

To: Karen Bulman, Project Manager, City of Rapid City Growth Management Department	
From: Jody Page, Project Manager, HDR <i>JMP</i>	Project: Basin Electric Intertie Noise and Vibration Study and Land Use Assessment
CC: Monica Heller, Marcia Elkins – RC Growth Management Vivian Pappel, Tim Casey – HDR Dan Jennissen – Pennington County Planning & Zoning	
Date: 22 October 2007	Job No: 52575

RE: INVESTIGATION ON ZONING AROUND OTHER INTERTIE FACILITIES

PROJECT BACKGROUND

In accordance with the aforementioned project and report submitted in October 2007, HDR has been requested to investigate and identify mitigation solutions that have been used at other facilities similar to the Basin Electric Intertie system near Rapid City and to provide information regarding the distance between other communities or developments and other systems.

There were seven locations identified for Direct Current Intertie Conversion Facilities throughout the Midwest that connect the Eastern and Western power grids of the United States. In addition a Geothermal facility in Beulah, North Dakota that was mentioned in discussions with the public was also investigated for this report. Below is a list of the communities near those facilities that were investigated for this report.

Community	Population (2000 Census)	Year Intertie was Constructed	Approximate Distance To City
Rapid City, South Dakota	59,600	2003	3 miles
Clovis, New Mexico	32,700	1985	> 10 miles
Scottsbluff, Nebraska (Stegall)	14,732	1977	> 10 miles
Artesia, New Mexico	10,700	1983	> 10 miles
Lamar, Colorado	8,900	2005	> 10 miles
Miles City, Montana	8,500	1985	1 mile
Sydney, Nebraska	6,300	1988	1/2 mile
Beulah, North Dakota	3,200	1984	3 miles

HDR gathered data on each of the facilities using the methods of internet research, GIS mapping, and telephone calls to power company and community planning officials. Below is a summary of the information found. Also, attached in Appendix A, are notes from the telephone conversations concerning the project along with a compilation of all information found during our research.

As shown in the table and summaries, four of the investigated facilities were greater than 10 miles from the nearest community. Of the three facilities researched that were within 3 miles of a community, the populations of those cities were all below 9,000 residents and had limited information on zoning and land use planning.

SUMMARY OF FINDINGS

Clovis, New Mexico

The Blackwater DC Tie Station near Clovis, New Mexico began operating in 1985. This is a back-to-back 200 MW converter station owned and operated by the Public Service Company of New Mexico. The station is out of town a good distance and is surrounded by farmland. There is no zoning around the facility as it is out of the city limits. There have been no noise or vibration issues noted to date.

Miles City, Montana

The Miles City Converter Station near Miles City, Montana began operating in July of 1985. This is a back-to-back 200 MW converter station owned and operated by Western Area Power Administration and Basin Electric Power Cooperative. The Station is approximately 1 mile out of town and separated by the interstate. There is no specific land zoning as the site is out of the city limits and there have been no noise or vibration issues noted to date.

Sydney, Nebraska

The Virginia Smith DC Tie Station near Sydney, Nebraska began operating in March of 1988. This is a back-to-back 200 MW converter station owned and operated by Western Area Power Administration. The station is approximately ½ mile north of town and is surrounded by farmland. There is no zoning around the intertie because it is out of the city limits and there have been no noise or vibration issues noted to date.

Stegall, Nebraska

The David A. Hamil DC Tie Station near Stegall, Nebraska began operating in 1977. Stegall, Nebraska is a small community approximately 12 miles west of Scottsbluff. This is a back-to-back 100 MW converter station owned by Tri-State Generation and Transmission Cooperative and operated by Western Area Power Administration. This was the first DC Tie to connect the eastern and western power grids in the United States. The station is approximately 10 miles out of town and the nearest residence is ½ mile away. There is no zoning around the intertie because it is out of the city limits and there have been no noise or vibration issues noted to date.

Artesia, New Mexico

The Eddy County DC Tie Station near Artesia, NM began operating in 1983. This is a back-to-back 200 MW converter station owned and operated by the Public Service Company of New Mexico and the Texas-New Mexico Power Company. The station is out of town a good distance and is surrounded by farmland. There is no zoning around the facility as it is out of the city limits and there have been no noise or vibration issues noted to date.

Lamar, Colorado

The Lamar DC Tie Station near Lamar, Colorado began operating in 2005. This is a back-to-back 200 MW converter station owned and operated by Xcel Energy.

Beulah, North Dakota

The Antelope Valley Station near Beulah, North Dakota is not a DC Tie Station. It is a thermal generating facility that has been operated by Basin Electric Power Cooperative since July of 1984 and contains two 450 MW thermal generating units. The facility is approximately three miles southwest of town and surrounded mainly by farmland. There is no zoning around the facility as it is out of the city limits and there have been no noise or vibration issues to date.