

**Table AR-1**  
**Transmission System Additions – Asset Renewal Line Work**

<b>System Additions</b>	<b>Projected In-Service Year</b>	<b>Planning Zone</b>	<b>Need Category</b>	<b>Cost Estimate - Refer to Funding Project and Sum of Total (2009-2018) in Asset Renewal Financial Table</b>
Rebuild Plainfield-Chaffee Creek 69-kV line Y-90	2010	1	Improve condition and increase reliability performance of existing line	F1699
Rebuild Auburndale-Sigel 69-kV line Y-107	2010	1	Improve condition and increase reliability performance of existing line	F1732
Rebuild Rocky Run-Arpin 345-kV line W-8	2010	1	Improve condition and increase reliability performance of existing line	F2252
Rebuild Deer Trail-Whitcomb 69-kV line Y-86	2010	1	Improve condition and increase reliability performance of existing line	F2410
Rebuild Mauston-Hilltop 69-kV line Y-89	2010	1	Improve condition and increase reliability performance of existing line	F2345
Rebuild Wautoma-Berlin 69-kV line Y-95	2011	1	Improve condition and increase reliability performance of existing line	F2386
Re-insulate Winneconne-Berlin 69-kV line Y-80	2012	1	Improve condition and increase reliability performance of existing line	TBD
Re-insulate Harrison-Iola 69-kV line Y56 CWEC Iola Tap	2012	1	Improve condition and increase reliability performance of existing line.	TBD
Rebuild North Point-Rocky Run 115-kV line T-20	2016	1	Improve condition and increase reliability performance of existing line.	TBD

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Rebuild Wautoma-Portage 69-kV line Y17	2017	1	Improve condition and increase reliability performance of existing line	TBD
Planning to reconfigure with Fairwater/Ripon to North Randolph, 69-kV line Y26	2018	1	Improve condition and increase reliability performance of existing line	TBD
Rebuild Whiting Avenue-Plover 115-kV line B-106	2019	1	Improve condition and increase reliability performance of existing line	TBD
Replace select poles on Coyne-Saratoga 115-kV line T-72	2020	1	Improve condition and increase reliability performance of existing line	TBD
Re-insulate top phase and add additional arresters on Chandler-Forsyth 69-kV line (Chandler line)	2010	2	Improve condition and increase reliability performance of existing line	F2786
Improve clearances, install arresters on portions of line, replace select components on Roberts-9 Mile 69-kV line 6952	2011	2	Improve condition and increase reliability performance of existing line	F2037
Re-insulate and improve grounding on Munising-Forsyth 138-kV line (Munising 138 line)	2012	2	Improve condition and increase reliability performance of existing line	TBD
Reinsulate, add arresters, replace select poles on Munising-Gwinn 69-kV line (Autrain line)	2013	2	Improve condition and increase reliability performance of existing line	TBD
Reinsulate, add arresters, replace select poles on Blaney Park-Munising 69-kV line (Inland line)	2014	2	Improve condition and increase reliability performance of existing line	TBD

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Re-insulate Portage-9 Mile 69-kV lines 6901/6902	2014	2	Improve condition and increase reliability performance of existing line	TBD
Re-insulate and install arresters on KI Sawyer-Gwinn 69-kV line (Sawyer line)	2014	2	Improve condition and increase reliability performance of existing line	TBD
Install new cross arms on Atlantic-M38 69-kV line (Atlantic 69 line)	2014	2	Improve condition and increase reliability performance of existing line	TBD
Replace select poles and cross arms on Rexton-Hiawatha 69-kV line ESE_6908	2015	2	Improve condition and increase reliability performance of existing line	TBD
Replace underground cable on Magazine-Nine Mile/Three Mile 69-kV line ESE_6903	2015	2	Improve condition and increase reliability performance of existing line	TBD
Replace select poles and re-insulate Conover-Mass 69-kV line 6530	2018	2	Improve condition and increase reliability performance of existing line	TBD
Replace select poles and re-insulate Powers-Chalk Hill 69-kV line 6910	2018	2	Improve condition and increase reliability performance of existing line	TBD
Replace one circuit with new 3C XPLE submarine cable on McGulpin-Straits 138-kV line 9901	2020	2	Improve condition and increase reliability performance of existing line	TBD
Replace one circuit with new 3C XPLE submarine cable on McGulpin-Straits 138-kV line 9903	2020	2	Improve condition and increase reliability performance of existing line	TBD

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Remove the wishbone arms and install HLP insulators on Venture-Janesville 138-kV line X-24	2009	3	Improve condition and increase reliability performance of existing line	F2761
Rebuild Miner-Hillman 69-kV line Y-130	2010	3	Improve condition and increase reliability performance of existing line	F2346
Rebuild Forward-Rock Branch 69-kV line Y-135	2010	3	Improve condition and increase reliability performance of existing line	F1715
Rebuild Stage Coach-Spring Green 69-kV line Y-62	2010	3	Improve condition and increase reliability performance of existing line	F1656
Rebuild Dane-Dam Heights 69-kV line Y-8	2010	3	Improve condition and increase reliability performance of existing line	F1602
Rebuild Boscobel-Gran Grae 69-kV line Y-40	2010	3	Improve condition and increase reliability performance of existing line	F1444
Install anti-galloping and grounding improvements on Columbia-South Fond Du Lac 345-kV line W5	2011	3	Improve condition and increase reliability performance of existing line	TBD
Rebuild Pardeeville Tap-North Randolph/Rio 69-kV line Y-64	2011	3	Improve condition and increase reliability performance of existing line	F2389
Replace underground cable on East Towne-Sycamore 69-kV line 6987	2012	3	Improve condition and increase reliability performance of existing line.	TBD

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Replace underground cable on East Towne to Sycamore 69-kV line 6988	2012	3	Improve condition and increase reliability performance of existing line.	TBD
Replace underground with overhead cable on Pheasant Branch-West Middleton 69-kV line 6963	2012	3	Improve condition and increase reliability performance of existing line	TBD
Rebuild Portage-Dam Heights 69-kV line Y16	2013	3	Improve condition and increase reliability performance of existing line.	TBD
Rebuild Rubicon-Concord 138-kV line 9061	2013	3	Improve condition and increase reliability performance of existing line	TBD
Rebuild Eden-Hillman 69-kV line Y105	2018	3	Improve condition and increase reliability performance of existing line.	TBD
Replace underground cable on Stagecoach-West Middleton 69-kV line 6927	2019	3	Improve condition and increase reliability performance of existing line	TBD
Rebuild and reconductor Sauk Trail-20 <sup>th</sup> Street 138-kV line X-37	2009	4	Improve condition and increase reliability performance of existing line.	F2684
Re-insulate South Fond du Lac-Edgewater 345-kV line W1	2010	4	Improve condition and increase reliability performance of existing line	F2765
Replace shield wire on Stiles-Pulliam 138-kV lines KK64441-64451	2011	4	Improve condition and increase reliability performance of existing line	F2383

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Rebuild Mears-Woodenshoe 138-kV line A-79	2012	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Sunset Point-Mears 138-kV line MCRG21	2012	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Highway V-Oak Street 69-kV line Z-26	2013	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Manrap-Wesmark 69-kV line R-44	2013	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Finger Road-Highway V 69-kV line U-47	2014	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Sawyer-Dykesville 69-kV line DYKY21	2015	4	Improve condition and increase reliability performance of existing line	F2801
Replace the submarine cable on First Avenue-Redwood 69-kV line T-46	2015	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Neevin-Butte Des Morts 138-kV line 43021	2015	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Pioneer-Sobieski 69-kV line E-83 Tap	2016	4	Improve condition and increase reliability performance of existing line	TBD

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Rebuild Sobieski-Bayport 69-kV line T-98	2016	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Danz-Finger Road 69-kV line L-64	2016	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Woodenshoe-Neevin 138-kV line 80952	2016	4	Improve condition and increase reliability performance of existing line	TBD
Replace underground cable on University-Danz Avenue 69-kV line O-15	2017	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Butte des Morts-North Appleton 138-kV line 6853	2017	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Custer-New Holstein 69-kV line P-68	2019	4	Improve condition and increase reliability performance of existing line	TBD
Rebuild Goodman-Caldron Falls 69-kV line J-88	2019	4	Improve condition and increase reliability performance of existing line	TBD
Replace select poles on Howard-Pulliam 138-kV line D-82	2019	4	Improve condition and increase reliability performance of existing line	TBD
Replace underground cable on Erdman-Lodestar 138-kV line X-48	2019	4	Improve condition and increase reliability performance of existing line	TBD

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Replace underground cable on Edgewater-Erdman 69-kV line Y-31	2021	4	Improve condition and increase reliability performance of existing line	TBD
Shield wire replacement Norwich-43 <sup>rd</sup> St Terminal 138-kV line NWHG61	2012	5	Improve condition and increase reliability performance of existing line	TBD
Re-insulate Racine-Somers 138-kV line 1645	2012	5	Improve condition and increase reliability performance of existing line	TBD
Re-insulate Racine-Kenosha 138-kV line 1651	2012	5	Improve condition and increase reliability performance of existing line	TBD
Replace shield wire on Granville-Tosa 138-kV line 3452	2013	5	Improve condition and increase reliability performance of existing line	TBD
Replace shield wire on Butler-Bluemound 138-kV line 5061	2013	5	Improve condition and increase reliability performance of existing line	TBD
Replace shield wire on Tosa-Bluemound 138-kV line 5041	2013	5	Improve condition and increase reliability performance of existing line	TBD
Rebuild St. Martins-Edgewood 138-kV line 3013	2014	5	Improve condition and increase reliability performance of existing line	TBD
Rebuild and add breaker on Edgewood-Mukwonago 138-kV line 671K61	2014	5	Improve condition and increase reliability performance of existing line	TBD

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Rebuild Hartford-St. Lawrence 138-kV line 8031	2014	5	Improve condition and increase reliability performance of existing line	TBD
Rebuild Cooney-Concord 138-kV line 9042	2014	5	Improve condition and increase reliability performance of existing line	TBD
Rebuild Summit-Waukesha 138-kV line 7021	2015	5	Improve condition and increase reliability performance of existing line	TBD
Rebuild Summit-Merrill Hills 138-kV line 3551	2017	5	Improve condition and increase reliability performance of existing line	TBD
Rebuild Albers-Paris 138-kV line 3124	2018	5	Improve condition and increase reliability performance of existing line	TBD