



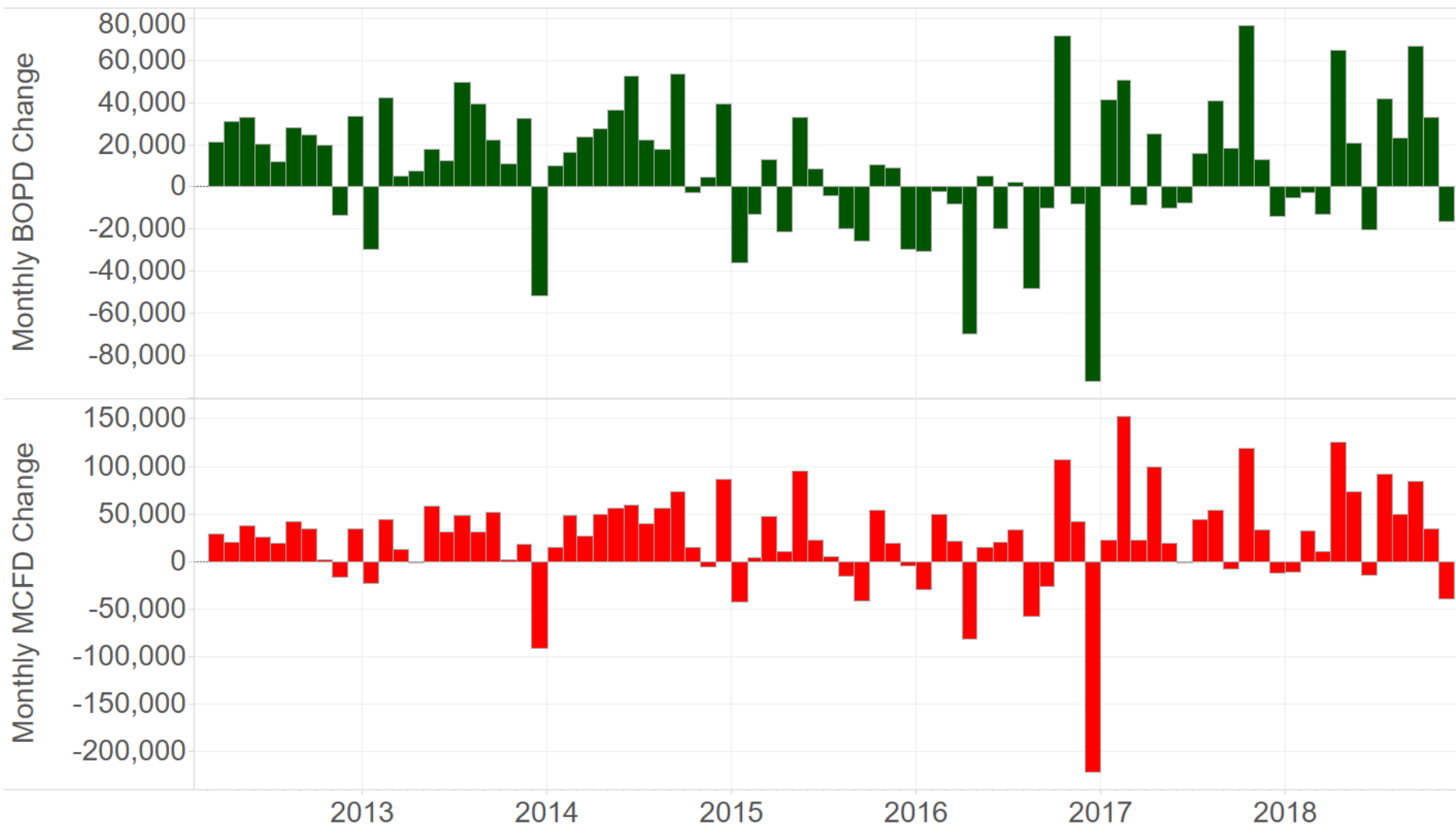
**January 2019 Monthly Update**  
**North Dakota Pipeline Authority**  
**Justin J. Kringstad**  
**January 15, 2019**

# US Williston Basin Oil Production - 2018

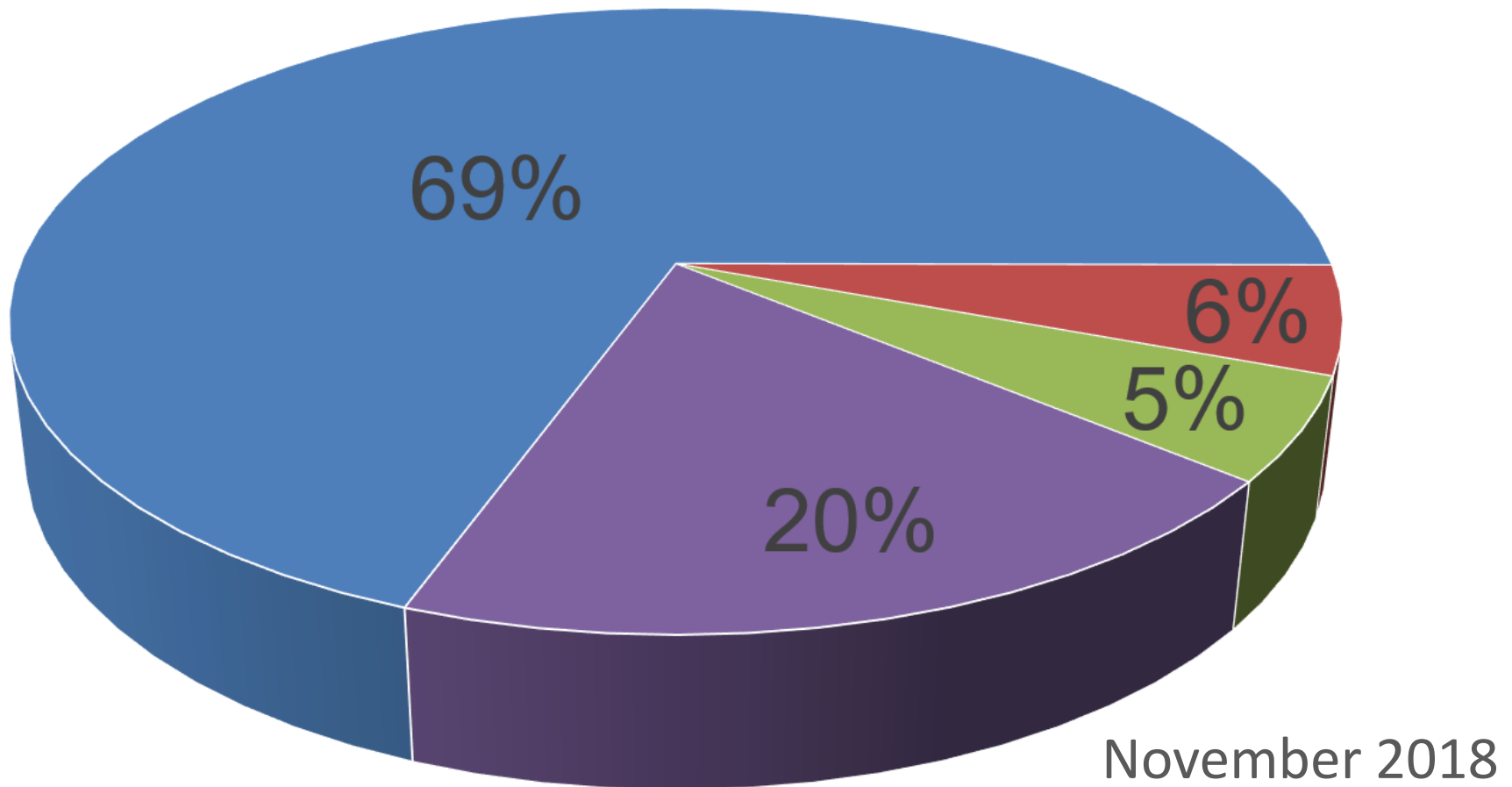
<b>MONTH</b>	<b>ND</b>	<b>Eastern MT*</b>	<b>SD</b>	<b>TOTAL</b>
January	1,177,637	50,110	3,555	1,231,301
February	1,175,080	50,861	3,628	1,229,568
March	1,162,129	49,830	3,502	1,215,461
April	1,226,921	52,426	3,515	1,282,862
May	1,247,756	53,717	3,471	1,304,944
June	1,227,440	53,987	3,443	1,284,870
July	1,269,315	53,187	3,377	1,325,879
August	1,292,513	55,627	3,471	1,351,611
September	1,359,283	54,634	3,475	1,417,392
October	1,392,369	53,406	3,375	1,449,151
November	1,375,803			
December				



# Monthly Production Change



# Estimated Williston Basin Oil Transportation



■ Pipeline Export

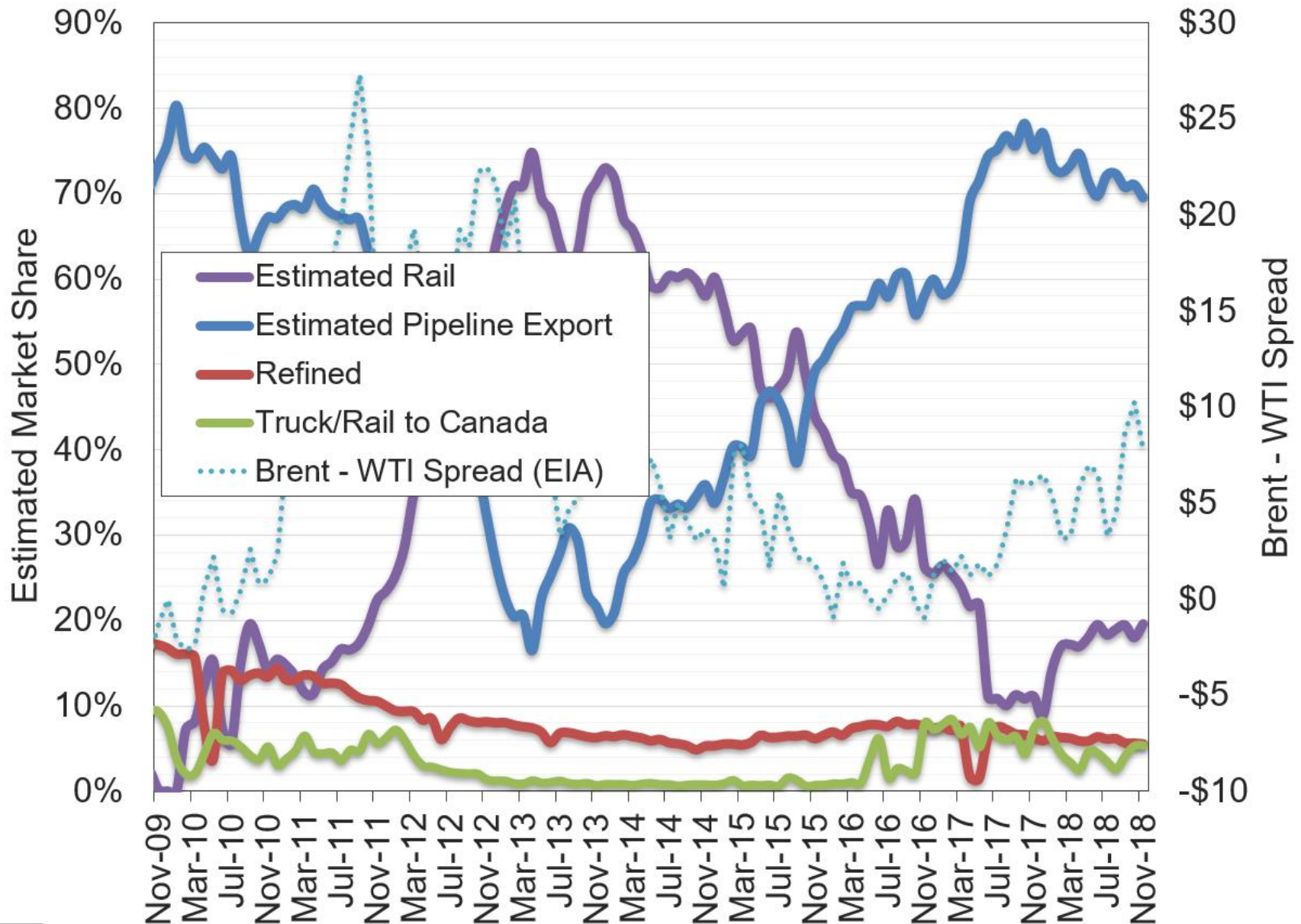
■ Truck/Rail to Canada

■ Refined

■ Estimated Rail



# Estimated Williston Basin Oil Transportation

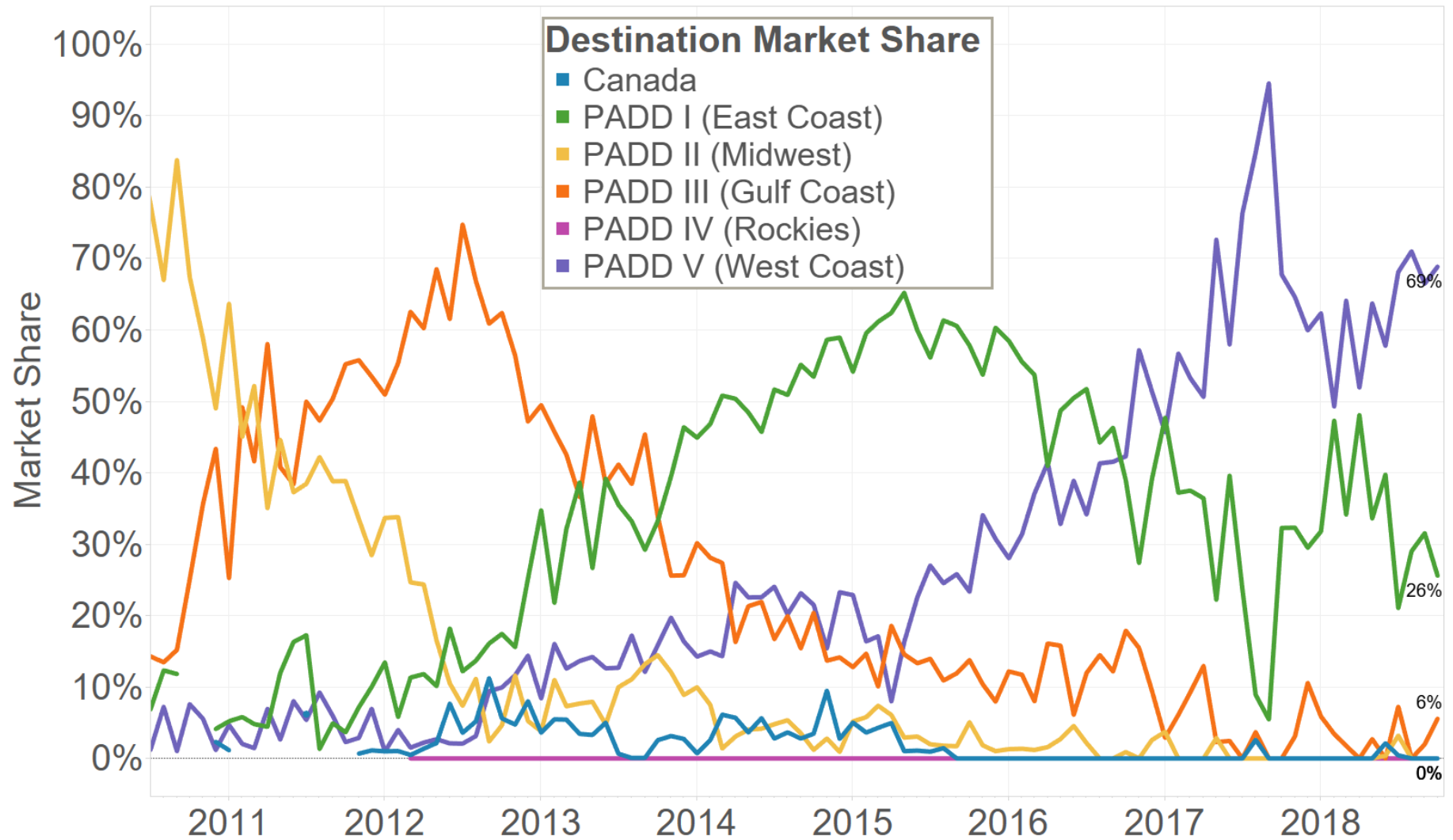


# Estimated ND Rail Export Volumes





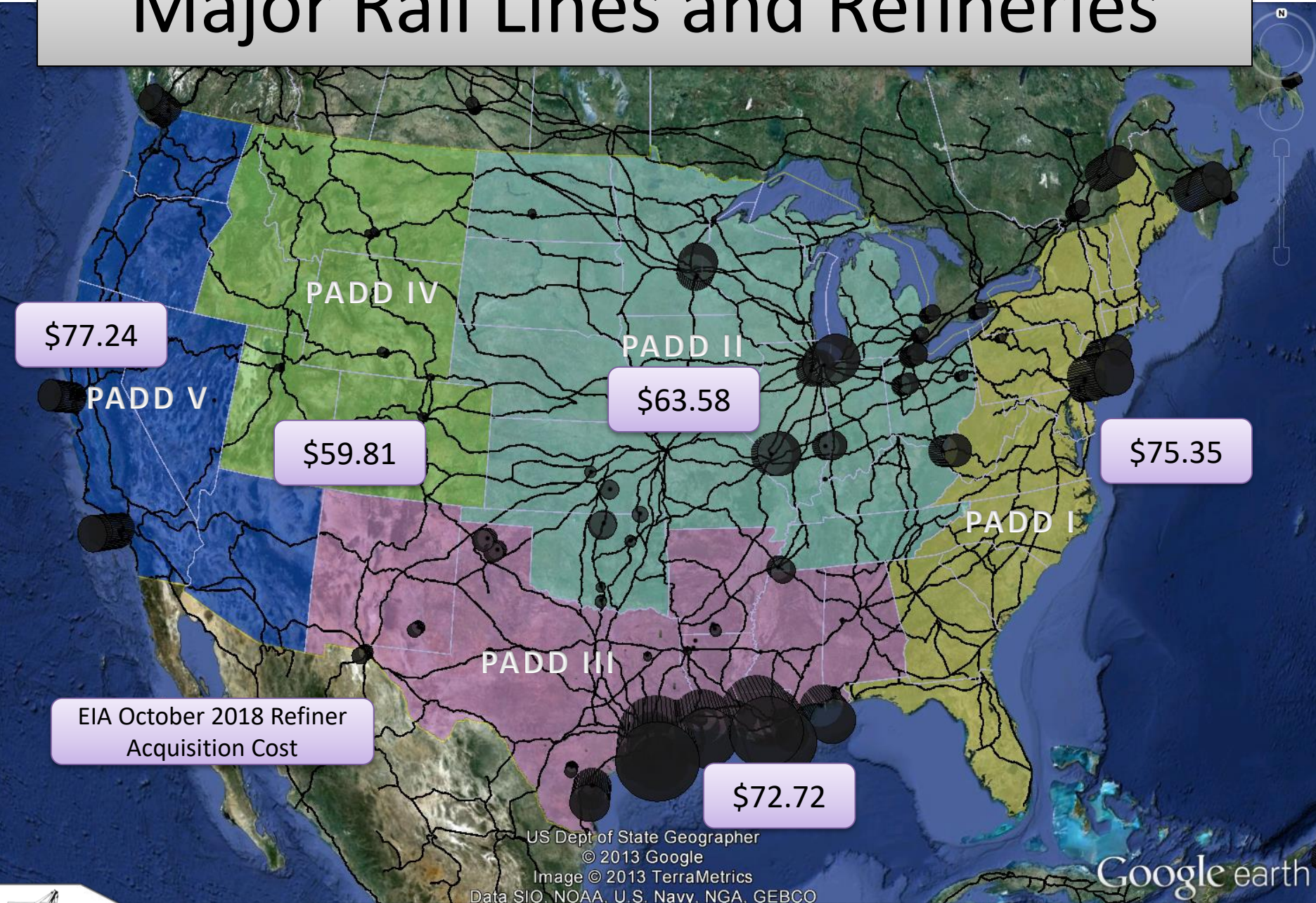
# Rail Destinations Market Share (Oct. 2018)



*Data for Rail Destination Market Share Provided by the US Energy Information Administration*

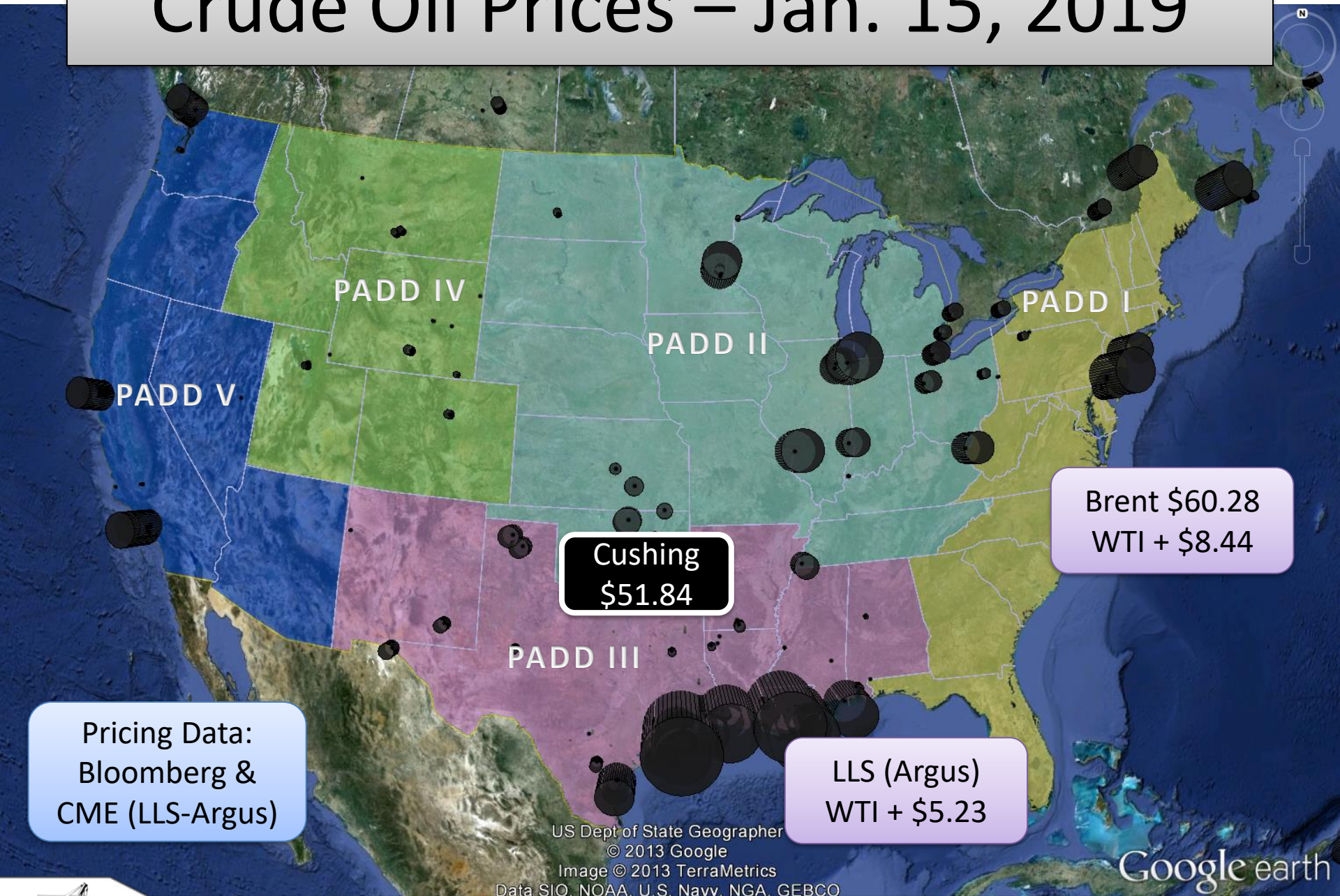


# Major Rail Lines and Refineries

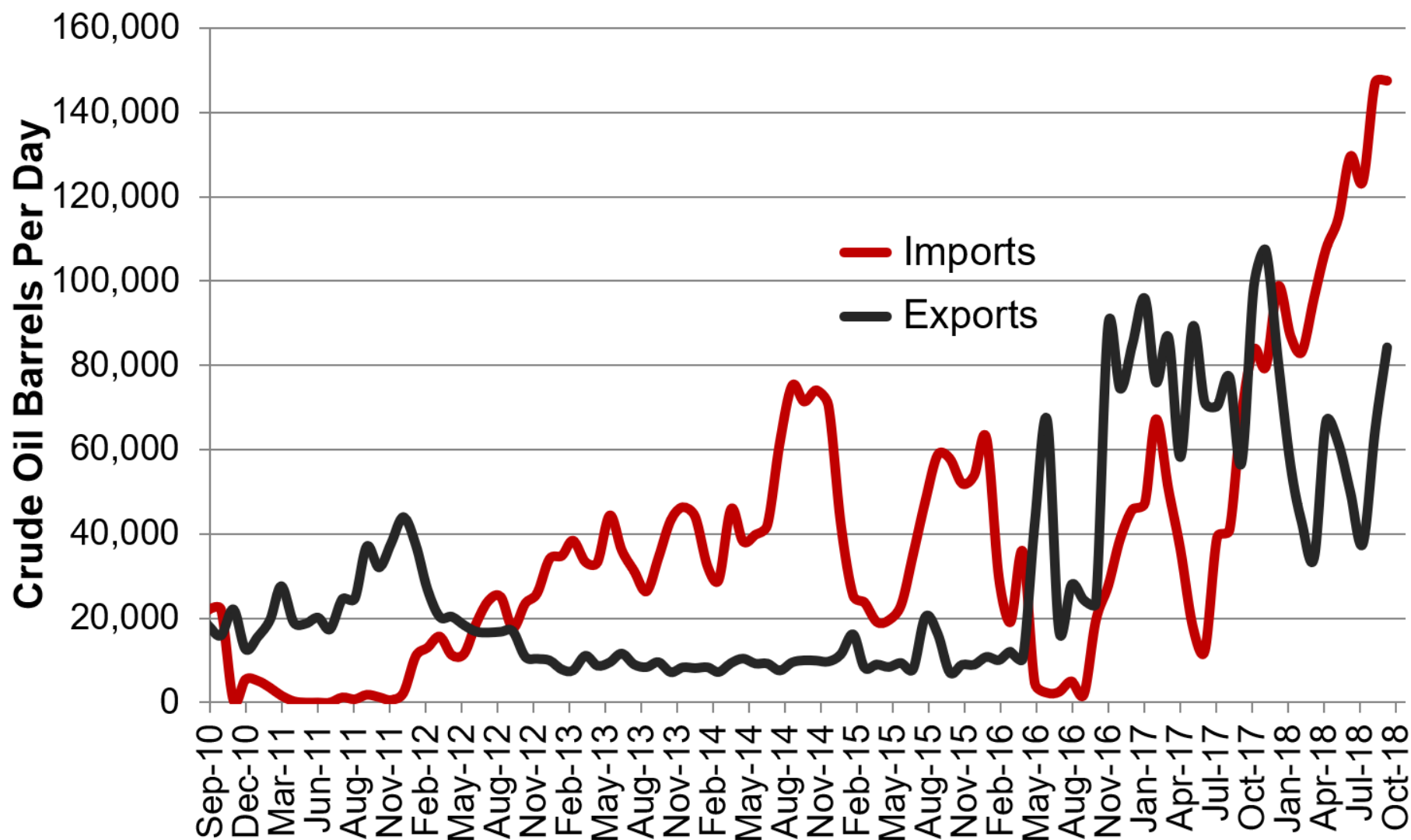




# Crude Oil Prices – Jan. 15, 2019



# Williston Basin Truck/Rail Imports and Exports with Canada



*Data for imports/exports chart is provided by the US International Trade Commission and represents traffic across US/Canada border in the Williston Basin area.*







CANADA'S OIL & NATURAL GAS PRODUCERS

For information contact: (403) 267-1141 / CAPP.ca

2017 CANADIAN CRUDE OIL PRODUCTION		
	000 m³/d	000 b/d
British Columbia	12	75
Alberta	534	3,363
Saskatchewan	77	486
Manitoba	6	39
Northwest Territories	0	0.3
Western Canada	630	3,963
Eastern Canada	36	224
Total Canada	665	4,187

COME BY CHANCE  
Steveston.....130



PIPELINE TOLLS FOR LIGHT OIL (US\$ per barrel)	
Edmonton to	
Burnaby (Trans Mountain)	1.95
Anacortes (Trans Mountain/Puget)	2.25
Sarnia (Enbridge)	4.80
Montreal (Enbridge)	6.10
Chicago (Enbridge)	4.15
Cushing (Enbridge)	5.35*-6.70
Wood River (Enbridge/Mustang/Capwood)	5.50
U.S. Gulf Coast (Enbridge/Seaway)	6.45*-9.55
Hardisty to	
Guemsey (Express/Platte)	3.30*
Wood River (Express/Platte)	5.05*
Wood River (Keystone)	4.50**~7.95
U.S. Gulf Coast (Enbridge/Seaway)	6.20*-8.65
U.S. Gulf Coast (Keystone/TC Gulf Coast)	9.70*-10.95

U.S. East Coast to Montreal (Portland/Montreal) 0.90

St. James to Wood River (Capline/Capwood) 1.35

PIPELINE TOLLS FOR HEAVY OIL (US\$ per barrel)	
Hardisty to:	
Chicago (Enbridge)	4.35
Cushing (Enbridge)	5.55*-6.90
Cushing (Keystone)	6.25**~10.10
Wood River (Enbridge/Mustang/Capwood)	6.15
Husky (Lime)	5.15**~9.05
Wood River (Express/Platte)	5.65*
U.S. Gulf Coast (Enbridge/Seaway)	7.30*-10.40
U.S. Gulf Coast (Keystone/TC Gulf Coast)	10.55*-12.45

Notes: 1) Assumed exchange rate = 0.79 US\$ / 1 C\$ (May 2018 average)  
2) Tolls rounded to nearest 5 cents  
3) Tolls in effect July 1, 2018

\* 15-year committed toll  
\*\* 20-year committed toll  
† First Open Season, 15-year, 50,000 b/d committed volumes  
‡ International Joint Toll

Crude Refining Capacities as at June 1, 2018  
(thousand barrels per day)

PADD Petroleum Administration for Defense District

Major Existing Crude Oil Pipelines Carrying Canadian Crude Oil

Selected Other Crude Oil Pipelines

MISSISSIPPI RIVER	
Marathon (Garyville)	556
ExxonMobil (Baton Rouge)	503
Phillips 66 (Bella Chasse)	247
Shell (Newark)	229
Shell (Convent)	223
Valero (Newark)	215
PBF (Chattanooga)	189
Valero (Memphis)	175
Duke (Wright Springs)	74
Placid (Port Allen)	60

LAKE CHARLES	
CITGO	425
Phillips 66	249
Calcasieu	75

HOUSTON/TEXAS CITY	
Marathon (Selaworth)	571
ExxonMobil (Baytown)	561
Shell (Dow Park)	312
Lynx/Biofuel	268
Valero (Q)	180-225
Petroleum (Pasadena)	110

SAN ANTONIO	
THREE RIVERS	21
Valero	89
CORPUS CHRISTI	300
FRT	300
Valero	275
OTGO	157

NEW MEXICO/TEXAS	
Andeavor (El Paso)	135
HollyFrontier (El Paso)	100
Duke (Big Spring)	73
Andeavor (Dallas)	25

LOS ANGELES	
Andeavor (Sanon/Wilmington)	380
Chenoweth (El Segundo)	260
PBF (Torrance)	155
Phillips 66 (Sanon/Wilmington)	139
Valero (Wilmington)	85
Duke (3-Paramount, LA, Bakersfield)	idled

SAN FRANCISCO	
Chenoweth (Richmond)	257
Andeavor (Martinez)	196
Shell (Martinez)	145
Valero (Berkeley)	145
Phillips 66 (Rocky & Santa Maria)	120

VANCOUVER	
Parkland Fuel (Burnaby)	55

VANCOUVER TO:	
Japan	- 4,300 miles
Taiwan	- 5,600 miles
S. Korea	- 4,600 miles
China	- 5,100 miles
San Francisco	- 800 miles
Los Angeles	- 1,100 miles

UPGRADERS BITUMEN CAPACITY	
Synco (Fort McMurray)	465
Suncor (Fort McMurray)	438
Shell (Sudbury)	240
CNRIL (Horizon)	200

EDMONTON	
Imperial (Stathena)	191
Suncor	142
Shell	100
NW Refining (Sturgeon County)	79
LLOYDMINSTER	
Husky asphalt plant	29
Husky Upgrader	82

REGINA	
Co-op Refinery-Upgrader	
Complex	130
MOOSE JAW	
Moose Jaw asphalt plant	19

NORTH DAKOTA	
Andeavor (Dickinson)	74
Andeavor (Dickinson)	20

KANSAS	
HollyFrontier (El Dorado)	115
CVR Refining (Coffeyville)	115
CIS (McPherson)	100

OKLAHOMA	
Phillips 66 (Ponca City)	203
HollyFrontier (Tulsa)	125
Valero (Ardmore)	96
CVR Refining (Wynnewood)	70

BORGER/MCKEE	
WRE (Borger)	146
McKee	146

TYLER	
Duke	75

SALT LAKE CITY	
Chenoweth	83
HollyFrontier	63
Big West Oil	35

DENVER	
Suncor (Commerce City)	96

BILLINGS	
CIS (Lewistown)	60
ExxonMobil	60
Phillips 66	60

WYOMING	
Stetco (Sindair)	85
HollyFrontier (Cheyenne)	52
Stetco (Cheyenne)	25
Pac Pacific (Newcastle)	18

GREAT FALLS	
Colmont	25

PRINCE GEORGE	
Husky	12

VANCOUVER	
Parkland Fuel (Burnaby)	55

PUGET SOUND	
BP (Cherry Point)	236
Shell (Anacortes)	137
Andeavor (Anacortes)	120
Phillips 66 (Ferndale)	105
TrailStone (Tacoma)	42

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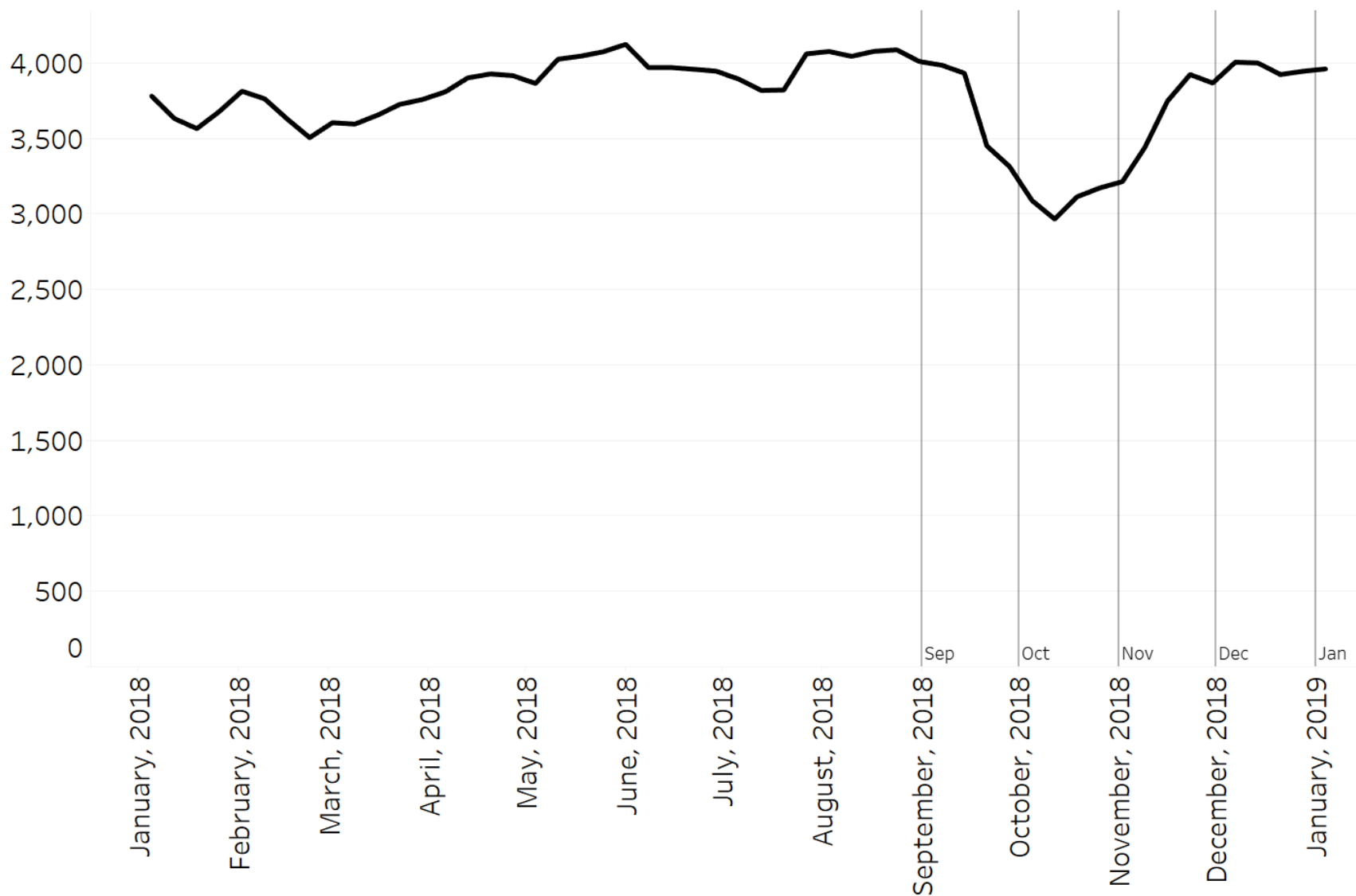
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||
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# PADD II Refinery Inputs

Midwest (PADD 2) Refiner Net Input of Crude Oil  
(Mbbbl/d) Mbbbl/d



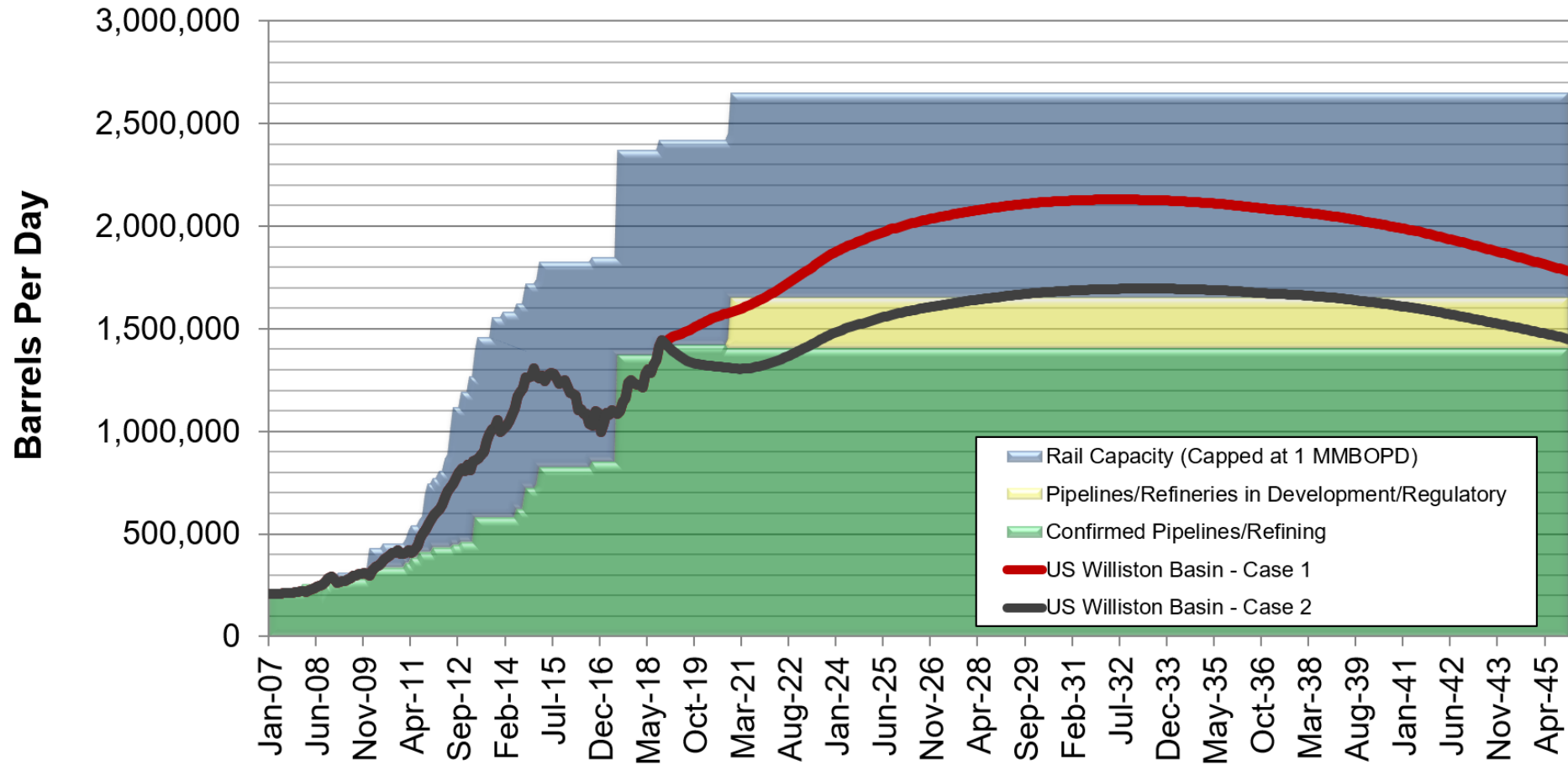
Data Source: EIA





# Williston Basin Oil Production & Export Capacity, BOPD

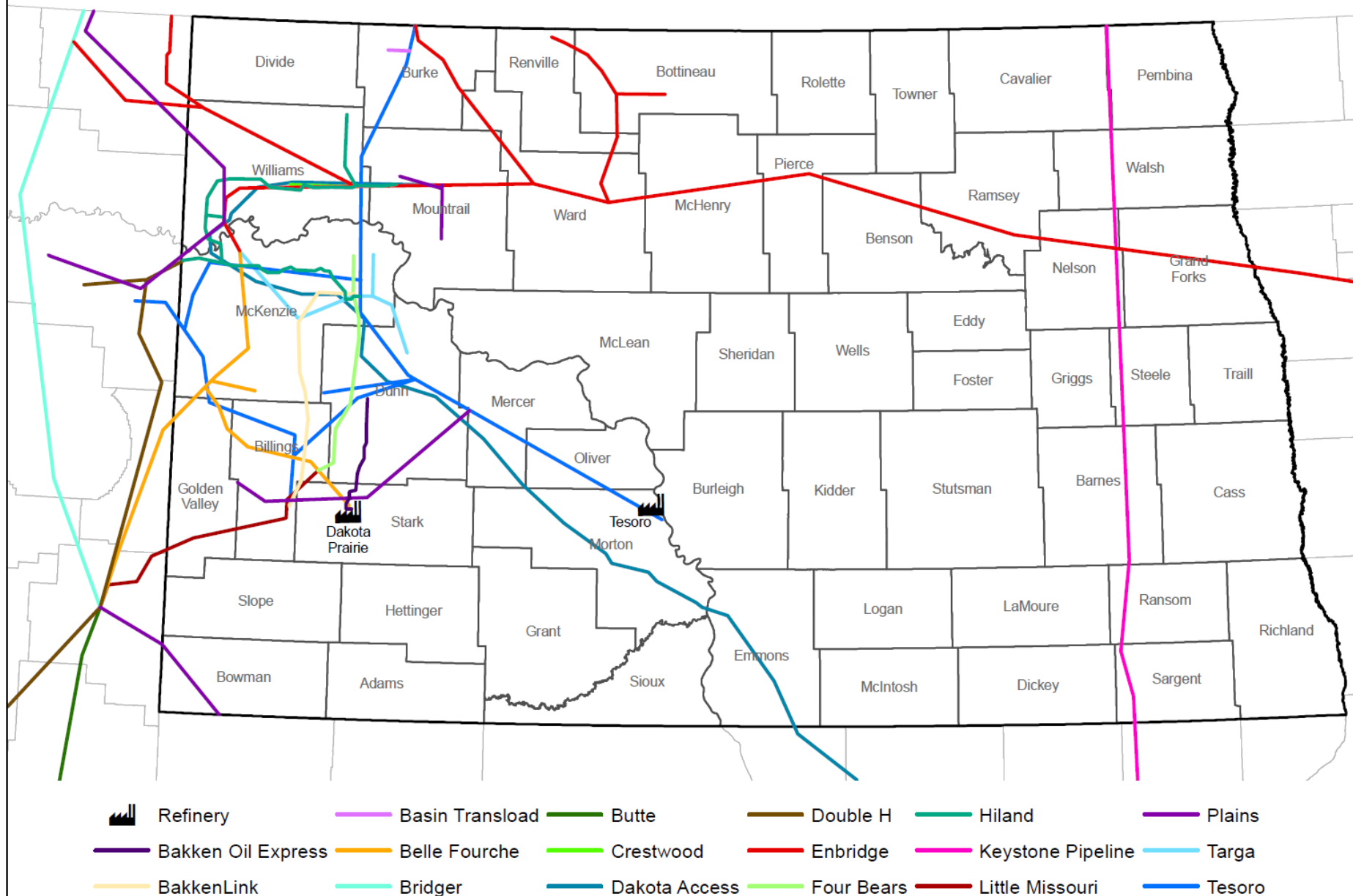
*Assumes Current Technology – Enhanced Oil Recovery Not Included*



*Production forecast is for visual demonstration purposes only and should not be considered accurate for any near or long term planning.*

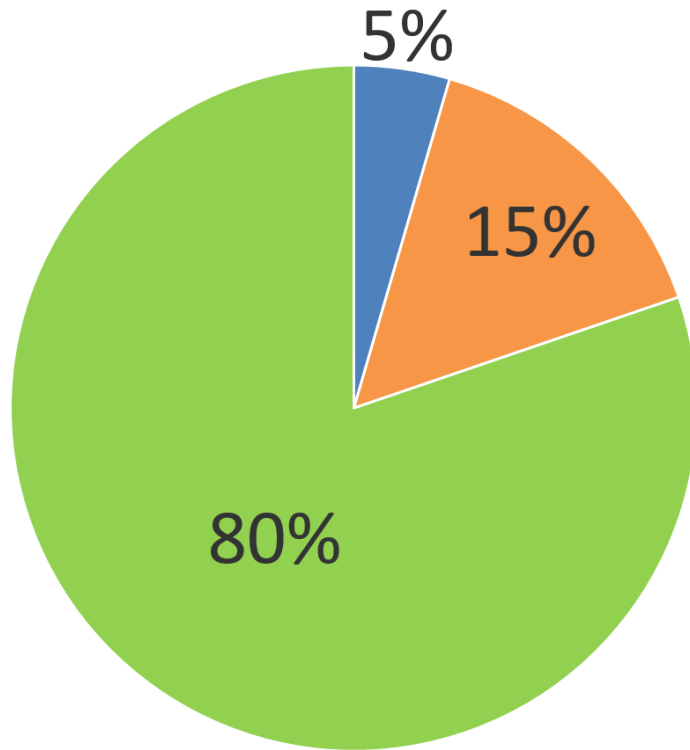


# North Dakota Crude Oil Pipelines



Disclaimer: Neither the State of North Dakota, nor any agency, officer, or employee of the State of North Dakota warrants the accuracy or reliability of this product and shall not be held responsible for any losses caused by reliance on this product. Portions of the information may be incorrect or out of date. Any person or entity that relies on any information obtained from this product does so at his or her own risk.

# Solving the Flaring Challenge



Statewide

**GREEN** – % of gas captured and sold  
**Blue** – % flared from zero sales wells  
**Orange** – % flared from wells with at least one mcf sold.

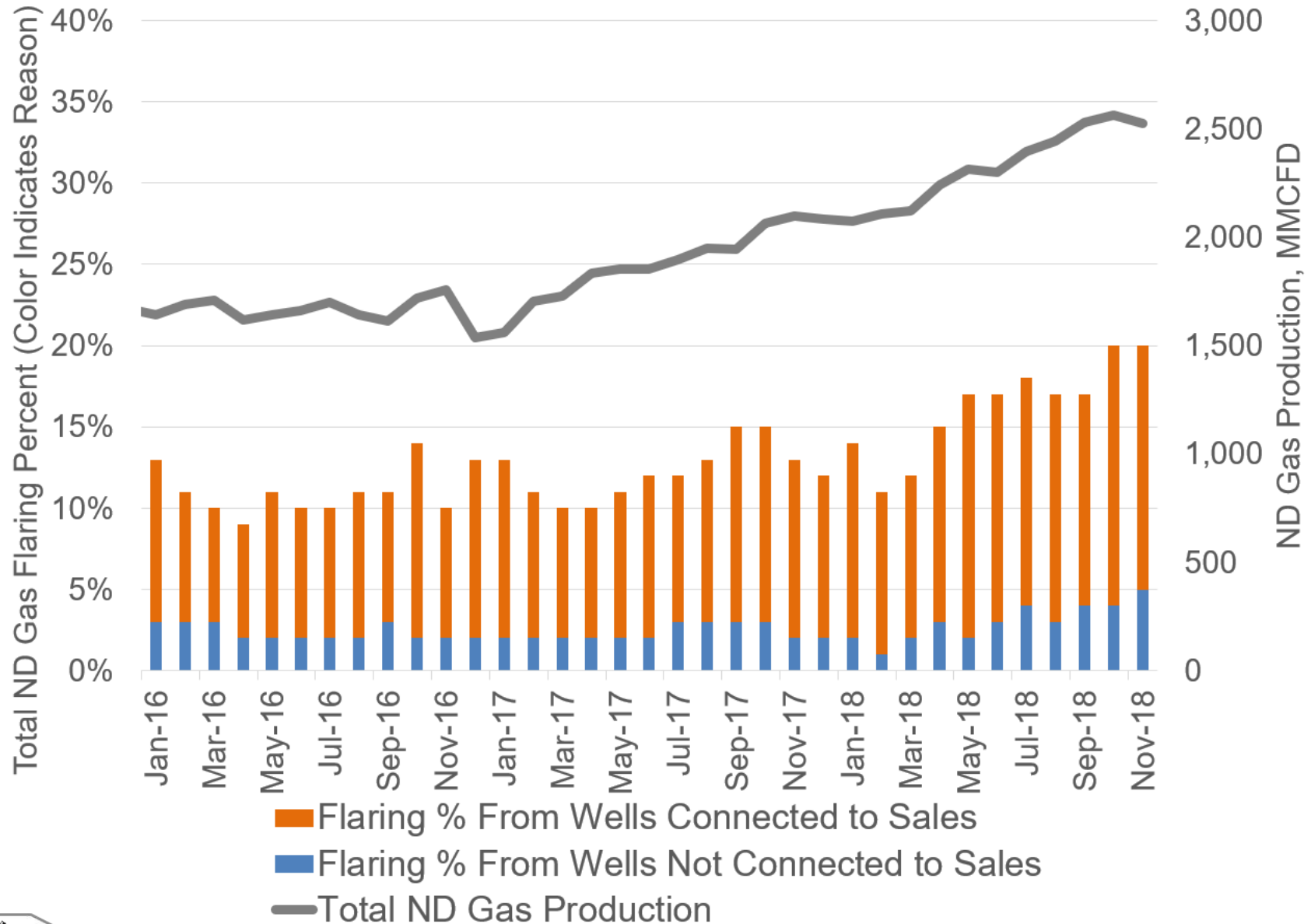
## Simple Terms

**Blue** – Lack of pipelines  
**Orange** – Challenges on existing infrastructure

November 2018 Data – Non-Confidential Wells

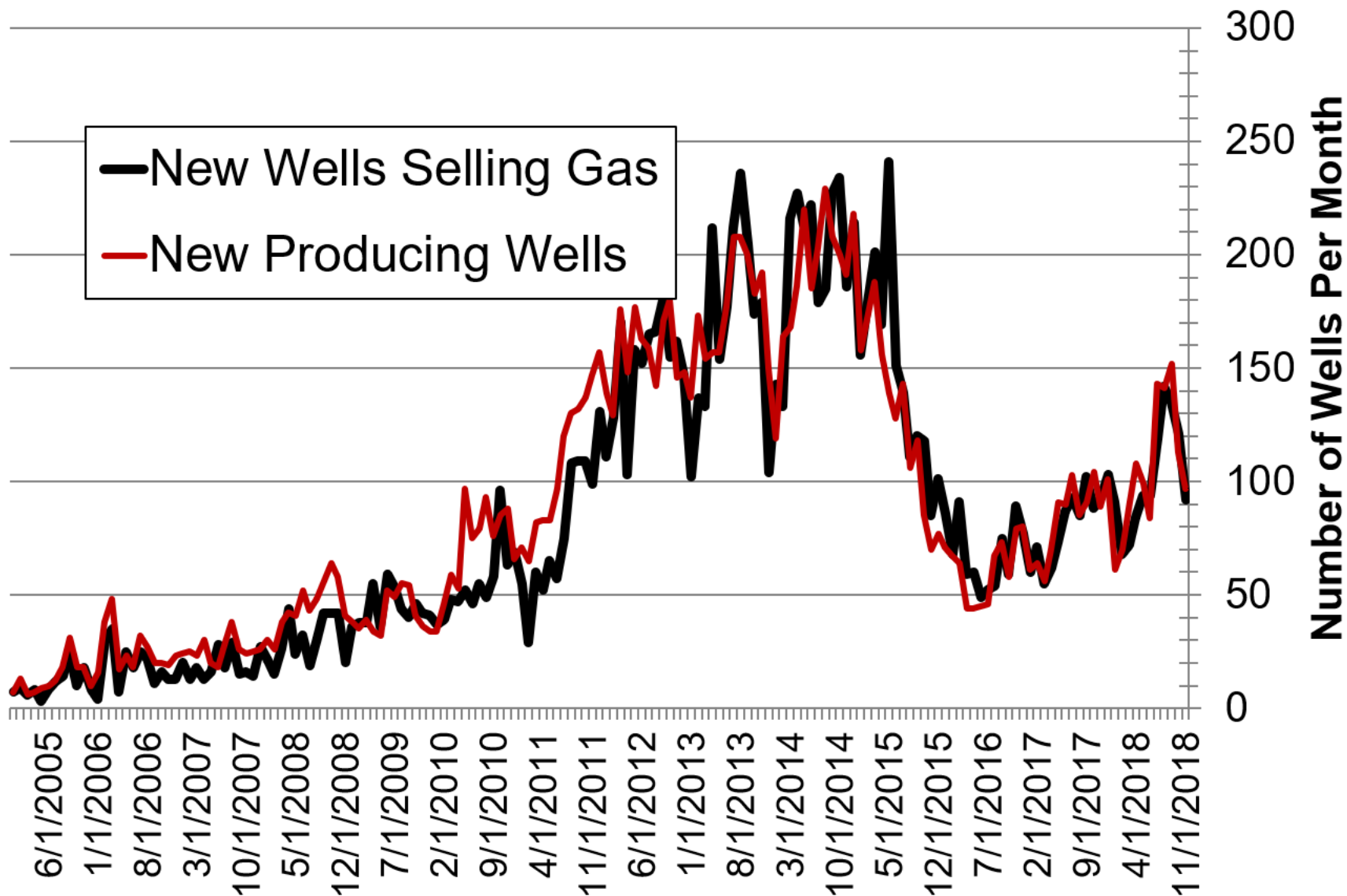


# Solving the Flaring Challenge

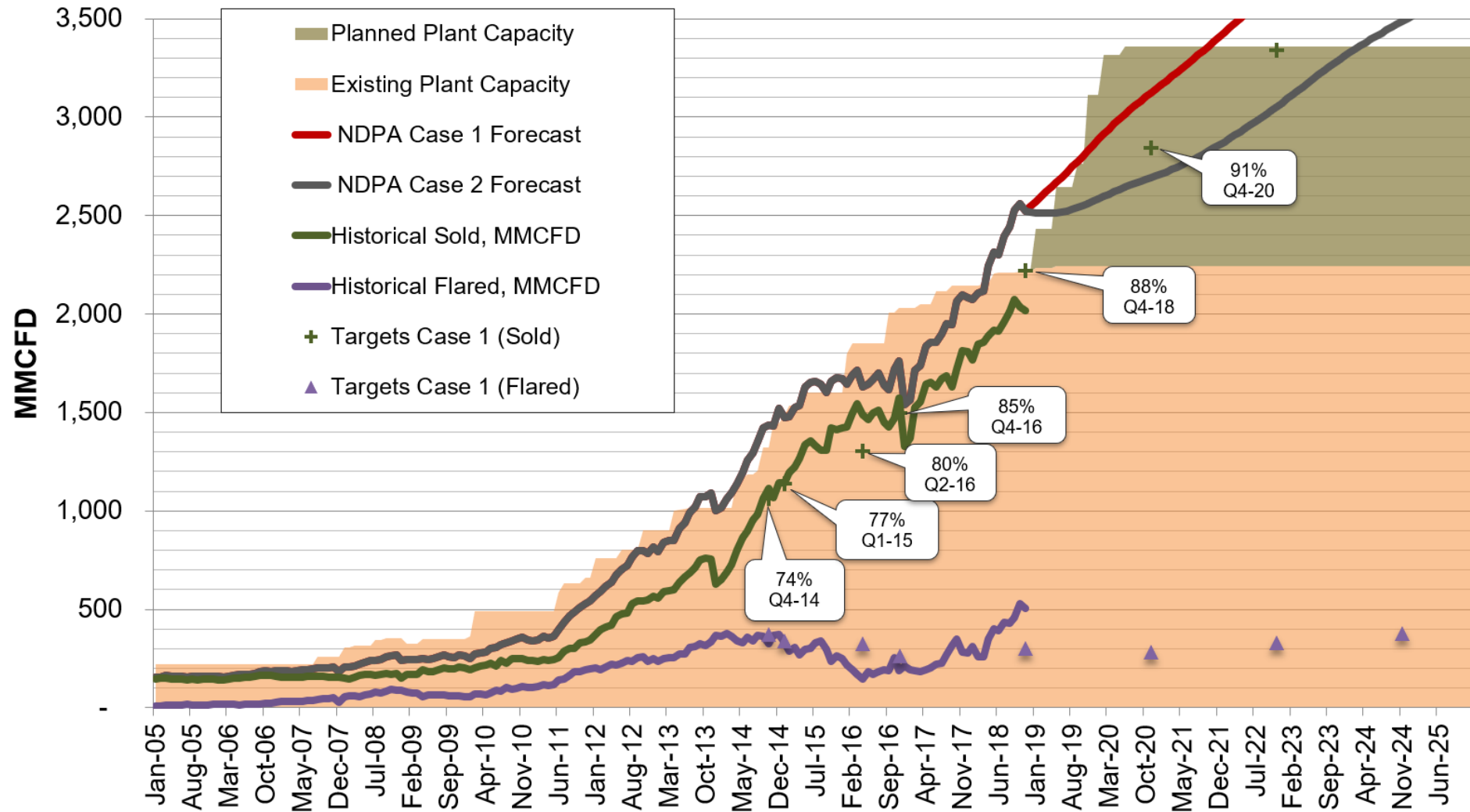




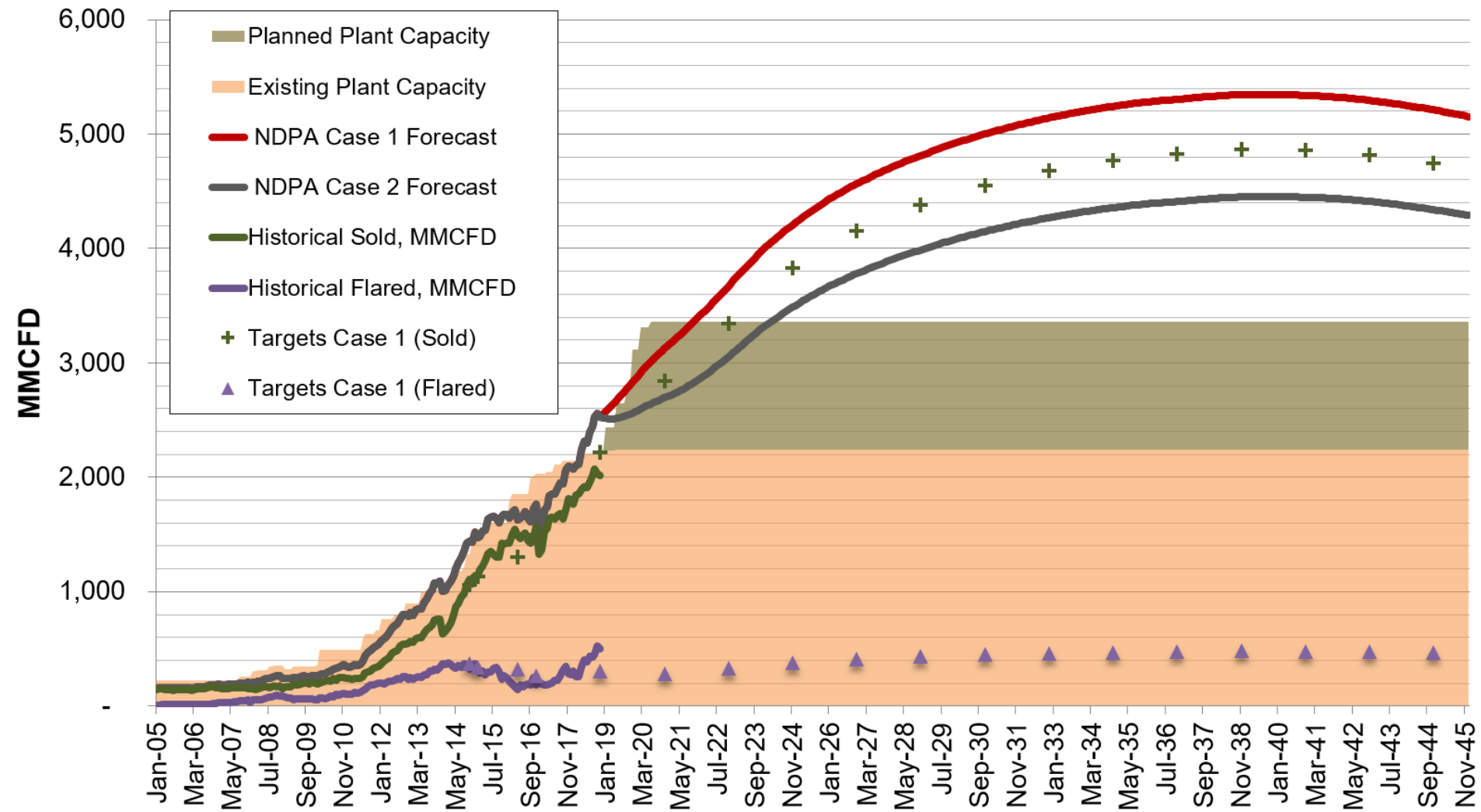
# Solving the Flaring Challenge



# Solving the Flaring Challenge



# Solving the Flaring Challenge



# Contact Information

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North Dakota Pipeline Authority

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Bismarck, ND 58505-0840

Phone: (701)220-6227

Fax: (701)328-2820

E-mail: [jjkringstad@ndpipelines.com](mailto:jjkringstad@ndpipelines.com)

Websites:

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

[www.northdakotapipelines.com](http://www.northdakotapipelines.com)



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

