

Siting Water Pipelines

The following length of water pipeline would be needed according to generation site alternative:

Selby: Approximately 13 miles of water pipeline

Selby East: Approximately 26 miles of water pipeline

Blunt: Between 26 and 29 miles of water pipeline

Onida: Approximately 24 miles of water pipeline

During March 19–20, 2007, a team evaluated the corridors identified in the Corridor Phase I study. The team analyzed the width of the pipeline right of way in relation to significant criteria (agriculture, distance to residence, wetlands, etc.). The water pipeline alternatives are located along existing access roads to minimize impacts to agricultural properties and other resources.

Siting Water Intakes

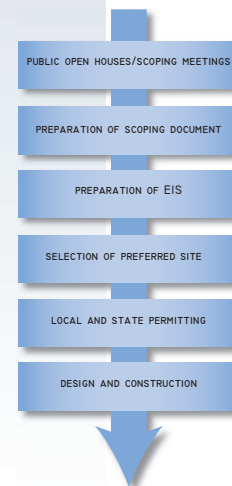
The proposed generation facility would require a water intake structure along Lake Oahe on the mainstem of the Missouri River. A siting study of the water intake sites took place in two phases:

- Water Intake Phase 1—Regional Screen Opportunities
- Water Intake Phase 2—Suitability Analysis and Refinement

Important criteria identified in Phase 1 of the site selection process included preferred depth of the intake screen below minimum operating pool elevation, shore elevation at intake pump station location (above mean sea level), and geologic hazard/shore stability. The objective of the Water Intake Phase 1 study was to identify opportunity areas related to these criteria.

The objective of the Water Intake Phase 2 study was to identify specific water intake locations within the areas identified in Phase 1. Phase 2 consisted of a suitability analysis involving important criteria such as significant natural communities, cultural and historic sites, threatened and endangered species habitat, etc. Water intake sites were identified based on the Phase 2 analysis and were further refined during a field study in November 2006. The field study evaluated sites with regards to slope instability based on evidence of slump or block slides along the eastern side of the Missouri River Valley. Three water intake locations were identified for the Pierre and Selby power plant study areas.

The Next Steps



Selection of the power plant site will be guided by public involvement and extensive environmental analyses. These processes will be carried out by Western Area Power Administration (Western) in compliance with the National Environmental Policy Act (NEPA). As part of that process, Western will hold public scoping meetings to collect public input regarding the proposed project.

Based on the results of the scoping period, Western will prepare the draft environmental impact statement (EIS). The draft EIS is expected to be available for public review and hearings in summer 2008. Publication and public review of the final EIS is expected in winter 2008/2009. The record of decision is expected in spring 2009. If Western approves the EIS, Basin Electric would proceed with land acquisition, detailed design, engineering, and construction of a power plant that would come on line in mid-2014.

Site Selection Study

Site: The specific location proposed for construction and operation of the generation facility or water intake structure.

Basin Electric conducted a site selection study to identify a power plant site under a central guiding principal and objective:

- Identify the site of least overall land use and environmental impact at a reasonable economic cost.

Several previous studies were conducted over a 30-year period to identify environmentally suitable sites for a coal-fired generation facility in Basin Electric's eastern service territory. The most recent site selection (from August 2006 to March 2007) study summarized these previous studies. This site selection study focused on central/north-central South Dakota. South Dakota was selected because it is proximate to rail lines for fuel delivery, a water source for power plant operations, and an existing transmission system for delivery of the power to Basin Electric's eastern system service territory.

The site selection study identified four preliminary alternative sites in South Dakota. Two sites are near Selby, in Walworth County, and the other two sites are near Pierre, in Hughes and Sully counties.

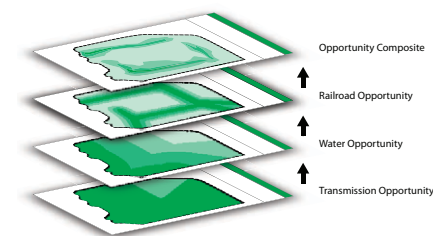
Opportunity and Constraints: Opportunities are non-weighted attributes that were identified as favorable to the development and operation of the project. Areas of higher opportunity generally tend to have greater compatibility and lower costs and impacts. Constraints are applied only within the study areas previously identified as opportunities and consist of avoidance and exclusion areas. Exclusion areas have the highest level of sensitivity, including legal, regulatory, or legislative designations, or extreme physical constraints not compatible with the project construction and operation. Avoidance areas include sensitive resources that would likely incur impacts if adversely affected by the project.

Power Plant Site Selection

Phase 1

Finding areas of highest opportunity

Phase 1 of the site selection process focused on narrowing down the project area using land use and environmental data to identify areas of highest opportunity.



Opportunity areas were identified as those closest to existing rail for fuel delivery, transmission interconnection, and available water supply for power plant operation.

Areas of opportunity were determined by overlaying data associated with the criteria listed above. Overlaying the suitability values (high, medium, and low) for each criterion resulted in a Phase 1 composite map.

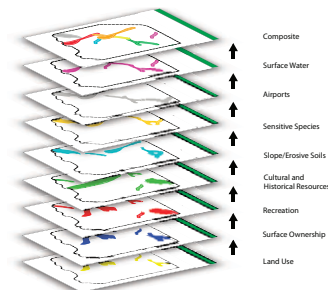
Phase 2

Finding alternative sites

The areas of highest opportunity from Phase 1 were carried into Phase 2. The objective of Phase 2 was to identify specific alternative sites within the opportunity areas identified in Phase 1. Constraints comprised of exclusion and avoidance areas by resource, such as biological, cultural, visual, land use, socioeconomic.

The highest opportunity areas identified in Phase I (high, medium, and low) were combined with the exclusion and avoidance areas identified in Phase 2 in a geographic information system (GIS) model and a composite matrix was created. A more detailed examination of the composite matrix was then conducted. A number of suitable locations were subsequently identified from the composite that minimized site selection within exclusion or avoidance areas.

Composite Matrix: Within the matrix, each site or route was ranked within each individual resource for comparative analysis with each alternative. These rankings were then summed for each resource and for each site as a whole to develop a composite score. These composite scores were then ranked. The site with the lowest composite rank could be considered the site or route with the least overall impact.



Fifteen sites were initially identified as candidate power plant study sites. A detailed comparative analysis of the 15 sites was then prepared. The sites were subjected to additional evaluation during field studies. As a result, 11 sites were eliminated from further consideration based on resource criteria such as existing ecological, cultural, visual, or land use sensitivities. The four remaining sites, Selby, Selby East, Blunt, and Onida, were carried forward in the site selection process.

Associated Facilities Site Selection

The proposed power plant, regardless of location, would require associated facilities, including electric transmission lines, water pipeline, and a water intake site. The length of the linear utilities would depend on the location of the site selected for the proposed power plant.

Corridor: An area identified as having routing opportunities evaluated for identifying more specific routes. Corridors often intersect and rarely represent unique routes. Each study area contains multiple corridors to maximize routing options. Corridors provide flexibility for minor reroutes to avoid sensitive land uses and to work with landowners.

The corridor studies for the transmission line and water pipeline were conducted in two distinct phases:

- Corridor Phase 1, Corridor Study—Identification and analysis of opportunities and constraints using available land use and environmental data
- Corridor Phase 2, Corridor Definition and Refinement—Identification of alternative corridors using refined criteria and site surveys

Siting Electric Transmission Lines and Substation Sites

The following transmission line facilities would be needed according to generation site alternative

Selby

- Between 13 and 24 miles of 230/345-kV transmission lines and, possibly, 3 miles of 115-kV transmission line
- Approximately 40 miles of 230/345-kV transmission lines between the Broadland and Storla substations

Selby East

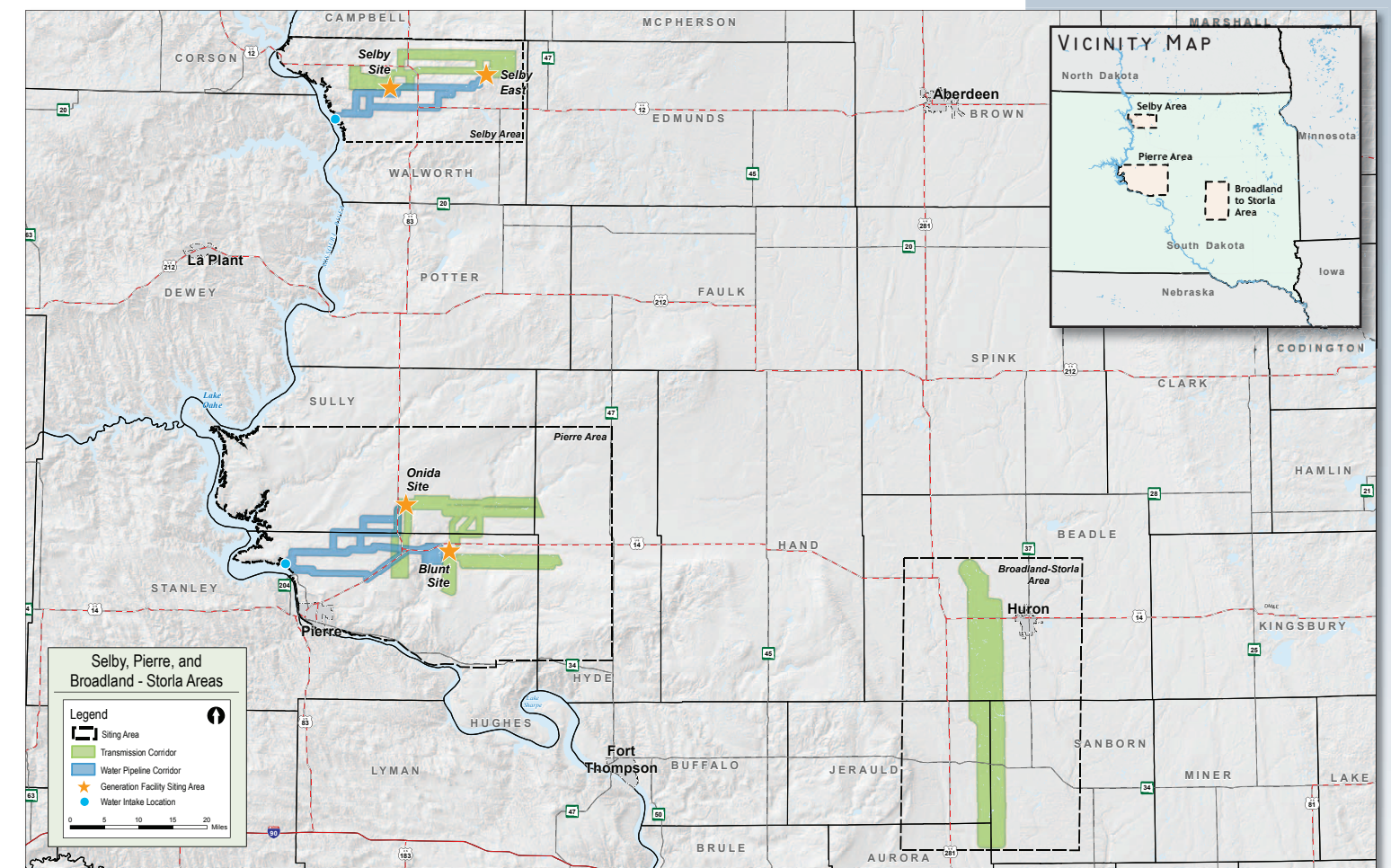
- Between 12 and 24 miles of 230/345-kV transmission lines and, possibly, 3 miles of 115-kV transmission line
- Approximately 40 miles of 230/345-kV transmission lines between the Broadland and Storla substations

Blunt

- Between 40 and 44 miles of 230/345-kV transmission lines
- 230/345-kV substation

Onida

- Between 52 and 64 miles of 230/345-kV transmission lines
- 230/345-kV substation



The purpose of Phase 1 and 2 of the transmission line corridor study was to identify potential transmission line corridors that use linear features such as existing utility rights-of-way while avoiding sensitive areas. A helicopter study of the preliminary transmission corridors was conducted on April 17th and 18th, 2007, to refine and identify the alternative corridors. This study evaluated the width of the transmission line right-of-way in relation to resource criteria such as land use, distance to residences, number of wetlands, etc.