ND Pipeline Authority
Energy Development & Transmission Committee

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July 29, 2015
From Jan-15 PPT

Peak Month Minimum
800 BOPD

Peak Month BOPD / Well Cost
800

After Tax IRR

7 MM
8 MM
9 MM

$45 Wellhead

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Watch List: Rigs & Uncompleted Wells

- 514 Uncompleted Non-Confidential Wells (7-27-2015)
- Estimated 375-425 are within the current drilling footprint*

*Confidential Wells Not Included
Understanding the Winter/Spring of 2014-15

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Production forecast is for visual demonstration purposes only and should not be considered accurate for any near or long term planning.
EIA Short Term Production Forecast Through August 2015 (July 2015 Report)

Bakken Region Oil production

Oil -22 thousand barrels/day month over month

thousand barrels/day


1,400 1,200 1,000 800 600 400 200 0
Estimated Williston Basin Oil Transportation

- Pipeline Export: 41%
- Refined: 1%
- Truck to Canadian Pipelines: 6%
- Estimated Rail: 52%

May 2015
Estimated Williston Basin Oil Transportation

- Estimated Rail
- Estimated Pipeline Export
- Refined
- Truck to Canadian Pipelines
- Brent - WTI Spread (EIA)
EIA PADD 2 Rail Transportation Data

Source: U.S. Energy Information Administration
Major Rail Lines and Refineries

EIA April 2015 Refiner Acquisition Cost

- PADD V: $56.53
- PADD IV: $46.25
- PADD II: $49.75
- PADD I: $54.30
- PADD III: $57.13

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Williston Basin Oil Production & Export Capacity, BOPD

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Williston Basin Crude Oil Transmission

As of July 2015: 827,000 BOPD Capacity
• Successful Open Season During the First Half of 2014
• 450,000 BOPD Capacity to Patoka, IL (30”)
• Expandable Up To 570,000 BOPD if Shipper Demand Exists
• Target In-service Date: Late 2016

Map Source: Energy Transfer Partners
North Dakota Pipeline Company LLC - formerly known as Enbridge Pipelines (North Dakota) LLC

- 225,000 BOPD ND Capacity to Clearbrook, MN (24”)
- 375,000 BOPD Clearbrook, MN to Superior, WI (30”)
- Target In-service Date: 2017
TransCanada: Upland Pipeline

- Successful Open Season During 2014
- Initial Capacity 220,000 BOPD (Expandable to 300,000 BOPD)
- Target In-service Date: 2020
- Energy East Project Capacity 1.1 MMBOPD
Forecasting Future Market Share is Difficult

Predicting how future oil production will move with any degree of confidence is difficult/impossible due to:

- Future oil production uncertainty
- Shifting market conditions
- Project commitments are unknown (pipe & rail)
- Regulatory uncertainty (pipe, rail, exports, etc)
North Dakota Oil Differential

Based on EIA Data
Solving the Flaring Challenge

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

May 2015 Data – Non-Confidential Wells

Statewide

83%

13%

4%
Solving the Flaring Challenge

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Graph showing ND Gas Flaring Percent and ND Gas Production from May 2013 to May 2015.

- Wells Not Connected
- Wells Connected
- ND Gas Production
Capturing the 4% Faster Well Connections

- New Wells Selling Gas
- New Producing Wells

Number of Wells Per Month
North Dakota Natural Gas Forecast, MMCFD

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EIA Short Term Production Forecast Through August 2015 (July 2015 Report)

Bakken Region
Natural gas production
million cubic feet/day

Gas -24
million cubic feet/day
month over month
Solving the Flaring Challenge

- Suspended Capacity
- Planned Plant Capacity
- Existing Plant Capacity
- NDPA Case 1 Forecast*
- NDPA Case 2 Forecast*
- Historical Sold, MMCFD
- Historical Flared, MMCFD
- Targets Case 1 (Sold)
- Targets Case 1 (Flared)

*Forecast values are subject to change as of Q4-20.
ND Natural Gas Transmission
Northern Border Gas Supply

Source
- Canada
- Other
- Rockies
- Williston Basin

Data: Northern Border/TransCanada
North Dakota NGL Production Forecast, BPD
Assumes 11 gpm and Case 1 Natural Gas Production

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