	A	В	D	Е	F	G
1	System Addition	2015 TYA Preliminary Network Need Year	2015 TYA Preliminary Projected In-Service Year	Planning Zone	Need Category	Comment
2	Presque Isle Substation: Install redundant bus differentials on 138-kV buses	2015***	2015	2	reliability (P5.5)	
3	Blaney Park 69-kV Substation: Reconfiguration	2015	2015	2	condition, reliability (69P1.2)	
4	Empire - Presque Isle 138-kV line uprate Goose Lake	2015**	2015	2	reliability (P1.2)	SBRM Project
5	North Monroe-South Monroe 69-kV uprate Y-87	2018**	2015	3a	reliability (69 P1.2)	SBRM Project
6	South Sheboygan Falls: Install two 138 kV 32.66 Mvar capacitor banks	2015***	2015	4	reliability (P1.3 with prior maintenance)	
7	Kenosha - Lakeview 138-kV line uprate 9341	2016**	2015	5	reliability (P1.2)	SBRM Project
8	Rock Springs - Artesian 138-kV line rebuild X-70	2016**	2015	3b	reliability (P1.2)	SBRM Project
9	Rock Springs Tap - Kirkwood 138-kV line uprate X-70	2016**	2015	3b	reliability (P1.2)	SBRM Project
10	Portage - Columbia 69-kV line uprate Y-99	2016*	2015	3b	generation retirement, reliability (P7)	
	Oak Creek-Bluemound 230-kV line uprate 862	2016**	2015	5	reliability (P1.2)	SBRM Project
12	Waunakee - Westport 69-kV line rebuild Y-131	2017**	2015	3a	reliability (69 P1.2)	SBRM Project
13	Neenah Creek substation: install new 69-kV bus and 2 line breakers to sectionalize	2015***	2015	1	T-D interconnection	added sectionalizing projects to 2015 TYA
14	Lyndon substation: Install 2 line breakers to sectionalize	2015***	2015	4	Operating flexibility	added sectionalizing projects to 2015 TYA
15	Maes substation: Install 2 line breakers to sectionalize	2015***	2015	4	Operating flexibility	added sectionalizing projects to 2015 TYA
	Berryville substation: loop in 3124 (Paris - Albers) into new Berryville substation	2017***	2015	5	T-D interconnection	
	Bain - Albers 138-kV line uprate 63143	2016**	2016	5	reliability (P1.2)	SBRM Project
	Oak Creek - Ramsey - Kansas 138-kV line uprate 824	2016**	2016	5	reliability (P1.2)	SBRM Project
	Norwich - Ramsey - Barland 138-kV line uprate NWHG41	2016**	2016	5	reliability (P1.2)	SBRM Project
	Nicholson - Barland 138-kV line uprate OACG48	2016**	2016	5	reliability (P1.2)	SBRM Project
F	Portage-Trienda 138-kV uprate X-67	2018**	2016	3b	reliability (69P1.2)	
	Royster to Sycamore 69-kV uprate 6986	2016**	2016	3a	reliability (69 P1.3)	SBRM Project
	Albers - Kenosha 138-kV line uprate 9352	2016**	2016	5	reliability (P1.2)	SBRM Project
	Oak Creek-Pennsylvania 138-kV line uprate 837	2016**	2016	5	reliability (P1.2)	SBRM Project
	Racine - Oak Creek 138-kV line uprate 812	2016**	2016	5	reliability (P1.2)	SBRM Project
	Fitchburg - Nine Springs 69-kV line rebuild 6943	2016**	2016	3a	reliability (69 P1.2)	SBRM Project
	Pflaumn - Royster 69-kV line rebuild 6934	2016**	2016	3a	reliability (69 P1.2)	SBRM Project
27	Port Washington - Saukville 138-kV line uprate 742	2016**	2016	5	reliability (P1.2)	SBRM Project
	Port Washington - Saukville 138-kV line uprate 762	2016**	2016	5	reliability (P1.2)	SBRM Project
30	Rocky Run - Plover 115-kV line uprate S-45	2016**	2016	1	reliability (P1.2)	SBRM Project
	Morrison Ave - Sherman 115-kV line re-conductor Z-52	2016**	2016	1	reliability (P1.2)	SBRM Project
31	Wautoma - Wild Rose Pumping 69-kV line rebuild Y-19	2016**	2016	1	reliability (69P1.2)	SBRM Project
32	Bay Lake: Holmes - Old Mead Road 138-kV project	ASAP***	2016	2	reliability (various TPL	Northen Plan
	Sun Valley Tap to Oregon 69-kV rebuild Y-119	2016**	2016	3a	categories) reliability (69 P1.3), condition	Need identified in Northern Plan Studies SBRM Project
	Beardsley St. Substation: Install 3 69-kV line breakers to sectionalize 69-	2016***	2016	4	operating flexibility	
	kV circuit J-10 Brillion Iron Works: 138/69-kV Substation construction and Glenview-	2016*	2016	4	T-D Interconnection	
	Brillion Iron Works 69-kV line extension Fitzgerald - Ellinwood 138-kV uprate W-101	2016*	2016	4	operating flexibility, reliability	Part of Ftzgerald 2nd Transformer Project
37	Fitzgerald - Sunset Point 138-kV uprate C-107	2016*	2016	4	(P1.3 with prior maintenance) operating flexibility, reliability	Part of Ftzgerald 2nd Transformer Project
30	Fitzgerald Substation: Install 2nd 345/138-kV transformer	2016*	2016	4	(P1.3 with prior maintenance) operating flexibility, reliability	
	Glory Road Substation: Install a new 138/69-kV transformer	2016***	2016	4	(P1.3 with prior maintenance) T-D interconnection, reliability	Part of Pulliam - Glroy Rd Conversion
40		2016***	2016	4	(69P6) T-D interconnection, reliability	Conversion project consists of network upgrades
41	Pulliam - Glory Road 138-kV line conversion K-115 Pulliam Substation: Install a new 138/69-kV transformer	2016	2016	4	(69P6) T-D interconnection, reliability	needed for Green Bay load increase Part of Pulliam - Glroy Rd Conversion
	Pulliam Substation: Install a new 138/69-kV transformer Oak Creek-Bluemound 230-kV line uprate 873	2016**	2016	5	(69P6) reliability (P1.2)	SBRM Project
43	Oak Creek-Bluemound 230-kV line uprate 873	2016**	2016	3a		SBRM Project SBRM Project and AM rebuild
44	McCue - Lamar 69-kV line rebuild Y-171 Stagecoach - Wick Drive 69-kV line rebuild Y-62	2016**	2016	3a 3a	reliability (69 P1.2)	SBRM Project and Aivi rebuild SBRM Project
45	Stagecoach - Wick Drive 69-kV line rebuild Y-62				reliability (69 P1.3)	SPKINI PTUJECT
	University/Whitewater line reconfiguration ACEC Delivered substation: Install line breakers to sectionalize V 146	2018**	2016	3b	reliability (P1.2)	added postionalizing preincts to 2045 TVA
47	ACEC Dellwood substation: Install line breakers to sectionalize Y-146	2016***	2016	1	T-D interconnection	added sectionalizing projects to 2015 TYA

1 48		2015 TYA	2015 TYA			G
48 I	System Addition	Preliminary Network Need Year	Preliminary Projected In-Service Year	Planning Zone	Need Category	Comment
	Montello substation: Install 2 line breaker on line Y-17 to sectionalize	2016***	2016	1	T-D interconnection	added sectionalizing projects to 2015 TYA
49	Guenther substation: loop T-20 in and out	2016***	2016	1	T-D interconnection	added sectionalizing projects to 2015 TYA
₅₀ E	Bloomington substation: Install SCADA controlled breakers to sectionalize	2016***	2016	3a	Operating flexibility	added sectionalizing projects to 2015 TYA
	Williams Bay substation: Loop X44 in and out	2016***	2016	3b	T-D interconnection	added sectionalizing projects to 2015 TYA
	Red Maple substation: Install a bus tie breaker	2016***	2016	4	Operating flexibility	added sectionalizing projects to 2015 TYA
5_	Zone 2 switching initiative	ASAP***	2016	2	Operating flexibility	
33	Canal Substation: Install 138-kV breakers on 138/69-kV transformers	2017***	2017	4	operating flexibility, reliability	
<u> </u>		2017***	2017	4	(69P1.3 with prior maintenance) reliability (P5.5)	
	Canal Substation: Install redundant bus differentials on 138-kV buses Creekview Substation: 138 kV line construction to serve T-D				. ,	
56 j	nterconnection Highway V Substation: Install 138-kV and 69-kV breakers on 138/69-kV	2017***	2017	4	T-D interconnection operating flexibility, reliability	
57 t	ransformers	2017***	2017	4	(69P1.3 with prior maintenance)	
58 E	Birchwood substation: Install a bus tie breaker	2017***	2017	3b	T-D interconnection	added sectionalizing projects to 2015 TYA
₅₉	Mukwonago substation: Install line breaker on line 67K61	2017***	2017	5	Operating flexibility	added sectionalizing projects to 2015 TYA
00	Construct Fairwater-Mackford Prairie 69-kV line	2018*	2017	1	reliability (69P1.2)	
	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	2018*	2017	1	reliability (69P1.2), condition	
,	West Middleton-Stage Coach 69-kV uprate 6927, short term fix	2018**	2017	3a	reliability (P1.2, 69 P1.3, P2.1)	
	Badger Coulee: La Crosse area - North Madison - Cardinal 345-kV line construction	2018***	2018	3a	reliability, economics and policy benefits	
	Branch River Substation: Construct new 345-kV switching station	2018	2018	4	new generation	
	Ogden St. Networking Project: Ogden St Bayshore 69-kV line	2018*	2018	4	T-D interconnection	
—	Point Beach Substation: Install new series 345-kV breaker for circuit Q-303	2018	2018	4	new generation	
	Colley Road-Brick Church 69-kV rebuild Y-32	2018*	2018	3b	reliability (P1.2, 69P1.3, 69P7,	
	Forest Junction 138-kV Substation: Install redundant bus differential	2019	2018	4	P6) condition reliability (stability E2.5)	
		2010	2018	4	system intact (P0)	
03	Forest Junction 138kV Substation: Install 25 Mvar inductor				, ,	
	Werner West 138kV Substation: Install 25 Mvar inductor	0000	2018	4	system intact (P0)	
/ 1	Saukville substation: Install parallel breaker on line 8222 West Marinette substation: Install 138-kV and 69-kV circuit switchers on	2020	2018	5	reliability (P2.1) reliability (various TPL	
72 4	38/69-kV transformers	2014***	2018	4	categories)	
73 ^N	M13-Reinforcement-Bunker Hill-Blackbrook	2019**	2019	1	reliability (P1.2) operating flexibility, reliability	
7 -	Atlantic Substation: Reconfiguration	2019	2019	2	(69P5)	
75 a	Bay Lake: Benson Lake Substation Construct new 138-kV substation and install 150 Mvar SVC (near Amberg Substation)	ASAP***	2019	2	reliability (various TPL categories)	
76	Presque Isle - Tilden 138 kV line loop into National and uprate National - Filden 138 kV line	2019	2019	2	reliability (P1.2, P6)	
77 1	Bay Lake: Morgan - Stiles 138-kV circuit de-bifurcate to form 2 separate 138-kV lines	ASAP***	2019	4	reliability (various TPL categories)	
E	Bay Lake: Morgan Substation reconfigure and expand 345-kV and 138-kV switchyards	ASAP***	2019	4	reliability (various TPL categories)	
	Bay Lake: North Appleton - Morgan 138 kV line construction	ASAP***	2019	4	reliability (various TPL categories)	
	Bay Lake: North Appleton - Morgan 345 kV line construction	ASAP***	2019	4	reliability (various TPL	
E	Bay Lake: North Appleton Substation Construct new 345-kV switchyard	ASAP***	2019	4	categories) reliability (various TPL	
(and reconfigure 138-kV switchyard Construct a new 138/69-kV substation on Spring Valley - North Lake	2019	2019	3b & 5	categories) T-D interconnection,reliability	Part of Spring Valley-Lake Geneva Project
,	Geneva 138-kV circuit Construct a new 69-kV circuit from Twin Lakes to the new substation	2019	2019	3b & 5	(69P1.2) T-D interconnection, reliability	Part of Spring Valley-Lake Geneva Project
0.5	Construct a new Spring Valley-North Lake Geneva 138-kV circuit	2019	2019	3b & 5	(69P1.2) T-D interconnection,reliability	. s s. spinig valley Lake Geneva i Toject
04					(69P1.2) T-D interconnection,reliability	Part of Carina Valley Lake Careya Design
65	Bain - Spring Valley 138-kV uprate 63141	2019	2019	3b & 5	(69P1.2) T-D interconnection, reliability	Part of Spring Valley-Lake Geneva Project
80	Fwin Lakes - Katzenberg 69-kV rerate Y-102 Somers substation: Close the N.O. Somers - Albers 138-kV line and install	2019	2019	3b & 5	(69P1.2)	Part of Spring Valley-Lake Geneva Project
87 r	N.O. bus tie breaker at Somers 7-121: re-rate 1.2 miles of 69 kV line between Council Creek and Tomah	2019***	2019	5	T-D interconnection reliability (P1), operating	
88 I	ndustrial Park	2015	2019	1	flexibility	
89	City Limits 138-kV bus reconductor	ASAP	2019	4	reliability (P3.2)	
90 F	Pine River-9 Mile 6921/6923 Minimum Asset Renewal and Uprate	***	2020	2	reliability (69P1.2), condition	
91	Cardinal - Hickory Creek 345-kV line construction	2020***	2020	3a	reliability, economics and policy benefits	
92	Plains - National 138-kV project	2014***	2020	2	reliability (various TPL categories)	NARA
	Plains 345/138-kV project (2-500 MVA replace existing)	2014***	2020	2	reliability (various TPL categories)	NARA

	A	В	D	l F		G
1	System Addition	2015 TYA Preliminary Network Need Year	2015 TYA Preliminary Projected In-Service Year	Planning Zone	Need Category	Comment
94	Plains - Arnold 138-kV uprate	2014***	2020	2	reliability (various TPL categories)	NARA
95	Morgan - Thunder 138-kV project	2014***	2020	4	reliability (various TPL categories)	NARA
96	Morgan - Plains 345-kV loop into new Thunder 345-kV substation.	2014***	2020	4	reliability (various TPL categories)	NARA
97	Thunder substation: install 345/138-kV and 138/69-kV transformers, convert 1 ckt of Thunder to Crivitz to 138-kV	2014***	2020	4	reliability (various TPL categories)	NARA
98	Highway V - Preble 138-kV line uprate	2014***	2020	4	reliability (various TPL categories)	
99	Depere - Glory Rd 138-kV overhead line rebuild	2014***	2020	4	reliability (various TPL categories)	
100	Southestern Wisconsin Northeastern Illinois Reinforcement Project	2014***	2020	5	reliability(P7)	
101	Wesmark Substation: Install 2-8 Mvar 69-kV capacitor banks	>2030	2020	4	reliability (69P2.1)	
	West Middleton - Stagecoach 69 kV line rebuild 6927	2018**	2020	3a	reliability (P1.2, P1.3)	
_	Winona - Atlantic 69-kV line rebuild Winona69	2022	2022	2	reliability	
104	Spring Green substation: Install a second 138/69-kV transformer	2022	2022	3a	reliability (69 P1.3)	
105	Construct Shoto to Custer 138-kV line	>2030	2022	4	reliability (69P1.2, 69P1.3)	
106	Custer Substation: Install 138/69-kV transformer	>2030	2022	4	reliability (69P1.2, 69P1.3)	
107	Boscobel 69 kV Substation: Install 1-8.16 Mvar capacitor bank	2023	2023	3a	reliability (69 P2.1) Long lead time analysis	
108	Granville substation: install redundant bus differentials on 345-kV and 138-kV buses	2023	2023	5	reliability (stability E2.5)	
	Arcadian substation: install redundant bus differentials on 345-kV and 138-kV buses	2023	2023	5	reliability (stability E2.5)	
110	Colley Road substation: Install 2nd 100 MVA 138/69kV transformer	2023	2023	3b	reliability (69P1.2)	
111	Arcadian-Waukesha 138-kV lines KK9942/KK9962 rebuild	2029	2025	5	reliability (P3.2)	
112	Brick Church substation: Install 2-24.5 Mvar 138-kV capacitor bank and 1-18 Mvar 69-kV capacitor bank	>2030	2025	3b	reliability (P1.2, 69P1.2)	
113	Portage - Columbia 138-kV line rebuild X-13	2030	2025	3b	reliability (P1.2)	
114	Portage - Columbia 138-kV line rebuild X-20	2030	2025	3b	reliability (P1.2)	
115	Aviation - North Fond du Lac 138-kV rebuild G-111	2025	2025	4	reliability (P3.2)	
116	West Middleton-Pheasant Branch 69-kV line rebuild 6963	>2030	2028	3a	reliability (69 P1.2)	
117	Construct Cardinal-Blount 138-kV line	2030	2029	3a	reliability (P6)	
118						
119						
120						
121	Legend	1				
122	* = dates based on approved project scope ISDs	i				
123	** = SBRM Study Need Year					
124	*** = Other Major Project Study need year					
125						
126						
127	Orange Shading = new project, was not in previous Assessment project list					
128	Gray Shading = some change (e.g. In-service year or scope) since previous Assessment					

2015 10-Year Assessment Preliminary Cancellations

System Addition	Previous Assessment Projected In-Service Year	Planning Zone
Pleasant Prairie - Zion 345-kV line uprate 2221	2020	5
Victoria-Winona 69 kV line construction	2019	2
Uprate Winnecone - Sunset Point Y-103	2019	1
Center St - S. Beaver Dam 69 kV line uprate Y-59	2026	3b