System Additions	Network Need Year	Projected In- Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional	MTEP Appendix Status	MTEP Project ID
ACEC Dellwood Substation: Install line breakers to sectionalize Y- 146	2016***	2016	1	T-D interconnection	Planned	А	7741
Zone 2 switching initiative	ASAP***	2016	2	Operating flexibility	Proposed		
Beardsley St. Substation: Install 3 69-kV line breakers to sectionalize 69-kV circuit J-10	2016***	2016	4	Operating flexibility	Planned	А	7981
Pulliam - Glory Road 138-kV line conversion K-115	2016***	2016	4	T-D interconnection, reliability (69P6)	Planned	А	3841
Pulliam Substation: Install a new 138/69-kV transformer	2016***	2016	4	T-D interconnection, reliability (69P6)	Planned	А	3841
Stagecoach - Wick Drive 69-kV line rebuild Y-62	2016**	2016	3	reliability (69 P1.3)	Planned	А	3892
BloomingtonSsubstation: Install SCADA controlled breakers to sectionalize	2016**	2016	3	Operating flexibility	Planned	Targeted A 16	9917
Construct Fairwater-Mackford Prairie 69-kV line	2018*	2017	1	T-D interconnection, reliability (69P1.2)	Planned	А	1708
Reconfigure the North Randolph-Ripon 69-kV line to form a second Ripon-Metomen 69-kV line and retire the circuit between Metomen and the Mackford Prairie tap	2018*	2017	1	reliability (69P1.2), condition	Planned	А	1708
Tomahawk Substation: Install bus tie breaker to sectionalize	2017***	2017	1	T-D Interconnection	Proposed	Targeted A 16	10523
Y-121: re-rate 1.2 miles of 69 kV line between Council Creek and Tomah Industrial Park	2015	2017	1	reliability (69P1.2), operating flexibility	Proposed	Target A 17	9928
White Lake Substation: Install line breaker to sectionalize	2017***	2017	1	T-D Interconnection	Proposed	Targeted A 16	11224
Canal Substation: Install 138-kV breakers on 138/69-kV transformers	2017***	2017	4	operating flexibility, reliability (69P1.3)	Proposed	Targeted A 16	7983
Canal Substation: Install redundant bus differentials on 138-kV buses	2017***	2017	4	reliability (P5.5)	Proposed	Targeted A 16	7985
Creekview Substation: 138 kV line construction to serve T-D interconnection	2017***	2017	4	T-D interconnection	Planned	А	4353

System Additions	Network Need Year	Projected In- Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional	MTEP Appendix Status	MTEP Project ID
Esker View Substation: loop LYNG11 in and out	2017***	2017	4	T-D interconnection	Planned	А	7780
Bain - Albers 138-kV line uprate 63143	2016**	2017	5	reliability (P1.2)	Planned	А	3900
Oak Creek-Pennsylvania 138-kV line uprate 837	2016**	2017	5	reliability (P1.2)	Planned	А	2056
Mukwonago Substation: Install line breaker on line 67K61	2017***	2017	5	Operating flexibility	Proposed	Targeted A 16	9923
Spare Reactor Purchase	2020	2017	1, 3	reliability (prior P1.4 + P0)	Proposed		
West Middleton-Stage Coach 69-kV uprate 6927, short term fix	2018**	2017	3	reliability (P1.2, 69P1.3, P2.1)	Planned	А	3159
Cardinal - North Madison 345 kV line	2018***	2017	3	reliability, economics and policy benefits	Planned	А	3127
Brick Church Substation: Remove breaker 1532-S current transformer	ASAP	2017	3	reliability (P1.3, P2.1)	Proposed	Target A 17	12182
University/Whitewater line reconfiguration	2018**	2017	3	reliability (P1.2)	Planned	А	4728
Birchwood Substation: Install a bus tie breaker	2019***	2017	3	T-D interconnection	Proposed	Targeted A 16	9921
Bay Lake: Benson Lake Substation Construct new 138-kV substation and install 150 Mvar SVC (near Amberg Substation)	ASAP***	2017	2	reliability (various TPL categories)	Planned	А	3679
Bay Lake: Morgan - Stiles 138-kV circuit de-bifurcate to form 2 separate 138-kV lines	ASAP***	2017	4	reliability (various TPL categories)	Planned	А	3679
Browntown 69-kV Bus Rerate	2017*	2017	3	reliability (P1.2)	Proposed	Target A 17	12099
Pershing Substation: Loop Stone Lake - Gardner Park 345-kV line into new Pershing 345/115-kV Substation	2018***	2018	1	T-T interconnection	Proposed	Targeted B 16	9925
Lawn Rd Substation: Install 138-kV breakers to sectionalize 138-kV circuit 6851	2018***	2018	4	Operating flexibility	Proposed	Target A 17	12174

System Additions	Network Need Year	Projected In- Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional	MTEP Appendix Status	MTEP Project ID
Lost Dauphin - Red Maple 138 kV line uprate Q-147	2020***	2018	4	reliability (various TPL categories)	Planned	Target A 17	9930
Branch River Substation: Construct new 345-kV switching station	2018*	2018	4	new generation	Planned	А	3206
Forest Junction 138kV Substation: Install 25 Mvar inductor	2018***	2018	4	system intact (P0)	Provisional	Target A 17	7581
Forest Junction 138-kV Substation: Install redundant bus differential	2019***	2018	4	reliability (stability E2.D)	Proposed		
Highway V Substation: Install 138-kV breakers and 69-kV circuit switchers on 138/69-kV transformers	2018***	2018	4	operating flexibility, reliability (prior + 69P1.3)	Proposed	Target A 17	7986
Ogden St. Networking Project: Ogden St Bayshore 69-kV line construction	2018***	2018	4	T-D interconnection	Proposed	А	4732
Depere - Glory Rd 138-kV overhead line rebuild	2020***	2018	4	reliability (various TPL categories)	Proposed	А	9081
Saukville Substation: Install parallel breaker on line 8222	2020	2018	5	reliability (P2.1)	Provisional		
Oak Creek - Hayes 138-kV line 811 uprate and reconfiguration	ASAP***	2018	5	reliability (P7)	Proposed	Targeted A 16	9934
Oakview Substation: loop 836 in and out	2018***	2018	5	T-D Interconnection	Planned	Targeted A 16	10563
St Martins Substation: Add new 138 kV bus and bus tie breaker	2018***	2018	5	T-D Interconnection	Proposed	Targeted A 16	10643
West Marinette Substation: Install 138-kV circuit switchers on 138/69-kV transformers	2014***	2018	4	reliability (various TPL categories)	Proposed	А	8076
North Madison - Briggs Road 345 kV line	2018***	2018	1, 3	reliability, economics and policy benefits	Planned	А	3127
Portage-Trienda 138-kV uprate X-67	2018**	2018	3	reliability (P1.2)	Planned	А	1624
Colley Road-Brick Church 69-kV rebuild Y-32	2018*	2018	3	reliability (P1.2, 69P1.3) conditon	Planned	А	2031

System Additions	Network Need Year	Projected In- Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional	MTEP Appendix Status	MTEP Project ID
Bay Lake: Morgan Substation reconfigure and expand 345-kV and 138-kV switchyards	ASAP***	2018	4	reliability (various TPL categories)	Planned	А	3679
Bay Lake: North Appleton - Morgan 138 kV line construction	ASAP***	2018	4	reliability (various TPL categories)	Planned	А	3952
Bay Lake: North Appleton - Morgan 345 kV line construction	ASAP***	2018	4	reliability (various TPL categories)	Planned	А	3679
Bay Lake: North Appleton Substation Construct new 345-kV switchyard and reconfigure 138-kV switchyard	ASAP***	2018	4	reliability (various TPL categories)	Planned	А	3679
M13-Reinforcement-Bunker Hill-Blackbrook	2019**	2019	1	reliability (P1.2)	Proposed	А	7602/7603
Atlantic Substation: Reconfiguration	2019	2019	2	operating flexibility, reliability (69P1.2)	Provisional	В	7586
City Limits 138-kV bus reconductor	2026	2019	4	reliability (P3.2)	Proposed	Targeted A 16	8640
Ellinwood 138-kV Bus Rerate	2019*	2019	4	reliability (P6)	Proposed	Target A 17	12103
Pulliam 138-kV Substation: Install redundant bus differential	2019***	2019	4	reliability (stability P5.5)	Proposed		
Somers Substation: Close the N.O. Somers - Albers 138-kV line and install N.O. bus tie breaker at Somers	2019***	2019	5	T-D interconnection	Planned	А	8660
Bain - Spring Valley 138-kV uprate 63141	2019	2019	3 & 5	T-D interconnection,reliability (69P1.2)	Planned	А	3808
Construct a new 138/69-kV substation on Spring Valley - North Lake Geneva 138-kV circuit	2019	2019	3 & 5	T-D interconnection,reliability (69P1.2)	Planned	А	3808
Construct a new 69-kV circuit from Twin Lakes to the new substation	2019	2019	3 & 5	T-D interconnection,reliability (69P1.2)	Planned	А	3808
Construct a new Spring Valley-North Lake Geneva 138-kV circuit	2019	2019	3 & 5	T-D interconnection, reliability (69P1.2)	Planned	А	3808
Twin Lakes - Katzenberg 69-kV rebuild Y-102	2019	2019	3 & 5	T-D interconnection,reliability (69P1.2)	Planned	А	3808
Williams Bay Substation: Loop X44 in and out	2019***	2019	3	T-D interconnection	Proposed	А	4421

System Additions	Network Need Year	Projected In- Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional	MTEP Appendix Status	MTEP Project ID
Baker St Substation: Add new 115-kV bus and bus tie breaker	2020***	2020	1	T-D Interconnection	Proposed	Target A 17	12115
Presque Isle - Tilden 138 kV line loop into National and uprate National - Tilden 138 kV line	ASAP***	2020	2	reliability (prior + P1.2)	Provisional	В	3838
Highway V - Preble 138-kV line uprate	2020***	2020	4	reliability (various TPL categories)	Provisional	В	8082
Wesmark Substation: Install 2-8 Mvar 69-kV capacitor banks	>2026	2020	4	reliability (69P2.1)	Provisional	Targeted B 16	9935
Southestern Wisconsin Northeastern Illinois Reinforcement Project	ASAP***	2020	5	reliability(P7.1)	Proposed	Α	8065
Port Washington - Saukville: Rebuild Line 762 to a double circuit	2021	2021	5	reliability (P2.4/P7.1)	Proposed	Targeted A 16	9986
Lakota Rd to Winona 138-kV Conversion	2021	2021	2	reliability (prior + P1.2), condition	Provisional	В	8089
Plains - Arnold 138-kV uprate	2023***	2023	2	reliability (various TPL categories)	Provisional	В	8073
Plains - National 138-kV project	2023***	2023	2	reliability (various TPL categories)	Provisional	А	8071
Plains 345/138-kV project (2-500 MVA replace existing)	2023***	2023	2	reliability (various TPL categories)	Provisional	В	8073
Morgan - Plains 345-kV loop into new Thunder 345-kV substation.	2023***	2023	4	reliability (various TPL categories)	Provisional	В	8076
Morgan - Thunder 138-kV project	2023***	2023	4	reliability (various TPL categories)	Provisional	В	8076
Thunder Substation: install 345/138-kV and 138/69-kV transformers, convert 1 ckt of Thunder to Crivitz to 138-kV	2023***	2023	4	reliability (various TPL categories)	Provisional	В	8076
Cardinal - Hickory Creek 345-kV line construction	2023***	2023	3	reliability, economics and policy benefits	Proposed	А	3127
West Middleton - Stagecoach 69 kV line rebuild 6927	2023**	2023	3	reliability (P1.2, P1.3)	Provisional	Target B 17	12175

System Additions	Network Need Year	Projected In- Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional	MTEP Appendix Status	MTEP Project ID
Arcadian Substation: install redundant bus differentials on 345-kV and 138-kV buses	2023	2023	5	reliability (stability E2.D)	Provisional		
Granville Substation: install redundant bus differentials on 345-kV and 138-kV buses	2023	2023	5	reliability (stability E2.D)	Provisional		
Colley Road Substation: Install 2nd 100 MVA 138/69kV transformer	>2031	2023	3	reliability (69P1.2, 69P2.1, 69P1.3)	Provisional	В	7585
Winona - Atlantic 69-kV line rebuild Winona69	2026	2024	2	reliability (69 prior + P1.2)	Provisional		4727
Aviation - North Fond du Lac 138-kV rebuild G-111	>2026	2025	4	reliability (P3.2)	Provisional		
Arcadian-Waukesha 138-kV lines KK9942/KK9962 rebuild	2027	2025	5	reliability (P3.2, P1.2)	Proposed	А	1270
Construct Shoto to Custer 138-kV line	>2031	2026	4	reliability (69P1.2, 69P1.3)	Provisional	В	1719
Custer Substation: Install 138/69-kV transformer	>2031	2026	4	reliability (69P1.2, 69P1.3)	Provisional	В	1718
Gran Grae Substation: Install a second 161/69 kV transformer	2026*	2026	3	reliability (69P1.3)	Provisional		
Portage - Columbia 138-kV line rebuild X-13	2027	2027	3	reliability (P1.2)	Provisional		4730
Portage - Columbia 138-kV line rebuild X-20	2027	2027	3	reliability (P1.2)	Provisional		4730
Construct Cardinal-Blount 138-kV line	>2031	2029	3	reliability (P6)	Provisional		1730

Legend
* = dates based on approved project scope ISDs
** = SBRM Study Need Year
*** = Other Major Project Study need year
No Shading = No change to project since previous Assessment

S	ystem Additions	Network Need Year	Projected In- Service Year	Planning Zone	Need Category	Planned, Proposed or Provisional	MTEP Appendix Status	MTEP Project ID
Orange Shading = new p	project, was not in previous Assessment							

Gray Shading = some change (e.g. In-service year or scope) since previous Assessment