

The base case is titled sp11basea. The 345 kV alternative was created by using the configuration employed in the original study¹ except the North Rochester 345/161 kV substation taps the Prairie Island-Byron 345 kV line to better match the proposed configuration. The 345 alternative case is named sp11basea-345 alt. The 161 kV alternative has the same configuration as the original study.²

The losses of three cases were compared:

<u>Case</u>	<u>Name</u>	<u>Case Loses MW</u>	<u>Delta MW</u> (Loss Decrease)
Base Case	sp11basea	12,758.1	-----
345 Alternative Case	sp11basea-345-alt	12,747.6	10.5
161 Alternative Case	sp11basea-161-alt	12,751.1	7.0

A similar method was used for the summer off peak case. The model used for this analysis is the 2011 Summer Off Peak from the *2006 MAPP Series*. High west to east transfers were added to the base case until MWSI reached 1,508 MW (Prairie Island-Byron – 832 MW and Eau Claire-Arpin – 676 MW). Both the 345 Alternative and the 161 Alternative were created the same as the in the summer peak case described above.

The losses of three cases were compared:

<u>Case</u>	<u>Name</u>	<u>Case Loses MW</u>	<u>Delta MW</u> (Loss Decrease)
Base Case	sop11basea	12,216.2	-----
345 Alternative Case	sop11basea-345-alt	12,191.8	24.4
161 Alternative Case	sop11basea-161-alt	12,211.3	4.9

¹ Southeastern Minnesota-Southwestern Wisconsin Reliability Enhancement Study; Woodworth 3-6-2006.

² La Crosse 161 kV Load Serving Study; Iverson 8-3-2005. Found in Chapter 9 of Rochester/La Crosse Study.

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Date: April 7, 2008