		1 2020								
S 1 411	2019	2020 Estimated In				Planned /	MISO MTEP			-
Project Name	Estimated In-Service Year	Service	ZONE	Need Category	Planning Event	Proposed / Provisional	Appendix (BOLD = Certified)	MTEP PRJID	Cost	Explaination
Peterment Occursit Occale (V. 40). OPOM Installation	III-Gervice real	Year		Communication					¢ 0.500,000,00	
Petenwell - Council Creek (X-40), OPGW Installation Hilltop SS, Install 69kV Breakers	2020	2024	1	Communication Condition and Performance		Planned Planned	A in MTEP21 A in MTEP17	19587 12031	\$ 8,600,000.00 \$ 1,000,000.00	
Wautoma - Wild Rose 69kV (Y-180), Partial Rebuild	2020	2020	1	Condition and Performance		Planned	A in MTEP18	13770	\$ 5,500,000.00	In-Service
Wild Rose - Harrison 69kV (Y-19), Partial Rebuild	2020	2020	1	Condition and Performance		Planned	A in MTEP18	12147	\$ 14,400,000.00	
Harrison SS, Install 69kV Breakers	2021	2021	1	Condition and Performance		Planned	A in MTEP17	12051	\$ 2,700,000.00	Proposed to Planned Status / Updated Cost Estimate
Caroline SS, Transformer (T31) 69kV Breaker and Relay Asset Renewals	2021	2021	1	Condition and Performance		Planned	A in MTEP18	14986	\$ 4,488,625.00	
Saratoga - Coyne 115kV (T-72), Rebuild	2021	2021	1	Condition and Performance		Planned	A in MTEP17	12178	\$ 6,600,000.00	
Whitcomb SS, Transformer (T31) 69kV Breaker Asset Renewals										
	2021	2021	1	Condition and Performance		Planned	A in MTEP18	14987 13243	\$ 5,469,503.00	ICV Changed / Hadatad Coat Fatimate
Winneconne SS, Relay and Breaker Replacement Chaffee Creek SS - Lincoln Pump Station 69kV (Y-18), Rebuild	2021	2023	1	Condition and Performance Condition and Performance		Planned Planned	A in MTEP18 A in MTEP18	10486	\$ 2,150,000.00 \$ 9,600,000.00	ISY Changed / Updated Cost Estimate
Wautoma - Chaffee Creek 69kV (Y-49), Rebuild	2023	2023	1	Condition and Performance		Planned	A in MTEP18	7764	\$ 14,500,000.00	
McKenna - Castle Rock 69kV (Y-47), Rebuild	2025	2025	1	Condition and Performance		Planned	A in MTEP18	7763	\$ 10,740,000.00	
Lincoln Pump Station - McKenna 69kV (Y-145), Rebuild	2025	2025	1	Condition and Performance		Planned	A in MTEP18	7765	\$ 9,000,000.00	From Proposed to Planned Status
J821 GIC Zenith SS - Generator Interconnection Facilities and Network Upgrades		2021	1	G-T Interconnection		Planned	A in MTEP20	18567	\$ 7,235,132.00	GIA Signed
Waupaca Area Energy Storage Project	2021	2021	1	Operational Flexibility	prior + P1.2	Planned	A in MTEP19	15947	\$ 8,071,000.00	Expected to be Certified in Early 2020 as part of MTEP19 / Proposed to Planned Status
Venus SS, new inductor bank	2025	2025	1	Reliability	P0	Provisional	B in MTEP19	15945	\$ 1,800,000.00	
Weston - Sherman Street, 115kV line (Z-52), uprate		2023	1	Reliability	P6 and P7	Proposed	A in MTEP20	14909	\$ 997,000.00	
Petenwell - Saratoga 138kV (X-43), Line Rebuild	2022	2022	1	Reliability, Economic	D2 20	Proposed	A in MTEP20	18017	\$ 24,500,000.00	Cost Estimated Updated
Maine - Hilltop 115kV line (U-11), uprate Big Pond SS, Retire Substation	2020	2023	1	Reliabilty Retirement	P3 and P6	Proposed Planned	A in MTEP20 A in MTEP18	14909 13831	\$ 835,000.00 \$ 454,000.00	
Venus SS, Capacitor Bank Retirement	2020	2020	1	Retirement		Planned	A in MTEP18	13831	\$ 454,000.00	In-Service
Waupaca SS, DIC, transformer addition	2021	2020	1	T-D Interconnection		Planned	A in MTEP20	18053	\$ 6,900,000.00	ISY Changed / Proposed to Planned / Moved to Target A, MTEP20 / Updated Cost Estimate
Stratford SS, DIC add 2nd transformer and substation rebuild	2019	2020	1	T-D Interconnection		Planned	A in MTEP18	15044	\$ 3,700,000.00	In-Service
Homme SS, New DIC	2020	2020	1	T-D Interconnection		Planned	A in MTEP18	13787	\$ 371,249.00	Proposed to Planned Status
Baker St SS, Add new 115-kV bus and bus tie breaker	2021	2021	1	T-D Interconnection		Planned	A in MTEP17	12115	\$ 5,800,000.00	Proposed to Planned Status / Updated Cost Estimate
Birnamwood SS, DIC replace transformer and substation rebuild		2021	1	T-D Interconnection		Planned	A in MTEP18	15128	\$ 130,000.00	Refined Scope Added
Birnamwood SS, DIC replace transformer and substation rebuild	2023	2023	1	T-D Interconnection		Planned	A in MTEP18	15128	\$ 4,500,000.00	ISY Changed / Proposed to Planned Status
Hancock SS, Replace Transformers	2019		1	T-D Interconnection		Planned	A in MTEP18	13774	\$ 4,700,000.00	In-Service In-Service
9 Mile SW STA - Pine River 69kV (6921/23), Replace select poles , x-arms, re-insulate	2025	2025	2	Condition and Performance		Provisional	B in MTEP19	16496	\$ 5,900,000.00	19711 1 1
Empire SS, Control House Replacement and Breaker & Relay Asset Renewal	2025	2024 2026	2 2	Condition and Performance		Provisional	B in MTEP19	16489	\$ 6,732,000.00 \$ 14.000.000.00	ISY Updated
North Lake - Greenstone 69kV (NLKY11), Rebuild Mass - Conover 69kV (6530), Replace select poles, reinsulate	2025	2028	2	Condition and Performance Condition and Performance		Provisional Provisional	B in MTEP19	16495	\$ 14,000,000.00 \$ 8,600,000.00	ISY Changed ISY Changed
Hiawatha - Pine River 69kV (ESE 6908), Replace select poles, cross arms.	2020	2020	2	Condition and Performance		Planned	A in MTEP18	13773	\$ 5,012,778.00	In-Service
Mackinac - McGulpin 138kV (9901 and 9903), submarine cable replacement	2021	2021	2	Condition and Performance		Planned	A in MTEP18	15145	\$ 105,000,000.00	iii dervide
Mackinac HVDC, System Control and Monitoring (SCM) Asset Renewal	2022	2022	2	Condition and Performance		Planned	A in MTEP20	18020	\$ 4,000,000.00	Proposed to Planned Status
Tilden SS, Control House Replacement and Breaker & Relay Asset Renewal	2025	2023	2	Condition and Performance		Planned	A in MTEP20	16488	\$ 5,880,000.00	Provisional to Proposed Status / Moved to Target A, MTEP20 / Cost Estimate Udpated
Nordic SS, Install 138kV Breakers	2019		2	Condition and Performance		Planned	A in MTEP17	12062	\$ 5,500,000.00	In-Service
Nine Mile SS, Install MODs for Sectionalizing										
NII KC24 Tan. Creamatana 42014/ construct new transmission line	2019	2022	2	Condition and Performance		Planned	A in MTEP18	13788	\$ 3,443,060.00	In-Service
NLKG31 Tap - Greenstone 138kV, construct new transmission line J928/J849 Indian Lake , Common Use Upgrades	2022	2022 2020	2 2	Condition and T-D Interconnection G-T Interconnection		Planned Planned	A in MTEP19 A in MTEP19	15933 17064	\$ 5,200,000.00 \$ 200,000.00	Proposed to Planned Status / Certified by MISO in MTEP19 ISY Changed
J928 - Garden Corners SS, GIC Network Upgrades	2020	2020	2	G-T Interconnection		Planned	A in MTEP19	16494	\$ 304,855.00	Certified by MISO in MTEP19
J849, Chandler SS, Interconnection Facilities and Network Upgrades	2022	2022	2	G-T Interconnection		Planned	A in MTEP19	16492	\$ 3,036,785.00	Certified by MISO in MTEP19
North Lake - M-38 138kV (NLKG31), Rerate	2020	2020	2	Line Clearance		Planned	A in MTEP18	15284	\$ 1,500,000.00	,
Forsyth SS - Gwinn SS 69kV, new line	2023	2023	2	Operational Flexibility		Provisional	B in MTEP20	18018	\$ 4,000,000.00	
Atlantic SS, 138/69kV Bus Reconfiguration and Transformer Addition	2022	2022	2	Operational Flexibility	P2.2	Planned	A in MTEP19	7586	\$ 11,600,000.00	Certified by MISO in MTEP19 / Cost Estimated Updated
Winona - Atlantic 69kV (Winona69), rebuild	2025	2025	2	Reliability	P6	Proposed	A in MTEP20	4727	\$ 13,900,000.00	Proposed to Planned / Cost Estimated Updated
Arnold SS, 80 MVAR Inductor Bank	2022	2027	2	Reliability	PO PO	Provisional	B in MTEP18	14187	< 10 M	ISY Changed
Silver River SS, New 138kV Inductor Bank	2019	2020	2	Reliability	PO	Planned	A in MTEP18	14185	\$ 4,100,000.00	In-Service
Presque Isle - Tilden 138kV, Loop and Uprate M-38 SS, New 138kV Inductor Bank	2022	2022	2	Reliability Reliability	prior + P1.2 P0	Planned Planned	A in MTEP19 A in MTEP18	15345 14185	\$ 15,300,000.00 \$ 4,100,000.00	Certified by MISO in MTEP19 / Updated Cost Estimate In-Service
Central UP, new DIC	2021	2023	2	T-D Interconnection	FU	Proposed	A in MTEP18	15133	\$ 6,200,000.00	ISY Changed
Eastern UP, new DIC	2022	2023	2	T-D Interconnection		Proposed	A in MTEP18	15130	\$ 12,593,000.00	ISY Changed
Keel Ridge SS, new DIC	2024	2025	2	T-D Interconnection		Proposed	A in MTEP18		\$ 2,600,000.00	Updated ISY
Academy - Columbus 69kV (Y-21), Rebuild	2024	2024	3	Condition and Performance		Provisional	A in MTEP20	10590	\$ 3,500,000.00	Cost Estimated Updated
Darlington - Rock Branch 69kV (Y-109), Rebuild	2025	2025	3	Condition and Performance		Provisional	B in MTEP20	18046	\$ 16,600,000.00	
Rock Branch SS - Dodgeville SS 69kV (Y-35), Partial Rebuild	2027	2025	3	Condition and Performance		Provisional			\$ 9,000,000.00	ISY Changed
South Beaver Dam - Horicon 69kV (Y-134), Rebuild	2026	2026	3	Condition and Performance		Provisional	B in MTEP20	18047	\$ 14,000,000.00	
South Fond du Lac - Spring Brook 69kV (Y-133), Partial rebuild	2029	2030	3	Condition and Performance		Provisional	B in MTEP18	13739	\$ 17,000,000.00	ISY Changed / Updated Cost Estimate
Pflaum SS, Asset Renewal	2025	2025	3	Condition and Performance		Planned	A in MTEP18	13768	\$ 2,075,688.00	Proposed to Planned
Hillman - Darlington 138kV (X-14/X-101), Rebuild Husikamp SS, Relay and Breaker Replacement	2026	2026 2020	3	Condition and Performance Condition and Performance		Proposed Planned	A in MTEP18 A in MTEP18	4726 13717	\$ 21,090,000.00 \$ 506,490.00	
Portage - Staff 138kV (X-6), Rebuild	2020	2020	3	Condition and Performance		Planned	A in MTEP17	9968	\$ 12,000,000.00	Cost Estimated Updated
Staff - North Randolph 138kV (X-98), Rebuild	2020	2020	3	Condition and Performance		Planned	A in MTEP17	9974	\$ 4,300,000.00	In-Service
Waupun SS, Rebuild Substation	2020	2020	3	Condition and Performance		Planned	A in MTEP17	12100	\$ 3,736,340.00	In-Service
West Towne SS, Relay Replacements	2020	2020	3	Condition and Performance		Planned	A in MTEP18	13749	\$ 2,600,000.00	In-Service In-Service
Mount Horeb SS, Install 69kV Breakers	2020	2020	3	Condition and Performance		Planned	A in MTEP17	12903	\$ 2,500,000.00	In-Service
Sycamore SS, Install 69kV Breakers	2020	2020	3	Condition and Performance		Planned	A in MTEP17	12183	\$ 2,755,829.00	Proposed to Planned Status
Dane - Waunakee 69kV (Y-143), Rebuild	2021	2021	3	Condition and Performance		Planned	A in MTEP17	12177	\$ 7,000,000.00	
Hillside SS, Relay and Breaker Replacements	2021	2021	3	Condition and Performance		Planned	A in MTEP18	13802	\$ 1,600,000.00	Cost Estimated Updated
Sheepskin - Stoughton 69kV (Y-12), Rebuild	2021	2021	3	Condition and Performance		Planned	A in MTEP17	7600	\$ 9,800,000.00	Cost Estimated Updated
Colley Road SS, Transformer Replacement and Asset Renewal	2023	2023	3	Condition and Performance		Planned	A in MTEP20	17585	\$ 3,150,000.00	Proposed to Planned Status
Boscobel - Lone Rock 69kV (Y-124), Rebuild	2019		3	Condition and Performance		Planned	A in MTEP16	7583	\$ 32,500,000.00	In-Service In-Service

Project Name	2019 Estimated	2020 Estimated In Service	ZONE	Need Category	Planning Event	Planned / Proposed /	MISO MTEP Appendix	MTEP PRJID	Cost	Explaination
	In-Service Year	Year				Provisional	(BOLD = Certified))		
Kilbourn SS, Bus Reconfiguration and Relay Replacement	2019		3	Condition and Performance		Planned	A in MTEP18	13789	\$ 6,900,000.00	In-Service
Nelson Dewey SS, Transformer Addition and Asset Renewal	2019		3	Condition and Performance		Planned	A in MTEP16	9961	\$ 5,375,625.00	In-Service
Blount - East Campus, 69kV, (6907), underground cable replacement		2020	3	Damage		Planned	A in MTEP20	18848	\$ 9,000,000.00	Recommended for Approved in MISOs Expedited Review Project
J584 GIC Jordan SS, Generator Interconnection Facilities and Network Upgrades	2021	2021	3	G-T Interconnection		Proposed	A in MTEP19	16493	\$ 6,200,858.00	GIA Signed
J855 GIC Ebenezer SS - Generator Interconnection Facilities and Network Upgrades J870/J871 MPFCA Highland SS, Generator Interconnection Facilities	2020	2020 2020	3	G-T Interconnection G-T Interconnection		Planned Planned	A in MTEP20 A in MTEP20	18655 17525	\$ 5,526,333.00 \$ 5,524,756.00	GIA Signed Proposed to Planned / Moyard to Tarrett A MTER20 / Cost Estimated Hadated
J870 GIA Highland SS Interconnection Facilities	2020	2020	3	G-T Interconnection		Planned	A in MTEP20	18849	\$ 230,118.00	Proposed to Planned / Moved to Target A, MTEP20 / Cost Estimated Updated GIA Signed
J870/J871 MPFCA Highland SS, Generator Network Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	17525	\$ 16,655,765.00	Proposed to Planned / Moved to Target A, MTEP20 / Cost Estimated Updated
J807 GIC Falcon SS Addition - Generator Interconnection Facilities and Network Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	18566	\$ 870,186.00	GIA Signed
Gran Grae SS, Install a second 161/69kV transformer	2026	2026	3	Reliability	P1.3	Provisional			\$ 8,200,000.00	
Cardinal SS - Blount SS 138kV, construct	2031	2031	3	Reliability	P6	Provisional	С	1730	\$ 109,000,000.00	ISY Changed
West Middleton SS - Stagecoach SS 69kV (6927), Partial Rebuild	2023	2023	3	Reliability	P6	Proposed	A in MTEP20	12175	\$ 2,800,000.00	
Portage SS - Columbia SS 138kV (X-13/X-20), rebuild existing double circuit	2024	2024	3	Reliability	P1.2	Planned	A in MTEP19	4730	\$ 11,500,000.00	Proposed to Planned / Certified by MISO in MTEP19 / Updated Cost Estimate
Portage - Trienda 138kV (X-67), uprate	2020	2020	3	Reliability	P1.2	Planned	A in MTEP14	1624	\$ 1,791,970.00	In-Service
Huiskamp SS - Waunakee SS (Y-132), Switch Replacement	2019		3	Reliability	P6 P1.2	Planned	A in MTEP18 A in MTEP14	13824 3808	\$ 288,500.00	In-Service
Spring Valley SS - North Lake Geneva SS 138kV, Construct Cardinal SS - Hickory Creek SS 345kV, Line Construction	2019	2023	3	Reliability Reliability, Economic and Policy	P1.2	Planned Planned	A in MTEP14	3127	\$ 70,500,000.00 \$ 492,200,000.00	In-Service
Klondike SS, New DIC	2023	2020	3	T-D Interconnection		Planned	A in MTEP19	14906	\$ 872,230.00	In-Service
Green County, new DIC	2022	2022	3	T-D Interconnection		Planned	A in MTEP18	15129	\$ 4,000,000.00	Proposed to Planned / Cost Estimated Updated
Barneveld SS, DIC, new substation	2023	2023	3	T-D Interconnection		Planned	A in MTEP20	18052	\$ 12,320,000.00	Proposed to Planned / Moved to Target A, MTEP20 / Cost Estimated Updated
Dam Heights SS, DIC and new radial line	2020	2020	3	T-D Interconnection		Planned	A in MTEP18	15045	\$ 4,200,000.00	Cost Estimated Updated
Koshkonong SS, new DIC	2020	2020	3	T-D Interconnection		Planned	A in MTEP18	14905	\$ 1,000,000.00	In-Service
Muscoda SS, DIC add 2nd transformer and substation rebuild	2020	2021	3	T-D Interconnection		Planned	A in MTEP18	15124	\$ 3,290,000.00	ISY Change
J855 GIC Ebenezer SS - Generator Interconnection Facilities and Network Upgrades		2020	3	G-T Interconnection		Planned	A in MTEP20	18665	\$ 5,526,333.00	GIA Signed
Portage Industrial Park SS, DIC, replace transformers and substation rebuild	2021	2021	3	T-D Interconnection		Planned	A in MTEP18	15127	\$ 3,000,000.00	Proposed to Planned Status
Milton Lawns SS, DIC add 2nd transformer and line breakers Northern Lights Substation, new T-D Interconnection	2021	2021	3	T-D Interconnection		Planned	A in MTEP18 A in MTEP17	15131	\$ 3,000,000.00	Drawaged to Diamond Chabus
Waterloo SS, new DIC	2021	2021	3	T-D Interconnection T-D Interconnection		Planned Planned	A in MTEP17	12346 14906	\$ 21,235,700.00 \$ 3,622,800.00	Proposed to Planned Status Cost Estimated Updated
J947 Tennyson SS, Generator Interconnection Facilities and Network Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	19145	\$ 5,608,810.00	GIA Signed
J807 J819 J864 J870 J871 J947 MPFCA Common Use Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	19226	\$ 440,000.00	MPFCA Signed
J807 J819 J850 MPFCA Common Use Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	19245	\$ 372,880.00	MPFCA Signed
J864 J870 J871 J947 MPFCA Common Use Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	19246	\$ 1,406,518.00	MPFCA Signed
J807 J819 J850 J947 MPFCA Common Use Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	19247	\$ 199,855.00	MPFCA Signed
J807 J819 J870 J947 MPFCA Common Use Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	19248	\$ 181,784.00	MPFCA Signed
J807 J864 J870 J871 J947 MPFCA Common Use Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	19267	\$ 537,753.00	MPFCA Signed
J807 J819 J947 MPFCA Common Use Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	19268	\$ 4,067,713.00	MPFCA Signed
J864 J870 J871 MPFCA Common Use Upgrades		2021	3	G-T Interconnection		Planned	A in MTEP20	19269	\$ 915,243.00	MPFCA Signed
J818 Jefferson SS Generator Interconnection Facilities and Network Upgrades J850 North Creek SS, Generator Interconnection Facilities and Network Upgrades		2022	3	G-T Interconnection G-T Interconnection		Planned Planned	A in MTEP20 A in MTEP20	18925 19146	\$ 5,032,559.00 \$ 12,572,372.00	GIA Signed GIA Signed
J864 Lone Rock SS Generator Interconnection Facilities and Network Upgrades		2022	3	G-T Interconnection		Planned	A in MTEP20	19225	\$ 1,767,400.00	GIA Signed
Stiles SS - West Marinette SS (M117/L142), OPGW Installation	2023	2023	4	Communication		Planned	A in MTEP19	15936	\$ 5,600,000.00	Certified by MISO in MTEP19
Edgewater SS - Lodestar SS 138kV (X-48/Y-31), Underground cable rebuild	2022	2023	4	Condition and Performance		Proposed	A in MTEP19	15925	\$ 11,400,000.00	Updated ISY / Certified by MISO in MTEP19
Pioneer SS - Crivitz SS 138kV (E-83/B-2), retire 69kV and reconfigure load to 138kV	2022	2022	4	Condition and Performance		Planned	A in MTEP18	14926	\$ 20,400,000.00	Proposed to Planned / ISY Changed
Danz Ave SW STA - University (WPS) 69kV (O-15), underground rebuild & OPGW	2023	2023	4	Condition and Performance		Proposed	A in MTEP19	15924	\$ 14,800,000.00	Certified by MISO in MTEP19
Cedar Ridge Wind Generation - Mullet River 138kV (X-97), Rebuild	2020	2020	4	Condition and Performance		Planned	A in MTEP17	12148	\$ 18,500,000.00	In-Service In-Service
Finger Road - Canal 69kV (J-10), Rebuild	2020	2020	4	Condition and Performance		Planned	A in MTEP16		\$ 56,639,999.00	In-Service
Redwood - First Ave 69kV (T-46), Replace the submarine cable	2020	2021	4	Condition and Performance		Planned	A in MTEP18	8444	\$ 12,500,000.00	ISY Changed / Updated Cost Estimate
Butte Des Morts - Sunset Point 138kV, Rebuild	2021	2021	4	Condition and Performance		Planned	A in MTEP17	12185	\$ 20,600,000.00	
Cloverleaf SS, Replace Dead End and Switches	2021	2021	4	Condition and Performance		Planned	A in MTEP18	13728	\$ 1,062,784.00	
Erdman SS, Transformer and Breaker Asset Renewal	2021	2022	4	Condition and Performance		Planned	A in MTEP19	15931	\$ 7,000,000.00	ISY Updated / Certified by MISO in MTEP19
Bayport SS - Pioneer SS 138kV, rebuild as a double-circuit	2021	2022	4	Condition and Performance		Planned	A in MTEP18	14706	\$ 47,400,000.00	ISY Changed / Proposed to Planned Status
Shoto SS, Transformer (T1) and Breaker Asset Renewal	2021	2021	4	Condition and Performance		Planned	A in MTEP18	14988	\$ 5,700,000.00	ISY Changed
Edgewater SS, Bus Reconfiguration	2022	2022	4	Condition and Performance		Planned	A in MTEP18	13756	\$ 9,800,000.00	
Finger Rd - Danz 69kV (L-64), Rebuild	2022	2022	4	Condition and Performance		Planned	A in MTEP18	12141	\$ 4,230,000.00	
Hwy V - Finger Rd 69kV (U-47), Rebuild	2022	2022	4	Condition and Performance		Planned	A in MTEP18	12140	\$ 1,520,000.00	
New Holstein - Custer 69kV (P-68), Rebuild	2022	2022	4	Condition and Performance		Planned	A in MTEP18	7584	\$ 32,800,000.00	Cost Estimated Updated
Wesmark SS, Relay and Breakers	2022	2022	4	Condition and Performance		Planned	A in MTEP18	13747	\$ 811,572.00	ICV Character
Morgan SS, Breaker Asset Renewal and Facility Upgrades Pulliam SS, Transformer Retirement and Bus Reconfiguration	2023	2022	4	Condition and Performance Condition and Performance	prior + P1.2	Planned Planned	A in MTEP20 A in MTEP20	16606 15930	\$ 5,000,000.00 \$ 4,000,000.00	ISY Changed Cost Estimated Updated
Finger Road SW STA - Wesmark 69kV (FIRY11), Rebuild	2022	2022	4	Condition and Performance	prior + r 1.2	PLanned	A in MTEP18	12134	\$ 14,400,000.00	Cost Estimated Opuated
Glenview SS, Transformer Retirement and Breaker & Relay Asset Renewal	2023	2023	4	Condition and Performance		Planned	A in MTEP20	18019	\$ 2,200,000.00	Cost Estimated Updated
Wesmark - Rapids 69kV (R-44), Rebuild	2024	2024	4	Condition and Performance		Planned	A in MTEP18	12135	\$ 21,500,000.00	
Oak St - Hwy V 69kV (Z-26), Rebuild	2025	2025	4	Condition and Performance		Planned	A in MTEP18	12137	\$ 9,000,000.00	
New Holstein SS, Install 69kV Breaker	2019		4	Condition and Performance		Planned	A in MTEP18	13791	\$ 537,221.00	In-Service
Manrap SS, Install 69kV Breakers	2020		4	Condition and Performance		Planned	A in MTEP17	12184	\$ 1,336,964.00	In-Service
Caldron Falls - Goodman 69kV (J-88), Rebuild	2020		4	Condition and Performance		Planned	A in MTEP16	9977	\$ 25,206,000.00	In-Service
Forest Junction SS, Relieve Market Congestion	2020	2020	4	Economic	prior + P1.2	Planned	A in MTEP18	16164	\$ 2,000,000.00	Proposed to Planned Status
J886 GIC Kewaunee SS, Interconnection Facilities and Network Upgrades	2020	2020	4	G-T Interconnection		Planned	A in MTEP20	17526	\$ 2,300,000.00	In-Service
J505 GIC Apollo SS, Generator Interconnection and Network Facilities	2021	2021	4	G-T Interconnection	DC.	Planned	A in MTEP18	14925	\$ 8,300,000.00	ISV Changed / Torret A MITEDOO / Coat Father to the dated
Howards Grove SS - Erdman SS 138kV, new line	2026	2023	4	Reliability	P6	Provisional	A in MTEP20	18568 14964	\$ 25,000,000.00 \$ 635,000.00	ISY Changed / Target A MTEP20 / Cost Estimate Updated
Lost Dauphin - Red Maple 138kV (Q-147), uprate Edgewater SS - Erdmann SS 69kV (Y-31), rerate	2020	2023	4	Reliability Reliability	P6 prior + P1.2	Proposed Planned	A in MTEP21 A in MTEP18	13824	\$ 2,350,000.00	
Pulliam SS, Install redundant bus differential	2020	2020	4	Reliability	stability P5.5	Planned	A in MTEP18		\$ 2,350,000.00	ISY Changed
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	2040	2020				Dlanned /	MISO MTEP			
Project Name	2019 Estimated In-Service Year	Estimated In Service Year	ZONE	Need Category	Planning Event	Planned / Proposed / Provisional	Appendix (BOLD = Certified)	MTEP PRJID	Cost	Explaination
20th Street SS, Install two 138kV 8.16 MVAR Capacitor Banks	2020	2021	4	Reliability	prior + P1.2	Planned	A in MTEP19	14908	\$ 2,500,000.00	ISY Changed / Updated Cost Estimate
Huebner SS, Install two 138kV 8.16 MVAR Capacitor Banks	2021	2021	4	Reliability	prior + P1.2	Planned	A in MTEP19	14908	\$ 2,400,000.00	Certified by MISO in MTEP19
Riverside SS, Bus Uprate	2022	2022	4	Reliability	prior + P1	Planned	A in MTEP18	13832	\$ 80,000.00	
Ellinwood SS, Upgrade 138kV Bus	2019		4	Reliability	prior + P1	Planned	A in MTEP17	12103	\$ 2,400,000.00	In-Service
Forest Junction SS, Install 25 MVAR Inductor	2019		4	Reliability	system intact P0	Planned	A in MTEP17	7581	\$ 1,800,000.00	In-Service
Sheboygan County SS, DIC, substation rebuild	2022	2023	4	T-D Interconnection		Proposed	A in MTEP20	18051	\$ 8,000,000.00	Provisional to Proposed / Target A in MTEP20
30th Avenue SS, DIC, replace transformer	2020	2020	4	T-D Interconnection		Planned	A in MTEP18	14905	\$ 2,200,000.00	
Ogden St SS, Network Project: Ogden St - Bayshore 69kV Line Construction	2020	2020	4	T-D Interconnection		Planned	A in MTEP15	4732	\$ 17,100,000.00	Cost Estimated Updated
Packaging SS, new DIC	2020	2020	4	T-D Interconnection		Planned	A in MTEP18	15132	\$ 9,800,000.00	In-Service
Bayridge SS, new T-D Interconnection	2025	2022	4	T-D Interconnection		Planned	A in MTEP16	10485	\$ 2,122,335.00	ISY Changed
Preble SS, DIC, add 4th transformer and substation rebuild	2022	2022	4	T-D Interconnection		Planned	A in MTEP20	17628	\$ 3,498,694.00	Proposed to Planned Status
Roosevelt SS, Construct	2022	2022	4	T-D Interconnection		Planned	A in MTEP16	10686	\$ 1,102,365.00	Proposed to Planned Status
Edgewater SS, DIC, replace transformer and substation rebuild	2023	2024	4	T-D Interconnection		Planned	A in MTEP18	15126	\$ 5,100,000.00	ISY Changed / Proposed to Planned Status / Cost Estimate Updated
Eaton SS, new T-D Interconnection	2022	2024	4	T-D Interconnection		Planned	A in MTEP16	10484	\$ 2,500,000.00	ISY Changed / Proposed to Planned Status
Lincoln - Bluemound (43rd St) 138kV (5053), replace underground cable	2024	2024	5	Condition and Performance		Provisional	B in MTEP20	18048	\$ 30,000,000.00	
Burlington SS, Install 138kV Breakers	2021	2021	5	Condition and Performance		Planned	A in MTEP17	12058	\$ 2,000,000.00	Proposed to Planned Status
Bain SS, Control House and Breaker Asset Renewal	2021	2021	5	Condition and Performance		Planned	A in MTEP19	15932	\$ 8,500,000.00	Certified by MISO in MTEP19
Paris - Burlington 138kV (8962), Rebuild	2021	2021	5	Condition and Performance		Planned	A in MTEP18	13732	\$ 12,560,000.00	
Barton - Auburn 138kV (9752), Partial Rebuild	2022	2022	5	Condition and Performance		Planned	A in MTEP18	13743	\$ 7,050,000.00	ISY Changed
St. Lawrence - Barton 138kV (8032), Partial Rebuild	2021	2022	5	Condition and Performance		Planned	A in MTEP18	13735	\$ 8,400,000.00	ISY Changed
Range Line SW STA, Control House Replacement and Asset Renewal	2022	2022	5	Condition and Performance		Planned	A in MTEP19	15928	\$ 7,100,000.00	Certified by MISO in MTEP19
Summit - Cooney 138kV (6431), Rebuild	2023	2022	5	Condition and Performance		Planned	A in MTEP19	15457	\$ 4,100,000.00	Updated ISY / Certified by MISO in MTEP19
Norwich - Barland 138kV (NWHG41), Re-insulate	2019		5	Condition and Performance		Planned	A in MTEP18	13821	\$ 310,000.00	In-Service
St Lawrence SS, Breaker replacement and asset renewal	2019		5	Condition and Performance		Planned	A in MTEP18	13746	\$ 253,393.00	In-Service
Waukesha SS, Relay and Breaker Replacements	2019	2024	5	Condition and Performance	etability F2 D	Planned	A in MTEP18 B in MTEP19	13742	\$ 836,447.00	In-Service
Granville SS, Control House and Relay Replacement and Asset Renewal Arcadian SS, Power Transformer and Control House Replacement and Asset Renewal	2024	2024	5	Condition and Performance / Reliability Condition and Performance / Reliability	stability E2.D stability E2.D	Provisional Planned	A in MTEP20	16490 16486	\$ 24,000,000.00 \$ 40,000,000.00	Cost Estimated Updated
J850/J878 MPFCA East Paris New SS	2023	2023	5	G-T Interconnection	Stability E2.D	Proposed	A in MTEP20	18985	\$ 25,525,101.00	MPFCA Signed
Port Washington SS - Saukville SS 138kV (762), Rebuild to a double circuit	2021	2022	5	Reliability	P2.4, P7.1	Planned	A in MTEP16	9986	\$ 21,000,000.00	Cost Estimated Updated
Lincoln SS, Bus Reconfiguration	2019	2021	5	Reliability	prior + P1.2	Planned	A in MTEP18	13738	\$ 4,100,000.00	In-Service
Juneautown SS, new T-D Interconnection	2020	2020	5	T-D Interconnection	prior + r 1.2	Planned	A in MTEP18	13104	\$ 33,884,000.00	III-Service
State Line SS, new DIC	2020	2020	5	T-D Interconnection		Planned	A in MTEP18	14604	\$ 6,300,000.00	In-Service / Cost Estimated Updated
Arcadian SS, Construct D-T	2020	2021	5	T-D Interconnection		Planned	A in MTEP17	13067	\$ 514,000.00	ISY Changed / Updated Cost Estimate
J878 GIC Paris SS, Generator Interconnection Facilities and Network Upgrades		2022	5	G-T Interconnection		Planned	A in MTEP20	19265	\$ 2,353,840.00	GIA Signed
Mount Pleasant Tech Interconnection	2019		5	T-D Interconnection		Planned	A in MTEP18	14073	\$ 117,000,000.00	In-Service
Communication Reliability Upgrades 2022	2025	2025	various	Communication		Proposed	B in MTEP18	14965	\$ 8,851,667.00	
Communication Reliability Upgrades Current Cycle	2021	2021	various	Communication		Planned	A in MTEP18	13823	\$ 34,461,836.00	
Communication Reliability Upgrades 2019	2022	2022	various	Communication		Planned	A in MTEP18	13829	\$ 1,422,500.00	
Communication Reliability Upgrades 2020	2023	2023	various	Communication		Planned	A in MTEP19	14910	\$ 11,344,615.00	Certified by MISO in MTEP19
Communication Reliability Upgrades 2021	2024	2024	various	Communication		Planned	A in MTEP20	14911	\$ 10,927,208.00	Target A in MTEP20 / Cost Estimated Updated
Small Capital Project and Asset Renewal 2022	2025	2025	various	Condition and Performance		Proposed	B in MTEP18	14964	\$ 30,489,835.00	
Small Capital Project and Asset Renewal Current Cycle	2021	2021	various	Condition and Performance		Planned	A in MTEP18	13821	\$ 38,457,451.00	
Small Capital Project and Asset Renewal 2019	2022	2022	various	Condition and Performance		Planned	A in MTEP18	13822	\$ 8,007,814.00	
Small Capital Project and Asset Renewal 2020	2023	2023	various	Condition and Performance		Planned	A in MTEP19	14908	\$ 35,906,079.00	Certified by MISO in MTEP19
Small Capital Project and Asset Renewal 2021	2024	2024	various	Condition and Performance		Planned	A in MTEP20	14909	\$ 38,913,412.00	Proposed to Planned / Target A in MTEP20 / Cost Estimated Updated
Line Clearance Mitigation Project 2022	2025	2025	various	Line Clearance		Proposed	B in MTEP18	14966	\$ 7,100,000.00	
Line Clearance Mitigation Project Current Cycle	2021	2021	various	Line Clearance		Planned	A in MTEP18	13824	\$ 18,718,669.00	
Line Clearance Mitigation Project 2019	2022	2022	various	Line Clearance		Planned	A in MTEP18	13825	\$ 5,832,204.00	
Line Clearance Mitigation Project 2020	2023	2023	various	Line Clearance		Planned	A in MTEP19	14912	\$ 12,062,247.00	Certified by MISO in MTEP19
Line Clearance Mitigation Project 2021	2024	2024	various	Line Clearance		Planned	A in MTEP20	14913	\$ 3,791,502.00	Target A in MTEP20 / Cost Estimated Updated
Physical Security 2022	2025	2025	various	Physical Security		Proposed	B in MTEP18	14967	\$ 9,165,536.00	
Physical Security Current Cycle	2021	2021	various	Physical Security		Planned	A in MTEP18	13826	\$ 67,198,396.00	
Physical Security 2019	2022	2022	various	Physical Security		Planned	A in MTEP18	13828	\$ 3,000,000.00	
Physical Security 2020	2023	2023	various	Physical Security		Planned	A in MTEP19	14914	\$ 21,603,965.00	Certified by MISO in MTEP19
Physical Security 2021	2024	2024	various	Physical Security		Planned	A in MTEP20	14915	\$ 17,908,909.00	Target A in MTEP20 / Cost Estimated Updated
Load Interconnection 2022	2025	2025	various	T-D Interconnection		Proposed	B in MTEP18	14968	\$ 38,475,000.00	
Distribution Interconnection Current Cycle	2021	2021	various	T-D Interconnection		Planned	A in MTEP18	14904	\$ 6,436,258.00	
Distribution Interconnection 2019	2022	2022	various	T-D Interconnection		Planned	A in MTEP18	14905	\$ 10,570,000.00	0.000 11.000000000000000000000000000000
Load Interconnection 2020	2023	2023	various	T-D Interconnection		Planned	A in MTEP19	14906	\$ 26,774,954.00	Certified by MISO in MTEP19
Load Interconnection 2021	2024	2024	various	T-D Interconnection		Planned	A in MTEP20	14907	\$ 20,124,594.00	Target A in MTEP20 / Cost Estimated Updated

LEGEND

Green Shading = Project In-Service (Interm Updates Only)
No Shading = No change to project since previous Assessment

Orange Shading = new project, was not in previous Assessment project list

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

COMMONLY USED DEFINITIONS

DIC - Distribution Interconnection
GIA - Generator Interconnection Agreement

American Transmission Co.

GIC - Generator Interconnection MPFCA - Multi-Party Facility Agreement

MISO MTEP Appendix - Indicates MTEP Cycle, Cycles MTEP18 and prior are Certified in MISOs' Regional Plan for A projects (**BOLDED**), MTEP20 and future cycles are not yet certified at the time of publication (3/2020).