North Dakota Legislative Council

Prepared for the Energy Development and Transmission Committee
LC# 23.9038.01000
August 2021

NATURAL GAS AND PROPANE INFRASTRUCTURE DEVELOPMENT - BACKGROUND MEMORANDUM

STUDY OVERVIEW

Section 1 of House Bill No. 1159 (2021) directs the Legislative Management to study natural gas and propane infrastructure development in the state. The study must include consideration of the current infrastructure available for natural gas and propane, challenges related to the development of natural gas and propane infrastructure, community needs for natural gas and propane infrastructure, and a cost-benefit analysis of any state incentives to encourage the development of natural gas and propane infrastructure.

PRIOR STUDIES RELATED TO NATURAL GAS AND PROPANE

During the 2019-20 interim, the Energy Development and Transmission Committee received information regarding natural gas developments, capture, usage, and services as a part of its study of a comprehensive energy policy for the state and the development of each facet of the energy industry. The North Bakken Expansion Project would provide 200 million cubic feet of natural gas transportation capacity per day. In addition, the project would provide approximately 67 miles of new pipeline construction, compression, and ancillary facilities to transport natural gas from core Bakken production areas in western North Dakota to an interconnection point with Northern Border Pipeline. The project is expected to be completed in 2021, cost $220 million, be designed using 20-inch diameter pipeline, and provide residue gas service from north of Lake Sakakawea to Northern Border Pipeline in McKenzie County. Natural gas produced from the Bakken and Three Forks Formations is very high in natural gas liquids such as ethane, propane, and butane. It is expected natural gas liquid production will exceed pipeline capacity again in 2021 until further system expansions take place or a new market option is developed.

The committee was informed the Alliance Pipeline is the shortest connection for gas capacity, but it is very heavy in natural gas liquids. The Alliance Pipeline was built to take those liquids to the Aux Sable processing facility near Chicago, Illinois, to remove those liquids, and provide the 1,050 British thermal unit (Btu) natural gas to the existing pipeline market. Because the line was built for the Aux Sable processing plant, any entity that taps the line before the liquids reach the Aux Sable processing facility has to pay an Aux Sable liquids charge due to the reduction of liquids Aux Sable receives in Illinois. The liquids charge adds to the total cost of natural gas for unserved or underserved communities in North Dakota.

Montana-Dakota Utilities informed the committee there are 91 communities served with natural gas in North Dakota, totaling approximately 150,000 customers and 366 communities unserved with natural gas totaling approximately 46,000 homes.

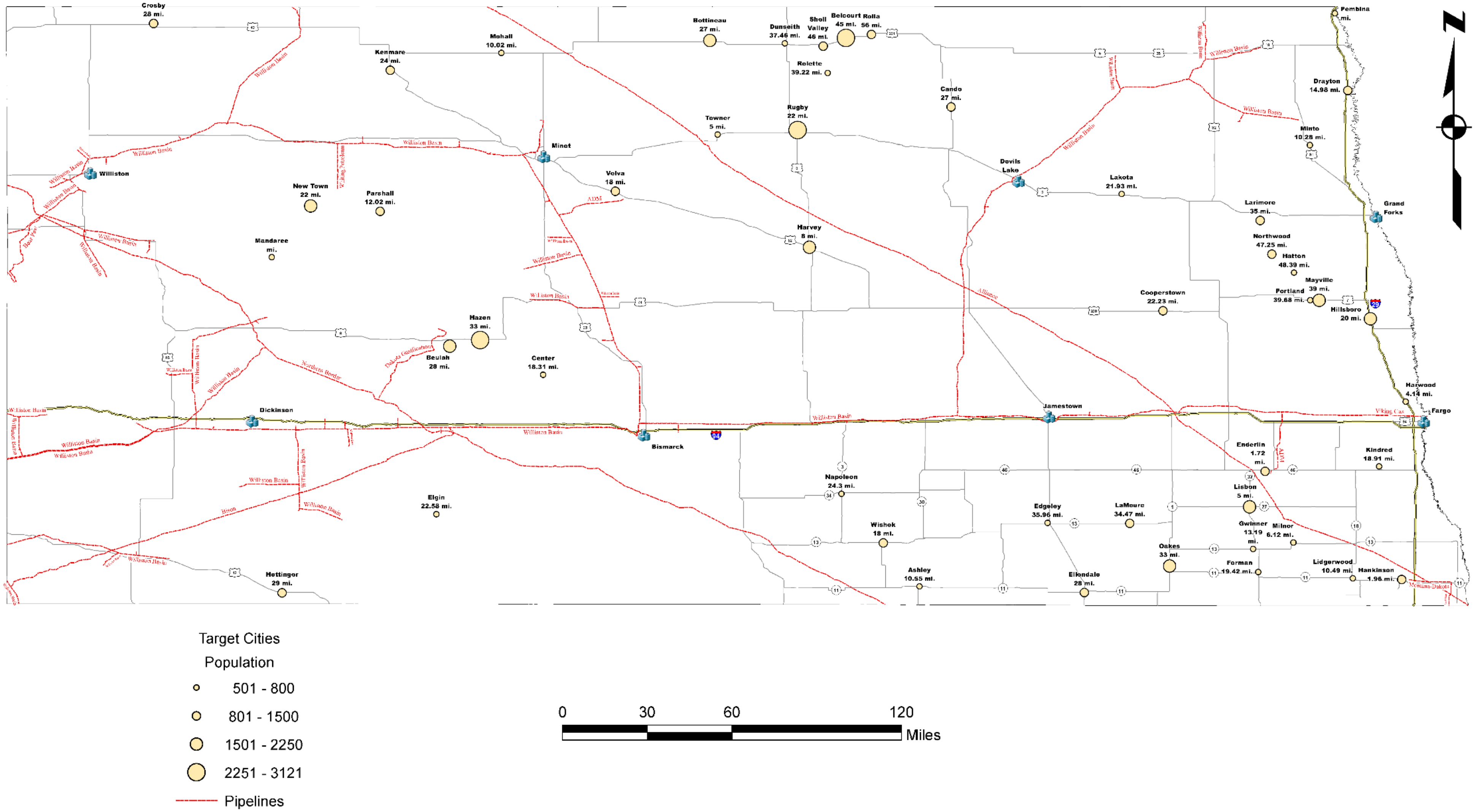
INFRASTRUCTURE COST RANGES

Infrastructure	Cost Ranges
HDPE lateral pipeline	$400 - $500k per mile
Steel lateral pipeline	$750k - $1 million per mile
Pipeline interconnections	$300k - $3.5 million
Town border stations	$150k - $500k
Distribution systems	$750k - $2 million

Source: Montana-Dakota Utilities Co.

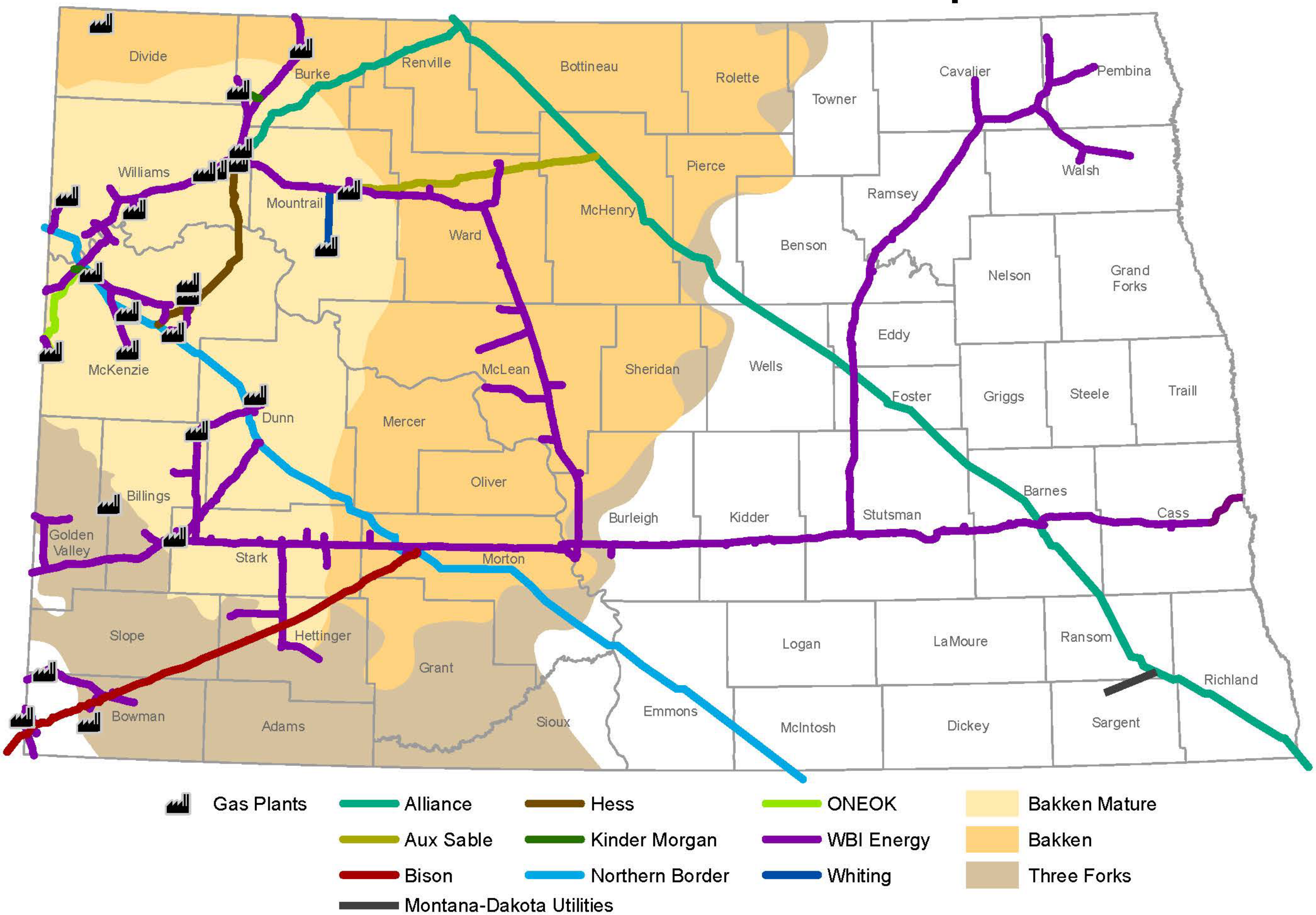
NORTH DAKOTA NATURAL GAS SERVICES AND INFRASTRUCTURE

ND Towns Without Gas Services



Source: Montana-Dakota Utilities Co.

North Dakota Natural Gas Pipelines



Updated: February 2019

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Source: North Dakota Pipeline Authority.

STATE TAX INCENTIVES FOR GAS

Extracted oil and natural gas are subject to the oil and gas gross production tax and the oil extraction tax. Materials used in extraction of the oil and gas may be subject to sales or use taxes. Pipelines and other infrastructure used to transport the oil and gas may be subject to property taxes.

Natural Gas Energy Sources

Generators of electricity from sources other than coal or wind, with a generation capacity of 100 kilowatts or more, are subject to payments in lieu of taxes pursuant to North Dakota Century Code Section 57-33.2-04. Payments in lieu of taxes consist of a tax of 50 cents per kilowatt times the rated capacity of the generation unit, plus a tax of 1 mill per kilowatt-hour of electricity generated by the production unit during the taxable period.

Oil and Gas Gross Production Tax

Pursuant to Chapter 57-51, a gross production tax of 5 percent of the gross value at the well is levied upon all oil produced in the state except a royalty interest in oil produced from an interest held by an organized Indian tribe or produced from a state, federal, or municipal holding. A gross production tax is levied upon all gas produced in the state and is calculated by multiplying taxable production by an annually adjusted flat rate per thousand cubic feet.

Exemptions from the gross production tax include:

- Gas used on the lease for production purposes and any royalty interest from gas produced from a state, federal, or municipal holding, or from an interest held by an organized Indian tribe.
- Shallow gas produced during the first 24 months of production following the date gas was first sold from a shallow gas well and gas produced from a shallow gas well during testing, but prior to well completion, or during connection to a pipeline pursuant to Section 57-51-02.4.
- Gas burned at the well site to power an electrical generator that consumes at least 75 percent of the gas from the well pursuant to Section 57-51-02.5.
- Gas collected at the well site by a system that intakes at least 75 percent of the gas and natural gas liquids volume from the well for beneficial consumption pursuant to Section 57-51-02.6.

Other Oil and Gas Tax Incentives

Additional state tax incentives pertaining to oil and gas include:

- A sales and use tax exemption for materials used to reduce emissions, increase efficiency, or enhance the reliability of equipment at a new or existing oil refinery or gas processing plant pursuant to Sections 57-39.2-04.2 and 57-40.2-04.2.
- A sales and use tax exemption for gross receipts from sales of carbon dioxide used for enhanced recovery of oil or natural gas pursuant to Sections 57-39.2-04 and 57-40.2-04.
- A sales tax exemption for gross receipts from sales of natural gas or sales of fuels used for heating purposes pursuant to Section 57-39.2-04.
- A sales and use tax exemption for materials used to construct or expand a system used to compress, process, gather, collect, or refine gas recovered from an oil or gas well in this state or used to expand or build a gas processing facility in this state pursuant to Sections 57-39.2-04.5 and 57-40.2-03.3.
- A sales and use tax exemption for materials used to construct or expand a processing facility to produce liquefied natural gas pursuant to Sections 57-39.2-04.10 and 57-40.2-03.3.
- A sales tax exemption for materials used to construct or expand a system used to compress, gather, collect, store, transport, or inject carbon dioxide for use in enhanced recovery of oil or natural gas pursuant to Sections 57-39.2-04.14 and 57-40.2-03.3.

- A property tax exemption for equipment, machinery, tools, materials, and property necessary, and being used at the site of a producing well, for the production of oil and gas pursuant to Section 57-51-04. The property tax exemption does not apply expressly to drilling rigs, gasoline extraction or absorption plants, water systems, fuel systems, hospitals, residences, and various other buildings.
- A property tax exemption for any equipment directly used for enhanced recovery of oil or natural gas pursuant to Section 57-60-06. The property tax exemption does not apply to the land on which the equipment is located.
- A property tax exemption for property, exclusive of land, and necessary associated equipment for the transportation or storage of carbon dioxide for use in enhanced recovery of oil or natural gas pursuant to Section 57-06-17.1. The property tax exemption applies for the first 10 full taxable years following the initial operation of the pipeline but does not apply to the land on which the property and associated equipment is located.

SUGGESTED STUDY APPROACH

In conducting the study, the committee may desire to receive testimony from the North Dakota Pipeline Authority, Tax Commissioner, Department of Mineral Resources, the North Dakota League of Cities, the North Dakota Association of Counties, and utility companies. The committee may decide to focus the testimony on whether:

- There is an unmet need for natural gas in any North Dakota communities;
- The need or demand for natural gas is expected to increase;
- The need for natural gas in unserved or underserved communities is related to a lack of natural gas and propane infrastructure in those communities; and
- There are any state incentives that could encourage the development and expansion of natural gas and propane infrastructure in the state.