

*Table PR-14
Transmission System Additions for Zone 2*

System additions	System need year	Projected in-service year	Planning zone	Need category	Planned, Proposed or Provisional
Rebuild Atlantic-Osceola 69-kV line (Laurium #1)	2006	2008	2	reliability, condition	Planned
Install 1-4.08 MVAR capacitor bank at Roberts 69-kV Substation	2007	2008	2	reliability	Proposed
Construct 138 kV bus and install 138/115-kV 150 MVA and 138/69-kV 60 MVA transformers at Conover Substation	2008	2008	2	reliability, transfer capability	Planned
Install 2-4.08 MVAR capacitor banks at Munising 69-kV Substation	2008	2008	2	reliability	Proposed
Uprate Mass-Winona 69-kV line clearance to 185 degrees F	2008	2008	2	generation	Planned
Uprate Winona-Atlantic 69-kV line clearance to 185 degrees F	2008	2008	2	generation	Planned
Uprate Empire-Forsyth 138-kV line to 302 MVA	2008	2008	2	reliability	Planned
Construct ring bus at the Pine River 69-kV Substation and replace 1-5.4 MVAR capacitor bank with 2-4.08 MVAR banks	2008	2008	2	reliability	Proposed
Install 1-4.08 MVAR capacitor bank at L'Anse 69 kV	2008	2009	2	reliability	Proposed
Relocate Cedar Substation (North Lake)	2005	2009	2	reliability, condition	Proposed
Install 2-16.33 MVAR capacitor bank at Perkins 138-kV Substation	2009	2009	2	reliability	Proposed
Install 1-16.33 MVAR capacitor bank at Hiawatha 138-kV Substation	2009	2009	2	reliability	Proposed
Install 2-8.16 MVAR capacitor banks at the 9 Mile 69-kV Substation	2009	2009	2	reliability	Proposed
Uprate Chandler-Cornell 69-kV line clearance from 120 to 167 deg F	2009	2009	2	reliability	Proposed
Install second 345/138-kV transformer at Plains Substation	2009	2009	2	reliability, transfer capability	Proposed
Rebuild/convert Conover-Plains 69-kV line to 138 kV	2010	2010	2	reliability, transfer capability	Planned
Construct 138 kV bus and install a 138/69 kV, 60 MVA transformer at Iron Grove Substation	2010	2010	2	reliability, transfer capability	Planned

*Table PR-14
Transmission System Additions for Zone 2 (continued)*

System additions	System need year	Projected in-service year	Planning zone	Need category	Planned, Proposed or Provisional
Construct 138 kV bus and install a 138/69 kV, 60 MVA transformer at Aspen Substation	2010	2010	2	reliability	Planned
Relocate Iron River Substation (Iron Grove)	2010	2010	2	reliability	Planned
Install 1-16.33 MVAR capacitor bank at Indian Lake 138-kV Substation	2010	2010	2	reliability	Proposed
Rebuild Blaney Park-Munising 69 kV to 138 kV	2013	2013	2	reliability, condition	Provisional
Rebuild/convert Holmes-Chandler 69 kV to 138-kV operation	2013	2013	2 & 4	reliability, condition	Provisional
Construct new Mackinac 138/69-kV Substation	TBD	TBD	2	reliability	Provisional
Rebuild Hiawatha-Pine River 69-kV line ESE_6908	TBD	TBD	2	maintenance	Provisional
Increase ground clearance of M38-Atlantic 69-kV line from 120 to 167 degrees F	TBD	TBD	2	reliability	Provisional
Convert Indian Lake-Hiawatha 69-kV line to double-circuit 138-kV operation, construct new Hiawatha 138-kV Substation	TBD	TBD	2	reliability	Provisional
Uprate overhead portions of Straits-McGulpin 138-kV circuits #1 & #3 to 230 F degree summer emergency ratings	TBD	TBD	2	reliability	Provisional
Install 2-5.4 MVAR capacitor banks at Osceola 69 kV	TBD	TBD	2	reliability	Provisional
Install 2-8.16 MVAR capacitor banks at M38 69 kV	TBD	TBD	2	reliability	Provisional
Install 1-5.4 MVAR capacitor bank at MTU or Henry Street 69-kV Substation	TBD	TBD	2	reliability	Provisional