



# FEBRUARY 2021 WEATHER EVENT IMPACT ON NATURAL GAS COSTS

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Informal Hearing, Case No. PU-21-102  
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## Overview

- Natural gas storage opportunities and challenges
- Thoughts on February Event gas cost impact differences among ND utilities
- Historical gas cost and “all in” average rate comparisons
- Additional February Event gas cost true-up options

## Underground Storage Gas (review)

- We hold firm storage on three pipelines (190,000 Dth withdrawal in Feb)
- Gas injected over summer for winter withdrawal
- Varying quantities each day to meet changing demand
- Critical balancing service for differences between actual and forecasted loads
- Storage gas must be withdrawn 80%-95% by end of winter
- Price certainty and supply for physical winter needs
- Primary tool for serving variable needs over the winter

# NSP Supply Areas

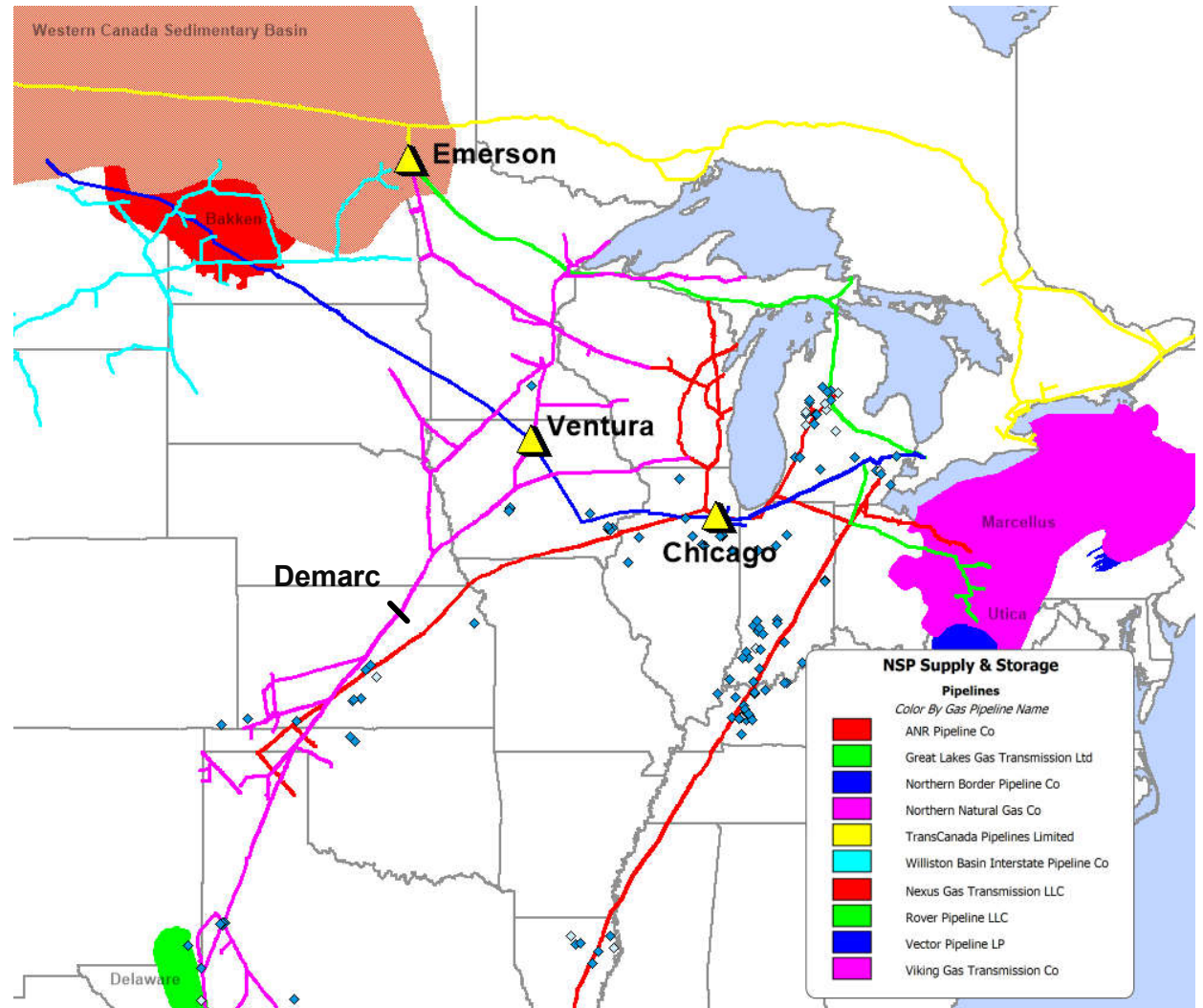
## Market Centers

Bakken at Ventura

Western Canada at Emerson

Southwest U.S. at Demarc

Chicago Hub



## Underground Storage – Expansion

- We monitor alternate storage availability on an ongoing basis
- Current pipeline network is full
  - Northern Natural Gas storage/transportation fully subscribed
  - Limited transportation access to WBI Storage services
    - WBI transport to Fargo fully subscribed
    - Northern Border from WBI Storage to Ventura fully subscribed
  - Limited transportation access to Michigan storage services
    - ANR fully subscribed through Chicago to Viking or Northern Border
    - Great Lakes fully subscribed from ANR Storage to service areas
    - Viking fully subscribed

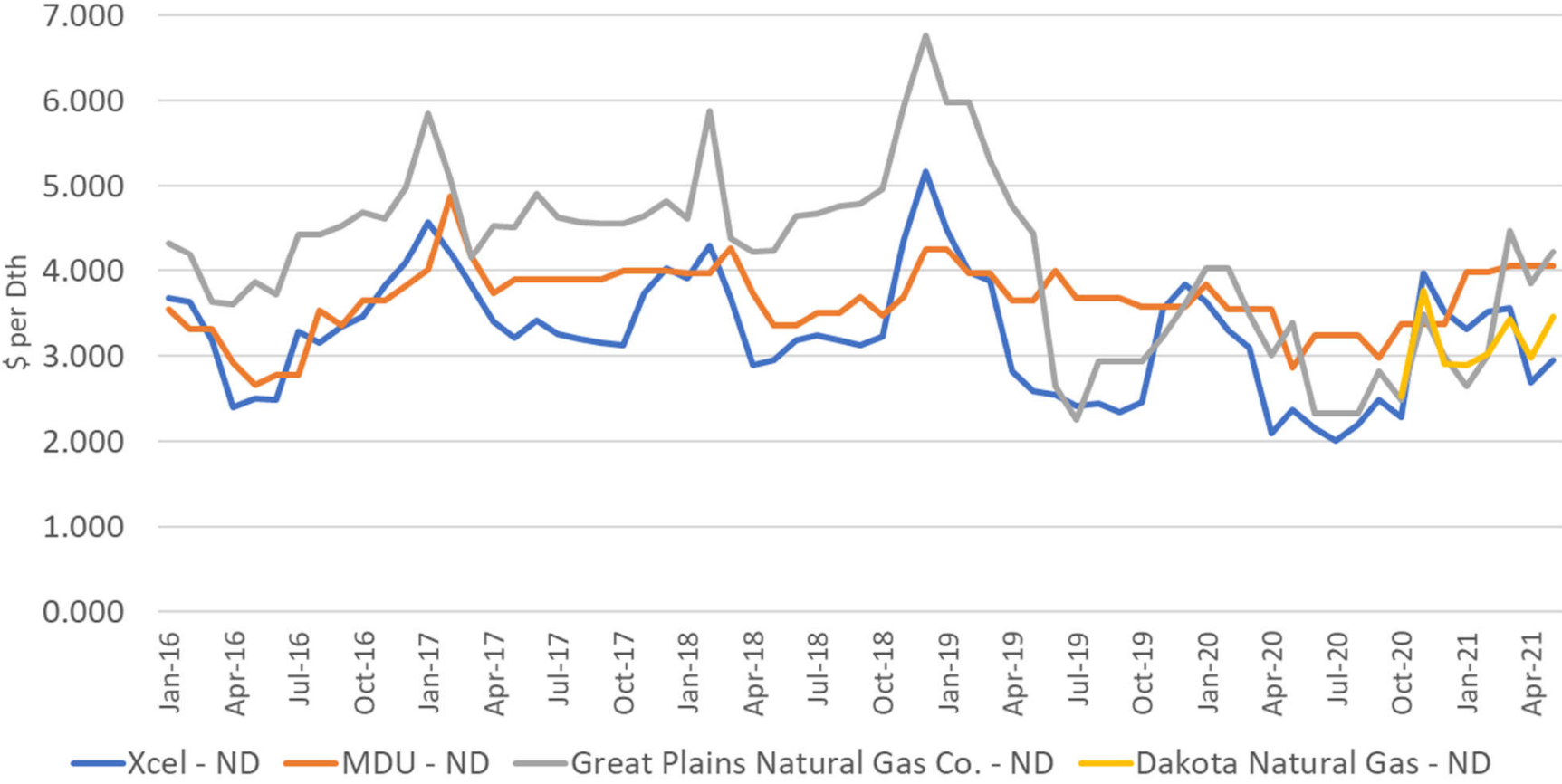
## Underground Storage – Expansion (cont.)

- Limited options for additional storage service for NSP
  - North Dakota customers pay ~\$8M/year in demand charges
- Increase storage from Michigan to 50% of NSP Design Day = ~\$21M/yr
  - Assumes service at tariff rates, but higher construction related costs are likely
  - Only serves 50% of needs; higher service requires substantial construction and costs
- Acquire WBI Storage to Fargo
  - Requires construction along WBI line to Fargo
  - Acquiring 100% of WBI's available storage (28,000 Dth/d) would cost ND customers ~\$8M/yr in storage/transportation costs and require construction
  - Only serves 50% of needs; higher service requires substantial construction and costs

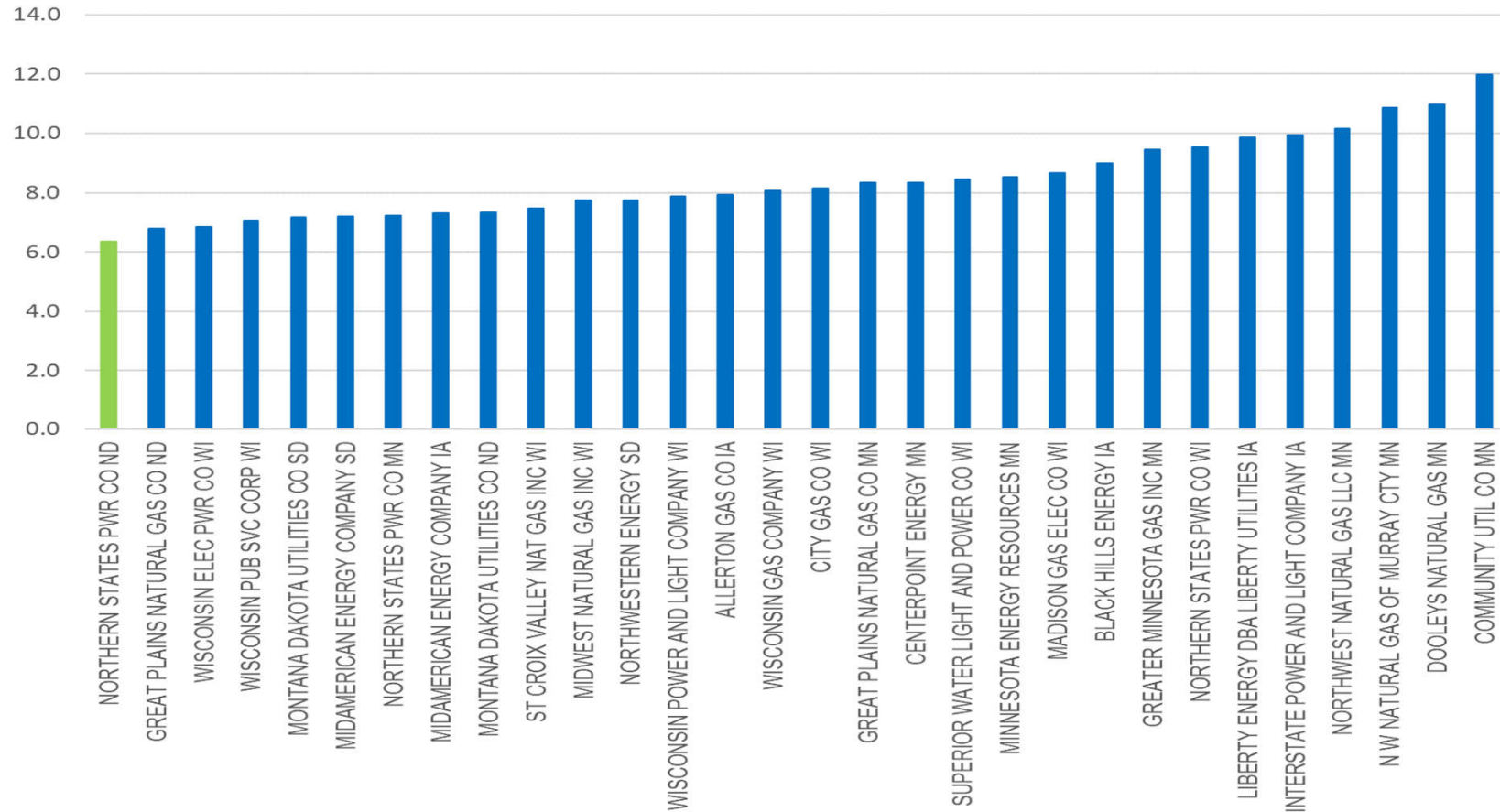
## Thoughts on Differences in Feb. Event Gas Cost Impacts

- Aspects of utility portfolios allowed less exposure to commodities market
  - Geographic variability of February weather
  - Storage withdrawal capacity relative to load
    - Resulting in higher everyday costs
  - Small utilities may have gas supply managed by third-party under fixed prices

# Utility Cost of Gas Rates in ND (2016 - 2021)

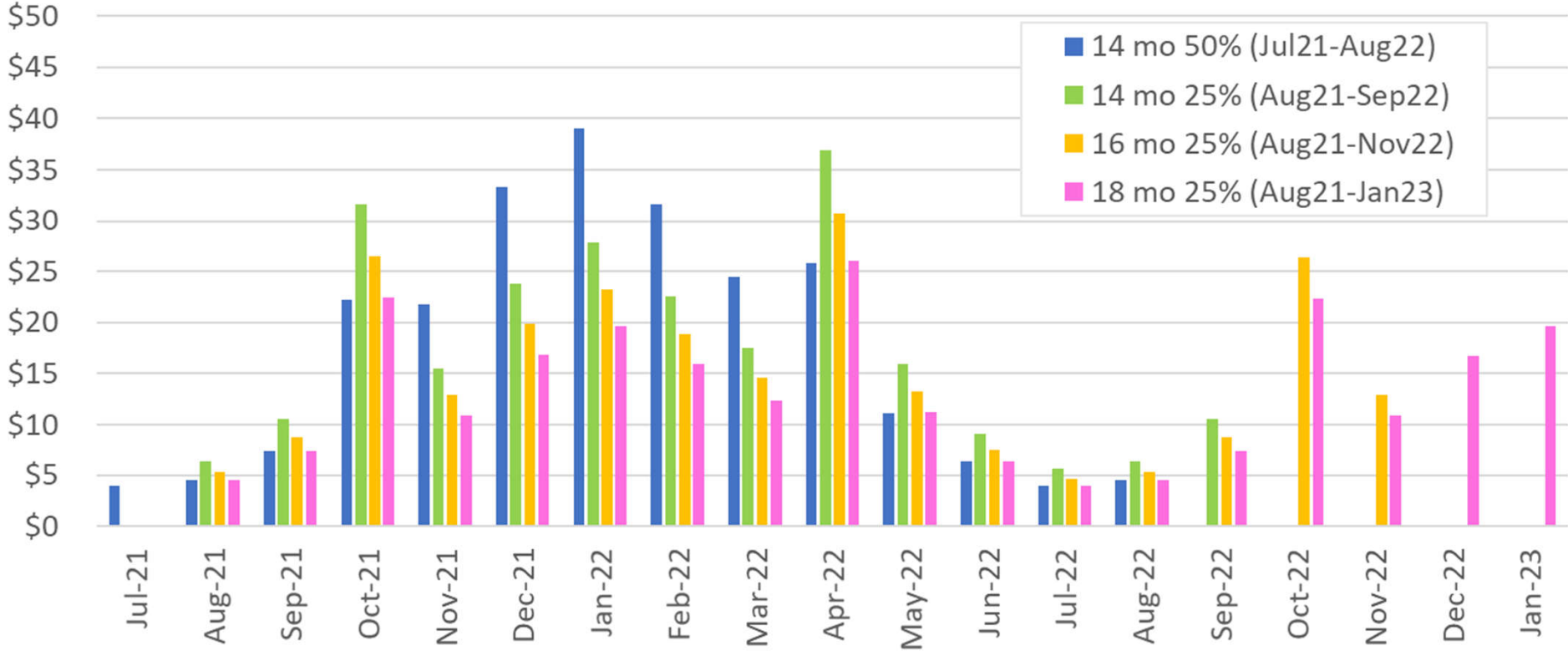


# Average Residential Natural Gas Rates (\$/dekatherm)



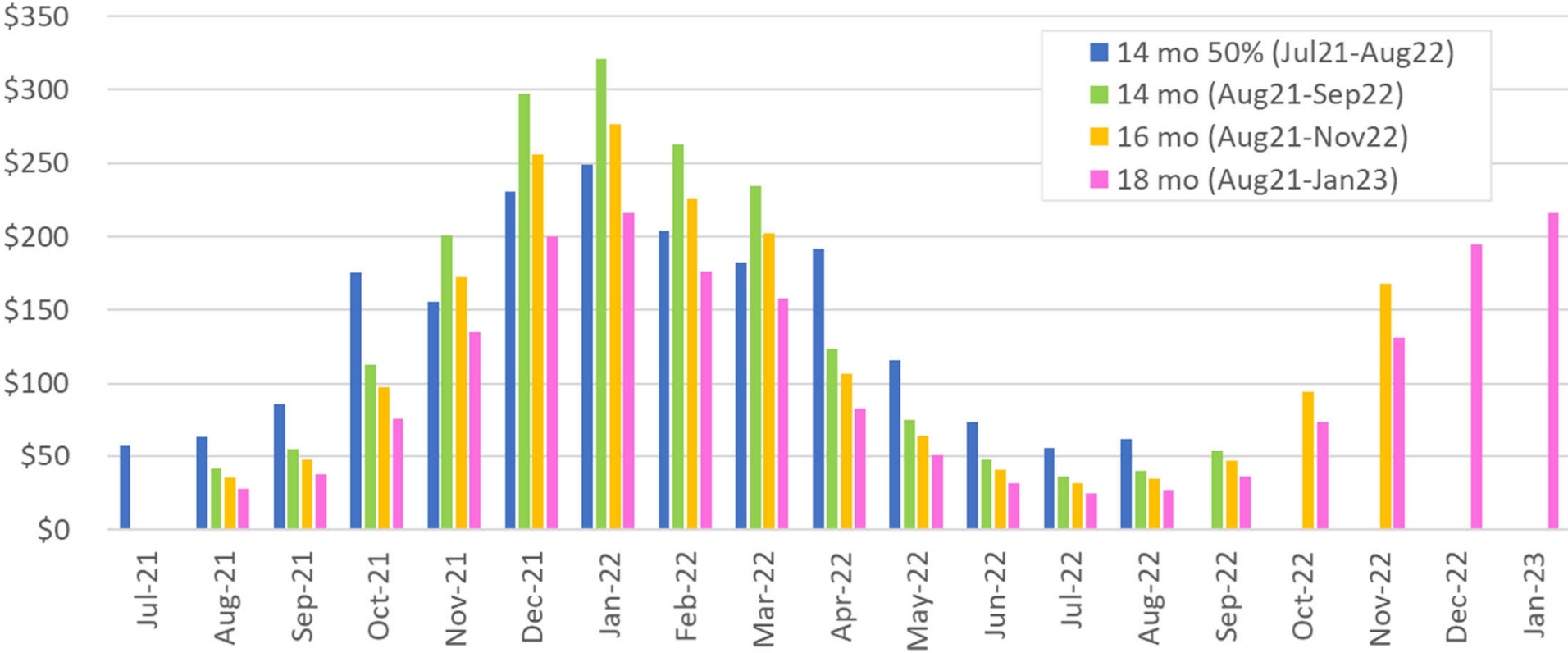
2019 Data for IOUs in MN, ND, SD, WI, and IA from the American Gas Association

# True-up Scenarios – Residential Bill Impacts



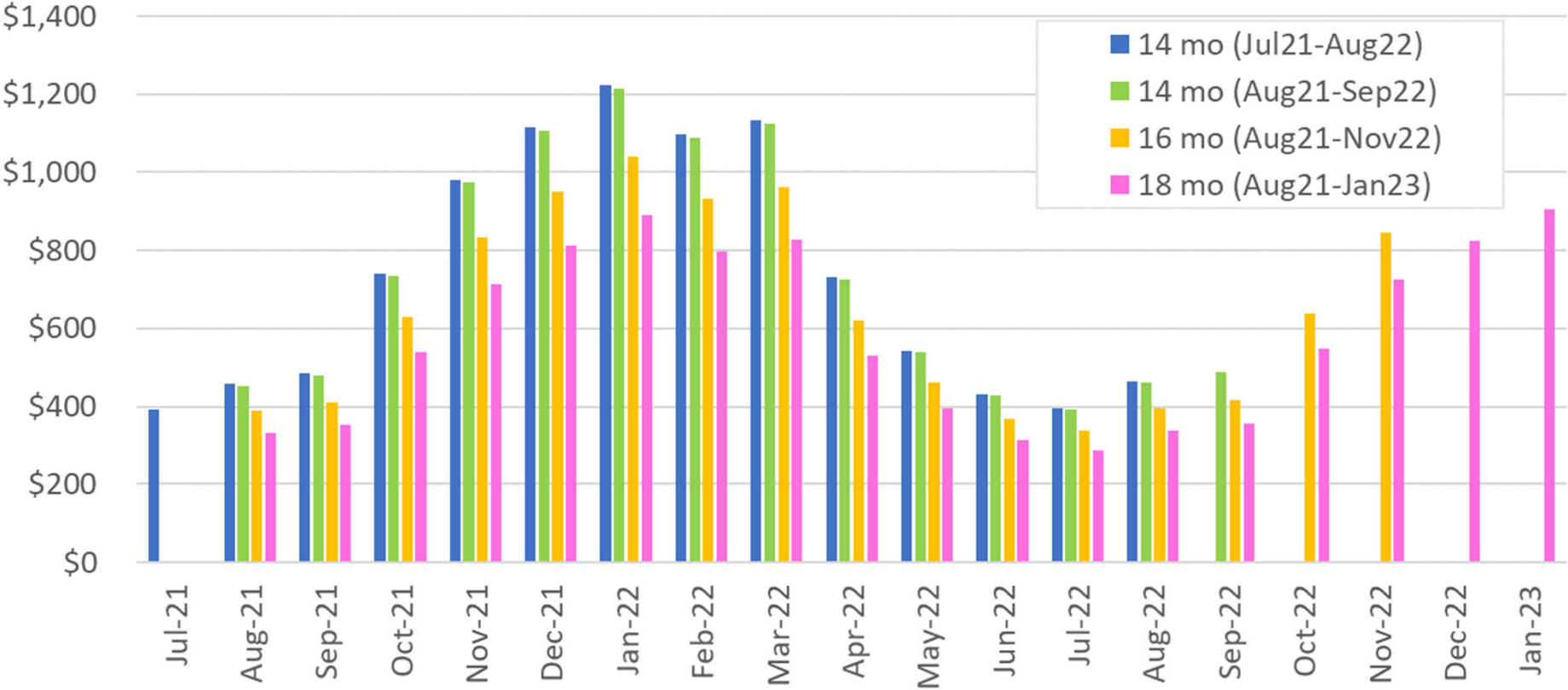
Note: The average January bill is about \$70, and the average July bill is about \$20

# True-up Scenarios – Commercial Firm Bill Impacts



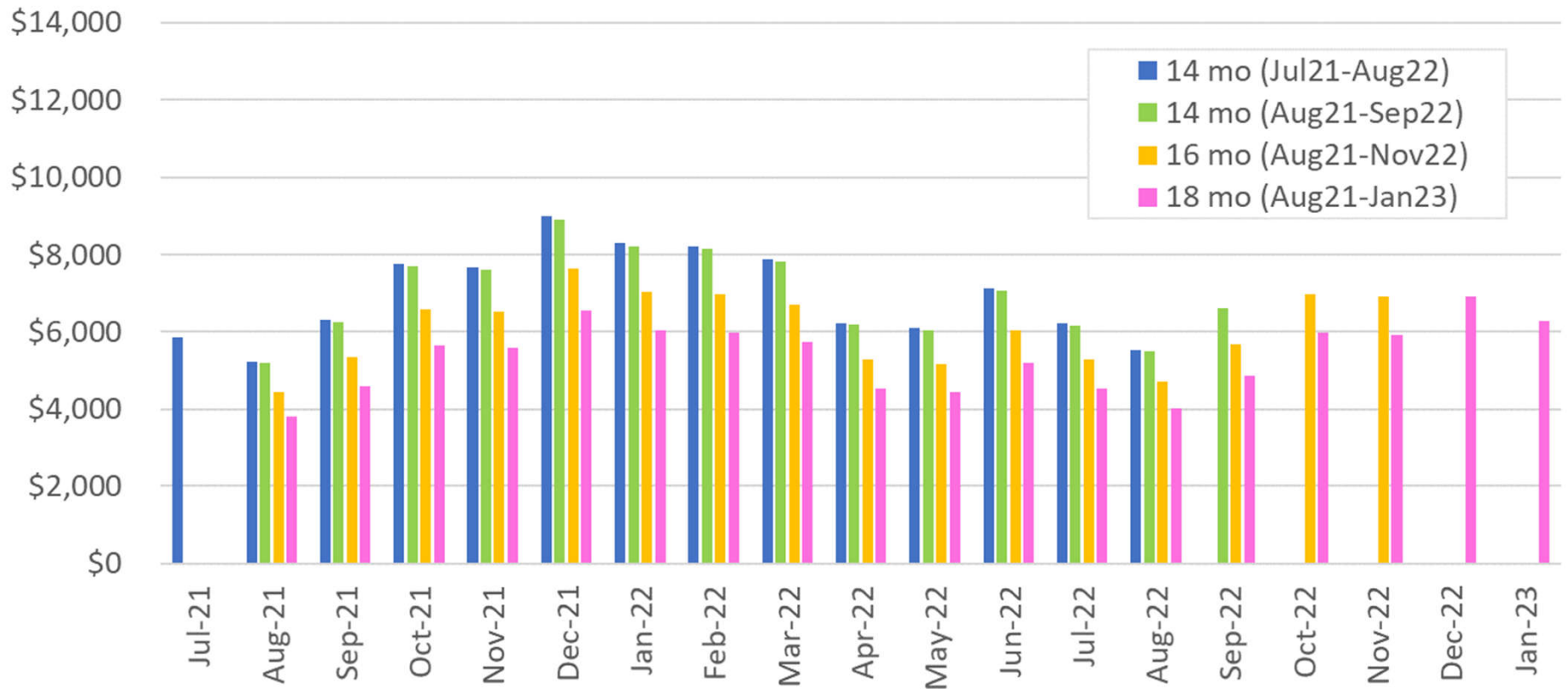
Note: The average January bill is about \$560, and the average July bill is about \$70

# True-up Scenarios – Small Interruptible Bill Impacts



Note: The average January bill is about \$4085, and the average July bill is about \$1020

# True-up Scenarios – Large Interruptible Bill Impacts



Note: The average January bill is about \$24,520, and the average July bill is about \$12,900

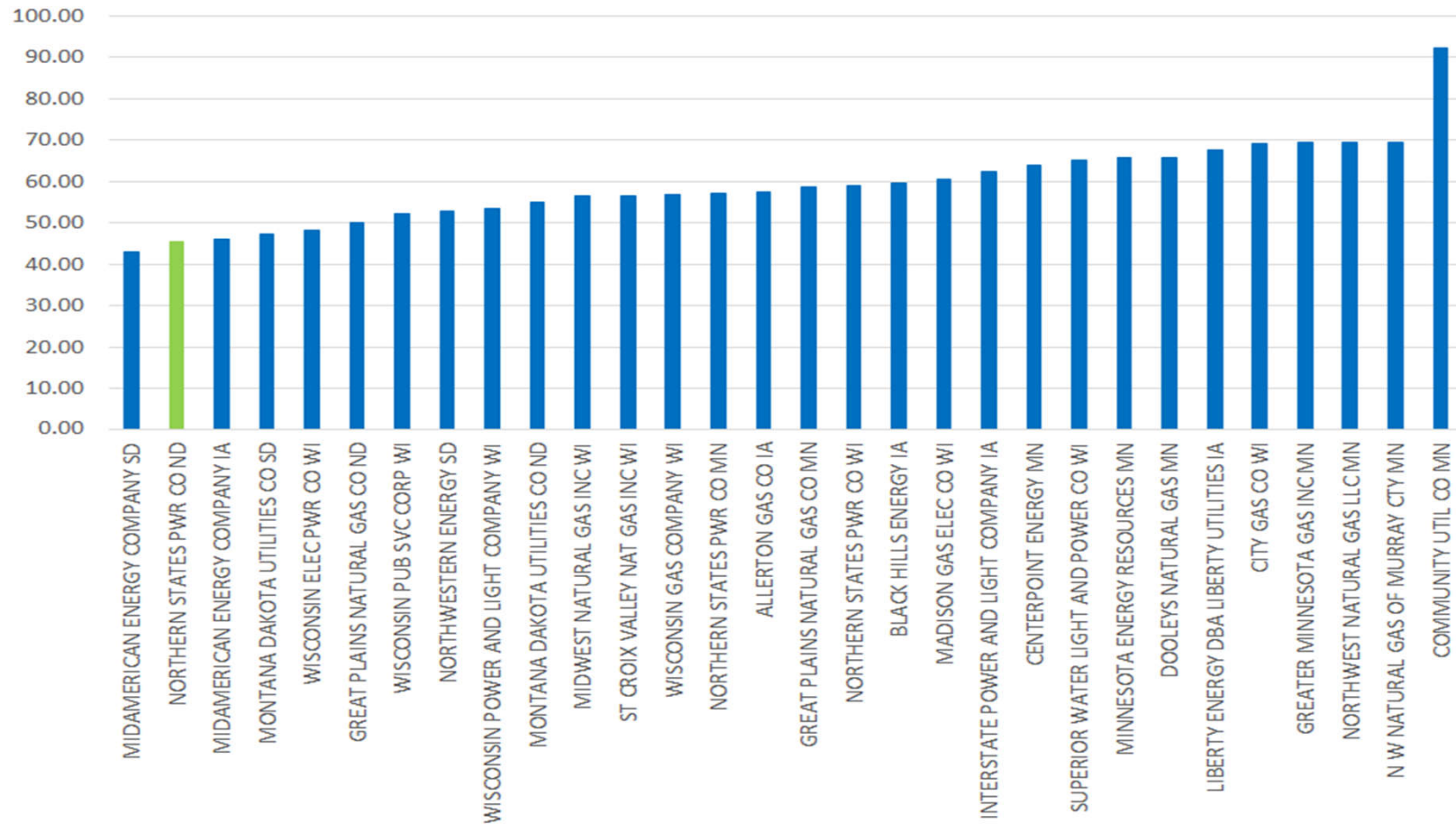
## Cost of Gas True-up Display – Schedule A, Page 2

	BILLING COST OF GAS BY CLASS (From Column 3)			
			Small	Large
<b>Class Summary</b>	Residential	C&I	Interruptible	Interruptible
Annual Demand	0.04792	0.04792	N / A	N / A
Commodity	0.27240	0.27240	0.27240	0.27240
<b>SUBTOTAL</b>	0.32032	0.32032	0.27240	0.27240
TRUE-UP	-0.02454	-0.01970	0.00760	0.00760
<b>TRUE-UP - Feb Event</b>	0.00000	0.00000	0.00000	0.00000
<b>TOTAL COG</b>	0.29578	0.30062	0.28000	0.28000



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# Average Residential Natural Gas Monthly Bills



2019 Data for IOUs in MN, ND, SD, WI, and IA from the American Gas Association