

Project Table Field Legend

Appendix A contains projects which are being or have been approved by MISO Board of Directors. Transmission Owners are obligated to make a good faith effort to construct projects in Appendix A.

Appendix B projects have been reviewed by MISO staff for need and effectiveness.

Project table has blue highlighted header. A project may have multiple facilities.

Facility table has beige highlighted header. A project's facilities may have different in service dates.

Project Table Field Legend

Field	Description
Target Appendix	Target appendix for the MTEP16 planning cycle. "A in MTEP16" projects were reviewed and approved in MTEP16. This column also indicates what projects were approved in prior MTEPs that are not yet in
App AB	Appendix the project is in. B>A for projects moving during this planning cycle.
Region	MISO Planning Region: Central, East, West or South
Geographic Location by TO Member System	Project geographic location by Transmission Owner member systems
PrjID	Project ID: MISO project identifier
Project Name	Project name (short name)
Project Description	A description of the project's components
State 1	State project is located or first state if in multiple states
State 2	If applicable, the second state the project is located
Allocation Type per FF	Project Type per Attachment FF of Tariff. BaseRel is Baseline Reliability, GIP is Generator Interconnection Project, TDSP is Transmission Delivery Service Project, MEP is Market Efficiency Project, MVP is Multi Value Project, Other is none of the above. Preliminary project allocation types may be designated for projects in Appendix B
Share Status	Cost allocation status for projects in Appendix A or moving to Appendix A in current planning cycle. Projects are Shared, Not Shared or Excluded. Preliminary sharing designations may be input for Appendix B projects
Other Type	Indicates the project driver behind Other type projects.
Estimated Cost	Total estimated project cost from Facility table
Expected ISD (Min/Max)	Dates when project is expected to be in service. Min and Max dates. Expected ISD are in Facility table.
Max kV	Maximum facility voltage in project. Summary information from Facility table
Min kV	Minimum facility voltage in project. Summary information from Facility table
Transmission Project Category	Bottom-Up, Top-Down or Externally Driven per BPM-020 r15 section 2.3

Appendices A, B: Project Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PrjID	Project Name	Project Description	State 1	State2	Allocation Type per FF	Share Status	Other Type	Estimated Cost	Expected ISD (Min)	Expected ISD (Max)	Max kV	Min kV	Transmission Project Category
A in MTEP16	B>A	Central	AmerenIL	3005	S. Belleville-Tilden Terminal Equipment U	Baldwin 138 kV Substation - Construct a 5 position 138 kV ring bus at Baldwin Substation (5 - 3000 A, 40 kA PCBs). Build a 138 kV double-circuit line between Baldwin Substation and the tap to the South Belleville-Tilden 1526 138 kV line by rebuilding 2 miles of existing single-circuit 138 kV line to double-circuit capability, both circuits to have 2000 A summer emergency capability.	IL	IL	Other		Reliability	\$3,400,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP16	B>A	Central	AmerenIL	7820	Hennepin-Kewanee-6101 Reconductoring	Upgrade terminal equipment at Hennepin terminal.	IL	IL	Other		Condition	\$300,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP16	B>A	Central	AmerenIL	7860	Effingham 138-Effingham NW Increase G	Effingham 138-Effingham, Northwest 138 kV Line - Elevate 2.72 miles of 954 kcmil ACSR conductor to permit operation at 120 degrees C. Upgrade terminal equipment at Effingham 138 Substation.	IL	IL	BaseRel			\$2,000,000	6/1/2016	6/1/2016	138		Bottom-up
A in MTEP16	B>A	Central	AmerenIL	7869	Alsey Tap (Ballard) Breaker Station	Install 138 kV breaker station near tap to the PPI Alsey Plant on the Jerseyville, Northwest-Meredosa-1 138 kV line. May be an ultimate 6-breaker ring bus.	IL	IL	Other		Reliability	\$6,626,495	5/1/2016	5/1/2016	138		Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9261	Searitt Breaker Station	Build a 3-breaker 138 kV ring bus (Searitt Breaker Station) adjacent to the N. Decatur-Latham-1566 138 kV line near the planned Enbridge Pumping Station. Build a radial 138 kV line to the new customer substation.	IL	IL	Other		Reliability	\$4,563,667	6/1/2016	12/1/2017	138		Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9722	Frederick, North 138-69 kV Transformer R	Replace existing 138-69 kV transformer bank with 112 MVA unit.	IL	IL	Other		Distribution		10/3/2016	10/3/2016	138	69	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9726	Fogarty 138-34.5 kV Transformer Connect	Provide 138 kV connection to supply 138-34.5 kV transformer	IL	IL	Other		Distribution	\$1,726,448	6/1/2018	6/1/2018	138	34.5	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9727	Wakefield Substation	Establish 138 kV ring bus; connect to South Bloomington-Clinton-1372 line to supply Wakefield Substation	IL	IL	Other		Distribution	\$7,430,056	6/1/2019	6/1/2019	138	34.5	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9736	East Quincy-Hamilton-4 Reconductoring	Replace existing conductor	IL	IL	Other		Condition	\$8,315,916	5/1/2016	5/1/2016	138	138	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9741	E. Collinsville-Porter Road Terminal Equip	Upgrade terminal equipment at Porter Road	IL	IL	Other		Reliability	\$50,000	5/24/2016	5/24/2016	138	138	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9845	Gallatin 138 kV Ring Bus	Construct 138 kV ring bus	IL	IL	Other		Distribution	\$5,621,250	5/1/2017	5/1/2017	138	69	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9853	Mt. Vernon, West Terminal Equipment	Upgrade terminal equipment in Prairie State-Mt. Vernon, West position	IL	IL	Other		Condition		6/1/2017	6/1/2017	345	345	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9869	Havana-Springfield 138 kV Upgrade	Upgrade terminal equipment	IL	IL	Other		Condition		6/1/2017	6/1/2017	138	138	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	9873	Edwards 138-69 kV Transformer Addition	Install 138-69 kV Transformer	IL	IL	Other		Distribution		12/1/2016	12/1/2016	138	69	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	10884	Roxford Substation - Replace 345/138 kV	Roxford 345/138 kV Substation - Replace 345/138 kV, 560 MVA transformer with a 700 MVA unit, and install a 3000 A, 50 kA PCB to place the transformer on its own position at Roxford Substation.	IL	IL	BaseRel			\$3,611,589	5/23/2016	5/23/2016	345	138	Bottom-up
A in MTEP16	B>A	Central	AmerenIL	10904	Brokaw-Gibson City South-1582 Recond	Rebuild to 1200 A summer emergency capability. Upgrade line terminal equipment at Gibson City South Substation.	IL	IL	Other		Condition	\$10,318,299	12/1/2016	12/1/2016	138		Bottom-up
A in MTEP16	B>A	Central	AmerenIL	11063	Rising-North Champaign-1592 Terminal U	Upgrade terminal equipment at Rising Substation on the Rising-North Champaign-1592 138 kV line position.	IL	IL	Other		Condition	\$1,747,553	12/1/2016	12/1/2016	138		Bottom-up
A in MTEP16	B>A	Central	AmerenMO	10483	Cape-Kelso-2 and Kelso-Miner-2 - Increas	Increase ground clearance to and perform line hardware verification to permit operation at 120 degrees C. Upgrade terminal equipment at Cape, Kelso, and Miner Substations.	MO	MO	Other		Condition	\$5,586,082	12/1/2016	12/1/2016	161	161	Bottom-up
A in MTEP16	B>A	Central	AmerenMO	10604	Page-Sioux-4 Reconductoring	Replace 14.28 miles of 2-300 kcmil Copper conductor with conductor matching or exceeding the capability of the rest of the line (954 kcmil ACSR conductor)	MO	MO	Other		Condition		12/1/2016	12/1/2016	138		Bottom-up
A in MTEP16	B>A	Central	CWLD	10162	McBaine Line Terminal Upgrades	Upgrade McBaine-McBaine Tap line to 249 MVA (300501 bus), Replace a switch (from 600 A to 1200 A) and a wave trap (from 600 A to 2000 A). Limiting element will be conductor at 895 A = 249 MVA.	MO	MO	Other		Reliability	\$50,000	3/1/2016	3/1/2016	161		Bottom-up
A in MTEP16	B>A	Central	DEI	2873	Danville E. 69kV looped feed	Construct new Danville East substation near HRH hospital- single 22.4MVA transformer - 6945 ckt to be looped through	IN	IN	Other		Distribution	\$990,000	6/1/2018	6/1/2018	69	12	Bottom-up
A in MTEP16	B>A	Central	DEI	9834	Noblesville to Tipton W. 230kV Rebuild	Noblesville to Tipton West 23008 ckt: Replace all single/H-frame pole structures with steel poles, reconductor with 954ACSR45X7 OVAL / OPGW and build Switching Station with 3-2000A line switches near existing Carmel 146th St. junction.	IN	IN	Other		Condition	\$12,079,985	12/31/2018	12/31/2018	230		Bottom-up
A in MTEP16	B>A	Central	DEI	9850	Lebanon Prairie Crk. 69kV Switching Stati	New Lebanon Prairie Crk. 69kV Switching Station to be inserted in the 6983 ckt.	IN	IN	Other		Distribution	\$3,518,244	12/31/2017	12/31/2017	69		Bottom-up

Appendices A, B: Project Table 10/03/2016

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A in MTEP16	B>A	Central	DEI	9854	Speed 138kV - Brkr Replacements	Speed 138kV - Replace OCB 13850, 13857, 13869, 13881, 138138 TIE and obsolete relays on CIR 13850, 13857, 13881.	IN	IN	Other		Condition	\$2,264,125	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	Central	DEI	9855	Columbus North Brkr / Relay Replacements	Columbus North: Replace OCB 6975, 6929, 69230-1, 6950 and obsolete relays on CIR 6929, 6950, 6975, 6982. Also replace relays on CIR 23019.	IN	IN	Other		Condition	\$2,711,016	12/31/2020	12/31/2020	230	69	Bottom-up
A in MTEP16	B>A	Central	DEI	9856	Walton 230-69kV Brkr Replacements	Walton: Replace OCB 69 KV CAP BK, 69230-1, 69110, 69 KV TRANSFER, 6927, 6987, 23020-21.	IN	IN	Other		Condition	\$3,303,866	12/31/2017	12/31/2017	230	69	Bottom-up
A in MTEP16	B>A	Central	DEI	9858	Bedford 345 Brkr / Xfmr Replacements	Bedford 345: Replace 345/138kV Bank 7, Replace relays on CIR 6995, 13829, 13837, 34506, 34521. Replace all 69kV and 138kV Oil Circuit Breakers.	IN	IN	Other		Condition	\$12,078,813	12/31/2018	12/31/2018	345	69	Bottom-up
A in MTEP16	B>A	Central	DEI	9888	MiddleFork to Deer Crk. Jct. 69kV rebuild	Rebuild 6988 ckt. from MiddleFork sub to deadend 879/1041-01 and from Deer Cr Jct to 879/1046. 477acsr@120C w/ OPGW - 187 wood poles to be replaced with light duty steel.	IN	IN	Other		Condition	\$4,860,632	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP16	B>A	Central	DEI	9889	Sharpsville to Kokomo SE 69kV rebuild	Rebuild 69174 ckt. from Sharpsville sub to Kokomo SE. 477acsr@120C w/ OPGW - 174 wood poles to be replaced with light duty steel.	IN	IN	Other		Condition	\$4,287,945	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP16	B>A	Central	DEI	9890	Gibson Sta. to Merom Sta. 345kV Deadend	Gibson to Merom: Install (10) double deadend structures in the 34511 ckt.	IN	IN	Other		Condition	\$4,433,734	12/31/2017	12/31/2017	345		Bottom-up
A in MTEP16	B>A	Central	DEI	9891	Flat Rock to Hope Jct. 69kV Pole Replacement	Flat Rock to Hope Jct. 6975 ckt. pole replacements (45), replace line switches at both ends. Transfer existing conductor to new poles.	IN	IN	Other		Condition	\$1,087,274	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP16	B>A	Central	DEI	9892	Lewis Crk. to Flat Rock 69kV Pole Replacement	Lewis Crk. to Flat Rock 6975 ckt. pole replacements (100), replace line switches at Lewis Crk with 1200A. Transfer existing conductor to new poles.	IN	IN	Other		Condition	\$1,875,342	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP16	B>A	Central	DEI	9893	Shelbyville Northeast CB and Relay Replacement	Shelbyville Northeast - Replace CIR 6946, 6976, 69183, 13803, 13865 relays, replace OCBs 6946, 6976, 69183, 69138-1, 13803, replace Bank 1 ground switch with circuit switcher, and station battery.	IN	IN	Other		Condition	\$3,511,433	6/1/2017	6/1/2017	138	69	Bottom-up
A in MTEP16	B>A	Central	DEI	9897	River Ridge Gateway 138-12kV New Sub.	River Ridge Gateway 138-12kV Sub. to be inserted in the 13857 ckt. between Clark Maritime and HE Northport	IN	IN	Other		Distribution	\$1,000,000	6/1/2018	6/1/2018	138	12	Bottom-up
A in MTEP16	B>A	Central	DEI	9905	Sharpsville to Windfall Jct. 69kV rebuild	Rebuild 69174 from Sharpsville sub to Windfall Jct - 477acsr@120C w/ OPGW - 81 wood poles to be replaced with light duty steel. Replace (3) Windfall Jct switches with 1200A. Install new motor mechs on 69-1 and 69-3 at Windfall Junction.	IN	IN	Other		Condition	\$2,179,983	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP16	B>A	Central	DEI	9914	Mohawk to Lee Hanna 69kV rebuild	Rebuild 5.84 mile 69kV - 69130 ckt. from Mohawk to Mohawk Ind. Jct to Lee Hanna Jct with 954ACSR@120C - replace (2) Lee Hanna Jct line switches with 1200A	IN	IN	Other		Condition	\$3,741,298	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP16	B>A	Central	DEI	9926	Spelterville 138-34kV Sub Expansion	Spelterville: expand sub footprint, Install 138/34kV 60MVA Bank	IN	IN	Other		Condition	\$1,000,000	12/31/2018	12/31/2018	138	34	Bottom-up
A in MTEP16	B>A	Central	DEI	10144	Cayuga Station 230kV Breakers Replacement	Cayuga Gen. Sta.: Replace existing 230kV OCBs 23011-03, 23013-11, 230B9-13 and associated disconnect switches. New brkrs will be 3000 amp, 63KIA with 3000A disc switches.	IN	IN	BaseRel		Condition	\$1,536,000	12/31/2017	12/31/2017	230		Bottom-up
A in MTEP16	B>A	Central	DEI	11343	Lafayette SE to General Foods Jct 13808	Lafayette SE to General Foods Jct 13808 Reconnector: rebuild 0.64 mile of 138kV line with 954acsr@120C	IN	IN	BaseRel		Condition	\$1,060,000	6/1/2018	6/1/2018	138		Bottom-up
A in MTEP16	B>A	Central	IPL	9220	Parker Substation Breaker Replacements	Replacement of three (3) 138 kV breakers at Parker Substation; Two line breakers for the 132-07 and 132-17 transmission lines and a bus-tie breaker.	IN	IN	BaseRel		Condition		12/31/2018	12/31/2018	138		Bottom-up
A in MTEP16	B>A	Central	IPL	9221	Southport Substation Breaker Replacement	Replacement of one (1) 138 kV breaker at Southport Substation; One line breaker for the 132-29 transmission line.	IN	IN	BaseRel		Condition		12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	Central	IPL	9222	Thompson 138 kV Substation Breaker Replacement	Replacement of three (3) 138 kV breakers at Thompson 138 kV Substation; Two line breakers for the 132-68 and 132-77 transmission lines and a bus-tie breaker.	IN	IN	BaseRel		Condition		12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	Central	IPL	9223	River Road Substation Breaker Replacement	Replacement of one (1) 138 kV breaker at River Road Substation; One bus-tie breaker.	IN	IN	BaseRel		Condition		12/31/2018	12/31/2018	138		Bottom-up

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A in MTEP16	B>A	Central	IPL	9602	Mooresville Substation Breaker Replacement	Replacement of three (3) 138 kV breakers at Mooresville Substation; Two (2) line breakers for the 132-24 and 132-24 lines and a bus-tie breaker.	IN	IN	BaseRel				12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	Central	IPL	11123	Guion Relay Addition	Addition of redundant bus differential (87) relay at Guion 345 kV south bus section.	IN	IN	BaseRel				7/15/2017	7/15/2017	345		Bottom-up
A in MTEP16	B>A	Central	IPL	11523	Stout CT - Stout North Line Rating Upgrade	Increase line rating from 322 to 345 MVA	IN	IN	Other		Reliability		6/30/2021	6/30/2021	138		Bottom-up
A in MTEP16	B>A	Central	IPL	11643	Replace Failed Stout Auto	Replace Failed Stout Auto	IN	IN	Other		Condition		6/1/2017	6/1/2017	345		Bottom-up
A in MTEP16	B>A	Central	PPI	9564	Turris Tap Breaker Station, Turris-Athens	Construct Turris tap 138 kV 4-breaker station, Turris-Athens 138 kV transmission line, Athens 138/69 kV substation, Athens Tap 69 kV switching station	IL	IL	Other		Reliability	\$16,297,000	12/1/2019	12/1/2020	138	69	Bottom-up
A in MTEP16	B>A	Central	Vectren	4393	Y67-2 Dubois - Huntingburg Rebuild	Rebuild and Reconductor approx. 3.5 miles of 69 kV	IN	IN	Other		Distribution	\$2,625,000	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP16	B>A	Central	Vectren	9940	Elliott Dist Sub and Y52 69kV Line Loop	New Distribution Substation with 9.375MVA 69kV/12kV transformer and Y52 69kV loop from Elliott sub to Sunbeam sub for load growth	IN	IN	Other		Distribution	\$1,350,000	12/31/2015	12/31/2015	69	12	Bottom-up
A in MTEP16	B>A	Central	Vectren	9942	Z85 138kV Line Relocation for Road Wide	Public Roadway relocation of 1.25 miles of Z85 138kV line	IN	IN	Other		Relocation	\$1,200,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	Central	Vectren	9946	Adams Substation for Distribution	69kV/12kV distribution substation to serve customer load (Y65).	IN	IN	Other		Distribution	\$2,100,000	12/31/2018	12/31/2018	138	12	Bottom-up
A in MTEP16	B>A	Central	Vectren	9948	Y56 69kV Line Rebuild from Pelzer to Chr	69kV line Y56 rebuild from Pelzer to Chrisney substations.	IN	IN	Other		Distribution	\$6,800,000	12/31/2019	12/31/2019	69		Bottom-up
A in MTEP16	B>A	Central	Vectren	9952	Y43 Berry Plastics Sub Loop Feed	Berry Plastics Substation loop feed (69kV Y43).	IN	IN	Other		Distribution	\$300,000	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP16	B>A	East	CETO	9543	Stamping Plant 138 kV Circuit Breaker Re	Increase short-circuit capacity of the 177 and 188 circuit breakers	MI	MI	BaseRel			\$560,000	6/30/2016	6/30/2016	138		Bottom-up
A in MTEP16	B>A	East	CETO	9544	CE Annual Breaker Replacement Program	CE Breaker Replacement Program - 2017	MI	MI	Other		Condition	\$1,240,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	CETO	9545	CE Annual Breaker Replacement Program	Breaker Replacement Program for 2016	MI	MI	Other		Condition	\$1,380,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	East	CETO	9859	CE Line Equipment Replacement Program	Replace cross arms, insulators, guying, and switches as needed to maintain the lines' condition	MI	MI	Other		Condition	\$160,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	East	CETO	9860	CE Line Equipment Replacement Program	Replace cross arms, insulators, guying, and switches as needed to maintain the lines' condition	MI	MI	Other		Condition	\$160,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	CETO	9861	CE Pole Replacement Program - 2016	Replace damaged or defective poles with new poles	MI	MI	Other		Condition	\$360,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	East	CETO	9862	CE Pole Replacement Program - 2017	Replace damaged or defective poles with new poles	MI	MI	Other		Condition	\$680,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	CETO	9863	CE Line Sag Remediation - 2016	Install poles or replace spans of conductor to remediate sag limits	MI	MI	Other		Reliability	\$400,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	East	CETO	9865	CE Relay Replacement Program - 2016	Replace electromechanical and/or defective relays with new digital relays	MI	MI	Other		Condition	\$240,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	East	CETO	9866	CE Relay Replacement Program - 2017	Replace electromechanical and/or defective relays with new digital relays	MI	MI	Other		Condition	\$480,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	CETO	9868	CE Substation Equipment Replacements	Replace damaged or defective substation equipment, not including breakers or relays, with new equipment	MI	MI	Other		Condition	\$560,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	East	CETO	9870	CE Substation Equipment Replacements	Replace damaged or defective substation equipment, not including breakers or relays, with new equipment	MI	MI	Other		Condition	\$500,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	CETO	9871	Edenville-Edenville Jct 138 kV Line Rebuild	Rebuild the north portion of the Edenville-Edenville Jct 138 kV Line, approximately 9.8 miles, utilizing 138 kV single circuit construction and 336.4 ACSR conductor.	MI	MI	Other		Condition	\$4,170,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	CETO	9872	Edenville-Edenville Jct 138 kV Line Rebuild	Rebuild the south portion of the Edenville-Edenville Jct 138 kV Line, approximately 2.0 miles, utilizing 138 kV single circuit construction and 336.4 ACSR conductor.	MI	MI	Other		Condition	\$850,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP16	B>A	East	CETO	9874	Cole Creek Spur 138 kV Line Rebuild	Rebuild the Cole Creek-Cole Creek Jct 138 kV Line, approximately 4.7 miles, utilizing 138 kV single circuit construction and 795 ACSR conductor.	MI	MI	Other		Condition	\$1,960,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	CETO	9875	Chase 138 kV Bus Rebuild	Rebuild the 138 kV portion of Chase Substation to a three breaker ring bus	MI	MI	Other		Reliability	\$3,200,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	CETO	9878	Vrooman - Complete 138 kV Bus	Complete the 138 kV bus as a ring by adding one 138 kV breaker	MI	MI	Other		Reliability	\$800,000	6/1/2018	6/1/2018	138		Bottom-up
A in MTEP16	B>A	East	CETO	10046	Beaver Creek Customer Interconnection	Consumers Energy has received a request to connect a new load near Grayling. Construct a 138 kV three breaker ring bus at Beaver Creek Substation. Replace relaying at Higgins Substation.	MI	MI	Other		Distribution	\$3,500,000	3/1/2018	3/1/2018	138		Bottom-up
A in MTEP16	B>A	East	CETO	10763	J392 Generation Upgrades-CE	Add a wavetrap and upgrade relaying at Emmet Substation to accommodate the addition of a dual-pilot relay scheme on the Emmet-Livingston 138 kV Line.	MI	MI	GI			\$874,000	6/17/2016	6/17/2016	138		Externally-Driven
A in MTEP16	B>A	East	ITCT	9685	Jacob - St. Clair 120 kV Sag Remediation	Remediate the Sag Limit on Jacob-St. Clair 120 kV to 292 MVA (1405 Amp)	MI	MI	BaseRel			\$139,000	12/31/2019	12/31/2019	120		Bottom-up
A in MTEP16	B>A	East	ITCT	9682	Seneca - Spokane 120 kV Sag Remediation	Remediate the Sag Limit on Seneca-Spokane 120 kV to 283 MVA (1362 Amp)	MI	MI	BaseRel			\$339,000	12/31/2018	12/31/2018	120		Bottom-up
A in MTEP16	B>A	East	ITCT	9883	Ironton 120 kV-Install Two Line Breakers	Install two 120 kV breakers to terminate the two River Rouge-Ironton 120 kV connections at Ironton	MI	MI	BaseRel			\$910,000	12/31/2019	12/31/2019	120		Bottom-up
A in MTEP16	B>A	East	ITCT	9884	Belle River - Pontiac 345 kV Sag Remediation	Raise the Sag Limit on Belle River-Pontiac 345 kV to 1414 MVA (2366 Amp)	MI	MI	Other		Reliability	\$340,000	12/31/2019	12/31/2019	345		Bottom-up
A in MTEP16	B>A	East	ITCT	9887	Pontiac - Wixom 345 kV Sag Remediation	Raise the Sag Limit on Pontiac-Wixom 345 kV to 1185 MVA (1983 Amp)	MI	MI	Other		Reliability	\$305,000	12/31/2019	12/31/2019	345		Bottom-up
A in MTEP16	B>A	East	ITCT	9900	River Rouge - Ironton #2 120 kV Sag Remediation	Raise the Sag Limit on River Rouge-Ironton #2 120 kV to 271 MVA (1304 Amps)	MI	MI	BaseRel			\$340,000	12/31/2018	12/31/2018	120		Bottom-up

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A in MTEP16	B>A	East	ITCT	9902	Sterling 120 kV Ring Bus	Install a new 120 kV bus and one 120 kV breaker to convert Sterling to a ring bus. Also move the Sterling transformer #201 connection to the new bus and install a disconnect switch on the low side. Breaker "HT" will become the bus-tie between bus #101 and #104	MI	MI	BaseRel			\$1,100,000	12/31/2018	12/31/2018	120		Bottom-up
A in MTEP16	B>A	East	ITCT	9994	Custer - Monroe 120 kV Line Rebuild	Rebuild the entire Custer - Monroe 120 kV line. Pre-build it to 230 kV construction to facilitate possible future 230 kV expansion in southern Michigan. Replace all existing structures and conductor with new double-circuit structures that are designed for bundled 954 ACSR 54/7 conductor and install this conductor along with an OPGW path. Also, upgrade terminal equipment at Custer and Monroe	MI	MI	BaseRel			\$14,500,000	12/31/2019	12/31/2019	120		Bottom-up
A in MTEP16	B>A	East	ITCT	9998	2017 ITCT Asset Replacement Program	Replace aging and outdated equipment on a cycle that will ensure each piece of equipment is replaced near its expected end of life. Modern equipment can improve reliability, use state of the art technology, and typically will allow for longer maintenance intervals. New equipment is also commonly equipped with better monitoring and alarming functionality giving improved remote supervision. All of this will help to reduce overall maintenance costs	MI	MI	Other		Reliability	\$47,970,000	12/31/2017	12/31/2017	345	120	Bottom-up
A in MTEP16	B>A	East	ITCT	9999	2018 ITCT Asset Replacement Program	Replace aging and outdated equipment on a cycle that will ensure each piece of equipment is replaced near its expected end of life. Modern equipment can improve reliability, use state of the art technology, and typically will allow for longer maintenance intervals. New equipment is also commonly equipped with better monitoring and alarming functionality giving improved remote supervision. All of this will help to reduce overall maintenance costs.	MI	MI	Other		Reliability	\$53,250,000	12/31/2018	12/31/2018	345	120	Bottom-up
A in MTEP16	B>A	East	ITCT	10000	2019 ITCT Asset Replacement Program	Replace aging and outdated equipment on a cycle that will ensure each piece of equipment is replaced near its expected end of life. Modern equipment can improve reliability, use state of the art technology, and typically will allow for longer maintenance intervals. New equipment is also commonly equipped with better monitoring and alarming functionality giving improved remote supervision. All of this will help to reduce overall maintenance costs.	MI	MI	Other		Reliability	\$53,310,000	12/31/2019	12/31/2019	345	120	Bottom-up
A in MTEP16	B>A	East	ITCT	10010	ITCT Customer Interconnections - Year 20	Customer interconnection requests and retirements.	MI	MI	Other		Distribution	\$2,000,000	12/31/2019	12/31/2019	120		Bottom-up
A in MTEP16	B>A	East	ITCT	10243	Navarre 120 kV Breakers HX Replacement	Upgrade the existing Navarre 120 kV breaker HX to have an interrupting capability of 50 kA.	MI	MI	Other		Reliability	\$70,000	6/30/2018	6/30/2018	120		Bottom-up
A in MTEP16	B>A	East	ITCT	10270	Apache - Seneca 120 kV Sag Remediation	The proposed solution is to remediate the sag limit on the Apache - Seneca 120 kV line to 230 MVA (1107 Amp).	MI	MI	BaseRel		Reliability	\$202,000	12/31/2018	12/31/2018	120		Bottom-up
A in MTEP16	B>A	East	ITCT	10425	J340 Generation Interconnection	Rebuild 5.3 miles of the existing 120 kV Cosmo tap to double circuit steel poles, relocate the Harvest Wind tap point, and string 954 ACSR to create the new J340-Harvest Wind-Grassmere 120 kV line. Expand the Grassmere station and install 1-345 kV breaker, a 345/120 kV transformer, and a 120 kV breaker on the low side of the transformer to tie in the new line.	MI	MI	GIP	Shared		\$15,150,000	9/1/2017	9/1/2017	345	120	Externally-Driven
A in MTEP16	B>A	East	ITCT	10723	Skylark	ITC will install 2-120 kV line breakers and 2-120 kV section breakers with associated disconnects at Skylark, and loop the 120 kV Northeast-Sloan line in and out. OPGW will be added on the new Northeast-Skylark and Sloan-Skylark 120 kV lines, and relay upgrades will occur at Sloan and Northeast.	MI	MI	Other		Distribution	\$5,395,000	12/1/2017	12/1/2017	120		Bottom-up
A in MTEP16	B>A	East	ITCT	10923	ITCT Pole Top Switch Additions/Replacements	Installing, or replacing as appropriate, pole-top switches at tap points of circuits will provide the operational flexibility to sectionalize parts of the line to isolate faults or perform maintenance work on it without having to shut down the entire circuit.	MI	MI	Other		Reliability	\$2,400,000	12/31/2016	12/31/2016	120		Bottom-up
A in MTEP16	B>A	East	ITCT	10924	ITCT Pole Top Switch Additions/Replacements	Installing, or replacing as appropriate, pole-top switches at tap points of circuits will provide the operational flexibility to sectionalize parts of the line to isolate faults or perform maintenance work on it without having to shut down the entire circuit.	MI	MI	Other		Reliability	\$2,400,000	12/31/2018	12/31/2018	120		Bottom-up
A in MTEP16	B>A	East	ITCT	11003	Mercury Interconnection	Construct a new 120 kV, 3 breaker substation and install approx. 0.8 miles of new double circuit structures to loop the existing Artic-Crestwood 120 kV line into the new substation. Install approx. 4.7 miles of OPGW (fiber) on the Arctic-Ranger line and upgrade relaying at Crestwood and Ranger.	MI	MI	Other		Distribution	\$10,100,000	12/1/2017	12/1/2017	120		Bottom-up

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A in MTEP16	B>A	East	ITCT	11043	Relay Modifications at Monroe to Accommodate PJM Generator Interconnection Request	Perform necessary relay modifications and install a new wave trap at Monroe in order to accommodate the PJM generator interconnection request ID# Y1-069 (in the PJM queue) which involves the construction of a new 799 MW natural gas generation facility in First Energy.	MI	MI	GIP	Shared		\$250,000	4/4/2016	4/4/2016	345		Externally-Driven
A in MTEP16	B>A	East	ITCT	11443	Ranger Interconnection Request	ITC to install 2-3000 A, 120 kV, 40 kA min. int. capability, line breakers at existing Ranger Station. DTE to replace existing transformers with 40 MVA 120/13.2 kV transformers. Upgrades will support 50MW of new load at Ranger, and 37 MW of load relocated from Ford Engineering distribution station. Trainers on the River Rouge - Warren #2 line will also be upgraded to prevent overload.	MI	MI	Other		Distribution	\$2,173,000	12/1/2017	12/1/2017	120		Bottom-up
A in MTEP16	B>A	East	ITCT	11583	J301 Generation Interconnection	TO Interconnection Facilities and Network Upgrades associated with the J301 generation interconnection project. This includes a new 345 kV, 3-breaker substation fed by looping the 345 kV Bauer-Ringle line.	MI	MI	GIP	Shared		\$9,497,000	9/1/2017	9/1/2017	345		Externally-Driven
A in MTEP16	B>A	East	ITCT	11584	J308 Generation Interconnection	345 kV, 3 Breaker Substation with relay upgrades and 0.1 miles of dbl ckt 345 kV to new substation (tapping greenwood-rapson)	MI	MI	GIP	Shared		\$9,421,000	9/1/2016	9/1/2017	345		Externally-Driven
A in MTEP16	B>A	East	ITCT	11603	J321 Generation Interconnection	The J321 TOIFs and NUs include a new 345 kV, 3-breaker substation in a ring bus configuration, and loop the Greenwood-Rapson #2 345 kV line into the new substation.	MI	MI	GIP	Shared		\$9,366,000	9/1/2017	9/1/2017	345		Externally-Driven
A in MTEP16	B>A	East	ITCT	11604	J419 Generation Interconnection	Network Upgrades and TOIFs associated with the J419 project. These include extending bus 103 and installing a 120 kV breaker with associated disconnects at Milan substation.	MI	MI	GIP	Shared		\$803,000	6/30/2018	6/30/2018	120		Externally-Driven
A in MTEP16	B>A	East	METC	2809	Garfield Avenue – Hemphill 138 kV Rebuild	Rebuild a ~9.5 mile-long portion of 336 ACSR conductor utilizing 1431 ACSR conductor on double-circuit, 138 kV structures, relocate a portion of the Weadock – Hemphill 138 kV line to the other side of the new structures.	MI	MI	BaseRel			\$11,000,000	12/31/2019	12/31/2019	138		Bottom-up
A in MTEP16	B>A	East	METC	3133	Bell Road - Cornell 138 kV Rebuild	Rebuild a ~4.3 mile-long portion of the Claremont – Cornell 2 line between Bell Road and Cornell.	MI	MI	BaseRel			\$4,350,000	12/31/2019	12/31/2019	138		Bottom-up
A in MTEP16	B>A	East	METC	9422	Coldwater Interconnection phase 1	METC would construct a 138 kV, 4-breaker substations configured into a ring bus (Newton), and build a 3 mile, 138 kV, single circuit, line on new right-of-way between Michigan Ave and Newton substations.	MI	MI	Other		Distribution	\$12,310,000	4/1/2017	6/1/2018	138		Bottom-up
A in MTEP16	B>A	East	METC	9695	Bullock 138 kV Terminal Equipment Upgrade	Upgrade terminal equipment at Bullock on the Dow Corning 138 kV line	MI	MI	BaseRel			\$300,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP16	B>A	East	METC	9705	Alma - Regal #2 138 kV Sag Remediation	Remediate the sag limit on the Alma – Regal 2 138 kV line to a minimum of 208 MVA / 871 Amps	MI	MI	BaseRel			\$200,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP16	B>A	East	METC	9876	Kam - Manning 138 kV Sag Remediation	Remediate the sag limit on the Kam - Manning 138 kV line to a minimum of 396 MVA / 1657 Amps and upgrade terminal equipment at Kam	MI	MI	BaseRel			\$620,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP16	B>A	East	METC	9932	Kam - Saginaw River 138 kV Line Rebuild	Rebuild a ~2.7 mile-long portion of six-wired 3/0 copper conductor utilizing 1431 ACSR conductor on single-circuit, 138 kV structures, remediate the sag limit on the existing 1431 ACSR conductor to a minimum of 412 MVA / 1724 Amps, and upgrade terminal equipment at both Kam and Saginaw River stations	MI	MI	BaseRel			\$8,500,000	12/31/2019	12/31/2019	138		Bottom-up
A in MTEP16	B>A	East	METC	9945	2017 METC Asset Replacement Program	Replace aging and outdated equipment on a cycle that will ensure each piece of equipment is replaced near its expected end of life. Modern equipment can improve reliability, use state of the art technology, and typically will allow for longer maintenance intervals. New equipment is also commonly equipped with better monitoring and alarming functionality giving improved remote supervision. All of this will help to reduce overall maintenance costs.	MI	MI	Other		Condition	\$54,276,000	12/31/2017	12/31/2017	345	138	Bottom-up
A in MTEP16	B>A	East	METC	9956	2018 METC Asset Replacement Program	Replace aging and outdated equipment on a cycle that will ensure each piece of equipment is replaced near its expected end of life. Modern equipment can improve reliability, use state of the art technology, and typically will allow for longer maintenance intervals. New equipment is also commonly equipped with better monitoring and alarming functionality giving improved remote supervision. All of this will help to reduce overall maintenance costs.	MI	MI	Other		Condition	\$49,398,000	12/31/2018	12/31/2018	345	138	Bottom-up
A in MTEP16	B>A	East	METC	9959	METC Customer Interconnections - Year 2	Customer interconnection requests and retirements.	MI	MI	Other		Distribution	\$2,500,000	12/31/2017	12/31/2017	138		Bottom-up

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A in MTEP16	B>A	East	METC	9960	2019 METC Asset Replacement Program	Replace aging and outdated equipment on a cycle that will ensure each piece of equipment is replaced near its expected end of life. Modern equipment can improve reliability, use state of the art technology, and typically will allow for longer maintenance intervals. New equipment is also commonly equipped with better monitoring and alarming functionality giving improved remote supervision. All of this will help to reduce overall maintenance costs.	MI	MI	Other		Condition	\$49,398,000	12/31/2019	12/31/2019	345	138	Bottom-up
A in MTEP16	B>A	East	METC	9972	METC Four Mile Control Relocation Project	Replace METC relaying and controls at Four Mile Substation. Locate the new relaying and controls in a new dedicated METC control center. Install dedicated METC AC and DC systems.	MI	MI	Other		Relocation	\$3,520,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	METC	9975	METC Verona Control Relocation	Replace METC relaying and controls at Verona Substation. Locate the new relaying and controls in a new dedicated METC control center. Install dedicated METC AC and DC systems.	MI	MI	Other		Relocation	\$2,940,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	East	METC	9978	Eureka 138 kV Breaker Replacement	Replace the Eureka 138 kV circuit switcher 256 with a synchronous breaker that has a continuous rating of 3000 amp and a minimum interrupting capability of 40 kA.	MI	MI	BaseRel			\$510,000	6/30/2018	6/30/2018	138		Bottom-up
A in MTEP16	B>A	East	METC	9984	Tittabawassee 345 kV Breaker 38H9 Repl	The proposed solution is to replace the Tittabawassee 345 kV breaker 38H9 with a breaker that has a continuous rating of 3000 amp and a minimum interrupting capability of 40 kA.	MI	MI	BaseRel			\$790,000	6/30/2018	6/30/2018	345		Bottom-up
A in MTEP16	B>A	East	METC	10286	Campbell 138 kV Remove Circuit Breaker	Remove the Campbell 508 disconnect switch. Modify the relaying to remove 588 breaker sparing capability.	MI	MI	Other		Reliability	\$88,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP16	B>A	East	METC	10323	Coldwater Phase 2 Wagner	Install a new 138 kV, 3 breaker substation (tentatively named Wagner) in a ring bus configuration in Union City, MI. Loop the existing 138 kV Alder Creek-Batavia line into Wagner, and modify relaying at Batavia to accommodate the new substation. Construct an approx. 13 mile, 138 kV line between Wagner and Newton on 138 kV, single circuit, steel poles.	MI	MI	Other		Distribution	\$34,409,000	5/31/2018	5/31/2018	138		Bottom-up
A in MTEP16	B>A	East	METC	10384	Verona - Bamum Creek Jct. 138 kV Sag R	Fully remediate the sag limit on the 266.8 ACSR conductor from the Verona – Bamum Creek Jct. section of the Verona – Batavia 138 kV circuit to the conductor rating of 730 Amps / 174 VMVA (summer emergency) using new future double circuit (FDC) structures capable of supporting 954 ACSR in order to facilitate a rebuild of this circuit in the near future.	MI	MI	BaseRel			\$1,070,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP16	B>A	East	METC	10743	Covert Gen Interconnection (PJM-T94)	Phase 1 to construct a new control house at Palisades substation and replace the relaying associated with positions RH25 and FH27. Install OPGW on the new Palisades-Segreto #1 345 kV line and remove the METC SCADA equipment at Covert.	MI	MI	GIP	Shared		\$3,605,000	9/30/2015	9/30/2015	345		Externally-Driven
A in MTEP16	B>A	East	METC	10744	J392 Generation Interconnection	Wolverine will construct the Stand Alone Network Upgrades which include the new 4 row, 11 breaker, 138 kV Van Tyle substation, laid out in a breaker and a half design. Ownership of these upgrades will be transferred to METC upon completion of the construction. METC will loop the 138 kV Livingston-Stover line into Van Tyle, and rebuild the new Livingston-Van Tyle line to double circuit structures, with OPGW being added to the new poles. 1431 ACSR conductor will be installed on both sides of the new structures to create Livingston-Van Tyle #1 and #2. A dual pilot relaying scheme will be installed on the Livingston-Emmett 138 kV line, and the Livingston substation will be expanded to include 2 new rows, and 5 additional breakers, on the 138 kV breaker and a half sub. Relaying upgrades will also occur at Gaylord.	MI	MI	GIP	Shared		\$18,087,200	5/6/2016	6/11/2016	138		Externally-Driven
A in MTEP16	B>A	East	METC	11243	Verona - Bamum Creek Jct. 138 kV Rebuil	Rebuild the Verona – Bamum Creek Jct. section of the Verona – Batavia 138 kV circuit using 954 ACSR and OGPW on new 230 kV future double circuit structures. Replace PTS 3186. Upgrade terminal equipment at the Verona station. Also reconductor approximately 0.6 miles of the Verona – Foundry 138 kV circuit where it shares common structures with the Verona – Batavia 138 kV circuit.	MI	MI	BaseRel			\$13,300,000	5/31/2018	5/31/2018	138		Bottom-up
A in MTEP16	B>A	East	METC	11683	Barnum Creek-Alder Creek 138kV Sag Re	Remediate Sag on the Barnum Creek Jct. – Alder Creek 138 kV section up to the conductor rating of 174 MVA (730 Amp.).	MI	MI	BaseRel			\$400,000	5/31/2018	5/31/2018	138		Bottom-up
A in MTEP16	B>A	East	METC	11684	Alder Creek-Wagner 138kV Sag Remedia	Remediate Sag on the Alder Creek – Wagner 138 kV section up to the conductor rating of 174 MVA (730 Amp.).	MI	MI	BaseRel			\$365,000	5/31/2018	5/31/2018	138		Bottom-up

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A in MTEP16	B>A	East	METC	11704	Denso J.-Vrooman 138kV Sag Remediation	Remediate the sag limit on the Denso J.-Vrooman 138 kV section to at least 150 MVA (628 Amp).	MI	MI	BaseRel			\$195,000	5/31/2018	5/31/2018	138		Bottom-up
A in MTEP16	B>A	East	WPSC	4385	Burnips to Fairview	Burnips to Fairview Rebuild	MI	MI	Other		Reliability	\$3,500,000	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP16	B>A	East	WPSC	9899	Redwood to Scottville Rebuild	Rebuild the Redwood to Scottville 69kV line, install new poles and hardware with 795ACSS conductor	MI	MI	Other		Reliability	\$10,500,000	12/1/2018	12/31/2018	69		Bottom-up
A in MTEP16	B>A	East	WPSC	9913	2017 Battery Bank Replacement Project	This project replaces battery banks and chargers that have reached the end of their useful life at transmission stations.	MI	MI	Other		Condition	\$70,000	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP16	B>A	East	WPSC	9915	Oden Relay Upgrade	Upgrade the relaying on the Oden-Emmet terminal	MI	MI	Other		Condition	\$35,000	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP16	B>A	East	WPSC	11023	J392 Generator Interconnection	Upgrades determined in the FEB2015 DPP studies to connect J392. Wolverine to construct the following: -Advance 138kV station and 138/69kV transformer -Gaylord 138kV 4 breaker ring bus to accommodate 3rd line into the station (2016) -Gaylord 138kV 6 breaker ring bus and 2nd 138/69kV transformer (2018) -Upgrades to Elmira, Deer Lake and Alpine distribution subs from 69kV to 138kV operation -Conversion of existing Gaylord - Advance 69kV line to 138kV operation, new lines will be Gaylord - Van Tyle and Van Tyle to Advance -Rebuild of Gaylord - Livingston 138kV line to 795ACSS	MI	MI	GIP			\$13,980,072	4/30/2016	10/31/2018	138	13.09	Externally-Driven
A in MTEP16	B>A	South	AECC	9662	Harrison South Transformer Upgrade	Upgrade the autotransformer at the Harrison South 161/69 kV substation. The four single phase 5.6 MVA, 161/69 kV transformers will be replaced with the three phase 27.5 MVA, 161/69 kV autotransformer from the Black Rock 161/69 kV substation.	AR	AR	Other		Distribution	\$600,000	1/1/2017	1/1/2017	161		Bottom-up
A in MTEP16	B>A	South	AECC	9663	Tap EAI Newport - Balch 161 kV line: Construct 20 MVA, 161/13.2 kV substation under EAI Newport - Parkin 161 kV line. The load for this substation will be transferred from the Newport and Cherokee Acres distribution delivery points. Once the load is transferred the two distribution delivery points will no longer be needed.	Construct 20 MVA, 161/13.2 kV substation under EAI Newport - Parkin 161 kV line. The load for this substation will be transferred from the Newport and Cherokee Acres distribution delivery points. Once the load is transferred the two distribution delivery points will no longer be needed. Edit: POD/substation name will likely be changed from South Newport to Newport East.	AR	AR	Other		Distribution	\$500,000	7/1/2017	7/1/2017	161	13.2	Bottom-up
A in MTEP16	B>A	South	AECC	10204	Tap EAI Moses to Bailey 161kV line, Construct 161/13.2kV Hunter North substation	Tap EAI Moses to Bailey 161kV line, Construct 161/13.2kV Hunter North substation	AR	AR	Other		Reliability	\$500,000	6/1/2018	6/1/2018	161		Bottom-up
A in MTEP16	B>A	South	AECC	10205	Bee Branch to Damascus 161kV transmission	Build 6.8 mile 161kV line from the existing AECC Bee Branch substation to the proposed Damascus substation, add 161kV line breaker, build 161/13.2kV Damascus substation.	AR	AR	Other		Distribution	\$8,000,000	2/28/2017	2/28/2017	161		Bottom-up
A in MTEP16	B>A	South	AECC	10206	Clinton West to Partain 161kV line, 161/69kV substation	Build 5 position ring bus at the AECC Clinton West substation, Build 14 mile 161kV line from the existing Clinton West substation to the proposed Partain substation, Build 3 position ring bus at the proposed Partain substation, Build the proposed Partain 161/69kV substation.	AR	AR	Other		Reliability	\$27,000,000	12/1/2020	12/1/2020	161	69	Bottom-up
A in MTEP16	B>A	South	AXLA	10122	Hunter - Downtown 138 kV Reconductor	Reconductor the existing Hunter - Downtown 138kV transmission line	LA	LA	Other		Reliability	\$340,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP16	B>A	South	AXLA	10123	Prescott - Sterkx 138 kV Reconductor	Reconductor the existing Prescott - Sterkx 138kV transmission line	LA	LA	Other		Reliability	\$490,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP16	B>A	South	CLECO	9542	Dolet Hills Mine Line Tap	Tap the existing 230 kV line from Dolet Hills to Mansfield Compressor to serve existing load which is moving its operations.	LA	LA	Other		Reliability	\$5,000,000	12/1/2016	12/1/2016	230		Bottom-up
A in MTEP16	B>A	South	CLECO	9713	Dolet Hills Breaker Replacements	Replace one of the 345 kV Breakers at Dolet Hills due to aging equipment and trouble maintaining existing breakers.	LA	LA	Other		Reliability	\$294,580	11/1/2016	11/1/2016	345		Bottom-up
A in MTEP16	B>A	South	CLECO	9715	Wax Lake Cap Switcher Replacements	Replaces existing MOS 8374 & 8373 with Cap Switcher at Wax Lake	LA	LA	Other		Reliability	\$406,013	10/1/2016	10/1/2016	138		Bottom-up
A in MTEP16	B>A	South	CLECO	10983	Hopkins Breaker Addition	Add a second Breaker in Series with Hopkins Breaker 8061.	LA	LA	Other		Reliability	\$300,000	5/1/2017	5/1/2017	138		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	4665	Mabelvale: Replace 500-115 Autos	Upgrade both Mabelvale 500/115 kV autotransformers to 598MVA.	AR	AR	BaseRel			\$17,417,000	12/1/2017	12/1/2017	500	115	Bottom-up
A in MTEP16	B>A	South	Entergy-AR	7942	Mayflower - Morgan: Rebuild 115kV line	Mayflower - Morgan: Rebuild 115kV line	AR	AR	BaseRel			\$4,877,301	6/1/2019	6/1/2019	115		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	7944	Stuttgart Ricuskey - Stuttgart Ind: Rebuild 176MVA	Stuttgart Ricuskey - Stuttgart Ind: Upgrade 115kV line to 176MVA	AR	AR	GIP			\$2,526,158	1/30/2018	1/30/2018	115		Externally-Driven
A in MTEP16	B>A	South	Entergy-AR	9673	Ei Dorado Install 2nd 500/115 Autotransformer	Install 2nd-598MVA 500/115 kV autotransformer at Ei Dorado EHV.	AR	AR	BaseRel			\$16,446,045	6/1/2018	6/1/2018	500	115	Bottom-up
A in MTEP16	B>A	South	Entergy-AR	9691	Lonoke East 115kV: 20.5MVAR Capacitor	Install new 20.5 MVAR Capacitor bank on Lonoke East 115 kV.	AR	AR	BaseRel			\$1,456,861	6/1/2017	6/1/2017	115		Bottom-up

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A in MTEP16	B>A	South	Entergy-AR	9693	Pleasant Hill: Add tertiary reactors	Add three 30 MVAR reactors on the tertiary windings of the 500/161/13.8 kV transformer at the Pleasant Hill EHV substation to maintain the voltages within the limits defined in the Entergy Local Planning Criteria.	AR	AR	BaseRel			\$2,184,660	10/1/2017	10/1/2017	500	161	Bottom-up
A in MTEP16	B>A	South	Entergy-AR	9696	Newport 161 kv: Address Newport Flicker	Build a breaker switching station "Mallory" near Newport Industrial and re-terminate the Newport-Swifton, Newport - Newport Industrial and Newport Industrial - Newport Air Base 161kV lines into Mallory. The 3.5 mile long line Newport - Mallory should be upgraded to a minimum of 545MVA (1956 Amps).	AR	AR	BaseRel			\$15,150,000	6/1/2018	6/1/2018	161		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	9697	Trumann-Trumann West: Upgrade existing	Re-build 6.5 mile long line to a minimum rating of 1300A.	AR	AR	BaseRel			\$12,115,000	6/1/2018	6/1/2018	161		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	9698	El Dorado East - El Dorado Jackson 115kV	Upgrade El Dorado East - El Dorado Jackson 115 kV line to minimum 1300A.	AR	AR	BaseRel			\$4,926,295	6/1/2018	6/1/2018	115		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	9703	Bono: New 161kV Substation	Build new 161kV substation to support load growth.	AR	AR	Other		Distribution	\$9,380,200	10/1/2017	10/1/2017	161		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	9704	London North: New 161kV Substation	Construct new London North 161kV substation	AR	AR	Other		Distribution	\$9,244,000	10/1/2017	10/1/2017	161		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	9707	Camden Maguire115kV: Reconfigure stati	Reconfigure Camden Maguire 115 kV substation so that a single bus failure will not open all the elements in the Camden Maguire substation. Some potential configurations are double bus double breaker, breaker and a half, and ring bus. The final configuration will be decided during project scoping.	AR	AR	BaseRel			\$5,772,470	6/1/2017	6/1/2017	115		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	9708	ISES 161kV: Reconfigure station	Reconfigure the Independence 161 kV station to a breaker-and-a-half configuration or a double bus/double breaker configuration to help eliminate area thermal and voltage violations.	AR	AR	BaseRel			\$9,100,851	10/1/2017	10/1/2017	161		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	9709	Mabelvale 115kV: Reconfigure Station	Reconfigure the Mabelvale 115 kV substation so that a single bus tie breaker failure will not open all the elements in the Mabelvale 115 kV substation. Some potential configurations are double bus double breaker, breaker and a half, and ring bus. The final configuration will be decided during project scoping.	AR	AR	BaseRel			\$17,446,076	6/1/2019	6/1/2019	115		Bottom-up
A in MTEP16	B>A	South	Entergy-AR	10044	Goodwin Road 115 kV: New SS for GIA J	Construct a new 115 kV 3 breaker ring bus switching station named Goodwin Road on the Stuttgart Ricuskey - Almyra 115 kV line.	AR	AR	GIP			\$10,064,000	1/30/2018	1/30/2018	115		Externally-Driven
A in MTEP16	B>A	South	Entergy-AR	11483	Benton Hurricane Lake 115 kV: New point	Cut-in new wholesale delivery point on River Ridge - Mabelvale 115 kV line	AR	AR	Other		Reliability	\$1,589,494	5/1/2017	5/1/2017	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	4634	Ninemile to Westwego 115 kV: Reconduc	Reconductor the existing Ninemile to Westwego115 kV line to achieve a minimum rating of320 MVA and upgrade terminal equipment at Ninemile and Westwego line bays to achieve the minimum rating of 320 MVA.	LA	LA	BaseRel			\$9,026,000	6/1/2018	6/1/2018	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	4639	Ninemile to Harvey2 115 kV: Reconductor	Reconductor the existing Ninemile to Harvey2 115 kV line to achieve a minimum rating of320 MVA and upgrade terminal equipment at Ninemile and Harvey2 line bays to achieve the minimum rating of 320 MVA.	LA	LA	BaseRel			\$15,121,000	6/1/2018	6/1/2018	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	7949	Solac 230-69 kV: Upgrade Both Autos	Replace both 230/69 kV AT with 300MVA	LA	LA	BaseRel			\$8,457,000	6/1/2018	6/1/2018	230	69	Bottom-up
A in MTEP16	B>A	South	Entergy-LA	7950	East Broad to Ford 69 kV line: Reconduc	Re-conductor East Broad to Ford 69 kV line	LA	LA	BaseRel			\$1,474,000	6/1/2018	6/1/2018	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	7952	Contraband to Solac 69 kV line: Recondu	Re-conductor Contraband to Solac 69 kV line	LA	LA	BaseRel			\$4,125,000	6/1/2018	6/1/2018	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9682	Vienna - Trussell Crossing: Upgrade line	Upgrade the Vienna - Trussell Crossing 115 kV to a minimum of 260MVA.	LA	LA	BaseRel			\$8,823,757	6/1/2020	6/1/2020	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9684	Cadeville: New distribution substation	Construct a new 115 kV substation in the Cadeville area to serve area load	LA	LA	Other		Distribution	\$41,643,000	6/1/2018	6/1/2018	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9686	Lake Providence: New distribution substat	Construct a new radial 115 kV transmission line to the Lake Providence area to serve area load.	LA	LA	Other		Distribution	\$31,830,074	6/1/2020	6/1/2020	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9690	Hodge: Replace existing substation	Construct a new 230 kV substation to serve area load in the Hodge area.	LA	LA	Other		Distribution	\$14,121,450	12/1/2018	12/1/2018	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9763	Baker to Blount 69kV: Reconductor Line	Upgrade the rating on the Baker to Blount 69 kV line. This includes reconductor and upgrading station equipment.	LA	LA	BaseRel			\$5,182,000	6/1/2018	6/1/2018	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9765	Harelson to Line 369 Tap 69 kV: Recondu	Reconductor the Harelson to Line 369 Tap 69 kV line.	LA	LA	BaseRel			\$3,165,000	12/1/2018	12/1/2018	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9770	Goosport to L673 TP 69 kV: Upgrade Stat	Upgrade the substation equipment at Goosport to increase the rating of the line.	LA	LA	BaseRel			\$145,205	11/18/2016	11/18/2016	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9771	SWLA69IP Phase 1: Construct Jefferson (Construct new Jefferson Davis 138/69 kV substation.	LA	LA	BaseRel			\$76,570,000	6/1/2019	6/1/2019	138	69	Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9772	SWLA69IP Phase 1: Colonial Welsh TP to	Construct a new line from Colonial Welsh Tap to the new Jefferson Davis 138 kV station.	LA	LA	BaseRel				6/1/2019	6/1/2019	138		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9773	SWLA69IP Phase 1: Jefferson Davis to C	Build a new 69 kV line from Jefferson Davis to Carter substation	LA	LA	BaseRel				6/1/2019	6/1/2019	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9774	SWLA69IP Phase 1: Jefferson Davis to C	Construct 5 miles of double circuit 69 kV with a conductor rating of at least 880 A to a cut in point on 69 kV L-13 two miles south of the existing Compton 69 kV substation. Rebuild 2 miles of 69 kV L-13 from new cut in point to Compton with a conductor rating of at least 880 A.	LA	LA	BaseRel				6/1/2019	6/1/2019	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9775	SWLA69IP Phase 1: Derouen 69 kV Cut ii	Cut the Derouen 69 kV substation in and out of Line 11.	LA	LA	BaseRel				6/1/2019	6/1/2019	69		Bottom-up

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A in MTEP16	B>A	South	Entergy-LA	9776	SWLA69IP Phase 1: Lawtag 69 kV Cut int	Cut line number 13 in and out of the Lawtag 69 kV substation. Also, close the normally open point on line number 13A.	LA	LA	BaseRel				6/1/2019	6/1/2019	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9777	SWLA69IP Phase 1: Welsh 69 kV Cut int	Cut the Welsh 69 kV substation in and out of line 13A.	LA	LA	BaseRel				6/1/2019	6/1/2019	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9778	SWLA69IP Phase 1: Colonial Welsh TP to	Reconductor the Colonial Welsh Tap to Jefferson Davis 138 kV line.	LA	LA	BaseRel				6/1/2019	6/1/2019	138		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9779	SWLA69IP Phase 2: Carter to Serpent 69	Reconductor the Carter to Serpent 69 kV line.	LA	LA	BaseRel			\$19,235,078	12/1/2018	12/1/2018	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9780	SWLA69IP Phase 3: Compton to Elton 69	Reconductor Comton to Elton 69 kV line.	LA	LA	BaseRel			\$12,782,000	12/1/2019	12/1/2019	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9782	SWLA69IP Phase 4: Lake Arthur 69 kV M	Move the normally open point at the Lake Arthur 69 kV substation.	LA	LA	BaseRel				6/1/2022	6/1/2022	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9786	Nelson 138 kV: Add L-274 to Breaker-and-	Add L-274, L-654, L-656 and L-698 to the double bus double breaker scheme at Nelson.	LA	LA	Other		Reliability	\$1,142,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9787	Air Products to Giegy 138kV: Upgrade Sut	Upgrade substation equipment on the Air Products and Giegy terminals to increase the rating of the line.	LA	LA	BaseRel			\$300,000	6/1/2016	6/1/2016	138		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9788	Port Barre 69 kV: Install Cap Bank	Install a capacitor bank at the Port Barre substation.	LA	LA	BaseRel			\$786,000	6/1/2018	6/1/2018	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9790	Swisco 138 kV: Construct New Substation	Construct a new substation to serve area load.	LA	LA	Other		Distribution	\$8,191,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9791	Thompson Road 230 kV: Construct New S	Construct a new substation to serve area load.	LA	LA	Other		Distribution	\$9,252,000	6/1/2018	6/1/2018	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9792	Lowe Grout Road 138 kV: Construct New	Construct a new substation to serve area load.	LA	LA	Other		Distribution	\$6,989,000	6/1/2019	6/1/2019	138		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9794	Repapco to Port Hudson Station 230 kV: U	Upgrade substation equipment at on the Repapco to Port Hudson 230 kV line.	LA	LA	BaseRel			\$101,000	6/1/2018	6/1/2018	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9795	Nesser 69 kV: New Cap Bank	Add a capacitor bank to the Nesser 69 kV substation.	LA	LA	BaseRel			\$1,053,000	12/1/2017	12/1/2017	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9801	North Norco 115 kV: Add Cap Bank	Add a capacitor bank to the North Norco substation.	LA	LA	BaseRel			\$1,826,000	12/1/2017	12/1/2017	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9805	Patterson to Pontchartrain Park 115 kV: R	Reconductor the Patterson to Pontchartrain Park 115 kV line	LA	LA	BaseRel			\$11,851,000	12/1/2018	12/1/2018	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9847	EGSL Underrated Breaker Project: Mossvi	Breaker number 17985 at the Mossville 69 kV substation will be replace due to the short circuit analysis.	LA	LA	Other		Reliability	\$700,000	12/1/2017	12/1/2017	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9848	EGSL Underrated Breaker Project: Mossvi	Breaker 17995 at the Mossville 69 kV substation will be replaced due to the short circuit analysis.	LA	LA	Other		Reliability		12/1/2017	12/1/2017	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	9849	EGSL Underrated Breaker Project: Carlyss	Breaker number 7840 at the Carlyss 69 kV substation will be replace due to the short circuit analysis.	LA	LA	Other		Reliability		12/1/2017	12/1/2017	69		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	10008	Nelson to Menena 230 kV: Construct New	Construct new 230 kV line from Nelson to Menena.	LA	LA	BaseRel			\$15,500,000	6/1/2020	6/1/2020	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	10223	LAGEN Holly Ridge new substation	Construct a new 115/13.8 kV distribution serving substation on the Oak Ridge - Dunn 115 kV transmission line in North Central Louisiana.	LA	LA	Other		Distribution	\$254,833	12/31/2016	12/31/2016	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	10583	Coly 230 kV: Add Breaker	Add a breaker at the Coly 230 kV substation.	LA	LA	Other		Reliability	\$1,692,865	6/1/2018	6/1/2018	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	10584	Tiger 230 kV: Add Breaker	Add a 230 kV breaker at the Tiger substation.	LA	LA	Other		Reliability	\$1,692,865	6/1/2018	6/1/2018	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	10585	Harelson 230 kV: Add Breaker	Add a breaker at the Harelson 230 kV substation.	LA	LA	Other		Reliability	\$1,692,865	6/1/2018	6/1/2018	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	10588	Fleur 230 kV Substation: New Substation	Construct a new 230 kV substation on the Oakville to Alliance 230 kV transmission line. This substation will be the primary feed to a customer in the area. Load will move from other substations in the area. Rebuild the Ninemile to Barataria 115 kV line.	LA	LA	Other		Distribution	\$42,705,000	12/31/2018	12/31/2018	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	10591	Willow Glen 500/138 kV Auto: Adjust Taps	Changing the position of the de-energized tap changer to 500kV (3/C) from 487.5kV (2/B).	LA	LA	Other		Reliability	\$15,027	6/1/2016	6/1/2016	500	138	Bottom-up
A in MTEP16	B>A	South	Entergy-LA	10623	Sadie 230 kV: Construct New Substation	Construct a new 230 kV substation on the PPG to Rosebluff 230 kV line.	LA	LA	Other		Distribution	\$24,814,742	6/1/2018	6/1/2018	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	10624	Big Lake 230 kV: Construct New Substati	Construct a new 230 kV substation on the Vincent to Graywood 230 kV line.	LA	LA	Other		Distribution	\$28,000,000	6/1/2019	6/1/2019	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	11423	Menena 230 kV: Construct New Substatio	Industrial Customer Connection This is a customer driven project to install a new 230 kV substation on the PPG to Rosebluff 230 kV line.	LA	LA	Other		Reliability	\$7,290,000	12/1/2017	12/1/2017	230		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	12016	Upgrade Minden - Sarepta 115 kV Termin	Upgrade line terminal equipment on Minden - Sarepta 115kV to increase the MVA rating to 176MW	LA	LA	Other		Economic	\$1,900,000	1/1/2020	1/1/2020	115		Bottom-up
A in MTEP16	B>A	South	Entergy-LA	12017	Southeast Louisiana Project	Construction a new 230 kV substation called Churchill. Construction of approximately 26 miles of new 230 kV transmission line connecting the existing 230 kV Waterford substation to the Churchill 230 kV substation crossing the Down Stream Gypsy load pocket interface. Re-configuration of the existing Waterford to Ninemile and Ninemile to Estelle 230 kV lines into the Churchill 230 kV substation and out to the existing Ninemile 230 kV substation to provide access to the strong sources at the Ninemile substation. Add a breaker at the Michoud 115 kV substation to address the findings during the reliability no-harm robustness analysis.	LA	LA	Other		Economic	\$87,656,751	1/1/2022	1/1/2022	230		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	9822	Harper 115 kV new switching station	Construct a new 115 kV breaker switching station.	MS	MS	Other		Reliability	\$5,300,000	12/1/2018	12/1/2018	115		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	9833	Greenville North Install 2nd Capacitor	Install 2nd 20.5 MVAR capacitor bank at Greenville North 115 kV.	MS	MS	BaseRel			\$1,185,857	6/1/2018	6/1/2018	115		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	9839	Reconfigure Gerald Andrus 230 kV line ter	Retermine Ray Braswell 230 kV line circuit into Bagby line bay. This project will be completed as part of the pre-planned Madison/Hinds Improvement Project as the scope of that project is replacing the necessary breakers at the Gerald Andrus 230 kV.	MS	MS	BaseRel			\$310,000	3/1/2018	3/1/2018	230		Bottom-up

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A in MTEP16	B>A	South	Entergy-MS	9949	Cloverdale 115kV Delivery Point	The Cloverdale DP will be served from the existing Entergy IP to Johns Manville 115kV transmission line via a looped transmission feed into a new switching station to be constructed at the DP site.	MS	MS	Other		Distribution	\$900,000			115		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	9955	Steiner 115kV Delivery Point	The Steiner DP will be located approximately 1.6 miles northeast of the existing Shaw Switching Station and will be served from Entergy's existing 115kV Cleveland to Shaw transmission line via a looped transmission feed. This DP will require installation of a new switching station with motor operated switches and other miscellaneous upgrades to accommodate the new 115kV looped service.	MS	MS	Other		Distribution	\$810,000			115		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	10863	Attala - Conehoma Creek: Upgrade line	Upgrade line rating of Attala - Conehoma Creek 115 kV line to minimum 1303A.	MS	MS	BaseRel			\$1,716,001	6/1/2017	6/1/2017	115		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	10864	Pelahatchie - Morton: Upgrade line	Upgrade the Pelahatchie - Morton 115 kV line to 1303 A.	MS	MS	BaseRel			\$5,593,224	12/31/2017	12/31/2017	115		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	10865	Morton - Forest Ind 115 kV (Southern Con	Upgrade approximately 9 miles of 115 kV line between Morton and Forest Ind (to the Southern Company tie point) to minimum 1303 A.	MS	MS	BaseRel			\$10,987,197	6/1/2018	6/1/2018	115		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	10943	Norrel Road: Construct new 230 kV subst	Construct new 230 kV substation on the Clinton Industrial - Gerald Andrus (new Tinnin substation will be cut-in during 2017-2018) 230 kV line.	MS	MS	Other		Distribution	\$9,197,916	6/1/2019	6/1/2019	230		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	11623	Gallman: Install 115 kV transmission break	Install transmission breakers at Gallman 115 kV	MS	MS	Other		Reliability	\$2,988,936	12/31/2016	12/31/2016	115		Bottom-up
A in MTEP16	B>A	South	Entergy-MS	11705	Wynndale 115 kV: Install distribution trans	Install 2x115/13.8 kV distribution transformers in the Wynndale substation.	MS	MS	Other		Distribution	\$7,789,909	12/31/2017	12/31/2017	115	13.8	Bottom-up
A in MTEP16	B>A	South	Entergy-MS	11783	McAdams Upgrade Autotransformers	Remove and replace the both a banks of autotransformers with new autotransformers with a minimum rating of at least 750 MVA per bank. Replace the existing spare single phase auto and re-configure the bus so that is usable for either bank. Add 1 - 35 MVAR reactor to autotransformer bank # 2, so there are 4 reactors for each autotransformer bank.	MS	MS	BaseRel			\$12,633,990	6/1/2020	6/1/2020	500	230	Bottom-up
A in MTEP16	B>A	South	Entergy-MS	12015	Lakeover 500/230 kV XFMR	Relocate existing 500/230 kV transformer from McAdams to Lakeover	MS	MS	Other		Economic	\$6,700,000	1/1/2020	1/1/2020	500	230	Bottom-up
A in MTEP16	B>A	South	Entergy-TX	4620	Kolbs 230 kV - Add capacitor bank	Kolbs Substation: Add two 86.4 MVAR 230 kV capacitor banks	TX	TX	BaseRel			\$3,000,000	6/1/2017	6/1/2017	230		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	7930	Heights 230 kV: Construct New Substatio	Construct new 230 kV substation for load growth in the Woodlands area to offload the New Caney 138 kV substation. New substation will be tapped into 230 kV line between China and Porter.	TX	TX	Other		Distribution	\$14,208,000	6/1/2019	6/1/2019	230	34.5	Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9806	Bryan 138-69 kV: Replace Autos & Recon	Replace the 2 138/69 kV autotransformers at the Bryan substation and reconfigure the 69 kV and 138 kV buses.	TX	TX	BaseRel			\$8,268,000	6/1/2019	6/1/2019	138	69	Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9807	Pintail 138 kV: Construct new Switching S	Expand an existing substation to include breakers and switches. This will allow a normally open point to be closed.	TX	TX	Other		Distribution	\$9,524,000	12/1/2018	12/1/2018	138		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9808	Kirbyville 69 kV: Add Cap Bank	Add a new capacitor bank to the Kirbyville 69 kV substation.	TX	TX	BaseRel			\$1,000,000	6/1/2018	6/1/2018	69		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9809	Hull to Sour Lake 69 kV: Reconductor Line	Reconductor the Hull to Sour Lake 69 kV line.	TX	TX	BaseRel			\$30,759,000	6/1/2019	6/1/2019	69		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9810	Raywood to Daisetta 69 kV: Reconductor	Reconductor the Raywood to Daisetta 69 kV line.	TX	TX	BaseRel			\$8,655,000	12/1/2019	12/1/2019	69		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9812	PARIP Garden 230 kV: Construct New 230	Port Arthur Reliability Improvement Plan: Cut the Sabine to China 230 kV line and the Nederland to Mid County 230 kV line into a new 230 kV substation named Garden.	TX	TX	BaseRel			\$65,635,000	6/1/2019	6/1/2019	230		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9813	PARIP Garden to Legend 230 kV: Constru	Port Arthur Reliability Improvement Plan: Construct a new line from the new Garden substation to the new Legend substation.	TX	TX	BaseRel				6/1/2019	6/1/2019	230		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9814	PARIP Legend 230 kV: Construct New Su	Port Arthur Reliability Improvement Plan: Construct a new substation and cut in 230 kV line 829(Port Acres to Keith Lake). The new substation will be named Legend.	TX	TX	BaseRel				6/1/2019	6/1/2019	230		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9817	Helbig 230 kV: Reconfigure Bus	Reconfigure the bus work at the Helbig 230 kV substation to represent a ring bus.	TX	TX	BaseRel			\$7,196,000	12/1/2018	12/1/2018	230		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9818	Stowell to Himex 69 kV: Convert to 138 kV	Convert the Stowell to Himex 69 kV line to 138 kV. The line is already built to 138 kV standards.	TX	TX	BaseRel			\$13,600,000	6/1/2019	6/1/2019	138		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	9852	Grimes 345/138 kV: Install Breakers on Lc	Install breakers on the low side of autotransformer number 2 at the Grimes 345/138 kV substation.	TX	TX	BaseRel			\$1,142,000	6/1/2017	6/1/2017	345		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	10823	Moscow 138 kV: Construct New Substatio	Construct a new 138 kV substation on L-411 Corrigan Bulx to Kickapoo 138 kV line to serve an industrial customer.	TX	TX	Other		Distribution	\$7,004,002	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP16	B>A	South	Entergy-TX	11363	Hartburg 500 kV: Reconfigure Line Bays	Re-position the line bays of line L-800 (Hartburg-Cottonwood 500 kV Circuit 1) and line L-547 (Hartburg-Cypress 500 kV line) at Hartburg 500 kV substation.	TX	TX	BaseRel			\$2,000,000	6/1/2017	6/1/2017	500		Bottom-up
A in MTEP16	B>A	South	Lafa	8821	Northeast to Peck	69kV line connecting Northeast station to Peck station.	LA	LA	Other		Distribution	\$4,230,000	12/31/2019	12/31/2019	69		Bottom-up

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A in MTEP16	B>A	South	SMEPA	9957	Origis Solar Project Substation	The Origis Energy solar plant will tap SMEPA's existing 69kV Line 42 (Sumrall to Rawls Springs) approximately 5.6 miles from Sumrall with a new 69kV switching station and a 69/26.4 kV GSU. Line 42 and 43 (Columbia to Sumrall) will be uprated to a higher conductor temperature via structural change outs to support the generation addition. OPGW will also be installed for communications.	MS	MS	GIP			\$1,590,000	3/23/2017	3/23/2017	69	26.4	Externally-Driven
A in MTEP16	B>A	South	SMEPA	9969	Origis Solar Project Transmission Rebuild	The Origis Energy solar plant will tap SMEPA's existing 69kV Line 42 (Sumrall to Rawls Springs) approximately 5.6 miles from Sumrall with a new 69kV switching station and a 69/26.4 kV GSU. Line 42 and 43 (Columbia to Sumrall) will be uprated to a higher conductor temperature via structural change outs to support the generation addition. OPGW will also be installed for communications.	MS	MS	GIP			\$4,782,000			69		Externally-Driven
A in MTEP16	B>A	West	ATC	3190	Rebuild Sunset Point-Winneconne 69 kV	Rebuild line Y-103 from Sunset Point to Winneconne to SNSE = 200/300 deg F	WI	WI	Other		Reliability	\$3,868,404	4/29/2016	4/29/2016	69		Bottom-up
A in MTEP16	B>A	West	ATC	7583	Rebuild Lone Rock - Boscobel 69 kV	Rebuild Y-124 from Lone Rock to Boscobel with T2-4/0 ACSR. Includes partial rebuild of Y-78 Lone Rock - Richland Center	WI	WI	Other		Condition	\$41,848,961	12/31/2015	12/31/2018	69		Bottom-up
A in MTEP16	B>A	West	ATC	7983	Install 138/69 kV Canal Breakers	Install Canal 138-69 kV transformer high/low side breaker additions	WI	WI	Other		Distribution	\$5,100,000	6/1/2017	6/1/2017	138	69	Bottom-up
A in MTEP16	B>A	West	ATC	7985	Install 138 kV Canal Redundant Bus Differ	This project consists of installing redundant bus differential protection on the two Canal 138-kV buses. The project will install two new dual SEL-487B bus differential relay panels.	WI	WI	Other		Distribution	\$221,116	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP16	B>A	West	ATC	8442	Replace Arnott 138/69 kV Transformer	Asset maintenance, Replace the Arnott 138-69 kV Tr with 60 MVA unit	WI	WI	Other		Reliability	\$4,545,000	12/31/2016	12/31/2016	138	69	Bottom-up
A in MTEP16	B>A	West	ATC	8640	Upgrade City Limits Bus 138 kV	Replace bus conductors at City Limits	WI	WI	Other		Reliability	\$500,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	West	ATC	8841	Rebuild Finger Rd - Canal 69 kV	This project is a Asset Management driven project to rebuild the main section of J-10 from Finger Road to Beardsley to Canal. The tapped lines off of J-10 and East Krok to Beardsley are not included in this scope. No substation work is included in scope.	WI	WI	Other		Reliability	\$74,000,000	12/1/2019	12/1/2019	69		Bottom-up
A in MTEP16	B>A	West	ATC	9423	Rebuild 115KV Line B-106 Plover - Whiting	Rebuild line B-106 (Plover-Okray-Whiting 115) using existing conductor 795 ACSR.	WI	WI	BaseRel			\$6,217,603	12/1/2019	12/1/2019	115		Bottom-up
A in MTEP16	B>A	West	ATC	9896	Lyndon Substation	Install 2 line breakers to sectionalize.	WI	WI	Other		Distribution	\$3,100,000	12/31/2015	12/31/2015	138		Bottom-up
A in MTEP16	B>A	West	ATC	9911	Maes Substation 138 kV	Maes substation: Install 2 line breakers to sectionalize.	WI	WI	Other		Distribution	\$1,800,000	4/22/2016	4/22/2016	138		Bottom-up
A in MTEP16	B>A	West	ATC	9917	Bloomington Substation 69kV	Install SCADA controlled breakers to sectionalize.	WI	WI	Other		Distribution	\$1,600,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP16	B>A	West	ATC	9918	Red Maple Substation 138kV	Install a bus tie breaker.	WI	WI	Other		Distribution	\$1,200,000	6/1/2016	6/1/2016	138		Bottom-up
A in MTEP16	B>A	West	ATC	9921	Birchwood Substation 138kV	Install a bus tie breaker.	WI	WI	Other		Distribution	\$700,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	West	ATC	9923	Mukwanago Substation 138kV	Install line breaker on line 67K61.	WI	WI	Other		Distribution	\$600,000	12/1/2017	12/1/2017	138		Bottom-up
A in MTEP16	B>A	West	ATC	9934	Upgrade Oak Creek - Hayes 138-kV line	Oak Creek - Hayes 138-kV line 811 upgrade and reconfiguration	WI	WI	Other		Reliability	\$21,000,000	6/30/2018	6/30/2018	138		Bottom-up
A in MTEP16	B>A	West	ATC	9938	Replace Sunset Point 138-69 kV Transfon	Replace 138/69kV power transformer with 100MVA continuous top rated transformer.	WI	WI	Other		Reliability	\$6,000,000	12/1/2016	12/1/2016	138		Bottom-up
A in MTEP16	B>A	West	ATC	9944	Replace Erdman T31 Transformer	Replace Erdman T31 Transformer.	WI	WI	Other		Reliability	\$6,000,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	West	ATC	9954	Replace Lost Dauphin T1 Transformer	Replace Lost Dauphin T1 Transformer.	WI	WI	Other		Reliability	\$6,700,000	12/1/2018	12/1/2018	138		Bottom-up
A in MTEP16	B>A	West	ATC	9958	Replace East Krok Transformer	Replace East Krok Transformer.	WI	WI	Other		Reliability	\$2,500,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP16	B>A	West	ATC	9961	Replace Nelson Dewey T31/T32 Transfon	Replace Nelson Dewey T31/T32 Transformers.	WI	WI	Other		Reliability	\$6,000,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP16	B>A	West	ATC	9977	Rebuild 69KV Line J-88 Goodman - Caldron	Rebuild 69KV Line J-88 Goodman - Caldron Falls Substation.	WI	WI	Other		Condition	\$35,000,000	6/30/2020	6/30/2020	69		Bottom-up
A in MTEP16	B>A	West	ATC	9986	Rebuild 138KV Line 762 Port Washington	Rebuild 138KV Line 762 Port Washington - Saukville Substation.	WI	WI	BaseRel			\$15,000,000	12/31/2021	12/31/2021	138		Bottom-up
A in MTEP16	B>A	West	ATC	10403	Re-rate Kegonsa - Sun Prairie (Y-81) 69kV	Re-rate Y-81 69kV line between Kegonsa - Sun Prairie.	WI	WI	Other		Reliability	\$5,000,000	4/21/2017	4/21/2017	69		Bottom-up
A in MTEP16	B>A	West	ATC	10404	Re-rate 9 Mile - Detour (6950) 69kV Line	Re-rate Approximately 56.87 miles (6950) 69kV Line between 9 Mile - Detour substations.	MI	MI	Other		Reliability	\$7,000,000	3/17/2017	3/17/2017	69		Bottom-up
A in MTEP16	B>A	West	ATC	10484	Construct Eaton 138 kV T- D	Construct a new ATC 138KV loop through at Eaton Substation.	WI	WI	Other		Distribution	\$2,500,000	6/1/2019	6/1/2019	138	24.9	Bottom-up
A in MTEP16	B>A	West	ATC	10485	Construct Bay Ridge 138 kV T- D	Construct a new ATC 138KV loop through at Bay Ridge Substation.	WI	WI	Other		Distribution	\$2,000,000	6/1/2022	6/1/2022	138	24.9	Bottom-up
A in MTEP16	B>A	West	ATC	10543	Construct T-D Escanaba North Substation	Construct T-D Escanaba North Substation (GOAB)	MI	MI	Other		Distribution	\$1,000,000	1/1/2017	1/1/2017	69		Bottom-up
A in MTEP16	B>A	West	ATC	10563	Construct T -D Oakview Substation	Construct T -D Oakview Substation	WI	WI	Other		Distribution	\$4,900,000	6/1/2018	6/1/2018	138		Bottom-up
A in MTEP16	B>A	West	ATC	10589	Rerate Whitcomb - Tigerton Tap 69kV	Rerate Whitcomb - Tigerton Tap 69kV	WI	WI	Other		Reliability	\$1,400,000	6/9/2017	6/9/2017	69		Bottom-up
A in MTEP16	B>A	West	ATC	10603	Construct T - D Springwater Substation	Construct T - D Springwater Substation.	WI	WI	Other		Distribution	\$7,100,000	12/31/2019	12/31/2019	69		Bottom-up
A in MTEP16	B>A	West	ATC	10643	Construct T - D St. Martins Substation	St Martins Bus Expansion, Bus-tie Breaker Addition, Line Relocation, and T-D Transformer Addition.	WI	WI	Other		Distribution	\$2,300,000	1/1/2017	1/1/2018	138		Bottom-up
A in MTEP16	B>A	West	ATC	10683	Uprate Lone Rock - Richland Center 69kV	Uprate Lone Rock - Richland Center to max operating temperature.	WI	WI	Other		Reliability	\$1,700,000	6/9/2017	6/9/2017	69		Bottom-up
A in MTEP16	B>A	West	ATC	10684	Construct T - D Ellinwood Substation	T-D distribution transformer addition at Ellinwood Substation.	WI	WI	Other		Distribution	\$100,000	6/1/2017	6/1/2017	138	24.9	Bottom-up

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A in MTEP16	B>A	West	ATC	10685	Construct T - D Tomahawk Substation	Tomahawk Substation bus-tie breaker addition and T-D distribution transformer addition.	WI	WI	Other		Distribution	\$700,000	6/1/2017	6/1/2017	115		Bottom-up
A in MTEP16	B>A	West	ATC	10686	Construct T - D Roosevelt Road Substation	ATC bus expansion and T-D distribution transformer addition.	WI	WI	Other		Distribution	\$200,000	6/1/2018	6/1/2018	138		Bottom-up
A in MTEP16	B>A	West	ATC	10703	Replace Jefferson SS 138 kV Circuit Breaker	Replace Jefferson SS 138 kV Circuit Breakers and replace 138kV capacitor bank.	WI	WI	Other		Distribution	\$2,200,000	11/15/2016	11/15/2016	138		Bottom-up
A in MTEP16	B>A	West	ATC	11223	Construct T - D Townhall Substation	New T-D Townhall Substation - GOAB on Y-32 and approx. 2 miles of new 69 kV ROW.	WI	WI	Other		Distribution	\$3,900,000	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP16	B>A	West	ATC	11224	Construct T - D White Lake Substation	White Lake Distribution Transformer Addition and ATC Line Breaker Addition.	WI	WI	Other		Distribution	\$908,000	11/1/2017	11/1/2017	138		Bottom-up
A in MTEP16	B>A	West	CFU-PMEU	11383	J329 Network Upgrades	Network upgrades associated with J329 for substations in Pella Iowa.	IA	IA	GIP			\$1,043,700	8/1/2017	8/1/2017	69		Externally-Driven
A in MTEP16	B>A	West	GRE	7884	Riverview 345/115/69 kV Substation	Construct the new Riverview 345/115/69 kV substation directly off the CapX 345 kV line between the Melrose East and Millwood 69 kV substations. The transformers will be a 448 MVA, 345/115 kV transformer and a 70 MVA 115/69 MVA transformer. This substation will initially have two 345 line terminating breakers, a single 345 kV breaker on the high side of the transformer, two 69 kV line termination breakers in addition to a low side 69 kV breaker. The substation should be designed for future development and be laid out for nine 345 breaker (3 rows of 345 kV breakers in a breaker and half scheme), six 115 kV (2 rows of 115 kV breakers in a breaker and half scheme), and four 69 kV breakers in a straight bus configuration.	MN	MN	Other		Reliability	\$20,051,684	12/10/2018	12/10/2018	345	69	Bottom-up
A in MTEP16	B>A	West	GRE	7896	Fish Trap Pumping Station	Construct a new 115 kV transmission line from the Dog Lake to Soaracyville (#24 Line) 115 kV transmission line to Koch Pipeline's new Fish Trap pumping substation (approximately 20 miles).	MN	MN	Other		Reliability	\$10,855,000	8/31/2017	8/31/2017	115	115	Bottom-up
A in MTEP16	B>A	West	GRE	10423	Randolph Distribution Substation	Construct approximately 0.25 mile in and out 115 kV line from the NSP 0822 line (Empire to Colville).	MN	MN	Other		Distribution	\$525,000	3/30/2017	3/30/2017	115		Bottom-up
A in MTEP16	B>A	West	GRE	10424	Savage Distribution Substation	Construct approximately 0.5 mile in and out 115 kV line from the NSP 5539 line (Black Dog to Blue Lake).	MN	MN	Other		Distribution	\$1,000,000	10/31/2017	10/31/2017	115		Bottom-up
A in MTEP16	B>A	West	GRE	11463	C023 - Stanton 31RB3	Jumpers replacement inside Stanton Substation at 230 kV breaker 31RB3.	ND	ND	GIP			\$33,033	11/1/2016	11/1/2016	230		Externally-Driven
A in MTEP16	B>A	West	GRE, MP	4378	Menahga Area Project	Build Hubbard to Blueberry to Red Eye 115 kV	MN	MN	Other		Distribution	\$29,360,749	4/1/2017	9/1/2020	115	34.5	Bottom-up
A in MTEP16	B>A	West	ITCM	9664	Guthrie-White Pole Rd-Panora 34 to 69 kV Conv	Convert 34.5 kV system between Guthrie - White Pole Rd (new breaker station) - Menlo - Redfield - Panora - Guthrie to 69 kV operation	IA	IA	Other		Condition	\$3,385,176	12/31/2017	12/31/2017	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9665	PCI-Oak Hill 34 to 69 kV Conv	Convert 34.5 kV system between PCI and Oak Hill to 69 kV operation	IA	IA	Other		Condition	\$33,600	12/31/2017	12/31/2017	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9666	Emerald Isle-Beverly 34 to 69 kV Conv	Convert 34.5 kV system between Beverly and Emerald Isle to 69 kV operation.	IA	IA	Other		Condition	\$5,114,718	12/31/2018	12/31/2018	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9667	Wapello County Substation Reliability Rel	Rebuild the Wapello County 161kV to breaker and 1/2 design and upgrade the 69 kV ring bus.	IA	IA	BaseRel			\$10,115,465	12/31/2017	12/31/2017	161	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9668	Cedar Rapids-North Liberty area-Hills Upg	Add a new Hills area 345/161kV source and upgrade the 161 and 69kV systems in the North Liberty area. This includes a new North Liberty 161/69kV substation also.	IA	IA	BaseRel			\$75,440,438	12/31/2019	12/31/2025	345	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9669	St. Ansgar Industrial Substation	New 69kV/distribution substation. Tap 69kV line and install new 69kV breakers for new substation.	IA	IA	Other		Distribution	\$2,508,817	11/1/2017	11/17/2017	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9670	Columbus Junction 69 kV Breaker Addition	Add 69 kV breaker at the Columbus Junction substation.	IA	IA	Other		Distribution	\$932,101	12/31/2020	12/31/2020	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9671	Amber Creamery 69 kV Capacitor	Add a 69 kV cap bank at the Amber Creamery substation.	IA	IA	Other		Reliability	\$515,076	12/31/2016	12/31/2016	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9672	76th AVE SW Substation	ITC will need to construct a new four (4) terminal, four (4) breaker 69 kV substation southeast of the city of Cedar Rapids, Iowa in order to eliminate the coordination and system protection issues. The existing PCI - Tharp 69 kV transmission line will need to be tapped and re-routed into the new substation. The existing Prairie Creek Ckt. 0210 will need to be re-routed and terminated into the new substation when the area is converted as well. A 13.2 MVAR capacity bank will be installed at the new substation to provide voltage support for the area.	IA	IA	Other		Condition	\$4,056,304	12/31/2019	12/31/2019	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9706	Huntley 69 kV Maintenance	Relocate the 161/69 kV T1 transformer and replace the 161/69 kV T2 transformer with the Adams 161/69 kV 75 MVA transformer and the 69 kV breakers at the new proposed Huntley substation.	MN	IA	Other		Reliability	\$9,055,247	12/31/2016	12/31/2016	161	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9711	Traer 161 kV Ring Bus	Convert the Traer 161 kV to a ring bus design.	IA	IA	BaseRel			\$5,065,882	12/31/2017	12/31/2017	161	161	Bottom-up

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A in MTEP16	B>A	West	ITCM	9712	BGS Substation Upgrades	Modify the Burlington Generating Station's substation for increased reliability and to accommodate the required NERC PRC-005 maintenance testing of the BGS relaying schemes. Replace 161 kV circuit switcher 1272 with a breaker to isolate the BGS - Denmark #2 161 kV line from 161/69 kV T2 transformer. The 69 kV motor-operated switches will be replaced with 69 kV main circuit breakers to create separately relayed 161/69 kV transformer and 69 kV bus sections. Additional three-phase 161 kV voltage transformers will be added. A new control enclosure will be added outside the BGS power plant. All ITC relaying will be replaced and be installed in this new enclosure. The existing schemes in the BGS plant control room will be retired and removed.	IA	IA	BaseRel			\$3,114,346	6/1/2017	6/1/2017	161	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9714	Doud-Lyon 34 to 69 kV Conv	Construct a new 69 kV breaker station near Lyon with 3 line terminals. The station should be laid out to accommodate a future additional breaker position for an Alliant Energy distribution transformer. Re-connect or extend 69 kV taps to the connected distribution substations and convert to 69 kV operation from the new station near Lyon to Doud.	IA	IA	Other		Condition	\$4,638,479	12/31/2019	12/31/2019	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9901	Mount Ayr 69 kV Substation Rebuild	Complete rebuild of the substation with all new equipment was proposed. Due to space limitations at the existing site, a new Kneedler (Mt. Ayr) 69kV breaker station will be constructed just north of the Mt. Ayr site. The existing 8.1MVA cap will be replaced with a 3-stage 8.4MVA (25.2MVA total) capacitor bank at the Kneedler sub site.	IA	IA	Other		Condition	\$4,944,594	12/31/2018	12/31/2018	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9904	Appanoose Co 161 kV Rebuild	ITC will replace it with a unit equipped with a Load Tap Changer (LTC). The 100 MVA (equipped with a LTC) 161:69kV transformer at Fernald will be relocated to Appanoose County after the MGS upgrades are completed. In addition, to increase reliability, ITC will rebuild the existing 161kV bus to a ring configuration.	IA	IA	BaseRel			\$4,944,594	12/31/2019	12/31/2019	161	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9907	Summit to Dovray 69 kV Rebuild	Phase 1: Rebuild ~12.9 miles of old line to new T2-4/0 ACSR	MN	MN	Other		Condition	\$9,162,091	12/31/2022	12/31/2022	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9908	Dovray to Fulda 69 kV Rebuild	Rebuild ~14.5 miles of old line to new T2-4/0 ACSR	MN	MN	Other		Condition	\$9,410,124	12/31/2023	12/31/2023	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9910	Fulda to Heron Lake 69 kV Rebuild	Rebuild ~20.14 miles of old line to new T2-4/0 ACSR	MN	MN	Other		Condition	\$14,976,652	12/31/2024	12/31/2024	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	9937	J233-Network Upgrades	Replace existing 161/69 kV transformers with 150 MVA units at Fernald, Jasper, and Newton substations. Uprate the Marshalltown-Blairstown Junction 115 kV line to 90 MVA; Uprate the Jasper to Laurel 161 kV to 361 MVA; remove sag limit from Jasper to Newton 161 kV line to allow operation at 276 MVA; Rebuild ITCM's portion of the Newton to Prairie City 69 kV with T2-4/0 ACSR to allow operation at MEC's rating of 40 MVA	IA	IA	GIP			\$17,740,415	9/15/2015	3/30/2017	161	69	Externally-Driven
A in MTEP16	B>A	West	ITCM	9939	H009-Jasper-Aurora 69 kV	Rebuild Jasper to Aurora Heights 69 kV with T2-477 ACSR	IA	IA	GIP			\$3,720,000	12/31/2016	12/31/2016	69	69	Externally-Driven
A in MTEP16	B>A	West	ITCM	9941	H021-Traer-Traer Tap 69 kV	Upgrade Traer to Traer Tap 69 kV	IA	IA	GIP			\$293,449	6/1/2016	6/1/2016	69	69	Externally-Driven
A in MTEP16	B>A	West	ITCM	9985	Newhall-Williamsburg 161 kV Rebuild	Rebuild Williamsburg 115kV tap to 161kV	IA	IA	Other		Condition	\$40,174,153	12/31/2018	12/31/2018	161	161	Bottom-up
A in MTEP16	B>A	West	ITCM	9988	Newhall 161 kV Breaker Station	Construct a new 3 position 161kV breaker station	IA	IA	Other		Condition	\$8,090,882	12/31/2018	12/31/2018	161	161	Bottom-up
A in MTEP16	B>A	West	ITCM	10022	PCI-Mt.Vernon-Lisbon-76th AVE Conv	ITC will be converting the PCI to Mt. Vernon to Lisbon North to 76th Ave. substation from 34.5 kV operation to 69 kV operation. To accommodate the conversion, a 69 kV breaker and associated equipment will be installed at the PCI substation, two (2) 69 kV breakers and associated equipment will be installed at the Lisbon North substation, approximately 0.6 mile of new 69 kV transmission line will be constructed to complete the PCI to 76th Ave circuit and OPGW will need to be installed.	IA	IA	Other		Condition	\$5,793,932	12/31/2019	12/31/2019	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	10023	ITC Midwest Asset Replacement Program	Equipment that is past its expected design life, utilizes outdated functionality or whose failure rates and maintenance have increased potential for misoperations and higher maintenance costs associated with their ongoing use.	IA,MN,IL	IA,MN,IL	Other		Condition	\$111,600,000	12/31/2017	12/31/2019	345	69	Bottom-up

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A in MTEP16	B>A	West	ITCM	10024	ITCM Customer Interconnects with short l	These projects are being done at the request of an interconnection customer in order to facilitate new load, re-distribute existing load, improve the performance of the sub-transmission and distribution systems, or to accommodate a new Transmission-to-Transmission connection request.	IA,MN,IL	IA,MN,IL	Other		Distribution	\$2,000,000	12/31/2019	12/31/2019	345	69	Bottom-up
A in MTEP16	B>A	West	ITCM	10268	Dubuque 8th Street Distribution Transform	This project consists of the ITC work required to allow for the replacement of the two 69/distribution transformers at the 8th Street substation. This project will move the Alliant distribution transformer T-225 position to the existing Sandridge (bkr 253) position & move the ITC owned Sandridge terminal equipment to the former T-255 (bkr 252) position. Alliant will move the T-140 (bkr 257) position to the former North Clinton (bkr 256) position. This project will also require relay upgrades. In addition, the removal of a guyed structure and replace with a new self-supported structure within the substation will be required.	IA	IA	Other		Reliability	\$1,603,393	4/30/2017	4/30/2017	69	69	Bottom-up
A in MTEP16	B>A	West	ITCM	10269	Lore-Hickory Creek 161kV Rebuild	Rebuild 6.81 miles of the Lore-Hickory Creek 161kV line and upgrade the Lore 161kV terminal.	IA	IA	BaseRel			\$12,700,847	12/31/2017	12/31/2017	161	161	Bottom-up
A in MTEP16	B>A	West	ITCM	10303	Williamsburg 161kV Temp Conversion	To provide a reliable conversion to 69kV the 34.5kV will need temporary configurations to provide a reliable transition. The Williamsburg 115kV high side will be converted to 161kV. The two aging and miss-matched 115/34.5kV transformers will be replaced with a newer and larger 161/36kV transformer from the Hiawatha Substation. This will provide an increased level of reliability to Williamsburg by serving the high-side from a newly rebuilt and shorter 161kV line compared to an older and longer 115kV line.	IA	IA	Other		Reliability	\$1,204,368	12/30/2017	12/31/2017	161	34	Bottom-up
A in MTEP16	B>A	West	ITCM	11163	Devils Creek	69 kV customer interconnection near Ft. Madison, IA. Build a new Devils Creek 69kV distributions substation.	IA	IA	Other		Distribution	\$2,026,223	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP16	B>A	West	ITCM	11164	Oelwein Hub Distribution Sub	ITCM will form an in and out configuration and install two line breakers at the new substation.	IA	IA	Other		Distribution	\$6,317,468	4/30/2017	4/30/2017	69		Bottom-up
A in MTEP16	B>A	West	ITCM	11763	J344 Network Upgrades - Irvine Switch St	To provide a point of interconnection for project J344, a 169 MW wind-powered generating facility, a new 3-terminal, 3-breaker "Irvine" ring bus substation on the Poweshiek to Beacon 161 kV line. The Network Upgrade was required to interconnect the project to the transmission system, and the Network Upgrade was required as a condition of Interconnection Service for project J344.	IA	IA	GIP			\$5,537,540	9/1/2017	9/1/2017	161	161	Externally-Driven
A in MTEP16	B>A	West	ITCM, XEL	11883	Huntley - Wilmarth 345 kV	Huntley to Wilmarth 345 kV Single Ckt Transmission Line - 38.5 miles	MN	MN	MEP	Shared		\$108,000,000	1/1/2022	1/1/2022	345		Top-Down
A in MTEP16	B>A	West	MDU	4140	Bowdle Jct	Build a new Bowdle Jct to replace old Bowdle substation	SD	SD	Other		Reliability	\$5,500,000	6/30/2017	6/30/2017	115	41.6	Bottom-up
A in MTEP16	B>A	West	MDU	9120	Leola	A new 115 kV transmission line from the Ellendale Jct. Substation to a new Leola Jct. 115/41.6 Substation. The new Leola Jct. substation will connect to the existing Ellendale-Bowdle 41.6 kV line.	SD,ND	SD	Other		Reliability	\$12,835,000	10/31/2017	10/31/2017	115	41.6	Bottom-up
A in MTEP16	B>A	West	MDU	9121	Heskett-Mandan 115 Upgrade	Replace limiting switches in the Heskett substation on the Mandan 115 kV line.	ND	ND	BaseRel			\$125,000	12/31/2016	12/31/2016	115		Bottom-up
A in MTEP16	B>A	West	MDU	11403	TSR F109/A634	Reconductor Coyote-Beulah 115 kV line	ND	ND	TDSP			\$350,000	12/31/2015	12/31/2015	115		Externally-Driven
A in MTEP16	B>A	West	MEC	8108	Sub 73 - Dupont 69 kV Line Upgrade	Replace structures to allow a higher operating temperature for the line.	IA	IA	Other		Reliability	\$40,000	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP16	B>A	West	MEC	8110	Sub 73 - Elvira Tap 69 kV line upgrade	Replace structures on the Sub 73-Elvira 69 kV line to allow a higher operating temperature.	IA	IA	Other		Reliability	\$50,000	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP16	B>A	West	MEC	8112	Buffalo Bill Tap - Elvira Tap 69 kV line upg	Replace structures to allow a higher conductor operating temperature.	IA	IA	Other		Reliability	\$25,000	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP16	B>A	West	MEC	9947	Polk City Substation and Lines	Build a new 33 MVA 161-13 kV distribution substation near Polk City, Iowa with 161 kV line taps connecting to the Bittersweet-NE Ankeny 161 kV line.	IA	IA	Other		Distribution	\$7,000,000	6/1/2018	6/1/2018	161	13	Bottom-up
A in MTEP16	B>A	West	MEC	9973	Manawa Second Transformer	Add a second 33 MVA 161-13 kV transformer at the Manawa Substation.	IA	IA	Other		Distribution	\$1,100,000	10/1/2017	10/1/2017	161	13	Bottom-up
A in MTEP16	B>A	West	MEC	9976	Avoca transformer 69 kV circuit breaker	Add a 69 kV circuit breaker on the low side of Avoca 161-69 kV transformer 8T1.	IA	IA	Other		Reliability	\$415,000	12/1/2016	12/1/2016	69		Bottom-up
A in MTEP16	B>A	West	MEC	9980	Teakwood 34.5 kV Reactors	Add two 10 MVA/ 34.5 kV reactors at Teakwood Substation.	IA	IA	Other		Reliability	\$850,000	10/1/2016	10/1/2016	34.5		Bottom-up
A in MTEP16	B>A	West	MEC	9981	Sub 701-Honey Creek 69 kV Line	Rebuild the Sub 701-Honey Creek 69 kV line.	IA	IA	Other		Reliability	\$3,250,000	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP16	B>A	West	MEC	9987	Johnston 161-13 kV Substation	Construct a new Johnston 33 MVA 161-13 kV distribution substation.	IA	IA	Other		Distribution	\$2,130,000	11/30/2016	11/30/2016	161	13	Bottom-up

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A in MTEP16	B>A	West	MEC	9992	Lake Comelia-Coulter 69 kV Upgrade	Replace limiting structures on the Lake Comelia-Coulter 69 kV line to increase line rating.	IA	IA	Other		Reliability	\$59,000	7/1/2016	7/1/2016	69		Bottom-up
A in MTEP16	B>A	West	MEC	9993	Humboldt East-Thor 69 kV Upgrade	Upgrade the Humboldt East-Thor 69 kV line by replacing limiting structures.	IA	IA	Other		Reliability	\$61,000	4/13/2016	4/13/2016	69		Bottom-up
A in MTEP16	B>A	West	MEC	9996	Eagle Grove Second 69-13 kV transformer	Install a second 69-13 kV Transformer at the Eagle Grove Substation	IA	IA	Other		Distribution	\$2,440,000	12/9/2016	12/9/2016	69	13	Bottom-up
A in MTEP16	B>A	West	MEC	10004	Sub 18 replace transformer 8T3	Replace 161-69 kV transformer 8T3 at Sub 18 with a 167 MVA unit.	IA	IA	Other		Reliability	\$1,080,000	6/1/2018	6/1/2018	161	69	Bottom-up
A in MTEP16	B>A	West	MEC	10005	Replace 161 kV Circuit Breaker at Plymouth	Replace 161 kV circuit breaker 9610 at Plymouth Substation	IA	IA	BaseRel			\$264,000	12/8/2015	12/8/2015	161		Bottom-up
A in MTEP16	B>A	West	MEC	10006	Sycamore Substation: replace three 161 kV	Replace 161 kV circuit breakers AG805, AG812 and AG816 at Sycamore Substation.	IA	IA	BaseRel			\$685,000	12/31/2016	12/31/2016	161		Bottom-up
A in MTEP16	B>A	West	MEC	10009	Bondurant: Replace 161 kV circuit breaker	Replace 161 kV circuit breaker AH810 at Bondurant Substation.	IA	IA	BaseRel			\$325,000	10/31/2016	10/31/2016	161		Bottom-up
A in MTEP16	B>A	West	MEC	10503	Tate & Lyle Bus Tie Breaker	Add a 161 kV bus tie circuit breaker at Tate & Lyle Substation	IA	IA	BaseRel			\$443,000	10/20/2016	10/20/2016	161		Bottom-up
A in MTEP16	B>A	West	MEC	10663	Willow Creek Substation Expansion	Expand the Willow Creek Substation 161 kV bus to accommodate a new 50 MVA 161-13 kV transformer. Add three new 161 kV circuit breakers and convert the substation to a breaker and one-half configuration.	IA	IA	Other		Distribution	\$120,000	12/31/2016	12/31/2016	161	13.2	Bottom-up
A in MTEP16	B>A	West	MEC	10664	34th Avenue 3rd Transformer	Install a third 161-13 kV 62 MVA transformer and associated equipment at the 34th Ave. NW Substation.	IA	IA	Other		Distribution	\$90,000	12/1/2016	12/1/2016	161	13.2	Bottom-up
A in MTEP16	B>A	West	MEC	10803	Sub J Iowa City Reduce Capacitor Bank Size	Reduce the size of the existing 161 kV capacitor bank at Sub J Iowa City, from 50.4 MVAR to 37.8 MVAR. The capacitor bank relaying will also be replaced at this time.	IA	IA	BaseRel			\$300,000	12/1/2016	12/1/2016	161		Bottom-up
A in MTEP16	B>A	West	MEC	10867	J285 Interconnection Facilities	Add one 345 kV circuit breaker position at Obrien County Substation 345 kV ring bus for the J285 generator interconnection.	IA	IA	GIP	Shared		\$3,000,000	8/15/2016	8/15/2016	345		Externally-Driven
A in MTEP16	B>A	West	MEC	10868	J411 Interconnection Facilities (Ida Co. Sub)	Construct a new three-terminal 345 kV ring bus substation (Ida County Substation), bisecting the Raun-Lehigh 345 kV line for the J411 generator interconnection. Install new transposition structures for the Raun-Ida County and Ida County-Lehigh 345 kV lines. ITC Midwest will have an ownership share of the network transmission facilities.	IA	IA	GIP	Shared		\$5,750,000	7/15/2016	7/15/2016	345		Externally-Driven
A in MTEP16	B>A	West	MEC	11103	Black Hawk: Install 2-69 kV Cap Banks	Add two 69 kV, 15 MVAR capacitor banks at Black Hawk Substation.	IA	IA	GIP			\$1,180,000	11/15/2016	11/15/2016	69		Externally-Driven
A in MTEP16	B>A	West	MEC	11143	Creston-Macksburg 161 kV Uprate	Structure replacements.	IA	IA	GIP			\$175,000	12/1/2016	12/1/2016	161		Externally-Driven
A in MTEP16	B>A	West	MEC	11144	Sub T(FD): Replace 161 kV Sw 11-817	Replace 161 kV Switch 11-817	IA	IA	GIP			\$88,000	6/24/2016	6/24/2016	161		Externally-Driven
A in MTEP16	B>A	West	MEC	11145	Sub T FD-Boone Jct 161 Line Uprate	structure replacements	IA	IA	GIP			\$173,000	6/30/2016	6/30/2016	161		Externally-Driven
A in MTEP16	B>A	West	MEC	11146	Clarinda-Brooks 161 kV Uprate	structure replacements	IA	IA	GIP			\$200,000	6/1/2017	6/1/2017	161		Externally-Driven
A in MTEP16	B>A	West	MEC	11203	R42 Network Upgrades	Add two new 345 kV circuit breakers and create a ring bus	IA	IA	GIP	Shared		\$2,882,000	11/1/2012	11/1/2012	345		Externally Driven
A in MTEP16	B>A	West	MEC	11204	J191 Network Upgrades	Add a new 345 kV circuit breaker and associated switches	IA	IA	GIP	Shared		\$754,100	12/30/2011	12/30/2011	345		Externally Driven
A in MTEP16	B>A	West	MEC	11283	Clarinda-Maryville 161 kV Uprate	Replace three structures.	IA	IA	GIP			\$100,100	6/1/2017	6/1/2017	161		Externally-Driven
A in MTEP16	B>A	West	MEC	11284	Clarinda Substation: Replace 161 kV Switch	At Clarinda Substation, on the line terminal to Maryville, install a new 161 kV line disconnect switch, replace associated line drops and jumpers, and remove the existing switch.	IA	IA	GIP			\$80,500	6/1/2017	6/1/2017	161		Externally-Driven
A in MTEP16	B>A	West	MEC	11285	Beacon 161 kV Line Drops, Poweshiek	Replace line drops at Beacon Substation on the Beacon-Poweshiek 161 kV line terminal.	IA	IA	GIP			\$25,000	9/1/2017	9/1/2017	161		Externally-Driven
A in MTEP16	B>A	West	MP	7910	5 Line Upgrade	Increase capacity of Brainerd - Mud Lake 115 kV Line	MN	MN	BaseRel			\$1,900,000	11/1/2019	11/1/2019	115		Bottom-up
A in MTEP16	B>A	West	MP	7996	15 Line Upgrade	Rebuild & reconductor Fond Du Lac - Hibbard 115 kV Line	MN	MN	BaseRel			\$5,500,000	12/31/2017	12/31/2017	115		Bottom-up
A in MTEP16	B>A	West	MP	7997	15th Avenue West Modernization	Rebuild & modernize existing 15th Avenue West Substation, including new 14 kV switchgear, one new 115/14 kV transformer, replace 3 115 kV breakers and other 115 kV equipment, and miscellaneous site improvements	MN	MN	Other		Condition	\$10,000,000	5/1/2018	12/31/2018	115	13.8	Bottom-up
A in MTEP16	B>A	West	MP	9064	Arrowhead 115 kV Bus Reconfiguration	Reconfigure Arrowhead 115 kV bus to eliminate 115 MW breaker failure contingency. Cannot have Arrowhead - Colbyville & Arrowhead - Haines Road on adjacent buses	MN	MN	BaseRel			\$600,000	12/31/2017	12/31/2017	115		Bottom-up
A in MTEP16	B>A	West	MP	9622	83 Line Upgrade	Replace limiting elements at Boswell & Blackberry to restore 100C rating	MN	MN	Other		Reliability	\$500,000	6/1/2019	6/1/2019	230		Bottom-up
A in MTEP16	B>A	West	MP	9623	95 Line Upgrade	Replace limiting elements at Boswell & Blackberry to restore 100C rating	MN	MN	Other		Reliability	\$500,000	6/1/2019	6/1/2019	230		Bottom-up
A in MTEP16	B>A	West	MP	9624	Bear Creek 69/46 kV Transformer	Install 69/46 kV transformer at Great River Energy's existing Bear Creek Substation and remove existing Sandstone 69/46 kV distribution station	MN	MN	Other		Condition	\$2,000,000	12/31/2017	12/31/2017	69	46	Bottom-up
A in MTEP16	B>A	West	MP	9625	Nemadji 115 kV Project	New switching station in Gary - Stinson 115 kV Line near Enbridge's Superior Terminal: 115 kV line development around the Superior Terminal	WI	WI	Other		Reliability	\$8,690,000	12/31/2014	12/31/2017	115		Bottom-up
A in MTEP16	B>A	West	MP	10284	28 Line Upgrade	Increase emergency rating of Boswell - Canisteo 115 kV Line to at least 150 MVA	MN	MN	BaseRel			\$790,000	5/1/2017	5/1/2017	115		Bottom-up

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A in MTEP16	B>A	West	MP	10383	Laskin-Tac Harbor Voltage Conversion	Convert Laskin - Tac Harbor 138 kV system to 115 kV and add a 15 MVAR capacitor bank at Dunka Road; coordinated with the Hoyt Lakes Substation Modernization (Project #4426) and Dunka Road Substation (Project #2761)	MN	MN	Other		Condition	\$2,484,000	7/1/2017	12/31/2017	115	13.8	Bottom-up
A in MTEP16	B>A	West	OTP	9990	Devils Lake East 41.6 kV	Relay upgrades	ND	ND	Other		Reliability	\$37,500	12/31/2017	12/31/2017	41.6		Bottom-up
A in MTEP16	B>A	West	OTP	9995	Devils Lake SW 41.6 kV	Relay upgrades	ND	ND	Other		Reliability	\$37,500	12/31/2017	12/31/2017	41.6		Bottom-up
A in MTEP16	B>A	West	OTP	10003	Rugby 41.6 kV Breakers	Install four 41.6 kV Breakers in the Rugby area to re-terminate existing OTP-owned 41.6 kV circuits from CPEC-owned Rugby substation to 230 kV delivery.	ND	ND	Other		Non - Transferr	\$2,000,000	12/31/2016	12/31/2016	230	41.6	Bottom-up
A in MTEP16	B>A	West	OTP	10007	Max to Ryder 41.6 kV Line Upgrade	The project will start in 2016 and be completed in 2018. The project will replace failing insulation, cross arms and poles identified through patrols and inspections and replace the failing 1/0 ACSR conductor for approximately 34 miles between Max, ND and Ryder, ND.	ND	ND	Other		Condition	\$2,500,000	12/31/2018	12/31/2018	41.6		Bottom-up
A in MTEP16	B>A	West	OTP	11743	Western ND 41.6 kV Breaker Stations	Western ND 41.6 kV Breaker Stations will consist of 3 Facilities 1. Coleharbor - Single in-line circuit breaker addition 2. Drake - Single in-line circuit breaker addition 3. Granville Jct. - Three circuit breaker addition	ND	ND	Other		Non - Transferr	\$1,500,000	12/31/2016	12/31/2016	41.6		Bottom-up
A in MTEP16	B>A	West	RPU	10443	Douglas Trail Substation	New load serving substation (Douglas Trail Substation) will tap RPU's immediately adjacent Q5 161kV transmission line.	MN	MN	Other		Distribution	\$7,000,000	4/1/2017	4/1/2017	161		Bottom-up
A in MTEP16	B>A	West	XEL	4696	Rebuild Prentice-Medford 69 kV	Rebuild this line to 795 ACSR due to age and condition of the line	WI	WI	Other		Condition	\$20,145,714	1/31/2018	1/31/2018	69		Bottom-up
A in MTEP16	B>A	West	XEL	10045	City of Chaska Interconnection	Build an in-and-out from double circuit 115 kV just south of Bluff Creek. This in-and-out will serve the City of Chaska's new distribution substation. New line will 1.7 mi following road from POI to potential new sub	MN	MN	Other		Reliability	\$3,200,000	6/30/2016	6/30/2016	115		Bottom-up
A in MTEP16	B>A	West	XEL	10062	Tyrone Tap Interconnection	Install a 3-way switch on NSP's St. Thomas Tap to Boright #2 69 kV line. GRE will then construct a radial line from the tap to serve the new MVEC load.	MN	MN	Other		Reliability	\$375,000	6/30/2016	6/30/2016	69		Bottom-up
A in MTEP16	B>A	West	XEL	10063	Rebuild Jackson Co - DPC Merrillan Tap	Rebuild 6.1 miles from Jackson Co to DPC Merrillan Tap to 565.3 ACSR/TW.	WI	WI	Other		Reliability	\$3,300,000	7/30/2016	7/30/2016	69		Bottom-up
A in MTEP16	B>A	West	XEL	10065	Rogers Lake Overstressed Breaker Repair	Replace the four existing gas 40 kA breakers at Rogers Lake with with gas 63 kA breakers.	MN	MN	Other		Condition	\$940,847	4/30/2016	4/30/2016	115		Bottom-up
A in MTEP16	B>A	West	XEL	10066	Southtown Area Upgrades	Upgrade the Southtown-Cedarvale 115 kV line to a minimum of 290 MVA emergency. Upgrade the Southtown-Shepard 115 kV line to a minimum of 270 MVA emergency. Add a 80 MVAR cap to the Hiawatha substation.	MN	MN	BaseRel			\$3,495,000	6/1/2016	12/30/2017	115		Bottom-up
A in MTEP16	B>A	West	XEL	10067	MPC Fossum Interconnection	This project will convert the Prairie Substation to a breaker-in-a-half configuration to accommodate MPC's Fossum 115 kV interconnection request. Fossum will operate radially.	ND	ND	Other		Reliability	\$17,261,500	1/1/2018	1/1/2018	115		Bottom-up
A in MTEP16	B>A	West	XEL	10068	Install Baytown 2nd Transformer	Install a 2nd transformer and switchgear at Baytown substation. This will require an in-and-out design at Baytown.	MN	MN	Other		Reliability	\$1,625,468	6/1/2017	6/1/2017	115	13.8	Bottom-up
A in MTEP16	B>A	West	XEL	10069	Twin Creek Breaker Station	Install a 2 or 3 position 69 kV breaker station - Breakers to Radisson and Osprey/Big Falls - Possible breaker looking toward the Enbridge loads or just switches - Replaces the planned 3-way tap switch on line W3474 that was part of the Enbridge expansion/DPC N-2 retirement plan	WI	WI	Other		Reliability	\$2,866,000	11/1/2019	11/1/2019	69		Bottom-up
A in MTEP16	B>A	West	XEL	10071	Prescott Capacity Upgrade	Install second 69/12.47 kV 28 MVA transformer at Prescott, add additional feeders, and install a second 10 MVAR cap bank.	WI	WI	Other		Distribution	\$1,174,000	9/30/2016	9/30/2016	69		Bottom-up
A in MTEP16	B>A	West	XEL	10072	Dean Lake Third Transformer and Ring Bus	Install a 3rd TR at Dean Lake and add 4 new breakers to complete the ring bus.	WI	MN	Other		Distribution	\$4,904,100	8/1/2016	12/31/2016	115	13.8	Bottom-up
A in MTEP16	B>A	West	XEL	10073	GIC Monitoring	This project is to install GIC Monitoring at various substations throughout NSP/MNSPW system. Projects will be modeled after the King GIC monitoring pilot program. Transformers will be selected based upon planning study and geographic location. The first substations to have the GIC monitoring installed will be Quarry, Adams, Elm Creek, and Eau Claire.	WI	MN	Other		Reliability	\$585,150	4/30/2016	12/31/2016	345	115	Bottom-up

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A in MTEP16	B>A	West	XEL	10074	Airport - Rogers Lake 115 kV Rebuild	This project rebuilds the Airport - Rogers Lake 115 kV line due to age and condition. The new line would be built using 795 ACSR conductor.	MN	MN	Other		Condition	\$4,092,000	5/30/2019	5/30/2019	115		Bottom-up
A in MTEP16	B>A	West	XEL	10075	Waconia 2nd Distribution Transformer	Install a 2nd distribution transformer at Waconia substation and associated feeders. This new transformer will require the 69 kV yard to be converted to an in-and-out configuration.	MN	MN	Other		Reliability	\$420,000	12/30/2017	12/30/2017	69	13.8	Bottom-up
A in MTEP16	B>A	West	XEL	10076	West St Cloud - Millwood Tap Rebuild	Rebuild 24 miles of line from West St. Cloud to Millwood Tap. This new line will be built using 477 ACSR conductor.	MN	MN	Other		Condition	\$10,400,000	5/30/2019	5/30/2019	69		Bottom-up
A in MTEP16	B>A	West	XEL	10077	GRE St. James Interconnection	Install a new three-way switch with load interrupters to accommodate GRE interconnection on line 0714.	MN	MN	Other		Reliability	\$390,800	12/1/2016	12/1/2016	69		Bottom-up
A in MTEP16	B>A	West	XEL	10288	Osprey 69 kV Expansion	Install 69 kV straight bus with 2 additional 69 kV breakers. Reroute line from Whitetail Tap and Flambeau into Osprey. Rebuild the last 0.4 miles of 69 kV on the Whitetail Tap line to match the rest of the conductor type	WI	WI	Other		Reliability	\$2,880,000	9/1/2018	9/1/2018	69		Bottom-up
A in MTEP16	B>A	West	XEL	10289	Elmwood - Eau Galle Rebuild	Rebuild the existing 2/0 conductor to 477 ACSR due to age and condition	WI	WI	Other		Condition	\$2,109,095	12/1/2015	12/1/2016	69		Bottom-up
A in MTEP16	B>A	West	XEL	10290	Gravel Island Distribution	Install a 28 MVA distribution TR and associated breaker and bus work	WI	WI	Other		Distribution	\$2,983,000	8/30/2017	8/30/2017	161	12.5	Bottom-up
A in MTEP16	B>A	West	XEL	10291	New LCO Hydro Transformer	Install single 34.5/23.9 kV TR to connect the Lac Courte Oreilles (LCO) hydro facility to the NCP system near Radisson	WI	WI	Other		Distribution	\$180,000	12/1/2018	12/1/2018	34.5	23.9	Bottom-up
B in MTEP16	B	Central	AmerenIL	9719	Cahokia Bus-Tie 3-4 Upgrade	Upgrade Bus-Tie 3-4 position to 3000 A capability	IL	IL					6/1/2018	6/1/2018	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9723	Fishhook Breaker Station	Construct 138 kV breaker station in East Quincy-Meredosia-2 138 kV line.	IL	IL					12/31/2018	12/31/2018	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9724	Newton Transformer #1 Reroute.	Relocate Newton 345/138 kV Xfmr #1 345 kV connection point	IL	IL					6/1/2018	6/1/2018	345	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9729	North Decatur-Clinton Rt.. 54 Upgrade	Reconductor to 1200 A summer emergency capability	IL	IL					6/1/2019	6/1/2019	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9734	North Utica Substation	Construct 138 kV breaker station in North LaSalle-Fox River-1646 138 kV line.	IL	IL					6/1/2019	6/1/2019	138	34.5	Bottom-up
B in MTEP16	B	Central	AmerenIL	9738	Grand Tower-Carbondale Reconductoring	Reconductor to 1200 A summer emergency capability	IL	IL					6/1/2025	6/1/2025	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9739	Carbondale, Northwest-West Frankfort Re	Reconductor 3.18 miles conductor in the Carbondale-Reeds section with conductor capable of carrying 1200 A under summer emergency conditions.	IL	IL					6/1/2025	6/1/2025	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9740	Grand Tower-Campbell Hill Reconductoring	Reconductor to 1200 A summer emergency capability	IL	IL					6/1/2025	6/1/2025	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9743	Pana, North-Route 51D Reconductoring	Reconductor to 2000 A summer emergency capability	IL	IL					6/1/2021	6/1/2021	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9745	Ramsey Transformer Replacement	Replace existing transformer with 560 MVA unit	IL	IL					6/1/2018	6/1/2018	345	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9746	Pana, North-Schram City Reconductoring	Reconductor to 1200 A summer emergency capability	IL	IL					6/1/2018	6/1/2018	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9826	Neoga Transformer Addition	Install 2nd. 345/138 kV, 560 MVA Transformer	IL	IL					6/1/2018	6/1/2018	345	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9832	Casey-Kansas Reconductoring	Reconductor to 3000 A summer emergency capability	IL	IL					6/1/2027	6/1/2027	345	345	Bottom-up
B in MTEP16	B	Central	AmerenIL	9838	Kincaid Terminal Upgrade	Upgrade terminal equipment on Kincaid-Austin 345 kV position.	IL	IL					6/1/2022	6/1/2022	345	345	Bottom-up
B in MTEP16	B	Central	AmerenIL	9840	Washington Street Ring Bus	Install 138 kV Ring Bus	IL	IL					5/1/2020	5/1/2020	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9841	South Bloomington 138-34.5 kV Transform	Install 112 MVA Transformer	IL	IL					5/1/2019	5/1/2019	138	34.5	Bottom-up
B in MTEP16	B	Central	AmerenIL	9842	Normal East 138-69 kV Transformer	Install 112 MVA Transformer	IL	IL					5/1/2020	5/1/2020	138	69	Bottom-up
B in MTEP16	B	Central	AmerenIL	9843	Normal East 138-34.5 kV Transformer	Install 112 MVA Transformer	IL	IL					5/1/2019	5/1/2019	138	34.5	Bottom-up
B in MTEP16	B	Central	AmerenIL	9844	Normal East-McLean 138 kV Line	Construct 138 kV line	IL	IL					5/1/2020	5/1/2020	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9851	Edwards-Kewanee-7423 Reconductoring	Reconductor Ameren portion to 1200 A summer emergency capability	IL	IL					6/1/2019	6/1/2019	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	9857	Liberty 345/138 kV Substation	Establish 345/138 kV Substation, connect to 138 kV system in Collinsville-O'Fallon-Highland, Illinois area	IL	IL					6/1/2019	6/1/2019	345	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	10883	Ina Substation 138 kV Breaker Addition	Install 138 kV ring bus	IL	IL					6/1/2019	6/1/2019	138	138	Bottom-up
B in MTEP16	B	Central	AmerenIL	10885	Cahokia-Ridge-2 138 kV Terminal Equipm	Upgrade terminal equipment at Cahokia and Ridge Substations.	IL	IL					6/1/2018	6/1/2018	138		Bottom-up

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B in MTEP16	B	Central	AmerenIL	10886	South Belleville-Centerville-1586 138 kV	Reconductor approximately 5.6 miles in the 17th Street-Centerville section of south Belleville-Centerville-1586 with conductor capable of carrying 1200 A under summer emergency conditions.	IL	IL					6/1/2018	6/1/2018	138		Bottom-up
B in MTEP16	B	Central	AmerenMO	3020	Overton-Columbia Terminal Upgrade	Upgrade terminal equipment at Overton Substation.	MO	MO	BaseRel				6/1/2018	6/1/2018	161	161	Bottom-up
B in MTEP16	B	Central	AmerenMO	9717	Moberly Terminal Upgrade	Upgrade terminal equipment on Thomas Hill-Moberly-1 161 kV line position.	MO	MO					6/1/2040	6/1/2040	161	161	Bottom-up
B in MTEP16	B	Central	AmerenMO	9721	Bland-Tegeler 138 kV Reconductoring	Reconductor line to 1200 A summer emergency capability	MO	MO					6/1/2020	6/1/2020	138	138	Bottom-up
B in MTEP16	B	Central	AmerenMO	9728	Adair Substation Upgrades	Upgrade terminal equipment	MO	MO					11/15/2018	11/15/2018	161	161	Bottom-up
B in MTEP16	B	Central	AmerenMO	9730	Gray Summit Breaker Replacement	Replace overstressed 138 kV breakers.	MO	MO					12/1/2019	12/1/2019	138	138	Bottom-up
B in MTEP16	B	Central	AmerenMO	9731	Marshall Breaker Replacement	Replace overstressed Bus-Tie 3-4 138 kV breaker.	MO	MO					6/1/2019	6/1/2019	138	138	Bottom-up
B in MTEP16	B	Central	AmerenMO	9732	Mason Breaker Replacement	Replace overstressed Bus-Tie 1-2 138 kV breaker.	MO	MO					12/1/2021	12/1/2021	138	138	Bottom-up
B in MTEP16	B	Central	AmerenMO	9733	Page Breaker Replacement	Replace overstressed 138 kV breakers	MO	MO					12/1/2021	12/1/2021	138	138	Bottom-up
B in MTEP16	B	Central	AmerenMO	9735	Tyson Breaker Replacement	Replace overstressed 138 kV breakers	MO	MO					12/1/2021	12/1/2021	138	138	Bottom-up
B in MTEP16	B	Central	AmerenMO	9824	Huster Terminal Upgrade	Upgrade terminal equipment on Sioux-Huster-3 position.	MO	MO					6/1/2017	6/1/2017	138	138	Bottom-up
B in MTEP16	B	Central	AmerenMO	9825	Osage Terminal Upgrade	Upgrade terminal equipment on Tegeler-Osage-1 position.	MO	MO					6/1/2021	6/1/2021	138	138	Bottom-up
B in MTEP16	B	Central	AmerenMO	9828	Joachim-St. Francois-2 and Boyd Branch	Increase ground clearance	MO	MO					6/1/2022	6/1/2022	138	138	Bottom-up
B in MTEP16	B	Central	AmerenMO	9830	Meramec-Joachim-2 Reconductoring	Reconductor to 1600 A summer emergency capability	MO	MO					6/1/2022	6/1/2022	138	138	Bottom-up
B in MTEP16	B	Central	IPL	10786	Stout BESS - DPP J401	New ±20 MVA battery energy storage system at existing Stout substation	IN	IN				\$4,000	12/31/2017	12/31/2017	138	13.8	Bottom-up
B in MTEP16	B	Central	PPI	9563	Cronus 138 kV Transmission Lines	Construct two new 138 kV transmission lines from Ameren Illinois's West Tuscola substation to serve new Cronus Fertilizer Plant	IL	IL	Other		Reliability	\$3,600,000	12/1/2017	12/1/2017	138		Bottom-up
B in MTEP16	B	Central	Vectren	9943	Leonard Road 138/69 kV Transformer Add	Leonard Road 138kV/69kV transformer addition and 138kV line Z94 loop.	IN	IN				\$3,100,000	12/31/2023	12/31/2023	138	69	Bottom-up
B in MTEP16	B	Central	Vectren	9950	Y76 69kV Line Rebuild from New Harmon	69kV (Line Y76) rebuild from New Harmony to Northwest	IN	IN	Other		Condition	\$10,000,000	12/31/2018	12/31/2018	69		Bottom-up
B in MTEP16	B	Central	Vectren	9953	New Toyota South Distribution Substation	69kV/12kV distribution substation for load growth.	IN	IN				\$2,500,000	12/31/2020	12/31/2020	138	12	Bottom-up
B in MTEP16	B	East	CETO	9879	Moore Road-Vrooman 138 kV Line	Construct a new approximately 22 mile 138 kV line between Moore Road and Vrooman Substations, adding 138 kV circuit breakers to each station.	MI	MI				\$22,000,000	6/1/2019	6/1/2019	138		Bottom-up
B in MTEP16	B	East	ITCT	9885	Jewell - St. Clair #1 345 kV Sag Remediat	Raise the Sag Limit on Jewell-St.Clair 345 kV to 1965 MVA (3288 Amp)	MI	MI	BaseRel			\$5,380,000	12/31/2019	12/31/2019	345		Bottom-up
B in MTEP16	B	East	ITCT	9909	6-Wire Trenton Channel - Jefferson 120 kV	Six-wiring the Trenton Channel - Jefferson #4 120 kV and Trenton Channel - Horn - Jefferson 120 kV circuits with the existing decommissioned lines on their common structures. This will also require the construction of approximately 0.16 mile of double circuit 954 ACSR to complete the loop in-and-out of Horn station. Additionally, rebuild approximately 0.2 miles of 954 ACSR conductor to 1431 ACSR on the Jefferson-Riverview #2 120 kV circuit. Also install a 120 kV bus-tie breaker at Jefferson and upgrade station equipment at Trenton Channel, Horn, Jefferson, and Riverview	MI	MI				\$2,400,000	12/31/2018	12/31/2018	120		Bottom-up
B in MTEP16	B	East	METC	9864	Whiting - Custer 120 kV Rebuild	Rebuild 9.98 miles of 636 ACSR from the Whiting - Custer 120 kV circuit using 1431 ACSR and OPGW on new 230 kV future double circuit structures. Replace limiting equipment at both the Whiting and Custer stations	MI	MI				\$14,300,000	6/30/2018	6/30/2018	120		Bottom-up
B in MTEP16	B	East	METC	9880	Claremont - Manning #1 138 kV Sag Rem	Remediate the sag limit on the Portsmouth Tap - Manning 138 kV section of the Claremont - Manning 1 138 kV line to a minimum of 378 MVA / 1581 Amps, remediate the sag limit on the Claremont - Portsmouth Tap 138 kV section of the Claremont - Manning 1 138 kV line to a minimum of 362 MVA / 1514 Amps, and upgrade terminal equipment at Claremont	MI	MI	BaseRel			\$330,000	12/31/2018	12/31/2018	138		Bottom-up
B in MTEP16	B	East	METC	9881	Claremont - Manning #2 138 kV Sag Rem	Remediate the sag limit on the Claremont - Manning 2 138 kV line to a minimum of 369 MVA / 1544 Amps and upgrade terminal equipment at Claremont	MI	MI	BaseRel			\$1,400,000	12/31/2018	12/31/2018	138		Bottom-up
B in MTEP16	B	East	METC	9929	Donaldson Creek - Pere Marquette 138 kV	Build new ~21 mile circuit from Donaldson Creek to Pere Marquette using 954 ACSR and OPGW. Replace equipment at Donaldson Creek, Pere Marquette, and White Lake Stations	MI	MI	BaseRel			\$8,700,000	12/31/2019	12/31/2019	138		Bottom-up

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B in MTEP16	B	East	WPSC	9895	Graves Crossing to Central Lake Rebuild	Rebuild the Graves Crossing to Central Lake 69kV line, install new poles and hardware with 336ACSR conductor	MI	MI				\$3,200,000	12/31/2022	12/31/2022	69		Bottom-up	
B in MTEP16	B	East	WPSC	9903	White Cloud to Rogers	Rebuild the White Cloud to Rogers 69kV line, install new poles and hardware with 795ACSS conductor	MI	MI				\$18,500,000	12/31/2020	12/31/2020	69		Bottom-up	
B in MTEP16	B	East	WPSC	9916	Fairview Station Upgrade	Fairview station upgrade	MI	MI				\$900,000	12/31/2022	12/31/2022	69		Bottom-up	
B in MTEP16	B	East	WPSC	9920	Graves Crossing Station Upgrade	Upgrade the Graves Crossing station	MI	MI				\$500,000	12/31/2020	12/31/2020	69		Bottom-up	
B in MTEP16	B	East	WPSC	10264	Pellston to Cross Village Rebuild	Rebuild the Pellston to Cross Village 69kV line, install new poles and hardware with 336ACSR conductor	MI	MI				\$3,600,000	12/31/2022	12/31/2022	138		Bottom-up	
B in MTEP16	B	East	WPSC	10265	Gaylord Relay Replacement	Gaylord relay replacement - 138kV Livingston line	MI	MI				\$35,000	12/31/2019	12/31/2019	138		Bottom-up	
B in MTEP16	B	East	WPSC	10266	East Jordan Station Rebuild	This project will replace the existing equipment at the East Jordan station and upgrade the steel, install new controls, 125v DC battery system and a circuit breaker.	MI	MI				\$350,000	12/31/2019	12/31/2019	69		Bottom-up	
B in MTEP16	B	East	WPSC	10267	Black Lake Station Rebuild	Black Lake Station Rebuild	MI	MI				\$350,000	12/31/2019	12/31/2019	69		Bottom-up	
B in MTEP16	B	South	AECC	10203	Shaw to Sardis 115kV	12.00 mile 115kV line from the AECC Shaw substation to the AECC Sardis substation and tie into a proposed 115kV ring bus at the Sardis substation	AR	AR							115		Bottom-up	
B in MTEP16	B	South	AECC	10207	5 position ring bus at Heber Springs North	Build 5 position ring bus at the existing AECC Heber Springs North, build 26 mile 161kV line from the existing Heber Springs North substation to the proposed Partain 161/69kV substation	AR	AR	Other		Reliability	\$23,000,000	6/1/2021	6/1/2021	161		Bottom-up	
B in MTEP16	B	South	CLECO	9718	Ashmore Rd. - Rork 230 kV line	Tap the existing Hineston to Coodrie 230 kV line 24 miles from Coodrie at a new 230 kV substation Ashmore Rd. Build a 64 mile 230 kV line from Ashmore Rd. to Rork substation routed through Oakdale, Kinder and Basile for future load growth.	LA	LA				\$115,000,000			230		Bottom-up	
B in MTEP16	B	South	Entergy-AR	9694	Camden Maguire - Smackover 115kV: Re	Re-build 14.32 mile long line to a minimum rating of 882A.	AR	AR	BaseRel			\$20,706,029	6/1/2024	6/1/2024	115		Bottom-up	
B in MTEP16	B	South	Entergy-AR	9699	El Dorado Donan 115kV: Add 1-30MVAR	Add one 30 MVAR capacitor bank at El Dorado Donan 115 kV substation	AR	AR				\$871,182	6/1/2019	6/1/2019	115		Bottom-up	
B in MTEP16	B	South	Entergy-AR	9700	Blakely - Mt. Pine South 115kV: Rebuild L	Re-building the -2.92 mile long 115 kV line to a minimum line rating of 259 MVA (1300 Amps)	AR	AR				\$3,972,886	6/1/2022	6/1/2022	115		Bottom-up	
B in MTEP16	B	South	Entergy-AR	9701	Lynch West - NLR Galloway 115kV: Rebu	Upgrade 4.12mi Lynch - NLR Galloway line to a minimum rating of 259 MVA (1300 Amps). Any substation equipment rated below 259 MVA (1300 Amps) needs to be upgraded as well.	AR	AR				\$4,785,896	6/1/2020	6/1/2020	115		Bottom-up	
B in MTEP16	B	South	Entergy-AR	9702	Sylvan Hills - Jacksonville North 115kV: E	The line is currently limited to 975 Amps by line bay bus at Sylvan Hills. Upgrading the terminal equipment to a minimum rating of 1200 Amps will eliminate the thermal overloads due to breaker failures.	AR	AR				\$26,626	6/1/2018	6/1/2018	115		Bottom-up	
B in MTEP16	B	South	Entergy-AR	9710	Little Rock South 115kV: Reconfigure Sta	Reconfigure Little Rock South 115 kV station configuration into a double bus double breaker, breaker and a half, or a ring bus configuration.	AR	AR				\$5,463,000	6/1/2025	6/1/2025	115		Bottom-up	
B in MTEP16	B	South	Entergy-AR	10163	Jonesboro North: Add second 161kV trans	Craighead Electric Cooperative Corporation (CECC) is splitting the 13.2 kV bus and adding in a second 161 to 13.2 kV transformer.	AR	AR				\$800,000	3/1/2017	3/1/2017	161	13.2	Bottom-up	
B in MTEP16	B	South	Entergy-LA	4611	Waddill 230-69 kV Substation with reconfi	Cut the existing 69kV Line 759 Denham Springs to Gloria and the existing 69kV Line 369.3 Gloria to Flannery REA at or near Structure number 92. Also cut the existing 230kV line approximately 7.07 miles from Coly toward Jaguar where it crosses near the same Structure number 92. Construct a new station to bring these lines into a new 230-69kV station. Install a 3 breaker ring bus on the 230kV side and a 5 breaker ring bus on the 69kV side to create a new Flannery area 230-69kV auto-transformer station. The 69kV lines, Gloria to Harelson and Coly to Jones Creek create an intersection. Cut the Harelson to Gloria line 340 at or near structure 73 and cut the Coly to Jones Creek line 749 at or near structure 21. Install a new dead end type structure to reconnect the lines and create Harelson to Jones Creek and Lockhart to Gloria.	LA	LA	BaseRel				\$15,859,000	6/1/2026	6/1/2026	230	69	Bottom-up
B in MTEP16	B	South	Entergy-LA	7970	Minden Area Improvement Ph 2	Construct new 115 kV substation east of Minden REA and cut-in Minden REA to Arcadia 115 kV line and construct new 115 kV lines to cut the Minden to Sailes 115 kV line in and out of the new substation.	LA	LA	BaseRel			\$9,592,834	6/1/2026	6/1/2026	115		Bottom-up	
B in MTEP16	B	South	Entergy-LA	9683	West Monroe Area 230 kV Reliability Impr	Install 500/230 kV autotransformer at Perryville 500 kV. Construct double circuit 230 kV and utilize existing 230 kV construct facilities to wind up with Perryville - Selman Field - Rilla 230 kV circuit and Perryville - Dunn 230 kV circuit. Install 230/115 kV autotransformers at Dunn and Rilla. Install 230/69 kV auto at Selman Field.	LA	LA	BaseRel			\$78,902,650	6/1/2021	6/1/2021	500	69	Bottom-up	
B in MTEP16	B	South	Entergy-LA	9687	Sarepta - Minden 115 kV: Upgrade termin	Upgrade terminal equipment at Minden 115 kV substation	LA	LA				\$553,129	6/1/2022	6/1/2022	115		Bottom-up	
B in MTEP16	B	South	Entergy-LA	9688	Dunn - Winnsboro 115 kV: New line	Construct new 230 kV line (energized to 115 kV) from Dunn to Winnsboro.	LA	LA	BaseRel			\$34,998,093	6/1/2020	6/1/2020	115		Bottom-up	

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B in MTEP16	B	South	Entergy-LA	9689	Beekman: New distribution substation	Construct a new 115 kV substation on the North Bastrop - Crossett North 115 kV line.	LA	LA	Other		Distribution	\$7,880,989	6/1/2020	6/1/2020	115		Bottom-up
B in MTEP16	B	South	Entergy-LA	9764	Dixie Baker to Baker 69 kV: Reconductor	Upgrade the Dixie Baker to Baker 69 kV line section. This includes a reconductor and upgrading substation equipment.	LA	LA				\$2,963,000	6/1/2026	6/1/2026	69		Bottom-up
B in MTEP16	B	South	Entergy-LA	9766	Gloria to Flannery REA 69 kV: Reconductor	Upgrade the Gloria to Flannery REA 69 kV line section.	LA	LA	BaseRel			\$2,020,989	6/1/2019	6/1/2019	69		Bottom-up
B in MTEP16	B	South	Entergy-LA	9767	Harelson to Line 372 Tap 69 kV: Reconductor	Reconductor the Harelson to Line 372 Tap 69 kV line.	LA	LA				\$5,143,000	6/1/2025	6/1/2025	69		Bottom-up
B in MTEP16	B	South	Entergy-LA	9781	SWLA69IP Phase 1: Jennings to Lawtag	Reconductor the Jennings to Lawtag line.	LA	LA					6/1/2022	6/1/2022	69		Bottom-up
B in MTEP16	B	South	Entergy-LA	9784	Ford to Lake 69 kV: Reconductor Line	Reconductor the Ford to Lake 69 kV line.	LA	LA				\$1,552,000	6/1/2025	6/1/2025	69		Bottom-up
B in MTEP16	B	South	Entergy-LA	9789	Port Hudson 230-69 kV: Upgrade T6 static	Upgrade substation equipment on the T6 autotransformer to upgrade the element.	LA	LA	Other		Reliability	\$21,435	6/1/2026	6/1/2026	230	69	Bottom-up
B in MTEP16	B	South	Entergy-LA	9793	Esso to Delmont 230 kV: Reconductor Line	Reconductor the Esso to Delmont 230 kV line.	LA	LA				\$2,136,000	6/1/2023	6/1/2023	230		Bottom-up
B in MTEP16	B	South	Entergy-LA	9797	Nelson to Lake Charles Bulk 138 kV: Reconductor	Reconductor the Nelson to Lake Charles Bulk 138 kV line.	LA	LA				\$11,416,000	6/1/2023	6/1/2023	138		Bottom-up
B in MTEP16	B	South	Entergy-LA	9798	Gypsy to Claytonia 115 kV: Reconductor Line	Reconductor the Gypsy to Claytonia 115 kV line.	LA	LA				\$7,366,203	6/1/2020	6/1/2020	115		Bottom-up
B in MTEP16	B	South	Entergy-LA	9802	Snakefarm to Labarre 230 kV: Reconductor	Reconductor the Snakefarm to Labarre 230 kV line.	LA	LA				\$3,834,000	6/1/2020	6/1/2020	230		Bottom-up
B in MTEP16	B	South	Entergy-LA	9803	Prospect to Goodhope 230 kV: Reconductor	Reconductor the Prospect the Goodhope 230 kV line section.	LA	LA				\$697,815	6/1/2020	6/1/2020	230		Bottom-up
B in MTEP16	B	South	Entergy-LA	9804	Avenue C to Paris Tap 115 kV: Reconductor	Reconductor the Avenue C to Paris Tap 115 kV line.	LA	LA				\$220,032	6/1/2022	6/1/2022	115		Bottom-up
B in MTEP16	B	South	Entergy-MS	7906	Greenwood to Greenwood SS 115 kV: Upgrade	Upgrade Greenwood - Greenwood SS 115 kV from 70 MVA to at least 239 MVA.	MS	MS	BaseRel			\$13,133,452	6/1/2019	6/1/2019	115		Bottom-up
B in MTEP16	B	South	Entergy-MS	9823	Franklin 500 kV reconfig	Reconfigure the Franklin 500 kV EHV substation so that the Franklin - Bogalusa and Franklin - McKnight 500 kV lines do not share a common breaker.	MS	MS				\$22,435,508	12/1/2020	12/1/2020	500		Bottom-up
B in MTEP16	B	South	Entergy-MS	9829	Ray Braswell 500/115 upgrade 115 kV breakers	Upgrade 2-2500A 115 kV breakers on the low side of the Ray Braswell 500/115 kV autotransformer.	MS	MS				\$1,153,930	6/1/2019	6/1/2019	115		Bottom-up
B in MTEP16	B	South	Entergy-MS	9831	Tillatoba 230 kV Reconfigure	Reconfigure Tillatoba 230 kV from a single bus single breaker to a multiple protection scheme bus (double bus double breaker)	MS	MS				\$5,449,089	6/1/2024	6/1/2024	230		Bottom-up
B in MTEP16	B	South	Entergy-MS	9837	South Grenada - Elliott 115 kV: Upgrade line	Upgrade South Grenada - Elliott 115 kV line to 260MVA.	MS	MS				\$4,961,042	6/1/2022	6/1/2022	115		Bottom-up
B in MTEP16	B	South	Entergy-TX	9820	Hearne to Calvert 69 kV: Reconductor Line	Reconductor the Hearne to Calvert 69 kV line.	TX	TX				\$9,500,000	6/1/2020	6/1/2020	69		Bottom-up
B in MTEP16	B	South	Entergy-TX	9821	Bryan to College Station Area 138 kV: Construct	Build a new 138 kV line from the Bryan substation to a new substation in the College Station Area.	TX	TX				\$31,500,000	6/1/2024	6/1/2024	138		Bottom-up
B in MTEP16	B	South	Entergy-TX	10964	Calvert to Hearne 69 kV: Construct New Line	Build a new line from Calvert to Hearne 69kV.	TX	TX					6/1/2018	6/1/2018	69		Bottom-up
B in MTEP16	B	South	ETEC	10081	Fred 138kV Loop Project	Construct new Fred switching station on Dogwood-Warren 138 kV line, construct new 138kV Fred substation, construct new 138 kV line from Fred switching station to new Fred substation, construct new 138kV line from Fred substation to North Buna substation.	TX	TX							138		Bottom-up
B in MTEP16	B	South	ETEC	10082	Fred 138kV Loop Project Alt_01	Construct new 138kV Fred substation, construct new 138kV line from Fred substation to the existing North Buna substation, construct new 138kV line from Fred substation to the existing Fork Creek substation	TX	TX							138		Bottom-up
B in MTEP16	B	South	ETEC, Entergy-TX	10080	Weldon 138kV Tie Line	Construct 138 kV line from existing Mustang Prairie station in AEP-Texas to a new Weldon station to existing Magnolia Groveton station in Entergy-Texas.	TX	TX	Other		Distribution				138		Bottom-up
B in MTEP16	B	West	ATC	8443	Replace Rocky Run 345/115 kV T1 Transformers	Replace the three Rocky Run 345-115 kV transformers with two 500 MVA units.	WI	WI				\$22,000,000	12/31/2017	12/31/2017	345	115	Bottom-up
B in MTEP16	B	West	ATC	9925	Tap Stone Lake - Gardner Park 345-kV line	Loop Stone Lake - Gardner Park 345-kV line into new Pershing 345-kV Substation.	WI	WI	BaseRel			\$15,000,000	6/1/2018	6/1/2018	345		Bottom-up
B in MTEP16	B	West	ATC	9928	Re-rate Council Creek - Tomah Industrial Park	Re-rate 1.2 miles of 69 kV line between Council Creek and Tomah Industrial Park.	WI	WI					11/1/2017	11/1/2017	69		Bottom-up
B in MTEP16	B	West	ATC	9930	Uprate Lost Dauphin - Red Maple 138kV	Lost Dauphin - Red Maple 138-kV line uprate.	WI	WI					12/1/2018	12/1/2018	138		Bottom-up
B in MTEP16	B	West	ATC	9935	Install Wesmark Substation 2-8 Mvar 69-kV	Wesmark Substation: Install 2-8 Mvar 69-kV capacitor banks.	WI	WI					6/1/2020	6/1/2020	69		Bottom-up
B in MTEP16	B	West	ATC	9968	Rebuild 138kV Line X-6 Portage - Staff Substation	Rebuild 138kV Line X-6 Portage - Staff Substation.	WI	WI					12/31/2019	12/31/2019	138		Bottom-up
B in MTEP16	B	West	ATC	9974	Rebuild 138kV Line X-98 Staff - North Randolph Substation	Rebuild 138kV Line X-98 Staff - North Randolph Substation.	WI	WI					12/31/2019	12/31/2019	138		Bottom-up
B in MTEP16	B	West	ATC	9991	Rebuild Racine 345kV Bus	Rebuild Racine 345kV Bus.	WI	WI					12/31/2018	12/31/2018	345		Bottom-up
B in MTEP16	B	West	ATC	10486	Rebuild Chaffee Creek - Lincoln Pump Station	Rebuild line Y-18 Chaffee Creek - Lincoln Pump Station.	WI	WI					12/31/2021	12/31/2021	69		Bottom-up
B in MTEP16	B	West	ATC	10590	Rebuild Academy - Columbus 69kV	Rebuild Academy - Columbus (Y-21) 69kV	WI	WI					12/31/2023	12/31/2023	69		Bottom-up
B in MTEP16	B	West	ATC, XEL	10183	Pershing 345 kV Substation	New 345/115 kV substation located near Sheldon Pump on the Stone Lake to Gardner Park 345 kV line. This is a joint Xcel Energy/ATC project with ATC owning the 345 kV yard at Pershing and Xcel Energy owning the rest of the substation.	WI	WI	BaseRel			\$14,500,000	6/1/2018	6/1/2018	345	115	Bottom-up
B in MTEP16	B	West	GRE	8920	Elisha 115/34.5	Build 11.4 miles 115 kV from Hubbard to Elisha. Build 4.9 miles 115 kV from Elisha to Potato Lake tap.	MN	MN	Other		Distribution	\$15,817,000	9/1/2022	9/1/2022	115	34.5	Bottom-up
B in MTEP16	B	West	GRE	9200	Two Inlets Pumping Station (X1A)	Tap the IM-PT line near Potato Lake substation and build ~7.5 miles of 115kV transmission line to connect the future Two Inlets substation. The substation will supply power to the Enbridge Two Inlets pump station.	MN	MN	Other		Reliability	\$7,344,393	10/19/2018	10/19/2018	115		Bottom-up

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B in MTEP16	B	West	GRE	9201	Backus Pumping Station (X2A)	Build 115 kV line from a new interconnection to the MP's 115 kV #142 line (Badoura ? Pine River) to the Bull Moose substation - Backus Pump Station	MN	MN	Other		Reliability	\$2,105,607	10/31/2018	10/31/2018	115		Bottom-up
B in MTEP16	B	West	GRE	9202	Palisade Pumping Station (X3A)	Build 115 kV line from MP's 115 kV #13 line to the Enbridge Palisade Pumping Station.	MN	MN	Other		Reliability	\$13,058,755	10/31/2018	10/31/2018	115		Bottom-up
B in MTEP16	B	West	GRE	9203	Cromwell Pumping Station (X4A)	Build 115 kV line from line to the Cromwell Pumping Station.	MN	MN	Other		Reliability	\$920,000	10/11/2018	10/11/2018	115		Bottom-up
B in MTEP16	B	West	GRE	10102	Owatonna Area Project	Construct a 33 mile 161 kV line from Freeborn/Hayward to West Owatonna.									#N/A	#N/A	Bottom-up
B in MTEP16	B	West	ITCM	9100	Burlington Terminal & 4th St-Agency 69kV	Upgrade the Burlington 69kV terminal so the Burlington-South Burlington line is conductor limited. Rebuild the Burlington 4th Street-Agency 69kV line to T2-477 (140MVA).	IA	IA					12/19/2019	12/31/2019	69		Bottom-up
B in MTEP16	B	West	MDU	9122	East Bismarck-Expressway 115 Upgrade	Replace switches and line jumpers at East Bismarck Jct. on the 115 kV line to Expressway Sub.	ND	ND				\$125,000	6/1/2020	6/1/2020	115		Bottom-up
B in MTEP16	B	West	MDU	9140	Coyote-NACO Sub 115 Upgrade	Reconductor Coyote Jct-NACO sub 115 kV line with 477 ACSS	ND	ND				\$1,270,000	9/1/2020	9/1/2020	115		Bottom-up
B in MTEP16	B	West	MDU	9180	Green River Capacitors	Increase Green River Jct. 15 Mvar capacitors to 20 Mvar	ND	ND				\$400,000	10/1/2020	10/1/2020	115		Bottom-up
B in MTEP16	B	West	MEC	2937	Sub 39: Second 345-161 kV Xfmr	Add a second 345-161 kV xfmr. Expand 345 kV and 161 kV buses.	IL	IL	BaseRel			\$10,900,000	6/1/2022	6/1/2022	345	161	Bottom-up
B in MTEP16	B	West	MEC	2938	Uprate Sub 39 - Cordova 345 kV Line	Change out structures to increase rating.	IL	IL	BaseRel			\$1,300,000	12/1/2021	12/1/2021	345		Bottom-up
B in MTEP16	B	West	MP	9642	20 Line Bus Relocation	Move 20 Line (Blackberry - 20L Tap) from Blackberry Bus 2 to Blackberry Bus 1	MN	MN				\$1,500,000	12/31/2019	12/31/2019	115		Bottom-up
B in MTEP16	B	West	MP	9643	Little Falls 115 kV Tie Breaker Addition	Add a tie breaker in the Little Falls 115 kV bus. Bus 1 to consist of 163 Line (Little Falls - CWP Little Falls), 46 Line (Little Falls - Mud Lake), and 1TR (115/34 kV). Bus 2 to consist of 868 Line (Little Falls - West St Cloud), 49 Line (Little Falls - Blanchard), 10K Cap Bank, and 2TR (115/34 kV). Line-connected transformer 2TR will need to be reconfigured to connect to Bus 2.	MN	MN				\$1,000,000	6/1/2017	6/1/2017	115		Bottom-up
B in MTEP16	B	West	MP	9644	North Shore Cap Banks	Add three cap banks in the North Shore Loop. Establish a shunt cap bank station (2x20 MVA) on the site of the future North Shore Switching Station near Silver Bay, MN, interconnected to existing Tac Harbor - Silver Bay 115 kV Line. Add a second 138 kV cap bank (1x15 MVA) at the Hoyt Lakes Substation.	MN	MN	BaseRel			\$2,500,000	12/31/2017	12/31/2017	115		Bottom-up
B in MTEP16	B	West	MP	9646	Nashauk 14 Line Upgrade	Increase capacity of Nashauk - 14 Line Tap 115 kV line	MN	MN				\$500,000	5/1/2020	5/1/2020	115		Bottom-up
B in MTEP16	B	West	MP	9647	53 Line Upgrade	Increase capacity of existing Nashauk - National 115 kV Line (53 Line)	MN	MN				\$500,000	5/1/2020	5/1/2020	115		Bottom-up
B in MTEP16	B	West	MP	10285	Forbes 38-44MW Breaker Failure Relay	Install breaker failure relay on Forbes 38-44MW 115 kV bus tie breaker	MN	MN					5/1/2020	5/1/2020	115		Bottom-up
B in MTEP16	B	West	MPC, OTP	4813	Clearbrook West 115 kV-Bagley West 230	Clearbrook West to Bagley West 230 kV - new 115 kV transmission line (16 miles) 795 ACSR conductor. Bagley West 230/115 kV new substation. Add 230/115 kV Breakers 140 MVA Transformer & new line termination. Bagley West 230 kV tap. Project taps proposed Clearbrook to Clearbrook West 115 kV radial line. Bagley North 115 kV Switching substation, Add 115 kV 3 Breaker Ring Bus	MN	MN	BaseRel			\$12,300,000	12/31/2020	12/31/2020	230	115	Bottom-up
B in MTEP16	B	West	OTP	9997	Rolette 230/69/41.6 kV Substation	Tap Xcel's 230 kV line between Rugby and Glenboro and install 230/69/41.6 kV Transformer - Install three 230 kV Breakers, one 69 kV Breaker, one 41.6 kV Breaker and install one 230/69/41.6 kV Transformer (60 MVA). Construct 12 miles of 41.6 kV line and 6 miles of 69 kV	ND	ND	Other		Reliability	\$9,000,000	12/1/2018	12/1/2018	230	41.6	Bottom-up
B in MTEP16	B	West	OTP	10001	Voltaire 115/41.6 kV Substation	Build a new 115/41.6 kV substation in the Voltaire area by tapping MISO facilities and re-terminating existing OTP - owned 41.6 kV circuits from CPEC - owned Voltaire substation to new OTP - owned 115/41.6 kV delivery. Install one 40 MVA Transformer 115/41.6 kV. Install four 41.6 kV Breakers.	ND	ND	Other		Reliability	\$5,000,000	10/1/2018	10/1/2018	115	41.6	Bottom-up
B in MTEP16	B	West	OTP	10043	Jamestown 345 Breaker Addition	Install an additional 345 kV breaker to meet TPL-001-4 Compliance Standard.	ND	ND				\$2,000,000	12/31/2020	12/31/2020	345		Bottom-up
B in MTEP16	B	West	OTP	10903	Rugby 115 kV Breaker/Line Addition	Rugby 115 kV Breaker/Line Addition - Install a new 115 kV Breaker and 2 miles of line to Rugby-Harvey line.	ND	ND	Other		Reliability	\$1,500,000	12/1/2017	12/1/2017	115		Bottom-up
A in MTEP03	A	Central	SIPC	81	Carrier Mills 161kV	A new 25-mile 161kV transmission line from Southern Illinois Power Cooperative's power plant to a new 161/69kV substation located north of Carrier Mills, IL.	IL	IL	Other			\$10,200,000	10/1/2016	10/1/2016	161	69	Bottom-up
A in MTEP06	A	Central	AmerenIL	739	Franklin County Power Plant Connection	Franklin County Power Plant Connection - Tap 345 kV Line 4561 Tap, and Install new 345 kV ring bus	IL	IL	Other			\$6,410,900	11/1/2020	11/1/2020	345		Bottom-up
A in MTEP08	A	Central	DEI	1899	Macy to Rochester Metals Jct 69kV recon	Reconductor Macy to Rochester Metals Jct section of 6957 circuit with 477ACSR - approx 9.1 miles	IN	IN	Other		Reliability	\$4,707,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP08	A	Central	HE	1929	Georgetown Primary Ring Bus	138kV Ring Bus addition / Modification to Georgetown Primary	IN	IN	Other		Reliability	\$1,250,000	9/1/2012	9/1/2012	138		Bottom-up

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A in MTEP08	A	Central	Vectren	1782	NorthEast Sub Bus re-config	Rebuild existing straight bus with more reliable breaker and half scheme	IN	IN	Other		Reliability	\$8,000,000	12/31/2024	12/31/2024	138		Bottom-up
A in MTEP08	A	Central	Vectren	1784	Jasper#3 Sub Exp-Victory Line	Extend existing Victory line to new term at existing sub	IN	IN	Other			\$3,625,000	12/31/2019	12/31/2019	69		Bottom-up
A in MTEP08	A	Central	Vectren	1788	Y34 - St. Wendel to Mohr Rd	New 69kV line from St. Wendel Sub to Mohr Rd Sub	IN	IN	Other		Reliability	\$2,750,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP08	A	Central	Vectren	1789	Y56 - City of Boonville Loop	New 69kV line from Boonville Sub to Boonville Pioneer Sub	IN	IN	Other		Reliability	\$1,400,000	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP08	A	East	METC	1448	Simpson	Project to connect a distribution transformer at Simpson	MI	MI	Other			\$2,200,000	12/31/2019	12/31/2019	138	12.5	Bottom-up
A in MTEP08	A	West	ITCM	1744	Maquoketa-Grand Mound 161kV Recond	Reconductor 161kV from Maquoketa to Grand Mound (old East Calamus-Maquoketa 161kV line)	IA	IA	BaseRel			\$10,150,000	12/31/2019	12/31/2019	161		Bottom-up
A in MTEP08	A	West	NWEC	2011	Frederic-Lewis 34.5kV Rebuild	Rebuild the 34.5kV system between Frederic and Lewis sub at 69kV with 477ASCR and horizontal post construction.	WI	WI	Other			\$350,000	6/1/2011	6/1/2011	69		Bottom-up
A in MTEP08	A	West	NWEC	2012	Falun-Penta 34.5kV Rebuild	Rebuild the 34.5kV system between Falun and Penta sub at 69kV with 477ASCR and horizontal post construction.	WI	WI	Other			\$538,000	9/1/2011	9/1/2011	69		Bottom-up
A in MTEP08	A	West	NWEC	2013	Penta-Siren Tap 34.5kV Rebuild	Rebuild the 34.5kV system between Penta sub and Siren Tap at 69kV with 477ASCR and horizontal post construction.	WI	WI	Other			\$175,000	6/1/2011	6/1/2011	69		Bottom-up
A in MTEP08	A	West	NWEC	2016	Frederic-Coffee Cup 69kV reconductor	Reconductor 69kV line with 477ASCR	WI	WI	Other			\$100,000	1/1/2013	1/1/2013	69		Bottom-up
A in MTEP08	A	West	NWEC	2018	Balsam Lake-Centuria 69kV line	Build new 69kV line to Centuria and build Distribution Sub	WI	WI	Other			\$1,200,000	6/1/2011	6/1/2011	69	12.47	Bottom-up
A in MTEP08	A	West	XEL	675	Rebuild Westgate to Scott County 69 kV	Upgrade 20.1 miles Westgate-Deephaven-Excelstor-Scott County 69kV to 115 kV using 795 ACSS conductor, Upgrade 2 miles Westgate-Eden Prairie 115kV #1 and #2 to 400MVA (ProjID 606), Substation work at Deephaven, Excelstor and Scott County.	MN	MN	Other			\$14,000,000	6/15/2017	6/15/2017	115		Bottom-up
A in MTEP09	A	Central	AmerenIL	2273	Supply to LaFarge Customer Substation	Provide 161 kV supply to customer substation	IL	IL	Other		Distribution	\$570,000	6/1/2020	6/1/2020	161		Bottom-up
A in MTEP09	A	Central	DEI	2154	Carmel Rohrer Rd 69/12kv New Sub	Carmel Rohrer Rd 69/12-22.4MVA sub to looped through the 6989 ckt. at or near the existing Carmel Shell Oil tap	IN	IN	Other		Distribution	\$591,143	6/1/2019	6/1/2019	69	12	Bottom-up
A in MTEP09	A	Central	Vectren	2466	Roesner Rd 138/12kV Substation	New 138/12kV Substation for load growth	IN	IN	Other		Distribution	\$3,000,000	6/1/2019	6/1/2019	138	12.47	Bottom-up
A in MTEP09	A	East	METC	662	Weeds Lake	Loop the 345kV Argenta - Robinson Park 345kV circuit into a new 345/138kV EHV substation called Weeds Lake. Build 4 new (approximately 6 miles) 138kV circuits to loop the two Argenta-Milham 138kV lines into the substation.	MI	MI	BaseRel			\$49,248,128	12/15/2016	12/15/2016	345	138	Bottom-up
A in MTEP09	A	East	METC	2478	Capital Ave	New distribution interconnection served from Battle Creek - Verona #2 138kV (Line connection change to Battle Creek to Island Road)	MI	MI	Other		Distribution	\$178,188	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP09	A	East	METC	2481	Forrest Grove	New distribution interconnection served from Campbell-Ransom 138kV circuit.	MI	MI	Other		Distribution	\$170,000	5/31/2018	5/31/2018	138		Bottom-up
A in MTEP09	A	East	METC	2482	Hawthorne	New distribution interconnection served from Four Mile - Blendon 138kV circuit.	MI	MI	Other		Distribution	\$170,000	5/31/2020	5/31/2020	138		Bottom-up
A in MTEP09	A	East	METC	2483	Maines Road	New distribution interconnection served from Marshall - Blackstone 138kV circuit	MI	MI	Other		Distribution	\$176,386	12/1/2016	12/1/2016	138		Bottom-up
A in MTEP09	A	East	METC	2485	Ironwood	New distribution interconnection served from CE's 138kV spur on the Ransom-Buck Creek 138kV.	MI	MI	Other		Distribution	\$12,000	6/1/2019	6/1/2019	138		Bottom-up
A in MTEP09	A	East	METC	2486	Haakwood	New distribution interconnection served from Riggsville-Livingston 138kV (on the Rondo-Vanderbilt section)	MI	MI	Other		Distribution	\$170,000	6/1/2018	6/1/2018	138		Bottom-up
A in MTEP09	A	East	METC	2501	Northern Reactive	Install 3 capacitors in the northern part of Michigan	MI	MI	BaseRel			\$2,700,001	6/1/2030	6/1/2030	0		Bottom-up
A in MTEP09	A	East	WPSC	2736	East Bay-South Boardman Line Rebuild	East Bay - South Boardman Dist - South Boardman 69 kV line rebuild (16 miles) to 143 MVA	MI	MI	Other		Reliability	\$7,500,000	3/31/2010	12/31/2016	69		Bottom-up
A in MTEP09	A	East	WPSC	2770	Gilmore	New distribution interconnection served from Hersey to Vestaburg circuit.	MI	MI	Other		Distribution	\$500,000	6/1/2017	12/31/2017	69		Bottom-up
A in MTEP09	A	West	ITCM	2367	Anita Area 34kV to 69kV Rebuilds	Rebuild 5 miles from the Anita-Exira REC to 69kV. Also rebuild 4.7 miles of the Anita to the Anita-Wiota Joint sub. Rebuild 21.9 miles from Thompson- Redfield. These lines will continue to operate at 34kV.	IA	IA	Other		Condition	\$2,425,000	8/27/2014	12/31/2016	34		Bottom-up
A in MTEP09	A	West	ITCM	2371	New Marengo 69kV Switching Station	Construct a new 3-terminal 69kV switching station at the existing Marengo 34kV sub.	IA	IA	Other		Condition	\$1,900,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP09	A	West	MP	2759	Laskin	Move Virginia 115/46 kV Transformer to Laskin	MN	MN	Other		Distribution	\$1,500,000	12/31/2017	12/31/2017	115	46	Bottom-up
A in MTEP10	A	Central	DEI	1520	Durbin 230/69	Construct a new Durbin 230/69kv 150mva substation with 2 69kv line terminals.	IN	IN	Other		Reliability	\$9,167,826	6/1/2017	6/1/2017	230	69	Bottom-up
A in MTEP10	A	Central	DEI	2143	Frances Creek 345/69kV Bank 2	Add Frances Creek 345/69kV Bank 2 - 200MVA with LTC	IN	IN	Other		Reliability	\$6,887,000	6/1/2020	6/1/2020	345	69	Bottom-up
A in MTEP10	A	East	ITCT	2929	Ariel Substation (formerly Holland)	Distribution Interconnection to add two new 120/13.2kV transformers at Holland. Connects to the Wheeler to Troy 120kV circuit.	MI	MI	Other		Distribution	\$2,800,000	11/30/2016	11/30/2016	120		Bottom-up
A in MTEP10	A	West	GRE	2564	St. Wendel 3.0 mile, 115 kV line	St. Wendel 3.0 mile, 115 kV line	MN	MN	Other		Distribution	\$1,500,000	11/8/2017	11/8/2017	115		Bottom-up
A in MTEP10	A	West	GRE	2577	Columbus (CE) 69 kV Substation	Columbus (previously Elmcrest) (CE) 69 kV Substation	MN	MN	Other		Distribution	\$140,000	5/18/2021	5/18/2021	69		Bottom-up
A in MTEP10	A	West	GRE	2579	Foster Lake (WH) 69 kV Substation	Foster Lake (WH) 69 kV Substation	MN	MN	Other		Distribution	\$140,000	10/30/2020	10/30/2020	69		Bottom-up
A in MTEP10	A	West	GRE	2589	Barnes Grove (DEA) 2.0 mile, 69 kV line	Barnes Grove (DEA) 2.0 mile, 69 kV line	MN	MN	Other		Distribution	\$115,001	7/20/2023	7/20/2023	69		Bottom-up
A in MTEP10	A	West	GRE	2670	Schuster Lake 115/41.6 Source	Schuster Lake 115/41.6 Source	MN	MN	Other		Reliability	\$4,480,714	4/14/2020	4/14/2020	115	41.6	Bottom-up
A in MTEP10	A	West	ITCM	3048	Jefferson Co-Perlee 69kV Rebuild	Rebuild the Jefferson Co-Perlee 69kV line section.	IA	IA	Other		Condition	\$2,700,000	12/31/2022	12/31/2022	69		Bottom-up
A in MTEP10	A	West	ITCM	3053	Keokuk Hydro-Caribide 69kV Dbl Ckt	Build a new 69kV circuit from Keokuk Hydro-Caribide.	IA	IA	Other		Reliability	\$3,240,000	12/31/2016	12/31/2016	69	69	Bottom-up

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A in MTEP10	A	West	ITCM	3055	Cedar Rapids 34kV Conversion Plan	ITCM, working with IP & L, has formed a plan to better serve Cedar Rapids load with new larger, 2-transformer substations that will allow retirement of the 4kV system along with several other small distribution substations. Most of these new substations will be served from a new 69 kV and 161 kV Cedar Rapids transmission system that will use the existing 34.5 kV system right-of-way. This will allow retirement of several existing 34.5kV lines while shifting distribution load to a higher voltage to allow better normal and contingency performance.	IA	IA	Other		Reliability	\$9,310,000	4/29/2011	12/31/2019	161	69	Bottom-up
A in MTEP10	A	West	ITCM	3057	West Branch 34kV Load Shift Projects	Construct 69kV taps for the Moscow & New Liberty dist. Subs	IA	IA	Other		Distribution	\$2,505,000	12/31/2018	12/31/2019	69	34	Bottom-up
A in MTEP10	A	West	ITCM	3058	Vinton-Hazleton 34kV Conversion Plan	The plan includes rebuilding a line between Dundee and Vinton substations and converting this line to 69 kV operation. In order to operate this line at 69 kV a 161/69 kV transformer will need to be installed at Vinton. Also, an approximately 6 mile line will be built to connect the Hazleton source to the Dundee - Vinton line. This plan also includes rebuilding a line between Coggon and Hiawatha substations and converting this line to 69 kV operation. A 161/69 kV transformer will need to be installed at Coggon.	IA	IA	Other		Distribution	\$5,160,000	12/31/2011	12/31/2016	161	69	Bottom-up
A in MTEP10	A	West	MP	2547	Essar	Essar project adds a 95 MW new mine and taconite plant load in fall 2011 with 50 MW DRI facility fall of 2012 total demand to 145 MW. Future load additions could increase total demand to 300 MW	MN	MN	Other		Distribution	\$14,000,000	3/8/2013	4/1/2027	230	14	Bottom-up
A in MTEP10	A	West	MP	2761	Polymet	add new 138/14 kV substation off MP 138 KV Line #1	MN	MN	Other		Distribution	\$3,242,847	1/31/2017	1/31/2017	138	14	Bottom-up
A in MTEP10	A	West	MPW	2934	South Sub add transformer in parallel with	Add a 134 MVA transformer at South Sub (633301-633501) in parallel with existing 75 MVA transformer.	IA	IA	Other		Reliability	\$5,400,000	12/1/2016	12/1/2016	161	69	Bottom-up
A in MTEP10	A	West	NWEC	3092	Webb Lake 69kV line	Rebuild 34.5kV line to Webb Lake at 69kV with horizontal post construction and #4/0 ACSR	WI	WI	Other		Condition	\$425,000	6/1/2012	6/1/2012	69		Bottom-up
A in MTEP11	A	Central	AmerenIL	2239	Proposed MVP Portfolio 1 - Sidney to Risi	Sidney to Rising 345 kV line	IL	IL	MVP			\$8,703,420	6/1/2016	9/1/2016	345		Top-Down
A in MTEP11	A	Central	AmerenIL	3017	Proposed MVP Portfolio 1 - Maywood-Her	Maywood-Herleman-Meredosia-Ipava & Meredosia-Austin 345 kV lines	IL	IL	MVP			\$705,400,612	1/10/2016	11/15/2017	345	138	Top-Down
A in MTEP11	A	Central	AmerenIL	3169	Proposed MVP Portfolio 1 - Pawnee to Pa	Pawnee to Pana 345 kV line including additional transformer at Pana	IL	IL	MVP			\$135,496,358	11/15/2016	11/15/2018	345	138	Top-Down
A in MTEP11	A	Central	AmerenIL, DEI	2237	Proposed MVP Portfolio 1 - Pana - Mt. Zion	Pana to Mt. Zion to Kansas to Sugar Creek 345 kV line. Install transformers at Mt. Zion and Kansas	IN	IL	MVP			\$399,992,176	2/26/2015	11/15/2018	345	138	Top-Down
A in MTEP11	A	Central	AmerenIL, MEC	3022	Proposed MVP Portfolio 1 - Fargo-Sandbu	Fargo-Sandburg-Oak Grove 345 kV Line - New 70 mile, 3000 A summer emergency capability line. 345 kV PCBs: 3-Fargo, 1-Oak Grove, 3-Sandburg, 560 MVA xfmr at Sandburg	IL	IA	MVP			\$219,254,491	11/15/2016	11/15/2018	345	138	Top-Down
A in MTEP11	A	Central	AmerenMO	3170	Proposed MVP Portfolio 1 - Zachary-Mayw	Zachary - Maywood 345 kV, 58 miles, 3000A. Establish a new 345 kV substation at Maywood	MO	MO	MVP			\$153,369,959	1/10/2016	11/15/2018	345		Top-Down
A in MTEP11	A	Central	AmerenMO, ITCM	2248	Proposed MVP Portfolio 1 - Zachary - Ott	Zachary Substation - New 560 MVA, 345/161 kV Transformer. New 71 mile 345 kV line from Zachary to Ottumwa with 3000 A summer emergency capability	MO	IA	MVP			\$191,850,587	6/1/2017	11/15/2018	345	161	Top-Down
A in MTEP11	A	Central	DEI	3379	Shelbyville McKay Rd. 69kV Dist Sub	Shelbyville McKay Rd. - add new 69/12kV distribution sub in the 6976 ckt. Loop through with 954acsr and a set of 1200A line switches.	IN	IN	Other		Reliability	\$553,710	6/1/2017	6/1/2017	69	12	Bottom-up
A in MTEP11	A	Central	DEI	3386	Carmel Springmill Rd. to Hortonville 69kV	Carmel Springmill Rd. Sub - Add 3-69kV breakers in straight bus config and build new .23 mile 69kV 954ACSS@200C line from Springmill Sub to old Springmill Jct. to complete circuit to Hortonville. Change operating mode at Homeplace to close loop from 146th to Springmill.	IN	IN	Other		Reliability	\$1,866,000	6/1/2019	6/1/2019	69		Bottom-up
A in MTEP11	A	Central	DEI, NIPS	2202	Proposed MVP Portfolio 1 - Reynolds to G	Reynolds to Greentown 765 kV line	IN	IN	MVP			\$387,493,373	8/29/2013	6/1/2018	765	345	Top-Down
A in MTEP11	A	Central	IPL	3273	Southwest - Stout CT Line Rating Upgrade	Increase line rating from 322 to 345MVA	IN	IN	Other		Reliability	\$300,000	6/30/2018	6/30/2018	138		Bottom-up
A in MTEP11	A	East	ITCT	3281	Chelsea (formerly Lima) Substation	Distribution Interconnection Request	MI	MI	Other		Distribution	\$6,500,000	12/31/2016	12/31/2016	120		Bottom-up
A in MTEP11	A	East	ITCT	3285	Shoal 120kV Capacitor	33.3 Mvar Capacitor at Shoal 120kV	MI	MI	BaseRel			\$4,330,000	11/30/2016	11/30/2016	120		Bottom-up
A in MTEP11	A	East	NIPS	3203	Proposed MVP Portfolio 1 - Reynolds to B	Reynolds to Burr Oak to Hiple 345 kV line and tie in second AEP 345 kV circuits at Reynolds and Hiple	IN	IN	MVP			\$388,000,000	12/31/2019	12/31/2019	345		Top-Down
A in MTEP11	A	East	WPSC	3331	Redwood to Hart	Rebuild the Redwood to Hart line section with a larger conductor	MI	MI	Other		Reliability	\$1,000,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP11	A	East	WPSC	3335	Burnip Transmission Station Upgrade	Upgrade to replace outdated equipment. Bus, breakers, relays, and other equipment as necessary.	MI	MI	Other		Condition	\$800,000	12/31/2022	12/31/2022	69		Bottom-up

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A in MTEP11	A	West	ATC	3206	G833-4_J022-3 Long Term Solution	1) Construct a new Barnhart 345 & 138 kV substation 2) Install a new 345/138 kV transformer at Barnhart 3) Loop Edgewater-South Fond du Lac, Edgewater-Cedarsauk, Sheboygan Energy Center-Granville 345 kV lines into Barnhart 4) Loop the South Sheboygan Falls-Mullet River 138 kV line into Barnhart 138 kV 5) Construct a new 138 kV line from Barnhart to Plymouth #4 6) Construct a new 138 kV line from Plymouth #4 to Howards Grove 7) Construct a new 138 kV line from Howards Grove to Erdman 8) Convert the existing Forest Junction-Howards Grove-Plymouth #4 138 kV line and the northern portion of the existing Plymouth #4-Holland 138 kV line to 345 kV 9) Terminate the not-converted Holland 138 kV line at Barnhart 138 kV 10) Terminate the southern end of the converted 345 kV line at Barnhart 11) Construct a new Branch River 345 kV substation 12) Loop the converted 345 kV line into Branch River 345 kV substation 13) Loop the Point Beach-Forest Junction, Point Beach-Sheboygan Energy Center 345 kV lines into Branch River 14) Uprate Barnhart-Cedarsauk 345 kV line to 960 MVA for SNSE	WI	WI	GIP				\$46,647,000	12/31/2018	12/31/2018	345		Externally-Driven
A in MTEP11	A	West	ATC, DPC, ITCM	3127	Proposed MVP Portfolio 1: N LaCrosse-N	Construct N LaCrosse-N Madison-Cardinal 345 kV & Hickory Creek-Eden-Cardinal 345 kV line. Install Eden transformer.	WI,IA	IA	MVP			\$1,045,495,000	6/5/2013	12/31/2023	345	138	Top-Down	
A in MTEP11	A	West	GRE	2679	Ramsey-Grand Forks (81.02 mi.) 230 kV F	Ramsey-Grand Forks (81.02 mi.) 230 kV Rebuild	MN	MN	Other	Condition		\$41,496,025	5/31/2021	5/31/2021	230		Bottom-up	
A in MTEP11	A	West	GRE	3454	Pomerleau Lake Line Termination	Terminate the Parkers Lake - Elm Creek 115 kV line to the Pomerleau Lake breaker station that Xcel Energy plans to establish in the 2013 timeframe	MN	MN	Other	Reliability		\$2,126,607	6/13/2017	10/27/2017	115		Bottom-up	
A in MTEP11	A	West	GRE, MP	2634	Savanna-Cromwell	Savanna-Cromwell	MN	MN	BaseRel			\$5,647,421	9/30/2013	3/31/2016	115		Bottom-up	
A in MTEP11	A	West	ITCM	3412	Fort Madison Interconnection	Install tap capable of double circuit 69kV to Fort Madison substation and install associated relay equipment.	IA	IA	Other	Distribution		\$1,740,000	10/7/2016	10/7/2016	69		Bottom-up	
A in MTEP11	A	West	ITCM	3413	Gladbrook 161kV tap	Install a 161kV tap pole in the Marshalltown to Traer line with two line switches. Construct a 161kV tap line to the new Gladbrook substation.	IA	IA	Other	Distribution		\$300,000	12/31/2015	12/31/2015	161	161	Bottom-up	
A in MTEP11	A	West	ITCM	3418	Mount Vernon Circuit 6420 Rebuild to 69kV	This project rebuilds the sections (approximately 17 miles) of Mount Vernon circuit 6420 that will be utilized in the overall 34.5kV to 69kV conversion plan but have not yet been constructed for 69kV operation.	IA	IA	Other	Distribution		\$7,150,000	12/31/2015	12/31/2015	34	34	Bottom-up	
A in MTEP11	A	West	ITCM	3422	South Broadway TEQ	Upgrades terminal equipment. Change out existing relays, add new control building, add 69kV bus	IA	IA	Other	Distribution		\$852,000	6/30/2015	6/30/2015	69		Bottom-up	
A in MTEP11	A	West	ITCM, MEC	3205	Proposed MVP Portfolio 1: Lakefield Jct.	New 345 kV line from Lakefield Junction to Kossuth County via Winnebago and Winco and a new 345 kV line from Obrien County to Webster via Kossuth County. Includes 161 kV rebuild as underbuild along portions of the	MN,IA	IA	MVP			\$516,336,690	12/22/2015	6/1/2018	345	161	Top-Down	
A in MTEP11	A	West	ITCM, MEC	3213	Proposed MVP Portfolio 1 - Winco to Hazl	Winco to Lime Creek to Killdeer to Blackhawk to Hazleton 345 kV line and Lime Creek, Killdeer and Black Hawk transformers	IA	IA	MVP			\$377,229,516	8/14/2015	12/31/2018	345	161	Top-Down	
A in MTEP11	A	West	MDU, OTP	2220	MVP Portfolio 1 - Ellendale to Big Stone S	Big Stone to Ellendale 345 kV line	SD,ND	ND	MVP			\$395,670,000	9/30/2019	9/30/2019	345	230	Top-Down	
A in MTEP11	A	West	MDU, OTP, XEL	2221	MVP Portfolio 1 - Big Stone South to Broo	Brookings to Big Stone 345 kV line (double ckt capable)	SD	SD	MVP			\$226,720,000	9/30/2017	9/30/2017	345	230	Top-Down	
A in MTEP11	A	West	OTP, XEL	3481	Buffalo - Casselton 115 kV Line	Construct 16 mile 115 kV line from Buffalo - Casselton (ND); Replace Buffalo 345/115 kV Transformer; Rebuild portion of Sheyenne - Mapleton 115 kV Line	ND	ND	BaseRel			\$5,600,000	11/1/2013	6/30/2017	345	115	Bottom-up	
A in MTEP12	A	Central	AmerenMO	3366	Wallen Creek Substation High-Side Trans	Install 2-2000 A, 138 kV PCBs	MO	MO	Other	Reliability		\$2,635,000	12/1/2018	12/1/2018	138		Bottom-up	
A in MTEP12	A	Central	BREC	3792	Wilson-Matanzas 161 kV Interconnection	Create a new 161 kV BREC-LG&E/KU interconnection by looping the Wilson-Paradise portion of the three terminal interconnection through a new Matanzas substation (LG&E/KU) The loop will require 600 feet of new 954 MCM ACSS construction and will be located 10.5 miles from Wilson. The new LG&E/KUMatanzas station will include 2 161/138 kV transformers, (2) 161 kV line terminals, (2) 138 kV line terminals, (6) 138 kV breakers, and (6) 161 kV breakers.	KY	KY	Other	Reliability			9/1/2013	1/1/2016	161		Bottom-up	
A in MTEP12	A	Central	DEI	3542	New Castle Ingersoll 1 Bank 2 Repl	New Castle Ingersoll 1 Bank 2 Repl ? Replaces 34/12kV bank w/22MVA 69/12kV Bank. Add 69kV tap line.	IN	IN	Other	Distribution		\$579,657	6/1/2017	6/1/2017	69	12	Bottom-up	
A in MTEP12	A	East	ITCT	3591	St. Clair 345 kV Station Equipment Upgra	Replace 345kV station equipment in the B, C and D rows at St. Clair.	MI	MI	BaseRel			\$924,000	5/31/2016	5/31/2016	345		Bottom-up	
A in MTEP12	A	East	ITCT	3624	ITCT Customer Interconnections - Year 2C	Customer interconnection requests and retirements	MI	MI	Other	Distribution		\$2,000,000	12/31/2016	12/31/2016	120		Bottom-up	
A in MTEP12	A	East	METC	3590	SVC at Tippy	Install Static Var Compensator (SVC) at Tippy	MI	MI	BaseRel			\$28,500,000	6/1/2030	6/1/2030	138		Bottom-up	

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A in MTEP12	A	East	METC	3599	Palisades 345 kV Station Equipment Upgrade	Upgrade the station equipment at Palisades in rows 25, 27, and 29.	MI	MI	BaseRel			\$4,000,000	12/31/2018	12/31/2018	345		Bottom-up
A in MTEP12	A	East	METC	3625	METC Customer Interconnections - Year 2	Customer interconnection requests and retirements	MI	MI	Other		Distribution	\$2,500,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP12	A	West	ATC	1270	Rebuild Arcadian-Waukesha 138 kV lines	Rebuild the two Arcadian-Waukesha 138 kV lines	WI	WI	BaseRel			\$23,406,000	6/1/2025	6/1/2025	138		Bottom-up
A in MTEP12	A	West	ATC	3679	Green Bay to Morgan 345 kV project and New Green Bay sub to Morgan 345 kV line and new 138 kV line from Holmes to 18th road		WI	MI	BaseRel			\$356,848,000	8/13/2016	10/25/2018	345	69	Bottom-up
A in MTEP12	A	West	ATC	3952	Green Bay - Morgan 138 kV line	Green Bay - Morgan 138 kV line	WI	WI	Other		Reliability	\$76,711,000	5/13/2018	10/28/2018	345	138	Bottom-up
A in MTEP12	A	West	GRE	3470	MISO G667		MN	MN	GIP			\$722,000	12/31/2014	12/31/2014	0		Externally-Driven
A in MTEP12	A	West	GRE	11543	G549 - Glacial Ridge	Install new 69kV 3-way switch structure in the GRE AG-WL line.	MN	MN	GIP			\$150,000	11/1/2018	11/1/2018	69		Externally-Driven
A in MTEP12	A	West	GRE	11563	G830 - McHenry Substation Upgrade	Install 115 kV ring bus at McHenry substation	ND	ND	GIP			\$4,952,173	11/1/2017	11/1/2017	115		Externally-Driven
A in MTEP12	A	West	ITCM	3627	Chariton-Corydon 69 kV Rebuild	Rebuild the 69 kV line from Chariton to Corydon.	IA	IA	Other		Condition	\$8,351,986	12/30/2016	12/30/2016	69		Bottom-up
A in MTEP12	A	West	ITCM	3628	Relocate Lehigh Switch Station	Construct a new Lehigh Switch Station and retire the existing site. This will require a new 69 kV line from the General Food sub to the Northwest sub.	IA	IA	Other		Relocation	\$6,755,200	8/25/2017	8/25/2017	69		Bottom-up
A in MTEP12	A	West	ITCM	3629	8th Street-Salem 161 kV line	Build a new 8th Street-Salem 161 kV line. This will require ~3.5 miles of new 161 kV line to tie to an existing 69 kV line out of 8th Street that is constructed to 161 kV standards. A new 161 kV terminal will be required at Salem and 8th Street.	IA	IA	BaseRel			\$7,222,073	12/31/2016	12/31/2016	161	69	Bottom-up
A in MTEP12	A	West	ITCM	3630	Adams to Stewartville 69 kV Rebuild	Rebuild the ~35 mile line section due to age & condition.	IA	IA	Other		Reliability	\$12,200,000	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP12	A	West	ITCM	3631	Rock Creek to Mill Creek 69 kV Rebuild	Rebuild the ~5 mile line section to T2-477 ACSR	IA	IA	Other		Reliability	\$2,500,000	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP12	A	West	ITCM	3632	Arnold 161kV Bus Upgrades	Move the Arnold-Hiawatha 161 kV line terminal to a new terminal position next to the Arnold-6th Street 161 kV line by adding 2 new 161 kV breakers.	IA	IA	BaseRel			\$2,400,000	12/31/2017	12/31/2017	161		Bottom-up
A in MTEP12	A	West	ITCM	3638	Corydon 69 kV Sub Rebuild	Complete rebuild of the substation with all new equipment.	IA	IA	Other		Condition	\$5,129,204	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP12	A	West	ITCM	3639	Chariton 69 kV Sub Rebuild	Complete rebuild of the substation with all new equipment.	IA	IA	Other		Condition	\$7,683,367	9/2/2016	9/2/2016	69		Bottom-up
A in MTEP12	A	West	ITCM	3640	Belmond-Meservey	Rebuild the 4.65 mile section old line to new T2-4/0 ACSR.	IA	IA	Other		Condition	\$1,627,500	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP12	A	West	ITCM	3643	Oseola Rec. to Woodburn Jct. 69 kV Rebuild	Rebuild the 5.5 mile section old line to new T2-4/0 ACSR.	IA	IA	Other		Condition	\$1,950,000	12/31/2022	12/31/2022	69		Bottom-up
A in MTEP12	A	West	ITCM	3644	Knoxville to Lucas County 69 kV Rebuild	Rebuild 10.6 miles of old line to new T2-4/0 ACSR.	IA	IA	Other		Condition	\$3,750,000	12/31/2021	12/31/2021	69		Bottom-up
A in MTEP12	A	West	ITCM	3645	Triboji 6750 (Oleans Tap) 69 kV Rebuild	Rebuild ~9.5 miles of old line to new T2-4/0 ACSR.	IA	IA	Other		Condition	\$3,350,000	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP12	A	West	ITCM	3647	Eastern Iowa Project Rebuilds	Rebuild the 34.5 kV line sections to 69 kV construction and operate at 34.5 kV until conversion.	IA	IA	Other		Condition	\$18,900,000	6/10/2013	12/31/2021	34		Bottom-up
A in MTEP12	A	West	ITCM	3648	Marshalltown-Grand Junction Area Conversion	Rebuild the 34.5 kV line sections to 69 kV construction and operate at 34.5 kV until conversion.	IA	IA	Other		Condition	\$10,300,000	7/19/2013	12/31/2019	34		Bottom-up
A in MTEP12	A	West	ITCM	3649	Plaza Interconnection	The Marshalltown ? Timber Creek 161 kV line will be tapped in & out of the new Plaza substation, with line terminals including breakers and a bus tie breaker.	IA	IA	Other		Distribution	\$1,750,000	12/31/2020	12/31/2020	161		Bottom-up
A in MTEP12	A	West	MEC	3710	Norwalk 161-33 kV transformer	Add 33 MVA 161-13 kV transformer at existing substation	IA	IA	Other		Distribution	\$886,413	7/1/2021	7/1/2021	161	13.2	Bottom-up
A in MTEP12	A	West	XEL	3769	Mankato - Twin Cities through flow mitigation	Re-build 13 miles of 69 kV line from Carver County substation to Arlington to 477 ACSR conductor and Install 5.4 MVAR capacitor at Crystal Foods substation along with Auto transfer switch.	MN	MN	Other		Reliability	\$4,155,551	3/1/2019	3/1/2019	69		Bottom-up
A in MTEP12	A	West	XEL	3775	Couderay - Osprey 161 kV line	This project will continue the 161 kV connection from Stone Lake - Couderay (Radisson) on to Osprey. This is needed to supply power to the eastern 115 kV line running between Bayfront - Ironwood - Chippewa falls during low hydro conditions. There will be a new 161/115 kV connection at Osprey	WI	WI	BaseRel			\$7,000,000	6/3/2015	1/27/2017	161	115	Bottom-up
A in MTEP12	A	West	XEL	3797	Maple River - Red River 2nd 115 kV line	build 5 miles of new 115 kV circuit between Maple River and Red River substations	ND	ND	Other		Reliability	\$15,619,485	10/31/2017	12/22/2017	115		Bottom-up
A in MTEP13	A	Central	AmerenIL	2302	Madison Industrial-Madison State Street 1	Reconductor 2.35 miles of 795 kcmil SAC conductor to 1200 A summer emergency capability	IL	IL	BaseRel			\$1,637,000	12/1/2016	12/1/2016	138		Bottom-up
A in MTEP13	A	Central	AmerenIL	4272	Grand Tower-Makanda 138 kV Line Rebuild	Rebuild 16.91 miles of existing 556 kcmil ACSR conductor with conductor capable of carrying 1200 A under summer emergency conditions.	IL	IL	Other		Condition		12/1/2016	12/1/2016	138		Bottom-up
A in MTEP13	A	Central	CWLP	4270	N Auburn-Chatham Main 138 kV Line Reconductor	Reconductor N Auburn- Chatham Main 138 kV Line to 795 ACSR	IL	IL	BaseRel			\$130,000	6/1/2014	6/1/2014	138	138	Bottom-up
A in MTEP13	A	Central	DEI	4029	Sylvania to Yedo 6935 Rebuild	Rebuild radial tap in the 6935 ckt from Sylvania to Kingman to Yedo with 477acsr @ 100C and upgrade Kingman line switches (2) to 1200A.	IN	IN	Other		Reliability	\$2,770,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP13	A	Central	DEI	4030	Cayuga 69 to Gessie Jct 6936 Rebuild	Rebuild 6936 ckt from Cayuga 69 sub towards Gessie Jct. (str. 804-2501) with 477acsr @ 100C	IN	IN	Other		Reliability	\$3,100,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP13	A	Central	DEI	4032	Five Points 230kV Station Upgrade Phase I	Five Points Station Upgrade Phase I ? Install new prefabricated control building. Replace 230kV breakers and relays. Replace 230kV circuit switchers with 230kV breakers. Replace 230-138kV bank protection. Replace 230kV bus protection.	IN	IN	Other		Reliability	\$5,406,000	12/31/2017	12/31/2017	230	138	Bottom-up
A in MTEP13	A	Central	DEI	4033	Camp Atterbury to Edinburg 6950 Rebuild	Camp Atterbury to Edinburg 6950 Reconductor 2/0 Cu (4.0 miles) to 477ACSR and uprate existing 477ACSR 80C to 477ACSR 100C (4.5 miles).	IN	IN	Other		Reliability	\$1,650,765	12/31/2017	12/31/2017	69		Bottom-up

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A in MTEP13	A	Central	DEI	4037	Lafayette 230kV Ring Bus - Ph. 2	Lafayette 230kV Sub Ring Bus - Phase 2, install two 230kV 40kA breakers, support structures, bus and 954KCM jumpers to complete five-breaker - 230kV ring bus. Install three transformer protection schemes.	IN	IN	BaseRel			\$1,618,000	12/31/2019	12/31/2019	230		Bottom-up
A in MTEP13	A	Central	IPL	4724	Eagle Valley 138kV Substation - DPP J23	J238 - 138kV - Generator interconnection substation - install four bay breaker and a half design substation for 725MW CCGT in Morgan County Indiana at the existing Pritchard Plant site.	IN	IN	GIP				4/16/2016	4/16/2016	138		Externally-Driven
A in MTEP13	A	East	ITCT	1550	Sunset to Hager Underground 120 kV Re	Replace the 0.08 miles of underground 1500 KCM CU XLPE SSC 120 kV conductor from the Hager to Sunset 120 kV circuit with 5000 KCM CU XLPE 120 kV conductor. Also address clearance issues causing the sag limit on the 954 ACSR overhead conductor portion of this circuit	MI	MI	BaseRel			\$2,200,000	12/31/2016	12/31/2016	120		Bottom-up
A in MTEP13	A	East	ITCT	3938	Greenwood 120 kV Capacitors	Install two 120kV, 26 Mvar capacitors capacitor banks at the Greenwood substation with 2 synchronous breakers and a 120 kV line breaker.	MI	MI	BaseRel			\$2,020,000	7/15/2017	7/15/2017	120		Bottom-up
A in MTEP13	A	East	ITCT	4145	Quaker to Southfield (CTL18-2) 120 kV Ur	Reconductor the 0.36 mile Quaker to Southfield Underground cable section using 5000 KCM CU XLPE cable.	MI	MI	BaseRel			\$3,960,000	12/31/2016	12/31/2016	120		Bottom-up
A in MTEP13	A	East	ITCT	4153	Toll Road + SVC	Relocate all ITCT Transmission circuits at the Fermi 120 kV switchyard to a new station nearby (Toll Road station). This station would be configured as a breaker-and-a-half scheme. Create three feeds from Toll Road to the Fermi 120 kV switchyard. Install a 100 MVAR Static VAR Compensator at Toll Road.	MI	MI	BaseRel			\$40,000,000	12/31/2017	12/31/2018	120		Bottom-up
A in MTEP13	A	East	ITCT	4159	ITCT Annual Wood Pole Replacement Pro	Replace aging wood poles with concrete poles or steel towers.	MI	MI	Other		Condition	\$8,500,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4163	ITCT Annual Surge Arrestor Replacement	Replace old Silicon Carbide and Gap-type surge arresters with the new MOV gapless type ones in substations.	MI	MI	BaseRel			\$360,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4171	ITCT Annual Misc Line Equipment Replac	Replace cross arms that need to be replaced to maintain lines in serviceable conditions. Replace defective and damaged insulators for system reliability. Replace defective pole guying for system reliability or to meet code issues.	MI	MI	Other		Condition	\$5,000,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4175	ITCT Pole Top Switch Additions/Replacem	Installing, or replacing as appropriate, pole-top switches at tap points of circuits will provide the operational flexibility to sectionalize parts of the line to isolate faults or perform maintenance work on it without having to shut down the entire circuit.	MI	MI	Other		Reliability	\$2,400,000	10/15/2014	12/31/2016	120		Bottom-up
A in MTEP13	A	East	ITCT	4176	ITCT Pole Top Switch Additions/Replacem	Installing, or replacing as appropriate, pole-top switches at tap points of circuits will provide the operational flexibility to sectionalize parts of the line to isolate faults or perform maintenance work on it without having to shut down the entire circuit.	MI	MI	Other		Reliability	\$2,400,000	12/31/2015	12/31/2016	120		Bottom-up
A in MTEP13	A	East	ITCT	4177	ITCT Pole Top Switch Additions/Replacem	Installing, or replacing as appropriate, pole-top switches at tap points of circuits will provide the operational flexibility to sectionalize parts of the line to isolate faults or perform maintenance work on it without having to shut down the entire circuit.	MI	MI	Other		Reliability	\$2,400,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4181	ITCT Instrument Transformer Replacem	Replace the aging potential devices including potential transformers and coupling-capacitor type potential devices.	MI	MI	Other		Condition	\$360,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4187	ITCT Annual NERC Protection Compliano	Upgrade relay throughout system.	MI	MI	Other		Condition	\$2,400,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4191	ITCT Annual Breaker Replacement Progre	Replace defective breakers throughout system	MI	MI	Other		Condition	\$6,250,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4195	ITCT Annual Battery Replacement Progra	Replace battery chargers with the new ones.	MI	MI	Other		Condition	\$200,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4199	ITCT Disconnect Switch Replacement Pro	Replace problematic Pennsylvania Type A6A-2, EEE, R1E, WESTINGHOUSE, HK-PORTER, AND DELTA-STAR disconnect switches (or any disconnect switches with problematic auxiliary latch assemblies)	MI	MI	Other		Condition	\$400,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4204	ITCT Annual Relay Betterment Program 2	Annual relay betterment program	MI	MI	Other		Condition	\$10,400,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	ITCT	4286	Henry Ford Substation	Loop in the Frisbie ? Waterman 120 kV underground cable to feed the Henry Ford substation. Splices and terminals will be installed and underground cable run from the existing line to the new substation. The substation is located approximated 150 feet fro	MI	MI	Other		Distribution	\$5,000,000	5/31/2018	5/31/2018	120		Bottom-up
A in MTEP13	A	East	ITCT	4287	Hilton Road (formerly Ferndale) Substatio	Loop either the Lincoln - Northeast 120 kV or the Lincoln ? Northeast ? Northwest 120 kV circuit to feed the new Hilton substation. The substation is located adjacent to the circuit. At the new station, 3-120 kV breakers and the associated 120 kV stat	MI	MI	Other		Reliability	\$3,800,000	3/31/2017	3/31/2017	120		Bottom-up
A in MTEP13	A	East	METC	4143	Verona - Marshall 138kV (Verona pos 388	Terminal Equipment upgrade at Verona 138 kV	MI	MI	Other		Reliability	\$80,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP13	A	East	METC	4146	Marshall - Blackstone 138kV Rebuild	Rebuild 34.5 miles of the Marshall-Blackstone 138kV circuit utilizing single circuit 138kV structures and 954 ACSR conductor.	MI	MI	Other		Condition	\$46,300,000	12/31/2016	12/31/2016	138		Bottom-up

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A in MTEP13	A	East	METC	4147	Battle Creek - Island Road 138kV Rebuild	Rebuild 23.9 miles of the Battle Creek ? Island Road 138kV circuit utilizing single circuit 138kV structures and 954 ACSR conductor.	MI	MI	Other		Condition	\$24,300,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP13	A	East	METC	4149	Argenta - Tallmadge 345kV Sag Remediation	Remediate sag on the Argenta ? Tallmadge 345kV line to bring its thermal rating up to 2422 Amp (1447 MVA)	MI	MI	BaseRel			\$1,500,000	6/30/2016	6/30/2016	345		Bottom-up
A in MTEP13	A	East	METC	4150	Verona-Argenta 138kV (Verona pos 277)	Upgrade station equipment at Verona.	MI	MI	BaseRel			\$140,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP13	A	East	METC	4157	METC Annual Wood Pole Replacement Program	Replace defective and aging wood poles with concrete poles or steel poles.	MI	MI	Other		Condition	\$9,000,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4161	METC Annual Surge Arrestor Replacement	Replace old Silicon Carbide and Gap-type surge arresters with the new MOV gapless type ones in substations.	MI	MI	Other		Condition	\$360,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4167	METC Annual Misc Line Equipment Replacement	Replace cross arms that need to be replaced to maintain lines in serviceable conditions. Replace defective and damaged insulators for system reliability. Replace defective pole guying for system reliability or to meet code issues.	MI	MI	Other		Condition	\$6,000,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4174	METC Pole Top Switch Additions/Replacement	Installing, or replacing as appropriate, pole-top switches at tap points of circuits will provide the operational flexibility to sectionalize parts of the line to isolate faults or perform maintenance work on it without having to shut down the entire circuit.	MI	MI	Other		Reliability	\$3,600,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4179	METC Instrument Transformer Replacement	Replace the aging instrument transformers including potential transformers and coupling-capacitor type instrument transformers.	MI	MI	Other		Condition	\$360,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4184	METC Annual NERC Protection Compliance	Upgrade relay throughout system.	MI	MI	Other		Condition	\$2,400,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4189	METC Annual Breaker Replacement Program	Replace defective breakers throughout system	MI	MI	Other		Condition	\$9,000,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4193	METC Annual Battery Replacement Program	Replace battery chargers with new ones.	MI	MI	Other		Condition	\$120,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4203	METC Disconnect Switch Replacement Program	Replace problematic Pennsylvania Type A6A-2, EEE, R&E, WESTINGHOUSE, HK-PORTER, AND DELTA-STAR disconnect switches (or any disconnect switches with problematic auxiliary latch assemblies)	MI	MI	Other		Condition	\$900,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4205	METC Annual Relay Betterment Program	Annual relay betterment program	MI	MI	Other		Condition	\$7,000,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4207	METC Annual Power Plant Control Relocation	Replace controls for METC substations that currently exist in power plant buildings. Locate new controls in dedicated METC control houses.	MI	MI	Other		Relocation	\$2,400,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP13	A	East	METC	4218	Bass Creek - Black River 138kV Sag Remediation	Remediate the sag limit on the Bass Creek - Black river 138kV line up its conductor rating of 208 MVA (871 A)	MI	MI	BaseRel			\$180,000	6/30/2016	6/30/2016	138		Bottom-up
A in MTEP13	A	East	WPSC	4084	North Shade to Vestaburg	North Shade to Vestaburg Rebuild	MI	MI	Other		Condition	\$10,000,000	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP13	A	East	WPSC	4085	Lake County to Fountain Junction	Lake County to Fountain Junction Rebuild	MI	MI	Other		Reliability	\$3,100,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP13	A	West	ATC	3813	Rebuild Dam Heights-Portage 69 kV	Reconductor the entire Dam Heights-Portage 69 kV line with T2-4/0 ACSR conductor	WI	WI	Other		Condition	\$33,700,000	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP13	A	West	ATC	3817	Install Shoto 138 kV breaker	Shoto 138/69 kV transformer highside breaker additions	WI	WI	Other		Relaying	\$4,325,000	12/1/2017	12/1/2017	138		Bottom-up
A in MTEP13	A	West	ATC	3841	Convert Pulliam-Glory Rd 69 kV	Convert Pulliam-Glory Rd 69 kV Line to 138 kV	WI	WI	Other		Reliability	\$22,675,655	3/1/2016	12/1/2016	138	69	Bottom-up
A in MTEP13	A	West	ATC	3892	Rebuild Stagecoach-Black Rock 69 kV; transfer the existing conductor to rebuild Black Earth-Wick Drive 69 kV.	Reconductor Stagecoach-Black Rock 69 kV; transfer the existing conductor to rebuild Black Earth-Wick Drive 69 kV.	WI	WI	Other		Reliability	\$3,500,000	1/1/2017	1/1/2017	69		Bottom-up
A in MTEP13	A	West	ATC	3895	Reconductor Oak Creek-Kansas 138 kV line	Reconductor Oak Creek-Ramsey-Kansas 138 kV line	WI	WI	Other		Reliability	\$830,000	6/1/2016	6/1/2016	138		Bottom-up
A in MTEP13	A	West	GRE	4008	New Market & Cleary Lake Area Projects	The New Market & Cleary Lake Area project, a joint project between NSP and GRE, consists of rebuilding existing transmission lines and constructing new 69 kV transmission lines. The 69 kV line rebuilds and new constructions are to 115 kV standard for future 115 kV operation.	MN	MN	BaseRel			\$200,000	12/15/2015	8/31/2016	69		Bottom-up
A in MTEP13	A	West	GRE	4009	St. Boni Second 115/69 kV Substation Improvements	Install second 115/69 kV transformer at St. Boni including modifications on the 115 and 69 kV buses for additional breakers	MN	MN	Other		Reliability	\$10,185,577	2/6/2017	2/6/2017	115	69	Bottom-up
A in MTEP13	A	West	GRE, MP	3531	Zemple (formerly Deer River) Substation	New 230/115 kV Substation	MN	MN	BaseRel			\$17,404,002	3/31/2015	11/8/2016	230	23	Bottom-up
A in MTEP13	A	West	ITCM	4099	Albert Lea Westside-South Broadway 69kV	Rebuild approximately 2 miles of the Albert Lea Westside-South Broadway 69kV line to T2-4/0 capacity.	MN	MN	Other		Condition	\$840,000	12/31/2021	12/31/2021	69		Bottom-up
A in MTEP13	A	West	ITCM	4101	Montgomery-Waseca Jct 69kV Rebuild	Rebuild the ~29.5 mile Montgomery-French Lake Tap-Waseca Jct 69kV line to T2-4/0.	MN	MN	Other		Condition	\$26,137,683	12/31/2016	12/31/2020	69	69	Bottom-up
A in MTEP13	A	West	ITCM	4102	Columbus Jct-Newport 69kV Rebuild	Rebuild the ~19 mile Columbus Jct-IBP Tap-Winfield Tap-Cairo REC-Newport 69kV line to T2-4/0.	IA	IA	Other		Condition	\$13,798,885	12/31/2021	12/31/2021	69	69	Bottom-up
A in MTEP13	A	West	ITCM	4103	North Burlington-Mediapolis 69kV Rebuild	Rebuild the ~6.4 mile North Burlington-North Burlington Tap 69kV line to T2-4/0.	IA	IA	Other		Reliability	\$5,760,000	9/1/2016	9/1/2016	69	69	Bottom-up
A in MTEP13	A	West	ITCM	4104	Lansing-Monona 69kV Rebuild	Rebuild the ~25 mile Lansing-Harper's Ferry Tap-Waterville Tap-Monona 69kV line to T2-4/0.	IA	IA	Other		Condition	\$20,975,036	12/31/2020	12/31/2020	69	69	Bottom-up
A in MTEP13	A	West	ITCM	4105	Decorah-Waukon 69kV Rebuild	Rebuild the ~23 mile Decorah-Ludlow Tap-Waukon 69kV line to T2-4/0.	IA	IA	Other		Condition	\$9,660,000	12/31/2022	12/31/2022	69	69	Bottom-up
A in MTEP13	A	West	ITCM	4106	Windsor-Richfield 69kV Rebuild	Rebuild the ~11.2 mile Windsor-Hawk Tap-Richfield 69kV line to T2-4/0.	IA	IA	Other		Condition	\$4,750,000	12/31/2020	12/31/2020	69	69	Bottom-up
A in MTEP13	A	West	ITCM	4107	Emery-Lehigh Tap 69kV Rebuild	Rebuild the ~4.5 mile Emery-Lehigh 69kV line to T2-4/0.	IA	IA	Other		Condition	\$2,295,600	8/4/2017	8/4/2017	69	69	Bottom-up
A in MTEP13	A	West	ITCM	4108	Ellendale-West Owatonna 69kV Rebuild	Rebuild the ~13 mile Ellendale-West Owatonna 69kV line to T2-4/0.	MN	MN	Other		Condition	\$7,281,277	12/31/2022	12/31/2022	69	69	Bottom-up
A in MTEP13	A	West	ITCM	4113	Hayward Breaker 665 Terminal Upgrade	Upgrade 69kV terminal equipment on the Hayward breaker 665.	MN	MN	Other		Reliability	\$15,000	4/30/2015	4/30/2015	161	69	Bottom-up

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A in MTEP13	A	West	ITCM	4114	Triboji Breaker 6730 Terminal Uprate	Upgrade 69kV terminal equipment on the Triboji breaker 6730 and change the CT ratio at Flying Cloud.	IA	IA	Other		Reliability	\$20,000	4/30/2015	4/30/2015	161	69	Bottom-up
A in MTEP13	A	West	ITCM	4115	New Fletcher 161/69kV Sub & Line Taps	Construct a new Fletcher 161/69kV sub next of the Marshalltown. Fletcher will be served from the Marshalltown 161kV ring position.	IA	IA	Other		Condition	\$7,173,600	12/31/2019	12/31/2019	161	69	Bottom-up
A in MTEP13	A	West	ITCM	4116	Eastern Iowa Phase 2 Rebuilds	Eastern Iowa Study Rebuild and Conversion Projects (Phase 2) ? Rebuild 34kV single CKT to DBL CKT 69kV for Marion ? ? Anamosa & Hiawatha ? Coggon ? Mt. Vernon ? Linn TWP REC New Line ? Linn TWP REC ? Cornell New Line ? Springville ? Amber 34kV Rebuild to 69kV ? Lovell REC Tap ? Monticello Industrial 34kV Rebuild to 69kV ? Hiawatha ? Echo Hill REC 69 kV Conversion	IA	IA	Other		Condition	\$13,150,000	3/14/2014	12/31/2017	69	69	Bottom-up
A in MTEP13	A	West	ITCM	4118	Grand Junction-Jefferson WCC Rebuild	Rebuild ~7 miles of 34kV lines to 69kV construction (operate at 34kV).	IA	IA	Other		Condition	\$6,117,600	12/25/2017	12/25/2017	34	34	Bottom-up
A in MTEP13	A	West	ITCM	4121	Customer Interconnections with short lead	These projects are being done at the request of an interconnection customer in order to facilitate new load, re-distribute existing load, improve the performance of the sub-transmission and distribution systems, or to accommodate a new Transmission-to-Transmission	IA,MN	IA,MN	Other		Distribution	\$2,000,000	12/31/2013	12/31/2016	0		Bottom-up
A in MTEP13	A	West	ITCM	4122	Annual Misc Line Equipment Replacement	Replace defective cross arms, damaged or defective line insulators, failed line arrestors, and damaged, defective or non-code compliant pole guys.	IA,MN	IA,MN	Other		Reliability	\$4,000,000	12/31/2013	12/31/2016	0		Bottom-up
A in MTEP13	A	West	ITCM	4123	Breaker Replacement Program	Replace the breakers with new breakers. Prioritized replacement of breakers identified as high-maintenance or over-duty with modern technology circuit breakers should continue in order to improve the reliability of the transmission system. Adoption of this alternative is consistent with industry wide trend towards the use of low/no-maintenance SF6 gas puffer-style dead tank circuit breakers with built in bushing current transformers and very low SF6 gas emissions.	IA,MN	IA,MN	Other		Reliability	\$5,000,000	12/31/2013	12/31/2016	0		Bottom-up
A in MTEP13	A	West	ITCM	4124	Fiber Optic Static Wire Additions Project	Project includes the Engineering, Procurement, Construction and Commissioning of Fiber Optic Static Wire Additions for use with ITCM's SCADA system and protective relaying.	IA,MN	IA,MN	Other		Metering	\$720,000	12/31/2014	12/31/2016	0		Bottom-up
A in MTEP13	A	West	ITCM	4125	PCM Equipment Replacement Program	Replace the PCB equipment as other project work allows for outages.	IA,MN	IA,MN	Other		Reliability	\$3,600,000	12/31/2013	12/31/2016	0		Bottom-up
A in MTEP13	A	West	ITCM	4126	Pole Top Switch Replacement Program	Annual program to replace pole top switches that are inoperable, unreliable, or that cannot be adequately adjusted.	IA,MN	IA,MN	Other		Reliability	\$960,000	12/31/2013	12/31/2016	0		Bottom-up
A in MTEP13	A	West	ITCM	4127	Relay Betterment Program	Improve some of the existing relay protection systems and replace end-of-life relays with new microprocessor based relays. Add fiber optics to improve communication between stations where the previously installed pilot scheme is defective or is malfunctioning.	IA,MN	IA,MN	Other		Reliability	\$2,500,000	12/31/2013	12/31/2016	0		Bottom-up
A in MTEP13	A	West	ITCM	4128	SMART GRID Project	Replace, upgrade, or install TELECOM, RTUs, Relay, etc.	IA,MN	IA,MN	Other		Metering	\$4,800,000	12/31/2013	12/31/2016	0		Bottom-up
A in MTEP13	A	West	ITCM	4129	Wood Pole Replacement Program	Replace aging wood poles, cross arms, and pole guys with like-for-like poles and equipment.	IA,MN	IA,MN	Other		Condition	\$3,500,000	12/31/2013	12/31/2016	0		Bottom-up
A in MTEP13	A	West	ITCM, MEC	3249	NE 54th Ave.-Bondurant 161 kV line	New 161 kV line from NE 54th Ave. Substation to Bondurant Substation and associated substation equipment additions.	IA	IA	Other		Distribution	\$11,221,895	12/1/2018	12/1/2018	161		Bottom-up
A in MTEP13	A	West	MEC	2952	NE 54th Ave. 161-13 kV Substation	Construct the NE 54th Ave. 161-13 kV Substation	IA	IA	Other		Distribution	\$1,300,000	6/1/2018	6/1/2018	161	13	Bottom-up
A in MTEP13	A	West	MEC	3248	Rising Sun - NE 54th Ave. 161 kV Line	New 161 kV line from new Rising Sun Substation on DPS-Reasnor line to NE 54th Ave. and associated substation equipment additions.	IA	IA	Other		Distribution	\$14,036,000	5/1/2018	6/1/2018	161		Bottom-up
A in MTEP13	A	West	MEC	4256	NW 70th Avenue Substation	New 161 kV line from Highways 141 and 44 Substation to NW 70 Avenue Sub to 100th and 54th Avenue Sub and new 161-13 kV 70th Avenue Substation	IA	IA	Other		Distribution	\$9,070,000	12/1/2016	12/1/2016	161	13	Bottom-up
A in MTEP13	A	West	MP	4294	NERC Facility Ratings Alert: Low Priority	Derates & physical mitigation on NERC "Low" priority lines	MN	MN	Other		Reliability	\$44,959,385	12/16/2013	12/31/2016	161		Bottom-up
A in MTEP13	A	West	OTP	3667	Nunda to Rutland 41.6 kV Line Rebuild	Rebuild 8 miles of 41.6 kV line	SD	SD	Other		Condition	\$466,000	11/30/2015	11/30/2015	41.6	41.6	Bottom-up
A in MTEP13	A	West	OTP	4233	Parshall 41.6 kV Transformer	Replace 69/41.6 kV transformer at Parshall with a 10 MVA, 41.6/24 kV transformer	ND	ND	Other		Reliability	\$500,000	5/1/2017	5/1/2017	41.6	24	Bottom-up
A in MTEP13	A	West	XEL	4224	Ironwood Switch Replacement	Replace aging in-line disconnect switches with new three-way GOAB switches outside Ironwood substation. Re-conductor .5 miles of Line W3607, .5 miles of W3628, .5 miles of W3631	WI	WI	Other		Condition	\$1,150,000	12/15/2015	12/1/2020	34.5		Bottom-up
A in MTEP13	A	West	XEL	4305	SW MN High Voltage Mitigation	Install 1x25 MVA switched reactor at Fenton and 1x25 MVA switched reactor at Yankee	MN	MN	BaseRel			\$8,100,000	3/1/2017	6/1/2019	115		Bottom-up

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A in MTEP13	A	West	XEL	4308	W3404 Cedar Falls - Menomonee 69 kV re	Rebuilding 5 miles of 4/0 and 336 ACSR conductor between Cedar Falls-Menomonee 69 kV to 795 ACSR. Also, replacing bus work at Cedar Falls from 4/0 to 1590 AAC to increase the rating	WI	WI	Other		Reliability	\$4,087,810	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP13	A	West	XEL	4314	Ashland - Ironwood 88 kV rebuild	Rebuild the 88 kV line between Bay Front - Saxon Pump - Norrie due to age and condition	WI,MI	WI	Other		Condition	\$35,977,500	12/1/2021	12/1/2021	88		Bottom-up
A in MTEP14	A	Central	AmerenIL	4076	ADM-Peoria (Hiram) Project	ADM - Peoria - (Hiram Substation) - Build new 2.2 miles of 138 kV line with 2000 A summer emergency capability. Reconnect deenergized 4.6 mile 138 kV line between Edwards Plant and Bartonville Substation. Add two new 138 kV, 2000 A PCBs at Edwards Plant. Relocate 138 kV lines outside Edwards Plant to make room for connecting the deenergized 138 kV line into Edwards Plant. Relocate 69 kV lines on one tower at Bartonville.	IL	IL	Other		Distribution	\$6,320,000	6/10/2015	6/1/2017	138		Bottom-up
A in MTEP14	A	Central	AmerenIL	4345	Gifford Substation 138 kV Ring Bus	Establish a new 138 kV, 3-breaker ring bus at the existing Rantoul Junction in the Paxton, East-Sidney-1 138 kV Line	IL	IL	Other		Reliability	\$4,775,000	5/22/2019	5/22/2019	138		Bottom-up
A in MTEP14	A	Central	AmerenIL	4471	Cahokia-Dupo Ferry-1 138 kV Line	Replace 6.98 miles of 2-300 kcmil Copper conductor with largest size conductor existing structures will carry.	IL	IL	Other		Condition	\$10,403,000	12/1/2017	12/1/2017	138		Bottom-up
A in MTEP14	A	Central	AmerenIL	4474	LaSalle Tap (Hickok) 138 kV Breaker Stati	Install new 3-position breaker station in the Hennepin-Oglesby-1556 138 kV line at the tap to LaSalle Air Products and North LaSalle Substations. 3-2000A PCBs needed. Upgrade terminal equipment to match line capability.	IL	IL	Other		Reliability	\$4,400,032	9/1/2019	9/1/2019	138		Bottom-up
A in MTEP14	A	Central	AmerenIL	4477	Clayton Junction (Monument) 138 kV Breac	Install 138 kV breaker station at Clayton Junction. Needed: 3-2000 A PCBs.	IL	IL	Other		Reliability	\$4,950,000	9/1/2019	9/1/2019	138		Bottom-up
A in MTEP14	A	Central	AmerenIL	4479	Ramsey, East 345 kV Ring Bus	Install 345 kV ring bus. Needed: 3-3000 A PCBs.	IL	IL	Other		Reliability	\$6,000,000	9/1/2019	9/1/2019	345		Bottom-up
A in MTEP14	A	Central	AmerenIL	4480	Oglesby 138 kV Substation - Rebuild	Rebuild Oglesby Substation. Utilize a breaker-and-a-half arrangement.	IL	IL	Other		Reliability	\$14,660,550	11/1/2020	11/1/2020	138		Bottom-up
A in MTEP14	A	Central	AmerenIL	4495	Rivermines-Maries-1, Clark-Osage-2, Mari	Rivermines-Maries-1, Clark-Osage-2, and Maries-Osage-1 138 kV Lines - Rebuild/reconductor 95 miles of 250 kcmil Copper in the Clark-Osage-2 138 kV line, 60 miles of 250 kcmil Copper in the Rivermines-Maries-1 138 kV line, and 34.3 miles of 250 kcmil Copper in the Maries-Osage-1 138 kV line with 556 kcmil ACSR conductor or equivalent. Note that this is a 95 mile double-circuit tower line.	MO	MO	Other		Reliability	\$46,500,000	12/1/2016	12/1/2016	138		Bottom-up
A in MTEP14	A	Central	AmerenMO	2993	Dupo Ferry-Buck Knob Reconductoring	Dupo Ferry-Buck Knob 138 kV Line - Replace 22 mi. of 2-300 ACSR with maximum size conductor existing towers will support.	MO	MO	Other		Condition	\$31,367,940	12/1/2018	12/1/2018	138		Bottom-up
A in MTEP14	A	Central	AmerenMO	4723	Kelso-Lutesville-1 345 kV Replace Structu	Replace 50% of structures (17.6 miles) to maintain at least a 100 degree C conductor temperature capability on this line.	MO	MO	Other		Condition	\$8,441,336	12/1/2017	12/1/2017	345		Bottom-up
A in MTEP14	A	Central	DEI	3545	Wabash Riv 138KV Gen Sta Phase II	Wabash Riv 138KV Gen Sta. Phase II (Bus #2 & Transfer Bus); Perform Line associated relay work. Repl. breakers: 138230-9, 13847 and DS Switches. Replace Bus Insulators.	IN	IN	Other		Condition	\$1,434,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	Central	DEI	3550	Martinsville 69kv Normally Open Loop	Construct approximately 1.5 mi of 69kv line to complete a normally open loop between Martinsville SE and Martinsville East distribution subs.	IN	IN	Other		Reliability	\$1,434,000	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP14	A	Central	DEI	3556	Greenwood South 69KV Dist. Sub.	Build a new 69-12kV 22.4MVA sub in the 69102 line adjacent +/- to the existing HE Gilmore 69kv sub	IN	IN	Other		Distribution	\$481,000	12/31/2016	12/31/2016	69	12	Bottom-up
A in MTEP14	A	Central	DEI	4368	Dresser - Wabash Riv. New 138KV Line	Build a new 138KV line from Dresser to Wabash River Gen. Station with 2000A terminal equipment and 954ACSS - 200C conductor, approx. 10 miles	IN	IN	BaseRel			\$14,500,000	3/31/2017	3/31/2017	138		Bottom-up
A in MTEP14	A	Central	DEI	4402	Huntington Riverfork to State St 69143 Re	Huntington Riverfork to State St 69143 ckt: Reconductor 2.85 miles of 69KV transmission 2/0 Cu to 477 ACSR conductor. Begin about half mile east of Hunt Riv Fk sub at pole 823-6512 and continue to Hunt State St Sub 69kv bus. Also reconductor 4/0 ACSR river span.	IN	IN	Other		Reliability	\$2,520,282	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP14	A	Central	DEI	4408	Huntington 138 to State St 69143 Recond	Reconductor 2.5 miles of the 69143 ckt from Huntington 138 sub to State St with 477ACSR @ 100C	IN	IN	Other		Reliability	\$2,600,000	12/30/2016	12/30/2016	69		Bottom-up
A in MTEP14	A	Central	DEI	4411	Bloomington 6991 Reconductor	Reconductor 13.7 miles of the 6991 ckt from Bloomington Dunn St sub to Bloomington 230 sub with 954ACSR @ 100C	IN	IN	Other		Reliability	\$1,843,000	7/16/2014	12/31/2016	69		Bottom-up
A in MTEP14	A	Central	DEI	4414	Wabash Chippewa 69 Alt Feed	New N.O. alternate 69kv feed from 69132 ckt over to Wabash Chippewa 69kv sub	IN	IN	Other		Reliability	\$2,244,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP14	A	Central	DEI	4415	Veedersburg West 230-69kv Bk 2 addition	Veedersburg West: Add 75MVA 230/69 Bk 2 with LTC at Veedersburg West sub; add breaker to 69KV ring bus and tie in new bank; convert 230KV bus into 4-breaker ring	IN	IN	Other		Reliability	\$3,509,000	6/1/2020	6/1/2020	230	69	Bottom-up
A in MTEP14	A	Central	DEI	4417	Pumpkin Center 69KV Brk Repl	Pumpkin Center: Replace OCB 6952, OCB 69123, OCB 69230, (1) Ground Switch, (2) 230KV ABS and Motor Mechs. Lighting Arrestors, Line & Bus Pots, (7) 69KV Disconnect Switches and Station Service Transformer. Replace 230/69 Circuit Switcher with a 230KV Gas Circuit Breaker.	IN	IN	Other		Reliability	\$2,424,000	12/31/2017	12/31/2017	69		Bottom-up

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A in MTEP14	A	Central	DEI	4418	Hillsdale North 230-69 Sub	Construct new Hillsdale North 230-69kV substation to be inserted in the 23003 ckt with high and low side ring buses, 1-200MVA bank, 2-69kv line terminals. Loop the existing 6906 ckt through. Change Normal Operational status to Open between Hillsdale Sw. Sta. 69kV (250579) and Montezuma 69kV (250695).	IN	IN	Other		Reliability	\$12,300,000	6/1/2017	6/1/2017	230	69	Bottom-up
A in MTEP14	A	Central	HE	4714	Ratts 138/161 kV Transformer Upgrade	New Transformer	IN	IN	Other		Reliability	\$3,500,000	5/15/2014	5/15/2014	161	138	Bottom-up
A in MTEP14	A	Central	HE	4715	Ratts 138 kV Transmission line Upgrade	Upgrade Transmission line	IN	IN	Other		Reliability	\$200,000	5/15/2014	5/15/2014	138		Bottom-up
A in MTEP14	A	Central	PPI	4434	Alsey 2nd 138 kV Tap to Ameren	Add 0.33 mile double circuit 138 kV line from Alsey-Ameren to sectionalize the Ameren 59 mile Jerseyville-Alsey-Meredosia line into a 35 mile Jerseyville-Alsey segment and a 24 mile Alsey-Meredosia segment. Add Alsey 138 kV breaker.	IL	IL	Other		Reliability	\$1,039,100	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	ITCT	4499	Tuscola 120 kV Capacitor	Install a 33.3 MVAR capacitor at the Tuscola 120 kV station	MI	MI	BaseRel			\$1,350,000	3/31/2017	3/31/2017	120		Bottom-up
A in MTEP14	A	East	ITCT	4500	Carrigan 120 kV Switching Station	Reconfigure the Lee - Menlo and Wabash - Yuma 120 kV circuits into a switching station named Carrigan.	MI	MI	BaseRel			\$7,380,000	12/31/2017	12/31/2017	120		Bottom-up
A in MTEP14	A	East	ITCT	4518	Monroe 345/120 kV Transformer 304 Repl	Replace the 345/120 kV Transformer 304 at Monroe.	MI	MI	Other		Reliability	\$3,800,000	4/1/2017	4/1/2017	345	120	Bottom-up
A in MTEP14	A	East	ITCT	4519	Custer - Monroe #2 120 kV & Monroe - Whiting 120 kV lines	Reconfigure the Custer ? Whiting 120 kV line into Monroe to create the Custer ? Monroe 2 120 kV and Monroe ? Whiting 120 kV lines.	MI	MI	Other		Reliability	\$12,300,000	4/1/2040	4/1/2040	120		Bottom-up
A in MTEP14	A	East	ITCT	4529	Brownstown to Elm 230 kV Sag Remediation	Remediate the sag limit on the Brownstown to Elm 230kV line up to its conductor rating	MI	MI	Other		Reliability	\$485,000	12/31/2016	12/31/2016	230		Bottom-up
A in MTEP14	A	East	ITCT	4530	Brownstown to Navarre 230 kV Sag Remediation	Remediate the sag limit on the Brownstown to Navarre 230kV line up to a higher sag limit	MI	MI	Other		Reliability	\$290,000	12/31/2016	12/31/2016	230		Bottom-up
A in MTEP14	A	East	ITCT	4531	Dorset to Milan 120 kV Sag Remediation	Remediate the sag limit on the Dorset to Milan 120kV line up to its conductor rating	MI	MI	Other		Reliability	\$225,000	12/31/2016	12/31/2016	120		Bottom-up
A in MTEP14	A	East	ITCT	4532	Wayne to Hines 230 kV Sag Remediation	Remediate the sag limit on the Wayne to Hines 230kV line up to its conductor rating	MI	MI	Other		Reliability	\$155,000	12/31/2016	12/31/2016	230		Bottom-up
A in MTEP14	A	East	ITCT	4566	ITCT Customer Interconnections - Year 2	Customer interconnection requests and retirements	MI	MI	Other		Distribution	\$2,000,000	12/31/2017	12/31/2017	120		Bottom-up
A in MTEP14	A	East	ITCT	4567	ITCT Customer Interconnections - Year 2	Customer interconnection requests and retirements	MI	MI	Other		Distribution	\$2,000,000	12/31/2018	12/31/2018	120		Bottom-up
A in MTEP14	A	East	ITCT	4573	ITCT Transformer Refurbishment Program	Replace leaking oil pumps and valves, transformer oil, surge arresters, and bushings.	MI	MI	Other		Condition	\$600,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP14	A	East	ITCT	4584	Trenton Channel 120 kV Bus 14 Second In	Install a second independent bus protection scheme on Trenton Channel 120 kV bus 14 so that three (3) phase to ground fault on the bus will be cleared within 5 cycles when the existing single bus protection scheme is shutdown.	MI	MI	Other		Reliability	\$108,000	12/31/2016	12/31/2016	120		Bottom-up
A in MTEP14	A	East	ITCT	4585	Trenton Channel 120 kV Bus 17 Second In	Install a second independent bus protection scheme on Trenton Channel 120 kV bus 17 so that a three (3) phase to ground fault on the bus will be cleared within 5 cycles when the existing single bus protection scheme is shutdown.	MI	MI	Other		Reliability	\$360,000	12/31/2016	12/31/2016	120		Bottom-up
A in MTEP14	A	East	ITCT	4701	NERC Alert Facility Ratings for 2016	Verify and remediate facilities as required due to the industry-wide NERC alert	MI	MI	Other		Reliability	\$3,600,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP14	A	East	ITCT	4737	Micah & Klam (Genesee County Pumping)	Customer interconnection request to provide 120 kV service to two new substations serving Genesee County Pumping. Build 7.6 miles of new 954 ACSR on double circuit towers to feed the new substations.	MI	MI	Other		Distribution	\$14,090,000	12/11/2015	8/31/2016	120		Bottom-up
A in MTEP14	A	East	METC	1803	Plum-Stover 138 kV Rebuild	Rebuild the 8.8 mile 138 kV line to 954 ACSR and OPGW (Pre-build to 230 kV construction).	MI	MI	Other		Reliability	\$10,500,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4504	Vergennes - Marquette 138 kV Sag Remediation	Remediate the sag limit on the 795 ACSR from the Vergennes - Marquette 138 kV circuit up to the conductor limit.	MI	MI	Other		Reliability	\$345,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4505	Bass Creek - Sternberg 138 kV Sag Remediation	Remediate the sag limits on the 336.4 and 266.8 ACSR portions of the Bass Creek - Sternberg 138 kV circuit.	MI	MI	Other		Reliability	\$1,200,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4521	Riggsville - Rondo 138 kV Sag Remediation	Remediate sag on the Riggsville - Rondo 138 kV section to bring its rating up to the conductor limit (174 MVA).	MI	MI	Other		Reliability	\$324,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4522	Lawndale - Murphy 138 kV Rebuild	Rebuild the 3/0 Cu & 2/0 Cu 6-wire (1,188 mile) and 336 ACSR (1,713 mile) sections on the Lawndale ? Murphy 138 kV line to 954 ACSR. The 3/0 Cu & 2/0 Cu 6-wire section will be rebuilt on single-circuit steel poles while the 336 ACSR section will be rebuilt.	MI	MI	Other		Reliability	\$2,800,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4537	METC Customer Interconnections - Year 2	Customer interconnection requests and retirements	MI	MI	Other		Distribution	\$2,500,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP14	A	East	METC	4538	METC Customer Interconnections - Year 2	Customer interconnection requests and retirements	MI	MI	Other		Distribution	\$2,500,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP14	A	East	METC	4539	METC Hemphill Control Relocation Project	Replace METC relaying and controls at Hemphill Substation. Locate the new relaying and controls in a new dedicated METC control center. Install dedicated METC AC and DC systems.	MI	MI	Other		Relocation	\$3,640,000	12/31/2017	12/31/2017	0		Bottom-up
A in MTEP14	A	East	METC	4542	METC Morrow Control Relocation Project	Replace METC relaying and controls at Morrow Substation. Locate the new relaying and controls in a new dedicated METC control center. Install dedicated METC AC and DC systems.	MI	MI	Other		Relocation	\$3,110,000	12/31/2017	12/31/2017	0		Bottom-up
A in MTEP14	A	East	METC	4546	METC Power Transformer Refurbishment	Replace leaking oil pumps and valves, transformer oil, surge arresters, and bushings	MI	MI	Other		Condition	\$600,000	12/31/2016	12/31/2016	0		Bottom-up

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A in MTEP14	A	East	METC	4555	Tippy to Stronach 138 kV Circuit Dual Pilot	Install a dual pilot relay protection system on the Tippy to Stronach 138 kV circuit so that three (3) phase to ground faults will be cleared within 5 cycles. The Tippy 138 kV BK 177 bypassing will also be removed.	MI	MI	Other		Reliability	\$575,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4556	Blackstone 138 kV Second Bus Protection	Install a second bus relay scheme on Blackstone blue and white busses and install second independent relay components on Blackstone end of the Blackstone-Marshall 138 kV circuit, Blackstone-Tompkins 138 kV ckt #1 and #2 and Blackstone-Leoni 138 kV ckt #	MI	MI	Other		Reliability	\$845,000	3/31/2017	3/31/2017	138		Bottom-up
A in MTEP14	A	East	METC	4557	Croton to Four Mile 138 kV Circuit Dual Pilot	Add a dual pilot relay protection system on Croton to Four Mile 138 kV circuit so that 3 phase to ground faults on the circuit will be cleared within 5 cycles.	MI	MI	Other		Reliability	\$483,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4558	Kam to Manning 138 kV Circuits - Dual Pilot	Install a dual pilot relay protection scheme on the Kam to Manning 138 kV circuit	MI	MI	Other		Reliability	\$460,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4559	Kam to Saginaw River 138 kV Circuits - Dual Pilot	Install a dual pilot relay protection scheme on the Kam to Saginaw River 138 kV circuit	MI	MI	Other		Reliability	\$575,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4699	METC NERC Alert Facility Ratings for 2016	Verify and remediate facilities as required due to the industry-wide NERC alert	MI	MI	Other		Reliability	\$11,200,000	12/31/2016	12/31/2016	0		Bottom-up
A in MTEP14	A	East	METC	4814	Battle Creek to Morrow #1 138 kV Sag Remediation	Remediate the sag limit on the Battle Creek to Morrow #1 138 kV line up to the most limiting conductor.	MI	MI	Other		Reliability	\$366,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	East	METC	4815	Verona to Foundry 138 kV Sag Remediation	Remediate the sag limit on the Verona - Foundry 138 kV line up to the most limiting conductor.	MI	MI	Other		Reliability	\$815,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	South	Entergy-AR	4751	EAI Underrated Breaker Project: Jackson	Upgrade breaker to increase short circuit interrupting capability	AR	AR	Other		Reliability	\$279,164	12/1/2016	12/1/2016	115		Bottom-up
A in MTEP14	A	South	Entergy-AR	4755	EAI SPOF Projects: Modify relaying at ISE	EAI SPOF Projects: Modify relaying at ISES 500/161 kV	AR	AR	Other		Reliability	\$16,215,941	6/1/2017	6/1/2017	500		Bottom-up
A in MTEP14	A	South	Entergy-AR	4756	EAI SPOF Projects: Modify relaying at M	EAI SPOF Projects: Modify relaying at Mabelvale 500 kV	AR	AR	Other		Relaying	\$8,013,145	12/30/2016	12/30/2016	500		Bottom-up
A in MTEP14	A	South	Entergy-AR	4757	EAI SPOF Projects: Modify relaying at EI	EAI SPOF Projects: Modify relaying at EI Dorado 500 kV	AR	AR	Other		Relaying	\$1,000,000	6/1/2018	6/1/2018	500		Bottom-up
A in MTEP14	A	South	Entergy-AR	7761	Datto: Add 161 kV 24 MVAR Capacitor Bank	Install a new 24 MVAR 161 kV mobile temporary capacitor bank at the Datto station. Also the tap position of the 161/115 kV autotransformer at Datto will be changed from 156.975 kV to 161 kV for better reactive support to the the 115 kV network.	AR	AR	BaseRel		Reliability	\$1,522,059	12/31/2016	12/31/2016	161		Bottom-up
A in MTEP14	A	South	Entergy-AR	8040	ANO - Mabelvale 500kV: Replace Substation	ANO - Mabelvale 500kV: Replace Substation Equipment	AR	AR	Other		Economic	\$1,809,881	6/1/2018	6/1/2018	500		Bottom-up
A in MTEP14	A	South	Entergy-AR	8041	ANO - Pleasant Hill 500kV: Replace Substation	ANO - Pleasant Hill 500kV: Replace Substation Equipment	AR	AR	Other		Economic	\$1,431,807	12/1/2017	12/1/2017	500		Bottom-up
A in MTEP14	A	South	Entergy-LA	4605	Crown Zellerbach Area: Construct new 230	Construct a new 230-138 kV station along the existing Crown Zellerbach to Starhill Tap Point 138 kV line approximately 0.86 miles from Crown Zellerbach going toward Starhill Tap Point. Tap the Waterloo to Fancy Point 230 kV line approximately 2.0 miles from Fancy Point going toward Waterloo and extend the Waterloo to Fancy Point line with conductor rated at a minimum of 1956 A, 779 MVA from the tap point approximately 1.8 miles in-and-out of the 230 kV side of the new station. Install 300 MVA, 230-138 kV autotransformer.	LA	LA	BaseRel			\$17,190,728	9/1/2017	9/1/2017	230	138	Bottom-up
A in MTEP14	A	South	Entergy-LA	4761	EGSL SPOF Projects: Modify relaying at Willow	EGSL SPOF Projects: Modify relaying at Willow Glen 500 kV	LA	LA	Other		Relaying	\$6,003,861	4/25/2018	4/25/2018	500		Bottom-up
A in MTEP14	A	South	Entergy-LA	4762	EGSL SPOF Projects: Modify relaying at Fancy	EGSL SPOF Projects: Modify relaying at Fancy Point 500kV	LA	LA	Other		Relaying	\$440,111	6/1/2018	6/1/2018	500		Bottom-up
A in MTEP14	A	South	Entergy-LA	4763	EGSL Underrated Breaker Project: Jagua	Upgrade breaker to increase short circuit interrupting capability	LA	LA	Other		Reliability	\$970,497	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP14	A	South	Entergy-LA	4764	EGSL Underrated Breaker Project: Jagua	Upgrade breaker to increase short circuit interrupting capability	LA	LA	Other		Reliability		12/31/2016	12/31/2016	69		Bottom-up
A in MTEP14	A	South	Entergy-LA	4765	EGSL Underrated Breaker Project: Blount	Upgrade breaker to increase short circuit interrupting capability	LA	LA	Other		Reliability		12/31/2016	12/31/2016	69		Bottom-up
A in MTEP14	A	South	Entergy-LA	4769	Schriever: Construct new 230 kV substation	Construct new Schriever 230 kV Substation	LA	LA	Other		Distribution	\$13,443,939	3/31/2017	3/31/2017	230		Bottom-up
A in MTEP14	A	South	Entergy-LA	4770	ELL Underrated Breaker Project: Waterloo	Upgrade breaker to increase short circuit interrupting capability	LA	LA	Other		Reliability	\$1,082,400	12/31/2016	12/31/2016	230		Bottom-up
A in MTEP14	A	South	Entergy-LA	4771	ELL Underrated Breaker Project: Waterloo	Upgrade breaker to increase short circuit interrupting capability	LA	LA	Other		Reliability		12/31/2016	12/31/2016	230		Bottom-up
A in MTEP14	A	South	Entergy-LA	4773	ELL SPOF Projects: Modify relaying at N	ELL SPOF Projects: Modify relaying at Ninemile 230 kV	LA	LA	Other		Relaying	\$4,036,969	3/1/2017	3/1/2017	230		Bottom-up
A in MTEP14	A	South	Entergy-LA	4774	ELL SPOF Projects: Modify relaying at S	ELL SPOF Projects: Modify relaying at Southport 230 kV	LA	LA	Other		Relaying		4/1/2017	4/1/2017	230		Bottom-up
A in MTEP14	A	South	Entergy-LA	4775	ELL SPOF Projects: Modify relaying at L	ELL SPOF Projects: Modify relaying at Labarre 230 kV	LA	LA	Other		Relaying		6/1/2017	6/1/2017	230		Bottom-up
A in MTEP14	A	South	Entergy-LA	4776	ELL SPOF Projects: Modify relaying at H	ELL SPOF Projects: Modify relaying at Harahan 230 kV	LA	LA	Other		Relaying		2/1/2017	2/1/2017	230		Bottom-up
A in MTEP14	A	South	Entergy-LA	4778	ENOI SPOF Projects: Modify relaying at Market	ENOI SPOF Projects: Modify relaying at Market Street 230 kV	LA	LA	Other		Relaying		11/1/2016	11/1/2016	230		Bottom-up
A in MTEP14	A	South	Entergy-LA	8284	Richardson to Iberville 230 kV line; Add second	From MCPS study - Project substantially similar to PC-W: Tap the Bagatelle - Sorrento line into Panama substation; Upgrade line bay bus at Romeville substation; Construct line using 1780 ACSR - 11.0 mi. Add second 1200 MVA, 500-230 kV autotransformer at Coly	LA	LA	Other		Economic	\$60,196,515	7/16/2016	12/31/2018	500	230	Bottom-up
A in MTEP14	A	South	Entergy-MS	4614	Franklin - McComb build new 115 kV line	Construct a new line from Franklin-McComb with a rating of at least 398MVA (double-bundled 954ACSR for reduced impedance). Construction of the line should meet 230kV specifications, but will be initially operated at 115kV	MS	MS	BaseRel			\$33,412,348	11/15/2017	11/15/2017	115	115	Bottom-up

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A in MTEP14	A	South	Entergy-MS	4788	EMI Underrated Breaker Project: Rex Bro	Upgrade breaker to increase short circuit interrupting capability	MS	MS	Other		Reliability		12/31/2016	12/31/2016	115		Bottom-up
A in MTEP14	A	South	Entergy-MS	4789	EMI Underrated Breaker Project: Rex Bro	Upgrade breaker to increase short circuit interrupting capability	MS	MS	Other		Reliability		12/31/2016	12/31/2016	115		Bottom-up
A in MTEP14	A	South	Entergy-MS	4790	EMI Underrated Breaker Project: Rex Bro	Upgrade breaker to increase short circuit interrupting capability	MS	MS	Other		Reliability		12/31/2016	12/31/2016	115		Bottom-up
A in MTEP14	A	South	Entergy-MS	4793	EMI Underrated Breaker Project: Greenvil	Upgrade breaker to increase short circuit interrupting capability	MS	MS	Other		Reliability		12/31/2016	12/31/2016	115		Bottom-up
A in MTEP14	A	West	ATC	1624	Uprate Portage-Trienda 138 kV	Increase clearance and uprate SS equipment	WI	WI	Other		Reliability	\$2,000,000	6/1/2022	6/1/2022	138		Bottom-up
A in MTEP14	A	West	ATC	1708	Construct Fairwater-Mackford Prairie 69 kV	Construct Fairwater-Mackford Prairie 69 kV line, 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	WI	WI	Other		Reliability	\$20,400,000	1/1/2017	9/26/2017	69		Bottom-up
A in MTEP14	A	West	ATC	2031	Rebuild Colley Rd-Brick Church 69 kV	Rebuild Colley Rd-Brick Church 69 kV (Y-32)	WI	WI	Other		Reliability	\$36,968,500	6/1/2018	6/1/2018	69		Bottom-up
A in MTEP14	A	West	ATC	2056	Uprate Oak Creek-Pennsylvania 138 kV	Uprate Oak Creek-Pennsylvania 138 kV	WI	WI	Other		Reliability	\$4,000,000	1/31/2017	1/31/2017	138		Bottom-up
A in MTEP14	A	West	ATC	3096	Uprate Munising-Blaney Park 69 kV	Increase ground clearance for the Inland line Munising-Blaney Park 69 kV to 167 deg F (37 MVA) clearance	MI	MI	Other		Reliability	\$13,000,000	12/31/2020	12/31/2020	69		Bottom-up
A in MTEP14	A	West	ATC	3510	Rebuild Mukwonago-St Martins 138 kV	Rebuild Mukwonago-Edgewood-St. Martins 138 kV line, includes replacing jumpers at Edgewood and Mukwonago	WI	WI	Other		Reliability	\$23,121,000	6/15/2019	6/15/2019	138		Bottom-up
A in MTEP14	A	West	ATC	3808	Construct Bain-Spring Valley-North Lake C	Reconductor Bain-Spring Valley 138; construct a 138/69 kV Geneva substation; construct a new Spring Valley-Geneva 138 kV line; construct a new Geneva-North Lake Geneva 138 kV line; construct Twin Lakes-Geneva 138 kV line; reconductor Katzenberg-Richm	WI	WI	Other		Reliability	\$70,546,000	6/1/2019	6/1/2019	138	69	Bottom-up
A in MTEP14	A	West	ATC	3890	Reconductor Port Washington-Saukville 1	Reconductor Port Washington-Saukville 138 kV line	WI	WI	Other		Reliability	\$2,284,000	12/31/2021	12/31/2021	138		Bottom-up
A in MTEP14	A	West	ATC	3891	Reconductor Port Washington-Saukville 1	Reconductor Port Washington-Saukville 138 kV line	WI	WI	Other		Reliability	\$2,843,000	12/31/2021	12/31/2021	138		Bottom-up
A in MTEP14	A	West	ATC	3900	Reconductor Bain-Albers 138 kV	Reconductor Bain-Albers 138 kV line	WI	WI	Other		Reliability	\$1,300,000	12/31/2016	12/31/2016	138		Bottom-up
A in MTEP14	A	West	ATC	3904	Reconductor McCue-Lamar 69 kV	Reconductor McCue-Lamar 69 kV line	WI	WI	Other		Reliability	\$3,500,000	6/10/2016	6/10/2016	69		Bottom-up
A in MTEP14	A	West	ATC	4711	Rebuild Wautoma - Montello Tap (Y-17) 6	Rebuild the 13.1 mile portion of Y-19 (WAU-A11 69 kV) with T2 4/0 Penguin. Rebuild the 6.1 mile portion of line Y-19 (A11-MOO 69 kV) with T2 4/0 Penguin. All structures used will allow operation to 200 deg F normal and 300 deg F emergency	WI	WI	Other		Condition	\$13,600,000	10/17/2016	10/17/2016	69		Bottom-up
A in MTEP14	A	West	ATC	4728	Reconfigure University 138 kV area	Reconfigure the University area lines of Whitewater - University (4453) 138kV line, Bluff Creek - University (6552) 138kV line and Mukwonago - Whitewater (77353) 138kV line into new lines of Whitewater - University (4453A) 138kV line, Mukwonago - Universi	WI	WI	Other		Reliability	\$5,075,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP14	A	West	ATC	4731	Rebuild Horicon 69 kV Bus	Replace the 4/0 Copper Main Strin Bus, Jumpers and lugs. In addition to the 336 ACSR Jumpers, 69 kV station Post insulators and bus support clamps. This will increase the bus & bus jumper ratings that are currently limiters and raise the limit to that of	WI	WI	Other		Condition	\$210,000	7/1/2016	7/1/2016	69		Bottom-up
A in MTEP14	A	West	ATC	4734	Construct Cedar Creek T-D Interconnectio	Construct a new 115kV substation tapping 115kV line T-20 between Weston and Dewey	WI	WI	Other		Distribution	\$2,000,000	4/29/2015	6/1/2015	115		Bottom-up
A in MTEP14	A	West	CFU	4588	University Ave. Substation	New Substation with 161/69 kV transformer and 69kV line to serve the network 69kV system	IA	IA	Other		Reliability	\$6,934,500	4/1/2017	4/1/2017	161	69	Bottom-up
A in MTEP14	A	West	CFU-PMEU	4386	RRHP - Pella W interconnection	Reconfiguration of Pella West 69 kV Substation to improve load serving reliability for City of Pella. Substation will be reconfigured from a line breaker to a ringbus scheme.	IA	IA	Other		Reliability	\$2,360,335	4/1/2017	4/1/2017	69		Bottom-up
A in MTEP14	A	West	GRE	2600	Big Sandy (LCP) 4.0 mile, 69 kV line	Big Sandy (LCP) 4.0 mile, 69 kV line	MN	MN	Other		Distribution	\$4,239,175	9/23/2016	9/23/2016	69		Bottom-up
A in MTEP14	A	West	GRE, XEL	4379	Quarry-West St. Cloud 115 kV line and W	Build a 115 kV line from Quarry to the West St. Cloud substation and fully breaker the West St. Cloud substation	MN	MN	Other		Reliability	\$9,250,000	4/13/2017	4/13/2017	115		Bottom-up
A in MTEP14	A	West	GRE-WMU	4380	Priam Substation	Move Willmar 115/69 kV transformer to new Priam substation location	MN	MN	Other		Reliability	\$4,000,000	5/1/2019	5/1/2019	115	69	Bottom-up
A in MTEP14	A	West	ITCM	4455	DAEC Tap 3.32 miles Rebuild	Rebuild the 34kV operated line to 69kV standards. Continue to operate at 34kV.	IA	IA	Other		Condition	\$2,674,264	12/31/2016	12/31/2016	34		Bottom-up
A in MTEP14	A	West	ITCM	4456	East Nevada Street Expansion	Install 69 kV bus and three breaker positions in the East Nevada St substation. Initially one breaker will be installed with the Timber Creek to East Nevada St line rebuild, and the remaining breakers will be installed closer to the 69 kV conversion	IA	IA	Other		Condition	\$400,000	5/27/2016	12/31/2020	34		Bottom-up
A in MTEP14	A	West	ITCM	4459	Eastern Iowa Rebuild & Conversion Plan f	ITCM has worked with the stakeholders in the Eastern Iowa Study area to find a solution that is acceptable to everyone. A conversion plan was chosen that maximizes the number of miles of 34.5 kV lines that can be retired and gives the most substations lo	IA	IA	Other		Condition	\$4,440,000	8/31/2015	12/31/2018	69		Bottom-up
A in MTEP14	A	West	ITCM	4461	Hiawatha-Emerald Isle-Marion 69kV Conv	This project converts the line from Hiawatha to Marion to 69 kV operation. Alliant Energy will also be installing a new substation by the name of Emerald Isle on the Hiawatha to Marion 69 kV line. ITC will then be installing three breakers at the Emerald	IA	IA	Other		Condition	\$1,841,957	6/16/2016	9/3/2016	69		Bottom-up

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A in MTEP14	A	West	ITCM	4462	Keswick-Victor 69kV Conversion	Convert the Keswick - Victor to 69kV. Build Victor 69kV Switching Station substation and install a 69/34.5kV XFMR to provide back up for the 34.5kV system in the Victor and Brooklyn area until that area is converted to 69kV in 2020.	IA	IA	Other		Condition	\$3,000,000	12/30/2021	12/30/2021	69	34	Bottom-up
A in MTEP14	A	West	ITCM	4463	Otter Creek-Fletcher 69kV Conversion	Convert the 34kV lines between Otter Creek and Fletcher to 69kV operation. The 34kV terminal at Marshalltown will be retired and a new 69kV source from the new Fletcher sub will feed the new line.	IA	IA	Other		Condition	\$240,000	12/31/2019	12/31/2019	69		Bottom-up
A in MTEP14	A	West	ITCM	4465	Marshalltown-Stoney Point 161kV Conversion	Convert Marshalltown - Stoney Point to 161kV operation. Add additional 161kV terminal at Marshalltown. Install at 161/36kV transformer at Marshalltown. Add additional 161kV terminal at Marshalltown for a total of two additional 161kV terminals at Marshalltown.	IA	IA	Other		Reliability	\$1,100,000	12/31/2016	12/31/2016	161		Bottom-up
A in MTEP14	A	West	ITCM	4467	Fairbank-Oelwein 5.5 mile 69kV Rebuild	Rebuild 5.5 miles of the Oelwein-Fairbank 69kV line.	IA	IA	Other		Condition	\$2,805,000	12/31/2019	12/31/2019	69		Bottom-up
A in MTEP14	A	West	ITCM	4704	Marshalltown-Pammel-Cedar Rapids 34kV	The project will rebuild several 34kV lines to 69kV standards to prepare for the future conversion to 69kV.	IA	IA	Other		Condition	\$46,190,500	8/17/2015	12/31/2021	34		Bottom-up
A in MTEP14	A	West	MDU	3083	Dickinson 115 kV Loop	Complete 115 kV loop & new 115/41.6 substation in Dickinson area	ND	ND	Other		Reliability	\$2,250,000	5/7/2014	7/1/2018	115	41.6	Bottom-up
A in MTEP14	A	West	MDU	4133	Collins distribution substation	A new 115/12.47 kV distribution substation on the Heskett-NW Bismarck 115 kV line	ND	ND	Other		Distribution	\$1,500,000	12/1/2015	3/1/2017	115	12.47	Bottom-up
A in MTEP14	A	West	MDU	4134	South 9th distribution substations	A new 115/12.47 kV distribution substation on the East Bismarck-Sweet Ave 115 kV line	ND	ND	Other		Distribution	\$4,200,000	6/1/2017	6/1/2017	115	12.47	Bottom-up
A in MTEP14	A	West	MDU	4141	Wishek Jct Reactor	A new tertiary reactor on Wishek 230/115/13.8 kV transformer	ND	ND	Other		Reliability	\$500,000	9/30/2016	9/30/2016	13.8		Bottom-up
A in MTEP14	A	West	MEC	4255	Sioux City Airport Sub	Construct the Sioux City Airport 161-13 kV Substation	IA	IA	Other		Distribution	\$2,500,000	5/1/2017	5/1/2017	161	13	Bottom-up
A in MTEP14	A	West	MEC	4594	Sioux City Airport Substation Line Taps	161 kV Line taps into Sioux City Airport Substation	IA	IA	Other		Distribution	\$140,000	5/1/2017	5/1/2017	161		Bottom-up
A in MTEP14	A	West	MH, MP	3831	Great Northern Transmission Line	U.S. portion of new Dorsey - Iron Range 500 kV transmission line, including 500 kV line from border crossing to Iron Range, midpoint series compensation station, new Iron Range 500/230 kV yard adjacent to existing Blackberry 230/115 kV Substation, and interconnection to 230 kV system at Blackberry.	MN	MB	TDSP			\$676,242,932	6/1/2020	6/1/2020	500	230	Externally-Driven
A in MTEP14	A	West	MP	4044	Canosia Road Substation	New 115/14 kV substation in Arrowhead - Cloquet 115 kV line	MN	MN	Other		Distribution	\$4,868,663	6/30/2016	6/30/2016	115	14	Bottom-up
A in MTEP14	A	West	MP	4045	Embarrass Transformer	New 115/23 kV transformer at Embarrass Switching Station	MN	MN	Other		Distribution	\$1,850,000	10/1/2016	10/1/2016	115	23	Bottom-up
A in MTEP14	A	West	MP	4426	Hoyt Lakes Substation Modernization	Rebuild and reconfigure existing Hoyt Lakes Substation	MN	MN	Other		Reliability	\$3,000,000	1/31/2017	1/31/2017	138		Bottom-up
A in MTEP14	A	West	MRES	4470	Woodpecker Damage Mitigation	Address sign woodpecker damage on MRES facilities	MN	MN	Other		Condition	\$150,000	6/30/2014	12/31/2016	230		Bottom-up
A in MTEP14	A	West	OTP	4444	NERC Alert Facility Ratings for Low Priority	Verify and remediate facilities as required due to the industry-wide NERC alert	MN,ND,S	MN,ND	Other		Reliability	\$7,701,028	12/31/2016	12/31/2016	115		Bottom-up
A in MTEP14	A	West	XEL	4693	Rebuild Douglas County-West Union 69 kV	Rebuild the Douglas County - West Union 69 kV line to 477 ACSR and transfer Osakis substation load to Douglas County	MN	MN	Other		Reliability	\$3,011,966	12/23/2016	12/23/2016	69		Bottom-up
A in MTEP14	A	West	XEL	4694	Install Gravel Island 161 kV Capacitor Bank	Install two steps of 30 Mvar capacitor banks at Gravel Island substation on the 161 kV bus	WI	WI	BaseRel			\$3,500,000	8/1/2017	8/1/2017	161		Bottom-up
A in MTEP14	A	West	XEL	4697	Reconductor Split Rock-Lakefield Jct 345	Replace approximately 35 miles of 964 ACSS with 477 T2 between the Split Rock and Lakefield Jct substations	MN	MN	Other		Reliability	\$5,547,376	12/15/2015	11/30/2018	345		Bottom-up
A in MTEP15	A	Central	AmerenIL	3689	Keystone 138/34 kV Substation - Replace	Keystone 138-13.8 kV Substation - Replace 138 kV circuit breaker 1396 in the Wallace-Keystone line with a minimum 2000 A continuous 40 kA interrupting circuit breaker	IL	IL	Other		Reliability	\$500,000	11/15/2016	11/15/2016	138		Bottom-up
A in MTEP15	A	Central	AmerenIL	4078	Sandburg-Monmouth 138 kV Line Upgrade	Rebuild approx. 4 miles of 477 kcmil ACSR conductor to meet or exceed the 1521 A summer emergency capability of the 1272 kcmil ACSR conductor which makes up the rest of this line. Replace wavetrap at Galesburg Monmouth Substation with equipment capable of carrying 2000 A continuously.	IL	IL	BaseRel			\$4,200,000	11/15/2016	11/15/2016	138		Bottom-up
A in MTEP15	A	Central	AmerenIL	4079	Huff 138-69 kV Substation Connection	Establish new bulk substation connecting to the Havana-Danvers 138 kV Line 1352 between Powerton Jct. and Lilly Substation.	IL	IL	Other		Reliability	\$3,000,000	6/1/2017	6/1/2017	138	69	Bottom-up
A in MTEP15	A	Central	AmerenIL	4494	East Galesburg 161/138 kV XFMR Replace	Replace existing parallel 161/138 kV Transformers at East Galesburg with a single 161/138 kV Transformer at Sandburg 345/138 kV Substation.	IL	IL	BaseRel			\$3,681,580	12/1/2016	12/1/2016	161	138	Bottom-up
A in MTEP15	A	Central	AmerenIL	7825	Mascoutah Municipal (Hilgard) 138 kV Breaker	Install a 4-breaker 138 kV ring bus (2000 A, 40 kA) at or near the tap to Mascoutah Municipal on the existing Turkey Hill-Ashley 138 kV Line 1482.	IL	IL	Other		Reliability	\$5,900,000	12/1/2019	12/1/2019	138		Bottom-up
A in MTEP15	A	Central	AmerenIL	8050	Baldwin 345/138kV Transformer Replacement	Baldwin Plant 345/138 kV Transformer - Replace existing 448MVA with a 560 MVA unit	IL	IL	Other		MP funded	\$5,650,000	6/1/2015	6/1/2015	345	138	Bottom-up
A in MTEP15	A	Central	AmerenIL	8054	Tilden Jct to Sparta 138kV	Tilden Jct to Sparta 138kV - Reconductor approx. 5.7 of 4.77 KCM ACSR	IL	IL	Other		MP funded	\$2,710,721	12/1/2016	12/1/2016	138		Bottom-up
A in MTEP15	A	Central	AmerenIL	8055	Sparta Tap - Steelville - 138kV	Sparta Tap to Steelville 138kV - Reconductor approx. 7.4 of 4.77 KCM ACSR	IL	IL	Other		MP funded	\$2,318,247	6/1/2016	6/1/2016	138		Bottom-up
A in MTEP15	A	Central	AmerenIL	8060	Fayetteville South Tap - Tilden 138kV	Fayetteville South Tap to Tilden 138kV - Reconductor approx. 1.5 of 1113 KCM ACSR	IL	IL	Other		MP funded	\$1,500,000	12/1/2016	12/1/2016	138		Bottom-up

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A in MTEP15	A	Central	AmerenIL	8134	Tilden Jct to Tilden 138kv	Tilden Jct to Tilden 138kv - Reconductor one span of 1113 KCM ACSR	IL	IL	Other		MP funded	\$175,920	12/1/2015	12/1/2015	138		Bottom-up
A in MTEP15	A	Central	AmerenIL	8137	Turkey Hill to Mascoutah 138kv	Turkey Hill to Mascoutah 138kv - Reconductor approx. 8.5 of 4.77 KCM ACSR	IL	IL	Other		MP funded	\$4,250,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP15	A	Central	AmerenIL	8581	California Ridge Wind Farm Expansion	Increase of plant output capacity to 250 MW	IL	IL	Other		Reliability	\$48,000	3/2/2017	3/2/2017	138		Bottom-up
A in MTEP15	A	Central	AmerenMO	7871	Keokuk Plant 69 kV Breaker Addition	Install new 1200 A, 69 kV line position and circuit breaker to accommodate new 69 kV line to be constructed by ITC Midwest.	IA	IA	Other		Reliability	\$460,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP15	A	Central	AmerenMO	8840	Hitt Substation	Install 161 kV breaker and extend 161 kV line 0.2 miles to supply Hitt 161-34.5 kV Substation from Heritage Substation. Relocate 40 Mvar, 161 kV capacitor bank from Wedekind to Heritage Substation. Install 2-161 kV bus-tie breakers at Heritage, 3-161 kV breakers at Wedekind, and 1-161 kV breaker at Cape.	MO	MO	Other		Reliability	\$120,000	5/25/2016	11/14/2016	161	161	Bottom-up
A in MTEP15	A	Central	BREC	3435	Rome Junction to West Owensboro 69 kV	Reconductor 5.8 miles of 3/0 and 267 MCM ACSR with 336 MCM ACSS	KY	KY	Other		Reliability	\$440,000	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP15	A	Central	BREC	3436	Wilson to Sacramento 69 kV line addition	New 11 mile line and line terminal at Wilson	KY	KY	Other		Reliability	\$2,100,000	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP15	A	Central	BREC	3437	Thruston Junction to East Owensboro rec	Reconductor .4 miles of 3/0 ACSR with 336 MCM ACSR	KY	KY	Other		Reliability	\$40,000	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP15	A	Central	BREC	3438	Davies County to Phippot Tap reconducto	Reconductor 7.7 miles of 267 MCM ACSR with 336 MCM ACSR	KY	KY	Other		Reliability	\$580,000	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP15	A	Central	BREC	3441	Olivet Church Road to Olivet Church Road	Reconductor 1.4 miles of 4/0 ACSR with 336 MCM ACSS	KY	KY	Other		Reliability	\$150,000	12/31/2015	12/31/2015	69		Bottom-up
A in MTEP15	A	Central	BREC	3444	Meade County 161/69 transformer addition	Add a third 56 MVA transformer to the existing Meade County substation. Modified to replace both 56 MVA transformers with two 100 MVA transformers.	KY	KY	BaseRel			\$4,000,000	12/31/2015	12/31/2015	161	69	Bottom-up
A in MTEP15	A	Central	BREC	9420	Aleris Expansion	The proposed service plan for the Aleris load includes construction of a new-terrain 1.7 mile 161 kV radial circuit from Coleman EHV to serve the 28 MW load at the existing 161/13.8 kV delivery point. In addition, the plan includes a new-terrain 2 mile 161 kV circuit to provide service to a new 161/13.8 kV delivery point necessary to serve the expanded load (44 MW at 90% PF maximum contract demand).	KY	KY	Other		Reliability	\$9,550,000	3/31/2017	3/31/2017	161		Bottom-up
A in MTEP15	A	Central	BREC, PJM, Vectr	10142	Duff-Rockport-Coleman 345 kV	New 28.5 miles of single circuit, single conductor 345 kV transmission from Duff to Coleman, including sub upgrades (MISO); 14 miles of new double circuit 345 kV to Rockport, including two Rockport 765/345 kV transformers (PJM)	KY	IN	MEP			\$67,443,248	1/1/2021	1/1/2021	345		Top-Down
A in MTEP15	A	Central	CWLD	8300	Mill Creek 161 kV Substation	Regulatory Approval issues has caused a delay in this project.	MO	MO	Other		Reliability	\$32,000,000	6/1/2030	6/1/2030	161	13.8	Bottom-up
A in MTEP15	A	Central	DEI	2144	Franklin 230 to Earlywood 69kv Reconduc	Construct new Mill Creek 161 kV substation Franklin 230kV sub to Earlywood sub reconductor 1.06 mile - 69kV - 69165 line with 954ACSR@100C	IN	IN	Other		Reliability	\$1,170,000	6/30/2017	6/30/2017	69		Bottom-up
A in MTEP15	A	Central	DEI	7882	Bloomington Rogers St - Dunn St New 69	Construct new 69kV line from Bloomington Rogers St. to Bloomington Dunn St. (also includes Dunn St. bus work - AMIN1046) 954ACSR@100C	IN	IN	Other		Reliability	\$4,820,000	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP15	A	Central	DEI	7883	Bloomington Downtown 69/12kV Sub	Construct new 22.4MVA - 69/12kV sub near downtown Bloomington in the new line established by project AMIN1047 / 7882.	IN	IN	Other		Reliability	\$602,000	6/2/2017	6/2/2017	69	12	Bottom-up
A in MTEP15	A	Central	DEI	7885	Frankfort Burlington St - Middlefork 69kV	Frankfort Burlington St to Middlefork 69kV - 69133 ckt: Reconductor 12.4 miles with 954ACSR@100C	IN	IN	Other		Reliability	\$6,636,000	3/31/2017	3/31/2017	69		Bottom-up
A in MTEP15	A	Central	DEI	7903	Martinsville SE - HE Park Ave 69kV Recon	Martinsville SE - HE Park Ave 69kV - 6903 ckt: Reconductor 3.4 miles with 954ACSR@100C	IN	IN	Other		Reliability	\$2,102,000	6/1/2025	6/1/2025	69		Bottom-up
A in MTEP15	A	Central	DEI	7911	Frankfort 230kV and 69kV Ring Buses	Frankfort 230kV: complete 4-brkr ring bus; 69kV: complete 6-brkr ring bus and retire Jefferson Jct with new line terminal for 69kV line to Frankfort Muni.	IN	IN	Other		Reliability	\$5,109,020	12/31/2018	12/31/2018	230	69	Bottom-up
A in MTEP15	A	Central	DEI	7946	Speed - Jeffersonville New 138kV Line	Loop existing 138kV line from Speed to Clark Maritime to Jeffersonville. Add 2.52 mile 138kV line section from Speed to Memphis Jct and tie into existing 13890 circuit. Add .01 mile 138kV line section from Jeffersonville Jct. to Jeffersonville sub. Install 138kV line terminals at Speed and Jeffersonville.	IN	IN	Other		Reliability	\$5,472,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP15	A	Central	DEI	7953	Mohawk Industrial 69kV Sub Loop	New 1.2 mile 69kV line to complete 69130 ckt. loop through Mohawk Industrial 69/12kV sub.	IN	IN	Other		Reliability	\$1,309,000	12/31/2016	12/31/2016	69		Bottom-up

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A in MTEP15	A	Central	DEI	7957	Kokomo S. Main St. Sub Relocate	Relocate Kokomo S. Main St. 69/12kV distribution sub to higher ground (new sub name will be Kokomo Apperson)	IN	IN	Other		Reliability	\$1,261,000	6/1/2017	6/1/2017	69	12	Bottom-up	
A in MTEP15	A	Central	DEI	7961	Fairview 138kV Breaker Replacements	Fairview 138kV Breaker Replacements: replace OCB 13858, 13854, and relays at line terminals 13854, 13855, 13858	IN	IN	Other		Condition	\$4,211,000	12/31/2017	12/31/2017	138		Bottom-up	
A in MTEP15	A	Central	DEI	7963	New Castle 138kV Breaker Replacements	New Castle 138kV Breaker Replacements: replace OCB 13805, 13835, 13842, 13873, 13869-1, 13869-2, and relays at line terminals 13805, 13835, 13842, 13873, 13843	IN	IN	Other		Condition	\$2,516,322	12/31/2018	12/31/2018	138		Bottom-up	
A in MTEP15	A	Central	DEI	7964	Kokomo Highland Park 69kV Breaker Rep	Kokomo Highland Park Equipment: Replace OCB 69230-4, -5, -6, -7, OCB BK 7 CAP, 69kV primary UG cables, relays at terminals 6910, 6911, 6913, 6928, 6992, 13879, 13887, 138kV TRANSFER	IN	IN	Other		Condition	\$3,351,124	12/31/2018	12/31/2018	138	69	Bottom-up	
A in MTEP15	A	Central	DEI	7969	Edwardsport - Amo 345kV Intermediate St	Edwardsport - Amo 345kV - 34528 ckt. replace intermediate tansient structures with deadend structures - every 2.5 miles (22 structures).	IN	IN	Other		Reliability	\$16,052,359	12/31/2017	12/31/2017	345		Bottom-up	
A in MTEP15	A	Central	DEI	7974	Lafayette 230 - Attica 230kV Reconnector	Lafayette 230 - Attica 230kV - 23027 ckt: Reconnector 5.4 miles at Lafayette 230 end with 900ACSR-OVAL@100C; also reconnector portions of double-circuited 13877 and 13878 circuits with 954ACSR-OVAL@100C - total of 9.9 miles.	IN	IN	Other		Reliability	\$3,684,530	12/31/2018	12/31/2018	230	138	Bottom-up	
A in MTEP15	A	Central	DEI	7982	Advance - Dover 69kV Rebuild	Advance - Dover 69kV - 69134 ckt: Rebuild 7.9 mile line with 477ACSR@100C - replacing all structures with steel poles.	IN	IN	Other		Condition	\$4,903,384	12/31/2017	12/31/2017	69		Bottom-up	
A in MTEP15	A	Central	DEI	7984	Medora - Brownstown 69kV Rebuild	Medora - Brownstown 69kV - 6952 ckt: Rebuild 4.85 mile line transferring existing 477ACSR conductor - replacing all structures with steel poles.	IN	IN	Other		Condition	\$2,590,705	12/31/2018	12/31/2018	69		Bottom-up	
A in MTEP15	A	Central	DEI	7987	New Pekin Jct - Salem 69kV Rebuild	New Pekin Jct - Salem 69kV - 69153 ckt: Rebuild 9.4 mile line with 477ACSR@100C - replacing all structures with steel poles.	IN	IN	Other		Condition	\$4,028,000	12/31/2018	12/31/2018	69		Bottom-up	
A in MTEP15	A	Central	DEI	7989	Edwardsport - HE Rogers Jct 69kV Rebuild	Edwardsport - HE Rogers Jct 69kV - 6951 ckt: Rebuild 9.8 mile line with 477ACSR@100C - replacing all structures with steel poles. (HE Rogers Jct is located between Edwpt and Odon Jct)	IN	IN	Other		Condition	\$7,391,505	12/31/2016	12/31/2016	69		Bottom-up	
A in MTEP15	A	Central	DEI	7991	Rushville - HE Miroy 69kV Rebuild	Rushville - HE Miroy 69kV - 6920 ckt: Rebuild 7.2 mile line with 477ACSR@100C - replacing all structures with steel poles.	IN	IN	Other		Condition	\$6,699,202	12/31/2016	12/31/2016	69		Bottom-up	
A in MTEP15	A	Central	DEI	7992	Hillenbrand Jct - Andersonville Jct 69kV R	Hillenbrand Jct - Batesville North - Andersonville Jct 69kV - 6919 ckt: Rebuild 7.93 mile line with 477ACSR@100C - replacing all structures with steel poles.	IN	IN	Other		Condition	\$6,472,095	12/31/2018	12/31/2018	69		Bottom-up	
A in MTEP15	A	Central	DEI	9246	Lafayette SE to Laf S Jct2 new 138kV line	Lafayette SE to new Lafayette S Jct 2 (in existing 13808 ckt.) - build new 138kV - 1.75 mile - 954acsr@100c - 13899 ckt.; add new breaker in Laf SE ring; add (2) line switches at new jct and operate Laf S Jct to Laf S Jct 2 N.O.	IN	IN	BaseRel			\$3,976,181	6/1/2017	6/1/2017	138		Bottom-up	
A in MTEP15	A	Central	DEI	9247	Lafayette 230 sub - 138kV bus tie brkr anc	Lafayette 230 sub - insert a redundant 138kV bus tie breaker in series with existing breaker; add redundant bus differential relays to both 138kV bus 1 and 2. Scope also includes (5) 138kV antiquated breaker and relay replacements, disconnect switches and misc buswork.	IN	IN	BaseRel			\$4,500,000	6/1/2017	6/1/2017	138		Bottom-up	
A in MTEP15	A	Central	DEI, HE	7940	Bedford - HE Worthington 138kV Recond	Bedford - HE Worthington 138kV - 13840 ckt: Reconnector 33 miles with 954ACSR and replace all structures. Also reconnector 2 miles of 13823 where it is double circuited with 954ACSR starting at the Bedford end	IN	IN	BaseRel			\$36,169,000	7/31/2018	7/31/2018	138		Bottom-up	
A in MTEP15	A	Central	HE	10343	Hubbell Primary 138 kV Ring Bus and Tra	Construct a 138kV ring bus and add a second 138/69kV transformer	IN	IN	Other		Distribution	\$10,047,000	6/1/2016	6/1/2016	138		Bottom-up	
A in MTEP15	A	Central	IPL	4262	Pritchard - Centerton - Honey Creek - Sou	Increase line rating from 242 to 302 MVA	IN	IN	GIP				12/31/2016	12/31/2016	138		Externally-Driven	
A in MTEP15	A	Central	IPL	4263	Pritchard - Heartland Crossing - Mooresvil	Increase line rating from 191 to 242 MVA	IN	IN	GIP				12/31/2016	12/31/2016	138		Externally-Driven	
A in MTEP15	A	Central	IPL	4264	Pritchard - Franklin Township	New 138 kV transmission line rated 322 MVA	IN	IN	GIP				12/31/2016	12/31/2016	138		Externally-Driven	
A in MTEP15	A	Central	IPL	7701	Thompson Substation Upgrade	New 345 kV breaker, relocated Hanna E 275 MVA autotransformer and new 2-138 kV breakers	IN	IN	Other		Reliability		11/23/2015	6/1/2016	345	138	Bottom-up	
A in MTEP15	A	Central	IPL	7704	Rockville Substation Breaker Additions	New 2-345 kV breakers and 138 kV bus tie breaker	IN	IN	Other		Reliability					345		Bottom-up
A in MTEP15	A	Central	IPL	9402	Guion - Westlane Line Upgrade	Upgrade conductor rating to 298 MVA via line clearance.	IN	IN	BaseRel				7/15/2017	7/15/2017	138		Bottom-up	

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A in MTEP15	A	Central	PPI	7881	Fishhook-Pittsfield 138 kV	Construct new 14.5 mile 138 kV line from the new Ameren Fishhook 138 kV switching station on the Meradosia-East Quincy South 138 kV line to the PPI Pittsfield 138/69 kV substation.	IL	IL	Other		Reliability	\$7,637,747	12/1/2017	12/31/2018	138	69	Bottom-up
A in MTEP15	A	Central	PPI	7889	Fishhook-Liberty 138 kV, Liberty 138/69 kV	Construct Fishhook-Liberty 138 kV line, Liberty 138/69 kV substation, and replace St. Anthony 138/69 kV transformer.	IL	IL	Other		Reliability	\$11,724,709	12/31/2019	12/31/2019	138	69	Bottom-up
A in MTEP15	A	Central	Vectren	4391	Pigeon Creek Cap Bank Addition	Add a 15.6 MVAR cap bank at the Pigeon Creek Sub	IN	IN	Other		Reliability	\$600,000	12/31/2019	12/31/2019	69		Bottom-up
A in MTEP15	A	East	ITCT	7891	Stone Pool Substation	New 3 transformer 120 kV distribution substation	MI	MI	Other		Distribution	\$16,525,000	5/1/2017	5/1/2017	120		Bottom-up
A in MTEP15	A	East	ITCT	7892	Bartlett Substation	Interconnection Request for a new 120 kV, 2 transformer distribution substation	MI	MI	Other		Distribution	\$7,920,000	6/13/2019	6/13/2019	120		Bottom-up
A in MTEP15	A	East	ITCT	8083	Cortland Relay Replacement	The proposed solution is to upgrade the limiting relaying on the Cortland - Warren 120 kV line to increase its summer emergency rating.	MI	MI	Other		Reliability	\$300,000	6/1/2017	6/1/2017	120		Bottom-up
A in MTEP15	A	East	ITCT	8087	Stratford 33.3 MVAR Capacitor Bank	Install a 33.3 MVAR capacitor bank on the 120 kV bus 101 at Stratford along with the necessary station equipment.	MI	MI	BaseRel			\$820,000	6/1/2018	6/1/2018	120		Bottom-up
A in MTEP15	A	East	ITCT	8094	Fitz 345/120 kV Transformer and 120 kV S	Install a 345/120 kV transformer and construct a 120 kV, 3 breaker yard (ring bus configuration with space to expand to a breaker and a half configuration) at the existing Fitz substation. The Adams-Bunce Creek 120 kV line, which runs adjacent to the Fitz property, would be looped into the new 120 kV side of the substation. To facilitate looping the line, less than 0.1 miles of new double circuit structures would be constructed with 1431 ACSR being installed on both sides of the new structures. Sag limits on the Bunce-Wabash#2 120 kV line and the Fitz-Bunce Creek 120 kV line will also need to be remediated to accommodate this project	MI	MI	BaseRel			\$13,200,000	6/1/2018	6/1/2018	345	120	Bottom-up
A in MTEP15	A	East	ITCT	9245	J327 Generator Interconnection	ITCT will add 2-120 kV breakers (Positions LM and LF) with associated disconnects at Rapson 120 kV substation to accommodate the interconnection of a 150 MW wind farm.	MI	MI	GIP			\$1,330,000	9/2/2016	9/2/2016	120		Externally-Driven
A in MTEP15	A	East	ITCT	9360	Scio Substation	This is a load interconnection request from DTE Energy to construct a 120/13.2 kV substation in Scio Township, MI. ITCT will construct a 120 kV straight bus with 2-120 kV line breakers and a 120 kV section breaker, as well as, associated disconnect switches, control house, and all other required connection equipment at Scio substation. Scio will be fed by looping in the existing Lark - Spruce 120 kV circuit.	MI	MI	Other		Reliability	\$10,350,000	12/31/2018	12/31/2018	120	13.2	Bottom-up
A in MTEP15	A	East	ITCT	9362	State (formerly "Maize") and Blue Substati	DTE has submitted a load interconnection request for 2 new 120/41.6 kV substations proposing to serve load in the City of Ann Arbor and the University of Michigan Campus. ITCT would install 2-120 kV line breakers and 1-120 kV section breaker w/ associated disconnects in a straight bus configuration at State (formerly "Maize") and Blue substations respectively. At Pioneer substation, ITCT would add 2-120 kV line breaker and create 2 new positions to terminate 2 new lines between Pioneer and State (formerly "Maize"). ITCT would construct approx. 2.6 miles of double circuit 120 kV structures between Pioneer and State (formerly "Maize"), and string 954 ACSR to create the 120 kV State (formerly "Maize")-Pioneer 1 and 2 circuits. At Phoenix substation, ITCT would add 2-120 kV line breaker, 1-120 kV section breaker, relocate the Phoenix end of the Phoenix-Lark line, and create 2 new positions to terminate 2 new lines between Phoenix and Blue. ITCT would construct 2, approx. 2.7 mile underground lines between Phoenix and Blue using 2500 CU XLPE cable to create the 120 kV Blue-Phoenix 1 and 2 circuits.	MI	MI	Other		Reliability	\$97,873,000	12/31/2018	5/1/2019	120	41.6	Bottom-up
A in MTEP15	A	East	ITCT	9440	Waterman 120kV Cable Relocation for GI	Portions of the following ITCT circuits will need to be relocated to accommodate the construction of the Gordie Howe International Bridge (GICB) and the related US customs area: Waterman-Cato 120kV (underground), Waterman-St. Antoine 120kV (underground), Waterman-Frisbie 120kV (underground), Waterman-Zug 120kV (Overhead), and Waterman-DIG-Navarre 230kV (overhead).	MI	MI	Other		Reliability	\$25,000,000	12/31/2017	12/31/2017	230		Bottom-up
A in MTEP15	A	East	METC	2810	Delhi - Canal Jct 138kV Rebuild	Rebuild 7.2 miles of 4/0 ACSR and 336.4 ACSR utilizing 954 ACSR on new 138 kV structures. Also replace terminal equipment at the Delhi 138 kV station.	MI	MI	Other		Reliability	\$7,500,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP15	A	East	METC	3926	Dort to Pasadena (Goss) station equipmen	Replace/reset relay equipment and replace trainers in the Dort station	MI	MI	Other		Reliability	\$225,000	6/1/2017	6/1/2017	138		Bottom-up

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A in MTEP15	A	East	METC	4506	Four Mile - Wealthy Street 138 kV Rebuild	Rebuild 0.59 miles of 6-wired 266.8 ACSR + 3/0 Cu conductor from the Four Mile - Mullins Jct. section using 954 ACSR and rebuild 0.37 miles of 266.8 ACSR + 3/0 Cu, 6.75 miles of 2-3/0 Cu, and 0.49 miles of 795 ACSR from the Wealthy Street - Mullins Jct 138 kV segment utilizing 954 ACSR on new 138 kV structures. Install OPGW along the entire length of the circuit. Also upgrade terminal equipment at the Four Mile and Wealthy Street 138 kV stations.	MI	MI	BaseRel			\$8,600,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP15	A	East	METC	4508	Broadmoor to Plaster Creek 138 kV Sag Remediation	Remediate the sag on the 795 ACSR from the Broadmoor - Plaster Creek 138 kV circuit to the conductor limit.	MI	MI	Other		Reliability	\$190,000	6/1/2018	6/1/2018	138		Bottom-up
A in MTEP15	A	East	METC	4509	Argenta - Battle Creek 345kV Sag Remediation	Remediate Sag Limit to SEMER 2350 Amps. Upgrade station equipment at Battle Creek 345kV.	MI	MI	Other		Reliability	\$2,568,000	12/31/2017	12/31/2017	345		Bottom-up
A in MTEP15	A	East	METC	4524	Emmett - Livingston 138 kV Sag Remediation	Remediate sag on the Emmett - Livingston 138 kV line to bring its rating up to the conductor limit (208 MVA).	MI	MI	Other		Reliability	\$182,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP15	A	East	METC	8066	Amber - Donaldson Creek 138 kV Rebuild	Rebuild approx. 19.8 miles of the Amber to Donaldson Creek 138 kV circuit using 954 ACSR and OPGW on 138 kV future double circuit structures.	MI	MI	BaseRel			\$23,000,000	6/1/2018	6/1/2018	138		Bottom-up
A in MTEP15	A	East	METC	8067	Beals Road 138 kV Station Equipment Replacement	Replace 138 kV terminal equipment within the Beals Road Substation	MI	MI	Other		Reliability	\$400,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP15	A	East	METC	8070	North Belding 138 kV Station Equipment Replacement	Replace thermal limiting equipment at the North Belding station.	MI	MI	Other		Reliability	\$120,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP15	A	East	METC	8072	Riggsville to Port Calcite to Rockport 138 kV Sag Remediation	Rebuild 69 miles of existing 138 kV wood poles to double circuit capable 138 kV construction steel monopoles and string one side with T2 477 ACSR (or another similar capacity anti-galloping conductor configuration).	MI	MI	Other		Condition	\$96,505,000	12/31/2019	12/31/2019	138		Bottom-up
A in MTEP15	A	East	METC	8077	Vestaburg to Alma 138 kV Rebuild	Rebuild the Vestaburg - Alma 138 kV circuit utilizing 138 kV single circuit steel poles and 954 ACSR conductor. Install OPGW along the entire length of the circuit.	MI	MI	Other		Condition	\$18,200,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP15	A	East	METC	8078	Donaldson Creek 33.3 MVAR Capacitor	Install a 33.3 MVAR capacitor at Donaldson Creek.	MI	MI	BaseRel			\$1,200,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP15	A	East	METC	8080	Coldwater 3 x 18 MVAR 138 kV Capacitor	Install a 3 x 18 MVAR capacitor and necessary substation equipment at the 138 kV Coldwater Substation.	MI	MI	BaseRel			\$3,900,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP15	A	East	METC	8090	Cornell - Blue Water Jct. 138 kV Sag Remediation	Remediate the sag limit on the Cornell to Blue Water Jct. section of the Cornell - Bingham 138 kV circuit to increase its summer emergency rating to at least 760 A.	MI	MI	Other		Reliability	\$320,000	6/1/2018	6/1/2018	138		Bottom-up
A in MTEP15	A	East	METC	8091	Donaldson Creek - White Lake 138 kV Sag Remediation	Remediate the sag limit on the Donaldson Creek - White Lake 138 kV line to 160 MVA (670 Amp).	MI	MI	Other		Reliability	\$360,000	6/1/2018	6/1/2018	138		Bottom-up
A in MTEP15	A	East	METC	8096	Roosevelt to Gaines 345 kV Sag Remediation	Remediate the sag limit on the Roosevelt - Gaines 345 kV circuit. This will bring the rating up to the 2156 ACSR summer emergency limit of 2,830 A.	MI	MI	Other		Reliability	\$380,000	12/31/2017	12/31/2017	345		Bottom-up
A in MTEP15	A	East	METC	8109	Gaylord - Livingston 138kV Sag Remediation	Remediate the sag limit on the Gaylord to Livingston 138 kV line up to its conductor rating of 174 MVA (730 Amp).	MI	MI	Other		Reliability	\$75,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP15	A	East	METC	8118	Beecher - Samaria 138 kV Rebuild	Rebuild the 636 ACSR portion of the Beecher to Samaria 138 kV circuit utilizing 954 ACSR on 138 kV double circuit steel poles. Relocate the Beecher-Whiting 138 kV line to the open side of the new structures. Replace overloaded terminal equipment at Beecher and upgrade relaying at Morocco.	MI	MI	Other		Condition	\$25,600,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP15	A	East	METC	8119	METC Pole Top Switches Additions-Replacement	Install or replace an existing a new 138 kV, 2-way, full-load-break pole top switch at various tap points across the METC system	MI	MI	Other		Reliability	\$3,600,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP15	A	East	METC	8121	Hackett Jct. - Laundra Jct. 138 kV Sag Remediation	Remediate the sag limit on the Hackett Jct. - Laundra Jct. section of the Bullock - Saginaw River 138 kV circuit to increase its summer emergency rating to at least 840 A.	MI	MI	Other		Reliability	\$90,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP15	A	East	METC	8122	METC Pole Top Switches Additions-Replacement	Install or replace an existing a new 138 kV, 2-way, full-load-break pole top switch at various tap points	MI	MI	Other		Reliability	\$3,600,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP15	A	East	METC	8124	Argenta - Morrow 138 kV Rebuild	Rebuild approximately 10 miles of existing 138 kV steel lattice towers with wood cross arms to double circuit capable 230 kV construction steel monopoles and string one side with 954 ACSR.	MI	MI	Other		Condition	\$13,900,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP15	A	East	METC	8126	Kenowa Reactor 28R Replacement	Replace the reactor with a new standard 345kV, 100 MVAR and upgrade relaying.	MI	MI	Other		Condition	\$3,500,000	8/15/2016	8/15/2016	345		Bottom-up
A in MTEP15	A	East	METC	8127	Six Ludington 345 kV Circuit Breaker Replacement	Replace the 22H9, 24H9, 25H9, 22F7, 24F7, and 25F7 Ludington 345 kV circuit breakers with the circuit breakers containing 400 ohm pre-insertion resistors.	MI	MI	Other		Reliability	\$8,640,000	12/31/2017	12/31/2017	345		Bottom-up

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A in MTEP15	A	East	METC	8144	Meyer (formerly "Hayes Street") 345/138 kV	Construct a new EHV "Meyer" (formerly "Hayes Street") substation approximately four miles north of the Tallmadge station, loop the existing Ludington - Tallmadge #2, Kenowa - Argenta 345 kV and Cobb - Tallmadge #1 138 kV circuits into the new station and install a new 345/138 kV transformer at Meyer. The solution will also require replacing the limiting terminal equipment at the Tallmadge 345 kV station (pos. 27HR) and remediating the sag limits on the Argenta - Meyer 345 kV circuit (formerly Argenta - Kenowa 345 kV line) to at least 1,524 MVA (2,550 A) and on the Tallmadge - Meyer #1 345 kV circuit (formerly Ludington - Tallmadge #2 345 kV) to 2,007 MVA (3,358 A).	MI	MI	BaseRel				\$31,700,000	5/31/2018	5/31/2018	345	138	Bottom-up
A in MTEP15	A	East	METC	8170	Leoni to Page Ave 138kV - Install 2nd relay	Install the second relay component on the Leoni to Page Ave. 138 kV circuit at Leoni end so that, for faults on the Page Ave. end, the Leoni breaker will trip and clear the fault with one relay component failure.	MI	MI	Other		Reliability	\$75,000	12/31/2016	12/31/2016	138		Bottom-up	
A in MTEP15	A	East	METC	8171	Croton to Felch Road 138 kV Circuit Dual	1.Install dual pilot relay protection system on Croton to Felch Road 138 kV circuit so that 3 phase to ground faults on the circuit will be cleared within 7 cycles. 2.Remove the sparing scheme of using Croton 138 kV breaker 500 to spare breaker 388 for Croton to Felch Road 138 kV circuit. 3.Remove Felch Road 138 kV BK 188 Bypassing	MI	MI	Other		Reliability	\$540,000	6/1/2017	6/1/2017	138		Bottom-up	
A in MTEP15	A	East	METC	8460	Hemphill - Sabine 138 kV Sag Remediation	Remediate the sag limit on the Sabine - Hemphill 138 kV line to increase its summer emergency rating to the 336 ACSR conductor rating of 208 MVA (871 Amps).	MI	MI	Other		Reliability	\$140,000	12/31/2017	12/31/2017	138		Bottom-up	
A in MTEP15	A	East	METC	8461	Cobb - Sternberg 138 kV Sag Remediation	Remediate the sag limit on the Cobb-Sternberg 138 kV line to bring its rating up to 174 MVA (730 Amp).	MI	MI	Other		Reliability	\$480,000	6/1/2017	6/1/2017	138		Bottom-up	
A in MTEP15	A	East	METC	8540	Claremont - Layton 138 kV Sag Remediation	Remediate the sag limit on the Claremont-Layton section of the Claremont - Cornell #1 138 kV line to bring its rating up to 209 MVA (874 Amps).	MI	MI	Other		Reliability	\$520,000	12/31/2017	12/31/2017	138		Bottom-up	
A in MTEP15	A	East	METC	9361	Green 138 kV Substation	A load interconnection request from Consumers Energy (CE) to serve the new Facility for Rare Isotope Beams (FRIB) on the Michigan State University campus. METC will install 4-138 kV breakers and associated disconnects, laid out in a ring bus configuration (future breaker and a half), as well as the control house, and all other 138 kV equipment required at the new Green substation. METC will loop the existing Delhi - College 138 kV line into Green and CE will construct two new 138 kV underground circuits between the Spartan and Green substations. METC will install approx. 7.2 miles of OPGW on the existing structures between College and Tihart, and add an anti-islanding scheme at College to avoid islanding the generation at Spartan with the load fed out of College sub.	MI	MI	Other		Reliability	\$5,307,000	10/1/2016	10/1/2016	138		Bottom-up	
A in MTEP15	A	East	NIPS	8500	Lagrange 138kV Ring Bus	Create 138kV Ring Bus at lagrange Substation	IN	IN	BaseRel			\$2,715,000	12/31/2018	12/31/2018	138	138	Bottom-up	
A in MTEP15	A	East	NIPS	9405	Kosciusko 13881 Switch	Replace Line Switch and substation Conductor at Kosciusko.	IN	IN	BaseRel			\$147,845	5/1/2018	5/1/2018	138		Bottom-up	
A in MTEP15	A	East	NIPS	9406	Reynolds 138kV (138109) Switches	Replace (2) 138kV Switches at Reynolds	IN	IN	BaseRel			\$112,665	5/1/2018	5/1/2018	138		Bottom-up	
A in MTEP15	A	East	NIPS	9461	Hiple 138kV Relay	Add Redundant 138kV Bus Differential Relay at Hiple	IN	IN	BaseRel			\$50,000	12/31/2018	12/31/2018	138		Bottom-up	
A in MTEP15	A	East	WPSC	3567	Hersey to Weidman	Hersey to Weidman line rebuild	MI	MI	Other		Reliability	\$11,500,000	12/31/2017	12/31/2017	69		Bottom-up	
A in MTEP15	A	East	WPSC	4086	Fountain Junction to Scottville	Fountain Junction to Scottville Rebuild	MI	MI	Other		Reliability	\$4,650,000	12/31/2016	12/31/2016	69		Bottom-up	
A in MTEP15	A	East	WPSC	4384	Airport Station Modification	The current configuration of the Airport station is not desirable from a planning or protection standpoint. The transformer protection clears the entire 138kV bus, there is primarily electromechanical relaying in the station and both the 138kV and 69kV the stations have oil circuit breakers. This project will upgrade both busses to ring bus configurations, put the current 138kV and 69kV stations in a common fence, replace oil breakers with SF6 and bring the design up to current Wolverine standards.	MI	MI	Other		Reconfig	\$4,190,000	1/1/2017	12/31/2018	138	69	Bottom-up	
A in MTEP15	A	East	WPSC	7660	Advance Station Upgrade	Complete relocation and rebuild of the current Advance switching station to a ring bus design with a new protection and control system.	MI	MI	Other		Relocation	\$2,250,000	12/31/2016	12/31/2016	69		Bottom-up	
A in MTEP15	A	East	WPSC	7661	Vestaburg Transmission	Convert transfer bus to straight bus, replace old station switches and upgrade relaying to add a sparing scheme.	MI	MI	Other		Reconfig	\$170,000	12/31/2017	12/31/2017	69		Bottom-up	
A in MTEP15	A	East	WPSC	7662	Atlanta Transmission	Replace outdated and unreliable switches on the bus and replace transformer bushings.	MI	MI	Other		Condition	\$250,000	12/31/2017	12/31/2017	69		Bottom-up	
A in MTEP15	A	East	WPSC	7663	Gaylord OCB	Replace oil breaker and upgrade battery bank and relaying for 125VDC operation.	MI	MI	Other		Condition	\$300,000	12/31/2017	12/31/2017	69		Bottom-up	

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A in MTEP15	A	East	WSPC	8220	Casnovia to White Cloud Line Raise	1.93 miles of line has been requested by GLE to be raised to accommodate distribution underbuild. This project will rebuild a total of 2.5 miles to gradually tie the new taller poles into the existing line. The existing conductor is planned to be used for this project.	MI	MI	Other		Relocation	\$800,000	5/31/2016	5/31/2016	69		Bottom-up
A in MTEP15	A	East	WSPC	8221	Airport Station Line Modifications	This project will construct the line modifications required to route lines into the new Airport station.	MI	MI	Other		Relocation	\$1,000,000	12/31/2017	12/31/2017	138	69	Bottom-up
A in MTEP15	A	East	WSPC	8380	Advance Line Modifications	Line modifications to support the new Advance Transmission station project.	MI	MI	Other		Relocation	\$1,250,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP15	A	South	AECC	8320	Tap EAI El Dorado - Monticello East 115 kV	Tap Entergy El Dorado 115 kV line: Construct 1.6 miles 115 kV line and Hermitage 115/13.2 kV substation.	AR	AR	Other		Distribution	\$2,060,000	10/1/2017	10/1/2017	115	13.2	Bottom-up
A in MTEP15	A	South	AECC	8341	Corning North 115kV Expansion	Expanding the Corning North 115kV Substation to add a second transformer. This expansion is necessary to serve a new 2.5MW load of the feed mill and poultry houses associated with the poultry processing plant coming online in the area.	AR	AR	Other		Distribution	\$1,500,000	8/1/2015	8/1/2015	115		Bottom-up
A in MTEP15	A	South	AECC	8342	Pocahontas East 161kV Load Addition	3.5 mile radial tap from the coop owned Pocahontas East substation to a new distribution substation to accommodate new load in the area associated with the PECO Poultry Processing Plant.	AR	AR	Other		Distribution	\$4,750,000	8/1/2015	8/1/2015	161		Bottom-up
A in MTEP15	A	South	AECC	8400	Tap EAI El Dorado to Monticello East 115kV	Tap EAI El Dorado to Monticello East 115kV line, build 13 miles 115kV line, build 115/69kV substation	AR	AR	Other		Distribution	\$6,400,000	4/1/2017	4/1/2017	115	69	Bottom-up
A in MTEP15	A	South	AECC	8402	Camden South to Camden West 115kV tr	Construct 7 mile 115kV transmission line from the existing Camden South delivery point to the proposed Camden West substation, construct Camden West 115/13.2kV substation.	AR	AR	Other		Distribution	\$3,950,000	12/1/2019	12/1/2019	115	13.2	Bottom-up
A in MTEP15	A	South	AECC	8420	Ingram 161/25kV Substation	New 161/25kV substation with initial load of 12,000kW.	AR	AR	Other		Distribution	\$5,861,500	12/1/2017	12/1/2017	161	24.9	Bottom-up
A in MTEP15	A	South	AECC	8480	Gainesville 161/13.2kV Substation	New 161/13.2kV substation with initial load of 9,500 kW.	AR	AR	Other		Distribution	\$7,000,000	1/1/2017	1/1/2017	161	13.2	Bottom-up
A in MTEP15	A	South	CLECO	8980	West Fork 230kV Ring Bus	Add a 230 kV Ring Bus at Westfork Substation.	LA	LA	Other		Reliability	\$2,308,708	10/30/2015	10/30/2015	230		Bottom-up
A in MTEP15	A	South	CLECO	9042	Coughlin Breaker Replacements	Replace Breakers 8000, 8128, 8006, 8115, 8009 at Coughlin.	LA	LA	Other		Reliability	\$725,008	10/1/2015	10/1/2015	138		Bottom-up
A in MTEP15	A	South	CLECO	9340	9340 - Longville Line Tap	Tap the Existing Deridder to Nelson 138 kV line and build a new substation Longville to serve new customer load.	LA	LA	Other		Reliability	\$4,400,000	12/1/2016	12/1/2016	138		Bottom-up
A in MTEP15	A	South	CLECO	9421	TXEastern Opelousas Tap	Tap the Existing Plaisance to Veazie 138 kV line with a new substation Texas Eastern to serve current customer plant expansion.	LA	LA	Other		Distribution	\$5,400,000	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP15	A	South	CLECO, Entergy-L	7988	Schriever to Bayou Vista 230 kV line(Ente	Construct approximately 30.44 miles of 230 kV line from Terrebonne 230 kV substation(Entergy owned) to Bayou Vista 230 kV substation (CLECO owned).This is a CLECO and Entergy joint project, Cleco's portion includes 12.1 miles of 230 kV line and expanding Bayou Vista substation to 230 kV and installing 230-138 kV auto transformer at Bayou Vista substation. Entergy's portion includes approx. 18.33 miles of 230 line from Schriever 230 kV substation.	LA	LA	BaseRel		Economic	\$75,900,000	6/1/2018	6/1/2018	230	138	Bottom-up
A in MTEP15	A	South	Entergy-AR	4666	Mabelvale-Bryant: Reconductor 115kV line	Identified in MCPS study to relieve congestion on the Mabelvale - Bryant - Bryant South 115 kV line. EAI has agreed to fund the upgrade to reduce congestion for the area.	AR	AR	Other		Economic	\$6,371,120	12/1/2019	12/1/2019	115		Bottom-up
A in MTEP15	A	South	Entergy-AR	4669	Jim Hill Area Upgrades - Rebuild Jim Hill	Rebuild the Jim Hill - Datto 115kV line and convert it from 115kV to 161kV operation. Install breakers at Datto. After the completion of the project, remove the mobile temporary capacitor bank at Datto.	AR	AR	BaseRel		Economic	\$43,729,766	5/1/2019	5/1/2019	161		Bottom-up
A in MTEP15	A	South	Entergy-AR	7925	Black Rock to Imboden: Construct new 69	Add 69kV breaker in AECC's Black Rock station and build a new 0.4 mile 69 kV line from Black Rock to Imboden.	AR	AR	Other		Distribution	\$3,133,719	10/15/2016	10/15/2016	69		Bottom-up
A in MTEP15	A	South	Entergy-AR	7928	Jonesboro EHV: Tap ISES - Dell 500kV lin	Tap ISES - Dell 500kV line, build a 500/161kV station with a 800MVA auto, and tie in the Jonesboro - Hergett and Hergett - Trumann W. 161kV lines into the new station.	AR	AR	BaseRel		Economic	\$74,965,393	11/15/2017	11/15/2017	500	161	Bottom-up
A in MTEP15	A	South	Entergy-AR	8680	Conway Middle Road 161 kV substation: C	Construct a new 161 kV substation at Conway Middle Road. The new substation will be cut into the Conway Industrial - Hamlet SS 161 kV line approximately 0.7 miles east of Conway Industrial.	AR	AR	Other		Distribution	\$786,000	9/20/2016	9/20/2016	161		Bottom-up
A in MTEP15	A	South	Entergy-AR	8681	Jefferson Industrial 115 kV substation: Co	Construct NEW 115 kV substation named Jefferson Industrial to serve new industrial block load request. New substation will be cut into Woodward - Pine Bluff Arsenal D 115 kV line.	AR	AR	Other		Distribution	\$5,257,000	11/1/2016	11/1/2016	115		Bottom-up
A in MTEP15	A	South	Entergy-AR	8860	EAI Underrated Breaker Project: Paragou	Replace breaker B7315-TCO at Paragould due to insufficient fault interrupting capability.	AR	AR	Other		Reliability	\$256,005	12/1/2016	12/1/2016	115		Bottom-up

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A in MTEP15	A	South	Entergy-LA	4604	Port Hudson to Zachary REA 69 kV Line	Upgrade the Port Hudson to Zachary 69 kV line conductor, risers, and line jumpers (approximately 5.76 miles, existing rating of 93 MVA) to a rating of at least 211 MVA. Upgrade the remaining entire electrical circuit path including but not be limited to the line switches, traps, or any and all other appurtenant facilities along the line segment between and including Port Hudson and Zachary REA stations to a minimum of 1200 A, 143 MVA. The resulting line rating will be limited then by the 1200 A, 143 MVA station equipment	LA	LA	BaseRel			\$11,202,000	2/24/2017	2/24/2017	69		Bottom-up
A in MTEP15	A	South	Entergy-LA	4606	Fancy Point: Add 2nd 500-230 kV, 1200 MVA	Add a second 500-230 kV, 1200MVA bank (composed of single phase units) at the Fancy Point substation.	LA	LA	BaseRel			\$92,000,000	3/1/2019	3/1/2019	500	230	Bottom-up
A in MTEP15	A	South	Entergy-LA	4630	Francis to Marydale: Upgrade 69 kV line	Reconductor the Francis to Marydale 69 kV line to a minimum of 105 MVA	LA	LA	BaseRel			\$13,283,208	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP15	A	South	Entergy-LA	7919	Vincent 230 kV Substation: Add 61 MVAR	Install 230 kV 61 MVAR cap bank at Vincent 230 kV substation	LA	LA	BaseRel			\$1,324,421	12/1/2016	12/1/2016	230		Bottom-up
A in MTEP15	A	South	Entergy-LA	7923	Lake Charles Bulk to Chlomal 69 kV Line	Re-conductor Lake Charles Bulk to Chlomal 69 kV line and station equipment at Lake Charles bulk.	LA	LA	BaseRel			\$2,905,700	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP15	A	South	Entergy-LA	7948	Scott to Carencro 69 kV line: Reconducto	Upgrade relay/relay settings at Carencro and Re-conductor Scott to Carencro 69 kV line	LA	LA	BaseRel			\$6,822,535	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP15	A	South	Entergy-LA	8585	LCTP: Construct new Rhodes 500 kV swi	Construct a new 500 kV, 3000 A, three breaker ring bus switching station west of Nelson on the Nelson to Hartburg 500 kV line.	LA	LA	BaseRel			\$28,070,000	3/18/2018	3/18/2018	500		Bottom-up
A in MTEP15	A	South	Entergy-LA	8586	LCTP: Construct new 500-230 kV Bulk St	Construct a new 500-230 kV substation west of the existing Carlyss 230 kV substation. This includes the installation of a new 500-230 kV, 1200 MVA autotransformer bank at the new 500-230 kV bulk station comprised of (3) single phase units.	LA	LA	BaseRel			\$31,530,000	3/18/2018	3/18/2018	500	230	Bottom-up
A in MTEP15	A	South	Entergy-LA	8587	LCTP: Construct new 500 kV transmissio	Construct approximately 11.5 miles of new 500 kV transmission line from the new Rhodes 500 kV switching station to a new 500-230 kV bulk station west of the existing Carlyss 230 kV substation.	LA	LA	BaseRel			\$43,000,000	3/18/2018	3/18/2018	500		Bottom-up
A in MTEP15	A	South	Entergy-LA	8588	LCTP: Construct new 230 kV line from ne	Construct approximately 1.5 miles of new 230 kV transmission line from the new 500-230 kV bulk substation west of Carlyss to the existing Carlyss 230 kV substation.	LA	LA	BaseRel			\$8,690,000	3/18/2018	3/18/2018	230		Bottom-up
A in MTEP15	A	South	Entergy-LA	8589	LCTP: Reconfigure Carlyss 230 kV subst	Expand the existing Carlyss 230 kV substation into a breaker and a half operating scheme. Replace the underrated 230 kV breakers with ones having sufficient short circuit interrupting due to the increase in fault currents. The breakers to be replaced are: 8775-C 13145-CO 13150-CO 13155-CO 13480-CO 13500-CO 13580-CO	LA	LA	BaseRel			\$14,050,000	3/18/2018	3/18/2018	230		Bottom-up
A in MTEP15	A	South	Entergy-LA	8590	LCTP: Construct new 12 mile 230 kV line	Construct approximately 12 miles of new 230 kV transmission line from Carlyss to the Solac 230 kV substation. The line will be designed and routed to accommodate a future cut-in into the Calcasieu substation. Add a 230 kV line bay terminal at Carlyss and the Graywood 230 kV substation to facilitate the termination of the new line.	LA	LA	BaseRel			\$33,160,000	3/18/2018	3/18/2018	230		Bottom-up
A in MTEP15	A	South	Entergy-LA	9284	Bayou Verret 230 kV: Add Cap Bank	Install two 40.7 MVAR 230 kV cap banks at Bayou Verret substation.	LA	LA	BaseRel			\$1,684,477	8/31/2017	8/31/2017	230		Bottom-up
A in MTEP15	A	South	Entergy-LA	9285	Waterford - Vacherie 230 kV: Reconductor	Reconductor the Waterford to Vacherie 230 kV line.	LA	LA	BaseRel			\$19,732,950	6/1/2019	6/1/2019	230		Bottom-up
A in MTEP15	A	South	Entergy-MS	7698	Greenville to Greenville East 115 kV: Upg	Upgrade LAB, TAB, and BAB switches in E Greenville line bay at Greenville 115 kV to greater than 810A rating.	MS	MS	BaseRel			\$463,871	12/31/2016	12/31/2016	115		Bottom-up
A in MTEP15	A	South	Entergy-MS	7901	Natchez to Natchez SES (both lines) 115	Upgrade 600A relaying and CTs at Natchez SES and Natchez on both 115 kV lines (line 168 and 169) to minimum 810A (minimum conductor on 3 inbetween line sections).	MS	MS	BaseRel			\$796,791	12/1/2016	12/1/2016	115		Bottom-up
A in MTEP15	A	South	Entergy-TX	4617	Egypt to Panorama 138 kV Line: Recondi	Reconductor approximately 1.16 miles of 138 kV line to a minimum of 468 MVA (1272 ACSS). Line Bay bus and risers (currently 649.5 ACAR rated at 860 amps) and 1033 AAC rated at 1017 amps) will also need to be replaced at Panorama to meet or exceed the conductor rating of 468 MVA (1957 amps).	TX	TX	BaseRel			\$3,347,942	5/1/2017	5/1/2017	138		Bottom-up
A in MTEP15	A	South	Entergy-TX	4653	Reconductor Sabine to Port Neches Bulk	Install reactor at Port Neches Bulk on the Sabine bay.	TX	TX	BaseRel			\$4,358,791	12/1/2017	12/1/2017	138		Bottom-up

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A in MTEP15	A	South	Entergy-TX	7947	Reconductor Sabine to Port Neches Bulk	(Sabine to Port Neches 138 kV line install reactors at Sabine 138 kV.	TX	TX	BaseRel			\$4,363,775	12/1/2017	12/1/2017	138		Bottom-up
A in MTEP15	A	South	Entergy-TX	8582	Alden 138 kV Substation: Add 200 MVAR	Add a +200/-100 MVar SVC at the existing Alden 138 kV substation.	TX	TX	BaseRel			\$31,593,000	10/3/2016	10/3/2016	138		Bottom-up
A in MTEP15	A	South	Entergy-TX	8583	Oakridge 138 kV Substation: Add Capacity	Add a 138 kV, 25.1 MVAR capacitor bank to the 138 kV bus.	TX	TX	BaseRel			\$912,000	10/3/2016	10/3/2016	138		Bottom-up
A in MTEP15	A	South	Entergy-TX	9241	Deer Lake 138 kV substation: Construct New	Construct a new 138 kV substation to serve load in the Montgomery County, TX area. The new substation will be placed on the existing Ponderosa to Navasota line number 96 between the Fish Creek and Spring Branch substations near the line crossing of Deer Lake Lodge Road.	TX	TX	Other		Reliability	\$675,157	12/1/2016	12/1/2016	138		Bottom-up
A in MTEP15	A	South	Entergy-TX	9242	Wildcat 69 kV substation: Construct New	Entergy is proposing to construct a new 69 kV substation (Wildcat 69 kV Substation) which will serve a new block load addition in East Texas, near Beaumont, TX. The new block load addition will be placed on 69 kV line 98 which is between the South Beaumont and Nitro 69 kV substations. New transmission facilities including approximately 0.1 miles of new 69 kV double circuited transmission line will also need to be constructed in order to connect the new substation. The new substation will be where 69 kV line 98 intersects with Sulphur Plant Road. The interconnection will cut the existing 69 kV line 98 between South Beaumont and Nitro, at approximately 1.5 miles north of Nitro. The line will then be routed in and out through the new Wildcat 69 kV substation which is located adjacent to the transmission line.	TX	TX	Other		Reliability	\$5,159,000	11/1/2016	11/1/2016	69		Bottom-up
A in MTEP15	A	South	Entergy-TX	9280	Cypress 500/138 kV: New 2nd Auto	Install second 500/138 kV auto at Cypress.	TX	TX	BaseRel			\$14,392,680	6/1/2020	6/1/2020	500	138	Bottom-up
A in MTEP15	A	South	Entergy-TX	9281	Cleveland - Tarkington 138 kV: Reconduct	Reconductor 9.3 miles and upgrade all related equipment	TX	TX	BaseRel			\$9,451,175	8/31/2018	8/31/2018	138		Bottom-up
A in MTEP15	A	South	Entergy-TX	9282	South Beaumont - Carroll St Ck1 138 kV:	Reconductor 3.3 miles and upgrade all related equipment	TX	TX	BaseRel			\$1,636,587	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP15	A	South	Entergy-TX	9283	South Beaumont - Carroll St Ck2 138 kV:	Reconductor 3.3 miles and upgrade all related equipment	TX	TX	BaseRel			\$1,767,746	6/1/2017	6/1/2017	138		Bottom-up
A in MTEP15	A	South	Entergy-TX	9460	South Beaumont 138 kV: Replace Existing	Replace the 2 Existing 138/69 kV Autos with 200 MVA autos and reconfigure the Bus Work.	TX	TX	BaseRel			\$16,559,809	11/1/2017	11/1/2017	138	69	Bottom-up
A in MTEP15	A	South	Entergy-TX	9482	China to Stowell 230 kV: Construct New L	Construct a new 230 kV line from China to Stowell with a minimum rating of 1950 Amps. Install a 230/138 kV 400 MVA autotransformer at Stowell.	TX	TX	BaseRel			\$57,300,000	6/1/2019	6/1/2019	230	138	Bottom-up
A in MTEP15	A	South	Entergy-TX	10487	Western Region Economic Project(WREP)	Build a new 230 kV line from Grimes to Lewis Creek and install a second 345/230 kV auto at the Grimes station. Rebuild the ~25 mile long Newton Bulk – Leach 138 kV line.	TX	TX	Other		Economic	\$155,820,000	6/1/2019	6/1/2020	345	230	Bottom-up
A in MTEP15	A	South	ETEC	8208	Luce Bayou 138kV	Cut into Tarkington-Long John 138 kV and install new Luce Bayou 138 kV substation.	TX	TX	Other		Distribution	\$16,300,000	12/31/2017	12/31/2017	138		Bottom-up
A in MTEP15	A	South	LAFA	8820	Northeast Station	New 230-69 autotransformer to feed new 69kV line to feed new 69kV station to alleviate distribution loading.	LA	LA	Other		Distribution	\$10,500,000	12/31/2018	12/31/2018	230	69	Bottom-up
A in MTEP15	A	South	SMEPA	8120	Rebuild L18 and L18A (Ellisville to Glade	Rebuild the existing Ellisville - Glade GOAB - Cleo 69kV lines using 795 ACSR conductor.	MS	MS	Other		Reliability	\$2,860,000	10/31/2016	4/30/2017	69		Bottom-up
A in MTEP15	A	South	SMEPA	8560	SMEPA/SOCO IC (Jasper County)	Tap the Missionary - Waynesboro 161kV line (SMEPA L232) at the intersection with Mississippi Power Company (MPCo's) Laurel East - Enterprise 230kV line. Add a new 230/161kV autotransformer at the Missionary substation and convert the entire Missionary - Waynesboro line to 230kV operation. Construct a new 161kV line from Homewood - Missionary utilizing existing double circuit lines as well as rebuilding existing 69kV lines to double circuit specifications that currently span from Homewood - Missionary. *Note: L232 was constructed using 230kV insulation, but is currently operated at 161kV	MS	MS	Other		Reliability	\$18,960,000	12/31/2017	9/1/2020	230	161	Bottom-up
A in MTEP15	A	South	SMEPA	9000	Rebuild L71A (Benndale to Benndale GT)	Rebuild the existing Benndale - Benndale GT 69kV line using 795 ACSR conductor and 48-fiber OPGW.	MS	MS	Other		Reliability	\$370,000	7/15/2016	7/15/2016	69		Bottom-up
A in MTEP15	A	South	SMEPA	9020	Rebuild L37A&B (Big Level to Wiggins GC	Rebuild the existing Big Level - Wiggins GOAB 69kV line using 795 ACSR conductor and 48-fiber OPGW.	MS	MS	Other		Reliability	\$1,875,000	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP15	A	West	ATC	3159	Uprate West Middleton-Stage Coach 69 kV	West Middleton-Timberlane-Stage Coach 69 kV line uprate	WI	WI	Other		Reliability	\$2,000,000	12/31/2017	12/31/2018	69		Bottom-up
A in MTEP15	A	West	ATC	4353	Construct Creekview 138 kV T-D	Add new load at Creekview 138 kV substation and associated network upgrades	WI	WI	Other		Distribution	\$16,000,000	12/1/2017	12/1/2017	138		Bottom-up
A in MTEP15	A	West	ATC	4419	Uprate Sunset Point jumpers	Uprate the jumpers of 138kV lines Sunset Point - Mears Corners (MCRG21) and Sunset Point - Ellinwood (STPG311)	WI	WI	BaseRel			\$109,000	5/17/2016	6/1/2016	138		Bottom-up

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A in MTEP15	A	West	ATC	4421	Construct Williams Bay 138 kV Substation	Loop Elkhorn - Brick Church (X-44) 138kV line in and out of Williams Bay, add two 138kV line breakers and addition of a new distribution transformer	WI	WI	Other		Distribution	\$4,450,000	7/1/2017	7/1/2017	138		Bottom-up
A in MTEP15	A	West	ATC	4422	Construct Brillion Iron Works 138/69 kV substation	Loop Shoto - Glenview (L-90) 138kV line into new 138/69/12.47kV Brillion Iron Works (BIW) substation, add a 138/69kV transformer at BIW and extend Glenview - Brillion Iron (M-65) 69kV line to new 69kV bus	WI	WI	Other		Distribution	\$12,500,000	8/19/2016	8/19/2016	138	69	Bottom-up
A in MTEP15	A	West	ATC	4732	Construct Ogden Street 69 kV T-D	Construct a new 69kV line from Ogden St. - Baysshore, rebuild Baysshore - 2nd St. - Fiber switching structure (N-14) 69kV and install two line breakers at Ogden St.	WI	WI	Other		Distribution	\$10,400,000	12/1/2018	12/1/2018	69		Bottom-up
A in MTEP15	A	West	ATC	7601	Montello 69 kV breaker additions	Add line breakers to Y-17 at Montello 69 kV. Add 8 Mvar capacitor at Montello 69 kV and remove mobile capacitor at Lakehead Portage.	WI	WI	Other		Reliability	\$3,400,000	6/21/2016	7/1/2016	69		Bottom-up
A in MTEP15	A	West	ATC	7602	Rerate Bunker Hill - Kelly 115 kV	Rerate Bunker Hill - Kelly 115 kV based on SBRM. This project is a part of PR05440.	WI	WI	BaseRel			\$4,800,000	10/31/2019	10/31/2019	115		Bottom-up
A in MTEP15	A	West	ATC	7603	Rebuild Bunker Hill - Blackbrook 115 kV	Rebuild Blackbrook - Bunker Hill portion of M-13. Retire Blackbrook and Bunker Hill stations and build new Roehring Rd ring bus.	WI	WI	BaseRel			\$25,200,000	11/1/2019	11/1/2019	115		Bottom-up
A in MTEP15	A	West	ATC	7741	Dellwood Line Breaker 69 kV	Install capacitor bank at Dellwood 69 kV and remove mobile capacitor bank at McKenna.	WI	WI	Other		Reliability	\$3,100,000	12/15/2016	12/15/2016	69		Bottom-up
A in MTEP15	A	West	ATC	7780	T-D Esker View	Build new 138/24.9 kV distribution substation.	WI	WI	Other		Distribution	\$4,500,000	3/1/2017	3/1/2017	138	24.9	Bottom-up
A in MTEP15	A	West	ATC	7981	Rebuild Beardsley St 69 kV Substation	Breaker additions at Beardsley St to sectionalize J-10 circuit.	WI	WI	Other		Reliability	\$2,500,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP15	A	West	ATC	8065	Construct Southeast Wisconsin - Northeast	Reconfigure the Pleasant Prairie - Arcadian 345kV (PLPL81) and Zion - Libertyville 345 kV (2224) transmission lines to loop into a new 4 position (breaker and half) 345 kV Switching Station.	WI	IL	BaseRel			\$52,000,000	12/31/2020	12/31/2020	345		Bottom-up
A in MTEP15	A	West	ATC	8071	Plains - National 138 kV line	New Plains - National 138 kV line	MI	MI	BaseRel			\$124,602,000	12/31/2023	12/31/2023	138		Bottom-up
A in MTEP15	A	West	ATC	8660	Construct Somers 138 kV T-D	Reconfigure Somers substation to add second 138/24.9 kV distribution transformer.	WI	WI	Other		Distribution	\$2,800,000	9/1/2020	9/1/2020	138	24.9	Bottom-up
A in MTEP15	A	West	ATC	9080	Install W. Marinette 138-69 kV transformer	Install high and low side breakers on existing 138/69 kV transformer.	WI	WI	Other		Reliability	\$4,500,000	12/31/2018	12/31/2018	138		Bottom-up
A in MTEP15	A	West	ATC	9081	Reconductor De Pere - Glory Road 138 kV	Reconductor R122 De Pere - Glory Road 138 kV line	WI	WI	BaseRel			\$736,000	3/1/2018	3/1/2018	138		Bottom-up
A in MTEP15	A	West	DPC	7664	Rebuild Briggs Road-La Crosse Tap 161 kV	Dairyland Power Cooperative plans to rebuild the Briggs Road-La Crosse Tap 161 kV line on the existing right-of-way. The rebuild will include replacing the poles and installing 795 ACSS conductor for 8.8 miles between the Briggs Road substation and the La Crosse Tap 3-way switch.	WI	WI	Other		Condition	\$12,000,000	4/21/2017	4/21/2017	161		Bottom-up
A in MTEP15	A	West	GRE	3782	Mantrap 115 kV Conversion	Convert Mantrap and Potato Lake Dist. Substation from 34.5 kV to 115 kV operation.	MN	MN	Other		Distribution	\$4,463,269	10/27/2016	10/27/2016	115		Bottom-up
A in MTEP15	A	West	GRE	4377	Yankee Doodle Bus Tie Breaker	Install bus tie breaker between Yankee Doodle North and South	MN	MN	BaseRel			\$891,674	11/3/2016	11/3/2016	115		Bottom-up
A in MTEP15	A	West	GRE	7894	Stockade Pumping Station	GRE proposes to tap the GRE-owned Wakefield - Big Swan 115 kV line and build a new, ~6 mile, 115 kV transmission to the proposed pumping station.	MN	MN	Other		Reliability	\$3,812,779	10/2/2017	10/2/2017	115	115	Bottom-up
A in MTEP15	A	West	GRE	7899	Cedar Lake Pumping Station	Install a transmission line to connect to MVEC's Cedar Lake pump station sub. Line to be built to 115kV specs but initially energized at 69kV. Line length is undetermined at this point. 6 miles are assumed.	MN	MN	Other		Reliability	\$4,989,152	10/19/2017	10/19/2017	115	115	Bottom-up
A in MTEP15	A	West	GRE	7912	Lawndale to Bass Lake 2.0 mile 115 kV R	Construct two miles of 115 kV line with 795 ACSS conductor from Lawndale Tap, which is between Bass Lake and Cedar Island, to the high side structure of new Wright Hennepin Electric Cooperative's Lawndale #2 distribution substation.	MN	MN	Other		Distribution	\$2,000,000	5/1/2021	5/1/2021	115	115	Bottom-up
A in MTEP15	A	West	ITCM	8042	ITCM Burlington South Sub Modifications	Alliant Energy will install high side protection at the Burlington South substation. ITC protection equipment will be removed and switches will be replaced.	IA	IA	Other		Relaying	\$60,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP15	A	West	ITCM	8043	ITCM Customer Interconnections with sho	These projects are being done at the request of an interconnection customer in order to facilitate new load, re-distribute existing load, improve the performance of the sub-transmission and distribution systems, or to accommodate a new Transmission-to-Transmission connection request.	IA,MN,IL	IA,MN,IL	Other		Distribution	\$4,800,000	12/31/2017	12/31/2018	345	69	Bottom-up
A in MTEP15	A	West	ITCM	8048	ITCM Control Enclosure Blanket	Replace the older control enclosures that are too deteriorated to be refurbished.	IA,MN,IL	IA,MN,IL	Other		Condition	\$1,860,000	12/31/2015	12/31/2016	345	69	Bottom-up

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A in MTEP15	A	West	ITCM	8049	ITCM NERC Compliance Mitigation	Install a redundant DC Battery system and add a redundant differential relay scheme to the 345/161kV transformer. 1.Meeting NERC Compliance guidelines 2.Addressing issues related to the DAEC INPO audit also identifying the need for having redundant tripping from redundant battery sets 3.Redundant batteries at a nuclear facility.	IA,MN,IL	IA,MN,IL	Other		Reliability	\$180,000	12/31/2015	12/31/2016	345	69	Bottom-up
A in MTEP15	A	West	ITCM	8051	ITCM NRUC/ERUC Replacement Program	The need for replacing miscellaneous aged, broken, or failed equipment in the field ? primarily in substations. Equipment replacements identified from maintenance inspections, such as batteries, field capacitors, control building HVAC units, transformer t	IA,MN,IL	IA,MN,IL	Other		Condition	\$9,000,000	12/31/2015	12/31/2016	345	69	Bottom-up
A in MTEP15	A	West	ITCM	8053	ITCM Poor Performing Circuits Blanket	Rebuild poor performing circuits that have been identified as a system reliability issue	IA,MN,IL	IA,MN,IL	Other		Reliability	\$4,800,000	12/31/2015	12/31/2016	69	34	Bottom-up
A in MTEP15	A	West	ITCM	8057	ITCM SCADA Program	1.Project includes the Engineering, Procurement, Construction and Commissioning of ITCM's SCADA system 2.Upgrade and/or install TELECOM, Remote Terminal Unit (RTUs), Annunciator and Relay communication network 3.Re-direction of alarm signals and station data communications	IA,MN,IL	IA,MN,IL	Other		SCADA	\$360,000	12/31/2015	12/31/2016	345	69	Bottom-up
A in MTEP15	A	West	ITCM	8058	ITCM Tower/Pole Signage Program	Add pole signage to transmission towers and poles that are not currently numbered to aid field personnel in troubleshooting activities and performing scheduled inspections and maintenance.	IA,MN,IL	IA,MN,IL	Other		Condition	\$1,200,000	12/31/2015	12/31/2016	345	69	Bottom-up
A in MTEP15	A	West	ITCM	8074	ITCM Fairfax 42MVAR 161kV Cap	Adding a 42 MVAR 161 kV capacitor bank at Fairfax is part of the plan to add a total of 170 MVAR in the Cedar Rapids area.	IA	IA	BaseRel		Reliability	\$1,687,896	6/30/2017	6/30/2017	161		Bottom-up
A in MTEP15	A	West	ITCM	8086	ITCM Radio 13.2MVAR 69kV Cap	Adding a 13.2 MVAR 69 kV capacitor bank at NE Marion (Radio) is part of the plan to add a total of 170 MVAR in the Cedar Rapids area.	IA	IA	Other		Reliability	\$524,804	2/29/2016	2/29/2016	69		Bottom-up
A in MTEP15	A	West	ITCM	8088	ITCM Hiawatha 42MVAR 161kV Cap	Adding a 42 MVAR 161 kV capacitor bank at Hiawatha is part of the plan to add a total of 170 MVAR in the Cedar Rapids area.	IA	IA	BaseRel		Reliability	\$193,795	12/31/2018	12/31/2018	161		Bottom-up
A in MTEP15	A	West	ITCM	8093	ITCM PCI 161/69kV Transformer	A 200 MVA unit will be purchased and installed as an in-service spare at Prairie Creek Industrial (PCI).	IA	IA	Other		Reliability	\$3,617,594	12/31/2016	12/31/2016	161	69	Bottom-up
A in MTEP15	A	West	ITCM	8106	ITCM Heron Lake Sub Rebuild and 161kV	Install two 21 MVAR banks and rebuild the Heron Lake 161kV sub to a ring bus(designed for future bkr and 1/2).	MN	MN	BaseRel		Reliability	\$16,929,252	12/31/2019	12/31/2019	161	69	Bottom-up
A in MTEP15	A	West	ITCM	8125	ITCM Anita-Grand Junction Area Rebuilds	Rebuild the Anita-Anita Muni-Adair-Thompson Junction (17.6 miles) to 69kV construction, continue to operate at 34kV	IA	IA	Other		Condition	\$11,159,322	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP15	A	West	ITCM	8128	ITCM Anita-Grand Junction Area Rebuilds	Add a new Redfield-Panora 69kV line (10 miles) and rebuild Bagley Jct-Bagley REC Tap-Bagley Town-Herndon-Dawson-Perry (19.25 miles) to 69kV construction, continue to operate at 34kV	IA	IA	Other		Condition	\$20,693,759	12/31/2017	12/31/2019	69		Bottom-up
A in MTEP15	A	West	ITCM	8129	ITCM Anita-Grand Junction Area Rebuilds	Rebuild the Jefferson WCC-Scranton line to 69kV(14.5 miles) and rebuild Perry-Madrid North (12.4 miles) to 69kV (continue to operate at 34kV).	IA	IA	Other		Condition	\$11,837,228	12/31/2018	12/31/2018	69		Bottom-up
A in MTEP15	A	West	ITCM	8132	ITCM Anita-Grand Junction Area Rebuilds	Rebuild the Bagley Junction-Scranton (16 miles) distribution substation to 69kV (continue to operate at 34kV)	IA	IA	Other		Condition	\$8,104,200	12/31/2019	12/31/2019	69		Bottom-up
A in MTEP15	A	West	ITCM	8150	ITCM Belle Plaine Area Conversion	The conversion will need a new 161/69kV 100MVA transformer at Belle Plaine. Four 69kV breakers are needed at Belle Plaine. A three position breaker station will be needed south of Belle Plaine. A three position breaker station is needed west of Chelsea.	IA	IA	Other		Condition	\$11,578,828	12/31/2025	12/31/2025	161	69	Bottom-up
A in MTEP15	A	West	ITCM	8151	ITCM Belle Plaine-Vinton-Traer Conversion	Two additional 69kV breakers are needed at the Vinton substation. One additional 69kV breaker is needed at the Traer substation.	IA	IA	Other		Condition	\$1,932,611	12/31/2025	12/31/2025	69		Bottom-up
A in MTEP15	A	West	ITCM	8152	ITCM Conroy-Parnell Conversion	A new 161/69kV 100MVA transformer and three 69kV breakers are needed at the Parnell Substation.	IA	IA	Other		Condition	\$3,812,623	12/31/2025	12/31/2025	161	69	Bottom-up
A in MTEP15	A	West	ITCM	8153	ITCM Parnell-Keswick Conversion	Add a new Keswick three (3) terminal 69kV switch station	IA	IA	Other		Condition	\$2,931,083	12/31/2025	12/31/2025	69		Bottom-up
A in MTEP15	A	West	ITCM	8154	ITCM Fairfax-Marengo Conversion	Convert the Fairfax-Marengo Area to 69kV. Two 69kV breakers are needed at the Fairfax Substation. Four 69kV breakers are needed at the Marengo Substation.	IA	IA	Other		Condition	\$6,632,211	12/31/2025	12/31/2025	69		Bottom-up

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A in MTEP15	A	West	ITCM	8155	ITCM Marshalltown-Tama-Laurel Conversion	Convert the Marshalltown-Tama-Laurel to 69kV. One breaker is needed at the Fletcher 69kV Substation. Four 69kV breakers are needed at the Tama Breaker Substation. Three 69kV breakers are needed at the Laurel breaker substation.	IA	IA	Other		Condition	\$6,601,909	12/31/2025	12/31/2025	69		Bottom-up
A in MTEP15	A	West	ITCM	8157	ITCM J233 Marshalltown Network Upgrade	Three new terminals are needed at the Marshalltown substation to accommodate interconnection to the generating facilities 3 GSUs.	IA	IA	GIP			\$3,850,000	12/31/2015	12/31/2015	161		Externally-Driven
A in MTEP15	A	West	ITCM	8158	ITCM DAEC 69kV Switch Station	ITC will need to construct a new three (3) terminal, three (3) break 69 kV switch station northwest of the city of Palo, Iowa. The existing Vinton ? DAEC ? Hiawatha 69 kV transmission lines will need to be tapped and re-routed into the new substation.	IA	IA	Other		Reliability	\$3,062,831	3/31/2017	3/31/2017	69		Bottom-up
A in MTEP15	A	West	ITCM	8160	ITCM Morgan Valley-Beverly 345kV	The project builds a new 345 kV switching station in the DAEC-Tiffin 345 kV line (Morgan Valley Switch Station), adds a new 6.5 mile 345 kV line from the new Morgan Valley Switchstation to a new 345/161 kV substation adjacent to the existing Beverly 161/69/34.5 kV substation. The new 345 kV portion of the substation connects to the existing Beverly substation via a new 345/161 kV autotransformer.	IA	IA	BaseRel			\$38,156,592	5/1/2021	5/1/2021	345	161	Bottom-up
A in MTEP15	A	West	ITCM	8161	ITCM Ames-Doud (South Ckt) Phase 1	The first phase will include converting Ames Mine to 69 kV operation from Ames NADC, and the second phase will include converting from Ames Mine to a new Ames 69 kV breaker station.	IA	IA	Other		Condition	\$2,004,000	12/31/2016	12/31/2016	69		Bottom-up
A in MTEP15	A	West	ITCM	8162	ITCM Ames-Doud (South Ckt) Phase 2	The line from a new Ames 69 kV breaker station to Ames Mine to Ames NADC will be converted to 69 kV operation. The remainder of this line back to Doud is already operated at 69 kV. This will be completed in two phases at the request of IPL. The first phase will include converting Ames Mine to 69 kV operation from Ames NADC, and the second phase will include converting from Ames Mine to a new Ames 69 kV breaker station.	IA	IA	Other		Condition		12/31/2017	12/31/2017	69		Bottom-up
A in MTEP15	A	West	ITCM	8164	ITCM Ames-Barilla Conversion	Construct a new 4 terminal Ames switch station and convert the line for this sub to Barilla to 69kV operation.	IA	IA	Other		Condition	\$7,092,832	12/31/2017	12/31/2017	69		Bottom-up
A in MTEP15	A	West	ITCM	8166	ITCM Vinton-Hiawatha Conversion Terminal	A new 69kV Hiawatha terminal will be added and CIPCO will construct a short section of line from the new terminal down to the temporary connection point where the temporary connection will be removed and the Toddville REC line will then be connected to the new CIPCO segment fed from the new Hiawatha 69kV terminal. At the Vinton end, a new 69kV terminal will be added to allow the entire line from Hiawatha to Vinton to be network operated at 69kV.	IA	IA	Other		Condition	\$1,108,800	8/5/2016	8/5/2016	69		Bottom-up
A in MTEP15	A	West	ITCM	8167	ITCM Doud-Ames Transmission Conversion	The line between Doud and Ames Transmission will be converted to 69 kV operation. The taps at the distributions substations may be modified to re-connect the new 69 kV high side distribution substations, and the existing 69 kV terminals at Boone Jct will be re-terminated to breaker positions at Doud. A 161/69 kV transformer will be installed at Doud, and the existing 161/69 kV transformer at Boone Jct. will be removed. This conversion will take place in two phases. Phase one will include the Doud substation work and converting from Doud to Clear Lake REC to Gilbert REC to Squaw Valley REC, and phase two will include converting from Squaw Valley REC to Gilbert (IPL) to Ames Transmission.	IA	IA	Other		Condition	\$6,129,000	7/19/2016	7/19/2016	161	69	Bottom-up
A in MTEP15	A	West	ITCM	8168	ITCM Doud-Ames Transmission Conversion	The line between Doud and Ames Transmission will be converted to 69 kV operation. The taps at the distributions substations may be modified to re-connect the new 69 kV high side distribution substations, and the existing 69 kV terminals at Boone Jct will be re-terminated to breaker positions at Doud. A 161/69 kV transformer will be installed at Doud, and the existing 161/69 kV transformer at Boone Jct. will be removed. This conversion will take place in two phases. Phase one will include the Doud substation work and converting from Doud to Clear Lake REC to Gilbert REC to Squaw Valley REC, and phase two will include converting from Squaw Valley REC to Gilbert (IPL) to Ames Transmission.	IA	IA	Other		Condition	\$1,380,600	3/31/2017	3/31/2017	69		Bottom-up
A in MTEP15	A	West	MEC	8020	Pleasant Corner-Beacon 161 kV Line & Terminal	Construct the new Pleasant Corner-Beacon 161 kV line & install a new 161 kV line terminal at Beacon	IA	IA	BaseRel			\$15,265,000	12/1/2019	12/1/2019	161		Bottom-up

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A in MTEP15	A	West	MEC	8028	Hastings Replace 161-69 kV Transformer	Replace the Hastings 89.6 MVA 161-69 kV transformer with a 125 MVA transformer.	IA	IA	Other		Reliability	\$2,000,000	6/1/2023	6/1/2023	161	69	Bottom-up
A in MTEP15	A	West	MEC	8030	Clarksville-Waverly West 69 kV Line	Construct three miles of new 69 kV line between Clarksville and Waverly West Substations.	IA	IA	Other		Reliability	\$2,600,000	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP15	A	West	MEC	8035	Sub 78 Uprate Terminal to Q56	At Sub 78, upgrade the 161 kV terminal to Q56 to a minimum of 1412A, consistent with the line conductor top rating; including replacing 1192 AAC line drops and 1200A line backer.	IA	IA	BaseRel			\$207,000	4/1/2017	4/1/2017	161		Bottom-up
A in MTEP15	A	West	MEC	8036	Sub 56 Uprate Terminal to Q78	At Sub 56, upgrade the 161 kV terminal to Q78 to a minimum of 1412A, consistent with the line conductor max rating; including replacing 1192 AAC line drops.	IA	IA	BaseRel			\$91,000	4/1/2017	4/1/2017	161		Bottom-up
A in MTEP15	A	West	MEC	8037	Sub 93 Replace 345 kV Breakers 964 & 965	Replace the Louisa Sub 93, 345 kV circuit breakers 93-964 and 93-954 with new 3000 Amp circuit breakers. Replace related equipment with 3000 Amp equipment (jumpers, etc.).	IA	IA	Other		Condition	\$853,000	11/15/2017	11/15/2017	345		Bottom-up
A in MTEP15	A	West	MEC	8038	GRS Replace 69 kV Line Switches 4647, 4648	Near Sub 41 Tap, replace 600A 69 kV line disconnect switches 4647 and 4648 with new 1200A line switches.	IL	IL	Other		Reliability	\$153,000	6/1/2017	6/1/2017	69		Bottom-up
A in MTEP15	A	West	MEC	8039	Sub R - GRS Tap 69 kV Rebuild	Rebuild the 69 kV line from Sub R to the three-way GRS tap in Rock Island. Replace underground cable and upgrade overhead section as needed to match cable rating.	IL	IL	Other		Reliability	\$3,325,000	11/1/2020	11/1/2020	69		Bottom-up
A in MTEP15	A	West	MEC	8059	DPS 69 kV Breaker & Switch Replacement	Replace eight 69 kV circuit breakers and sixteen 69 kV switches at the DPS Substation.	IA	IA	Other		Reliability	\$850,000	12/1/2017	12/1/2017	69		Bottom-up
A in MTEP15	A	West	MEC	8340	Ashawa-Army Post-Willow Creek-Greenfield Plaza 161 kV Line	Rebuild and reconductor the Ashawa-Army Post-Willow Creek-Greenfield Plaza 161 kV line with T-2 556.5 MC ACSR conductor.	IA	IA	BaseRel			\$4,217,833	6/15/2014	6/15/2017	161		Bottom-up
A in MTEP15	A	West	MEC	8740	Brooks-Adams County 161 kV Line	Construct a new 10-mile 161 kV line from Brooks Substation to the new Adams county Substation and add two 161 kV line circuit breakers at Brooks Substation. Remove eight miles of existing 161 kV line from Idaho Avenue Substation to Adams County Substation.	IA	IA	BaseRel			\$9,250,000	12/1/2016	12/1/2016	161		Bottom-up
A in MTEP15	A	West	MEC	8880	Sycamore: Maintenance project to replace transformer	Replace failed Sycamore Substation 161-69 kV transformer AG8T1 with a new 167 MVA 161-69 kV transformer - failed asset replacement maintenance project	IA	IA	Other		Condition	\$1,645,000	5/1/2015	5/1/2015	161	69	Bottom-up
A in MTEP15	A	West	MEC	9160	Hastings 69 kV Capacitor Reduction	Reduce the reactive capability of the 69 kV capacitor at Hastings Substation from 33.6 MVAR to 21.6 MVAR.	IA	IA	Other		Reliability	\$51,657	4/19/2015	4/19/2015	69		Bottom-up
A in MTEP15	A	West	MP	7995	Maturi 115/23 kV Transformer	Add 115/23 kV transformer at existing Maturi Substation	MN	MN	Other		Distribution	\$1,426,000	12/31/2015	12/31/2015	115	23	Bottom-up
A in MTEP15	A	West	MP	7998	Dog Lake Substation Expansion	Add breakers and extend a short 115 kV line to the existing Dog Lake Substation to sectionalize the Vermdale-Dog Lake - Soarville three terminal line	MN	MN	Other		Reliability	\$3,090,000	12/31/2017	12/31/2017	115		Bottom-up
A in MTEP15	A	West	MP	7999	Straight River Substation	Tap new Hubbard - Menahga/Blueberry 115 kV Line and build a dedicated 115/34.5 kV substation in order to re-establish service to an existing MP pipeline customer in anticipation of the eventual removal of both 115/34.5 kV transformers from Hubbard effected by the GRE development of 115 kV lines from Hubbard - Menahga and Hubbard - Potato Lake	MN	MN	Other		Distribution	\$2,810,000	10/1/2016	10/1/2016	115	34.5	Bottom-up
A in MTEP15	A	West	MP	8000	16 Line Relocation	Relocate a segment of the existing Arrowhead - 16L Tap 115 kV Line around proposed United Taconite basin expansion	MN	MN	Other		Reliability	\$4,740,000	5/1/2018	5/1/2018	115		Bottom-up
A in MTEP15	A	West	MP	8001	Enbridge East Extension	Extension from Gary - Stinson 115 kV to serve a new Enbridge distribution station at the Superior Terminal	WI	WI	Other		Reliability	\$802,541	10/1/2015	10/1/2015	115		Bottom-up
A in MTEP15	A	West	MP	8002	South Sub Extension	Extension from existing Nemadji Tap to serve a new Enbridge distribution station at the Superior Terminal	WI	WI	Other		Reliability	\$1,229,500	7/15/2015	7/15/2015	115		Bottom-up
A in MTEP15	A	West	MP	8003	Hawthorne II Extension	Reconfiguration of existing Hawthorne Tap to accommodate line switches and a second Enbridge pumping station (and potential future extensions)	WI	WI	Other		Reliability	\$530,000	12/31/2015	12/31/2015	161		Bottom-up
A in MTEP15	A	West	MP	9060	Forbes 230/115 kV Transformer Addition	Addition of a second 230/115 kV Transformer at the Forbes Substation.	MN	MN	BaseRel			\$4,000,000	10/1/2016	10/1/2016	230	115	Bottom-up
A in MTEP15	A	West	MP	9061	Minntac 230 kV Bus Expansion	Addition of circuit breakers and associated equipment to convert the current substation to a ring bus configuration.	MN	MN	BaseRel			\$4,000,000	10/1/2016	10/1/2016	230		Bottom-up
A in MTEP15	A	West	MP	9062	Maturi 115/34.5 kV Transformer Replacement	Replace existing Maturi 10 MVA transformer with a larger-capacity 18.6 MVA transformer of the same basic size. Move Maturi 10 MVA transformer to new Straight River Substation (MTEP Project #7999)	MN	MN	Other		Distribution	\$400,000	5/1/2016	5/1/2016	115	34.5	Bottom-up
A in MTEP15	A	West	MP	9063	Hat Trick 115 kV Project	New 115/23 kV substation in Laskin - 37 Line Tap 115 kV Line	MN	MN	Other		Distribution	\$5,834,850	12/31/2016	12/31/2016	115	23	Bottom-up

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A in MTEP15	A	West	OTP	8240	Jamestown Network Upgrades 345/115 kV	To accommodate the interconnection of MISO queue projects J262 and J263 as originally identified in the MISO February 2013 DPP Studies, OTP will make Network Upgrades to the 345/115/41.6 kV system. Three Facilities: 1. Replace existing 345/115/41.6 kV transformers #1 and #2 at Jamestown with a larger 336 MVA transformers 2. Install 345 kV Breaker and bus work as a tie between transformers. 3. Install 115 kV Breaker in ring bus for J262-263 injection. ISD - 10/31/2016	ND	ND	GIP			\$9,550,000	10/31/2016	10/31/2016	345	115	Externally-Driven
A in MTEP15	A	West	OTP	8281	Donaldson 115 kV Breaker	Add a new 115 kV breaker at Donaldson to the Donaldson to Drayton 115 kV line to improve reliability of area loads. This breaker will reduce fault exposure to Donaldson loads by 17 miles and improve operations, maintenance, and relaying flexibility at Donaldson.	MN	MN	Other		Reliability	\$370,000	7/31/2018	7/31/2018	115		Bottom-up
A in MTEP15	A	West	XEL	8075	Lake Bavaria Substation	Build a new 115/34.5 kV distribution substation southwest of the Twin Cities. This will tap the existing radial GRE line going to the GRE-Victoria substation. Additionally, also install a 40 MVAR capacitor bank for voltage support.	MN	MN	Other		Distribution	\$1,153,304	12/30/2016	12/30/2016	115		Bottom-up
A in MTEP15	A	West	XEL	8079	Line 0714 Rebuild	Rebuild 3.6 miles of 69 kV line from Madelia Switching Station to Village of Madelia to 336 ACSR	MN	MN	Other		Reliability	\$1,594,000	6/1/2019	6/1/2019	69		Bottom-up
A in MTEP15	A	West	XEL	8097	Poplar Lake Reactor	Install a 20 MVAR 161 kV reactor at DPC's Poplar Lake substation	WI	WI	Other		Reliability	\$2,339,744	10/7/2016	10/7/2016	161		Bottom-up
A in MTEP15	A	West	XEL	8107	Yankee Cut over	Install a 3rd 115/34.5 kV transformer at Yankee, cut over the Buffalo Ridge feeder 321 and serve from Yankee	MN	MN	Other		Distribution	\$4,000,000	1/1/2019	1/1/2019	115	34.5	Bottom-up
A in MTEP15	A	West	XEL	8113	Ward County 230 kV	Construct new 230/115 kV substation near Minot, ND construct new 230 kV line from new substation to GRE McHenry substation. Joint project with BEPC	ND	ND	BaseRel			\$38,961,100	12/1/2018	12/1/2018	230	115	Bottom-up
A in MTEP15	A	West	XEL	8117	Ward County - Souris 115 kV Line Rebuild	Rebuild 115 kV lines from Ward County to Souris substation	ND	ND	BaseRel			\$14,400,000	9/30/2023	9/30/2023	115		Bottom-up
A in MTEP15	A	West	XEL	8142	Stone Lake TR2 Upgrade	Upgrade Stone Lake TR2 to 112 MVA	WI	WI	Other		Reliability	\$2,227,000	12/1/2017	12/1/2017	161	69	Bottom-up
A in MTEP15	A	West	XEL	8149	Bayfield Loop 69 kV	This project builds new 69 kV line 20 miles from the existing Stinson - Bayfront 115 kV line to a new substation near Bayfield, WI. New substation at the 115 kV tap location and a new 69/34.5 kV sub near Bayfield. Also included in the project is a rebuild of the existing Iron River - Herbster 34.5 kV line to 69 kV standards. All of the lines in the Bayfield loop will be operated at 34.5 kV for the initial planning horizon and converted when necessary.	WI	WI	Other		Reliability	\$40,000,000	12/1/2018	12/1/2018	115	34.5	Bottom-up
A in MTEP15	A	West	XEL	8780	Bailey Road Substation	Add a new Bailey 345/115 kV substation located east of the Red Rock substation located on the existing Red Rock-AS King 345 kV line. Install two 345/115 kV, 448 MVA transformers. Reroute four existing 115 kV lines from Red Rock to Bailey Road. Add 115/34.5 kV, 70 MVA distribution to the substation.	MN	MN	BaseRel			\$34,500,000	6/1/2018	6/1/2018	345	115	Bottom-up
B	B	East	ITCT	1850	Hancock 230/120kV Transformer	Cut the Wixom-Quaker 230kV circuit into Hancock Station, install a 230/120kV transformer.	MI	MI	BaseRel			\$9,000,000	12/31/2020	12/31/2020	230	120	Bottom-up
B	B	West	ATC	1946	Install 2nd Spring Green 138/69 kV Transf	Install a 2nd Spring Green 138/69 kV Transformer with a 100 MVA summer normal rating	WI	WI	Other		Reliability	\$5,578,636	6/1/2024	6/1/2024	138	69	Bottom-up
B	B	West	GRE, ITCM	1741	G517: Dotson - Storden - Heron Lake 161	Network upgrades for G517. Build a new Heron Lake - Cottonwood Co 161 kV line and a new Cottonwood Co 161 kV switch station. Build Cottonwood Co to Dotson 161 kV line.	MN	MN	GIP			\$36,719,820	12/31/2013	12/31/2013	161		Bottom-up
B in MTEP10	B	East	ITCT	1856	Belle River - Greenwood - Pontiac 345kV	Cut the Pontiac section of the Belle River-Greenwood-Pontiac 345kV circuit into and out of Jewell station. Utilize an existing unused side of 345kV tower for one of the circuits into Jewell, and relocate the Jewell-Spokane 230kV circuit	MI	MI	BaseRel			\$5,200,000	12/31/2030	12/31/2030	345		Bottom-up
B in MTEP10	B	East	ITCT	2932	St Antoine-Essex #2 120 kV	Construct 2nd underground cable from St Antoine to Essex (5.1 miles).	MI	MI	BaseRel			\$54,800,000	6/1/2020	6/1/2020	120		Bottom-up
B in MTEP10	B	East	METC	3210	Vanderbilt - Riggsville 138 kV Rebuild	Rebuild 30.3 miles of 138 kV 266 ACSR to 954 ACSR FDC 230 kV construction.	MI	MI				\$33,254,000	6/1/2016	6/1/2016	138		Bottom-up
B in MTEP10	B	West	ITCM	1746	Lakefield-Adams 161 kV Rebuild	Rebuild Lakefield-Fox Lake-Rutland-Winnebago-Hayward-Adams 161 kV line to double circuit 345 & 161 kV. Allow for a 345 kV line position for future use.	MN	MN	BaseRel			\$97,580,000	12/31/2014	12/31/2018	161		Bottom-up
B in MTEP11	B	Central	AmerenMO	2973	Howard Bend Substation Connection	Howard Bend 138-12 kV Substation - Provide 138 kV ring bus connection from Mason-Carrollton-8 138 kV line to new Howard Bend Substation. Install 1-138 kV, 2000 A PCB at Carrollton Substation as a bus-tie.	MO	MO	Other		Distribution	\$1,371,000	12/1/2022	12/1/2022	138		Bottom-up

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B in MTEP11	B	East	METC	1815	Chase - Mecosta 138kV Rebuild	Rebuild 7.2 miles of 138kV 110 and 115 CU to 954 ACSR. Prebuild to 230kV construction.	MI	MI	BaseRel			\$8,900,000	6/1/2020	6/1/2020	138		Bottom-up
B in MTEP11	B	West	MEC	3215	Sub 49 161 kV Capacitor	Add 50 MVar 161 kV capacitor	IL	IL	BaseRel			\$840,000	6/1/2030	6/1/2030	161		Bottom-up
B in MTEP11	B	West	MEC	3266	Sub 56-89 161 Line Uprate	Increase 161 kV line rating.	IA	IA	BaseRel			\$680,000	6/1/2024	6/1/2024	161		Bottom-up
B in MTEP12	B	Central	AmerenIL	2290	Joppa 345 kV Switching Station 2nd. Xfmr	Add 2nd. 345/161 kV, 560 MVA Transformer	IL	IL	Other		Reliability		6/1/2023	6/1/2023	345	161	Bottom-up
B in MTEP12	B	Central	AmerenIL	3336	Gilman-Waseka Reconductoring	Reconductor to 1600 A summer emergency capability	IL	IL	BaseRel			\$4,763,000	6/1/2020	6/1/2020	138		Bottom-up
B in MTEP12	B	Central	AmerenIL	3342	Diamond Star-McClean County Sw. Statio	Increase ground clearance on 2.4 miles of 477 kcmil ACSR conductor	IL	IL	BaseRel			\$240,000	6/1/2025	6/1/2025	138		Bottom-up
B in MTEP12	B	Central	AmerenIL	3687	North Decatur 138-34 kV Substation - Rec	North Decatur 138-34 kV Substation - Replace 138 kV circuit breaker 1313 in the North Decatur-Clinton Route 54 line with a minimum 2000 A continuous 40 kA interrupting circuit breaker. Upgrade other limiting terminal equipment to a minimum of 2000 A.	IL	IL	Other		Reliability	\$500,000	6/1/2017	6/1/2017	138		Bottom-up
B in MTEP12	B	Central	AmerenIL	3703	New Berlin 138-69 kV Sub	New Berlin 138-69 kV Substation - Install new 112 MVA, 138-69 kV Substation. Connect to Auburn, North-Jacksonville Industrial 138 kV Line 1306.	IL	IL	Other		Distribution		12/1/2022	12/1/2022	138	69	Bottom-up
B in MTEP12	B	Central	AmerenMO	3701	Cotter Creek 138-34.5 kV Substation Supp	Cotter Creek 138-34.5 kV Substation - Provide 138 kV supplies to new Cotter Creek Substation. This will consist of installing a 2000 A, 138 kV PCB at Joachim Substation, and extending new 138 kV line from Joachim to Cotter Creek Substation. Also, for the second 138 kV supply to Cotter Creek, a new 3-2000 A breaker 138 kV switching station (Olympian Village) will be established in the Joachim-St. Francois-2 138 kV line, with a 138 kV line extended from Olympian Village Switching Station to Cotter Creek Substation.	MO	MO	Other		Distribution	\$31,230,640	6/1/2023	6/1/2023	138		Bottom-up
B in MTEP12	B	Central	AmerenMO	3708	Fountain Lake 2nd. Transformer	Install 2nd. 138-12.5 kV Transformer	MO	MO	Other		Distribution		6/1/2018	6/1/2018	138	12.5	Bottom-up
B in MTEP12	B	East	ITCT	1295	Quaker to Southfield #2 120 kV	Rebuild the existing Quaker to Drexel to Southfield circuit utilizing 1431 ACSR conductor on double circuit 230 kV towers and add a second Quaker to Southfield circuit on this new tower line	MI	MI	BaseRel			\$51,050,000	6/1/2018	6/1/2018	120		Bottom-up
B in MTEP12	B	East	ITCT	2933	Superior - Wayne 120 kV Reconductor	Re-conductor approximately 10.5 miles of 477 ACSR conductor of the Superior ? Wayne 120 kV circuit to 795 ACSR.	MI	MI	BaseRel				12/31/2020	12/31/2020	120		Bottom-up
B in MTEP12	B	East	ITCT	3589	Lee - Menlo 120 kV Rebuild	Rebuild approximately 5.4 miles of 267 ACSR conductor to 954 ACSR between Lee and the Lake Huron Pumping Tap and approximately 6.4 miles of 267 ACSR conductor to 954 ACSR between Menlo and the Lake Huron Pumping Tap and replace station equipment Lee and M	MI	MI	BaseRel			\$11,200,000	6/1/2018	6/1/2018	120		Bottom-up
B in MTEP12	B	East	METC	3137	Warren - Bard Road 138 kV Rebuild	Rebuild approximately 19.6 miles of the Warren to Bard Road 138 kV circuit to 230 kV double circuit construction using 954 ACSR. One side would be energized at 138kV, with the other side left vacant for future use. Also replace terminal equipment at Bard Road.	MI	MI	BaseRel			\$27,800,000	12/31/2017	12/31/2017	138		Bottom-up
B in MTEP12	B	East	METC	3582	Bullock - Summerton 138 kV Rebuild	Rebuild the entire circuit between Bullock and Summerton to 954 ACSR on single-circuit, 138 kV steel pole structures and replace the terminal equipment at Bullock	MI	MI	BaseRel			\$20,000,000	6/1/2017	6/1/2017	138		Bottom-up
B in MTEP12	B	East	METC	3594	Tittabawassee 345 kV Station Equipment	Replace 345kV station equipment in rows 34 and 36 at Tittabawassee.	MI	MI	BaseRel			\$3,500,000	12/31/2018	12/31/2018	345		Bottom-up
B in MTEP12	B	West	OTP	3659	Roberts County 115/69/41.6 kV Substation	New 115/69/41.6 kV Substation (joint with WAPA and East River Electric Cooperative)	SD	SD	Other		Reliability	\$2,000,000	11/1/2018	11/1/2018	115	41.6	Bottom-up
B in MTEP12	B	West	OTP	3661	Grenville 69/41.6 kV Substation	Build a new 69/41.6 kV Substation between Otter Tail Power and East River Electric Systems	SD	SD	Other		Reliability	\$700,000	12/31/2017	12/31/2017	69	41.6	Bottom-up
B in MTEP12	B	West	OTP	3664	Mooreton - Roberts Jct (Abercrombie) 41.6	Build 16 miles of new 41.6 kV line	ND	ND	Other		Reliability	\$3,800,000	12/31/2018	12/31/2018	41.6		Bottom-up
B in MTEP13	B	Central	AmerenIL	4069	Stallints Substation Bus-Tie Breaker Addit	Install 2-138 kV, 2000 A bus-tie breakers	IL	IL	BaseRel			\$897,220	6/1/2020	6/1/2020	138		Bottom-up
B in MTEP13	B	Central	AmerenIL	4071	Wood River-Stallings 138 kV Line Upgrade	Wood River-Stallings 138 kV Line 1456 - Increase clearances to ground on 5.63 miles of 477 kcmil ACSR between Cottage Hills and Wanda to permit operation at 120 degrees C. Reconductor 6.01 miles of 477 kcmil ACSR in the Stallings-Wanda section with conductor capable of carrying 1600 A under summer emergency conditions. Replace or reconnect 600 A CTs and replace an 800 A PCB at Cottage Hills with equipment capable of carrying 1200 A continuously.	IL	IL	BaseRel			\$11,004,000	6/1/2025	6/1/2025	138		Bottom-up
B in MTEP13	B	Central	AmerenMO	4067	Meramec-Watson-2 138 kV Line Recond	Reconductor 3.7 miles to 1600 A summer emergency capability.	MO	MO				\$2,107,484	6/1/2018	6/1/2018	138		Bottom-up
B in MTEP13	B	Central	AmerenMO	4075	Sioux-Huster-3 138 kV Reconductoring	Reconductor 5.9 miles of 954 kcmil ACSR with conductor capable of carrying 1600 A under summer emergency conditions. Replace 1200 A terminal equipment (dixconnect switches, CT's, bus conductor) at Huster with equipment capable of carrying 1600 A or better.	MO	MO				\$5,900,000	6/1/2024	6/1/2024	138		Bottom-up

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B in MTEP13	B	East	METC	4346	Karn-Garfield 138kV Rebuild	Rebuild the 33.5 mile copper portion of the Karn to Garfield circuit using single circuit 138kV structures and 954 ACSR conductor. Mitigate several additional points of interest on the remaining portions (795 and 1431 ACSR). Replace station equipment at	MI	MI				\$39,500,000	12/31/2018	12/31/2018	138		Bottom-up
B in MTEP13	B	West	GRE	4012	Hardy Lake Substation (CWP) 115 kV	GRE will build new Crow Wing Power 115 kV Hardy Lake Substation	MN	MN	Other		Distribution	\$207,500	12/31/2020	12/31/2020	115		Bottom-up
B in MTEP13	B	West	GRE	4013	Air Lake (DEA) 115 kV Substation	GRE will build new Dakota Electric 115 kV South Air Lake substation.	MN	MN	Other		Distribution	\$864,000	5/2/2026	5/2/2026	115		Bottom-up
B in MTEP13	B	West	GRE	4015	Le Homme Dieu 115 kV	GRE will convert Runestone's LeHommeDieu 69 kV distribution sub to 115 kV	MN	MN	Other		Distribution	\$365,000	12/31/2027	12/31/2027	115		Bottom-up
B in MTEP13	B	West	GRE	4016	Cashel 115 kV conversion	GRE will convert Agralite Cashel 41.6 kV distribution sub to 115 kV	MN	MN	Other		Distribution	\$625,000	5/31/2022	5/31/2022	115		Bottom-up
B in MTEP13	B	West	MEC	4252	Neal North:161 kV Breaker Replacements	Replace 161 kV oil circuit breaker 9680 at the Neal North Substation	IA	IA	BaseRel			\$325,000	6/30/2015	6/30/2015	161		Bottom-up
B in MTEP13	B	West	MP	3756	Wrenshall	Add Transformer and breakers at Wrenshall	MN	MN				\$3,000,000	12/31/2020	12/31/2020	115	69	Bottom-up
B in MTEP13	B	West	MP	4295	HVDC Valve Hall Replacement	Modernization of HVDC terminals at Arrowhead & Square Butte	ND	MN	Other		Condition	\$75,000,000	12/31/2020	12/31/2020	250		Bottom-up
B in MTEP14	B	Central	AmerenIL	4489	Fargo-Pioneer 138 kV Line 1347 Rebuild	Rebuild line between Fargo and Radnor. Tentative 1600 A summer emergency target rating.	IL	IL				\$3,000,000	11/15/2018	11/15/2018	138		Bottom-up
B in MTEP14	B	Central	AmerenMO	4498	Bertie-Jim Hill 161 kV Line	Construct approximately 20 miles of 161 kV line between Jim Hill Plant and Bertie Substation in southeast, Missouri. The new line should have a 2000 A summer emergency rating. Construct 161 kV ring bus at Bertie Substation. Install 161 kV breaker at Jim Hill.	MO	MO				\$30,500,000	6/1/2020	6/1/2020	161		Bottom-up
B in MTEP14	B	East	METC	1795	David Jct. - Bingham 138kV	Rebuild approximately 19 miles of 336.4 ACSR utilizing 954 ACSR on new 138 kV future double circuit structures.	MI	MI	BaseRel			\$19,000,000	12/31/2016	12/31/2016	138		Bottom-up
B in MTEP14	B	East	METC	3922	Alpine J - Rogue River J - Cannon J 138kV	Rebuild 8.4 miles of 336 ACSR utilizing 954 ACSR on new 138 kV structures.	MI	MI	BaseRel			\$8,200,000	12/31/2016	12/31/2016	138		Bottom-up
B in MTEP14	B	East	METC	4510	Morrow - Battle Creek 138kV #1 Rebuild	Rebuild approximately 22 miles of Morrow to Battle Creek 138kV #1 to 954 ACSR. Upgrade station equipment at Morrow.	MI	MI	BaseRel			\$24,640,000	12/31/2017	12/31/2017	138		Bottom-up
B in MTEP14	B	East	METC	4511	Verona-Foundry 138 kV Rebuild	Rebuild approximately 21 miles of Verona to Foundry 138kV to 1431 ACSR. Upgrade station equipment at Verona.	MI	MI	BaseRel			\$16,021,000	12/31/2019	12/31/2019	138		Bottom-up
B in MTEP14	B	East	WPSC	4383	Bradley New Station	This project alleviates an identified thermal violation on the Bradley to Gaines line which is limited by equipment in the Bradley station. In addition, the current configuration of the Bradley and Wayland stations are not desirable from a planning or protection standpoint. The transformer protection clears the entire 138kV bus, there is primarily electromechanical relaying in the Bradley station and there are oil breakers in the Bradley station. This project will upgrade both the Wayland and Bradley busses to ring bus configurations, put the current 138kV and 69kV stations in a common fence, replace oil breakers with SF6 and bring the design up to current Wolverine standards.	MI	MI	Other		Reconfig	\$4,650,000	1/1/2017	12/31/2022	138	69	Bottom-up
B in MTEP14	B	South	SMEPA	4439	Plant Morrow to Purvis Bulk 161kV Line	Tap existing Purvis to Lumberton 161kV line. Construct a 161kV switching station with 3 breakers at Tap Point (new). Construct a 3 mile 161kV line from the Tap point to Morrow (new). Uprate existing line section from Purvis to Tap Point to Lumberton to 296 MVA. Add 161kV breaker at Morrow (new)	MS	MS	Other		Reliability	\$3,498,200	6/1/2021	6/1/2021	161		Bottom-up
B in MTEP14	B	South	SMEPA	4440	Lumberton-Wiggins-Benddale 161kV Con	Rebuild line 35A, 37A, 37B and 37C @ 161kV insulation (new). Add 161kV breaker at Lumberton and Benddale 161kV stations (new). Construct a new Stillmore and Big Level switching station with 3 breakers (new). Construct a 8 mile line to Stillmore (new). Convert Stillmore and Big Level distribution stations to 161kV	MS	MS	BaseRel			\$15,755,800	6/1/2021	6/1/2021	161		Bottom-up
B in MTEP14	B	South	SMEPA	4441	State Line 161kV Source Project	Tap existing Waynesboro to Hintonville 161kV line. Construct a 161kV switching station with 3 breakers at Tap Point (new). Construct a 161kV switch yard at State Line with breakers (new). Construct a 19 mile 161kV line from Tap point to State Line 161kV station (new). Add a 161/69kV 100MVA transformer at State Line (new). Add 69kV bay and breaker at State Line 69kV station (new).	MS	MS	BaseRel			\$14,250,000	6/1/2026	6/1/2026	161	69	Bottom-up
B in MTEP14	B	West	ATC, MP	3832	Iron Range - Arrowhead 345 kV Line	Blackberry-Arrowhead 345kV double circuit	MN	MN				\$220,481,656	12/31/2025	12/31/2025	500	345	Bottom-up
B in MTEP14	B	West	GRE	4376	Parkwood-Crooked Lake 115 kV Reconn	Reconductor the existing conductor to 795 ACSS	MN	MN				\$500,000	4/29/2020	4/29/2020	115		Bottom-up
B in MTEP14	B	West	MDU	3082	NW Bismarck Ring Bus	Install 115kV ring bus at the NW Bismarck substation	ND	ND				\$3,050,000	6/1/2017	6/1/2017	115		Bottom-up
B in MTEP14	B	West	MP	2548	Duluth 230 kV Project	Add a second 230/115 kV transformer and upgrade an existing line to 230 kV	MN	MN				\$6,000,000	12/31/2026	12/31/2026	230	115	Bottom-up
B in MTEP14	B	West	MP	3856	HVDC 750 MW Upgrade	Upgrade existing HVDC line & terminal from Square Butte-Arrowhead to 750MW	ND,MN	MN				\$200,000,000	12/31/2020	12/31/2020	250	230	Bottom-up

Appendices A, B: Project Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PrjID	Project Name	Project Description	State 1	State2	Allocation Type per FF	Share Status	Other Type	Estimated Cost	Expected ISD (Min)	Expected ISD (Max)	Max kV	Min kV	Transmission Project Category
B in MTEP14	B	West	MPC, OTP	4232	Winger-Thief River Falls 230 kV Line	Winger Sub Expansion, Thief River Sub Expansion, New 47 mile 230kV Transmission Line Between Winger & Thief River, Thief River 230/115 Transformer	MN	MN	BaseRel			\$28,000,000	11/15/2024	11/15/2024	230	115	Bottom-up
B in MTEP15	B	Central	AmerenIL	3010	Baldwin-Grand Tower-N.W. Cape (Heritag	New 69 mile, single-circuit line (possible double circuit), 3000 A SE capability (Baldwin-Grand Tower - 45 miles; Grand Tower-N.W. Cape - 24 miles). Grand Tower 345/138 kV Substation - 1-560 MVA transformer, 345 kV Ring bus	IL	IL	Other		Reliability	\$5,000,000	6/1/2030	6/1/2030	345	138	Bottom-up
B in MTEP15	B	Central	AmerenIL	7802	West Frankfort, East-West-Frankfort-1 138	Reconductor 5.25 miles of 1272 kcmil ACSR conductor with conductor capable of carrying 1600 A under summer emergency conditions. Replace bus conductor at West Frankfort, East with conductor having capability equal to or greater than the new line conductor.	IL	IL	BaseRel				6/1/2026	6/1/2026	138		Bottom-up
B in MTEP15	B	Central	AmerenIL	7821	Kickapoo Capacitor Bank Addition	Install --2-7.2 Mvar, 34.5 kV capacitor banks and PCBs.	IL	IL	BaseRel				6/1/2020	6/1/2020	34.5		Bottom-up
B in MTEP15	B	Central	AmerenIL	7826	Turkey Hill 138 kV Bus-Tie Breaker	Install 138 kV bus tie breaker. Needed: 1-138 kV, 2000 A (minimum), 40 kA PCB.	IL	IL	Other		Reliability		12/1/2019	12/1/2019	138		Bottom-up
B in MTEP15	B	Central	AmerenIL	7861	Effingham Northwest Breaker Additions	Install 2-138 kV, 2000 A, 40 kA PCBs, one on each 138 kV line position. Upgrade bus conductor to 2000 A continuous capability.	IL	IL	Other		Reliability		6/1/2019	6/1/2019	138		Bottom-up
B in MTEP15	B	Central	AmerenIL	7863	Tilden Substation 138 kV Ring Bus	Establish a 5 position 138 kV ring bus for 4-138 kV lines and 1-138/34.5 kV transformer.	IL	IL	Other		Reliability		12/1/2020	12/1/2020	138		Bottom-up
B in MTEP15	B	Central	AmerenMO	7862	Buick Smelter Substation Relocation	Relocate substation. Remove existing substation, install 2 motor-operated 161 kV switches and 2 customer owned and installed 161 kV circuit switchers. Make provisions for the addition of a third 161-4 kV transformer.	MO	MO	Other		Condition		12/1/2020	12/1/2020	161	4	Bottom-up
B in MTEP15	B	Central	BREC	3440	Reid EHV 161/69 kV transformer	Add a 56 MVA transformer to the existing Reid EHV substation.	KY	KY	BaseRel			\$5,000,000	12/31/2024	12/31/2024	161	69	Bottom-up
B in MTEP15	B	Central	PPI	7888	Tyson 161/69 kV substation and 69 kV line	Project Modified from original submittal and moved to Appendix B. Tyson substation is no longer part of this project. 69 kV terminal addition at MidAmerican Sub 39. Construct new 11 mile 69 kV line from MidAmerican Sub 39 to PPI/Jo-Carroll Energy Ladwig Substation. Construct 0.2 mile 69 kV line from the City of Geneseo plant to Jo-Carroll Energy Geneseo Substation.	IL	IL	Other		Reliability	\$289,300	12/31/2016	12/31/2016	69	69	Bottom-up
B in MTEP15	B	Central	Vectren	4395	NE cap bank tertiary conversion	Remove existing cap banks from the tertiary winding of the 138/69 kV transformer at Northeast sub, and install equivalent cap banks on the 69 kV bus with breakers	IN	IN				\$450,000	12/31/2019	12/31/2019	69		Bottom-up
B in MTEP15	B	Central	Vectren	4396	Z71 Scott - Toyota	Install new approx. 13 mile 138 kV line designate Z71 (not Z75).	IN	IN				\$13,000,000	12/31/2020	12/31/2020	138		Bottom-up
B in MTEP15	B	Central	Vectren	4397	Y31 Leonard Rd. - Z93 Rebuild	Rebuild approx. 6.8 miles of 69 kV	IN	IN				\$5,100,000	12/31/2020	12/31/2020	69		Bottom-up
B in MTEP15	B	Central	Vectren	4398	Y52-1 NE - Sunbeam Rebuild	Rebuild and reconductor approx. 3 miles of 69 kV	IN	IN				\$2,250,000	12/31/2021	12/31/2021	69		Bottom-up
B in MTEP15	B	Central	Vectren	4399	Newtonville 161 kV ring bus conversion	Convert existing 161 kV bus to a ring bus configuration	IN	IN				\$1,000,000	12/31/2023	12/31/2023	161		Bottom-up
B in MTEP15	B	East	ITCT	3943	Navarre 230/120 kV Transformer #201	Increase the CT ratio on the low-side breaker of the Navarre 230/120 kV Transformer #201.	MI	MI					12/31/2018	12/31/2018	230	120	Bottom-up
B in MTEP15	B	East	ITCT	4520	Mortar Creek (formerly Hull Road) Station	Build Mortar Creek 345 kV station and reconfigure the Bayshore to Monroe 345 kV, Lemoynne to Majestic 345 kV, and Morocco to Milan to Monroe 345 kV lines into it in a breaker-and-a-half scheme configuration.	MI	MI	Other		Reliability	\$23,950,000	6/1/2018	6/1/2018	345		Bottom-up
B in MTEP15	B	East	ITCT	8068	Brownstown - Monroe #2 345 kV Sag Ren	Remediate the sag limit on the Brownstown to Monroe #2 345 kV line	MI	MI	Other		Reliability	\$1,200,000	12/31/2017	12/31/2017	345		Bottom-up
B in MTEP15	B	East	ITCT	8069	Lemoynne - Majestic 345 kV Sag Remediat	Remediate the sag limit on the Lemoynne - Majestic 345 kV line to increase its summer emergency rating to a minimum rating of 1822 MVA / 3049 Amps.	MI	MI	Other		Reliability	\$2,500,000	12/31/2018	12/31/2018	345		Bottom-up
B in MTEP15	B	East	ITCT	8099	Lincoln to Northeast/Northwest 120 kV Re	Rebuild about 2.95 miles of 477 ACSR on the Lincoln section of the Lincoln/Northeast/Northwest circuit to 1431 ACSR on new 120 kV double circuit towers. The other side of these towers supports a portion of the Lincoln to Northeast 120 kV circuit which will also be upgraded to 1431 ACSR. Upgrades or replacement of any limiting equipment at Lincoln, Hilton Road (formerly Ferndale), and Northeast substations will also be necessary.	MI	MI	Other		Reliability	\$4,200,000	12/31/2018	12/31/2018	120		Bottom-up
B in MTEP15	B	East	METC	1804	Marquette - Easton Jct. 138kV	Replace limiting equipment at the Marquette 138 kV	MI	MI					12/31/2018	12/31/2018	138		Bottom-up
B in MTEP15	B	East	METC	3927	Saginaw River 138 kV Station Equipment	Replace limiting equipment from the Saginaw River 138 kV station.	MI	MI	Other		Reliability	\$2,800,000	12/31/2017	12/31/2017	138		Bottom-up
B in MTEP15	B	East	METC	4525	Goss 345/138 kV Transformer #2	Install a second 345/138 kV transformer and install/upgrade station equipment at Goss.	MI	MI	Other		Reliability	\$9,300,000	12/31/2018	12/31/2018	345	138	Bottom-up

Appendices A, B: Project Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	ProjID	Project Name	Project Description	State 1	State2	Allocation Type per FF	Share Status	Other Type	Estimated Cost	Expected ISD (Min)	Expected ISD (Max)	Max kV	Min kV	Transmission Project Category
B in MTEP15	B	East	METC	8123	Weeds Lake Transformer #2 and Looping	Install a second 345/138 kV transformer at the Weeds Lake Substation and loop in the Argenta to Twin Branch 345 kV line. This creates a Weeds Lake - Twin Branch 345 kV line and a 2nd Argenta - Weeds Lake 345 kV circuit	MI	MI	Other		Reliability	\$17,500,000	12/31/2018	12/31/2018	345	138	Bottom-up
B in MTEP15	B	East	METC	8130	Pere Marquette to Keystone 230 kV	Construct a new 75 mile, 230 kV circuit between Keystone and Pere Marquette Substation. Approx. 20 miles of the new line will be on new double circuit steel pole structures, 30 miles from rebuilding existing 138 kV structures to 230 kV double circuit steel poles, and 25 miles on existing DC'Ts with a vacant side of the structures. Install a 345/230 kV transformer and associated terminal equipment at Pere Marquette substation. Add a 230/138 kV transformer and associated terminal equipment at Keystone substation. Project will also swap the line positions of the Keystone-Wexford 138 kV and the 138 kV side of the Keystone 345/138 kV transformer at Keystone	MI	MI	BaseRel			\$90,198,000	12/31/2018	12/31/2018	345	138	Bottom-up
B in MTEP15	B	East	NIPS	8026	DeKalb Transformer	Upgrade DeKalb 138/69kV Transformer. This will also increase ratings of the DeKalb to Auburn 138kV Line	IN	IN				\$2,700,000	12/31/2017	12/31/2017	138	69	Bottom-up
B in MTEP15	B	East	WPSC	8222	Bradley Station Line Modifications	This project will construct the line modifications required to route lines into the new Bradley station.	MI	MI	Other		Relocation	\$1,000,000	12/31/2022	12/31/2022	138	69	Bottom-up
B in MTEP15	B	East	WPSC	8360	Alba New Station	The Alba transmission tie station represents the oldest tie on the Wolverine system. It is located on a small parcel of leased property with limited expansion capability. The existing station shall be replaced with a new in/out transmission line design, three (3) breaker substation, modern control house, metering, protection relaying and a 50 or 90MVA, 138/69kV tie transformer, dependent upon load requirements.	MI	MI	Other		Condition	\$4,000,000	12/31/2022	12/31/2022	138	69	Bottom-up
B in MTEP15	B	East	WPSC	8361	Alba Line Mods	This project will address 138kV transmission line and structure reconfiguration costs associated with construction of the new Alba transmission substation, so that the 138kV ITC/METC looped transmission line segments can successfully enter and leave the substation	MI	MI	Other		Reconfig	\$1,000,000	12/31/2022	12/31/2022	138	69	Bottom-up
B in MTEP15	B	South	CLECO	7993	Rodemacher to East Leesville/reconductor	Reconductor Rodemacher to East Leesville 230 kv line.	LA	LA	BaseRel			\$10,000,000	5/1/2024	5/1/2024	230		Bottom-up
B in MTEP15	B	South	Entergy-TX	4799	Dishman: Construct new substation	Construct new 230kV substation on the Amelia to Helbig 230kV line	TX	TX	Other		Distribution	\$10,500,000	6/1/2021	6/1/2021	230		Bottom-up
B in MTEP15	B	South	SMEPA	8141	Rebuild L16 (Hoy - Sharon GOAB) 69kV L	Rebuild the existing Hoy - Sharon GOAB 69kV line using 161kV double circuit specifications and 795 ACSR conductor.	MS	MS	BaseRel			\$1,273,600	6/1/2026	6/1/2026	69		Bottom-up
B in MTEP15	B	South	SMEPA	8143	Rebuild L45A (Foxworth - Pickwick GOAB)	Rebuild the existing Foxworth - Pickwick GOAB 69kV line using 161kV specifications and 795 ACSR conductor.	MS	MS	BaseRel			\$2,050,300	6/1/2026	6/1/2026	69		Bottom-up
B in MTEP15	B	West	ATC	1718	Install Custer 138/69 kV transformer	Install a 138/69 kV transformer at Custer substation	WI	WI	Other		Reliability	\$4,904,268	6/1/2026	6/1/2026	138	69	Bottom-up
B in MTEP15	B	West	ATC	1719	Construct Shoto-Custer 138 kV line	Construct a Shoto-Custer 138 kV line	WI	WI	BaseRel			\$22,938,000	12/31/2026	12/31/2026	138		Bottom-up
B in MTEP15	B	West	ATC	3678	Construct Marquette-Mackinac 138 kV	Rebuilds Forsyth to Nine Mile as 138 kV line and rebuilds from Nine Mile to Straits area as 138 kV. This includes a new 138 kV connection between Seney and Roberts.	MI	MI	Other		Reliability	\$262,850,000	12/31/2050	12/31/2050	138	69	Bottom-up
B in MTEP15	B	West	ATC	3838	Construct Plains-National 345 kV	New 345 kV line from Plains to National, including new National substation and transformers	WI	MI				\$180,800,000	6/1/2019	12/31/2050	345	138	Bottom-up
B in MTEP15	B	West	ATC	7580	Install 138 kV Werner West Inductor	Install a 138 kV 25 Mvar inductor at Werner West	WI	WI				\$1,524,446	6/1/2018	6/1/2018	138		Bottom-up
B in MTEP15	B	West	ATC	7581	Install 138 kV Forest Jct Inductor	Install a 138 kV 25 Mvar inductor at Forest Jct	WI	WI				\$1,762,635	6/1/2018	6/1/2018	138		Bottom-up
B in MTEP15	B	West	ATC	7584	Rebuild New Holstein - St Nazianz - Custer	Rebuild P-68 New Holstien - St Nazianz- Custer 69 kV circuit with T2-4/0 ACSR	WI	WI				\$15,941,421	12/31/2022	12/31/2022	69		Bottom-up
B in MTEP15	B	West	ATC	7585	Install 2nd Colley Rd 138/69 kV transform	Add 2nd 138/69 kV transformer at Colley Rd	WI	WI				\$9,944,381	6/1/2023	6/1/2023	138	69	Bottom-up
B in MTEP15	B	West	ATC	7586	Atlantic 138/69 kV bus reconfiguration and	Reconfigure the Atlantic substations 138 kV and 69 kV bus work. Denergize the existing Atlantic 138/69 kV transformer and install a new 138/69 kV transformer.	WI	WI				\$9,043,283	6/1/2019	6/1/2019	138	69	Bottom-up
B in MTEP15	B	West	ATC	7762	Rebuild Y-19 Wautoma - Harrison 69 kV	Rebuild Y-19 from Wautoma to Harrison 69 kV with T2 4/0 Penguin conductor.	WI	WI					12/31/2023	12/31/2023	69		Bottom-up
B in MTEP15	B	West	ATC	7763	Rebuild Y-47 McKenna - Castle Rock 69 kV	Rebuild Y-145 from McKenna - Castle Rock 69 kV with T2 4/0	WI	WI					12/31/2023	12/31/2023	69		Bottom-up
B in MTEP15	B	West	ATC	7764	Rebuild Y-49 Wautoma - Chaffee Creek 69 kV	Rebuild Y-49 from Wautoma - Chaffee Creek 69 kV with T2 4/0	WI	WI					12/31/2023	12/31/2023	69		Bottom-up
B in MTEP15	B	West	ATC	7765	Rebuild Y-145 Lincoln - McKenna 69 kV	Rebuild Y-145 from Lincoln Pumping Station - McKenna 69 kV with T2 4/0 Penguin conductor.	WI	WI					12/31/2023	12/31/2023	69		Bottom-up
B in MTEP15	B	West	ATC	8073	Plains - Marquette Area Reinforcement Pr	Upgrade Plains - Arnold 138 kV line and upgrade existing Plains 345/138 kV transformer and install a 2nd Plains 345/138 kV transformer	MI	MI				\$43,720,000	12/1/2023	12/1/2023	345	138	Bottom-up
B in MTEP15	B	West	ATC	8076	Morgan - Plains Area Reinforcement Proje	New Thunder Substation, Loop Morgan - Plains 345 into new Thunder Substation, New Morgan - Thunder 138 kV line, Convert Thunder - Crivitz 69 kV to 138 kV.	WI	WI				\$105,000,000	12/1/2023	12/1/2023	345	69	Bottom-up
B in MTEP15	B	West	ATC	8082	Green Bay Area Reinforcement Project	Highway Y - Preble 138 kV line reconductor	WI	WI				\$6,000,000	12/1/2020	12/1/2020	138		Bottom-up

Appendices A, B: Project Table 10/03/2016

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B in MTEP15	B	West	ATC	8084	Rhineland Area Reinforcement Project	Uprate Highway 8 - Clear Lake 115 kV line	WI	WI				\$24,000,000	12/1/2020	12/1/2020	115		Bottom-up
B in MTEP15	B	West	ATC	8089	Lakota-Winona 69 kV to 138 kV Conversion	Convert the existing 69-kV lines from Conover-Mass and Mass-Winona from 69 kV to 138 kV; Modify the existing Mass Substation to accommodate 138-kV buswork and a new 138/69-kV transformer	WI,MI	MI				\$100,000,000	12/1/2021	12/1/2021	138	69	Bottom-up
B in MTEP15	B	West	ATC	8263	Rebuild Y-45 W. Wisconsin Rapids - Sigel	Rebuild Y-45 on existing right of way. No terminal equipment is being replaced.	WI	WI				\$18,667,906	12/31/2021	12/31/2021	69		Bottom-up
B in MTEP15	B	West	ATC	8440	Rebuild Oak Creek- Hayes 138 kV	Asset maintenance, reconductor line 811 Oak Creek - Hayes	WI	WI				\$13,743,440	12/31/2019	12/31/2019	138		Bottom-up
B in MTEP15	B	West	ATC	8441	Escanaba Load Addition T-D	Build new Escanaba 69 kV substation with distribution loads	MI	MI				\$5,616,000	12/31/2016	12/31/2016	69	12.47	Bottom-up
B in MTEP15	B	West	ATC	8444	Replace First Ave-Sawyer 69 kV (UG)	Asset maintenance, Replace UG Cable from 1st Ave-Sawyer 69 kV line	WI	WI					12/31/2020	12/31/2020	69		Bottom-up
B in MTEP15	B	West	ATC	8620	Construct Howards Grove - Erdman 138 kV	Construct a new 138 kV line from Howards Grove to Erdman	WI	WI					12/12/2018	12/12/2018	138		Bottom-up
B in MTEP15	B	West	ATC	8641	Install Boscobel Capacitor	Project consists of adding a 2nd 8.16 MVAR step	WI	WI				\$1,394,539	6/1/2023	6/1/2023	69		Bottom-up
B in MTEP15	B	West	GRE	2632	Oniquum 115 kV Conversion	Oniquum 115 kV Conversion	MN	MN	Other		Distribution	\$5,300,000	11/30/2022	11/30/2022	115		Bottom-up
B in MTEP15	B	West	ITCM	8111	ITCM Cedar Rapids-North Liberty Area Upgr	161 and 69 kV upgrades in the Cedar Rapids to North Liberty. IA area including a new North Liberty 161/69kV sub and new Rose Hollow to North Liberty to Fairfax 161kV line.	IA	IA	BaseRel			\$74,482,582	12/31/2019	12/31/2024	161	69	Bottom-up
B in MTEP15	B	West	ITCM	8842	Quad Cities-Rock Creek 345kV Dbl Ckt	Rebuild the Quad Cities to Rock Creek 345kV line to double circuit and add 345kV terminals at both	IA,IL	IA,IL	BaseRel				12/31/2024	12/31/2024	345		Bottom-up
B in MTEP15	B	West	ITCM	8843	Rock Creek 2nd 345/161kV Transformer	Add a 2nd 345/161kV 450MVA transformer at the Rock Creek substation.	IA	IA	BaseRel				12/31/2024	12/31/2024	345	161	Bottom-up
B in MTEP15	B	West	ITCM	8844	Albany-Galena 161kV Rebuild	Rebuild the Albany-York-Savanna-Galena 161kV line.	IL	IL	BaseRel				12/31/2024	12/31/2024	161		Bottom-up
B in MTEP15	B	West	MEC	8023	Hills - Sub E 161 kV Reconductor	Reconductor the Hills - Sub E 161 kV line in Iowa City to increase the line rating.	IA	IA	BaseRel			\$4,000,000			161		Bottom-up
B in MTEP15	B	West	MEC	8114	Sub A - Sub 84 69 kV Line Uprate	Replace structures to allow a higher conductor operating temperature.	IA	IA	Other		Reliability	\$225,000	6/1/2018	6/1/2018	69		Bottom-up
B in MTEP15	B	West	MP	7913	868 Line Upgrade	Increase capacity of Little Falls - West St. Cloud 115 kV Line	MN	MN	BaseRel			\$6,800,000	11/1/2019	11/1/2019	115		Bottom-up
B in MTEP15	B	West	MPC, OTP	4237	Hensel-Drayton 115 kV #2	Hensel Sub Expansion, Drayton Sub Expansion, Hensel-Drayton 115 kV Transmission Line	ND	ND	BaseRel			\$6,500,000	11/15/2021	11/15/2021	115		Bottom-up
B in MTEP15	B	West	OTP	4236	Ortonville 115/41.6 kV Transformer	Replace Transformer - 40 MVA	MN	MN	Other		Reliability	\$1,000,000	11/15/2020	11/15/2020	115	41.6	Bottom-up
B in MTEP15	B	West	OTP	8085	Kerkhoven Town Conversion to 115 kV	Build a new, approximately, one mile 115 kV line from the GRE Kerkhoven 115/41.6 kV sub to the new OTP Kerkhoven Town substation. Also convert the Kerkhoven town delivery substation from 41.6 kV to 115 kV through the installation of a new 10 MVA 115/12.5 kV transformer. This project will consist of two facilities: 1.New 115/12.5 kV Substation at Kerkhoven Town with a new (1) 115 kV breaker and a new 10 MVA 115/12.5 kV transformer. 2.Approxmetely 1 mile of 115 kV transmission line from the GRE Kerkhoven 115 kV Substation to the New Kerkhoven Town 115/12.5 kV substation. The total estimated cost of this project is \$ 1.7 million. The expected in service date for this project is November 15, 2020.	MN	MN	Other		Reliability	\$1,700,000	11/15/2020	11/15/2020	115	12.5	Bottom-up

Facility Table Field Legend

Project table has blue highlighted header. A project may have multiple facilities.

Facility table has beige highlighted header. A project's facilities may have different in service dates.

Facility Table Field Legend

Field	Description
Target Appendix	Target appendix for the MTEP16 planning cycle. "A in MTEP16" projects were reviewed and approved in MTEP16. This column also indicates what projects were approved in prior MTEPs that are not yet in
App AB	Appendix the project is in. B>A for projects moving during this planning cycle.
Region	MISO Planning Region: Central, East, West or South
Geographic Location by TO Member System	Project geographic location by Transmission Owner member systems
PrjID	Indicates the Facility's Project. Projects may have multiple facilities.
Facility ID	Facility ID: MISO facility identifier
Expected ISD	Expected In Service Date for this facility
From Sub	From substation for transmission line or location of transformer or other equipment
To Sub	To substation for transmission line or transformer designation
Ckt	Circuit identifier
Max kV	Maximum voltage of this facility
Min kV	Minimum voltage of this facility (transformer low-side voltage)
Facility Rating	Rating of the facility in applicable units. Typically Summer rate
Facility Description	Brief description of transmission facility
State	State the facility is located in
Miles Upg.	Transmission line miles on existing rights of way (ROW)
Miles New	Transmission line miles on new rights of way (ROW)
Plan Status	Indicates status of project in planning or implementation. Conceptual, Proposed, Planned, Last Milestone Achieved, Under Construction and In Service
Estimated Cost	Total estimated facility cost
Cost Shared	Y if facility is cost shared per Attachment FF
Postage Stamp	Y if facility has postage stamp cost allocation per Attachment FF
MISO Facility	Y for facilities under MISO functional control. NT for non-transferred facilities under Agency Agreements

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App A/B	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP16	B>A	Central	AmerenIL	3005	8614 LN		6/1/2017	Baldwin	Baldwin Tap	1526	138		399	Build a 138 kV double-circuit line between Baldwin Substatio	IL		2	Planned	\$2,400,000	Planning	N	N	Y
A in MTEP16	B>A	Central	AmerenIL	3005	8615 CB		6/1/2017	Baldwin	Install 138 kV Breakers		138			Construct a 5 position 138 kV ring bus at Baldwin Substatio	IL			Planned	\$1,000,000	Planning	N	N	Y
A in MTEP16	B>A	Central	AmerenIL	7820	20090 LNrc		6/1/2017	Hennepin	Kewanee	6101	138		214	Upgrade terminal equipment at Hennepin terminal.	IL			Planned	\$300,000	Engineering	N	N	Y
A in MTEP16	B>A	Central	AmerenIL	7860	20100 LNrb		6/1/2016	Effingham 138	Effingham NW	1	138		280	Elevate 2.72 miles of 954 kcmil ACSR conductor to permit c	IL	2.72	M5_In Service	\$2,000,000	Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	7869	20107 SUB		5/1/2016	Alsey Tap			138		287	Install 138 kV breaker station near tap to the PPI Alsey Par	IL		M5_In Service	\$6,626,495	Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	9261	20851 SUB		12/1/2017	Searitt			138		287	Build a 3-breaker 138 kV ring bus adjacent to the North Dec	IL		Planned	\$4,119,500	Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	9261	20852 LN		6/1/2016	Searitt	Enbridge	1	138		143	Construct radial 138 kV line from Searitt Breaker Station b	IL	0.5	Planned	\$444,167	Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	9722	21106 TX		10/3/2016	Frederick, North			138	69	112	Replace existing 138-69 kV transformer bank with 112 MV	IL		Planned		Engineering	N	N	NT	
A in MTEP16	B>A	Central	AmerenIL	9726	21110 SUB		6/1/2018	Fogarty			138	34.5	112	Provide 138 kV connection to supply 138-34.5 kV transform	IL		Planned	\$1,726,448	Engineering	N	N	NT	
A in MTEP16	B>A	Central	AmerenIL	9727	21111 SUB		6/1/2019	Wakefield			138	34.5	112	Establish 138 kV ring bus; connect of South Bloomington-C	IL		Planned	\$7,430,056	Engineering	N	N	NT	
A in MTEP16	B>A	Central	AmerenIL	9736	21123 LNrc		5/1/2016	East Quincy	Hamilton	4	138	138	159	Replace existing conductor.	IL	30.6	M5_In Service	\$8,315,916	Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	9741	21128 TEQ		5/24/2016	Porter Road	East Collinsville	1	138	138	160	Upgrade terminal equipment at Porter Road.	IL		M5_In Service	\$50,000	Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	9845	21222 SUB		5/1/2017	Gallatin			138	69	159	Construct 138 kV ring bus in Kansas-HutsonMcBaine 138 kV line	IL		Planned	\$5,621,250	Engineering	N	N	NT	
A in MTEP16	B>A	Central	AmerenIL	9853	21230 TEQ		6/1/2017	Prairie State	Mt. Vernon, West	1	345	345	1401	Upgrade terminal equipment at Mt. Vernon, West	IL		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	9869	21251 TEQ		6/1/2017	Havana	Elkhart	1	138	138	160	Upgrade terminal equipment	IL		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	9873	21256 TX		12/1/2016	Edwards Plant			138	69	150	Install 138-69 kV transformer	IL		Planned		Engineering	N	N	NT	
A in MTEP16	B>A	Central	AmerenIL	10884	21681 TX		5/23/2016	Roxford			345	138	700	Replace 345/138 kV, 560 MVA transformer with a 700 MVA I	IL		M5_In Service	\$3,611,589	Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	10884	21682 TEQ		5/23/2016	Roxford			345	138	1793	Install a 3000 A, 50 kA PCB to place the Roxford 345/138 k	IL		M5_In Service		Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	10904	21688 LNrb		12/1/2016	Brokaw	Gibson City South	1	138		255	Rebuild to 1200 A summer emergency capability.	IL	28.5	Planned	\$10,218,299	Planning Preliminary	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	10904	21689 TEQ		12/1/2016	Gibson City South			138		478	Upgrade terminal equipment	IL		Planned	\$100,000	Planning Preliminary	N	N	Y	
A in MTEP16	B>A	Central	AmerenIL	11063	21713 TEQ		12/1/2016	Rising	North Champaign	1592	138		399	Upgrade terminal equipment at Rising Substation terminal	IL		Planned	\$1,747,553	Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenMO	10483	21586 LNup		12/1/2016	Cape	Kelso	2	161	161	280	Increase ground clearance, upgrade terminal equipment at	MO	5.99	Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenMO	10483	21587 LNup		12/1/2016	Kelso	Miner	2	161	161	280	Increase ground clearance, upgrade terminal equipment at	MO	19.9	Planned	\$5,586,082	Engineering	N	N	Y	
A in MTEP16	B>A	Central	AmerenMO	10604	21624 LNrc		12/1/2016	Page	Soux	1	138		241	Replace conductor to match capability of the rest of the line	MO	14.3	Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	CWLD	10162	21625 TEQ		3/1/2016	McBaine	McBaine Tap	1	161		249	New wave trap and new switch on McBaine-McBaine Tap 1 M	MO		M5_In Service	\$50,000	Budgetary	N	N	Y	
A in MTEP16	B>A	Central	DEI	2873	5026 Dist		6/1/2018	Danville East	new dist sub	1	69	12		Construct new Danville East substation near HRH hospital	IN		0.5	Planned	\$990,000	Planning	N	N	NT
A in MTEP16	B>A	Central	DEI	9834	21211 LNrb		12/31/2018	Noblesville Gen Statc	Tipton West	1	230		501	Noblesville to Tipton West 23008 ckt. Replace all single/H-I	IN	12	Planned	\$12,079,985	Engineering w/AFUCN	N	N	Y	
A in MTEP16	B>A	Central	DEI	9850	21227 SwSta		12/31/2017	Lebanon Prairie Crk.	SS		69		100	New Lebanon Prairie Crk. 69kV Switching Station to be ins	IN	1.1	Planned	\$3,518,244	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9854	21231 CB		12/31/2017	Speed			138			Speed 138kV - Replace OCB 13850, 13857, 13869, 13881 I	IN		Planned	\$2,264,125	Engineering w/AFUCN	N	N	Y	
A in MTEP16	B>A	Central	DEI	9855	21232 CB		12/31/2020	Columbus North			230	69		Columbus North: Replace OCB 6975, 6929, 69230-1, 6950 I	IN		Planned	\$2,711,016	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9856	21233 CB		12/31/2017	Walton			230	69		Walton: Replace OCB 69 kV CAP BK, 69230-1, 69110, 69 I	IN		Planned	\$3,303,866	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9858	21238 TX		12/31/2018	Bedford 345kV			345	138	400	Bedford 345: Replace 345/138kV Bank 7	IN		Planned	\$4,151,661	Engineering w/AFUCN	N	N	Y	
A in MTEP16	B>A	Central	DEI	9858	21239 CB		12/31/2018	Bedford 345kV			345	69		Bedford 345: Replace relays on CIR 6995, 13829, 13837, 3 I	IN		Planned	\$7,927,152	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9888	21275 LNrb		12/31/2017	Middlefork	Deer Crk. Jct.	1	69		100	Rebuild 6988 ckt. from MiddleFork sub to deadend 879/104 I	IN	7.1	Planned	\$4,860,632	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9889	21277 LNrb		12/31/2017	Sharpsville	Kokomo Southeast	69			100	Rebuild 69174 ckt. from Sharpsville sub to Kokomo SE. 477 I	IN	7.3	Planned	\$4,287,945	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9890	21278 LNup		12/31/2017	Gibson Gen. Sta.	HE Merom Gen. Sta.	345				Gibson to Merom: Install (10) double deadend structures in	IN		Planned	\$4,433,734	Engineering w/AFUCN	N	N	Y	
A in MTEP16	B>A	Central	DEI	9891	21279 LNup		12/31/2016	Flat Rock	Hope Jct.	69			69	Flat Rock to Hope Jct. 6975 ckt. pole replacements (45), rej	IN	3.3	Planned	\$1,087,274	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9892	21280 LNup		12/31/2018	Lewis Crk.	Flat Rock	69			69	Lewis Crk. to Flat Rock 6975 ckt. pole replacements (100),	IN	5.7	Planned	\$1,875,342	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9893	21281 CB		6/1/2017	Shelbyville Northeast			138	69		Shelbyville Northeast - Replace CIR 6946, 6976, 69183, 13 I	IN		Planned	\$3,511,433	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9897	21295 Dist		6/1/2018	River Ridge Gateway			138	12		River Ridge Gateway 138-12kV Sub. to be inserted in the 1 I	IN		Planned	\$1,000,000	Planning Preliminary	N	N	NT	
A in MTEP16	B>A	Central	DEI	9905	21313 LNrb		12/31/2017	Sharpsville	Windfall Jct.	69			100	Rebuild 69174 from Sharpsville sub to Windfall Jct -477ac	IN	3.5	Planned	\$2,179,983	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9914	21327 LNrb		6/1/2017	Mohawk	Lee Hanna Jct	69			153	Rebuild 5.84 mile 69kV - 69130 ckt. from Mohawk to Mohav	IN	5.84	Planned	\$3,741,298	Engineering w/AFUCN	N	N	NT	
A in MTEP16	B>A	Central	DEI	9926	21338 Dist		12/31/2018	Speltville		138	34			Speltville: expand sub footprint. Install 138/34kV 60MVA I	IN		Planned	\$1,000,000	Planning Preliminary	N	N	NT	
A in MTEP16	B>A	Central	DEI	10144	21480 CB		12/31/2017	Cayuga Gen. Sta.			230			Cayuga Gen. Sta.: Replace existing 230kV OCBs 23011-0 I	IN		Planned	\$1,536,000	Engineering w/AFUCN	N	N	Y	
A in MTEP16	B>A	Central	DEI	11343	21762 LNrc		6/1/2018	Lafayette SE	General Foods Jct	1	138		301	Lafayette SE to General Foods Jct 13808 Reconnector: rec	IN	0.64	Planned	\$1,060,000	Planning Preliminary	N	N	Y	
A in MTEP16	B>A	Central	IPL	9220	20836 CB		12/31/2018	Parker			138			Replacement of 138 kV line breaker on 132-07 line due to r	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9220	20843 CB		12/31/2018	Parker			138			Replacement of 138 kV bus-tie breaker due to results of an	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9220	20842 CB		12/31/2018	Parker			138			Replacement of 138 kV line breaker on 132-17 line due to r	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9221	20837 CB		12/31/2016	Southport			138			Replacement of 138 kV line breaker on 132-29 line due to r	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9222	20838 CB		12/31/2016	Thompson			138			Replacement of 138 kV line breaker on 132-77 line due to r	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9222	20841 CB		12/31/2016	Thompson			138			Replacement of 138 kV bus-tie breaker due to results of an	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9222	20840 CB		12/31/2016	Thompson			138			Replacement of 138 kV line breaker on 132-68 line due to r	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9223	20839 CB		12/31/2018	River Road			138			Replacement of 138 kV bus-tie breaker due to results of an	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9602	20935 CB		12/31/2016	Mooreville			138			Replacement of 138 kV 132-84 Line breaker due to results i	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9602	20937 CB		12/31/2016	Mooreville			138			Replacement of 138 kV bus-tie breaker due to results of J2:	IN		Planned		Engineering	N	N	Y	
A in MTEP16	B>A	Central	IPL	9602	20936 CB		12/31/2																

Appendices A, B - Project Facility Table 10/03/2016

Target Appendix	App A/B	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP16	B>A	East	CETO	9863	21244	LNup	12/31/2016	CE Line Sag Remediation - 2016		1	138			Install poles or replace spans of conductor to remediate sag	MI			Planned	\$400,000		N	N	Y
A in MTEP16	B>A	East	CETO	9865	21245	RLY	12/31/2016	CE Relay Replacement Program - 2016		1	138			Replace electromechanical and/or defective relays with new MI	MI			Planned	\$240,000	Planning	N	N	Y
A in MTEP16	B>A	East	CETO	9866	21246	RLY	12/31/2017	CE Relay Replacement Program - 2017		1	138			Replace electromechanical and/or defective relays with new MI	MI			Planned	\$480,000	Planning	Preliminary	N	Y
A in MTEP16	B>A	East	CETO	9868	21252	TEQ	12/31/2016	CE Substation Equipment Replacements - 2016		1	138			Replace damaged or defective substation equipment, not in MI	MI			Planned	\$560,000	Planning	N	N	Y
A in MTEP16	B>A	East	CETO	9870	21253	TEQ	12/31/2017	CE Substation Equipment Replacements - 2017		1	138			Replace damaged or defective substation equipment, not in MI	MI			Planned	\$500,000	Planning	Preliminary	N	Y
A in MTEP16	B>A	East	CETO	9871	21254	LNrb	12/31/2017	Edenville	Edenville Jct	1	138			Rebuild the north portion of the Edenville-Edenville Jct 138 MI	MI	9.8		Planned	\$4,170,000	Planning	N	N	Y
A in MTEP16	B>A	East	CETO	9872	21255	LNrb	12/31/2016	Edenville	Edenville Jct	1	138			Rebuild the south portion of the Edenville-Edenville Jct 138 MI	MI	2		Planned	\$850,000	Engineering	Preliminary	N	Y
A in MTEP16	B>A	East	CETO	9874	21258	LNrb	12/31/2017	Cole Creek	Cole Creek Jct	1	138			Rebuild the Cole Creek-Cole Creek Jct 138 kV Line, approx	MI	4.7		Planned	\$1,960,000	Planning	Preliminary	N	Y
A in MTEP16	B>A	East	CETO	9875	21259	SUB	12/31/2017	Chase		1	138			Rebuild the 138 kV portion of Chase Substation to a three t	MI			Planned	\$3,200,000	Engineering	Preliminary	N	Y
A in MTEP16	B>A	East	CETO	9878	21263	SUB	6/1/2018	Vrooman		1	138			Complete the 138 kV bus as a ring by adding one 138 kV b	MI			Planned	\$600,000	Planning	Preliminary	N	Y
A in MTEP16	B>A	East	CETO	10046	21447	SUB	3/1/2018	Beaver Creek		1	138			Construct a 138 kV three breaker ring bus at Beaver Creek	MI			Planned	\$3,200,000	Planning	Preliminary	N	Y
A in MTEP16	B>A	East	CETO	10046	21448	RLY	3/1/2018	Higgins		1	138			Replace the relaying on the Higgins end of the line to Beav	MI			Planned	\$300,000	Planning	Preliminary	N	Y
A in MTEP16	B>A	East	CETO	10763	21661	TEQ	6/1/2016	Emmet		1	138			Add a wavetramp and upgrade relaying on the Emmet-Living	MI			M5_In Service	\$874,000	Pre-Construction	N	N	Y
A in MTEP16	B>A	East	ITCT	9685	21008	LNup	12/31/2019	Jacob	St. Clair	1	120			Remediate the Sag Limit on Jacob-St. Clair 120 kV to 292 I	MI			Planned	\$139,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	9692	21016	LNup	12/31/2018	Seneca	Spokane	1	120			Raise the Sag Limit on Seneca-Spokane 120 kV to 283 MV/	MI			Planned	\$339,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	9883	21271	CB	12/31/2019	Ironton		1	120			Install two 120 kV breakers to terminate the two River Roug	MI			Planned	\$910,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	9884	21272	LNup	12/31/2019	Belle River	Pontiac	1	345			Raise the Sag Limit on Belle River-Pontiac 345 kV to 1414 I	MI			Planned	\$340,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	9887	21276	LNup	12/31/2019	Pontiac	Wxom	1	345			Raise the Sag Limit on Pontiac-Wxom 345 kV to 1185 MV/	MI			Planned	\$305,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	9900	21301	LNup	12/31/2018	River Rouge	Ironton	2	120			Raise the Sag Limit on River Rouge-Ironton #2 120 kV to 2	MI			Planned	\$340,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	9902	21308	SUB	12/31/2018	Sterling		1	120			Install a new 120 kV bus and one 120 kV breaker to convert	MI			Planned	\$1,100,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	9994	21418	LNrb	12/31/2019	Custer	Monroe	1	120			Rebuild the entire Custer - Monroe 120 kV line. Pre-build it	MI			Planned	\$14,500,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	9998	21420	SUB	12/31/2017	ITCT Asset Replacement Program - 2017		345	120			Replace aging and outdated equipment on a cycle that will r	MI			Planned	\$47,970,000	Budgetary	N	N	Y
A in MTEP16	B>A	East	ITCT	9999	21421	SUB	12/31/2018	ITCT Asset Replacement Program - 2018		345	120			Replace aging and outdated equipment on a cycle that will r	MI			Planned	\$53,250,000	Budgetary	N	N	Y
A in MTEP16	B>A	East	ITCT	10000	21423	SUB	12/31/2019	ITCT Asset Replacement Program - 2019		345	120			Replace aging and outdated equipment on a cycle that will r	MI			Planned	\$53,310,000	Budgetary	N	N	Y
A in MTEP16	B>A	East	ITCT	10010	21433	Dist	12/31/2019	Blanket for Customer Throughout System		1	120			Connect interconnecting entities as requested	MI			Planned	\$2,000,000	Budgetary	N	N	Y
A in MTEP16	B>A	East	ITCT	10243	21501	CB	6/30/2018	Navarre		1	120			Upgrade the existing Navarre 120 kV breaker HX to have a	MI			Planned	\$70,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	10270	21516	LNup	12/31/2018	Apache	Seneca	1	120			The proposed solution is to remediate the sag limit on the	MI			Planned	\$202,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	10425	21581	SUB	9/1/2017	Grassmere		345	120			Install a 345 kV breaker w/ associated disconnects	MI			Under Construction	\$1,421,500	Engineering	Y	Y	Y
A in MTEP16	B>A	East	ITCT	10425	22187	SUB	9/1/2017	Grassmere		120	120			120 kV breakers and associated disconnects	MI			Under Construction	\$1,496,500	Engineering	Y	N	Y
A in MTEP16	B>A	East	ITCT	10425	21583	LN	9/1/2017	J340 Substation	Grassmere	1	120			Rebuild 5.3 miles of the existing 120 kV Cosmo tap using d	MI	5.3		Under Construction	\$7,170,000	Engineering	Y	N	Y
A in MTEP16	B>A	East	ITCT	10425	21582	TX	9/1/2017	Grassmere		345	120			Install a 345/120 kV transformer at Grassmere	MI			Under Construction	\$5,062,000	Engineering	Y	N	Y
A in MTEP16	B>A	East	ITCT	10723	21650	SUB	12/1/2017	Skyhawk 120 kV		1	120			Construct the 120 kV Skyhawk substation and install 2-120 k	MI			Planned	\$3,487,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	10723	21654	RLY	12/1/2017	Sloan 120 kV		1	120			Upgrade relaying at Sloan to accommodate the Skyhawk sub	MI			Planned	\$117,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	10723	21653	RLY	12/1/2017	Northeast 120kV		1	120			Upgrade relaying at Northeast to accommodate the new 5k	MI			Planned	\$223,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	10723	21652	LN	12/1/2017	Skyhawk	Sloan	1	120			Line created by looping the existing Northeast-Sloan 120 kV	MI	3.1	0.1	Planned	\$627,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	10723	21651	LN	12/1/2017	Northeast	Skyhawk	1	120			Line created by looping the existing Northeast-Sloan 120 kV	MI	4.6	0.1	Planned	\$941,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	10923	21690	TEQ	12/31/2016	Throughout System		1	120			Install a new GOAB switch or replace an existing 120 kV, f	MI			Planned	\$2,400,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	10924	21691	TEQ	12/31/2018	Throughout System		1	120			Install a new GOAB switch or replace an existing 120 kV, f	MI			Planned	\$2,400,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11003	21698	SUB	12/1/2017	Mercury 120 kV		1	120			120 kV, 3-breaker substation in a straight bus configuration	MI			Planned	\$2,721,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11003	21703	RLY	12/1/2017	Arcic	Ranger	1	120			Install 4.7 miles of OPGW (fiber) on the existing structures	MI	4.7		Planned	\$1,116,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11003	21702	RLY	12/1/2017	Crestwood		1	120			Upgrade relaying equipment at Crestwood Substation	MI			Planned	\$206,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11003	21701	RLY	12/1/2017	Ranger		1	120			Upgrade relaying equipment at Ranger substation	MI			Planned	\$127,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11003	21700	LN	12/1/2017	Crestwood	Mercury	1	120			Line created by looping the existing Arcic-Crestwood 120 k	MI	0.8		Planned	\$2,965,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11003	21699	LN	12/1/2017	Arcic	Mercury	1	120			Line created by looping the existing Arcic-Crestwood 120 k	MI	0.8		Planned	\$2,965,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11043	21712	TEQ	4/4/2016	Monroe	Bay Shore	345	120			Replace 345kV terminal equipment at Monroe on the Monrc	MI			M5_In Service	\$2,500,000	Engineering	Y	Y	Y
A in MTEP16	B>A	East	ITCT	11443	21775	SUB	12/1/2017	Ranger		1	120			Install 2-3000A 120kV 40 kA min. int. capability line break	MI	0		Planned	\$1,899,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11443	21778	SUBmisc	12/1/2017	Warren		1	120			Replace Trainers on River Rogue - Warren #2 120 kV line	MI	0		Planned	\$7,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11443	21777	SUBmisc	12/1/2017	River Rouge Power Plant		1	120			Replace Trainers on River Rogue - Warren #2 120 kV line	MI	0		Planned	\$7,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11443	21776	RLY	12/1/2017	ELM		1	120			Install line differential and breaker control relaying for pos	MI	0		Planned	\$260,000	Engineering	N	N	Y
A in MTEP16	B>A	East	ITCT	11583	21787	SUB	9/1/2017	Kirk 345 kV		345	120			New 345 kV, 3-breaker substation laid out in a ring bus con	MI			Planned	\$7,559,500	GIA	Y	Y	Y
A in MTEP16	B>A	East	ITCT	11583	21790	TEQ	9/1/2017	Kirk 345 kV		345	120			TOIFs associated with the J301 Project. This includes a 345	MI			Planned	\$685,000	GIA	N	N	Y
A in MTEP16	B>A	East	ITCT	11583	21789	LN	9/1/2017	Kirk	Bauer	1	345			New 345 kV line created by looping the Bauer-Ringle 345 k	MI	0.1		Planned	\$626,250	GIA	Y	Y	Y
A in MTEP16	B>A	East	ITCT	11583	21788	LN	9/1/2017	Kirk	Ringle	1	345			New 345 kV line created by looping the Bauer-Ringle 345 k	MI	0.1		Planned	\$626,250	GIA	Y	Y	Y
A in MTEP16	B>A	East	ITCT	11584	21791	SUB	9/1/2017	Helena 345 kV		345	120			New 345 kV, 3-breaker substation laid out in a ring bus con	MI			Planned	\$7,495,000	GIA	Y	Y	Y
A in MTEP16	B>A	East	ITCT	11584	21794	TEQ	9/1/2016	Helena 345 kV		345	120			TOIFs for the J308 Project. These include a 345 kV disconn	MI			Planned	\$673,00				

Appendices A, B - Project Facility Table 10/03/2016

Target Appendix	App A/B	Planning Region	Geographic Location by TO Member System	ProjID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP16	B>A	East	METC	9945	21365 SUB		12/31/2017	METC Asset Replacement Program - 2017		345	138		Replace aging and outdated equipment on a cycle that will r	MI			Planned	\$54,276,000	Budgetary	N	N	Y	
A in MTEP16	B>A	East	METC	9956	21371 SUB		12/31/2018	METC Asset Replacement Program - 2018		345	138		Replace aging and outdated equipment on a cycle that will r	MI			Planned	\$49,398,000	Budgetary	N	N	Y	
A in MTEP16	B>A	East	METC	9959	21373 Dist		12/31/2017	Blanket for Customer Throughout System		138			Connect interconnecting entities as requested	MI			Planned	\$2,500,000	Budgetary	N	N	Y	
A in MTEP16	B>A	East	METC	9960	21374 SUB		12/31/2019	METC Asset Replacement Program - 2019		345	138		Replace aging and outdated equipment on a cycle that will r	MI			Planned	\$49,398,000	Budgetary	N	N	Y	
A in MTEP16	B>A	East	METC	9972	21389 RLY		12/31/2017	Four Mile		138			Replace METC relaying and controls at Four Mile Substatio	MI			Planned	\$3,520,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	9975	21393 RLY		12/31/2017	Verona		138			Replace METC relaying and controls at Verona Substation. MI	MI			Planned	\$2,940,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	9978	21399 SUB		6/30/2018	Eureka		138			Replace the Eureka 138 kV circuit switcher 256 with a syncr	MI			Planned	\$510,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	9984	21407 SUB		6/30/2018	Tittabawassee		345			Replace the Tittabawassee 345 kV breaker 38H9 with a bre	MI			Planned	\$790,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	10286	21531 TEQ		12/31/2018	Campbell		138			Remove the Campbell 508 disconnect switch. Modify the r	MI			Planned	\$68,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	10323	21673 SUB		5/31/2018	Michigan Ave 138kV		138			Install 2-138 kV line breakers and associated disconnect sw	MI			Planned	\$2,137,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	10323	21744 LN		5/31/2018	Batavia	Wagner	1	138		Line created by looping the Alder Creek-Batavia 138 kV circ	MI	0.1		Planned	\$412,000	Planning	N	N	Y	
A in MTEP16	B>A	East	METC	10323	21743 LN		5/31/2018	Alder Creek	Wagner	1	138		Line created by looping the Alder Creek-Batavia 138 kV circ	MI	0.1		Planned	\$412,000	Planning	N	N	Y	
A in MTEP16	B>A	East	METC	10323	21742 LN		5/31/2018	Newton	Wagner	1	138		Construct an approx. 13 mile, 138 kV line, on new future do	MI	13		Planned	\$26,117,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	10323	21741 RLY		5/31/2018	Coldwater 138 kV		138			Upgrade relaying on pos. 3040 @ Coldwater substation.	MI			Planned	\$188,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	10323	21740 RLY		5/31/2018	Batavia 138 kV		138			Upgrade relaying at pos. BM37 @ Batavia substation	MI			Planned	\$21,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	10323	21739 SUB		5/31/2018	Wagner 138 kV		138			Add a 138 kV, 3 breaker substation laid out in a ring bus co	MI			Planned	\$5,122,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	10384	21576 LNup		6/1/2017	VERONA	BARNUM CREEK J	138	138		Fully remediate the sag limit on the 266.8 ACSR conductor MI	MI			M3_Long Lead Materials	\$1,070,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	10743	21655 RLY		9/30/2015	Palisades 345 kV		345			Construct a new control house at Palisades substation and	MI			M5_In Service	\$3,482,000	Engineering	Y	Y	Y	
A in MTEP16	B>A	East	METC	10743	21657 LNrb		9/30/2015	Palisades	Segreto	1	345		Install OPGW on the Palisades-Segreto #1 line (formerly Cr	MI	1.5		M5_In Service	\$112,000	Engineering	Y	Y	Y	
A in MTEP16	B>A	East	METC	10743	21656 RLY		9/30/2015	Covert		345			Remove METC SCADA equipment from Covert substation MI	MI			M5_In Service	\$11,000	Engineering	Y	Y	Y	
A in MTEP16	B>A	East	METC	10744	21658 SUB		5/9/2016	Van Tyle 138 kV		138			New 138 kV, 4 row, 11 breaker substation to be fed by loop MI	MI			M5_In Service	\$7,947,200	GIA	Y	N	Y	
A in MTEP16	B>A	East	METC	10744	21697 RLY		5/6/2016	Gaylord		138			Upgrade relaying at Gaylord	MI			M5_In Service	\$200,000	GIA	Y	N	Y	
A in MTEP16	B>A	East	METC	10744	21696 SUB		6/11/2016	Livingston		138			Create 2 new rows and install 5-138 kV breakers with assoc	MI	2.8		M5_In Service	\$3,630,000	GIA	Y	N	Y	
A in MTEP16	B>A	East	METC	10744	21660 LN		5/9/2016	Livingston	Van Tyle	2	138		New 138 kV line created by rebuilding the Livingston-Van ty	MI	2.8	0.1	M5_In Service	\$3,245,000	GIA	Y	N	Y	
A in MTEP16	B>A	East	METC	10744	21659 LN		5/9/2016	Livingston	Van Tyle	1	138		New 138 kV line created by looping the Livingston-Stover li	MI	2.8	0.1	M5_In Service	\$3,245,000	GIA	Y	N	Y	
A in MTEP16	B>A	East	METC	11243	21747 LNrb		5/31/2018	Verona	Barnum Creek Jct.	138			Rebuild the Verona - Barnum Creek Jct. section of the Ver	MI	6.2		Planned	\$13,300,000	Engineering	N	N	Y	
A in MTEP16	B>A	East	METC	11243	21748 LNrc		5/31/2018	Verona	Convis Jct.	138			Reconductor approximately 0.6 miles of the Verona - Foun	MI	0.6		Planned			N	N	Y	
A in MTEP16	B>A	East	METC	11683	21814 LNup		5/31/2018	Barnum Creek	Alder Creek	1	138		Remediate Sag on the Barnum Creek Jct. - Alder Creek 13 MI	MI			Planned	\$400,000	Engineering Prelimin	N	N	Y	
A in MTEP16	B>A	East	METC	11684	21815 LNup		5/31/2018	Alder Creek	Wagner	1	138		Remediate Sag on the Alder Creek - Wagner 138 kV sectio	MI			Planned	\$365,000	Engineering Prelimin	N	N	Y	
A in MTEP16	B>A	East	METC	11704	21817 LNup		5/31/2018	Denso J	Vrooman	1	138		Remediate the sag limit on the Denso J--Vrooman 138 kV s	MI			Planned	\$195,000	Engineering Prelimin	N	N	Y	
A in MTEP16	B>A	East	WPSC	4385	8400 LNrb		12/31/2018	Burnips	Drenthe	1	69	143.4MV		Rebuild Overloaded line (Peak case)	MI	10.5		Planned	\$3,150,000	Planning	N	N	Y
A in MTEP16	B>A	East	WPSC	4385	8401 LNrb		12/31/2018	Drenthe	Fairview	1	69	143.4MV		Rebuild Overloaded line (Peak case)	MI	1.1		Planned	\$350,000		N	N	Y
A in MTEP16	B>A	East	WPSC	9899	21302 LNrb		12/31/2018	Redwood	Crystal Valley Juncti	1	69	143.4		Rebuild the Redwood to Scottville 69kV line, install new pol	MI	6.92		Planned	\$3,075,000	Budgetary	N	N	NT
A in MTEP16	B>A	East	WPSC	9899	21305 LNrb		12/31/2018	Riverton	Scottville	1	69			Rebuild the Redwood to Scottville 69kV line, install new pol	MI	0.1		Planned	\$500,000	Budgetary	N	N	NT
A in MTEP16	B>A	East	WPSC	9899	21304 LNrb		12/31/2018	Eden	Riverton	1	69			Rebuild the Redwood to Scottville 69kV line, install new pol	MI	6.12		Planned	\$3,325,000	Budgetary	N	N	NT
A in MTEP16	B>A	East	WPSC	9899	21303 LNrb		12/1/2018	Crystal Valley Junctio	Eden	1	69	143.4		Rebuild the Redwood to Scottville 69kV line, install new pol	MI	7.45		Planned	\$3,600,000	Budgetary	N	N	NT
A in MTEP16	B>A	East	WPSC	9913	21324 BAT		12/31/2017	System Need		69			2017 Battery Bank replacement program	MI			Planned	\$7,000	Budgetary	N	N	NT	
A in MTEP16	B>A	East	WPSC	9915	21329 RLY		12/31/2017	Oden		69			Upgrade relaying at Oden on the Oden - Emmet terminal	MI			Planned	\$35,000	Budgetary	N	N	NT	
A in MTEP16	B>A	East	WPSC	11023	21704 SUB		5/16/2016	Advance		138	69		Add 138kV bus and 138/69kV transformer to Wolverine's Av	MI			Under Construction	\$4,213,420	Budgetary	N	N	NT	
A in MTEP16	B>A	East	WPSC	11023	21711 LNrb		4/30/2016	Gaylord (WPSC)	Livingston		138			Rebuild existing line with 795ACSS conductor	MI	2.03		Under Construction	\$891,442	Budgetary	N	N	Y
A in MTEP16	B>A	East	WPSC	11023	21710 LNrcv		5/15/2016	Gaylord	Advance	1	138			Convert operating voltage on the Gaylord to Advance lin	MI	21.8	1	Under Construction	\$806,493	Budgetary	N	N	Y
A in MTEP16	B>A	East	WPSC	11023	21709 SUB		5/15/2016	Deer Lake		138	13.1		Upgrade Deer Lake distribution station from 69kV to 138kV	MI			Under Construction	\$639,544	Budgetary	N	N	NT	
A in MTEP16	B>A	East	WPSC	11023	21708 SUB		5/15/2016	Alpine Distribution		138	13.1		Upgrade Alpine distribution substation from 69kV to 138kV	MI			Under Construction	\$1,404,228	Budgetary	N	N	NT	
A in MTEP16	B>A	East	WPSC	11023	21707 SUB		5/15/2016	Elmira		138	13.1		Upgrade the Elmira distribution station from 69kV to 138kV	MI			Under Construction	\$1,234,872	Budgetary	N	N	NT	
A in MTEP16	B>A	East	WPSC	11023	21706 SUB		10/31/2018	Gaylord (WPSC)		138			Phase II - Convert Gaylord 138kV bus to 6 breaker ring bus	MI			Under Construction	\$2,244,651	Budgetary	N	N	Y	
A in MTEP16	B>A	East	WPSC	11023	21705 SUB		4/30/2016	Gaylord (WPSC)		138	96		Phase I - Convert 138kV bus to 4 terminal ring bus design.	MI			Under Construction	\$2,545,422	Budgetary	N	N	NT	
A in MTEP16	B>A	South	AECG	9662	20987 TX		1/1/2017	Harrison South		161			Upgrade transformer at Harrison South.	AR			Planned	\$600,000	Planning Preliminary	N	N	Y	
A in MTEP16	B>A	South	AECG	9663	20988 SUB		7/1/2017	Newport East		161	13.2		Construct 20 MVA, 161/113.2 kV substation.	AR			Planned	\$500,000	Planning Preliminary	N	N	NT	
A in MTEP16	B>A	South	AECG	10204	21491 SUB		6/1/2018	Hunter North 161/13.2kV Substation		161			161/13.2kV Hunter North substation	AR			Planned	\$500,000	Planning Preliminary	N	N	Y	
A in MTEP16	B>A	South	AECG	10205	21492 SwSta		2/28/2017	AECG Bee Branch		161			161kV Tap Breaker	AR			Planned	\$500,000		N	N	Y	
A in MTEP16	B>A	South	AECG	10205	21494 SUB		2/28/2017	Damascus		161			161/13.2kV substation	AR			Planned	\$2,000,000		N	N	Y	
A in MTEP16	B>A	South	AECG	10205	21493 LN		2/28/2017	AECG Bee Branch	AECG Damascus	1	161			6.8 mile 161kV line from the existing AECG Bee Branch sub	AR			Planned	\$5,500,000		N	N	Y
A in MTEP16	B>A	South	AECG	10206	21495 SwSta		12/1/2020	Clinton West		161			5 position ring bus	AR			Planned	\$5,000,000		N	N	Y	
A in MTEP16	B>A	South	AECG	10206	21497 SUB		12/1/2020	Partain		161	69	100MVA		build 3 position ring bus and 100MVA 161/69kV stepdown s	AR			Planned	\$4,000,000	Planning Preliminary	N	N	NT
A in MTEP16	B>A	South	AECG	10206	21496 LN		12/1/2020	Clinton West	Partain		161			14.0 mile line from the existing Clinton West to the propose	AR			Planned	\$18,000,000	Planning Preliminary	N	N	Y
A in MTEP16	B>A	South	AXLA	10122	21469 LNrc		6/1/2017	Hunter	Downtown	1	138			Reconductor the existing Hunter - Downtown 138kV transm	LA			Planned	\$340,000		N	N	Y
A in MTEP16	B>A	South	AXLA	10123	21470 LNrc		6/1/																

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App A/B	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility	
A in MTEP16	B>A	South	Entergy-AR	11483	21774 SUB		5/1/2017	Hurricane Lake		1	115			New delivery point on River Ridge - Mabelvale 115 kV line.	AR			Planned	\$1,589,494	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	4634	8797 LNrc		6/1/2018	Ninemile 115 kV subs	Westwego 115 kV s	1	115	320 MVA		Reconductor Line	LA	5.65		Planned	\$9,026,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	4634	8798 TEQ		6/1/2018	Ninemile 115 kV subs	Westwego 115 kV s	1	115	320 MVA		Upgrade terminal equipment	LA			Planned		Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	4639	8804 LNrc		6/1/2018	Ninemile 115 kV subs	Harvey2 115 kV sub	1	115	320 MVA		Reconductor Line	LA	9.5		Planned	\$15,121,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	4639	8805 TEQ		6/1/2018	Ninemile 115 kV subs	Harvey2 115 kV sub	1	115	320 MVA		Upgrade terminal equipment	LA			Planned		Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	7949	20209 TX		6/1/2018	SOLAC 2 230	SOLAC 69	1	230	69	300	*NERC TPL-001-4 Reliability Standards and Entergy's Plan	LA			Planned	\$8,457,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	7949	21135 TX		6/1/2018	Solac 230	Solac 69	2	230	69	300	Upgrade AT2	LA			Planned		Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	7950	20210 LNrc		6/1/2018	335235 East Broad	335237 Ford 69	1	69	143 MVA		*NERC TPL-001-4 Reliability Standards and Entergy's Plan	LA	1.49		Planned	\$1,474,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	7952	20212 LNrc		6/1/2018	335239 SOLAC 69	335240 SOLAC 69	1	69	143 MVA		*NERC TPL-001-4 Reliability Standards and Entergy's Plan	LA	2.26		Planned	\$4,125,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9682	20997 LNrb		6/1/2020	Vienna	Trussell Crossing	1	115			Upgrade line rating.	LA	6.9		Planned	\$8,823,757	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9684	21006 Dist		6/1/2016	Cadeville		1	115			115 kV distribution substation	LA			Planned	\$41,643,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9684	21007 LN			Rilla	Cadeville	1	115			15 mile 115 kV line constructed to 230 kV specs	LA			Planned		Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9686	21009 Dist		6/1/2020	Lake Providence		1	115			New Lake Providence distribution sub.	LA			Planned	\$31,830,074	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9686	21010 LN			OakGrove	Lake Providence	1	115	176		New 115 kV line to new distribution substation.	LA		15	Planned		Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9690	21014 Dist		12/1/2018	Hodge		1	230			230 kV substation	LA			Planned	\$14,121,450	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9763	21137 LNrc		6/1/2018	Baker	Blount	1	69			Upgrade Line	LA			Planned	\$5,182,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9765	21139 LNrc		12/1/2018	Harelsion	Line 369 Tap	1	69			Upgrade Line	LA			Planned	\$3,165,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9770	21144 TEQ		11/18/2016	Goosport	L673 Tp	1	69			Upgrade Line	LA			Planned	\$145,205	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9771	21145 SUB		6/1/2019	Jefferson Davis		1	138	69		Build new Sub	LA			Planned	\$76,570,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9772	21146 LN		6/1/2019	Colonial Welsh Tap	Jefferson Davis	1	138			Construct New Line	LA			Planned		Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9773	21147 LN		6/1/2019	Jefferson Davis	Carter	1	69			Build new line	LA			Planned		Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9774	21148 LN		6/1/2019	Jefferson Davis	L-13	1	69			Cut L-13 in and out of Jeff Davis 69 kV sub	LA			Planned		Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9775	21149 TAP		6/1/2019	Derouen		1	69			Cut Derouen into Line 11	LA			Planned		Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9776	21150 TAP		6/1/2019	Lawlag		1	69			Cut Lawtag sub in and out of Line 13.	LA			Planned		Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9777	21151 TAP		6/1/2019	Welsh		1	69			Cut Welsh in and out of line 13A	LA			Planned		Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9778	21152 LNrc		6/1/2019	Colonial Welsh Tap	Jefferson Davis	1	138			Reconductor Line	LA			Planned		Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9779	21153 LNrc		12/1/2018	Carter	Serpent	1	69			Reconductor Line	LA			Planned	\$19,235,078	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9780	21154 LNrc		12/1/2019	Compton	Elton	1	69			Reconductor Line	LA			Planned	\$12,782,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9782	21156 SUBmisc		6/1/2022	Lake Arthur		1	69			Adjust Normally Open Point	LA			Planned		Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9786	21160 CB		6/1/2017	Nelson		1	138			Add a breaker on line 274.	LA			Planned	\$1,142,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9787	21161 TEQ		6/1/2016	Air Products	Giegy	1	138			Upgrade line	LA			Planned	\$300,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9788	21162 CAP		6/1/2018	Port Barre		1	69			Add Cap Bank	LA			Planned	\$786,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9790	21164 Dist		6/1/2017	Swisco		1	230			Construct new distribution Substation	LA			Planned	\$8,191,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9791	21165 Dist		6/1/2018	Thompson Road		1	230			New distribution substation	LA			Planned	\$9,252,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9792	21166 Dist		6/1/2019	Lowe Grout Road		1	138			New Distribution Substation	LA			Planned	\$6,989,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9794	21168 TEQ		6/1/2018	Repapco	Port Hudson	1	230			Upgrade line	LA			Planned	\$101,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9795	21169 CAP		12/1/2017	Nesser		1	69			Add Capacitor bank	LA			Planned	\$1,053,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9801	21175 CAP		12/1/2017	North Norco		1	115			New Capacitor Bank	LA			Planned	\$1,826,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9805	21179 LNrc		12/1/2018	Patterson	Pontchartrain Park	1	115			Upgrade Line	LA			Planned	\$1,851,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	9847	21224 CB		12/1/2017	Mossville		1	69			Replace breaker	LA			Planned	\$700,000	Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9848	21225 CB		12/1/2017	Mossville		1	69			Replace breaker	LA			Planned		Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	9849	21226 CB		12/1/2017	Carlyss		1	69			Replace breaker	LA			Planned		Planning	N	N	NT	
A in MTEP16	B>A	South	Entergy-LA	10008	21432 LN		6/1/2020	Nelson 230 kV	Menena 230 kV	1	230	779		Approximately 5.5 miles of 1272 ACSS single conductor.	LA	0	5.5	Planned	\$15,500,000	Planning	Preliminary	N	N	Y
A in MTEP16	B>A	South	Entergy-LA	10223	21500 TAP		12/31/2016	HollyRidge		1	115			New cut-in for LAGEN Holly Ridge substation	LA			Planned	\$254,833	Facility Study	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	10583	21605 CB		6/1/2018	Coly 230		1	230			Add 230 kV Breaker at Coly	LA			Planned	\$1,692,865	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	10584	21606 CB		6/1/2018	Tiger 230		1	230			Add breaker at Tiger 230 kV	LA			Planned	\$1,692,865	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	10585	21607 CB		6/1/2018	Harelsion 230		1	230			Add breaker at Harelsion 230 kV	LA			Planned	\$1,692,865	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	10588	21616 SUB		12/31/2018	Fleur 230		1	115			Construct new substation on the Oakville to Alliance 230 kV Line	LA			Planned	\$11,100,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	10588	21669 LNrb		12/31/2018	Ninemile	Barataria	1	115			Rebuild Line	LA			Planned	\$31,605,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	10588	21617 CAP		12/31/2018	Fleur		1	230			Add cap bank to support the customer load	LA			Planned		Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	10591	21622 TX		6/1/2016	Willow Glen 500	Willow Glen 138	1	500	138		Adjust Tap on Auto	LA			Planned	\$15,027	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	10623	21626 SUB		6/1/2018	Sadie		1	230			Construct New 230 kV Substation on the PPG to Rosebluff	LA			Planned	\$24,814,742	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	10624	21627 SUB		6/1/2019	Big Lake		1	230			Construct 230 kV substation on the Vincent to Graywood	LA			Planned	\$28,000,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	11423	21769 SUB		12/1/2017	PPG	Rosebluff	1	230			Construct a new 230 kV substation on the PPG to Rosebluff	LA			Planned	\$7,290,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	12016	22087 TEQ		1/1/2020	Minden	Sarepta	1	115			Upgrade line terminal equipment on Minden - Sarepta 115kV	LA			Planned	\$1,900,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	12017	22088 SUB		1/1/2022	NSUB1		1	115			New substation south of Ninemile substation	LA			Planned	\$13,687,330	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	12017	22091 CB		1/1/2022	Michoud		1	230			Add breaker and reconfigure 115 kV bus at Michoud	LA			Planned	\$1,700,000	Planning	N	N	Y	
A in MTEP16	B>A	South	Entergy-LA	12017	22090 TEQ		1/1/2022	Waterford		1	230													

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App A/B	Planning Region	Geographic Location by Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP16	B>A	South	Entergy-TX	9807	21182 SwSta		12/1/2018	Pintal			138			New Switching Station	TX			Planned	\$9,524,000	Planning	N	N	Y
A in MTEP16	B>A	South	Entergy-TX	9808	21183 CAP		6/1/2018	Kirbyville			69			New Capacitor bank	TX			Planned	\$1,000,000	Planning	N	N	NT
A in MTEP16	B>A	South	Entergy-TX	9809	21184 LNrc		6/1/2019	Hull	Sour Lake		69			Upgrade Line	TX			Planned	\$30,759,000	Planning	N	N	NT
A in MTEP16	B>A	South	Entergy-TX	9810	21185 LNrc		12/1/2019	Raywood	Daisetta	1	69			Upgrade Line	TX			Planned	\$8,655,000	Planning	N	N	NT
A in MTEP16	B>A	South	Entergy-TX	9812	21187 SwSta		6/1/2019	Garden			230			Build New Substation	TX			Planned	\$65,835,000	Planning	N	N	Y
A in MTEP16	B>A	South	Entergy-TX	9813	21188 LN		6/1/2019	Garden	Legend	1	230			Build new line	TX			Planned		Planning	N	N	Y
A in MTEP16	B>A	South	Entergy-TX	9814	21189 SwSta		6/1/2019	Legend			230			Build New Substation	TX			Planned		Planning	N	N	Y
A in MTEP16	B>A	South	Entergy-TX	9817	21192 CB		12/1/2018	Helbig			230			Add Circuit Breakers	TX			Planned	\$7,196,000	Planning	N	N	Y
A in MTEP16	B>A	South	Entergy-TX	9818	21193 LNcnv		6/1/2019	Stowell	Himex	1	138			Convert line to 138 kV	TX			Planned	\$13,600,000	Planning	N	N	Y
A in MTEP16	B>A	South	Entergy-TX	9852	21229 CB		6/1/2017	Grimes			345			Install new breaker	TX			Planned	\$1,142,000	Planning	N	N	Y
A in MTEP16	B>A	South	Entergy-TX	10823	21668 SUB		6/1/2017	Moscow			138			Construct New Customer substation	TX			Planned	\$7,004,002	Facility Study	N	N	Y
A in MTEP16	B>A	South	Entergy-TX	11363	21763 TEQ		6/1/2017	Hartburg			500			Re-position line bays Hartburg-Cottonwood 500 kV line 1 & 2	TX			Planned	\$2,000,000	Planning	N	N	Y
A in MTEP16	B>A	South	LAF&A	8821	20746 LN		12/31/2019	Northeast	Peck		69			69kV line connecting Northeast station to Peck station.	LA			Planned	\$4,230,000	Planning	N	N	NT
A in MTEP16	B>A	South	SMEPA	9957	21378 SUB		3/23/2017	Origis Sub	Origis Gen	1	69	26.4	60 MVA	The Origis Energy solar plant will tap SMEPA's existing 69k MS	TX			Planned	\$1,590,000	Planning	N	N	NT
A in MTEP16	B>A	South	SMEPA	9957	21715 GEN		3/23/2017	Origis Gen			69	26.4	52MW	The Origis Energy solar plant will tap SMEPA's existing 69k MS	TX			Planned		Planning	N	N	NT
A in MTEP16	B>A	South	SMEPA	9969	21382 LNrb			Sumrall	Rawls Springs	1	69	71	MVA	Rebuild L42 to final conductor temperature of 100C (71 M MS	TX			Planned	\$2,202,498	Planning	N	N	NT
A in MTEP16	B>A	South	SMEPA	9969	21386 LNrb			Sumrall	Columbia	1	69	71	MVA	Rebuild L43 to a final conductor temperature of 100C (71 M MS	TX			Planned	\$2,579,502	Planning	N	N	NT
A in MTEP16	B>A	West	ATC	3190	5631 LN		4/29/2016	Sunset Point	Winneconne	1	69			70 Rebuild line Y-103 from Sunset Point to Winneconne to SN, WI	WI	10.5		Planned	\$3,868,404	Engineering	N	N	Y
A in MTEP16	B>A	West	ATC	7583	20011 LNrb		12/31/2018	Lone Rock	Richland	1	69			Rebuild Y-78 Lone Rock - Richmond 69 kV	WI	11.3		Planned	\$41,848,961	Engineering	N	N	Y
A in MTEP16	B>A	West	ATC	7583	20017 LNrb		12/31/2018	Blue River Tap	Boscobel	1	69			79 Rebuild Y-124 Blue River Tap - Boscobel 69 kV	WI	6.1		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ATC	7583	20016 LNrb		12/31/2018	Muscoda	Blue River Tap	1	69			79 Rebuild Y-124 Muscoda - Blue River Tap 69 kV	WI	8.9		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ATC	7583	20015 LNrb		12/31/2015	Avoca Tap	Muscoda Ind. Park	1	69			79 Rebuild Y-124 Avoca Tap - Muscoda Ind. Park 69 kV	WI	4.32		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ATC	7583	20014 LNrb		12/31/2018	Muscoda Ind. Park	Muscoda	1	69			79 Rebuild Y-124 Muscoda Ind. Park - Muscoda 69 kV	WI	0.33		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ATC	7583	20013 LNrb		12/31/2018	Avoca Tap	Avoca	1	69			79 Rebuild Y-124 Avoca Tap - Avoca 69 kV	WI	0.87		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ATC	7583	20012 LNrb		12/31/2018	Lone Rock	Avoca Tap	1	69			79 Rebuild Y-124 Lone Rock - Avoca Tap 69 kV	WI	7.93		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ATC	7983	20253 CB		6/1/2017	Canal			138	69		Canal 138-69 kV transformer high/low side breaker addition	WI			Planned	\$5,100,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	7985	20255 RLY		6/1/2017	Canal			138			Installing redundant bus differential protection on the two C&I WI	WI			Planned	\$221,116	Engineering	N	N	Y
A in MTEP16	B>A	West	ATC	8442	20670 TX		12/31/2016	Arnott		1	138	69		60 Replace the Arnott 138/69 kV Transformer with a 60 MVA U WI	WI			Planned	\$4,545,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	8640	20710 BUS		12/31/2017	City Limits		1	138			332 Replace bus conductor at City Limits bus 1-2 with 2500 kon WI	WI			Planned	\$500,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	8640	20711 BUS		12/31/2017	City Limits		2	138			484 Replace bus conductor at City Limits bus 2-3 with 2500 kon WI	WI			Planned		Planning	N	N	Y
A in MTEP16	B>A	West	ATC	8841	20752 LNrb		12/1/2019	Finger Rd	Luxemburg	1	69			39 Rebuild J-10 Finger Road 69 - Luxemburg 69 with T2 4/0 A WI	WI	12.5		Planned	\$74,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	8841	20758 LNrb		12/1/2019	Canal	Algoma	1	69			39 Rebuild J-10 Canal 69 - Algoma 69 with 4/0 T2 ACSR WI	WI	18.7		Planned		Planning	N	N	Y
A in MTEP16	B>A	West	ATC	8841	20757 LNrb		12/1/2019	Algoma	Algoma	1	69			39 Rebuild J-10 Algoma 69 - Algoma S Tap 69 with 4/0 T2 AC WI	WI	1.74		Planned		Planning	N	N	Y
A in MTEP16	B>A	West	ATC	8841	20756 LNrb		12/1/2019	Algoma	Barnett	1	69			46 Rebuild J-10 Algoma S Tap 69 - Barnett 69 with 4/0 T2 AC WI	WI	7.01		Planned		Planning	N	N	Y
A in MTEP16	B>A	West	ATC	8841	20755 LNrb		12/1/2019	Barnett	Beardsley	1	69			46 Rebuild J-10 Barnett 69 - Beardsley 69 with 4/0 T2 ACSR WI	WI	3.32		Planned		Planning	N	N	Y
A in MTEP16	B>A	West	ATC	8841	20754 LNrb		12/1/2019	Booster	Beardsley	1	69			46 Rebuild J-10 Booster 69 - Beardsley 69 with 4/0 T2 ACSR WI	WI	5.51		Planned		Planning	N	N	Y
A in MTEP16	B>A	West	ATC	8841	20753 LNrb		12/1/2019	Luxemburg	Booster	1	69			46 Rebuild J-10 Luxemburg 69 - Booster 69 with 4/0 T2 ACSR WI	WI	6.23		Planned		Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9423	20899 LNrb		12/1/2019	Plover	Whiting Avenue	1	115			205 Rebuild line B-106 (Plover-Okray-Whiting 115) using existin WI	WI	5.8		Planned	\$6,217,603	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9896	21307 SUB		12/31/2015	Lyndon			138			Install 2 line breakers to sectionalize.	WI			M5_In Service	\$3,100,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9911	21322 SUB		4/22/2016	Maes			138			Maes substation: Install 2 line breakers to sectionalize	WI			Planned	\$1,800,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9917	21331 SUB		12/31/2016	Bloomington			138			Install SCADA controlled breakers to sectionalize	WI			Planned	\$1,600,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9918	21332 SUB		6/1/2016	Red Maple			138			Install a bus tie breaker.	WI			Planned	\$1,200,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9921	21334 SUB		12/31/2017	Birchwood			138			Install a bus tie breaker.	WI			Planned	\$700,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9923	21335 SUB		12/1/2017	Mukwonago			138			Install line breaker on line 67K61.	WI			Planned	\$600,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9934	21349 LNup		6/30/2018	Oak Creek	Hayes	1	138			310 Oak Creek - Hayes 138-kV line #11 upgrade and reconfigu WI	WI			Planned	\$21,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9938	21360 TX		12/1/2016	Sunset Point			138			Replace Sunset Point 138-69 kV Transformer	WI			Planned	\$6,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9944	21364 TX		12/31/2017	Erdman			138			Replace Erdman T31 Transformer.	WI			Planned	\$6,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9954	21369 TX		12/1/2018	Lost Dauphin			138			Replace Lost Dauphin T1 Transformer.	WI			Planned	\$6,700,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9958	21370 TX		12/31/2017	East Krok			138			Replace East Krok Transformer.	WI			Planned	\$2,500,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9961	21372 TX		12/31/2018	Nelson Dewey			138			Replaces Nelson Dewey T31/T32 Transformers.	WI			Planned	\$6,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9977	21394 LNrb		6/30/2020	Goodman	Caldron Falls	1	69			Rebuild 69kV Line J-88 Goodman - Caldron Falls Substati WI	WI			Planned	\$35,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	9986	21408 LNrb		12/31/2021	Port Washington	Saukville	1	138			Rebuild 138kV Line 762 Port Washington - Saukville Subst WI	WI			Planned	\$15,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	10403	21577 LNup		4/21/2017	Keponsa	Sun Prairie	1	69			Re-rate Y - #1 69kV line between Keponsa - Sun Prairie WI	WI			Planned	\$5,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	10404	21578 LNup		3/17/2017	9 Mile	Delour	1	69			Re-rate Approximately 56.87 miles (6950) 69kV Line betwe WI	WI	56.9		Planned	\$7,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	10484	21588 LN		6/1/2019	HWY V	Eaton	1	138			690 Construct a new ATC 138kV loop through at Eaton Subst WI	WI	6.54		Planned	\$2,500,000	Planning	N	N	Y
A in MTEP16	B>A	West	ATC	10484	21590 SUB		6/1/2019	Eaton			138	24.9		New Eaton 138 KV substation	WI			Planned		Planning	N	N	NT
A in MTEP16	B>A	West	ATC	10484	21589 LN		6/1/2019	Eaton															

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Target Appendix	App A/B	Planning Region	Geographic location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upp	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP16	B>A	West	CFU-PMEU	11383	21767 RLY		8/1/2017	Pella West Substation			69			Line relaying for G329 including relaying changes for capac	IA			Planned	\$74,400	GIA	N	N	NT
A in MTEP16	B>A	West	CFU-PMEU	11383	21766 TEQ		8/1/2017	Pella West Substation			69			Terminal for J329 69kV line into the Pella West substation.	IA			Under Construction	\$800,050	GIA	N	N	NT
A in MTEP16	B>A	West	GRE	4378	8387 CB		9/1/2020	Long Lake			115			Circuit breakers for new lines related to Hubbard-Potato Lal	MN			Planned	\$835,000	Planning	N	N	Y
A in MTEP16	B>A	West	GRE	4378	20790 LN		4/1/2017	Blueberry	Red Eye		115			Construct a new 115 kV transmission line from the Blueberry	MN		8	Planned	\$13,655,749	Planning Preliminary	N	N	Y
A in MTEP16	B>A	West	GRE	4378	8891 SUB		4/1/2017	Blueberry			115	34.5		New Blueberry 115/34.5 kV substation using Hubbard trans MN	MN			Planned	\$2,400,000	Planning	N	N	Y
A in MTEP16	B>A	West	GRE	4378	8890 CB		4/1/2017	Hubbard			115			Circuit breakers for new lines to Cat River and Potato Lake	MN			Planned	\$1,670,000	Planning	N	N	Y
A in MTEP16	B>A	West	GRE	7884	20114 SUB		12/10/2018	Riverview			345	115	448	Construct the new Riverview 345/115/69 kV substation dire	MN			Planned	\$13,425,056	Planning Preliminary	N	N	Y
A in MTEP16	B>A	West	GRE	7884	20129 LNrb		12/10/2018	Melrose	Riverview		1	69	69	Rebuild E Melrose to Millwood Tap 4.6 mile line.	MN	4.6		Planned	\$2,042,957	Planning Preliminary	N	N	NT
A in MTEP16	B>A	West	GRE	7884	20128 SUB		12/10/2018	Riverview			115	69	70	Construct the new Millwood (Riverview Road) 345/115/69 I	MN			Planned	\$4,583,671	Planning Preliminary	N	N	Y
A in MTEP16	B>A	West	GRE	7896	20133 LN		8/31/2017	Fish Trap Pumping Station			1	115	115	Construct a new 115 kV transmission line from the Wing Ri	MN		20	Planned	\$10,855,000	Planning Preliminary	N	N	Y
A in MTEP16	B>A	West	GRE	10423	21579 Dist		3/30/2017	Randolph			115			New distribution substation	MN		0.25	Planned	\$525,000	Planning	N	N	Y
A in MTEP16	B>A	West	GRE	10424	21580 Dist		10/31/2017	Savage			115			New distribution substation	MN		0.5	Planned	\$1,000,000	Planning	N	N	Y
A in MTEP16	B>A	West	GRE	11463	21773 TEQ		11/1/2016	Leland Olds	Stanton		1	230		Replace 31RB3 jumpers to increase line rating above 313 I	MND			Planned	\$33,033	Planning	N	N	Y
A in MTEP16	B>A	West	GRE_MP	4378	8383 LN		4/1/2017	Hubbard	Blueberry		1	115		Build new 115 kV line from Hubbard to new Blueberry subs	MN	15		Planned	\$10,800,000	Planning	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21050 SwSta		12/31/2017	White Pole Road	Switch Station		69	69		Construct a new 3 terminal switch station named White Pok	IA			Planned	\$2,341,176	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21071 LNcnv		12/31/2017	Panorama REC Tap	Panorama REC		1	69	69	Convert Panorama REC Tap - Panorama REC to 69 kV (e	IA	0.8		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21070 LNcnv		12/31/2017	Panora Muni Tap	Panorama REC Tap		1	69	69	Convert Panora Muni Tap - Panorama REC to 69 kV (e	IA	1.57		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21069 LNcnv		12/31/2017	Panora Muni Tap	Panorama Muni		1	69	69	Convert Panora Muni Tap - Panora Muni to 69 kV (existi	IA	0.61		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21068 LNcnv		12/31/2017	Panora Switch Station	Panora Muni Tap		1	69	69	Convert Panora Switch Station - Panora Muni Tap to 69 kV	IA	5.72		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21067 LNcnv		12/31/2017	Panora Switch Station	Panorama REC		1	69	69	Convert Panora Switch Station - Panorama REC to 69 kV (exi	IA	0.7		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21066 LNcnv		12/31/2017	Panora Switch Station	Guthrie		1	69	69	Convert Panora Switch Station - Guthrie to 69 kV (existi	IA	6		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21065 SwSta		12/31/2017	Panora Switch Station	Switch Station		69	69		CIPCO will construct a new Panora 69 kV 3 terminal switch	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21064 LNcnv		12/31/2017	Redfield Tap	Panora Switch Stati		1	69	69	Convert Redfield Tap - Panora Switch Station to 69 kV	IA	10		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21063 LNcnv		12/31/2017	Redfield Tap	Redfield		1	69	69	Convert Redfield Tap - Redfield to 69 kV (existing 34.5 kV	IA	0.7		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21062 LNcnv		12/31/2017	Diamondhead REC T	Redfield Tap		1	69	69	Convert Diamondhead REC Tap - Redfield Tap to 69 kV (e	IA	1.85		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21061 LNcnv		12/31/2017	Diamondhead REC T	Diamondhead REC		1	69	69	Convert Diamondhead REC Tap - Diamondhead REC to 66	IA	1.75		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21060 LNcnv		12/31/2017	Stuart Muni Tap	Diamondhead REC		1	69	69	Convert Stuart Muni Tap - Diamondhead REC Tap to 69 kV	IA	8		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21059 LNcnv		12/31/2017	Stuart Muni Tap	Stuart Muni		1	69	69	Convert Stuart Muni Tap - Stuart Muni to 69 kV (existing 34	IA	0.8		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21058 LNcnv		12/31/2017	Stuart REC Tap	Stuart Muni Tap		1	69	69	Convert Stuart REC Tap - Stuart Muni Tap to 69 kV (existi	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21057 LNcnv		12/31/2017	Stuart Muni South Tap	Stuart REC		1	69	69	Convert Stuart Muni South Tap - Stuart REC to 69 kV (exis	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21056 LNcnv		12/31/2017	Stuart Muni South Tap	Stuart Muni South T		1	69	69	Convert Stuart Muni South Tap - Stuart Muni South Tap to	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21055 LNcnv		12/31/2017	Stuart REC Tap	Stuart Muni South T		1	69	69	Convert Stuart REC Tap - Stuart Muni South Tap to 69 kV	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21054 LNcnv		12/31/2017	Hawkeye REC	Stuart REC Tap		1	69	69	Convert Hawkeye REC - Stuart REC Tap to 69 kV (existi	IA			Planned	\$264,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21053 LNcnv		12/31/2017	White Pole Road	Hawkeye REC		1	69	69	Convert White Pole Rd - Hawkeye REC to 69 kV (existi	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21052 LNcnv		12/31/2017	Guthrie	White Pole Road		1	69	69	Convert Guthrie - White Pole Rd to 69 kV (existing 34.5 kV	IA			Planned	\$240,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21051 TAP		12/31/2017	White Pole Road	Switch Station		69	69		69 kV line taps for the new White Pole Road station	IA			Planned	\$540,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9664	21037 SUB		12/31/2017	PCI	Substation		69	69		Convert PCI-Oak Hill to 69 kV operation	IA			Planned	\$12,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9665	21039 LN		12/31/2017	PCI	Oak Hill		1	69	69	Convert to 69 kV operation (already built for 69 kV).	IA	4.5		Planned	\$21,600	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9665	21038 Dist		12/31/2017	Oak Hill	Substation		69	69		Convert to 69 kV operation	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9666	21027 LNcnv		12/31/2018	Emerald Isle	Harrison		1	69	69	Convert Emerald Isle-Harrison line to 69 kV operation (alrea	IA	3.5		Planned	\$240,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9666	21034 SUB		12/31/2018	Beverly	Substation		69	69	77	Add two new 69 kV line terminals and a 69 kV bus tie break	IA			Planned	\$1,461,539	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9666	21033 LNrb		12/31/2018	PCI	Beverly		1	69	69	Rebuild a portion of the PCI-Beverly line to double circuit	IA	1.2		Planned	\$1,466,754	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9666	21032 LNcnv		12/31/2018	Taylor	Beverly		1	69	77	Convert the Beverly-Taylor line to 69kV operation	IA	5.15		Planned	\$1,502,754	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9666	21030 Dist		12/31/2018	Taylor	Substation		69	69		New Taylor 69kV/distribution substation	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9666	21029 LNcnv		12/31/2018	Harrison	Taylor		1	69	69	Convert Harrison-Taylor line to 69 kV operation (already bui	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9666	21028 SUB		12/31/2018	Emerald Isle	Substation		69	69		Add 69 kV terminal at Emerald Isle	IA			Planned	\$443,671	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9667	20989 BUS		12/31/2017	Wapello	Substation		161	69	558	Rebuild the 161kV to breaker and 1/2 design and upgrade e	IA			Planned	\$9,094,680	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9667	21638 LNup		12/31/2017	Jefferson	Wapello Co		1	161	161	Line work for sub reconfiguration.	IA			Planned	\$226,200	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9667	21637 LNup		12/31/2017	OGS	Wapello Co		2	161	161	Line work for sub reconfiguration	IA			Planned	\$118,200	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9667	21636 LNup		12/31/2017	Appanoose County	Wapello Co		1	161	161	Line work for sub reconfiguration.	IA			Planned	\$118,200	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9667	21635 LNup		12/31/2017	OGS	Wapello Co		1	161	161	Line work for sub reconfiguration.	IA			Planned	\$550,200	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9667	21634 SUB		12/31/2017	OGS	Substation		161	161		Upgrades required at OGS for the Wapello Co upgrades	IA			Planned	\$7,985	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9668	21079 SUB		12/31/2019	New Hills area	Substation		345	69		Construct a new substation in the Hills area.	IA			Planned	\$19,029,110	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9668	21092 LN		12/31/2025	Conroy	Homestead		1	69	69	New CIPCO owned Conroy-Homestead 69 kV line	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9668	21091 SwSta		12/31/2025	Conroy	Switch Station		69	69		New Conroy 69 kV switching station	IA			Planned	\$3,979,450	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9668	21090 SwSta		12/31/2025	Homestead	Switch Station		69	69		New Homestead 69 kV switching station	IA			Planned	\$3,979,450				

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App A/B	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP16	B>A	West	ITCM	9706	21076 LN		12/31/2016	Huntley	Blue Earth	1	69	69		Connect the Huntley 69kV to the Blue Earth 69 kV sub	IA			Planned	\$1,272,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9706	21075 LN		12/31/2016	Huntley	Walters	1	69	69		Connect the Huntley 69kV to the Walter 69 kV sub	MN			Planned	\$1,792,800	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9706	21074 LN		12/31/2016	Huntley	Winnabago Local	1	69	69		Connect the new Huntley 69kV to the Winnabago Local 69kV	MN			Planned	\$676,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9706	21073 SUB		12/31/2016	Huntley	Winnabago Jct	1	69	69		Retire the Winnabago Jct 69kV portion of the sub.	IA			Planned	\$300,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9711	21044 BUS		12/31/2017	Traer	Substation	1	161	161		Convert the 161 kV to a ring bus	IA			Planned	\$3,667,882	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9711	21759 TAP		12/31/2017	Traer	161 kV line taps	1	161	161		Reroute 161 kV lines and new dead ends near the Traer su	IA			Planned	\$1,344,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9711	21045 SUBmisc		12/31/2017	Dysart	Substation	1	161	161		Upgrade 161 kV switch	IA			Planned	\$54,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9712	21046 SUB		6/1/2017	Burlington Generating	Substation	1	69	69		Modify the Burlington Generating Station's substation for in	IA			Planned	\$3,114,346	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21291 SwSta		12/31/2019	Lyon	Switch Station	69	69	69		Construct a new 3 terminal switch station near Lyon (official	IA			Planned	\$3,420,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21632 SUB		12/31/2019	Lyon	Substation	69	69	69		Retire the old Lyon 34kV substation.	IA			Planned	\$160,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21631 LN		12/31/2019	Boone CKT 2230	Substation	1	69	69		Retire the 34kV Boone CKT 2230.	IA			Planned	\$360,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21300 LNcnv		12/31/2019	Jewell	Lyon	1	69	69		Jewell to Lyon Breaker Station 34.5 to 69 kV line conversion	IA	0.96		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21298 LNcnv		12/31/2019	Stanhope Muni Tap	Jewell	1	69	69		Stanhope Muni Tap to Jewell 34.5 to 69 kV line conversion	IA	10.2		Planned	\$257,505	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21297 LNcnv		12/31/2019	Stanhope Muni Tap	Stanhope Muni	1	69	69		Stanhope Muni Tap to Stanhope Muni 34.5 to 69 kV line co	IA	0.25		Planned	\$420,974	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21296 LNcnv		12/31/2019	Stratford REC Tap	Stanhope Muni Tap	1	69	69		Stratford REC Tap to Stanhope Muni Tap 34.5 to 69 kV line	IA	4.98		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21294 LNcnv		12/31/2019	Stratford REC Tap	Stratford REC	1	69	69		Stratford REC Tap to Stratford REC 34.5 to 69 kV line conv	IA	2.7		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21293 LNcnv		12/31/2019	Ridgeport REC	Stratford REC Tap	1	69	69		Ridgeport REC to Stratford REC Tap 34.5 to 69 kV line con	IA	4.94		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9714	21292 LNcnv		12/31/2019	Doud	Ridgeport REC	1	69	69		Doud to Ridgeport REC 34.5 to 69 kV line conversion	IA	11.2		Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9901	21306 SUB		12/31/2018	Kneedler	Substation	69	69	69		New sub north of Mt. Ayr instead of rebuilding the Mount Ayr	IA			Planned	\$4,291,794	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9901	21753 CAP		12/31/2018	Mt Ayr (Kneedler)	Substation	69	69	69		Add a 21.42 MVAR cap at Kneedler sub. (Three stages of 7	IA			Planned		Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9901	21752 TAP		12/31/2018	Mt Ayr (Kneedler)	Substation	69	69	69		69kV line tap work for the new Kneedler substation	IA			Planned	\$652,800	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9904	21311 SUB		12/31/2019	Appanose County	Substation	1	161	161		Due to a lack of voltage support in Southwest Iowa and an	IA			Planned	\$4,944,594	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9907	21315 LNrb		12/31/2022	Summit	Dowray	1	69	69		Rebuild -12.9 miles of old line to new T2-4/0 ACSR	MN	12.9		Planned	\$9,162,091	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9908	21316 LNrb		12/31/2023	Dowray	Fulda	1	69	69		Rebuild 69kV line from Dowray substation to the Fulda Junc	MN	14.5		Planned	\$9,410,124	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9910	21318 LNrb		12/31/2024	Fulda Junction	Heron Lake	1	69	69		Rebuild 69kV line from Fulda Junction to Heron Lake	MN	20.1		Planned	\$14,976,652	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9937	21363 TX		11/30/2016	Femald	Transformer	1	161	69	150 MVA	Replace existing 161/69 kV transformer with 150 MVA unit	IA			Planned	\$2,392,800	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9937	21640 SUB		12/15/2015	Marshalltown	Substation	1	161	161		Network upgrades for the J233 project	IA			M5_In Service	\$4,095,731	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9937	21359 LNrb		3/30/2017	Newton	Prairie City	1	69	69	40 MVA	Rebuild ITCM portion of jointly-owned line with T2-4/0 cond	IA			Planned	\$4,647,247	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9937	21358 LNup		12/31/2016	Jasper	Newton	1	161	161	276 MVA	Raise structure to allow operation at 276 MVA	IA			Planned	\$108,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9937	21357 LNrc		12/31/2016	Jasper	Laurel	1	161	161	361 MVA	Replace conductor to allow operation at 361 MVA	IA			Planned	\$151,037	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9937	21356 LNup		9/15/2015	Marshalltown	Blairstown Junction	1	115	115	90 MVA	Raise/Replace structures to allow operation at 90 MVA	IA			M5_In Service	\$1,560,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9937	21355 TX		2/1/2016	Newton	Transformer	1	161	69	150 MVA	Replace existing 161/69 kV transformer with 150 MVA unit	IA			M5_In Service	\$2,392,800	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9937	21354 TX		4/12/2016	Jasper	Transformer	1	161	69	150 MVA	Replace existing 161/69 kV transformer with 150 MVA unit	IA			M5_In Service	\$2,392,800	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9939	21361 LNrb		12/31/2016	Jasper	Aurora Heights	1	69	69	140 NVA	Rebuild line with T2-4/77 ACSR conductor to allow operatio	IA			Planned	\$3,720,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9941	21362 TEQ		6/1/2016	Traer	Traer Tap	1	69	69	61 MVA	Upgrade terminal/replace breaker to increase rating to bus	IA			Planned	\$293,449	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9985	21411 LNrb		12/31/2018	Newhall	Williamsburg	1	161	161		Rebuild Williamsburg 115kV tap to 161kV	IA	23	3	Planned	\$40,174,153	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9988	21409 SwSta		12/31/2018	Newhall	Switch Station	1	161	161		Construct 3 position 161kV Breaker Station	IA			Planned	\$6,924,478	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	9988	21757 TAP		12/31/2018	Newhall	Line Taps	1	161	161		Construct 161kV line taps for 3 position 161kV Breaker Stat	IA			Planned	\$1,166,404	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10022	21434 SUB		12/31/2019	Lisbon North	Substation	1	69	69		Two (2) 69 kV breakers and associated equipment will be ir	IA			Planned	\$598,171	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10022	21633 LNcnv		12/31/2019	PCI	Mt. Vernon	1	69	69		Convert to 69kV operation.	IA			Planned	\$661,200	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10022	21437 LNup		12/31/2019	76th AVE (Eagle)	Tharp	1	69	69		OPGW will need to be installed.	IA			Planned	\$2,175,600	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10022	21436 LN		12/31/2019	PCI	76th AVE (Eagle)	1	69	69		approximately 0.6 mile of new 69 kV transmission line w	IA			Planned	\$2,037,600	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10022	21435 SUB		12/31/2019	PCI	Substation	1	69	69		A 69 kV breaker and associated equipment will be installed	IA			Planned	\$321,361	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10023	21441 LN		12/31/2017	ITCM Asset Blanket f	Throughout system	3	45	69		Replace aging and outdated equipment on a cycle that will	IA, MN, IL			Planned	\$37,200,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10023	21443 LN		12/31/2019	ITCM Asset Blanket f	Throughout system	3	45	69		Replace aging and outdated equipment on a cycle that will	IA, MN, IL			Planned	\$37,200,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10023	21442 LN		12/31/2018	ITCM Asset Blanket f	Throughout system	3	45	69		Replace aging and outdated equipment on a cycle that will	IA, MN, IL			Planned	\$37,200,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10024	21438 LN		12/31/2019	Blanket for Customer	Throughout system	3	45	69		These projects are being done at the request of an interco	IA, MN, IL			Planned	\$2,000,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10268	21511 SUB		4/30/2017	Dubuque 8th Street	Substation	69	69	69		Sub upgrades associated with the Alliant Energy distributor	IA			Planned	\$1,290,000	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10268	21513 LN		4/30/2017	Dubuque 8th Street	Sandridge	1	69	69		Re-terminate Sandridge 69kV line.	IA			Planned	\$156,696	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10268	21512 LN		4/30/2017	Dubuque 8th Street	Bunker Hill	1	69	69		Replace guyed structure with self-supporting structure.	IA			Planned	\$156,697	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10269	21514 LNrb		12/31/2017	Lore	Hickory Creek	1	161	161		Rebuild 6.81 miles of the Lore-Hickory Creek 161 kV line.	IA			Planned	\$12,471,467	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10269	21639 TEQ		12/31/2017	Hickory Creek	Substation	1	161	161		Remove the wave trap	IA			Planned	\$101,400	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10269	21515 TEQ		12/31/2017	Lore	Hickory Creek	1	161	161		Upgrade the Lore 161kV terminal and remove the wave trap	IA			Planned	\$127,980	Engineering	N	N	Y
A in MTEP16	B>A	West	ITCM	10303	21559 SUB		12/31/2017	Williamsburg	Substation	1	161	34		The two aging and miss-matched 115/34.5kV transformers	IA			Planned	\$1,204,368	Engineering	N	N	NT
A in MTEP16	B>A	West	ITCM	10303																			

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App A/B	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility	
A in MTEP16	B>A	West	MEC	9947	21368 LN		6/1/2018	Polk City	NE Ankeny	1	161			New 3 mile line from Polk City Substation to existing Bittersweet	IA		3	Planned	\$2,500,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MEC	9947	21367 LN		6/1/2018	Polk City	Bittersweet	1	161		210	Build four miles of new 161 kV line from Polk City to the exit	IA		4	Planned	\$3,200,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MEC	9973	21390 TX		10/1/2017	Manawa		1	161	13	33	Add a second 33 MVA 161-13 kV transformer at Manawa S IA	IA			Planned	\$1,100,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	9976	21396 CB		12/1/2016	Avoca		69				Add a new 69 kV breaker on transformer 8T1 at Avoca Sub IA	IA			Planned	\$415,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	9980	21398 IND		10/1/2016	Teakwood		34.5			20	Add two 10 MVAR 34.5 kV reactors at Teakwood Substation IA	IA			Planned	\$850,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	9981	21403 LNrb		6/1/2017	Sub 701	Honey Creek	1	69			Rebuild the Sub 701 to Honey Creek 69 kV line.	IA	10.2	0	Planned	\$3,250,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	9987	21410 SUB		11/30/2016	Johnston		1	161	13	33	New Johnston 33 MVA 161-13 kV distribution substation an IA	IA			Planned	\$2,130,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	9992	21414 LNup		7/1/2016	Lake Cornelia	Couller	1	69			44 Replace limiting structures to increase line rating.	IA			Planned	\$59,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	9993	21416 LNup		4/13/2016	Humboldt East	Thor	1	69			44 Replace limiting structures to increase line rating. Mitigates IA	IA			Planned	\$61,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	9996	21419 TX		12/9/2016	Eagle Grove		69	13	25 MVA		Install second 69-13 kV Transformer & 69 kV bus tie breaker IA	IA			Planned	\$2,440,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	10004	21427 TX		6/1/2018	Sub 18		161	69		167	Replace Sub 18 161-69 kV transformer with a 167 MVA uni IA	IA			Planned	\$1,080,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	10005	21428 CB		12/9/2015	Plymouth		161	40			Replace 161kV circuit breaker 9610 at Plymouth Substation IA	IA			M5_In Service	\$264,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MEC	10006	21429 CB		12/31/2016	Sycamore		161	40 kA			Replace 161 kV circuit breakers AG805, AG812 and AG814 IA	IA			Planned	\$665,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MEC	10009	21430 CB		10/31/2016	Bondurant		161	40 kA			Replace 161 kV circuit breaker AH810 at Bondurant Subst IA	IA			Planned	\$325,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MEC	10503	21601 CB		10/20/2016	Tate & Lyle		161				Add 161 kV bus tie breaker	IA			Planned	\$443,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MEC	10663	21641 TX		12/31/2016	Willow Creek	Willow Creek	161	13.2	50		Add three new 161 kV breakers to convert the substation to IA	IA	0	0	Planned	\$120,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	10664	21642 TX		12/1/2016	34th Ave. NW		161				Add a new 62 MVA 161-13 kV transformer at the 34th Ave. IA	IA	0	0	Planned	\$90,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MEC	10803	21667 CAP		12/1/2016	Sub J Iowa City		161			37.8	Reducing the size of the Sub J capacitor bank to 37.8 MVA IA	IA			Planned	\$300,000	Budgetary	N	N	Y	
A in MTEP16	B>A	West	MEC	10867	21677 CB		8/15/2016	Obrien County		345				New 345 kV circuit breaker position for J285 generator inter IA	IA			Under Construction	\$3,000,000	Planning	Y	Y	Y	
A in MTEP16	B>A	West	MEC	10868	21678 SUB		7/15/2016	Ida County		345				Ida County 345 kV Substation to bisect the Raun-Lehigh 34 IA	IA			Under Construction	\$5,750,000	Planning	Y	Y	Y	
A in MTEP16	B>A	West	MEC	11103	21716 CAP		11/15/2016	636201		69				Two 69 kV, 15 MVAR capacitors	IA			Under Construction	\$1,180,000	Engineering	N	N	NT	
A in MTEP16	B>A	West	MEC	11143	21717 LNup		12/1/2016	635645	652560	1	161			structure replacements	IA			Planned	\$175,000	Engineering	N	N	Y	
A in MTEP16	B>A	West	MEC	11144	21718 TEQ		6/24/2016	636020		1	161			Replace 161 kV switch	IA			Under Construction	\$88,000	Engineering	N	N	Y	
A in MTEP16	B>A	West	MEC	11145	21719 LNup		6/30/2016	631079	636020	1	161			structure replacements	IA			Planned	\$173,000	Engineering	N	N	Y	
A in MTEP16	B>A	West	MEC	11146	21720 LNup		6/1/2017	635034	635038	1	161			structure replacements	IA			Planned	\$200,000	Engineering	N	N	Y	
A in MTEP16	B>A	West	MEC	11203	21738 SUB		11/1/2012	Lehigh		345	3000 A			Add two 345 kV circuit breakers and complete a 345 kV IA	IA			M5_In Service	\$2,882,000	Actual	Y	Y	Y	
A in MTEP16	B>A	West	MEC	11204	21737 SUB		12/30/2011	Rolling Hills		345	3000 A			Add a new 345 kV circuit breaker and associated IA	IA			M5_In Service	\$754,100	Actual	Y	Y	Y	
A in MTEP16	B>A	West	MEC	11283	21754 LNup		6/1/2017	541251 MARYVLES	635034 CLRNDA 5	1	161			Replace three structures.	IA			Planned	\$100,100	Budgetary	N	N	Y	
A in MTEP16	B>A	West	MEC	11284	21755 TEQ		6/1/2017	541251 MARYVLES	635034 CLRNDA 5	1	161			Network Upgrades for J343 Adams County Wind.	IA			Planned	\$80,500	Budgetary	N	N	Y	
A in MTEP16	B>A	West	MEC	11285	21756 TEQ		9/1/2017	631113 POWESHKS	635870 BEACON 5	1	161			Non-Stand Alone Network Upgrade for J344 wind interconn IA	IA			Planned	\$25,000	GIA	N	N	Y	
A in MTEP16	B>A	West	MP	7910	20153 LNrc		11/1/2019	Brainerd	Mud Lake	1	115		182	Reconductor Brainerd - Mud Lake 115 kV Line with 636 AC MN	IA	4.41	0	Planned	\$1,900,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	7996	20269 LNrb		12/31/2017	FondDuLac	Hibbard	1	115		122	Fond Du Lac - Hibbard 115 kV Line	MN	11.3	0	Planned	\$5,500,000	Planning	Preliminary	N	N	Y
A in MTEP16	B>A	West	MP	7997	20271 TEQ		12/31/2018	15th Avenue West		115	13.8	39.2		115 kV substation improvements (fencing, grounding, reloc MN	MN	0	0	Planned	\$3,500,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	7997	20939 TX		5/1/2018	15th Avenue West		114	13.8	39.2		New 115/14 kV transformer	MN	0	0	Planned	\$750,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MP	7997	20938 CB		5/1/2018	15th Avenue West		115				115 kV "21-71MW" breaker replacement	MN	0	0	Planned	\$250,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	7997	20276 CB		12/31/2018	15th Avenue West		115				115 kV "21L" breaker replacement	MN	0	0	Planned	\$250,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	7997	20274 CB		12/31/2018	15th Avenue West		115				115 kV "71L" breaker replacement	MN	0	0	Planned	\$250,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	7997	20273 Dist		12/31/2018	15th Avenue West		13.8				New 14 kV switchgear, 14 kV bus, & 14 kV feeder relocation MN	MN	0	0	Planned	\$5,000,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MP	9064	20809 BUS		12/31/2017	Arrowhead		115				Expand and reconfigure 115 kV bus	MN	0	0	Planned	\$600,000	Budgetary	N	N	Y	
A in MTEP16	B>A	West	MP	9622	20940 TEQ		6/1/2019	Boswell		230				Replace limiting switches at Boswell	MN	0	0	Planned	\$250,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	9622	20941 TEQ		6/1/2019	Blackberry		230				Replace limiting switches at Blackberry	MN	0	0	Planned	\$250,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	9623	20942 TEQ		6/1/2019	Boswell		230				Replace limiting switches at Boswell	MN	0	0	Planned	\$250,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	9623	20943 TEQ		6/1/2019	Blackberry		230				Replace limiting switches at Blackberry	MN	0	0	Planned	\$250,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	9624	20944 Dist		12/31/2017	Bear Creek		69	46	18.7		Add 69/46 kV transformer	MN	0	0	Planned	\$2,000,000	Planning	N	N	NT	
A in MTEP16	B>A	West	MP	9625	20945 SwSta		12/31/2017	Nemadji		115				NEW Nemadji Switching Station	WI	0	0	Planned	\$4,630,000	Engineering	N	N	Y	
A in MTEP16	B>A	West	MP	9625	20953 LN		12/31/2017	Nemadji	Gary	1	115		235	Extend existing 115 kV line from Gary into Nemadji	WI	0	0.08	Planned	\$50,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	9625	20952 LN		12/31/2017	Nemadji	Enbridge South	1	115		182	Nemadji - South 115 kV Line	WI	0	0.2	Planned	\$100,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	9625	20951 LN		12/31/2017	Enbridge East	Enbridge South	1	115		182	Replace switch structure in East - South 115 kV Line	WI	0	0	Planned	\$150,000	Engineering	N	N	Y	
A in MTEP16	B>A	West	MP	9625	20950 LN		6/1/2016	Enbridge North	Enbridge East	1	115			North - East 115 kV Line (partial double ckt with Nemadji - WI	WI	0	0.72	Planned	\$200,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	9625	20949 LN		12/31/2014	Nemadji	Enbridge North	1	115		182	Nemadji - North 115 kV Line (double ckt with Nemadji - Stur WI	WI	0	0.64	Planned	\$150,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	9625	20948 LN		12/31/2017	Nemadji	Sinson	1	115		235	Nemadji - Stinson 115 kV Line (double circuit with Nemadji WI	WI	0	1.2	Planned	\$1,500,000	Planning	N	N	Y	
A in MTEP16	B>A	West	MP	9625	20947 TEQ		12/31/2017	Various Customer-Owned		115				Enbridge Substation Modifications	WI	0	0	Planned	\$1,530,000	Engineering	N	N	Y	
A in MTEP16	B>A	West	MP	9625	20946 CAP		12/31/2017	Nemadji		115				Nemadji Cap Bank	WI	0	0	Planned	\$380,000	Engineering	N	N	Y	
A in MTEP16	B>A	West	MP	10284	21522 TEQ		5/1/2017	Boswell 115		115			150	Disconnect switch, Jumpers, and wave Trap	MN			Planned	\$120,000	Engineering	Prelimin	N	N	Y
A in MTEP16	B>A	West	MP	10284	21523 LNup		5/1/2017	Boswell	Canistota	115				Increase operating temperature from 65C to 90C	MN			Planned	\$670,000	Engineering	Prelimin	N	N	Y
A in MTEP16	B>A	West	MP	10383																				

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App A/B	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP16	B>A	West	XEL	10066	21549	CAP	12/30/2017	Hiawatha			115			Add a 80 MVAR cap to the Hiawatha substation.	MN			Planned	\$1,995,000		N	N	Y
A in MTEP16	B>A	West	XEL	10066	21548	TEQ	6/1/2016	Southtown	Shepard		115			Upgrade the Southtown-Shepard 115 kV line to a minimum	MN			Planned	\$750,000		N	N	Y
A in MTEP16	B>A	West	XEL	10067	21526	SUB	11/1/2018	Prairie			115			Breaker and a half conversion to accommodate Fossum 115 kV ND	MN			Planned	\$17,261,500		N	N	Y
A in MTEP16	B>A	West	XEL	10068	21546	SUB	6/1/2017	Baytown			115	13.8		Install a 2nd transformer and switchgear at Baytown substa	ND			Planned	\$1,625,468		N	N	NT
A in MTEP16	B>A	West	XEL	10069	21545	SUB	11/1/2019	Twin Creek			69			Install a 2 position 69 kV breaker station	WI			Planned	\$2,866,000		N	N	NT
A in MTEP16	B>A	West	XEL	10071	21530	SUB	9/30/2016	Prescott			69			Install second 69/12.47 kV 28 MVA transformer	WI			Planned	\$750,000		N	N	NT
A in MTEP16	B>A	West	XEL	10071	21532	CAP	9/30/2016	Prescott			69			Install a second 10 MVAR cap bank	WI			Planned	\$424,000		N	N	NT
A in MTEP16	B>A	West	XEL	10072	21533	SUB	12/31/2016	Dean Lake			115			Add 4 new breakers to complete the ring bus.	WI			Planned	\$4,904,100		N	N	Y
A in MTEP16	B>A	West	XEL	10072	21534	TX	8/1/2016	Dean Lake			115	13.8		Install third distribution transformer (City of Shakopee)	MN			Planned			N	N	NT
A in MTEP16	B>A	West	XEL	10073	21538	SUBmisc	4/30/2016	Quarry			345	115		Install GIC monitoring	MN			Planned	\$37,298		N	N	Y
A in MTEP16	B>A	West	XEL	10073	21541	SUBmisc	12/31/2016	Eau Claire			345	161		Install GIC monitoring	WI			Planned	\$250,000		N	N	Y
A in MTEP16	B>A	West	XEL	10073	21540	SUBmisc	4/30/2016	Elm Creek			345	115		Install GIC monitoring	MN			Planned	\$47,652		N	N	Y
A in MTEP16	B>A	West	XEL	10073	21539	SUBmisc	12/31/2016	Adams			345	161		Install GIC monitoring	MN			Planned	\$250,000		N	N	Y
A in MTEP16	B>A	West	XEL	10074	21536	LNrb	5/30/2019	Airport	Rogers Lake		115			rebuids the Airport - Rogers Lake 115 kV line using 795 AC	MN	3.4		Planned	\$4,050,000		N	N	Y
A in MTEP16	B>A	West	XEL	10075	21542	TX	12/30/2017	Waconia			69	13.8		Install a 2nd distribution transformer at Waconia substation.	MN			Planned	\$420,000		N	N	NT
A in MTEP16	B>A	West	XEL	10076	21535	LNrb	5/30/2019	West St. Cloud	Milwood Tap		69			Rebuild 24 miles of line from West St. Cloud to Milwood Ta	MN	24		Planned	\$10,400,000		N	N	NT
A in MTEP16	B>A	West	XEL	10077	21537	TAP	12/1/2016	St. James			69			Install a new three-way switch on line 0714.	MN			Planned	\$390,800		N	N	NT
A in MTEP16	B>A	West	XEL	10288	21550	SUB	9/1/2018	Osprey			69			Install 69 kV straight bus with 3 x 69 kV breakers	WI			Planned	\$1,850,000		N	N	NT
A in MTEP16	B>A	West	XEL	10288	21552	LN	9/1/2018	Osprey	Whitelail Tap		69			Reterminate line from Whitelail Tap into Osprey. Rebuild l	WI			Planned	\$710,000		N	N	NT
A in MTEP16	B>A	West	XEL	10288	21551	LN	9/1/2018	Osprey	Flambeau		69			Reterminate line from DPC Flambeau	WI			Planned	\$320,000		N	N	NT
A in MTEP16	B>A	West	XEL	10289	21553	LNrb	12/1/2015	Elmwood			1	69		Rebuild the existing 2/0 conductor to 477 ACSR due to age	WI			Planned	\$1,109,095		N	N	NT
A in MTEP16	B>A	West	XEL	10289	21554	LNrb	12/1/2016	Comfort	Eau Galle		1	69		Rebuild the existing 2/0 conductor to 477 ACSR due to age	WI			Planned	\$1,000,000		N	N	NT
A in MTEP16	B>A	West	XEL	10290	21555	SUB	8/30/2017	Gravel Island			161	12.5		Install a 28 MVA distribution TR and associated breaker an	WI			Planned	\$2,983,000		N	N	NT
A in MTEP16	B>A	West	XEL	10291	21556	SUB	12/1/2018	Staks	LCO Hydro		34.5	23.9		Install single 34.5/23.9 kV TR to connect the Lac Courte On	WI			Planned	\$180,000		N	N	NT
A in MTEP16	B>A	West	XEL	11883	21848	LN	1/1/2022	Huntley	Wilmarth		345			38.5 miles of 345 kV Single Ckt	MN	38.5		M2a_Pre-Project Approval	\$103,056,574		Y	Y	Y
A in MTEP16	B>A	West	XEL	11883	21853	SUBmisc	1/1/2022	Wilmarth			345			Substation modifications at Wilmarth	MN			M2a_Pre-Project Approval	\$2,471,713		Y	Y	Y
B in MTEP16	B	Central	AmerenIL	9719	21100	SUB	6/1/2018	Cahokia			138	138	717	Upgrade Bus-Tie 3-4 capability to 3000 A.	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9723	21107	SUB	12/31/2018	Fishhook			138	138	240	Construct 138 kV breaker station in East Quincy-Meredosia	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9724	21108	SUB	6/1/2018	Newton			345	138	450	Relocate Newton 345/138 kV Transformer #1 connection p	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9729	21113	LNrc	6/1/2019	North Decatur	Clinton Rt. 54		1	138	138	240 Reconductor to 1200 A summer emergency capability.	IL	5.4		Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9734	21119	SUB	6/1/2019	North Ulica			138	34.5		255 Construct 138 kV breaker station in North LaSalle-Fox Rive	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9738	21125	LNrc	6/1/2025	Grand Tower	Carbondale, Northw		1	138	138	240 Reconductor to 1200 A summer emergency capability.	IL	16.7		Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9739	21126	LNrc	6/1/2025	Carbondale, Northwe	West Frankfort		1	138	138	240 Reconductor to 1200 A summer emergency capability.	IL	3.18		Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9740	21127	LNrc	6/1/2025	Grand Tower	Campbell Hill		1	138	138	240 Reconductor to 1200 A summer emergency capability.	IL	7.94		Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9743	21130	LNrc	6/1/2021	Pana, North	Route 51D		1	138	138	399 Reconductor to 2000 A summer emergency capability	IL	1.43		Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9745	21132	TX	6/1/2018	Ramsey			345	138	560	Replace existing 345/138 kV Transformer	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9746	21133	LNrc	6/1/2018	Midway	Schram City		1	138	138	240 Reconductor to 1200 A summer emergency capability	IL	5.19		Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9826	21201	TX	6/1/2018	Neoga			345	138	560	Install 2nd. 345/138 kV Transformer	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9832	21208	LNrc	6/1/2027	Casey	Kansas		1	345	345	1793 Reconductor to 3000 A summer emergency capability.	IL	21.2		Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9838	21215	TEQ	6/1/2022	Kincaid	Austin		1	345	345	1195 Upgrade terminal equipment to minimum 2600 A summer e	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9840	21216	SUB	5/1/2020	Washington Street			138	138	478	Establish 138 kV ring bus	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9841	21217	TX	5/1/2019	South Bloomington			138	34.5		112 Install 138-34.5 kV transformer	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9842	21219	TX	5/1/2020	Normal East			138	69		112 Install 138-69 kV transformer	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9843	21220	TX	5/1/2019	Normal East			138	34.5		112 Install 138-34.5 kV transformer.	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9844	21221	LN	5/1/2020	Normal East	McLean		1	138	138	399 Construct 138 kV Line	IL	10		Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9851	21228	LNrc	6/1/2019	Edwards	Kewanee		1	138	138	190 Reconductor Ameren portion to 1200 A summer emergency	IL	1.51		Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9857	21234	SUB	6/1/2019	Liberty			345	138	560	Establish 345/138 kV Substation. Connect to Prairie State-	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9857	21237	LNrb	6/1/2019	Liberty	E. Collinsville		1	138	138	269 Connect 138 kV outlet from Liberty Sub to E. Collinsville-Pc	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9857	21236	LN	6/1/2019	Liberty	Highland		1	138	138	269 Rebuild radial 138 kV line from Liberty Sub to Highland, IL	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	9857	21235	LN	6/1/2019	Liberty	Canteen		1	138	138	399 Construct 138 kV line from new Liberty Substation.	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	10883	21679	TEQ	6/1/2019	Ina	Benton, NW		1	138	159	Install 2000 A, 138 kV PCB at Ina terminal	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	10883	21680	TEQ	6/1/2019	Ina	Mt. Vernon		1	138	159	Remove metering set	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	10885	21683	TEQ	6/1/2018	Cahokia			138	240		Upgrade terminal equipment	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	10885	21684	TEQ	6/1/2018	Ridge			138	240		Upgrade terminal equipment	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenIL	10886	21685	LNrc	6/1/2018	Centerville			1	138	240	Reconductor to 1200 A summer emergency capability.	IL			Proposed			N	N	
B in MTEP16	B	Central	AmerenMO	3020	5230	TEQ	6/1/2018	Overton	Columbia		1	161	250	Overton-Huntsdale-Columbia 161 kV - Upgrade terminal eq	MO			Proposed			N	N	Y
B in MTEP16	B	Central	AmerenMO	3020	21098	SUB	6/1/2018	Overton			1	161	557	Replace bus-tie breaker at Overton.	MO			Proposed			N	N	
B in MTEP16	B	Central	AmerenMO	3020	21097	TEQ	6/1/2018	Overton	Loy Martin		1	161	250	Upgrade terminal equipment at Overton.	MO			Proposed			N	N	
B in MTEP16	B	Central	AmerenMO	3020	21096	TEQ	6/1/20																

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility	
B in MTEP16	B	Central	IPL	10786	21721 RLY		12/31/2017	Lilly South		1	138			Change relay tap settings at Lilly South to increase Lilly Sou	IL			Proposed	\$4,000.00	Planning	N	N		
B in MTEP16	B	Central	PPI	9563	20928 LN		12/1/2017	ATUSCOLA W (3483)	ACRONUS W	1	138		229	2.7 mile 138 kV transmission line	IL		2.7	Proposed	\$1,620,000.00	Budgetary	N	N	Y	
B in MTEP16	B	Central	PPI	9563	20929 LN		12/1/2017	ATUSCOLA W (3483)	ACRONUS E	1	138		229	3.3 mile 138 kV transmission line	IL		3.3	Proposed	\$1,980,000.00	Budgetary	N	N	Y	
B in MTEP16	B	Central	Vectren	9943	21387 TX		12/31/2023	LEONARD ROAD		1	138	69		138/69kV transformer addition at existing Leonard Road sw	IN			Proposed	\$3,000,000.00	Budgetary	N	N		
B in MTEP16	B	Central	Vectren	9943	21388 LN		12/31/2023	AB BROWN	FARM BUREAU	Z94	138			Z94 138kV line loop from AB Brown Sub to Farm Bureau S	IN			Proposed	\$100,000.00	Budgetary	N	N		
B in MTEP16	B	Central	Vectren	9950	21397 LNrb		12/31/2018	New Harmony	Northwest	Y76	69			Rebuild of 19 miles of Y76 69kV line from New Harmony su	IN			Planned	\$10,000,000.00	Budgetary	N	N	NT	
B in MTEP16	B	Central	Vectren	9953	21404 Dist		12/31/2020	FRANCISCO	TOYOTA	Z76	138	12		New 138kV/12kV distribution substation	IN			Proposed	\$2,500,000.00	Budgetary	N	N		
B in MTEP16	B	East	CETO	9879	21264 LN		6/1/2019	Moore Road	Vrooman	1	138			Construct a new approximately 22 mile 138 kV line between MI	MI	22	Proposed	\$20,600,000.00	Budgetary	N	N			
B in MTEP16	B	East	CETO	9879	21266 SUB		6/1/2019	Vrooman			138			Add a 138 kV circuit breaker to the existing ring bus and ins	MI			Proposed	\$700,000.00	Budgetary	N	N		
B in MTEP16	B	East	CETO	9879	21265 SUB		6/1/2019	Moore Road			138			Add a 138 kV circuit breaker to the existing ring bus and ins	MI			Proposed	\$700,000.00	Budgetary	N	N		
B in MTEP16	B	East	ITCT	9864	21249 LNrb		6/30/2018	Whiting	Custer		120			Rebuild 1.26 miles of 636 ACSR from the ITCT portion of th	MI			Proposed	\$3,196,500.00	Engineering	N	N	Y	
B in MTEP16	B	East	ITCT	9885	21273 LNup		12/31/2019	Jewell	St.Clair	1	345			Raise the Sag Limit on Jewell-St.Clair 345 kV to 1965 MVA MI	MI			Proposed	\$5,380,000.00	Engineering	N	N	Y	
B in MTEP16	B	East	ITCT	9909	21317 LN		12/31/2018	Trenton Channel	Jefferson	4	120			Six-wiring the Trenton Channel - Jefferson #4 120 kV line w	MI			Proposed	\$104,000.00	Engineering	N	N		
B in MTEP16	B	East	ITCT	9909	21328 SUB		12/31/2018	Riverview			120			Upgrade station equipment at position "HD"	MI			Proposed	\$142,000.00	Engineering	N	N		
B in MTEP16	B	East	ITCT	9909	21326 SUB		12/31/2018	Jefferson			120			Install a 120 kV bus-tie breaker and upgrade station equipm	MI			Proposed	\$1,450,000.00	Engineering	N	N		
B in MTEP16	B	East	ITCT	9909	21325 SUB		12/31/2018	Horn			120			Upgrade station equipment	MI			Proposed	\$65,500.00	Engineering	N	N		
B in MTEP16	B	East	ITCT	9909	21323 SUB		12/31/2018	Trenton Channel			120			Upgrade station equipment at position "JG" and "HG"	MI			Proposed	\$328,000.00	Engineering	N	N		
B in MTEP16	B	East	ITCT	9909	21321 LN		12/31/2018	Jefferson	Riverview	2	120			Rebuild approximately 0.2 mile of 954 ACSR conductor to 1 MI	MI	0.2	Proposed	\$102,500.00	Engineering	N	N			
B in MTEP16	B	East	ITCT	9909	21320 LN		12/31/2018	Horn	Jefferson	1	120			Six-wiring the Horn - Jefferson 120 kV line with the decom	MI	0.16	Proposed	\$104,000.00	Engineering	N	N			
B in MTEP16	B	East	ITCT	9909	21319 LN		12/31/2018	Trenton Channel	Horn	1	120			Six-wiring the Trenton Channel - Horn 120 kV line with the	MI			Proposed	\$104,000.00	Engineering	N	N		
B in MTEP16	B	East	METC	9864	21248 LNrb		6/30/2018	Whiting	Custer		120			Rebuild 7.87 miles of 636 ACSR from the METC portion of	MI			Proposed	\$11,096,500.00	Engineering	N	N	Y	
B in MTEP16	B	East	METC	9864	21250 TEQ		6/30/2018	Whiting			120			Replace limiting terminal equipment at the Whiting station	MI			Proposed	\$2,000.00	Engineering	N	N	Y	
B in MTEP16	B	East	METC	9864	21257 TEQ		6/30/2018	Custer			120			Replace limiting terminal equipment at the Custer station	MI			Proposed	\$5,000.00	Engineering	N	N	Y	
B in MTEP16	B	East	METC	9880	21267 LNup		12/31/2018	Claremont	Manning	1	138			Remediate the sag limit on the Portsmouth Tap - Manning	MI			Proposed			N	N	Y	
B in MTEP16	B	East	METC	9880	21268 TEQ		12/31/2018	Claremont			138			Upgrade terminal equipment at Claremont	MI			Proposed	\$330,000.00	Engineering	N	N	Y	
B in MTEP16	B	East	METC	9881	21269 LNup		12/31/2018	Claremont	Manning	2	138			Remediate the sag limit on the Claremont - Manning 2 138	MI			Proposed	\$1,040,000.00	Engineering	N	N	Y	
B in MTEP16	B	East	METC	9881	21270 TEQ		12/31/2018	Claremont			138			Upgrade terminal equipment at Claremont	MI			Proposed	\$360,000.00	Engineering	N	N	Y	
B in MTEP16	B	East	METC	9929	21339 LN		12/31/2019	Donaldson Creek	Pere Marquette	1	138			Build new -21 mile circuit from Donaldson Creek to Pere M	MI			Proposed	\$7,400,000.00	Engineering	N	N	Y	
B in MTEP16	B	East	METC	9929	21341 TEQ		12/31/2019	Pere Marquette			138			Upgrade terminal equipment at Pere Marquette	MI			Proposed	\$760,000.00	Engineering	N	N	Y	
B in MTEP16	B	East	METC	9929	21340 TEQ		12/31/2019	Donaldson Creek			138			Upgrade terminal equipment at Donaldson Creek	MI			Proposed	\$540,000.00	Engineering	N	N	Y	
B in MTEP16	B	East	WPSC	9895	21290 LNrb		12/31/2022	Graves Crossing	Central Lake	1	69		75.2	Rebuild the Graves Crossing to Central Lake 69kV line, inst	MI	7.9	Proposed	\$3,200,000.00	Budgetary	N	N			
B in MTEP16	B	East	WPSC	9903	21309 LNrb		12/31/2020	White Cloud	Wrights Creek	1	69		143.4	Rebuild the White Cloud to Rogers 69kV line, install new pc	MI	14.4	Proposed	\$7,200,000.00	Budgetary	N	N			
B in MTEP16	B	East	WPSC	9903	21312 LNrb		12/31/2020	Hesperia	Rogers	1	69			Rebuild the White Cloud to Rogers 69kV line, install new pc	MI	14	Proposed	\$7,200,000.00	Budgetary	N	N			
B in MTEP16	B	East	WPSC	9903	21310 LNrb		12/31/2020	Wrights Creek	Hesperia	1	69			Rebuild the White Cloud to Rogers 69kV line, install new pc	MI	7.68	Proposed	\$4,100,000.00	Budgetary	N	N			
B in MTEP16	B	East	WPSC	9916	21330 SwSta		12/31/2022	Fairview			69			Upgrade equipment at the Fairview station	MI			Proposed	\$900,000.00	Budgetary	N	N		
B in MTEP16	B	East	WPSC	9920	21333 SwSta		12/31/2020	Gravese Crossing			69			Upgrade the Graves Crossing station	MI			Proposed	\$500,000.00	Budgetary	N	N		
B in MTEP16	B	East	WPSC	10264	21507 LNrb		12/31/2022	Pellston	Cross Village	1	138			Pellston to Cross Village line rebuild	MI	9.08	Proposed	\$3,600,000.00	Budgetary	N	N			
B in MTEP16	B	East	WPSC	10265	21508 RLY		12/31/2019	Gaylord			138			Gaylord relay replacement - 138kV Livingston line	MI			Proposed	\$35,000.00	Budgetary	N	N		
B in MTEP16	B	East	WPSC	10266	21509 SwSta		12/31/2019	East Jordan			69			East Jordan Station Rebuild	MI			Proposed	\$350,000.00	Budgetary	N	N		
B in MTEP16	B	East	WPSC	10267	21510 SwSta		12/31/2019	Black Lake			69			Black Lake Station Rebuild	MI			Proposed	\$350,000.00	Budgetary	N	N		
B in MTEP16	B	South	AECG	10203	21489 SwSta			AECG Sardis			115			4 position ring bus	AR			Proposed			N	N		
B in MTEP16	B	South	AECG	10203	21490 LN			AECG Shaw	AECG Sardis		115			12 mile 115kV transmission line	AR			Proposed			N	N		
B in MTEP16	B	South	AECG	10207	21498 SwSta		6/1/2021	Heber Springs North			161			Build 5 position ring bus at the existing AECG Heber Spring	AR			Proposed	\$5,000,000.00	Planning Preliminary	N	N	Y	
B in MTEP16	B	South	AECG	10207	21499 LN		6/1/2021	Heber Springs North	Partain		161			Build 26 mile 161kV line form the existing AECG Heber Spr	AR			Proposed	\$18,000,000.00	Planning Preliminary	N	N	Y	
B in MTEP16	B	South	CLECO	9718	21101 SUB			Ashmore Rd.			230			Build a new 230 kV substation Tapped into the Hinston to LA	LA			Proposed	\$7,000,000.00	Planning Preliminary	N	N		
B in MTEP16	B	South	CLECO	9718	21102 LN			Ashmore Rd.	Rork		230			Build a new 64 mile 230 kV line from Ashmore Rd. to Rork	LA	64	Proposed	\$108,000,000.00	Planning Preliminary	N	N			
B in MTEP16	B	South	Entergy-AR	9694	21018 LNrb		6/1/2024	Camden Maquire 115	Smackover 115kV		115			The 14.32 mile long line will be upgraded to a minimum rati	AR	14.3	Proposed	\$20,706,029.00	Planning	N	N			
B in MTEP16	B	South	Entergy-AR	9699	21023 CAP		6/1/2019	El Dorado Donan	115kV		115			Add one 30 MVAR capacitor bank at El Dorado Donan 115	AR			Proposed	\$871,182.00	Planning	N	N		
B in MTEP16	B	South	Entergy-AR	9700	21024 LNrb		6/1/2022	Blakely 115kV	Mt. Pine South 115kV		115			Re-build the 2.92 mile long 115 kV line to a minimum line r	AR	2.92	Proposed	\$3,972,886.00	Planning	N	N			
B in MTEP16	B	South	Entergy-AR	9701	21025 LNrb		6/1/2020	LynchWest 115kV	NLR Galloway 115kV		115			Upgrade 4.12mi Lynch - NLR Galloway line to a minimum r	AR	4.12	Proposed	\$4,785,896.00	Planning	N	N			
B in MTEP16	B	South	Entergy-AR	9702	21026 TEQ		6/1/2018	Sylvan Hills 115kV	Jacksonville North 115kV		115			Upgrade line bay bus at Sylvan Hills.	AR			Proposed	\$26,626.00	Planning	N	N		
B in MTEP16	B	South	Entergy-AR	9710	21043 SUB		6/1/2025	Little Rock South 115kV			115			Reconfigure Little Rock South 115 kV station configuration	AR			Proposed	\$5,463,000.00	Planning	N	N		
B in MTEP16	B	South	Entergy-AR	10163	21483 Dist		3/1/2017	Jonesboro North			13.2	40		CECC is adding a second 161 to 13.2 kV transformer due to	AR			Proposed	\$800,000.00	Planning	N	N		
B in MTEP16	B	South	Entergy-LA	4611	8761 SUB		6/1/2026	Waddill 230 kV substation			230	200 MVA		Construct new substation	LA			Proposed	\$15,859,000.00	Planning	N	N	Y	
B in MTEP16	B	South	Entergy-LA	4611	8763 TX		6/1/2026	Waddill 230 kV subst	Waddill 69 kV subst	1	230		69	200 MVA	Install transformer	LA			Proposed			N	N	Y
B in MTEP16	B	South	Entergy-LA	4611	8762 SUB		6/1/2026	Waddill 69 kV substation			69	200 MVA		Construct new substation	LA			Proposed			N	N	Y	
B in MTEP16	B	South	Entergy-LA	7970	20247 SUB		6/1/2026	(New) MINDEN EAST 115			115			Cut Arcadia to Minden REA 115 kV line into New Minden E	LA			Proposed	\$9,592,834.0					

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
B in MTEP16	B	South	Entergy-LA	9797	21171	LNrc	6/1/2023	Nelson	Lake Charles	1	138			Upgrade line	LA			Proposed	\$11,416,000.00	Planning	N	N	
B in MTEP16	B	South	Entergy-LA	9798	21172	LNrc	6/1/2020	Gypsy	Claytonia	1	115			Upgrade line	LA			Proposed	\$7,366,203.00	Planning	N	N	
B in MTEP16	B	South	Entergy-LA	9802	21176	LNrc	6/1/2020	Snakefalm	Laborde	1	230			Upgrade line	LA			Proposed	\$3,834,000.00	Planning	N	N	
B in MTEP16	B	South	Entergy-LA	9803	21177	LNrc	6/1/2020	Prospect	Goodhope	1	230			Upgrade Line	LA			Proposed	\$697,815.00	Planning	N	N	
B in MTEP16	B	South	Entergy-LA	9804	21178	LNrc	6/1/2022	Avenue C	Paris Tap	1	115			Upgrade Line	LA			Proposed	\$220,032.00	Planning	N	N	
B in MTEP16	B	South	Entergy-MS	7906	20144	LNrb	6/1/2019	Greenwood	Greenwood SS	1	115			Upgrade line to 239 MVA	MS	10.5		Proposed	\$13,133,452.00	Planning	N	N	
B in MTEP16	B	South	Entergy-MS	9823	21199	SwSta	12/1/2020	Franklin			500			Reconfigure Franklin 500 kV substation	MS			Proposed	\$22,435,508.00	Planning	N	N	
B in MTEP16	B	South	Entergy-MS	9829	21205	CB	6/1/2019	Ray Braswell			115			Rplace 2-115 kV breakers	MS			Proposed	\$1,153,930.00	Planning	N	N	
B in MTEP16	B	South	Entergy-MS	9831	21207	BUS	6/1/2024	Tillatoba			230			Reconfigure bus	MS			Proposed	\$5,449,089.00	Planning	N	N	
B in MTEP16	B	South	Entergy-MS	9837	21213	LNrb	6/1/2022	South Grenada	Elliott		115			Upgrade 115 kV line	MS	4.91		Proposed	\$4,961,042.00	Planning	N	N	
B in MTEP16	B	South	Entergy-TX	9820	21195	LNrc	6/1/2020	Hearne	Calvert		69			Upgrade Line	TX			Proposed	\$9,500,000.00	Planning	N	N	
B in MTEP16	B	South	Entergy-TX	9821	21196	LN	6/1/2024	Bryan	College Station Area		138			New line	TX			Proposed	\$31,500,000.00	Planning	N	N	
B in MTEP16	B	South	Entergy-TX	10080	21452	SUB			334126		138			Magnolia Groveton station upgrades to support addition of r	TX			Proposed		N	N		
B in MTEP16	B	South	Entergy-TX	10964	21694	LN	6/1/2018	Hearne	Calvert		2	69		Construct a new line from Hearne to Calvert	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10080	21450	LN			334126		138			Construct new 138 kV line from existing Magnolia Groveton TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10080	21454	SUB			509325		138			Mustang Prairie station upgrades to support addition of new TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10080	21453	SUB			TBD		138			New Weldon station to support load growth	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10080	21451	LN			509325		138			Construct new 138 kV line from existing Mustang Prairie sta TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10081	21455	SwSta			TBD		138			New switching station on Dogwood-Warren 138 kV line TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10081	21459	SUB			334304		138			North Buna station upgrades to support addition of new tra TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10081	21458	LN			334304		138			Construct new 138 kV line from the new Fred substation to TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10081	21457	SUB			TBD		138			Construct new 138 kV Fred substation	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10081	21456	LN			TBD		138			Construct new 138 kV line from the new Fred switching stat TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10082	21460	SUB			TBD		138			Construct new 138 kV Fred substation	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10082	21464	SUB			334281		138			Fork Creek station upgrades to support addition of new tran TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10082	21463	SUB			334304		138			North Buna station upgrades to support addition of new tra TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10082	21462	LN			334281		138			Construct new 138 kV line from the new Fred substation to TX	TX			Proposed		N	N		
B in MTEP16	B	South	ETEC	10082	21461	LN			334304		138			Construct new 138 kV line from the new Fred substation to TX	TX			Proposed		N	N		
B in MTEP16	B	West	ATC	8443	20671	TX	12/31/2017	Arnott			135	115		500 Replace the Rocky Run 345/115 kV T1 transformer with a 5 WI	WI			Proposed		N	N		
B in MTEP16	B	West	ATC	8443	21488	TX	12/31/2017	Arnott			135	115		500 Replace the three Rocky Run 345-115 kV transformers with WI	WI			Proposed		N	N		
B in MTEP16	B	West	ATC	8443	21487	TX	12/31/2017	Arnott			135	115		500 Replace the three Rocky Run 345-115 kV transformers with WI	WI			Proposed	\$22,000,000.00	N	N		
B in MTEP16	B	West	ATC	9925	21337	SUB			6/1/2018	Pershing		345		Loop Stone Lake - Gardner Park 345-kV line into new Persh WI	WI			Planned	\$15,000,000				Y
B in MTEP16	B	West	ATC	9928	21342	LNup	11/1/2017	Council Creek	Tomah Industrial		69		48.6	Re-rate 1.2 miles of 69 kV line between Council Creek and WI	WI	1.2		Proposed		N	N		
B in MTEP16	B	West	ATC	9930	21343	LNup	12/1/2018	Lost Dauphin	Red Maple		138		246	Lost Dauphin - Red Maple 138-kV line uprate.	WI			Proposed		N	N		
B in MTEP16	B	West	ATC	9935	21352	CAP	6/1/2020	Wesmark			69			Wesmark Substation: Install 2-6 Mvar 69-kV capacitor bank WI	WI			Proposed		N	N		
B in MTEP16	B	West	ATC	9968	21383	LNrb	12/31/2019	Portage	Staff		138			Rebuild 138kV Line X-6 Portage - Staff Substation.	WI			Proposed		N	N		
B in MTEP16	B	West	ATC	9974	21391	LNrb	12/31/2019	North Randolph	Staff		138			Rebuild 138kV Line X-98 Staff - North Randolph Substation WI	WI			Proposed		N	N		
B in MTEP16	B	West	ATC	9991	21412	BUS	12/31/2018	Racine			345			Rebuild Racine 345kV Bus.	WI			Proposed		N	N		
B in MTEP16	B	West	ATC	10486	21594	LNrb	12/31/2021	Chaffee Creek	ACEC Colma Tap		69			526 Rebuild line Y-18 Chaffee Creek - Lincoln Pump Station.	WI			Proposed		N	N		
B in MTEP16	B	West	ATC	10486	21595	LNrb	12/31/2021	ACEC Coloma Tap	Lincoln Pump Statio		69			526 Rebuild Chaffee Creek - Lincoln Pump Station 69 kV.	WI			Proposed		N	N		
B in MTEP16	B	West	ATC	10590	21620	LNrb	12/31/2023	Academy	Columbus Tap		69			79 Rebuild Academy - Columbus 69kV.	WI	1		Proposed		N	N		
B in MTEP16	B	West	ATC	10590	21621	LNrb	12/31/2023	Columbus Tap	Columbus		69			79 Rebuild Academy - Columbus 69kV.	WI	1.13		Proposed		N	N		
B in MTEP16	B	West	ATC, XEL	10183	21485	SUB	6/1/2018	Pershing			345	115		New Pershing 345/115 kV substation.	WI			Proposed	\$10,000,000.00	N	N		Y
B in MTEP16	B	West	GRE	8920	20786	SUB	9/1/2022	Elisha			115	34.5		New Elisha 115/34.5 kV substation using Hubbard transform MN	MN			Proposed	\$2,400,000.00	Planning	N	N	Y
B in MTEP16	B	West	GRE	8920	20789	LN	9/1/2022	Hubbard	Potato Lake		115			Build new 115 kV line from Hubbard to Elijah to Potato Lake MN	MN	17.6		Proposed	\$9,670,000.00	Planning	N	N	Y
B in MTEP16	B	West	GRE	8920	20788	LN	9/1/2022	Elisha	Osage		69	34.5	190	Build 69 kV line operated at 34.5 kV from Elisha to Osage.	MN			Proposed	\$3,312,000.00	Planning	N	N	Y
B in MTEP16	B	West	GRE	8920	20787	TEQ	9/1/2022	Osage			69	34.5		Osage motor operated switch	MN			Proposed	\$435,000.00	Planning	N	N	Y
B in MTEP16	B	West	GRE	9200	20831	LN	10/19/2018	Potato Lake Tap	Arago		115			Build ~7.5 miles of 115 kV transmission line from Potato La MN	MN	7.5		Proposed	\$7,344,993.37	Planning	N	N	Y
B in MTEP16	B	West	GRE	9201	20832	LN	10/31/2018	Bull Moose tap	Backus Pumping St		115			Build 115 kV line from a new interconnection to the MP's 11 MN	MN	3.5		Proposed	\$2,105,606.54	Planning	N	N	Y
B in MTEP16	B	West	GRE	9202	20833	SwSta	10/31/2018	Rice River			115			New Rice River substation	MN			Proposed	\$3,223,825.82	Planning	N	N	Y
B in MTEP16	B	West	GRE	9202	20835	LN	10/31/2018	Rice River	Palisade		115			Build ~13 miles of 115 kV transmission line from the new Ri MN	MN	13		Proposed	\$9,835,229.37	Planning	N	N	Y
B in MTEP16	B	West	GRE	9203	20834	LN	10/11/2018	Cromwell tap	Cromwell Pumping		115			Build 0.2 miles of 115 kV transmission line from Cromwell to MN	MN	0.2		Proposed	\$920,000.00	Planning	N	N	Y
B in MTEP16	B	West	ITCM	9100	20813	BUS	12/19/2019	Burlington	South Burlington		69		103	MVA Upgrade terminal equipment above the conductor rating.	IA			Proposed		N	N		
B in MTEP16	B	West	ITCM	9100	20814	LNrb	12/31/2019	Burlington 4th Street	Agency		69		101	MVA Rebuild the 4th Street-Agency 69kV line to T2-477.	IA	2.51		Proposed		N	N		
B in MTEP16	B	West	MDU	9122	20818	TEQ	6/1/2020	East Bismarck			115			191 Replace switch 7114, 7115 & 7117 and line jumpers.	ND			Proposed	\$125,000.00	Engineering Preliminary	N	N	
B in MTEP16	B	West	MDU	9140	20822	LNrc	9/1/2020	Coyote Jet	NACO		115			120 Reconnector line with 477 ACSS	ND	7		Proposed	\$1,270,000.00	Planning Preliminary	N	N	
B in MTEP16	B	West	MDU	9180	20830	CAP	10/1/2020	Green River Jet			115			Increase existing 15 Mvar capacitors to 20 Mvar	ND			Proposed	\$400,000.00	Planning	N	N	
B in MTEP16	B	West	MEC	2937	5112	TX	6/1/2022	Sub 39	Transformer		2	345	161	560 Add 2nd 345-161 kV xfrm	IL			Proposed	\$10,900,000.00	Planning	N	N	Y
B in MTEP16	B	West	MEC	2938	5113	LNrb	12/1/2021	Sub 39	Cordova		1	345		1471 Uprate 345 kV line structures. Includes reconfiguration out IL	IL	15.5		Proposed	\$1,300,000.00	Planning	N	N	Y
B in MTEP16	B	West	MP																				

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP03	A	Central	SIPC	81	5339 LN		10/12/2016	Carrier Mills	161/69 kV transformer	1	161	69		New 161/69kV substation located north of Carrier Mills, IL	IL			Under Construction	\$1,000,000.00		N	N	Y
A in MTEP06	A	Central	AmerenIL	739	1432 LN		11/12/2020	Line 4561 Tap	Franklin County P	1	345			345 kV connection (new ring bus) to new generation	IL			Planned	\$6,410,900.00	Engineering	N	N	Y
A in MTEP08	A	Central	DEI	1899	3795 LNrc		12/31/2016	Macy	Rochester Metals Jc	1	69		100	Reconductor Macy to Rochester Metals Jct section of 6957	IN	9.1		Under Construction	\$4,707,000.00	Engineering	N	N	NT
A in MTEP08	A	Central	HE	1929	3808 SUB		9/1/2012	Georgetown Primary		1	138	2000		Rebuild	IN			Planned	\$1,250,000.00		N	N	Y
A in MTEP08	A	Central	Vectren	1782	3572 SUB		12/31/2024	Northeast Sub Bus re	Substation	1	138			Rebuild existing straight bus with more reliable breaker	IN			M2a_Pre-Project Approval	\$8,000,000.00	Budgetary	N	N	Y
A in MTEP08	A	Central	Vectren	1784	3574 SUB		12/31/2019	Jasper#3 Sub Exp-Vi	Victory	1	69			Extend existing Victory line to new term at existing sub	IN			M2a_Pre-Project Approval	\$3,625,000.00	Budgetary	N	N	NT
A in MTEP08	A	Central	Vectren	1788	3578 SUB		12/31/2016	St. Wendel Sub	Mohr Rd Sub	34	69			New 69kV line from St. Wendel Sub to Mohr Rd Sub	IN			M2a_Pre-Project Approval	\$2,750,000.00	Budgetary	N	N	NT
A in MTEP08	A	Central	Vectren	1789	3579 SUB		12/31/2018	Boonville Sub	Boonville Pioneer S	56	69			New 69kV line from Boonville Sub to Boonville Pioneer Sub	IN			M2a_Pre-Project Approval	\$1,400,000.00	Budgetary	N	N	NT
A in MTEP08	A	East	METC	1448	2452 Dist		12/31/2019	Simpson 138kV			138	12.5		Install a second distribution transformer at Simpson (Simpso	MI			Planned	\$2,200,000.00		N	N	Y
A in MTEP08	A	West	ITCM	1744	3546 LNrc		12/31/2019	Maquoketa	Grand Mound	1	161		326/326	Reconductor	IA	14.5		Planned	\$10,150,000.00	Planning	N	N	Y
A in MTEP08	A	West	NWEC	2011	3992 LNrb		6/1/2011	Frederic	Lewis	69	69			31 Rebuild the 34.5kV system between Frederic and Lewis sub	WI	2.8	0	Planned	\$350,000.00		N	N	Y
A in MTEP08	A	West	NWEC	2012	3993 LNrb		9/1/2011	Falun	Penta	69	69			47 Rebuild the 34.5kV system between Falun and Penta sub	WI	4.3	0	Under Construction	\$538,000.00		N	N	Y
A in MTEP08	A	West	NWEC	2013	3994 LNrb		6/1/2011	Penta	Siren Tap	69	69			15 Rebuild the 34.5kV system between Penta sub and Siren T	WI	1.4	0	Planned	\$175,000.00		N	N	Y
A in MTEP08	A	West	NWEC	2016	3997 LNrc		1/1/2013	Frederic	Coffee Cup	69	69			84 Reconductor 69kV line with 477ACSR	WI	2	0	Planned	\$100,000.00		N	N	Y
A in MTEP08	A	West	NWEC	2018	3999 LN		6/1/2011	Eureka Tap	Centuria	69	12.5			Build new 69kV line to Centuria and build Distribution Su	WI	0	4	Planned	\$1,200,000.00		N	N	Y
A in MTEP08	A	West	XEL	675	1364 LNup		6/15/2017	Westgate	Scott County	1	115		194 MVA	upgrade line	MN	20.1		Planned	\$14,000,000.00		N	N	Y
A in MTEP09	A	Central	AmerenIL	2273	4187 LN		6/1/2020	LaFarge	161 kV Supply to Custome	1	161			Provide 161 kV supply to customer substation	IL			Planned	\$570,000.00	Engineering	N	N	Y
A in MTEP09	A	Central	DEI	2154	2942 SUB		6/1/2019	Carmel Rohrer Rd.	distribution sub	69	12			Carmel Rohrer Rd 69/12-22.4MVA sub to looped through th	IN	0.4	0.4	M2a_Pre-Project Approval	\$591,143.00	Engineering	N	N	NT
A in MTEP09	A	Central	Vectren	2466	4430 SUB		6/1/2019	Roesner Rd 138/12kV	Substation	1	138	12.5	16/20	New 138/12kV Substation for load growth	IN			M2a_Pre-Project Approval	\$3,000,000.00	Budgetary	N	N	NT
A in MTEP09	A	East	METC	662	1350 SUB		12/15/2016	Weeds Lake 345/138 kV		345	138			Weeds Lake 345/138 kV switching station	MI			Under Construction	\$17,841,284.40		Y	N	Y
A in MTEP09	A	East	METC	662	8991 SUB		12/15/2016	Milham 138 kV		138	138			Remote relay work to be completed at Milham 138 kV	MI			Under Construction	\$553,735.20		N	N	Y
A in MTEP09	A	East	METC	662	3597 SUB		12/15/2016	Argenta 138 kV		138	138			Remote relay work to be completed at Argenta 138 kV	MI			Under Construction	\$1,067,275.20		Y	N	Y
A in MTEP09	A	East	METC	662	3596 LNup		12/15/2016	Weeds Lake	N. AVE	138	138			line extension on MILHAM to N. AVE circuit N. AVE side	MI			Under Construction	\$5,780,000.00		Y	N	Y
A in MTEP09	A	East	METC	662	3595 LNup		12/15/2016	Weeds Lake	12th ST	138	138			line extension on BRONCO to 12th ST circuit 12TST side	MI			Under Construction	\$5,780,000.00		Y	N	Y
A in MTEP09	A	East	METC	662	3594 LNup		12/15/2016	Weeds Lake	MILHAM	138	138			line extension on MILHAM to N. AVE circuit MILHAM side	MI			Under Construction	\$5,780,000.00		Y	N	Y
A in MTEP09	A	East	METC	662	3593 LNup		12/15/2016	Weeds Lake	BRONCO	138	138			line extension on BRONCO 12th ST circuit BRONCO side	MI			Under Construction	\$5,780,000.00		Y	N	Y
A in MTEP09	A	East	METC	662	3592 TX		12/15/2016	Weeds lake 345/138	Transformer	345	138			transformer	MI			Under Construction	\$6,665,833.20		Y	N	Y
A in MTEP09	A	East	METC	2478	4466 TAP		6/1/2017	Capital Ave	Battle Creek	1	138			Capital Ave taps the Battle Creek-Verona 138kV circuit #2.	MI			Planned	\$89,094.00		N	N	Y
A in MTEP09	A	East	METC	2478	4467 TAP		6/1/2017	Capital Ave	Battle Creek	1	138			Capital Ave taps the Battle Creek-Verona 138kV circuit #2.	MI			Planned	\$89,094.00		N	N	Y
A in MTEP09	A	East	METC	2481	4470 TAP		5/31/2018	Forest Grove	Campbell	1	138			Forest Grove taps the Campbell-Hudsonville (toward Ransc	MI			Planned	\$85,000.00		N	N	Y
A in MTEP09	A	East	METC	2481	4471 TAP		5/31/2018	Forest Grove	Hudsonville	1	138			Forest Grove taps the Campbell-Hudsonville (toward Ransc	MI			Planned	\$85,000.00		N	N	Y
A in MTEP09	A	East	METC	2482	4472 TAP		5/31/2020	Hawthorne	Four Mile	1	138			Hawthorne taps the Four Mile-Pingree (toward Blendon) 13	MI			Planned	\$85,000.00		N	N	Y
A in MTEP09	A	East	METC	2482	4473 TAP		5/31/2020	Hawthorne	Pingree	1	138			Hawthorne taps the Four Mile-Pingree (toward Blendon) 13	MI			Planned	\$85,000.00		N	N	Y
A in MTEP09	A	East	METC	2483	4474 TAP		12/1/2016	Maines Road	Marshall	1	138			Maines Road taps the Marshall-Blackstone 138kV circuit	MI			M3_Long Lead Materials	\$88,193.00		N	N	Y
A in MTEP09	A	East	METC	2483	4475 TAP		12/1/2016	Maines Road	Blackstone	1	138			Maines Road taps the Marshall-Blackstone 138kV circuit	MI			M3_Long Lead Materials	\$88,193.00		N	N	Y
A in MTEP09	A	East	METC	2486	4478 RLY		6/1/2019	Ransom	Buck Creek	1	138			Relay modifications	MI			Planned	\$12,000.00		N	N	Y
A in MTEP09	A	East	METC	2486	4479 TAP		6/1/2018	Haakwood	Rondo	1	138			Haakwood taps the Rondo-Vanderbilt section of the Riggsv	MI			Planned	\$85,000.00		N	N	Y
A in MTEP09	A	East	METC	2486	4480 TAP		6/1/2018	Haakwood	Vanderbilt	1	138			Haakwood taps the Rondo-Vanderbilt section of the Riggsv	MI			Planned	\$85,000.00		N	N	Y
A in MTEP09	A	East	METC	2501	4501 CAP		6/1/2030	Plum						Install 25.2 MVAR capacitor	MI			Planned	\$435,484.00		N	N	Y
A in MTEP09	A	East	METC	2501	4500 CAP		6/1/2030	Keystone						Install 50.4 MVAR capacitor	MI			Planned	\$740,323.00		N	N	Y
A in MTEP09	A	East	METC	2501	4499 CAP		6/1/2030	New site (Wexford prime)						Install 25.2 MVAR capacitor	MI			Planned	\$1,524,194.00		N	N	Y
A in MTEP09	A	East	WPSC	2736	4758 LNrb		12/31/2016	East Bay	South Boardman Di	1	69		143.4MV	Rebuild Overloaded Line	MI	15.9		Planned	\$7,500,000.00		N	N	Y
A in MTEP09	A	East	WPSC	2770	4832 TAP		12/31/2017	Hersey	Gilmore	1	69			Gilmore Taps the Hersey to Vestaburg 69kV circuit	MI			Planned	\$250,000.00	Planning	N	N	Y
A in MTEP09	A	East	WPSC	2770	4833 TAP		6/1/2017	Gilmore	Vestaburg	1	69			Gilmore Taps the Hersey to Vestaburg 69kV circuit	MI			Planned	\$250,000.00	Planning	N	N	Y
A in MTEP09	A	West	ITCM	2367	4360 LNrb		4/29/2016	Anita 161kV	Exira REC	1	34	39/39		Rebuild the 34kV line to 69kV (operate at 34kV).	IA	5		Under Construction	\$1,250,000.00		N	N	NT
A in MTEP09	A	West	ITCM	2367	4362 LNrb		12/31/2016	Anita-Wiota	Adair	1	34	39/39		Rebuild 1.2 miles of the Anita-Wiota-Adair line.	IA	1.2		Planned	\$300,000.00		N	N	NT
A in MTEP09	A	West	ITCM	2367	4361 LNrb		12/31/2016	Anita 161kV	Anita-Wiota	1	34	39/39		Rebuild the 34kV line to 69kV (operate at 34kV).	IA	3.5		Planned	\$875,000.00		N	N	NT
A in MTEP09	A	West	ITCM	2371	4383 SUB		12/31/2016	Marengo	new switching station	1	69			Construct a new 3-terminal 69kV switching station at the ex	IA			M1_Final SPM or OOC	\$1,900,000.00	Engineering	N	N	NT
A in MTEP09	A	West	MP	2759	4782 SUB		12/31/2017	Laskin	Substation Transformer	1	115	46	28	Substation Transformer	MN			Planned	\$1,500,000.00	Engineering	N	N	Y
A in MTEP10	A	Central	DEI	1520	2596 SUB		6/1/2017	Durbin	230/69 substation	1	230	69		Build a new 230/69kV 150mva sub with 2 69kV line terminat	IN			M3_Long Lead Materials	\$9,167,825.75	Engineering	N	N	Y
A in MTEP10	A	Central	DEI	2143	2929 TX		6/1/2020	Frances Creek	bank 2	2	345	69	200	Add Frances Creek 345/69kV Bank 2 - 200MVA with LTC	IN			M1_Final SPM or OOC	\$6,887,000.00	Engineering	N	N	NT
A in MTEP10	A	East	ITCT	2929	5098 LN		11/30/2016	Ariel (formerly Hollan	Holland	1	120			Distribution Interconnection to add two new 120/13.2kV tra	MI			Under Construction	\$2,800,000.00		N	N	Y
A in MTEP10	A	East	ITCT	2929	5100 LNup		11/30/2016	Ariel (formerly Hollan	Troy	1	120			Distribution Interconnection to add two new 120/13.2kV tra	MI	0.73	0.1	Under Construction			N	N	Y
A in MTEP10	A	East	ITCT	2929	5099 LNup		11/30/2016	Ariel (formerly Hollan	Wheeler	1	120			Distribution Interconnection to add two new 120/13.2kV tra	MI			Under Construction			N	N	Y
A in MTEP10	A	West	GRE	2564	4566 LN		11/8/2017	St. Wendel	Le Sauk	1	115			Sattel Distribution Sub, 795 ACSS 115 kV radial line and sv	MN		3	Under Construction	\$1,500,000.00	Engineering	N	N	Y
A in MTEP10	A	West	GRE	2577	4588 SUB		5/18/2021	Columbus	Columbus Tap	1	69												

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	ProjID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP10	A	West	ITCM	3057	5302 LN		12/31/2019	Muscaline Switch Sta	Moscow Tap	1	69	69		Tap the Muscaline Switch Station to Magnet T69kV line for	IA	0	0	M1_Final SPM or OOC		Engineering	N	N	Y
A in MTEP10	A	West	ITCM	3058	5323 SUB		12/31/2016	Urbana	Substation	1	69	69		New 69kV/dist sub	IA			M1_Final SPM or OOC	\$5,160,000.00	Engineering	N	N	Y
A in MTEP10	A	West	ITCM	3058	5322 SUB		12/31/2016	Lafayette	Substation	1	69	69		New 69kV/dist sub	IA			M1_Final SPM or OOC	\$5,160,000.00	Engineering	N	N	Y
A in MTEP10	A	West	ITCM	3058	5321 SUB		12/31/2016	Walker REC	Substation	1	69	69		New 69kV/dist sub	IA			M1_Final SPM or OOC	\$5,160,000.00	Engineering	N	N	Y
A in MTEP10	A	West	ITCM	3058	5318 SUB		12/31/2016	Brandon	Substation	1	69	69		New 69kV/dist sub	IA			M1_Final SPM or OOC	\$5,160,000.00	Engineering	N	N	Y
A in MTEP10	A	West	ITCM	3058	5317 SUB		12/31/2016	Shellsburg	Substation	1	69	69		New 69kV/dist sub	IA			M1_Final SPM or OOC	\$5,160,000.00	Engineering	N	N	Y
A in MTEP10	A	West	ITCM	3058	5316 SUB		12/31/2016	Palo	Substation	1	69	69		New 69kV/dist sub	IA			M1_Final SPM or OOC	\$5,160,000.00	Engineering	N	N	Y
A in MTEP10	A	West	ITCM	3058	5308 LN		6/1/2015	Palo	Todville REC	1	69	69		New 69kV	IA	0	4.5	M1_Final SPM or OOC	\$5,160,000.00	Engineering	N	N	Y
A in MTEP10	A	West	MP	2547	5438 SUB		4/1/2027	Blackberry	Substation Equipment	1	230			632 line entrance & breaker	IA			Planned		Engineering	N	N	Y
A in MTEP10	A	West	MP	2547	4557 LN		4/1/2027	Blackberry	Essar Steel Sub (Mt	1	230			632 Essar new Line and new bay at McCarthy Lake (facility #45	IA		15	Planned	\$14,000,000.00	Engineering	N	N	Y
A in MTEP10	A	West	MP	2761	4780 SUB		1/31/2017	Northmet	Substation Equipment	1	138	14		Substation Equipment & Transformer	IA			Planned	\$3,242,847.00	Engineering	N	N	Y
A in MTEP10	A	West	MPW	2934	5106 TX		12/1/2016	South 161/69 kV	transformer	2	69	69		134 Add transformer in parallel with existing 75 MVA transforme	IA			Planned	\$5,400,000.00	Engineering	N	N	Y
A in MTEP10	A	West	NWEC	3092	5410 LNrb		6/1/2012	Lake 26	Webb Lake	1	69			15 Rebuild 34.5kV line to Webb Lake at 69kV with horizontal t	IA	2.6	0	Planned	\$425,000.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	2237	4104 LN		11/15/2016	Pana	Faraday	1	345			1793 new line - 35.9 miles of 345 kV	IL		35.9	Planned	\$77,050,763.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	2237	20828 LN		11/15/2016	Faraday	Mt. Zion PPG	2	138			399 Build 2 miles of 138 kV line between Faraday 138 kV Subst	IL		2	Planned	\$12,759,396.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	2237	20827 LN		11/15/2016	Faraday	Mt. Zion PPG	1	138			399 Build 2 miles of 138 kV line between Faraday 138 kV Subst	IL		2	Planned	\$14,386,687.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	2237	20826 CB		11/15/2016	PPG Substation	Instal 4-138 kV breakers	1	138			Install 4 138 kV, 2000 A breakers to accommodate connecti	IL			Planned	\$4,509,333.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	2237	20825 LNrb		6/1/2017	Mt. Zion PPG	Route 51	1	138			399 Rebuild 4.43 miles of 795 kcmil ACSR with conductor capai	IL	4.43		Planned	\$4,248,992.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	2237	20824 LNrb		6/1/2017	Mt. Zion PPG	Mt. Zion Rt. 121	1	138			399 Rebuild 2.37 miles of 795 kcmil ACSR conductor with condit	IL	2.37		Planned	\$2,345,666.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	2237	20773 LNrb		11/15/2018	Kansas	Area Connection Work	345				Rerouting of existing lines and work at remote ends	IL			Planned	\$5,341,519.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	2237	20772 LNrb		11/15/2018	Faraday	Area Connection Work	345				Rerouting of existing lines and work at remote ends	IL			Planned	\$3,496,405.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	2237	4154 LN		11/15/2018	Kansas	Sugar Creek	1	345			1793 new line - 34.5 miles 345 kV; Kansas to Indiana State Line	IL		34.5	Planned	\$86,838,538.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	2237	4152 LN		11/15/2018	Faraday	Kansas	1	345			1793 new line - 70.2 miles 345 kV	IL		70.2	Planned	\$157,278,038.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	2237	4151 TX		11/15/2016	Faraday	Transformer	1	345	138		560 new transformer - 560 MVA, 345/138 kV, plus 345 kV ring b	IL			M3_Long Lead Materials	\$22,927,839.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	2239	20775 LNrb		6/1/2016	Sidney	Area Connection Work	345				Rerouting of existing lines and work at remote ends	IL			Planned	\$3,344,896.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	2239	20774 LNrb		6/1/2016	Rising	Area Connection Work	345				Rerouting of existing lines and work at remote ends	IL			Planned	\$5,268,524.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	3017	4149 LN		11/15/2017	Meredosia	Ipava	1	345			1793 new line - 48.0 miles 345 kV; Includes 1.1 mile Illinois r	IL	48		M3_Long Lead Materials	\$139,715,270.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	3017	20780 LN		11/15/2016	Meredosia	Area Connection Work	345				Rerouting of existing lines and work at remote ends	IL			Planned	\$13,604,236.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	3017	20779 LNrb		6/1/2017	Ipava	Area Connection Work	345				Rerouting of existing lines and work at remote ends	IL			Planned	\$13,131,584.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	3017	20778 LNrb		1/10/2016	Austin	Area Connection Work	345				Rerouting of existing lines and work at remote ends	IL			Under Construction	\$4,960,087.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	3017	20777 LNrb		1/10/2016	Herleman	Area Connection Work	345				Rerouting of existing lines and work at remote ends	IL			Under Construction	\$6,730,984.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	3017	6968 TX		11/15/2016	Meredosia	Instal 345/138 kV X	1	345	138		560 Meredosia 345/138 kV Substation - Install 345/138 kV Xfmr	IL			Under Construction	\$29,111,231.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3017	6597 LN		6/1/2017	Ipava	1	345				1793 Substation work for new Meredosia-Ipava 345 kV line	IL			M3_Long Lead Materials	\$30,284,809.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3017	6430 TX		11/15/2017	Austin	Transformer	2	345	138		560 2nd. 345/138, 560 MVA Xfmr, establish 345 kV breaker-anc	IL			M3_Long Lead Materials	\$40,230,142.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3017	5227 LN		11/15/2016	Herleman	Meredosia	1	345			1793 new line - 46.6 miles 345 kV; Includes 0.8 mile Illinois r	IL	46.6		M3_Long Lead Materials	\$147,551,577.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3017	5203 TX		11/15/2016	Herleman	Xfmr Addition	1	345	138		450 Quincy Area 345/138 kV Substation - 1-560 MVA transform	IL			Under Construction	\$29,311,011.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3017	5202 LN		11/15/2016	Maywood	Herleman	1	345			1793 new line - 15.2 miles 345 kV; Includes 1.6 mile Mississipi r	IL	15.2		M3_Long Lead Materials	\$73,857,213.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3017	4150 LN		11/15/2017	Meredosia	Austin	1	345			1793 new line - 76.5 miles 345 kV	IL		76.5	M3_Long Lead Materials	\$176,912,468.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3022	5232 LN		11/15/2018	Fargo	Sandburg	1	345			Fargo-Sandburg 345 kV Line - New 39 mile, 3000 A summe	IL		39	Planned	\$92,100,000.00	Budgetary	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3022	20781 TEQ		11/15/2016	Sandburg	1	138				Area Connection work associated with Sandburg.	IL			Planned	\$1,500,000.00	Budgetary	N	N	Y
A in MTEP11	A	Central	AmerenIL	3022	6599 LN		12/15/2016	Fargo	1	345				Fargo substation work - add a new 345 kV ring bus	IL			Planned	\$14,500,000.00	Budgetary	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3022	6554 TX		11/15/2016	Sandburg	345/138 kV transfo	1	345	138	560	MVA new 560 MVA, 345/138 kV xfmr, 345 kV ring bus, and 138 l	IL			Planned	\$38,200,000.00	Budgetary	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3169	5600 LN		11/15/2018	Pana	Austin	1	345			1793 new line - 33.6 miles 345 kV	IL		33.6	Planned	\$78,331,104.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenIL	3169	20782 LNrb		11/15/2016	Pana	Area Connection Work	345				Rerouting of existing lines and work at remote ends	IL			Planned	\$14,519,558.00	Engineering	N	N	Y
A in MTEP11	A	Central	AmerenIL	3169	6431 TX		11/15/2016	Pana	Transformer	2	345	138		560 Install 2nd. 345/138 kV Xfmr at Pana Sub., 345 kV breaker-	IL			M3_Long Lead Materials	\$42,645,696.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenMO	2248	4160 LN		11/15/2018	Ottumwa	Zachary	1	345			1793 AmerenMOs portion of new line - 345 kV, 36 mile single circ	MO	36		Planned	\$66,000,000.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenMO	2248	20771 TEQ		11/15/2018	Zachary	1	161				Area Connection work associated with Zachary Substation	MO			Planned	\$9,870,000.00	Budgetary	Y	Y	Y
A in MTEP11	A	Central	AmerenMO	2248	5187 SUB		11/15/2018	Zachary	Instal Transformer	1	345	161		560 Adair Substation - New 560 MVA, 345/161 kV Transformer	MO			Planned	\$27,000,000.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	AmerenMO	3170	5601 LN		11/15/2018	Zachary	Maywood	1	345			1793 Construct new 60 mile, 345 kV Line	MO	60		Planned	\$122,000,000.00	Budgetary	Y	Y	Y
A in MTEP11	A	Central	AmerenMO	3170	6603 SUB		1/10/2016	Maywood	Establish 345 kV Sub	345				1793 New Maywood Substation - Establish with breaker-and-a-h	MO			Under Construction	\$31,369,959.00	Engineering	Y	Y	Y
A in MTEP11	A	Central	DEI	2202	7286 LNrb		6/1/2018	Wabash	Wabash Container	1	69			100 Reconductor Wabash to Wabash Container section of the 6 I	IN	0.8		M3_Long Lead Materials	\$625,000.00	Engineering	Y	Y	NT
A in MTEP11	A	Central	DEI	2202	7287 LNrb		6/1/2018	Kokomo Delco	Greentown	1	138			179 Upgrade 397ACSR conductor from Kokomo Delco to Green	IN	10.2		M3_Long Lead Materials	\$142,000.00	Engineering	N	N	Y
A in MTEP11	A	Central	DEI	2237	8313 LN		11/15/2018	ILIN State Line	Sugar Creek	1	345			1793 Sugar Creek 345kV ring breaker addition and 1.5 mile - 30C	IN		1.5	M1_Final SPM or OOC	\$8,809,000.00	Engineering	N	N	Y
A in MTEP11	A	Central	DEI	3379	6252 Dist		6/1/2017	Shelbyville McKay Rd	new distribution sub	69	12												

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP11	A	West	ATC_XEL	3127	5627 LNrb		12/31/2017	North Madison	Cardinal	1	138		272	Reconductor with T2-477 HAWK ACSR	WI	19.9		M1_Final SPM or OOC	\$6,010,000.00	Engineering	Y	Y	Y
A in MTEP11	A	West	ATC_XEL	3127	6573 SUB		12/31/2018	Briggs Road (North L	Substation	345				Terminate North Madison - North LaCrosse 345 kV line into	WI			Planned	\$7,300,000.00	Engineering	Y	Y	Y
A in MTEP11	A	West	DPC_ITCM	3127	20577 LN		12/31/2023	Eden	Hickory Creek	1	345		1399	New circuit	WI,IA		49	M1_Final SPM or OOC	\$193,305,000.00	Engineering	Y	Y	Y
A in MTEP11	A	West	GRE	2679	4696 LN		5/31/2021	Ramsey	Grand Forks	1	230			230 kV rebuild	IA	81	Under Construction	\$41,496,024.63	Planning	N	N	Y	
A in MTEP11	A	West	GRE	3454	6267 SUB		6/13/2017	Medina	115 kV breaker station	115			0	Convert WHCEA7's Median 69 kV distribution substation to	MN	0	0	Planned	\$1,726,608.36	Engineering	N	N	Y
A in MTEP11	A	West	GRE	3454	6659 LN		10/27/2017	Pomerleau Lake	Plymouth/Parkers Ln	1	115			In and Out tap to Pomerleau Lake substation	MN		0.25	Planned	\$399,999.00	Engineering	N	N	Y
A in MTEP11	A	West	ITCM	2248	20770 LN		6/1/2017	Ottumwa	IAMO Border	1	345	161	1793	345/161kV double circuit line - ITC Midwest portion ~20 mile	IA			M1_Final SPM or OOC	\$40,640,000.00	Engineering	Y	Y	Y
A in MTEP11	A	West	ITCM	3127	20579 SUB		12/31/2023	Hickory Creek	Substation	345				Hickory Creek Substation modifications	IA			M1_Final SPM or OOC	\$13,000,000.00	Engineering	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6520 SUB		12/31/2016	Huntley (formerly Win	Substation	345	161	1800		Construct a new sub with a 345kV ring bus with 2 line termin	IA			M1_Final SPM or OOC	\$27,360,000.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6535 LN		6/1/2017	Winnebago	Fairbault Co	1	161		446 MVA	Construct 345-161kV double circuit	IA		15.1	M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6534 LN		6/1/2017	Winco	Fairbault Co	1	161		446 MVA	Construct 345-161kV double circuit	MN,IA	22		M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6533 LN		6/1/2018	Ledyard	Burt	1	345		1800	Construct 345kV circuit	IA		19	M1_Final SPM or OOC	\$41,225,660.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6532 LN		6/1/2017	Huntley (formerly Win	Ledyard	1	161		1800	Retire existing 161kV H frame circuit	MN,IA			M1_Final SPM or OOC	\$1,105,632.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6531 LN		6/1/2017	Huntley (formerly Win	Ledyard	1	345		1800	Construct 345-161kV double circuit	MN,IA	22		M1_Final SPM or OOC	\$47,734,975.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6530 SUB		6/1/2017	Ledyard	Substation	1	345		1800	Construct a new Ledyard (formerly Winco West) 3-termina	IA			M1_Final SPM or OOC	\$10,980,000.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6529 SUB		12/31/2016	Lakefield	Substation	345			1800	Add a 345kV terminal at Lakefield including 2 new 345kV bk	IA			M1_Final SPM or OOC	\$5,000,000.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6528 LN		12/31/2016	Rutland	Winnebago	1	161			Retire existing 161kV H frame circuit	MN			M1_Final SPM or OOC	\$804,097.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6527 LN		12/31/2016	Fox Lake	Rutland	1	161			Retire existing 161kV H frame circuit	MN			M1_Final SPM or OOC	\$804,097.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6526 LN		12/31/2016	Rutland	Huntley (formerly W	1	161		446 MVA	Construct 345-161kV double circuit	MN	15.2		M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6525 LN		12/31/2016	Fox Lake	Rutland	1	161		446 MVA	Construct 345-161kV double circuit	MN	16.5		M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6524 LN		12/31/2016	Lakefield	Fox Lake	1	161		446 MVA	Construct 345-161kV double circuit	MN	23		M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6523 LN		12/31/2016	Lakefield	Fox Lake	1	161			Retire existing 161kV H frame circuit	MN			M1_Final SPM or OOC	\$1,155,888.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6522 LN		12/31/2016	Lakefield	Huntley (formerly W	1	345		1800	Construct 345-161kV double circuit	MN	55		M1_Final SPM or OOC	\$119,337,438.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3205	6521 TX		12/31/2016	Huntley (formerly Win	transformer	345	161	450 MVA		Add a 345/161kV TRF	IA			M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6547 LN		12/31/2016	Lime Creek	Emery	1	161			Retire existing 161kV H frame circuit	IA			M1_Final SPM or OOC	\$804,096.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6546 LN		12/31/2016	Lime Creek	Emery	1	161		335 MVA	Construct 345-161kV double circuit	IA		16	M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6545 LN		12/31/2016	Lime Creek	Kildeer	1	345		1800	Construct 345-161kV double circuit	IA		16	M1_Final SPM or OOC	\$34,716,345.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6544 TX		12/31/2016	Kildeer	transformer	345	161	450 MVA		Add a 345/161kV TRF	IA			M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6543 SUB		12/31/2016	Kildeer	Substation	345	161	1800		Construct a new sub with a 345kV ring bus with 2 line termin	IA			M1_Final SPM or OOC	\$19,380,000.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6542 TX		12/31/2016	Lime Creek	transformer	345	161	450 MVA		Add a 345/161kV TRF	IA			M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6541 SUB		12/31/2016	Lime Creek	Substation	345	161	1800		Construct a new sub with a 345kV ring bus with 2 line termin	IA			M1_Final SPM or OOC	\$18,930,000.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6540 LN		12/31/2018	Lime Creek tap	Lime Creek	1	161			Retire existing 161kV H frame circuit	IA			M1_Final SPM or OOC	\$226,152.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6539 LN		12/31/2018	Worth County	Lime Creek tap	1	161			Retire existing 161kV H frame circuit	IA			M1_Final SPM or OOC	\$251,280.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6538 LN		12/31/2018	Winco West	Winco	1	161			Retire existing 161kV H frame circuit	IA			M1_Final SPM or OOC	\$804,096.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6537 LN		12/31/2018	Lime Creek	Worth County	1	161		200 MVA	Construct 345-161kV double circuit	IA		7	M1_Final SPM or OOC		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3213	6536 LN		12/31/2018	Ledyard	Lime Creek	1	345		1800	Construct 345-161kV double circuit	IA	61		M1_Final SPM or OOC	\$132,356,067.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM	3412	6299 SUB		10/7/2016	Fort Madison	Substation	1	69			Add new 69/dist TRF	IA			M4_Pre-Construction	\$1,740,000.00	Engineering	N	N	Y
A in MTEP11	A	West	ITCM	3413	6300 LN		12/31/2015	Gladbrook	Gladbrook Tap	1	161		161	Add new 69/dist TRF	IA			Planned	\$300,000.00	Planning	N	N	Y
A in MTEP11	A	West	ITCM	3413	6302 LN		12/31/2015	Traer	Gladbrook Tap	1	161		161	Add new 69/dist TRF	IA			Planned		Planning	N	N	Y
A in MTEP11	A	West	ITCM	3413	6301 LN		12/31/2015	Marshalltown	Gladbrook Tap	1	161		161	Add new 69/dist TRF	IA			Planned		Planning	N	N	Y
A in MTEP11	A	West	ITCM	3418	6307 LN		12/31/2015	Mt Vernon 6420	6420 circuit	1	34		34	Rebid ckt 69kV	IA			Planned	\$7,150,000.00	Planning	N	N	Y
A in MTEP11	A	West	ITCM	3422	6311 TEQ		6/30/2015	South Broadway	Substation	1	69		195 MVA	Upgrades terminal equipment. Change out existing relays,	IA			Planned	\$852,000.00	Engineering	N	N	Y
A in MTEP11	A	West	ITCM, MEC	2248	6566 TEQ		6/1/2017	Ottumwa	345 kV terminal	1	345			add 345 kV terminal for Zachary line	IA			M1_Final SPM or OOC	\$9,360,000.00	Engineering	Y	Y	Y
A in MTEP11	A	West	ITCM, MEC	3213	6549 LN		12/31/2016	Kildeer	Blackhawk	1	161			Construct 345-161kV double circuit and transfer existing 16	IA			Under Construction		Planning	Y	Y	Y
A in MTEP11	A	West	ITCM, MEC	3213	6548 LN		12/31/2016	Kildeer	Blackhawk	1	345			Construct 345-161kV double circuit	IA		29	M1_Final SPM or OOC	\$57,677,172.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM, MEC	3213	6557 LN		5/1/2017	Blackhawk	Kildeer	1	345			Blackhawk - Kildeer 345/161 kV double circuit line via Fran	IA	63		Under Construction	\$110,626,884.00	Planning	Y	Y	Y
A in MTEP11	A	West	ITCM, MEC	3213	6550 LN		12/31/2016	Emery	Blackhawk	1	161			Retire existing 161kV H frame circuit	IA			Under Construction	\$1,457,424.00	Planning	Y	Y	Y
A in MTEP11	A	West	MDU_OTP	2220	4092 LN		9/30/2019	Big Stone South	Elendale	345		1800		Line (The cost increase associated with the Big Stone South	SD,ND	165	Planned	\$365,000,000.00	Planning	Y	Y	Y	
A in MTEP11	A	West	MDU_OTP	2220	6382 TX		9/30/2019	Elendale 345/230	Transformer	345	230			Substation, Transformer 345/230, Line Reactor	ND			Planned	\$30,670,000.00	Planning	Y	Y	Y
A in MTEP11	A	West	MDU_OTP_XEL	2221	4116 TX		9/30/2017	Big Stone South 345/	Transformer	1	345	230	448 MVA	Transformer #1 345/230/13.8 kV	SD			Planned	\$4,000,000.00	Planning	Y	Y	Y
A in MTEP11	A	West	MEC	2248	6565 LN		10/1/2018	Ottumwa	Iowa border	1	345	161		345/161 double circuit line. MEC's portion	IA	22		M2a_Pre-Project Approval	\$38,980,586.95	Engineering	Y	Y	Y
A in MTEP11	A	West	MEC	3022	5989 LN		4/8/2017	Oak Grove	Sandburg	1	345	161		New 345/161 kV double circuit line. Replaces existing Oak	IA	32		M2a_Pre-Project Approval	\$68,319,117.67	Engineering	Y	Y	Y
A in MTEP11	A	West	MEC	3022	6564 LNrc		4/30/2017	Sub 56	Sub 85	1	161		410	Reconductor Sub 56-Sub 85 161 kV line with T2- 556.5 AC	IA	7.5		M1_Final SPM or OOC	\$2,588,989.63	Engineering	Y	Y	Y
A in MTEP11	A	West	MEC	3022	6562 TEQ		4/8/2017	Oak Grove	345 kV terminal	345				add 345 kV terminal for Sandburg line	IA			M2a_Pre-Project Approval	\$2,046,383.81	Engineering	Y	Y	Y
A in MTEP11	A	West	MEC	3205	5951 LN		12/1/2016																

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP12	A	West	ATC	3679	7243 SUB		10/25/2018	Morgan		1	345			Morgan 345 kV substation expansion	WI			M1_Final SPM or OOC	\$13,987,000.00	Engineering	Y	Y	Y
A in MTEP12	A	West	ATC	3679	7242 TX		8/13/2016	Old Mead Road		2	138	69	60	Add new 2nd 138/69 kV Transformer at Old Mead Road	MI			M1_Final SPM or OOC	\$4,300,000.00	Engineering	N	N	Y
A in MTEP12	A	West	ATC	3679	6923 LN		3/31/2017	Morgan	Stiles	2	138		294	Deburfucate Morgan-Falls-Pioneer-Stiles 138 kV ckt to form	MI		11	M1_Final SPM or OOC	\$6,669,000.00	Engineering	Y	N	Y
A in MTEP12	A	West	ATC	3679	6919 SVC		8/1/2017	Benson Lake		1	138			New 150 MVAR SVC at Benson Lake (near Amberg)	MI			M1_Final SPM or OOC	\$40,213,000.00	Engineering	Y	N	Y
A in MTEP12	A	West	ATC	3679	6912 LN		10/25/2018	North Appleton	Morgan	1	345		1204	New 345 kV line from North Appleton - Morgan	WI		40	M1_Final SPM or OOC	\$155,814,000.00	Engineering	Y	Y	Y
A in MTEP12	A	West	ATC	3679	6911 SUB		5/13/2018	North Appleton		1	345			New 345 kV Switchyard North Appleton	WI			M1_Final SPM or OOC	\$34,265,000.00	Engineering	Y	Y	Y
A in MTEP12	A	West	ATC	3652	6926 TX		5/13/2018	North Appleton		1	345	138	500	New 345/138kV Transformer at North Appleton	WI			M1_Final SPM or OOC	\$7,700,000.00	Engineering	N	N	Y
A in MTEP12	A	West	ATC	3652	6927 LN		10/28/2018	North Appleton	Morgan	1	138		294	New 138 kV line from North Appleton-Morgan	WI		40	M1_Final SPM or OOC	\$69,011,000.00	Engineering	N	N	Y
A in MTEP12	A	West	GRE	3470	6397 GEN		12/31/2014	G667-200987	Round Lake Tap		1	69		Connection on GRE Round Lake tap	MN			Planned	\$722,000.00	Engineering	N	N	Y
A in MTEP12	A	West	GRE	11543	21785 TAP		11/1/2018	Glacial Ridge			69			Install new 69kV 3-way switch structure.	MN			Planned	\$1,500,000.00	Planning	N	N	Y
A in MTEP12	A	West	GRE	11563	21786 SUB		11/1/2017	McHenry			115			Install 115 kV ring bus	ND			Planned	\$4,952,173.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3627	6750 LN		12/30/2016	Chariton	Derby REC	1	69		77 MVA	Rebuild line section.	IA			Under Construction	\$2,044,831.00	Engineering	N	N	Y
A in MTEP12	A	West	ITCM	3627	6752 LN		12/30/2016	Millerlon	Corydon	1	69		77 MVA	Rebuild line section.	IA	5.38		Under Construction	\$2,444,704.00	Engineering	N	N	Y
A in MTEP12	A	West	ITCM	3627	6751 LN		12/30/2016	Millerlon	Derby REC	1	69		77 MVA	Rebuild line section.	IA	8.5		Under Construction	\$3,862,451.00	Engineering	N	N	Y
A in MTEP12	A	West	ITCM	3628	6733 LN		8/25/2017	General Foods	Northwest Tap	1	69		77 MVA	Build a new 69kV line from the General Foods substation to	IA			M1_Final SPM or OOC	\$1,494,000.00	Engineering	N	N	Y
A in MTEP12	A	West	ITCM	3628	9083 LN		8/25/2017	Holnam	New 69kV Tap	1	69			Install new GOAB and 69kV tap	IA			M1_Final SPM or OOC	\$490,000.00	Engineering	N	N	Y
A in MTEP12	A	West	ITCM	3628	9082 LN		8/25/2017	Nettle	Northwest Switch St	1	69			Rebuild the Nettle to old Lehigh site 69kV line and install Of	IA			M1_Final SPM or OOC	\$1,305,600.00	Engineering	N	N	Y
A in MTEP12	A	West	ITCM	3628	6736 SUB		8/25/2017	Lehigh	Substation	1	69			Retire the existing Lehigh switch station	IA			M1_Final SPM or OOC	\$60,000.00	Engineering	N	N	Y
A in MTEP12	A	West	ITCM	3628	6735 SUB		8/25/2017	Nettle	Substation	1	69			New 3 terminal Nettle Lehigh area switch station	IA			M1_Final SPM or OOC	\$3,135,600.00	Engineering	N	N	Y
A in MTEP12	A	West	ITCM	3628	6734 LN		8/25/2017	Holnam	Lehigh	1	69		77 MVA	Retire the existing Lehigh to Holnam 69kV line section	IA			M1_Final SPM or OOC	\$270,000.00	Engineering	N	N	Y
A in MTEP12	A	West	ITCM	3629	6744 LN		12/31/2016	8th Street	Salem	1	161	69		Build 3.5 miles of new 161kV line. 8th Street sub work. Sale	IA	3.5	Under Construction	\$7,222,073.00	Engineering	Y	N	Y	
A in MTEP12	A	West	ITCM	3629	6746 SUB		12/31/2016	8th Street	Substation	1	161		558 MVA	Add new 161kV terminal and reroute line to new terminal.	IA			Under Construction		Planning	N	N	Y
A in MTEP12	A	West	ITCM	3629	6745 SUB		12/31/2016	Salem	Substation	1	161		558 MVA	Add new 161kV terminal and 161kV bus tie breaker	IA			Under Construction		Planning	N	N	Y
A in MTEP12	A	West	ITCM	3630	6739 LN		12/31/2018	Adams	Stewartville 6th Stre	1	69		77 MVA	Rebuild 69kV line to T2-4/0 ACSR	IA	29.9		Planned	\$10,500,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3630	6740 LN		12/31/2018	Stewartville 6th Street	Stewartville Junctio	1	69		77 MVA	Rebuild 69kV line to T2-4/0 ACSR	IA	4.68		Planned	\$1,700,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3631	6772 LN		12/31/2017	Rock Creek	CMP NT	1	69		140 MVA	Rebuild the 69kV line section	IA	1.2		M1_Final SPM or OOC	\$1,250,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3631	6773 LN		12/31/2017	CMP NT	Mill Creek	1	69		140 MVA	Rebuild the 69kV line section	IA	3.6		M1_Final SPM or OOC	\$1,250,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3632	6753 SUB		12/31/2017	Arnold	Substation	1	161			Add two new 161kV breakers and reroute Hiawatha line ter	IA			Planned	\$2,400,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3638	6755 SUB		12/31/2017	Coydon	Substation	1	69		143 MVA	Complete rebuild of the Coydon sub	IA			M1_Final SPM or OOC	\$5,129,204.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3639	6754 SUB		9/2/2016	Chariton	Substation	1	69		143 MVA	Complete rebuild of the Chariton sub	IA			Under Construction	\$7,683,367.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3640	6761 LN		12/31/2018	Belmond	Meservy Tap	1	69		77 MVA	Rebuild the 69kV line section	IA	4.65		M1_Final SPM or OOC	\$1,627,500.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3643	6765 LN		12/31/2022	Oscoeola	Woodburn Junction	1	69		77 MVA	Rebuild the 69kV line section	IA	5.5		M1_Final SPM or OOC	\$1,950,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3644	6766 LN		12/31/2021	Knoxville	Lucas	1	69		77 MVA	Rebuild the 69kV line section	IA	10.6		M1_Final SPM or OOC	\$3,750,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3645	6767 LN		12/31/2017	Triboji	Montgomery	1	69		77 MVA	Rebuild the 69kV line section	IA	5.75		M1_Final SPM or OOC	\$2,000,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3645	6770 LN		12/31/2017	Spiriti Lake	Orleans Tap	1	69		77 MVA	Rebuild the 69kV line section	IA	0.4		M1_Final SPM or OOC	\$200,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3645	6769 LN		12/31/2017	Bosworth	Spiriti Lake	1	69		77 MVA	Rebuild the 69kV line section	IA	1.17		M1_Final SPM or OOC	\$400,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3645	6768 LN		12/31/2017	Bosworth	Montgomery	1	69		77 MVA	Rebuild the 69kV line section	IA	2.16		M1_Final SPM or OOC	\$750,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	7116 LN		12/31/2021	Dixon	Fulton	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	17		M1_Final SPM or OOC	\$5,950,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	7115 LN		12/31/2015	Zwingle	Mosalem REC	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA			8 M1_Final SPM or OOC	\$2,800,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	7114 LN		12/31/2019	PCI	Putnam	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA			0.5 M1_Final SPM or OOC	\$175,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	7113 LN		9/28/2017	Mt Vernon	Lisbon	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	2		2 M1_Final SPM or OOC	\$1,400,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	7112 LN		12/31/2018	Manchester Tap	Manchester Industri	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA			0.5 M1_Final SPM or OOC	\$175,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	7111 LN		12/31/2018	Clarence	Clarence REC	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA			2 M1_Final SPM or OOC	\$700,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	7110 LN		12/31/2018	Rome Tap	Rome	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA			2 M1_Final SPM or OOC	\$700,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	7109 LN		12/31/2016	Coggon	Manchester Industri	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA			2.5 M1_Final SPM or OOC		Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	6816 LN		4/28/2017	Prairie Creek	Bertam JU	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	6		M1_Final SPM or OOC	\$2,100,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	6815 LN		6/1/2018	Clarence	Wyoming	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	11		M1_Final SPM or OOC	\$3,850,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	6814 LN		12/31/2015	Clarence	Clarence Tap	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	1		M1_Final SPM or OOC	\$350,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	6813 LN		12/31/2017	Cascade Muni	Cascade Muni Tap	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	1		M1_Final SPM or OOC	\$350,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3647	6812 LN		11/3/2017	Ryan REC	Ryan REC tap	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	1		M1_Final SPM or OOC	\$350,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3648	6800 LN		12/31/2015	Story City	Ames	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	3.5		M1_Final SPM or OOC	\$1,200,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3648	6799 LN		12/31/2015	Gilbert	Ames	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	4.7		M1_Final SPM or OOC	\$2,000,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3648	6798 LN		3/17/2017	Marion	Nevada Street	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	1.4		M1_Final SPM or OOC	\$500,000.00	Planning	N	N	Y
A in MTEP12	A	West	ITCM	3648	6791 LN		12/31/2019	Boone Jct	Ridgeport REC	1	34		77 MVA	Rebuild the 34kV line section to 69kV for future conversion	IA	2.75		M1_Final SPM or OOC	\$1,200,000.00	Planning	N	N	Y
A in MTEP12	A																						

Appendices A, B - Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upp	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP13	A	Central	DEI	4037	7670 SUB		12/31/2019	Lafayette 230 breaker			230			Lafayette 230kV Sub Ring Bus - Phase 2, install one 230kV IN	MI			M3_Long Lead Materials	\$1,618,000	Engineering	N	N	Y
A in MTEP13	A	Central	IPL	4724	8953 SUB		4/16/2016	Eagle Valley 138 kV S new gen i-connect			138			J238 - 138kV - Generator interconnection substation - install IN	MI			Under Construction		N	N	N	Y
A in MTEP13	A	East	ITCT	1550	2639 LNug		12/31/2016	Hager Sunset		1	120			Replace the 0.08 miles of underground 1500 KCM CU XLP MI	MI	0.1	M4_Pre-Construction	\$2,200,000.00	Engineering	N	N	Y	
A in MTEP13	A	East	ITCT	9338	7500 CAP		7/15/2017	Greenwood			120			Install two 120kV, 26 Mvar capacitor capacitor banks at th MI	MI		M3_Long Lead Materials	\$2,020,000	Engineering	N	N	Y	
A in MTEP13	A	East	ITCT	4145	7880 LNug		12/31/2016	Quaker	Southfield		120			Reconductor the 0.36 mile Quaker to Southfield Undergrou MI	MI	0.36	M4_Pre-Construction	\$3,960,000.00	Engineering	N	N	Y	
A in MTEP13	A	East	ITCT	4153	7892 SwSta		12/31/2017	Toll Road 120kV			120			Construct a 120kV switching station (Toll Road).	MI		M3_Long Lead Materials	\$15,000,000	Engineering	N	N	Y	
A in MTEP13	A	East	ITCT	4153	8318 SVC		12/31/2018	Toll Road			120			Install a 100 MVAR SVC at Toll Road.	MI		M2a_Pre-Project Approval	\$25,000,000	Planning	N	N	Y	
A in MTEP13	A	East	ITCT	4153	8317 LN		12/31/2017	Toll Road	Ferri	3	120			Loop the existing Ferri - Swan Creek 120kV line into Toll F MI	MI		M3_Long Lead Materials		N	N	N	Y	
A in MTEP13	A	East	ITCT	4153	7898 LN		12/31/2017	Toll Road	Swan Creek	1	120			Loop the existing Ferri - Swan Creek 120kV line into Toll F MI	MI		M3_Long Lead Materials		N	N	N	Y	
A in MTEP13	A	East	ITCT	4153	7897 LN		12/31/2017	Toll Road	Ferri	2	120			Loop the existing Ferri - Radka 120kV line into Toll Road. MI	MI		M3_Long Lead Materials		N	N	N	Y	
A in MTEP13	A	East	ITCT	4153	7896 LN		12/31/2017	Toll Road	Radka	1	120			Loop the existing Ferri - Radka 120kV line into Toll Road. MI	MI		M3_Long Lead Materials		N	N	N	Y	
A in MTEP13	A	East	ITCT	4153	7895 LN		12/31/2017	Toll Road	Ferri	1	120			Loop the existing Ferri - Shoal 120kV line into Toll Road. MI	MI		M3_Long Lead Materials		N	N	N	Y	
A in MTEP13	A	East	ITCT	4153	7894 LN		12/31/2017	Toll Road	Shoal	1	120			Loop the existing Ferri - Shoal 120kV line into Toll Road. MI	MI		M3_Long Lead Materials		N	N	N	Y	
A in MTEP13	A	East	ITCT	4159	7906 LNrb		12/31/2016	ITCT Wood Pole Rep	Throughout system					Replace aging wood poles with concrete poles or steel towe MI	MI		Under Construction	\$8,500,000	N	N	N	Y	
A in MTEP13	A	East	ITCT	4163	7910 TEQ		12/31/2016	ITCT Surge Arrestor	Throughout system					Replace old Silicon Carbide and Gap-type surge arresters v MI	MI		Under Construction	\$360,000	N	N	N	Y	
A in MTEP13	A	East	ITCT	4171	7918 TEQ		12/31/2016	ITCT Misc Line Equip	Throughout system					Replace cross arms that need to be replaced to maintain lin MI	MI		Under Construction	\$5,000,000	N	N	N	Y	
A in MTEP13	A	East	ITCT	4175	6706 TEQ		12/31/2016	Seville 1 & 2			120			Install a new 120 kV, 3-way, full-load-break pole top switch MI	MI		M4_Pre-Construction		N	N	N	Y	
A in MTEP13	A	East	ITCT	4175	7922 TEQ		12/31/2014	ITCT Pole Top Switch	Throughout system					Install a new or replace an existing 120 kV, 1-way, full-load-I MI	MI		Under Construction	\$2,400,000	N	N	N	Y	
A in MTEP13	A	East	ITCT	4175	6711 TEQ		6/30/2016	Topaz 2	Peru		120			Install a new 120 kV, 1-way, full-load-break pole top switch MI	MI		M4_Pre-Construction		N	N	N	Y	
A in MTEP13	A	East	ITCT	4176	7923 TEQ		12/31/2015	ITCT Pole Top Switch	Throughout system					Install a new or replace an existing 120 kV, 1-way, full-load-I MI	MI		Under Construction	\$2,400,000	N	N	N	Y	
A in MTEP13	A	East	ITCT	4176	6705 TEQ		12/31/2016	Long Lake 1 & 2			120			Install 2 new 120 kV, 1-way, full-load-break pole top switch MI	MI		M4_Pre-Construction		N	N	N	Y	
A in MTEP13	A	East	ITCT	4177	7924 TEQ		12/31/2016	ITCT Pole Top Switch	Throughout system					Install a new or replace an existing 120 kV, 1-way, full-load-I MI	MI		Under Construction	\$2,400,000	N	N	N	Y	
A in MTEP13	A	East	ITCT	4181	7928 TEQ		12/31/2016	ITCT Instrument Tran	Throughout system					Replace the aging potential devices including potential trans MI	MI		Under Construction	\$360,000	N	N	N	Y	
A in MTEP13	A	East	ITCT	4187	7934 TEQ		12/31/2016	ITCT NERC Protectio	Throughout system					Upgrade relay throughout system.	MI		Under Construction	\$2,400,000	N	N	N	Y	
A in MTEP13	A	East	ITCT	4191	7938 CB		12/31/2016	ITCT Breaker Repla	Throughout system					Replace defective breakers throughout system	MI		Under Construction	\$6,250,000	N	N	N	Y	
A in MTEP13	A	East	ITCT	4195	7942 TEQ		12/31/2016	ITCT Battery Replac	Throughout system					Replace battery chargers with the new ones.	MI		Under Construction	\$200,000.00	N	N	N	Y	
A in MTEP13	A	East	ITCT	4199	7946 TEQ		12/31/2016	ITCT Disconnect Swi	Throughout system					Replace problematic Pennsylvania Type A6A-2, EEE, R18E MI	MI		Under Construction	\$400,000.00	N	N	N	Y	
A in MTEP13	A	East	ITCT	4204	7951 TEQ		12/31/2016	ITCT Annual Relay B	Throughout system					Replace damaged or defective relays.	MI		Under Construction	\$10,400,000.00	N	N	N	Y	
A in MTEP13	A	East	ITCT	4286	8093 LN		5/31/2018	Frisbie Waterman		1	120			Loop in the Frisbie ? Waterman 120 kV underground cable MI	MI		M2a_Pre-Project Approval	\$5,000,000.00	Engineering	N	N	Y	
A in MTEP13	A	East	ITCT	4287	8094 LN		3/31/2017	Lincoln Northeast		1	120			Loop the Lincoln - Northeast 120 kV circuit to feed the new MI	MI		M4_Pre-Construction	\$3,800,000.00	Engineering	N	N	Y	
A in MTEP13	A	East	METC	4143	7877 TEQ		12/31/2016	Verona			138			Upgrade Terminal Equipment at Verona 138 kV (position 38 MI	MI		M4_Pre-Construction	\$80,000,000	Engineering	N	N	Y	
A in MTEP13	A	East	METC	4146	7881 LNrb		12/31/2016	Marshall	Blackstone		138			Rebuild 34.5 miles to 954 ACSR conductor	MI	34.5	Under Construction	\$46,300,000.00	Engineering	N	N	Y	
A in MTEP13	A	East	METC	4147	7882 LNrb		6/1/2017	Battle Creek	Island Road		138			Rebuild 23.9 miles to 954 ACSR conductor	MI	23.9	M4_Pre-Construction	\$24,300,000.00	Engineering	N	N	Y	
A in MTEP13	A	East	METC	4149	7884 LNup		6/30/2016	Argentina	Tallmadge		135			Remediate sag on the Argentina ? Tallmadge 345kV line to b MI	MI		M4_Pre-Construction	\$1,500,000.00	Engineering	N	N	Y	
A in MTEP13	A	East	METC	4150	7885 TEQ		12/31/2016	Verona			138			Upgrade station equipment at Verona 138kV (position 277). MI	MI		M4_Pre-Construction	\$140,000,000	Engineering	N	N	Y	
A in MTEP13	A	East	METC	4157	7904 LNrb		12/31/2016	METC Wood Pole Re	Throughout system					Replace defective wood poles with concrete poles or steel t MI	MI		Under Construction	\$9,000,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4161	7908 TEQ		12/31/2016	METC Surge Arrestor	Throughout system					Replace old Silicon Carbide and Gap-type surge arresters v MI	MI		Under Construction	\$360,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4167	7914 LNup		12/31/2016	METC Misc Line Equip	Throughout system					Replace cross arms that need to be replaced to maintain lin MI	MI		Under Construction	\$6,000,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4174	7921 TEQ		12/31/2016	METC Pole Top Swit	Throughout system					Install or replace an existing a new 138 kV, 2-way, full-load- MI	MI		Under Construction	\$3,600,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4179	7926 TEQ		12/31/2016	METC Instrument Tra	Throughout system					Replace the aging instrument transformers including potenti MI	MI		Under Construction	\$360,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4184	7931 TEQ		12/31/2016	METC NERC Protect	Throughout system					Upgrade relay throughout system.	MI		Under Construction	\$2,400,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4189	7936 CB		12/31/2016	METC Breaker Repla	Throughout system					Replace defective breakers throughout system	MI		Under Construction	\$9,000,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4193	7940 TEQ		12/31/2016	METC Battery Replac	Throughout system					Replace battery chargers with the new ones.	MI		Under Construction	\$120,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4203	7950 TEQ		12/31/2016	METC Disconnect Sw	Throughout system					Replace problematic Pennsylvania Type A6A-2, EEE, R18E MI	MI		Under Construction	\$900,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4205	7952 TEQ		12/31/2016	METC Annual Relay I	Throughout system					Replace damaged or defective relays.	MI		Under Construction	\$7,000,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4207	7954 TEQ		12/31/2016	METC Power Plant C	Throughout system					Replace controls for METC substations that currently exist i MI	MI		Under Construction	\$2,400,000.00	N	N	N	Y	
A in MTEP13	A	East	METC	4218	7965 LNup		6/30/2016	Bass Creek	Black River		138			Remediate the sag limit on the Bass Creek - Black River 13 MI	MI		M4_Pre-Construction	\$180,000,000	Engineering	N	N	Y	
A in MTEP13	A	East	WPSC	4084	7737 LNrb		12/31/2018	North Shade	Vestaburg		69	143.4MV		Rebuild Line (Poles have reached the end of their useful life MI	MI	19.3	Planned	\$10,000,000.00	N	N	N	Y	
A in MTEP13	A	East	WPSC	4085	7738 LNrb		12/31/2016	Lake County	Fountain Junction		69	143.4MV		Rebuild Overloaded line (Peak case)	MI	6.35	Planned	\$3,100,000.00	N	N	N	Y	
A in MTEP13	A	West	ATC	3813	7160 LNrc		12/31/2017	Dam Heights	Eagleview		69			Reconductor Dam Heights-Eagleview 69 kV line with T2-4I WI	WI	0.1	M1_Final SPM or OOC		Engineering	N	N	Y	
A in MTEP13	A	West	ATC	3813	7164 LNrc		12/31/2017	Caledonia	Portage		69			Reconductor Caledonia-Portage 69 kV line with T2-4I WI	WI	7	M1_Final SPM or OOC		Engineering	N	N	Y	
A in MTEP13	A	West	ATC	3813	7163 LNrc		12/31/2017	Merrimac Tap	Caledonia		69			Reconductor Merrimac Tap-Caledonia 69 kV line with T2-4I WI	WI	8.4	M1_Final SPM or OOC		Engineering	N	N	Y	
A in MTEP13	A	West	ATC	3813	7162 LNrc		12/31/2017	Merrimac Tap	Merrimac		69			Reconductor Merrimac Tap-Merrimac 69 kV line with T2-4I WI	WI	1.8	M1_Final SPM or OOC	\$33,700,000	Engineering	N	N	Y	
A in MTEP13	A	West	ATC	3813	7161 LNrc		12/31/2017	Eagleview	Merrimac Tap		69			Reconductor Eagleview-Merrimac Tap 69 kV line with T2-4I WI	WI	8.4	M1_Final SPM or OOC		Engineering	N	N	Y	
A in MTEP13	A	West	ATC	3817	7168 CB		12/1/2017	Shoto			138			Shoto 138-69 kV Tr highside breaker additions	WI		M3_Long Lead Materials	\$4,325,000	N	N	N	Y	
A in MTEP13	A	West	ATC	3841	7268 LN		12/1/2016	Pulliam	Liberty St		138			246 Existing line conversion from 69 to 138 from Pulliam to Libe WI	WI	3.93	M1_Final SPM or OOC	\$22,675,655	Engineering, Nomina	N	N	Y	
A in MTEP13	A	West	ATC	3841	7274 TX		3/1/2016	Glory Rd			138	69		154 New Transformer at Glory Rd	WI		M1_Final SPM or OOC		N	N	N	Y	
A in MTEP13	A	West	ATC	3841	7273 TX		12/1/2016	Pulliam			138	69		154 New Transformer at Pulliam	WI		M1_Final SPM or OOC		N	N	N	Y	
A in MTEP13	A	West	ATC	3841	72																		

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upr	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP13	A	West	ITCM	4104	7772 LN		12/31/2020	Lansing	Harper's Ferry Tap	1	69	69	57 MVA	Rebuild the Lansing-Harper's Ferry Tap 69kV to T2-4/0.	IA	6.57		M3 Long Lead Materials	\$5,777,996.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4104	7774 LN		12/31/2020	WatervilleTap	Monona	1	69	69	48 MVA	Rebuild the Waterville Tap-Monona 69kV to T2-4/0.	IA	15.6		M3 Long Lead Materials	\$13,025,337.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4104	7773 LN		12/31/2020	Harper's Ferry Tap	WatervilleTap	1	69	69	77 MVA	Rebuild the Harper's Ferry Tap-Waterville Tap 69kV to T2-4/0.	IA	2.63		M3 Long Lead Materials	\$2,171,703.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4105	7775 LN		12/31/2022	Decorah	Ludlow Tap	1	69	69	69 MVA	Rebuild the Decorah-Ludlow Tap 69kV to T2-4/0.	IA	20.5		M1_Final SPM or OOC	\$8,600,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4105	7776 LN		12/31/2022	Ludlow Tap	Waukon - IPL	1	69	69	59 MVA	Rebuild the Ludlow Tap-Waukon 69kV to T2-4/0.	IA	2.51		M1_Final SPM or OOC	\$1,060,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4106	7777 LN		12/31/2020	Windsor	Hawk Tap	1	69	69	48 MVA	Rebuild the Windsor-Hawk Tap 69kV to T2-4/0.	IA	6.6		M1_Final SPM or OOC	\$2,775,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4106	7778 LN		12/31/2020	Hawk Tap	Richfield	1	69	69	45 MVA	Rebuild the Hawk Tap-Richfield 69kV to T2-4/0.	IA	4.64		M1_Final SPM or OOC	\$1,975,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4107	7782 LN		8/4/2017	Armour	Lehigh Quarry Tap	1	69	69	77 MVA	Rebuild the Armour-Nettle to T2-4/0.	IA	1.87		M1_Final SPM or OOC	\$1,078,800.00	Engineering	N	N	Y
A in MTEP13	A	West	ITCM	4107	7784 LN		8/4/2017	Nettle	Lehigh Quarry Tap	1	69	69	77 MVA	Rebuild the line from 25th Street Tap-Lehigh Quarry Tap to T2-4/0.	IA	1.65		M1_Final SPM or OOC	\$600,000.00	Engineering	N	N	Y
A in MTEP13	A	West	ITCM	4107	7783 LN		8/4/2017	Nettle	Northwest Tap	1	69	69	77 MVA	Rebuild the 25th Street Tap-Northwest Tap to T2-4/0.	IA	1.01		M1_Final SPM or OOC	\$616,800.00	Engineering	N	N	Y
A in MTEP13	A	West	ITCM	4108	7779 LN		12/31/2022	Ellendale	Steele Center Tap	1	69	69	77 MVA	Rebuild the Ellendale-Steele Center Tap to T2-4/0.	MN	1.98		M1_Final SPM or OOC	\$1,091,365.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4108	7781 LN		12/31/2022	Pratt Tap	West Owatonna	1	69	69	77 MVA	Rebuild the Pratt Tap-West Owatonna to T2-4/0.	MN	4.25		M1_Final SPM or OOC	\$2,342,576.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4108	7780 LN		12/31/2022	Steele Center Tap	Pratt Tap	1	69	69	77 MVA	Rebuild the Steele Center Tap-Pratt Tap to T2-4/0.	MN	6.98		M1_Final SPM or OOC	\$3,847,336.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4113	7794 TEQ		4/30/2015	Hayward	Substation	1	161	69	250 MVA	Upgrade 69kV breaker 665 terminal equipment	MN			Planned	\$15,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4114	7795 TEQ		4/30/2015	Trboj	Substation	1	161	69	250 MVA	Upgrade 69kV breaker 6730 terminal equipment	IA			Planned	\$15,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4114	7796 TEQ		4/30/2015	Flying Cloud	Substation	1	161	69	250 MVA	Change CT ratio to increase capacity/coordinate with Trboj	IA			Planned	\$5,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4115	7808 SUB		12/31/2019	Fletcher	Substation	1	161	69		Build new Fletcher 161kV & 69kV sub	IA			M1_Final SPM or OOC	\$5,173,800.00	Engineering	N	N	Y
A in MTEP13	A	West	ITCM	4115	7809 TX		12/31/2019	Fletcher	Transformer	1	161	69	150 MVA	New Fletcher 150 MVA 161/69kV TRF	IA			M1_Final SPM or OOC	\$2,000,000.00	Engineering	N	N	Y
A in MTEP13	A	West	ITCM	4116	7807 LN		12/31/2016	Linn TWP REC	Cornell	1	69	69	77 MVA	Build a new Linn TWP REC-Cornell 69kV with T2-4/0.	IA	4.2		M1_Final SPM or OOC	\$1,760,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4116	7806 LN		12/31/2017	Lowell REC	Monticello Industrial	1	69	69	77 MVA	Rebuild the Lowell REC-Monticello Industrial to T2-4/0.	IA	5.4		M1_Final SPM or OOC	\$2,270,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4116	7804 LN		12/31/2017	Springville	Amber	1	69	69	77 MVA	Rebuild the Springville-Amber to T2-4/0.	IA	21.1		M1_Final SPM or OOC	\$9,120,000.00	Engineering	N	N	Y
A in MTEP13	A	West	ITCM	4118	7798 LN		12/25/2017	Grand Junction	Grand Jct REC Tap	1	34	34	39 MVA	Rebuild the Grand Jct-Grand Jct REC Tap to T2-4/0.	IA	0.1		M1_Final SPM or OOC	\$62,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4118	7800 LN		12/25/2017	Grant REC Tap	Jefferson WCC	1	34	34	39 MVA	Rebuild the Grant REC Tap/Jefferson WCC to T2-4/0.	IA	0.25		M1_Final SPM or OOC	\$739,800.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4118	7799 LN		12/25/2017	Grand Jct REC Tap	Grant REC Tap	1	34	34	39 MVA	Rebuild the Grand Jct REC Tap-Grant REC Tap to T2-4/0.	IA	6.4		M1_Final SPM or OOC	\$5,315,800.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4121	7821 LN		12/31/2016	Blanket for Customer	Throughout system					These projects are being done at the request of an intercom	IA,MN			Under Construction	\$2,000,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4122	7825 LN		12/31/2016	Blanket for Misc. Line	Throughout system					Replace defective cross arms, insulators, arrestors, and poles	IA,MN			Under Construction	\$4,000,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4123	7829 LN		12/31/2016	Blanket for Breaker R	Throughout system					Replace defective and damaged breakers	IA,MN			Under Construction	\$5,000,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4124	7832 LN		12/31/2016	Blanket for Fiber Optic	Throughout system					Project includes the Engineering, Procurement, Construction	IA,MN			Under Construction	\$720,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4125	7836 LN		12/31/2016	Blanket for Replacem	Throughout system					Replace known and unknown PCB equipment in substation	IA,MN			Planned	\$1,800,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4125	7835 LN		12/31/2015	Blanket for Replacem	Throughout system					Replace known and unknown PCB equipment in substation	IA,MN			Planned	\$1,800,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4126	7840 LN		12/31/2016	Blanket for Pole Top	Throughout system					Replace defective pole top switches	IA,MN			Under Construction	\$960,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4127	7844 LN		12/31/2016	Blanket for Relay Belt	Throughout system					Replace defective cross arms, insulators, arrestors, and poles	IA,MN			Under Construction	\$2,500,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4128	7848 LN		12/31/2016	Blanket for SMART G	Throughout system					Replace, upgrade, or install TELECOM RTUs, Relay, etc.	IA,MN			Under Construction	\$4,800,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM	4129	7852 LN		12/31/2016	Blanket for Wood Pole	Throughout system					Replace deteriorating wood pole	IA,MN			Under Construction	\$3,500,000.00	Planning	N	N	Y
A in MTEP13	A	West	ITCM, MEC	3249	6052 LN		12/1/2018	NE 54th Ave.	Bondurant	1	161		410	New 161 kV line from NE 54th Ave. to Bondurant and assoc	IA	0	8.3	Planned	\$1,221,895.00	Planning	N	N	Y
A in MTEP13	A	West	MEC	2952	8020 SUB		6/1/2018	NE 54th Ave.	Substation		161	13	33	New 161-13 kV Substation.	IA			Planned	\$1,300,000.00	Planning	N	N	Y
A in MTEP13	A	West	MEC	3248	6048 LN		6/1/2018	Rising Sun Substation	NE 54th Ave.	1	161		410	New 161 kV line from Rising Sun Substation on DPS-Reasor	IA	0	6	Planned	\$8,100,000.00	Planning	N	N	Y
A in MTEP13	A	West	MEC	3248	6050 LN		5/1/2018	DPS	Reasnor	1	161		325	Add 161 kV line taps to new Rising Sun Substation	IA	0.1	Planned	\$736,000.00	Planning	N	N	Y	
A in MTEP13	A	West	MEC	3248	6049 SwSta		5/1/2018	Rising Sun Substation			161			New 161 kV breaker substation off the DPS-Reasnor 161 kV	IA			Planned	\$5,200,000.00	Planning	N	N	Y
A in MTEP13	A	West	MEC	4256	8016 LN		12/1/2016	Hwys 141 & 44	NW 70th Avenue	1	161		410	New 161 kV line from Hwys 141 & 44 Sub to NW 70th Ave. IA	IA	3	Planned	\$3,200,000.00	Planning	N	N	Y	
A in MTEP13	A	West	MEC	4256	8018 SUB		12/1/2016	NW 70th Avenue	Substation		161	13	33	New 161-13 kV Substation.	IA			Planned	\$2,670,000.00	Planning	N	N	Y
A in MTEP13	A	West	MEC	4256	8017 LN		12/1/2016	NW 70th Avenue	Sycamore	1	161		410	New 161 kV line from NW 70th Avenue Sub to Sycamore S IA	IA	4	Planned	\$3,200,000.00	Planning	N	N	Y	
A in MTEP13	A	West	MP	3531	6591 SUB		12/15/2015	Deer River Substation	Substation Equipment	230	115		187	New Substation with 230/115 kV 187 MVA Transformer (sp MN	MN			Under Construction	\$2,000,000.00	Engineering	N	N	Y
A in MTEP13	A	West	MP	3531	7685 LN		11/8/2016	GRE Deer River	MP Deer River		115		122	New 115 kV line to complete the loop in Deer River	MN	1	0.75	Under Construction	\$2,197,441.00	Engineering	N	N	Y
A in MTEP13	A	West	MP	3531	7673 Dist		12/15/2015	Deer River Substation	Substation Equipment	115	23		10	New 115/23 kV 10 MVA transformer	MN			Under Construction	\$348,488.00	Engineering	N	N	Y
A in MTEP13	A	West	MP	3531	7672 TX		12/15/2015	Deer River Substation	Substation Equipment	230	115		187	New Substation with 230/115 kV 187 MVA Transformer	MN	0.25	Under Construction	\$10,309,809.00	Engineering	N	N	Y	
A in MTEP13	A	West	MP	4294	8218 LNup		12/31/2016	Riverton 230	Riverton 115		115		217	NERC facility ratings alert mitigation	MN	0.68	0	Planned	\$1,200.00	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8216 LNup		12/31/2016	Winter Street	Fairmount Park		115		182	NERC facility ratings alert mitigation	MN	3.48	0	Planned	\$127,123.53	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8215 LNup		12/31/2016	Wing River	Long Prairie		115		85	NERC facility ratings alert mitigation	MN	31.6	0	Planned	\$1,302,550.00	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8214 LNup		12/31/2016	Virginia	Minnac		115		144	NERC facility ratings alert mitigation	MN	6.26	0	Planned	\$253,011.76	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8212 LNup		12/31/2016	Virginia	Inland		115		120	NERC facility ratings alert mitigation	MN	4.04	0	Planned	\$188,602.94	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8211 LNup		12/31/2016	Virginia	Hibbing		115		55	NERC facility ratings alert mitigation	MN	28.7	0	Planned	\$1,236,958.82	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8210 LNup		12/31/2016	Virginia	16 Line Tap		115		90	NERC facility ratings alert mitigation	MN	11.1	0	Planned	\$443,061.76	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8209 LNup		12/31/2016	Vermdale	Wing River		115		98	NERC facility ratings alert mitigation	MN	1.08	0	Planned	\$62,397.06	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8208 LNup		12/31/2016	Vermdale	24 Line Tap		115		77	NERC facility ratings alert mitigation	MN	16.4	0	Planned	\$670,761.76	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8207 LNup		12/31/2016	Thomson	Cromwell		115		98	NERC facility ratings alert mitigation	MN	28.1	0	Planned	\$1,175,302.94	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8206 LNup		12/31/2016	Thomson	Pollack		115		84	NERC facility ratings alert mitigation	MN	6.88	0	Planned	\$302,832.35	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8205 LNup		12/31/2016	Thomson	Fond Du Lac		115		90	NERC facility ratings alert mitigation	MN	2.2	0	Planned	\$64,373.53	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8204 LNup		12/31/2016	Taconite Harbor	Silver Bay		115		159	NERC facility ratings alert mitigation	MN	24.9	0	Planned	\$1,048,691.18	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8201 LNup		12/31/2016	Stinson	Ridgeview		115		144	NERC facility ratings alert mitigation	MN	2.87	0	Planned	\$126,047.06	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8200 LNup		12/31/2016	Stinson	Stone Lake		161		168	NERC facility ratings alert mitigation	MN	42.6	0	Planned	\$1,794,126.47	Planning	N	N	Y
A in MTEP13	A	West																					

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP13	A	West	MP	4294	8174	LNup	12/31/2016	Laskin	Virginia	1	115		98	NERC facility ratings alert mitigation	MN	25.9	0	Planned	\$1,110,947.06	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8173	LNup	12/31/2016	Laskin	Forbes	1	115		113	NERC facility ratings alert mitigation	MN	31.4	0	Planned	\$1,302,214.71	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8172	LNup	12/31/2016	Laskin	Embarrass	1	115		98	NERC facility ratings alert mitigation	MN	10.2	0	Planned	\$429,726.47	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8171	LNup	12/31/2016	International Falls	Fort Frances	1	115		180	NERC facility ratings alert mitigation	MN	2.19	0	Planned	\$125,288.24	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8169	LNup	12/31/2016	Hoy Lakes	Laskin	1	115		168	NERC facility ratings alert mitigation	MN	5.75	0	Planned	\$252,111.76	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8168	LNup	12/31/2016	Hilltop	LSPI	1	115		162	NERC facility ratings alert mitigation	MN	2.91	0	Planned	\$126,117.65	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8167	LNup	12/31/2016	Hilltop	15th Ave West	1	115		120	NERC facility ratings alert mitigation	MN	4.57	0	Planned	\$189,538.24	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8165	LNup	12/31/2016	Hibblac	78 Line Tap	1	115		144	NERC facility ratings alert mitigation	MN	7.75	0	Planned	\$316,132.35	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8162	LNup	12/31/2016	Hibbing	44 Line Tap	1	115		91	NERC facility ratings alert mitigation	MN	1.72	0	Planned	\$63,526.47	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8161	LNup	12/31/2016	Hibbing	14 Line Tap	1	115		99	NERC facility ratings alert mitigation	MN	5.76	0	Planned	\$252,129.41	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8159	LNup	12/31/2016	Hibbard	Winter Street	1	115		182	NERC facility ratings alert mitigation	MN	3.36	0	Planned	\$126,947.06	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8158	LNup	12/31/2016	Haines Road	Swan Lake Road	1	115		144	NERC facility ratings alert mitigation	MN	1.32	0	Planned	\$62,820.59	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8157	LNup	12/31/2016	Grand Rapids	Riverton	1	115		55	NERC facility ratings alert mitigation	MN	67.7	0	Planned	\$2,843,241.18	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8156	LNup	12/31/2016	Gary	Stinson	1	115		207	NERC facility ratings alert mitigation	MN	11.1	0	Planned	\$491,664.71	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8155	LNup	12/31/2016	Forbes	78 Line Tap	1	115		113	NERC facility ratings alert mitigation	MN	15.9	0	Planned	\$669,879.41	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8154	LNup	12/31/2016	Forbes	44 Line Tap	1	115		85	NERC facility ratings alert mitigation	MN	17.8	0	Planned	\$733,829.41	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8153	LNup	12/31/2016	Forbes	ETCO	1	115		120	NERC facility ratings alert mitigation	MN	6.28	0	Planned	\$253,047.06	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8152	LNup	12/31/2016	Fond Du Lac	Hibbard	1	115		40	NERC facility ratings alert mitigation	MN	11.5	0	Planned	\$492,458.82	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8151	LNup	12/31/2016	ETCO	16 Line Tap	1	115		90	NERC facility ratings alert mitigation	MN	1.52	0	Planned	\$63,173.53	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8150	LNup	12/31/2016	Embarrass	Babbitt	1	115		64	NERC facility ratings alert mitigation	MN	26.4	0	Planned	\$1,111,847.06	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8149	LNup	12/31/2016	Embarrass	Virginia	1	115		90	NERC facility ratings alert mitigation	MN	15.3	0	Planned	\$620,217.65	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8148	LNup	12/31/2016	Dog Lake	24 Line Tap	1	115		98	NERC facility ratings alert mitigation	MN	0.65	0	Planned	\$61,638.24	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8147	LNup	12/31/2016	Cromwell	Riverton	1	115		77	NERC facility ratings alert mitigation	MN	61.2	0	Planned	\$2,601,482.35	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8145	LNup	12/31/2016	Cloquet	9 Line Tap	1	115		78	NERC facility ratings alert mitigation	MN	30.3	0	Planned	\$1,264,873.53	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8144	LNup	12/31/2016	Brainerd	Riverton	1	115		71	NERC facility ratings alert mitigation	MN	13.1	0	Planned	\$555,773.53	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8143	LNup	12/31/2016	Boswell	Grand Rapids	1	115		120	NERC facility ratings alert mitigation	MN	10.7	0	Planned	\$430,608.82	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8142	LNup	12/31/2016	Boswell	Nashauk	1	115		120	NERC facility ratings alert mitigation	MN	36.1	0	Planned	\$1,540,673.53	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8141	LNup	12/31/2016	Boswell	Blandin	1	115		120	NERC facility ratings alert mitigation	MN	7.78	0	Planned	\$316,185.29	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8190	LNup	12/31/2016	Ridgeview	Colbyville	1	115		120	NERC facility ratings alert mitigation	MN	9.1	0	Planned	\$367,241.18	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8140	LNup	12/31/2016	Boise	International Falls	1	115		85	NERC facility ratings alert mitigation	MN	1.4	0	Planned	\$62,961.76	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8138	LNup	12/31/2016	Blandin	20 Line Tap	1	115		138	NERC facility ratings alert mitigation	MN	8.32	0	Planned	\$365,864.71	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8137	LNup	12/31/2016	Blanchard	Little Falls	1	115		90	NERC facility ratings alert mitigation	MN	8.4	0	Planned	\$366,005.88	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8136	LNup	12/31/2016	Blanchard	Pepin Lake	1	115		98	NERC facility ratings alert mitigation	MN	14.3	0	Planned	\$618,329.41	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8135	LNup	12/31/2016	Colbyville	Two Harbors	1	115		118	NERC facility ratings alert mitigation	MN	23.3	0	Planned	\$984,882.35	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8134	LNup	12/31/2016	Blackberry	9 Line Tap	1	115		182	NERC facility ratings alert mitigation	MN	32.8	0	Planned		Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8133	LNup	12/31/2016	Badoura	Akeley	1	115		122	NERC facility ratings alert mitigation	MN	9.41	0	Planned	\$367,788.24	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8132	LNup	12/31/2016	Badoura	Hubbard	1	115		91	NERC facility ratings alert mitigation	MN	14.8	0	Planned	\$619,211.76	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8131	LNup	12/31/2016	Badoura	Dog Lake	1	115		58	NERC facility ratings alert mitigation	MN	34	0	Planned	\$1,427,750.00	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8129	LNup	12/31/2016	Arrowhead	15th Ave West	1	115		120	NERC facility ratings alert mitigation	MN	11.9	0	Planned	\$493,094.12	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8128	LNup	12/31/2016	Arrowhead	Hibbard	1	115		182	NERC facility ratings alert mitigation	MN	10.7	0	Planned	\$430,608.82	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8127	LNup	12/31/2016	Arrowhead	Haines Road	1	115		135	NERC facility ratings alert mitigation	MN	7.6	0	Planned	\$315,867.65	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8126	LNup	12/31/2016	Arrowhead	Colbyville	1	115		144	NERC facility ratings alert mitigation	MN	19.2	0	Planned	\$808,573.53	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8125	LNup	12/31/2016	Arrowhead	Cloquet	1	115		120	NERC facility ratings alert mitigation	MN	10.5	0	Planned	\$430,220.59	Planning	N	N	Y
A in MTEP13	A	West	MP	4294	8124	LNup	12/31/2016	Arrowhead	16 Line Tap	1	115		55	NERC facility ratings alert mitigation	MN	44.8	0	Planned	\$1,907,155.88	Planning	N	N	Y
A in MTEP13	A	West	OTP	3667	6829	LN	11/30/2015	Nunda	Rutland	1	41.6	41.6	34 MVA	Rebuild 8 miles of 41.6 kV line	SD	8		Under Construction	\$466,000.00	Planning	N	N	Y
A in MTEP13	A	West	OTP	4233	7989	TX	5/1/2017	Parshall 41.6kV sub	Parshall 41.6kV24k	1	41.6	24	10	Adding new transformer 10 MVA	ND			M3_Long Lead Materials	\$500,000.00	Planning	N	N	Y
A in MTEP13	A	West	XEL	4224	7974	SUB	12/1/2020	Ironwood			31.5			Relay setting updates, install 34.5 kV voltage regulator	WI			Planned	\$200,000.00	Planning	N	N	Y
A in MTEP13	A	West	XEL	4224	7973	LNrb	12/1/2020	Ironwood	Kimball (DPC)	1	34.5		22 MVA	Rebuild .5 mile portion of existing line, Replace in-line disco	WI	0.5		Planned	\$475,000.00	Planning	N	N	Y
A in MTEP13	A	West	XEL	4224	7972	LNrb	12/1/2020	Ironwood	Northside	1	34.5		16 MVA	Rebuild .5 mile portion of existing line, Replace in-line disco	WI	0.5		Planned	\$475,000.00	Planning	N	N	Y
A in MTEP13	A	West	XEL	4305	8236	SUB	3/1/2017	Yankee			115			Install 1x25 MVAr switched inductor	MN			Under Construction	\$4,300,000.00	Planning	N	N	Y
A in MTEP13	A	West	XEL	4305	8237	SUB	6/1/2019	Fenton			115			Install 1x25 MVAr switched inductor	MN			Planned	\$3,800,000.00	Planning	N	N	Y
A in MTEP13	A	West	XEL	4308	8243	LNrb	12/31/2016	Cedar Falls	Menomonie	1	69			Rebuilding 5 miles of 410 and 336 ACSR conductor between	WI			Planned	\$4,087,810.00	Planning	N	N	Y
A in MTEP13	A	West	XEL	4314	8251	LNrb	12/1/2021	Bay Front	Saxon Pump	1	88			It is expected to rebuild this line to 115 kV capable 795 ACS WI	WI			Planned	\$26,377,500.00	Planning	N	N	Y
A in MTEP13	A	West	XEL	4314	8252	LNrb	12/1/2021	Saxon Pump	Norrie	1	88			It is expected to rebuild this line to 115 kV capable 795 ACS WI	WI			Planned	\$9,600,000.00	Planning	N	N	Y
A in MTEP14	A	Central	AmerenIL	4076	7725	LN	6/1/2017	Edwards Plant	ADM-Peoria (Hiram)	1	138		399	Build new 2.2 miles of 138 kV line with 2000 A summer eme	IL	4.6	2.2	Planned	\$6,320,000.00	Planning	N	N	Y
A in MTEP14	A	Central	AmerenIL	4345	8312	SUB	5/22/2019	Gifford Sub			138			Establish a new 138 kV, 3-breaker ring bus at the existing F.I.L.	IL			Planned	\$4,775,000.00	Engineering	N	N	Y
A in MTEP14	A	Central	AmerenIL	4471	8570	LN	12/1/2017	Cahokia	Dupo Ferry	1	138			Replace 6.98 miles of 2-300 kcmil Copper conductor with la IL	IL	6.98		Planned	\$10,403,000.00	Planning	N	N	Y
A in MTEP14	A	Central	AmerenIL	4474	8575	SUB	9/1/2019	LaSalle Tap (Hickok)	Install 138 kV Breaker Stat	1	138			LaSalle Tap 138 kV Breaker Station (Hickok) - Install new 3-IL	IL			Planned	\$3,800,032	Engineering	N	N	Y
A in MTEP14	A	Central	AmerenIL	4474	8576	TEQ	9/1/2019	Hennepin	Oglesby	1	1556			255 Upgrade disconnect switch, wave trap, relay limit at Hennepin	IL			Planned	\$600,000	Planning	N	N	Y
A in MTEP14	A	Central	AmerenIL	4477	8582	SUB	9/1/2019	Clayton Junction (Mor)	Install 138 kV Breaker Stat	1	138			Install 138 kV breaker station at Clayton Junction. Needed: IL	IL			Planned	\$4,950,000	Engineering	N	N	Y
A in MTEP14	A	Central	AmerenIL	4477	8585	TEQ	9/1/2019	Meredosia East	Monument	1	138			240 Upgrade relay limit	IL			Planned		Planning	N	N	Y
A in MTEP14	A	Central	AmerenIL	4477	8584	TEQ	9/1/2019	East Quincy	Monument	1	138			240 Upgrade relay limit	IL			Planned		Planning	N	N	Y
A in MTEP14	A	Central	AmerenIL	4477	8583	TEQ	9/1/2019	Macomb	Monument	1	138			175 Upgrade relay limit	IL			Planned		Planning	N	N	Y
A in MTEP14	A	Central	AmerenIL	4479	8587																		

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility	
A in MTEP14	A	Central	DEI 4414	8433 LN	12/31/2016	Chippewa	New 69132 Jct			69			100	New N.O. alternate 69kv feed from 69132 ckt over to Waba In	IL		4.5	Under Construction	\$2,244,000	Engineering	N	N	Y	
A in MTEP14	A	Central	DEI 4415	8434 TX	6/1/2020	Veedersburg West	xmr addition			230	69	75	Veedersburg West. Add 75MVA 230/69 Bk 2 with LTC at V. In	IN			M1_Final SPM or OOC	\$3,509,000	Engineering	N	N	Y		
A in MTEP14	A	Central	DEI 4417	8436 CB	12/31/2017	Pumpkin Center	brkr replacements			69			Pumpkin Center: Replace OCB 69S2, OCB 69123, OCB 66 IN	IN			M3_Long Lead Materials	\$2,424,000	Engineering	N	N	Y		
A in MTEP14	A	Central	DEI 4418	8437 SUB	6/1/2017	Hillsdale North	new sub			230	69	69	Construct new Hillsdale North 230-69kV substation to be in: IN	IN		2	M3_Long Lead Materials	\$12,300,000	Planning	N	N	Y		
A in MTEP14	A	Central	HE 4714	8940 TX	5/15/2014	07Ratts 138/161 kV	07Ratts 138/161 kV			1	161	138	322	Replace Ratts AT3	IN			Planned	\$3,500,000	Engineering	N	N	Y	
A in MTEP14	A	Central	HE 4715	8941 LNrc	5/15/2014	07Rattss	07Rattap			1	138		327	Reconductor 138 kV line	IN	0.1		Planned	\$2,000,000	Engineering	N	N	Y	
A in MTEP14	A	Central	PPI 4434	8468 TAP	12/31/2016	Alsey	Alsey Tap			1	138		229	Alsey 2nd 138 kV Tap to Ameren	IL	0	0.33	M4_Pre-Construction	\$1,039,100	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4499	8618 CAP	3/31/2017	Tuscola				1	120			Install a 33.3 MVAR capacitor at the Tuscola 120 kV station MI	MI			M4_Pre-Construction	\$1,350,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4500	8619 SwSta	12/31/2017	Carrigan				1	120			Construct a new 4-breaker 120 kV switching station named MI	MI			M3_Long Lead Materials	\$4,930,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4500	8624 LNup	12/31/2017	Carrigan	Yuma			1	120	134	MVA	New line created by looping the Wabash - Yuma 120 kV cin MI	MI			M3_Long Lead Materials		Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4500	8623 LNup	12/31/2017	Carrigan	Wabash			1	120	274	MVA	New line created by looping the Wabash - Yuma 120 kV cin MI	MI			M3_Long Lead Materials	\$265,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4500	8622 LNup	12/31/2017	Carrigan	Menlo			1	120	134	MVA	New line created by looping the Menlo - Lake Huron Pumpi MI	MI			M3_Long Lead Materials	\$210,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4500	8621 LNup	12/31/2017	Carrigan	Lake Huron Pumpin			1	120	305	MVA	New line created by looping the Menlo - Lake Huron Pumpi MI	MI			M3_Long Lead Materials	\$275,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4500	8620 LNrb	12/31/2017	Lee	Menlo			1	120	305	MVA	Replace the existing structures from a one-mile segment of MI	MI	1	1	M3_Long Lead Materials	\$1,700,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4518	8649 TX	4/1/2017	Monroe 345/120 kV	Transformer 304			4	345	120	649	MVA	Replace the 345/120 kV Transformer 304 at Monroe. MI	MI			M3_Long Lead Materials	\$3,800,000	Engineering	N	N	Y
A in MTEP14	A	East	ITCT 4519	8650 LN	4/1/2040	Custer	Monroe			2	120	204	MVA	Reconfigure the Custer ? Whiting 120 kV line into Monroe to MI	MI	2.9	M2a_Pre-Project Approval	\$12,300,000	Engineering	N	N	Y		
A in MTEP14	A	East	ITCT 4519	8651 LN	4/1/2040	Monroe	Whiting			1	120	204	MVA	Reconfigure the Custer ? Whiting 120 kV line into Monroe to MI	MI	2.9	M2a_Pre-Project Approval		Engineering	N	N	Y		
A in MTEP14	A	East	ITCT 4529	8671 LNup	12/31/2016	Brownstown	Elm			1	230	743	MVA	Remediate the sag limit on the Brownstown to Elm 230kV/ li MI	MI			M4_Pre-Construction	\$485,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4530	8672 LNup	12/31/2016	Brownstown	Navarre			1	230	739	MVA	Remediate the sag limit on the Brownstown to Navarre 230 MI	MI			M4_Pre-Construction	\$290,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4531	8673 LNup	12/31/2016	Dorset	Milan			1	120	196	MVA	Remediate the sag limit on the Dorset to Milan 120kV/ line u MI	MI			M4_Pre-Construction	\$225,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4532	8674 LNup	12/31/2016	Wayne	Hines			1	230	585	MVA	Remediate the sag limit on the Wayne to Hines 230kV/ line i MI	MI			M3_Long Lead Materials	\$165,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4566	8708 TEQ	12/31/2017	Blanket for Customer	Throughout system			1	120			Connect interconnecting entitles as requested	MI			M2a_Pre-Project Approval	\$2,000,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4567	8709 TEQ	12/31/2018	Blanket for Customer	Throughout system			1	120			Connect interconnecting entitles as requested	MI			M2a_Pre-Project Approval	\$2,000,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4573	8715 TEQ	12/31/2016	ITCT Transformer Re	Throughout system			1	120			Replace leaking oil pumps and valves, transformer oil, surgi MI	MI			Under Construction	\$600,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4584	8726 TEQ	12/31/2016	Trenton Channel 120 kV Bus 14				1	120			Install a second independent bus protection scheme on Tre MI	MI			M3_Long Lead Materials	\$108,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4585	8727 TEQ	12/31/2016	Trenton Channel 120 kV Bus 17				1	120			Install a second independent bus protection scheme on Tre MI	MI			M3_Long Lead Materials	\$360,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4701	8886 LNup	12/31/2016	NERC Alert Facility R	Throughout system			1	120			Verify and remediate facilities as required due to the industr MI	MI			Under Construction	\$3,600,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4737	9005 RLY	8/31/2016	Lapeer				1	120			Upgrade relay at the Lapeer Substation	MI			Under Construction	\$110,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4737	9004 RLY	8/31/2016	Tuscola				1	120			Upgrade relay at the Tuscola Substation	MI			Under Construction	\$210,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4737	9003 LN	8/31/2016	Klam	Lapeer			1	120	270		New line created by looping the Lapeer - Tuscola circuit int: MI	MI	3.1	Under Construction	\$5,220,000	Engineering	N	N	Y		
A in MTEP14	A	East	ITCT 4737	9002 LN	8/31/2016	Klam	Bergen Tap			1	120	305		New line created by looping the Lapeer - Tuscola circuit int: MI	MI	3.1	Under Construction	\$5,220,000	Engineering	N	N	Y		
A in MTEP14	A	East	ITCT 4737	9001 CAP	8/31/2016	Klam				1	120			Install a 33.3 MVAR capacitor at the new Klam 120 kV sub: MI	MI			Under Construction	\$170,000	Engineering	N	N	Y	
A in MTEP14	A	East	ITCT 4737	9000 SUB	8/31/2016	Klam				1	120			Construct a new 3 breaker substation for Klam. MI	MI			Under Construction	\$3,160,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 1803	3168 LNrb	12/31/2016	Plum	Stover			1	138			Rebuild the 8.8 mile 138 kV line using 954 ACSR and OPG MI	MI	8.8	Under Construction	\$10,500,000	Engineering	N	N	Y		
A in MTEP14	A	East	METC 4504	8630 LNup	12/31/2016	Vergennes	Marquette			1	138	315	MVA	Remediate the sag limit on the 795 ACSR from the Vergen: MI	MI	17.2	M3_Long Lead Materials	\$345,000	Engineering	N	N	Y		
A in MTEP14	A	East	METC 4505	8631 LNup	12/31/2016	Bass Creek	Sternberg			1	138	154	MVA	Remediate the sag limits on the 336.4 and 266.8 ACSR por: MI	MI	15.9	M3_Long Lead Materials	\$1,200,000	Engineering	N	N	Y		
A in MTEP14	A	East	METC 4521	8662 LNup	12/31/2016	Rigsville	Rondo			1	138			Remediate sag on the Rigsville - Rondo 138 kV section to: MI	MI			M3_Long Lead Materials	\$324,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4522	8663 LNrb	12/31/2016	Lawdale	Murphy			1	138			Rebuild the 3/0 Cu & 2/0 Cu 6-wire (1.188 mile) and 336 AC MI	MI	2.84	M4_Pre-Construction	\$2,800,000	Engineering	N	N	Y		
A in MTEP14	A	East	METC 4537	8679 Dist	12/31/2017	Blanket for Customer	Throughout system			1	138			Connect interconnecting entitles as requested	MI			M2a_Pre-Project Approval	\$2,500,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4538	8680 Dist	12/31/2018	Blanket for Customer	Throughout system			1	138			Connect interconnecting entitles as requested	MI			M2a_Pre-Project Approval	\$2,500,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4539	8681 RLY	12/31/2017	METC Hemphill Cont	Hemphill			1	138			Replace METC relaying and controls at Hemphill Substation: MI	MI			M3_Long Lead Materials	\$3,640,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4542	8684 RLY	12/31/2017	METC Morrow Cont	Morrow			1	138			Replace METC relaying and controls at Morrow Substation: MI	MI			M3_Long Lead Materials	\$3,110,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4546	8688 TEQ	12/31/2016	METC Power Transfo	Throughout system			1	138			Replace leaking oil pumps and valves, transformer oil, surgi MI	MI			Under Construction	\$600,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4555	8697 TEQ	12/31/2016	Tippy	Stronach			1	138			Install a dual pilot relay protection system on the Tippy to St MI	MI			M3_Long Lead Materials	\$575,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4556	8698 TEQ	3/31/2017	Blackstone				1	138			install a second bus relay scheme on Blackstone blue and v MI	MI			M3_Long Lead Materials	\$845,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4557	8699 TEQ	12/31/2016	Croton	Four Mile			1	138			Add a dual pilot relay protection system on Croton to Four I MI	MI			M3_Long Lead Materials	\$483,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4558	8700 TEQ	12/31/2016	Kam	Manning			1	138			Install a dual pilot relay protection scheme on the Kam to M MI	MI			M3_Long Lead Materials	\$460,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4559	8701 TEQ	12/31/2016	Kam	Saginaw River			1	138			Install a dual pilot relay protection scheme on the Kam to S: MI	MI			M3_Long Lead Materials	\$575,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4699	8884 LNup	12/31/2016	NERC Alert Facility R	Throughout system			1	120			Verify and remediate facilities as required due to the industr MI	MI			Under Construction	\$11,200,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4814	9097 LNup	12/31/2016	Morrow	Battle Creek			1	138	225	MVA	Remediate sag limit on the Morrow - Battle Creek #1 138 kV MI	MI			M4_Pre-Construction	\$366,000	Engineering	N	N	Y	
A in MTEP14	A	East	METC 4815	9098 LNup	12/31/2016	Verona	Foundry			1	138	180	MVA	Remediate sag limit on the Verona - Foundry 138 kV line to MI	MI			M3_Long Lead Materials	\$815,000	Engineering	N	N	Y	
A in MTEP14	A	South	Entergy-AR 4751	9019 CB	12/1/2016	Jacksonville North 115 kV substation				1	115			Upgrade Circuit Breaker: Jacksonville North 115 kV B3621 AR	AR			Planned	\$279,164	Engineering	N	N	Y	
A in MTEP14	A	South	Entergy-AR 4755	9023 TEQ	6/1/2017	ISES 500 kV substation				1	500			EAI SPOF Projects: Modify relaying at ISES 500/161 kV AR	AR			Under Construction	\$16,215,941	Scoping	N	N	Y	
A in MTEP14	A	South	Entergy-AR 4756	9024 TEQ	12/30/2016	Mabelvale 500 kV Substation				1	500			EAI SPOF Projects: Modify relaying at Mabelvale 500 kV AR	AR			Under Construction	\$8,013,145	Scoping	N	N	Y	
A in MTEP14	A	South	Entergy-AR 4757	9025 TEQ	6/1/2018	Ei Dorado 500 kV substation				1	500			EAI SPOF Projects: Modify relaying at Ei Dorado 500 kV AR	AR			Planned	\$1,000,000	Scoping	N	N	Y	
A in MTEP14	A	South																						

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP14	A	South	Entergy-MS	4614	8767 LN		11/15/2017	Franklin 115 kV subst	McComb 115 kV substation	115	115	398 MVA	Construct new line	MS		25	Planned	\$33,412,348	N	N		Y	
A in MTEP14	A	South	Entergy-MS	4614	8768 CB		11/15/2017	Franklin 115 kV subst	McComb 115 kV substation	115		398 MVA	Add substation terminals	MS			Planned		N	N		Y	
A in MTEP14	A	South	Entergy-MS	4788	9056 CB		12/31/2016	Rex Brown 115 kV substation		115			Upgrade Circuit Breaker: Rex Brown 115 kV J9732-CO	MS			Under Construction		N	N		Y	
A in MTEP14	A	South	Entergy-MS	4789	9057 CB		12/31/2016	Rex Brown 115 kV substation		115			Upgrade Circuit Breaker: Rex Brown 115 kV J9742-CO	MS			Under Construction		N	N		Y	
A in MTEP14	A	South	Entergy-MS	4790	9058 CB		12/31/2016	Rex Brown 115 kV substation		115			Upgrade Circuit Breaker: Rex Brown 115 kV J9743-CO	MS			Under Construction		N	N		Y	
A in MTEP14	A	South	Entergy-MS	4793	9061 CB		12/31/2016	Greenville 115 kV substation		115			Upgrade Circuit Breaker: Greenville 115 kV J9940-CO	MS			Under Construction		N	N		Y	
A in MTEP14	A	West	ATC	1624	3241 LN		6/1/2022	Portage	Trienda	2	138		Uprate X-67 Portage - Trienda 138-kV	WI	3.4		Planned	\$2,000,000	N	N		Y	
A in MTEP14	A	West	ATC	1708	3490 LN		1/1/2017	Fairwater	Mackford Prairie	1	69	72 MVA	Construct Fairwater-Mackford Prairie 69 kV line	WI		3.5	Planned	\$20,400,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	1708	3491 LN		9/26/2017	Ripon	Melomen	2	69	59 MVA	Reconfigure the North Randolph-Ripon 69-kV line to form a	WI	3.7		Planned		N	N		Y	
A in MTEP14	A	West	ATC	2031	3906 LNrb		6/1/2018	Colley Rd	Enzyme Bio System	1	69		Rebuild Colley Rd-Enzyme Bio Systems Tap (Y-32) 69 kV	WI		0.98	Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	2031	3907 LN		6/1/2018	Brick church	Sharon Tap	1	69		Rebuild Brick Church to Sharon Tap	WI		3.82	Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	2031	3909 LNrb		6/1/2018	Clinton Tap	Sharon Tap	1	69		Rebuild Clinton Tap-Sharon Tap 69 kV	WI		9	Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	2031	3908 LNrb		6/1/2018	RC3 (Clinton)	Clinton Tap	1	69		Rebuild RC3 (Clinton)-Clinton Tap 69 kV	WI		1.55	Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	2031	3907 LNrb		6/1/2018	Enzyme Bio Systems	RC3 (Clinton)	1	69		Rebuild Enzyme Bio Systems Tap-RC3 (Clinton) 69 kV	WI		5.33	Planned	\$36,968,500	Engineering	N	N		Y
A in MTEP14	A	West	ATC	2056	3943 LN		1/31/2017	Oak Creek	Pennsylvania	1	138		Uprate Oak Creek-Pennsylvania (637) 138 kV	WI	4.53		M2a_Pre-Project Approval	\$4,000,000	N	N		Y	
A in MTEP14	A	West	ATC	3096	5421 LN		12/31/2020	Munising	Timber Products	1	69	37 MVA	Increase ground clearance for the Inland line Munising-Blan	MI	6.2		Planned	\$13,000,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	3096	5423 LN		12/31/2020	Seney	Blaney Park	1	69	37 MVA	Increase ground clearance for the Inland line Munising-Blan	MI	18		Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	3096	5422 LN		12/31/2020	Timber Products	Seney	1	69	37 MVA	Increase ground clearance for the Inland line Munising-Blan	MI	28.4		Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	3510	6481 LN		6/15/2019	Mukwonago	Edgewood	1	138		293 671K61 Mukwonago-Edgewood 138-kV rebuild	WI	7.19		Planned	\$23,121,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	3510	6482 LN		6/15/2019	Edgewood	St. Martins	1	138		287 3013 Edgewood-St. Martins 138-kV rebuild	WI	7.07		Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	3808	7149 TX		6/1/2019	Geneva		1	138	69	100 New Geneva 138-69 kV Transformer	WI			Planned	\$12,155,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	3808	7155 LN		6/1/2019	Twin Lakes	Geneva	1	69		116 Construct new Twin Lakes-Geneva 69 kV line with T2-336	WI	1		Planned	\$7,391,000	Planning	N	N		Y
A in MTEP14	A	West	ATC	3808	7154 LNrc		6/1/2019	Richmond Road	Twin Lakes	1	69		116 Reconductor Twin Lakes-Richmond 69 kV line with T2-336	WI	2.3		Planned	\$2,675,000	Planning	N	N		Y
A in MTEP14	A	West	ATC	3808	7153 LNrc		6/1/2019	Katzenberg	Richmond Road	1	69		116 Reconductor Katzenberg-Richmond 69 kV line with T2-336	WI	2.6		Planned	\$3,024,000	Planning	N	N		Y
A in MTEP14	A	West	ATC	3808	7152 LN		6/1/2019	Geneva	North Lake Geneva	1	138		293 Construct new Geneva-North Lake Geneva 138 kV line with	WI	12.5		Planned	\$17,420,000	Planning	N	N		Y
A in MTEP14	A	West	ATC	3808	7151 LN		6/1/2019	Spring Valley	Geneva	1	138		293 Construct new Spring Valley-Geneva 138 kV line with T2-4	WI	11.6		Planned	\$26,567,000	Planning	N	N		Y
A in MTEP14	A	West	ATC	3808	7150 LNrc		6/1/2019	Bain	Spring Valley	1	138		293 Reconductor Bain-Spring Valley 138 kV line with T2-477	WI	14.5		Planned	\$1,314,000	Planning	N	N		Y
A in MTEP14	A	West	ATC	3890	7435 LN		12/31/2021	Port Washington	Saukville	1	138		319 Reconductor Port Washington-Saukville (762) 138 kV line	WI			Planned	\$2,284,000	Planning	N	N		Y
A in MTEP14	A	West	ATC	3891	7436 LN		12/31/2021	Port Washington	Saukville	1	138		319 Reconductor Port Washington-Saukville (742) 138 kV line	WI			Planned	\$2,843,000	Planning	N	N		Y
A in MTEP14	A	West	ATC	3900	7450 LN		6/1/2016	Bain	Albers	1	138		285 Reconductor Bain-Albers (63143) 138 kV line	WI	3.1		Planned	\$1,300,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	3904	7457 LN		6/10/2016	McCue	REC Harmony	1	69		88 Reconductor McCue-REC Harmony (Y-171) 69 kV line	WI	1.36		Planned	\$3,500,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	3904	8362 LN		6/10/2016	Red Hawk Tap	Lamar	1	69		88 Reconductor Red Hawk Tap - Lamar 69 kV line	WI	0.17		Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	3904	7458 LN		6/10/2016	REC Harmony	Red Hawk Tap	1	69		88 Reconductor REC Harmony-Red Hawk Tap 69 kV line	WI	2.45		Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	4711	8930 LNrb		10/17/2016	Waucoma	A11 Tap	1	69		79 Rebuild the 1.1 mile portion of Y-17 (WAU-A11 69 kV) with	WI	13.1		Planned	\$13,600,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	4711	8931 LNrb		10/17/2016	A11 Tap	Montello Tap	1	69		79 Rebuild the 6.1 mile portion of line Y-17 (A11-MOO 69 kV)	WI	3.1		Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	4728	8961 LNrb		6/1/2017	University	Whitewater	1	138		246 Reconfigure the University area lines of Whitewater - Unive	WI		6.2	Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	4728	8960 LNrb		6/1/2017	University	Mukwonago	1	138		246 Reconfigure the University area lines of Whitewater - Unive	WI		22.7	Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	4728	8959 LNrb		6/1/2017	Whitewater	Bluff Creek	1	138		175 Reconfigure the University area lines of Whitewater - Unive	WI		5.02	Planned	\$5,075,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	4731	8966 SUB		7/1/2016	Horicon		1	69		Replace the 4/0 Copper Main Strin Bus, Jumpers and lugs.	WI			Planned	\$210,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	4731	8968 LNup		7/1/2016	Horicon	Horicon Industrial P	1	69		64 Replace the 4/0 Copper Main Strin Bus, Jumpers and lugs.	WI			Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	4731	8967 LNup		7/1/2016	Horicon	Juneau Tap	1	69		59 Replace the 4/0 Copper Main Strin Bus, Jumpers and lugs.	WI			Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	4734	8980 CB		5/4/2015	Cedar Creek		115			Cedar Creek 115kV bus tie breaker	WI			Planned	\$2,000,000	Engineering	N	N		Y
A in MTEP14	A	West	ATC	4734	8979 CB		5/4/2015	Cedar Creek		115			Cedar Creek - Dewey 115kV line breaker	WI			Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	4734	8978 CB		5/4/2015	Cedar Creek		115			Weston - Cedar Creek 115kV line breaker	WI			Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	4734	8977 TAP		6/1/2015	Cedar Creek	Dewey	1	115		205 Loop Weston - Dewey 115kV line into new Cedar Creek su	WI		15.65	Planned		Engineering	N	N		Y
A in MTEP14	A	West	ATC	4734	8976 TAP		6/1/2015	Weston	Cedar Creek	1	115		205 Loop Weston - Dewey 115kV line into new Cedar Creek su	WI		0.25	Planned		Engineering	N	N		Y
A in MTEP14	A	West	CFJ	4588	8730 SUB		4/1/2017	University Ave.	Transformer	161	69	143 MVA	New Substation	IA			Under Construction	\$5,398,000	N	N		Y	
A in MTEP14	A	West	CFJ	4588	8731 LN		4/1/2017	University Ave	GT to GH Tap	6915	69	143 MVA	69kV Line and 3 way switch	IA		1.3	M4_Pre-Construction	\$1,536,500	N	N		Y	
A in MTEP14	A	West	CFJ-PMEU	4386	8402 SUB		4/1/2017	Pella West		69			Reconfiguration of Pella West 69 kV Substation to improve	IA			Planned	\$2,360,335	Planning	N	N		Y
A in MTEP14	A	West	GRE	2600	4611 LN		9/23/2016	Big Sandy	Big Sandy Tap	1	69		New Distribution	MN		4	Planned	\$4,239,175	Planning	N	N		NT
A in MTEP14	A	West	GRE	4379	8391 LN		4/13/2017	Quarry	West St. Cloud	1	115		190 Build new line from Quarry to West St. Cloud	MN			Planned	\$3,250,000	Planning	N	N		Y
A in MTEP14	A	West	GRE	4379	8392 SUB		4/13/2017	West St. Cloud		115			Install 115 kV breaker and half layout at West St. Cloud	MN			Planned	\$4,000,000	Planning	N	N		Y
A in MTEP14	A	West	GRE-WMU	4380	8394 SUB		5/1/2019	Priam		115	69		Move Willmar 115/69 kV transformer to new Priam 115 kV	MN			Planned	\$3,000,000	Planning	N	N		Y
A in MTEP14	A	West	GRE-WMU	4380	8395 LN		5/1/2019	Priam	Pennock/Willmar W	1	69		Establish 69 kV outlets from Priam	MN		1.5	Planned	\$1,000,000	Planning	N	N		Y
A in MTEP14	A	West	ITCM	4455	8521 LN		12/31/2016	DAEC Tap	DAEC	1	34	39 MVA	Rebuild the line to 69kV standards for future conversion.	IA	3.32		Planned	\$2,674,264	Engineering	N	N		Y
A in MTEP14	A	West	ITCM	4456	8523 SUB		12/31/2020	East Nevada Street	Substation	1	34		Add two 69kV breakers at the East Nevada distribution sub	IA			Planned	\$400,000	Planning	N	N		Y
A in MTEP14	A	West	ITCM	4459	8529 LN		12/31/2018	Rome REC	Rome REC Tap	69	77 MVA		Build a new 69kV line from Rome REC back to the present	IA	2		Planned	\$1,080,000	Planning				

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	ProjID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upr	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP14	A	West	ITCM	4704	8915 LN		12/31/2020	Traer	Dysart	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	8.28		Planned	\$3,726,000	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8914 LN		5/3/2019	Sutherland	LeGrand	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	6.27		Planned	\$2,821,500	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8913 LN		5/3/2018	Ferguson	Timber Creek Tap	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	3.75		Planned	\$1,687,500	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8912 LN		7/29/2017	Vining REC Tap	Tama East	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	10.6		Planned	\$4,783,500	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8911 LN		12/31/2020	Belle Plaine Jct	Vining REC Tap	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	12.7		Planned	\$5,706,000	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8910 LN		12/31/2021	Benco	Tap	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	1.57		Planned	\$706,500	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8909 LN		2/9/2018	Belle Plaine Jct	City of Belle Plaine	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	4.8		Planned	\$2,160,000	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8908 LN		3/16/2018	Williamsburg South	Parnell	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	15		Planned	\$6,750,000	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8907 LN		5/24/2018	Koszar REC Tap	Belle Plaine Jct	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	5.7		Planned	\$2,565,000	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8906 LN		5/4/2018	Williamsburg South	Tap	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	3		Planned	\$1,350,000	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8905 LN		4/27/2018	Williamsburg East	Tap	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	2.6		Planned	\$1,170,000	Planning	N	N	Y
A in MTEP14	A	West	ITCM	4704	8904 LN		5/3/2018	Blairstown Tap	Tap	1	34		39 MVA	Rebuild 34kV to 69kV standandards and continue to operate	IA	2.6		Planned	\$1,170,000	Planning	N	N	Y
A in MTEP14	A	West	MDU	3083	5365 CB		7/1/2018	North Dickinson	2 PCB	1	115			Complete North Dickinson bus	ND			Planned	\$1,500,000	Engineering	N	N	Y
A in MTEP14	A	West	MDU	3083	5364 LN		7/1/2018	North Dickinson	Dickinson West	1	115		120	New line Segment	ND	3		Planned	\$750,000	Engineering	N	N	Y
A in MTEP14	A	West	MDU	4133	7864 TX		3/1/2017	Collins	115/41.6 kV transformer	1	115	41.6			ND			Planned	\$1,500,000	Engineering	N	N	Y
A in MTEP14	A	West	MDU	4134	7865 SUB		6/1/2017	South 9th	115/12.47 kV transf	1	115	12.5	25	New substation & transformer	ND			Planned	\$3,600,000	Engineering	N	N	Y
A in MTEP14	A	West	MDU	4134	7866 LN		6/1/2017	South 9th tap	South 9th	1	115		190	Double circuit line to the new South 9th substation connecti	ND			Planned	\$600,000	Engineering	N	N	Y
A in MTEP14	A	West	MDU	4141	7875 IND		9/30/2016	Wishek Jct	tertiary reactor	13.8			15 1 X 30 Mvar tertiary reactor	ND			Planned	\$500,000	Engineering	N	N	Y	
A in MTEP14	A	West	MEC	4255	8003 SUB		5/1/2017	Sioux City Airport	Substation	161	13			Sioux City Airport Substation	IA			Planned	\$2,500,000	Planning	N	N	Y
A in MTEP14	A	West	MEC	4594	8741 LN		5/1/2017	Raun	Sioux City Airport	1	161		410	Add Raun-Sioux City Airport 161 kV line	IA	0.1	Planned	\$70,000	Planning	N	N	Y	
A in MTEP14	A	West	MEC	4594	8742 LN		5/1/2017	Kellogg	Sioux City Airport	1	161		410	Add CF Industries-Sioux City Airport 161 kV line	IA	0.1	Planned	\$70,000	Planning	N	N	Y	
A in MTEP14	A	West	MH, MP	3831	7200 LN		6/1/2020	Dorsey	US/MB Border	1	500		1732	Dorsey-US/Manitoba Border 500 kV Line	MB	160	Planned						
A in MTEP14	A	West	MH, MP	3831	7622 SC		6/1/2020	Warroad River		1	500		1732	New midpoint series compensation station on Dorsey - Iron	MN	0	Planned	\$52,433,712	Facility Study	N	N	Y	
A in MTEP14	A	West	MH, MP	3831	7202 SUB		6/1/2020	Iron Range		1	500	230	1200	New Iron Range 500/230 kV Substation adjacent to existing MN	0	0	Planned	\$46,023,004	Facility Study	N	N	Y	
A in MTEP14	A	West	MH, MP	3831	7201 LN		6/1/2020	US/MB Border	Iron Range	1	500		1732	US/Manitoba Border-Iron Range 500 kV Line	MN	220	Planned	\$573,207,005	Facility Study	N	N	Y	
A in MTEP14	A	West	MP	3831	20289 LNri		6/1/2020	Iron Range	various	230				Modifications to and reroutes of existing 230 kV and 115 kV MN	0	2	Planned	\$3,891,711	Facility Study	N	N	Y	
A in MTEP14	A	West	MP	3831	20293 RLY		6/1/2020	Hilltop		230				One 230 kV panel replacement at Hilltop to facilitate interco MN	0	0	Planned	\$137,500	Facility Study	N	N	Y	
A in MTEP14	A	West	MP	3831	20292 RLY		6/1/2020	Arrowhead		230				One 230 kV panel replacement at Arrowhead to facilitate in MN	0	0	Planned	\$137,500	Facility Study	N	N	Y	
A in MTEP14	A	West	MP	3831	20291 RLY		6/1/2020	Forbes		230				One 230 kV panel replacement at Forbes to facilitate interco MN	0	0	Planned	\$137,500	Facility Study	N	N	Y	
A in MTEP14	A	West	MP	3831	20290 RLY		6/1/2020	Blackberry		230				Two 230 kV panel replacements at Blackberry to facilitate ir MN	0	0	Planned	\$275,000	Facility Study	N	N	Y	
A in MTEP14	A	West	MP	4044	7681 SUB		6/30/2016	Canosa Road	New Substation	115	14	39.2		New substation in Arrowhead - Cloquet 115 kV Line	MN	0	Under Construction	\$4,868,663	Engineering	N	N	Y	
A in MTEP14	A	West	MP	4045	7682 TX		10/1/2016	Embarrass		1	115	23	18.6	Embarrass 115/23 kV Transformer	MN	0	0	Planned	\$1,850,000	Planning	N	N	Y
A in MTEP14	A	West	MP	4426	8457 BUS		1/31/2017	Hoyt Lakes		138				Bus reconfiguration & equipment replacements	MN	0	0	Planned	\$2,500,000	Planning Preliminary	N	N	Y
A in MTEP14	A	West	MP	4426	20288 CAP		1/31/2017	Hoyt Lakes		138			30	Hoyt Lakes 30 MVar ar cap bank	MN	0	0	Planned	\$500,000	Planning Preliminary	N	N	Y
A in MTEP14	A	West	MRES	4470	8563 LN		12/31/2016	Fergus Falls	Silver Lake	1	230			Address woodpecker damage and prevent future damage c MN			Planned		Planning	N	N	Y	
A in MTEP14	A	West	MRES	4470	8568 LN		12/31/2016	Detroit Lakes West	Detroit Lakes Indust	1	115			Address woodpecker damage and prevent future damage c MN			Planned		Planning	N	N	Y	
A in MTEP14	A	West	MRES	4470	8567 LN		12/31/2016	Egdetown	Pelican Rapids	1	115			Address woodpecker damage and prevent future damage c MN			Planned		Planning	N	N	Y	
A in MTEP14	A	West	MRES	4470	8566 LN		12/31/2016	Audubon	Comorant Jct.	1	115			Address woodpecker damage and prevent future damage c MN			Planned		Planning	N	N	Y	
A in MTEP14	A	West	MRES	4470	8565 LN		12/31/2016	Alexandria Tap	Milona Tap	1	115			Address woodpecker damage and prevent future damage c MN			Planned	\$150,000	Planning	N	N	Y	
A in MTEP14	A	West	MRES	4470	8564 LN		12/31/2016	Alexandria - MRES	Grant County	1	115			Address woodpecker damage and prevent future damage c MN			Planned		Planning	N	N	Y	
A in MTEP14	A	West	OTP	4444	8503 LNup		12/31/2016	NERC Alert Facility R	Throughout system	1	115			Verify and remediate facilities as required due to the industr MN,ND,SD			Planned	\$7,701,028	Construction	N	N	Y	
A in MTEP14	A	West	XEL	4379	8393 CB		4/13/2017	Quarry		1	115			Install 115 kV breaker and half layout at existing Quarry sub MN			Planned	\$2,000,000	Planning	N	N	Y	
A in MTEP14	A	West	XEL	4693	8877 LNrb		12/23/2016	Douglas County	West Union	1	69		71.7	Rebuild the Douglas County - West Union 69 kV line to 477 MN	6.6		Planned	\$3,011,966	Planning	N	N	Y	
A in MTEP14	A	West	XEL	4694	8878 CAP		8/1/2017	Gravel Island		1	161			Install two steps of 30 Mvar capacitor banks at Gravel Islan WI			M4_Pre-Construction	\$3,500,000	Planning	N	N	Y	
A in MTEP14	A	West	XEL	4697	8881 LNrc		11/30/2016	Split Rock	Nobles County	1	345		1195	Reconductor 35 miles to Bundled 477 1-2 ACSR	MN	35	Planned	\$5,547,376	Planning	N	N	Y	
A in MTEP15	A	Central	AmerenIL	3689	6966 CB		11/15/2016	Keystone Substation	Wallace	1	138			Keystone 138-13.8 kV Substation - Replace 138 kV circuit t IL			Planned	\$500,000	Planning	N	N	Y	
A in MTEP15	A	Central	AmerenIL	4078	7729 LN		11/15/2016	Sandburg	Monmouth	1	138		280	Rebuild approx. 4 miles of 477 kcmil ACSR conductor to ne IL	4		Planned	\$4,200,000	Budgetary	N	N	Y	
A in MTEP15	A	Central	AmerenIL	4079	7730 SUB		6/1/2017	Huff	Connection for new 138-65	1	138	69		Establish new bulk substation connecting to the Havana-Da IL			Planned	\$3,000,000	Planning	N	N	Y	
A in MTEP15	A	Central	AmerenIL	4494	8605 TX		12/1/2016	East Galesburg	Replace 161/138 kV XFMR	161	138			Replace existing parallel 161/138 kV Transformers at East (IL			Planned	\$3,681,580	Planning Preliminary	N	N	Y	
A in MTEP15	A	Central	AmerenIL	7825	20096 SwSta		12/1/2019	Mascoutah Municipal	(Hilgard)	1	348			Install a 4-breaker 138 kV ring bus (2000 A, 40 kA) at or ne IL			Planned	\$5,900,000	Engineering	N	N	Y	
A in MTEP15	A	Central	AmerenIL	8050	20344 TX		6/1/2015	Baldwin 345kV		1	345		138 560 MVA	Replace existing transformer	IL		Planned	\$5,650,000	Planning Preliminary	N	N	Y	
A in MTEP15	A	Central	AmerenIL	8054	20351 LNrc		12/1/2016	Tilden Jct	Sparta	1	138			Reconductor 5.7 miles of line	IL	5.7	Planned	\$2,710,721	Planning Preliminary	N	N	Y	
A in MTEP15	A	Central	AmerenIL	8055	20352 LNrc		6/1/2016	Sparta Tap	Steekville	1	138			Reconductor 7.4 miles of line	IL	7.4	Planned	\$2,318,247	Planning Preliminary	N	N	Y	
A in MTEP15	A	Central	AmerenIL	8060	20485 LNrc		12/1/2016	Fayetteville South Tap	Tilden	1	138			Reconductor 1.5 miles of line	IL	1.5	Planned	\$1,500,000	Planning Preliminary	N	N	Y	
A in MTEP15	A	Central	AmerenIL	8134	20488 LNrc		12/1/2015	Tilden Jct	Tilden	1	138			Reconductor one span of line	IL		Planned	\$175,920	Planning Preliminary	N	N	Y	
A in MTEP15	A	Central	AmerenIL	8137	20491 LNrc		6/1/2017	Turkey Hill	Mascoutah	1	138			Reconductor 8.5 miles of line	IL	8.5	Planned	\$4,250,000	Planning Preliminary	N	N	Y	
A in MTEP15	A	Central	AmerenIL	8581	20686 TEQ		3/2/2017	Vermillion		1	138			Increase of wind farm capacity to 250 MW	IL		Planned	\$48,000	Engineering				

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upp	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP15	A	Central	DEI	7883	20112	Dist	6/2017	Bloomington Downtown	new distribution sub	1	69	12		Construct new 22 4MVA - 69/12kV sub near downtown Blo	IN			M3_Long Lead Materials	\$602,000	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7885	20115	LNrc	3/31/2017	Frankfort Burlington	S Middlefork	1	69		153	Frankfort Burlington ST to Middlefork 69kV - 69/133 ckt. Reo	IN	12.4		M4_Pre-Construction	\$6,636,000	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7903	20140	LNrc	6/1/2025	Martinsville SE	HE Park Ave	1	69		153	Martinsville SE - HE Park Ave 69kV - 69/03 ckt. Reconstruct	IN	3.4		M1_Final SPM or OOC	\$2,102,000	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7911	20155	SUB	12/31/2018	Frankfort 230kV	Frankfort 230kV	230	69	2000A	Frankfort 230kV: complete 4-brkr ring bus; 69kV: complete	IN			M1_Final SPM or OOC	\$5,109,020	Engineering w/AFUDN	N		NT	
A in MTEP15	A	Central	DEI	7946	20197	LN	12/31/2017	Speed	Jeffersonville	1	138		306	Loop existing 138kV line from Speed to Clark Maritime to J	IN	2.53		M1_Final SPM or OOC	\$5,472,000	Engineering w/AFUDN	N		Y
A in MTEP15	A	Central	DEI	7953	20213	LN	12/31/2016	Mohawk 230kV	Mohawk 138	1	69		153	New 1.2 mile 69kV line to complete 69/130 ckt. loop through	IN		1.2	Under Construction	\$1,309,000	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7957	20218	Dist	6/1/2017	Kokomo S. Main St.	Kokomo S. Main St.	1	69	12		Relocate Kokomo S. Main St. 69/12kV distribution sub to hi	IN			M3_Long Lead Materials	\$1,261,000	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7961	20225	CB	12/31/2017	Fairview 138	Fairview 138	1	138			Fairview 138kV Breaker Replacements: replace OCB 1385	IN			M3_Long Lead Materials	\$4,211,000	Engineering w/AFUDN	N		Y
A in MTEP15	A	Central	DEI	7963	20226	CB	12/31/2018	New Castle 138	New Castle 138	1	138			New Castle 138kV Breaker Replacements: replace OCB 13	IN			M1_Final SPM or OOC	\$2,516,322	Engineering w/AFUDN	N		Y
A in MTEP15	A	Central	DEI	7964	20227	CB	12/31/2018	Kokomo Highland Park	Kokomo Highland Park	138	69			Kokomo Highland Park Equipment: Replace OCB 69230-4, IN	IN			M1_Final SPM or OOC	\$3,351,124	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7969	20232	LNup	12/31/2017	Edwardsport	Amo	345				Edwardsport - Amo 345kV - 345/28 ckt. replace intermediate	IN			M1_Final SPM or OOC	\$16,052,359	Engineering w/AFUDN	N		Y
A in MTEP15	A	Central	DEI	7974	20237	LNrc	12/31/2016	Lafayette 230kV	Attica	230	138			Lafayette 230 - Attica 230kV - 230/27 ckt. Reconductor 5.4 r	IN	15.3		M1_Final SPM or OOC	\$3,694,530	Engineering w/AFUDN	N		Y
A in MTEP15	A	Central	DEI	7982	20251	LNrc	12/31/2017	Advance	Dover	1	69		100	Advance - Dover 69kV - 69/134 ckt. Rebuild 7.9 mile line wit	IN	7.9		M1_Final SPM or OOC	\$4,903,384	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7984	20254	LNup	12/31/2018	Medora	Brownstown	1	69			Medora - Brownstown 69kV - 69/52 ckt. Rebuild 4.85 mile li	IN	4.85		M1_Final SPM or OOC	\$2,590,705	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7987	20257	LNrc	12/31/2018	New Pekin Jct	Salem	1	69		100	New Pekin Jct - Salem 69kV - 69/153 ckt. Rebuild 9.4 mile li	IN	9.4		M1_Final SPM or OOC	\$4,028,000	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7989	20259	LNrc	12/31/2016	Edwardsport	Odon Jct	1	69			Edwardsport - HE Rogers Jct 69kV - 69/51 ckt. Rebuild 9.8 i	IN	9.8		M4_Pre-Construction	\$7,391,505	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7991	20261	LNrc	12/31/2016	Rushville	HE Miroy	1	69		100	Rushville - HE Miroy 69kV - 69/20 ckt. Rebuild 7.2 mile line	IN	7.2		M4_Pre-Construction	\$6,699,202	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	7992	20265	LNrc	12/31/2018	Hillenbrand Jct	Andersonville Jct	1	69			Hillenbrand Jct - Batesville North - Andersonville Jct 69kV -	IN	7.93		M1_Final SPM or OOC	\$6,475,095	Engineering w/AFUDN	N		NT
A in MTEP15	A	Central	DEI	9246	20849	LN	6/1/2017	Lafayette Southeast	Lafayette South Jct	1	138		301	Lafayette SE to new Lafayette S Jct 2 (in existing 13808 ckt	IN	1.75		M3_Long Lead Materials	\$3,976,181	Engineering w/AFUDN	N		Y
A in MTEP15	A	Central	DEI	9247	20850	SUB	6/1/2017	Lafayette 230kV	Lafayette 230 sub - insert a redundant 138kV bus to break i	1	138			Lafayette 230 sub - insert a redundant 138kV bus to break i	IN			M1_Final SPM or OOC	\$4,500,000	Planning Preliminary	N		Y
A in MTEP15	A	Central	DEI, HE	7940	20191	LNrb	7/31/2018	Bedford	HE Worthington	1	138		230	Bedford - Owensburg - HE Buena Vista - HE Worthington 1	IN	35		M3_Long Lead Materials	\$36,169,000	Engineering w/AFUDN	N		Y
A in MTEP15	A	Central	HE	10343	21569	SUB	6/1/2016	Hubbell	Hubbell	1	138			Construct a 138kV ring bus and add a second 138/69kV tra	IN			Planned	\$10,047,000		N		Y
A in MTEP15	A	Central	IPL	4262	8040	LNup	12/31/2016	Pritchard	Center-ton-Honey Cr	1	138		302	Increase line rating from 242 to 302 MVA	IN	21.6		Planned		Planning	N		Y
A in MTEP15	A	Central	IPL	4263	8041	LNup	12/31/2016	Pritchard	Hearland Crossing-	1	138		242	Increase line rating from 191 to 242 MVA	IN	15.8		Planned		Planning	N		Y
A in MTEP15	A	Central	IPL	4264	8042	LN	12/31/2016	Pritchard	Franklin Township	1	138		322	New 138 kV transmission line rated 322 MVA on spare posi	IN	23		Under Construction		Planning	N		Y
A in MTEP15	A	Central	IPL	7701	20063	CB	6/1/2016	Thompson	Breakers	138				Two new breakers	IN			Planned			N		Y
A in MTEP15	A	Central	IPL	7704	20065	CB	6/1/2016	Rockville	Breaker	345				New breaker	IN			Planned			N		Y
A in MTEP15	A	Central	IPL	7704	20066	CB	6/1/2016	Rockville	Breaker	138				New breaker	IN			Planned			N		Y
A in MTEP15	A	Central	IPL	9402	20892	LNup	7/15/2017	Guion	Westlane	40	138		298	Increase line rating to 298 MVA by increased clearance.	IN	2.2		Planned			N		Y
A in MTEP15	A	Central	PPI	7881	20113	LN	12/31/2018	Fishhook	Pittsfield	1	138		229	14.5 mile single pole 138 kV line constructed with 795 MCM IL	IL	14.5		Planned	\$6,887,747	Engineering	N		Y
A in MTEP15	A	Central	PPI	7881	20121	LNrb	12/1/2017	Pittsfield	Pittsfield Distribution	1	69	69	50	69 kV Underbuild on portion of Fishhook-Pittsfield 138 kV li	IL	2.5		Planned	\$750,000		N		NT
A in MTEP15	A	Central	PPI	7889	20123	LN	12/31/2019	Fishhook 138 kV	Liberty 138 kV	138	138		229	Construct 12 mile 138 kV line from Fishhook substation to L	IL	12		Planned	\$5,819,909	Engineering	N		Y
A in MTEP15	A	Central	PPI	7889	20125	TX	12/31/2019	St. Anthony 138 kV	St. Anthony 69 kV	138	69		75	Replace 50 MVA delta-wye 138/69 kV transformer with 75 I L	IL			Planned	\$1,251,800	Engineering	N		NT
A in MTEP15	A	Central	PPI	7889	20124	SUB	12/31/2019	Liberty 138 kV	Liberty 69 kV	1	138	69	75	New 138/69 kV substation including 75 MVA 138/69 kV tra	IL			Planned	\$4,653,000	Engineering	N		NT
A in MTEP15	A	Central	Vectren	4391	8408	CAP	12/31/2019	Pigeon Creek 69	Capacitor	69	15.6			Add a 15.6 MVAR cap bank at the Pigeon Creek Sub	IN	0	0	Planned	\$6,600,000	Planning	N		Y
A in MTEP15	A	Central	Vectren	10142	21473	TEQ	1/1/2021	Duff	Sub upgrades at Duff	345				Sub upgrades at Duff	IN			Planned	\$3,092,381		Y		Y
A in MTEP15	A	East	ITCT	7891	20322	LNug	5/1/2017	Cato	Stone Pool	1	120			New 120 kV underground cable to loop in Stone Pool Subst	MI			Under Construction	\$6,047,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	7891	20455	RLY	5/1/2017	Midtown	Relay Upgrades at Midtown	120				Relay Upgrades at Midtown	MI			M4_Pre-Construction	\$54,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	7891	20454	RLY	5/1/2017	Cato	Relay upgrades at Cato	120				Relay upgrades at Cato	MI			M4_Pre-Construction	\$54,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	7891	20324	TAP	5/1/2017	Stone Pool	New Stone Pool Substation	120				New Stone Pool Substation	MI			M4_Pre-Construction	\$4,323,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	7891	20323	LNug	5/1/2017	Midtown	Stone Pool	1	120			New 120 kV underground cable to loop in Stone Pool.	MI			Under Construction	\$6,047,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	7892	20319	LN	6/13/2019	Hood	Bartlett	120				New 120 kV transmission line to loop in Bartlett.	MI			M2a_Pre-Project Approval	\$2,490,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	7892	20845	RLY	6/13/2019	Bloomfield	Relay Upgrades at Bloomfield	120				Relay Upgrades at Bloomfield	MI			M2a_Pre-Project Approval	\$15,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	7892	20844	RLY	6/13/2019	Hood	Relay Upgrades at Hood Substation	120				Relay Upgrades at Hood Substation	MI			M2a_Pre-Project Approval	\$15,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	7892	20321	TAP	6/13/2019	Bartlett	New distribution substation	120				New distribution substation	MI			M2a_Pre-Project Approval	\$2,910,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	7892	20320	LN	6/13/2019	Bloomfield	Bartlett	1	120			New 120 kV transmission line to loop in Bartlett Substation	MI			M2a_Pre-Project Approval	\$2,490,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	8083	20408	RLY	6/1/2017	Cortland	Upgrade limiting relay at Cortland.	120				Upgrade limiting relay at Cortland.	MI			M3_Long Lead Materials	\$300,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	8087	20411	CAP	6/1/2018	Stratford	33.3 MVAR capacitor bank at Stratford 120 kV station.	120				33.3 MVAR capacitor bank at Stratford 120 kV station.	MI			M2a_Pre-Project Approval	\$820,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	8094	20422	TX	6/1/2018	Fitz	Add a 345/120 kV transformer at Fitz Substation	301	345	120		Add a 345/120 kV transformer at Fitz Substation	MI			M2a_Pre-Project Approval	\$5,500,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	8094	20431	SUB	6/1/2018	Fitz	Install 345 and 120 kV substation equipment at Fitz to accom	345	120			Install 345 and 120 kV substation equipment at Fitz to accom	MI			M2a_Pre-Project Approval	\$6,500,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	8094	20427	LN	6/1/2018	Fitz	120 kV line created by looping the Adams-Bunce 120 kV li	1	120			120 kV line created by looping the Adams-Bunce 120 kV li	MI	0.1		M2a_Pre-Project Approval	\$600,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	8094	20426	LN	6/1/2018	Adams	120 kV line created by looping the Adams-Bunce 120 kV li	1	120			120 kV line created by looping the Adams-Bunce 120 kV li	MI	0.1		M2a_Pre-Project Approval	\$600,000	Engineering	N		Y
A in MTEP15	A	East	ITCT	9245	20848	SUB	9/2/2016	Rapson	Add two breakers, disconnects, and relays.	120				Add two breakers, disconnects, and relays.	MI			Under Construction	\$1,330,000	Engineering	Y		Y
A in MTEP15	A	East	ITCT	9360	20874	SUB	12/31/2018	Scio 120/13.2 kV	Install 2-120 kV line breakers and 1-120 kV section breaker	12													

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Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upd	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP15	A	East	METC	4509	8637 LNup		12/31/2017	Argenta	Battle Creek	1	345		1239	Remediate sag limit to SEMER 2350 Amps.	MI	27.9	0	M2a_Pre-Project Approval	\$2,500,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	4509	8638 TEQ		12/31/2017	Battle Creek		1	345		Upgrade terminal equipment at Battle Creek.	MI			M2a_Pre-Project Approval	\$68,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	4524	8665 LNup		12/31/2017	Emmet	Livingston	1	138		Remediate sag on the Emmet - Livingston 138 kV line to bri	MI			M3_Long Lead Materials	\$182,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8066	20374 LNrb		6/1/2018	Amber	Donaldson Creek	1	138		199 Rebuild approx. 19.8 miles of 336 ACSR conductor utilizing MI	MI	19.8	0	M3_Long Lead Materials	\$23,000,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8067	20380 CB		6/1/2017	Beals Road		1	138		430 MVA Replace the limiting equipment on the Beals Road 138 kV line	MI	0	0	M3_Long Lead Materials	\$400,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8070	20388 TEQ		6/1/2017	North Belding	Vergennes	1	138		Replace limiting terminal equipment at North Belding.	MI			M3_Long Lead Materials	\$120,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8072	20394 LNrb		12/31/2019	Riggsville	Port Calcote	1	138		Rebuild 45 miles of 336.4 ACSR strung on 138 kV single cir	MI	45		M2a_Pre-Project Approval	\$62,048,000	Engineering	Prelimin	N	Y	
A in MTEP15	A	East	METC	8072	20396 LNrb		12/31/2019	Port Calcote	Rockport	1	138		Rebuild 24 miles of 266.8 ACSR strung on 138 kV single cir	MI	24		M2a_Pre-Project Approval	\$34,457,000	Engineering	Prelimin	N	Y	
A in MTEP15	A	East	METC	8077	20418 LNrb		12/31/2018	Vestaburg	Alma	1	138		Rebuild the Vestaburg - Alma 138 kV line (approx. 16.7 mil	MI	16.7		M3_Long Lead Materials	\$18,200,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8078	20401 CAP		6/1/2017	Donaldson Creek			138		33.3 MVAR Capacitor	MI			M2a_Pre-Project Approval	\$1,200,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8080	20404 CAP		6/1/2017	Colowater			138		Install a 3 x 18 MVAR capacitor and associated station equi	MI			M3_Long Lead Materials	\$3,900,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8090	20416 LNup		6/1/2018	Cornell	Blue Water Jct.	1	138		Remediate the sag limit to at least 760 A.	MI			M3_Long Lead Materials	\$320,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8091	20417 LNup		6/1/2018	Donaldson Creek	White Lake	1	138		Remediate sag limit.	MI			M2a_Pre-Project Approval	\$360,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8096	20421 LNup		12/31/2017	Roosevelt	Gaines	1	345		Remediate sag limit.	MI			M3_Long Lead Materials	\$380,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8109	20446 LNup		6/1/2017	Gaylord	Livingston	1	138		Remediate the sag limit on the Gaylord - Livingston 138 kV	MI			M3_Long Lead Materials	\$75,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8118	20466 TEQ		12/31/2018	Beecher		1	138		Replace overloaded terminal equipment at Beecher.	MI			M2a_Pre-Project Approval	\$350,000	Planning	N	N	Y	
A in MTEP15	A	East	METC	8118	20801 LNrc		12/31/2018	Beecher	Whiting	1	138		Relocate the Beecher-Whiting 138 kV line to the open side	MI			M2a_Pre-Project Approval	\$4,000,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8118	20800 RLY		12/31/2018	Morocco		1	138		Upgrade relays at Morocco station.	MI			M2a_Pre-Project Approval	\$250,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8118	20468 LNrb		12/31/2018	Beecher	Samaria	1	138		Rebuild the 636 ACSR portion of the Beecher to Samaria 1 MI	MI			M2a_Pre-Project Approval	\$21,000,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8119	20470 LNup		12/31/2017	METC Pole Top Switches Additions-Replacem		1	138		Install or replace an existing a new 138 kV, 2-way, full-load-	MI			M2a_Pre-Project Approval	\$3,600,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8121	20472 LNup		12/31/2018	Hackett Jct.	Laundra Jct.	1	138		Remediate the sag limit on the Hackett Jct. to Laundra Jct. MI	MI			M3_Long Lead Materials	\$90,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8122	20474 LNup		12/31/2018	METC Pole Top Switches Additions-Replacem		1	138		Install or replace an existing a new 138 kV, 2-way, full-load-	MI			M2a_Pre-Project Approval	\$3,600,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8124	20476 LNrb		12/31/2018	Argenta	Morrow	1	138		Rebuild approximately 10 miles of existing 138 kV steel latt	MI	10.5		M3_Long Lead Materials	\$13,900,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8126	20477 IND		8/15/2016	Kenowa		1	345		Replace reactor 28R	MI			Under Construction	\$3,500,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8127	20484 CB		12/31/2017	Ludington		1	345		Replace Ludington 345 kV circuit breakers 22H9, 24H9, 25I MI	MI			M2a_Pre-Project Approval	\$8,640,000	Engineering	N	N	Y	
A in MTEP15	A	East	METC	8144	20521 TX		5/31/2018	Meyer (formerly "Hayes Street")		1	345	138		Install a 345/138 kV transformer at the new Meyer substatic MI	MI			M3_Long Lead Materials	\$4,500,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8144	20531 SUB		5/31/2018	Tallmadge		1	345		138	Replace 345 kV terminal equipment at Tallmadge substation MI	MI			M2a_Pre-Project Approval	\$140,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8144	20529 SUB		5/31/2018	Meyer (formerly "Hayes Street")		1	345	138		Construct the Meyer substation and install all 345 and 138 kV MI	MI			M2a_Pre-Project Approval	\$20,200,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8144	20528 LN		5/31/2018	Meyer (formerly "Hay Cobb")		1	138			Construct approx. 0.25 miles of new 138 kV, double circuit t MI	MI	0.1		M2a_Pre-Project Approval	\$960,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8144	20527 LN		5/31/2018	Meyer (formerly "Hay Tallmadge")		2	138			Construct approx. 0.25 miles of new 138 kV, double circuit t MI	MI	0.1		M2a_Pre-Project Approval	\$900,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8144	20526 LN		5/31/2018	Meyer (formerly "Hay Kenowa")		1	345			Construct approx. 0.1 miles of new 345 kV, double circuit st MI	MI	0.1		M2a_Pre-Project Approval	\$1,300,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8144	20525 LN		5/31/2018	Meyer (formerly "Hay Argenta")		1	345			Construct approx. 0.1 miles of new 345 kV, double circuit st MI	MI	0.1		M2a_Pre-Project Approval	\$1,300,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8144	20524 LN		5/31/2018	Meyer (formerly "Hay Ludington")		1	345			Construct approx. 0.1 miles of new 345 kV, double circuit st MI	MI	0.1		M2a_Pre-Project Approval	\$1,200,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8144	20523 LN		5/31/2018	Meyer (formerly "Hay Tallmadge")		1	345			Construct approx. 0.1 miles of new 345 kV, double circuit st MI	MI	0.1		M2a_Pre-Project Approval	\$1,200,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8170	20575 RLY		12/31/2016	Leoni	Page Ave	1	138			Install the second relay component on the Leoni to Page Av MI	MI			M3_Long Lead Materials	\$75,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8171	20576 RLY		6/1/2017	Croton	Felch Road	1	138			1. Install dual pilot relay protection system on Croton to Felc MI	MI			M3_Long Lead Materials	\$540,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8460	20675 LNup		12/31/2017	Hemphill	Sabine	1	138		180	Remediate the sag limit on the Sabine - Hemphill 138 kV lin MI	MI			M3_Long Lead Materials	\$140,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8461	20674 LNup		6/1/2017	Cobb	Sternberg	1	138			Remediate the sag limit on the Cobb-Sternberg 138 kV line MI	MI			M3_Long Lead Materials	\$480,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	8540	20680 LNup		12/31/2017	Claremont	Layton	1	138			Remediate the sag limit on the Claremont-Layton section of MI	MI	17.2		M3_Long Lead Materials	\$520,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	9361	20877 SwSta		10/1/2016	Green 138 kV		1	138			Install 4-138 kV breakers with associated disconnects laid o	MI			Under Construction	\$4,483,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	9361	20879 LN		10/1/2016	College	Green	1	138			New line created by looping the Delhi-College 138 kV circui MI	MI	0.1		Under Construction	\$412,000	Engineering	N	N	Y
A in MTEP15	A	East	METC	9361	20878 LN		10/1/2016	Delhi	Green	1	138			New line created by looping the Delhi-College 138 kV circui MI	MI	0.1		Under Construction	\$412,000	Engineering	N	N	Y
A in MTEP15	A	East	NIPS	8500	20678 BUS		12/31/2018	Lagrange	Lagrange	138	138			Make necessary upgrades at Lagrange 138kV Substation t	IN			Planned	\$2,715,000	Planning	N	N	Y
A in MTEP15	A	East	NIPS	9405	20896 SUBmisc		5/1/2018	Kosciusko		138				Replace Line switch and substation Conductor	IN			Planned	\$147,845	Planning	N	N	Y
A in MTEP15	A	East	NIPS	9406	20897 SUBmisc		5/1/2018	Reynolds		138				Replace (2) 138kV Switches at Reynolds	IN			Planned	\$112,665	Planning	N	N	Y
A in MTEP15	A	East	NIPS	9461	20915 RLY		12/31/2018	17HIPL		138				Add Redundant 138kV Bus Differential Relay	IN			Planned	\$50,000	Planning	N	N	Y
A in MTEP15	A	East	WPSC	3567	6651 LNrb		12/31/2017	Hersey	Osceola Jct	1	69	143.4MV		Rebuild Overloaded line (Peak case)	MI	4.02		Planned	\$2,100,000	Budgetary	N	N	Y
A in MTEP15	A	East	WPSC	3567	6654 LNrb		12/31/2017	Martiny	Weidman	1	69	143.4MV		Rebuild Overloaded line (Peak case)	MI	8.37		Planned	\$4,200,000	Budgetary	N	N	Y
A in MTEP15	A	East	WPSC	3567	6653 LNrb		12/31/2017	Barryton	Martiny	1	69	143.4MV		Rebuild Overloaded line (Peak case)	MI	1		Planned	\$500,000	Budgetary	N	N	Y
A in MTEP15	A	East	WPSC	3567	6652 LNrb		12/31/2017	Osceola Jct	Barryton	1	69	143.4MV		Rebuild Overloaded line (Peak case)	MI	9.69		Planned	\$4,700,000	Budgetary	N	N	Y
A in MTEP15	A	East	WPSC	4086	7739 LNrb		12/31/2016	Fountain Junction	Scottville	1	69	143.4MV		Rebuild Overloaded line (Peak case)	MI	9.15		Planned	\$4,650,000	Planning	N	N	Y
A in MTEP15	A	East	WPSC	4384	8399 SUB		12/31/2017	Airport	Substation Upgrade	138	69			138kV Breaker Replacement and Protective Equipment Upd	MI			Planned	\$4,100,000	Budgetary	N	N	Y
A in MTEP15	A	East	WPSC	4384	21503 SUB		12/31/2018	Airport		138				Landscaping costs	MI			Planned	\$50,000	Budgetary	N	N	Y
A in MTEP15	A	East	WPSC	4384	21502 SUB		1/1/2017	Airport		138				Airport Substation zoning costs	MI			Planned	\$40,000	Budgetary	N	N	Y
A in MTEP15	A	East	WPSC	7660	20047 BUS		12/31/2016	Advance Transmission		69				New 69kV switching station	MI			Planned	\$2,250,000	Planning	N	N	NT
A in MTEP15	A	East	WPSC	7661	20048 BUS		12/31/2017	Vestaburg Transmission		69				Switch and bus upgrades, including a sparing scheme addit	MI			Planned	\$170,000	Planning	N	N	

Appendices A, B - Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP15	A	South	CLECO	7988	20260 SUB		6/1/2018	Bayou Vista 230	Bayou Vista 138 kV	1	230	138	500 MVA	CLECO will expand Bayou Vista substation to 230 kV and it LA				Planned		Planning	N	N	Y
A in MTEP15	A	South	CLECO	8980	20867 BUS		10/30/2015	West Fork		1	230			Replace the Existing 230 kV high side bus at West Fork with LA				Under Construction	\$2,308,708	Budgetary	N	N	Y
A in MTEP15	A	South	CLECO	9042	20864 CB		10/1/2015	Coughlin			138			Replace Breakers 8000, 8128, 8006, 8115, 8009 due to arc LA				Under Construction	\$725,008	Budgetary	N	N	Y
A in MTEP15	A	South	CLECO	9340	20873 SUB		12/1/2016	Longville			138			Build a new 138 kV substation Longville tapped into the Der LA				Planned	\$4,400,000	Budgetary	N	N	Y
A in MTEP15	A	South	CLECO	9421	20898 SUB		6/1/2017	Plaisance	Veazie	1	138			New substation tapped into the Plaisance to Veazie 138 kV LA				Planned	\$4,360,000	Budgetary	N	N	Y
A in MTEP15	A	South	CLECO	9421	20900 LN		6/1/2017	Plaisance	Veazie	1	138			Build 138 kV line from existing transmission line to connect LA		0.7	Planned	\$1,040,000	Budgetary	N	N	Y	
A in MTEP15	A	South	CLECO, Entergy-L	7988	20258 LN		6/1/2018	Terrebonne 230 kV	Bayou Vista 230 kV	1	230		640	Construct approximately 30.33 miles from Terrebonne to Be LA		30.33	Planned	\$75,900,000	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-AR	4666	8847 LNrc		12/1/2019	Mabelvale 115 kV Sub	Bryant 115 kV Subs	1	115		390 MVA	Reconductor Line	AR	5	Planned	\$6,371,120	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-AR	4666	21439 LNrb		12/1/2019	Bryant	Bryant South	1	115			115 kV line	AR		Planned			N	N	Y	
A in MTEP15	A	South	Entergy-AR	4669	8850 LNrcv		5/1/2019	Jim Hill 161 kV substa	Datto 161 kV Substa	1	161		363 MVA	rebuild line and convert from 115kV to 161kV operation	AR	39.3	Planned	\$43,729,766	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-AR	4669	8851 CB		5/1/2019	Datto 161 kV Substation		1	161		363MVA	Install breakers at Datto	AR		Planned			N	N	Y	
A in MTEP15	A	South	Entergy-AR	7925	20180 LN		10/15/2016	Black Rock 69kV sub	Imboden 69kV subs	1	69			Construct 0.4 mile 69kV transmission line from Black Rock to AR		0.4	Under Construction	\$3,133,719	Engineering Prelimin	N	N	NT	
A in MTEP15	A	South	Entergy-AR	7925	20181 CB		10/15/2016	Black Rock 69kV Substation (AECC)		1	69			new 69kV circuit breaker to be added at Black Rock 69kV s AR			Under Construction			N	N	NT	
A in MTEP15	A	South	Entergy-AR	7928	20198 SUB		11/15/2017	New EHV 500kV substa		1	500		161	Build a 500/161kV substation where the ISES - Dell 500kV AR			Under Construction	\$74,965,393		N	N	Y	
A in MTEP15	A	South	Entergy-AR	7928	20208 LNrb		11/15/2017	Hergett 161kV substa	Trumann West 161k	1	161		363MVA	Rebuild the Hergett - new EHV 161kV substation - Trumann AR		8.3	Under Construction			N	N	Y	
A in MTEP15	A	South	Entergy-AR	7928	20207 LNrb		11/15/2017	Jonesboro 161kV sub	Jonesboro (SPA) 161	1	161		544MVA	rebuild the Jonesboro - Jonesboro (SPA) 161 kV line to a r AR		0.9	Under Construction			N	N	Y	
A in MTEP15	A	South	Entergy-AR	7928	20205 TEQ		11/15/2017	New EHV 161kV sub	Jonesboro 161kV su	1	161		363MVA	Upgrade terminal equipment on the Hergett - new EHV stat AR			Under Construction			N	N	Y	
A in MTEP15	A	South	Entergy-AR	7928	20203 TEQ		11/15/2017	Hergett 161kV substa	New EHV 161kV sul	1	161		363MVA	replace terminal equipment on teh Hergett - new EHV static AR			Under Construction			N	N	Y	
A in MTEP15	A	South	Entergy-AR	7928	20200 TX		11/15/2017	New EHV 500kV sub	New EHV 161kV substation	500	161	800		Install an 800MVA 500/161kV autotransformer (10%Z on 4I AR			Under Construction			N	N	Y	
A in MTEP15	A	South	Entergy-AR	7928	20199 SUB		11/15/2017	New EHV 161kV substation		500	161			Build a 500/161 kV station where the ISES -Dell 500kV line AR			Under Construction			N	N	Y	
A in MTEP15	A	South	Entergy-AR	8680	20729 TAP		9/20/2016	Conway Middle Road		1	161			New 161 kV substation	AR		Under Construction	\$786,000	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-AR	8681	20730 SUB		11/1/2016	Jefferson Industrial		1	115			New 115 kV substation	AR		Under Construction	\$5,257,000	Facility Study	N	N	Y	
A in MTEP15	A	South	Entergy-AR	8860	20764 CB		12/1/2016	Paragould		1	115			New circuit bkr	AR		Planned	\$256,005	Engineering	N	N	Y	
A in MTEP15	A	South	Entergy-LA	4604	8749 LNrc		2/24/2017	Port Hudson 69 kV su	Zachary REA substa	1	69		143 MVA	Reconductor Line	LA	5.76	Under Construction	\$11,202,000	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-LA	4604	8750 TEQ		2/24/2017	Port Hudson 69 kV su	Zachary REA substa	1	69		143 MVA	Upgrade terminal equipment	LA		Under Construction			Planning	N	N	Y
A in MTEP15	A	South	Entergy-LA	4606	8754 TX		3/1/2019	Fancy Point 500 kV su	Fancy Point 230 kV	2	500	230	1200	Add transformer	LA		Planned	\$92,000,000	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-LA	4630	8793 LNrc		6/1/2017	Francis 69 kV substa	Marydale 69 kV sub	1	69		105 MVA	Reconductor Line	LA	7.47	Planned	\$13,283,208	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-LA	7919	20174 CAP		12/1/2016	Vincent 230 kV		1	230			"NERC TPL-001-4 Reliability Standards and Entergy's Plan LA			Planned	\$1,324,421	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-LA	7923	20178 LNrc		6/1/2017	Lake Charles Bulk 69	Chlomal 69 kV	1	69		117 MVA	"NERC TPL-001-4 Reliability Standards and Entergy's Plan LA		3.07	Planned	\$2,905,700	Planning Preliminary	N	N	NT	
A in MTEP15	A	South	Entergy-LA	7923	20236 TEQ		6/1/2017	Lake Charles Bulk		69	117 MVA			LC Bulk-Chlomal Upgrade 600 A switches to 1200 A and up LA			Planned			N	N	NT	
A in MTEP15	A	South	Entergy-LA	7948	20202 LNrc		6/1/2017	335346 Scott 69	335435 Carencro 69	1	69		143 MVA	"NERC TPL-001-4 Reliability Standards and Entergy's Plan LA		6.84	Planned	\$6,822,535	Planning	N	N	NT	
A in MTEP15	A	South	Entergy-LA	7988	20262 SUB		6/1/2018	Terrebonne		200				Breakers and switches addition to accommodate new line LA			Planned			N	N	Y	
A in MTEP15	A	South	Entergy-LA	8585	20690 SwSta		3/18/2018	Rhodes 500kV Substation		500				Construction of a new 500 kV, 3000 A, three breaker ring b LA			Under Construction	\$28,070,000		N	N	Y	
A in MTEP15	A	South	Entergy-LA	8586	20691 SUB		3/18/2018	TBD		500	230	1200		Construct a new 500-230 kV substation west of the existing LA			Under Construction	\$31,530,000		N	N	Y	
A in MTEP15	A	South	Entergy-LA	8587	20692 LN		3/18/2018	Rhodes	TBD	1	500	2598		Construct approximately 11.5 miles of new 500 kV transmis LA		7	Under Construction	\$43,000,000		N	N	Y	
A in MTEP15	A	South	Entergy-LA	8588	20693 LN		3/18/2018	TBD	Carlyss	1	230	1195		Construct approximately 1.5 miles of new 230 kV transmiss LA		4	Under Construction	\$8,690,000		N	N	Y	
A in MTEP15	A	South	Entergy-LA	8589	20694 CB		3/18/2018	Carlyss		230				Expand the existing Carlyss 230 kV substation into a breake LA			Under Construction	\$14,050,000		N	N	Y	
A in MTEP15	A	South	Entergy-LA	8589	20696 BUS		3/18/2018	Carlyss		230				Expand the existing Carlyss 230 kV substation into a breake LA			Under Construction			N	N	Y	
A in MTEP15	A	South	Entergy-LA	8590	20695 LN		3/18/2018	Carlyss	Solac	1	230	779	MVA	Construct approximately 12 miles of new 230 kV transmissi LA		12	Under Construction	\$33,160,000		N	N	Y	
A in MTEP15	A	South	Entergy-LA	9284	20862 CAP		8/31/2017	Bayou Verret		1	230			Install two 40.7 MVAR 230 kV cap banks at Bayou Verret si LA			Planned	\$1,684,477		N	N	Y	
A in MTEP15	A	South	Entergy-LA	9285	20863 LNrb		6/1/2019	Waterford	Vacherie	1	230			Reconductor Waterford to Vacherie 230 kV line.	LA		Planned	\$19,732,950		N	N	Y	
A in MTEP15	A	South	Entergy-MS	7898	20135 SUBmisc		12/31/2016	Greenville		115				Upgrade 600A switches to minimum 810A rating (conductor MS			Under Construction	\$463,871	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-MS	7901	20137 RLY		12/1/2016	Natchez SES		115				upgrade relaying and CTs at Natchez on line 168 and 169 MS			Planned	\$796,791	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-MS	7901	20138 RLY		12/1/2016	Natchez		115				Upgrade relaying and CTs on line 168 and 169 MS			Planned			N	N	Y	
A in MTEP15	A	South	Entergy-TX	4617	8771 LNrc		5/1/2017	Egypt 138 kV Substa	Panorama 138 kV S	1	138		287 MVA	Reconductor Line	TX	1.16	Under Construction	\$3,347,942		N	N	Y	
A in MTEP15	A	South	Entergy-TX	4617	8772 TEQ		5/1/2017	Panorama 138 kV Substation		138			287 MVA	Upgrade Terminal Equipment	TX		Under Construction			N	N	Y	
A in MTEP15	A	South	Entergy-TX	4653	21600 IND		12/1/2017	Port Neches		138				Install reactor on Sabine Bay Line 516	TX		Planned	\$4,358,791	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-TX	7947	21599 IND		12/1/2017	Sabine		138				Install Reactor at Sabine on the Port Neches bay	TX		Planned	\$4,363,775	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-TX	8582	20687 SVC		10/30/2016	Alden		138			+200/-	Add a 200 MVAR SVC at the existing Alden 138 kV substat	TX		Under Construction	\$31,593,000		N	N	Y	
A in MTEP15	A	South	Entergy-TX	8583	20688 CAP		10/30/2016	Oakridge		138			25.1	Add a 25.1 MVAR Capacitor bank to the Oakridge 138 kV b TX			Planned	\$912,000		N	N	Y	
A in MTEP15	A	South	Entergy-TX	9241	20856 SUB		12/1/2016	Deer Lake	Fish Creek	1	138			New 138 kV substation between Fish Creek and Spring Brz TX			Planned	\$675,157	Planning	N	N	Y	
A in MTEP15	A	South	Entergy-TX	9242	20855 SUB		11/1/2016	Wildcat	Nitro	1	69			New 69 kV substation between South Beaumont and Nitro TX			Under Construction	\$5,159,000		N	N	NT	
A in MTEP15	A	South	Entergy-TX	9280	20858 TX		6/1/2020	Cypress 500	Cypress 138	2	500	138		2nd Cypress 500/138 kV Auto.	TX		Planned	\$14,392,680		N	N	Y	
A in MTEP15	A	South	Entergy-TX	9281	20859 LNrb		8/31/2018	Cleveland	Tarkington	1	138			Reconductor 9.3 miles and upgrade all related equipment.	TX		Planned	\$9,451,175		N	N	Y	
A in MTEP15	A	South	Entergy-TX	9282	20860 LNrc		6/1/2017	South Beaumont	Carroll St	1	138			Reconductor 3.3 miles and upgrade all related equipment.	TX		Planned	\$1,636,587		N	N	Y	
A in MTEP15	A	South	Entergy-TX	9283	20861 LNrc		6/1/2017	South Beaumont	Carroll St	2	138			Reconductor 3.3 miles and upgrade all related equipment.	TX		Planned	\$1,767,746		N	N	Y	
A in MTEP15	A	South	Entergy-TX	9460	20909 TX		11/1/2017	South Beaumont 138	South Beaumont 69	1	138	69	200	Upgrade Transformer to 2									

Appendices A, B - Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP15	A	South	SMEPA	8560	20698 SUB		6/1/2018	Waynesboro - Missior	Laurel East - Enterprise	230				Add 230kV Bay with Breakers at switching station.	MS			Planned	\$2,680,000	Engineering	N	N	Y
A in MTEP15	A	South	SMEPA	8560	20697 SwSta		6/1/2018	Waynesboro - Missior	Laurel East - Enterprise	230				Tap the existing SMEPA owned Waynesboro - Missionary	MS			Planned	\$365,000	Engineering	N	N	Y
A in MTEP15	A	South	SMEPA	8560	20685 BUS		6/1/2018	Waynesboro		230				Add 230kV bay with breaker at Waynesboro Create Ring E	MS			Planned	\$670,000	Engineering	N	N	Y
A in MTEP15	A	South	SMEPA	8560	20684 BUS		6/1/2018	Waynesboro		230				Add 230kV Breaker to existing bay at Waynesboro	MS			Planned	\$230,000	Engineering	N	N	Y
A in MTEP15	A	South	SMEPA	8560	20683 BUS		6/1/2018	Missionary		230				Add 230kV Bay with Breaker at Missionary	MS			Planned	\$670,000	Engineering	N	N	Y
A in MTEP15	A	South	SMEPA	9000	20792 LNrb		7/15/2016	Benndale	Benndale GT	1	69			Rebuild line using 795 ACSR and 48-fiber OPGW.	MS	1.2		Planned	\$370,000	Planning	N	N	NT
A in MTEP15	A	South	SMEPA	9020	20793 LNrb		12/31/2017	Wiggins GOAB	Big Level	1	69			Rebuild the existing Big Level - Wiggins GOAB 69kV line	MS	8.4		Planned	\$1,875,000	Planning	N	N	NT
A in MTEP15	A	West	ATC	3159	5547 LN		12/31/2017	West Middleton	Timberlane Tap	1	69			88 Uprate West Middleton to Timberlane Tap 69 kV Line	WI	1.8		Planned	\$2,000,000	Planning Preliminary	N	N	Y
A in MTEP15	A	West	ATC	3159	5548 LN		12/31/2018	Timberlane Tap	Stage Coach	1	69			88 Uprate Timberlane Tap to Stage Coach 69 kV Line	WI	2.4		Planned		Planning Preliminary	N	N	Y
A in MTEP15	A	West	ATC	4353	8328 SUB		12/1/2017	Creekview		1	138			New 138kV Creekview substation	WI			Planned	\$16,000,000	Planning	N	N	Y
A in MTEP15	A	West	ATC	4353	8330 LN		12/1/2017	Creekview	South Fond Du Lac	1	138			246 Loop Forward Energy Center - South Fond Du Lac 138kV li	WI	13.2		Planned		Planning	N	N	Y
A in MTEP15	A	West	ATC	4353	8329 LN		12/1/2017	Forward Energy Cent	Creekview	1	138			246 Loop Forward Energy Center - South Fond Du Lac 138kV li	WI	7.58		Planned		Planning	N	N	Y
A in MTEP15	A	West	ATC	4419	8439 TEQ		6/1/2016	Sunset Point	Ellinwood	1	138			246 Uprate Sunset Point - Ellinwood (SPTG311) 138kV line at S	WI			Planned	\$109,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	4421	8441 LN		7/1/2017	Elkhorn	Williams Bay	1	138			197 Loop Elkhorn - Brick Church (X-44) 138kV line into Williams	WI	7.67		Planned	\$875,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	4421	8444 CB		7/1/2017	Williams Bay		1	138			Add line breaker to Brick Church - Williams Bay (X-44) 138kV	WI			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4421	8443 CB		7/1/2017	Williams Bay		1	138			Add line breaker to Elkhorn - Williams Bay (X-44) 138kV lin	WI			Planned	\$3,575,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	4421	8442 LN		7/1/2017	Brick Church	Williams Bay	1	138			188 Loop Elkhorn - Brick Church (X-44) 138kV line into Williams	WI	6.62		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4422	8445 TX		8/19/2016	Brillon Iron Works		1	138	69		60 New 138/69kV transformer at new Brillon Iron Works subst	WI			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4422	8451 LN		8/19/2016	Forest Junction	Glennview	1	138			174 Uprate Forest Junction - Glennview (E-57) 138kV line	WI	4.62		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4422	8450 LN		8/19/2016	Brillon Iron Works	Brillon Iron Works A	1	69			87 Brillon Iron Works - Brillon Iron Works Arc 69kV line arc fu	WI	0.11		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4422	8449 LN		8/19/2016	Glennview		1	69			39 Expand Glennview - Brillon Iron (M-65) 69kV line to the new	WI	0.95		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4422	8448 LN		8/19/2016	Glennview	Brillon Iron Works	1	138			174 Loop Shoto - Glennview (L-90) 138kV line into Brillon Iron	WI	1.09		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4422	8447 LN		8/19/2016	Shoto	Brillon Iron Works	1	138			105 Loop Shoto - Glennview (L-90) 138kV line into Brillon Iron	WI	22.4		Planned	\$12,500,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	4422	8446 SUB		8/19/2016	Brillon Iron Works		1	138			New Brillon Iron Works (BIW) substation	WI			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4732	8969 LN		12/1/2018	Ogden St.	Bayshore	1	69			123 Construct a new 69kV line from Ogden St. - Bayshore	WI	0.54		Planned	\$10,400,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	4732	8973 CB		12/1/2018	Ogden St.		1	69			Ogden St. - Bayshore 69kV breaker	WI			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4732	8972 CB		12/1/2018	Ogden St.		1	69			Ogden St. - Wells St. 69kV breaker	WI			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4732	8971 LNrb		12/1/2018	2nd St.		1	69			123 Rebuild 2nd St. - Fiber switching structure (N-14) 69kV	WI	0.59		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	4732	8970 LNrb		12/1/2018	Bayshore	2nd St.	1	69			123 Rebuild Bayshore - 2nd St. (N-14) 69kV	WI	0.15		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	7601	20036 Remove		7/1/2016	Lakehead Portage		1	69			Remove 16 Mvar mobile capacitor bank at Lakehead Portage	WI			Planned	\$3,400,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	7602	20037 LNup		10/31/2019	Bunker Hill	Kelly	1	115			145 Rerate Bunker Hill - Kelly 115 kV as part of Blackbrook/Bun	WI	19.5		Planned	\$4,800,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	7603	20038 Remove		11/1/2019	Blackbrook		1	115			Retire Blackbrook 115 kV station	WI			Planned	\$25,200,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	7603	20044 LNrb		11/1/2019	Roehring Rd	Pine	1	115			145 Rebuild M-13b Pine - Roehring Rd 115 kV with double circ	WI	10.9		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	7603	20043 LNrb		11/1/2019	Roehring Rd	Kelly	1	115			145 Rebuild M-13a Kelly - Roehring Rd 115 kV	WI	19.5		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	7603	20042 LNrb		11/1/2019	Roehring Rd	Antigo	1	115			145 Rebuild A-313b Antigo - Roehring Rd 115kV	WI	5.85		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	7603	20041 LNrb		11/1/2019	Roehring Rd	Gardner Park	1	115			145 Rebuild A-313a Gardner Park - Roehring Rd 115kV with dc	WI	34.3		Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	7603	20040 SwSta		11/1/2019	Roehring Rd		1	115			Build new 115 kV 4 position ring bus named Roehring Rd	WI			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	7603	20039 Remove		11/1/2019	Bunker Hill		1	115			Retire Bunker Hill 115 kV station	WI			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	7741	20069 CAP		12/15/2016	Dellwood		1	69			Add 8.17 Mvar capacitor bank at Dellwood 69 kV station	WI			Planned	\$3,100,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	7741	20070 Remove		12/15/2016	McKenna		1	69			Remove 15.3 Mvar mobile capacitor bank from McKenna st	WI			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ATC	7780	20086 TX		3/1/2017	Esler View		1	138	24.9		32 Build 138/24.9 kV distribution transformer	WI			Planned	\$4,500,000	Engineering	N	N	NT
A in MTEP15	A	West	ATC	7981	20252 CB		12/31/2016	Beardsley St		1	69			Add breakers at Beardsley St to sectionalize J-10	WI			Planned	\$2,500,000	Engineering	N	N	Y
A in MTEP15	A	West	ATC	8065	20373 LNrb		12/31/2020	Pleasant Prairie	New Sub	1	345			1146 Loop Arcadian - Pleasant Prairie (PLPL81) 345 kV into new	WI	0	0.8	Planned		Planning Preliminary	N	N	Y
A in MTEP15	A	West	ATC	8065	20378 SwSta		12/31/2020	New Sub		1	345			New 345 kV New Sub switching station	WI			Planned		Planning Preliminary	N	N	Y
A in MTEP15	A	West	ATC	8065	20377 LNrb		12/31/2020	Libertyville	New Sub	1	345			1201 Loop Zion - Libertyville (2224) 345 kV into new New Sub sv	IL	0	2	Planned		Planning Preliminary	N	N	Y
A in MTEP15	A	West	ATC	8065	20376 LNrb		12/31/2020	Zion	New Sub	1	345			1201 Loop Zion - Libertyville (2224) 345 kV into new New Sub sv	IL	0	2	Planned	\$52,000,000	Planning Preliminary	N	N	Y
A in MTEP15	A	West	ATC	8065	20375 LNrb		12/31/2020	Arcadian	New Sub	1	345			928 Loop Arcadian - Pleasant Prairie (PLPL81) 345 kV into new	WI	14.8	0.8	Planned		Planning Preliminary	N	N	Y
A in MTEP15	A	West	ATC	8071	20389 LN		12/31/2023	Plains	National	1	138			294 New 138 kV line from Plains - National	MI	0	57	Planned	\$124,602,000	Planning	N	N	Y
A in MTEP15	A	West	ATC	8660	20719 TX		9/1/2020	Somers		2	138	24.9		66 2nd Somers distribution transformer	WI			Planned	\$2,800,000	Planning Preliminary	N	N	NT
A in MTEP15	A	West	ATC	8660	20721 CB		9/1/2020	Albers		1	138			New line breaker from Albers to Somers.	WI			Planned		Planning Preliminary	N	N	Y
A in MTEP15	A	West	ATC	8660	20720 CB		9/1/2020	Albers		1	138			New line breaker for Bain - Albers	WI			Planned		Planning Preliminary	N	N	Y
A in MTEP15	A	West	ATC	9080	20810 CB		12/31/2018	W. Marinette		2	138			Install high and low side breakers on existing 138/69 kV tra	WI			Planned	\$4,500,000	Planning	N	N	Y
A in MTEP15	A	West	ATC	9080	20812 CB		12/31/2018	W. Marinette		1	138			Install W. Marinette 138-69 kV transformer high-side protec	WI			Planned		Planning	N	N	Y
A in MTEP15	A	West	ATC	9081	20811 LNrc		3/1/2018	Depere	Glory Rd	1	138			290 Reconductor R122 De Pere - Glory Road 138 kV underground	WI	1.14		Planned	\$736,000	Planning	N	N	Y
A in MTEP15	A	West	DPC	7664	20663 LNrb		4/21/2017	Briggs Road	La Crosse Tap switc	1	161			414 DPC will rebuild the existing 161 kV line following existing F	WI	13.3	0	Planned	\$12,000,000	Planning	N	N	Y
A in MTEP15	A	West	GRE	3782	7085 LN		10/27/2016	Long Lake	Mantrap	1	115			142 115 kV line	MN	0.33	6.25	Planned	\$4,463,269	Planning	N	N	Y
A in MTEP15	A	West	GRE	4377	8889 CB		11/3/2016	Yankee Doodle North	Yankee Doodle Sou	1	115			Install bus tie breaker to allow closure of normally open po									

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
A in MTEP15	A	West	ITCM	8128	20502 LN		12/31/2019	Bagley	Perry	1	69			Rebuild 34kV to 69kV (operate at 34kV until 69kV/dist subs	IA	19		Planned	\$11,841,000	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8129	20511 LN		12/31/2018	Jefferson WCC	Scranton Distribution	1	69			Rebuild 34kV to 69kV (operate at 34kV until 69kV/dist subs	IA	14.5		Planned	\$11,837,228	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8132	20516 LN		12/31/2019	Bagley Jct	Scranton	1	69			Rebuild 34kV to 69kV (operate at 34kV until 69kV/dist subs	IA	16		Planned	\$8,104,200	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8150	20534 SUB		12/31/2025	Belle Plaine	Substation	161	69	69		Add four 69kV breakers that are needed at Belle Plaine anc	IA			Planned	\$4,891,936	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8150	20724 SUB		12/31/2025	34.5kV substation retirements			34.5			Retire the 34.5kV substation equipment that is no longer ne	IA			Planned	\$600,000	Engineering	N	N	NT
A in MTEP15	A	West	ITCM	8150	20537 SwSta		12/31/2025	Haven	Switch Station	69	69	143 MVA		Haven Three (3) Terminal 69kV Switch Station	IA			Planned	\$3,043,446	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8150	20536 SwSta		12/31/2025	Belle Plaine South (R	Switch Station	69	69	143 MVA		Belle Plaine South (now named River Valley) Three (3) Ten	IA			Planned	\$3,043,446	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8150	20535 TX		12/31/2025	Belle Plaine	Transformer	161	69	100 MVA		Add a 161/69kV 100MVA transformer at Belle Plaine	IA			Planned		Engineering Preliminary	N	N	Y
A in MTEP15	A	West	ITCM	8151	20538 SUB		12/31/2025	Vinton	Substation	69	143 MVA			Two additional 69kV breakers are needed at the Vinton sub	IA			Planned	\$1,164,487	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8151	20539 SUB		12/31/2025	Traer	Substation	69	143 MVA			One additional 69kV breaker is needed at the Traer substat	IA			Planned	\$768,124	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8152	20542 SUB		12/31/2025	Parnell	Substation	161	69			Three 69kV breakers are needed at the Parnell Substation.	IA			Planned	\$3,612,623	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8152	20543 TX		12/31/2025	Parnell	Transformer	1	161	69	100 MVA	A new 161/69kV 100MVA transformer is needed at the Parn	IA			Planned		Engineering Preliminary	N	N	Y
A in MTEP15	A	West	ITCM	8153	20544 SwSta		12/31/2025	Keswick	Switch Station	69	143 MVA			Add a Keswick 3 terminal switch station	IA			Planned	\$2,931,083	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8154	20545 SUB		12/31/2025	Fairfax	Substation	69	69			Two 69kV breakers are needed at the Fairfax Substation.	IA			Planned	\$1,278,863	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8154	20728 LN		12/31/2025	various 34.5kV	various 34.5kV	34.5				retire 34.5kV lines that are no longer needed	IA			Planned	\$974,405	Engineering	N	N	NT
A in MTEP15	A	West	ITCM	8154	20727 SUB		12/31/2025	various 34.5 kV subs			34.5			retire 34.5kV subs	IA			Planned	\$180,000	Engineering	N	N	NT
A in MTEP15	A	West	ITCM	8154	20546 SUB		12/31/2025	Marengo	Substation	69	69			Four 69kV breakers need to be installed at the Marengo Su	IA			Planned	\$4,198,943	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8155	20547 SUB		12/31/2025	Fletcher	Substation	69	69			One (1) 69kV Terminal at Fletcher Substation	IA			Planned	\$367,444	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8155	20726 LN		12/31/2025	new switch stations			69			Perform the 69kV line work for new switch stations for the c	IA			Planned	\$600,060	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8155	20549 SwSta		12/31/2025	Laurel	Switch Station	69	69			Three 69kV breakers and one 69kV bus tie breaker are nee	IA			Planned	\$2,817,203	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8155	20548 SwSta		12/31/2025	Tama Paper	Switch Station	69	69			Three 69kV line breakers and one 69kV bus tie breaker are	IA			Planned	\$2,817,203	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8157	20551 SUB		12/31/2015	Marshalltown	Substation	161	558 MVA			Three new terminals are needed at the Marshalltown subst	IA			Planned	\$3,850,000	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8158	20552 SwSta		3/31/2017	DAEC	Switch Station	69	69			Construct a new three (3) terminal, three (3) breaker 69 kV	IA			Planned	\$3,062,831	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8160	20554 SwSta		5/1/2021	Morgan Valley	Switch Station	345	345			Add a new Morgan Valley 345kV three terminal switch stat	IA			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8160	20737 CAP		5/1/2021	Beverly	Capacitor	69	69	33 MVAR		Add a 33 MVAR cap on the Beverly 69kV bus	IA			Planned		Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8160	20559 SUB		5/1/2021	Beverly	Substation	345	161			Add a new Beverly 345/161kV substation adjacent to the ex	IA			Planned	\$14,864,540	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8160	20558 TX		5/1/2021	New Beverly 345/161	Substation	1	345	161	450 MVA	New Beverly 345/161kV 450MVA autotransformer	IA			Planned		Engineering Preliminary	N	N	Y
A in MTEP15	A	West	ITCM	8160	20557 SUB		5/1/2021	New Beverly 345/161	Substation	345	161			Add a new Beverly 345/161kV substation adjacent to the ex	IA			Planned		Engineering Preliminary	N	N	Y
A in MTEP15	A	West	ITCM	8160	20555 LN		5/1/2021	Morgan Valley	New Beverly 345/16	1	345			Add a new 6.5 mile 345 kV line from the new Morgan Valley	IA	6.5		Planned	\$23,292,052	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8161	20562 LN		12/31/2016	Ames Mine	Ames NADC	1	69			Buid Ames Mine NADC 69V	IA			Planned	\$2,004,000	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8162	20563 LNcnv		12/31/2017	Ames Mine	New Ames 69kV Su	1	69			Convert the line from Ames Mine to the new Ames 69kV S	IA	1.9		Planned		Engineering Preliminary	N	N	Y
A in MTEP15	A	West	ITCM	8164	20565 SwSta		12/31/2017	new Ames	Substation	69	69			Construct a new 4 terminal switch station	IA			Planned	\$6,255,832	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8164	20725 LN		12/31/2017	Boone Jct	Barilla	1	34.5			Retire 0.4 miles	IA			Planned	\$132,000	Engineering	N	N	NT
A in MTEP15	A	West	ITCM	8164	20566 LNcnv		12/31/2017	new Ames Substation	Barilla	1	69			Convert the line from the new Ames Substation to Barilla to	IA	5.1		Planned	\$705,000	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8166	20568 SUB		8/5/2016	Hiawatha	Substation	69	69			Add a 69kV terminal at the Hiawatha sub	IA			Under Construction	\$554,400	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8166	20569 SUB		8/5/2016	Vinton	Substation	69	69			Add a 69kV terminal at Vinton	IA			Under Construction	\$554,400	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8167	20570 SUB		7/19/2016	Doud	Substation	161	69			The existing 69 kV terminals at Boone Jct will be re-termina	IA			Under Construction	\$5,496,000	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8167	20572 LN		7/19/2016	Doud	Squaw Valley REC	1	69			Convert the line from Doud to Squaw Valley REC to 69kV c	IA	8.6		Under Construction	\$633,000	Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8167	20571 TX		7/19/2016	Doud	Transformer	1	161	69	100 MVA	Add a Doud 161/69kV transformer	IA			Under Construction		Engineering	N	N	Y
A in MTEP15	A	West	ITCM	8168	20573 LN		3/31/2017	Squaw Valley REC	Ames Transmission	69	69			Convnet the line to 69kV operation	IA	6.5		Planned	\$1,380,600	Engineering	N	N	Y
A in MTEP15	A	West	MEC	8020	20294 LN		12/1/2019	Pleasant Corner	Beacon	1	161	410 MVA		New 161 kV Line from Pleasant Corner to Beacon	IA	0	16	Planned	\$14,500,000	Engineering	N	N	Y
A in MTEP15	A	West	MEC	8020	20295 TEQ		12/1/2019	Beacon		161	2000A			New 161 kV Line Terminal at the Beacon Substation	IA			Planned	\$765,000	Planning	N	N	Y
A in MTEP15	A	West	MEC	8028	20304 TX		6/1/2023	Hastings		161	69	125 MVA		Replace the Hastings transformer with a 125 MVA transfomr	IA			Planned	\$2,000,000	Planning	N	N	NT
A in MTEP15	A	West	MEC	8030	20305 LN		6/1/2017	Clarksville East	Waverly West	1	69			New 69 kV Line from Clarksville East to Waverly West. Rel	IA	0	3	Planned	\$2,600,000	Planning	N	N	NT
A in MTEP15	A	West	MEC	8035	20372 TEQ		4/1/2017	Sub 78		161				Replace limiting terminal equipment	IA			Planned	\$207,000	Planning	N	N	Y
A in MTEP15	A	West	MEC	8036	20371 TEQ		4/1/2017	Sub 56		161				Replace limiting terminal equipment	IA			Planned	\$91,000	Planning	N	N	Y
A in MTEP15	A	West	MEC	8037	20430 CB		11/15/2017	Sub 93		345	3000A			Replace Sub 93 345 kV circuit breakers 954 and 964 with n	IA			Planned	\$853,000	Planning	N	N	Y
A in MTEP15	A	West	MEC	8038	20381 LNup		6/1/2017	Sub S	Sub G & Sub R	69	1200 A			Replace two 69 kV line switches near Sub 41 on the G-R-S IL	IA	3.5		Planned	\$153,000	Planning	N	N	NT
A in MTEP15	A	West	MEC	8039	20379 LNup		11/1/2020	Sub R	GRS Tap	69	119 MVA			Rebuild the 69 kV line from Sub R to the three way GRS ta	IA	1.55	0	Planned	\$3,325,000	Planning	N	N	NT
A in MTEP15	A	West	MEC	8059	20364 CB		12/1/2017	DPS		69	2000A			Replace eight 69 kV circuit breakers and associated 69 kV v	IA			Planned	\$850,000	Planning	N	N	NT
A in MTEP15	A	West	MEC	8340	20642 LNrc		6/15/2015	Ashawa	Army Post Road	1	161			Reconductor and rebuild the 161 kV line from Ashawa to Ar	IA	4.28	0	Planned	\$1,977,833	Planning	N	N	Y
A in MTEP15	A	West	MEC	8340	20644 LNrc		6/15/2017	Willow Creek	Greenfield Plaza	1	161			Rebuild and reconductor the Willow Creek to Greenfield Pl	IA	4.78	0	Planned	\$1,850,000	Planning	N	N	Y
A in MTEP15	A	West	MEC	8340	20643 LNrc		6/15/2014	Army Post	Willow Creek	1	161			Rebuild and reconductor 1.0 mile of 161 kV line from Army	IA	1	0	Planned	\$390,000	Planning	N	N	Y
A in MTEP15	A	West	MEC	8740	20739 LN		12/1/2016	Brooks	Adams County	1	161			410 New 10-mile 161 kV line from Brooks Substation to Adams	IA	0	10	Planned	\$7,500,000	Planning	N	N	Y
A in MTEP15	A	West	MEC	8740	20740 SUB		12/1/2016	Brooks		1	161			2000 Add two new 161 kV line circuit breakers at the exist	IA			Planned	\$1,750,000	Planning	N	N	Y
A in MTEP15	A	West	MEC	8880	20768 TX		5/1/2015	Sycamore		1	161	69	167	Replace failed transformer AG8T1	IA	0	0	Planned					

Appendices A, B - Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upp	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility	
A in MTEP15	A	West	OTP	8240	21468 SUB		10/31/2016	Jamestown 345			345			Install 345 kV Breaker as a tie breaker between the transfor	ND			Planned	\$1,700,000	Planning	Y	Y	Y	
A in MTEP15	A	West	OTP	8240	21440 SUB		10/31/2016	Jamestown 345kV			115			Install 115 kV ring bus breaker and bus work.	ND			Planned	\$850,000	Planning	N	N	Y	
A in MTEP15	A	West	OTP	8281	20627 SUB		7/31/2018	Donaldson 115	Drayton 115		115			Add a new 115 kV breaker at Donaldson to the Donaldson	MN			Planned	\$370,000	Planning	Preliminary	N	N	Y
A in MTEP15	A	West	XEL	8075	20395 SUB		12/30/2016	Lake Bavaria			115			Install new distribution substation	MN			Under Construction	\$1,153,304	Scoping	N	N	Y	
A in MTEP15	A	West	XEL	8079	20403 LNrb		6/1/2019	Madelia Switching Sta	Village of Madelia	1	69			Rebuild 3.6 miles of 69 kV line from Madelia Switching Stati	MN	3.6		Planned	\$1,594,000	Scoping	N	N	NT	
A in MTEP15	A	West	XEL	8097	20425 SUB		10/7/2016	Poplar Lake			161			Install 161 kV 20 MVAR reactor at Poplar Lake substation	WI			Planned	\$2,339,744	Scoping	N	N	Y	
A in MTEP15	A	West	XEL	8107	20444 SUB		1/1/2019	Yankee			115	34.5		Install a 3rd 115/34.5 kV transformer at Yankee, cut over th	MN			Planned	\$4,000,000	Planning	N	N	NT	
A in MTEP15	A	West	XEL	8113	20449 SUB		12/1/2018	Ward County			230	115		New 230/115 kV substation near Minot, ND	ND			Planned	\$12,186,000	Scoping	N	N	Y	
A in MTEP15	A	West	XEL	8113	20453 LN		12/1/2018	Ward County	McHenry	1	230		500	New 230 kV line from Ward County - McHenry	ND		20	Planned	\$26,775,100	Scoping	N	N	Y	
A in MTEP15	A	West	XEL	8117	20471 LNrb		9/30/2023	Ward County	Souris	1	115		230	Rebuild the 115 kV line between Ward County and Souris	ND	7		Planned	\$7,200,000	Scoping	N	N	Y	
A in MTEP15	A	West	XEL	8117	20473 LNrb		9/30/2023	Ward County	Souris	2	115		230	Rebuild the 115 kV line between Ward County and Souris	ND	7		Planned	\$7,200,000	Scoping	N	N	Y	
A in MTEP15	A	West	XEL	8142	20508 TX		12/1/2017	Stone Lake			161	69	112	Upgrade 161-69 kV transformer to 112 MVA	WI			Planned	\$2,227,000	Scoping	N	N	NT	
A in MTEP15	A	West	XEL	8149	20540 LN		12/1/2018	New Sub (South)	New Sub (North)	1	69			New 69 kV line tapping the existing Stinson - Bayfront 115 kV l	WI	20		Planned	\$14,500,000	Planning	N	N	NT	
A in MTEP15	A	West	XEL	8149	20561 LNrb		12/1/2018	Cornucopia	Bayfield Tap	1	69			Rebuild Cornucopia - Bayfield Tap 34.5 kV to 69 kV using 4 W	WI	18		Planned	\$11,000,000	Planning	N	N	NT	
A in MTEP15	A	West	XEL	8149	20560 SUB		12/1/2018	New Sub (North)			69	34.5		New 69/34.5 kV line near Bayfield Tap. Includes one 3 MVA/	WI			Planned	\$2,800,000	Planning	N	N	NT	
A in MTEP15	A	West	XEL	8149	20556 LNrb		12/1/2018	Iron River	Herbster	1	69			Rebuild Iron River - Herbster 34.5 kV to 69 kV using 477 AC W	WI	25		Planned	\$6,500,000	Planning	N	N	NT	
A in MTEP15	A	West	XEL	8149	20541 SUB		12/1/2018	New Sub (South)			115	69		New 115/69 kV substation on the Stinson - Bayfront 115 kV W	WI			Planned	\$5,200,000	Planning	N	N	NT	
A in MTEP15	A	West	XEL	8780	20798 SUB		6/1/2018	Bailey Road			345	115		New substation tapping Red Rock-A.S. King 345 kV line	MN			Planned	\$29,000,000	Scoping	N	N	Y	
A in MTEP15	A	West	XEL	8780	20799 TX		6/1/2018	Bailey Road			9	345	115	Bailey Road 345/115 transformer #9	MN			Planned	\$5,500,000	Planning	N	N	Y	
B	B	East	ITCT	1850	3732 LN		12/31/2020	Hancock	Wixom	1	230			New Line resulting from Quaker-Wixom cut into Hancock	MI			Proposed			N	N	Y	
B	B	East	ITCT	1850	3734 TX		12/31/2020	Hancock 230/120 kV	Transformer	1	230	120		New Transformer	MI			Proposed	\$9,000,000.00		N	N	Y	
B	B	East	ITCT	1850	3733 LN		12/31/2020	Hancock	Quaker	1	230			New Line resulting from Quaker-Wixom cut into Hancock	MI			Proposed			N	N	Y	
B	B	West	ATC	1946	20582 TX		6/1/2024	Spring Green		2	138	69	100	Install a 2nd Spring Green 138-69 kV Transformer	WI			Proposed	\$5,578,636.00	Engineering	N	N	Y	
B	B	West	GRE, ITCM	1741	2235 LN		12/31/2013	Storden (Cottonwood	Dotson	1	161		446	New line	MN	26		Proposed	\$16,379,839.00	Planning	Y	N	Y	
B	B	West	ITCM	1741	3292 LNrb		12/31/2013	Heron Lake	South Storden	1	161		440	Rebuild line to higher capacity	MN			Proposed	\$6,818,660.00	Planning	Y	N	Y	
B	B	West	ITCM	1741	4028 LN		12/31/2013	South Storden	Cottonwood County	1	161				MN			Proposed	\$4,092,575.00	Planning	Y	N	Y	
B	B	West	ITCM	1741	4027 COM		12/31/2013	Communication System	Upgrades		161				MN			Proposed	\$400,000.00	Planning	Y	N	Y	
B	B	West	ITCM	1741	4026 SUB		12/31/2013	Heron Lake Substation			161				MN			Proposed	\$4,195,530.00	Planning	Y	N	Y	
B	B	West	ITCM	1741	4025 SUB		12/31/2013	Cottonwood County substation			161				MN			Proposed	\$4,833,216.00	Planning	Y	N	Y	
B in MTEP10	B	East	ITCT	1856	3743 LN		12/31/2030	Jewell	Pontiac	1	345			Cut Pontiac-Greenwood-Belle River into Jewell creating Po	MI			Proposed	\$2,600,000.00		N	N	Y	
B in MTEP10	B	East	ITCT	1856	3744 LN		12/31/2030	Jewell	Belle River - Greenv	1	345			Cut Pontiac-Greenwood-Belle River into Jewell creating Po	MI			Proposed	\$2,600,000.00		N	N	Y	
B in MTEP10	B	East	ITCT	2932	5104 LN		6/1/2020	St Antonio	Essex	1	120			Construct 2nd underground cable from St Antonio to Essex	MI	5.1		Proposed	\$54,800,000.00		N	N	Y	
B in MTEP10	B	East	METC	3210	5953 LN		6/1/2016	Vanderbilt	Riggsville	1	138			Rebuild 30.3 miles of 138 kV 266 ACSR to 954 ACSR FDC MI	MI	30.3		Proposed	\$33,254,000.00		N	N	Y	
B in MTEP10	B	West	ITCM	1746	3549 LNrb		12/31/2014	Fox Lake	Rutland	1	161	446/446		Rebuild existing line	MN	17		Proposed	\$11,900,000.00	Planning	N	N	Y	
B in MTEP10	B	West	ITCM	1746	3553 LNrb		12/31/2018	Hayward	Adams	1	161	446/446		Rebuild existing line	MN	36.4		Proposed	\$25,480,000.00	Planning	N	N	Y	
B in MTEP10	B	West	ITCM	1746	3552 LNrb		12/31/2016	Winnebago	Hayward	1	161	446/446		Rebuild existing line	MN	49.1		Proposed	\$34,370,000.00	Planning	N	N	Y	
B in MTEP10	B	West	ITCM	1746	3551 LNrb		12/31/2017	Lakefield Jct	Fox	1	161	446/446		Rebuild existing line	MN	22.3		Proposed	\$15,610,000.00	Planning	N	N	Y	
B in MTEP10	B	West	ITCM	1746	3550 LNrb		12/31/2015	Rutland	Winnebago	1	161	446/446		Rebuild existing line	MN	14.6		Proposed	\$10,220,000.00	Planning	N	N	Y	
B in MTEP11	B	Central	AmerenMO	2973	5174 SUB		12/1/2022	Mason-Carrollton-8	Connection to Howa	1	138			478 Howard Bend 138-12 kV Substation - Provide 138 kV ring t	MO			Proposed	\$1,371,000.00	Planning	N	N	Y	
B in MTEP11	B	East	METC	1815	3649 LNrb		6/1/2020	Chase	Mecosta	1	138		108	Rebuild 7.2 miles (230 kV construction, operate at 138 kV)	MI	7.2		Proposed	\$8,900,000.00	Planning	N	N	Y	
B in MTEP11	B	West	METC	3215	6089 CAP		6/1/2030	Sub 49	Capacitor	1	161		50	Sub 49 161 kV 50 MVAR Capacitor	IL			Proposed	\$840,000.00	Planning	N	N	Y	
B in MTEP11	B	West	METC	3266	6085 LNrb		6/1/2024	Sub 56	Sub 89	1	161		314	Sub 56-89 161 kV line upgrade	IA	22		Proposed	\$680,000.00	Planning	N	N	Y	
B in MTEP12	B	Central	AmerenIL	2290	4206 LN		6/1/2023	Joppa	2nd. 345/161 kV Transfomr	345	161		560	Install 2nd. 345/161 kV, 560 MVA Transformer	IL			Proposed			N	N	Y	
B in MTEP12	B	Central	AmerenIL	3336	6201 LN		6/1/2020	Gilman	Watske	1	138		322	Reconductor to 1600 A summer emergency capability	IL	15.2		Proposed	\$4,763,000.00	Planning	N	N	Y	
B in MTEP12	B	Central	AmerenIL	3342	6207 LN		6/1/2025	Diamond Star	McCleary County Sw	1	138		160	Diamond Star Tap-McCleary County section of McCleary-We	IL	5.04		Proposed	\$240,000.00	Planning	N	N	Y	
B in MTEP12	B	Central	AmerenIL	3687	6964 CB		6/1/2017	North Decatur	Clinton Route 54	1	138			North Decatur 138-34 kV Substation - Replace 138 kV Bre	IL			Proposed	\$500,000.00	Planning	N	N	Y	
B in MTEP12	B	Central	AmerenIL	3703	6953 SUB		12/1/2022	New Berlin Sub		1	138	69	112	Install new 112 MVA, 138-69 kV Substation. Connect to Au	IL			Proposed			N	N	Y	
B in MTEP12	B	Central	AmerenMO	3701	6946 LN		6/1/2023	Joachim	Cotter Creek	1	138		240	Extend 138 kV line from Joachim to Cotter Creek 138-34.5	MO			Proposed	\$11,880,110.00	Engineering	N	N	Y	
B in MTEP12	B	Central	AmerenMO	3701	6948 LN		6/1/2023	Olympian Village	Cotter Creek	1	138		240	Extend 138 kV line from Olympian Village to Cotter Creek 1	MO			Proposed	\$13,385,390.00	Engineering	N	N	Y	
B in MTEP12	B	Central	AmerenMO	3701	6947 SUB		6/1/2023	Olympian Village Sub		1	138		478	Olympian Village Switching Station - Establish 138 kV Brea	MO			Proposed	\$5,965,140.00	Engineering	N	N	Y	
B in MTEP12	B	Central	AmerenMO	3708	6960 TX		6/1/2018	Fountain Lake Sub.	Install 2nd. 138-12.5 kV Xi	1	138	12.5	45	Fountain Lake Substation - Install 2nd. 138-12.5 kV Transf	MO			Proposed			N	N	Y	
B in MTEP12	B	East	ITCT	1295	2124 LN		6/1/2018	Quaker 120	To Drexel to Southfield 120	1	120			Rebuild the existing Quaker to Drexel to Southfield circuit of	MI	7.35		Proposed	\$25,500,000.00		N	N	Y	
B in MTEP12	B	East	ITCT	1295	5485 LN		6/1/2018	Quaker 120	Southfield 120	1	120			Rebuild the existing Quaker to Drexel to Southfield circuit of	MI	7.35		Proposed	\$25,500,000.00		N	N	Y	
B in MTEP12	B	East	ITCT	2933	5105 LNrc		12/31/2020	Superior	Wayne	1	120			Reconductor a ~10.5 mile-long portion of the Superior - Wz	MI	10.5		Proposed	\$5,000,000.00		N	N	Y	
B in MTEP12	B	East	ITCT	3589	6683 LNrb		6/1/2018	Lee	Lake Huron Pumpin	1	120			Rebuild approximately 5.4 miles of 267 ACSR conductor to	MI	5.4		Proposed	\$6,200,000.00		N	N	Y	
B in MTEP12	B	East	ITCT	3589	6684 LNrb		6/1/2018	Lake Huron Pumping	Menlo	1	120			Rebuild approximately 6.4 miles of 267 ACSR conductor to	MI</									

Appendices A, B - Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upp	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
B in MTEP13	B	West	MP	4295	8220 HVDC		12/31/2020	Square Butte	Valve hall upgrade		250		550	Replace valve hall at Square Butte terminal +/- 250 kV	ND			Proposed	\$37,500,000	Planning	N	N	Y
B in MTEP14	B	Central	AmerenIL	4489	8600 LN		11/15/2018	Fargo	Radnor	1347	138		240	Rebuild Fargo-Pioneer-1347 138 kV line between Fargo and	IL	3		Proposed	\$3,000,000	Planning	N	N	Y
B in MTEP14	B	Central	AmerenMO	4498	8611 LN		6/1/2020	Bermie	Jim Hill	1	161		399	Construct approximately 20 miles of 161 kV line between Jim Hill	MO	20		Proposed	\$24,000,000	Planning	N	N	Y
B in MTEP14	B	Central	AmerenMO	4498	8613 CB		6/1/2020	Jim Hill	Install 161 kV Breaker		161			Install 161 kV Breaker at Jim Hill	MO			Proposed	\$500,000	Planning	N	N	Y
B in MTEP14	B	Central	AmerenMO	4498	8612 CB		6/1/2020	Bermie	Install 161 kV Ring Bus		161			Construct 161 kV ring bus at Bermie Substation	MO			Proposed	\$6,000,000	Planning	N	N	Y
B in MTEP14	B	East	METC	1795	3604 LNrb		12/31/2016	David Jct.	Bingham	1	138	303 MVA		Rebuild approximately 19miles of 336.4 ACSR from the Bin MI	MI	19		Proposed	\$19,000,000	Engineering	N	N	Y
B in MTEP14	B	East	METC	3922	7484 LNrb		12/31/2016	Alpine Jct.	Canon Jct.	1	138	257 MVA		Rebuild 8.4 miles of 336 ACSR utilizing 954 ACSR on new MI	MI	8.4		Proposed	\$8,200,000	Engineering	N	N	Y
B in MTEP14	B	East	METC	4510	8639 LNrb		12/31/2017	Morrow	Battle Creek	1	138	388 MVA		Rebuild 22 miles of Morrow - Battle Creek 138kV to 954 AC MI	MI	22	0	Proposed	\$24,200,000	Engineering	N	N	Y
B in MTEP14	B	East	METC	4510	8640 TEQ		12/31/2017	Morrow		1	138			Upgrade terminal equipment at Morrow	MI			Proposed	\$440,000	Engineering	N	N	Y
B in MTEP14	B	East	METC	4511	8641 LNrb		12/31/2019	Verona	Foundry	1	138	287 MVA		Rebuild 21 miles of the Verona - Foundry 38kV circuit to 143 MI	MI	21	0	Proposed	\$16,000,000	Engineering	N	N	Y
B in MTEP14	B	East	METC	4511	8642 TEQ		12/31/2019	Verona		1	138			Upgrade terminal equipment at Verona	MI			Proposed	\$21,000,000	Engineering	N	N	Y
B in MTEP14	B	East	WPSC	4363	8398 SUB		12/31/2022	Bradley	Substation Upgrade	138	69			138kV Breaker Replacement and Protective Equipment Upd	MI			Proposed	\$4,000,000	Budgetary	N	N	Y
B in MTEP14	B	East	WPSC	4363	21506 SUB		12/31/2022	Bradley		138				Bradley Landscaping	MI			Proposed	\$100,000	Budgetary	N	N	Y
B in MTEP14	B	East	WPSC	4363	21505 SUB		12/31/2021	Bradley		138				Bradley Zoning	MI			Proposed	\$50,000	Budgetary	N	N	Y
B in MTEP14	B	East	WPSC	4363	21504 SUB		1/1/2017	Bradley		138				Bradley station land	MI			Proposed	\$500,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4439	8475 LN		6/1/2021	Tap Point	Morrow	1	161	296		New 161kV Line (Tap existing Purvis - Lumberton 161kV Li	MS	3		Proposed	\$1,050,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4439	8479 TEQ		6/1/2021	Morrow		1	161			Add 161kV Breaker @ Morrow	MS			Proposed	\$165,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4439	8478 LNup		6/1/2021	Purvis	Lumberton	1	161			Uprate Purvis to Lumberton 161kV line to 296MVA w/OPG	MS	1		Proposed	\$123,200	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4439	8477 TAP		6/1/2021	Tap Point		1	161			New 161kV Switching Station @ Tap Point w/ 3 breakers	MS			Proposed	\$1,950,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4439	8476 LN		6/1/2021	Tap Point	Morrow	1	161			New 161kV Transmission Line Right of Way	MS	3		Proposed	\$210,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8480 TEQ		6/1/2021	Lumberton		1	161			Add 161kV breaker at Lumberton 161kV substation	MS			Proposed	\$180,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8490 SwSta		6/1/2021	Big Level		1	161			Big Level 161kV switching station w/3 breakers	MS			Proposed	\$1,950,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8489 SwSta		6/1/2021	Stillmore		1	161			Stillmore 161kV switching station w/3 breakers	MS			Proposed	\$1,950,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8488 Dist		6/1/2021	Big Level		1	161			Convert Big Level distribution substation to 161kV	MS			Proposed	\$1,600,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8487 Dist		6/1/2021	Stillmore		1	161			Convert Stillmore distribution substation to 161kV	MS			Proposed	\$1,600,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8486 LNrb		6/1/2021	Stillmore	Wiggins GOAB	1	161		296	Rebuild Line 37C (Stillmore - Wiggins GOAB) at 161kV w/C	MS	7.22		Proposed	\$2,093,800	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8485 LNrb		6/1/2021	Benndale GT	Benndale	1	161		296	Rebuild Line 35A (Benndale GT - Benndale) at 161kV w/O	MS	1.3		Proposed	\$377,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8484 LNrb		6/1/2021	Wiggins GOAB	Big Level	1	161		296	Rebuild Lines 37A & 37B (Wiggins GOAB - Big Level) at 16	MS	8.5		Proposed	\$2,465,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8483 LN		6/1/2021	Wiggins GOAB	Stillmore	1	161			New 161kV Transmission Line Right of Way	MS	8		Proposed	\$560,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8482 LN		6/1/2021	Wiggins	Stillmore	1	161		296	New 161kV line to Stillmore w/OPGW	MS	8		Proposed	\$2,800,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4440	8481 TEQ		6/1/2021	Benndale		1	161			Add 161kV breaker at Benndale 161kV substation	MS			Proposed	\$180,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4441	8491 TAP		6/1/2026	Tap Point		1	161			New 161kV Switchyard (Tap L171) w/ breakers	MS			Proposed	\$1,950,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4441	8498 TEQ		6/1/2026	State Line		69				Additional 69kV breaker	MS			Proposed	\$120,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4441	8497 TEQ		6/1/2026	State Line		69				Additional 69kV bay w/ breaker	MS			Proposed	\$440,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4441	8496 TX		6/1/2026	State Line		69	50			New 161/69kV, 100 MVA transformer	MS			Proposed	\$1,810,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4441	8495 TEQ		6/1/2026	State Line		161				New 161kV bay w/ breaker	MS			Proposed	\$1,635,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4441	8494 SwSta		6/1/2026	State Line		161				New 161kV Switchyard at State Line	MS			Proposed	\$315,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4441	8493 LN		6/1/2026	Tap Point	State Line	1	161		296	New 161kV Transmission Line Right of Way	MS	19		Proposed	\$1,330,000	Planning	N	N	Y
B in MTEP14	B	South	SMEPA	4441	8492 LN		6/1/2026	Tap Point	State Line	1	161		296	New 161kV Transmission Line w/ OPGW adder	MS	19		Proposed	\$6,650,000	Planning	N	N	Y
B in MTEP14	B	West	ATC, MP	3832	7203 LN		12/31/2025	Blackberry	Transformer	1	500	345	1200	Blackberry 1200 MVA 500/345 kV transformer	MN			Proposed		Planning	N	N	Y
B in MTEP14	B	West	ATC, MP	3832	7206 LN		12/31/2025	Blackberry	Arrowhead	2	345		1219	Blackberry - Arrowhead 345 kV line (Ckt 2)	MN	60		Proposed		Planning	N	N	Y
B in MTEP14	B	West	ATC, MP	3832	7205 LN		12/31/2025	Blackberry	Arrowhead	1	345		1219	Blackberry - Arrowhead 345 kV line (Ckt 1)	MN	60		Proposed	\$220,481,656.22	Planning	N	N	Y
B in MTEP14	B	West	ATC, MP	3832	7204 LN		12/31/2025	Blackberry	Transformer	2	500	345	1200	Blackberry 1200 MVA 500/345 kV transformer	MN			Proposed		Planning	N	N	Y
B in MTEP14	B	West	GRE	4376	8381 LNrc		4/29/2020	Parkwood	Crooked Lake	1	115	300+		Reconductor line	ND	3.36		Proposed	\$500,000	Planning	N	N	Y
B in MTEP14	B	West	MDU	3082	5362 CB		6/1/2017	NW Bismarck	3 PCB	1	115			Create a ring bus	MN			Proposed	\$3,050,000	Engineering	N	N	Y
B in MTEP14	B	West	MP	2548	4564 TX		12/31/2026	Hilltop		2	230	115	187	Hilltop Transformer #2	MN	0		Proposed	\$3,000,000	Planning	Preliminary	N	Y
B in MTEP14	B	West	MP	2548	4565 LNcnv		12/31/2026	Arrowhead	Hilltop	1	230		470	Upgrade 115 kV line to 230 kV	MN	9		Proposed	\$3,000,000	Planning	Preliminary	N	Y
B in MTEP14	B	West	MP	3856	7379 LNup		12/31/2020	Square Butte	Arrowhead	1	250		750	Structure upgrades on existing +/- 250 V HVDC line to achi	ND	465		Proposed	\$10,000,000	Planning	N	N	Y
B in MTEP14	B	West	MP	3856	20820 HVDC		12/31/2020	Square Butte		250			750	Replace valve hall at Square Butte HVDC terminal +/-250kV	ND			Proposed	\$37,500,000	Planning	N	N	Y
B in MTEP14	B	West	MP	3856	20819 HVDC		12/31/2020	Arrowhead		250			750	Replace valve hall at Arrowhead HVDC terminal +/-250kV	ND			Proposed	\$37,500,000	Planning	N	N	Y
B in MTEP14	B	West	MP	3856	7383 TEQ		12/31/2020	Arrowhead	HVDC Terminal Eq.	1	250			Arrowhead HVDC terminal equipment upgrades; +/- 250 V	MN			Proposed	\$15,000,000	Planning	Y	N	Y
B in MTEP14	B	West	MP	3856	7382 TX		12/31/2020	Arrowhead	Converter Transform	1	250	230	750	Twelve 75 MVA converter transformers at Arrowhead; +/- 2	MN			Proposed	\$42,500,000	Planning	N	N	Y
B in MTEP14	B	West	MP	3856	7381 TEQ		12/31/2020	Square Butte	HVDC Terminal Eq.	1	250			Square Butte HVDC terminal equipment upgrades; +/- 250	ND			Proposed	\$15,000,000	Planning	N	N	Y
B in MTEP14	B	West	MP	3856	7380 TX		12/31/2020	Square Butte	Converter Transform	1	250	230	750	Twelve 75 MVA converter transformers at Square Butte; +/-	ND			Proposed	\$42,500,000	Planning	N	N	Y
B in MTEP14	B	West	MPC, OTP	4232	7985 SUB		11/15/2024	Winger 230 kV	Winger 230 kV	1	230			Winger Sub Expansion. Add 230 kV Breakers & Terminal	MN			Proposed	\$2,000,000	Planning	N	N	Y
B in MTEP14	B	West	MPC, OTP	4232	7988 LN		11/15/2024	Winger 230 kV	Thief River 230 kV	1	230		452	Winger-Thief River 230 kV New Transmission Line	MN	47		Proposed	\$20,000,000	Planning	N	N	Y
B in MTEP14	B	West	MPC, OTP	4232	7987 TX																		

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upg	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility	
B in MTEP15	B	East	ITCT	4520	8658 LN		6/1/2018	Mortar Creek	Monroe	2	345		1748	Loop the Monroe #2 circuit into Mortar Creek.	MI			Proposed	\$1,000,000.00	Engineering	N	N	Y	
B in MTEP15	B	East	ITCT	4520	8657 LN		6/1/2018	Mortar Creek	Lenawee - Milan	1	345		1814	Loop the Lenawee - Milan circuit into Mortar Creek.	MI			Proposed	\$1,000,000.00	Engineering	N	N	Y	
B in MTEP15	B	East	ITCT	4520	8656 LN		6/1/2018	Mortar Creek	Majestic	1	345		953 MVA	Loop the Majestic circuit into Mortar Creek.	MI			Proposed	\$1,000,000.00	Engineering	N	N	Y	
B in MTEP15	B	East	ITCT	4520	8655 LN		6/1/2018	Mortar Creek	Lemoine	1	345		953 MVA	Loop the Lemoine circuit into Mortar Creek.	MI			Proposed	\$1,000,000.00	Engineering	N	N	Y	
B in MTEP15	B	East	ITCT	4520	8654 LN		6/1/2018	Mortar Creek	Monroe	1	345		1315	Loop Monroe circuit into Mortar Creek.	MI			Proposed	\$1,000,000.00	Engineering	N	N	Y	
B in MTEP15	B	East	ITCT	4520	8653 LN		6/1/2018	Mortar Creek	Bayshore	1	345		1262	Loop the Bayshore circuit into Mortar Creek.	MI			Proposed	\$1,000,000.00	Engineering	N	N	Y	
B in MTEP15	B	East	ITCT	4520	20382 RLY		6/1/2018	Majestic					345	Upgrade relays at the Majestic station.	MI			Proposed	\$450,000.00	Engineering	N	N		
B in MTEP15	B	East	ITCT	4520	20383 RLY		6/1/2018	Monroe					345	Upgrade relays at Monroe station.	MI			Proposed	\$400,000.00	Engineering	N	N		
B in MTEP15	B	East	ITCT	8068	20384 LNup		12/31/2017	Brownstown	Monroe	2	345		1756	Remediate the sag limit on the Brownstown to Monroe 2.34 MI	MI	18.2	0	Proposed	\$1,200,000.00	Engineering	N	N		
B in MTEP15	B	East	ITCT	8069	20385 LNup		12/31/2018	Lemoine	Majestic	1	345			Remediate the sag limit on the Lemoine - Majestic 345 kV I	MI			Proposed	\$2,500,000.00	Engineering	N	N		
B in MTEP15	B	East	ITCT	8099	20442 LNrb		12/31/2018	Lincoln	Northeast/Northwes	1	120			Rebuild 2.95 miles of 477 ACSR to 1431 ACSR on new Do	MI			Proposed	\$4,000,000.00	Engineering	N	N		
B in MTEP15	B	East	ITCT	8099	20443 TEQ		12/31/2018	Lincoln						Replace 2 line entrances at Lincoln Substation.	MI			Proposed	\$200,000.00	Engineering	N	N		
B in MTEP15	B	East	METC	1804	3620 TEQ		12/31/2018	Marquette	Substation Equipment	1	138			upgrade station equipment (relaying at Marquette)	MI			Proposed			N	N	Y	
B in MTEP15	B	East	METC	3927	7489 TEQ		12/31/2017	Kam	Saginaw River	1	138			Replace limiting equipment from the Saginaw River 138 kV	MI			Proposed	\$2,800,000.00	Engineering	N	N	Y	
B in MTEP15	B	East	METC	4525	8666 TX		12/31/2018	Goss				345	138	Install a second 345/138 kV transformer at Goss.	MI			Proposed	\$4,490,000.00	Engineering	N	N	Y	
B in MTEP15	B	East	METC	4525	8667 SUB		12/31/2018	Goss				345	138	Install new and upgrade existing station equipment at Goss.	MI			Proposed	\$4,810,000.00	Engineering	N	N	Y	
B in MTEP15	B	East	METC	8123	20475 TX		12/31/2018	Weeds Lake				345	138	Add a 2nd 345/138 kV transformer at Weeds Lake substat	MI			Proposed	\$4,500,000.00	Engineering	N	N		
B in MTEP15	B	East	METC	8123	20681 RLY		12/31/2018	Argenta				345		Upgrade line relaying at Argenta 345 kV station.	MI			Proposed	\$250,000.00	Engineering	N	N		
B in MTEP15	B	East	METC	8123	20483 SUB		12/31/2018	Weeds Lake				345	138	Add 345 and 120 kV station equipment required to accomo	MI			Proposed	\$11,750,000.00	Engineering	N	N		
B in MTEP15	B	East	METC	8123	20481 LN		12/31/2018	Weeds Lake	Twin Branch	1	345			Install approx 0.1 miles of new 345 kV double circuit stru	MI		0.1	Proposed	\$500,000.00	Engineering	N	N		
B in MTEP15	B	East	METC	8123	20479 LN		12/31/2018	Weeds Lake	Argenta	2	345			Install approx 0.1 miles of new 345 kV double circuit stru	MI		0.1	Proposed	\$500,000.00	Engineering	N	N		
B in MTEP15	B	East	METC	8130	20497 TX		12/31/2018	Pere Marquette				345	230	Install a 345/230 kV transformer at Pere Marquette substati	MI			Proposed	\$4,655,000.00	Engineering	Prelimin	N	N	
B in MTEP15	B	East	METC	8130	20505 LN		12/31/2018	Keystone	Pere Marquette	1	230			Construct the new, approx. 75 mile, 230 kV transmission li	MI	29.4	46.4	Proposed	\$66,020,000.00	Engineering	Prelimin	N	N	
B in MTEP15	B	East	METC	8130	20504 SUB		12/31/2018	Pere Marquette				345	230	Install all 230 and 345 kV terminal equipment associated wi	MI			Proposed	\$11,561,000.00	Engineering	Prelimin	N	N	
B in MTEP15	B	East	METC	8130	20503 SUB		12/31/2018	Keystone				230	138	Install all 230 and 138 kV terminal equipment associated wi	MI			Proposed	\$5,595,000.00	Engineering	Prelimin	N	N	
B in MTEP15	B	East	METC	8130	20499 TX		12/31/2018	Keystone				230	138	Install a 230/138 kV transformer at Keystone substation.	MI			Proposed	\$2,367,000.00	Engineering	Prelimin	N	N	
B in MTEP15	B	East	NIPS	8026	20299 TX		12/31/2017	17DEKALB 138	17DEKALB 69	1	138	69	112	Upgrade to 112 MVA Transformer	IN			Proposed	\$2,700,000.00	Planning	N	N		
B in MTEP15	B	East	NIPS	8026	20301 LNup		12/31/2017	17DEKALB	05AUBURN	1	138		54	Rating Increase	IN			Proposed		Actual	N	N		
B in MTEP15	B	East	WPSC	8222	20610 LN		12/31/2022	Bradley 138kV & 69kV				138	69	Construction to support the upgrade of the Airport 138kV ar	MI			Proposed	\$1,000,000.00	Budgetary	N	N		
B in MTEP15	B	East	WPSC	8360	20649 SUB		12/31/2022	Alba				138	69	The Alba transmission line station represents the oldest tie o	MI			Proposed	\$4,000,000.00	Budgetary	N	N		
B in MTEP15	B	East	WPSC	8361	20650 LN		12/31/2022	Alba				138	69	This project will address 138kV transmission line and struct	MI			Proposed	\$1,000,000.00	Budgetary	N	N		
B in MTEP15	B	South	CLECO	7993	20267 LNrc		5/1/2024	Rodemacher	East Leesville	1	230		628	Reconductor Rodemacher to East Leesville 230 kV line with	LA	38.3		Proposed	\$10,000,000.00	Planning	N	N		
B in MTEP15	B	South	Entergy-TX	4799	9067 SUB		6/1/2021	Dishman 230 kV Substation				230		Construct new substation	TX			Proposed	\$10,500,000.00	Planning	N	N	Y	
B in MTEP15	B	South	SMEPA	8141	20510 LNrb		6/1/2026	Hoy	Sharon GOAB	1	69		126	Rebuild L16 (Hoy - Sharon GOAB 69kV) using 795 ACSR v	MS	3.98		Proposed	\$1,273,600.00	Planning	N	N		
B in MTEP15	B	South	SMEPA	8143	20515 LNrb		6/1/2026	Foxworth	Pickwick GOAB	1	69		126	Rebuild L45A (Foxworth - Pickwick GOAB) using 795 ACS	MS	7.07		Proposed	\$2,050,300.00	Planning	N	N		
B in MTEP15	B	West	ATC	1718	3504 TX		6/1/2026	Custer	Transformer	1	138		69	100 MVA Install a 138/69 kV transformer at Custer substation	WI			Proposed	\$4,904,268.00	Engineering	N	N	Y	
B in MTEP15	B	West	ATC	1719	3505 LN		12/31/2026	Shoto	Custer	1	138		290 MVA	Construct a Shoto-Custer 138 kV line	WI		9.94	Proposed	\$22,938,000.00	Engineering	N	N	Y	
B in MTEP15	B	West	ATC	3678	6900 SUB		12/31/2050	Roberts				138		New 138 kV Sub at Roberts	MI			Proposed	\$5,300,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6909 LN		12/31/2050	Forsyth	Munising	1	138		348	Rebuild Forsyth-Munising 138 kV line	MI		50	Proposed	\$75,000,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6908 LN		12/31/2050	Pine River	Straits	1	138		348	Terminal work for conversion of double circuit 69kV line for	MI			Proposed	\$750,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6899 SUB		12/31/2050	Seney				138		New 138 kV Sub at Seney	MI			Proposed	\$5,300,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6898 TX		12/31/2050	Roberts				138	69	60 New 138/69 kV Transformer at Roberts	MI			Proposed	\$2,300,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6897 TX		12/31/2050	Seney				138	69	60 New 138/69 kV Transformer at Seney	MI			Proposed	\$2,300,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6896 LN		12/31/2050	Seney	Roberts	1	138		348	New 138kV line from Seney-Roberts	MI		20	Proposed	\$22,500,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6895 LN		12/31/2050	Munising	Seney	1	138		348	Rebuild Munising-Seney 138kV line on new ROW	MI		30	Proposed	\$37,500,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6907 SUB		12/31/2050	new sub near Pine River				138		New 138 kV Sub near Pine River	MI			Proposed	\$4,500,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6906 TX		12/31/2050	Pine River				138	69	60 New 138/69 kV Transformer at Pine River	MI			Proposed	\$2,300,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6905 SUB		12/31/2050	new sub near 9-Mile				138		New 138 kV Sub near 9-Mile	MI			Proposed	\$5,300,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6904 TX		12/31/2050	9-Mile				138	69	60 New 138/69 kV Transformer at 9-Mile	MI			Proposed	\$2,300,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6903 LN		12/31/2050	9-Mile	Pine River	2	138		174	Rebuild 9-Mile to Pine River as double circuit 138 kV (Oper	MI		25	Proposed	\$15,000,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6902 LN		12/31/2050	9-Mile	Pine River	1	138		348	Rebuild 9-Mile to Pine River as double circuit 138 kV (Oper	MI		25	Proposed	\$15,000,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3678	6901 LN		12/31/2050	Roberts	9-Mile	1	138		348	Rebuild and Convert 69kV line from Roberts to 9-Mile to 13	MI		50	Proposed	\$67,500,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3838	6914 LN		12/31/2050	Plains	National	1	345		1204	New 345 kV line from Plains-National	MI		60	Proposed	\$144,400,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3838	7250 LN		6/1/2019	Presque Isle	Tilden	1	138			Loop Presque Isle-Tilden 138 into new National Substation	WI			Proposed	\$600,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3838	6918 TX		12/31/2050	National				2	345	500 New 345/138kV Transformer at National	MI			Proposed	\$8,400,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3838	6917 TX		12/31/2050	National				2	345	500 New 345/138kV Transformer at National	MI			Proposed	\$8,400,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	3838	6916 SUB		12/31/2050	National				1	345	New 345kV sub near National	MI			Proposed	\$19,000,000.00	Planning	N	N	Y	
B in MTEP15	B	West	ATC	7580	20003 IND		6/1/2018	Werner West				138		Install new 25 Mvar inductor at Werner West 138 kV	WI			Proposed	\$1,524,446.00	Engineering	N	N		
B in MTEP15	B	West	ATC	7581	20004 IND		6/1/2018	Forest Junction				138		Install new 25 Mvar inductor at Forest Jct 138 kV	WI			Proposed	\$1,762,635.00	Engineering	N	N		
B in MTEP15	B	West	ATC	7584	20018 LNrb		12/31/2022	New Holstein	St Nazianz	1	69		79	Rebuild New Holstein - St Nazianz 69 kV	WI		10.2	Proposed	\$15,941,421.00	Engineering	N	N		
B in MTEP15	B	West	ATC	7584	20019 LNrb		12/31/2022	St Nazianz	Custer	1	69		79	Rebuild St Nazianz - Custer 69 kV	WI		11.2	Proposed		Engineering	N	N		
B in MTEP15	B	West	ATC	7585	20020 TX		6/1/2023	Colley Rd				132	69	93 Install new 138/69 kV 100 MVA transformer	WI			Proposed	\$9,944,361.00	Engineering	N	N		
B in MTEP15	B	West	ATC	7586	20021 TX		6/1/2019	Atlantic				2	138	69	80 Install new 138/69 kV 100 MVA transformer	WI			Proposed	\$9,043,263.00	Engineering	N	N	
B in MTEP15	B	West	ATC	7586	20032 TEQ		6/1/2019	Atlantic				6												

Appendices A, B: Project Facility Table 10/03/2016

Target Appendix	App AB	Planning Region	Geographic Location by TO Member System	PriID	Facility ID	Facility Type	Expected ISD	From Sub	To Sub	Ckt	Max kV	Min kV	Facility Rating	Facility Description	State	Miles Upd	Miles New	Plan Status	Estimated Cost	Est Type	Cost Shared	Postage Stamp	MISO Facility
B in MTEP15	B	West	ATC	7762	20076 LNrb		12/31/2023	Wild Rose	A15	1	69		79	Rebuild Y-19 Wild Rose - A15	WI	3.62		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	7762	20075 LNrb		12/31/2023	Wild Rose Tap	Wild Rose	1	69		79	Rebuild Y-19 from Wild Rose Tap - Wild Rose	WI	2.79		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	7762	20074 LNrb		12/31/2023	Harrison Tap	Wild Rose Tap	1	69		79	Rebuild Y-19 from Harrison Tap - Wild Rose Tap	WI	13.3		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	7763	20079 LNrb		12/31/2023	McKenna	A13	1	69		69	Rebuild Y-47 McKenna - A13	WI	7.68		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	7763	20080 LNrb		12/31/2023	A13	Castle Rock	1	69		53	Rebuild Y-47 A13 - Castle Rock	WI	0.82		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	7764	20081 LNrb		12/31/2023	Wautoma	WC5 (ACEC Richfo	1	69		79	Rebuild Y-49 Wautoma - ACEC Richford	WI	8.25		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	7764	20082 LNrb		12/31/2023	WC5 (ACEC Richfo	Chaffee Creek	1	69		64	Rebuild Y-49 ACEC Richford - Chaffee Creek	WI	4.78		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	7765	20083 LNrb		12/31/2023	McKenna	A07	1	69		69	Rebuild Y-145 McKenna - A07	WI	5.29		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	7765	20085 LNrb		12/31/2023	Lincoln Pumping Sta.	Lincoln Pumping Sta	1	69		79	Rebuild Y-145 Lincoln Pumping Sta. Tap - Lincoln Pumping	WI	0.13		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	7765	20084 LNrb		12/31/2023	A07	Lincoln Pumping Sta	1	69		79	Rebuild Y-145 A07 - Lincoln Pumping Station Tap	WI	1.19		Proposed		Engineering	N	N	
B in MTEP15	B	West	ATC	8073	20390 LNup		12/1/2023	Plains	Arnold	1	138		205	Uprate 78652 Plains - Arnold 138 kV line	MI	29		Proposed	\$43,720,000.00	Planning	N	N	
B in MTEP15	B	West	ATC	8073	20392 TX		12/1/2023	Plains		2	345		500	Install a second 345/138 kV transformer at Plains Substation	MI			Proposed		Planning	N	N	
B in MTEP15	B	West	ATC	8073	20391 TX		12/1/2023	Plains		1	345	138	500	Upgrade existing 345/138 kV transformer at Plains Substation	MI	0	0	Proposed		Planning	N	N	
B in MTEP15	B	West	ATC	8076	20718 LNcnv		12/1/2023	High Falls	Crivitz	1	138		233	Convert High Falls - Crivitz 69 kV line to create a Thunder -	WI	13		Proposed			N	N	
B in MTEP15	B	West	ATC	8076	20717 LN		12/1/2023	Thunder	Plains	1	345		1219	Loop Morgan - Plains 345 into Thunder to create a new Mo	WI	40		Proposed			N	N	
B in MTEP15	B	West	ATC	8076	20716 LN		12/1/2023	Morgan	Plains	1	345		1219	Loop Morgan - Plains 345 into Thunder to create a new Mo	WI	31		Proposed		Planning Preliminary	N	N	
B in MTEP15	B	West	ATC	8076	20715 LN		12/1/2023	Morgan	Thunder	1	138		316	New 138 kV line from Morgan - Thunder	WI	31		Proposed	\$105,000,000.00	Planning Preliminary	N	N	
B in MTEP15	B	West	ATC	8076	20714 TX		12/1/2023	Thunder		1	138	69	100	Install a new 138/69 kV transformer at Thunder Substation	WI			Proposed			N	N	
B in MTEP15	B	West	ATC	8076	20713 TX		12/1/2023	Thunder		1	345	138	500	Install a new 345/138 kV transformer at Thunder Substation	WI			Proposed			N	N	
B in MTEP15	B	West	ATC	8082	20407 LNrc		12/1/2020	Highway V	Preble	1	138		220	Reconductor X154 Highway V - Preble 138 kV line	WI	2		Proposed	\$6,000,000.00	Planning	N	N	
B in MTEP15	B	West	ATC	8084	20410 LNup		12/1/2020	Highway 8	Clear Lake	1	115		145	Uprate Q95 Highway 8 - Clear Lake 115 kV line	WI	21		Proposed	\$24,000,000.00	Planning	N	N	
B in MTEP15	B	West	ATC	8089	20413 LNcnv		12/1/2021	Lakota	Mass	1	138		139	Convert the existing 69-kV line from Conover-Mass to 138-kV MI	WI	58		Proposed	\$100,000,000.00	Planning Preliminary	N	N	
B in MTEP15	B	West	ATC	8089	20415 SUB		12/1/2021	Mass		1	138	69	100	Modify the existing Mass Substation to accommodate 138-kV MI	WI			Proposed		Planning Preliminary	N	N	
B in MTEP15	B	West	ATC	8089	20414 LNcnv		12/1/2021	Mass	Winona	1	138		139	Convert the existing 69-kV line from Mass-Winona to 138-kV MI	WI	10.5		Proposed		Planning Preliminary	N	N	
B in MTEP15	B	West	ATC	8263	20621 LNrb		12/31/2021	WWR	NSC	1	69		69	Rebuild Y-45 with new conductor.	WI	0.22		Proposed			N	N	
B in MTEP15	B	West	ATC	8263	20625 LNrb		12/31/2021	RUDT	RUD	1	69		79	Rebuild Y-45 with new conductor.	WI	5.37		Proposed			N	N	
B in MTEP15	B	West	ATC	8263	20624 LNrb		12/31/2021	NSC	NSCT	1	69		79	Rebuild Y-45 with new conductor.	WI	0.82		Proposed			N	N	
B in MTEP15	B	West	ATC	8263	20623 LNrb		12/31/2021	RUDT	SLG	1	69		69	Rebuild Y-45 with new conductor.	WI	5.29		Proposed	\$18,667,906.00	Planning	N	N	
B in MTEP15	B	West	ATC	8263	20622 LNrb		12/31/2021	NSC	RUDT	1	69		69	Rebuild Y-45 with new conductor.	WI	5.47		Proposed			N	N	
B in MTEP15	B	West	ATC	8440	20666 LNrc		12/31/2019	Oak Creek	Hayes	1	138		194	reconductor the 4/0 Cu section of 811 Oak Creek-Hayes w	WI	12.9		Proposed	\$13,743,440.00	Planning	N	N	
B in MTEP15	B	West	ATC	8441	20667 SUB		12/31/2016	Escanaba			69			New 69 kV Escanaba Switching Station	MI			Proposed	\$5,616,000.00	Planning	N	N	
B in MTEP15	B	West	ATC	8441	20669 TX		12/31/2016	Escanaba		2	69	12.5	28	Escanaba T2	MI			Proposed			N	N	
B in MTEP15	B	West	ATC	8441	20668 TX		12/31/2016	Escanaba		1	69	12.5	28	Escanaba T1	MI			Proposed			N	N	
B in MTEP15	B	West	ATC	8444	20672 LNrb		12/31/2020	First Ave	Sawyer	1	69		68	Replace UG Cable from 1st Ave-Sawyer 69 kV line	WI	1		Proposed			N	N	
B in MTEP15	B	West	ATC	8620	20709 LN		12/12/2018	Howards Grove	Erdman	1	138		294	Build new Howards Grove - Erdman 138 kV line.	WI	6.6		Proposed			N	N	
B in MTEP15	B	West	ATC	8641	20712 CAP		6/1/2023	Boscobel		1	69			Add a second 8.16 MVAR capacitor.	WI			Proposed	\$1,394,539.00	Planning	N	N	
B in MTEP15	B	West	GRE	2632	4643 LN		11/30/2022	Onigum	Birch Lake	1	115		140	Onigum 115 kV conversion, Birch Lake 115 kV breaker and	MN	9.45		Proposed	\$5,300,000.00	Planning	N	N	Y
B in MTEP15	B	West	ITCM	8111	20458 LN		12/31/2024	Tharp	North Liberty	1	161	69	446	MVA New 161-69 kV double circuit line from Tharp to new North	IA	9.5		Proposed	\$21,125,552.40	Engineering	N	N	
B in MTEP15	B	West	ITCM	8111	20736 LN		12/31/2024	Conroy	Homestead	1	69	69	77	MVA Build a new Conroy to Homestead 69kV line.	IA	5		Proposed	\$7,479,482.40	Engineering	N	N	
B in MTEP15	B	West	ITCM	8111	20735 SwSta		12/31/2024	Heartland	Switch Station	69	69			ITC will add a new Heartland switch station with 3 terminals	IA	5		Proposed	\$3,979,449.60	Engineering	N	N	
B in MTEP15	B	West	ITCM	8111	20469 SUB		12/31/2022	Fairfax	Terminal	161	558	MVA		Fairfax substation 161 kV bus position addition	IA			Proposed	\$904,827.60	Engineering	N	N	
B in MTEP15	B	West	ITCM	8111	20467 LN		12/31/2019	Rose Hollow	Heartland	1	69	140	MVA	Build a new Rose Hollow - Heartland 69 kV line (double circ	IA	9		Proposed	\$14,929,987.20	Engineering	N	N	
B in MTEP15	B	West	ITCM	8111	20465 LN		12/31/2022	Tharp	Fairfax	1	161	161	446	MVA New 161 kV line from Fairfax to Tharp.	IA	8		Proposed	\$17,897,122.80	Engineering	N	N	
B in MTEP15	B	West	ITCM	8111	20464 SwSta		12/31/2024	Conroy	Substation	69	69			ITC will install a new Conroy 69 kV switch station with 3 ter	IA			Proposed	\$3,979,449.60	Engineering	N	N	
B in MTEP15	B	West	ITCM	8111	20463 TX		12/31/2019	Rose Hollow	Transformer	1	161	69	150	MVA Rose Hollow new 150 MVA 161/69 kV transformer	IA			Proposed		Planning Preliminary	N	N	
B in MTEP15	B	West	ITCM	8111	20459 SUB		12/31/2019	Rose Hollow	Substation	161	69			Rose Hollow 161 kV bus position addition, 69kV Terminal ac	IA			Proposed	\$4,186,710.00	Engineering	N	N	
B in MTEP15	B	West	ITCM	8842	20759 LN		12/31/2024	Quad Cities	Rock Creek	2	345	1246		Build the Quad Cities to Rock Creek 345kV line to double ci	IA, IL			Proposed			N	N	
B in MTEP15	B	West	ITCM	8843	20760 TX		12/31/2024	Rock Creek		345	161	450	MVA	Add a 2nd 345/161kV 450MVA transformer at Rock Creek.	IA			Proposed			N	N	
B in MTEP15	B	West	ITCM	8844	20761 LNrb		12/31/2024	Albany	York	1	161	446	MVA	Rebuild Albany-York161kV to 446MVA.	IL	15		Proposed			N	N	
B in MTEP15	B	West	ITCM	8844	20763 LNrb			Savanna	Galena	1	161	446	MVA	Rebuild Savanna to Galena 161kV to 446 MVA.	IL	29.2		Proposed			N	N	
B in MTEP15	B	West	ITCM	8844	20762 LNrb			York	Savanna	1	161			Rebuild York to Savanna 161kV to 446 MVA.	IL	8.65		Proposed			N	N	
B in MTEP15	B	West	MEC	8023	20297 LNrc			Hills	Sub E (Iowa City)	1	161	410	MVA	Reconductor 161 kV line	IA	6.6		Proposed	\$4,000,000.00	Planning	N	N	
B in MTEP15	B	West	MEC	8114	20451 LNup		6/1/2018	SubA	Sub 84	69			72	Replace structures to increase line clearance and rating.	IA	8.6		Proposed	\$225,000.00	Planning	N	N	NT
B in MTEP15	B	West	MP	7913	20154 LNrc		11/1/2019	Little Falls	St. Stephen Tap	1	115		144	Little Falls - Langola Tap - (Future) St. Stephen Tap recon	MN	17.6	0	Proposed	\$6,800,000.00	Planning	N	N	Y
B in MTEP15	B	West	MPC, OTP	4237	7994 SUB		11/15/2021	Hensel 115 kV	Hensel 115 kV	1	115			Hensel 115 kV Sub Expansion	ND			Proposed	\$500,000.00	Planning	N	N	Y
B in MTEP15	B	West	MPC, OTP	4237	7996 LN		11/15/2021	Hensel 115 kV	Drayton 115 kV	1	115			147 Hensel-Drayton 115 kV New 22 miles Transmission Line	ND	22		Proposed	\$5,000,000.00	Planning	N	N	Y
B in MTEP15	B	West	MPC, OTP	4237	7995 SUB		11/15/2021	Drayton 115 kV	Drayton 115 kV	1	115												