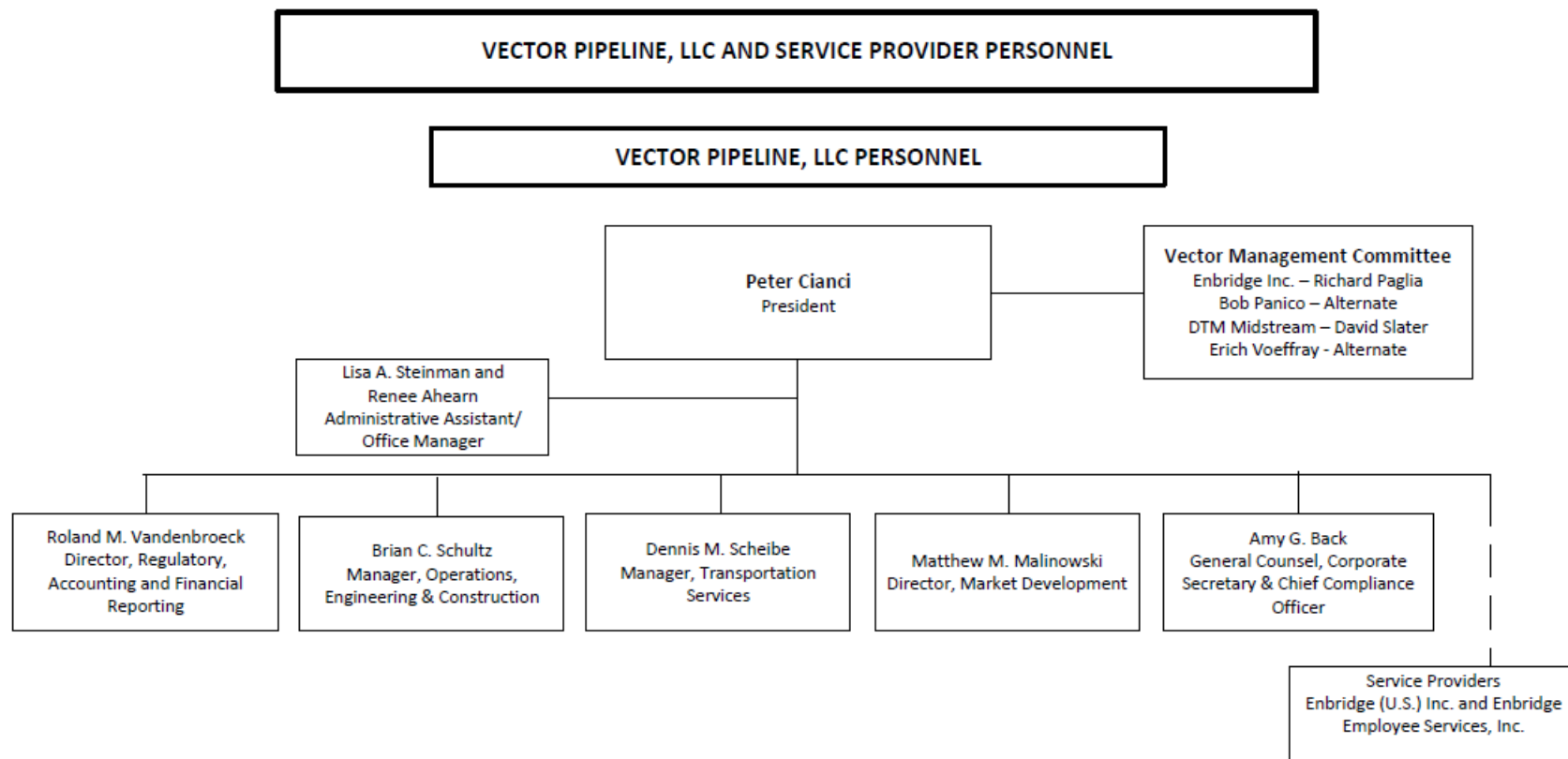
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# Partnership Structure



01/24/2022

# Organization Chart





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# **Matt Malinowski**

## **Director, Market Development**



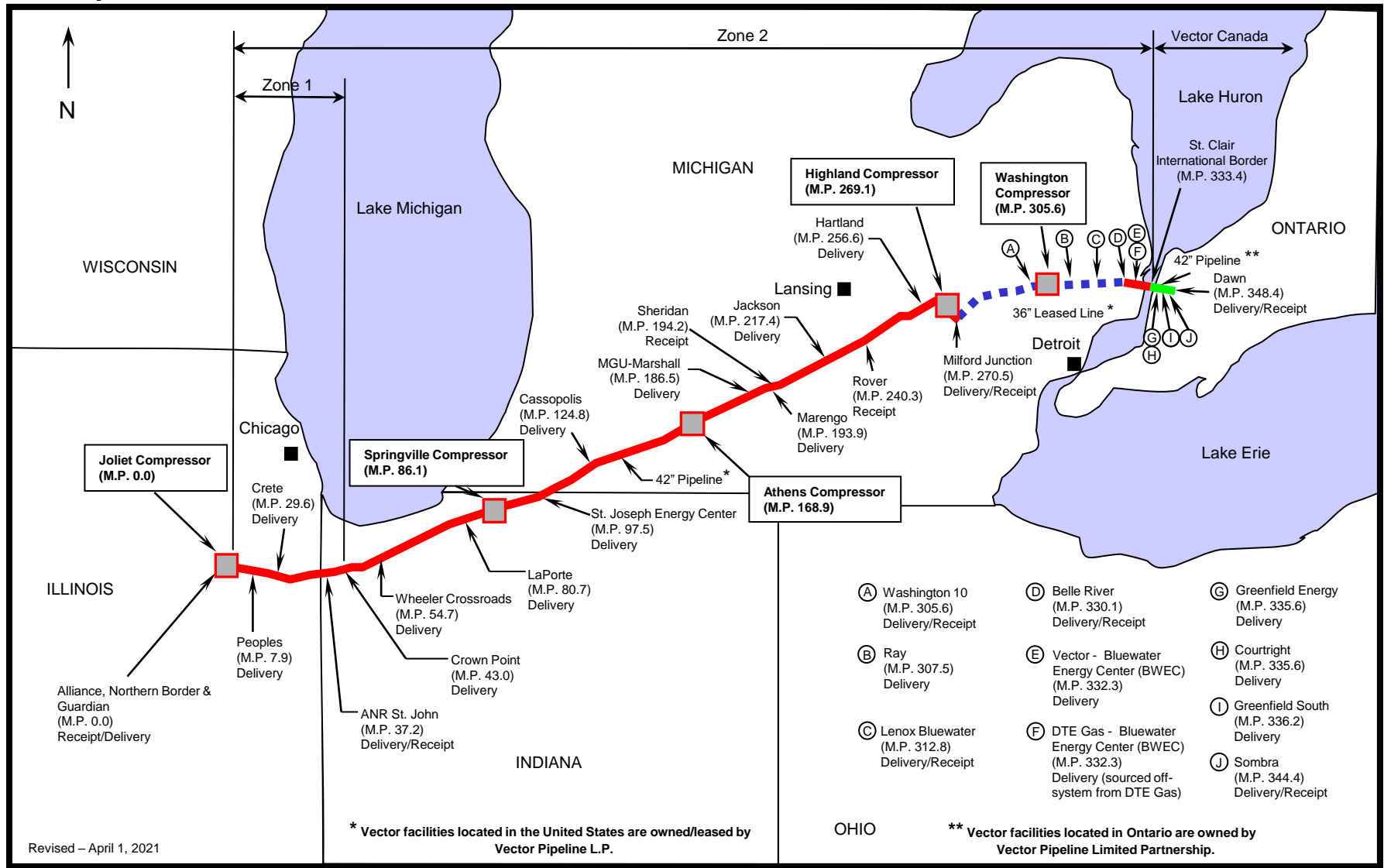
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# **Operations, Performance and Efficiency**



# Vector Pipeline System Map

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Revised – April 1, 2021

# 2023 Outage Recap

- Mainline Valve Stem Repair at Washington Compressor
  - Station block valve developed a fault requiring a complete pipeline segment blowdown in order to repair
  - Three day job – May 9-11
- Cleaning pig run
  - Two cleaning pig runs on Athens to Milford segment on Gas Day June 27
- Consumers Energy meters
  - Hartland recoating/repainting Sept 25-30
  - Ray – flow control valve repair required – 1<sup>st</sup> week of October
- Joliet Meter outage – Sept 19 – Nov 8 (details on next slide)
- Other routine maintenance throughout the year with no effect on firm transportation services.

# Joliet Meter Outage

- Alliance and NBPL interconnections require modifications
- Meters and flow control valves needed to be resized due to reduced volumes
- New capacities:
  - Alliance – 500 MMcf/d
  - NBPL – 300 MMcf/d
- Outage window – began Sept. 19 and tentatively ending on Nov. 8 - no flow from Alliance and Northern Border
- Guardian impacted at the beginning (Sept. 19-21) and end of this project (Oct. 23-25) when the cut-outs and tie-ins are being made



# 2024 Maintenance

- Tentative cleaning pig run
  - Athens to Milford Junction – date TBD
- No other major outages planned at this time for 2024
- Vector will continue its normal ongoing maintenance activities including thorough equipment testing and inspections. This work is usually performed without affecting firm transportation services.

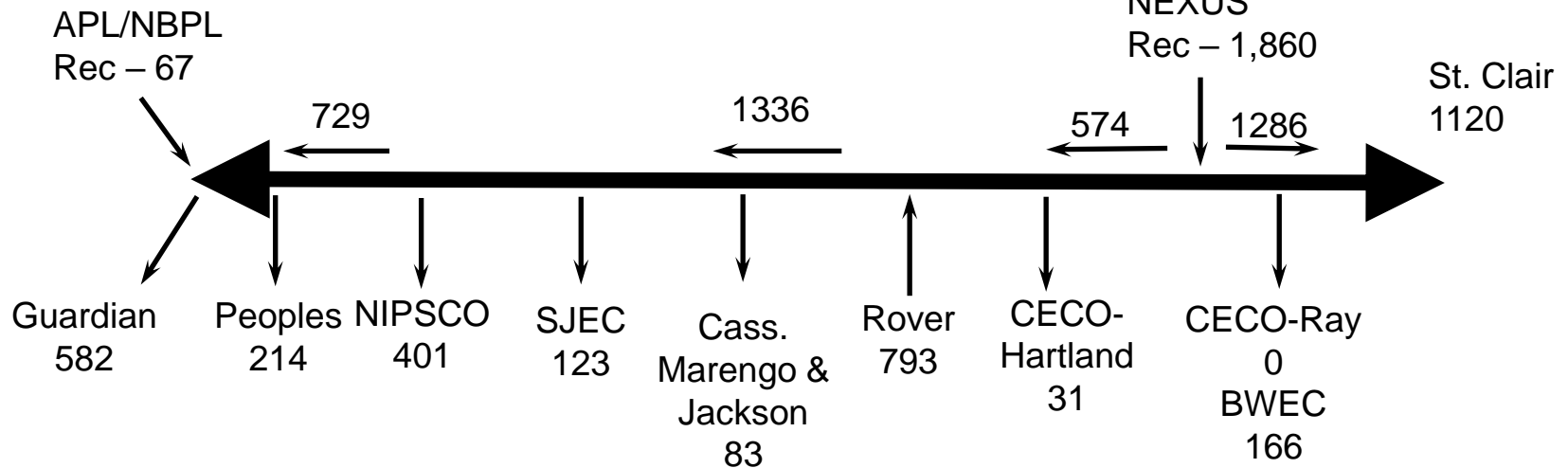


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# Winter Peak Day 2022/23

Winter 2022/23 System Peak – 2,721 MDth  
January 31, 2023

Michigan  
Receipts  
Wash 10  
Bluewater  
DTE Gas/  
NEXUS  
Rec – 1,860



Temperature Range – S.E. Mich. (White Lake): 2°F to 19°F

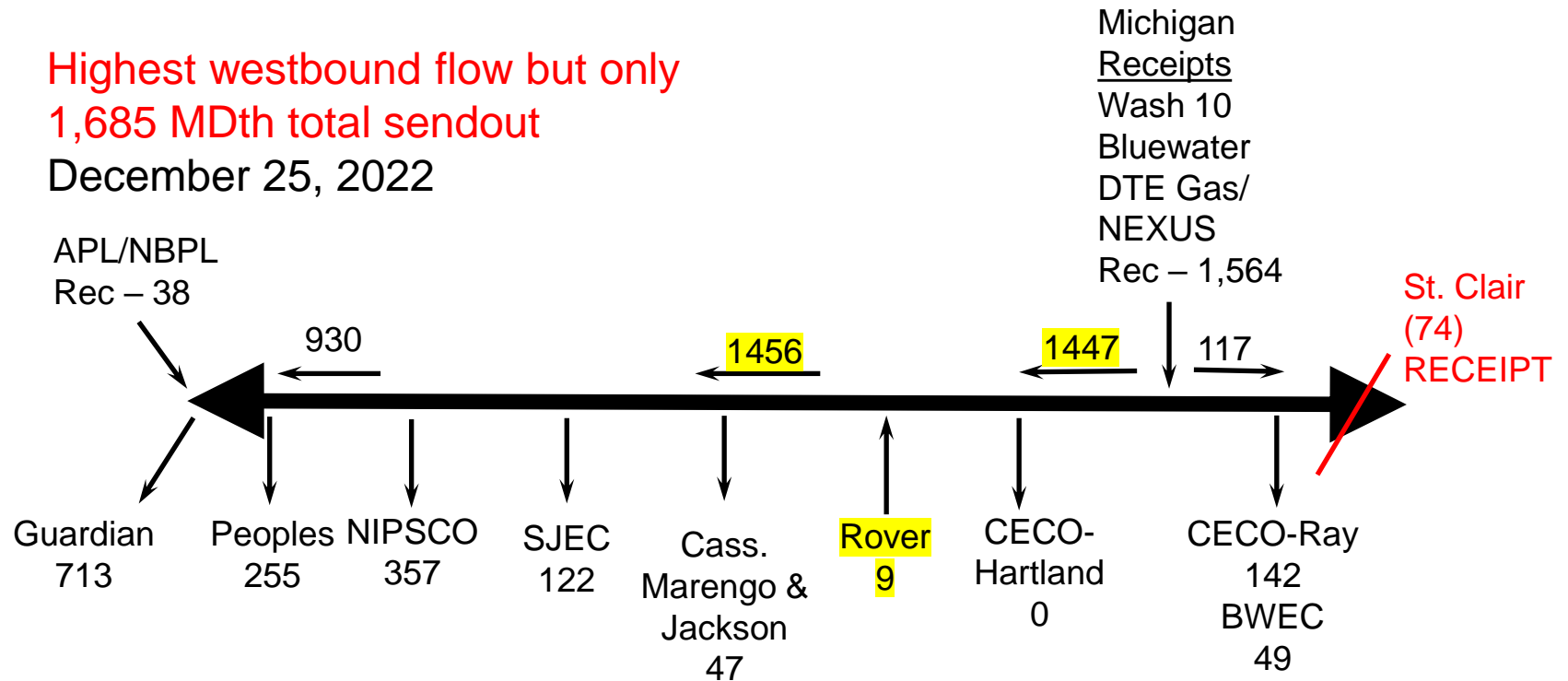


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# Critical Westbound Flow Pattern

Highest westbound flow but only  
1,685 MDth total sendout

December 25, 2022



Temperature Range – S.E. Mich. (White Lake): 12°F to 16°F

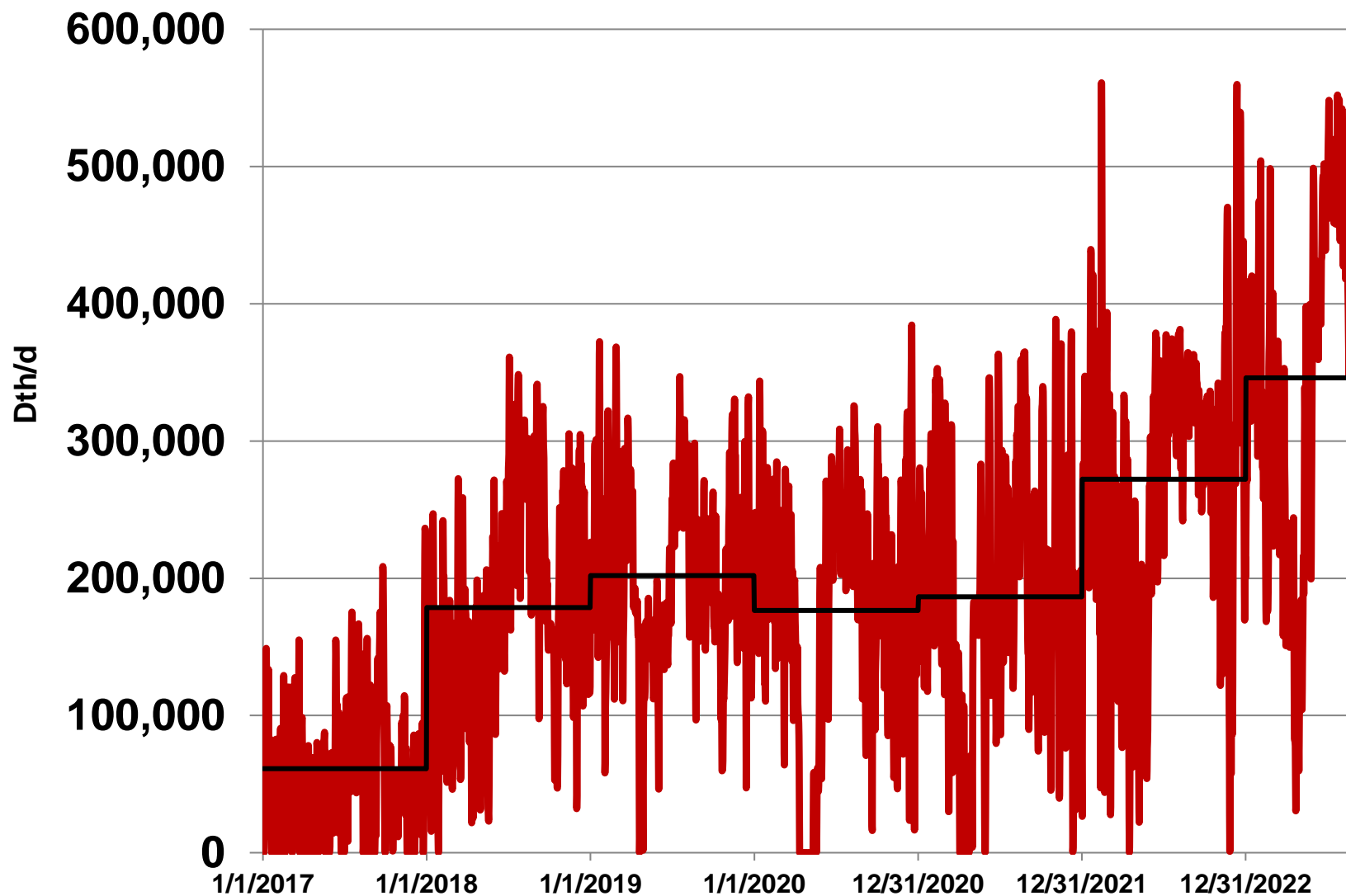
# Past Peak Day Volume by Year

January 7, 2014	2,341
February 20, 2015	2,216
March 13, 2016	1,594
January 6, 2017	2,189
January 4, 2018	2,057
January 31, 2019	2,971
December 18, 2019	2,702
February 7, 2021	2,361
January 10, 2022	2,778
January 31, 2023	2,721



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# Power Plant Consumption (with Annual Average)

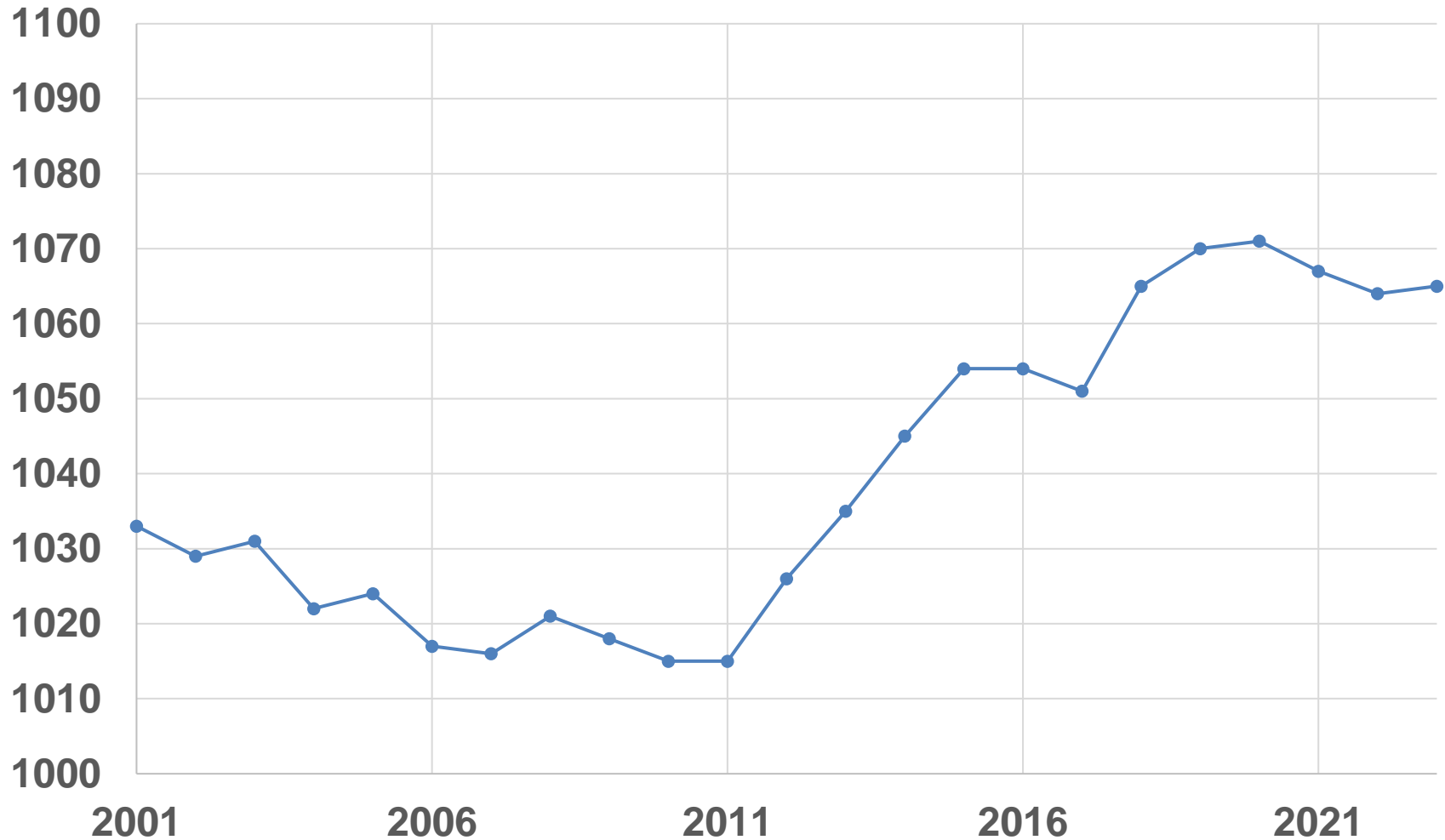




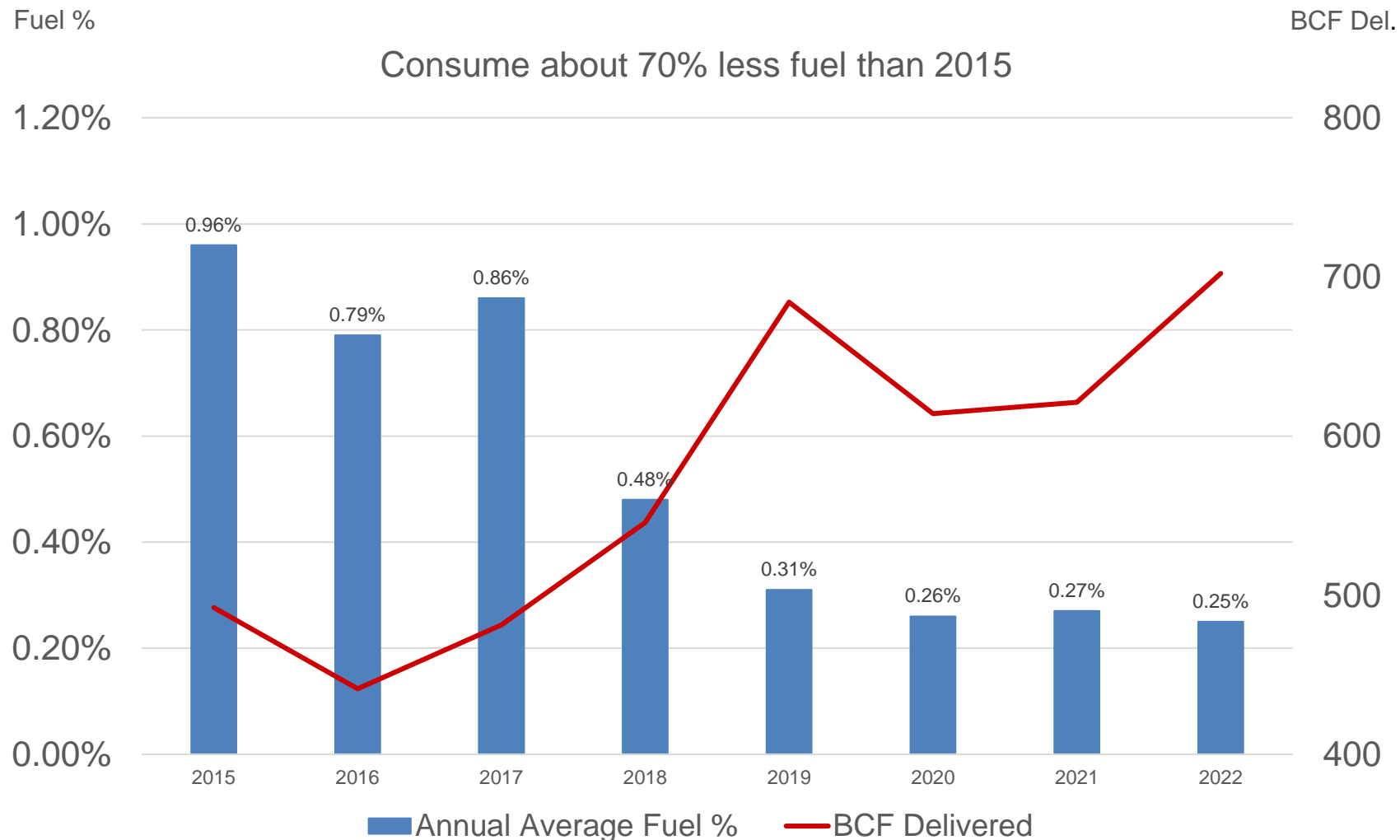
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# Historical BTU Content

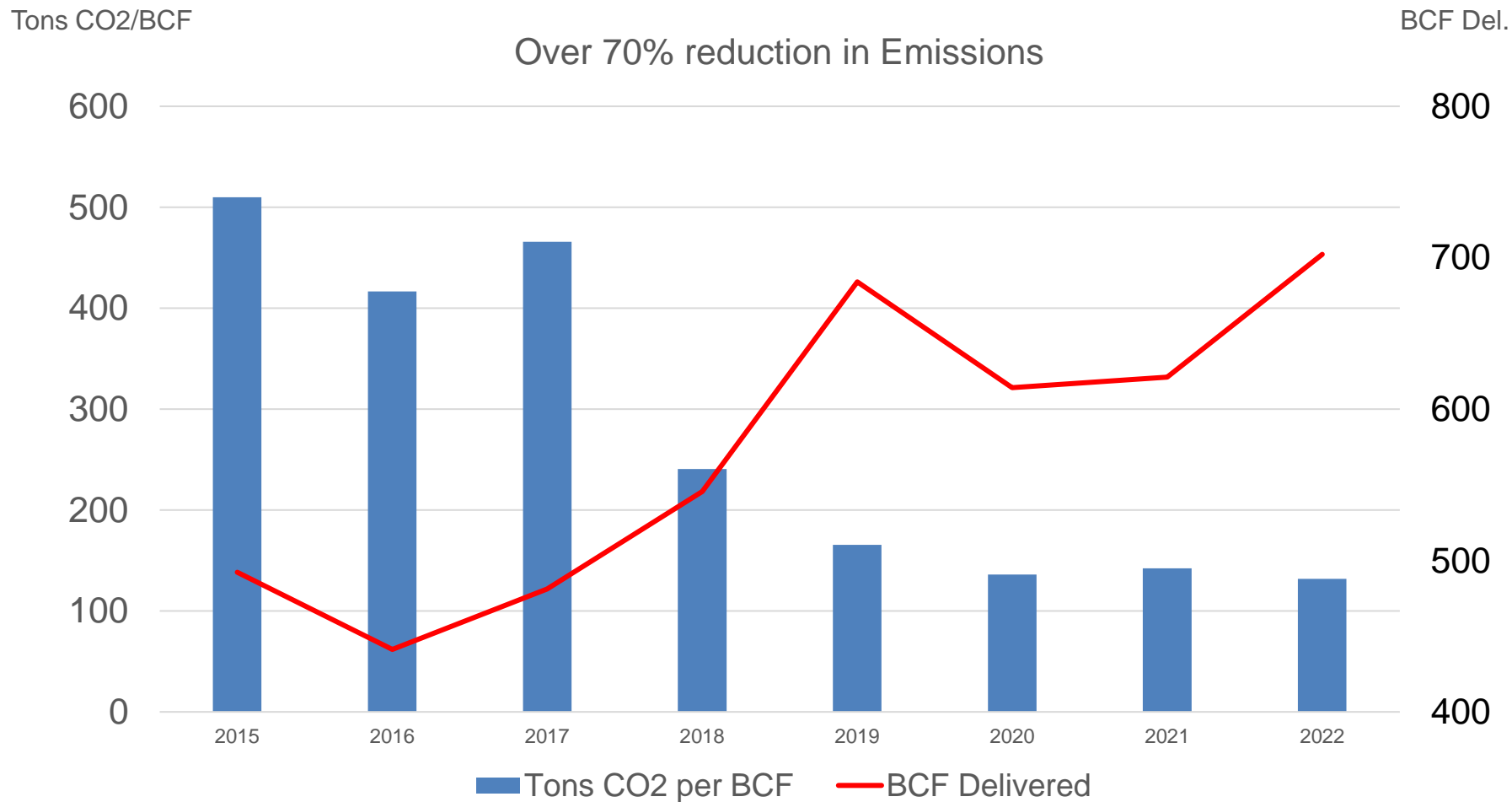
(Btu/cf @ St. Clair)



# Reducing Fuel Consumption



# Reduction in Greenhouse Gas





# Mitigating Fugitive Emissions

- Dry Gas Seals on Compressors
- Minimize/Optimize Station Startups and Shutdowns
- Use of hot taps for new interconnects when applicable
- Convert high-bleed pneumatic actuators to low-bleed
- Redesign blowdown systems to reduce venting during testing
  - all compressor stations have been converted
- Replace station fire alarm systems with more accurate detectors to prevent false alarms and emergency blowdowns
- Thermal imaging camera purchased to spot check and repair small leaks

# Mitigating Fugitive Emissions - Continued

- Methane abatement program being investigated to reinject gas normally vented in a compressor shutdown back into pipeline
  - To be installed at Washington Compressor station in 2024
  - If successful, look to install at other stations in future years
- Other Green Initiatives
  - Participating in Electric Utilities Renewable Programs
    - Committed to purchase our electricity from green sources (primarily solar / wind)
      - 100% in Consumers Energy (Athens Station)
      - 100% in Indiana Michigan Power (Springville Station)
      - 25% in DTE Electric (Highland / Washington Stations)



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# **Future Business**

# RNG Gas

- Vector has developers interested in connecting Renewable Natural Gas (RNG) projects into the mainline.
  - Sponsors are seeking customers to buy the gas.
- RNG is typically landfill gas or manure digestors from large dairy operations.
  - It is mostly dairy farm operators along Vector
- Known potential projects are in mid-Michigan and northern Indiana
- Very small receipt points
  - Typically less than 1,000 Dth per day
- More to come!



# Load Growth along Vector

- DTE Electric coal to gas conversion of Belle River powerplant
  - Unit 1 - December 2025
  - Unit 2 - December 2026
  - 312 MDth/d maximum volume
- Electric Vehicle Battery Plants
  - Marshall, Michigan – Ford/CATL (project “paused”)
  - New Carlisle, Indiana – GM/Samsung
- Additional merchant powerplants in Indiana, Michigan and Ontario

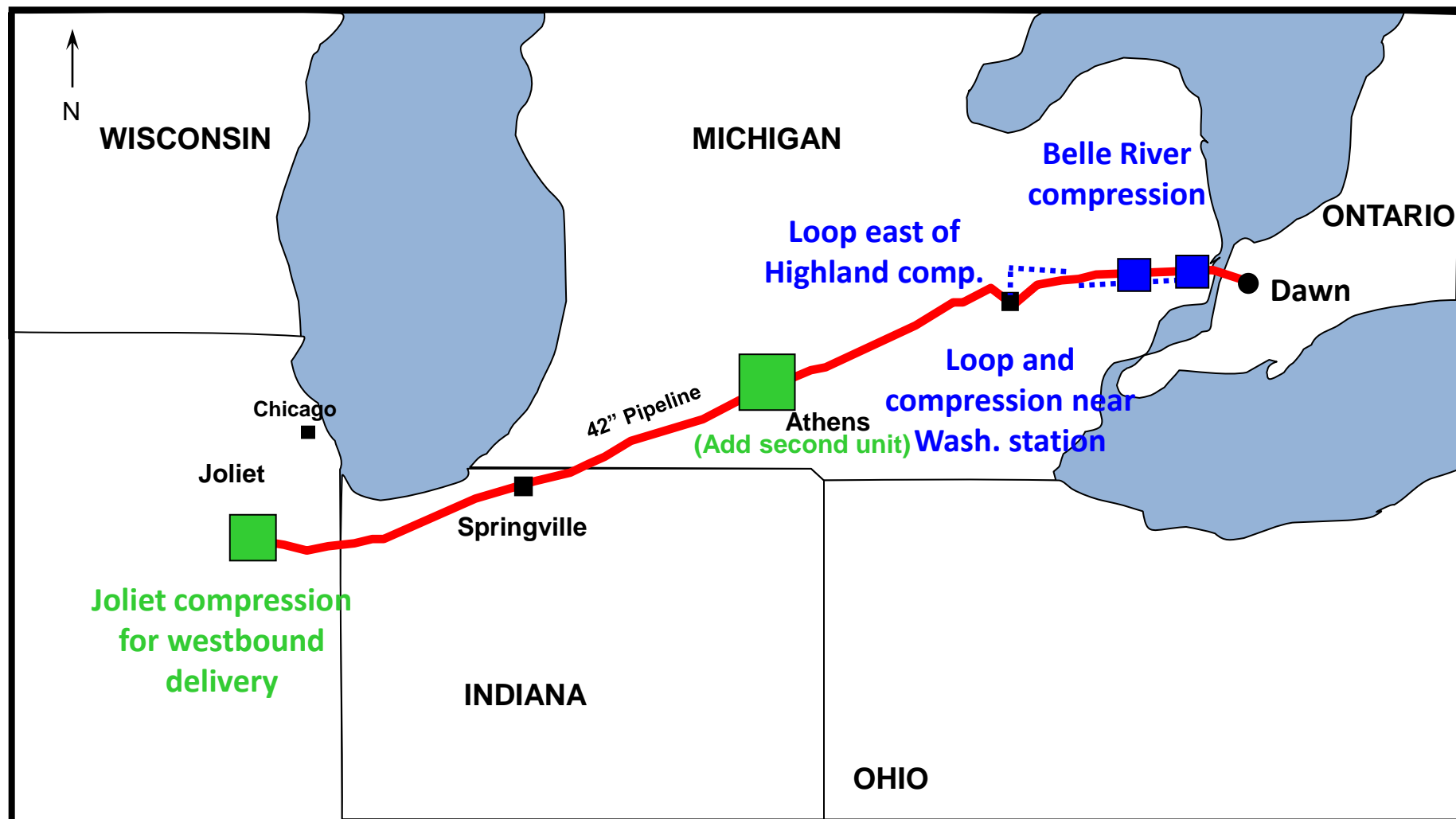
# Potential Expansions

- **Eastbound Expansions:**
  - Vector can expand eastbound capacity from Michigan storage, Appalachian and / or Joliet supplies to Dawn with the addition of loop and compression.
- **Westbound Expansions:**
  - The eastbound expansion facilities also increase our westbound capacity (Michigan Storage to Joliet markets)
  - Joliet Compressor Station can be modified to deliver existing firm westbound into premium Northern Border market



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# Potential Expansion Facilities



# Belle River Compressor Expansion

- Vector owns land near Belle River for a future compressor station.
- Investigating feasibility of moving the underutilized compressor at Joliet to Belle River
- Incremental eastbound
  - 40-55 MDth/d annual
  - up to an additional 100 MDth/d winter-only
- Nov. 2026 earliest in-service
- Annual service at max rate (\$0.2318/Dth) and winter-only approximately \$0.15/Dth



# Westbound Markets

- Expand mainline capacity in a westbound direction
- Requires a second compressor at the Athens station
  - This project is another potential use for the unit from Joliet
- Incremental 100 MDth/d from Rover, NEXUS or Milford
  - Receipts east of Milford will require loop on the 36-inch Lease Line and will require a much higher rate
- Rate approximately \$0.23/Dth
- Target in-service – November 2026

# Joliet Firm Compression Service into NBPL

- Need:
  - Northern Border is finally selling westbound firm transportation from this part of their system
- Target Customers:
  - Existing Vector westbound firm shippers
  - Alliance Shipper's (wheeling service to Northern Border)
- Facilities – install electric compressor
  - This project is a stand-alone project and does not increase our mainline capacity
- Compression Service Capacity
  - 100 – 200 MDth/d range
- In-service as early as Nov. 2025

# Joliet Firm Compression Service into NBPL

## Estimated Rates – New “Compression Rate Schedule”

Volume (MDth/d)	Demand Charge (\$/Dth)*	Usage Rate (\$/Dth)**	IT Rate (\$/Dth)**
100	0.100	0.015	0.115
150	0.075	0.015	0.090
200	0.050	0.015	0.065

\*100% L.F.

\*\* Adjust annually based on actual electrical usage

# Expression of Interest

- These projects require Open Seasons to gauge interest
- Need to move fast to make the target in-service dates
  - Joliet Firm Compression – In-service Nov. 2025
    - Requires an Open Season by 4<sup>th</sup> Q 2023 / 1<sup>st</sup> Q 2024
  - Athens and / or Belle River Compression – Nov. 2026
    - Requires an Open Season by 1<sup>st</sup> Q 2024
    - Assume longer regulatory timeline due to new construction and capacity increase on Mainline
- Binding Precedent Agreements required to move forward
- Please see Matt and Dennis for follow-up



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# **Dennis Scheibe**

## **Manager, Transportation Services**



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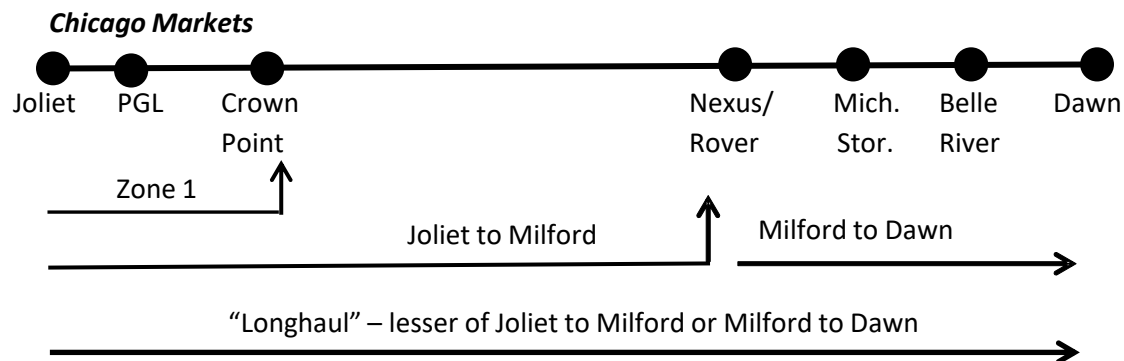
# **Daily Interruptible Capacity**



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# Mainline Capacity Segments

East Bound



West Bound



# Example of Capacity Posting

[Vector Pipeline](#) > [Doing Business With Us](#) > [Projected IT Availability](#)

## PROJECTED IT AVAILABILITY

**October 6, 2023**

Note: Vector's "Traditional Joliet to Dawn" longhaul availability can be determined by using the lesser of the "Joliet to Milford Junction" or the "Rover to Dawn" segment.

Projected IT-1 by segment available October 6, 2023 (current day):

- Joliet to Crown Point 1,393,020
- Joliet to Milford Junction 1,354,680
- Rover to Dawn 976,172
- Milford Junction to Joliet 902,863

Projected IT-1 by segment available October 7-9, 2023:

- Joliet to Crown Point 1,006,148
- Joliet to Milford Junction 993,808
- Rover to Dawn 78,022
- Milford Junction to Joliet 886,803

\*All volumes are in Dekatherms

Projected IT-1 available volumes are estimated based on current operational conditions and are made available solely for informational purposes only and nothing contained in this posting shall be construed as an offer of service. Vector does not guarantee the availability of IT-1 service to any party at any time.



# Daily Interruptible Transportation

- Vector Monitors Cash Trading – Set ND price by 9:30AM CT
- Path Specific IT Discounts
- E-mail confirmation outlining discount parameters
- Factors Impacting Scheduled IT Quantities:
  - Firm secondary nominations flowing same path as IT
  - Unanticipated max rate IT Nominations
  - Unplanned outages

# Contract Path / Secondary Points

- Contract and flow patterns may limit Shippers' abilities to flow to secondary out-of-path points
- Secondary In-path: Between primary receipt and primary delivery and in the same direction at contract rate
- Secondary Out-of-Path: Outside of the primary receipt or delivery and/or in the opposite direction of the primary path.
  - ***Unless explicitly agreed to with Vector, secondary, out-of-path points are not discounted.***



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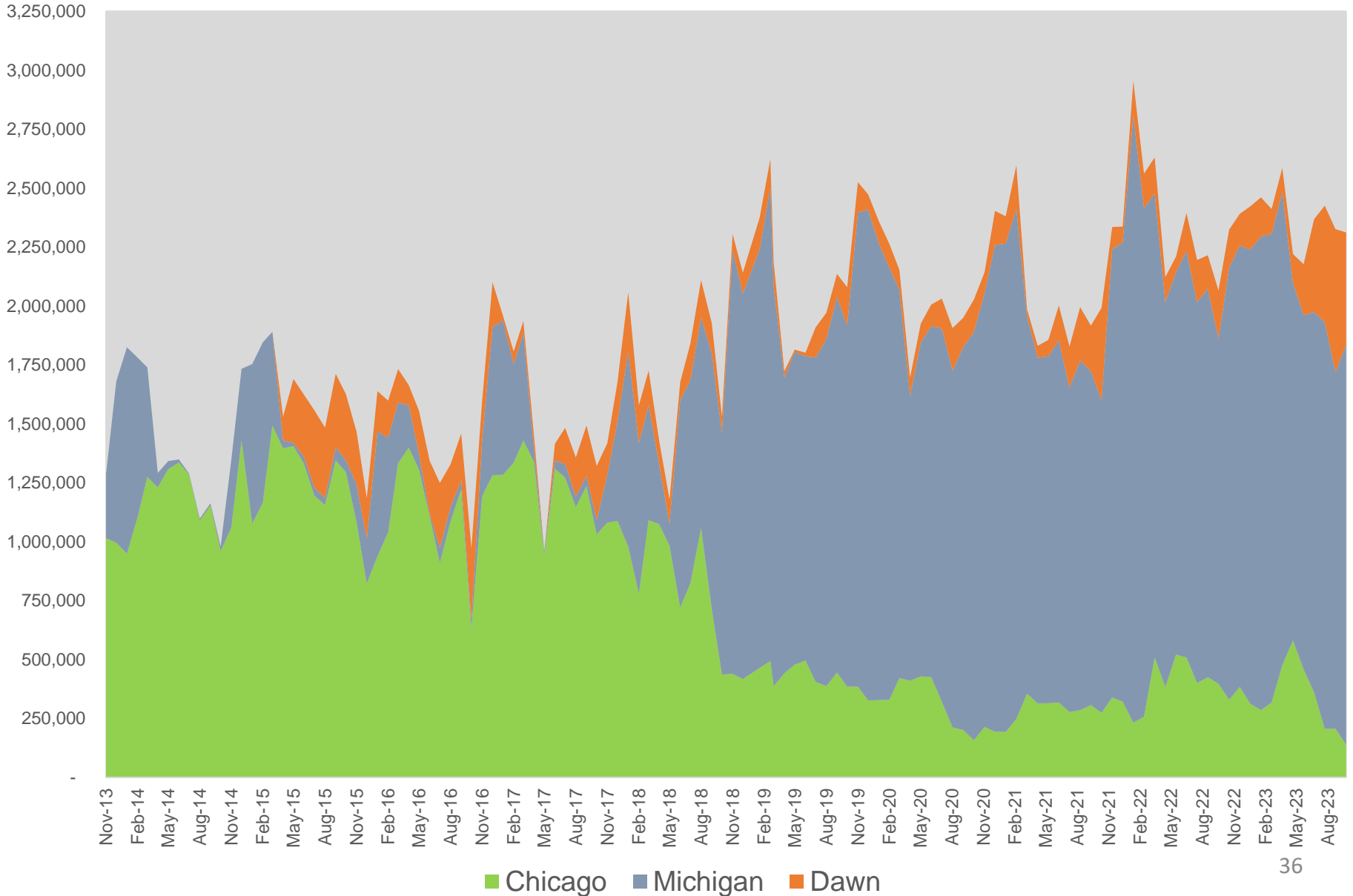
# Nomination Activity



# Average Monthly Nominated Receipts

Nov 2013 - September 2023

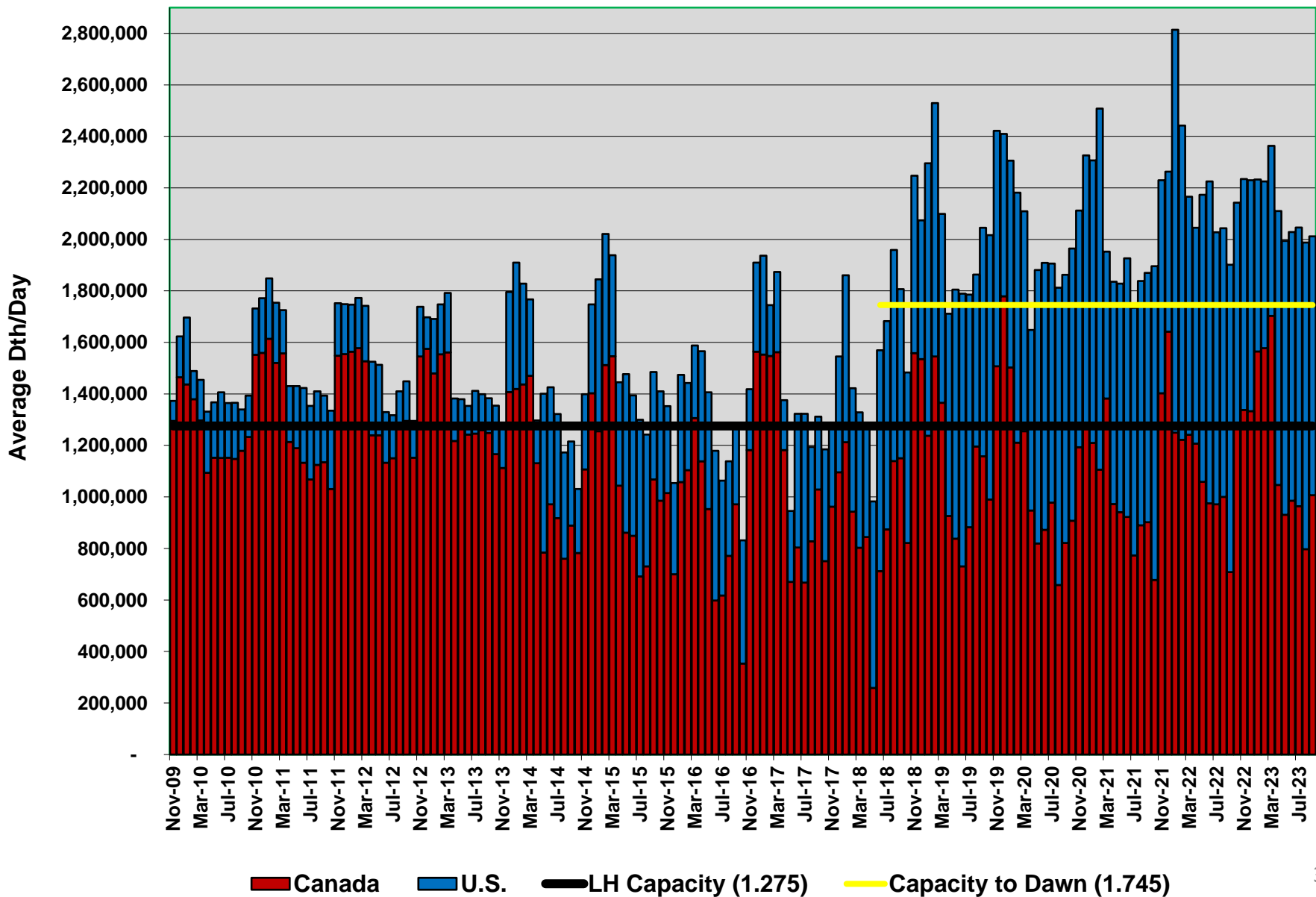
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# Nominated Deliveries (includes Longhaul, Shorthaul, Lease, Backhaul, and Segmented Capacity) Nov 2009 - September 2023



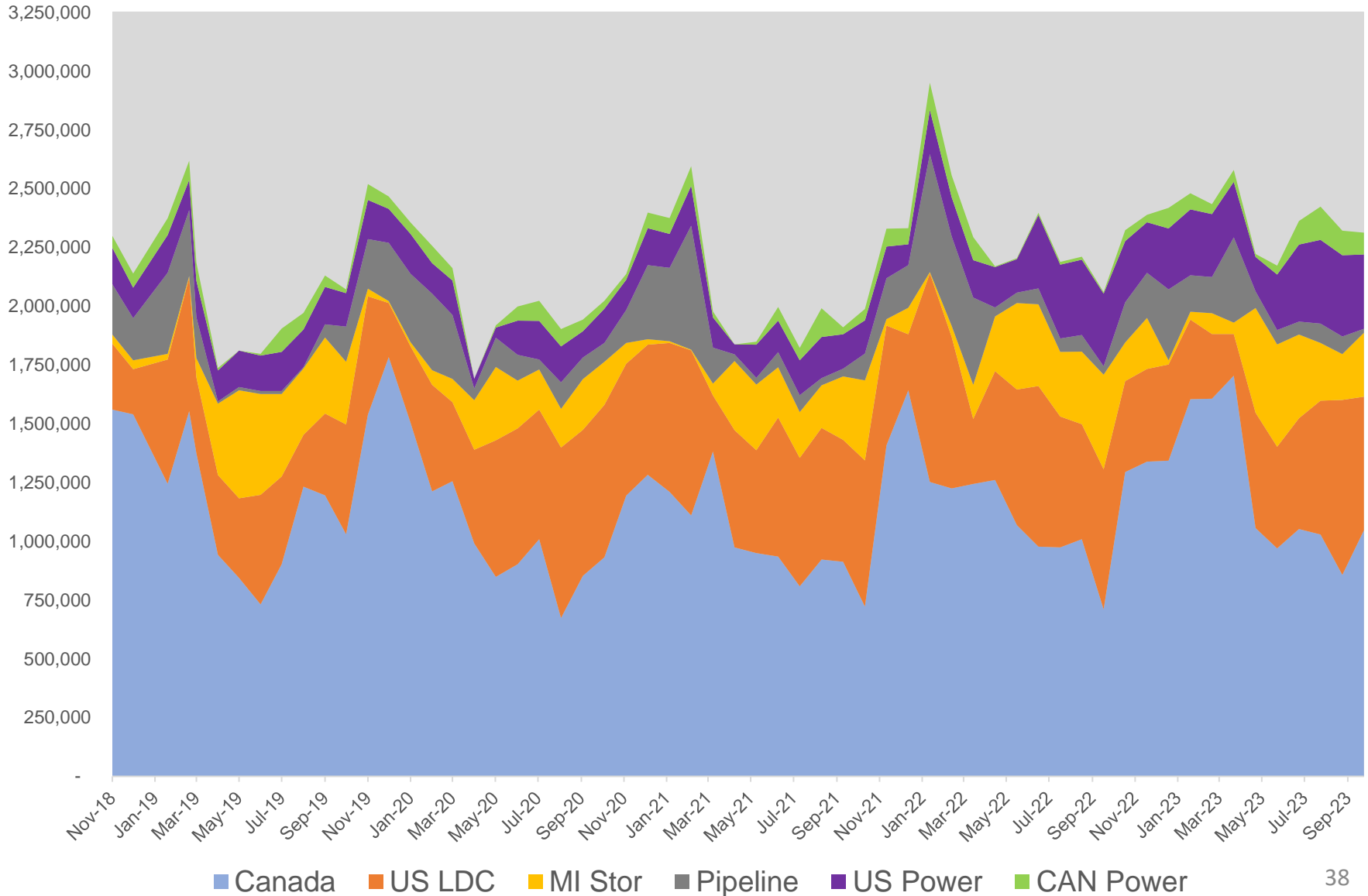


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# Average Monthly Nominated Deliveries

## by Interconnect Type

November 2018 - September 2023

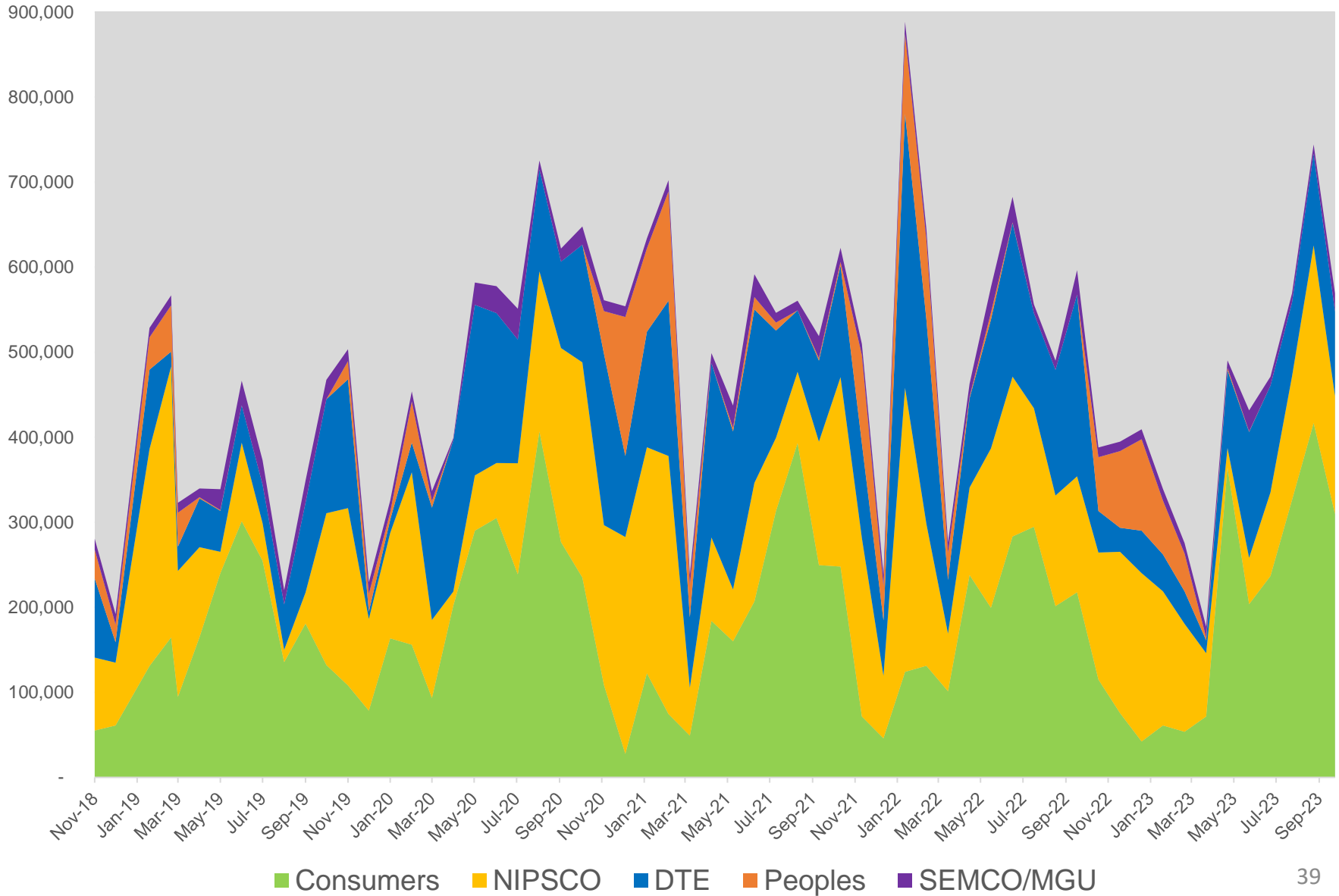




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# Monthly Average US LDC Deliveries

November 2018 - September 2023

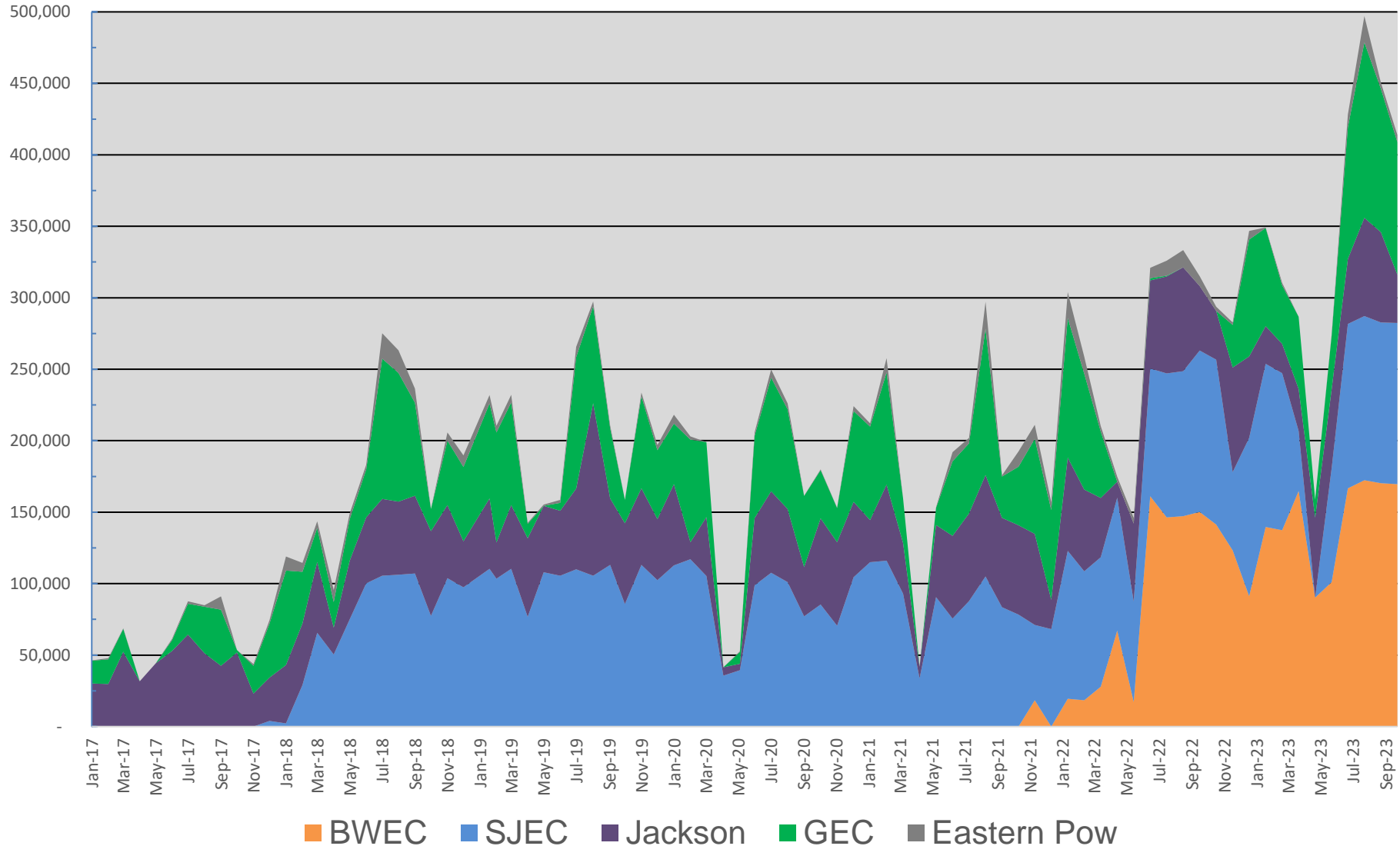




# Monthly Average Power Plant Deliveries

Jan 2017 - September 2023

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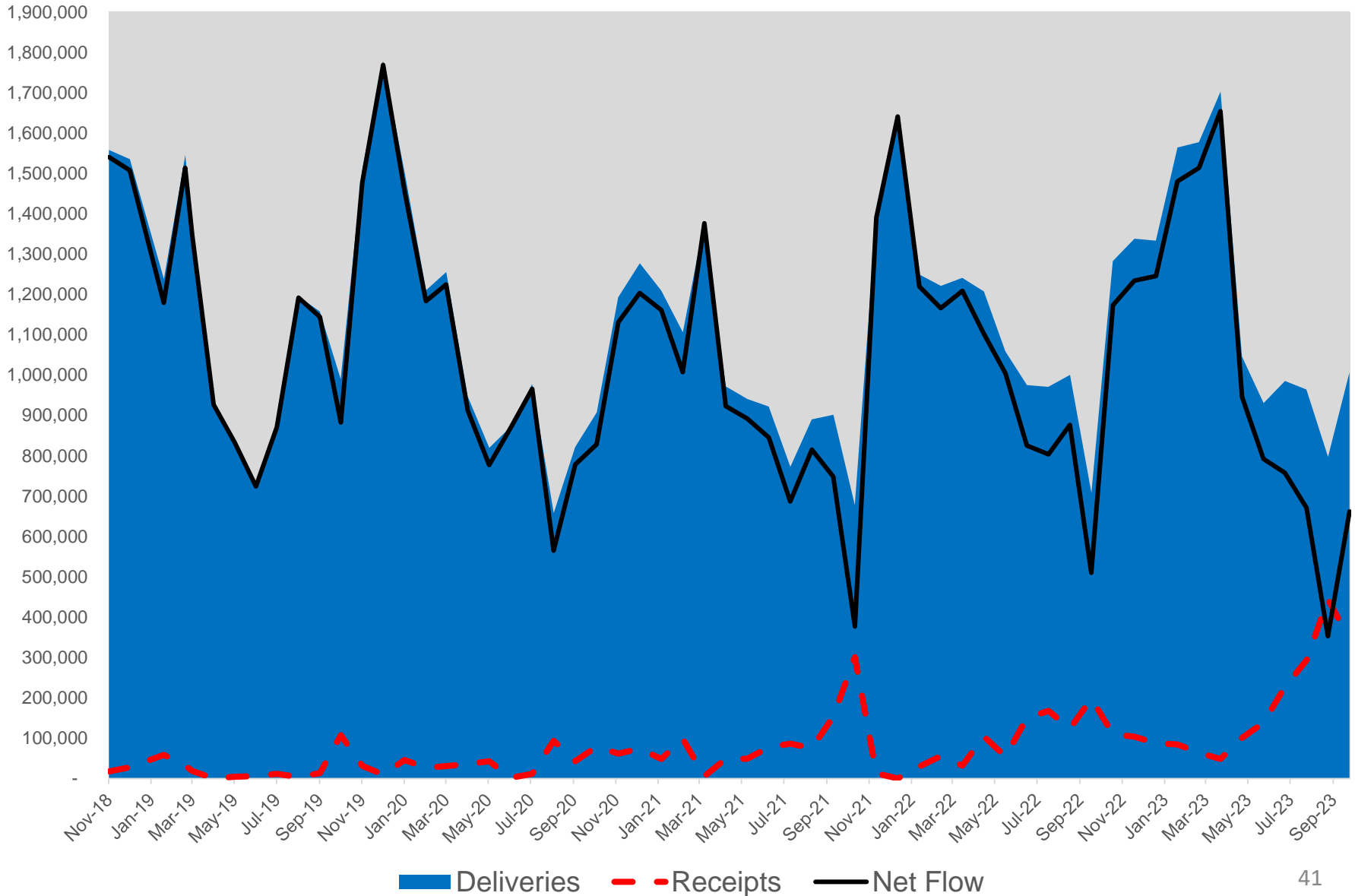




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# St. Clair Net Nominations

November 2018 - September 2023





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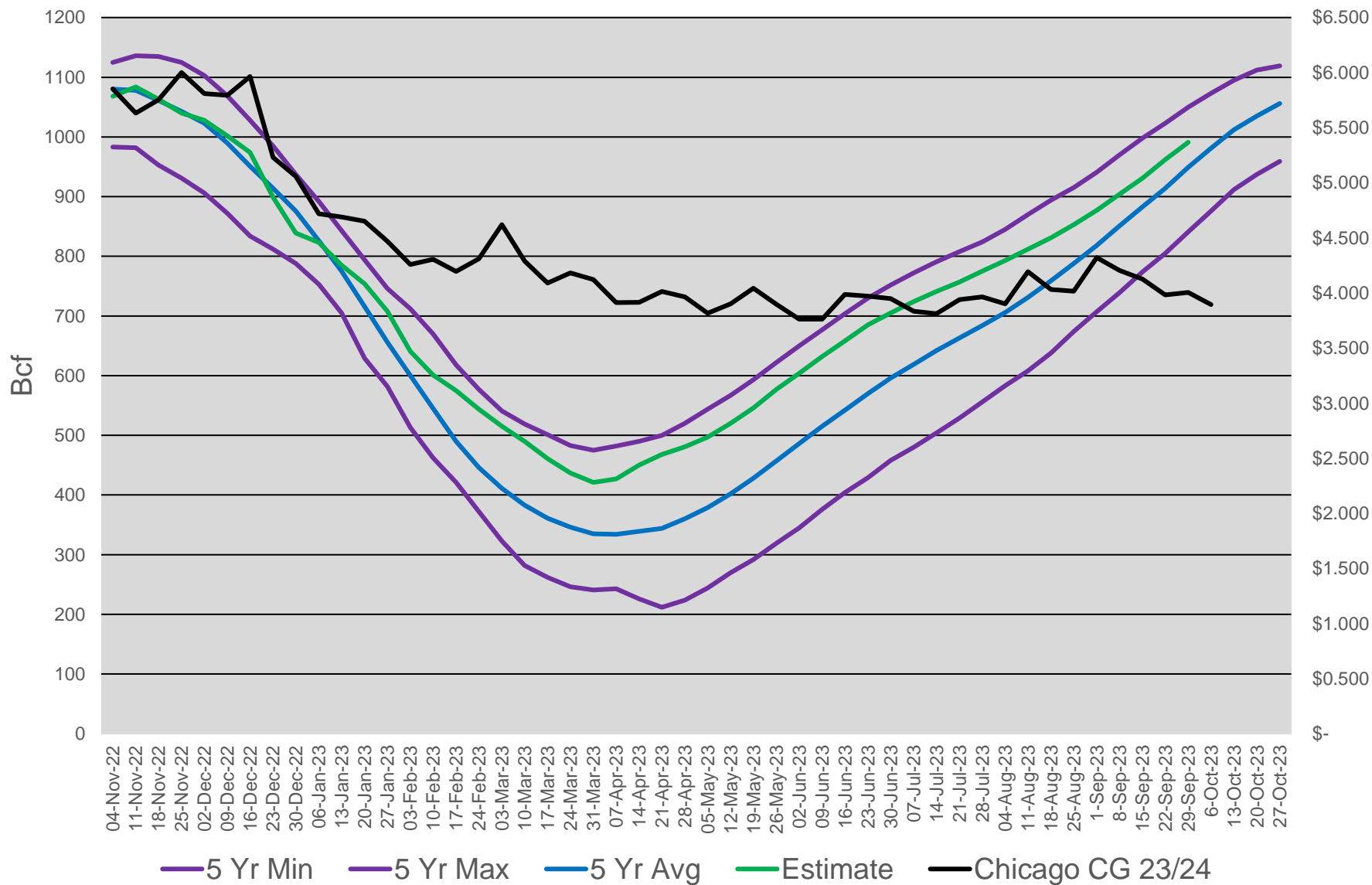
# Forward Outlook



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# Midwest Storage vs. W23-24 Chicago CG

November 2022 - October 2023



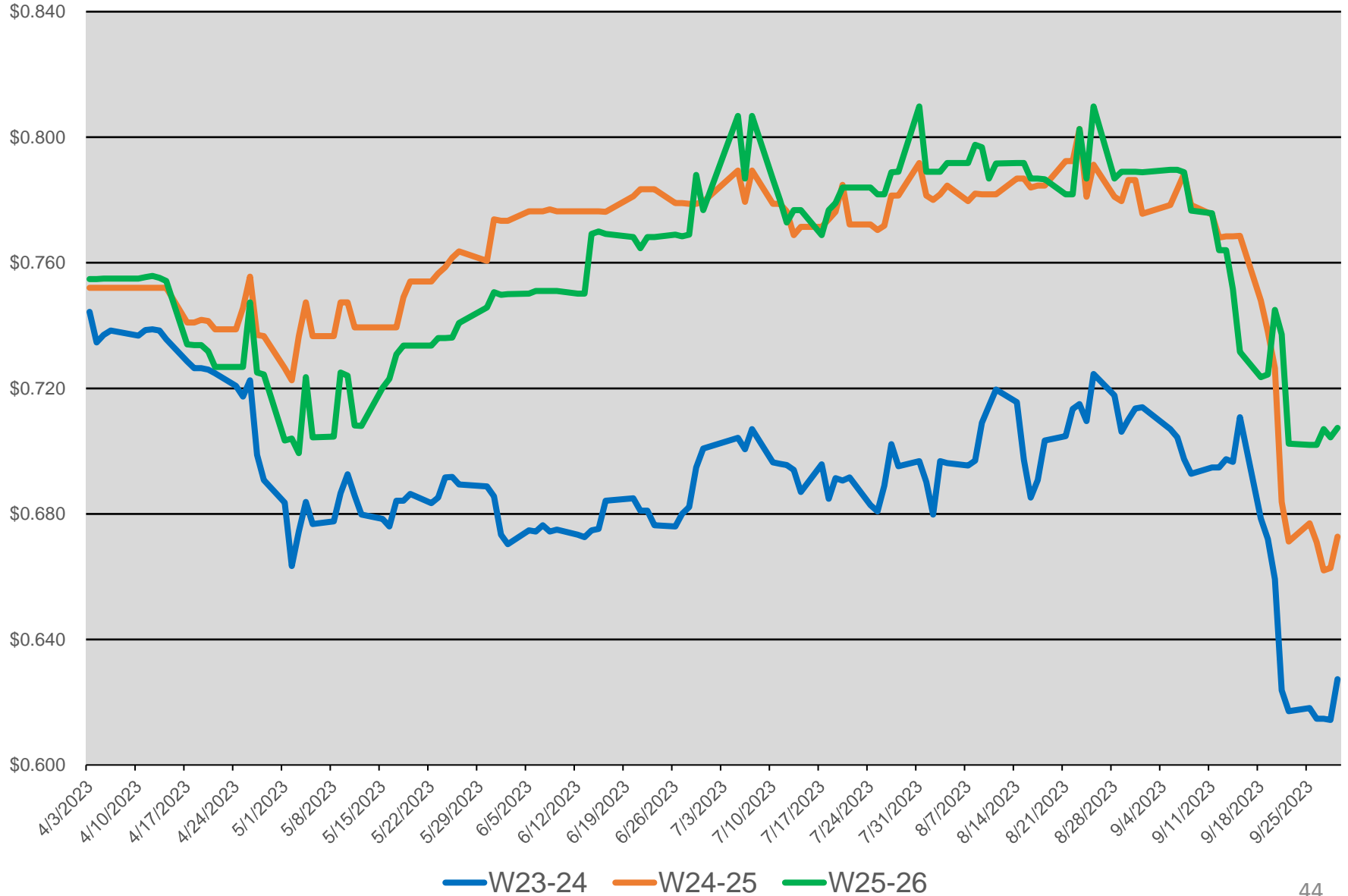
Source: US Energy Information Administration



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# Mich - Alliance Winter Forward Spread

Summer 2023

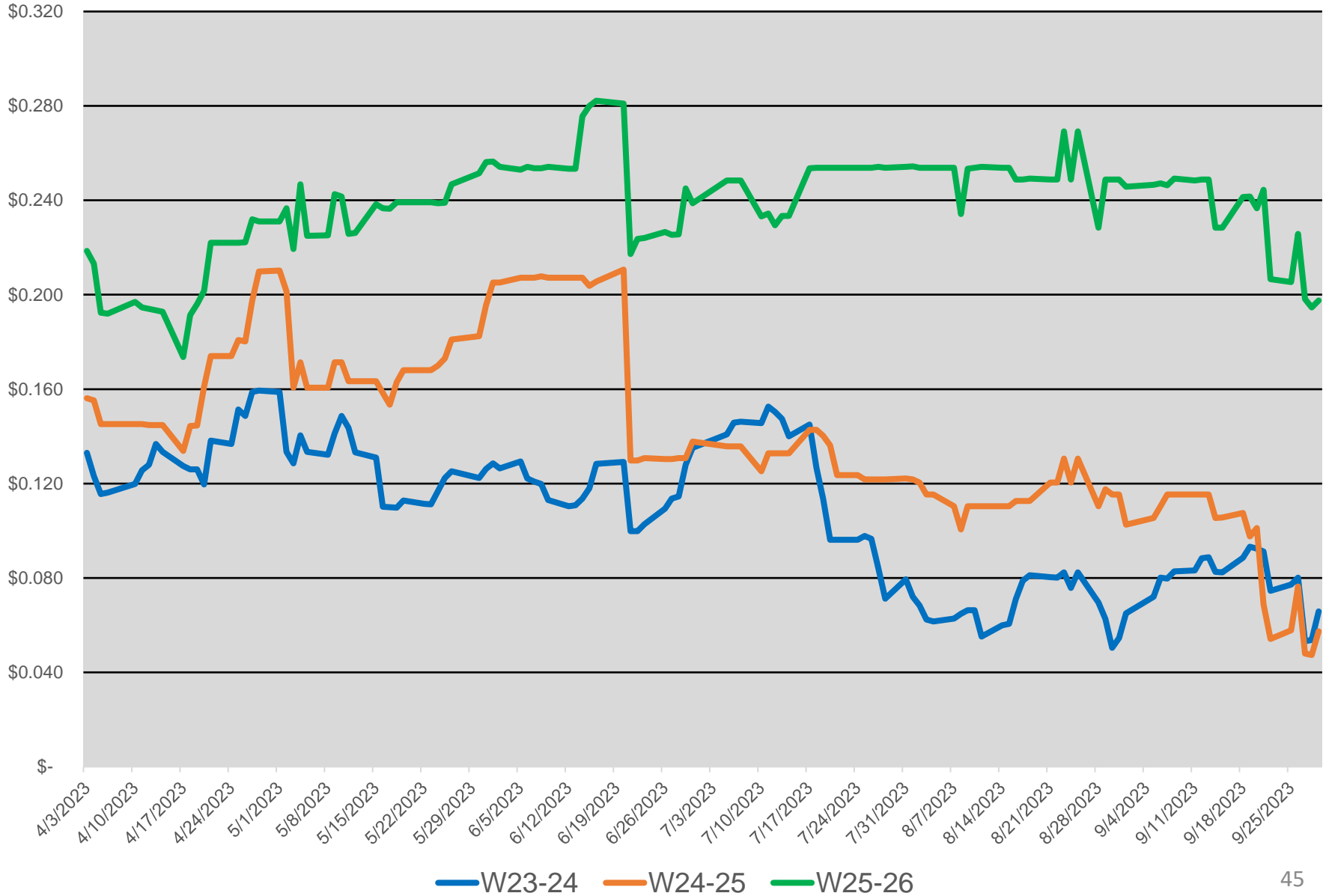




# Mich - Dawn Winter Forward Winter Spread

Summer 2023

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# Potential East Bound Capacity (MDth/d)

	<u>Nov23</u>	<u>Apr24</u>	<u>Nov24</u>	<u>Apr25</u>	<u>Nov25</u>
<u>From Joliet:</u>					
Zone 1 Delivery	335	399	335	399	335
Milford Delivery	229	203	261	203	278
Dawn Delivery (LH) *	0	0	65	110	190

Note: \* Potential capacity subject to negotiations with incumbent shippers

# Potential West Bound Capacity Delivery to Chicago

(MDth/d)

	<u>W23/24</u>	<u>W24/25</u>	<u>W25/26</u>	<u>W26/27</u>
From Milford or Rover:	0	0	35	262
From Dawn or Mich Storage:	0	0	44	139

Note: Potential capacity subject to negotiations with incumbent shippers

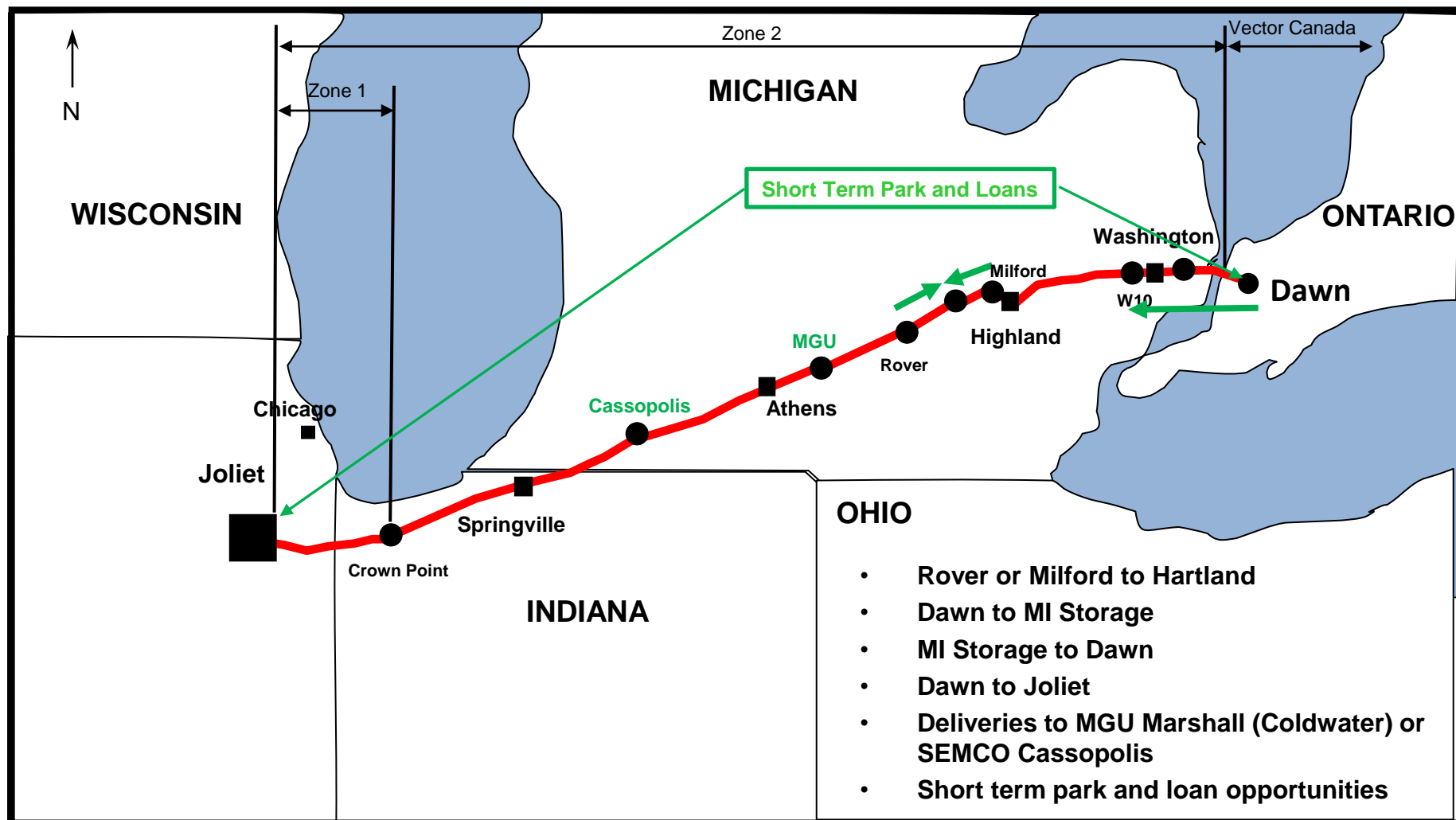
# Potential Delivery Point Capacity (MDth/d)

	<u>W23/24</u>	<u>W24/25</u>	<u>W25/26</u>	<u>W26/27</u>
Guardian	0	0	69	264
Peoples Smith Road	40	40	49	169
NIPSCO Crown Point	535	535	535	541

Note: Deliveries to Alliance and Northern Border by displacement only



# Other Marketable Capacity





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# **Customer Service Update**



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# Vector Scheduling Team

Primary Weekdays

Kenneth Glover

Backup Weekdays

Jared Schwieger

Rotating Nights/Weekends

Nikki Wooley

Joel Russ

Weekday Manager

Damita Porter

Night/Weekend Manager

James Cymes

# Weekly On Call Posting

Vector US Pipeline

- Powered by QuickNom™

System Time: 01:56:00 PM Central Time  
Statement Date/Time: 10/06/2023 01:55:35 PM

[Gas Scheduling Contacts](#)

## Nominations

[Nomination](#)  
[Confirmation](#)  
[Scheduled Quantity](#)  
[Submit Nomination](#)  
[EDI Confirmations](#)

Nom ID

[go](#)

## Flowing Gas

[Pre-determined Allocation](#)  
[Allocation Imbalance](#)  
[Measurement](#)  
[Measurement by Date](#)

## Invoicing

[Invoice](#)  
[Month To Date Invoice](#)  
[Generate Invoice](#)

## Capacity Release

[Offers](#)  
[Bids](#)  
[Awards](#)  
[Pre-approved Bidders](#)  
[Recall Capacity](#)  
[Reput Capacity](#)

## Contracts

[Contracts](#)

## Reports

[Hourly Operations Rpt](#)  
[Location Summary Rpt](#)  
[NCSQ Report](#)  
[US/CAN Sched Qty. Comparison](#)  
[Scheduled Summary Report](#)  
[PAL Balances](#)  
[Projected PAL Balances](#)  
[Other Reports](#)

## Admin

[Roles](#)  
[Users](#)  
[Entities](#)  
[Indexes](#)

Welcome to Vector QuickNom system. Please choose a link from left navigation.

### Gas Scheduling Contacts October 6 - October 12, 2023

Hot Line: [\(713\) 627-6076](tel:7136276076) Email: [transerv@enbridge.com](mailto:transerv@enbridge.com)

Confirmation/Scheduling all Cycles:

Nikki Wooley

ICE Chat: nwooley

(Monday – Sunday, 9:30 AM CST – 9:30 PM CST)

End of Day/Retros/End of Month:

Kenneth Glover

ICE Chat: kglover2

(Monday – Friday, 6:30 AM CST – 4:00 PM CST)

If a timely response is not received, please escalate to:

[damita.porter@enbridge.com](mailto:damita.porter@enbridge.com) (weekdays)

[james.cymes@enbridge.com](mailto:james.cymes@enbridge.com) (weeknights/weekend)

# QuickNom Enhancements

- Minor cosmetic changes to customer invoice
- Invoice backup sent via separate email with CSV file
- Coming Soon – Nomination upload feature
- Open to hear your suggestions for other improvements!



**Vector Pipeline™**

# **Thank You!**

**Direct any further questions to Matt or Dennis**

Matt (734) 276-6189

Dennis (734) 210-8481