

# Pipeline Authority Update



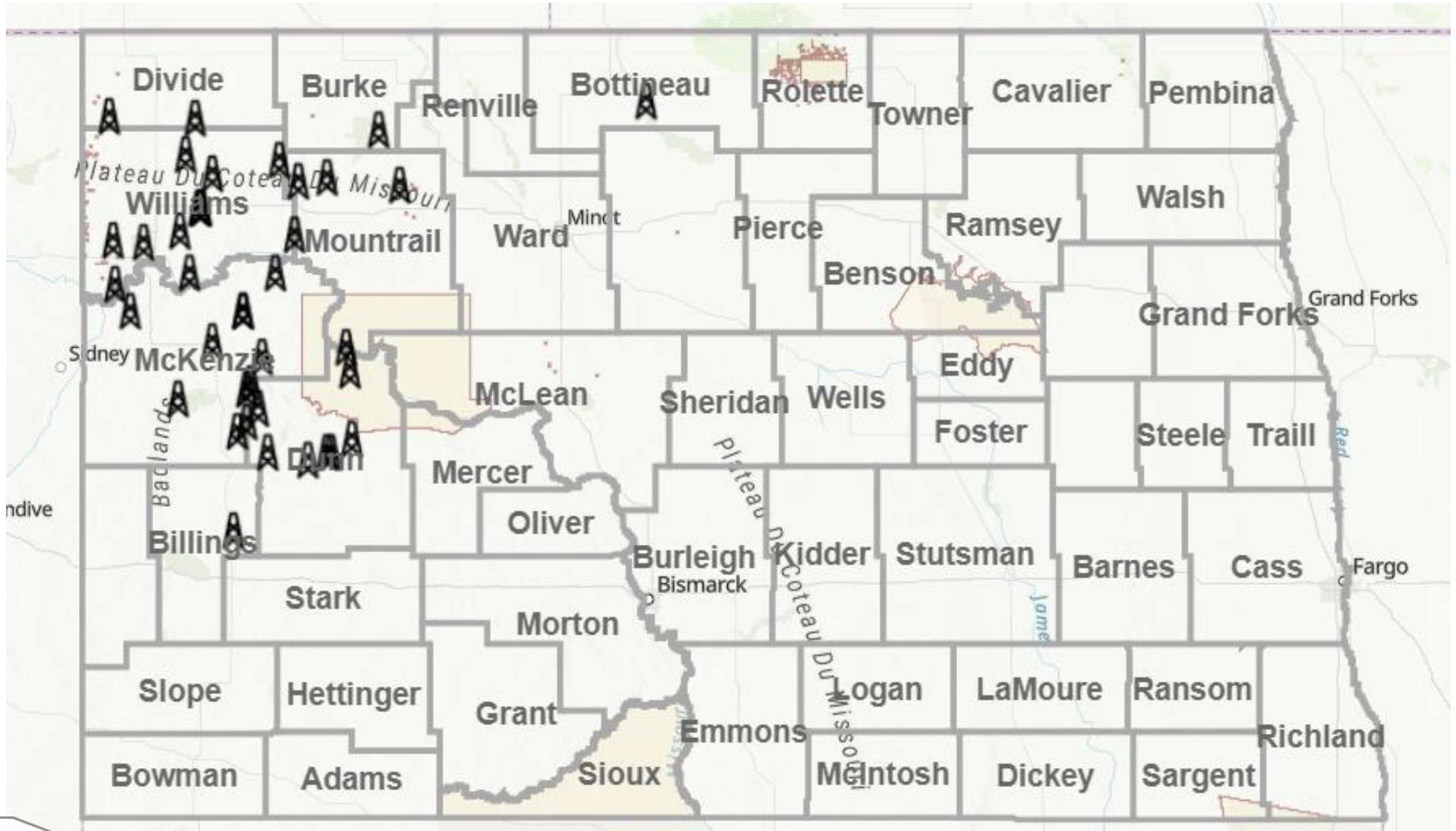
Image: Library of Congress

July 22, 2024

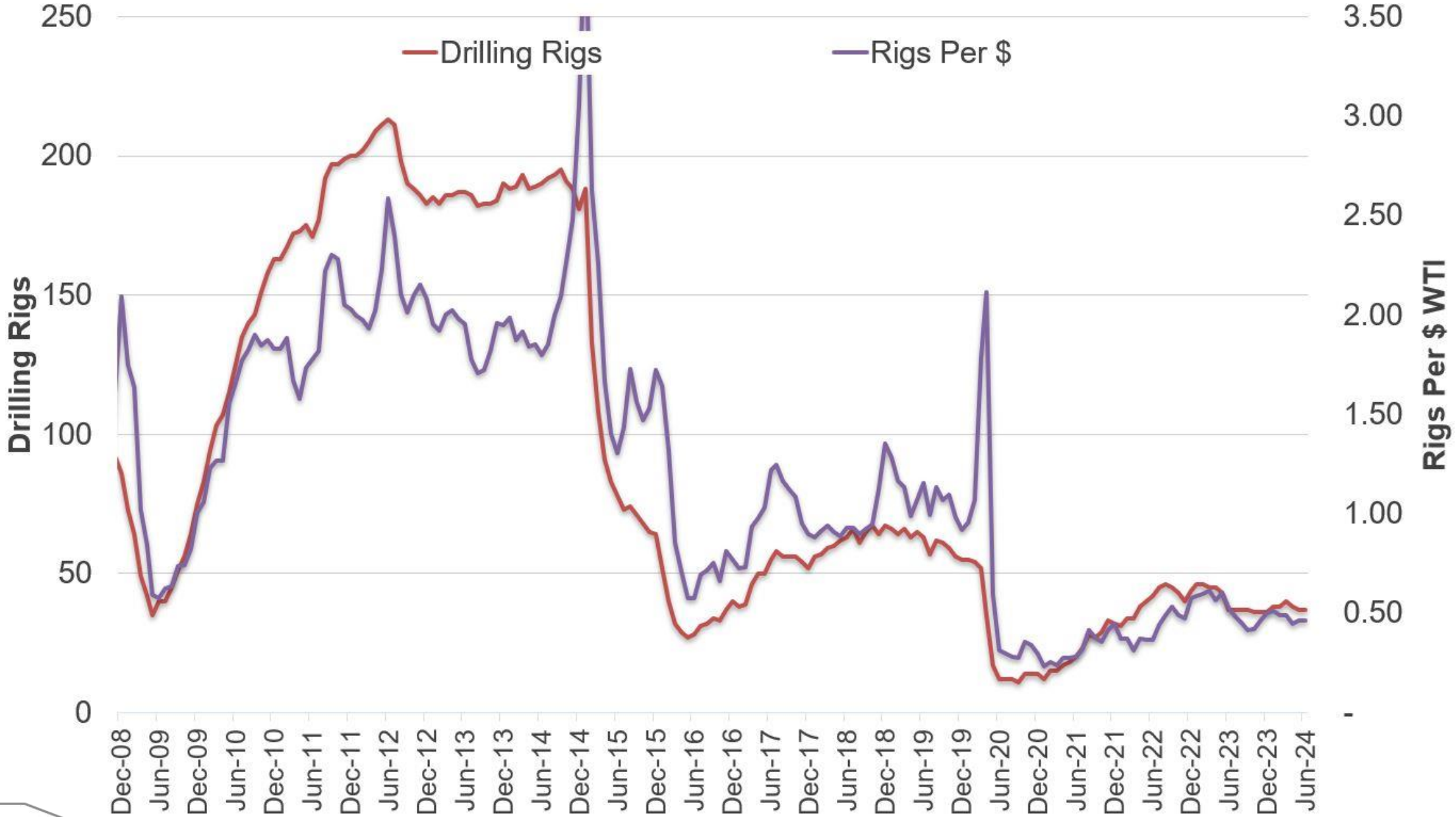


Justin J. Kringstad - North Dakota Pipeline Authority

# North Dakota Drilling Rigs: 39 (July 17, 2024)



# North Dakota Drilling Rig Relationship With Oil Price

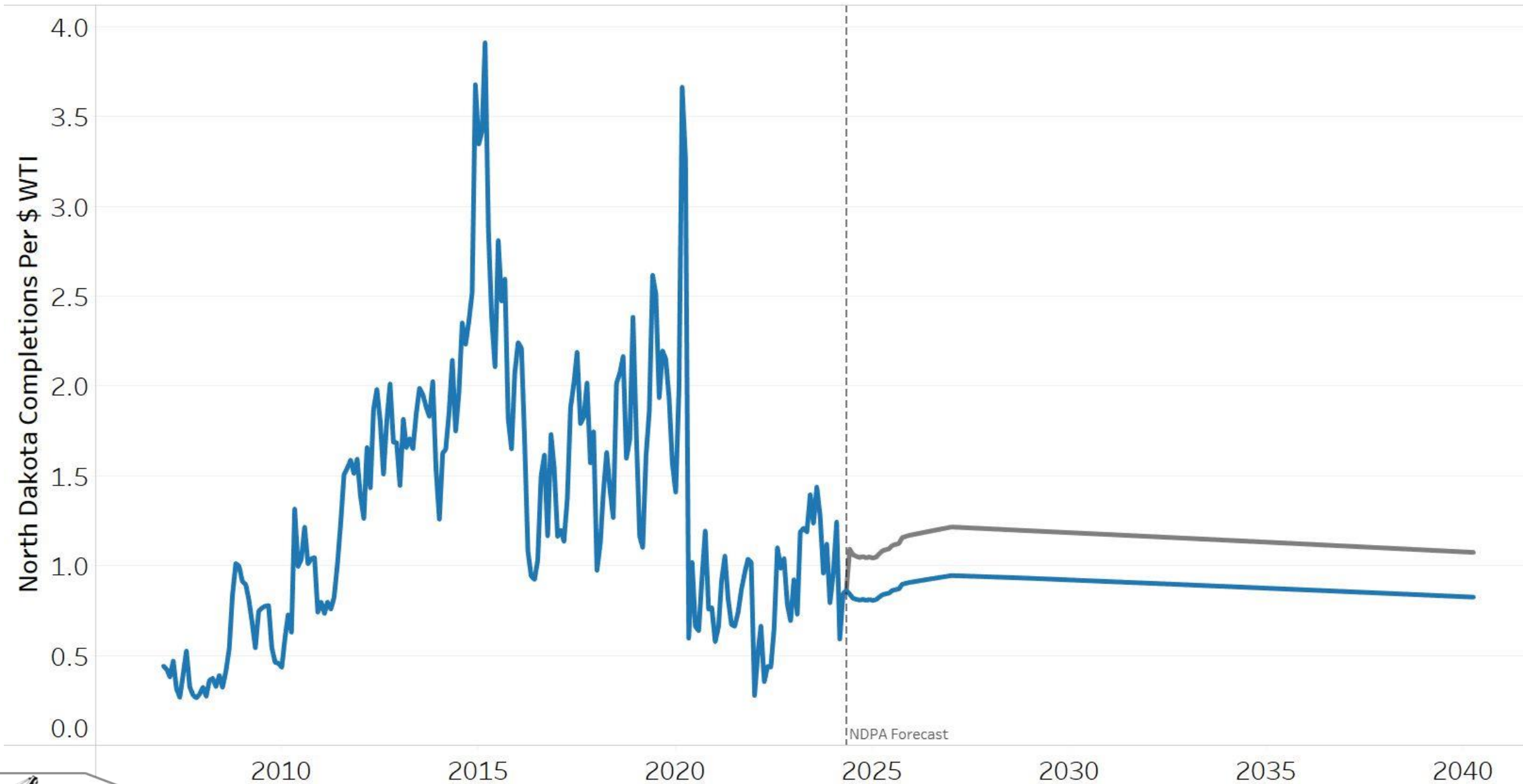




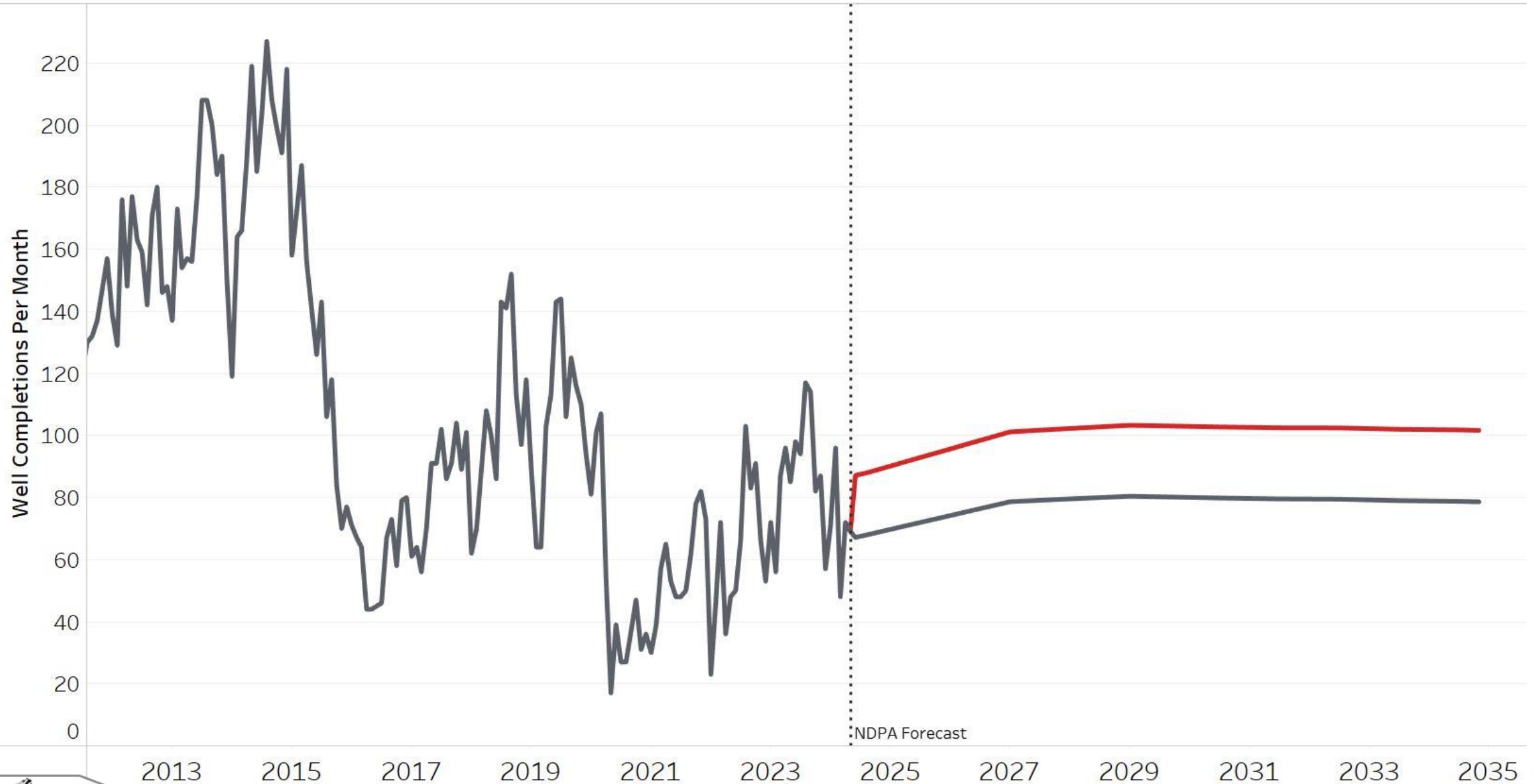
# Monthly Completion\* Scenarios - Oil



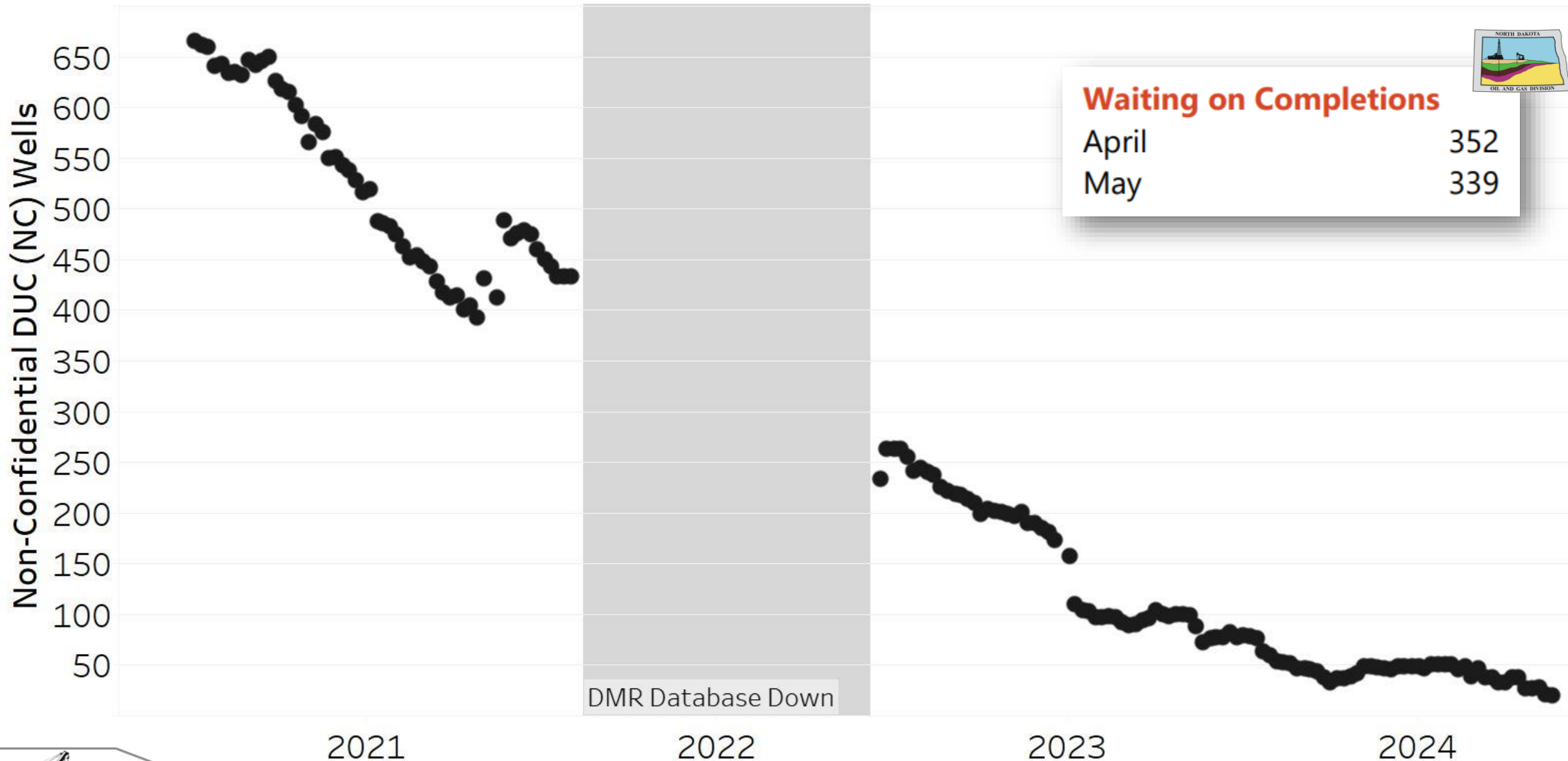
# North Dakota Well Completions and Oil Price (History & Forecast)



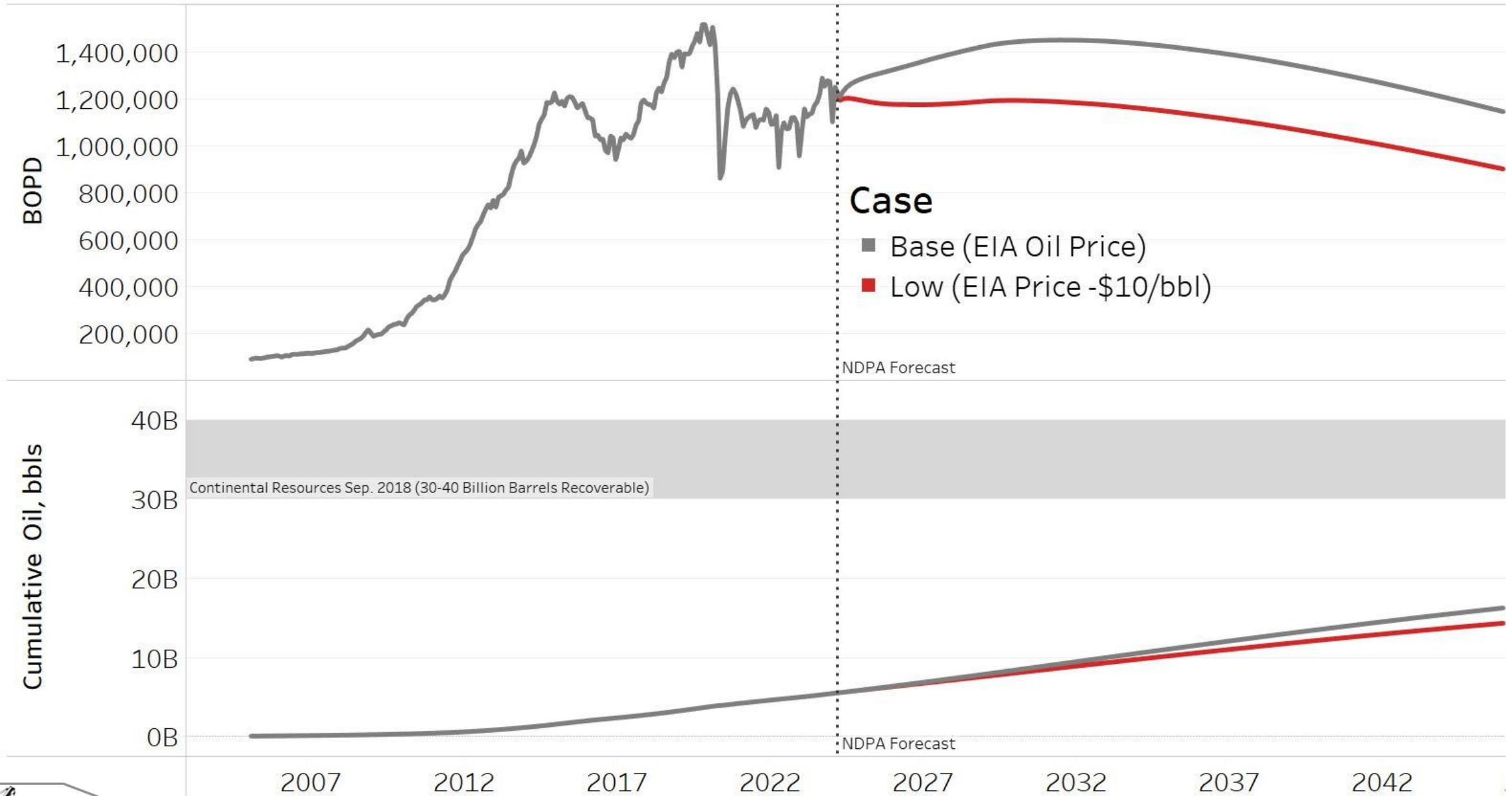
# North Dakota Well Completions (NDPA Forecast)



# North Dakota DUC/NC Well Counts

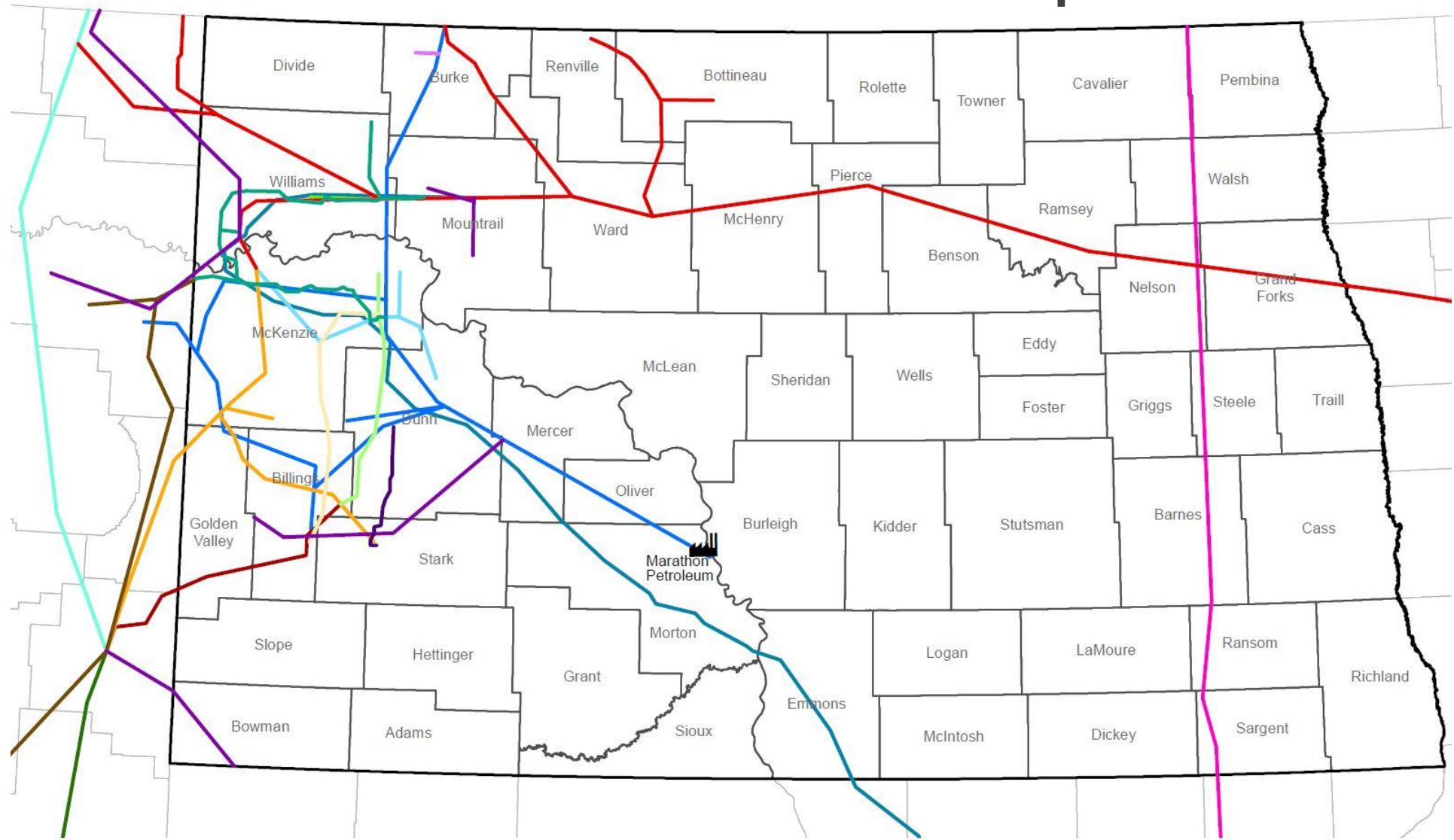


# ND Oil Production: EIA Price Deck





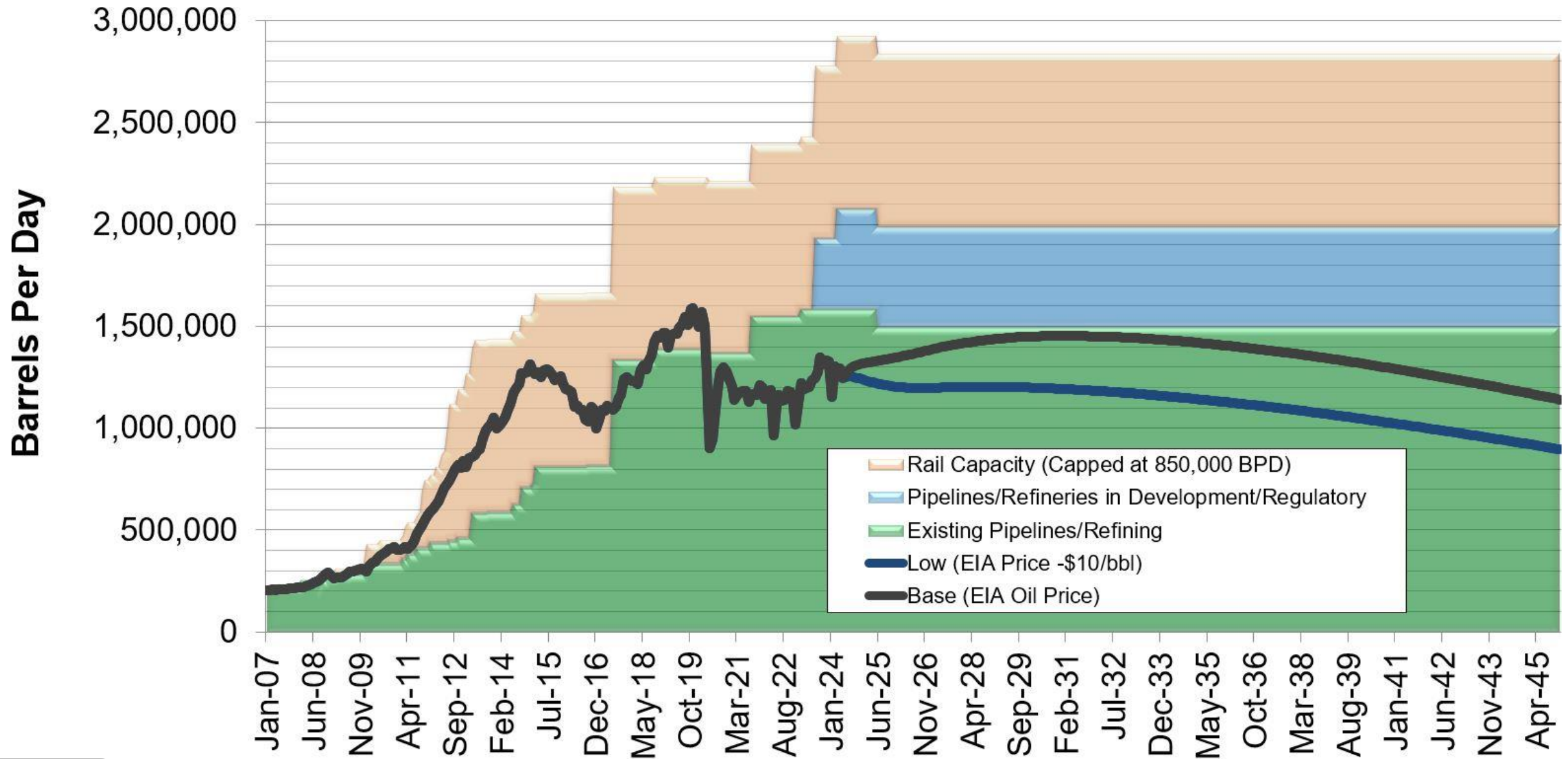
# North Dakota Oil Transmission Pipelines



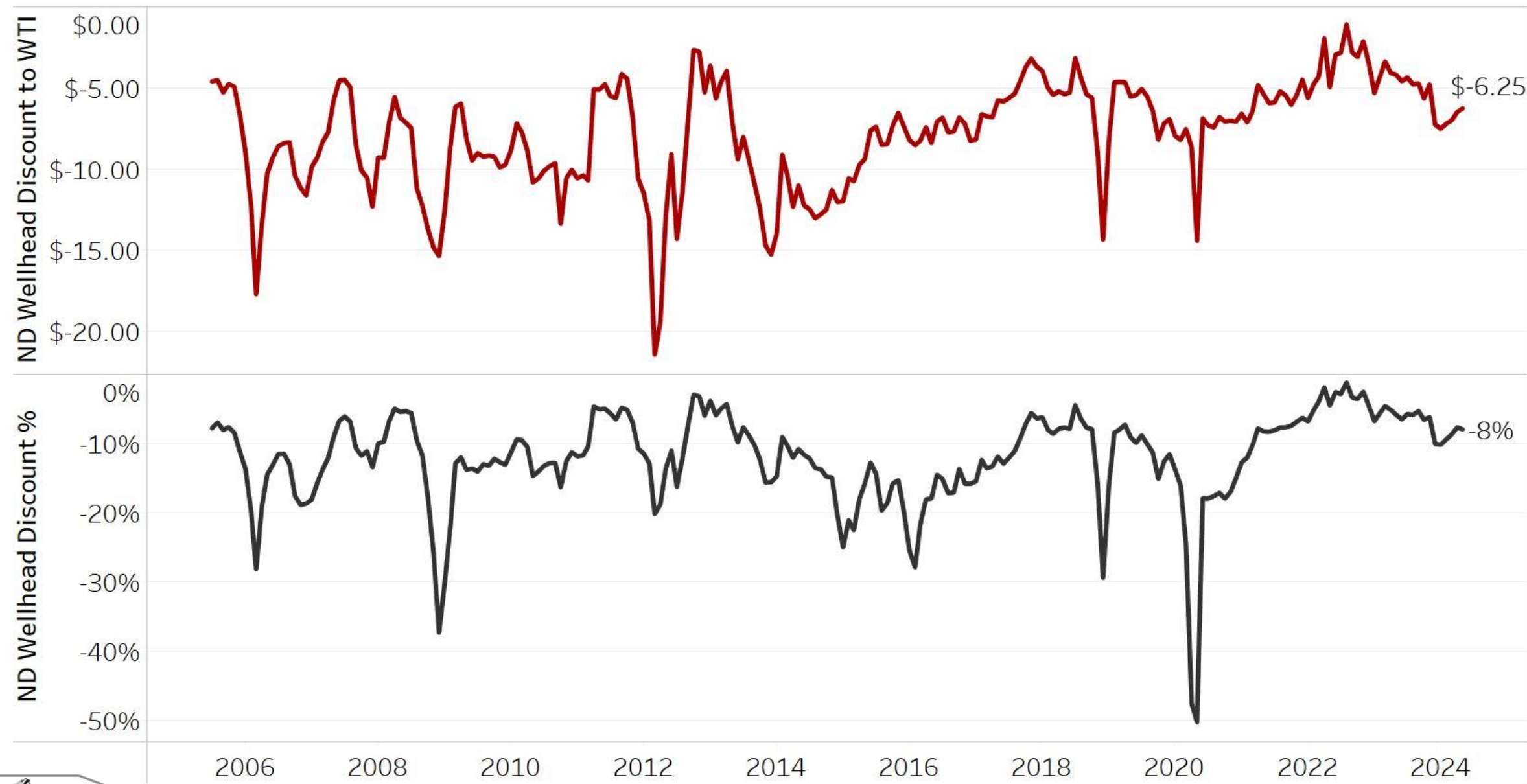
- |                    |                 |               |            |                   |          |
|--------------------|-----------------|---------------|------------|-------------------|----------|
| Refinery           | Basin Transload | Butte         | Double H   | Hiland            | Bridger  |
| Bakken Oil Express | Belle Fourche   | Crestwood     | Enbridge   | Keystone Pipeline | Targa    |
| BakkenLink         | Bridger         | Dakota Access | Four Bears | Little Missouri   | Marathon |



# Williston Basin Oil Production & Export Capacity, BOPD



# Average North Dakota Oil “Discount” to WTI





# A Complete Natural Gas Solution



## Production

- Technology
- Markets
- Forecasting



## Gathering

- Capacity
- Connections
- Compression



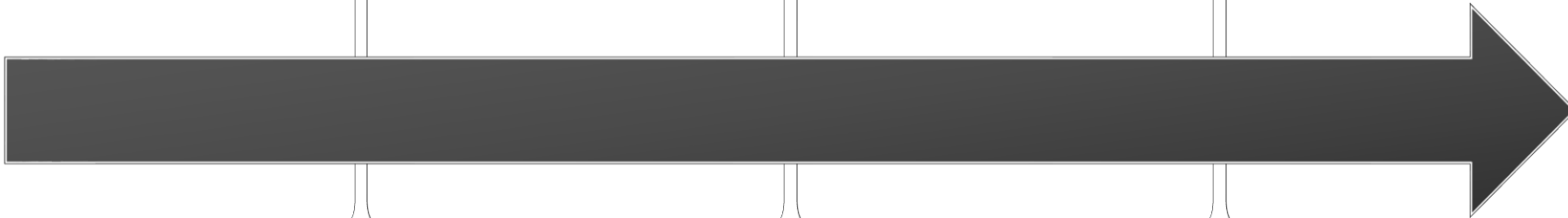
## Processing

- Capacity
- Location
- Configuration



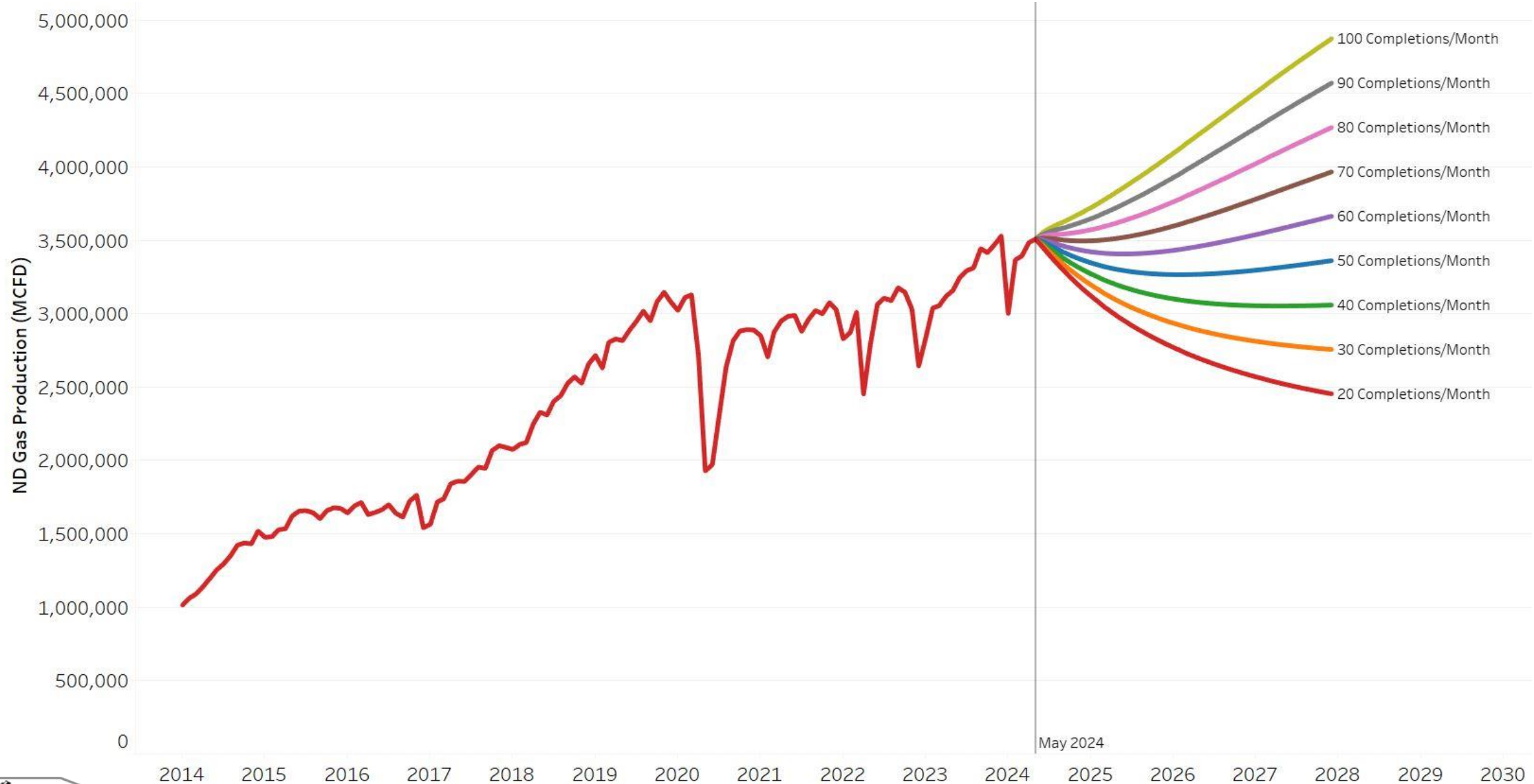
## Transmission

- Dry Gas
- Natural Gas Liquids

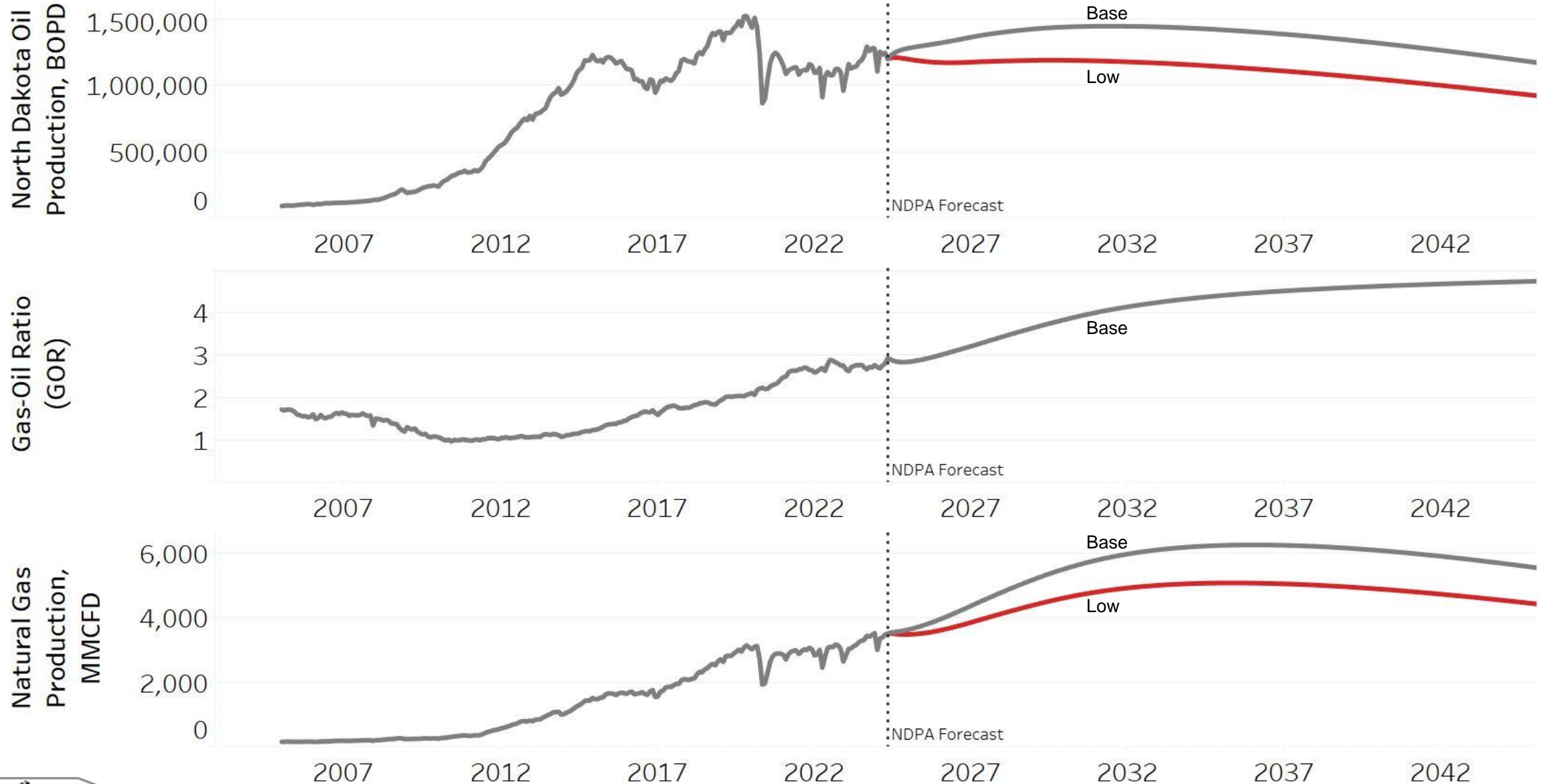




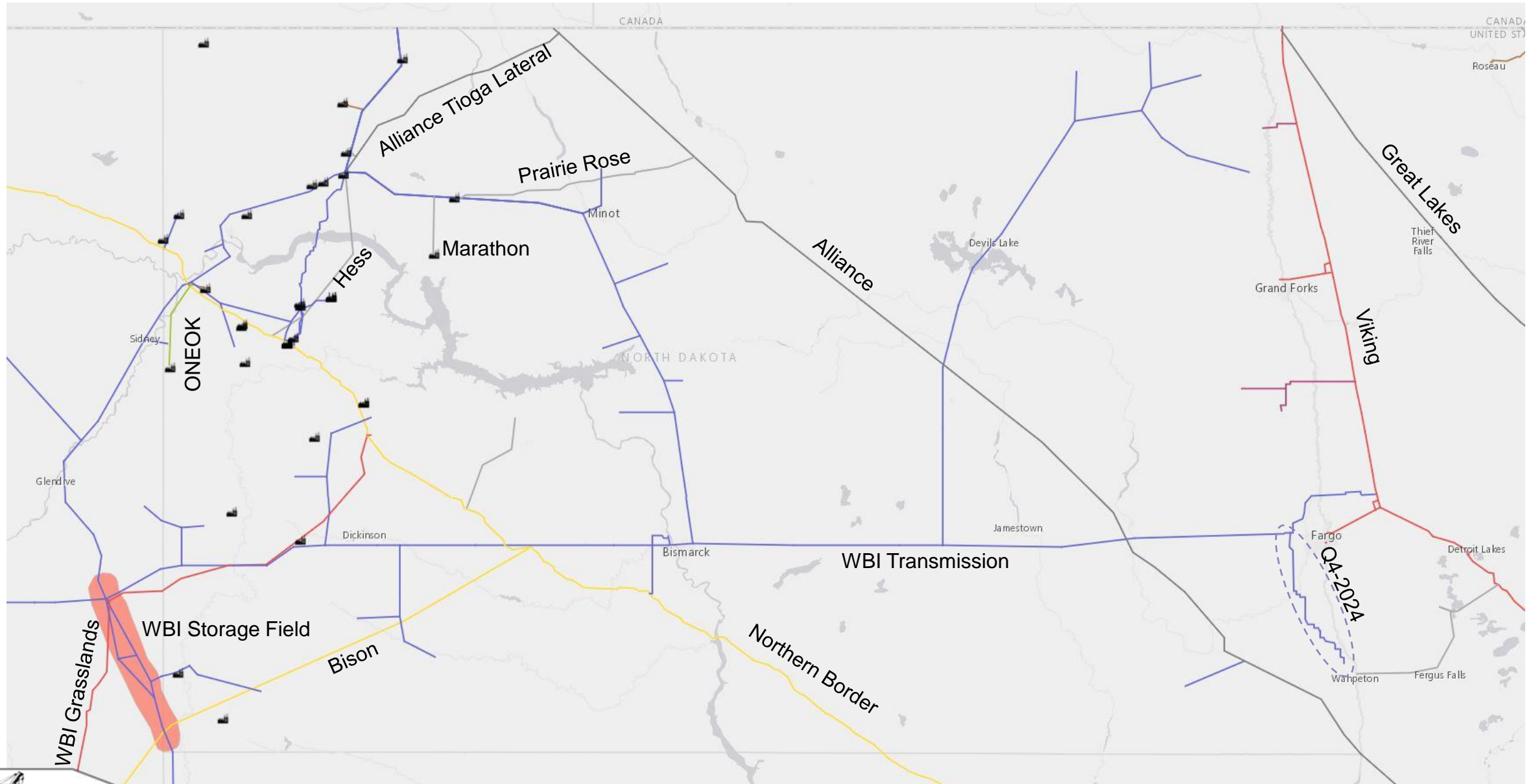
# Monthly Completion\* Scenarios - Gas



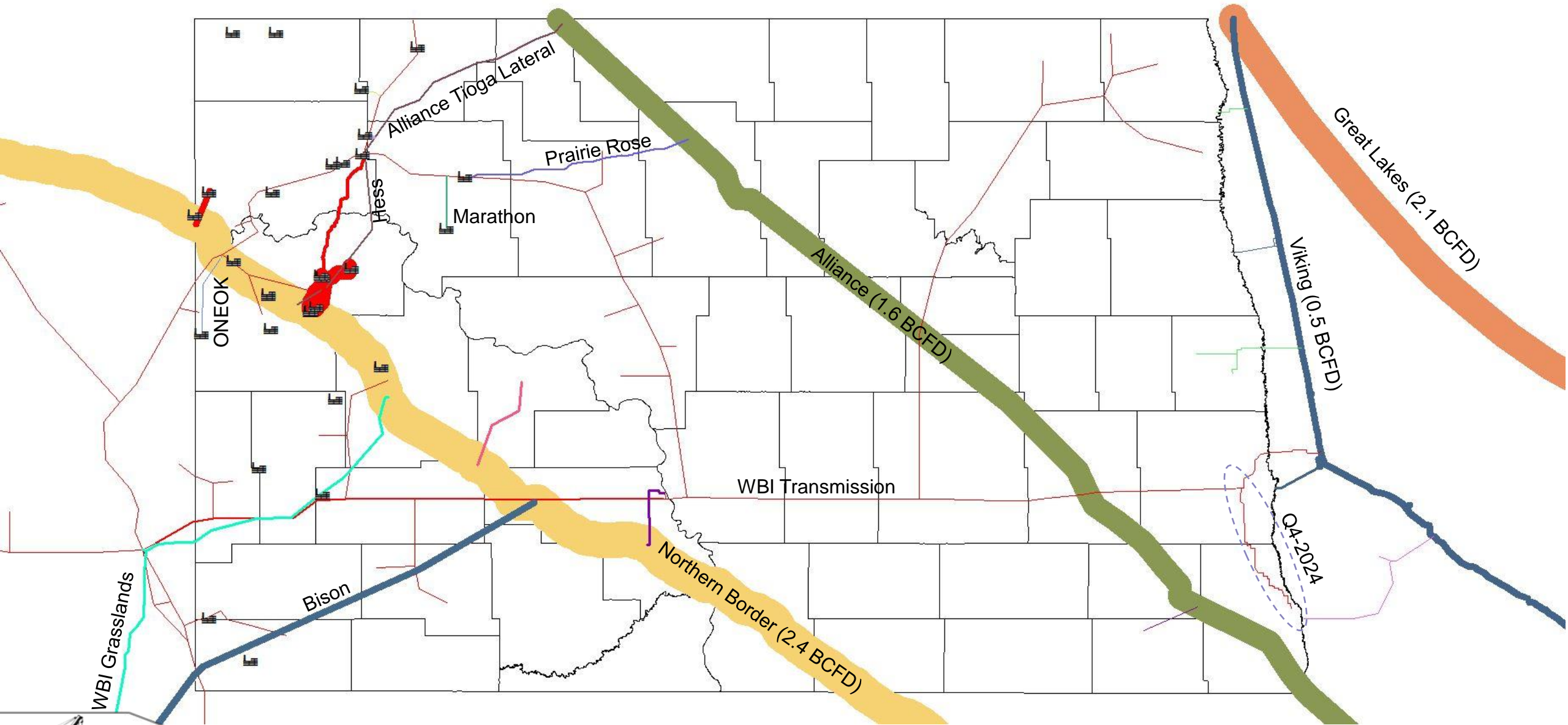
# ND Production Forecast: EIA Price Deck



# Major Residue Gas Pipeline Infrastructure

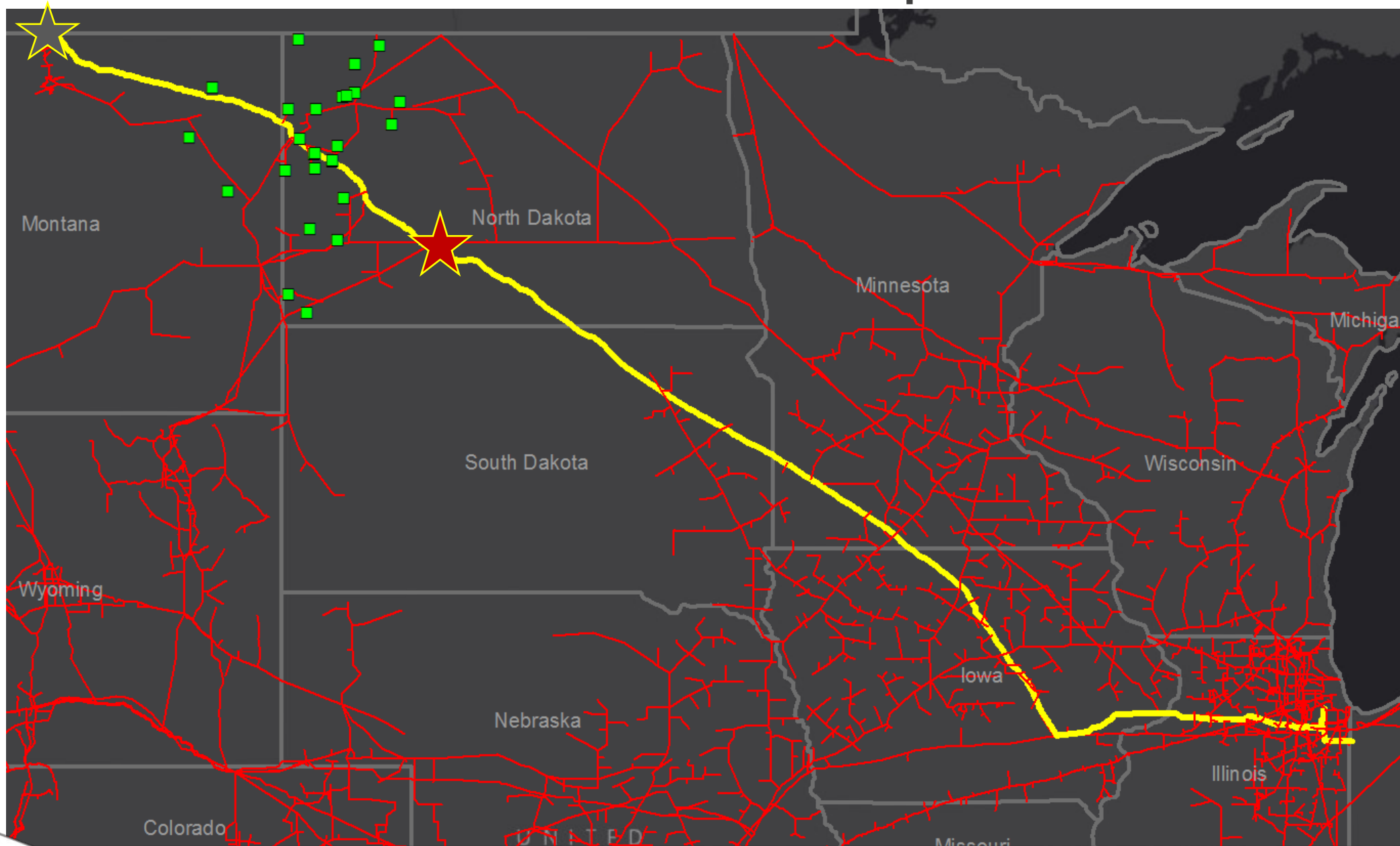


# Residue Gas Pipeline Capacity Visualization

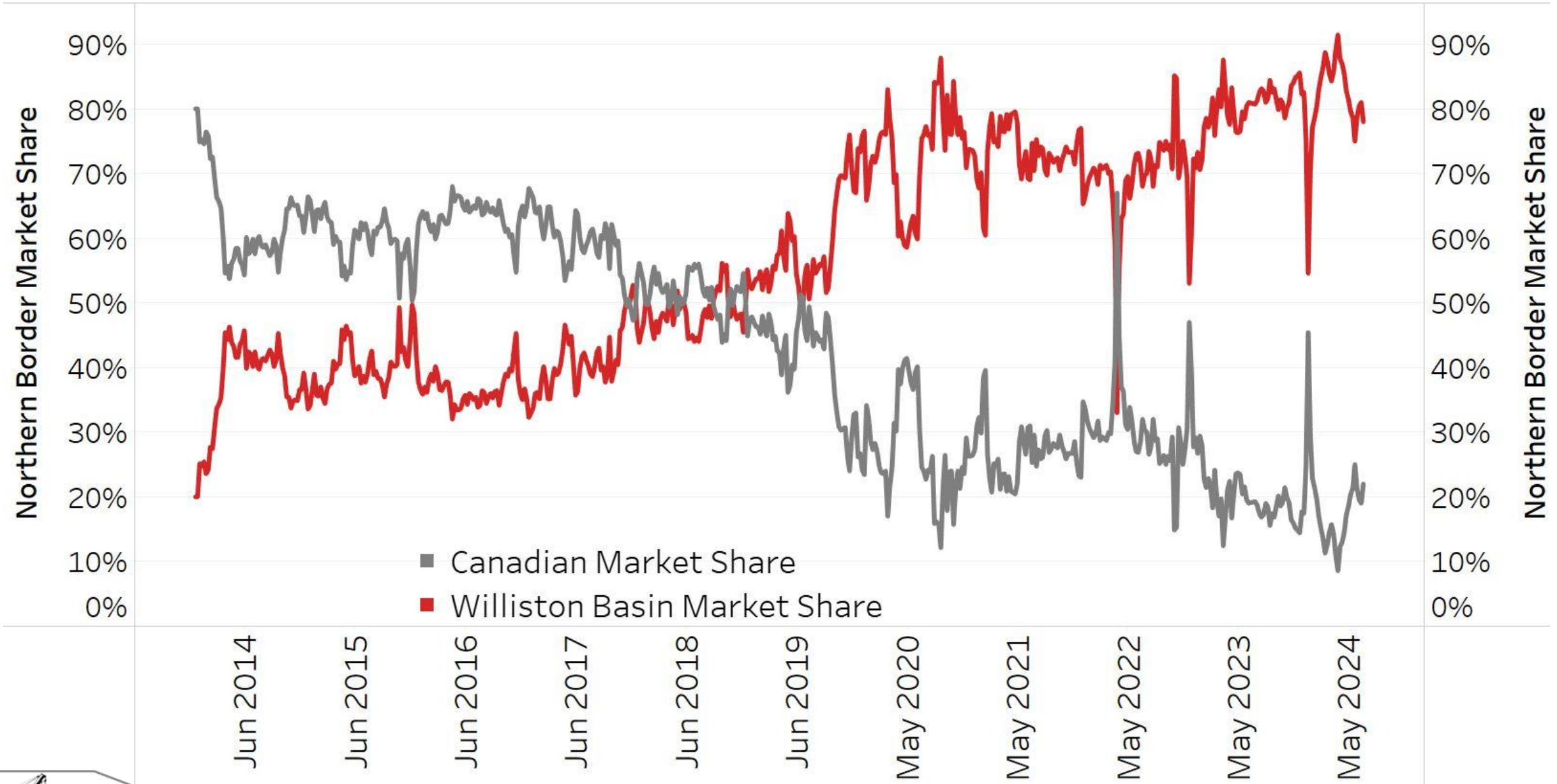




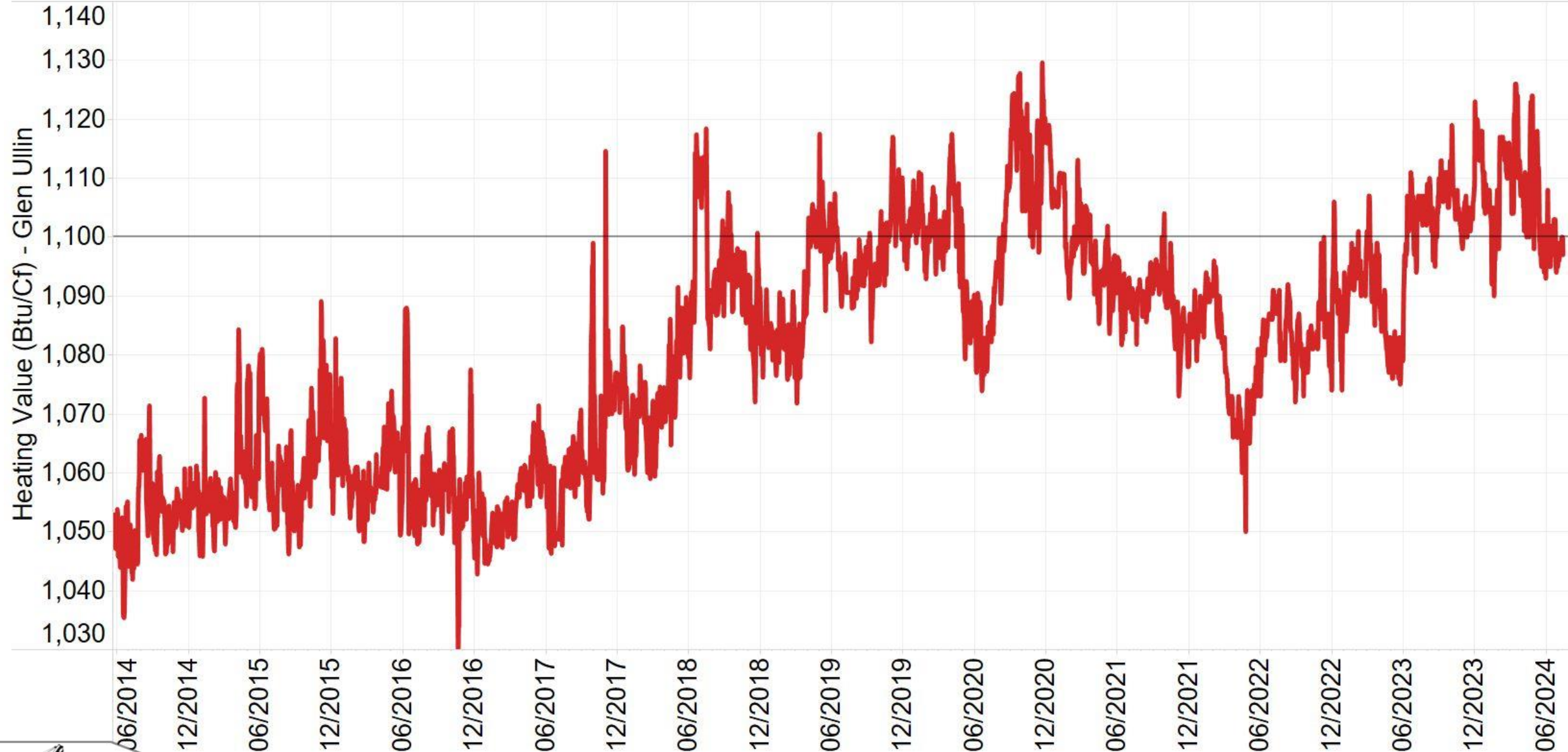
# Northern Border Pipeline



# Northern Border Pipeline Market Share

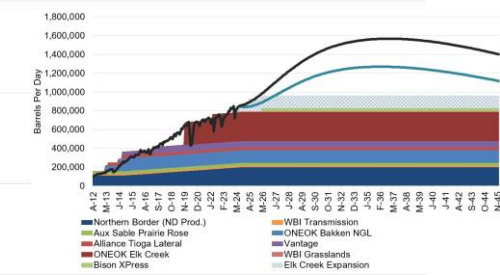
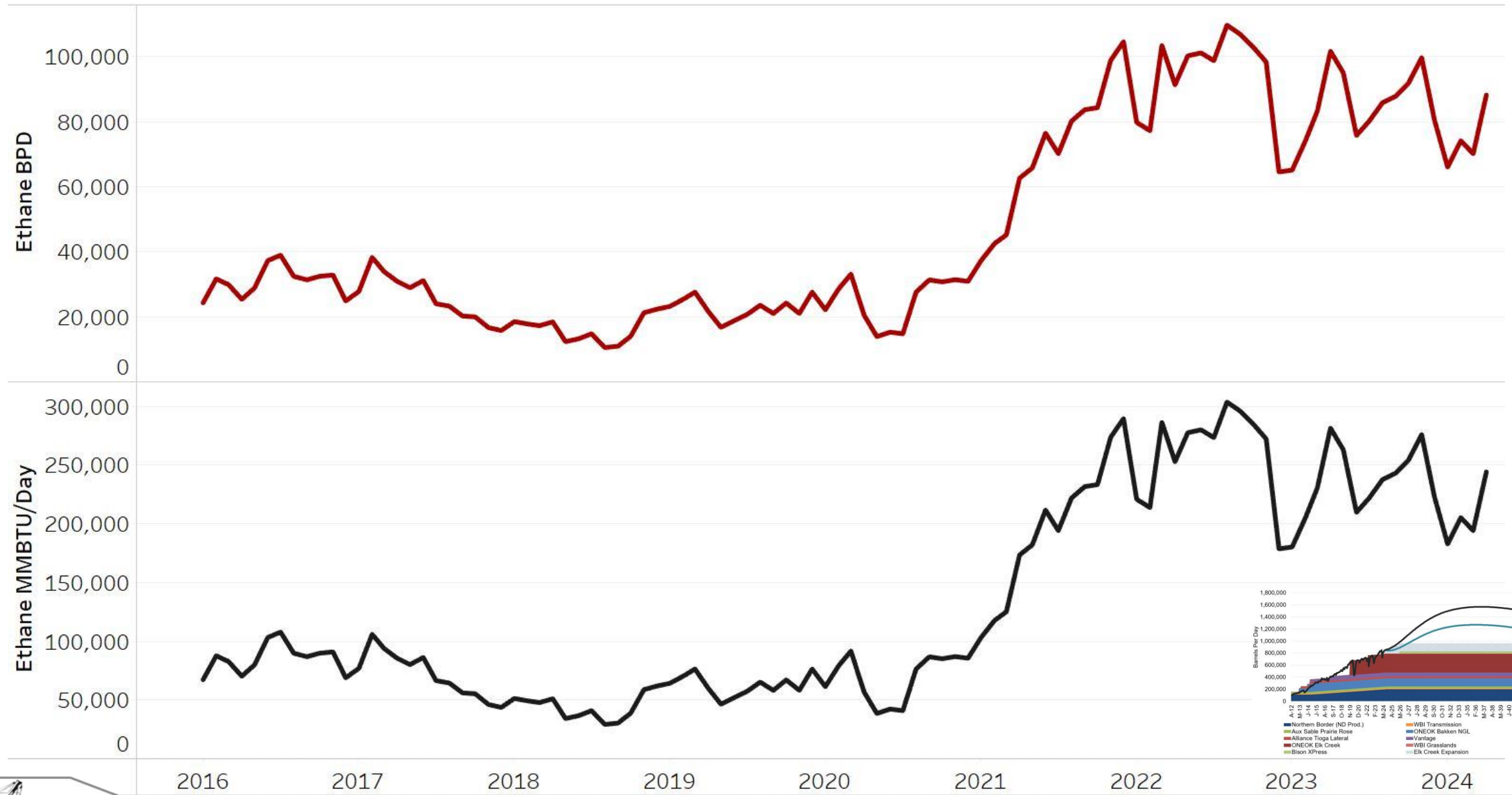


# Northern Border BTU at Glen Ullin, ND



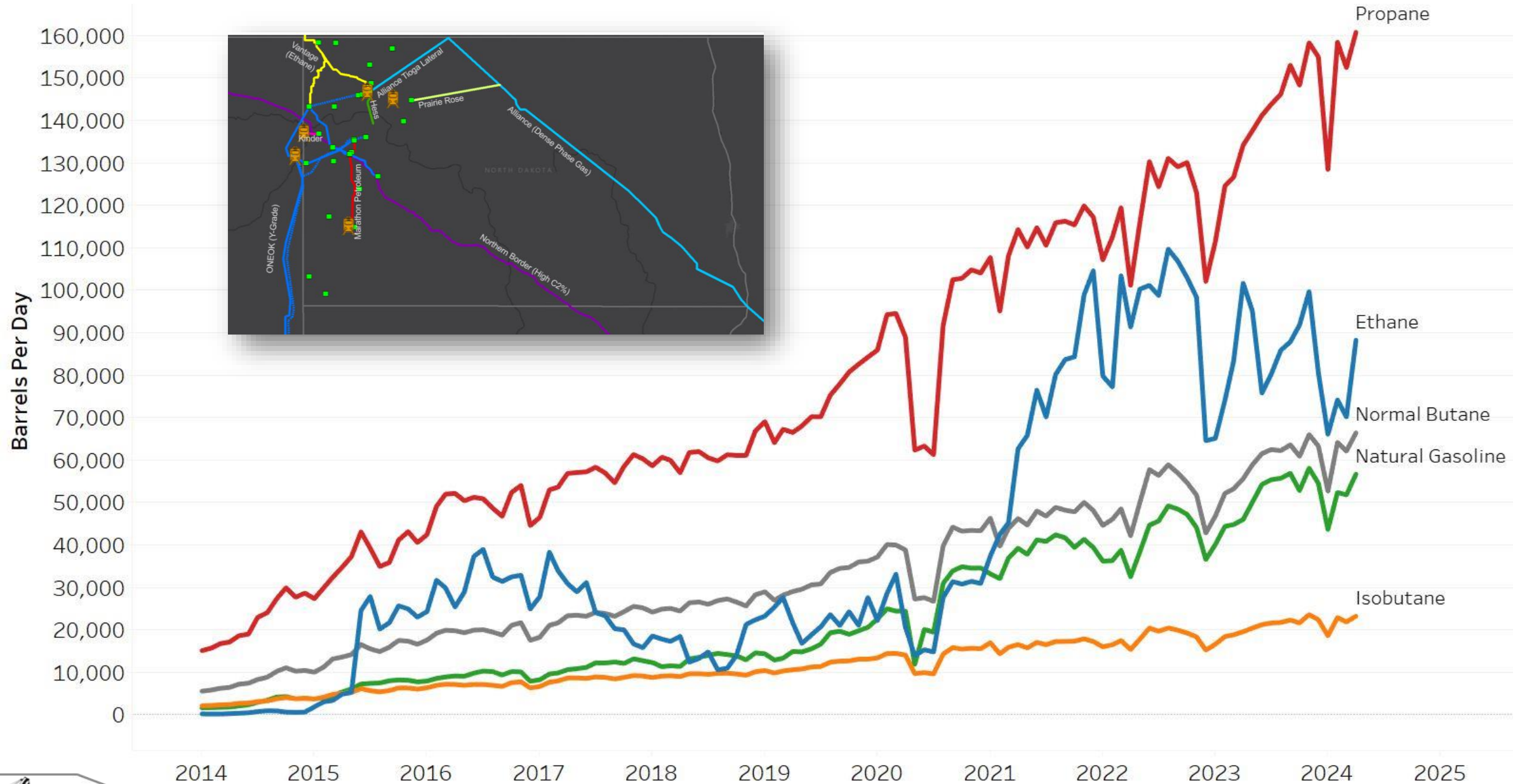


# Rockies NGL Pipes Driving Down NB BTU & Market Share





# PADD II to PADD IV NGL Pipeline Flows



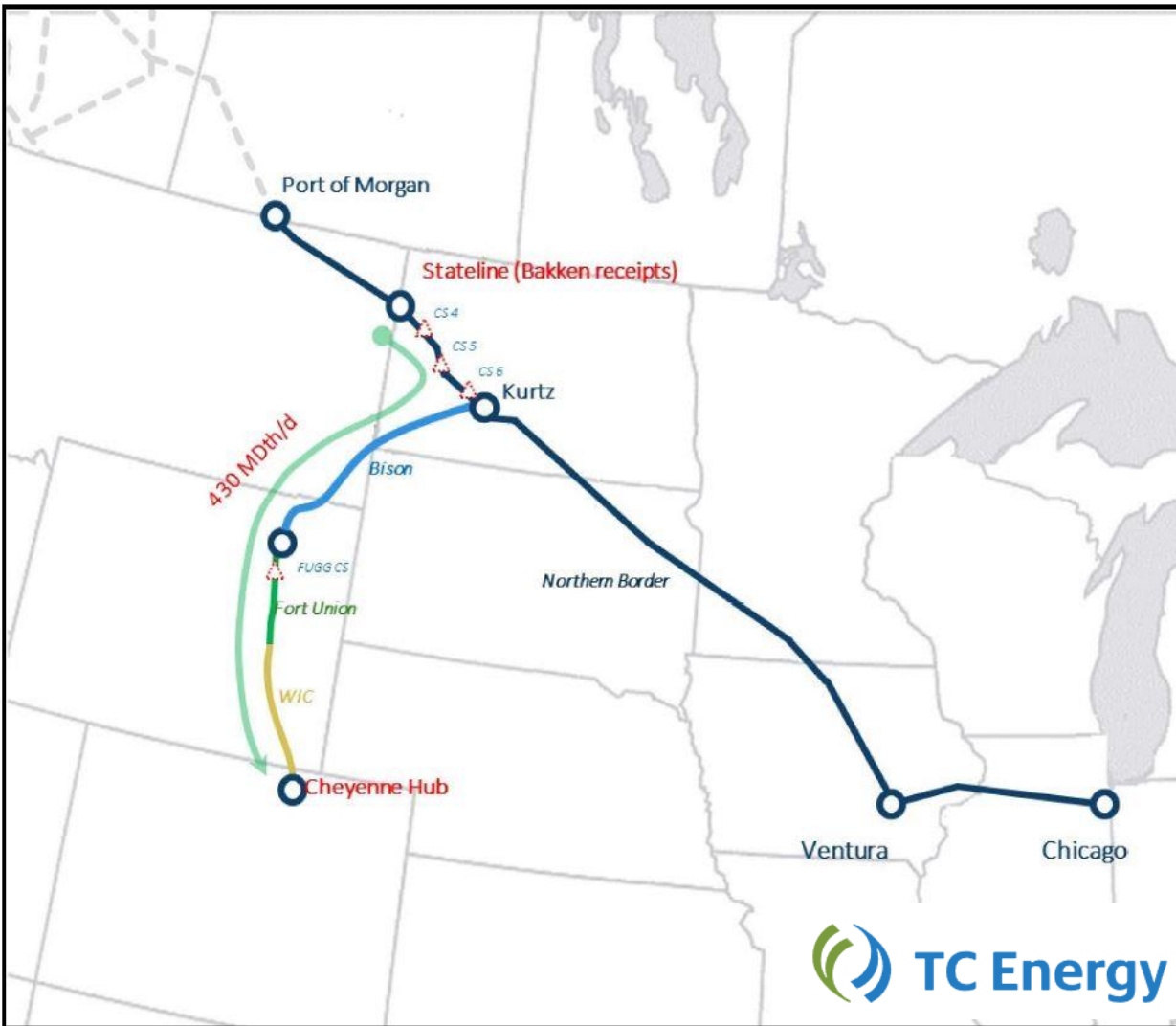
# TC Energy / Kinder Morgan: Bakken xPress Project

## Project Highlights

- Non-binding open season April 4 - May 6, 2022
- Binding Open Season: June 1-30, 2023
- Three compressor upgrades in North Dakota
- Reverse the idle Bison Pipeline (30" – 302 Mile)
- Capacity 300,000 Dth/Day (430,000 Offered)
- March 2026 targeted in-service date
- Fort Union Gas Gathering and Wyoming Interstate Company provide further transport to Cheyenne hub.
- Seeking commitments 10yrs or Longer
- \$555 million: \$347 Replacement/\$208 Expansion

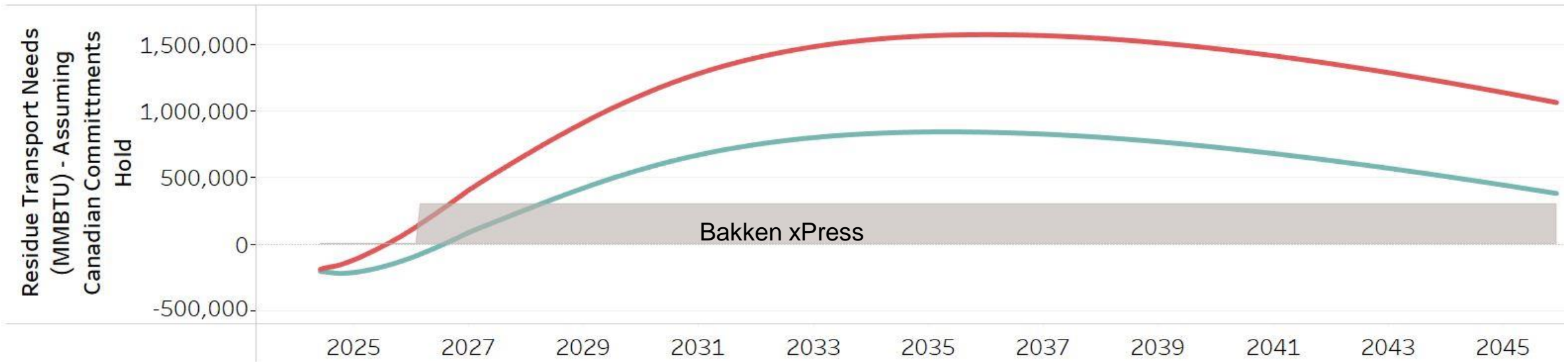
## Proposed Rates

- NBPL/Bison \$0.45/Dth + Fuel/Elec to WIC/FUG Interconnect
- WIC/FUG to Cheyenne \$0.30/Dth + Fuel/Elec
- Anchor Shipper Minimum: 50,000 Dth/Day

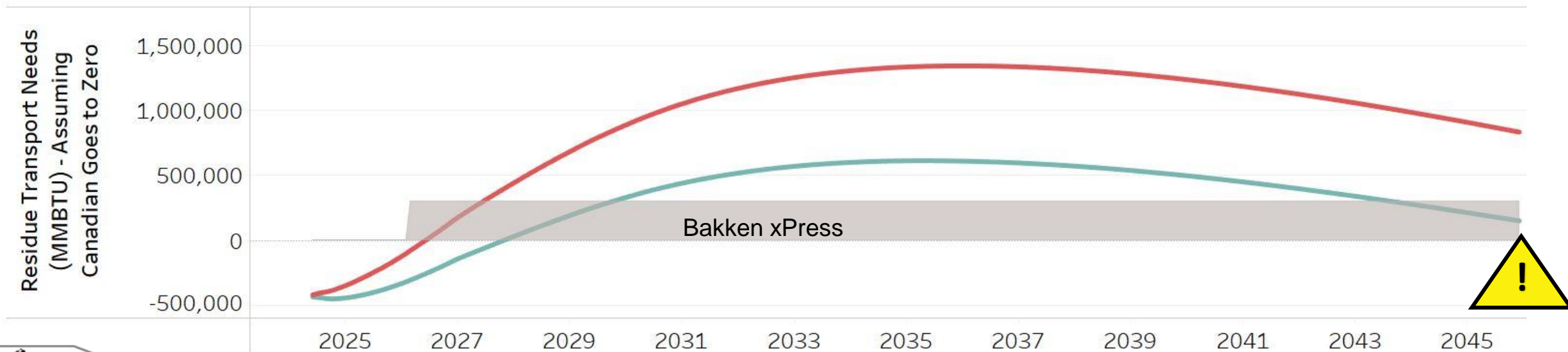


# Residue Capacity Needs : Glen Ullin 1,100 BTU

Residue Capacity Need: Port of Morgan at Contract Level: Glen Ullin BTU 1,100



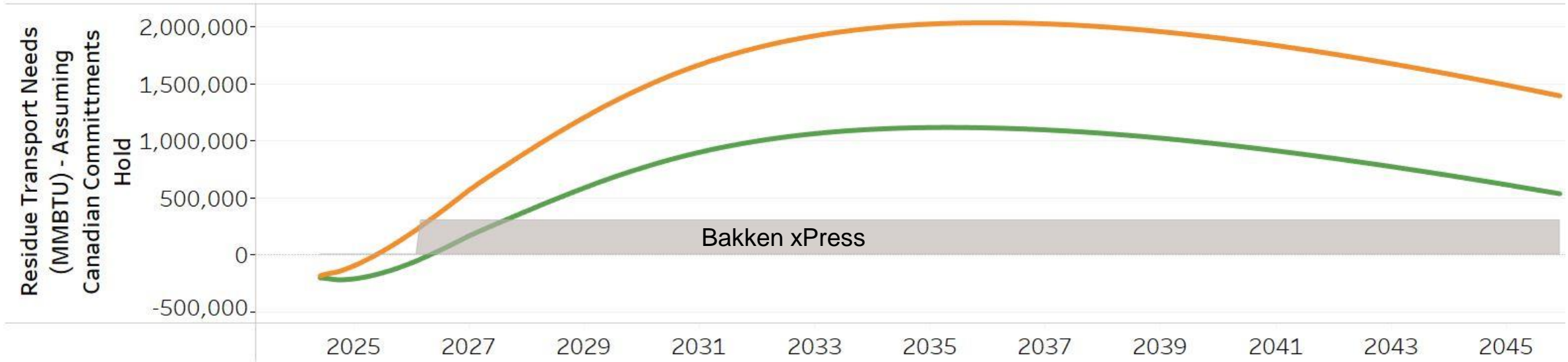
Residue Capacity Need: Port of Morgan Goes to Zero: Glen Ullin BTU 1,100



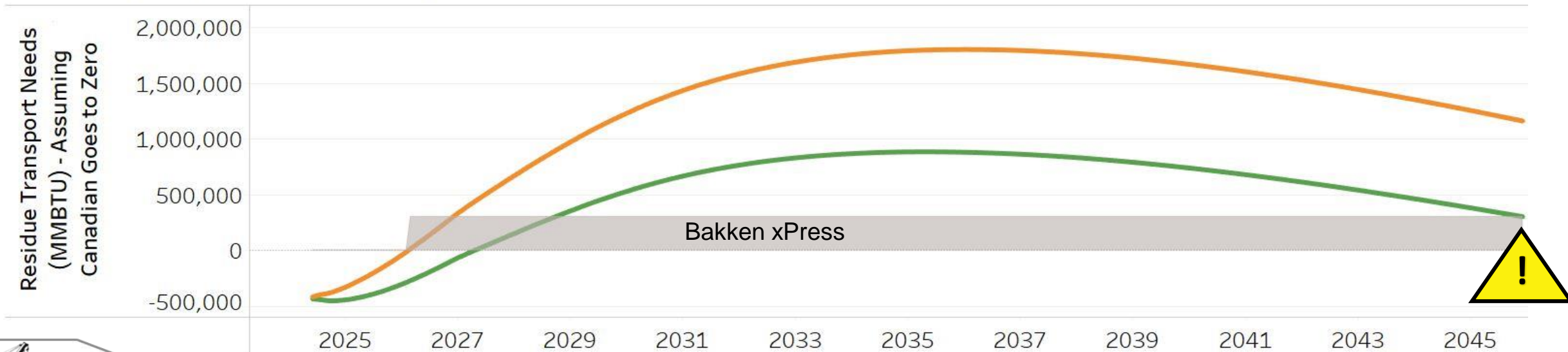


# Residue Capacity Needs : Glen Ullin 1,150 BTU

Residue Capacity Need: Port of Morgan at Contract Level: Glen Ullin BTU 1,150

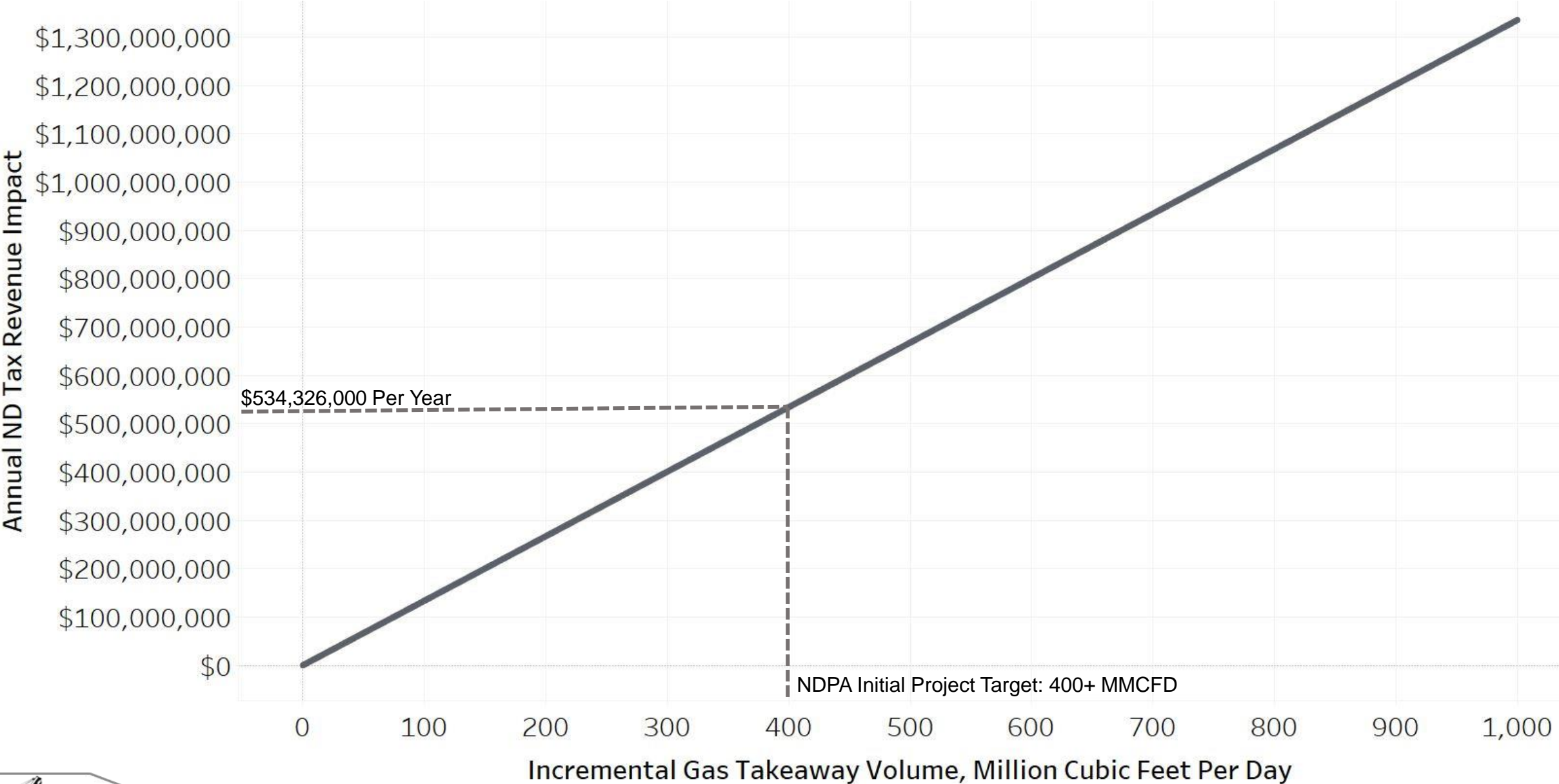


Residue Capacity Need: Port of Morgan Goes to Zero: Glen Ullin BTU 1,150





# ND Tax Impact of Incremental Gas Capacity



# Options Beyond 2026: The 5 “C’s”

## Construction (Interstate)

- Long-haul Pipe to New or Expanded Markets

## Compete

- Price Canadian Volumes to Flow Elsewhere

## Compression

- Increase Capacity on Existing Interstate Systems

## Consumption

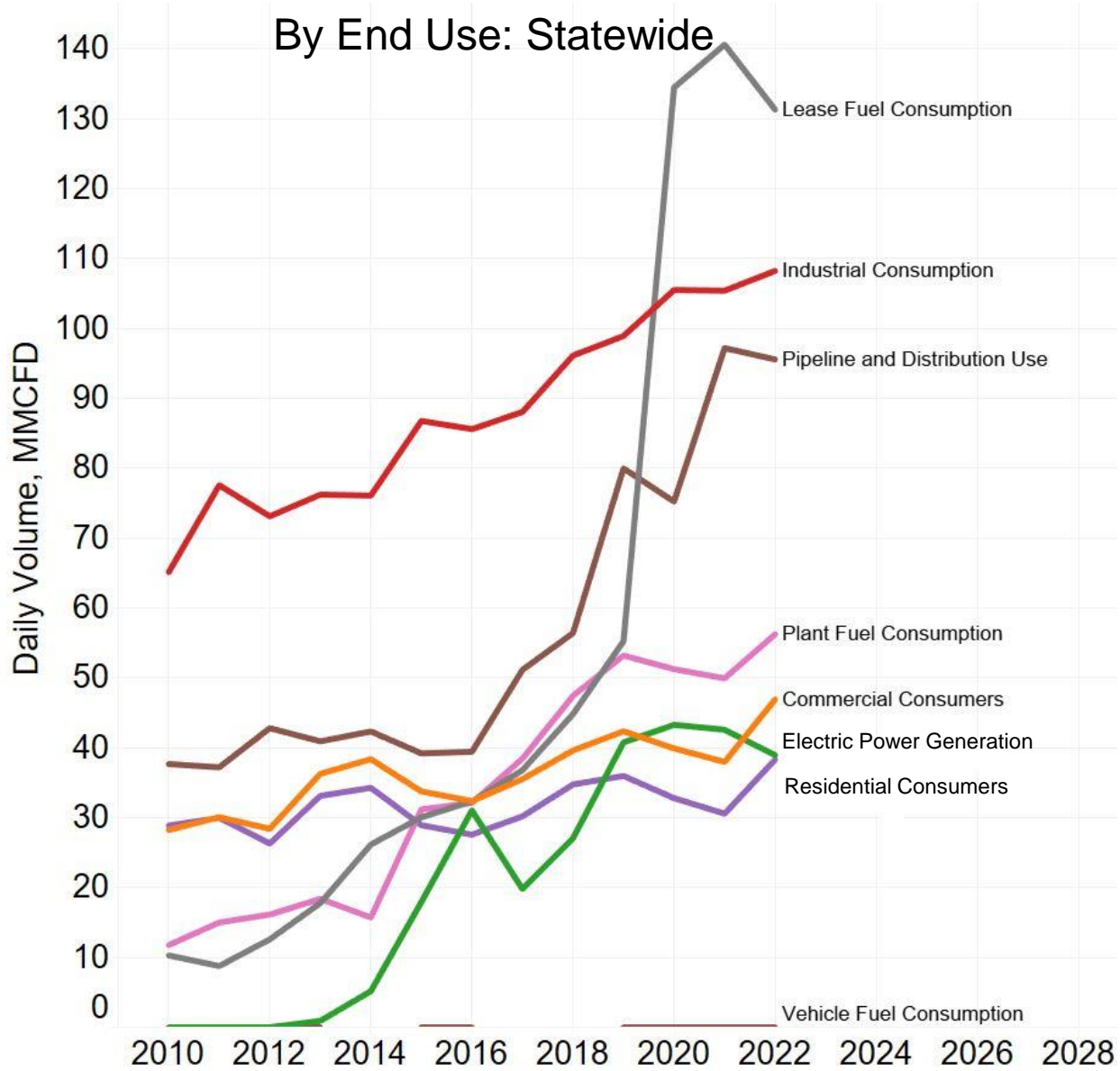
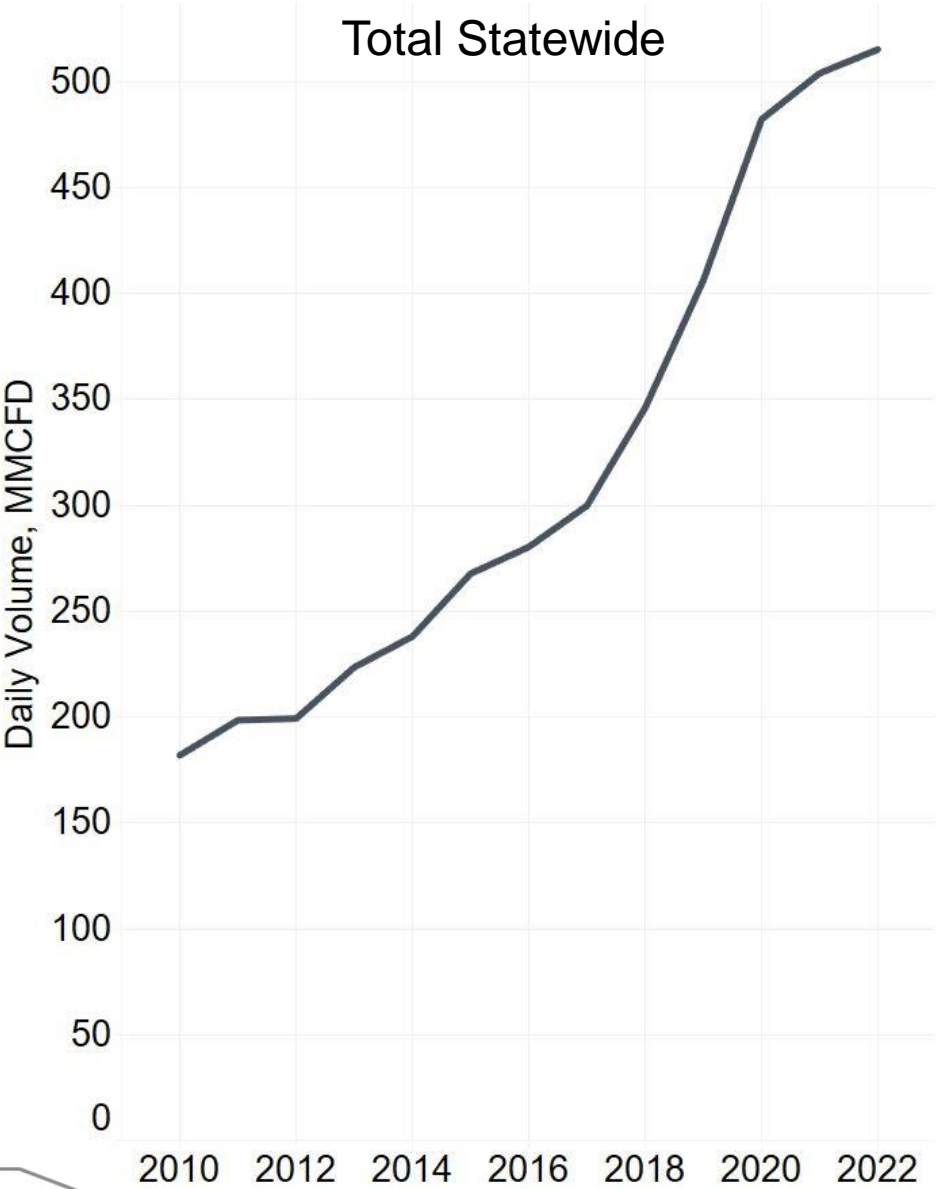
- Intra Region Gas Demand Expansion

## Contraction

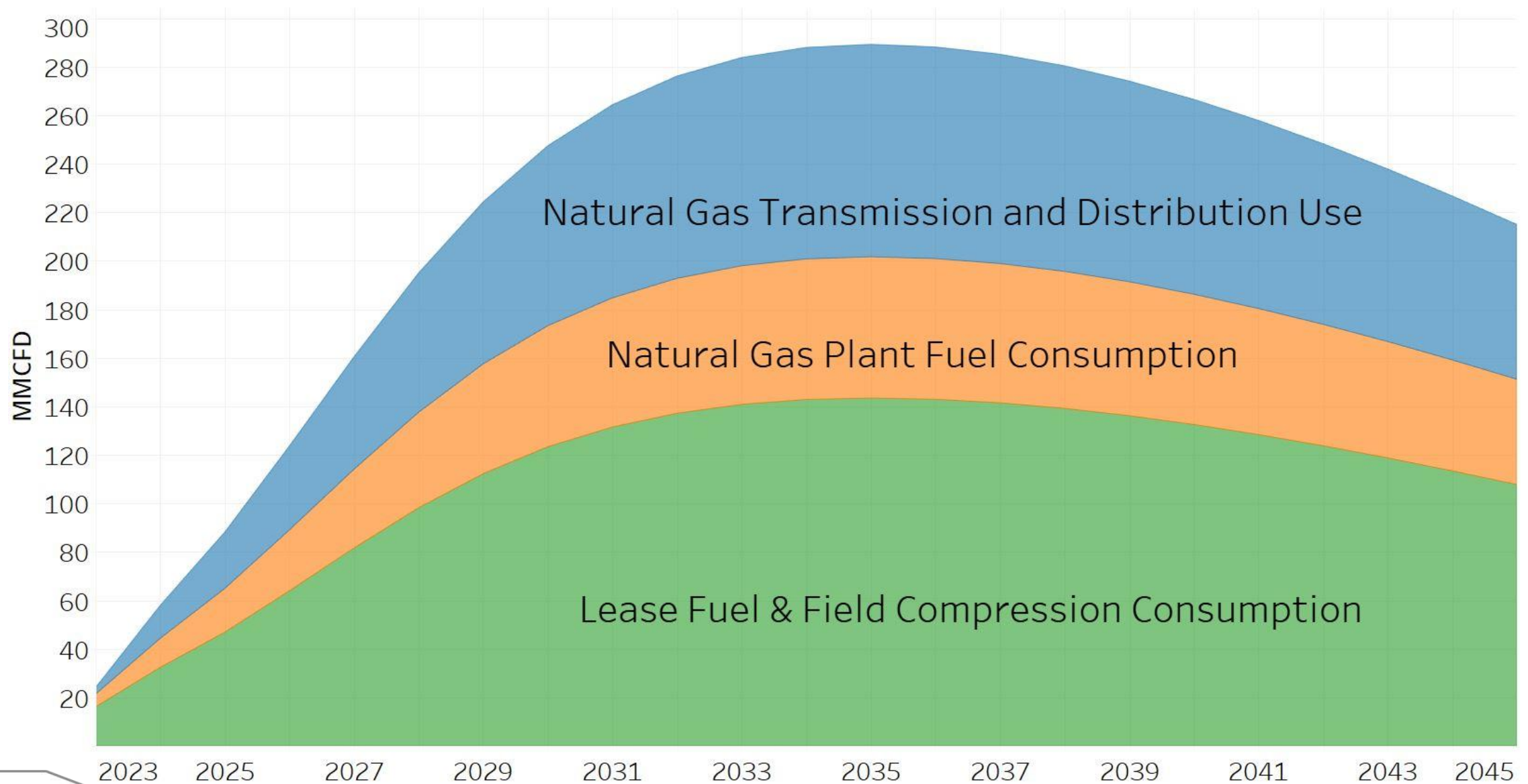
- Reduce E&P Activity to Meet Limited Gas Options



# North Dakota Gas Consumption (Annual)

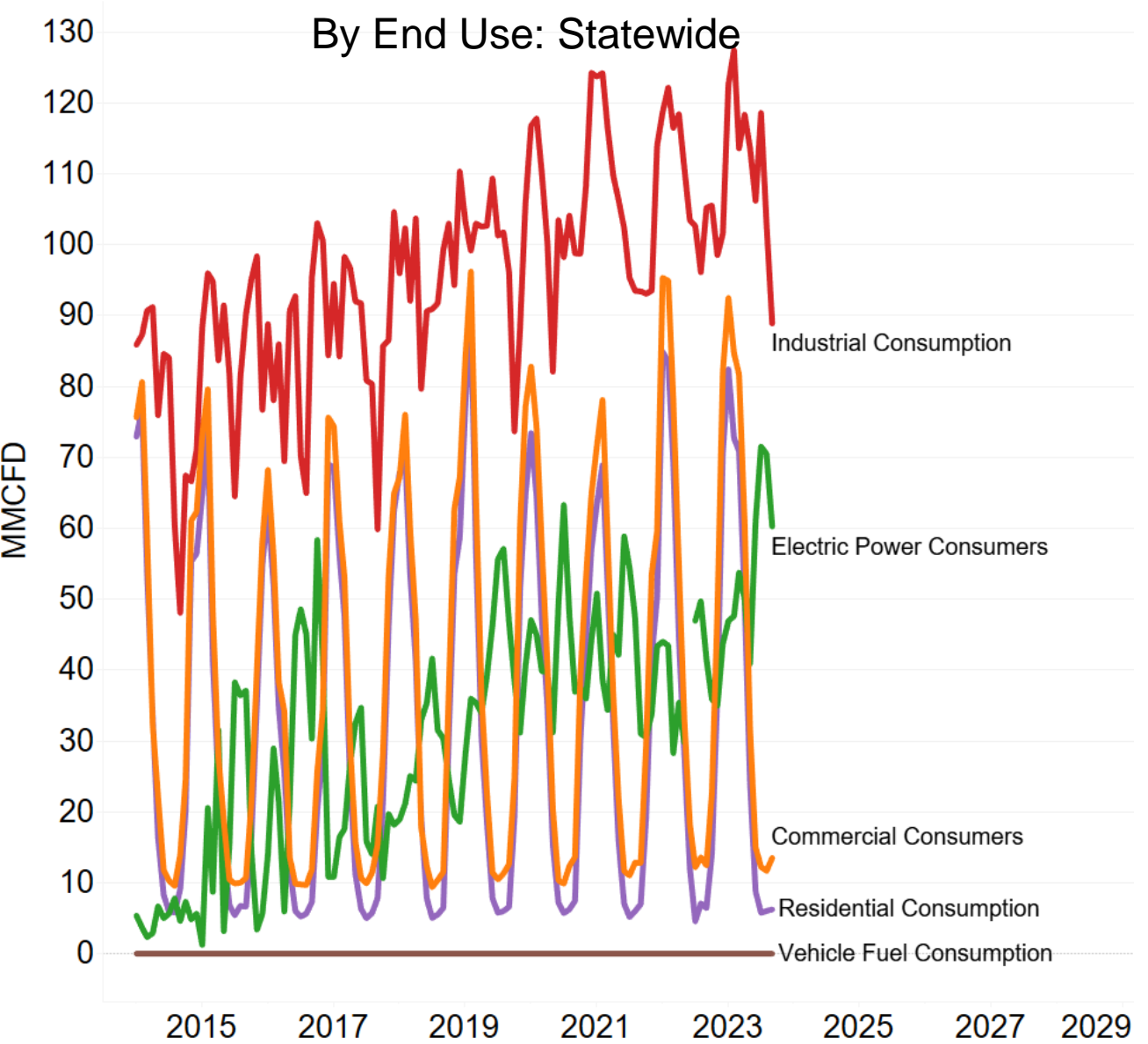
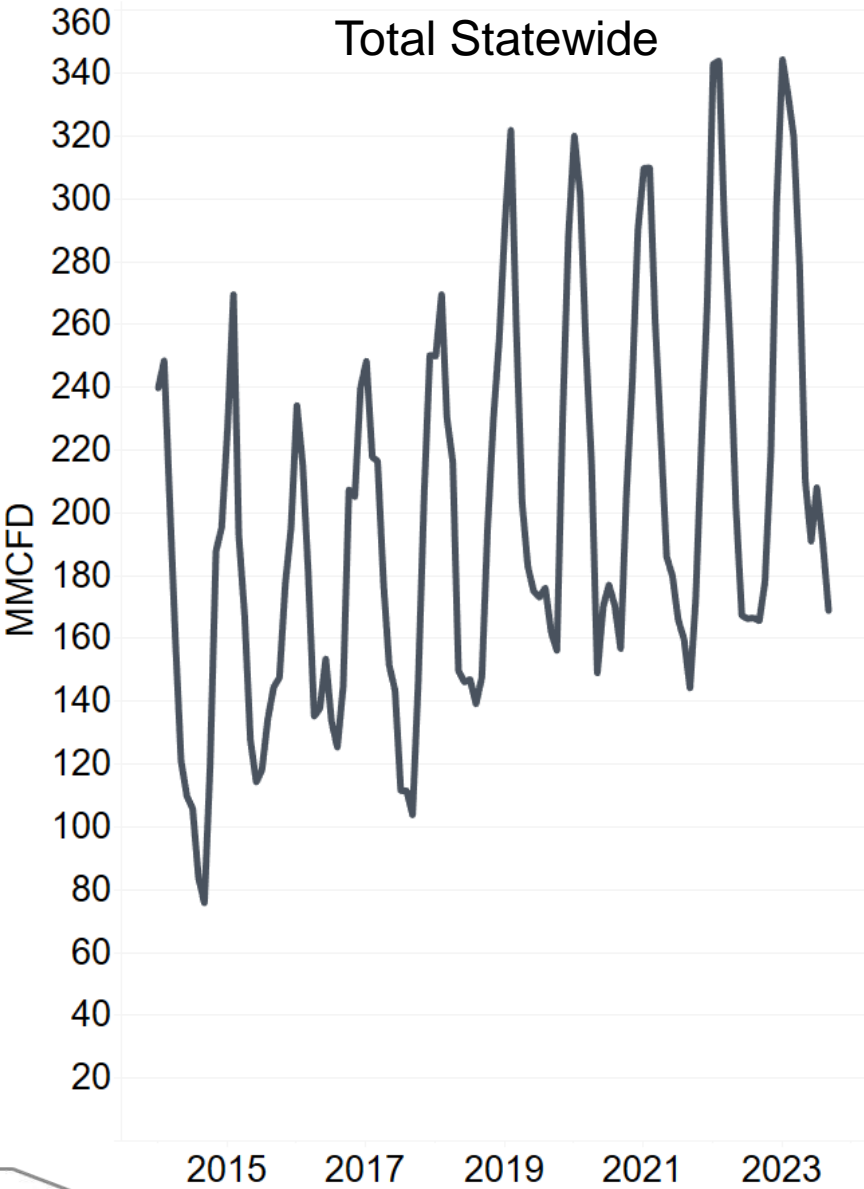


# Midstream Consumption (Incremental\*)

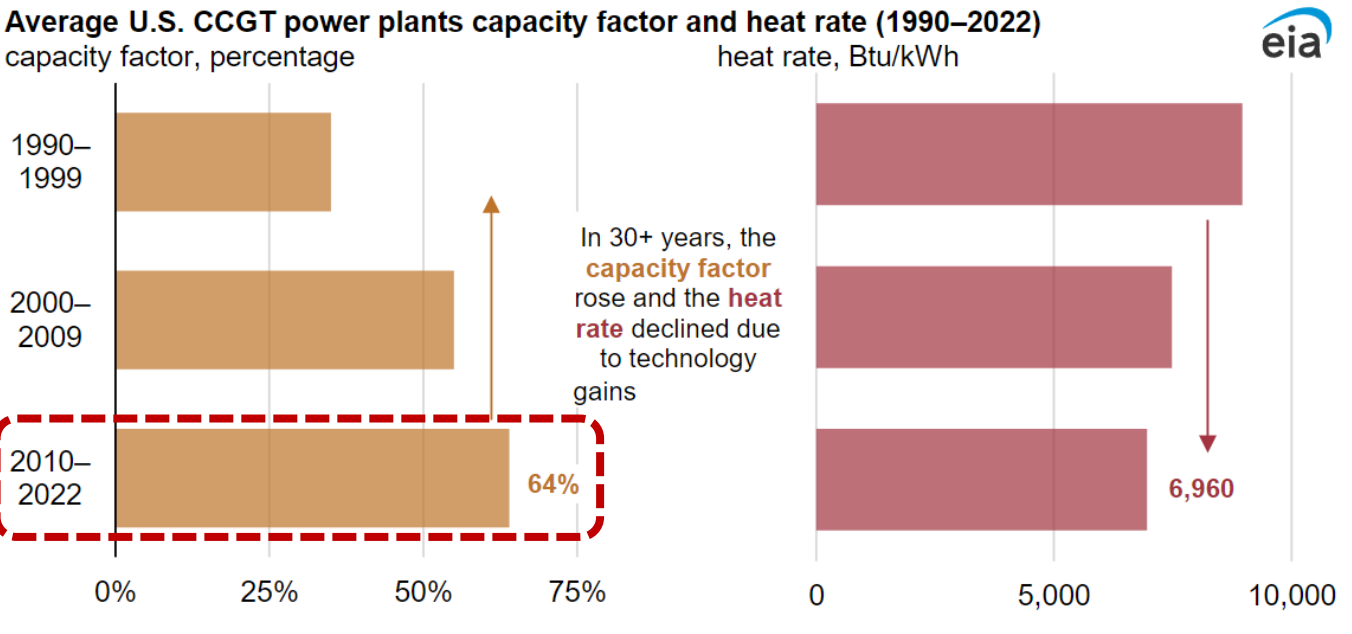




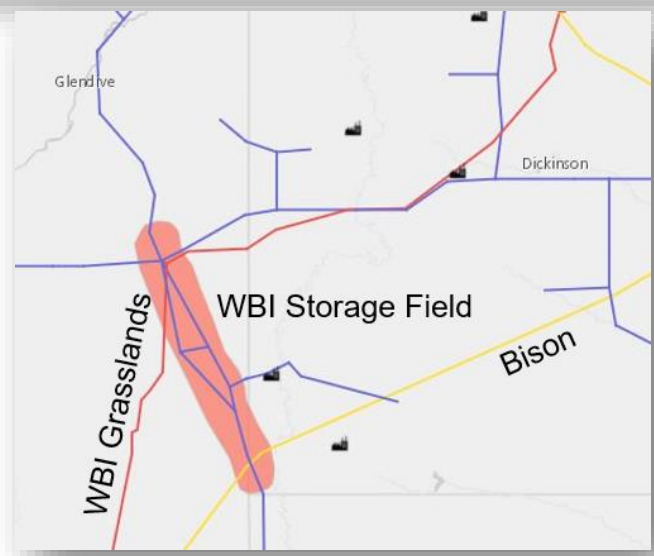
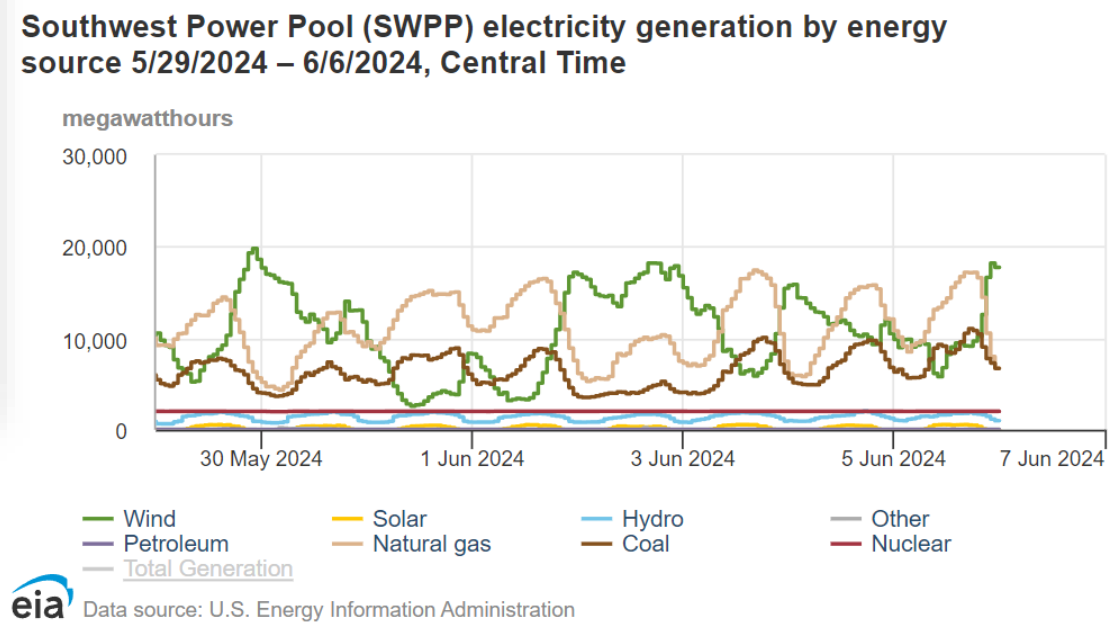
# Non-Midstream Consumption (Monthly)



# Intermittent Gas-Fired Generation Challenging to Match Oilfield Output

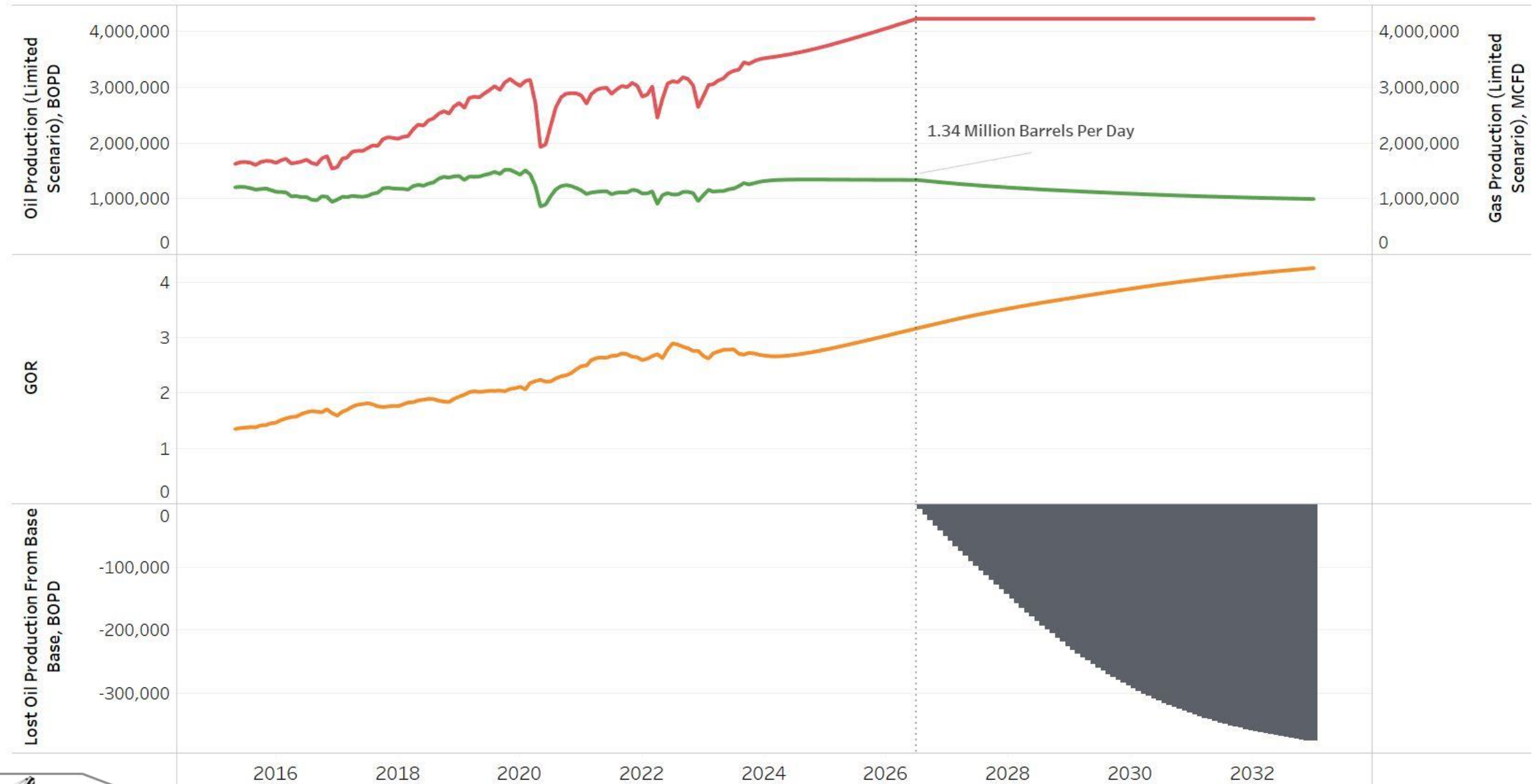


Gas-fired demand can fluctuate hourly, daily, and weekly, depending on system load, weather, etc.



Regional gas storage could provide a balancing solution for intermittent generation, but who pays for the required expansion?

# Gas Limitations Could Force Oil Production Down As GOR Rises



# Driving Forces for New Gas Pipelines



Supply Push



Demand Pull



System  
Reliability/Security





# Who Signs Up For Capacity?

Shippers



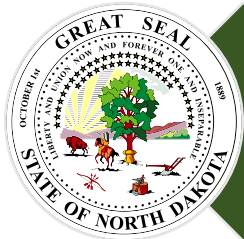
Producers/Midstream



Marketing Firms



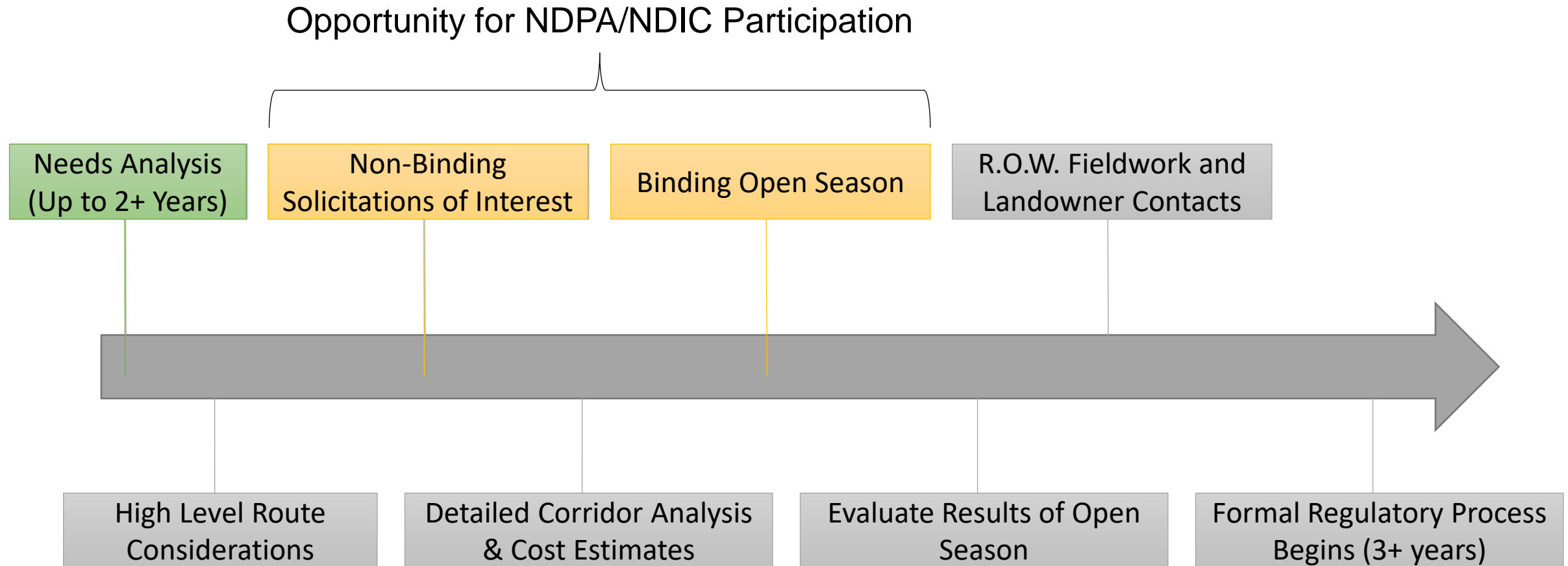
Industrial Consumers/LDC



State of North Dakota (PA/IC)



# Early Stages of Pipeline Development

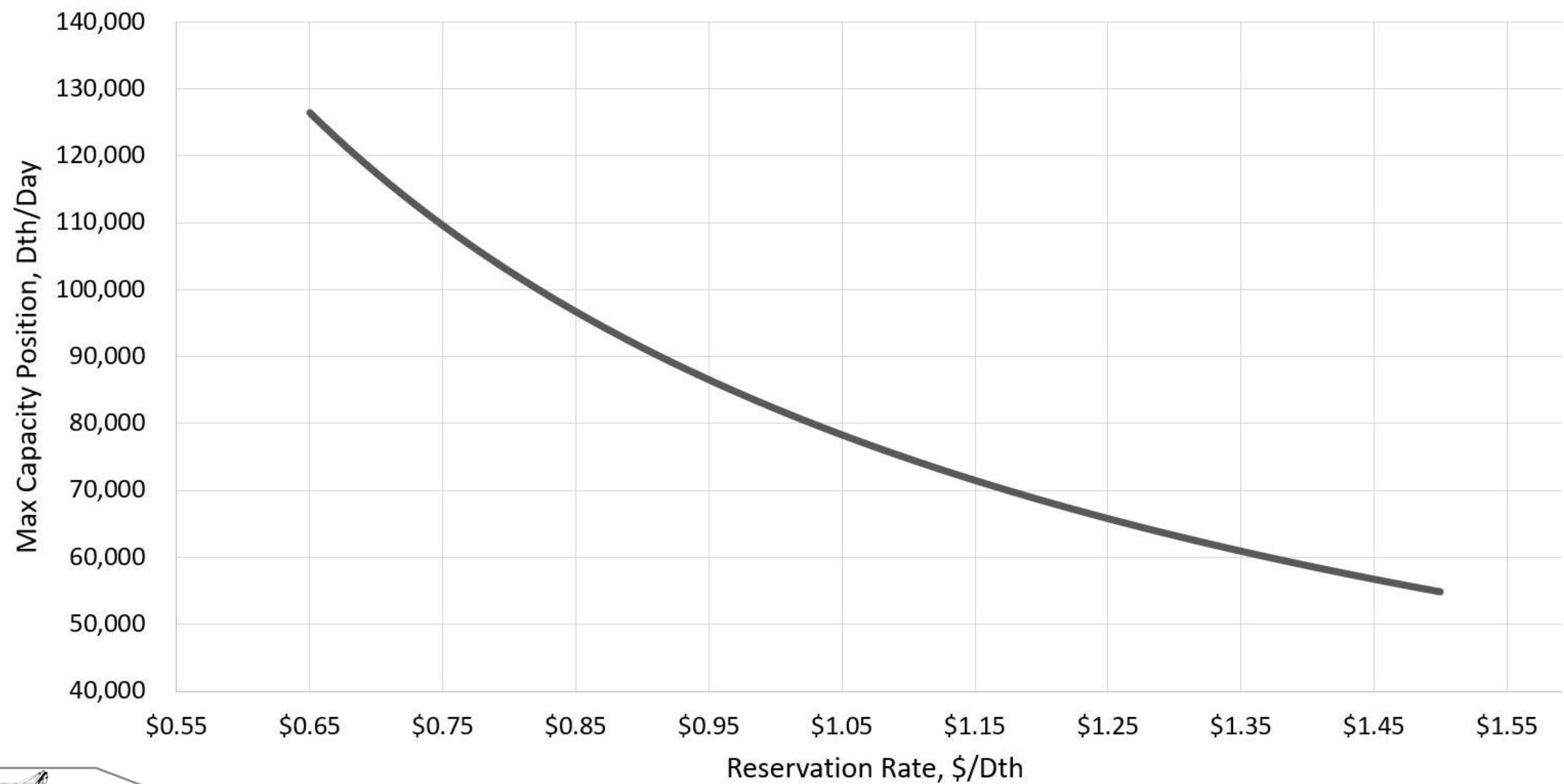


# Pipeline Authority Century Code– 54-17.7-04.

3. Acquire, purchase, hold, use, lease, license, sell, transfer, and dispose of an undivided or other interest in or the right to capacity in any pipeline system or systems, including interconnection of pipeline systems, within or without the state of North Dakota in order to facilitate the production, transportation, distribution, or delivery of energy-related commodities produced in North Dakota. If the authority acquires, purchases, holds, uses, or leases capacity positions, the authority shall sell, transfer, release, or dispose of the capacity positions at intervals that are no more frequent than monthly and in an amount that is equal to or greater than the market rate, but only if the sale, transfer, release, or disposal of the capacity positions is sufficient to cover the expenses and obligations incurred. The authority's contract obligations for the capacity positions are limited to the capacity rates, charges, and terms.



# Capacity and Reservation Rate at \$30M/Yr





# Capacity Release Term Considerations

## 31 Days or Less

FERC permitted with certain criteria

Forbidden under  
NDCC 54-17.7-04  
*Subsection 3*

## 32 Days to 1 Year

Any rate (*NDCC Restrictions*)

Bidding required

AMA allowed without bidding

Rollovers allowed

## Greater than 1 year

Max tariff rate only

No bidding required

AMA allowed without bidding

Rollovers allowed at max rate only



# How Will NDPA Manage Contracted Capacity?




Most  
Desirable




Least  
Desirable

Release capacity to replacement shipper(s)  
in increments greater than one year at max  
rate



Release capacity to replacement shipper(s)  
in increments less than one year at bid  
rates (*Limited by 54-17.7-04 Subsection 3*)



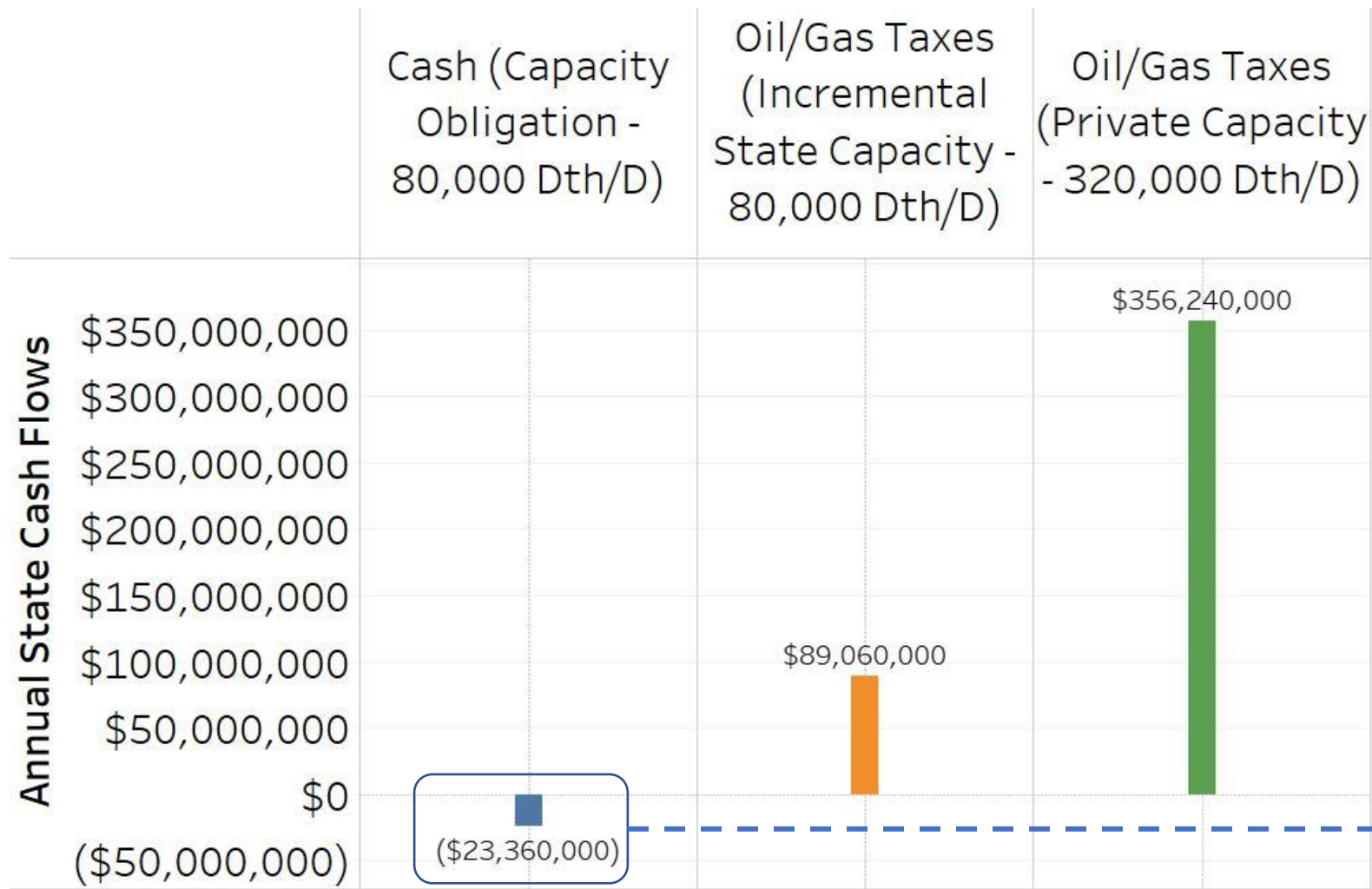
Release of capacity to an asset manager for  
an appropriate term length



Pay obligated precedent agreement rates  
until a release or asset management  
agreement is established



# Example Operating Project Cashflows



**Hypothetical Project Needs 400,000 Dth/D Capacity Commitment to Move Forward**

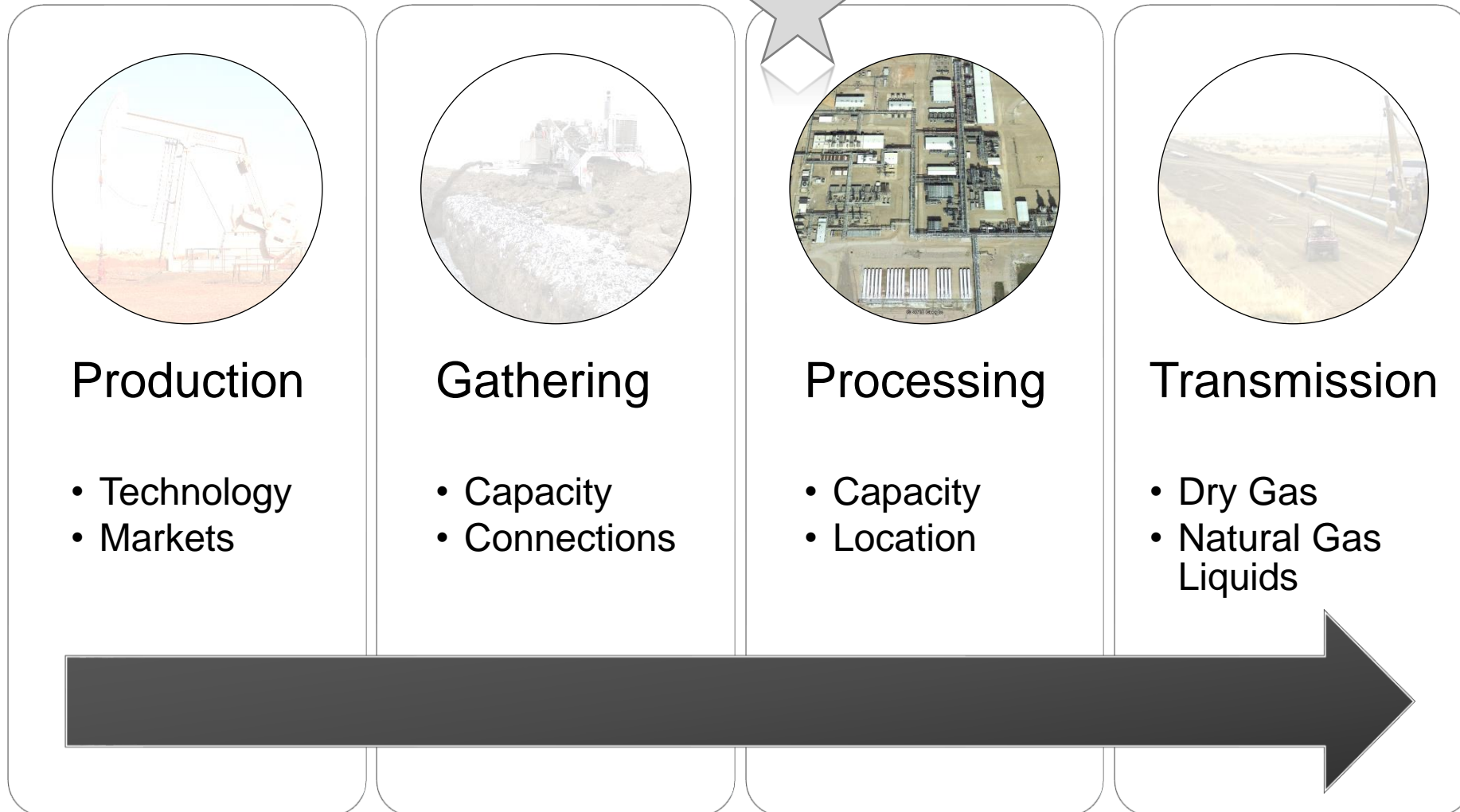


## Options for State Capacity Obligation

- Release (full or partial) to private sector
- Monetize capacity through asset management agreement (AMA)
- Worst case – Continue to pay obligations without recovery or release on 80,000Dth

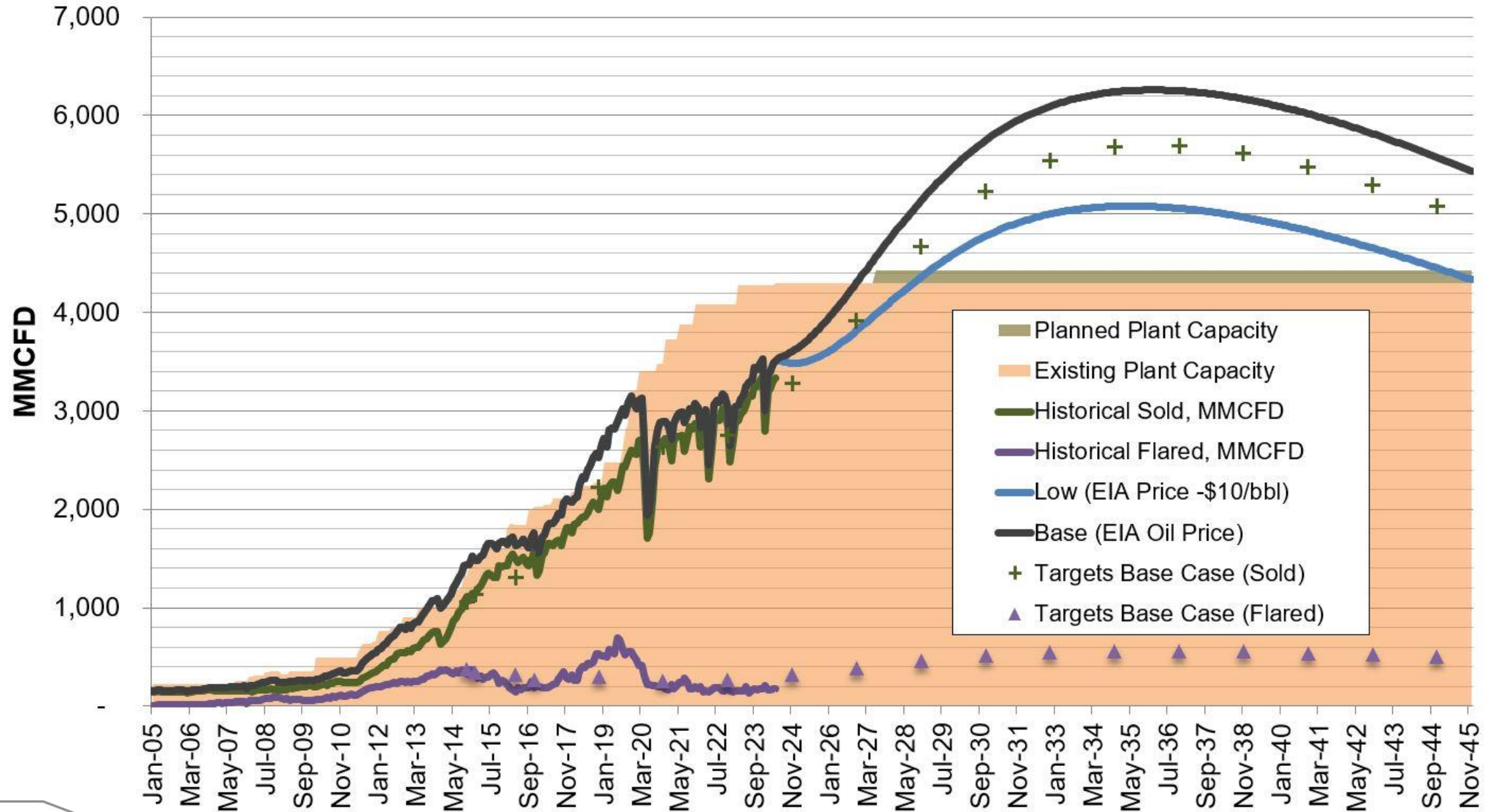


# Natural Gas Update

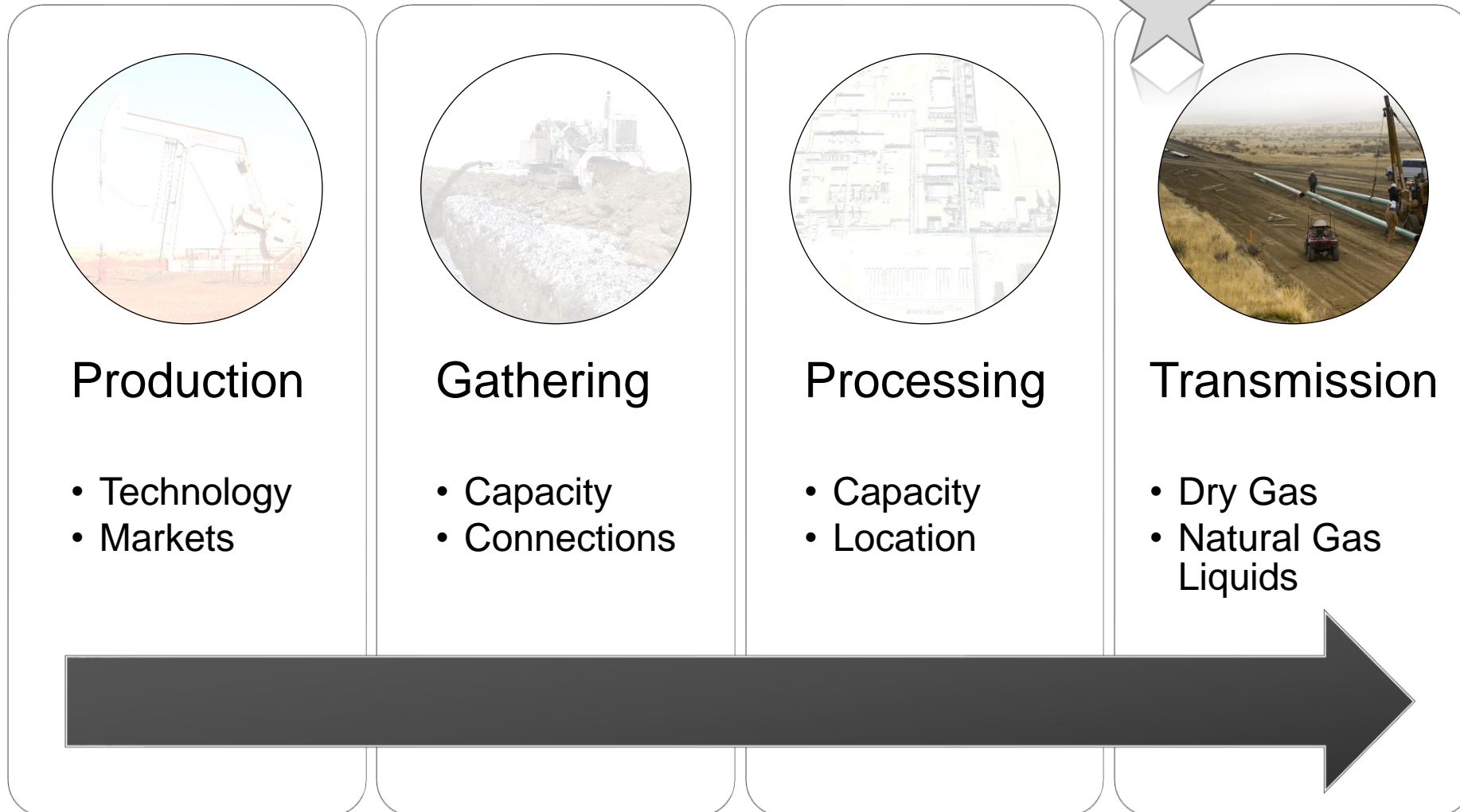




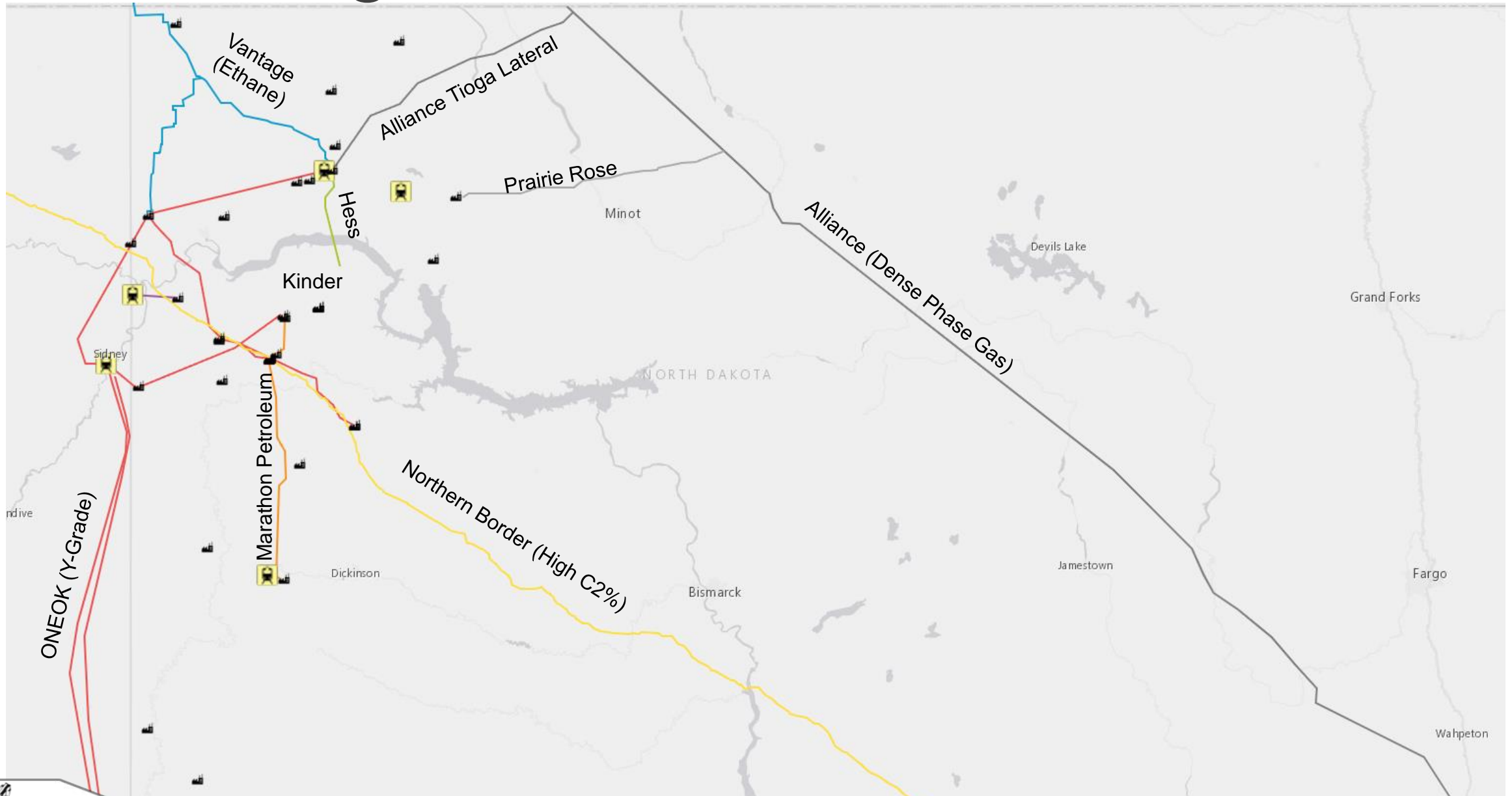
# North Dakota Natural Gas Processing Capacity



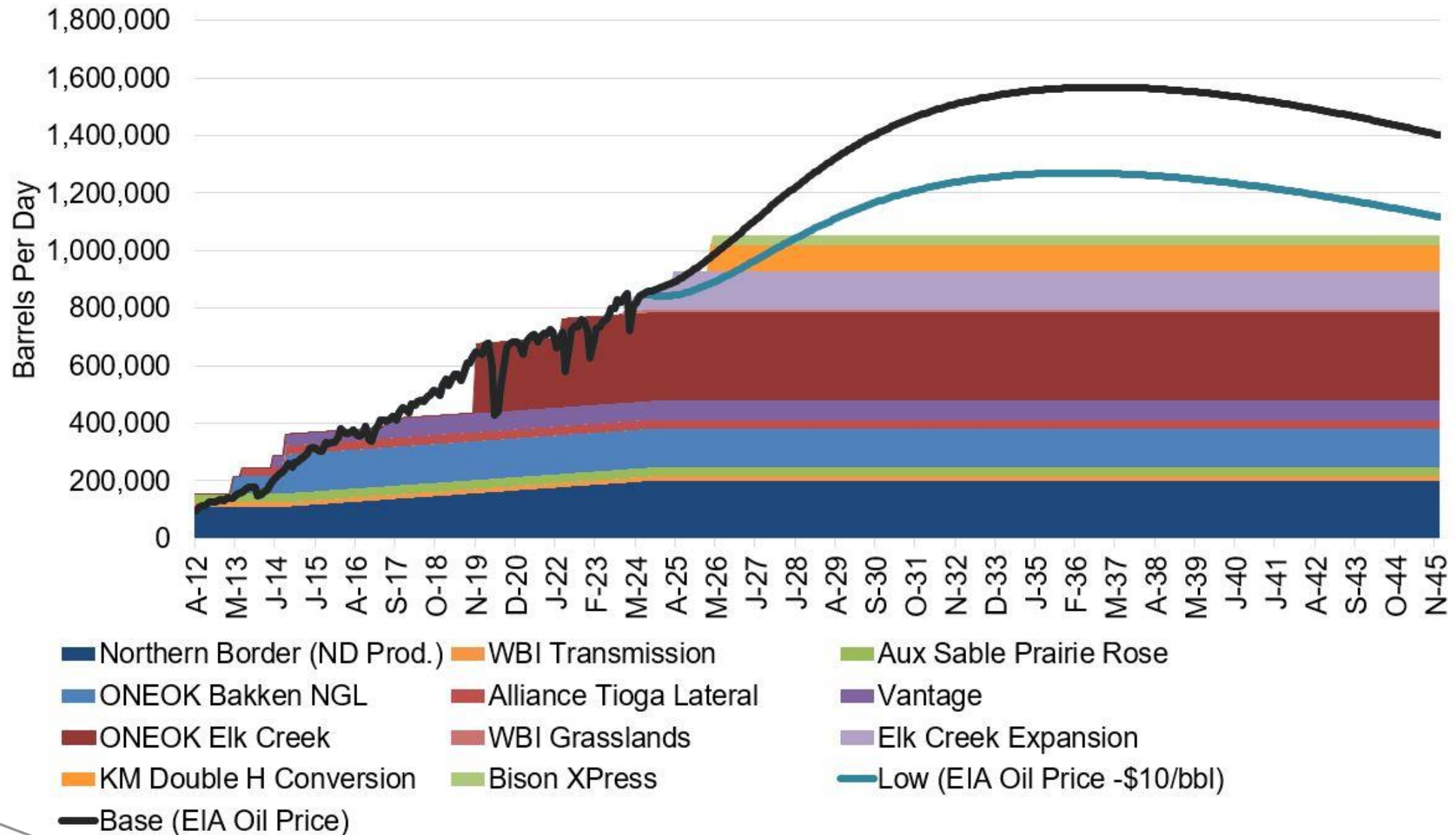
# Natural Gas Update



# Regional NGL Infrastructure



# NGL Pipeline Transport Options\*

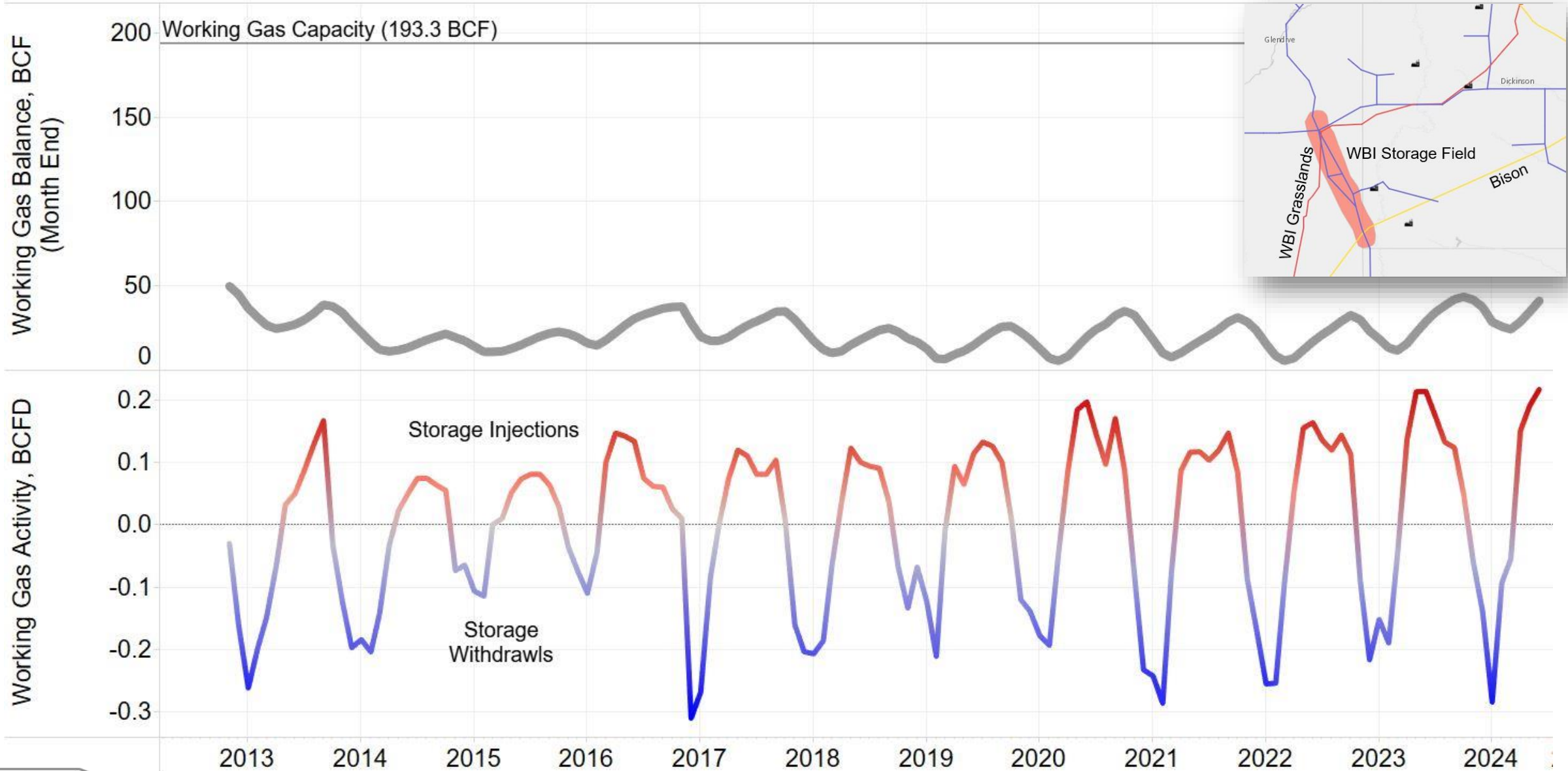




# Regional Natural Gas Storage



# Residue Gas Storage – WBI Energy\*



# Contact Information

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**Know what's below.  
Call before you dig.**

Websites:

[www.pipeline.nd.gov](http://www.pipeline.nd.gov)  
[www.northdakotapipelines.com](http://www.northdakotapipelines.com)

