

## 7.0 Needs

### 7.1 Introduction

Section 7 contains a discussion of each of the present and reasonably foreseeable inadequacies that have been identified in the six transmission planning zones. The discussion for each zone begins with a table summarizing each inadequacy. Then a table is presented that lists those inadequacies that were identified in previous biennial reports that have been addressed through the completion of a project. These tables are followed with a discussion of each inadequacy in the zone. The following information describes the type of information that is presented for each inadequacy.

**Tracking Number.** A numbering system was established in the 2005 Report that is continued here. The numbering system has three parts to it: the year the inadequacy was reported, the zone in which it occurs, and a chronological number assigned in no particular order, starting with number one for each reporting year. Thus, the Tracking Number for inadequacies first identified in the 2007 Biennial Report will begin with 2007, followed by the zone, and followed by a number. For example, 2007-NE-N1 is the Duluth Area 230 kV Project, an inadequacy identified in the Northeast Zone first identified in this report.

**Utility.** A category has been added to the discussion of each inadequacy entitled “Utility.” The intent here is to specifically list the utility or utilities that have the main responsibility for addressing the inadequacy. In some instances the local municipal utility or other person who is primarily responsible for the inadequacy is not a transmission-owning utility that is responsible to file this biennial report, so the reporting utility with the most involvement with the project is identified.

**Inadequacy.** The intent with this category is to describe in simple understandable terms the inadequacy that has been identified. The Public Utilities Commission expects the utilities to identify inadequacies in the transmission system that could affect reliability of service over the next ten years. The inadequacy may be an overload of certain facilities in a contingency situation, it may be an interconnection request, it may be increasing demand, or it may be a combination of factors jeopardizing the reliability of the transmission infrastructure. An inadequacy may be identified through transmission planning, such as when the impact of contingency events are examined, or through the announcement of a new development, such as an ethanol plant or the proposed construction of a new generating facility, or through an increase in the demand for energy in a particular area. For those inadequacies reported in prior years, the discussion in many cases is simply a repetition of the language from the 2005 Report because the inadequacy remains the same as was reported previously, but the language is repeated for the convenience of the reader.

**Alternatives.** The statute requires the utilities to identify alternative means of addressing each inadequacy listed. Initially, the utilities engage in a preliminary screening analysis – a qualitative exercise relying on experience and judgment – to determine what alternatives are within the realm of possible solutions to the problem. It is common to look at both short-term and long-term options.

There are a number of general factors that are relied on to make this initial cut. For example, the utilities will favor a transmission alternative that does not involve the creation of new right-of-way, such as the reconductoring of an existing line, over one that requires additional easements or land for a new line or new generation. Obviously, the utilities are going to prefer alternatives that are less expensive than the more expensive solutions. It can cost upwards of \$1500 per kilowatt to install generation. It is often readily apparent that a transmission option will be less expensive than a generation alternative. Sometimes transmission is the only option, such as when a new generating facility needs to connect to the grid.

Both the statutes (Minnesota Statutes § 216B.2426) and the PUC rules (Minnesota Rules part 7848.1300, item E) require the utilities to consider the possibility of installing distributed generation and other nontransmission alternatives, in addition to transmission solutions. The utilities prepared a *White Paper on Distributed Generation* in February 2006 in which they described some of the factors that go into the consideration of distributed generation and some of the difficulties in pursuing such an alternative. The White Paper is described in Section 2.6.1 of this Report.

In the *White Paper* the utilities identified those inadequacies in the 2005 Report where distributed generation might be an option worth exploring and that practice is continued in the 2007 Report with the new inadequacies that are listed. If distributed generation has been eliminated from consideration, that fact is noted.

**Analysis.** The intent of this category is to summarize the information the utilities have compiled with respect to identifying the inadequacy and evaluating possible alternatives for addressing the situation. In some cases, studies have been completed or are underway and these studies can be consulted for more detailed information. Obviously, the farther out into the future that the inadequacy needs resolving, the less detail there will be about various alternatives. In some cases the utility may have selected a preferred alternative and an explanation will be provided of why that alternative was selected.

Importantly, once the utility reaches the point where an alternative is selected and governmental approval is required before the project can be undertaken, the utility will examine all those alternatives that are required to be examined under the applicable requirements. Identifying a preferred alternative in the biennial report will often be the project that is ultimately implemented, but the analysis is not complete until the authorization is obtained.

**Schedule.** This category sets forth the utility's best estimate on when certain steps will have to be taken to avoid or correct an inadequacy. In some cases, the timing of a solution may depend on developments in the future, like load growth or decisions by independent power producers, and the timing is uncertain. Also, it is not always possible to know whether a particular option will have to be reviewed and approved by the Public Utilities Commission, but the utilities have attempted to identify those projects that would require a Certificate of Need and a Route Permit from the Commission.

**PUC Docket Numbers.** Since some of the inadequacies have been known for a period of years, it is possible that a matter is pending before the Public Utilities Commission or may have already been decided by the PUC. It is helpful to know the PUC Docket Number because that number

can be used to review documents that are part of the administrative record in the matter. Click on [www.edockets.state.mn.us/EFiling/search.jsp](http://www.edockets.state.mn.us/EFiling/search.jsp) and enter the docket number to find the complete record.

***Completed Projects.*** At the beginning of each zone discussion, a table is presented that lists those projects that have been completed within the last two years, since the 2005 Report was prepared. Those Tracking Numbers in the table will not be reported upon in future biennial reports. If a particular project has been approved by the PUC or other regulatory body, but the construction is not complete, the matter is not listed in this table and the Tracking Number is reported on in the body of the report. If the project required PUC approval, a docket number is provided and as discussed above, additional information about that project can be found in the PUC's edockets webpage. In a few cases, projects are listed in this table not because they are complete, but because they are reported on in other Tracking Numbers. The reader can refer to the other Tracking Number to read the full discussion of the matter.