

### ATC 2017 10-Year Assessment (TYA) Preliminary Network Solutions

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1	System Addition	2017 TYA Preliminary Network Need Year	2017 TYA Preliminary In-Service Year	Planning Zone	Need Category	Project Status	MISO MTEP 17 Appendix Status	MTEP PRJiD	MTEP Cost or Preliminary Cost Range (M\$)	Comment
2	Red Bird Substation: Tap line N239	2017***	2017	3	T-D Interconnection	Proposed	targeted A	12126	0.9	was in Q1 update
3	J384: Cooney - Summit 138-kV line uprate 6431	2017***	2017	3	G-T Interconnection	Proposed	targeted B	12283	0.2	was in Q1 update
4	J395: Falcon Substation - Loop line X-14 in and out	2017***	2017	3	G-T Interconnection	Proposed	targeted B	12284	18.6	was in Q1 update; cost is total for MTEP PRJiD 12284
5	Townhall Substation: Install 2 mile radial tap on Y-32	2017***	2017	3	T-D Interconnection	Proposed	A	11223	3.9	
6	Okray Substation: Add 115 kV bus-tie and line breakers	2018***	2018	1	T-D Interconnection	Proposed	targeted A	--	2.4	
7	McMillan - Wildwood 115-kV line N-144 uprate	ASAP***	2018	1	Economics	Proposed	targeted A	13064	0.2	
8	Plover Substation: Reposition line S-45 and replace line breaker	2018***	2018	1	T-D Interconnection	Proposed	--	--	<10	
9	Springwater Substation: Install 3 mile radial tap from Wild Rose Substation	2018***	2018	1	T-D Interconnection	Proposed	A	10603	<10	
10	Arcadian - Waukesha 138-kV lines uprate 9942/9962	2018	2018	5	reliability (P3.2, P1.2)	Proposed	targeted A	12463	0.3	was in Q1 update
11	Verona Substation: Install high side transformer breaker to sectionalize	2018***	2018	3	T-D Interconnection	Proposed	targeted A	12097	0.4	was in Q1 update
12	Stoughton West Substation: loop line Y-127 in and out	2018***	2018	3	T-D Interconnection	Proposed	targeted A	12347	1.8	was in Q1 update
13	Tripp Rd Substation: Install 138 kV line breakers to sectionalize	2018***	2018	3	T-D Interconnection	Proposed	targeted A	13068	2.9	
14	Plymouth Substation: Install 138 kV line breakers to sectionalize	2018***	2018	4	T-D Interconnection	Proposed	targeted A	13065	1.7	
15	J395: Darlington - North Monroe 138-kV line uprate X-49	2017***	2019	3	G-T Interconnection	Proposed	targeted B	12284	18.6	was in Q1 update; cost is total for MTEP PRJiD 12284
16	J390: Kittyhawk 345-kV Substation - loop line W-10 in and out	2019***	2019	3	G-T Interconnection	Proposed	targeted A	13103	49.6	
17	Retap Colley Rd 138/69-kV T31 current transformers	2019***	2019	3	reliability (various TPL categories)	Proposed	--	--	<10	
18	Install a 4.98 Ohm series reactor on Paddock - NW Beloit line X-53	2019***	2019	3	reliability (various TPL categories)	Proposed	--	--	<10	
19	Alliant Energy Dane County Substation: Loop line 13898 in and out	2020***	2020	3	T-D Interconnection	Proposed	targeted A	12346	26.0	was in Q1 update
20	Juneautown Substation: Loop line 247K81 in and out	2020***	2020	5	T-D Interconnection	Proposed	targeted B	13104	43.0	
21	Eaton Substation: Loop M-39 in and out	2022***	2022	4	T-D Interconnection	Proposed	A	10484	<10	
22	Shoto - Mirro - Northeast 69-kV uprate K-11	2022***	2022	4	reliability (69P1.2)	Proposed	--	--	<10	
23	Bayridge Substation: Loop G-85 in and out	2024***	2024	4	T-D Interconnection	Proposed	A	10485	<10	
24	Colley Road-Brick Church 69-kV rebuild Y-32	2018*	2017	3	reliability (P1.2, 69P1.3, 69P7, P6), condition	Planned	A	2031	37.0	was 2018
25	Zone 2 switching initiative	ASAP***	2017	2	operating flexibility	Proposed	--	--	<10	was 2016
26	Spare Reactor Purchase	2020	2018	1, 3	P0	Proposed	--	--	<10	was 2017
27	Oakview Substation: loop line 836 in and out and install 138-kV bus tie breaker	2018***	2018	5	T-D Interconnection	Planned	A	10563	<10	Scope Change
28	West Marinette Substation: Add high side protection to 138/69-kV transformers	2014***	2018	4	reliability (various TPL categories)	Proposed	A	9080	4.5	Scope change
29	Highway V Substation: Install 138-kV breakers and 69-kV circuit switchers on 138/69-kV transformers	2018***	2019	4	operating flexibility, reliability (prior + 69P1.3)	Proposed	targeted A	7986	7.4	was 2018
30	Portage-Trienda 138-kV uprate X-67	2022**	2022	3	reliability (69P1.2)	Planned	A	1624	2.0	was 2016
31	Highway V - Preble 138-kV line uprate	>2032	2023	4	reliability (various TPL categories)	Provisional	B	8082	6.0	was 2020
32	Colley Road Substation: Install 2nd 100 MVA 138/69kV transformer	>2032	2025	3	reliability (69P1.2, 69P2.1, 69P1.3)	Provisional	B	7585	9.9	was 2023
33	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	A	1708	20.4	

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34	Y-121: re-rate 1.2 miles of 69 kV line between Council Creek and Tomah Industrial Park	2015*	2017	1	reliability (P1), operating flexibility	Proposed	targeted A	9928	0.6	
35	Browntown 69-kV Bus Rerate	2017*	2017	3	reliability (69P1.2)	Proposed	targeted A	12099	0.7	
36	White Lake Substation: Install line breaker to sectionalize	2017***	2017	1	T-D Interconnection	Proposed	A	11224	0.9	
37	Mukwonago Substation: Install line breaker on line 67K61	2017***	2017	5	operating flexibility	Proposed	A	9923	0.6	
38	University/Whitewater line reconfiguration	2018**	2017	3	reliability (P1.2)	Planned	A	4728	5.1	
39	Cardinal - North Madison 345 kV line	2018***	2017	3	reliability, economics and policy benefits	Planned	A	3127	1054.8	cost is total for MTEP PRJID 3127
40	Birchwood Substation: Install a bus tie breaker	2019***	2017	3	T-D interconnection	Proposed	A	9921	0.7	
41	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	A	3679	356.8	cost is total for MTEP PRJID 3679
42	Canal Substation: Install 138-kV breakers on 138/69-kV transformers	2017***	2017	4	operating flexibility, reliability (69P1.3)	Proposed	A	7983	5.1	
43	Canal Substation: Install redundant bus differentials on 138-kV buses	2017***	2017	4	reliability (P5.5)	Proposed	A	7985	0.2	
44	Creekview Substation: 138 kV line construction to serve T-D interconnection	2017***	2017	4	T-D interconnection	Planned	A	4353	25.0	
45	Esker View Substation: loop LYNG11 in and out	2017***	2017	4	T-D interconnection	Planned	A	7780	4.5	
46	Pershing Substation: Loop Stone Lake - Gardner Park 345-kV line into new Pershing 345/115-kV Substation	2018***	2018	1	T-T interconnection	Proposed	B	9925	15.0	
47	St Martins Substation: Add new 138 kV bus and bus tie breaker	2018***	2018	5	T-D Interconnection	Proposed	A	10643	<10	
48	North Madison - Briggs Road 345 kV line	2018***	2018	1, 3	reliability, economics and policy benefits	Planned	A	3127	1054.8	cost is total for MTEP PRJID 3127
49	Oak Creek - Hayes 138-kV line 811 uprate and reconfiguration	ASAP***	2018	5	reliability (P7)	Proposed	A	9934	21.0	
50	Saukville Substation: Install parallel breaker on line 8222	2020	2018	5	reliability (P2.1)	Provisional	--	--	<10	
51	Lawn Rd Substation: Install 138-kV breakers to sectionalize 138-kV circuit 6851	2018***	2018	4	operating flexibility	Proposed	targeted A	12174	2.5	
52	Forest Junction 138kV Substation: Install 25 Mvar inductor	2018***	2018	4	system intact (P0)	Provisional	targeted A	7581	1.8	
53	Ogden St. Networking Project: Ogden St. - Bayshore 69-kV line construction	2018***	2018	4	T-D interconnection	Proposed	A	4732	10.4	
54	Forest Junction 138-kV Substation: Install redundant bus differential	2019***	2018	4	reliability (stability E2.D)	Proposed	--	--	<10	
55	Lost Dauphin - Red Maple 138 kV line uprate Q-147	2020***	2018	4	reliability (various TPL categories)	Planned	targeted A	9930	0.04	
56	Depere - Glory Rd 138-kV overhead line rebuild	2020***	2018	4	reliability (various TPL categories)	Proposed	A	9081	0.7	
57	Bay Lake: Morgan Substation -- reconfigure and expand 345-kV and 138-kV switchyards	ASAP***	2018	4	reliability (various TPL categories)	Planned	A	3679	356.8	cost is total for MTEP PRJID 3679
58	Bay Lake: North Appleton - Morgan 138 kV line construction	ASAP***	2018	4	reliability (various TPL categories)	Planned	A	3952	76.7	
59	Bay Lake: North Appleton - Morgan 345 kV line construction	ASAP***	2018	4	reliability (various TPL categories)	Planned	A	3679	356.8	cost is total for MTEP PRJID 3679
60	Bay Lake: North Appleton Substation -- Construct new 345-kV switchyard and reconfigure 138-kV switchyard	ASAP***	2018	4	reliability (various TPL categories)	Planned	A	3679	356.8	cost is total for MTEP PRJID 3679
61	Branch River Substation: Construct new 345-kV switching station	2018*	2018	4	new generation	Planned	A	3206	46.6	
62	Atlantic Substation: Reconfiguration	2019	2019	2	operating flexibility, reliability (69P5)	Provisional	B	7586	9.0	

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63	Bain - Spring Valley 138-kV uprate 63141	2019	2019	3 & 5	T-D interconnection, reliability (69P1.2)	Planned	A	3808	70.5	cost is total for MTEP PRJID 3808
64	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	A	3808	70.5	cost is total for MTEP PRJID 3808
65	Construct a new 69-kV circuit from Twin Lakes to the new substation	2019	2019	3 & 5	T-D interconnection, reliability (69P1.2)	Planned	A	3808	70.5	cost is total for MTEP PRJID 3808
66	Construct a new Spring Valley-North Lake Geneva 138-kV circuit	2019	2019	3 & 5	T-D interconnection, reliability (69P1.2)	Planned	A	3808	70.5	cost is total for MTEP PRJID 3808
67	Twin Lakes - Katzenberg 69-kV rebuild Y-102	2019	2019	3 & 5	T-D interconnection, reliability (69P1.2)	Planned	A	3808	70.5	cost is total for MTEP PRJID 3808
68	M13-Reinforcement-Bunker Hill-Blackbrook	2019**	2019	1	reliability (P1.2)	Proposed	A	7602/7603	30.0	
69	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	A	8660	2.8	
70	Williams Bay Substation: Loop X-44 in and out	2019***	2019	3	T-D interconnection	Proposed	A	4421	4.4	
71	City Limits 138-kV bus reconductor	2019***	2019	4	reliability (P3.2)	Proposed	A	8640	0.5	
72	Pulliam 138-kV Substation: Install redundant bus differential	2019***	2019	4	reliability (stability P5.5)	Proposed	--	--	<10	
73	Ellinwood 138-kV Bus Rerate	2019*	2019	4	reliability (P6)	Proposed	targeted A	12103	2.4	
74	Presque Isle - Tilden 138 kV line loop into National and uprate National - Tilden 138 kV line	2019	2020	2	reliability (prior + P1.2)	Provisional	--	--	>25	
75	Baker St Substation: Add new 115-kV bus and bus tie breaker	2020***	2020	1	T-D Interconnection	Proposed	targeted A	12115	4.4	
76	Southeastern Wisconsin Northeastern Illinois Reinforcement Project	ASAP***	2020	5	reliability(P7.1)	Proposed	A	8065	52.0	
77	Port Washington - Saukville: Rebuild Line 762 to a double circuit	2021	2021	5	reliability (P2.4, P7.1)	Proposed	A	9986	15.0	
78	Lakota Rd to Winona 138-kV Conversion	2021***	2021	2	reliability (prior + P1.2), condition	Provisional	B	8089	100.0	
79	Arcadian Substation: install redundant bus differentials on 345-kV and 138-kV buses	2023	2023	5	reliability (stability E2.D)	Provisional	--	--	<10	
80	Granville Substation: install redundant bus differentials on 345-kV and 138-kV buses	2023	2023	5	reliability (stability E2.D)	Provisional	--	--	<10	
81	West Middleton - Stagecoach 69 kV line rebuild 6927	2023**	2023	3	reliability (P1.2, P1.3)	Provisional	targeted B	12175	3.8	
82	Plains - Arnold 138-kV uprate	2023***	2023	2	reliability (various TPL categories)	Provisional	B	8073	43.7	cost is total for MTEP PRJID 8073
83	Plains - National 138-kV project	2023***	2023	2	reliability (various TPL categories)	Provisional	A	8071	124.6	
84	Plains 345/138-kV project (2-500 MVA replace existing)	2023***	2023	2	reliability (various TPL categories)	Provisional	B	8073	43.7	cost is total for MTEP PRJID 8073
85	Cardinal - Hickory Creek 345-kV line construction	2023***	2023	3	reliability, economics and policy benefits	Proposed	A	3127	1054.8	cost is total for MTEP PRJID 3127
86	Morgan - Plains 345-kV loop into new Thunder 345-kV substation.	2023***	2023	4	reliability (various TPL categories)	Provisional	B	8076	105.0	cost is total for MTEP PRJID 8076
87	Morgan - Thunder 138-kV project	2023***	2023	4	reliability (various TPL categories)	Provisional	B	8076	105.0	cost is total for MTEP PRJID 8076
88	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	B	8076	105.0	cost is total for MTEP PRJID 8076
89	Winona - Atlantic 69-kV line rebuild Winona69	>2032	2024	2	reliability (69 prior + P1.2)	Provisional	--	4727	28.1	
90	Aviation - North Fond du Lac 138-kV rebuild G-111	>2032	2025	4	reliability (P3.2)	Provisional	--	--	10-25	
91	Gran Grae Substation: Install a second 161/69 kV transformer	2026	2026	3	reliability (69P1.3)	Provisional	--	--	<10	
92	Portage - Columbia 138-kV line rebuild X-13	2018	2027	3	reliability (P1.2)	Provisional	--	4730	5.9	cost is total for MTEP PRJID 4730
93	Portage - Columbia 138-kV line rebuild X-20	2018	2027	3	reliability (P1.2)	Provisional	--	4730	5.9	cost is total for MTEP PRJID 4730

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1										
94	Construct Cardinal-Blount 138-kV line	2032	2029	3	reliability (P6)	Provisional	--	1730	60.8	
95										
96										
97										
98	<b>Legend</b>									
99	* = dates based on approved project scope ISDs									
100	** = SBRM Study Need Year									
101	*** = Other Major Project Study need year									
102										
103	No Shading = No change to project since previous Assessment									
104	Orange Shading = new project, was not in previous Assessment project list									
105	Gray Shading = some change (e.g. In-service year or scope) since previous Assessment									