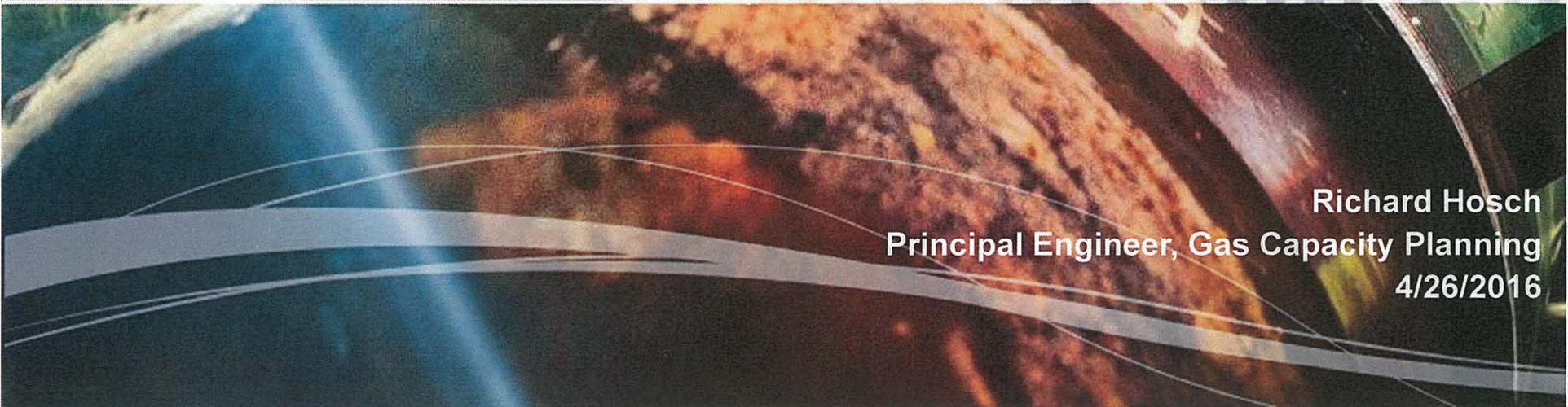




GAS INFRASTRUCTURE FOR NORTH DAKOTA



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4/26/2016

EXECUTIVE SUMMARY

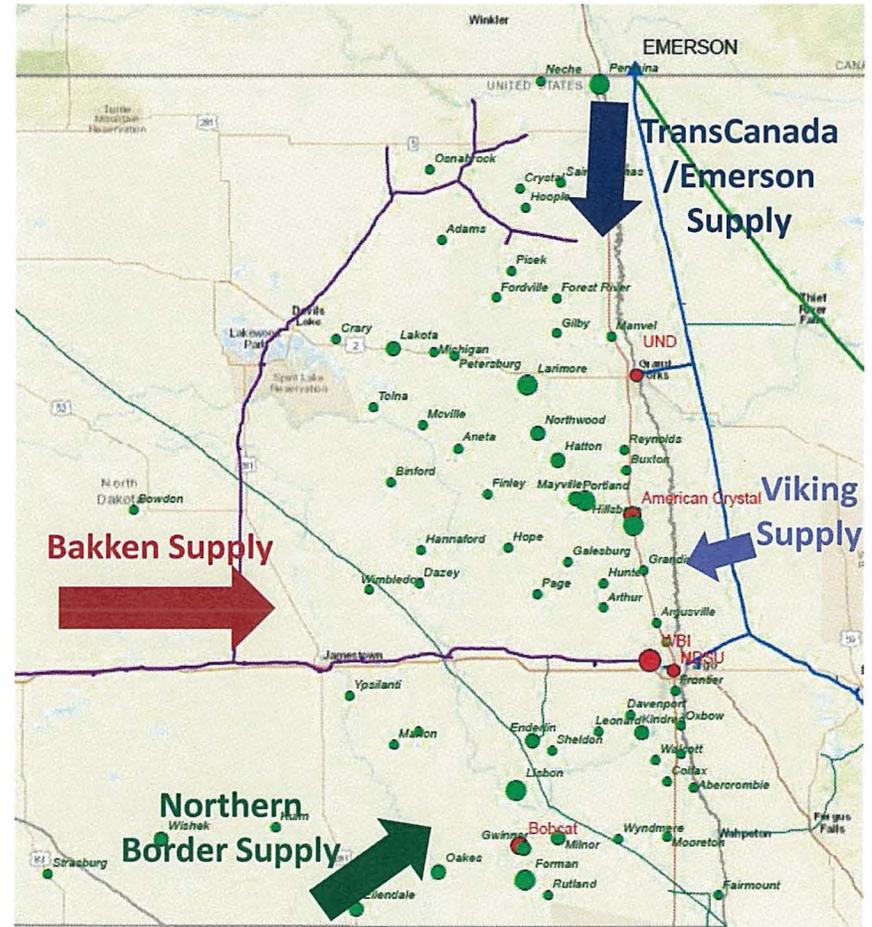
- Xcel Energy has evaluated multiple build-out strategies to provide gas service
 - Supply from Bakken, Viking and Northern Border Pipelines
 - Opportunities may exist to leverage existing gas systems in Fargo and Grand Forks to serve universities, organic growth, commercial and industrial customers
- Pipeline project economics are challenged
- Gas infrastructure investments are not sufficiently off-set due to small customer base
 - Potential number of new customers is low – average size of new towns is approximately 260 customers
 - Distance between unserved communities is large while population density remains low
 - Large commercial and industrial loads help anchor backbone pipelines



POTENTIAL PIPELINE ROUTES



- North Source Overview
 - Build pipeline from TransCanada and Emerson Natural Gas Hub
 - Connects 19 Unserved Communities
- Southern Source Overview:
 - Build pipeline from Northern Border
 - Connects 15 Unserved Communities
- Middle Source Overview:
 - Build pipeline from Viking Gas in Minnesota
 - Connects 22 Unserved Communities
- Three Additional Routes From Bakken Fields
 - Build pipeline from the Bakken Gas Fields
 - Connects 22+ Unserved Communities



CONCLUSIONS AND NEXT STEPS



- Economics are challenged, however implementation of some financial programs may help close the gap
- Uncertain market adoption rate provides additional pressure on project economics
- Xcel Energy would like to continue to work with the state of North Dakota to discuss and evaluate the viability of financial programs
- Future market conditions could potentially assist customer economics
 - Propane commodity costs
 - Increased population density
 - Large commercial and industrial customers



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