

Table PR-3
Transmission System Additions for 2009

System Additions	System Need Year	Projected In-Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional	Cost Estimate - Refer to Funding Project and Sum of Total (2008-2017) in Financial Table
Construct Gardner Park-Hwy 22 345-kV line	2009	2009	1	service limitation, reliability, import capability and Weston stability	Planned	F0301
Construct new Hwy 22 345-kV Substation	2009	2009	1	service limitation, reliability, import capability and Weston stability	Planned	F0301
Relocate Cedar Substation (North Lake)	2005	2009	2	reliability, condition	Planned	F1605
Install 1-4.08 MVAR capacitor bank at L'Anse 69 kV	2008	2009	2	reliability	Proposed	F1819
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	2009	2	reliability, condition	Proposed	F1282
Install 1-8.16 MVAR capacitor banks at the M38 138-kV Substation	2009	2009	2	reliability	Proposed	F2485
Uprate Chandler-Cornell 69-kV line clearance from 120 to 167 deg F	2009	2009	2	reliability	Proposed	F2016
Install 2-16.33 MVAR capacitor bank at Perkins 138-kV Substation	2009	2009	2	reliability	Proposed	F2220
Install 1-16.33 MVAR capacitor bank at Hiawatha 138-kV Substation	2009	2009	2	reliability	Proposed	F2222
Install 1-4.08 MVAR capacitor banks at Osceola 69 kV	2009	2009	2	reliability	Proposed	F2468
Uprate the Delta-North Bluff 69-kV line summer normal and emergency ratings from 120 deg F to 167 deg F	2009	2009	2	reliability	Provisional	F2531
Uprate the North Bluff-Gladstone 69-kV line summer normal and emergency ratings from 120 deg F to 167 deg F	2009	2009	2	reliability	Provisional	F2522
Uprate the Masonville-Gladstone 69-kV line summer normal and emergency ratings from 120 deg F to 167 deg F	2009	2009	2	reliability	Provisional	F2533

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Uprate the Chandler-Masonville 69-kV line summer normal and emergency ratings from 120 deg F to 167 deg F	2009	2009	2	reliability	Provisional	F2532
Install 3-16.33 MVAR 138-kV capacitor banks at North Beaver Dam Substation	2005	2009	3	reliability	Planned	F1847
Construct a Jefferson-Lake Mills-Stony Brook 138-kV line	2006	2009	3	reliability	Planned	F0924
Construct a new 138-kV line from North Madison to Huiskamp	2008	2009	3	reliability	Planned	F1626
Construct a new 138/69-kV substation near Huiskamp and install a 138/69-kV transformer with a 187 MVA summer emergency rating	2008	2009	3	reliability	Planned	F1626
Uprate 6632 Rockdale to Jefferson 138-kV line	2008	2009	3	reliability	Planned	F0924
Uprate X-8 Rockdale to Boxelder 138-kV line	2008	2009	3	reliability	Planned	F0924
Uprate 58751 Boxelder to Stony Brook 138-kV line	2008	2009	3	reliability	Planned	F0924
Convert Rock River to Bristol to Elkhorn 138-kV operation; rebuild Bristol with a new 138 kV bus	2008	2009	3	reliability	Planned	F1690
Install one temporary 12.45 MVAR 69-kV mobile capacitor bank at Brick Church Substation	2008	2009	3	reliability	Proposed	F2279
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	2009	3	reliability	Provisional	F2558
Install 5.7 MVAR distribution capacitor bank at Union Townline 69-kV Substation	2009	2009	3	reliability	Proposed	F2332
Install 2-24.5 MVAR 138 kV capacitor banks at Kilbourn Substation and install 2-24.5 MVAR 138-kV capacitor banks at Artesian Substation	2009	2009	3	reliability	Planned	F1712
Expand the existing 69-kV capacitor bank from 5.4 to 8.1 MVAR at Richland Center Olson Substation and install 1-7.8 MVAR 12.4-kV capacitor bank at Brewer Substation	2009	2009	3	reliability	Proposed	F2318
Uprate Y-41 Walworth- North Lake Geneva 69-kV to achieve a 69 MVA summer emergency rating	2009	2009	3	reliability	Proposed	F2154

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Uprate Y-152 North Lake Geneva-Lake Geneva 69-kV line to achieve a 115 MVA summer emergency rating	2009	2009	3	reliability	Proposed	F2155
Rebuild Stoughton Substation bus	2009	2009	3	reliability	Provisional	F2001
String a new 138-kV line from Clintonville-Werner West primarily on Morgan-Werner West 345-kV line structures	2004	2009	4	reliability, service limitation	Under Construction	F0823
Construct Morgan-Werner West 345-kV line	2004	2009	4	reliability, service limitation	Under Construction	F0823
Relocate Mishicot 138-kV Substation	2009	2009	4	new generation	Planned	F2035
Rebuild Crivitz-High Falls 69-kV double circuit line	2009	2009	4	reliability	Under Construction	F1357
Install a second 138-kV reserve auxiliary transformer (RAT) at Kewaunee and remove tertiary auxiliary transformer (TAT)	2009	2009	4	reliability	Proposed	F2371
Rebuild 2.37 miles of 69 kV from Sunset Point to Pearl Ave with 477 ACSR	2009	2009	4	reliability	Planned	F1361
Replace relaying on 230-kV circuits at Oak Creek	2009	2009	5	new generation	Planned	F0283
Replace two 345-kV circuit breakers at Pleasant Prairie Substation on the Racine and Zion lines with IPO breakers and upgrade relaying	2009	2009	5	new generation	Planned	F0283
Reconductor Oak Creek-Allerton 138-kV line	2009	2009	5	new generation	Planned	F0763
Install second 500 MVA 345/138-kV transformer at Oak Creek Substation	2009	2009	5	new generation	Planned	F0763
Loop Ramsey5-Harbor 138-kV line into Norwich and Kansas to form a new line from Ramsey-Norwich and Harbor-Kansas 138-kV lines	2009	2009	5	new generation	Planned	F2112
Replace CTs at Racine 345-kV Substation	2009	2009	5	new generation	Planned	F1165
Reconductor Oak Creek-Ramsey 138-kV line	2009	2009	5	new generation	Planned	F1729
Construct a 138-kV bus at Pleasant Valley Substation to permit second distribution transformer interconnection	2009	2009	5	T-D interconnection	Proposed	F2086
Construct a 138-kV bus at Hale Substation to permit third Brookdale distribution transformer interconnection	2009	2009	5	T-D interconnection	Proposed	F2097

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Expand Oak Creek 345-kV switchyard to interconnect one new generator	2009	2009	5	new generation	Planned	F2140
Construct 138-kV bus section at Shorewood	2009	2009	5	T-D interconnection	Provisional	F2502

Defined in Previous 10-Year Assessment
Revised in scope from Previous 10-Year Assessment
New to this 10-Year Assessment