Energy Development and Transmission Committee
North Dakota Pipeline Authority
Justin J. Kringstad
July 8, 2014 - Bismarck, ND
Forecasting Williston Basin Oil Production, BOPD

Production forecast is for visual demonstration purposes only and should not be considered accurate for any near or long term planning.
Challenges*
1) Moving oil out of the Williston Basin
2) Moving oil within the Williston Basin

*Modified from Bridger and Belle Fourche Pipelines
Estimated Williston Basin Oil Transportation

- Estimated Pipeline Export: 30%
- Tesoro Refinery: 6%
- Truck to Canadian Pipelines: 1%
- Estimated Rail: 63%

April 2014
Estimated ND Rail Export Volumes

Barrels Per Day

Aug-08  Dec-08  Apr-09  Aug-09  Dec-09  Apr-10  Aug-10  Dec-10  Apr-11  Aug-11  Dec-11  Apr-12  Aug-12  Dec-12  Apr-13  Aug-13  Dec-13  Apr-14
Williston Basin Oil Production & Export Capacity, BOPD

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

JJ Kringstad - North Dakota Pipeline Authority
Confirmed Pipeline Projects

**Butte Loop**
- In-service Date: Q3 2014
- 110,000 BOPD
- Service to Guernsey, WY

**Hiland Double H**
- In-service Date: Q4 2014
- 50,000 BOPD (Expandable up to 100,000 BOPD)
- Service to Guernsey, WY

**Plains Bakken North**
- In-service Date: May 2014
- 40,000 BOPD (Expandable up to 70,000 BOPD)
- Movement North to Canadian Interconnect
Pipeline Projects In Business Development or Regulatory

North Dakota Pipeline Company Sandpiper
- 225,000 BOPD
- Route: ND to Clearbrook, MN, 24” Clearbrook to Superior, WI, 30”
- In-service Date: Q1 2016

Enterprise Pipeline
- 200,000-250,000 BOPD (Estimated ND Portion)
- Route: Stanley, ND to Cushing, OK 1,200 miles, 30”
- In-service Date: Q4 2016

TransCanada Keystone XL
- Up to 100,000 BOPD
- Timeline Uncertain

Energy Transfer Partners
- 320,000 BOPD
- Route: ND to Patoka, IL, 1,100 miles, 30”
- In-service Date: Q4 2016
North Dakota Crude Oil Pipelines

Challenges*

1) Moving oil out of the Williston Basin
2) Moving oil within the Williston Basin

*Modified from Bridger and Belle Fourche Pipelines
ND Oil Gathering

Red – Trucked
Blue – Pipeline

All ND Production

Sep 2013 Estimates
Some data incomplete or unavailable
Year-Over-Year Oil Gathering Changes*

*Best available estimate. Some data incomplete or missing

~250 Additional Truckloads Per Day
Estimated YOY Oil Gathering Change

Sep 2012 to Sep 2013

BOPD

BILLINGS  BOTTINEAU  BOWMAN  BURKE  DIVIDE  DUNN  GOLDEN VALLEY  MCKENZIE  MCLEAN  MOUNTAINE  RENVILLE  STARK  WARD  WILLIAMS
Estimated YOY Daily Truckload Change

Assumes - 225 bbls/truck

Sep 2012 to Sep 2013
US Refining Markets

EIA April 2014 Refiner Acquisition Cost

- PADD I: $106.08
- PADD II: $94.42
- PADD III: $100.74
- PADD IV: $89.83
- PADD V: $104.28
North Dakota Natural Gas Production

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

- NDPA Case 1 Forecast*
- NDPA Case 2 Forecast*
- Actual Flared, MCFD
- Target Case 1 Volume

74% Q4-14
77% Q1-15
85% Q1-16
90-95% Q4-20
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

71% Statewide

10% 19%

April 2014 Data – Non-Confidential Wells
Capturing the 10% Faster Well Connections

Number of Wells Per Month

- New Wells Selling Gas
- New Producing Wells

Graph showing the number of new wells selling gas and new producing wells from 2005 to 2014.
Major Gas Projects in Development

WBI Energy – Dakota Pipeline
- 400-500 MMCFD
- 375 Miles, 24”
- Proposed In-service: 2017

Northern Border – Bakken Header
- 400 MMCFD
- 55 Miles, 20”
- Proposed In-service: Late 2016
Contact Information

Justin J. Kringstad, Director
North Dakota Pipeline Authority

600 E. Boulevard Ave. Dept. 405
Bismarck, ND 58505-0840

Phone: (701)220-6227
Fax: (701)328-2820
E-mail: jjkringstad@ndpipelines.com

Websites:
www.pipeline.nd.gov
www.northdakotapipelines.com