

Table PR-16  
Zone 3 Transmission System Additions

System Additions	System Need Year	Projected In-Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional
Construct a Jefferson-Tyrannena-Stony Brook 138-kV line	2006	2009	3	reliability	Planned
Uprate X-8 Rockdale to Boxelder 138-kV line	2008	2009	3	reliability	Planned
Uprate Y-41 Walworth- North Lake Geneva 69-kV to achieve a 69 MVA summer emergency rating	2009	2009	3	reliability	Planned
Uprate Y-61 McCue-Lamar 69-kV line to achieve 300 deg F line ratings and install 2-12.45 Mvar 69 kV capacitor banks at Lamar Substation	2008	2010	3	reliability	Proposed
Uprate X-23 Colley Road-Marine 138-kV line terminals	2014	2010	3	reliability	Proposed
Construct new Oak Ridge-Verona 138-kV line and install a 138/69-kV transformer at Verona with a 100 MVA summer normal rating	2009	2010	3	reliability	Planned
Upgrade Sheepskin capacitor bank from 10.8 MVAR to 16.2 MVAR	2009	2010	3	reliability	Planned
Construct second Paddock-Rockdale 345-kV line and replace 345/138-kV transformer T22 at Rockdale Substation	2010	2010	3	economics	Planned
Install 2-16.33 MVAR 69-kV capacitor banks at Spring Green Substation	2010	2010	3	reliability	Planned
Uprate the Royster Substation terminals	2010	2010	3	reliability	Planned

Table PR-16 (continued)  
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System Additions	System Need Year	Projected In-Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional
Replace two overhead Blount-Ruskin 69-kV lines with one underground 69-kV line	2010	2011	3	completion of earlier project per agreement with the City of Madison	Proposed
Rebuild the Y-119 Verona to Oregon 69-kV line	2008	2011	3	reliability, condition	Proposed
Rebuild Y-33 Brodhead to South Monroe 69-kV line	2011	2011	3	generation interconnection, reliability	Planned
Uprate terminal limitations at McCue for the Y-79 McCue-Milton Lawns 69-kV line	2011	2011	3	reliability	Proposed
Install 2-24.5 MVAR 138-kV capacitor bank and 1-18 MVAR 69-kV capacitor bank at Brick Church substation	2011	2011	3	reliability	Provisional
Rebuild part of the Y-8 Dane-Dam Heights 69-kV line	2015	2012	3	reliability, asset renewal, potential T-D interconnection	Provisional
Uprate Y-40 Gran Grae-Boscobel 69-kV line to achieve a 99 MVA summer emergency rating	2017	2012	3	reliability	Proposed
Uprate Fitchburg-Nine Springs 69-kV and Royster-Pflaum 69-kV lines and move AGA load to the Royster-Femrite 69-kV line	2006	2013	3	reliability	Proposed
Rebuild Y-32 Colley Road-Brick Church 69-kV line	2013	2013	3	reliability, condition	Provisional

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Install 2-16.33 MVAR 69-kV capacitor banks at Nine Springs Substation	2013	2013	3	reliability	Proposed
Install a 138/69-kV transformer at Bass Creek Substation	2010	2013	3	reliability	Proposed
Uprate X-12 Town Line Road-Bass Creek 138-kV line to 300 deg F	2010	2013	3	reliability	Proposed
Construct 345-kV line from Rockdale to West Middleton	2013	2013	3	reliability	Planned
Construct a 345-kV bus and install a 345/138 kV 500 MVA transformer at West Middleton Substation	2013	2013	3	reliability	Planned
Uprate Y-61 Sheepskin-Dana 69-kV line to 95 MVA	2013	2013	3	reliability	Proposed
Install 2-16.33 MVAR 69-kV capacitor banks and 2-24.5 MVAR 138-kV capacitor banks at Femrite Substation	2014	2014	3	reliability	Provisional
Install 1-16.33 MVAR 69-kV capacitor bank at Verona Substation	2014	2014	3	reliability	Provisional
Replace the existing 46 MVA Hillman 138/69-kV transformer with a 100 MVA transformer	2015	2015	3	reliability	Provisional
Install 1-8.16 MVAR capacitor bank at Boscobel 69-kV Substation and upgrade existing 5.4 MVAR bank with an 8.16 MVAR bank	2015	2015	3	reliability	Provisional
Uprate Columbia 345/138-kV transformer T-22 to 527 MVA	2015	2015	3	reliability	Provisional

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Install a second 138/69-kV transformer at Spring Green with a 100 MVA summer normal rating	2016	2016	3	reliability	Provisional
Uprate X-67 Portage-Trienda 138-kV line to 373 MVA	2016	2016	3	reliability	Provisional
Construct new 138-kV line from North Lake Geneva to South Lake Geneva Substation	2016	2016	3	reliability, T-D interconnection	Provisional
Construct new 138-kV bus and install a 138/69-kV 100 MVA transformer at South Lake Geneva Substation	2016	2016	3	reliability	Provisional
Install 2-16.33 MVAR 69-kV capacitor banks at Eden Substation	2016	2016	3	reliability	Provisional
Install 4-49 MVAR 138-kV capacitor banks at Concord Substation	2016	2016	3	reliability, economics	Provisional
Uprate the 6986 Royster to Sycamore 69-kV line to 115 MVA	2016	2016	3	reliability	Provisional
Install 2-16.33 MVAR 69-kV capacitor banks at Sun Prairie	2016	2016	3	reliability	Provisional
Uprate Y159 Brick Church-Walworth 69-kV line to 115 MVA	2017	2017	3	reliability	Provisional
Construct West Middleton-Blount 138-kV line	2017	2017	3	reliability	Provisional
Construct a Lake Delton-Birchwood 138-kV line	2017	2017	3	reliability	Provisional

Table PR-16 (continued)  
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System Additions	System Need Year	Projected In-Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional
Install 2-12.25 MVAR 69-kV capacitor banks at Mazomanie Substation	2017	2017	3	reliability	Provisional
Construct 69-kV double-circuit line between McCue and Lamar substations	2017	2017	3	reliability	Provisional
Install 2-16.33 MVAR 69-kV capacitor banks at Dam Heights	2017	2017	3	reliability	Provisional
Install 2-16.33 MVAR 69-kV capacitor banks at North Monroe	2018	2018	3	reliability	Provisional
Construct Spring Valley-Twin Lakes-South Lake Geneva 138-kV line	2018	2018	3	T-D interconnection, reliability	Provisional
Construct a Horicon-East Beaver Dam 138-kV line	2019	2019	3	reliability	Provisional
Construct a 345-kV bus, install a 345/138-kV 500 MVA transformer at North Randolph and loop the Columbia to South Fond Du Lac 345-kV line into the substation	2021	2021	3	reliability	Provisional
Install 2-16.33 MVAR 69-kV capacitor banks at Rio	2022	2022	3	reliability	Provisional