



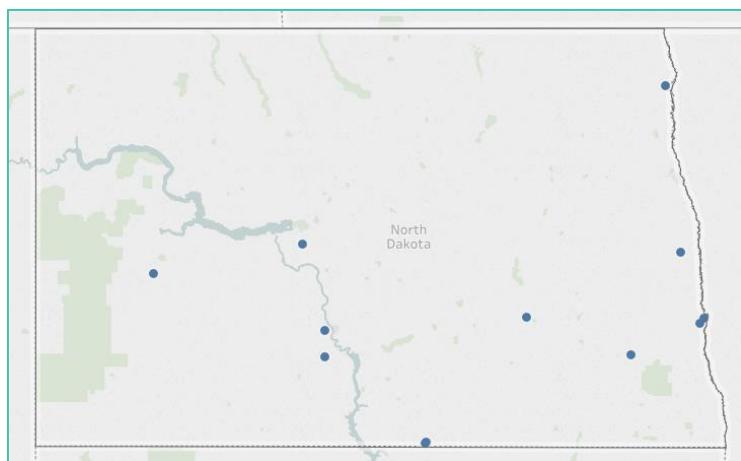
## Combined Heat and Power (CHP) Snapshots – North Dakota

### Upper-West CHP Technical Assistance Partnership (TAP) Quick Facts

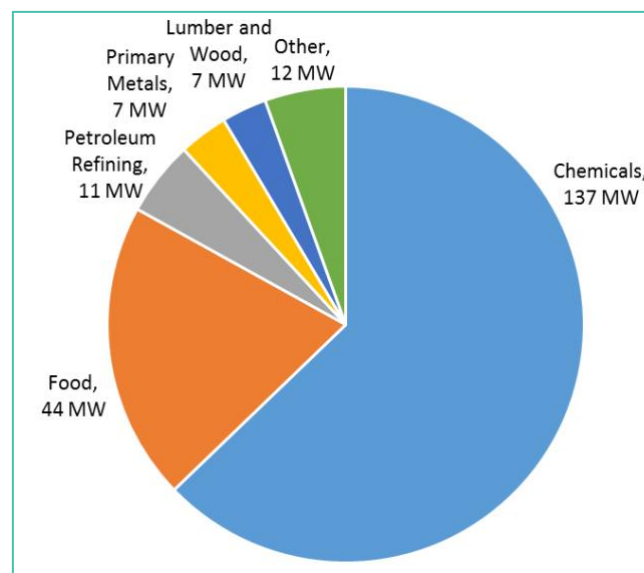
- The Upper-West CHP TAP works with regional partners to promote and assist in transforming the market for CHP, waste heat to power, and district energy technologies throughout the upper western part of the U.S.
- The Upper-West CHP TAP serves the states of Colorado, Montana, **North Dakota**, South Dakota, Utah, and Wyoming.

State	Number of Current Sites	Total CHP Capacity (MW) Deployment	Number of Potential Sites	Total CHP Technical Potential (MW)	CHP TAP Activities (2014-2017)		
					Technical Assistance	End-User Education	Policymaker Education
Colorado	26	508	4,544	1,718	19	7	19
Montana	16	73	942	377	31	6	3
<b>North Dakota</b>	<b>12</b>	<b>165</b>	<b>890</b>	<b>445</b>	<b>1</b>	<b>4</b>	<b>0</b>
South Dakota	5	24	969	378	0	4	0
Utah	22	289	2,676	1,119	15	7	17
Wyoming	11	170	609	847	2	4	6
Total	92	1,229	10,630	4,884	68	32	45

### North Dakota CHP Installations



### CHP Technical Potential by Industrial Sector





## North Dakota CHP Project Snapshots

- **Blue Flint Ethanol Plant (Underwood, ND)** – Instead of purchasing fuel to create another fuel, the Midwest AgEnergy Group built the Blue Flint Ethanol facility, which produces 65 million gallons of ethanol each year, next door to Great River Energy's Coal Creek Station. The ethanol facility uses the waste steam from the coal plant to provide process steam and heat and to dry distiller's grains; making Blue Flint one of the most energy-efficient biorefineries in the country.
- **Northern Border Pipeline (St. Anthony, ND)** – In 2006, Northern Border Pipeline (NBP) installed a waste heat to power (WHP) system at their #7 compressor station in order to use the waste heat produced onsite. The waste heat is converted to 5.5 MW of power, which is then supplied to the electric grid. The project generates revenue for NBP through electric sales royalties and also provides critical voltage support to the electric grid. Given the success of the #7 compressor station, many other NBP compressor stations are pursuing WHP at their locations.

## Testimonials from CHP TAP Beneficiaries in the Upper-West

"With [the Upper-West CHP TAP's] support, we have done extensive design analysis for implementing a 5 MW scale CHP system at one of our universities and have completed feasibility screenings at state and private hospitals....The CHP TAP has provided educational and technical support that has enabled our office to analyze CHP projects. Without the screening tools and support from the CHP TAP we most likely would not have considered CHP as an alternative to standard HVAC systems for many of our facilities. On-going support provided by [the TAP] is a high value resource. We also appreciate their continued effort to upgrade CHP tools to include additional product vendors."

*David Lemieux, Senior Energy Engineer  
Montana State Energy Office  
Helena, MT*

**The Upper-West CHP TAP provided early stage screenings, technical assistance, and/or studies to determine project feasibility for the following:**

"Cogen is a good way to go for a large facility with a heat load like ours. We've hardly ever been without power. If you want high reliability, especially in outlying areas, cogen can be a good alternative or supplement to the utility."

*Jerry Giles, Director of Village Operations  
Snowbird Ski and Summer Resort  
Salt Lake City, UT*

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<sup>1</sup> U.S. DOE, December 2016, "Combined Heat and Power Installation Database" (<https://doe.icfwebservices.com/chpdb/>).

<sup>2</sup> U.S. DOE, March 2016, "Combined Heat and Power (CHP) Technical Potential in the United States" (<https://energy.gov/eere/amo/downloads/new-release-us-doe-analysis-combined-heat-and-power-chp-technical-potential>).