

Table RS-1
Identified Needs and Transmission Lines Requiring New Right-of-Way

Identified need	Potential solutions	Approx. line mileage		System need year	Projected In-service year	Planning zone	Environmental screening provided?	Comments and/or Corresponding Exhibit Number
		Total	New ROW					
T-D interconnection request	Construct 115-kV line from new Woodmin Substation to the Clear Lake Substation	7.5	7.5	2012	2012	1	No	PSCW Approved
relieve overloads or low voltages under contingency	Construct 345-kV line from Rockdale to West Middleton	32.4	32.4	2013	2013	3	No	PSCW Approved - Under construction
relieve overloads or low voltages under contingency	Construct 18th Road-Chandler double circuit 138-kV lines and operate at 138/69	4	4	2014	2014	2	Yes	
economic benefits	Construct Pleasant Prairie-Zion Energy Center 345-kV line	7	7	2014	2014	5	Yes	
T-D interconnection request	Construct double-circuit 138-kV line to serve Milwaukee County T-D interconnection	2	2	2015	2015	5	Yes	
relieve overloads or low voltages under contingency, T-D interconnection request	Construct new 138-kV line from North Lake Geneva to South Lake Geneva Substation	3.4	3.4	2018	2018	3	Yes	
accommodate new generation	Construct Erdman-Howards Grove-Plymouth #4-Barnhart 138-kV line	18	18	2018	2018	4	Yes	
policy benefits	Construct Badger Coulee 345-kV line	118	118	2018	2018	3	Yes	
relieve overloads or low voltages under contingency	Construct Fairwater-Mackford Prairie 69-kV line	4	4	2018	2018	1	Yes	
T-D interconnection request,relieve overloads or low voltages under contingency	Construct Spring Valley-Twin Lakes-South Lake Geneva 138-kV line	24.0	15	2019	2019	35	Yes	
relieve overloads or low voltages under contingency	Construct a Lake Delton-Birchwood 138-kV line	5	5	2020	2020	31	Yes	
policy benefits	Construct Dubuque-Spring Green-Cardinal 345-kV line	80	80	2020	2020	3	Yes	
relieve overloads or low voltages under contingency	Construct second Dunn Road-Egg Harbor 69-kV line	12.66	12.66	2021	2021	4	Yes	
relieve overloads or low voltages under contingency	Construct a Hubbard-East Beaver Dam 138-kV line	10	10	2022	2022	34	Yes	
relieve overloads or low voltages under contingency, economics	Construct Shoto to Custer 138-kV line	6.9	6.9	2022	2022	4	Yes	

Table RS-2

Environmental Screening Information for Lines Requiring New Right-of-Way

18th Road to Chandler Double Circuit 138/69 kV Line

	General Description	New line
	Length (miles)	approximately 4
#1	Screening Area (Sq. mi.- length X width)	approximately 15.8
#2	Corridor Sharing Opportunities	Federal, state, & County highways, railroads, and existing transmission line rights-of-way offer opportunity for corridor sharing.
#3	Public Lands	A State of Michigan owned boat landing and park is located in the project area.
#4	Sensitive Resources	The Escanaba River, Reno Creek and associated tributaries and wetlands are located in the screening area.
#5	Cultural Resources	No known cultural resources have been identified in the project area however the potential exists for sites to exist along the Escanaba River corridor.
	Miscellaneous	West Gladstone airport is in the screening area.

Pleasant Prairie - Zion Energy Center 345-kV line

	General Description	New 345 kV transmission line
	Length (miles)	Approximately 6
#1	Screening Area (Sq. mi.- length X width)	Approximately 11.3
#2	Corridor Sharing Opportunities	Existing 345 kV and 138 kV corridors, a railroad corridor, a state highway corridor, and a county highway corridor provide sharing opportunities. There are no state owned lands over which any of the proposed routes cross. There is a former landfill site owned by the City of Kenosha that may require special consideration. Otherwise, the corridor sharing opportunities described above fall within State Highway and RR rights-of-way.
#3	Public Lands	Smaller, isolated wetland areas as well as small tributaries to the Des Plaines River are found within the study area.
#4	Sensitive Resources	There are several cultural resources within the study corridors. The potential for encountering these cultural and historic resources is low to medium.
#5	Cultural Resources	The possible routes identified traverse mainly industrial and agricultural land that include isolated pockets of wetland, including farmed wetlands.
	Miscellaneous	

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

Western Milwaukee County Electric Reliability Project

	General Description	New 138 kV transmission line
	Length (miles)	Approximately 3
#1	Screening Area (Sq. mi.- length X width)	Approximately 2.6
#2	Corridor Sharing Opportunities	Existing transmission lines, city streets, and state highway offer possible corridor sharing opportunities.
#3	Public Lands	DNR Forestry Education Center, Milwaukee County Grounds, and several county parks: Wisconsin Avenue, Cannon, and Gravel Sholes, Hansen Golf course are located in the screening area.
#4	Sensitive Resources	Rare Species Conservation Habitat, Underwood Creek/Parkway, Monarch Butterfly Habitat (nesting and foraging areas), and the Menomonee River are located in the screening area.
#5	Cultural Resources	There are several known burial areas and numerous historic areas and buildings located in the screening area.
	Miscellaneous	Milwaukee Regional Medical Center (MRMC) and MRMC Heliport are located in the screening area. Heavy residential development exists throughout study area. The proposed UWM research park; existing MMSD flood control facilities, Wauwatosa city Landfill, and Wisconsin Lutheran College also are located in the screening area.

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

North Lake Geneva-South Lake Geneva 138-kV line

	General Description	New line
	Length (miles)	approximately 3.4
#1	Screening Area (Sq. mi.)	approximately 21
#2	Corridor Sharing Opportunities	US Hwy 12 and State Hwy 120, along with other roads offer opportunities for corridor sharing, along with the existing transmission line Y-152
#3	Public Lands	Big Foot Beach State Park and other WDNR owned lands are located within the study area.
#4	Sensitive Resources	Lake Geneva, Lake Como, White River, and a number of large wetland complexes are located within the study area.
#5	Cultural Resources	The WHS database identifies archaeological and historic resources in the study area, particularly located near Lake Geneva.
	Miscellaneous	There is a moderate probability on encountering endangered resources.

Erdman-Howards Grove-Plymouth #4-Barnhart 138-kV line

	General Description	New Line
	Length (miles)	approximately 16.7
#1	Screening Area (Sq. mi.)	approximately 105
#2	Corridor Sharing Opportunities	Various federal, state, and county highways, existing transmission line, and railroad rights-of-way offer possible sharing opportunities.
#3	Public Lands	The Schuett Creek Fishery area and various county, city, town, and village parks are located in the project area.
#4	Sensitive Resources	The Sheboygan, Mullet, & Pigeon rivers and Otter, Fisher, and Seven Mile creeks along with associated tributaries and wetlands are located in the project area.
#5	Cultural Resources	The WHS database identifies a number of known archaeological and historic resources in the study area, particularly located near the Sheboygan River corridor.
	Miscellaneous	Sheboygan County memorial airport and Feldmann Field are located in the project area.

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Environmental Screening Information for Lines Requiring New Right-of-Way*

Badger Coulee 345-kV line

	General Description	New 345 kV transmission line
	Length (miles)	Approximately 118
#1	Screening Area (Sq. mi.- length X width)	Approximately 4,234
#2	Corridor Sharing Opportunities	Various federal, state, and county highways, existing transmission line, railroad, and pipeline rights-of-way offer possible sharing opportunities. Richard J Dorer SP (MN), O L Kipp SP (MN), Perrot SP (WI), Wildcat Mountain SP (WI), Rocky Arbor SP (WI), Mirror Lake SP (WI), Natural Bridge SP (WI), Devils Lake SP (WI), Bluemounds SP (WI), Lake Kegonsa SP (WI), Governor Nelson SP (WI), numerous county parks, state natural areas, wildlife areas, trails, and recreational areas are located throughout the screening area. The Upper Mississippi River National Wildlife and Fish Refuge, The Leopold Wetland Management District, and Ft Mc Coy Military Reservation are among the federal lands located in the screening area.
#3	Public Lands	Large, contiguous wetland areas are concentrated near the Mississippi and Wisconsin Rivers and their tributaries. Numerous Wisconsin State Natural Areas exist in the route screening area. The probability of encountering threatened, endangered, and rare species is high.
#4	Sensitive Resources	The Cultural Map of Wisconsin identifies numerous cultural resources within the screening area. The potential for encountering cultural and historic resources is high within the screening area.
#5	Cultural Resources	Principal ecological landscapes include the southwest savanna, western coulee and ridges, central sand plains, and central sand hills in Wisconsin. The western portions of the screening area are located in Wisconsin's driftless area and the Mississippi River valley.
	Miscellaneous	

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

Fairwater-Mackford Prairie 69-kV line

	General Description	New line
	Length (miles)	5
#1	Screening Area (Sq. mi.- length X width)	44.9
#2	Corridor Sharing Opportunities	State and County roads, railroad corridor, and existing electrical distribution lines routes located within the screening corridor offer the potential for corridor sharing.
#3	Public Lands	WDNR owns several parcels of "scattered wildlife" lands along the Grand River corridor.
#4	Sensitive Resources	The Grand river and associated wetlands are located in the project area.
#5	Cultural Resources	The WHS database identifies numerous arcahaeological, architectural and historic sites within the screening area. Cultural Map of Wisconsin does not identify any sites within the screening area.
	Miscellaneous	There is a moderate probability on encountering endangered resources.

Spring Valley-Twin Lakes-South Lake Geneva 138-kV line

	General Description	New Line
	Length (miles)	approximately 15 miles of new line
#1	Screening Area (Sq. mi.- length X width)	approximately 113
#2	Corridor Sharing Opportunities	Existing transmission lines, state and county roads located within the screening area offer the best possibility of corridor sharing.
#3	Public Lands	Numerous local parks, the New Munster state wildlife area and Camp Lake, Hooker Lake, and Silver Lake state fishery areas are located within the screening area.
#4	Sensitive Resources	Silver Lake, Camp Lake, Center Lake Lake Mary and Powers Lake and the Lower Fox (Illinois) River drainage basin are found within the screening area. The New Munster Bog Island, Silver Lake Bog, and Peat Lake State Natural Areas also are located in the screening area.
#5	Cultural Resources	The WHS database identifies archaeological and historic resources in the study area, particularly associated with lakes and rivers.
	Miscellaneous	

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Environmental Screening Information for Lines Requiring New Right-of-Way*

Lake Delton-Birchwood 138-kV line

	General Description	New line
	Length (miles)	approximately 5
#1	Screening Area (Sq. mi.- length X width)	approximately 41
#2	Corridor Sharing Opportunities	Interstate Highway 90/94, US Highway 12, State Highway 23, several county highways and local electrical distribution lines.
#3	Public Lands	Mirror Lake State Park, Dell Creek wildlife area, Hulburt Creek Woods State Natural Area and Hulburt Creek fishery area.
#4	Sensitive Resources	State Natural Areas and State Parks, Dell Creek, Harrison Creek, Lake Delton, Mirror Lake, Lake Blass, International Crane Foundation are located within the screening area.
#5	Cultural Resources	Cultural Map of Wisconsin identifies Dawn Manor, Seth Peterson cottage, International Crane Foundation, and the H.H. Bennett Studio within the screening area.
	Miscellaneous	Ho Chunk tribal lands and the Baraboo Dells Airport are located in the screening area.

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Environmental Screening Information for Lines Requiring New Right-of-Way*

Dubuque-Spring Green-Cardinal 345-kV line

	General Description	New 345 kV transmission line
	Length (miles)	Approximately 80
#1	Screening Area (Sq. mi.- length X width)	Approximately 2,351
#2	Corridor Sharing Opportunities	Various federal, state, and county highways, existing transmission line, railroad, and pipeline rights-of-way offer possible sharing opportunities.
#3	Public Lands	White Pine Hollow State Forest Preserve (IA), Mines of Spain SP (IA), Governor Dodge SP (WI), Tower Hill SP (WI), (WI), Natural Bridge SP (WI), , Bluemounds SP (WI), Governor Nelson SP (WI), Belmont Mound SP (WI), numerous county parks, state natural areas, wildlife areas, trails, and recreational areas are located throughout the screening area. The Upper Mississippi River National Wildlife and Fish Refuge is also located in the screening area.
#4	Sensitive Resources	Large, contiguous wetland areas are concentrated near the Mississippi and Wisconsin Rivers and their tributaries. Numerous Wisconsin State Natural Areas exist in the route screening area. The probability of encountering threatened, endangered, and rare species is high.
#5	Cultural Resources	The WHS database identifies archaeological and historic resources in the study area, particularly associated the Wisconsin and Mississippi River corridors.
	Miscellaneous	Principal ecological landscapes include the southwest savanna, western coulee and ridges, and central sand hills in Wisconsin. The western portions of the screening area are located in Wisconsin's driftless area and the Mississippi and Wisconsin River valleys.

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

Dunn Road-Egg Harbor 69-kV line

	General Description	Construct a second line
	Length (miles)	12.66
#1	Screening Area (Sq. mi.)	82.7
#2	Corridor Sharing Opportunities	State Hwy 42 and existing transmission line X-24A provide the best opportunities for corridor sharing, along with county and local roads.
#3	Public Lands	None identified
#4	Sensitive Resources	The study area is adjacent to Lake Michigan.
#5	Cultural Resources	The WHS database identifies several architectural and historic sites within the study area, many are located near State Hwy 42.
	Miscellaneous	There is a high probability of encountering endangered resources.

Hubbard - East Beaver Dam 138-kV line

	General Description	New line
	Length (miles)	10
#1	Screening Area (Sq. mi.)	approximately 65
#2	Corridor Sharing Opportunities	Highway 33, county highways, and a railroad right-of-way offer possible sharing opportunities.
#3	Public Lands	Portions of Horicon Marsh and Shaw Marsh wildlife areas and the Wild Goose Trail are within the screening area.
#4	Sensitive Resources	Horicon and Shaw Marsh, Rock River, Pratt Creek, Schulz Creek, Crystal Creek, Park Creek and Beaver Dam River are located in the screening area.
#5	Cultural Resources	Cultural Map of Wisconsin does not identify any sites within the screening area.
	Miscellaneous	

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

Shoto-Custer 138-kV line

	General Description	New line
	Length (miles)	6.9
#1	Screening Area (Sq. mi.)	54.3
#2	Corridor Sharing Opportunities	Existing transmission lines, state, county and local roads provide opportunities for corridor sharing.
#3	Public Lands	Several local parks and the Manitowoc County Airport are located in the project area.
#4	Sensitive Resources	The Manitowoc River, Wet Twin River, several unnamed tributaries and associated wetlands are located in the project area.
#5	Cultural Resources	The WHS database identifies numerous archaeological, architectural and historic sites within the project area.
	Miscellaneous	There is a low to moderate probability of encountering endangered resources.

NOTES:

#1	Screening Area Width:	For lines 0-5 miles long, screening area width equals length of segment: for lines 5-15 miles long, screening area width equals 5 miles; for lines > 15 miles long, screening area width equals 30% of line length.
#2	Corridor Sharing Opportunities:	Identify dominant corridor types.
#3	Public Lands:	Identify properties by name.
#4	Sensitive Resources:	List major stream crossings, significant topographic features, designated natural areas, etc.
#5	Cultural Resources:	List resources shown on the statewide cultural resources map.

Table RS-3
Transmission Line Rebuilds/Reconductors, New Circuits and Voltage Conversions on
Existing Right-of-Way

Identified need	Lines to be rebuilt/reconducted on existing ROW	Approx. mileage of rebuilt, reconducted or uprated lines	System need year	Projected In-service year	Planning zone	Environmental screening provided?	Comments
asset renewal	Partial rebuild Berlin-Wautoma 69-kV line	22.9	2011	2011	1	Yes	
asset renewal	Partial rebuild Whitcomb-Deer Trail 69-kV line	25.8	2010	2011	1	Yes	
asset renewal	Partial rebuild Nine Mile-Roberts 69-kV line	54.6	2011	2012	2	Yes	
asset renewal	Partial rebuild Rio-North Randolph 69-kV line	19.7	2011	2011	3	Yes	
asset renewal	Partial rebuild Spring Green-Stagecoach 69-kV line	24.6	2010	2011	3	Yes	
generation interconnection, relieve overloads or low voltages under contingency	Rebuild Brodhead to South Monroe 69-kV line	18	2011	2012	3	Yes	
relieve overloads or low voltages under contingency	Rebuild Sunset Point to Pearl Ave 69-kV line	2.37	2011	2012	4	Yes	
asset renewal	Underground cable replacement Sycamore-East Towne 69-kV	0.45	2012	2012	3	Yes	
relieve overloads or low voltages under contingency	Construct Canal-Dunn Road 138-kV line	7.64	2012	2012	4	Yes	
relieve overloads or low voltages under contingency, asset renewal, potential T-D interconnection request	Partial rebuild Dane-Dam Heights 69-kV line	5	2015	2012	3	Yes	
economics, relieve overloads or low voltages under contingency	Construct Monroe County-Council Creek 161-kV line	17.9	2013	2013	1	Yes	
economics, relieve overloads or low voltages under contingency	Uprate Council Creek-Petenwell 138-kV line	32	2013	2013	1	Yes	
asset renewal	Rebuild Concord-Rubicon 138-kV line	13	2013	2016	3	Yes	
relieve overloads or low voltages under contingency	Rebuild M38-Atlantic 69-kV line	22	2009	2013	2	Yes	
relieve overloads or low voltages under contingency, replace aging facilities	Rebuild Sun Valley Tap to Oregon 69-kV line	11	2020	2020	3	Yes	
asset renewal	Rebuild Edgewood-St. Martins 138-kV line	7.2	2014	2017	5	Yes	
asset renewal	Rebuild Edgewood-Mukwonago 138-kV line	7	2014	2017	5	Yes	
asset renewal	Rebuild Concord-Cooney 138-kV line	10.9	2014	2015	5	Yes	
asset renewal	Rebuild St. Lawrence-Hartford 138-kV line	5.2	2014	2014	5	Yes	
asset renewal	Underground cable replacement Redwood-First Avenue 69-kV line	0.8	2015	2015	4	Yes	
asset renewal	Rebuild Butte des Morts-Neevin 138-kV line	3	2015	2015	4	Yes	
asset renewal	Rebuild Dyckesville-Sawyer 69-kV line	24.8	2015	2015	4	Yes	
asset renewal	Partial rebuild Merrill Hills-Waukesha 138-kV line	12.3	2015	2015	5	Yes	
asset renewal	Rebuild Mears Corners-Sunset Point 138-kV line	4.1	2016	2016	4	Yes	
asset renewal	Rebuild Woodenshoe-Mears Corners 138-kV line	2.7	2016	2016	4	Yes	
asset renewal	Rebuild Wesmark-Manrap 69-kV line	19.7	2016	2016	4	Yes	
asset renewal	Rebuild Oak Street-Highway V 69-kV line	6	2016	2016	4	Yes	
asset renewal	Rebuild Finger Road-Danz 69-kV line	3.7	2016	2016	4	Yes	
asset renewal	Rebuild Neevin-Woodenshoe 138-kV line	3.4	2016	2016	4	Yes	
asset renewal	Partial rebuild Montello-Wautoma 69-kV line	20	2017	2017	1	Yes	
relieve overloads or low voltages under contingency, economic benefits	Construct 69-kV double-circuit line between McCue and Lamar substations	4.0	2017	2017	3	Yes	
asset renewal	Underground cable replacement Danz-University 69-kV line	2.7	2017	2017	4	Yes	

Table RS-3
Transmission Line Rebuilds/Reconductors, New Circuits and Voltage Conversions on
Existing Right-of-Way

Identified need	Lines to be rebuilt/reconstructed on existing ROW	Approx. mileage of rebuilt, reconducted or uprated lines	System need year	Projected In-service year	Planning zone	Environmental screening provided?	Comments
asset renewal	Rebuild North Appleton-Butte Des Morts 138-kV line	11.9	2017	2017	4	Yes	
asset renewal	Partial rebuild Summit-Waukesha 138-kV line	14.7	2017	2017	5	Yes	
relieve overloads or low voltages under contingency, replace aging facilities	Rebuild Colley Road-Brick Church 69-kV line	19.7	2018	2018	3	Yes	
asset renewal	Rebuild Dam Heights-Portage 69-kV line	23.5	2018	2016	3	Yes	
asset renewal	Rebuild Hillman-Eden 69-kV line	28	2018	2018	3	Yes	
asset renewal	Rebuild Paris-Albers 138-kV line	12.4	2018	2016	5	Yes	
asset renewal	Rebuild Plover-Whiting 115-kV line	5.7	2019	2019	1	Yes	
relieve overloads or low voltages under contingency	Uprate Royster to Sycamore 69-kV line	3.35	2019	2018	3	Yes	
asset renewal	Underground cable replacement West Middleton-Stagecoach 69-kV line	4.3	2019	2019	3	Yes	
asset renewal	Rebuild Goodman-Caldron Falls 69-kV line	21.3	2019	2019	4	Yes	
asset renewal	Rebuild New Holstein-Custer 69-kV line	21.8	2019	2015	4	Yes	
asset renewal	Underground cable replacement Lodestar-Erdman 69-kV line	5.3	2019	2019	4	Yes	
asset renewal	Underwater cable replacement Straits-McGulpin 69-kV line	6.2	2020	2020	2	Yes	
relieve overloads or low voltages under contingency	Construct Cardinal-Blount 138-kV line	5	2020	2020	3	Yes	
asset renewal	Underground cable replacement Erdman-Edgewater 69-kV line	0.7	2021	2021	4	Yes	
asset renewal	Rebuild Doylestown-Rio Pumping Station 69-kV line	11.5	2013	2013	3	Yes	
asset renewal	Partial rebuild Kirkwood-Trienda 138-kV line	16	2012	2012	3	Yes	
relieve overloads or low voltages under contingency	Reconductor Kansas-Harbor 138-kV line	8.4	TBD	TBD	5	Yes	
relieve overloads or low voltages under contingency	Rebuild Straits-Pine River lines 6904/5 for 138 kV and operate at 69 kV	25.3	2014	2014	2	Yes	
accommodate new generation	Convert Forest Junction-Howards Grove and part of Howards Grove-Holland 138-kV lines to double-circuit 345-kV operation	51	2018	2018	4	Yes	
relieve overloads or low voltages under contingency	Rebuild West Middleton-Pheasant Branch 69-kV line with double circuit	5	2022	2022	3	Yes	

*Table RS-4
Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way*

<u>Berlin-Wautoma 69-kV line partial rebuild</u>	
General Description	asset renewal of 69-kV line
Length (miles)	22.9
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several waterways including the Fox River, several unnamed streams, and associated wetlands.
#5 Cultural Resources	One known archaeological site is listed by WHS as occurring along this route.
Miscellaneous	There is a moderate probability of encountering rare species along this route.
<u>Whitcomb-Deer Trail 69-kV line partial rebuild</u>	
General Description	asset renewal of 69-kV line
Length (miles)	25.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The route crosses State owned Wauwasha State Trail and the Mountain Bay Recreational Trail.
#4 Sensitive Resources	The route crosses numerous waterways listed as Outstanding or Exceptional (OER) Resource waters as well as numerous trout streams. Sensitive resources are extensive along this route, as OERs are crossed 8 times.
#5 Cultural Resources	One archaeological site is listed by WHS as occurring along this route.
Miscellaneous	Because of the sensitive resource waters there is a high probability of encountering rare species along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Nine Mile-Roberts 69-kV line partial rebuild		
	General Description	Asset renewal of 69-kV line
	Length (miles)	54.6
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	There are numerous significant wetlands and waterways along the project route.
#5	Cultural Resources	Due to the undeveloped nature of much of the lands and the number of waterways along this line route, there is a moderate probability of identifying archaeological and historic sites in the vicinity of the corridor.
	Miscellaneous	Several rare species are known to exist along the project route.
Rio-North Randolph 69-kV line partial rebuild		
	General Description	asset renewal of 69-kV line
	Length (miles)	19.7
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	The route crosses the State owned Peter Helland Wildlife area.
#4	Sensitive Resources	The route crosses numerous waterways including Jennings Creek (a trout stream), the North Branch Duck Creek, and associated wetlands.
#5	Cultural Resources	One archaeological site is listed by WHS as occurring along this route.
	Miscellaneous	There is a high probability of encountering rare species along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Spring Green-Stagecoach 69-kV line partial rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	24.6
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	
#4 Sensitive Resources	Arena Pines Sand Barrens State Natural Area is identified along the route. The route also crosses State owned lands in the Black Earth Creek Fishery area and the Lower Wisconsin Riverway.
#5 Cultural Resources	The route crosses numerous waterways including several trout streams. Named waterways include The Wisconsin River, Blue Mounds Creek, Black Earth Creek, Halfway Prairie Creek, and Vermont Creek. In addition, Garfoot Creek, an Exceptional Resource Water, is crossed near Stage Coach SW.
Miscellaneous	Several archaeological sites are listed by WHS as occurring along this route. There is a very high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.
Brodhead-South Monroe 69-kV line rebuild	
General Description	Rebuild
Length (miles)	18
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	None identified
#4 Sensitive Resources	The existing line crosses a number of streams.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies a number of historic sites in and around the City of Monroe.
Miscellaneous	There is a low potential for encountering endangered resources.
Sunset Point-Pearl Avenue 69-kV line rebuild	
General Description	Rebuild a portion of the line
Length (miles)	2.37
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Riverside Cemetery
#4 Sensitive Resources	The existing line is adjacent to the Fox River, and passes through a few wetland areas.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies several historic sites located in the vicinity of the existing corridor along the Fox River.
Miscellaneous	The existing line passes through primarily urbanized areas.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Sycamore-East Towne 69-kV underground cable replacement		
General Description		asset renewal of 69-kV underground line
Length (miles)		0.45 miles of underground cable
#1 Screening Area (Sq. mi.- length X width)		Existing corridor
#2 Corridor Sharing Opportunities		N/A – existing transmission line corridor.
#3 Public Lands		No state owned lands identified on the route.
#4 Sensitive Resources		The majority of the route crosses a wetland complex along Starkweather creek but the line is located under a city street in this area.
#5 Cultural Resources		No known archaeological sites are listed by WHS as occurring along the underground segment of the route.
Miscellaneous		There is a low probability of encountering rare species along this route.
Canal-Dunn Road 69-kV line		
General Description		Construct line
Length (miles)		7.64
#1 Screening Area (Sq. mi.- length X width)		Existing corridor
#2 Corridor Sharing Opportunities		N/A – existing transmission line corridor.
#3 Public Lands		None identified
#4 Sensitive Resources		The existing line crosses Sturgeon Bay and one unnamed stream.
#5 Cultural Resources		There is low probability of encountering endangered resources.
Miscellaneous		
Dane-Dam Heights 69-kV line partial rebuild		
General Description		Rebuild 69-kV line
Length (miles)		5
#1 Screening Area (Sq. mi.- length X width)		Existing corridor
#2 Corridor Sharing Opportunities		N/A – existing transmission line corridor.
#3 Public Lands		Lodi Marsh Wildlife area is located along the route and Lodi Marsh
#4 Sensitive Resources		The Wisconsin River, Spring Creek, and several unnamed
#5 Cultural Resources		There are several known archaeological sites located along the line
Miscellaneous		There is a moderate to high likelihood of encountering rare species
Monroe County-Council Creek 161-kV line		
General Description		Construct line
Length (miles)		20
#1 Screening Area (Sq. mi.- length X width)		Existing corridor
#2 Corridor Sharing Opportunities		N/A – existing transmission line corridor.
#3 Public Lands		Elroy-Sparta State Trail, Fort McCoy Barrens State Natural Area
#4 Sensitive Resources		wetland areas, including: Farmers Valley Creek, Silver Creek, Chub
#5 Cultural Resources		cities of Tomah and Sparta, along with the Elroy-Sparta state trail.
Miscellaneous		resources.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Uprate Council Creek-Petenwell 138-kV line

General Description	Rebuild 138-kV line
Length (miles)	32
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands are crossed along the route.
#4 Sensitive Resources	The line crosses Kreyer Creek, Lemonweir River, Beaver Creek, S.
#5 Cultural Resources	Wisconsin Historical Society information identifies several known
Miscellaneous	Due to the proximity of this route to Necedah National Wildlife

Concord-Rubicon 138-kV line rebuild

General Description	asset renewal of 138-kV line
Length (miles)	13
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	the Rock River, Mud Run Creek, and numerous wetlands.
#5 Cultural Resources	route.
Miscellaneous	this route due to the numerous waterways, wetlands, and other

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

M38-Atlantic 69-kV line rebuild	
General Description	Rebuild
Length (miles)	22
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Copper Country State Forest
#4 Sensitive Resources	with associated wetlands and tributaries.
#5 Cultural Resources	rivers located in the screening area.
Miscellaneous	
Sun Valley Tap-Oregon 69-kV line rebuild	
General Description	Rebuild
Length (miles)	11
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A-Existing transmission line corridor.
#3 Public Lands	USFWS land
#4 Sensitive Resources	potential to encounter threatened and endangered species.
#5 Cultural Resources	the vicinity of the existing line
Miscellaneous	Storytown airport, Spiegel, Peterson, and Mc Manus Hoonch-na-
Edgewood-St. Martins 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	7.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Muskego Park Hardwoods is adjacent to the route
#4 Sensitive Resources	Several wetlands are crossed by the existing route.
#5 Cultural Resources	The route crosses several archaeological sites.
Miscellaneous	existing rare plant community, along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Edgewood-Mukwonago 138-kV line rebuild		
	General Description	asset renewal of 138-kV line
	Length (miles)	7
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	wetlands.
#5	Cultural Resources	The route crosses several archaeological sites.
	Miscellaneous	route with the extensive wetlands and rare plant communities
Concord-Cooney 138-kV line rebuild		
	General Description	asset renewal of 138-kV line
	Length (miles)	10.9
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	project route, along with several tributaries and numerous
#5	Cultural Resources	occurring along this route.
	Miscellaneous	along this route due to the numerous waterways, wetlands, and
St. Lawrence-Hartford 138-kV line rebuild		
	General Description	asset renewal of 138-kV line
	Length (miles)	5.2
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	unnamed Rubicon River tributary as well as associated wetlands.
#5	Cultural Resources	occurring along this route.
	Miscellaneous	route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Redwood-First Avenue 69-kV underwater cable replacement

General Description	asset renewal of 69-kV line
Length (miles)	0.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The submarine portion of the line crosses Sturgeon Bay.
#5 Cultural Resources	route.
Miscellaneous	this route due to the project crossing Sturgeon Bay.

Butte De Morts-Neevin 138-kV line rebuild

General Description	asset renewal of 138-kV line
Length (miles)	3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses two unnamed creeks and associated wetlands.
#5 Cultural Resources	route.
Miscellaneous	route due to the numerous waterways, wetlands, and other habitats.

Dyckesville-Sawyer 69-kV line rebuild

General Description	asset renewal of 69-kV line
Length (miles)	24.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	Sugar Creek, Olson Creek, the Red River, and the Ahnapee River.
#5 Cultural Resources	The route crosses several archeological sites according to WHS.
Miscellaneous	Several rare species are known to exist along the project route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Merrill Hills-Waukesha 138-kV line partial rebuild

	General Description	asset renewal of 138-kV line
	Length (miles)	12.3
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	to Pewaukee lakes, and also crosses several significant wetlands.
#5	Cultural Resources	occurring along this route.
	Miscellaneous	this route due to the waterways, wetlands, and other habitats.

Mears Corners-Sunset Point 138-kV line rebuild

	General Description	asset renewal of 138-kV line
	Length (miles)	4.1
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	wetlands.
#5	Cultural Resources	archaeological site is in close proximity.
	Miscellaneous	this route due to the waterways and wetlands.

Woodenshoe-Mears Corners 138-kV line rebuild

	General Description	asset renewal of 138-kV line
	Length (miles)	2.7
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	The route crosses four unnamed waterways.
#5	Cultural Resources	No historic sites are listed by WHS as occurring along this route.
	Miscellaneous	route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Wesmark-Manrap 69-kV line rebuild		
	General Description	asset renewal of 69-kV line
	Length (miles)	19.7
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	the Manitowoc River.
#5	Cultural Resources	The route crosses several archeological sites according to WHS.
	Miscellaneous	There is a low to moderate possibility of encountering rare species
Oak Street-Highway V 69-kV line rebuild		
	General Description	asset renewal of 69-kV line
	Length (miles)	6
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	River and the East River, and associated wetlands.
#5	Cultural Resources	Several archaeological sites are crossed by this line.
	Miscellaneous	on or near this route.
Finger Road-Danz 69-kV line rebuild		
	General Description	asset renewal of 69-kV line
	Length (miles)	3.7
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	The route crosses Baird creek and a small wetland.
#5	Cultural Resources	route.
	Miscellaneous	along this route due to the generally urban setting.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Neevin-Woodenshoe 138-kV line rebuild		
	General Description	asset renewal of 138-kV line
	Length (miles)	3.4
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	The route crosses six small, unnamed waterways and one wetland.
#5	Cultural Resources	along this route.
	Miscellaneous	route.
Montello-Wautoma 69-kV line partial rebuild		
	General Description	asset renewal of 69-kV line
	Length (miles)	20
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	area, the French Creek Wildlife Area, and lands along the shore of
#4	Sensitive Resources	The route crosses numerous waterways and associated wetlands.
#5	Cultural Resources	No archeological sites are listed by WHS as occurring along this route.
	Miscellaneous	There is a low probability of encountering rare species along this route.
McCue-Lamar 69-kV double-circuit line		
	General Description	Add second circuit
	Length (miles)	3.5
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor along railroad.
#3	Public Lands	No state-owned lands were identified along the route.
#4	Sensitive Resources	There are no significant waterways or wetlands crossed along the route.
#5	Cultural Resources	There are no archaeological sites located along the line route identified in the WHS database.
	Miscellaneous	There is a low likelihood of encountering rare species on this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Danz-University 69-kV underground cable replacement	
General Description	asset renewal of 69-kV line
Length (miles)	2.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	One large wetland complex is crossed by the existing line route.
Miscellaneous	One archeological site is crossed by the route according to WHS. Rare plants are known to occur along this route.
North Appleton-Butte de Morts 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	11.9
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	The route crosses numerous waterways and associated wetlands. No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.
Waukesha-Summit 138-kV line partial rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	14.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several unnamed waterways and associated wetlands and runs adjacent to three lakes.
#5 Cultural Resources	Several archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Colley Road-Brick Church 69-kV line rebuild		
	General Description	Rebuild 69-kV line
	Length (miles)	20
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state-owned lands are crossed along the route.
#4	Sensitive Resources	The line route crosses Spring Brook, Little Turtle Creek (Outstanding/Exceptional Water Resource), a few unnamed streams and wetlands associated with the waterways. Most of the line route is located along public roads or in agricultural lands.
#5	Cultural Resources	The Cultural Map of Wisconsin identifies the Clinton Village Hall and the Jefferson Prairie Norwegian Settlement near the existing corridor.
	Miscellaneous	Due to the primarily agricultural setting of this line, there is a moderate likelihood of encountering rare species on this route.
Dam Heights-Portage 69-kV line rebuild		
	General Description	asset renewal of 69-kV line
	Length (miles)	23.5
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	The route crosses portions of the State owned Pine Island Wildlife area and the Federally owned Leopold Wetland Management District.
#4	Sensitive Resources	Numerous wetlands and waterways exist along this route. One of these waterways is a trout stream.
#5	Cultural Resources	Several archaeological sites are crossed by this line.
	Miscellaneous	Numerous rare plant and animal species are known to occur along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Hillman-Eden 69-kV line rebuild		
General Description		asset renewal of 69-kV line
Length (miles)		28
#1 Screening Area (Sq. mi.- length X width)		Existing corridor
#2 Corridor Sharing Opportunities		N/A – existing transmission line corridor.
#3 Public Lands		The line crosses the State owned Pecatonica State Trail near Belmont.
#4 Sensitive Resources		The route crosses numerous waterways including the Galena River, associated wetlands, and several unnamed trout streams.
#5 Cultural Resources		Several historic sites are listed by WHS as occurring along this route.
Miscellaneous		There is a high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.
Paris-Albers 138-kV line rebuild		
General Description		asset renewal of 138-kV line
Length (miles)		12.4
#1 Screening Area (Sq. mi.- length X width)		Existing corridor
#2 Corridor Sharing Opportunities		N/A – existing transmission line corridor.
#3 Public Lands		No state owned lands identified on the route.
#4 Sensitive Resources		The route crosses several waterways including the Kilbourn Road Ditch, Pike Creek, and several relatively small wetlands.
#5 Cultural Resources		Several archaeological sites are listed by WHS as occurring along this route.
Miscellaneous		There is a low to moderate probability of encountering rare species along this route.
Plover-Whiting 115-kV line rebuild		
General Description		asset renewal of 115-kV line
Length (miles)		5.7
#1 Screening Area (Sq. mi.- length X width)		Existing corridor
#2 Corridor Sharing Opportunities		N/A – existing transmission line corridor.
#3 Public Lands		No state owned lands identified on the route.
#4 Sensitive Resources		The route crosses the Little Plover River, an exceptional resource water and trout stream, the Plover River Flowage, and significant floodplain wetlands.
#5 Cultural Resources		The route crosses several archaeological sites including several burial mounds.
Miscellaneous		There is a high probability of encountering rare species along this route, as many rare species occurrences are documented throughout the route, with significant undisturbed wetland and forest habitats.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Royster to Sycamore 69-kV line uprate	
General Description	Uprate existing line
Length (miles)	3.4
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands were identified along the route.
#4 Sensitive Resources	Starkweather Creek and associated wetlands are located along the line route.
#5 Cultural Resources	There is one known archaeological sites located along the line route.
Miscellaneous	A portion of the route is located along a bike trail.
West Middleton-Stagecoach 69-kV underground cable replacement	
General Description	Reconductor 69-kV line
Length (miles)	4.28
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses Black Earth Creek, an outstanding resource water, and its associated wetlands, as well as several smaller tributaries.
#5 Cultural Resources	No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route.
Goodman-Caldron Falls 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	21.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	The existing route crosses three trout streams, two of which are Outstanding or Exceptional Resource Waters. In addition the Peshtigo River near Caldron Falls and two other streams and associated wetlands are crossed by the route. A number of rare species are identified as occurring along and adjacent to the route. No cultural resources were identified along the route. However, the proximity of the route to a number of waterways raises the possibility of unknown cultural resources occurring.
Miscellaneous	

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

New Holstein-Custer 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	21.8 miles
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	The route crosses as many as 15 creeks and associated wetlands.
Miscellaneous	The route crosses several archeological sites according to WHS. There is a moderate likelihood of encountering rare species on this route, based on several known occurrences in and adjacent to the project route.
Lodestar-Erdman 69-kV underground cable replacement	
General Description	asset renewal of 69-kV line
Length (miles)	5.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses the Pigeon River, but does not cross any significant wetlands.
#5 Cultural Resources	No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There are historic occurrences of several rare plant species along this route.
Straits-McGulpin 138-kV underwater cable replacement	
General Description	asset renewal of 138-kV line
Length (miles)	6.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	The overhead portion of the route crosses wooded areas, while the underground portion crosses under Lake Michigan to McGulpin. There is a moderate - high probability of encountering archaeological resources along the near-shore area of Lake Michigan.
Miscellaneous	There is a high probability of encountering rare species along this route due to the waterways, wetlands, and other habitats.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Cardinal-Blount 138-kV line	
General Description	Construct 138-kV line
Length (miles)	5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The existing line parallels a recreational trail and golf course.
#4 Sensitive Resources	This line is primarily through a highly urbanized area, much of the existing line is underground. There are a few small wetlands and unnamed streams near the existing overhead portions east of West Middleton.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies a number of historic resources in the vicinity of the existing corridor.
Miscellaneous	
Erdman-Edgewater 69-kV underground cable replacement	
General Description	asset renewal of underground 69-kV line
Length (miles)	0.65 (Underground portion only)
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	One unnamed creek is crossed (underneath) by this route.
#5 Cultural Resources	No archaeological or historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.
Doylestown-Rio Pumping Station 69-kV rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	11.5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	
#4 Sensitive Resources	Grassy Lake Wildlife area, Grassy Lake state natural area, and U.S. Fish & Wildlife Service owned Manthey, Doylestown, Ludwig Waterfowl production areas are located along the project route. The route passes near Grassy Lake Wildlife area, Grassy Lake state natural area, Manthey, Doylestown, and Ludwig Waterfowl production areas and associated wetlands.
#5 Cultural Resources	There are no known archaeological sites listed by WHS as occurring along this route.
Miscellaneous	There is a moderate probability of encountering rare species along this route. Gilbert Field and Higgins airports are located near the route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Kirkwood - Trienda 138-kV partial rebuild	
General Description	asset renewal of 138-kV line (str 796-812)
Length (miles)	1.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The majority of the segment is located on Pine Island Wildlife area and Pine Island State Natural Area both owned by the Wisconsin Department of Natural Resources.
#4 Sensitive Resources	The route passes through a designated state natural area, a state wildlife area, and crosses the Wisconsin River and associated wetlands.
#5 Cultural Resources	There are no known archaeological sites listed by WHS as occurring along this route, however, the location along the Wisconsin River may contain previously un-identified sites.
Miscellaneous	There is a very high probability of encountering both terrestrial and aquatic rare species along this route.
Kansas-Harbor 138-kV line reconductor	
General Description	Reconductor underground portion of existing 138-kV line
Length (miles)	5.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The majority of the existing line is located below public roads.
#4 Sensitive Resources	The line route crosses under the Kinnikinnic River in the Milwaukee Harbor.
#5 Cultural Resources	Due to the location of the line primarily under public roads, there is a low probability of identifying intact archaeological sites in the vicinity of the corridor.
Miscellaneous	There is a low probability of encountering rare species. This line passes through primarily developed urban areas.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Straits-Pine River 69-kV rebuild	
General Description	asset renewal of 69-kV line to 138-kV standards
Length (miles)	25.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	
#4 Sensitive Resources	The majority of the line is located in the Hiawatha National Forest. The route passes through extensive wetlands and wooded lands, runs adjacent to Chain and Platz lakes, and crosses numerous streams including the Pine River and its tributaries.
#5 Cultural Resources	Based on the location of the line near the lake Michigan shoreline and tributary waterways there is a moderate to high probability of encountering archaeological sites along this route.
Miscellaneous	There is a high probability of encountering rare species along this route.
Convert Forest Junction - Howards Grove and part of Howards Grove-Holland 138-kV lines to 345-kV operation	
General Description	Convert 138-kV lines to 345-kV operation
Length (miles)	51
#1 Screening Area (Sq. mi.- length X width)	Existing transmission line corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The line does not cross any large public lands.
#4 Sensitive Resources	
#5 Cultural Resources	The line crosses the Pigeon, Sheboygan, Manitowoc, Mullet, Onion, Meeme, and Branch (OEWR) rivers, Mud Creek, and associated wetlands. The Brillion wildlife area is near the line route. There are a few known archaeological sites identified in the WHS records near or along the line route.
Miscellaneous	Sheboygan County Municipal airport is near the line route.
West Middleton - Pheasant Branch 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Limited publically owned lands are located along the line route.
#4 Sensitive Resources	Black Earth Creek (an outstanding exceptional resource water), Pheasant Branch and scattered wetlands are present along the project route.
#5 Cultural Resources	The WHS records identify a few archaeological sites along the line route.
Miscellaneous	There is a low - moderate probability of encountering rare species. This line passes primarily through urban lands.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

NOTES:

- | | | |
|----|---------------------------------|--|
| #1 | Screening Area Width: | For projects on existing rights-of-way the screening area consists of the current location and lands immediately adjacent. |
| #2 | Corridor Sharing Opportunities: | Identify dominant corridor types. |
| #3 | Public Lands: | Identify properties by name. |
| #4 | Sensitive Resources: | List major stream crossings, significant topographic features, designated natural areas, etc. |
| #5 | Cultural Resources: | List resources shown on the statewide cultural resources map. |