INDIANA INTEGRATED RESOURCE PLANNING REPORT

to the:

Indiana Utility Regulatory Commission

Appendix – Volume 1

Submitted Pursuant to:

Commission Rule 170 IAC 4-7

March 28, 2025

Appendix Volume 1

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Exhibit A Load Forecast Tables

Exhibit A-1
Indiana Michigan Power Company-Indiana
Annual Internal Energy Requirements and Growth Rates
2014-2044

	Residential Sales		Commercial Sales		Industrial Sales		Other Internal Sales		Losses		Total Internal Energy Requirements	
Year	GWH	% Growth	GWH	% Growth	GWH	% Growth	GWH	% Growth	GWH	% Growth	GWH	% Growth
Actual												
2014	4,556	---	4,090	---	6,809	---	4,479	---	1,660	---	21,594	---
2015	4,314	-5.3	4,086	-0.1	6,729	-1.2	4,412	-1.5	1,365	-17.7	20,906	-3.2
2016	4,392	1.8	4,151	1.6	6,948	3.3	4,487	1.7	1,148	-16.0	21,127	1.1
2017	4,165	-5.2	3,977	-4.2	6,965	0.2	4,422	-1.4	1,038	-9.5	20,568	-2.6
2018	4,510	8.3	4,042	1.6	7,018	0.8	4,055	-8.3	1,580	52.1	21,204	3.1
2019	4,246	-5.8	3,910	-3.3	6,794	-3.2	3,925	-3.2	1,505	-4.7	20,380	-3.9
2020	4,268	0.5	3,736	-4.5	6,461	-4.9	3,210	-18.2	1,331	-11.6	19,005	-6.7
2021	4,278	0.3	3,831	2.6	6,575	1.8	2,904	-9.5	1,507	13.3	19,095	0.5
2022	4,332	1.2	3,933	2.7	6,589	0.2	2,897	-0.3	1,430	-5.1	19,181	0.4
2023	4,071	-6.0	3,963	0.8	6,518	-1.1	2,740	-5.4	1,310	-8.4	18,602	-3.0
Forecast												
2024*	4,206	3.3	4,313	8.8	6,616	1.5	2,750	0.4	1,277	-2.5	19,161	3.0
2025	4,260	1.3	8,784	103.7	6,737	1.8	2,802	1.9	1,404	9.9	23,987	25.2
2026	4,232	-0.7	14,779	68.2	6,789	0.8	2,808	0.2	1,832	30.5	30,440	26.9
2027	4,201	-0.7	18,641	26.1	7,476	10.1	2,816	0.3	2,194	19.8	35,329	16.1
2028	4,186	-0.4	23,478	26.0	7,531	0.7	2,830	0.5	2,541	15.8	40,566	14.8
2029	4,178	-0.2	29,500	25.6	7,584	0.7	2,834	0.1	2,908	14.4	47,003	15.9
2030	4,294	2.8	37,994	28.8	7,750	2.2	2,843	0.3	3,024	4.0	55,905	18.9
2031	4,033	-6.1	39,053	2.8	7,547	-2.6	2,849	0.2	3,953	30.7	57,436	2.7
2032	4,146	2.8	39,165	0.3	7,692	1.9	2,862	0.4	3,634	-8.1	57,498	0.1
2033	4,166	0.5	39,168	0.0	7,744	0.7	2,866	0.1	3,613	-0.6	57,558	0.1
2034	4,180	0.3	41,508	6.0	7,788	0.6	1,026	-64.2	3,576	-1.0	58,078	0.9
2035	4,197	0.4	45,502	9.6	7,819	0.4	352	-65.7	3,763	5.2	61,632	6.1
2036	4,219	0.5	49,475	8.7	7,850	0.4	352	0.1	4,002	6.3	65,898	6.9
2037	4,240	0.5	51,561	4.2	7,881	0.4	352	0.1	4,135	3.3	68,169	3.4
2038	4,261	0.5	51,765	0.4	7,915	0.4	169	-52.1	4,137	0.0	68,246	0.1
2039	4,281	0.5	51,762	0.0	7,950	0.4	41	-76.0	4,134	-0.1	68,168	-0.1
2040	4,296	0.4	51,761	0.0	7,982	0.4	41	0.0	4,154	0.5	68,234	0.1
2041	4,322	0.6	51,771	0.0	8,018	0.5	41	0.1	4,141	-0.3	68,292	0.1
2042	4,344	0.5	51,772	0.0	8,045	0.3	41	0.0	4,146	0.1	68,348	0.1
2043	4,368	0.5	51,773	0.0	8,074	0.4	41	0.0	4,152	0.1	68,407	0.1
2044	4,397	0.7	51,776	0.0	8,109	0.4	41	0.0	4,159	0.2	68,482	0.1
***Includes 9 months actual and 3 months forecast data.**												
Average Annual Growth Rates												
2014-2023		-1.2		-0.4		-0.5		-5.3		-2.6		-1.6
2025-2044		0.2		9.8		1.0		-20.0		5.9		5.7

Exhibit A-2
Indiana Michigan Power Company - Indiana
Composition of Forecast of Other Internal Sales (GWh)
2025-2044

	Indiana		
Year	Street Lighting	Wholesale	Total
2025	41	2,761	2,802
2026	41	2,767	2,808
2027	41	2,776	2,816
2028	41	2,789	2,830
2029	41	2,793	2,834
2030	41	2,802	2,843
2031	40	2,809	2,849
2032	41	2,822	2,862
2033	41	2,825	2,866
2034	41	985	1,026
2035	41	311	352
2036	41	311	352
2037	41	312	352
2038	41	128	169
2039	41	0	41
2040	41	0	41
2041	41	0	41
2042	41	0	41
2043	41	0	41
2044	41	0	41

Revised

Exhibit A-3
Indiana Michigan Power Company-Indiana
Seasonal and Annual Peak Internal Demands, Energy Requirements and Load Factor
2014-2044

	Summer Peak			Preceding Winter Peak			Annual Peak, Energy and Load Factor				
	Date	MW	% Growth	Date	MW	% Growth	MW	% Growth	GWH	% Growth	Load Factor %
Actual											
2014	09/05/14	3,645	---	01/22/14	3,318	---	3,645	---	21,594	---	67.6
2015	07/28/15	3,544	-2.8	01/14/15	3,305	-0.4	3,544	-2.8	20,906	-3.2	67.3
2016	08/11/16	3,660	3.3	01/11/16	3,070	-7.1	3,660	3.3	21,127	1.1	65.9
2017	07/19/17	3,436	-6.1	12/15/16	3,159	2.9	3,436	-6.1	20,568	-2.6	68.1
2018	06/18/18	3,629	5.6	01/18/18	3,165	0.2	3,629	5.6	21,204	3.1	66.7
2019	07/15/19	3,465	-4.5	01/30/19	3,167	0.1	3,465	-4.5	20,380	-3.9	67.1
2020	07/09/20	3,318	-4.3	12/19/19	2,912	-8.0	3,318	-4.3	19,005	-6.7	65.4
2021	08/24/21	3,374	1.7	02/17/21	2,868	-1.5	3,374	1.7	19,095	0.5	64.4
2022	07/20/22	3,218	-4.6	01/26/22	2,895	0.9	3,218	-4.6	19,181	0.4	68.0
2023	08/24/23	3,293	2.3	02/01/23	2,794	-3.5	3,293	2.3	18,602	-3.0	64.5
Forecast											
2024*		3,287	33.5		2,954	5.7	3,287	-0.2	19,161	3.0	66.6
2025		4,010	-8.8		3,138	6.2	4,010	22.0	23,987	25.2	68.1
2026		4,875	21.6		4,031	28.5	4,875	21.6	30,440	26.9	71.3
2027		5,419	11.2		4,666	15.8	5,419	11.2	35,329	16.1	74.4
2028		6,012	10.9		5,521	18.3	6,012	10.9	40,566	14.8	77.0
2029		6,739	12.1		6,320	14.5	6,739	12.1	47,003	15.9	79.4
2030		7,998	18.7		7,158	13.2	7,998	18.7	55,905	18.9	79.8
2031		8,326	4.1		7,839	9.5	8,326	4.1	57,436	2.7	78.8
2032		8,335	0.1		7,841	0.0	8,335	0.1	57,498	0.1	78.7
2033		8,297	-0.5		7,882	0.5	8,297	-0.5	57,558	0.1	79.0
2034		8,341	0.5		7,928	0.6	8,341	0.5	58,078	0.9	79.5
2035		8,858	6.2		8,240	3.9	8,858	6.2	61,632	6.1	79.4
2036		9,509	7.3		8,753	6.2	9,509	7.3	65,898	6.9	79.1
2037		9,784	2.9		9,216	5.3	9,784	2.9	68,169	3.4	79.3
2038		9,743	-0.4		9,313	1.0	9,743	-0.4	68,246	0.1	80.0
2039		9,670	-0.7		9,288	-0.3	9,670	-0.7	68,168	-0.1	80.5
2040		9,758	0.9		9,281	-0.1	9,758	0.9	68,234	0.1	79.8
2041		9,683	-0.8		9,289	0.1	9,683	-0.8	68,292	0.1	80.3
2042		9,785	1.1		9,293	0.0	9,785	1.1	68,348	0.1	79.7
2043		9,799	0.1		9,304	0.1	9,799	0.1	68,407	0.1	79.7
2044		9,724	-0.8		9,299	-0.1	9,724	-0.8	68,482	0.1	80.4

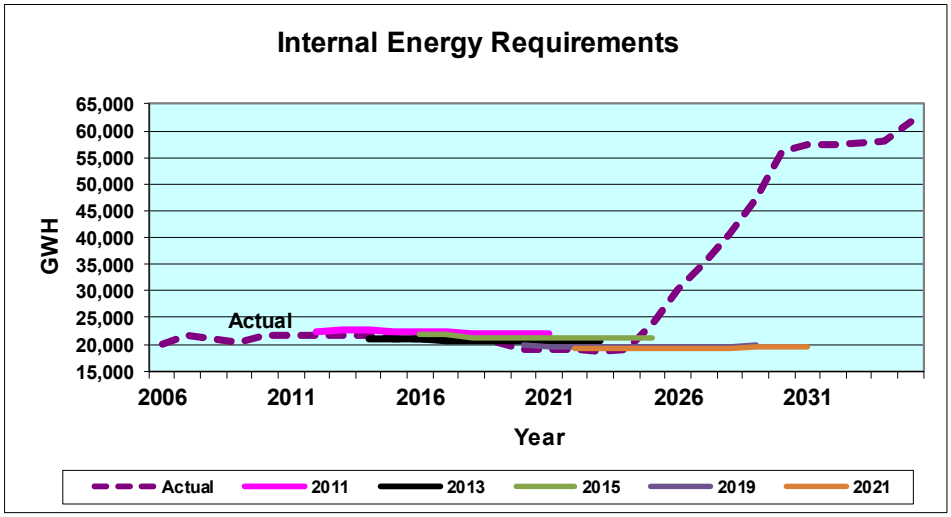
***Total energy requirements reflect 9 months actual and 3 months forecast data.**

Revised

Exhibit A-4

INDIANA MICHIGAN POWER COMPANY-INDIANA

COMPARISON OF FORECASTS



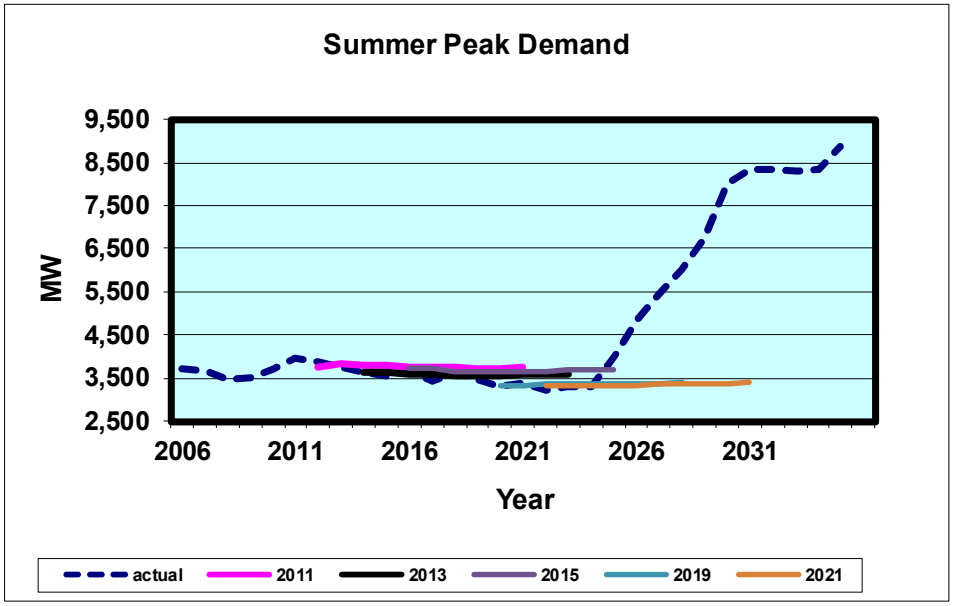


Exhibit A-5
Indiana Michigan Power Company-Indiana
Profiles of Monthly Peak Internal Demands
2015, 2020, (Actual)
2025, 2035 and 2044

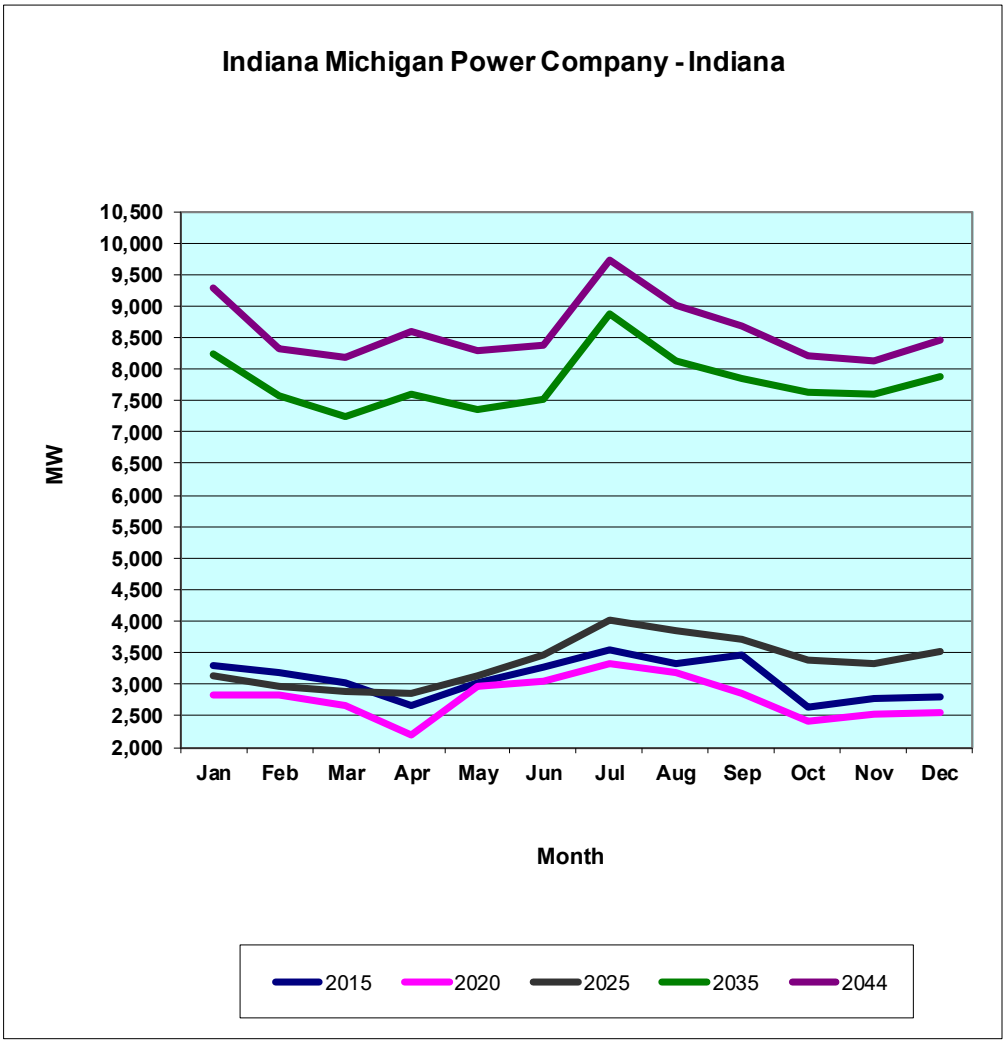
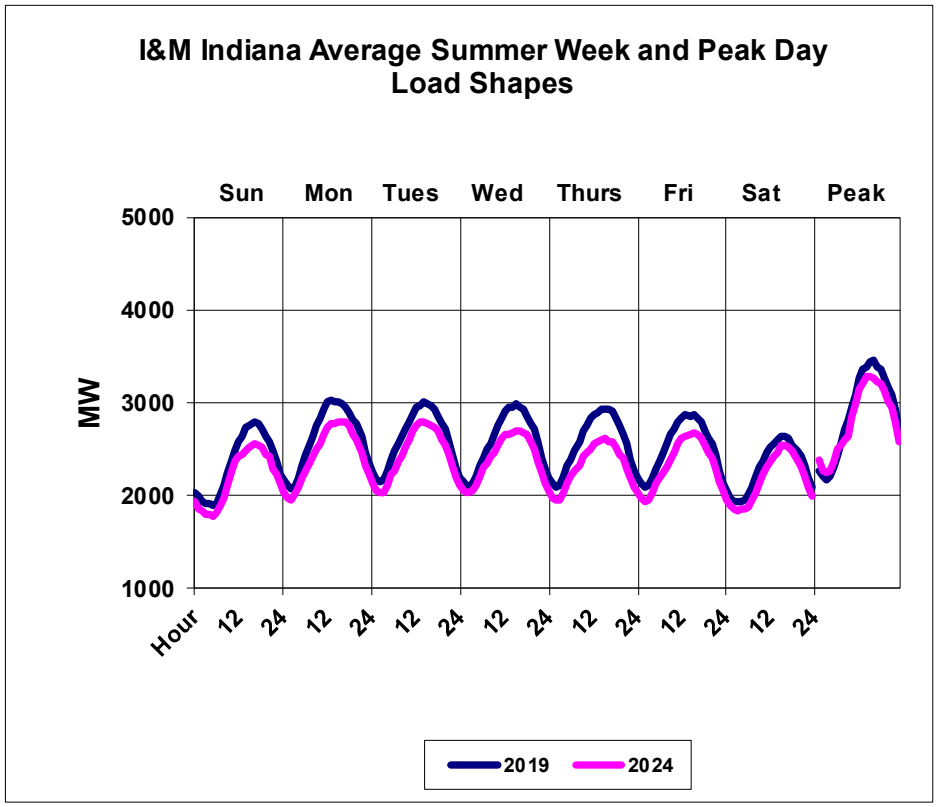


Exhibit A-6
Indiana Michigan Power Company-Indiana
Average Summer and Winter Week and Peak Day Load Shapes
2019, 2024



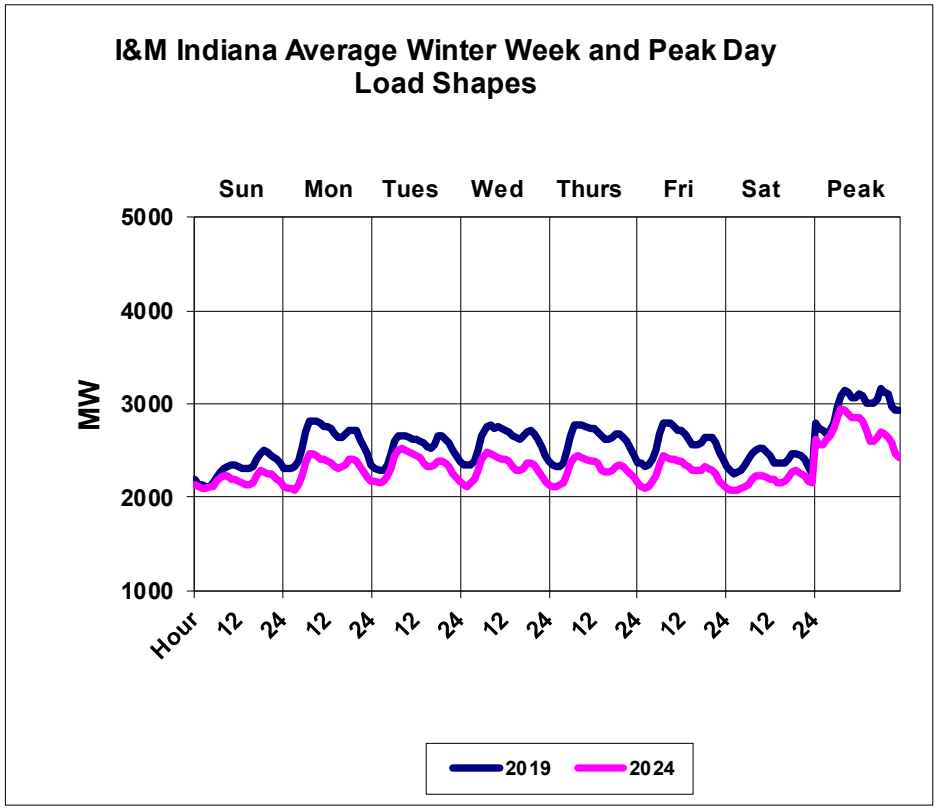
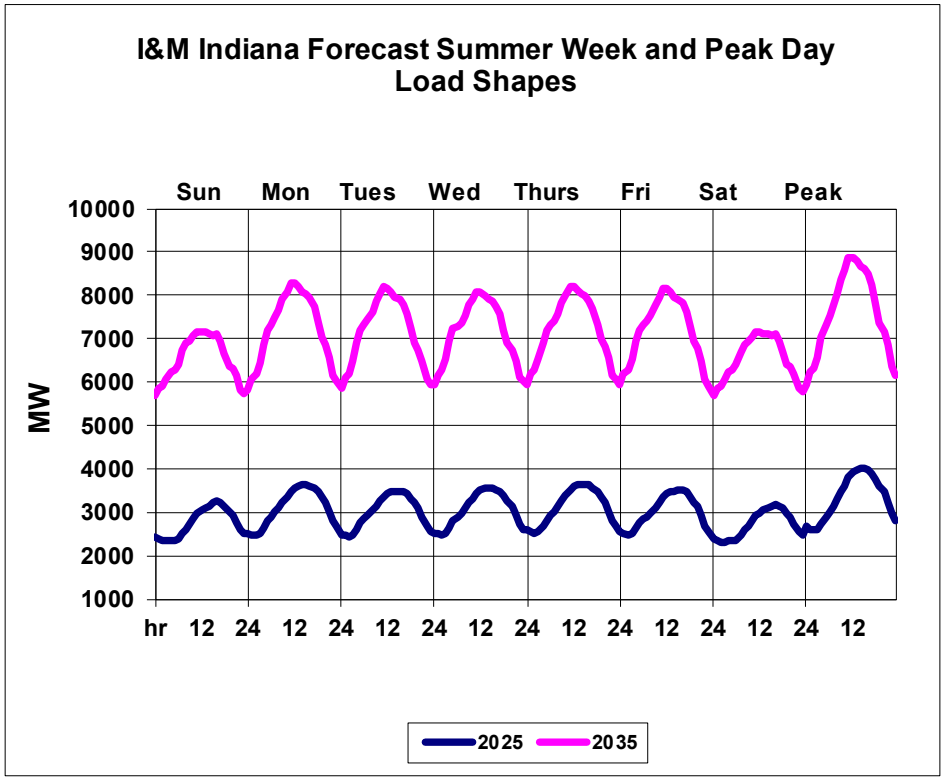


Exhibit A-7
Indiana Michigan Power Company-Indiana
Average Summer and Winter Week and Peak Day Load Shapes
2025, 2035



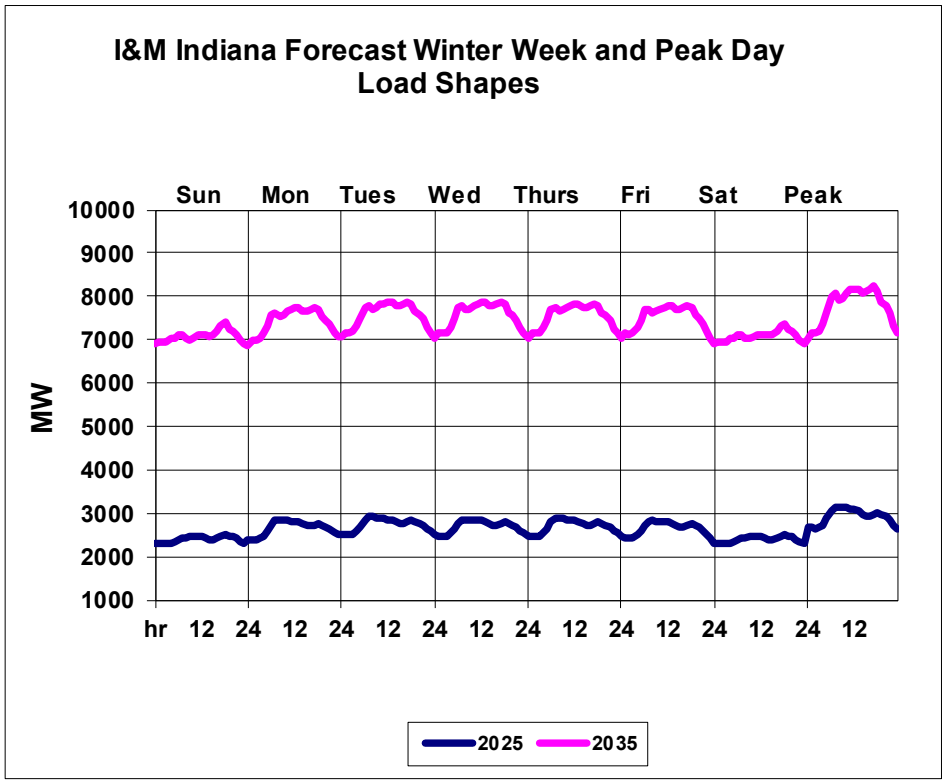
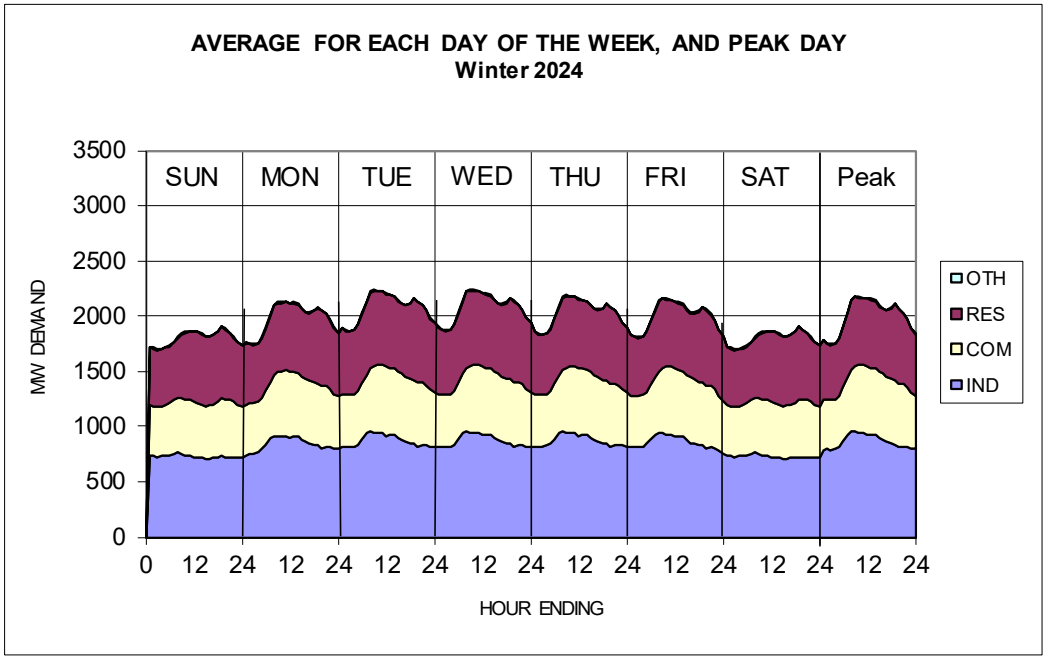
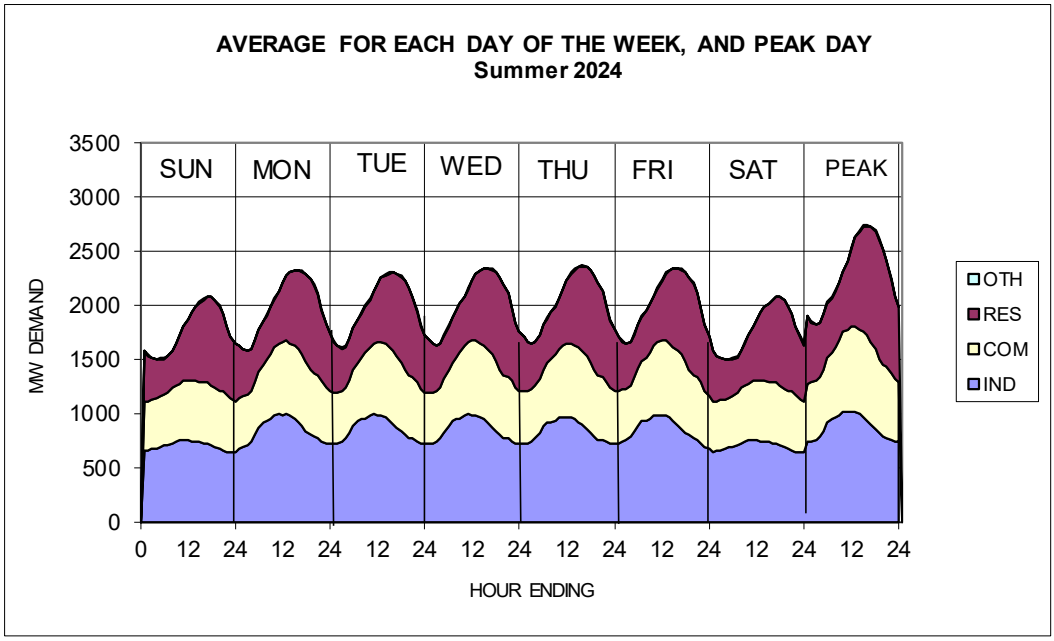


Exhibit A-8
Indiana Michigan Power Company-Indiana
Hourly Demand by Customer Class





Exhbit A-9
Indiana Michigan Power Company
Recorded and Weather Normalized Peak Load (MW) and Energy (GWh)
2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Indiana Michigan Power Company										
A. Peak Load - Summer										
1. Recorded	4,388	4,398	4,547	4,230	4,369	4,192	3,970	4,011	3,850	3,970
2. Weather - Normalized	4,375	4,405	4,501	4,374	4,329	4,176	3,892	3,950	3,929	3,919
B. Peak Load - Preceding Winter										
1. Recorded	3,938	3,952	3,702	3,795	3,723	3,766	3,445	3,365	3,356	3,280
2. Weather - Normalized	3,884	3,835	3,761	3,768	3,739	3,662	3,535	3,362	3,359	3,370
C. Energy										
1. Recorded	25,741	25,047	25,407	24,745	25,002	24,068	22,285	22,253	22,428	21,859
2. Weather - Normalized	25,654	25,100	25,285	25,029	24,576	23,933	22,354	22,150	22,296	22,315
Indiana Michigan Power Company - Indiana										
D. Peak Load - Summer										
1. Recorded	3,645	3,544	3,660	3,436	3,629	3,465	3,318	3,374	3,218	3,293
2. Weather - Normalized	3,806	3,774	3,766	3,671	3,728	3,598	3,405	3,441	3,396	3,399
E. Peak Load - Preceding Winter										
1. Recorded	3,318	3,305	3,070	3,159	3,165	3,167	2,912	2,868	2,895	2,794
2. Weather - Normalized	3,278	3,224	3,197	3,202	3,185	3,114	3,009	2,948	2,948	2,955
F. Energy										
1. Recorded	21,594	20,906	21,127	20,568	21,204	20,380	19,005	19,095	19,181	18,602
2. Weather - Normalized	21,454	20,938	21,040	20,779	20,879	20,267	19,062	19,035	19,099	18,972

Exhibit A-10

INDIANA MICHIGAN POWER COMPANY LOAD FORECAST
DATA SOURCES OUTSIDE THE COMPANY

DATA SERIES	FREQUENCY	GEOGRAPHIC	INTERVAL	SOURCE	ADJUSTMENT
Average Daily Temperatures at time of Daily Peak Load	Daily	Selected weather stations throughout the AEP System	1994-2023	NOAA (1) Weather Bank	None
Heating and Cooling Degree-Days	Monthly	Selected weather stations throughout the AEP System	1/95-5/23	NOAA (1) Weather Bank	
Gross Regional Product, Manufacturing	Monthy	U. S.	1984-2064	Moody's Analytics (2)	Extrapolated Forecast
Implicit Deflator-Gross Domestic Product	Monthly	U. S.	1980-2064	Moody's Analytics (2)	Extrapolated Forecast
U.S. Gas Prices, U.S. Gas Consumption	Monthly	U.S.	1980-2064	DOE/EIA (6)	Internal forecast of state natural gas prices. Historilcal from EIA.
Federal Reserve Board Industrial Production Indexes - Selected Industries	Monthly	U. S.	1975-2064	Moody's Analytics (2) FRB (3)	Extrapolated Forecast
Residential Appliance Efficiencies, Saturation Trends, Housing Size	Annual, Monthly	East North Central Census Region	1995-2064	DOE via Itron(7) Itron	Extrapolated projections, applied trends to Company Saturations
Commericial Equipment Efficiencies, Saturations Square-Footage	Annual, Monthly	East North Central Census Region	1995-2064	DOE via Itron(8) Itron	Extrapolated projections
U. S., and Indiana Natural Gas Prices by Sector	Monthly	U. S.	1980-2023	DOE/EIA (4)	None
Gross Regional Product	Monthly	Selected Indiana Counties	1980-2064	Moody's Analytics (5)	Extrapolated Forecast
Employment (Total and Selected Sectors), Personal Income and Population	Monthly	Selected Indiana Counties	1980-2057	Moody's Analytics (5)	Extrapolated Forecast

Source Citations:
(1) "Local Climatological Data," National Oceanographic and Atmospheric Administration.
(2) May 2024 Forecast, Moody's Analytics
(3) Board of Governors of Federal Reserve System, "Federal Reserve Statistical Release," 1975-2024
(4) U. S. Department of Energy/Energy Information Administration "Natural Gas Monthly," Selected Issues.
(5) May 2024 Regional Forecast, Moody's Analytics
(6) U.S. Department of Energy/Energy Information Administration Historical and Company Fundamentals 2023.
(8) Itron Summer 2023, DOE "Annual Energy Outlook 2023"
(7) Itron Summer 2023 DOE "Annual Energy Outlook 2023"

Exhibit A-11
Indiana Michigan Power - Indiana
DSM/Energy Efficiency Included in Load Forecast
Energy (MWh) and Coincident Peak Demand (MW)

	I&M - Indiana DSM/EE		
Year	Energy	Summer* Demand	Winter* Demand
2025	696,977	88.2	77.7
2026	734,615	114.5	94.1
2027	767,512	125.3	98.4
2028	801,290	129.6	119.5
2029	829,002	135.8	120.7
2030	852,555	127.6	124.8
2031	874,557	135.4	127.9
2032	886,811	136.8	129.1
2033	896,914	133.9	133.0
2034	907,637	140.4	132.7
2035	914,583	141.3	133.6
2036	922,090	141.9	134.1
2037	930,680	143.5	135.6
2038	937,971	144.5	136.5
2039	940,809	140.0	139.1
2040	940,809	144.6	136.8
2041	940,809	140.2	137.1
2042	940,809	145.0	137.0
2043	940,809	144.9	136.9
2044	940,809	139.6	136.5

***Demand coincident with Company's seasonal peak demand.**

Exhibit A-12
Indiana Michigan Power Company-Indiana
Low, Base and High Case for
Forecasted Seasonal Peak Demands and Internal Energy Requirements

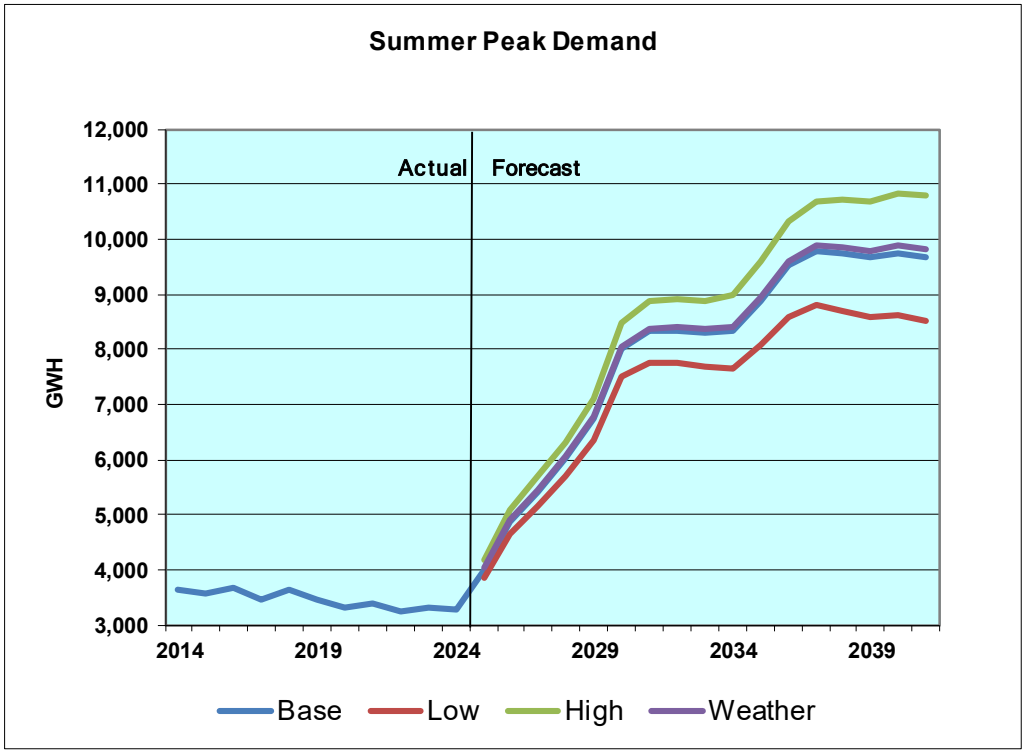
	Winter Peak Internal Demands (MW)			Summer Peak Internal Demands (MW)			Internal Energy Requirements (GWH)		
Year	Low Case	Base Case	High Case	Low Case	Base Case	High Case	Low Case	Base Case	High Case
2025	3,015	3,138	3,257	3,854	4,010	4,162	23,053	23,987	24,897
2026	3,852	4,031	4,202	4,658	4,875	5,082	29,089	30,440	31,732
2027	4,432	4,666	4,886	5,147	5,419	5,676	33,556	35,329	36,998
2028	5,217	5,521	5,804	5,681	6,012	6,320	38,335	40,566	42,648
2029	5,945	6,320	6,670	6,339	6,739	7,112	44,212	47,003	49,604
2030	6,702	7,158	7,584	7,489	7,998	8,475	52,350	55,905	59,238
2031	7,312	7,839	8,340	7,765	8,326	8,858	53,570	57,436	61,104
2032	7,288	7,841	8,369	7,748	8,335	8,897	53,444	57,498	61,370
2033	7,290	7,882	8,443	7,675	8,297	8,889	53,240	57,558	61,660
2034	7,281	7,928	8,529	7,661	8,341	8,974	53,337	58,078	62,480
2035	7,510	8,240	8,910	8,074	8,858	9,579	56,177	61,632	66,648
2036	7,919	8,753	9,516	8,602	9,509	10,337	59,616	65,898	71,640
2037	8,280	9,216	10,068	8,791	9,784	10,688	61,244	68,169	74,468
2038	8,319	9,313	10,227	8,703	9,743	10,699	60,962	68,246	74,942
2039	8,252	9,288	10,255	8,592	9,670	10,677	60,564	68,168	75,263
2040	8,197	9,281	10,299	8,619	9,758	10,830	60,266	68,234	75,723
2041	8,153	9,289	10,362	8,499	9,683	10,802	59,939	68,292	76,183
2042	8,108	9,293	10,419	8,537	9,785	10,970	59,632	68,348	76,628
2043	8,069	9,304	10,483	8,498	9,799	11,041	59,324	68,407	77,079
2044	8,020	9,299	10,543	8,387	9,724	11,025	59,064	68,482	77,639
Average Annual Growth Rate % - 2022-2041									
	5.3	5.9	6.4	4.2	4.8	5.3	5.1	5.7	6.2

Revised

Exhibit A-13

Indiana Michigan Power Company-Indiana

Range of Forecasts and Weather Scenarios



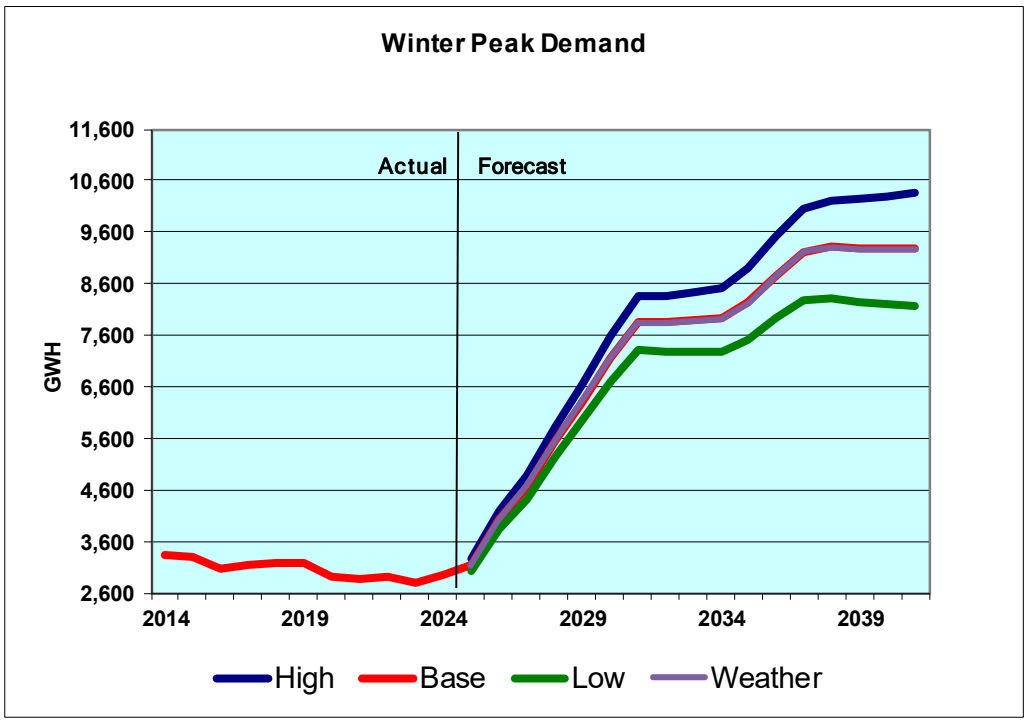


Exhibit A-14
Indiana Michigan Power Company-Indiana
Distributed Generation Resources

Year	Distrbuted Energy Resources	In Service Generation (kWh)
2011	28	354,589
2012	38	473,910
2013	52	531,673
2014	65	587,751
2015	84	961,312
2016	126	1,544,423
2017	234	2,204,697
2018	319	2,587,117
2019	525	3,310,221
2020	717	4,419,532
2021	1,066	6,032,697
2022	1,444	7,763,077
2023	1,617	8,874,495
2024	1,850	9,950,501
2025	2,067	11,034,419
2026	2,463	12,487,055
2027	3,013	14,269,057
2028	3,548	16,092,270
2029	4,027	17,857,384
2030	4,445	19,551,707
2031	4,824	21,215,859
2032	5,196	22,901,885
2033	5,549	24,590,745
2034	5,890	26,292,594
2035	6,156	27,902,071
2036	6,409	29,524,537
2037	6,648	31,156,183
2038	6,870	32,795,741
2039	7,079	34,444,479
2040	7,278	36,112,553
2041	7,470	37,802,502
2042	7,655	39,515,596
2043	7,835	41,218,534
2044	8,008	42,944,616

Exhibit A-15
Indiana Michigan Power Company-Indiana
Electric Vehicle and Distributed Generation Load Forecast Additions (kWh)

	Electric Vehicle Load Impacts (kWh)			Distributed Generation Load Impacts (kWh)		
Year	Residential	Commercial	Total	Residential	Commercial	Total
2024	3,415,676	359,661	3,775,336	(359,242)	(7,167,644)	(7,526,886)
2025	7,548,915	794,879	8,343,794	(690,558)	(7,920,246)	(8,610,804)
2026	11,943,447	1,257,610	13,201,057	(1,318,914)	(8,744,525)	(10,063,440)
2027	23,843,692	2,510,671	26,354,363	(2,204,961)	(9,640,481)	(11,845,442)
2028	36,070,521	3,798,120	39,868,641	(3,060,542)	(10,608,113)	(13,668,654)
2029	48,251,882	5,080,781	53,332,663	(3,822,186)	(11,611,583)	(15,433,769)
2030	60,640,324	6,385,248	67,025,571	(4,477,200)	(12,650,891)	(17,128,091)
2031	72,775,961	7,663,095	80,439,056	(5,066,206)	(13,726,037)	(18,792,243)
2032	85,352,326	8,987,349	94,339,675	(5,641,247)	(14,837,022)	(20,478,269)
2033	98,239,438	10,344,324	108,583,762	(6,183,284)	(15,983,845)	(22,167,129)
2034	111,001,957	11,688,179	122,690,136	(6,702,472)	(17,166,506)	(23,868,978)
2035	123,611,376	13,015,914	136,627,290	(7,093,449)	(18,385,006)	(25,478,455)
2036	135,586,899	14,276,902	149,863,801	(7,461,578)	(19,639,343)	(27,100,921)
2037	147,293,415	15,509,563	162,802,979	(7,803,048)	(20,929,519)	(28,732,568)
2038	159,340,622	16,778,099	176,118,720	(8,116,592)	(22,255,533)	(30,372,125)
2039	171,830,373	18,093,233	189,923,605	(8,403,478)	(23,617,386)	(32,020,864)
2040	184,599,951	19,437,832	204,037,783	(8,673,862)	(25,015,076)	(33,688,938)
2041	198,066,429	20,855,812	218,922,242	(8,930,282)	(26,448,605)	(35,378,887)
2042	212,198,675	22,343,896	234,542,571	(9,174,008)	(27,917,972)	(37,091,980)
2043	226,755,189	23,876,654	250,631,843	(9,407,579)	(29,387,339)	(38,794,918)
2044	241,609,493	25,440,769	267,050,261	(9,628,456)	(30,892,544)	(40,521,000)

Indiana Michigan Power Company

2024 IN IRP: Appendix 1

Exhibit B IRP Summary Document

Executive Summary

Overview

This Report presents Indiana Michigan Power Company's (I&M or Company) 2024 Integrated Resource Plan for its Indiana jurisdiction (2024 IN IRP or Report). This Report includes descriptions of assumptions, study parameters, and methodologies used to evaluate the integration of supply- and demand-side resources to meet future customer demand in a way that balances the Five Pillars of Indiana energy policy[1].

I&M is in the midst of a transformation in terms of forecasted load growth, customer composition and changes to the generation resources that are needed to serve customers. I&M is forecasting electric load growth by the end of 2030 that will more than double I&M's peak load from its 2023 levels. The load growth is primarily associated with hyperscale (HSL) business development, which includes large data center development with electric capacity requirements exceeding 500 megawatts (MW). By the end of 2030, HSL customers are forecasted to represent approximately 60% of I&M's Indiana Jurisdiction peak load. I&M is also experiencing a shift in the generation resource composition as Rockport Unit 1 is obligated to retire by the end of 2028. This coal-fired resource represents nearly one-fifth of the Company's existing generation fleet. In addition, a key consideration in this Integrated Resource Plan (IRP) was the evaluation of a Subsequent License Renewal (SLR) of the Cook Nuclear Plant Units 1 and 2 that would extend the operating license of each unit 20 years, from 2034 and 2037 to 2054 and 2057, respectively. The magnitude of future demand for electricity is unprecedented and will require substantial expansion of supply- and demand-side resources, especially when considering generation resource retirements coinciding with significant load growth.

At the core of this transformation is the Five Pillars of Indiana energy policy, which guides how I&M generates and supplies electricity to balance the consideration of Reliability, Affordability, Resiliency, Grid Stability, and Environmental Sustainability. As a result, the 2024 IN IRP established and utilized Portfolio Performance Indicators associated with each of the Five Pillars. These indicators allowed I&M to assess and compare the scenarios and sensitivities modeled and ultimately inform I&M's Preferred Portfolio.

The goal of the 2024 IN IRP process is to develop a Preferred Portfolio that contains a near-term plan, representing years 2025-2030, and a long-term-indicative plan, representing years 2031-2044. The Preferred Portfolio identifies the amount, timing, and type of resources required to supply capacity and energy as part of the Company's obligation to ensure a safe, reliable and economical power supply to its Indiana customers. The near-term plan has the least uncertainty and is inclusive of the Company's Short-Term Action Plan described herein which includes the activities the

[1] Ind. Code § 8-1-2-0.6. (2023). *GENERAL ADMINISTRATIVE ORDER OF THE INDIANA UTILITY REGULATORY COMMISSION.* Retrieved from https://www.in.gov/iurc/files/GAO-2023-04_ORDER_06-28-2023.pdf

Company plans to undertake during the 2025-2027 period to acquire the resource additions that will be necessary to meet the Company's capacity obligations.

This 2024 IN IRP is submitted based on the best information available at the time the load forecast and other modeling assumptions were developed. However, changes that affect this 2024 IN IRP can occur without notice and may not be reflected in this report due to the timing of the changes. Therefore, this 2024 IN IRP is not a firm commitment to specific resource additions or other courses of action over the period of the plan, as the future is uncertain. Accordingly, this 2024 IN IRP and the action items described herein are subject to change as new information becomes available or as circumstances warrant.

Background

An IRP explains how an electric utility company plans to meet the forecasted capacity and energy requirements of its customers. I&M is required to provide an IRP that encompasses a 20-year forecast planning horizon (in this 2024 IN IRP, 2025-2044). The 2024 IN IRP uses the Company's current long-term assumptions for:

- customer load requirements – peak demand and hourly energy;
- commodity prices – fuel, capacity, energy, and emission prices;
- existing planned supply-side resource retirement options;
- supply-side alternative costs and performance characteristics – including natural gas, nuclear, and renewable generation along with storage resources;
- transmission and distribution planning; and
- energy efficiency and demand-side management program costs and impacts.

The 2024 IN IRP load forecast included significant load growth from HSL customers. In addition, I&M's existing long-term wholesale contracts were assumed to continue through their current contractual terms. These load assumptions were included in the customer load requirements above.

In addition to the assumptions noted above, I&M considered the impact of the existing and proposed Greenhouse Gas regulations under the Environmental Protection Agency's (EPA) Section 111(b)(d). The Company's IRP modeling assessed these regulations, and ultimately considered the regulations in its Preferred Portfolio, in an effort to better position I&M for future compliance with Greenhouse Gas regulations.

I&M operates within the PJM Interconnection, L.L.C. (PJM) Regional Transmission Organization (RTO), while most Indiana utilities operate in the Midcontinent Independent System Operator, Inc. (MISO) RTO. As expected, each RTO has its own capacity planning process that results in different resource planning criteria and assumptions. Specifically in the 2024 IN IRP, the Company adhered to PJM's resource adequacy planning processes.

To meet its customers' future capacity and energy requirements, I&M made assumptions regarding the continued operation of its existing fleet of generation resources in the 2024 IN IRP. Specifically,

the two units at the Cook Nuclear Plant (Cook) are assumed to operate through the remainder of their current license periods (Unit 1 – 2034 and Unit 2 – 2037). As noted above, the SLR for both units were included as a resource option available for economic selection compared to other supply and demand-side resources. Rockport Unit 1 is assumed to operate through its committed retirement date of December 31, 2028. Supply-side resources under long-term contracts are assumed to continue through the end date of the respective contracts.

I&M analyzed 15 total scenarios and sensitivities that provided adequate supply and demand-side resources to meet its capacity and energy need while reducing or minimizing costs to its customers over the planning horizon (2025 to 2044).

Key Changes from 2021 IRP

The 2024 IN IRP includes changes from the Company's last IRP that impact the Report in its entirety, the capacity and energy assumptions, supply-side resource options, and demand-side resource options.

The following changes impacted all aspects of the 2024 IN IRP:

- I&M is transitioning to a state-specific IRP. This change will allow I&M to tailor its future resource plans and decisions to the needs specific to each individual state, which will best position I&M to meet the ongoing needs of its customers and comply with state energy policies.
- The 2024 IN IRP incorporated recommendations from the Indiana Utility Regulatory Commission (IURC or Commission) in the "Final Director's Report for Indiana Michigan Power Company's 2021 Integrated Resource Plan," issued on February 12, 2024.
- The Company engaged 1898 & Co., a part of Burns & McDonnell, to provide their own unique expertise and perspective along with facilitating the Public Advisory Process.

The following changes impacted the capacity and energy assumptions:

- I&M included the significant load forecast driven by new HSL business development.
- I&M included updated PJM resource adequacy changes, which impacted the capacity accreditation of all existing and modeled resources.
- The company included a capacity contingency in addition to the forecasted PJM load obligation.

The following changes impacted the supply-side resource options and assumptions:

- As noted above, the 2024 IN IRP resource options included a 20-year Cook SLR, or relicensing, for Cook Units 1 and 2.
- The 2024 IN IRP resource options included relicensing for the Elkhart Hydroelectric Plant in 2030, and the Mottville Hydroelectric Plant in 2033.
- The Company included a wider range of resource options, including existing natural gas resources available for procurement.
- Parallel to the 2024 IN IRP process, I&M issued four RFPs for generation resources to meet projected capacity and energy needs. The results from these RFPs were used to confirm and adjust the installed costs and build limits for supply-side resources and ultimately inform the Preferred Portfolio.

The following change impacted the demand-side resource options and assumptions:

The 2024 IN IRP process considered an array of new demand-side resource options through an updated Market Potential Study (MPS) that was completed in 2024. This study was conducted by GDS Associates and evaluated the potential for future energy efficiency (EE), demand response (DR) and distributed energy resources (DER) resources to support the IRP and demand-side management (DSM) planning processes.

IRP Process

The 2024 IN IRP process and associated modeling comply with the Indiana Guidelines for Resource Planning and reliability requirements while also quantifying risks introduced by the market and regulatory environments, and the risk of over-reliance on energy market imports and/or exports. The 2024 IN IRP process is structured around the following five (5) steps:

Step 1: Define IRP Objectives: The initial step in the 2024 IN IRP Process is to define the IRP Objectives that will be used to evaluate the modeling results.

Step 2: Modeling Inputs and Key Assumptions: The second step in the 2024 IN IRP process is to collect modeling inputs. These inputs include the following:

- Load Forecast;
- Fundamental Forecast of PJM Energy, Capacity, and Commodity Prices;
- Current resource evaluation;
- Capacity and Energy needs assessment; and
- Supply- and Demand-side resource options.

Step 3: Define and Optimize I&M Resource Portfolios: The third step in the 2024 IN IRP process is to create a set of optimized portfolios. This step can be iterative based on stakeholder feedback throughout the 2024 IN IRP process.

Step 4: Perform Scenario-Based Risk Analysis: The fourth step in the 2024 IN IRP process is to conduct analysis to determine cost and performance metrics for each portfolio.

Step 5: Identify Preferred Portfolio: In the final step of the 2024 IN IRP Process, portfolio results are presented through the Portfolio Performance Indicators matrix, incorporating each of the IRP Objectives. The result of Step 5 is the selection of a Preferred Portfolio.

The IRP Objectives of the 2024 IN IRP process aligned with the Five Pillars of Indiana energy policy, Reliability, Affordability, Resiliency, Stability, and Environmental Sustainability. Portfolio Performance Indicators related to IRP Objectives were defined and used to evaluate different portfolios in the 2024 IN IRP process, and ultimately identify a Preferred Portfolio. The Portfolio Performance Indicators are noted in Table 1.

Table 1. Portfolio Performance Indicators

IURC Pillar	IRP Objective	Performance Indicator
Reliability	Maintain capacity reserve margin and the consideration of reliance on the market for the benefit of customers.	Energy Market Exposure – Purchases
		Energy Market Exposure – Sales
		Planning Reserves
Affordability	Maintain focus on power supply cost and risks to customers	Net Present Value Revenue Requirement (NPVRR)
		Near-Term Power Supply Cost Impacts (CAGR)
		Portfolio Resilience
Resiliency	Maintain diversity of resources and fleet dispatchability	Resource Diversity
(Grid) Stability	Maintain fleet of flexible and dispatchable resources	Fleet Resiliency
Environmental Sustainability	Maintain focus on portfolio environmental sustainability benefits and compliance costs	Emissions Change
		Net Present Value Revenue Requirement (NPVRR)

The electric utility industry is changing rapidly and is subject to a significant number of external factors that are largely outside its control. The business development opportunities for data centers supporting advanced technologies is driving significant load growth across the United States at a time when some baseload generation resources are scheduled to retire. The result is increased economic pressures for new and existing resources to support the capacity and energy needs for utilities and RTO's experiencing the load growth. While some of these factors have been modeled in the 2024 IN IRP, the Company expects continuous improvement in incorporating these dynamic and uncertain factors in future IRPs.

Public Advisory Process

For the 2024 IN IRP, I&M conducted an extensive and thorough Public Advisory Process. I&M considered multiple sources of input and feedback, including comments in the "Final Director's Report for Indiana Michigan Power Company's 2021 Integrated Resource Plan," issued on February 12, 2024, stakeholder feedback, and internal suggestions. Care was taken to promote stakeholder engagement with a focus on transparency in the 2024 IN IRP process, encouraging questions and feedback along the way, and converting feedback to actionable suggestions to incorporate into the 2024 IN IRP process.

At the core of the process was a series of five (5) public Stakeholder Meeting Workshops. Figure 1 below lists the topics covered in each workshop.

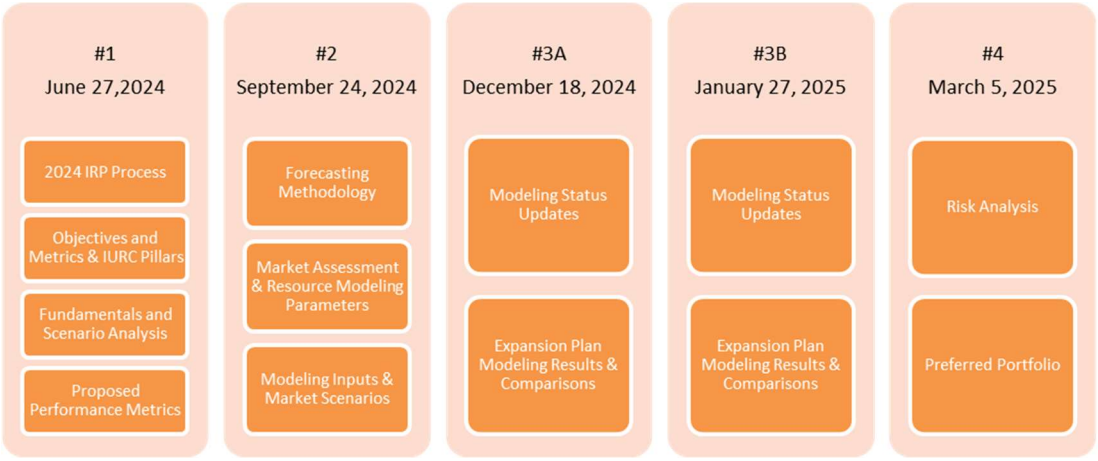


Figure 1. Stakeholder Meeting Workshops

The 2024 IN IRP had an average attendance of nearly 50 stakeholder participants at each of the five Stakeholder Meeting Workshops. Stakeholder participants represented a diverse mix of I&M residential, commercial and industrial customers, regulators, customer advocacy groups, environmental advocacy groups, fuel suppliers, advocacy groups, and elected officials. Meeting materials of each workshop can be found in Appendix Volume 4 and at 2024 IRP - Indiana Stakeholder Engagement Process. All workshops were held via webinar utilizing the Microsoft Teams meeting tool.

Concurrent with the Stakeholder Meeting Workshops described above, the Company managed an IRP website where stakeholders had an opportunity to submit questions and directly provide feedback to I&M for further consideration throughout the process. This provided stakeholders an ongoing and continuous opportunity to engage with I&M during the 2024 IN IRP process.

In addition to the core Stakeholder Meeting Workshops, a separate engagement process was developed for "Technical Stakeholders" who desired to examine the underlying analysis performed during the IRP process. I&M held two (2) technical conferences for Technical Stakeholders who,

after signing non-disclosure agreements, were presented with details around portfolio modeling. In addition, I&M held five (5) meetings designated as "office hours" to address Technical Stakeholder modeling questions.

I&M's Existing Resources and Going-In Positions

To establish a base from which to develop resource portfolios, I&M developed its current outlook for capacity and energy positions over the planning horizon. This outlook reflects the forecasted Indiana jurisdictional share of capacity and energy from I&M's existing and planned resources (resources approved by the Commission that will provide capacity and energy in future years) compared to Indiana's forecasted PJM load obligation and a capacity contingency, to calculate capacity and energy needs throughout the planning horizon.

I&M's existing supply-side resource portfolio includes a mix of nuclear, wind, solar, hydro, and fossil-fired resources. I&M has also recently obtained approval by the Commission for a diverse set of resources including solar, wind, and natural gas (capacity-only) resources that have resulted from multiple competitive procurement processes. Table 2 represents Indiana's share of the capacity associated with both the existing and recently approved resources.

Table 2. I&M Supply-Side Resources as of September 2024

Unit Name	Location	Fuel Type	C.O.D. [1] or Contract Start Date	Retirement or Contract Expiration Date [2]	PJM Nameplate Capacity (MW) [3]	
Clifty Creek 1-6	Madison, IN	Coal	1956	2039/40	62	(5)
Kyger Creek 1-5	Cheshire, OH	Coal	1955	2039/40	61	(5)
Rockport 1	Rockport, IN	Coal	1984	2027/28	1,079	
Lawrenceburg	Lawrenceburg, IN	Gas	2028	2033/34	697	(4)
Montpelier	West Poneto, IN	Gas	2027	2033/34	172	(4)
Berrien Springs 1-12	Berrien Springs, MI	Hydro	1908	2035/36	5	
Buchanan 1-10	Buchanan, MI	Hydro	1919	2035/36	2	
Constantine 1-4	Constantine, MI	Hydro	1921	2052/53	1	
Elkhart 1-3	Elkhart, IN	Hydro	1913	2029/30	2	
Mottville 1-4	White Pigeon, MI	Hydro	1923	2032/33	1	
Twin Branch 1-8	Mishawaka, IN	Hydro	1904	2035/36	5	
Cook 1	Bridgman, MI	Nuclear	1975	2033/34	830	
Cook 2	Bridgman, MI	Nuclear	1978	2036/37	956	
Deer Creek	Grant County, IN	Solar	2015	2034/35	2	
Elkhart	Elkhart, IN	Solar	2026	2055/56	83	(4)
Hoosier Line	White County, IN	Solar	2027	2056/57	150	(4)
Lake Trout	Blackford County, IN	Solar	2028	2062/63	201	
Mayapple	Elkhart, IN	Solar	2028	2062/63	183	
Olive	St. Joseph County, IN	Solar	2016	2035/36	4	
St. Joseph Solar	St. Joseph County, IN	Solar	2021	2050/51	16	
Twin Branch Solar	St. Joseph County, IN	Solar	2016	2035/36	2	
Watervliet	Berrien County, MI	Solar	2016	2035/36	4	
Fowler Ridge 1	Benton County, IN	Wind	2008	2027/28	83	(4)
Fowler Ridge 2	Benton County, IN	Wind	2009	2028/29	42	(4)
Headwaters	Randolph County, IN	Wind	2014	2033/34	166	(4)
Meadow Lake	Chalmers, IN	Wind	2026	2045/46	83	(4)
Wildcat	Madison County, IN	Wind	2014	2031/32	82	(4)
					4,974	

(1) Commercial operation date.
(2) Retirement or Contract Expiration dates represent the PJM Delivery Year and are assumptions for IRP planning purposes. Cook units 1 and 2, Elkhart Hydro, and Mottville Hydro Retirement dates represent license expiration dates.
(3) Represents Indiana's share of these resources
(4) Represents capacity from Power Purchase Agreements (PPAs) or Capacity Purchase Agreements (CPAs)
(5) Represents Indiana's share of the OVEC capacity under the ICPA

Figure 2 below shows Indiana's Going-In Capacity Position through 2044.

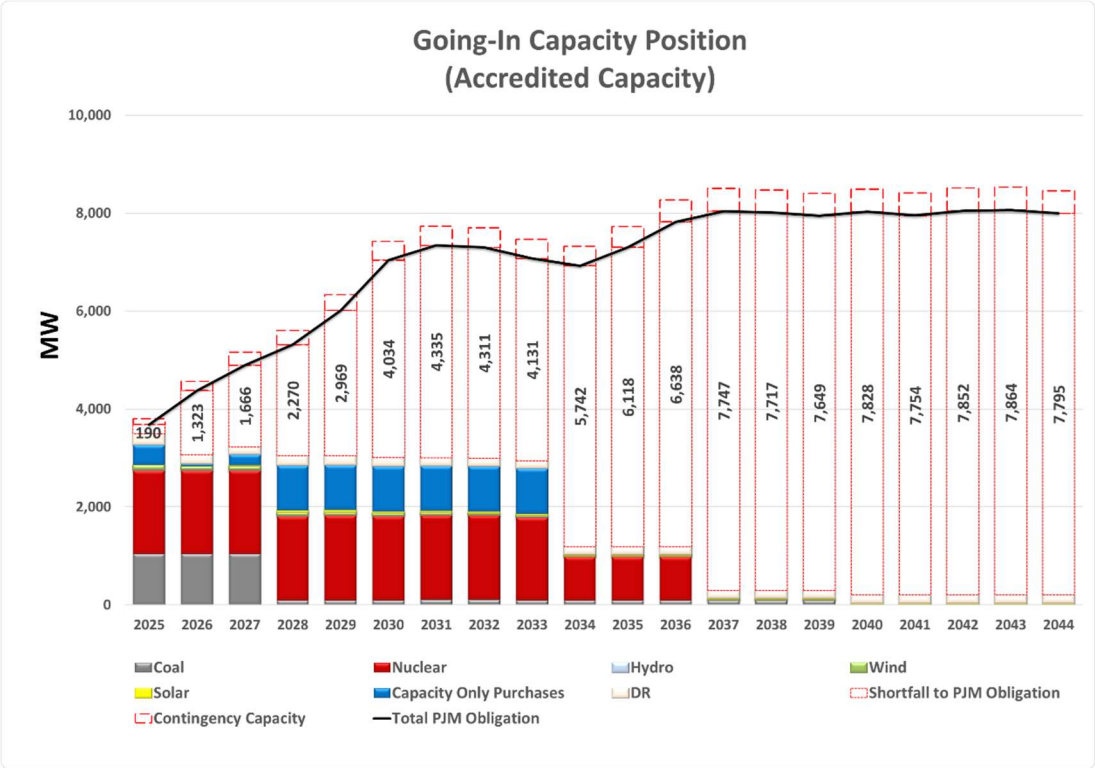


Figure 2. I&M Indiana Going-In Capacity Position

The capacity shortfall begins immediately in 2025 and rapidly increases over the planning horizon due primarily to the significant HSL growth, the expiration of capacity only purchases, and the going-in assumption that Cook Nuclear operates through its current license period. In the near-term, the Company will require a considerable amount of resources to meet the forecasted PJM load obligation. Over the long-term, the forecasted PJM load obligation more than doubles compared to the 2025 level.

I&M also developed a Going-In Energy Position, which is shown in Figure 3 below.

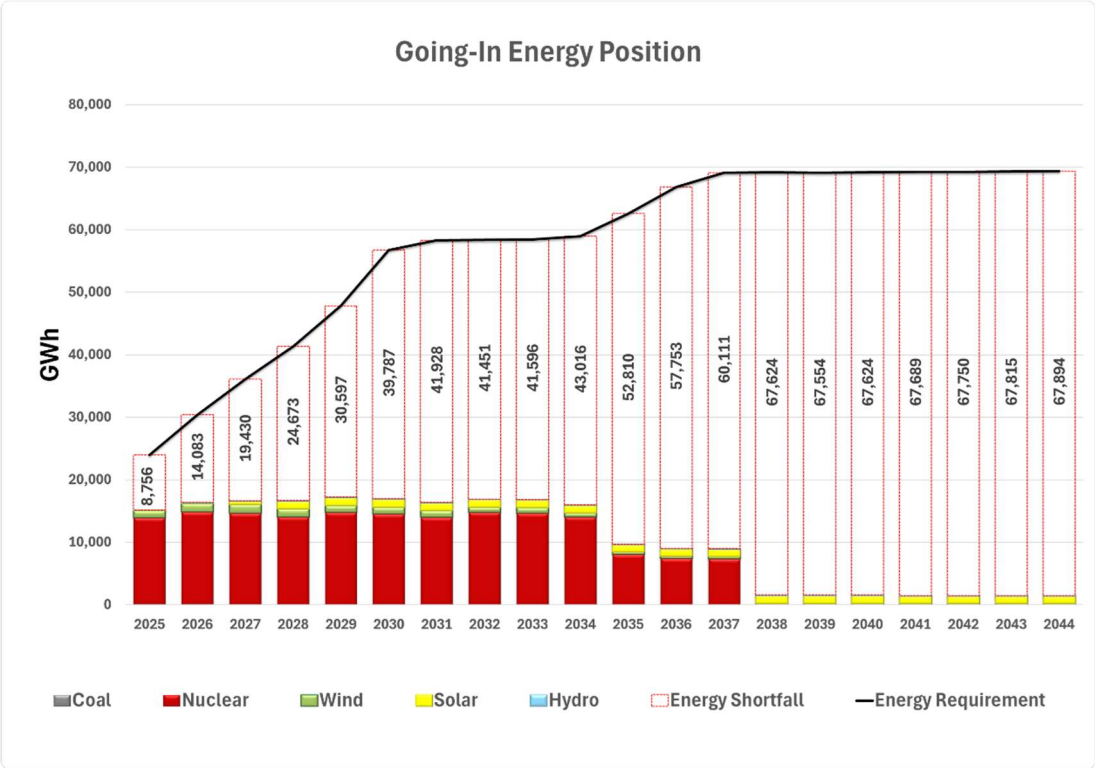


Figure 3. I&M Indiana Going-In Energy Position

Similar to the Going-In Capacity Position, the energy shortfall begins immediately in 2025, growing rapidly by 2030 and to nearly tripling by the end of the planning horizon. The energy shortfall is primarily due to HSL growth and the going-in assumption that Cook Nuclear operates through its current license period.

Summary of I&M's Preferred Portfolio Development

To assess how modeled portfolios would perform under various market and regulatory conditions I&M developed four (4) distinct scenarios, including the (1) Base Reference Case, (2) an Enhanced Environmental Regulations (EER) Case, reflecting existing and proposed regulations under EPA Section 111(b)(d), (3) a High Economic Growth Case and (4) a Low Economic Growth Case. Additionally, I&M developed 11 sensitivities that test how portfolios are impacted by specific changes to base assumptions. Each scenario and sensitivity was assessed using the Portfolio Performance Indicators.

A common theme that resulted from modeling all the scenarios and sensitivities was that similar amounts of natural gas resources were selected to meet Indiana's future capacity needs. This remained true even in the sensitivities where I&M evaluated an expedited transition to a low carbon resource portfolio. Another common theme was that all scenarios and sensitivities economically

selected the Cook Nuclear Plant Unit 1 and Unit 2 SLR opportunities, maintaining Cook as a foundation of I&M's future generation portfolio.

Based on the Portfolio Performance Indicators, three Candidate Portfolios were selected for further evaluation: (1) Base Reference Case; (2) Low Carbon: Transition to Objective; and (3) Expanded Wind Availability (EER). A comprehensive risk analysis was conducted on these Candidate Portfolios using a stochastic modeling approach. The modeling analyzed the variability of key output metrics, including Net Present Value (NPV) and percent of energy market purchases and sales compared to total load.

After reviewing both the Portfolio Performance Indicators and the results of the risk analysis for the Candidate Portfolios, a Preferred Portfolio was developed. I&M developed the Preferred Portfolio primarily based on modifications to the Expanded Wind Availability (EER) Case. This case was selected as the basis for the Preferred Portfolio for the following reasons:

- The case better positions I&M for compliance with existing and future Greenhouse Gas regulations based on the current and proposed EPA Section 111(b)(d) rules and the potential for regulations to occur in some form during the planning horizon.
- The case leverages a mix of resource types that support reliability and stability, while increasing resource diversity and expanding the renewable and clean energy portfolio.
- The case leverages existing natural gas resources which allows I&M to better manage the remaining life of its generation portfolio and associated risks, mitigates the impact of development risks associated with new generation, and lowers the additionality impacts of natural gas on I&M's customers and the PJM system.
- The case resulted in less variability in future cost risk as compared to the Base Reference Case in the risk analysis results.
- The case reflects up to date market conditions on resource availability based on results from the four (4) separate RFPs issued in 2024.

The Preferred Portfolio takes advantage of cost savings opportunities and other benefits associated with redevelopment of the Rockport site with future NGCTs and SMR technology. New NGCTs were included in the Preferred Portfolio in 2030, reflecting 690 MW of nameplate capacity. These new NGCTs reflect estimated cost reductions of approximately 15% compared to the generic new NGCT resource price. These cost reductions were included to reflect the cost savings associated with the reuse of the Rockport interconnection and existing facilities and the opportunity to leverage favorable equipment pricing associated with AEP multi-unit supply chain opportunities. In addition, SMRs were included in the Preferred Portfolio in 2036 and 2037, reflecting a total 600 MW of nameplate capacity. These SMRs reflect estimated cost reductions of approximately 30% compared to the generic SMR resource price. These cost reductions were included to reflect the cost savings associated with the reuse of the Rockport interconnection and existing facilities, energy community bonus ITCs, federal grant opportunities, customer participation, and leveraging fast follower savings opportunities. The Rockport facility qualifies as an energy community under the Inflation Reduction Act of 2022.

The Preferred Portfolio capacity additions are shown in Table 3.

Table 3. Preferred Portfolio Cumulative Nameplate Capacity Additions

Year	Nameplate MW								Accredited MW	
	Wind	Solar	Storage	New Acro	Existing NGCC	New NGCT	Existing NGCT	Nuclear Cook SLR & SMR	DR, EE, DER, CVR	Short Term Capacity
2025	0	0	0	0	0	0	0	0	0	325
2026	0	0	0	0	0	0	0	0	33	1,500
2027	0	0	0	0	0	0	0	0	61	1,875
2028	1,000	599	50	0	1,800	0	1,000	0	92	0
2029	1,000	596	50	0	2,700	0	1,000	0	116	0
2030	1,000	593	50	0	3,600	690	1,000	0	132	0
2031	1,400	590	50	0	4,500	690	1,500	0	148	0
2032	1,800	886	50	0	4,500	690	1,500	0	144	0
2033	2,200	1,480	50	0	4,500	690	1,500	0	138	0
2034	2,600	2,071	50	0	4,500	690	1,500	0	134	0
2035	3,000	2,210	50	0	4,500	690	1,500	888	134	0
2036	3,200	2,199	50	0	4,500	690	1,500	1,188	131	0
2037	3,600	2,636	50	0	4,500	690	1,500	1,488	128	0
2038	4,000	2,623	50	0	4,500	690	1,500	2,480	125	0
2039	4,000	2,609	50	0	4,500	690	1,500	2,480	122	0
2040	4,000	2,596	50	0	4,500	690	1,500	2,480	119	0
2041	4,000	2,582	50	0	4,500	690	1,500	2,480	111	0
2042	4,000	2,569	50	0	4,500	690	1,500	2,480	105	0
2043	3,000	2,555	50	0	4,500	690	1,500	2,480	99	0
2044	3,000	2,542	50	0	4,500	690	1,500	2,480	94	0

The Preferred Portfolio represents a balanced plan that supports I&M's IRP Objectives and provides a sound planning basis for the Company's near-term plan, 2025 through 2030, and long-term-indicative plan, 2031 through 2044. The Preferred Portfolio reflects a diverse mix of wind, solar, storage, natural gas, nuclear and demand-side resources that is maintained throughout the planning horizon, including taking advantage of near-term expanded wind availability based on market intelligence gained from I&M's 2024 RFPs. This diverse mix of resources represents an all-of-the-above approach to considering Indiana's Five Pillars of energy policy. Existing natural gas combined cycle (NGCC) and combustion turbine (NGCT) resources are leveraged to better position for future environmental compliance while also providing the benefit of lowering costs, mitigating development risk and reducing additionality. The Preferred Portfolio maintains nuclear power as a key foundation

to Indiana's future capacity and energy resource diversity by selecting the SLR for both Cook Unit 1 and 2 and also including 600 MW of new SMR technology that takes advantage of redevelopment opportunities at I&M's Rockport site. The Preferred Portfolio also reflects the relicensing of the Elkhart and Mottville Hydro resources in 2030 and 2033, respectively, which will be further evaluated as part of I&M's Short-Term Action Plan.

Figure 4 and Figure 5 below show the Preferred Portfolio's accredited capacity and energy results by resource type.

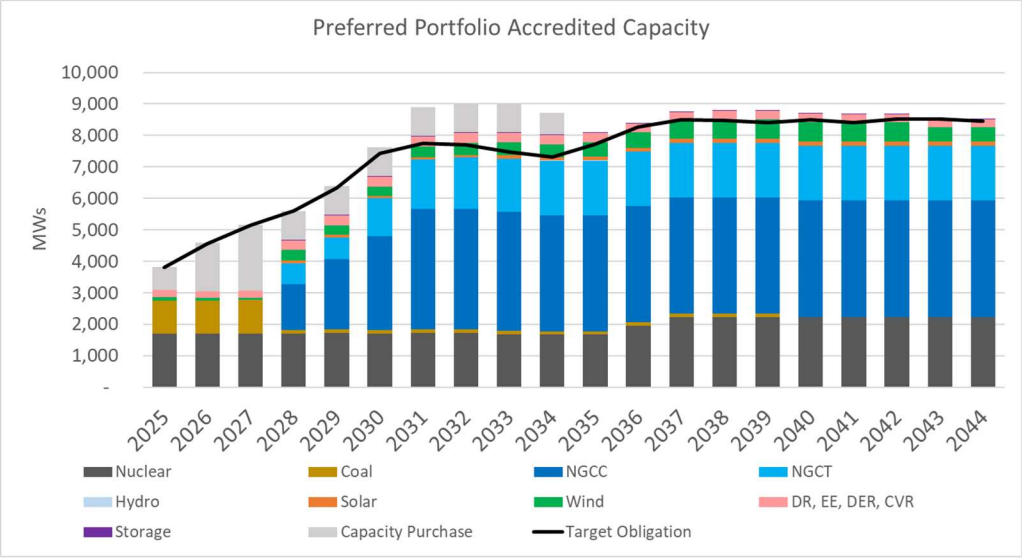


Figure 4. Preferred Portfolio Accredited Capacity by Resource Type

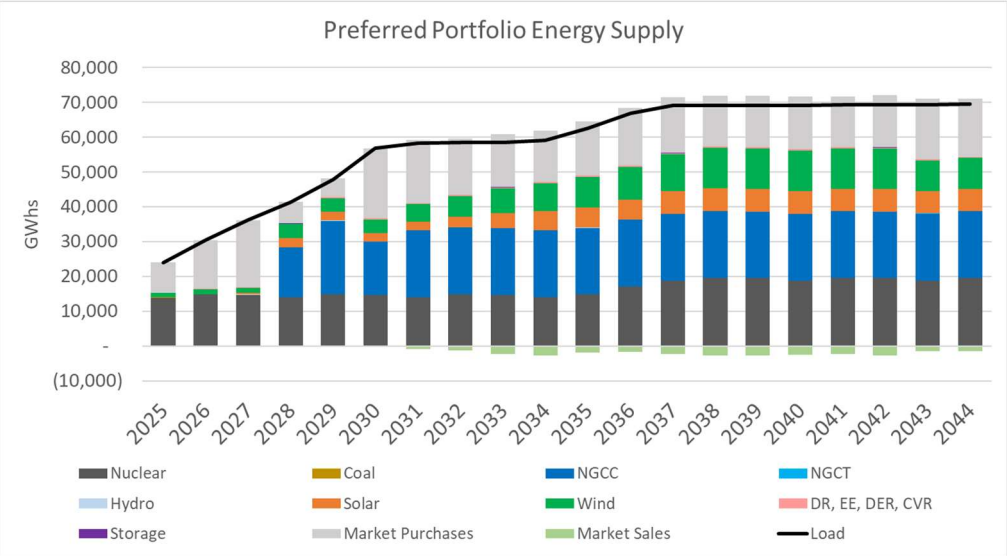


Figure 5. Preferred Portfolio Energy by Resource Type

As seen in the figures above, the Preferred Portfolio relies on significant capacity contributions from nuclear, NGCC, and NGCT resources due to their higher accredited capacity values, while wind and solar resources contribute less capacity due to the lower accredited values. As noted above, this was a common theme amongst all scenario and sensitivity results. From an energy perspective, wind and solar resources provide approximately 25% of the energy generated from 2034 to 2044 and nuclear resources provide approximately 28% of the energy generated from 2036 to 2044, leading to greater energy diversity within the Preferred Portfolio.

Conclusions and Short-Term Action Plan

The Company's 2024 IN IRP is the result of a Public Advisory Process and extensive modeling that evaluated numerous scenarios and sensitivities using the best available industry and market intelligence available at the time to inform resource assumptions. I&M's IRP Objectives and Portfolio Performance Indicators were designed to align with Indiana's Five Pillars of energy policy. The Preferred Portfolio represents a balanced consideration of the Five Pillars and an all-of-the-above resource plan to meet the future energy and capacity needs of I&M's Indiana retail customers and will be used as a guide for the resource decisions I&M undertakes as its business transforms in the future to serve the unprecedented load growth forecasted. The Preferred Portfolio leverages key opportunities to significantly expand I&M's resource diversity, taking advantage of existing and new generation resources, to support ongoing safety, reliability, and resiliency of the grid. The Preferred Portfolio also positions I&M to significantly expand clean energy resources and prepare for potential future environmental regulation, thereby supporting an environmentally sustainable future. Collectively, the benefits of the Preferred Portfolio support I&M's IRP Objectives while mitigating potential cost risks to customers in the event future market conditions change.

Steps that I&M has taken, or will take, as part of its Short-term Action Plan include:

DSM Programs: Continue the planning and regulatory actions necessary to implement an ongoing cost-effective portfolio of DSM programs in Indiana consistent with this IRP.

Rockport Retirement: Continue to take the steps necessary to support a transition of the Rockport Coal facility, including proceeding with necessary actions to support the ongoing development and commissioning of new resources from I&M's 2022 and 2023 All-Source RFPs that have been approved by the Commission to replace Rockport.

Near Term Capacity Needs: Use bilateral capacity purchases to obtain the capacity needed for future PJM Delivery Years that cannot be met through long-term resources.

2024 Competitive Procurement Activities: Complete selection of resources from the 2024 RFP and other competitive procurement activities undertaken by I&M that reflect the market conditions at the time the procurement activities are conducted. Seek approval of resources that are reasonably consistent with the Preferred Portfolio resource selections.

Rockport CT: Complete competitive procurement process, secure reuse of transmission interconnection and request approval of resource with the Commission.

Rockport SMR: Initiate early site permit process and continue to evaluate and pursue project development options.

Future Competitive Procurement Activities: Continue to issue future generation RFPs or utilize other competitive procurement methods, as necessary, to meet I&M's capacity and energy needs.

Cook SLR: Take the appropriate steps to implement the Cook Subsequent License Renewal, as supported by the IRP modeling results and Preferred Portfolio.

Hydro Relicensing: Take the appropriate steps to finalize the evaluation of the Elkhart and Mottville Hydro operating license renewal opportunities reflected in the Preferred Portfolio.

Adjust for the Future: Adjust this action plan and future IRPs to reflect changing circumstances, as necessary.

Since the Company's last IRP, I&M accomplishments towards the 2021 Short-Term Action Plan include:

- Complied with the modeling and other IRP-related commitments as set forth in the Settlement Agreements in Cause Nos. 45546 and 45933.
- Conducted All-Source RFPs in 2022 and 2023 to acquire the generation resources necessary to replace the energy and capacity needs associated with the Rockport retirement obligation in December 2028. The Commission approved the related resources in Cause Nos. 45868, 45869, 46083, 46085, and 46088.
- The Company completed an updated Market Potential Study in 2024 assessing the potential for future energy efficiency (EE), demand response (DR) and distributed energy resources (DER) resources.
- The Company issued four RFPs in September 2024 targeting approximately 4,000 MW of solar, wind, storage, thermal and supplemental capacity resources.
- The Company has notified PJM of its intention to continue as a Fixed Resource Requirement (FRR) entity through the 2025/2026 PJM Delivery Year ending May 31, 2026.
- The Company continues to monitor and support PJM's Capacity Interconnection Rights (CIR) Transfer Efficiency proposal that would support an expedited process for reusing I&M's existing interconnection rights at the Rockport site for future generation resource development.

Indiana Michigan Power Company

2024 IN IRP: Appendix 1

Exhibit C Portfolio Results

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Exhibit C-1: Base Reference Case

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,243	$ 436,651	$ 412,629	$ 1,241,523	$ 1,170,034
2026	$ 571,309	$ 420,459	$ 785,587	$ 1,777,354	$ 1,578,561
2027	$ 749,745	$ 408,956	$ 859,864	$ 2,018,564	$ 1,689,560
2028	$ 774,366	$ 388,805	$ 1,025,185	$ 2,188,356	$ 1,726,207
2029	$ 944,990	$ 277,401	$ 1,112,378	$ 2,334,769	$ 1,735,651
2030	$ 1,288,184	$ 264,772	$ 1,280,899	$ 2,833,855	$ 1,985,362
2031	$ 1,402,590	$ 244,999	$ 1,224,126	$ 2,871,715	$ 1,896,038
2032	$ 1,420,362	$ 235,127	$ 1,251,499	$ 2,906,987	$ 1,808,808
2033	$ 1,492,841	$ 224,082	$ 1,237,860	$ 2,954,783	$ 1,732,682
2034	$ 1,511,516	$ 214,383	$ 1,442,978	$ 3,168,877	$ 1,751,226
2035	$ 1,642,157	$ 114,408	$ 1,458,995	$ 3,215,560	$ 1,674,701
2036	$ 1,798,112	$ 111,276	$ 1,661,491	$ 3,570,878	$ 1,752,666
2037	$ 1,940,697	$ 99,975	$ 1,678,007	$ 3,718,679	$ 1,720,111
2038	$ 1,945,438	$ 23,861	$ 1,804,183	$ 3,773,482	$ 1,644,954
2039	$ 1,940,051	$ 22,346	$ 1,742,314	$ 3,704,711	$ 1,521,982
2040	$ 2,023,074	$ 22,137	$ 1,750,739	$ 3,795,950	$ 1,469,669
2041	$ 2,018,357	$ 7,244	$ 1,763,536	$ 3,789,137	$ 1,382,557
2042	$ 2,044,779	$ 7,120	$ 1,775,158	$ 3,827,057	$ 1,315,986
2043	$ 2,086,593	$ 6,999	$ 1,782,481	$ 3,876,073	$ 1,256,093
2044	$ 2,083,823	$ 6,883	$ 1,801,339	$ 3,892,045	$ 1,188,643
				NPV $B	**$ 32.0**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Base Reference			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	19,026	7	13
2028	5,846,262	952	67
2029	8,635,386	1,400	82
2030	11,480,952	1,861	109
2031	10,646,198	1,726	101
2032	11,295,908	1,831	107
2033	10,044,462	1,628	95
2034	12,794,003	1,788	111
2035	13,150,384	1,846	114
2036	15,122,792	1,879	122
2037	15,331,086	1,914	124
2038	15,154,266	1,885	122
2039	15,166,602	1,887	123
2040	15,284,534	1,905	124
2041	16,614,058	2,122	136
2042	16,690,817	2,134	137
2043	16,725,954	2,146	137
2044	16,021,969	2,024	131
2005 Baseline	21,134,511	29,137	115,198

Base Reference (GWh)																					
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	72	103	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	2,488	2,473	2,461	2,450	2,441	2,426	2,414	2,398	2,377	2,363	2,351	2,340	2,331	2,317	2,306	2,294	2,286
Wind	1,111	1,330	1,330	1,814	1,658	1,603	1,603	1,342	1,407	1,129	859	861	859	859	859	861	859	859	288	289
DR, EE, DER, CVR	0	125	130	136	152	152	152	279	281	283	285	286	286	286	286	286	286	286	286	286
Storage	-	-	-	395	391	400	386	412	329	305	324	323	309	351	364	351	440	460	503	458
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-
NGCC	-	-	-	14,256	21,120	28,079	26,037	27,626	24,566	32,015	32,887	38,439	38,945	38,512	38,542	38,835	42,082	42,270	42,280	40,638
Market Purchases	8,756	13,959	19,300	8,115	7,218	9,393	13,585	11,367	14,664	9,234	11,020	10,487	12,579	12,293	12,271	12,738	8,715	8,662	9,849	10,818
Market Sales	-	-	-	(10)	(53)	(0.3)	-	-	-	(578)	(120)	(758)	(351)	(363)	(357)	(339)	(360)	(357)	(312)	(248)
Load	23,987	30,441	36,097	41,368	47,833	56,758	58,311	58,385	58,455	58,986	62,547	66,821	69,100	69,185	69,109	69,175	69,234	69,289	69,349	69,423
% of Purchase	36.5%	45.9%	53.5%	19.6%	15.1%	16.5%	23.3%	19.5%	25.1%	15.7%	17.6%	15.7%	18.2%	17.8%	17.8%	18.4%	12.6%	12.5%	14.2%	15.6%
% of Sales	0.0%	0.0%	0.0%	0.02%	0.1%	0.001%	0.0%	0.0%	0.0%	1.0%	0.2%	1.1%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.4%	0.4%

Exhibit C-2: High Economic Growth

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 500,967	$ 436,651	$ 416,750	$ 1,354,368	$ 1,276,382
2026	$ 722,579	$ 420,459	$ 823,683	$ 1,966,721	$ 1,746,747
2027	$ 943,329	$ 408,956	$ 891,611	$ 2,243,896	$ 1,878,165
2028	$ 978,310	$ 388,805	$ 1,162,598	$ 2,529,713	$ 1,995,473
2029	$ 1,245,078	$ 277,401	$ 1,268,139	$ 2,790,618	$ 2,074,525
2030	$ 1,750,543	$ 264,772	$ 1,332,685	$ 3,348,000	$ 2,345,566
2031	$ 1,784,603	$ 244,999	$ 1,499,029	$ 3,528,631	$ 2,329,765
2032	$ 1,700,950	$ 235,127	$ 1,613,509	$ 3,549,586	$ 2,208,651
2033	$ 1,685,458	$ 224,082	$ 1,713,100	$ 3,622,640	$ 2,124,313
2034	$ 1,621,162	$ 214,383	$ 2,061,742	$ 3,897,287	$ 2,153,770
2035	$ 1,705,450	$ 114,408	$ 2,227,250	$ 4,047,108	$ 2,107,780
2036	$ 1,847,451	$ 111,276	$ 2,420,864	$ 4,379,591	$ 2,149,601
2037	$ 1,914,261	$ 99,975	$ 2,653,375	$ 4,667,611	$ 2,159,049
2038	$ 1,786,611	$ 23,861	$ 2,906,552	$ 4,717,024	$ 2,056,268
2039	$ 1,860,030	$ 22,346	$ 2,844,466	$ 4,726,842	$ 1,941,898
2040	$ 1,993,264	$ 22,137	$ 2,839,875	$ 4,855,276	$ 1,879,805
2041	$ 2,069,802	$ 7,244	$ 2,850,332	$ 4,927,378	$ 1,797,871
2042	$ 2,178,436	$ 7,120	$ 2,893,725	$ 5,079,281	$ 1,746,580
2043	$ 2,296,946	$ 6,999	$ 2,890,534	$ 5,194,479	$ 1,683,341
2044	$ 2,364,939	$ 6,883	$ 2,914,031	$ 5,285,853	$ 1,614,317
				NPV $B	**$ 39.3**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

High Economic Growth			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	3,311,662	1,283	2,316
2026	1,358,964	526	950
2027	1,095,175	424	766
2028	4,779,512	1,047	879
2029	7,090,269	1,149	67
2030	7,189,987	1,165	68
2031	9,529,080	1,545	90
2032	10,043,092	1,628	95
2033	9,253,570	1,500	88
2034	11,375,332	1,558	97
2035	12,201,862	1,692	105
2036	12,310,859	1,709	106
2037	12,399,243	1,724	107
2038	12,804,969	1,790	111
2039	13,473,868	1,898	117
2040	13,715,822	1,937	119
2041	14,295,219	2,053	125
2042	14,145,506	2,028	123
2043	14,474,370	2,081	126
2044	13,860,377	1,970	121
2005 Baseline	21,134,511	29,137	115,198

High Economic Growth (GWh)																					
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	2,978	1,222	985	1,087	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	4,905	4,872	4,848	4,824	4,809	4,777	5,054	6,229	7,407	8,560	8,517	8,474	8,448	8,387	8,344	7,186	7,768
Wind	1,111	1,330	1,330	1,814	1,658	1,603	2,743	3,628	4,829	5,692	5,992	7,150	8,273	9,414	9,414	9,437	9,414	9,414	8,844	8,865
DR, EE, DER, CVR	-	125	130	136	274	277	280	408	410	412	413	415	414	414	414	415	414	414	414	415
Storage	-	-	-	245	276	275	286	343	274	269	275	307	313	336	375	377	418	439	452	470
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170	191	198	99
NGCC	-	-	-	8,733	17,341	17,585	23,305	24,562	22,632	28,545	30,567	30,835	31,050	32,042	33,678	34,272	35,421	35,025	35,820	34,473
Market Purchases	6,813	14,132	20,039	12,984	11,523	20,884	16,554	13,730	15,015	10,829	10,435	12,593	13,823	11,499	10,232	10,711	9,117	9,949	11,533	12,135
Market Sales	(52)	-	-	(571)	(338)	-	(58)	(83)	(98)	(1,528)	(1,170)	(870)	(1,060)	(1,147)	(1,091)	(1,003)	(1,006)	(900)	(420)	(415)
Load	24,898	31,732	37,802	43,490	50,479	60,141	62,035	62,316	62,620	63,456	67,637	72,642	75,484	75,972	76,301	76,767	77,232	77,683	78,139	78,705
% of Purchase	27.4%	44.5%	53.0%	29.9%	22.8%	34.7%	26.7%	22.0%	24.0%	17.1%	15.4%	17.3%	18.3%	15.1%	13.4%	14.0%	11.8%	12.8%	14.8%	15.4%
% of Sales	0.2%	0.0%	0.0%	1.3%	0.7%	0.0%	0.1%	0.1%	0.2%	2.4%	1.7%	1.2%	1.4%	1.5%	1.4%	1.3%	1.3%	1.2%	0.5%	0.5%

Exhibit C-3: Low Economic Growth

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 321,337	$ 436,651	$ 371,419	$ 1,129,407	$ 1,064,374
2026	$ 474,498	$ 420,459	$ 716,241	$ 1,611,198	$ 1,430,988
2027	$ 612,741	$ 408,956	$ 757,521	$ 1,779,218	$ 1,489,225
2028	$ 685,035	$ 388,805	$ 828,316	$ 1,902,156	$ 1,500,448
2029	$ 801,229	$ 277,401	$ 936,311	$ 2,014,941	$ 1,497,893
2030	$ 1,032,603	$ 264,772	$ 1,111,899	$ 2,409,274	$ 1,687,907
2031	$ 1,089,609	$ 244,999	$ 1,030,341	$ 2,364,949	$ 1,561,448
2032	$ 1,062,162	$ 235,127	$ 1,035,536	$ 2,332,825	$ 1,451,549
2033	$ 1,090,666	$ 224,082	$ 1,031,072	$ 2,345,820	$ 1,375,587
2034	$ 1,053,292	$ 214,383	$ 1,239,360	$ 2,507,035	$ 1,385,471
2035	$ 1,109,612	$ 114,408	$ 1,256,757	$ 2,480,777	$ 1,292,018
2036	$ 1,198,121	$ 111,276	$ 1,462,875	$ 2,772,272	$ 1,360,693
2037	$ 1,270,670	$ 99,975	$ 1,480,280	$ 2,850,925	$ 1,318,723
2038	$ 1,251,555	$ 23,861	$ 1,605,933	$ 2,881,349	$ 1,256,051
2039	$ 1,233,798	$ 22,346	$ 1,547,498	$ 2,803,642	$ 1,151,802
2040	$ 1,251,018	$ 22,137	$ 1,559,979	$ 2,833,134	$ 1,096,897
2041	$ 1,215,482	$ 7,244	$ 1,572,238	$ 2,794,964	$ 1,019,809
2042	$ 1,211,282	$ 7,120	$ 1,586,407	$ 2,804,809	$ 964,472
2043	$ 1,191,831	$ 6,999	$ 1,596,901	$ 2,795,731	$ 905,994
2044	$ 1,216,762	$ 6,883	$ 1,614,279	$ 2,837,924	$ 866,711
				NPV $B	**$ 25.7**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Low Economic Growth			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	-	-	-
2026	-	-	-
2027	-	-	-
2028	6,020,098	976	57
2029	8,512,024	1,380	81
2030	11,430,236	1,853	108
2031	10,685,948	1,732	101
2032	11,127,312	1,804	106
2033	10,509,128	1,703	100
2034	13,693,180	1,934	119
2035	13,798,723	1,951	120
2036	15,163,913	1,885	122
2037	15,251,586	1,901	123
2038	15,739,553	1,980	128
2039	14,578,574	1,792	117
2040	14,429,368	1,772	116
2041	15,045,315	1,878	122
2042	14,683,451	1,819	118
2043	15,225,135	1,899	123
2044	13,840,673	1,687	111
2005 Baseline	21,134,511	29,137	115,198

Low Economic Growth (GWh)																					
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	1,280	1,274	1,268	1,262	1,257	1,251	1,245	1,235	1,218	1,212	1,206	1,201	1,196	1,190	1,185	1,179	1,174
Wind	1,111	1,330	1,330	1,814	1,658	1,603	1,603	1,342	1,407	1,129	859	861	859	859	859	861	859	859	288	861
DR, EE, DER, CVR	-	115	115	115	153	153	153	178	180	182	183	185	184	184	184	185	184	184	184	185
Storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGCC	-	-	-	14,723	20,818	27,955	26,135	27,214	25,702	34,214	34,472	38,540	38,750	39,944	37,104	36,728	38,219	37,334	38,680	35,261
Market Purchases	7,894	12,720	17,521	7,004	6,257	7,530	11,151	9,375	10,769	4,923	5,985	7,539	8,651	6,853	9,216	10,181	7,900	8,564	7,893	9,959
Market Sales	-	-	-	-	(42)	(30.1)	(16)	(15)	(20)	(1,705)	(618)	(2,697)	(1,686)	(2,141)	(1,968)	(2,163)	(2,483)	(2,477)	(2,195)	(2,459)
Load	23,053	29,089	34,284	39,093	44,992	53,148	54,386	54,269	54,070	54,171	57,011	60,450	62,081	61,800	61,401	61,097	60,765	60,454	60,140	59,876
% of Purchase	34.2%	43.7%	51.1%	17.9%	13.9%	14.2%	20.5%	17.3%	19.9%	9.1%	10.5%	12.5%	13.9%	11.1%	15.0%	16.7%	13.0%	14.2%	13.1%	16.6%
% of Sales	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.03%	0.03%	0.04%	3.1%	1.1%	4.5%	2.7%	3.5%	3.2%	3.5%	4.1%	4.1%	3.7%	4.1%

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Exhibit C-4: Enhanced Environmental Regulations (EER)

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,597	$ 436,651	$ 412,629	$ 1,241,877	$ 1,170,368
2026	$ 569,637	$ 420,459	$ 777,690	$ 1,767,786	$ 1,570,063
2027	$ 744,590	$ 408,956	$ 850,944	$ 2,004,490	$ 1,677,779
2028	$ 715,101	$ 388,805	$ 1,098,171	$ 2,202,077	$ 1,737,030
2029	$ 880,188	$ 277,401	$ 1,217,869	$ 2,375,458	$ 1,765,898
2030	$ 1,277,725	$ 264,772	$ 1,386,484	$ 2,928,981	$ 2,052,006
2031	$ 1,237,465	$ 244,999	$ 1,645,946	$ 3,128,410	$ 2,065,521
2032	$ 1,105,790	$ 235,127	$ 1,861,932	$ 3,202,849	$ 1,992,902
2033	$ 1,013,723	$ 224,082	$ 2,057,761	$ 3,295,566	$ 1,932,517
2034	$ 906,869	$ 214,383	$ 2,264,245	$ 3,385,497	$ 1,870,938
2035	$ 869,253	$ 114,408	$ 2,430,326	$ 3,413,987	$ 1,778,044
2036	$ 889,991	$ 111,276	$ 2,639,703	$ 3,640,970	$ 1,787,069
2037	$ 842,257	$ 99,975	$ 2,883,912	$ 3,826,144	$ 1,769,820
2038	$ 799,673	$ 23,861	$ 3,080,531	$ 3,904,065	$ 1,701,878
2039	$ 780,946	$ 22,346	$ 3,013,287	$ 3,816,579	$ 1,567,941
2040	$ 822,279	$ 22,137	$ 3,025,177	$ 3,869,593	$ 1,498,181
2041	$ 802,868	$ 7,244	$ 3,048,814	$ 3,858,926	$ 1,408,021
2042	$ 797,941	$ 7,120	$ 3,108,301	$ 3,913,362	$ 1,345,663
2043	$ 804,912	$ 6,999	$ 3,121,520	$ 3,933,431	$ 1,274,681
2044	$ 775,438	$ 6,883	$ 3,137,985	$ 3,920,306	$ 1,197,274
				NPV $B	**$ 33.2**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

EER			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	17,109	7	12
2026	3,830	1	3
2027	-	-	-
2028	5,828,886	945	55
2029	8,666,227	1,405	82
2030	6,253,802	1,014	59
2031	9,380,703	1,521	89
2032	9,406,403	1,525	89
2033	9,380,703	1,521	89
2034	9,380,703	1,521	89
2035	9,380,703	1,521	89
2036	9,406,403	1,525	89
2037	9,380,703	1,521	89
2038	9,380,703	1,521	89
2039	9,380,703	1,521	89
2040	9,406,403	1,525	89
2041	9,380,703	1,521	89
2042	9,380,703	1,521	89
2043	9,481,798	1,555	90
2044	9,406,403	1,525	89
2005 Baseline	21,134,511	29,137	115,198

EER (GWh)																				
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	15	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	4,301	4,272	4,252	4,231	5,425	6,594	7,767	8,024	9,196	10,337	10,284	10,232	10,201	10,128	10,075	9,466	9,436
Wind	1,111	1,330	1,330	1,814	1,658	1,603	2,743	3,628	4,829	5,692	6,562	7,722	8,844	9,414	9,414	9,437	9,414	9,414	8,844	8,865
DR, EE, DER, CVR	-	120	121	121	256	256	256	384	385	387	389	390	390	390	390	390	390	390	390	390
Storage	-	-	-	253	273	310	295	317	281	315	414	401	406	315	339	304	354	345	364	412
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160	-
NGCC	-	-	-	14,256	21,195	15,295	22,942	23,005	22,942	22,942	22,942	23,005	22,942	22,942	22,942	23,005	22,942	22,942	22,942	23,005
Market Purchases	8,813	14,062	19,327	6,732	5,908	20,599	17,848	15,982	15,342	14,703	15,196	16,582	17,210	16,257	16,076	16,690	15,815	16,417	17,214	16,641
Market Sales	-	-	-	(265)	(604)	(226.2)	(4,103)	(5,276)	(6,700)	(7,003)	(5,876)	(5,281)	(5,140)	(5,314)	(5,089)	(4,963)	(4,706)	(5,099)	(4,143)	(4,222)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.7%	46.2%	53.5%	16.3%	12.4%	36.3%	30.6%	27.4%	26.2%	24.9%	24.3%	24.8%	24.9%	23.5%	23.3%	24.1%	22.8%	23.7%	24.8%	24.0%
% of Sales	0.0%	0.0%	0.0%	0.6%	1.3%	0.4%	7.0%	9.0%	11.5%	11.9%	9.4%	7.9%	7.4%	7.7%	7.4%	7.2%	6.8%	7.4%	6.0%	6.1%

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Exhibit C-5: Base under EPA Section 111(b)(d) Requirements

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,243	$ 436,651	$ 412,629	$ 1,241,523	$ 1,170,034
2026	$ 571,375	$ 420,459	$ 780,338	$ 1,772,172	$ 1,573,958
2027	$ 749,886	$ 408,956	$ 853,769	$ 2,012,611	$ 1,684,577
2028	$ 719,013	$ 388,805	$ 1,083,749	$ 2,191,567	$ 1,728,740
2029	$ 885,000	$ 277,401	$ 1,203,725	$ 2,366,126	$ 1,758,961
2030	$ 1,256,458	$ 264,772	$ 1,372,885	$ 2,894,115	$ 2,027,579
2031	$ 1,177,899	$ 244,999	$ 1,708,129	$ 3,131,027	$ 2,067,248
2032	$ 1,047,420	$ 235,127	$ 1,922,167	$ 3,204,714	$ 1,994,062
2033	$ 958,367	$ 224,082	$ 2,120,164	$ 3,302,613	$ 1,936,649
2034	$ 851,728	$ 214,383	$ 2,328,465	$ 3,394,576	$ 1,875,955
2035	$ 830,957	$ 114,408	$ 2,519,656	$ 3,465,021	$ 1,804,623
2036	$ 850,283	$ 111,276	$ 2,719,467	$ 3,681,026	$ 1,806,729
2037	$ 801,377	$ 99,975	$ 2,966,705	$ 3,868,057	$ 1,789,207
2038	$ 785,604	$ 23,861	$ 3,096,680	$ 3,906,145	$ 1,702,785
2039	$ 767,164	$ 22,346	$ 3,032,767	$ 3,822,277	$ 1,570,281
2040	$ 812,529	$ 22,137	$ 3,045,298	$ 3,879,964	$ 1,502,197
2041	$ 803,435	$ 7,244	$ 3,063,178	$ 3,873,857	$ 1,413,469
2042	$ 809,676	$ 7,120	$ 3,117,534	$ 3,934,330	$ 1,352,873
2043	$ 826,466	$ 6,999	$ 3,127,690	$ 3,961,155	$ 1,283,665
2044	$ 804,841	$ 6,883	$ 3,149,543	$ 3,961,267	$ 1,209,784
				NPV $B	**$ 33.3**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Base under EPA Section 111(b)(d) Requirements			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	19,026	7	13
2028	5,846,262	952	67
2029	8,635,386	1,400	82
2030	6,253,802	1,014	59
2031	9,380,703	1,521	89
2032	9,406,403	1,525	89
2033	9,380,703	1,521	89
2034	9,380,703	1,521	89
2035	9,380,703	1,521	89
2036	9,406,403	1,525	89
2037	9,380,703	1,521	89
2038	9,380,703	1,521	89
2039	9,380,703	1,521	89
2040	9,406,403	1,525	89
2041	9,380,703	1,521	89
2042	9,380,703	1,521	89
2043	9,403,972	1,529	89
2044	9,406,403	1,525	89
2005 Baseline	21,134,511	29,137	115,198

Base under EPA Section 111(b)(d) (GWh)																				
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	72	103	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	3,394	3,373	3,357	4,244	5,439	6,608	7,780	8,339	9,511	10,649	10,595	10,541	10,509	10,434	10,380	10,326	10,294
Wind	1,111	1,330	1,330	1,814	1,658	1,603	2,743	3,628	4,829	5,692	6,562	7,722	8,844	8,844	8,844	8,865	8,844	8,844	8,273	8,293
DR, EE, DER, CVR	-	123	125	128	266	269	272	401	402	404	405	407	406	406	406	407	406	406	406	407
Storage	-	-	-	351	348	355	342	366	292	271	288	287	275	312	323	312	391	409	447	407
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	-
NGCC	-	-	-	14,256	21,120	15,295	22,942	23,005	22,942	22,942	22,942	23,005	22,942	22,942	22,942	23,005	22,942	22,942	22,942	23,005
Market Purchases	8,756	13,961	19,305	7,349	6,453	21,274	17,813	15,927	15,089	14,726	15,003	16,478	17,258	16,389	16,420	17,014	16,241	16,330	17,155	16,549
Market Sales	-	-	-	(97)	(259)	(65.1)	(4,147)	(5,299)	(6,489)	(7,013)	(5,889)	(5,394)	(5,386)	(5,200)	(5,173)	(5,049)	(4,920)	(4,827)	(4,351)	(4,429)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.5%	45.9%	53.5%	17.8%	13.5%	37.5%	30.5%	27.3%	25.8%	25.0%	24.0%	24.7%	25.0%	23.7%	23.8%	24.6%	23.5%	23.6%	24.7%	23.8%
% of Sales	0.0%	0.0%	0.0%	0.24%	0.5%	0.1%	7.1%	9.1%	11.1%	11.9%	9.4%	8.1%	7.8%	7.5%	7.5%	7.3%	7.1%	7.0%	6.3%	6.4%

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Exhibit C-6: Low Carbon: Transition to Objective

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 457,712	$ 436,651	$ 412,629	$ 1,306,992	$ 1,231,733
2026	$ 646,493	$ 420,459	$ 781,661	$ 1,848,613	$ 1,641,849
2027	$ 853,344	$ 408,956	$ 855,426	$ 2,117,726	$ 1,772,559
2028	$ 996,858	$ 388,805	$ 1,094,793	$ 2,480,456	$ 1,956,619
2029	$ 1,220,433	$ 277,401	$ 1,193,945	$ 2,691,779	$ 2,001,049
2030	$ 1,522,146	$ 264,772	$ 1,362,072	$ 3,148,990	$ 2,206,142
2031	$ 1,518,004	$ 244,999	$ 1,492,979	$ 3,255,982	$ 2,149,750
2032	$ 1,448,613	$ 235,127	$ 1,720,985	$ 3,404,725	$ 2,118,515
2033	$ 1,441,983	$ 224,082	$ 1,926,154	$ 3,592,219	$ 2,106,473
2034	$ 1,419,972	$ 214,383	$ 2,135,701	$ 3,770,056	$ 2,083,458
2035	$ 1,488,113	$ 114,408	$ 2,366,953	$ 3,969,474	$ 2,067,348
2036	$ 1,592,447	$ 111,276	$ 2,715,441	$ 4,419,164	$ 2,169,024
2037	$ 1,550,162	$ 99,975	$ 3,497,426	$ 5,147,563	$ 2,381,056
2038	$ 1,481,860	$ 23,861	$ 3,916,455	$ 5,422,176	$ 2,363,661
2039	$ 1,475,447	$ 22,346	$ 3,861,424	$ 5,359,217	$ 2,201,692
2040	$ 1,511,924	$ 22,137	$ 3,871,874	$ 5,405,935	$ 2,093,003
2041	$ 1,504,028	$ 7,244	$ 3,884,983	$ 5,396,255	$ 1,968,952
2042	$ 1,511,505	$ 7,120	$ 3,899,581	$ 5,418,206	$ 1,863,124
2043	$ 1,400,926	$ 6,999	$ 4,250,369	$ 5,658,294	$ 1,833,646
2044	$ 1,362,108	$ 6,883	$ 4,276,892	$ 5,645,883	$ 1,724,271
				NPV $B	**$ 39.9**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
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Exhibit C: Portfolio Results

Low Carbon: Transition to Objective			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	19,026	7	13
2028	5,846,262	952	67
2029	5,756,924	933	55
2030	8,610,714	1,396	82
2031	7,984,648	1,294	76
2032	8,471,931	1,373	80
2033	7,533,347	1,221	71
2034	7,310,266	1,185	69
2035	7,577,552	1,228	72
2036	6,758,218	1,095	64
2037	6,927,842	1,123	66
2038	6,795,227	1,101	64
2039	6,804,479	1,103	65
2040	6,879,525	1,115	65
2041	7,890,070	1,279	75
2042	7,947,640	1,288	75
2043	8,005,018	1,308	76
2044	7,432,601	1,205	71
2005 Baseline	21,134,511	29,137	115,198

Low Carbon: Transition to Objective (GWh)																				
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	18,427	21,395	21,308	20,703	21,353	21,293	22,824	23,620
Coal	72	103	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	4,905	5,776	5,748	6,623	9,020	11,367	13,721	16,058	19,323	21,895	21,784	21,673	21,912	21,750	21,638	20,410	20,069
Wind	1,111	1,330	1,330	1,814	2,228	2,173	3,314	4,200	5,399	6,263	7,703	9,437	9,985	9,985	9,985	10,009	9,985	9,985	9,414	8,865
DR, EE, DER, CVR	-	123	125	129	244	247	250	383	389	396	398	399	399	399	399	399	399	399	399	399
Storage	-	-	-	263	260	266	256	274	219	203	216	322	343	389	404	390	489	511	559	509
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85	-
NGCC	-	-	-	14,256	14,080	21,059	19,528	20,720	18,424	17,879	18,532	16,529	16,943	16,619	16,642	16,825	19,297	19,438	19,445	18,178
Market Purchases	8,756	13,961	19,305	6,349	10,608	12,663	14,392	10,088	10,716	10,582	10,425	12,567	10,454	8,820	8,790	8,845	6,881	6,966	6,418	7,279
Market Sales	-	-	-	(520)	(238)	(68.5)	(152)	(1,218)	(2,842)	(4,241)	(5,680)	(6,561)	(9,429)	(10,289)	(10,174)	(9,990)	(11,003)	(11,023)	(10,288)	(9,580)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.5%	45.9%	53.5%	15.3%	22.2%	22.3%	24.7%	17.3%	18.3%	17.9%	16.7%	18.8%	15.1%	12.7%	12.7%	12.8%	9.9%	10.1%	9.3%	10.5%
% of Sales	0.0%	0.0%	0.0%	1.26%	0.50%	0.12%	0.26%	2.09%	4.86%	7.2%	9.1%	9.8%	13.6%	14.9%	14.7%	14.4%	15.9%	15.9%	14.8%	13.8%

Indiana Michigan Power Company
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Exhibit C: Portfolio Results

Exhibit C-7: Low Carbon: Expanded Build Limits

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 457,712	$ 436,651	$ 412,629	$ 1,306,992	$ 1,231,733
2026	$ 646,680	$ 420,459	$ 773,770	$ 1,840,909	$ 1,635,007
2027	$ 853,530	$ 408,956	$ 852,801	$ 2,115,287	$ 1,770,518
2028	$ 1,134,094	$ 388,805	$ 996,162	$ 2,519,061	$ 1,987,071
2029	$ 1,453,545	$ 277,401	$ 1,226,535	$ 2,957,481	$ 2,198,570
2030	$ 2,028,354	$ 264,772	$ 1,602,214	$ 3,895,340	$ 2,729,025
2031	$ 1,762,802	$ 244,999	$ 2,030,255	$ 4,038,056	$ 2,666,110
2032	$ 1,746,175	$ 235,127	$ 2,039,625	$ 4,020,927	$ 2,501,933
2033	$ 1,786,361	$ 224,082	$ 2,032,830	$ 4,043,273	$ 2,370,971
2034	$ 1,806,039	$ 214,383	$ 2,073,558	$ 4,093,980	$ 2,262,469
2035	$ 1,781,125	$ 114,408	$ 2,374,935	$ 4,270,468	$ 2,224,109
2036	$ 1,698,504	$ 111,276	$ 2,815,215	$ 4,624,995	$ 2,270,050
2037	$ 1,717,290	$ 99,975	$ 3,186,259	$ 5,003,524	$ 2,314,429
2038	$ 1,703,326	$ 23,861	$ 3,312,216	$ 5,039,403	$ 2,196,800
2039	$ 1,698,440	$ 22,346	$ 3,257,159	$ 4,977,945	$ 2,045,057
2040	$ 1,714,065	$ 22,137	$ 3,304,467	$ 5,040,669	$ 1,951,583
2041	$ 1,723,043	$ 7,244	$ 3,314,248	$ 5,044,535	$ 1,840,619
2042	$ 1,730,956	$ 7,120	$ 3,325,806	$ 5,063,882	$ 1,741,285
2043	$ 1,464,294	$ 6,999	$ 4,015,041	$ 5,486,334	$ 1,777,920
2044	$ 1,318,849	$ 6,883	$ 4,119,850	$ 5,445,582	$ 1,663,099
				NPV $B	**$ 41.4**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Low Carbon: Expanded Build Limits			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	19,026	7	13
2028	5,846,262	952	67
2029	5,756,924	933	55
2030	5,740,476	931	54
2031	5,323,099	863	51
2032	5,647,954	916	54
2033	5,022,231	814	48
2034	4,873,511	790	46
2035	5,051,701	819	48
2036	4,505,479	730	43
2037	4,618,561	749	44
2038	4,530,151	734	43
2039	4,536,319	735	43
2040	4,586,350	743	44
2041	5,260,047	853	50
2042	5,298,426	859	50
2043	5,362,533	882	51
2044	4,955,067	803	47
2005 Baseline	21,134,511	29,137	115,198

Low Carbon: Expanded Build Limits (GWh)																				
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	16,228	17,007	16,917	16,253	16,993	16,912	20,625	21,418
Coal	72	103	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	3,998	7,890	12,372	12,310	12,275	12,187	12,728	15,371	17,429	18,206	18,113	18,020	18,269	18,134	18,039	17,387	17,772
Wind	1,111	1,330	1,330	4,672	6,221	10,729	15,292	15,063	15,096	14,818	15,688	18,013	17,970	17,970	17,970	18,013	17,970	17,970	14,548	13,439
DR, EE, DER, CVR	-	117	119	123	238	241	244	372	373	375	377	379	378	378	378	379	378	378	378	379
Storage	-	-	-	-	-	265	255	273	218	203	215	215	205	233	242	273	343	358	391	356
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97	-
NGCC	-	-	-	14,256	14,080	14,040	13,019	13,813	12,283	11,919	12,355	11,019	11,296	11,079	11,095	11,217	12,865	12,958	12,963	12,119
Market Purchases	8,756	13,967	19,311	4,590	6,545	8,111	6,661	5,821	6,857	8,096	8,839	10,271	10,458	10,117	10,072	10,220	8,699	8,779	8,812	9,790
Market Sales	-	-	-	(444)	(2,015)	(3,669.2)	(3,569)	(4,151)	(3,341)	(3,336)	(5,194)	(5,309)	(5,724)	(5,796)	(5,668)	(5,531)	(6,230)	(6,189)	(5,936)	(5,933)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.5%	45.9%	53.5%	11.1%	13.7%	14.3%	11.4%	10.0%	11.7%	13.7%	14.1%	15.4%	15.1%	14.6%	14.6%	14.8%	12.6%	12.7%	12.7%	14.1%
% of Sales	0.0%	0.0%	0.0%	1.07%	4.21%	6.46%	6.12%	7.11%	5.72%	5.7%	8.3%	7.9%	8.3%	8.4%	8.2%	8.0%	9.0%	8.9%	8.6%	8.5%

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Exhibit C-8: Base with High Indiana Load

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 419,464	$ 436,651	$ 416,750	$ 1,272,866	$ 1,199,572
2026	$ 610,055	$ 420,459	$ 823,683	$ 1,854,197	$ 1,646,809
2027	$ 800,523	$ 408,956	$ 891,611	$ 2,101,090	$ 1,758,635
2028	$ 793,224	$ 388,805	$ 1,175,637	$ 2,357,667	$ 1,859,761
2029	$ 978,445	$ 277,401	$ 1,237,697	$ 2,493,543	$ 1,853,682
2030	$ 1,367,685	$ 264,772	$ 1,405,779	$ 3,038,236	$ 2,128,549
2031	$ 1,400,592	$ 244,999	$ 1,490,262	$ 3,135,853	$ 2,070,435
2032	$ 1,443,354	$ 235,127	$ 1,500,505	$ 3,178,986	$ 1,978,054
2033	$ 1,528,310	$ 224,082	$ 1,486,524	$ 3,238,917	$ 1,899,297
2034	$ 1,556,858	$ 214,383	$ 1,692,399	$ 3,463,640	$ 1,914,122
2035	$ 1,708,396	$ 114,408	$ 1,708,449	$ 3,531,254	$ 1,839,118
2036	$ 1,892,165	$ 111,276	$ 1,910,130	$ 3,913,570	$ 1,920,867
2037	$ 1,943,763	$ 99,975	$ 2,058,126	$ 4,101,864	$ 1,897,357
2038	$ 1,903,329	$ 23,861	$ 2,251,683	$ 4,178,873	$ 1,821,674
2039	$ 1,909,187	$ 22,346	$ 2,191,979	$ 4,123,512	$ 1,694,036
2040	$ 2,005,533	$ 22,137	$ 2,200,583	$ 4,228,254	$ 1,637,043
2041	$ 2,022,835	$ 7,244	$ 2,209,722	$ 4,239,801	$ 1,546,992
2042	$ 2,063,294	$ 7,120	$ 2,261,039	$ 4,331,453	$ 1,489,429
2043	$ 2,092,432	$ 6,999	$ 2,309,109	$ 4,408,540	$ 1,428,647
2044	$ 2,108,669	$ 6,883	$ 2,330,062	$ 4,445,615	$ 1,357,705
				NPV $B	**$ 34.9**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Base with High Indiana Load			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	19,026	7	13
2028	5,846,262	952	67
2029	8,635,386	1,400	82
2030	11,480,952	1,861	109
2031	10,646,198	1,726	101
2032	11,295,908	1,831	107
2033	10,044,462	1,628	95
2034	12,794,003	1,788	111
2035	13,150,384	1,846	114
2036	15,122,792	1,879	122
2037	15,331,086	1,914	124
2038	15,154,266	1,885	122
2039	15,166,602	1,887	123
2040	15,284,534	1,905	124
2041	16,614,058	2,122	136
2042	16,690,817	2,134	137
2043	16,725,954	2,146	137
2044	16,021,969	2,024	131
2005 Baseline	21,134,511	29,137	115,198

Base with High Indiana Load (GWh)																				
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	72	103	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	4,905	4,872	4,848	4,824	4,809	4,777	4,753	4,724	4,697	4,665	4,642	4,618	4,603	4,571	4,547	3,409	3,699
Wind	1,111	1,330	1,330	1,814	1,658	1,603	2,743	2,485	2,547	2,270	1,999	2,004	3,140	3,711	3,711	3,720	3,711	3,711	3,140	3,148
DR, EE, DER, CVR	-	125	130	136	152	152	152	176	178	180	182	183	183	183	183	183	183	183	183	183
Storage	-	-	-	396	392	401	386	412	329	306	324	323	310	351	364	352	440	461	504	459
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73	-
NGCC	-	-	-	14,256	21,120	28,079	26,037	27,626	24,566	32,015	32,887	38,439	38,945	38,512	38,542	38,835	42,082	42,270	42,280	40,639
Market Purchases	9,666	15,250	21,007	8,071	7,848	10,505	13,846	11,930	15,463	10,468	12,819	12,750	14,443	13,988	14,334	15,181	11,537	11,860	14,508	15,696
Market Sales	-	-	-	(260)	(436)	(115)	(53)	(41)	(22)	(717)	(193)	(560)	(312)	(309)	(255)	(217)	(187)	(153)	(69)	(15)
Load	24,898	31,732	37,802	43,490	50,479	60,141	62,035	62,316	62,620	63,456	67,637	72,642	75,484	75,972	76,301	76,767	77,232	77,683	78,139	78,705
% of Purchase	38.8%	48.1%	55.6%	18.6%	15.5%	17.5%	22.3%	19.1%	24.7%	16.5%	19.0%	17.6%	19.1%	18.4%	18.8%	19.8%	14.9%	15.3%	18.6%	19.9%
% of Sales	0.0%	0.0%	0.0%	0.6%	0.9%	0.2%	0.1%	0.1%	0.03%	1.1%	0.3%	0.8%	0.4%	0.4%	0.3%	0.3%	0.2%	0.2%	0.1%	0.0%

Indiana Michigan Power Company
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Exhibit C: Portfolio Results

Exhibit C-9: Base with Low Indiana Load

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 364,310	$ 436,651	$ 371,419	$ 1,172,380	$ 1,104,872
2026	$ 531,087	$ 420,459	$ 716,241	$ 1,667,786	$ 1,481,248
2027	$ 696,280	$ 408,956	$ 757,521	$ 1,862,757	$ 1,559,148
2028	$ 782,226	$ 388,805	$ 822,157	$ 1,993,188	$ 1,572,255
2029	$ 932,084	$ 277,401	$ 938,993	$ 2,148,478	$ 1,597,163
2030	$ 1,236,952	$ 264,772	$ 1,107,565	$ 2,609,289	$ 1,828,034
2031	$ 1,228,043	$ 244,999	$ 1,164,832	$ 2,637,874	$ 1,741,646
2032	$ 1,238,678	$ 235,127	$ 1,161,228	$ 2,635,032	$ 1,639,591
2033	$ 1,244,178	$ 224,082	$ 1,210,522	$ 2,678,783	$ 1,570,835
2034	$ 1,240,563	$ 214,383	$ 1,416,519	$ 2,871,465	$ 1,586,867
2035	$ 1,338,452	$ 114,408	$ 1,432,805	$ 2,885,666	$ 1,502,888
2036	$ 1,508,633	$ 111,276	$ 1,411,730	$ 3,031,638	$ 1,487,995
2037	$ 1,507,586	$ 99,975	$ 1,559,730	$ 3,167,290	$ 1,465,061
2038	$ 1,490,983	$ 23,861	$ 1,685,437	$ 3,200,281	$ 1,395,082
2039	$ 1,470,015	$ 22,346	$ 1,623,918	$ 3,116,279	$ 1,280,241
2040	$ 1,522,741	$ 22,137	$ 1,633,585	$ 3,178,463	$ 1,230,598
2041	$ 1,500,102	$ 7,244	$ 1,643,983	$ 3,151,328	$ 1,149,837
2042	$ 1,502,315	$ 7,120	$ 1,655,686	$ 3,165,121	$ 1,088,370
2043	$ 1,521,664	$ 6,999	$ 1,664,531	$ 3,193,193	$ 1,034,797
2044	$ 1,498,412	$ 6,883	$ 1,682,168	$ 3,187,462	$ 973,462
				NPV $B	**$ 28.3**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Base with Load Indiana Load			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	19,026	7	13
2028	5,846,262	952	67
2029	8,635,386	1,400	82
2030	11,480,952	1,861	109
2031	10,646,198	1,726	101
2032	11,295,908	1,831	107
2033	10,044,462	1,628	95
2034	12,794,003	1,788	111
2035	13,150,384	1,846	114
2036	15,122,792	1,879	122
2037	15,331,086	1,914	124
2038	15,154,266	1,885	122
2039	15,166,602	1,887	123
2040	15,284,534	1,905	124
2041	16,614,058	2,122	136
2042	16,690,817	2,134	137
2043	16,725,954	2,146	137
2044	16,021,969	2,024	131
2005 Baseline	21,134,511	29,137	115,198

Base with Low Indiana Load (GWh)																				
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	72	103	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	1,280	1,274	1,268	1,262	1,257	1,251	1,245	1,235	1,218	1,212	1,206	1,201	1,196	1,190	1,185	1,179	1,174
Wind	1,111	1,330	1,330	1,814	1,658	1,603	2,743	2,485	3,118	2,840	2,570	2,576	3,711	3,711	3,711	3,720	3,711	3,711	3,140	3,148
DR, EE, DER, CVR	-	115	115	115	227	227	227	252	254	256	257	259	258	258	258	259	258	258	258	259
Storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-
NGCC	-	-	-	14,256	21,120	28,079	26,037	27,626	24,566	32,015	32,887	30,239	30,768	30,335	30,366	30,634	33,906	34,093	34,103	32,438
Market Purchases	7,822	12,617	17,504	7,456	5,888	7,333	10,059	7,769	10,191	6,302	6,253	11,669	12,284	11,677	11,408	11,535	7,368	7,093	7,853	8,458
Market Sales	-	-	-	-	(48)	(32)	(42)	(39)	(91)	(2,670)	(1,086)	(315)	(263)	(283)	(347)	(357)	(563)	(691)	(554)	(496)
Load	23,053	29,089	34,284	39,093	44,992	53,148	54,386	54,269	54,070	54,171	57,011	60,450	62,081	61,800	61,401	61,097	60,765	60,454	60,140	59,876
% of Purchase	33.9%	43.4%	51.1%	19.1%	13.1%	13.8%	18.5%	14.3%	18.8%	11.6%	11.0%	19.3%	19.8%	18.9%	18.6%	18.9%	12.1%	11.7%	13.1%	14.1%
% of Sales	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	4.9%	1.9%	0.5%	0.4%	0.5%	0.6%	0.6%	0.9%	1.1%	0.9%	0.8%

Exhibit C-10: Rockport Unit 1 Retires 2025

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,259	$ 672,729	$ 565,108	$ 1,630,096	$ 1,536,233
2026	$ 571,413	$ 326,395	$ 1,020,515	$ 1,918,323	$ 1,703,763
2027	$ 749,753	$ 320,015	$ 1,101,142	$ 2,170,910	$ 1,817,075
2028	$ 774,361	$ 304,989	$ 1,025,185	$ 2,104,535	$ 1,660,087
2029	$ 944,990	$ 277,401	$ 1,112,378	$ 2,334,769	$ 1,735,651
2030	$ 1,288,184	$ 264,772	$ 1,280,899	$ 2,833,855	$ 1,985,362
2031	$ 1,402,590	$ 244,999	$ 1,224,126	$ 2,871,715	$ 1,896,038
2032	$ 1,420,362	$ 235,127	$ 1,251,499	$ 2,906,988	$ 1,808,808
2033	$ 1,492,841	$ 224,083	$ 1,237,860	$ 2,954,784	$ 1,732,682
2034	$ 1,511,516	$ 214,383	$ 1,442,978	$ 3,168,877	$ 1,751,226
2035	$ 1,642,157	$ 114,409	$ 1,458,995	$ 3,215,561	$ 1,674,701
2036	$ 1,798,112	$ 111,276	$ 1,661,491	$ 3,570,879	$ 1,752,666
2037	$ 1,940,697	$ 99,974	$ 1,678,007	$ 3,718,678	$ 1,720,111
2038	$ 1,945,438	$ 23,861	$ 1,804,183	$ 3,773,482	$ 1,644,954
2039	$ 1,940,051	$ 22,346	$ 1,742,314	$ 3,704,711	$ 1,521,982
2040	$ 2,023,074	$ 22,137	$ 1,750,739	$ 3,795,950	$ 1,469,669
2041	$ 2,018,357	$ 7,244	$ 1,763,536	$ 3,789,137	$ 1,382,557
2042	$ 2,044,779	$ 7,119	$ 1,775,158	$ 3,827,056	$ 1,315,986
2043	$ 2,086,593	$ 6,999	$ 1,782,481	$ 3,876,073	$ 1,256,093
2044	$ 2,083,823	$ 6,883	$ 1,801,339	$ 3,892,045	$ 1,188,644
				NPV $B	**$ 32.6**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

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2024 IN IRP: Appendix 1
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Rockport Unit 1 Retires 2025			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	40,165	16	28
2026	-	-	-
2027	-	-	-
2028	5,828,886	945	55
2029	8,635,386	1,400	82
2030	11,480,952	1,861	109
2031	10,646,198	1,726	101
2032	11,295,908	1,831	107
2033	10,044,462	1,628	95
2034	12,794,003	1,788	111
2035	13,150,384	1,846	114
2036	15,122,792	1,879	122
2037	15,331,086	1,914	124
2038	15,154,266	1,885	122
2039	15,166,602	1,887	123
2040	15,284,534	1,905	124
2041	16,614,058	2,122	136
2042	16,690,817	2,134	137
2043	16,725,954	2,146	137
2044	16,021,969	2,024	131
2005 Baseline	21,134,511	29,137	115,198

Rockport Unit 1 Retires 2025 (GWh)																					
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	2,488	2,473	2,461	2,450	2,441	2,426	2,414	2,398	2,377	2,363	2,351	2,340	2,331	2,317	2,306	2,294	2,286
Wind	1,111	1,330	1,330	1,814	1,658	1,603	1,603	1,342	1,407	1,129	859	861	859	859	859	861	859	859	288	289
DR, EE, DER, CVR	-	125	130	136	152	152	152	279	281	283	285	286	286	286	286	286	286	286	286	286
Storage	-	-	-	395	391	400	386	412	329	305	324	323	309	351	364	351	440	460	503	458
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-
NGCC	-	-	-	14,256	21,120	28,079	26,037	27,626	24,566	32,015	32,887	38,439	38,945	38,512	38,542	38,835	42,082	42,270	42,280	40,638
Market Purchases	8,792	14,062	19,317	8,131	7,218	9,393	13,585	11,367	14,664	9,234	11,020	10,487	12,579	12,293	12,271	12,738	8,715	8,662	9,849	10,818
Market Sales	-	-	-	(10)	(53)	(0.3)	-	-	-	(578)	(120)	(758)	(351)	(363)	(357)	(339)	(360)	(357)	(312)	(248)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.7%	46.2%	53.5%	19.7%	15.1%	16.5%	23.3%	19.5%	25.1%	15.7%	17.6%	15.7%	18.2%	17.8%	17.8%	18.4%	12.6%	12.5%	14.2%	15.6%
% of Sales	0.0%	0.0%	0.0%	0.02%	0.1%	0.001%	0.0%	0.0%	0.0%	1.0%	0.2%	1.1%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.4%	0.4%

Exhibit C-11: Rockport Unit 1 Retires 2026

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,243	$ 515,343	$ 414,654	$ 1,322,240	$ 1,246,104
2026	$ 571,309	$ 494,028	$ 1,022,541	$ 2,087,878	$ 1,854,354
2027	$ 749,753	$ 320,015	$ 1,103,169	$ 2,172,937	$ 1,818,772
2028	$ 774,361	$ 304,989	$ 1,027,213	$ 2,106,563	$ 1,661,687
2029	$ 944,990	$ 277,401	$ 1,114,407	$ 2,336,798	$ 1,737,159
2030	$ 1,288,184	$ 264,772	$ 1,282,929	$ 2,835,885	$ 1,986,784
2031	$ 1,402,590	$ 244,999	$ 1,226,157	$ 2,873,746	$ 1,897,379
2032	$ 1,420,362	$ 235,127	$ 1,253,374	$ 2,908,863	$ 1,809,976
2033	$ 1,492,841	$ 224,083	$ 1,239,732	$ 2,956,656	$ 1,733,780
2034	$ 1,511,516	$ 214,383	$ 1,444,835	$ 3,170,734	$ 1,752,253
2035	$ 1,642,157	$ 114,409	$ 1,460,968	$ 3,217,534	$ 1,675,729
2036	$ 1,798,112	$ 111,276	$ 1,663,514	$ 3,572,902	$ 1,753,660
2037	$ 1,940,697	$ 99,974	$ 1,680,034	$ 3,720,705	$ 1,721,049
2038	$ 1,945,438	$ 23,861	$ 1,806,214	$ 3,775,513	$ 1,645,840
2039	$ 1,940,051	$ 22,346	$ 1,744,348	$ 3,706,745	$ 1,522,818
2040	$ 2,023,074	$ 22,137	$ 1,752,775	$ 3,797,986	$ 1,470,457
2041	$ 2,018,357	$ 7,244	$ 1,765,574	$ 3,791,175	$ 1,383,300
2042	$ 2,044,779	$ 7,119	$ 1,777,198	$ 3,829,096	$ 1,316,687
2043	$ 2,086,593	$ 6,999	$ 1,784,522	$ 3,878,114	$ 1,256,755
2044	$ 2,083,823	$ 6,883	$ 1,803,382	$ 3,894,088	$ 1,189,268
				NPV $B	**$ 32.4**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Rockport Unit 1 Retires 2026			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	-	-	-
2028	5,828,886	945	55
2029	8,635,386	1,400	82
2030	11,480,952	1,861	109
2031	10,646,198	1,726	101
2032	11,295,908	1,831	107
2033	10,044,462	1,628	95
2034	12,794,003	1,788	111
2035	13,150,384	1,846	114
2036	15,122,792	1,879	122
2037	15,331,086	1,914	124
2038	15,154,266	1,885	122
2039	15,166,602	1,887	123
2040	15,284,534	1,905	124
2041	16,614,058	2,122	136
2042	16,690,817	2,134	137
2043	16,725,954	2,146	137
2044	16,021,969	2,024	131
2005 Baseline	21,134,511	29,137	115,198

Rockport Unit 1 Retires 2026 (GWh)																					
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	72	103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	2,488	2,473	2,461	2,450	2,441	2,426	2,414	2,398	2,377	2,363	2,351	2,340	2,331	2,317	2,306	2,294	2,286
Wind	1,111	1,330	1,330	1,814	1,658	1,603	1,603	1,342	1,407	1,129	859	861	859	859	859	861	859	859	288	289
DR, EE, DER, CVR	-	125	130	136	152	152	152	279	281	283	285	286	286	286	286	286	286	286	286	286
Storage	-	-	-	395	391	400	386	412	329	305	324	323	309	351	364	351	440	460	503	458
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-
NGCC	-	-	-	14,256	21,120	28,079	26,037	27,626	24,566	32,015	32,887	38,439	38,945	38,512	38,542	38,835	42,082	42,270	42,280	40,638
Market Purchases	8,756	13,959	19,317	8,131	7,218	9,393	13,585	11,367	14,664	9,234	11,020	10,487	12,579	12,293	12,271	12,738	8,715	8,662	9,849	10,818
Market Sales	-	-	-	(10)	(53)	(0.3)	-	-	-	(578)	(120)	(758)	(351)	(363)	(357)	(339)	(360)	(357)	(312)	(248)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.5%	45.9%	53.5%	19.7%	15.1%	16.5%	23.3%	19.5%	25.1%	15.7%	17.6%	15.7%	18.2%	17.8%	17.8%	18.4%	12.6%	12.5%	14.2%	15.6%
% of Sales	0.0%	0.0%	0.0%	0.02%	0.11%	0.001%	0.0%	0.0%	0.0%	1.0%	0.2%	1.1%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.4%	0.4%

Exhibit C-12: Exit OVEC ICPA in 2030

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,243	$ 436,651	$ 412,629	$ 1,241,523	$ 1,170,034
2026	$ 571,309	$ 420,459	$ 785,587	$ 1,777,355	$ 1,578,561
2027	$ 749,745	$ 408,956	$ 859,864	$ 2,018,565	$ 1,689,560
2028	$ 774,366	$ 388,805	$ 1,025,185	$ 2,188,356	$ 1,726,207
2029	$ 969,114	$ 277,401	$ 1,078,459	$ 2,324,974	$ 1,728,369
2030	$ 1,284,069	$ 256,214	$ 1,334,581	$ 2,874,864	$ 2,014,092
2031	$ 1,398,340	$ 244,167	$ 1,251,037	$ 2,893,544	$ 1,910,451
2032	$ 1,415,090	$ 234,241	$ 1,261,579	$ 2,910,910	$ 1,811,249
2033	$ 1,487,364	$ 224,376	$ 1,248,412	$ 2,960,152	$ 1,735,830
2034	$ 1,505,915	$ 214,623	$ 1,453,811	$ 3,174,349	$ 1,754,250
2035	$ 1,636,421	$ 114,603	$ 1,469,791	$ 3,220,815	$ 1,677,437
2036	$ 1,792,252	$ 111,417	$ 1,672,711	$ 3,576,380	$ 1,755,367
2037	$ 1,934,718	$ 100,063	$ 1,689,491	$ 3,724,272	$ 1,722,699
2038	$ 1,939,386	$ 23,903	$ 1,815,815	$ 3,779,104	$ 1,647,405
2039	$ 1,934,014	$ 22,335	$ 1,753,985	$ 3,710,334	$ 1,524,293
2040	$ 2,016,772	$ 22,119	$ 1,762,616	$ 3,801,507	$ 1,471,820
2041	$ 2,011,843	$ 7,244	$ 1,775,309	$ 3,794,396	$ 1,384,476
2042	$ 2,038,155	$ 7,120	$ 1,787,014	$ 3,832,289	$ 1,317,785
2043	$ 2,079,743	$ 6,999	$ 1,794,132	$ 3,880,874	$ 1,257,649
2044	$ 2,077,085	$ 6,883	$ 1,812,889	$ 3,896,857	$ 1,190,113
				NPV $B	**$ 32.1**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Exit OVEC ICPA In 2030			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	19,026	7	13
2028	5,846,262	952	67
2029	8,635,386	1,400	82
2030	11,480,952	1,861	109
2031	10,646,198	1,726	101
2032	11,295,908	1,831	107
2033	10,044,462	1,628	95
2034	12,794,003	1,788	111
2035	13,150,384	1,846	114
2036	15,122,792	1,879	122
2037	15,331,086	1,914	124
2038	15,154,266	1,885	122
2039	15,166,602	1,887	123
2040	15,284,534	1,905	124
2041	16,614,058	2,122	136
2042	16,690,817	2,134	137
2043	16,725,954	2,146	137
2044	16,021,969	2,024	131
2005 Baseline	21,134,511	29,137	115,198

Exit OVEC ICPA In 2030 (GWh)																					
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	72	103	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	2,488	2,473	2,461	2,450	2,441	2,426	2,414	2,398	2,377	2,363	2,351	2,340	2,331	2,317	2,306	2,294	2,286
Wind	1,111	1,330	1,330	1,814	1,658	1,603	1,603	1,342	1,407	1,129	859	861	859	859	859	861	859	859	288	289
DR, EE, DER, CVR	-	125	130	136	274	277	280	436	438	439	441	443	442	442	442	443	442	442	442	443
Storage	-	-	-	395	391	400	386	412	329	305	324	323	309	351	364	351	440	460	503	458
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-
NGCC	-	-	-	14,256	14,080	28,079	26,037	27,626	24,566	32,015	32,887	38,439	38,945	38,512	38,542	38,835	42,082	42,270	42,280	40,638
Market Purchases	8,756	13,959	19,300	8,115	14,082	9,268	13,456	11,210	14,508	9,114	10,874	10,363	12,443	12,157	12,135	12,601	8,583	8,530	9,711	10,677
Market Sales	-	-	-	(10)	-	(1)	-	-	-	(614)	(131)	(791)	(372)	(383)	(377)	(358)	(386)	(382)	(330)	(264)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.5%	45.9%	53.5%	19.6%	29.4%	16.3%	23.1%	19.2%	24.8%	15.5%	17.4%	15.5%	18.0%	17.6%	17.6%	18.2%	12.4%	12.3%	14.0%	15.4%
% of Sales	0.0%	0.0%	0.0%	0.02%	0.0%	0.002%	0.0%	0.0%	0.0%	1.0%	0.2%	1.2%	0.5%	0.6%	0.5%	0.5%	0.6%	0.6%	0.5%	0.4%

Exhibit C-13: High Technology Costs

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,243	$ 436,651	$ 412,629	$ 1,241,523	$ 1,170,034
2026	$ 571,309	$ 420,459	$ 785,587	$ 1,777,355	$ 1,578,561
2027	$ 749,745	$ 408,956	$ 859,864	$ 2,018,565	$ 1,689,560
2028	$ 778,939	$ 388,805	$ 1,163,268	$ 2,331,012	$ 1,838,735
2029	$ 950,441	$ 277,401	$ 1,292,116	$ 2,519,958	$ 1,873,319
2030	$ 1,294,568	$ 264,772	$ 1,518,859	$ 3,078,199	$ 2,156,546
2031	$ 1,409,184	$ 244,999	$ 1,478,189	$ 3,132,372	$ 2,068,136
2032	$ 1,427,186	$ 235,127	$ 1,505,562	$ 3,167,875	$ 1,971,140
2033	$ 1,499,870	$ 224,082	$ 1,491,923	$ 3,215,875	$ 1,885,786
2034	$ 1,518,769	$ 214,383	$ 1,776,347	$ 3,509,499	$ 1,939,465
2035	$ 1,649,640	$ 114,408	$ 1,792,365	$ 3,556,413	$ 1,852,221
2036	$ 1,805,850	$ 111,276	$ 2,078,051	$ 3,995,177	$ 1,960,921
2037	$ 1,948,659	$ 99,975	$ 2,094,566	$ 4,143,200	$ 1,916,478
2038	$ 1,953,647	$ 23,861	$ 2,220,743	$ 4,198,251	$ 1,830,122
2039	$ 1,948,514	$ 22,346	$ 2,158,874	$ 4,129,734	$ 1,696,592
2040	$ 2,031,818	$ 22,137	$ 2,167,299	$ 4,221,254	$ 1,634,333
2041	$ 2,027,347	$ 7,244	$ 2,180,096	$ 4,214,687	$ 1,537,829
2042	$ 2,054,044	$ 7,120	$ 2,191,718	$ 4,252,882	$ 1,462,412
2043	$ 2,086,593	$ 6,999	$ 2,199,041	$ 4,292,633	$ 1,391,085
2044	$ 2,083,823	$ 6,883	$ 2,217,899	$ 4,308,605	$ 1,315,862
				NPV $B	**$ 34.8**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

High Technology Costs			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	19,026	7	13
2028	5,846,262	952	67
2029	8,635,386	1,400	82
2030	11,480,952	1,861	109
2031	10,646,198	1,726	101
2032	11,295,908	1,831	107
2033	10,044,462	1,628	95
2034	12,794,003	1,788	111
2035	13,150,384	1,846	114
2036	15,122,792	1,879	122
2037	15,331,086	1,914	124
2038	15,154,266	1,885	122
2039	15,166,602	1,887	123
2040	15,284,534	1,905	124
2041	16,614,058	2,122	136
2042	16,690,817	2,134	137
2043	16,725,954	2,146	137
2044	16,021,969	2,024	131
2005 Baseline	21,134,511	29,137	115,198

High Technology Costs (GWh)																					
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	72	103	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	2,488	2,473	2,461	2,450	2,441	2,426	2,414	2,398	2,377	2,363	2,351	2,340	2,331	2,317	2,306	2,294	2,286
Wind	1,111	1,330	1,330	1,814	1,658	1,603	1,603	1,342	1,407	1,129	859	861	859	859	859	861	859	859	288	289
DR, EE, DER, CVR	-	125	130	136	152	152	152	279	281	283	285	286	286	286	286	286	286	286	286	286
Storage	-	-	-	395	391	400	386	412	329	305	324	323	309	351	364	351	440	460	503	458
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-
NGCC	-	-	-	14,256	21,120	28,079	26,037	27,626	24,566	32,015	32,887	38,439	38,945	38,512	38,542	38,835	42,082	42,270	42,280	40,639
Market Purchases	8,756	13,959	19,300	8,115	7,218	9,393	13,585	11,367	14,664	9,234	11,020	10,487	12,579	12,293	12,271	12,738	8,715	8,662	9,849	10,818
Market Sales	-	-	-	(10)	(53)	(0.3)	-	-	-	(578)	(120)	(758)	(351)	(363)	(357)	(339)	(360)	(357)	(312)	(248)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.5%	45.9%	53.5%	19.6%	15.1%	16.5%	23.3%	19.5%	25.1%	15.7%	17.6%	15.7%	18.2%	17.8%	17.8%	18.4%	12.6%	12.5%	14.2%	15.6%
% of Sales	0.0%	0.0%	0.0%	0.02%	0.1%	0.00%	0.0%	0.0%	0.0%	1.0%	0.2%	1.1%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.4%	0.4%

Exhibit C-14: Expanded Wind Availability (Base)

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,243	$ 436,651	$ 412,629	$ 1,241,523	$ 1,170,034
2026	$ 571,369	$ 420,459	$ 781,661	$ 1,773,489	$ 1,575,128
2027	$ 749,881	$ 408,956	$ 855,426	$ 2,014,263	$ 1,685,959
2028	$ 928,861	$ 388,805	$ 832,104	$ 2,149,770	$ 1,695,769
2029	$ 1,093,761	$ 277,401	$ 940,736	$ 2,311,898	$ 1,718,648
2030	$ 1,450,426	$ 264,772	$ 1,108,693	$ 2,823,891	$ 1,978,382
2031	$ 1,574,712	$ 244,999	$ 1,050,928	$ 2,870,639	$ 1,895,328
2032	$ 1,600,422	$ 235,127	$ 1,064,368	$ 2,899,917	$ 1,804,409
2033	$ 1,670,638	$ 224,082	$ 1,053,242	$ 2,947,962	$ 1,728,682
2034	$ 1,686,194	$ 214,383	$ 1,258,070	$ 3,158,647	$ 1,745,573
2035	$ 1,814,953	$ 114,408	$ 1,273,900	$ 3,203,261	$ 1,668,295
2036	$ 1,968,833	$ 111,276	$ 1,476,068	$ 3,556,177	$ 1,745,451
2037	$ 2,108,336	$ 99,975	$ 1,492,458	$ 3,700,769	$ 1,711,827
2038	$ 2,111,787	$ 23,861	$ 1,618,273	$ 3,753,921	$ 1,636,427
2039	$ 2,106,739	$ 22,346	$ 1,555,710	$ 3,684,795	$ 1,513,801
2040	$ 2,186,094	$ 22,137	$ 1,564,646	$ 3,772,877	$ 1,460,736
2041	$ 2,178,966	$ 7,244	$ 1,578,161	$ 3,764,371	$ 1,373,520
2042	$ 2,202,812	$ 7,120	$ 1,628,301	$ 3,838,233	$ 1,319,829
2043	$ 2,152,102	$ 6,999	$ 1,635,653	$ 3,794,754	$ 1,229,741
2044	$ 2,149,587	$ 6,883	$ 1,653,440	$ 3,809,910	$ 1,163,559
				NPV $B	**$ 31.8**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
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Exhibit C: Portfolio Results

Expanded Wind Availability (Base)			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	80,351	31	56
2026	114,579	44	80
2027	19,026	7	13
2028	5,846,262	952	67
2029	8,635,386	1,400	82
2030	11,480,952	1,861	109
2031	10,646,198	1,726	101
2032	11,295,908	1,831	107
2033	10,044,462	1,628	95
2034	12,794,003	1,788	111
2035	13,150,384	1,846	114
2036	15,122,792	1,879	122
2037	15,331,086	1,914	124
2038	15,154,266	1,885	122
2039	15,166,602	1,887	123
2040	15,284,534	1,905	124
2041	16,614,058	2,122	136
2042	16,690,817	2,134	137
2043	16,725,954	2,146	137
2044	16,021,969	2,024	131
2005 Baseline	21,134,511	29,137	115,198

Expanded Wind Availability (Base) (GWh)																				
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	72	103	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	1,582	1,574	1,566	1,559	1,553	1,545	1,538	1,525	1,507	1,500	1,493	1,486	1,480	1,472	1,465	1,179	1,174
Wind	1,111	1,330	1,330	4,672	4,510	4,454	4,454	4,200	4,258	3,981	3,710	3,720	3,710	3,710	3,710	3,720	3,710	3,710	288	289
DR, EE, DER, CVR	-	123	125	129	241	241	241	369	370	372	374	375	375	375	375	375	375	375	375	375
Storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	-
NGCC	-	-	-	14,256	21,120	28,079	26,037	27,626	24,566	32,015	32,887	38,439	38,945	38,512	38,542	38,835	42,082	42,270	42,280	40,638
Market Purchases	8,756	13,961	19,305	6,560	5,669	7,776	11,929	9,726	12,947	7,989	9,426	9,244	11,076	10,827	10,818	11,261	7,493	7,476	11,253	12,211
Market Sales	-	-	-	(4)	(154)	(28.8)	(9)	(7)	(13)	(1,091)	(271)	(1,270)	(617)	(629)	(627)	(607)	(794)	(811)	(187)	(161)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.5%	45.9%	53.5%	15.9%	11.9%	13.7%	20.5%	16.7%	22.1%	13.5%	15.1%	13.8%	16.0%	15.6%	15.7%	16.3%	10.8%	10.8%	16.2%	17.6%
% of Sales	0.0%	0.0%	0.0%	0.01%	0.3%	0.1%	0.01%	0.01%	0.02%	1.8%	0.4%	1.9%	0.9%	0.9%	0.9%	0.9%	1.1%	1.2%	0.3%	0.2%

Exhibit C-15: Expanded Wind Availability (EER)

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,597	$ 436,651	$ 412,629	$ 1,241,877	$ 1,170,368
2026	$ 569,573	$ 420,459	$ 780,338	$ 1,770,370	$ 1,572,358
2027	$ 744,450	$ 408,956	$ 853,769	$ 2,007,175	$ 1,680,027
2028	$ 833,075	$ 388,805	$ 940,912	$ 2,162,792	$ 1,706,041
2029	$ 997,803	$ 277,401	$ 1,057,540	$ 2,332,744	$ 1,734,145
2030	$ 1,397,954	$ 264,772	$ 1,226,246	$ 2,888,972	$ 2,023,976
2031	$ 1,360,616	$ 244,999	$ 1,485,882	$ 3,091,497	$ 2,041,149
2032	$ 1,288,131	$ 235,127	$ 1,617,277	$ 3,140,535	$ 1,954,128
2033	$ 1,195,259	$ 224,082	$ 1,815,117	$ 3,234,458	$ 1,896,683
2034	$ 1,087,273	$ 214,383	$ 2,021,753	$ 3,323,409	$ 1,836,626
2035	$ 1,059,639	$ 114,408	$ 2,194,259	$ 3,368,306	$ 1,754,252
2036	$ 1,080,742	$ 111,276	$ 2,402,392	$ 3,594,410	$ 1,764,216
2037	$ 1,033,673	$ 99,975	$ 2,647,001	$ 3,780,649	$ 1,748,776
2038	$ 901,670	$ 23,861	$ 2,964,477	$ 3,890,008	$ 1,695,751
2039	$ 883,245	$ 22,346	$ 2,897,156	$ 3,802,747	$ 1,562,258
2040	$ 923,249	$ 22,137	$ 2,909,703	$ 3,855,089	$ 1,492,565
2041	$ 904,123	$ 7,244	$ 2,933,018	$ 3,844,385	$ 1,402,715
2042	$ 898,951	$ 7,120	$ 2,952,521	$ 3,858,592	$ 1,326,830
2043	$ 878,599	$ 6,999	$ 3,005,951	$ 3,891,549	$ 1,261,109
2044	$ 857,851	$ 6,883	$ 3,022,167	$ 3,886,901	$ 1,187,072
				NPV $B	**$ 32.8**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
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Exhibit C: Portfolio Results

Expanded Wind Availability (EER)			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	17,109	7	12
2026	3,830	1	3
2027	-	-	-
2028	5,828,886	945	55
2029	8,666,227	1,405	82
2030	6,253,802	1,014	59
2031	9,380,703	1,521	89
2032	9,406,403	1,525	89
2033	9,380,703	1,521	89
2034	9,380,703	1,521	89
2035	9,380,703	1,521	89
2036	9,406,403	1,525	89
2037	9,380,703	1,521	89
2038	9,380,703	1,521	89
2039	9,380,703	1,521	89
2040	9,406,403	1,525	89
2041	9,380,703	1,521	89
2042	9,380,703	1,521	89
2043	9,481,798	1,555	90
2044	9,406,403	1,525	89
2005 Baseline	21,134,511	29,137	115,198

Expanded Wind Availability (EER) (GWh)																					
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	14,722	14,028	14,813	14,722	14,028	14,813	14,722	14,028	14,813
Coal	15	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	2,488	2,473	2,461	2,450	2,441	3,632	4,819	5,996	7,174	8,330	8,891	8,846	8,819	8,757	8,712	9,572	9,542
Wind	1,111	1,330	1,330	4,101	3,939	3,884	5,025	5,915	7,110	7,974	8,273	9,437	10,555	11,696	11,696	11,724	11,696	11,696	8,844	8,865
DR, EE, DER, CVR	-	123	125	128	263	263	263	419	420	422	424	426	425	425	425	426	425	425	425	426
Storage	-	-	-	36	39	44	42	45	40	45	59	57	58	45	48	43	51	49	52	59
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160	-
NGCC	-	-	-	14,256	21,195	15,295	22,942	23,005	22,942	22,942	22,942	23,005	22,942	22,942	22,942	23,005	22,942	22,942	22,942	23,005
Market Purchases	8,813	14,060	19,322	6,255	5,308	20,181	17,314	16,109	15,317	14,744	15,207	16,514	17,127	15,511	15,387	15,977	15,145	15,762	17,269	16,677
Market Sales	-	-	-	(54)	(259)	(41.9)	(3,824)	(4,468)	(5,789)	(6,144)	(5,251)	(4,597)	(4,449)	(5,222)	(5,040)	(4,931)	(4,678)	(5,102)	(4,026)	(4,047)
Load	23,987	30,440	36,096	41,367	47,832	56,757	58,310	58,385	58,455	58,985	62,547	66,820	69,100	69,184	69,109	69,175	69,233	69,289	69,348	69,423
% of Purchase	36.7%	46.2%	53.5%	15.1%	11.1%	35.6%	29.7%	27.6%	26.2%	25.0%	24.3%	24.7%	24.8%	22.4%	22.3%	23.1%	21.9%	22.7%	24.9%	24.0%
% of Sales	0.0%	0.0%	0.0%	0.1%	0.5%	0.1%	6.6%	7.7%	9.9%	10.4%	8.4%	6.9%	6.4%	7.5%	7.3%	7.1%	6.8%	7.4%	5.8%	5.8%

Exhibit C-16: Preferred Portfolio

	Variable Costs	Fixed Costs Existing Resources	Fixed Costs New Resources	Total Nominal $	Total 2024 $
2024*	$ -	$ 988,761	$ -	$ 988,761	$ -
2025	$ 392,143	$ 436,651	$ 403,139	$ 1,231,933	$ 1,160,996
2026	$ 568,765	$ 420,459	$ 757,454	$ 1,746,678	$ 1,551,316
2027	$ 743,439	$ 408,956	$ 824,865	$ 1,977,260	$ 1,654,988
2028	$ 832,008	$ 388,805	$ 915,096	$ 2,135,909	$ 1,684,836
2029	$ 996,540	$ 277,401	$ 1,032,670	$ 2,306,611	$ 1,714,718
2030	$ 1,396,565	$ 264,772	$ 1,223,887	$ 2,885,224	$ 2,021,350
2031	$ 1,386,465	$ 244,999	$ 1,431,224	$ 3,062,688	$ 2,022,127
2032	$ 1,289,311	$ 235,127	$ 1,582,541	$ 3,106,979	$ 1,933,249
2033	$ 1,196,633	$ 224,082	$ 1,781,897	$ 3,202,612	$ 1,878,009
2034	$ 1,090,707	$ 214,383	$ 1,990,770	$ 3,295,860	$ 1,821,401
2035	$ 1,045,658	$ 114,408	$ 2,153,724	$ 3,313,790	$ 1,725,860
2036	$ 1,114,343	$ 111,276	$ 2,411,741	$ 3,637,360	$ 1,785,297
2037	$ 1,013,033	$ 99,975	$ 2,844,088	$ 3,957,096	$ 1,830,393
2038	$ 912,604	$ 23,861	$ 3,109,609	$ 4,046,074	$ 1,763,784
2039	$ 896,063	$ 22,346	$ 3,044,057	$ 3,962,466	$ 1,627,874
2040	$ 932,302	$ 22,137	$ 3,054,070	$ 4,008,509	$ 1,551,965
2041	$ 914,484	$ 7,244	$ 3,072,667	$ 3,994,395	$ 1,457,450
2042	$ 908,210	$ 7,120	$ 3,092,859	$ 4,008,189	$ 1,378,271
2043	$ 868,820	$ 6,999	$ 3,107,551	$ 3,983,370	$ 1,290,865
2044	$ 846,359	$ 6,883	$ 3,124,775	$ 3,978,017	$ 1,214,899
				NPV $B	**$ 33.1**

All $'s x 1,000.

*Not included in NPV calculation, used for calculating CAGR values.

Indiana Michigan Power Company
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Exhibit C: Portfolio Results

Preferred Portfolio			
Fiscal Year	CO2 (tons)	NOx (tons)	SO2 (tons)
2025	17,109	7	12
2026	3,830	1	3
2027	-	-	-
2028	5,828,886	945	55
2029	8,666,227	1,405	82
2030	6,253,802	1,014	59
2031	7,817,252	1,267	74
2032	7,838,669	1,271	74
2033	7,817,252	1,267	74
2034	7,817,252	1,267	74
2035	7,817,252	1,267	74
2036	7,838,669	1,271	74
2037	7,817,252	1,267	74
2038	7,817,252	1,267	74
2039	7,817,252	1,267	74
2040	7,838,669	1,271	74
2041	7,817,252	1,267	74
2042	7,817,252	1,267	74
2043	7,934,385	1,302	75
2044	7,838,669	1,271	74
2005 Baseline	21,134,511	29,137	115,198

Preferred Portfolio (GWh)																					
Type	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Nuclear	13,914	14,790	14,700	14,074	14,791	14,587	14,016	14,836	14,700	14,100	14,813	17,088	18,747	19,531	19,440	18,761	19,531	19,440	18,747	19,545
Coal	15	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydro	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Solar	52	51	536	2,488	2,473	2,461	2,450	3,045	4,231	5,416	5,686	5,656	6,522	6,489	6,456	6,436	6,391	6,359	6,326	6,306
Wind	1,111	1,330	1,330	4,101	3,939	3,884	5,025	5,915	7,110	7,974	8,844	9,437	10,555	11,696	11,696	11,724	11,696	11,696	8,844	8,865
DR, EE, DER, CVR	15	150	159	163	303	304	304	329	331	333	334	336	335	335	335	336	335	335	335	336
Storage	-	-	-	37	39	44	42	45	40	45	59	57	58	45	48	43	51	49	52	59
NGCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	188	-
NGCC	-	-	-	14,256	21,195	15,295	19,119	19,171	19,119	19,119	19,119	19,171	19,119	19,119	19,119	19,171	19,119	19,119	19,119	19,171
Market Purchases	8,798	14,033	19,288	6,221	5,293	20,164	18,086	16,181	15,186	14,693	15,623	16,590	16,110	14,645	14,617	15,137	14,368	14,907	17,336	16,654
Market Sales	-	-	-	(54)	(264)	(43.0)	(796)	(1,273)	(2,389)	(2,820)	(1,951)	(1,673)	(2,364)	(2,673)	(2,657)	(2,489)	(2,339)	(2,678)	(1,577)	(1,545)
Load	23,987	30,440	36,096	41,368	47,852	56,779	58,328	58,332	58,411	58,940	62,609	66,746	69,164	69,270	69,137	69,202	69,234	69,309	69,452	69,474
% of Purchase	36.7%	46.1%	53.4%	15.0%	11.1%	35.5%	31.0%	27.7%	26.0%	24.9%	25.0%	24.9%	23.3%	21.1%	21.1%	21.9%	20.8%	21.5%	25.0%	24.0%
% of Sales	0.0%	0.0%	0.0%	0.13%	0.55%	0.08%	1.36%	2.18%	4.09%	4.8%	3.1%	2.5%	3.4%	3.9%	3.8%	3.6%	3.4%	3.9%	2.3%	2.2%

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit C: Portfolio Results

Exhibit C-17: Nameplate Capacity Additions for all Cases

Portfolio	2034 Nameplate Capacity Additions (MW)								2044 Nameplate Capacity Additions (MW)							
	Wind	Solar	Storage	NGCT	NGCC	Nuclear*	DR, EE, DER, CVR**	**Total Additions**	Wind	Solar	Storage	NGCT	NGCC	Nuclear*	DR, EE, DER, CVR**	**Total Additions**
Preferred Portfolio	2,600	2,071	50	2,190	4,500	0	134	**11,545**	3,000	2,542	50	2,190	4,500	2,480	94	**14,856**
Base Reference	200	581	450	2,000	4,630	0	144	**8,005**	0	551	450	2,000	5,660	1,880	220	**10,761**
Enhanced Environmental Regulations	1,800	3,238	350	1,500	5,400	0	178	**12,466**	3,000	4,092	350	1,730	5,400	1,880	233	**16,685**
Base Under EPA Section 111(b)(d)	1,800	3,245	400	1,500	5,400	0	182	**12,527**	2,800	4,517	400	1,730	5,400	1,880	236	**16,963**
Low Carbon: Transition to Objective	2,000	6,194	300	3,500	2,700	0	173	**14,867**	3,000	9,359	500	3,730	2,700	3,080	235	**22,604**
Low Carbon: Expanded Build Limits	5,000	5,701	300	4,000	1,800	0	134	**16,935**	4,600	8,222	350	4,230	1,800	2780	200	**22,182**
High Economic Growth	1,800	1,891	454	3,500	4,630	0	188	**12,463**	3,000	3,266	450	3,730	4,630	1,880	246	**17,202**
Low Economic Growth	200	0	0	1,500	4,630	0	92	**6,422**	200	0	0	1,500	5,660	1,880	56	**9,296**
Expanded Wind Availability (Base)	1,200	145	0	2,000	4,630	0	168	**8,143**	0	0	0	2,230	5,660	1,880	229	**9,999**
Expanded Wind Availability (EER)	2,600	1,775	50	1,500	5,400	0	196	**11,521**	3,000	4,145	50	1,730	5,400	1,880	290	**16,495**
Base with High Indiana Load	600	1,742	451	3,000	4,630	0	88	**10,511**	1,000	1,251	451	3,460	5,660	1,880	55	**13,757**
Base with Low Indiana Load	800	0	0	2,000	4,630	0	100	**7,530**	1,000	0	0	2,000	4,630	1,880	53	**9,563**
High Technology Cost	200	581	450	2,000	4,630	0	144	**8,005**	0	551	450	2,000	5,660	1,880	220	**10,761**
Rockport Unit 1 Retires 2025	200	581	450	2,000	4,630	0	144	**8,005**	0	551	450	2,000	5,660	1,880	220	**10,761**
Rockport Unit 1 Retires 2026	200	581	450	2,000	4,630	0	144	**8,005**	0	551	450	2,000	5,660	1,880	220	**10,761**
Exit OVEC ICPA in 2030	200	581	450	2,000	4,630	0	204	**8,065**	0	551	450	2,000	5,660	1,880	302	**10,843**

Exhibit D Candidate Portfolio Risk Analysis

Exhibit D-1: Net Present value

NPV ($B)				
Percentile	Base Reference	Low Carbon: Transition to Objective	Expanded Wind Availability (EER)	Preferred Portfolio
10%	$26.5	$35.1	$28.9	$29.0
25%	$29.1	$37.2	$31.3	$31.3
50%	$32.4	$39.7	$34.1	$34.1
75%	$36.1	$42.4	$37.3	$37.3
90%	$39.9	$45.0	$40.4	$40.4

Exhibit D-2: Purchases as % of Load

Purchases as % of Load				
Percentile	Base Reference	Low Carbon: Transition to Objective	Expanded Wind Availability (EER)	Preferred Portfolio
10%	5%	10%	23%	22%
25%	18%	17%	26%	26%
50%	31%	24%	29%	29%
75%	45%	31%	32%	32%
90%	57%	38%	35%	36%

Exhibit D-3: Sales as % of Load

NPV ($B)				
Percentile	Base Reference	Low Carbon: Transition to Objective	Expanded Wind Availability (EER)	Preferred Portfolio
10%	0%	3%	2%	0%
25%	0%	5%	3%	1%
50%	0%	8%	6%	3%
75%	2%	14%	8%	5%
90%	8%	24%	11%	8%

Exhibit E Supply Side Resources

Exhibit E-1: Supply Side Resource Technology Installed Cost

Technology	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
CC-Single Shaft	1,946	1,953	1,988	2,031	2,074	2,120	2,163	2,209	2,256	2,309	2,363	2,422	2,488	2,559	2,635	2,716	2,806	2,903	3,001	3,099
CC-Multi-Shaft	1,688	1,694	1,724	1,762	1,799	1,839	1,877	1,916	1,957	2,002	2,049	2,101	2,158	2,219	2,285	2,355	2,433	2,517	2,602	2,687
CC with 90% CCS	4,304	4,272	4,296	4,337	4,374	4,413	4,445	4,476	4,507	4,545	4,581	4,681	4,794	4,914	5,042	5,180	5,333	5,498	5,664	5,827
CT	1,442	1,449	1,475	1,508	1,542	1,577	1,611	1,645	1,682	1,723	1,765	1,808	1,856	1,907	1,962	2,021	2,087	2,157	2,229	2,300
RICE	3,224	3,240	3,299	3,374	3,449	3,528	3,604	3,683	3,765	3,857	3,951	4,048	4,157	4,273	4,397	4,529	4,677	4,835	4,997	5,157
AD	2,017	2,027	2,064	2,110	2,157	2,206	2,254	2,303	2,354	2,412	2,470	2,531	2,598	2,671	2,748	2,831	2,923	3,022	3,123	3,222
SMR	9,608	9,553	9,713	9,950	10,194	10,453	10,687	10,937	11,210	11,512	11,822	12,134	12,481	12,860	13,250	13,684	14,174	14,686	15,222	15,748
SMR - Net ITC	7,144	7,103	7,221	7,397	7,579	7,772	7,946	8,132	8,335	8,559	8,789	9,021	9,280	10,386	11,551	13,684	14,174	14,686	15,222	15,748
Storage 4Hr	2,061	2,021	2,006	1,997	1,986	1,972	2,000	2,029	2,059	2,093	2,126	2,161	2,200	2,242	2,287	2,334	2,388	2,445	2,502	2,556
Storage 6Hr	3,102	3,041	3,019	3,006	2,988	2,968	3,010	3,054	3,099	3,150	3,201	3,254	3,313	3,376	3,444	3,516	3,597	3,684	3,770	3,852
Storage 8Hr	4,145	4,064	4,034	4,016	3,992	3,966	4,023	4,081	4,141	4,210	4,278	4,349	4,428	4,513	4,604	4,701	4,809	4,926	5,041	5,150
Storage 100Hr	2,925	2,868	2,847	2,834	2,817	2,798	2,838	2,880	2,922	2,971	3,019	3,069	3,126	3,186	3,250	3,319	3,395	3,478	3,560	3,637
Storage 4Hr - Net ITC	1,503	1,474	1,463	1,457	1,448	1,438	1,459	1,480	1,501	1,526	1,551	1,576	1,605	1,787	1,977	2,334	2,388	2,445	2,502	2,556
Storage 6Hr - Netc ITC	2,262	2,218	2,202	2,192	2,179	2,164	2,195	2,227	2,260	2,297	2,334	2,373	2,416	2,691	2,978	3,516	3,597	3,684	3,770	3,852
Storage 8Hr - Net ITC	3,023	2,964	2,942	2,929	2,912	2,892	2,934	2,976	3,020	3,070	3,120	3,171	3,229	3,597	3,981	4,701	4,809	4,926	5,041	5,150
Storage 100Hr - Net ITC	2,138	2,096	2,081	2,071	2,059	2,045	2,075	2,105	2,136	2,171	2,207	2,243	2,284	2,542	2,812	3,319	3,395	3,478	3,560	3,637
Wind	2,852	2,835	2,856	2,888	2,918	2,949	3,009	3,070	3,134	3,206	3,278	3,354	3,438	3,528	3,625	3,728	3,842	3,966	4,091	4,214
Solar	2,629	2,574	2,552	2,537	2,519	2,498	2,470	2,439	2,405	2,372	2,334	2,375	2,421	2,469	2,522	2,577	2,640	2,707	2,773	2,837
Solar with Storage	3,488	3,417	3,389	3,371	3,348	3,322	3,321	3,318	3,313	3,312	3,306	3,362	3,426	3,494	3,566	3,644	3,730	3,823	3,915	4,003
Solar - Net ITC	1,917	1,877	1,861	1,850	1,837	1,821	1,801	1,779	1,754	1,730	1,702	1,732	1,765	1,968	2,180	2,577	2,640	2,707	2,773	2,837
Solar - Net ITC and EC Bonus	1,799	1,761	1,746	1,736	1,723	1,709	1,690	1,669	1,646	1,623	1,597	1,625	1,656	1,857	2,066	2,577	2,640	2,707	2,773	2,837
Solar with Storage - Net ITC	2,543	2,492	2,471	2,458	2,442	2,423	2,422	2,420	2,416	2,415	2,411	2,452	2,498	2,784	3,083	3,644	3,730	3,823	3,915	4,003

Exhibit E-2: High Technology Costs Case Installed Cost Percent Increases

Technology	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Wind	4%	6%	8%	9%	11%	13%	13%	14%	14%	15%	15%	16%	16%	17%	17%	18%	18%	19%	19%	20%
Solar	3%	5%	6%	8%	11%	13%	16%	19%	22%	26%	31%	30%	30%	30%	30%	30%	30%	29%	29%	29%
Nuclear Small Modular Reactor						25%	29%	32%	37%	41%	46%	47%	48%	50%	51%	52%	53%	54%	54%	55%
NG Combustion Turbine	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%
NG Combined Cycle	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%
Storage (4-Hour)	28%	27%	27%	26%	25%	24%	25%	26%	27%	29%	30%	31%	32%	34%	35%	37%	38%	40%	41%	43%
Storage (6-Hour)	28%	28%	27%	27%	26%	26%	27%	28%	29%	31%	32%	33%	35%	36%	38%	40%	41%	43%	45%	47%
Storage (8-Hour)	29%	28%	28%	27%	27%	26%	28%	29%	30%	32%	33%	35%	36%	38%	39%	41%	43%	45%	47%	49%

Exhibit F Demand Side Resources

Exhibit F-1a: Energy Efficiency Bundles MWh Savings by Vintage

	2026-2028 Program Blocks					
	DSM MWh					
	Residential - Low/Medium	Residential - High	Residential - Behavior	IQW	IQ HEAR	C&I - ENHANCED
2026	16,865	5,535	7,158	701	1,025	88,831
2027	35,821	11,069	9,025	1,417	2,192	179,797
2028	56,534	16,386	11,100	2,140	3,490	269,492
2029	55,945	15,725		2,091	3,490	258,611
2030	54,780	14,964		2,042	3,490	246,760
2031	54,733	14,823		1,921	3,490	233,554
2032	54,669	14,274		1,841	3,490	230,763
2033	54,592	11,596		1,761	3,490	224,889
2034	54,425	9,358		1,702	3,490	220,336
2035	53,847	7,972		1,637	3,490	213,235
2036	50,050	7,959		1,449	3,490	197,603
2037	45,758	7,184		1,313	3,490	179,455
2038	41,653	6,482		1,183	3,490	161,660
2039	40,942	5,878		1,174	3,490	155,286
2040	39,986	5,878		1,173	3,490	152,218
2041	37,627	5,613		1,119	3,456	103,338
2042	31,409	5,027		949	2,436	54,017
2043	25,058	4,415		764	1,275	5,651
2044	21,046	4,094		623	58	5,436

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Exhibit F: Demand Side Resources

Exhibit F-1b: Energy Efficiency Bundles MWh Savings by Vintage

	2029-2031 Program Blocks					
	DSM MWh					
	Residential - Low/Medium	Residential - High	Residential - Behavior	IQW	IQ HEAR	C&I - ENHANCED
2029	22,767	5,914	13,294	742	1,415	96,798
2030	47,248	11,920	15,490	1,494	2,932	189,381
2031	71,524	17,314	17,574	2,239	4,536	277,337
2032	70,030	15,646		2,190	4,536	255,979
2033	68,779	14,203		2,142	4,536	234,963
2034	68,704	13,973		2,020	4,536	214,578
2035	68,623	13,420		1,941	4,536	212,035
2036	68,477	11,787		1,870	4,536	203,265
2037	68,183	10,401		1,811	4,536	197,907
2038	67,378	9,719		1,745	4,536	190,011
2039	63,228	9,702		1,558	4,536	175,512
2040	59,158	9,168		1,422	4,536	158,610
2041	55,423	8,725		1,292	4,536	144,228
2042	54,889	8,373		1,283	4,536	138,106
2043	53,893	8,373		1,283	4,536	135,541
2044	50,140	8,065		1,224	4,460	88,782

Exhibit F-1c: Energy Efficiency Bundles MWh Savings by Vintage

	2032-2045 Program Blocks					
	DSM MWh					
	Residential - Low/Medium	Residential - High	Residential - Behavior	IQW	IQ HEAR	C&I - ENHANCED
2032	27,610	7,037	19,453	759	1,678	102,890
2033	55,606	15,898	21,070	1,525	3,417	203,086
2034	82,368	23,097	22,408	2,288	5,206	295,587
2035	108,675	29,568	23,478	3,006	7,035	363,998
2036	136,866	35,523	24,312	3,725	8,880	440,966
2037	165,261	41,569	24,948	4,374	10,738	510,418
2038	193,184	46,404	25,425	5,023	12,607	577,062
2039	220,661	50,023	25,778	5,672	14,483	634,664
2040	247,265	53,154	25,780	6,262	16,365	687,109
2041	272,649	55,874	25,780	6,844	18,251	773,884
2042	294,825	58,174	25,780	7,299	20,140	849,709
2043	316,310	60,008	25,780	7,746	22,029	918,037
2044	336,954	61,817	25,780	8,199	23,918	979,567

Exhibit F-2a: Energy Efficiency Program Block MW Peak Impact

2026-2028 Program Blocks							
	DSM Summer Peak Impact (MW)						
	Residential - Low/Medium	Residential - High	Residential - Behavior	C&I - Base	IQW	IQ HEAR	C&I - ENHANCED
2026	4.75	3.13	0.82	11.25	0.13	0.02	11.79
2027	10.11	6.34	1.03	22.76	0.26	0.04	23.85
2028	15.96	9.41	1.27	34.05	0.39	0.07	35.66
2029	15.91	9.06		32.54	0.37	0.07	34.14
2030	15.82	8.55		30.91	0.34	0.07	32.51
2031	15.81	8.52		29.14	0.31	0.07	30.74
2032	15.81	8.45		28.75	0.30	0.07	30.36
2033	15.80	7.08		28.03	0.29	0.07	29.63
2034	15.77	5.71		27.49	0.27	0.07	29.08
2035	15.72	4.42		26.65	0.25	0.07	28.22
2036	14.92	4.41		24.75	0.20	0.07	26.25
2037	13.80	3.44		22.46	0.17	0.07	23.86
2038	12.64	2.56		20.13	0.14	0.07	21.43
2039	12.31	1.81		19.27	0.13	0.07	20.50
2040	12.13	1.81		18.87	0.13	0.07	20.08
2041	11.93	1.77		12.81	0.13	0.07	13.59
2042	11.62	1.69		6.73	0.12	0.05	7.13
2043	11.35	1.61		0.87	0.11	0.03	0.91
2044	11.26	1.57		0.84	0.11	0.01	0.87

Exhibit F-2b: Energy Efficiency Program Block MW Peak Impact

2029-2031 Program Blocks						
	DSM Summer Peak Impact (MW)					
	Residential - Low/Medium	Residential - High	Residential - Behavior	IQW	IQ HEAR	C&I - ENHANCED
2029	6.20	3.40	1.52	0.13	0.03	12.70
2030	12.53	6.94	1.77	0.26	0.06	24.70
2031	18.66	10.01	2.01	0.39	0.09	36.02
2032	18.54	9.24		0.37	0.09	33.11
2033	18.44	8.35		0.34	0.09	30.27
2034	18.43	8.29		0.31	0.09	27.59
2035	18.42	8.22		0.30	0.09	27.25
2036	18.41	6.86		0.29	0.09	26.15
2037	18.36	5.52		0.27	0.09	25.50
2038	18.30	4.25		0.26	0.09	24.52
2039	17.47	4.25		0.20	0.09	22.53
2040	16.54	3.62		0.17	0.09	20.15
2041	15.63	3.11		0.14	0.09	18.04
2042	15.41	2.72		0.14	0.09	17.11
2043	15.23	2.72		0.14	0.09	16.73
2044	14.94	2.68		0.13	0.09	10.85

Exhibit F-2c: Energy Efficiency Program Block MW Peak Impact

	2032-2045 Program Blocks					
	MW Peak Impact					
	Residential - Low/Medium	Residential - High	Residential - Behavior	IQW	IQ HEAR	Enhanced C&I
2032	6.21	3.80	2.22	0.13	0.04	21.10
2033	12.11	8.06	2.41	0.26	0.07	41.71
2034	17.50	11.38	2.56	0.39	0.11	60.83
2035	22.37	14.43	2.68	0.49	0.15	76.08
2036	27.53	17.37	2.78	0.60	0.19	91.52
2037	32.75	21.17	2.85	0.69	0.23	105.08
2038	37.69	24.66	2.90	0.79	0.28	117.47
2039	42.46	26.63	2.94	0.88	0.32	128.00
2040	46.67	28.37	2.94	0.96	0.36	137.16
2041	50.78	29.90	2.94	1.04	0.40	150.38
2042	54.20	31.22	2.94	1.08	0.45	161.69
2043	57.50	32.12	2.94	1.13	0.49	171.26
2044	60.71	33.01	2.94	1.17	0.53	179.30

Exhibit F-3a: Energy Efficiency Program Block Annual Costs ($)

	2026-2028 Program Blocks					
	Total Program Costs ($)					
	Residential - Low/Medium	Residential - High	Residential - Behavior	IQW	IQ HEAR	Enhanced C&I
2026	$5,455,424	$4,304,494	$73,672	$994,511	$915,413	$15,618,930
2027	$6,200,346	$4,530,342	$92,887	$1,008,943	$1,044,977	$16,178,865
2028	$6,987,272	$4,748,679	$114,252	$1,022,430	$1,166,050	$16,190,003

Exhibit F-3b: Energy Efficiency Program Block Annual Costs ($)

	2029-2031 Program Blocks					
	Total Program Costs ($)					
	Residential - Low/Medium	Residential - High	Residential - Behavior	IQW	IQ HEAR	Enhanced C&I
2029	$7,627,213	$4,976,273	$136,828	$1,034,650	$1,275,707	$16,759,520
2030	$8,280,354	$5,229,645	$159,433	$1,045,474	$1,372,799	$16,157,347
2031	$8,787,114	$5,455,300	$180,882	$1,036,745	$1,457,390	$15,541,000

Exhibit F-3c: Energy Efficiency Program Block Annual Costs ($)

	2032-2045 Program Blocks					
	Total Program Costs ($)					
	Residential - Low/Medium	Residential - High	Residential - Behavior	IQW	IQ HEAR	Enhanced C&I
2032	$9,992,647	$5,722,785	$200,221	$1,044,863	$1,530,129	$17,209,167
2033	$10,491,927	$6,903,911	$216,869	$1,051,752	$1,591,813	$16,733,474
2034	$10,773,198	$6,802,761	$230,639	$1,057,504	$1,643,256	$15,788,798
2035	$10,735,368	$6,569,756	$241,656	$1,055,362	$1,685,025	$15,572,728
2036	$11,129,364	$6,388,046	$250,237	$1,057,543	$1,704,340	$16,385,850
2037	$11,424,462	$6,699,538	$256,781	$1,059,348	$1,720,271	$15,713,225
2038	$11,571,704	$6,588,948	$261,691	$1,060,796	$1,732,986	$15,914,587
2039	$11,610,809	$6,057,993	$265,327	$1,061,929	$1,742,871	$14,969,822
2040	$11,784,307	$6,824,660	$265,342	$1,062,801	$1,750,405	$14,320,100
2041	$11,712,662	$6,403,029	$265,342	$1,064,195	$1,756,053	$17,561,077
2042	$11,796,022	$5,918,381	$265,342	$1,056,729	$1,760,085	$17,200,865
2043	$11,590,917	$5,627,350	$265,342	$1,056,742	$1,760,086	$16,086,759
2044	$11,458,310	$5,632,954	$265,342	$1,056,753	$1,760,087	$16,143,823
2045	$11,285,012	$5,410,004	$265,342	$1,056,762	$1,760,088	$14,959,904

Exhibit F-4: Demand Response Sumer Peak MW and Annual Cost ($)

	Demand Response 2026-2028 Program Blocks							
	Residential DLC		Residential Rates / Other		C&I DLC		C&I Rates / Other	
	DSM Summer Peak Impact (MW)	Annual Program Costs ($)	DSM Summer Peak Impact (MW)	Annual Program Costs ($)	DSM Summer Peak Impact (MW)	Annual Program Costs ($)	DSM Summer Peak Impact (MW)	Annual Program Costs ($)
2026	14.07	$5,020,520	5.99	$1,788,765	1.21	$1,323,084	6.16	$2,263,278
2027	19.06	$7,908,327	14.37	$2,851,622	2.60	$1,656,194	19.48	$2,787,071
2028	25.44	$11,304,088	26.05	$3,547,374	4.17	$2,252,325	38.76	$3,444,444
2029	29.83	$8,569,323	32.66	$2,446,731	5.41	$1,742,458	49.88	$2,253,148
2030	32.05	$5,118,369	34.41	$1,436,788	6.29	$1,127,379	52.77	$1,272,238
2031	33.31	$3,899,444	34.37	$1,091,185	7.00	$922,046	52.66	$961,958
2032	34.90	$3,652,977	34.20	$1,020,586	7.78	$898,834	52.24	$856,070
2033	36.37	$3,679,366	33.90	$1,020,626	8.53	$924,225	51.57	$850,028
2034	37.75	$3,769,954	33.54	$1,042,022	9.25	$965,420	50.86	$866,629
2035	38.90	$3,836,611	33.08	$980,083	9.95	$1,005,096	50.05	$875,008
2036	40.27	$6,558,263	32.70	$1,391,174	10.66	$1,211,565	49.29	$920,260
2037	41.63	$9,448,797	32.31	$1,503,585	11.35	$1,254,226	48.51	$938,325
2038	43.01	$12,378,908	31.94	$1,624,171	12.02	$1,300,560	47.67	$963,735
2039	44.41	$9,696,981	31.56	$1,552,980	12.67	$1,344,574	46.81	$964,960
2040	45.82	$6,515,220	31.19	$1,469,283	13.32	$1,387,716	45.96	$967,463
2041	47.26	$5,392,486	30.84	$1,432,478	13.96	$1,435,982	45.09	$970,553
2042	48.66	$5,179,697	30.48	$1,428,638	14.60	$1,478,519	44.19	$980,838
2043	50.05	$5,219,501	30.11	$1,427,153	15.22	$1,526,609	43.31	$973,946
2044	51.49	$5,328,035	29.83	$1,467,276	15.85	$1,571,569	42.42	$1,002,037

Exhibit F-5: Avoided Capacity and T&D Costs

Year	Capacity Price $/kW-Year	Capacity Price $/MW-Day	T&D $/kW-YR	Peak $/kW-YR
2026	$ 62.38	$ 170.90	$ 13.82	$ 76.20
2027	$ 58.41	$ 160.04	$ 13.82	$ 72.23
2028	$ 70.99	$ 194.50	$ 13.82	$ 84.81
2029	$ 72.31	$ 198.11	$ 13.82	$ 86.13
2030	$ 73.61	$ 201.68	$ 13.82	$ 87.43
2031	$ 74.94	$ 205.32	$ 13.82	$ 88.76
2032	$ 76.28	$ 208.99	$ 13.82	$ 90.10
2033	$ 77.66	$ 212.76	$ 13.82	$ 91.48
2034	$ 79.09	$ 216.69	$ 13.82	$ 92.91
2035	$ 80.60	$ 220.82	$ 13.82	$ 94.42
2036	$ 82.17	$ 225.12	$ 13.82	$ 95.99
2037	$ 83.79	$ 229.57	$ 13.82	$ 97.61
2038	$ 85.47	$ 234.18	$ 13.82	$ 99.29
2039	$ 87.21	$ 238.94	$ 13.82	$ 101.03
2040	$ 89.00	$ 243.84	$ 13.82	$ 102.82
2041	$ 90.81	$ 248.78	$ 13.82	$ 104.63
2042	$ 92.65	$ 253.84	$ 13.82	$ 106.47
2043	$ 94.55	$ 259.04	$ 13.82	$ 108.37
2044	$ 96.51	$ 264.40	$ 13.82	$ 110.33

Exhibit G Scenario Power Prices

Exhibit G-1: On-Peak Power Prices

Year ($/MWh)	EER	Base	High	Low
2025	$ 30.80	$ 30.68	$ 40.02	$ 25.47
2026	$ 30.69	$ 30.79	$ 38.30	$ 26.41
2027	$ 30.35	$ 30.57	$ 37.49	$ 25.80
2028	$ 31.44	$ 31.48	$ 38.89	$ 27.03
2029	$ 32.30	$ 32.06	$ 41.27	$ 26.76
2030	$ 34.72	$ 33.28	$ 42.79	$ 27.21
2031	$ 35.28	$ 33.72	$ 43.70	$ 26.78
2032	$ 35.98	$ 34.34	$ 44.33	$ 26.23
2033	$ 37.68	$ 35.61	$ 45.77	$ 26.81
2034	$ 38.92	$ 36.31	$ 47.71	$ 26.68
2035	$ 37.11	$ 37.14	$ 49.65	$ 26.67
2036	$ 38.53	$ 37.80	$ 52.68	$ 27.06
2037	$ 39.60	$ 38.71	$ 55.62	$ 27.41
2038	$ 41.08	$ 39.40	$ 56.55	$ 27.40
2039	$ 41.15	$ 39.30	$ 58.33	$ 26.54
2040	$ 41.56	$ 41.08	$ 61.30	$ 26.77
2041	$ 41.74	$ 42.63	$ 64.30	$ 26.48
2042	$ 41.58	$ 43.25	$ 66.63	$ 26.55
2043	$ 44.53	$ 44.80	$ 69.22	$ 26.94
2044	$ 43.60	$ 44.32	$ 70.59	$ 26.18

Nominal $'s

Exhibit G-2: Off-Peak Power Prices

Year ($/MWh)	EER	Base	High	Low
2025	$ 28.80	$ 28.82	$ 37.71	$ 23.58
2026	$ 28.62	$ 28.77	$ 36.04	$ 24.45
2027	$ 28.39	$ 28.62	$ 35.31	$ 23.91
2028	$ 29.62	$ 29.54	$ 36.52	$ 25.36
2029	$ 30.18	$ 30.07	$ 38.34	$ 25.15
2030	$ 32.30	$ 31.43	$ 39.94	$ 25.77
2031	$ 32.77	$ 31.78	$ 40.97	$ 25.33
2032	$ 33.38	$ 32.29	$ 41.40	$ 24.79
2033	$ 35.23	$ 33.68	$ 43.10	$ 25.41
2034	$ 36.51	$ 34.53	$ 44.90	$ 25.35
2035	$ 34.04	$ 35.29	$ 46.55	$ 25.36
2036	$ 35.37	$ 36.06	$ 49.43	$ 25.91
2037	$ 36.13	$ 36.74	$ 52.05	$ 26.05
2038	$ 37.92	$ 37.10	$ 52.56	$ 25.86
2039	$ 37.94	$ 36.88	$ 54.55	$ 25.19
2040	$ 38.30	$ 38.33	$ 56.90	$ 25.40
2041	$ 38.31	$ 39.52	$ 59.50	$ 25.13
2042	$ 37.71	$ 40.21	$ 61.81	$ 25.23
2043	$ 40.20	$ 41.42	$ 64.12	$ 25.61
2044	$ 39.08	$ 40.60	$ 65.51	$ 24.66

Nominal $'s

Exhibit H Transmission Projects

23rd Street Station Rebuild: This project will rebuild 23rd Street station to address equipment material condition, performance and risk in Muncie, IN. The two 138/69/34.5kV transformers will be replaced and the 138kV and the 34.5kV will be rebuilt in a ring bus configuration.

- Project cost: $5 million

23rd Street – Blaine Street Line Rebuild: This project will rebuild approximately 1.19 miles of 23rd Street-Blaine 69kV line (to be operated at 34.5kV) between structures 1-13 and structures 27 - 49 to address equipment material condition, performance and risk in Muncie, IN.

- Project cost: $7 million

Adams – Berne 69kV Structure Replacement: Due to equipment material condition and performance, this project replaces structures only for approximately 4.90 miles of the Adams – Berne 69kV line.

- Project cost: $13 million

Albion Area Improvements: This project is PJM baseline and supplemental. This baseline portion will address a voltage violation by adding a low side circuit breaker at Albion station. The supplemental portion addresses equipment material, condition, performance, and risk by rebuilding the Wolf Lake 69kV Tap (as double-circuit), the Richland-TriLakes 69kV line (as double circuit), the Albion-Kendallville 138kV line; and performing rehab work at Albion and Kendallville stations.

- Project cost: $47 million

Albion – Columbia Improvements: This project is retiring the Gateway-Tri-Lakes 69kV circuit and constructing a new 138kV double circuit capable greenfield line operating at 69kV between Wolf Lake and Tri-Lakes. A new 69kV breaker will be installed at Albion, 69kV breaker “A” at Gateway will be retired, and the capacitor and cap switcher will be replaced at Gateway.

- Project cost: $33 million

Allen – Maddox 345kV Rebuild: This project will rebuild the 27.8 mile double circuit 345kV Allen-Maddox Creek 345kV, which is made up of circuits Allen-RP Mone 345kV and RP Mone-Maddox Creek 345kV, to address a thermal violation. This project will also replace 345kV breakers B1 and B at Maddox Creek and 345kV breakers M and M2 at East Lima.

- Project cost: $50 million

Burr Oak AEP for Trinity WVPA: Wabash Valley Power Authority (WVPA) has requested a Transmission Interconnection at their existing Trinity 69kV delivery point. As Trinity will not be radially connected anymore, the Marathon switch will need to be removed and be replaced with a ring bus station to not create a three- terminal line. This project constructs Burr Oak station a three 69kV circuit breaker ring bus to connect to WVPA’s 69kV line connecting to their Trinity station.

- Project cost: $7 million

Colony Bay – Illinois Road: The Colony Bay – Illinois Rd 69kV line asset will be rebuilt and reconductored to address equipment material condition, performance, and risk. In order to achieve this, AEP plans to rebuild the 1960's wood poles (2.7 miles), re-conductor (2.8 miles) and the 1960's aluminum conductor of the Colony Bay – Illinois Rd single circuit 69kV 6.9 mile line. In order to support this line rebuild, the 69kV POP switches (qty. 2) at Aboite 69kV station will be replaced and owned by AEP.

- Project cost: $11 million

Deer Creek – Makahoy: Rebuild 16.5 miles of the Deer Creek - Makahoy 138kV line. Rebuild 3.9 miles of the Deer Creek - Makahoy 138kV line as double circuit west from Deer Creek. Operate as double circuit to allow for bringing the Grant line into Deer Creek eliminating the 3 terminal line.

- Project cost: $46 million

Delaware – Kenmore Rebuild: This project will rebuild ~3.7 mile double circuit Delaware - Kenmore, this line will be comprised of ~1.3 miles of underground and ~2.4 miles of overhead and will be built at 69kV standards but energized at 34.5kV to address equipment material condition, performance, and risk in Muncie, IN.

- Project cost: $30 million

Delaware – Sorenson Markle Delivery Point: WVPA has requested a new 12 MW delivery point in Markle Indiana. To serve this delivery point, a new switch will be installed on the Delaware-Sorenson 138kV line. From the new switch a greenfield ~2.5 mile 138kV radial line will be installed to the customer station.

- Project cost: $9 million

East Elkhart – Mottville Rebuild/Re-route: On the East Elkhart – Mottville Hydro 138kV circuit, ~3.95 miles of greenfield line will be constructed from structure 96 to the newly constructed RV Capital station and remove ~3.75 miles of the existing circuit from structure 96 to structure 121. This will effectively address asset renewal needs while eliminating a hard tapped radial feed.

- Project cost: $31 million

Fall Creek 345kV Circuit Breaker Replacement: This project addresses equipment material condition, performance, and risk. This project will retire and remove two 345kV circuit breakers (to be funded by AES). Two new 345kV circuit breakers will be installed and owned by AEP towards AES's Noblesville and Desoto station.

- Project cost: $9 million

Glenbrook Area Improvements: This project will build a new 138/12kV Beckwith station to replace and retire Glenbrook station. The new Beckwith station will be connected to the Industrial Park – Spy Run

138kV circuit. AEP will retire the 4.25 mile Industrial Park – Spy Run 34.5kV line as well as Glenbrook 34/12kV substation. The Industrial Park transformer will be replaced. All 34.5kV assets at Wallen will be retired and the 3.5 mile Wallen – Industrial Park 34.5kV line will be retired.

  - Project cost: $11 million

- Hamilton Area Improvements: Two-way service will be provided to Hamilton and customers by installing a new 69kV line to Butler to address Hamilton Station customer outages due to maintenance, storm outages, and fault load dropping on the radial line from Butler. Customers will be served from a new breaker-and-half Teutsch Station and the existing Butler Station will be retired, eliminating exposure to line faults. A new 69kV circuit breaker will replace the motor operated breaker switches (MOABs) at Hamilton.
  - Project cost: $20 million

- Hayes AES/DP&L 138kV Connect: This project is a Transmission owner connection request and baseline project which constructs Hayes station a four 138kV circuit breaker ring bus and will install a new ~0.19 miles 138kV line to the Indiana/ Ohio State line to connect to DP&L's 138kV line connecting to their Blazer station. A new 138kV line ~0.05 miles will be built from Hodgin station to Hayes station. Additionally, 138kV metering will be installed.
  - Project cost: $15 million

- Hillcrest – Adams 69kV Line Rebuild: AEP has identified overload criteria violations and multiple condition and performance needs on Hillcrest-Adams 69kV. Ferguson station will be rebuilt on the nearby 138kV line as Baer to move it out of the FAA flight path. The Ferguson – Bluffton 69kV Branch and Adams – Bluffton 69kV Line will be rebuilt and re-routed to accommodate Kinnerk station served out of Hillcrest station via 3.55 miles radial line and Uniondale (REMC) station served out of Kingsland station via 4.3 miles radial line. Oil filled circuit breakers at Kingsland Station, manufactured in 1969, will be replaced with new circuit breakers.
  - Project cost: $120 million

- Huguenard Area Improvements: This project will retire the ~12.9 mile Lincoln – Tillman 34.5kV line due to equipment material condition, performance and risk in Ft Wayne Indiana. This project will build a new ~2.4 mile 138kV double circuit line extension from the Lincoln – Allen 138kV line to the new 138/34.5kV Huguenard station. Huguenard will be a 138/34.5kV station with a 3CB 138kV ring with the transformer and 34.5kV CB being re-used from Tilman station.
  - Project cost: $19 million
- Hummel Creek: This project addresses equipment material condition, performance and risk. The project constructs ~4.48 miles of new 69kV line (to be operated at 34.5kV) between Hummel Creek and Marion Plant Stations.
  - Project cost: $11 million
- Jay – College Corner: This project rebuilds 62.4 mile 138kV Jay – College Corner line due to the condition and risk associated with t structures of this age and type.

  - Project cost: $114 million

- Madison – Pendleton Line Rebuild: This project rebuilds 4.17 miles of the Madison – Pendleton 138kV line to address equipment material condition, performance and risk. In addition, the project expands Meadowbrook station to address operational concerns by adding 2- 138kV circuit breakers to eliminate the 3 terminal line.
    - Project cost: $8 million
- Magley – Decatur Rebuild: This project is rebuilding 5.88 miles of 69kV to address equipment material condition on the Magley-Decatur 69kV line.
    - Project cost: $12 million
- Eastern Marion Improvements: This project is rebuilding 17.67 miles of the Deer Creek – Hartford City 69kV line, retiring the Deer Creek – Hummel Creek 34.5kV line, retiring the Jonesboro – Gas City 34.5kV line, retiring the Jonesboro Extension 34.5kV line, retiring the remaining Deer Creek – Alexandria 34.5kV line (2.2 miles), retiring the de-energized Deer Creek Extension 34.5kV line and upgrading Hummel Creek station to address equipment material condition, performance and risk issues in Marion, Indiana.
    - Project cost: $41 million
- McKinley – Industrial Park: This project will rebuild the Industrial Park – McKinley 138kV line and replace risers at Bass to address equipment material/condition, performance and risk in Ft. Wayne, Indiana as well as thermal violations. The supplemental portion of this project rebuilds the ~4.59 mile portion of the Industrial Park – McKinley line asset which includes ~1.9 miles of existing double circuit, ~1.5 miles of existing single circuit and ~1.4 miles of single circuit that'll be rebuilt double circuit with the Bass – McKinley 34.5kV asset. The baseline portion of the project will replace overloaded risers to alleviate the thermal overloads at Bass Station.
    - Project cost: $9 million
- Eastern Melita Area Improvements: AEP will build new 69kV lines from Melita to Anthony 69kV and a double circuit extension from Lincoln to connect to the Lincoln – Water Pollution 69kV line. A new single circuit 34.5kV Maumee Extension will connect Maumee Sw to the Lincoln – Water Pollution line. Anthony station will be rebuilt as a 69/12kV station, Melita will have a 69kV CB added, and Storm Water, Omnisource, Water Pollution and Lincoln will have minor work done to bring them to 69kV operation. Filtration Switch and the Skid station will be retired.
    - Project cost: $15 million
- North Melita Area Improvements: This project will rebuild the 2.59 mile 69kV wood line north of Melita while retiring the 2.14 mile 34.5kV line section south of Melita along with the 34.5kV breaker at McKinley. To accommodate the Melita connection, a new 69kV breaker will be installed at Melita, the transformer at Fulton will be replaced and transformer 3 at Spy Run will be replaced to bring the Spy Run – Melita line to 69kV operation.
    - Project cost: $25 million
- Northern Muncie Area Improvements: The Delaware 34.5kV station, the Delaware – Jay 34.5kV, 20 mile line and the Delaware – Haymond 34.5kV, 2.5 mile line have all been identified as rehab

candidates. AEP is installing a new 138kV Perch station and retiring the 20-mile Delaware – Jay asset. AEP will also be rebuilding the Delaware – Haymond line as well as rebuilding the Delaware 34.5kV station as a ring bus to address the issues identified.

  - Project cost: $7 million

- Pendleton – Makagoy Line Rebuild: This project will rebuild the Makahoy – Pendleton 138kV line (approximately 15 miles), replaces the Pendleton 138/34.5kV transformer #2 and removes the Pendleton transformer # 1 which is no longer in service.

  - Project cost: $27 million

- Pettit Avenue – Melita: This project will rebuild ~1.9 miles of 69kV line on the Hillcrest-Webster 69kV line asset to address equipment material condition, performance and risk.

  - Project cost: $12 million

- Project Amazing: This project will serve a new 1,100 MW customer on the 345kV lines south of Olive station in the New Carlisle, Indiana area. To serve the customer, the Dumont – Elderberry and Dumont – Sorenson 345kV lines will be tapped and two new greenfield 345kV stations, Larrison Drive and New Prairie, will be constructed along with (6) customer radials from each greenfield station to the customer delivery points (~0.07 miles). The Kenzie Creek – Thomson 345kV circuit will have sag mitigation work performed to help increase the operating temperature of the line to achieve higher ratings. Work at Olive is also required, which includes replacing 345kV circuit breakers B, B1, B2, D1, and D2 along with bringing in the Dumont – Sorenson 345kV circuit that passes outside the station into a new string (C).

  - Project cost: $188 million

- Project Discovery: This project will serve a new 1,200 MW customer on the 138kV lines west of Allen station. To serve the customer, Allen station will be expanded with (2) new 345/138kV transformers and circuit breakers. A greenfield Zodiac station with (26) 138kV breakers will be installed to cut in AEP lines Allen-Lincoln #1 & #2, Allen-Hillcrest and Allen-Magley along with (10) customer radials from Zodiac station to the customer delivery points (~0.75 miles). The (2) 138kV double circuit lines (~4.1 miles each) will be rebuilt from Allen station to new Zodiac station.

  - Project cost: $169 million

- Robison Park – Lincoln: AEP will rebuild the 7.8 mile 138kV single circuit Rob Park – Lincoln line asset and add a 138kV tie breaker to Trier station to remove the 4 MOAB's in series. Trier station will also have a DICM expansion.

  - Project cost: $25 million

- Robison Park – McKinley: To address equipment material/condition performance on the Robison Park-McKinley/Wallen 69kV line AEP will rebuild ~3.24 miles of single circuit 69kV line.

  - Project cost: $6 million

- Robison Park – South Hicksville 69kV Line Rebuild: AEP has identified condition and performance issues on the Robison Park-South Hicksville 69kV line and a thermal violation for N-1-1 type contingency will be mitigated by rebuilding 2.2 miles of the North Hicksville – Butler 69kV line and 33.22 miles of the South Hicksville – Robison Park Tie 69kV line.
    - Project cost: $21 million
- Robison Park – Sowers: This project will re-conductor 18.1 miles of double circuit 138kV conductor and rebuild 13.7 miles of the 138kV line (double circuit capable) between Robinson Park and Sowers stations. To address potential load growth with potential customers, double circuit towers were used for this rebuild for future projects. The project includes station upgrades at Grabill station to facilitate the line rebuild, complete security light upgrades at Grabill station, and install a MOAB toward Sowers station and a new switch towards Robinson Park at Grabill station.
    - Project cost: $42 million
- Winchester Area Improvements – East: This project will address planning criteria violations on the Winchester – Anchor Hocking 69kV line and 138/69/12kV Transformer #1 at Randolph station. Supplemental upgrades are also included to expand Randolph, Winchester, and Anchor Hocking stations to address asset performance, equipment condition, risk of failure, and operational flexibility.
    - Project cost: $19 million
- Winchester Area Improvements – West: This project will rebuild 19.1 miles of the Modoc – Winchester 69kV line and Buena Vista – Lynn 69kV lines to address equipment material condition, performance, and risk. The project includes upgrades to expand Modoc and Lynn stations, rebuild Huntsville Switch, and a new switch to serve the tie to Lobdell Station.
    - Project cost: $23 million

Exhibit I Public Advisory Process Exhibits

Communication and documentation of the Company's Stakeholder interactions can be found on the Company's IRP website at the following address:

https://www.indianamichiganpower.com/community/improving-our-community/projects/irp/stakeholder-engagement-process-indiana

Additionally, a copy of each presentation, meetings minutes and stakeholder questions and responses can be found in IRP Appendix Volume 4. This includes:

- Stakeholder Comments
- Stakeholder Workshop 1 Presentation and Minutes
- HSL Technical Conference Presentation and Minutes
- Technical Conference Presentation and Minutes
- Stakeholder Workshop 2 Presentation and Minutes
- Stakeholder Workshop 3A Presentation and Minutes
- Stakeholder Workshop 3B Presentation and Minutes
- Stakeholder Workshop 4 Presentation and Minutes

Exhibit J Cross Reference Table

Cross Reference Table **170 IAC 4-7**	**Report Reference**
170 IAC 4-7-2 Integrated resource plan submission	
2(c) On or before the applicable date, a utility subject to subsection (a) or (b) must submit electronically to the director or through an electronic filing system if requested by the director, the following documents:	
(1) The IRP.	
(2) A technical appendix containing supporting documentation sufficient to allow an interested party to evaluate the data and assumptions in the IRP. The technical appendix shall include at least the following:	
(A) The utility's energy and demand forecasts and input data used to develop the forecasts.	Appendix Volume 1 Exhibit A
(B) The characteristics and costs per unit of resources examined in the IRP.	Appendix Volume 1, Volume 2, Volume 3, Section 8
(C) Input and output files from capacity planning models, in electronic format.	Appendix Volume 1 Exhibit C, Section 9
(D) For each portfolio, the electronic files for the calculation of the revenue requirement if not provided as an output file.	Appendix Volume 1 Exhibit C
If a utility does not provide the above information, it shall include a statement in the technical appendix specifying the nature of the information it is omitting and the reason necessitating its omission. The utility may request confidential treatment of the technical appendix under section 2.1 of this rule.	N/A
(3) An IRP summary that communicates core IRP concepts and results to nontechnical audiences in a simplified format using visual elements where appropriate. The IRP summary shall include, but is not limited to, the following:	Appendix Volume 1 Exhibit B
(A) A brief description of the utility's:	
(i) existing resources;	
(ii) preferred resource portfolio;	
(iii) key factors influencing the preferred resource portfolio;	
(iv) short term action plan;	
(v) public advisory process; and	
(vi) additional details requested by the director.	
(B) A simplified discussion of the utility's resource types and load characteristics.	
The utility shall make the IRP summary readily accessible on its website.	
2 (d) Contemporaneously with the submission of an IRP under this section, a utility shall provide to the director the following information:	Transmittal Letter
(1) The name and address of known individuals or entities considered by the utility to be interested parties.	
(2) A statement that the utility has sent known interested parties, electronically or by deposit in the United States mail, first class postage prepaid, a notice of the utility's submission of the IRP to the commission. The notice must include the following information:	
(A) A general description of the subject matter of the submitted IRP.	

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit J: Cross Reference Table

Cross Reference Table **170 IAC 4-7**	**Report Reference**
(B) A statement that the commission invites interested parties to submit written comments on the utility's IRP within ninety (90) days of the IRP submittal. An interested party includes a business, organization, or particular customer that participated in the utility's previous public advisory process or submitted comments on the utility's previous IRP.	
A utility is not required to separately notify other customers.	
(3) A statement that the utility served a copy of the documents submitted under subsection (c) on the OUCC.	
170 4-7-2.6 Public Advisory Process	
Sec 2.6 (b) The utility shall provide information requested by an interested party relating to the development of the utility's IRP within fifteen (15) business days of a written request or as otherwise agreed to by the utility and the interested party. If a utility is unable to provide the requested information within fifteen (15) business days or the agreed time frame, it shall provide a statement to the director and the requestor as to the reason it is unable to provide the requested information.	Appendix Volume 4, Section 3
2.6 (c) The utility shall solicit, consider, and timely respond to relevant input relating to the development of the utility's IRP provided by: (1) interested parties; (2) the OUCC; and (3) commission staff.	
2.6 (d) The utility retains full responsibility for the content of its IRP.	
2.6 (e) The utility shall conduct a public advisory process as follows:	
(1) Prior to submitting its IRP to the commission, the utility shall hold at least three (3) meetings, a majority of which shall be held in the utility's service territory. The topics discussed in the meetings shall include, but not be limited to, the following:	
(A) An introduction to the IRP and public advisory process.	
(B) The utility's load forecast.	
(C) Evaluation of existing resources.	
(D) Evaluation of supply-side and demand-side resource alternatives, including:	
(i) associated costs;	
(ii) quantifiable benefits; and	
(iii) performance attributes.	
(E) Modeling methods.	
(F) Modeling inputs.	
(G) Treatment of risk and uncertainty.	
(H) Discussion seeking input on its candidate resource portfolios.	
(I) The utility's scenarios and sensitivities.	
(J) Discussion of the utility's preferred resource portfolio and the utility's rationale for its selection.	
(2) The utility may hold additional meetings.	
(3) The schedule for meetings shall: (A) be determined by the utility; (B) be consistent with its internal IRP development schedule; and (C) provide an opportunity for public participation in a timely manner so that it may affect the outcome of the IRP.	

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit J: Cross Reference Table

Cross Reference Table **170 IAC 4-7**	**Report Reference**
(4) The utility or its designee shall: (A) chair the participation process; (B) schedule meetings; (C) develop and publish to its website agendas and relevant material for those meetings at least seven (7) calendar days prior to the eeting; and (D) develop and publish to its website meeting minutes within fifteen (15) calendar days following the meeting.	
(5) Interested parties may request that relevant items be placed on the agenda of the meetings if they provide adequate notice to the utility.	
(6) The utility shall take reasonable steps to notify: (A) its customers; (B) the commission; (C) interested parties; and (D) the OUCC; of its public advisory process.	
170 IAC 4-7-4 Integrated resource plan contents	
Sec. 4. An IRP must include the following:	
(1) At least a twenty (20) year future period for predicted or forecasted analyses.	Section 9
(2) An analysis of historical and forecasted levels of peak demand and energy usage in compliance with section 5(a) of this rule.	Section 4
(3) At least three (3) alternative forecasts of peak demand and energy usage in compliance with section 5(b) of this rule.	Section 9
(4) A description of the utility's existing resources in compliance with section 6(a) of this rule.	Section 6
(5) A description of the utility's process for selecting possible alternative future resources for meeting future demand for electric service, including a cost-benefit analysis, if performed.	Section 8
(6) A description of the possible alternative future resources for meeting future demand for electric service in compliance with section 6(b) of this rule.	Section 8
(7) The resource screening analysis and resource summary table required by section 7 of this rule.	Appendix Volume 1 Exhibit E, Section 8
(8) A description of the candidate resource portfolios and the process for developing candidate resource portfolios in compliance with section 8(a) and 8(b) of this rule.	Section 9
(9) A description of the utility's preferred resource portfolio and the information required by section 8(c) of this rule.	Section 9
(10) A short term action plan for the next three (3) year period to implement the utility's preferred resource portfolio and its workable strategy, pursuant to section 9 of this rule.	Section 10
(11) A discussion of the:	Section 2
(A) inputs;	
(B) methods; and	
(C) definitions;	
used by the utility in the IRP.	
(12) Appendices of the data sets and data sources used to establish alternative forecasts in section 5(b) of this rule. If the IRP references a third-party data source, the IRP must include for the relevant data:	Appendix Volume 1, Volume 2
(A) source title;	Appendix Volume 1, Volume 2
(B) author;	Appendix Volume 1, Volume 2

Indiana Michigan Power Company
2024 IN IRP: Appendix 1
Exhibit J: Cross Reference Table

Cross Reference Table **170 IAC 4-7**	**Report Reference**
(C) publishing address;	Appendix Volume 1, Volume 2
(D) date;	Appendix Volume 1, Volume 2
(E) page number; and	Appendix Volume 1, Volume 2
(F) an explanation of adjustments made to the data.	Appendix Volume 1, Volume 2
The data must be submitted within two (2) weeks of submitting the IRP in an editable format, such as a comma separated value or excel spreadsheet file.	N/A
(13) A description of the utility's effort to develop and maintain a database of electricity consumption patterns, disaggregated by:	Section 4
(A) customer class;	
(B) rate class;	
(C) NAICS code;	
(D) DSM program; and	
(E) end-use.	
(14) The database in subdivision (13) may be developed using, but not limited to, the following methods:	
(A) Load research developed by the individual utility.	
(B) Load research developed in conjunction with another utility.	
(C) Load research developed by another utility and modified to meet the characteristics of that utility.	
(D) Engineering estimates.	
(E) Load data developed by a non-utility source.	
(15) A proposed schedule for industrial, commercial, and residential customer surveys to obtain data on:	
(A) end-use penetration;	
(B) end-use saturation rates; and	
(C) end-use electricity consumption patterns.	
(16) A discussion detailing how information from advanced metering infrastructure and smart grid, where available, will be used to enhance usage data and improve load forecasts, DSM programs, and other aspects of planning.	
(17) A discussion of the designated contemporary issues designated, if required by section 2.7(e) of this rule.	
(18) A discussion of distributed generation within the service territory and its potential effects on:	
(A) generation planning;	
(B) transmission planning;	
(C) distribution planning; and	
(D) load forecasting.	
(19) For models used in the IRP, including optimization and dispatch models, a description of the model's structure and applicability.	Section 9
(20) A discussion of how the utility's fuel inventory and procurement planning practices have been taken into account and influenced the IRP development.	Section 6

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Exhibit J: Cross Reference Table

Cross Reference Table **170 IAC 4-7**	**Report Reference**
(21) A discussion of how the utility's emission allowance inventory and procurement practices for an air emission have been considered and influenced the IRP development.	
(22) A description of the generation expansion planning criteria. The description must fully explain the basis for the criteria selected.	Section 9
(23) A discussion of how compliance costs for existing or reasonably anticipated air, land, or water environmental regulations impacting generation assets have been taken into account and influenced the IRP development.	Section 6
(24) A discussion of how the utilities' resource planning objectives, such as:	Section 9
(A) cost effectiveness;	
(B) rate impacts;	
(C) risks; and	
(D) uncertainty;	
were balanced in selecting its preferred resource portfolio.	
(25) A description and analysis of the utility's base case scenario, sometimes referred to as a business as usual case or reference case. The base case scenario is the most likely future scenario and must meet the following criteria:	Section 5 and Section 9
(A) Be an extension of the status quo, using the best estimate of forecasted electrical requirements, fuel price projections, and an objective analysis of the resources required over the planning horizon to reliablyand economically satisfy electrical needs.	
(B) Include:	
(i) existing federal environmental laws;	
(ii) existing state laws, such as renewable energy requirements and energy efficiency laws; and	
(iii) existing policies, such as tax incentives for renewable resources.	
(C) Existing laws or policies continuing throughout at least some portion of the planning horizon with a high probability of expiration or repeal must be eliminated or altered when applicable.	
(D) Not include future resources, laws, or policies unless:	
(i) a utility subject to section 2.6 of this rule solicits stakeholder input regarding the inclusion and describes the input received;	
(ii) future resources have obtained the necessary regulatory approvals; and	
(iii) future laws and policies have a high probability of being enacted.	
A base case scenario need not align with the utility's preferred resource portfolio.	
(26) A description and analysis of alternative scenarios to the base case scenario, including comparison of the alternative scenarios to the base case scenario.	Section 9
(27) A brief description of the models, focusing on the utility's Indiana jurisdictional facilities, of the following components of FERC Form 715:	Section 6
(A) The most current power flow data models, studies, and sensitivity analysis.	

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Cross Reference Table **170 IAC 4-7**	**Report Reference**
(B) Dynamic simulation on its transmission system, including interconnections, focused on the determination of the performance and stability of its transmission system on various fault conditions. The description must state whether the simulation meets the standards of the North American Electric Reliability Corporation (NERC).	
(C) Reliabilitycriteria for transmission planning as well as the assessment practice used. This description must include the following:	
(i) The limits of the utility's transmission use.	
(ii) The utility's assessment practices developed through experience and study.	
(iii) Operating restrictions and limitations particular to the utility.	
(28) A list and description of the methods used by the utility in developing the IRP, including the following:	Section 4, Section 5, Section 8, Section 9
(A) For models used in the IRP, the model's structure and reasoning for its use.	Section 5 and Section 9
(B) The utility's effort to develop and improve the methodology and inputs, including for its:	Section 4, Section 8, Section 9
(i) load forecast;	Section 4
(ii) forecasted impact from demand-side programs;	Section 4
(iii) cost estimates; and	Section 8
(iv) analysis of risk and uncertainty.	Section 9
(29) An explanation, with supporting documentation, of the avoided cost calculation for each year in the forecast period, if the avoided cost calculation is used to screen demand-side resources. The avoided cost calculation must reflect timing factors specific to the resource under consideration such as project life and seasonal operation. The avoided cost calculation must include the following:	
(A) The avoided generating capacity cost adjusted for transmission and distribution losses and the reserve margin requirement.	
(B) The avoided transmission capacity cost.	
(C) The avoided distribution capacity cost.	Section 8
(D) The avoided operating cost, including:	
(i) fuel cost;	
(ii) plant operation and maintenance costs;	
(iii) spinning reserve;	
(iv) emission allowances;	
(v) environmental compliance costs; and	
(vi) transmission and distribution operation and maintenance costs.	
(30) A summary of the utility's most recent public advisory process, including the following:	
(A) Key issues discussed.	Appendix Volume 4, Section 3
(B) How the utility responded to the issues.	
(C) A description of how stakeholder input was used in developing the IRP.	
(31) A detailed explanation of the assessment of demand-side and supply-side resources considered to meet future customer electricity service needs.	Section 8

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Exhibit J: Cross Reference Table

Cross Reference Table **170 IAC 4-7**	**Report Reference**
170 IAC 4-7-5 Energy and demand forecasts	
Sec. 5. (a) The analysis of historical and forecasted levels of peak demand and energy usage must include the following:	Section 4
(1) Historical load shapes, including the following:	
(A) Annual load shapes.	
(B) Seasonal load shapes.	
(C) Monthly load shapes.	
(D) Selected weekly load shapes.	
(E) Selected daily load shapes, which shall include summer and winter peak days, and a typical weekday and weekend day.	
(2) Disaggregation of historical data and forecasts by:	
(A) customer class;	
(B) interruptible load; and	
(C) end-use;	
where information permits.	
(3) Actual and weather normalized energy and demand levels.	
(4) A discussion of methods and processes used to weather normalize.	
(5) A minimum twenty (20) year period for peak demand and energy usage forecasts.	
(6) An evaluation of the performance of peak demand and energy usage for the previous ten (10) years, including the following:	
(A) Total system.	
(B) Customer classes or rate classes, or both.	
(C) Firm wholesale power sales.	
(7) A discussion of how the impact of historical DSM programs is reflected in or otherwise treated in the load forecast.	
(8) Justification for the selected forecasting methodology.	
(9) A discussion of the potential changes under consideration to improve the credibility of the forecasted demand by improving the data quality, tools, and analysis.	
(10) For purposes of subdivisions (1) and (2), a utility may use utility specific data or data such as described in section 4(14) of this rule.	
Sec. 5 (b) To establish plausible risk boundaries, the utility shall provide at least three (3) alternative forecasts of peak demand and energy usage including:	
(1) high;	
(2) low; and	
(3) most probable;	
peak demand and energy use forecasts.	
Sec. 5 (c) In determining the peak demand and energy usage forecast that is deemed by the utility, with stakeholder input, to be most probable, the utility shall consider alternative assumptions such as:	
(1) Rate of change in population.	
(2) Economic activity.	
(3) Fuel prices.	
(4) Price elasticity.	
(5) Penetration of new technology.	

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Cross Reference Table **170 IAC 4-7**	**Report Reference**
(6) Demographic changes in population.	
(7) Customer usage.	
(8) Changes in technology.	
(9) Behavioral factors affecting customer consumption.	
(10) State and federal energy policies.	
(11) State and federal environmental policies.	
170 IAC 4-7-6 Description of available resources	
Sec. 6. (a) In describing its existing electric power resources, the utility must include in its IRP the following information relevant to the twenty (20) year planning period being evaluated:	
(1) The net and gross dependable generating capacity of the system and each generating unit.	Section 6
(2) The expected changes to existing generating capacity, including the following:	
(A) Retirements.	
(B) Deratings.	
(C) Plant life extensions.	
(D) Repowering.	
(E) Refurbishment.	
(3) A fuel price forecast by generating unit.	Appendix Volume 3
(4) The significant environmental effects, including:	Section 6
(A) air emissions;	
(B) solid waste disposal;	
(C) hazardous waste;	
(D) subsequent disposal; and	
(E) water consumption and discharge; at existing fossil fueled generating units.	
(5) An analysis of the existing utility transmission system that includes the following:	
(A) An evaluation of the adequacy to support load growth and expected power transfers.	
(B) An evaluation of the supply-side resource potential of actions to reduce:	
(i) transmission losses;	
(ii) congestion; and	
(iii) energy costs.	
(C) An evaluation of the potential impact of demand-side resources on the transmission network.	
(6) A discussion of demand-side resources and their estimated impact on the utility's historical and forecasted peak demand and energy.	
The information listed in subdivisions (1) through (4) and in subdivision (6) shall be provided for each year of the future planning period.	
Sec. 6 (b) In describing possible alternative methods of meeting future demand for electric service, a utility must analyze the following resources as alternatives in meeting future electric service requirements:	

Indiana Michigan Power Company
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Exhibit J: Cross Reference Table

Cross Reference Table **170 IAC 4-7**	**Report Reference**
(1) Rate design as a resource in meeting future electric service requirements.	
(2) Demand-side resources. For potential demand-side resources, the utility shall include the following:	
(A) A description of the potential demand-side resource, including its costs, characteristics, and parameters.	
(B) The method by which the costs, characteristics, and other parameters of the demand-side resource are determined.	
(C) The customer class or end-use, or both, affected by the demand-side resource.	
(D) Estimated annual and lifetime energy (kWh) and demand (kW) savings.	
(E) The estimated impact of a demand-side resource on the utility's load, generating capacity, and transmission and distribution requirements.	Section 8
(F) Whether the program provides an opportunity for all ratepayers to participate, including low-income residential ratepayers.	
(3) Supply-side resources. For potential supply-side resources, the utility shall include the following:	
(A) Identification and description of the supply-side resource considered, including the following:	
(i) Size in megawatts.	
(ii) Utilized technology and fuel type.	
(iii) Energy profile of nondispatchable resources.	
(iv) Additional transmission facilities necessitated by the resource.	
(B) A discussion of the utility's effort to coordinate planning, construction, and operation of the supply-side resource with other utilities to reduce cost.	Section 9
(C) A description of significant environmental effects, including the following:	
(i) Air emissions.	
(ii) Solid waste disposal.	
(iii) Hazardous waste and subsequent disposal.	
(iv) Water consumption and discharge.	
(4) Transmission facilities as resources. In analyzing transmission resources, the utility shall include the following:	
(A) The type of the transmission	
resource, including whether the resource consists of one (1) of the following:	Section 6
(i) New projects.	
(i) Upgrades to transmission facilities.	
(ii) Efficiency improvements.	
(iii) Smart grid technology.	
(B) A description of the timing, types of expansion, and alternative options considered.	
(C) The approximate cost of expected expansion and alteration of the transmission network.	

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Cross Reference Table **170 IAC 4-7**	**Report Reference**
(D) A description of how the IRP accounts for the value of new or upgraded transmission facilities increasing power transfer capability, thereby increasing the utilization of geographically constrained cost effective resources.	
(E) A description of how:	Section 5 and Section 7
(i) IRP data and information affect the planning and implementation processes of the RTO of which the utility is a member; and	
(ii) RTO planning and implementation processes affect the IRP.	
170 IAC 4-7-7 Selection of resources	
Sec. 7. To eliminate nonviable alternatives, a utilityshall perform an initial screening of the future resource alternatives listed in section 6(b) of this rule. The utility's screening process and the decision to reject or accept a resource alternative for further analysis must be fully explained and supported in the IRP. The screening analysis must be additionally summarized in a resource summary table.	Section 8, Appendix Volume 1 Exhibit E
170 IAC 4-7-8 Resource portfolios	
Sec. 8. (a) The utility shall develop candidate resource portfolios from existing and future resources identified in sections 6 and 7 of this rule. The utility shall provide a description of its process for developing its candidate resource portfolios, including a description of its optimization modeling, if used. In selecting the candidate resource portfolios, the utility shall at a minimum consider:	Section 9
(1) risk;	
(2) uncertainty;	
(3) regional resources;	
(4) environmental regulations;	
(5) projections for fuel costs;	
(6) load growth uncertainty;	
(7) economic factors; and	
(8) technological change.	
Sec. 8 (b) With regard to candidate resource portfolios, the IRP must include the following:	
(1) An analysis of how candidate resource portfolios performed across a wide range of potential future scenarios, including the alternative scenarios required under section 4(26) of this rule.	
(2) The results of testing and rank ordering of the candidate resource portfolios by key resource planning objectives, including cost effectiveness and risk metrics.	
(3) The present value of revenue requirement for each candidate resource portfolio in dollars per kilowatt-hour delivered, with the interest rate specified.	
Sec. 8 (c) Considering the analyses of the candidate resource portfolios, a utility shall select a preferred resource portfolio and include in the IRP the following:	
(1) A description of the utility's preferred resource portfolio.	
(2) Identification of the standards of reliability.	
(3) A description of the assumptions expected to have the greatest effect on the preferred resource portfolio.	

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Exhibit J: Cross Reference Table

Cross Reference Table **170 IAC 4-7**	**Report Reference**
(4) An analysis showing that supply-side resources and demand-side resources have been evaluated on a consistent and comparable basis, including consideration of:	
(A) safety;	
(B) reliability;	
(C) risk and uncertainty;	
(D) cost effectiveness; and	
(E) customer rate impacts.	
(5) An analysis showing the preferred resource portfolio utilizes supply-side resources and demand-side resources that safely, reliably, efficiently, and cost-effectively meets the electric system demand taking cost, risk, and uncertainty into consideration.	
(6) An evaluation of the utility's DSM programs designed to defer or eliminate investment in a transmission or distribution facility, including their impacts on the utility's transmission and distribution system.	
(7) A discussion of the financial impact on the utility of acquiring future resources identified in the utility's preferred resource portfolio including, where appropriate, the following:	
(A) Operating and capital costs of the preferred resource portfolio.	
(B) The average cost per kilowatt-hour of the future resources, which must be consistent with the electricity price assumption used to forecast the utility's expected load by customer class in section 5 of this rule.	
(C) An estimate of the utility's avoided cost for each year of the preferred resource portfolio.	
(D) The utility's ability to finance the preferred resource portfolio.	
(8) A description of how the preferred resource portfolio balances cost effectiveness, reliability, and portfolio risk and uncertainty, including the following:	
(A) Quantification, where possible, of assumed risks and uncertainties, including, but not limited to:	
(i) environmental and other regulatory compliance;	
(ii) reasonably anticipated future regulations;	
(iii) public policy;	
(iv) fuel prices;	
(v) operating costs;	
(vi) construction costs;	
(vii) resource performance;	
(viii) load requirements;	
(ix) wholesale electricity and transmission prices;	
(x) RTO requirements; and	
(xi) technological progress.	
(B) An assessment of how robustness of risk considerations factored into the selection of the preferred resource portfolio.	
(9) Utilities shall include a discussion of potential methods under consideration to improve the data quality, tools, and analysis as part of the ongoing efforts to improve the credibility and efficiencies of their resource planning process.	Section 2 and Section 4

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Cross Reference Table **170 IAC 4-7**	**Report Reference**
(10) A workable strategy to quickly and appropriately adapt its preferred resource portfolio to unexpected circumstances, including changes in the following:	Section 9
(A) Demand for electric service.	
(B) Cost of new supply-side resources or demand-side resources.	
(C) Regulatory compliance requirements and costs.	
(D) Wholesale market conditions.	
(E) Fuel costs.	
(F) Environmental compliance costs.	
(G) Technology and associated costs and penetration.	
(H) Other factors that would cause the forecasted relationship between supply and demand for electric service to be in error.	
170 IAC 4-7-9 Short term action plan	
Sec. 9. (a) A utility shall prepare a short term action plan as part of its IRP and shall cover a three (3) year period beginning with the first year of the IRP submitted pursuant to this rule.	Section 9 and Section 10
Sec. 9 (b) The short term action plan shall summarize the utility's preferred resource portfolio and its workable strategy, as described in section 8(c)(10) of this rule, where the utility must take action or incur expenses during the three (3) year period.	
Sec. 9 (c) The short term action plan must include, but is not limited to, the following:	
(1) A description of resources in the preferred resource portfolio included in the short term action plan. The description may include references to other sections of the IRP to avoid duplicate descriptions. The description must include, but is not limited to, the following:	
(A) The objective of the preferred resource portfolio.	
(B) The criteria for measuring progress toward the objective.	
(2) Identification of goals for implementation of DSM programs that can be developed in accordance with IC 8-1-8.5-10 and 170 IAC 4-8-1 et seq. and consistent with the utility's longer resource planning objectives.	
(3) The implementation schedule for the preferred resource portfolio.	
(4) A budget with an estimated range for the cost to be incurred for each resource or program and expected system impacts.	
(5) A description and explanation of differences between what was stated in the utility's last filed short term action plan and what actually occurred.	

Indiana Michigan Power Company

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Exhibit K Capacity Contingency Results

Capacity Planning Risk Analysis: Annual Peak Load Requirement

Market Risk Analytics

Simulated Year: 2026

Jurisdiction: IM

Current State

Following is a summary of an analysis of the risks that influence the degree to which Indiana's accredited generating capacity will exceed Indiana's load obligation in a given planning year. This analysis is based on Indiana's annual peak load requirement as defined by PJM (Forecast Pool Requirement).

Figure 1 below shows the simulated probability distribution of peak load, accredited capacity, and the resulting surplus, reflecting the current projected PJM Forecast Pool Requirement. It also shows the cumulative distribution function of the simulated surplus. The distributions in Figure 1 reflect Indiana's share of generation resources for the reported delivery year.

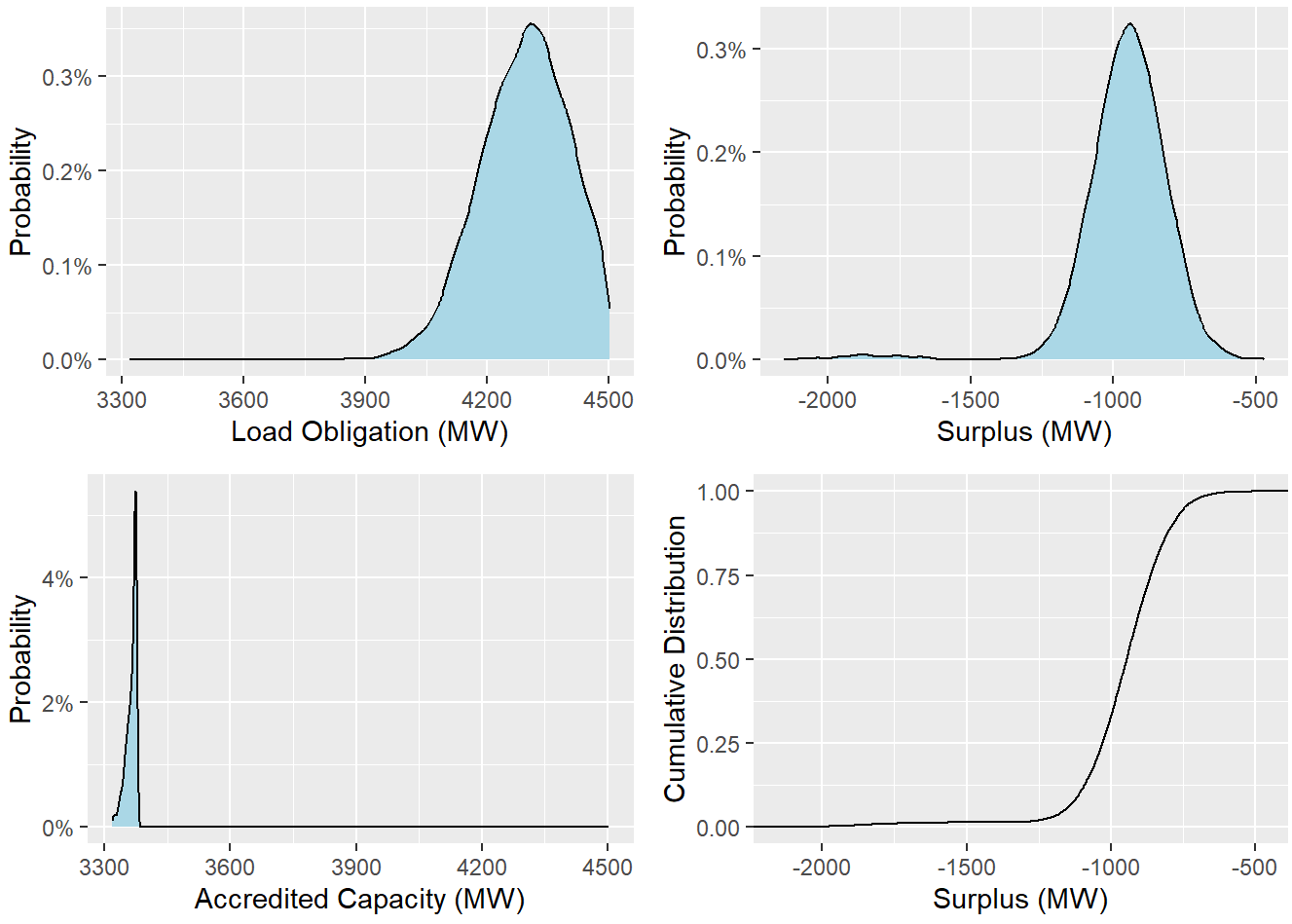

Figure 1: Probability Density and Cumulative Distributions for Load Obligation, Accredited Capacity, and Surplus, based on Current Procured Capacity and Load Forecast

Planning to the Forecasted PJM Load Obligation

First it must be defined what it means to plan Indiana's accredited capacity to meet the forecasted PJM load obligation. Recognizing that there are many factors that lead to uncertainty in the degree to which Indiana's capacity will be accredited, planning capacity to meet the forecasted PJM load obligation means that Indiana must procure sufficient capacity so that the median projected accredited capacity equals the forecasted PJM load obligation. By definition, this means that 50% of the outcomes will have insufficient capacity.

Figure 2 illustrates the distribution of the surplus if Indiana plans capacity to the forecasted PJM load obligation, including reference lines for the median (which is zero by definition) and the 5th percentile. Five percent of the time (1 in 20 years) the deficit will be more extreme than the 5th percentile. Appropriately, the distribution of the surplus reflects uncertainty in accredited capacity, peak load forecast, and credit risk. It is important to understand how frequently large deficits could occur, which would be accompanied by large penalties. To overcome this risk requires planning to a higher capacity obligation

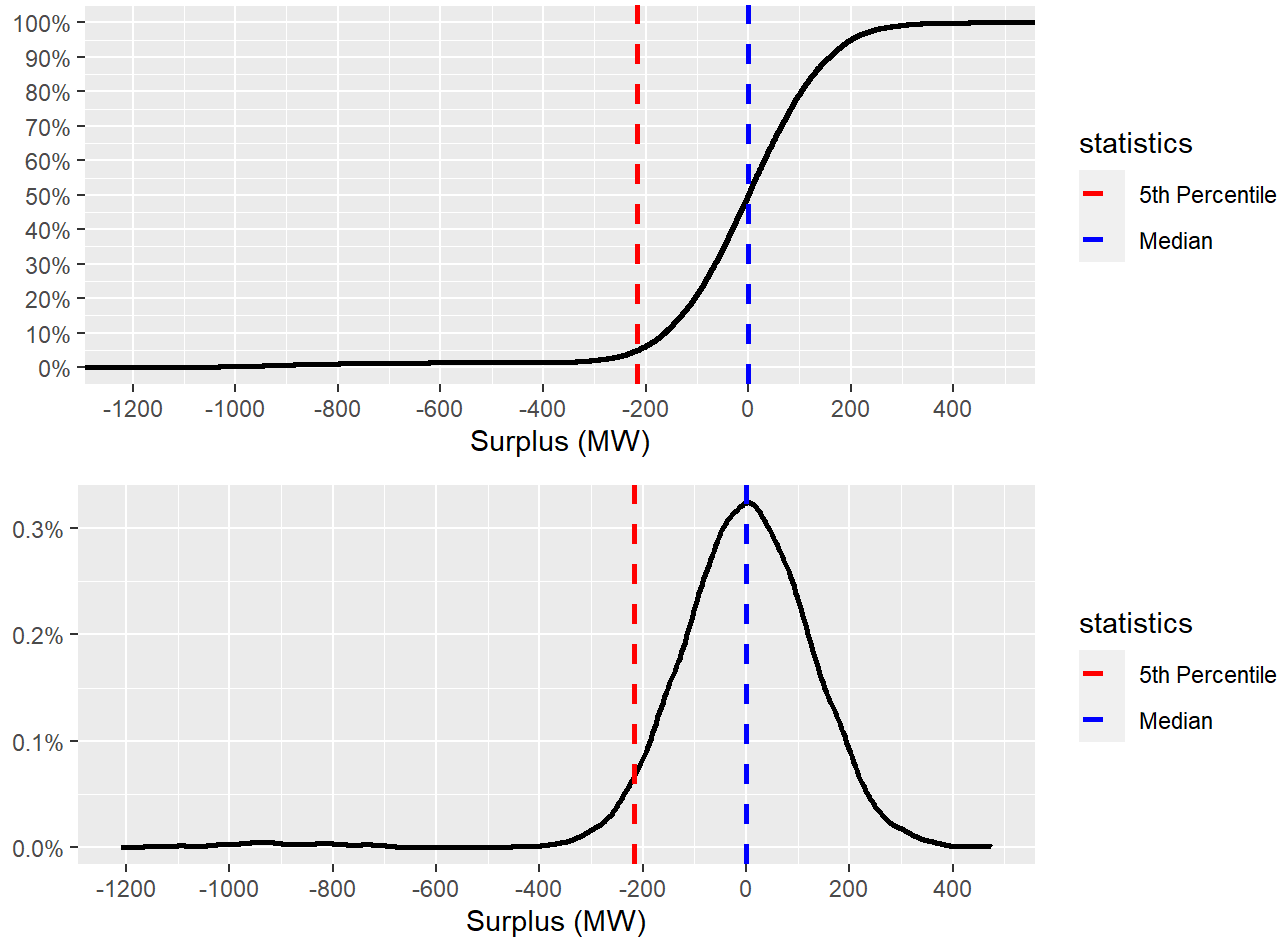

Figure 2: Cumulative Distribution Function and Probability Density Function for Surplus if Indiana Plans to the Forecasted PJM Load Obligation

Ensuring Indiana Meets The Forecasted PJM Load Obligation with Confidence

As illustrated by the discussion and illustrations above, planning to the forecasted PJM load obligation leaves a 50% chance of insufficient capacity. The following table describes the capacity contingency that should be added to the forecasted PJM load obligation (both in MW and as a percentage of the forecasted PJM load obligation), to ensure that the forecasted PJM load obligation is met at the specified confidence level.

Table 1: Capacity Contingency Necessary to Achieve The Specified Confidence Level of Meeting The Forecasted PJM Load Obligation

Confidence	Contingency (MW)	Contingency %	Additional Accredited Capacity
50%	0	0%	945
90%	164	3.62%	1109
95%	217	4.79%	1162
98%	302	6.67%	1247

The above table indicates that a capacity contingency of 4.79% should be added to the current Forecast Pool Requirement of the current peak load forecast to meet the final load obligation with 95% confidence.

The 95% confidence interval for this capacity contingency is 4.64% to 4.9%

Capacity Planning Risk Analysis: Annual Peak Load Requirement

Market Risk Analytics

Simulated Year: 2027

Jurisdiction: IM

Current State

Following is a summary of an analysis of the risks that influence the degree to which Indiana's accredited generating capacity will exceed Indiana's load obligation in a given planning year. This analysis is based on Indiana's annual peak load requirement as defined by PJM (Forecast Pool Requirement).

Figure 1 below shows the simulated probability distribution of peak load, accredited capacity, and the resulting surplus, reflecting the current projected PJM Forecast Pool Requirement. It also shows the cumulative distribution function of the simulated surplus. The distributions in Figure 1 reflect Indiana's share of generation resources for the reported delivery year.

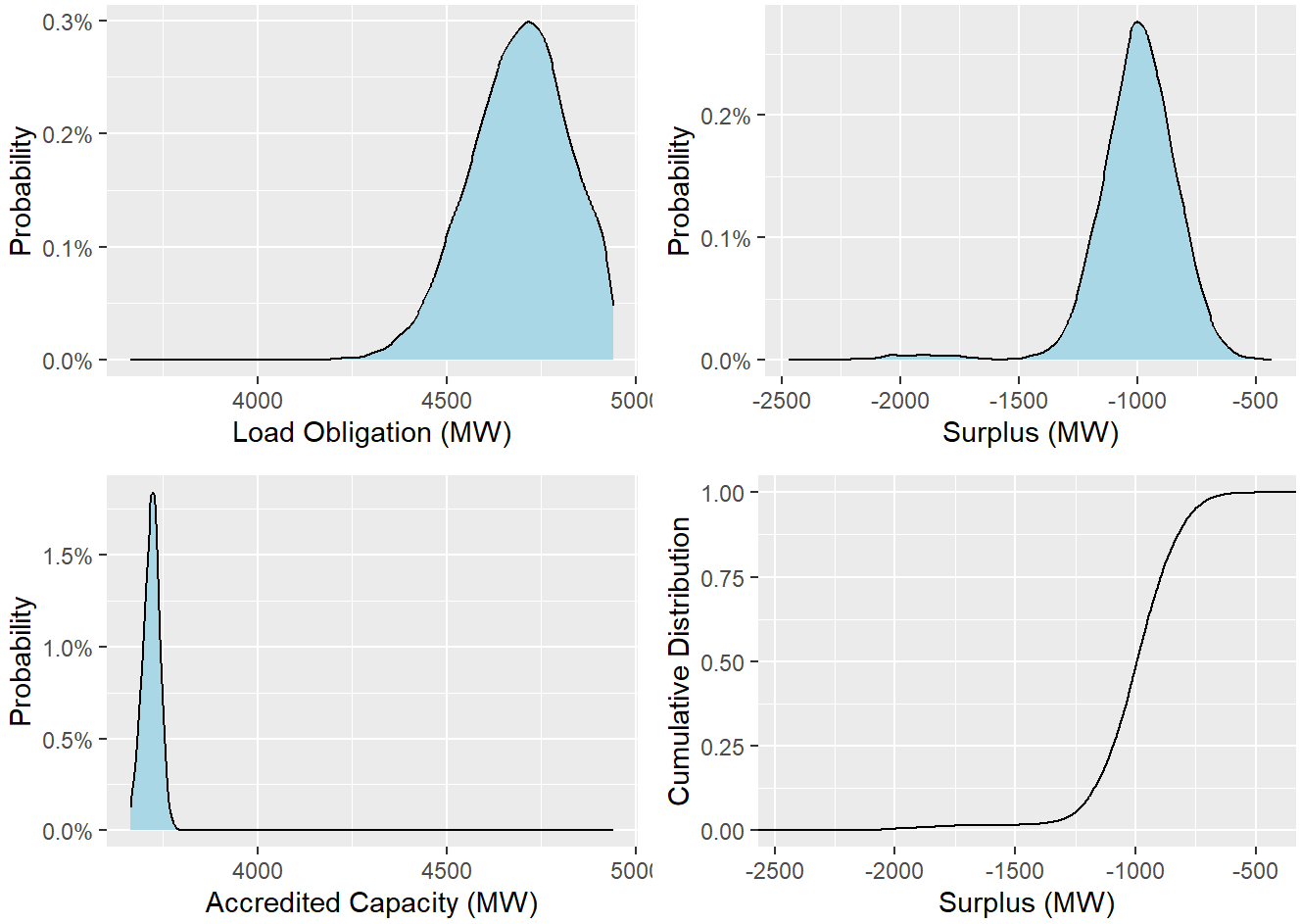

Figure 1: Probability Density and Cumulative Distributions for Load Obligation, Accredited Capacity, and Surplus, based on Current Procured Capacity and Load Forecast

Planning to the Forecasted PJM Load Obligation

First it must be defined what it means to plan Indiana's accredited capacity to meet the forecasted PJM load obligation. Recognizing that there are many factors that lead to uncertainty in the degree to which Indiana's capacity will be accredited, planning capacity to meet the forecasted PJM load obligation means that Indiana must procure sufficient capacity so that the median projected accredited capacity equals the forecasted PJM load obligation. By definition, this means that 50% of the outcomes will have insufficient capacity.

Figure 2 illustrates the distribution of the surplus if Indiana plans capacity to the forecasted PJM load obligation, including reference lines for the median (which is zero by definition) and the 5th percentile. Five percent of the time (1 in 20 years) the deficit will be more extreme than the 5th percentile. Appropriately, the distribution of the surplus reflects uncertainty in accredited capacity, peak load forecast, and credit risk. It is important to understand how frequently large deficits could occur, which would be accompanied by large penalties. To overcome this risk requires planning to a higher capacity obligation

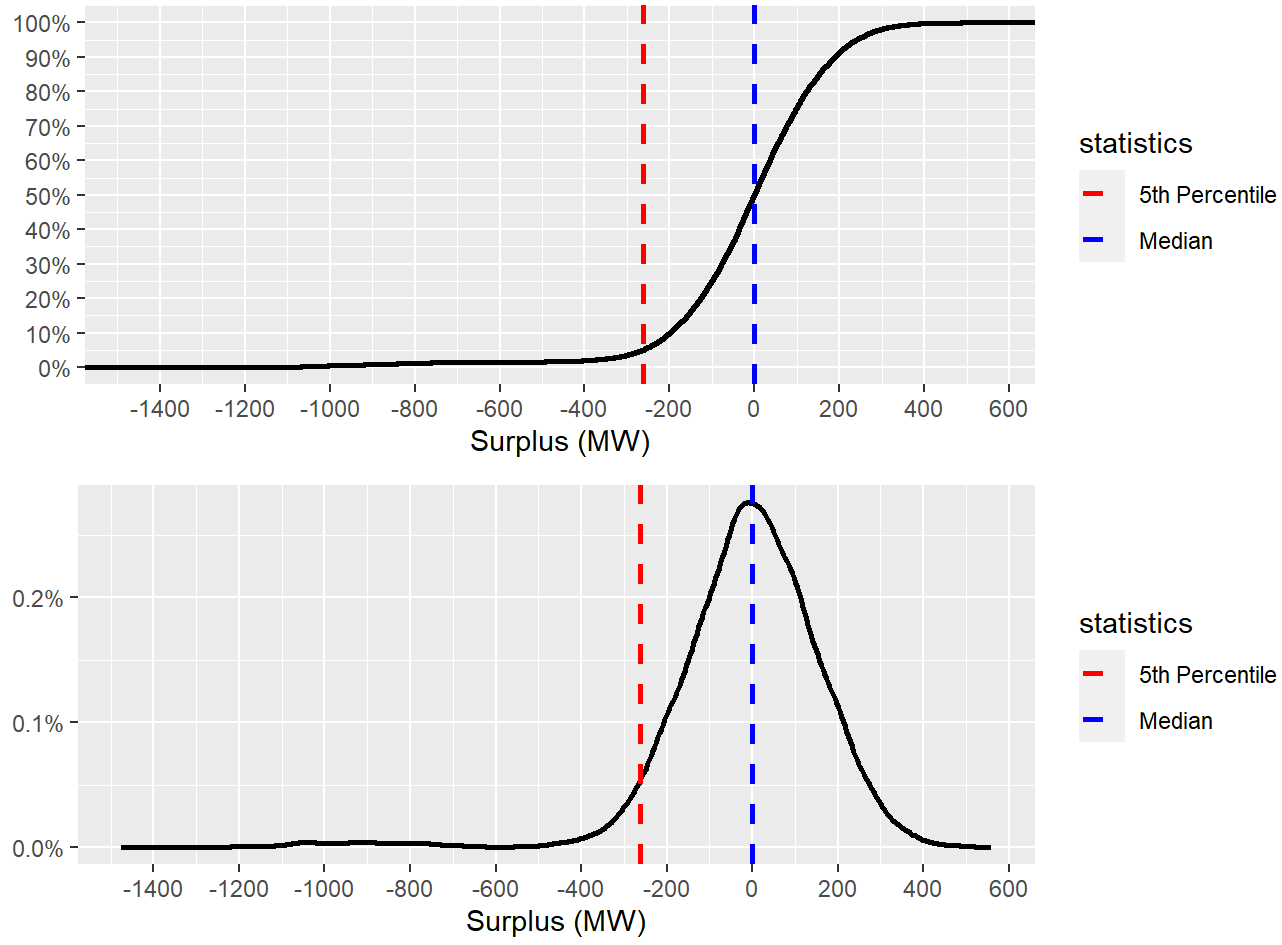

Figure 2: Cumulative Distribution Function and Probability Density Function for Surplus if Indiana Plans to the Forecasted PJM Load Obligation

Ensuring Indiana Meets The Forecasted PJM Load Obligation with Confidence

As illustrated by the discussion and illustrations above, planning to the forecasted PJM load obligation leaves a 50% chance of insufficient capacity. The following table describes the capacity contingency that should be added to the forecasted PJM load obligation (both in MW and as a percentage of the forecasted PJM load obligation), to ensure that the forecasted PJM load obligation is met at the specified confidence level.

Table 1: Capacity Contingency Necessary to Achieve The Specified Confidence Level of Meeting The Forecasted PJM Load Obligation

Confidence	Contingency (MW)	Contingency %	Additional Accredited Capacity
50%	0	0%	993
90%	199	4.02%	1192
95%	262	5.29%	1255
98%	396	8%	1389

The above table indicates that a capacity contingency of 5.29% should be added to the current Forecast Pool Requirement of the current peak load forecast to meet the final load obligation with 95% confidence.

The 95% confidence interval for this capacity contingency is 5.17% to 5.47%

Capacity Planning Risk Analysis: Annual Peak Load Requirement

Market Risk Analytics

Simulated Year: 2028

Jurisdiction: IM

Current State

Following is a summary of an analysis of the risks that influence the degree to which Indiana's accredited generating capacity will exceed Indiana's load obligation in a given planning year. This analysis is based on Indiana's annual peak load requirement as defined by PJM (Forecast Pool Requirement).

Figure 1 below shows the simulated probability distribution of peak load, accredited capacity, and the resulting surplus, reflecting the current projected PJM Forecast Pool Requirement. It also shows the cumulative distribution function of the simulated surplus. The distributions in Figure 1 reflect Indiana's share of generation resources for the reported delivery year.

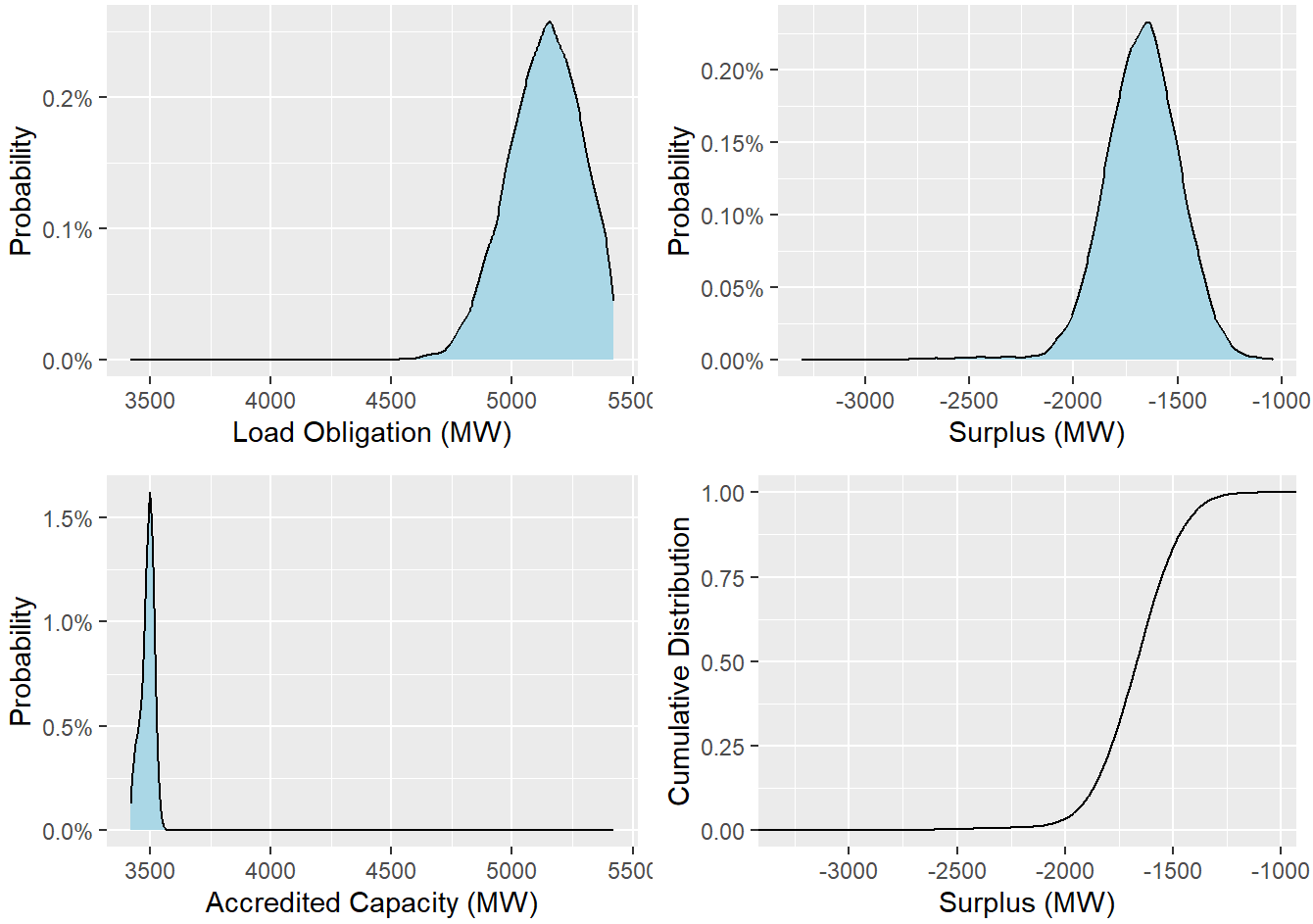

Figure 1: Probability Density and Cumulative Distributions for Load Obligation, Accredited Capacity, and Surplus, based on Current Procured Capacity and Load Forecast

Planning to the Forecasted PJM Load Obligation

First it must be defined what it means to plan Indiana's accredited capacity to meet the forecasted PJM load obligation. Recognizing that there are many factors that lead to uncertainty in the degree to which Indiana's capacity will be accredited, planning capacity to meet the forecasted PJM load obligation means that Indiana must procure sufficient capacity so that the median projected accredited capacity equals the forecasted PJM load obligation. By definition, this means that 50% of the outcomes will have insufficient capacity.

Figure 2 illustrates the distribution of the surplus if Indiana plans capacity to the forecasted PJM load obligation, including reference lines for the median (which is zero by definition) and the 5th percentile. Five percent of the time (1 in 20 years) the deficit will be more extreme than the 5th percentile. Appropriately, the distribution of the surplus reflects uncertainty in accredited capacity, peak load forecast, and credit risk. It is important to understand how frequently large deficits could occur, which would be accompanied by large penalties. To overcome this risk requires planning to a higher capacity obligation

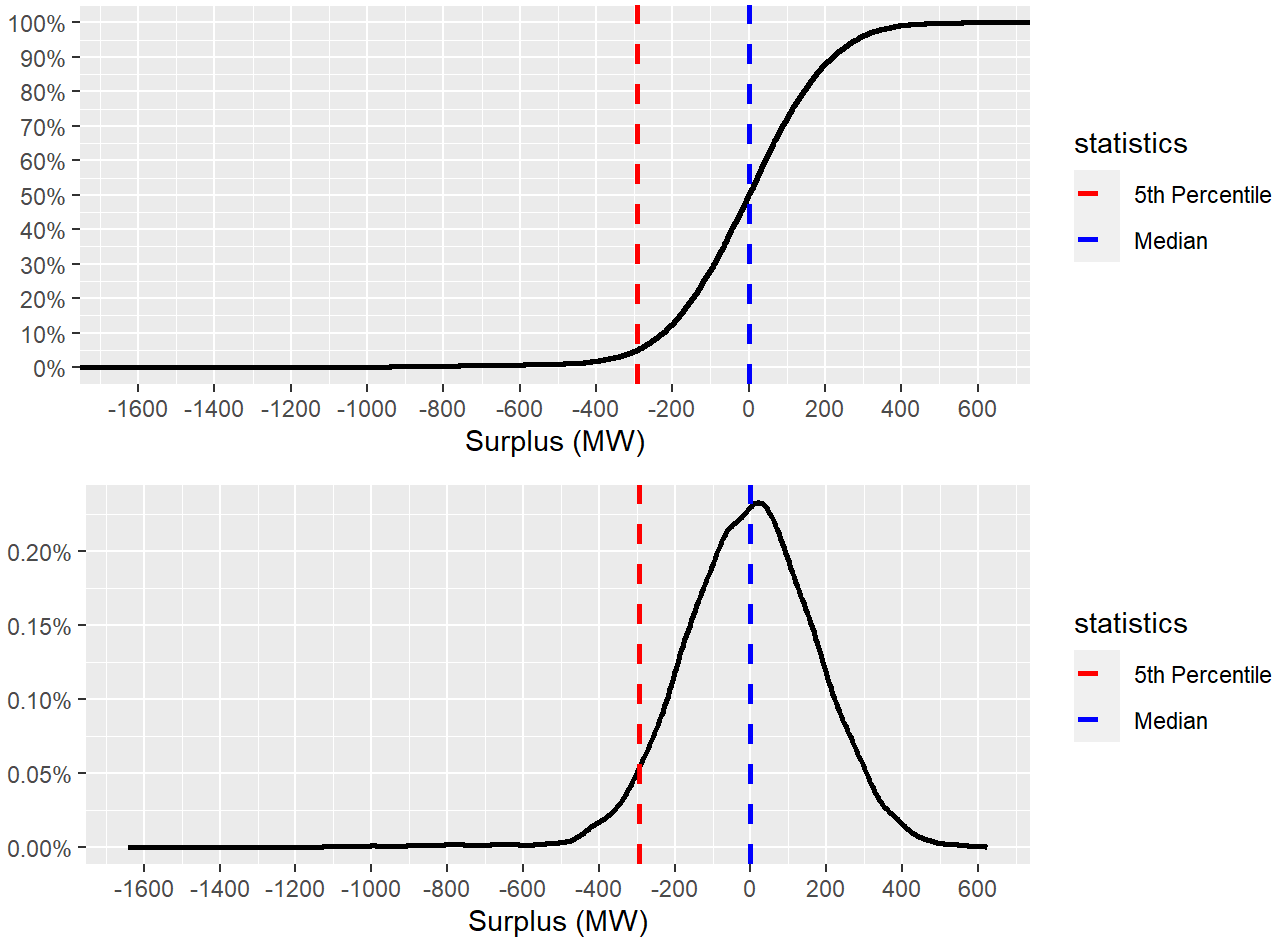

Figure 2: Cumulative Distribution Function and Probability Density Function for Surplus if Indiana Plans to the Forecasted PJM Load Obligation

Ensuring Indiana Meets The Forecasted PJM Load Obligation with Confidence

As illustrated by the discussion and illustrations above, planning to the forecasted PJM load obligation leaves a 50% chance of insufficient capacity. The following table describes the capacity contingency that should be added to the forecasted PJM load obligation (both in MW and as a percentage of the forecasted PJM load obligation), to ensure that the forecasted PJM load obligation is met at the specified confidence level.

Table 1: Capacity Contingency Necessary to Achieve The Specified Confidence Level of Meeting The Forecasted PJM Load Obligation

Confidence	Contingency (MW)	Contingency %	Additional Accredited Capacity
50%	0	0%	1667
90%	224	4.13%	1891
95%	292	5.39%	1959
98%	390	7.2%	2057

The above table indicates that a capacity contingency of 5.39% should be added to the current Forecast Pool Requirement of the current peak load forecast to meet the final load obligation with 95% confidence.

The 95% confidence interval for this capacity contingency is 5.32% to 5.55%

Capacity Planning Risk Analysis: Annual Peak Load Requirement

Market Risk Analytics

Simulated Year: 2029

Jurisdiction: IM

Current State

Following is a summary of an analysis of the risks that influence the degree to which Indiana's accredited generating capacity will exceed Indiana's load obligation in a given planning year. This analysis is based on Indiana's annual peak load requirement as defined by PJM (Forecast Pool Requirement).

Figure 1 below shows the simulated probability distribution of peak load, accredited capacity, and the resulting surplus, reflecting the current projected PJM Forecast Pool Requirement. It also shows the cumulative distribution function of the simulated surplus. The distributions in Figure 1 reflect Indiana's share of generation resources for the reported delivery year.

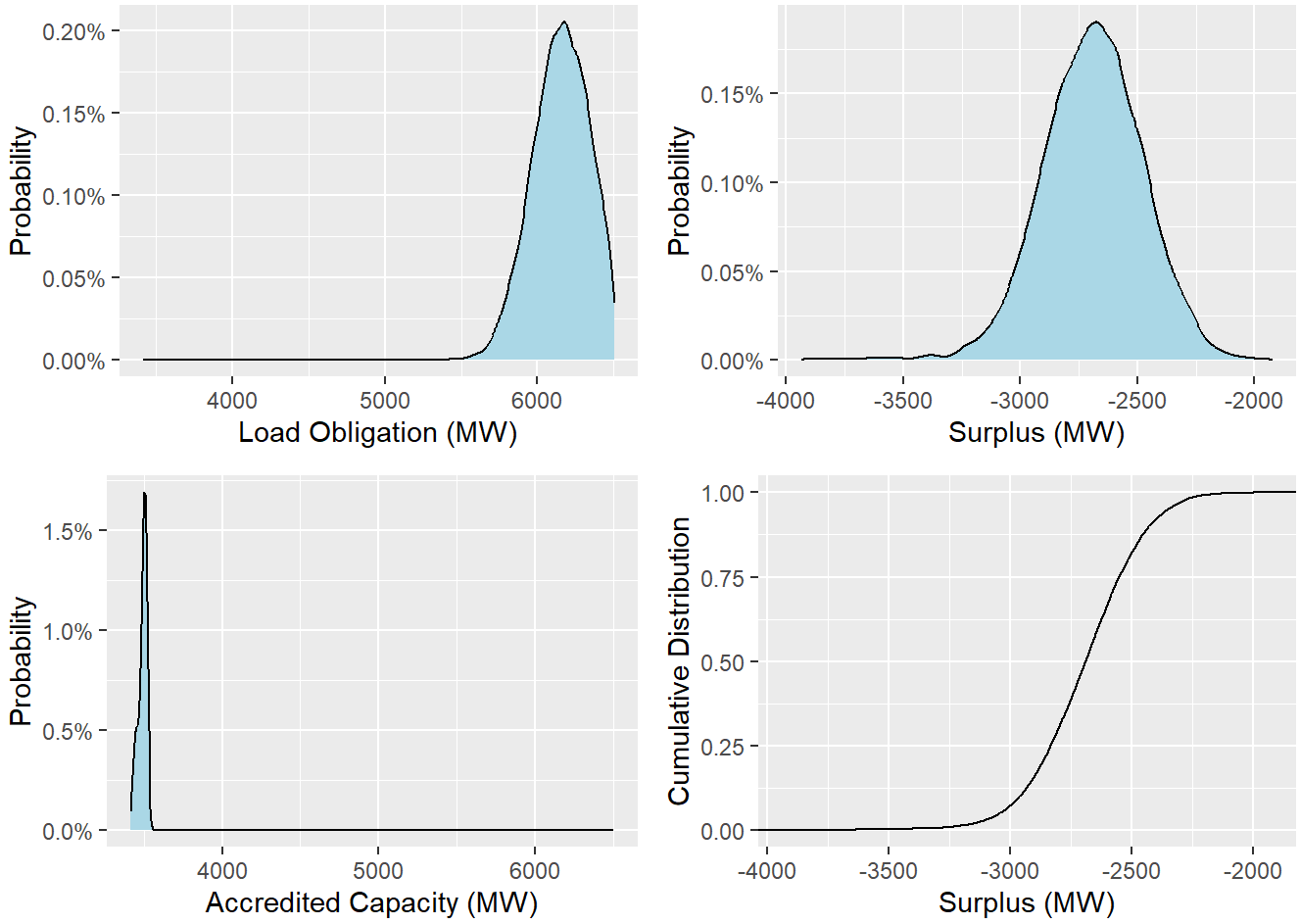

Figure 1: Probability Density and Cumulative Distributions for Load Obligation, Accredited Capacity, and Surplus, based on Current Procured Capacity and Load Forecast

Planning to the Forecasted PJM Load Obligation

First it must be defined what it means to plan Indiana's accredited capacity to meet the forecasted PJM load obligation. Recognizing that there are many factors that lead to uncertainty in the degree to which Indiana's capacity will be accredited, planning capacity to meet the forecasted PJM load obligation means that Indiana must procure sufficient capacity so that the median projected accredited capacity equals the forecasted PJM load obligation. By definition, this means that 50% of the outcomes will have insufficient capacity.

Figure 2 illustrates the distribution of the surplus if Indiana plans capacity to the forecasted PJM load obligation, including reference lines for the median (which is zero by definition) and the 5th percentile. Five percent of the time (1 in 20 years) the deficit will be more extreme than the 5th percentile. Appropriately, the distribution of the surplus reflects uncertainty in accredited capacity, peak load forecast, and credit risk. It is important to understand how frequently large deficits could occur, which would be accompanied by large penalties. To overcome this risk requires planning to a higher capacity obligation

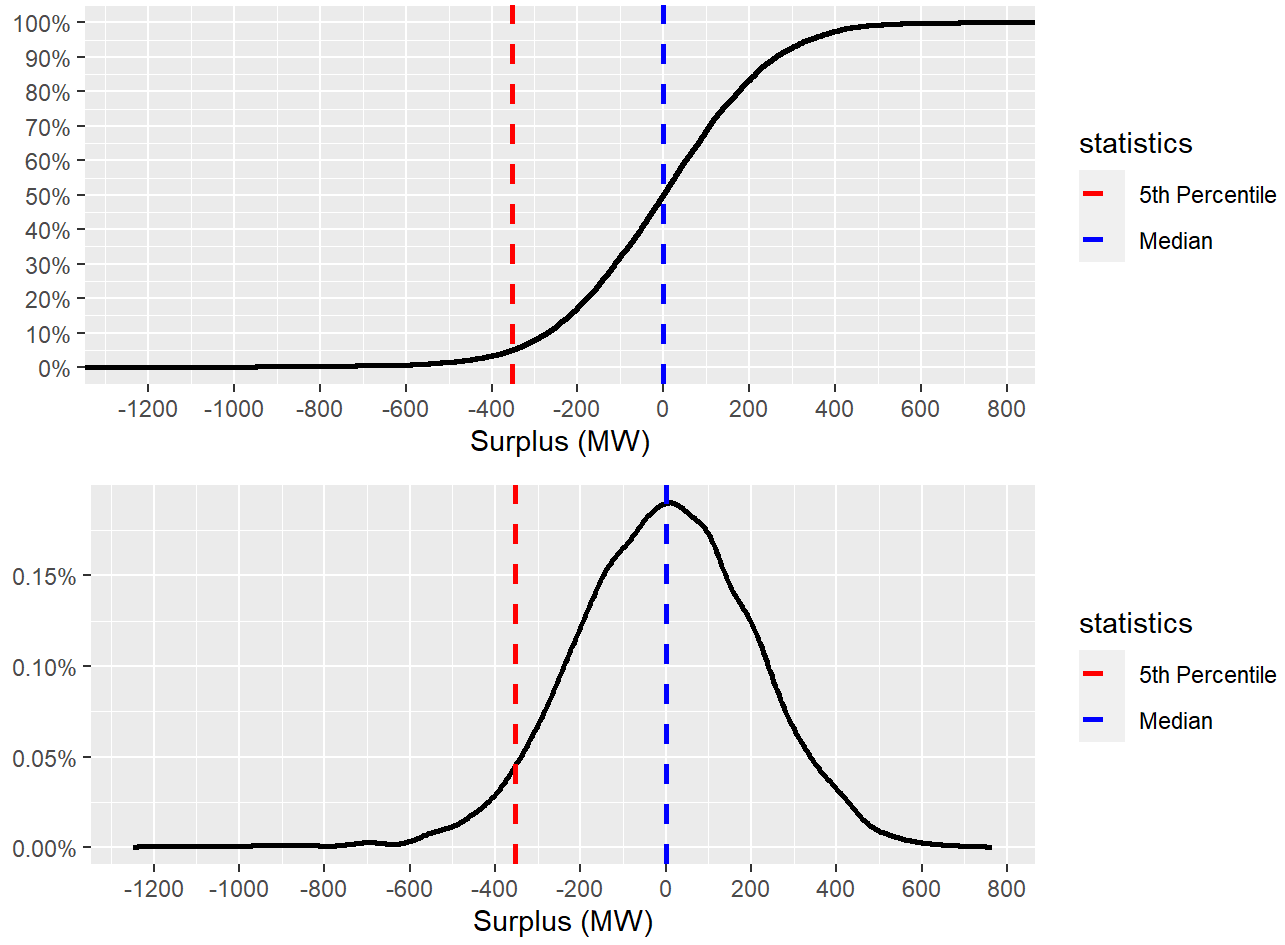

Figure 2: Cumulative Distribution Function and Probability Density Function for Surplus if Indiana Plans to the Forecasted PJM Load Obligation

Ensuring Indiana Meets The Forecasted PJM Load Obligation with Confidence

As illustrated by the discussion and illustrations above, planning to the forecasted PJM load obligation leaves a 50% chance of insufficient capacity. The following table describes the capacity contingency that should be added to the forecasted PJM load obligation (both in MW and as a percentage of the forecasted PJM load obligation), to ensure that the forecasted PJM load obligation is met at the specified confidence level.

Table 1: Capacity Contingency Necessary to Achieve The Specified Confidence Level of Meeting The Forecasted PJM Load Obligation

Confidence	Contingency (MW)	Contingency %	Additional Accredited Capacity
50%	0	0%	2688
90%	272	4.19%	2960
95%	353	5.43%	3041
98%	461	7.1%	3149

The above table indicates that a capacity contingency of 5.43% should be added to the current Forecast Pool Requirement of the current peak load forecast to meet the final load obligation with 95% confidence.

The 95% confidence interval for this capacity contingency is 5.31% to 5.59%

Capacity Planning Risk Analysis: Annual Peak Load Requirement

Market Risk Analytics

Simulated Year: 2030

Jurisdiction: IM

Current State

Following is a summary of an analysis of the risks that influence the degree to which Indiana's accredited generating capacity will exceed Indiana's load obligation in a given planning year. This analysis is based on Indiana's annual peak load requirement as defined by PJM (Forecast Pool Requirement).

Figure 1 below shows the simulated probability distribution of peak load, accredited capacity, and the resulting surplus, reflecting the current projected PJM Forecast Pool Requirement. It also shows the cumulative distribution function of the simulated surplus. The distributions in Figure 1 reflect Indiana's share of generation resources for the reported delivery year.

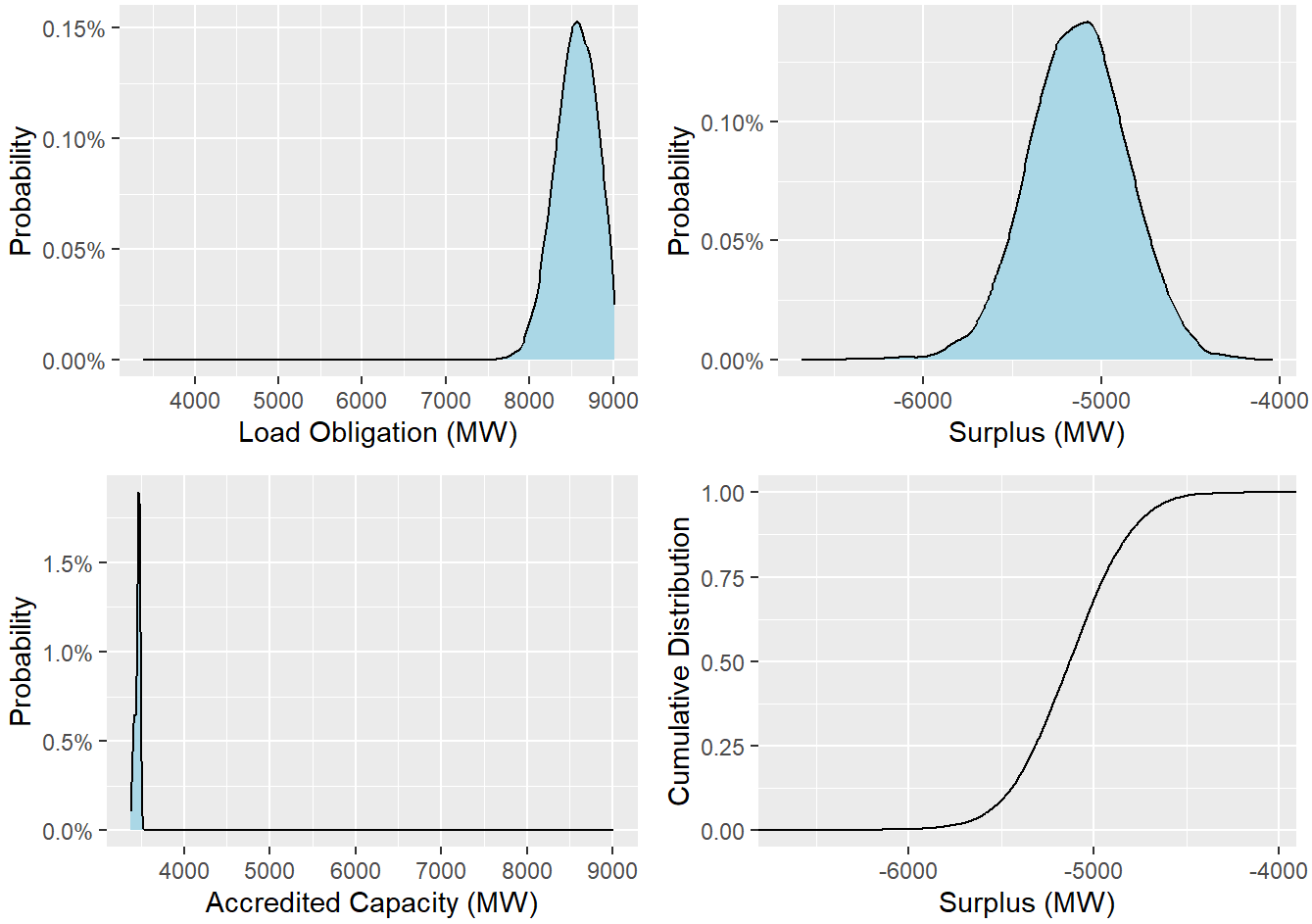

Figure 1: Probability Density and Cumulative Distributions for Load Obligation, Accredited Capacity, and Surplus, based on Current Procured Capacity and Load Forecast

Planning to the Forecasted PJM Load Obligation

First it must be defined what it means to plan Indiana's accredited capacity to meet the forecasted PJM load obligation. Recognizing that there are many factors that lead to uncertainty in the degree to which Indiana's capacity will be accredited, planning capacity to meet the forecasted PJM load obligation means that Indiana must procure sufficient capacity so that the median projected accredited capacity equals the forecasted PJM load obligation. By definition, this means that 50% of the outcomes will have insufficient capacity.

Figure 2 illustrates the distribution of the surplus if Indiana plans capacity to the forecasted PJM load obligation, including reference lines for the median (which is zero by definition) and the 5th percentile. Five percent of the time (1 in 20 years) the deficit will be more extreme than the 5th percentile. Appropriately, the distribution of the surplus reflects uncertainty in accredited capacity, peak load forecast, and credit risk. It is important to understand how frequently large deficits could occur, which would be accompanied by large penalties. To overcome this risk requires planning to a higher capacity obligation

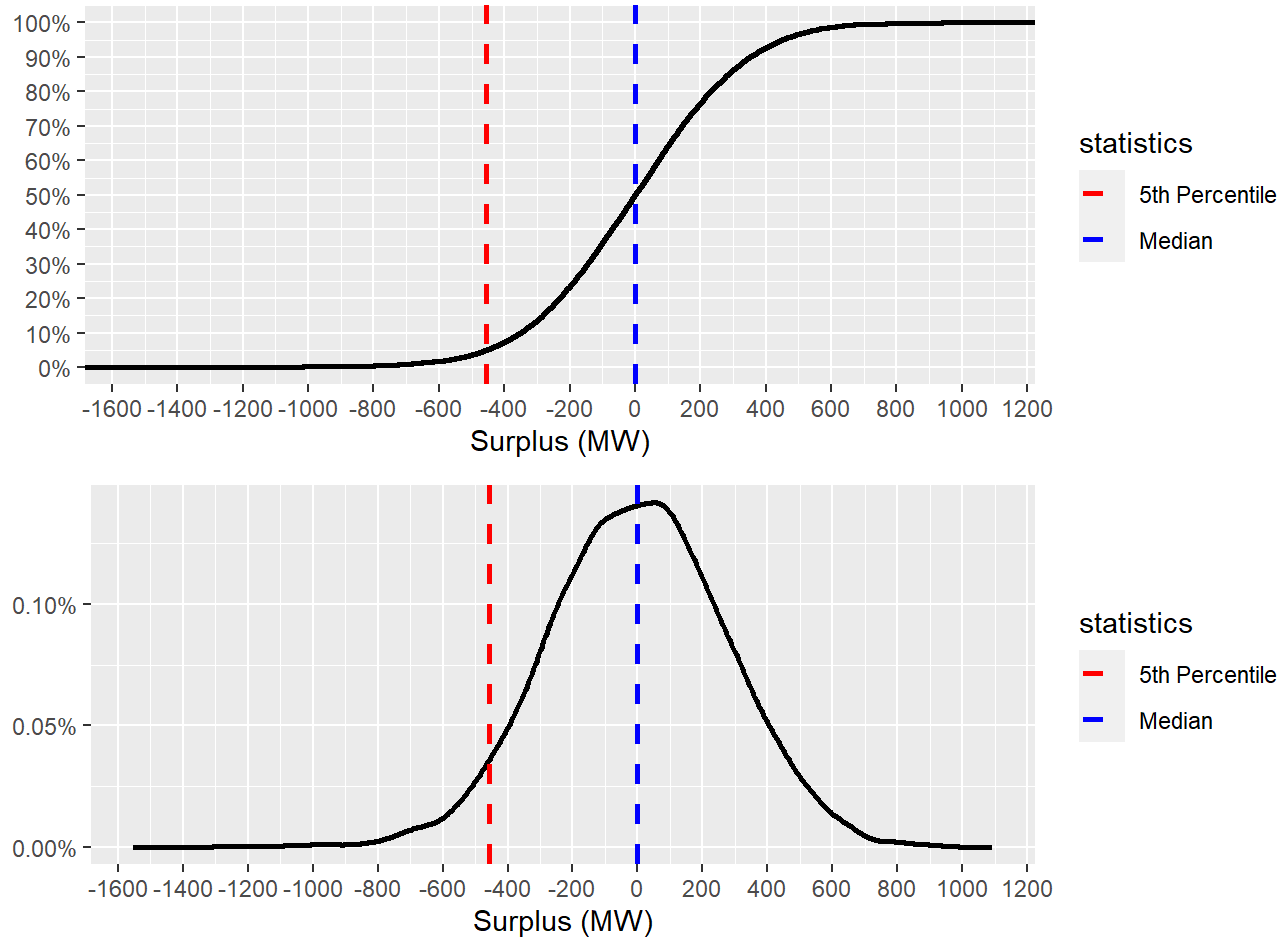

Figure 2: Cumulative Distribution Function and Probability Density Function for Surplus if Indiana Plans to the Forecasted PJM Load Obligation

Ensuring Indiana Meets The Forecasted PJM Load Obligation with Confidence

As illustrated by the discussion and illustrations above, planning to the forecasted PJM load obligation leaves a 50% chance of insufficient capacity. The following table describes the capacity contingency that should be added to the forecasted PJM load obligation (both in MW and as a percentage of the forecasted PJM load obligation), to ensure that the forecasted PJM load obligation is met at the specified confidence level.

Table 1: Capacity Contingency Necessary to Achieve The Specified Confidence Level of Meeting The Forecasted PJM Load Obligation

Confidence	Contingency (MW)	Contingency %	Additional Accredited Capacity
50%	0	0%	5130
90%	350	3.88%	5480
95%	456	5.06%	5586
98%	579	6.42%	5709

The above table indicates that a capacity contingency of 5.06% should be added to the current Forecast Pool Requirement of the current peak load forecast to meet the final load obligation with 95% confidence.

The 95% confidence interval for this capacity contingency is 4.95% to 5.15%

Indiana Michigan Power Company

2024 IN IRP: Appendix 1

Exhibit L I&M Indiana Hourly Load

Indiana Michigan Power Company - Indiana
2023 Hourly Load (MW) (All Hours Are EST)

DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
1/1/2023	1,785	1,775	1,743	1,714	1,713	1,719	1,757	1,767
1/2/2023	1,681	1,668	1,645	1,642	1,683	1,729	1,804	1,850
1/3/2023	1,968	1,916	1,931	1,924	1,904	2,024	2,098	2,235
1/4/2023	1,915	1,878	1,839	1,751	1,816	1,916	2,076	2,229
1/5/2023	2,116	2,074	2,044	2,030	2,097	2,220	2,369	2,460
1/6/2023	2,169	2,129	2,085	2,130	2,142	2,217	2,378	2,464
1/7/2023	2,091	2,067	2,035	1,994	2,022	2,029	2,071	2,126
1/8/2023	1,998	1,996	1,975	1,986	1,978	1,966	2,022	2,085
1/9/2023	2,136	2,106	2,028	2,080	2,175	2,270	2,419	2,566
1/10/2023	2,214	2,169	2,136	2,150	2,227	2,311	2,462	2,503
1/11/2023	2,150	2,118	2,094	2,079	2,118	2,196	2,246	2,330
1/12/2023	2,021	2,005	1,951	1,987	2,095	2,223	2,360	2,502
1/13/2023	2,146	2,116	2,084	2,110	2,158	2,186	2,333	2,467
1/14/2023	2,141	2,090	2,032	1,993	2,071	2,104	2,137	2,168
1/15/2023	2,120	2,126	2,104	2,135	2,146	2,168	2,190	2,247
1/16/2023	2,172	2,174	2,128	2,123	2,193	2,241	2,384	2,440
1/17/2023	2,193	2,189	2,099	2,121	2,156	2,215	2,384	2,410
1/18/2023	2,105	2,064	2,039	2,058	1,999	2,099	2,280	2,399
1/19/2023	2,214	2,154	2,114	2,080	2,137	2,202	2,189	2,286
1/20/2023	2,188	2,141	2,102	2,096	2,141	2,223	2,361	2,462
1/21/2023	2,047	2,010	2,026	2,021	2,035	2,065	2,131	2,174
1/22/2023	1,997	1,987	1,967	1,988	2,030	2,104	2,227	2,217
1/23/2023	2,119	2,129	2,125	2,154	2,194	2,290	2,464	2,505
1/24/2023	2,264	2,209	2,216	2,211	2,254	2,327	2,459	2,538
1/25/2023	2,164	2,064	2,135	2,073	2,148	2,248	2,448	2,566
1/26/2023	2,218	2,203	2,192	2,204	2,273	2,321	2,496	2,575
1/27/2023	2,267	2,247	2,253	2,251	2,290	2,359	2,492	2,591
1/28/2023	2,109	2,043	1,949	1,963	2,033	2,052	2,075	2,124
1/29/2023	1,988	1,949	1,921	1,915	1,954	1,957	2,008	2,015
1/30/2023	2,064	2,060	2,025	2,052	2,122	2,234	2,374	2,463
1/31/2023	2,277	2,259	2,236	2,227	2,288	2,400	2,530	2,622

Indiana Michigan Power Company - Indiana
2023 Hourly Load (MW) (All Hours Are EST)

DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
2/1/2023	2,354	2,324	2,298	2,327	2,367	2,495	2,671	2,794
2/2/2023	2,344	2,303	2,340	2,329	2,358	2,400	2,461	2,553
2/3/2023	2,293	2,288	2,250	2,278	2,304	2,391	2,508	2,607
2/4/2023	2,328	2,305	2,292	2,315	2,343	2,352	2,393	2,446
2/5/2023	2,158	2,121	2,065	2,092	2,076	2,069	2,101	2,142
2/6/2023	2,040	2,007	1,986	2,044	2,108	2,238	2,408	2,510
2/7/2023	2,239	2,176	2,157	2,207	2,237	2,328	2,402	2,488
2/8/2023	2,057	2,028	1,988	2,018	2,093	2,174	2,318	2,422
2/9/2023	2,104	2,074	2,052	2,065	2,133	2,251	2,420	2,470
2/10/2023	2,030	2,001	2,014	1,966	2,012	2,073	2,221	2,346
2/11/2023	1,994	1,935	1,932	1,959	1,990	2,065	2,111	2,188
2/12/2023	2,009	1,948	1,951	1,874	1,962	1,993	2,049	2,088
2/13/2023	2,045	2,048	2,050	2,038	2,103	2,198	2,342	2,408
2/14/2023	2,056	2,020	2,076	2,132	2,206	2,365	2,526	2,578
2/15/2023	2,038	1,967	2,012	1,979	2,025	2,088	2,139	2,223
2/16/2023	1,974	1,929	1,933	1,945	2,058	2,192	2,283	2,386
2/17/2023	2,033	2,052	2,057	2,039	2,107	2,207	2,351	2,400
2/18/2023	2,179	2,178	2,158	2,184	2,184	2,204	2,275	2,328
2/19/2023	2,073	2,015	2,012	1,977	2,002	2,020	2,017	2,071
2/20/2023	1,927	1,899	1,891	1,903	1,987	2,097	2,240	2,303
2/21/2023	2,067	2,041	2,018	2,042	2,085	2,179	2,320	2,428
2/22/2023	2,125	2,110	2,122	2,119	2,153	2,284	2,469	2,530
2/23/2023	2,066	2,034	1,978	2,023	2,076	2,177	2,320	2,412
2/24/2023	2,126	2,087	2,088	2,088	2,114	2,218	2,352	2,399
2/25/2023	2,023	2,021	1,914	1,936	1,961	2,000	2,042	2,084
2/26/2023	2,004	1,981	1,941	1,946	1,928	1,935	2,011	2,065
2/27/2023	2,011	2,013	1,975	1,987	2,075	2,186	2,399	2,500
2/28/2023	2,095	1,986	1,959	1,943	1,955	2,039	2,174	2,248
3/1/2023	2,057	2,064	2,030	2,021	2,063	2,187	2,285	2,371
3/2/2023	1,975	1,914	1,892	1,909	1,977	2,108	2,223	2,321
3/3/2023	2,027	2,043	2,009	2,053	2,066	2,177	2,320	2,471

Indiana Michigan Power Company - Indiana
2023 Hourly Load (MW) (All Hours Are EST)

DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
3/4/2023	2,040	1,966	1,957	1,953	1,945	1,965	2,037	2,053
3/5/2023	1,773	1,814	1,835	1,813	1,825	1,850	1,889	1,961
3/6/2023	1,981	1,966	1,964	1,981	2,011	2,123	2,273	2,309
3/7/2023	1,987	1,971	1,953	1,941	2,001	2,110	2,274	2,304
3/8/2023	2,069	2,079	2,038	1,998	2,087	2,165	2,236	2,295
3/9/2023	2,046	2,029	2,015	1,984	2,065	2,196	2,334	2,428
3/10/2023	2,123	2,098	2,055	2,096	2,146	2,247	2,361	2,444
3/11/2023	1,935	1,892	1,888	1,891	1,896	1,932	1,963	1,993
3/12/2023	1,906	1,964	1,910	1,928	1,945	1,920	1,971	1,986
3/13/2023	2,008	2,018	2,033	2,086	2,194	2,348	2,466	2,469
3/14/2023	2,147	2,138	2,158	2,205	2,325	2,447	2,563	2,492
3/15/2023	2,121	2,129	2,141	2,196	2,297	2,479	2,577	2,570
3/16/2023	2,002	1,976	1,982	2,037	2,149	2,319	2,436	2,376
3/17/2023	1,994	1,989	2,007	2,038	2,108	2,240	2,313	2,337
3/18/2023	2,029	2,024	1,953	2,050	2,136	2,149	2,221	2,262
3/19/2023	2,095	2,090	2,109	2,114	2,122	2,101	2,201	2,208
3/20/2023	2,104	2,070	2,117	2,151	2,283	2,393	2,524	2,494
3/21/2023	2,033	2,027	2,026	2,041	2,152	2,367	2,406	2,385
3/22/2023	1,960	1,930	1,920	1,932	2,041	2,232	2,326	2,329
3/23/2023	1,940	1,903	1,878	1,919	1,953	1,989	2,089	2,090
3/24/2023	1,967	1,974	1,972	1,960	2,074	2,211	2,283	2,322
3/25/2023	1,982	1,894	1,905	1,925	1,878	1,960	2,039	2,071
3/26/2023	1,881	1,857	1,833	1,859	1,877	1,916	1,959	1,995
3/27/2023	1,758	1,767	1,778	1,846	1,977	2,116	2,244	2,296
3/28/2023	1,932	1,917	1,971	1,998	2,149	2,243	2,351	2,334
3/29/2023	1,922	1,965	1,991	2,056	2,172	2,311	2,405	2,374
3/30/2023	1,998	1,996	1,995	2,028	2,073	2,349	2,385	2,372
3/31/2023	1,939	1,936	1,924	1,966	2,075	2,176	2,239	2,182
4/1/2023	1,630	1,684	1,674	1,666	1,730	1,797	1,841	1,844
4/2/2023	1,891	1,856	1,828	1,819	1,851	1,868	1,898	1,989
4/3/2023	1,890	1,894	1,877	1,940	2,031	2,130	2,234	2,212

Indiana Michigan Power Company - Indiana
2023 Hourly Load (MW) (All Hours Are EST)

DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
4/4/2023	1,834	1,797	1,766	1,863	1,945	2,074	2,115	2,198
4/5/2023	1,845	1,854	1,815	1,843	1,958	2,064	2,117	2,120
4/6/2023	1,868	1,846	1,844	1,856	1,950	2,066	2,195	2,212
4/7/2023	1,882	1,861	1,840	1,882	1,945	2,050	2,075	2,070
4/8/2023	1,752	1,716	1,710	1,720	1,713	1,825	1,878	1,882
4/9/2023	1,708	1,664	1,619	1,698	1,696	1,737	1,781	1,755
4/10/2023	1,714	1,695	1,735	1,807	1,938	2,097	2,176	2,128
4/11/2023	1,800	1,763	1,767	1,823	1,947	2,115	2,215	2,195
4/12/2023	1,810	1,787	1,783	1,836	1,867	1,962	2,012	1,997
4/13/2023	1,819	1,762	1,777	1,834	1,923	1,997	2,109	2,124
4/14/2023	1,765	1,691	1,689	1,709	1,827	1,968	1,992	2,046
4/15/2023	1,704	1,645	1,625	1,580	1,673	1,703	1,729	1,814
4/16/2023	1,677	1,649	1,637	1,634	1,643	1,674	1,717	1,747
4/17/2023	1,819	1,809	1,846	1,906	2,011	2,175	2,270	2,296
4/18/2023	1,936	1,949	1,917	1,925	2,064	2,174	2,237	2,270
4/19/2023	1,877	1,882	1,835	1,967	2,063	2,177	2,215	2,252
4/20/2023	1,798	1,774	1,759	1,811	1,923	2,040	2,137	2,153
4/21/2023	1,806	1,715	1,719	1,807	1,857	2,017	2,043	2,074
4/22/2023	1,690	1,683	1,672	1,676	1,701	1,748	1,731	1,821
4/23/2023	1,737	1,722	1,715	1,690	1,713	1,751	1,790	1,799
4/24/2023	1,882	1,843	1,889	1,945	2,029	2,213	2,260	2,289
4/25/2023	1,940	1,941	1,958	1,967	2,054	2,186	2,273	2,303
4/26/2023	1,922	1,932	1,960	2,002	2,075	2,223	2,286	2,301
4/27/2023	1,869	1,866	1,862	1,950	2,073	2,238	2,306	2,248
4/28/2023	1,836	1,812	1,801	1,861	1,959	2,100	2,151	2,212
4/29/2023	1,733	1,673	1,666	1,675	1,738	1,757	1,813	1,791
4/30/2023	1,465	1,457	1,446	1,449	1,469	1,478	1,485	1,505
5/1/2023	1,626	1,617	1,610	1,683	1,789	1,948	2,041	2,082
5/2/2023	1,711	1,692	1,702	1,752	1,857	1,980	2,055	2,065
5/3/2023	1,722	1,689	1,695	1,752	1,851	1,973	2,033	2,049
5/4/2023	1,660	1,647	1,661	1,718	1,847	1,973	2,042	2,018

Indiana Michigan Power Company - Indiana
2023 Hourly Load (MW) (All Hours Are EST)

DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
5/5/2023	1,598	1,576	1,636	1,745	1,828	1,996	2,044	1,974
5/6/2023	1,626	1,626	1,575	1,624	1,651	1,658	1,733	1,741
5/7/2023	1,598	1,596	1,559	1,622	1,641	1,628	1,644	1,753
5/8/2023	1,802	1,758	1,717	1,781	1,873	2,049	2,116	2,138
5/9/2023	1,820	1,795	1,791	1,836	1,832	2,003	2,096	2,087
5/10/2023	1,815	1,763	1,737	1,747	1,891	2,067	2,131	2,070
5/11/2023	1,804	1,796	1,795	1,803	1,882	2,014	2,141	2,185
5/12/2023	1,874	1,775	1,775	1,763	1,901	1,996	2,050	2,069
5/13/2023	1,796	1,761	1,730	1,712	1,744	1,762	1,762	1,822
5/14/2023	1,694	1,687	1,645	1,638	1,642	1,640	1,670	1,695
5/15/2023	1,692	1,670	1,681	1,744	1,799	1,980	2,109	2,107
5/16/2023	1,784	1,750	1,736	1,775	1,901	2,028	2,125	2,173
5/17/2023	1,771	1,766	1,745	1,800	1,917	2,058	2,099	2,110
5/18/2023	1,777	1,774	1,756	1,776	1,821	1,905	1,977	1,962
5/19/2023	1,758	1,704	1,779	1,816	1,897	1,994	2,077	2,069
5/20/2023	1,696	1,679	1,641	1,630	1,718	1,671	1,644	1,804
5/21/2023	1,600	1,575	1,581	1,580	1,600	1,572	1,592	1,603
5/22/2023	1,716	1,700	1,675	1,734	1,847	1,980	2,070	2,089
5/23/2023	1,831	1,773	1,756	1,785	1,865	2,014	2,013	2,079
5/24/2023	1,880	1,810	1,815	1,797	1,875	2,013	2,076	2,082
5/25/2023	1,766	1,744	1,697	1,779	1,880	2,024	2,044	2,080
5/26/2023	1,766	1,735	1,739	1,759	1,826	1,916	1,931	1,987
5/27/2023	1,612	1,569	1,569	1,544	1,609	1,574	1,590	1,610
5/28/2023	1,568	1,566	1,522	1,516	1,512	1,428	1,494	1,509
5/29/2023	1,543	1,460	1,508	1,492	1,468	1,483	1,505	1,477
5/30/2023	1,791	1,684	1,670	1,767	1,818	1,981	2,107	2,189
5/31/2023	1,926	1,949	1,889	1,956	2,025	2,088	2,230	2,336
6/1/2023	2,037	1,942	1,993	1,968	2,016	2,149	2,199	2,311
6/2/2023	1,961	1,895	1,836	1,837	1,918	1,990	2,086	2,174
6/3/2023	1,875	1,867	1,848	1,845	1,832	1,814	1,865	1,897
6/4/2023	1,883	1,798	1,737	1,723	1,703	1,705	1,672	1,709

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DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
6/5/2023	1,729	1,689	1,692	1,725	1,869	2,002	2,056	2,132
6/6/2023	1,908	1,861	1,825	1,889	1,894	1,965	2,058	2,143
6/7/2023	1,837	1,819	1,721	1,754	1,785	1,853	1,910	1,942
6/8/2023	1,816	1,764	1,763	1,757	1,846	1,947	2,009	2,075
6/9/2023	1,825	1,774	1,727	1,722	1,733	1,867	1,953	1,964
6/10/2023	1,767	1,705	1,699	1,671	1,662	1,689	1,697	1,727
6/11/2023	1,764	1,694	1,673	1,681	1,680	1,694	1,726	1,765
6/12/2023	1,828	1,785	1,785	1,825	1,914	2,036	2,116	2,191
6/13/2023	1,790	1,798	1,744	1,781	1,928	1,958	2,080	2,114
6/14/2023	1,835	1,759	1,765	1,787	1,910	2,009	2,058	2,099
6/15/2023	1,786	1,779	1,771	1,778	1,875	2,005	2,071	2,157
6/16/2023	1,823	1,716	1,740	1,734	1,851	1,962	1,978	2,006
6/17/2023	1,623	1,617	1,610	1,593	1,595	1,610	1,640	1,673
6/18/2023	1,686	1,632	1,634	1,595	1,592	1,593	1,642	1,632
6/19/2023	1,902	1,822	1,776	1,834	1,911	2,027	2,053	2,209
6/20/2023	1,974	1,932	1,884	1,879	1,949	1,951	2,024	2,093
6/21/2023	2,067	2,022	1,965	1,947	2,054	2,163	2,302	2,376
6/22/2023	2,055	1,942	1,854	1,944	1,972	2,102	2,246	2,313
6/23/2023	1,969	1,903	1,894	1,896	1,999	2,050	2,056	2,097
6/24/2023	1,895	1,836	1,808	1,806	1,805	1,699	1,774	1,896
6/25/2023	1,947	1,832	1,806	1,769	1,781	1,837	1,829	1,923
6/26/2023	2,011	1,944	1,960	1,987	2,067	2,188	2,288	2,324
6/27/2023	1,889	1,830	1,818	1,861	1,899	1,998	2,058	2,133
6/28/2023	1,761	1,732	1,740	1,782	1,900	1,993	2,039	2,081
6/29/2023	1,891	1,798	1,841	1,899	1,971	2,063	2,122	2,218
6/30/2023	1,813	1,922	1,868	1,833	1,951	2,005	2,118	2,144
7/1/2023	1,947	1,847	1,873	1,834	1,815	1,737	1,791	1,741
7/2/2023	1,776	1,736	1,676	1,577	1,576	1,585	1,572	1,642
7/3/2023	1,750	1,712	1,719	1,737	1,741	1,830	1,885	1,959
7/4/2023	1,874	1,746	1,727	1,697	1,667	1,680	1,648	1,761
7/5/2023	1,922	1,884	1,806	1,779	1,849	1,959	2,080	2,220

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DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
7/6/2023	2,141	2,142	2,067	2,043	2,109	2,194	2,275	2,363
7/7/2023	2,011	1,916	1,895	1,926	2,004	2,052	2,143	2,230
7/8/2023	2,017	1,993	1,920	1,896	1,895	1,899	2,012	2,008
7/9/2023	1,713	1,715	1,653	1,632	1,643	1,639	1,688	1,750
7/10/2023	1,889	1,811	1,825	1,854	1,917	2,030	2,098	2,165
7/11/2023	2,041	2,002	1,949	1,955	1,999	2,113	2,273	2,358
7/12/2023	2,173	2,115	2,003	1,999	2,016	2,214	2,338	2,311
7/13/2023	2,138	2,064	2,044	2,022	2,086	2,188	2,291	2,287
7/14/2023	2,072	2,013	1,949	2,004	2,047	2,138	2,216	2,247
7/15/2023	2,205	2,124	2,086	2,022	2,028	2,033	2,010	2,044
7/16/2023	1,931	1,873	1,855	1,827	1,840	1,792	1,836	1,902
7/17/2023	1,998	1,956	1,932	1,972	2,059	2,136	2,291	2,310
7/18/2023	1,925	1,911	1,850	1,843	1,913	1,933	1,997	2,045
7/19/2023	1,968	1,938	1,907	1,913	2,011	2,125	2,211	2,291
7/20/2023	2,104	2,010	2,007	2,026	2,074	2,193	2,300	2,371
7/21/2023	2,076	1,989	1,951	1,947	2,013	2,088	2,134	2,261
7/22/2023	1,802	1,813	1,823	1,817	1,839	1,836	1,873	1,922
7/23/2023	1,847	1,779	1,741	1,740	1,758	1,653	1,792	1,840
7/24/2023	1,889	1,840	1,834	1,890	1,957	2,101	2,178	2,301
7/25/2023	2,053	1,993	1,934	1,928	2,045	2,123	2,226	2,333
7/26/2023	2,129	2,070	1,997	2,012	2,092	2,200	2,312	2,434
7/27/2023	2,241	2,131	2,111	2,141	2,158	2,331	2,441	2,467
7/28/2023	2,369	2,288	2,214	2,257	2,244	2,399	2,477	2,511
7/29/2023	2,196	2,144	2,063	1,991	1,983	1,962	1,992	2,000
7/30/2023	1,912	1,852	1,792	1,789	1,757	1,746	1,733	1,786
7/31/2023	1,865	1,851	1,825	1,784	1,926	2,011	2,128	2,168
8/1/2023	1,945	1,915	1,895	1,903	1,961	2,016	2,089	2,237
8/2/2023	1,963	1,871	1,863	1,951	1,988	2,041	2,107	2,156
8/3/2023	2,018	1,937	1,914	1,958	2,032	2,111	2,162	2,255
8/4/2023	2,088	2,020	1,972	1,990	2,035	2,156	2,218	2,276
8/5/2023	2,061	1,970	1,916	1,879	1,886	1,943	1,936	2,044

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DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
8/6/2023	1,957	1,890	1,811	1,793	1,831	1,818	1,845	1,935
8/7/2023	1,966	1,951	1,926	1,937	2,032	2,161	2,169	2,299
8/8/2023	1,742	1,697	1,738	1,756	1,868	2,023	2,067	2,207
8/9/2023	1,996	1,928	1,938	1,958	1,980	2,144	2,213	2,277
8/10/2023	2,065	1,992	1,966	2,017	2,095	2,214	2,178	2,314
8/11/2023	1,949	2,000	1,868	1,856	2,061	2,171	2,261	2,313
8/12/2023	1,966	1,894	1,887	1,910	1,894	1,917	1,946	2,077
8/13/2023	1,842	1,716	1,703	1,715	1,699	1,710	1,682	1,851
8/14/2023	2,028	1,993	1,993	1,999	2,139	2,260	2,330	2,352
8/15/2023	1,952	1,944	1,866	1,874	1,922	2,038	2,088	2,104
8/16/2023	1,924	1,879	1,856	1,890	1,971	2,131	2,124	2,180
8/17/2023	1,987	1,932	1,910	1,910	1,997	2,192	2,229	2,306
8/18/2023	1,847	1,773	1,700	1,748	1,873	2,002	2,061	2,058
8/19/2023	1,729	1,632	1,622	1,683	1,683	1,635	1,761	1,754
8/20/2023	1,687	1,672	1,623	1,586	1,601	1,593	1,665	1,703
8/21/2023	2,126	2,136	2,018	2,106	2,200	2,349	2,456	2,509
8/22/2023	2,310	2,208	2,154	2,163	2,220	2,357	2,329	2,423
8/23/2023	2,027	2,020	1,988	2,024	2,132	2,310	2,360	2,414
8/24/2023	2,519	2,400	2,399	2,489	2,552	2,673	2,696	2,692
8/25/2023	2,523	2,460	2,392	2,365	2,425	2,567	2,590	2,652
8/26/2023	2,164	2,116	2,092	2,053	2,034	2,090	2,087	2,144
8/27/2023	1,953	1,894	1,833	1,788	1,747	1,749	1,729	1,810
8/28/2023	1,884	1,846	1,807	1,844	1,909	2,093	2,110	2,138
8/29/2023	1,909	1,873	1,866	1,852	1,997	2,123	2,205	2,257
8/30/2023	1,950	1,883	1,865	1,843	1,939	2,029	2,149	2,172
8/31/2023	1,881	1,838	1,798	1,863	1,942	2,086	2,145	2,130
9/1/2023	1,830	1,781	1,811	1,803	1,902	2,005	2,032	2,059
9/2/2023	1,743	1,689	1,691	1,657	1,661	1,728	1,709	1,777
9/3/2023	1,818	1,847	1,792	1,768	1,785	1,842	1,822	1,823
9/4/2023	2,002	1,936	1,875	1,835	1,850	1,815	1,825	1,879
9/5/2023	2,133	2,108	2,048	2,113	2,164	2,346	2,428	2,484

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DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
9/6/2023	2,259	2,180	2,141	2,176	2,241	2,424	2,496	2,508
9/7/2023	2,006	1,948	1,911	1,980	2,106	2,135	2,215	2,242
9/8/2023	1,915	1,873	1,870	1,882	1,959	2,082	2,215	2,236
9/9/2023	1,816	1,817	1,780	1,746	1,786	1,826	1,865	1,895
9/10/2023	1,747	1,696	1,671	1,667	1,652	1,619	1,686	1,666
9/11/2023	1,805	1,751	1,813	1,732	1,909	2,075	2,161	2,203
9/12/2023	1,937	1,835	1,894	1,961	2,078	2,203	2,334	2,335
9/13/2023	1,885	1,857	1,834	1,892	1,949	2,119	2,189	2,220
9/14/2023	1,830	1,852	1,852	1,866	1,924	2,112	2,194	2,177
9/15/2023	1,867	1,818	1,814	1,812	1,959	2,083	2,133	2,157
9/16/2023	1,762	1,695	1,635	1,630	1,683	1,717	1,702	1,801
9/17/2023	1,662	1,599	1,626	1,613	1,637	1,657	1,673	1,697
9/18/2023	1,813	1,745	1,778	1,844	1,954	2,111	2,157	2,170
9/19/2023	1,816	1,826	1,773	1,843	1,930	2,021	2,189	2,113
9/20/2023	1,850	1,853	1,817	1,832	1,833	1,930	2,019	1,999
9/21/2023	1,906	1,868	1,860	1,866	1,992	2,106	2,168	2,203
9/22/2023	1,948	1,903	1,851	1,796	1,926	2,094	2,180	2,217
9/23/2023	1,761	1,668	1,621	1,685	1,702	1,730	1,761	1,790
9/24/2023	1,656	1,627	1,592	1,562	1,584	1,615	1,635	1,704
9/25/2023	1,741	1,792	1,747	1,784	1,896	2,047	2,137	2,158
9/26/2023	1,938	1,897	1,888	1,930	2,000	2,164	2,240	2,228
9/27/2023	1,899	1,850	1,872	1,937	2,045	2,157	2,231	2,198
9/28/2023	1,923	1,908	1,878	1,930	1,987	2,157	2,228	2,216
9/29/2023	1,864	1,852	1,850	1,843	1,902	2,040	2,154	2,066
9/30/2023	1,785	1,726	1,664	1,718	1,709	1,714	1,741	1,741
10/1/2023	1,701	1,649	1,616	1,508	1,628	1,658	1,690	1,703
10/2/2023	1,804	1,813	1,777	1,840	1,965	2,111	2,179	2,204
10/3/2023	1,925	1,886	1,865	1,875	2,002	2,113	2,177	2,179
10/4/2023	1,900	1,880	1,856	1,918	2,022	2,141	2,238	2,200
10/5/2023	1,964	1,904	1,874	1,820	1,946	1,992	2,091	2,116
10/6/2023	1,932	1,910	1,867	1,910	1,955	2,099	2,148	2,154

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DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
10/7/2023	1,752	1,661	1,670	1,649	1,681	1,747	1,773	1,813
10/8/2023	1,603	1,571	1,574	1,573	1,584	1,623	1,686	1,721
10/9/2023	1,736	1,747	1,778	1,839	1,958	2,096	2,199	2,208
10/10/2023	1,847	1,838	1,852	1,882	1,982	2,126	2,220	2,205
10/11/2023	1,840	1,806	1,800	1,910	1,961	2,100	2,180	2,194
10/12/2023	1,844	1,835	1,783	1,836	1,948	2,032	2,133	2,155
10/13/2023	1,817	1,785	1,802	1,817	1,927	2,056	2,113	2,165
10/14/2023	1,804	1,791	1,758	1,749	1,700	1,798	1,773	1,779
10/15/2023	1,493	1,456	1,421	1,425	1,441	1,475	1,523	1,537
10/16/2023	1,577	1,567	1,568	1,609	1,729	1,859	1,949	1,932
10/17/2023	1,546	1,529	1,535	1,584	1,688	1,811	1,900	1,916
10/18/2023	1,572	1,575	1,570	1,628	1,746	1,875	1,975	1,976
10/19/2023	1,567	1,550	1,527	1,588	1,702	1,811	1,925	1,943
10/20/2023	1,678	1,632	1,630	1,682	1,817	1,922	1,990	1,953
10/21/2023	1,657	1,654	1,639	1,666	1,707	1,820	1,879	1,846
10/22/2023	1,629	1,606	1,586	1,581	1,582	1,669	1,744	1,752
10/23/2023	1,813	1,847	1,837	1,904	2,054	2,213	2,339	2,312
10/24/2023	1,851	1,782	1,800	1,891	1,980	2,133	2,236	2,250
10/25/2023	1,811	1,792	1,784	1,802	1,934	2,066	2,172	2,200
10/26/2023	1,858	1,830	1,807	1,850	1,930	2,099	2,163	2,080
10/27/2023	1,874	1,809	1,816	1,757	1,931	2,061	2,110	2,125
10/28/2023	1,739	1,665	1,698	1,679	1,671	1,716	1,787	1,803
10/29/2023	1,704	1,708	1,665	1,691	1,656	1,701	1,704	1,777
10/30/2023	1,776	1,765	1,808	1,912	2,017	2,154	2,275	2,280
10/31/2023	1,947	1,928	1,948	2,023	2,156	2,232	2,398	2,386
11/1/2023	2,070	2,048	2,043	2,094	2,179	2,327	2,432	2,457
11/2/2023	1,992	1,999	1,972	2,015	2,127	2,209	2,302	2,270
11/3/2023	2,016	1,986	2,010	2,021	2,146	2,135	2,228	2,231
11/4/2023	1,835	1,746	1,729	1,783	1,782	1,882	1,928	1,953
11/5/2023	1,748	1,757	1,732	1,700	1,697	1,780	1,865	1,892
11/6/2023	1,963	1,922	1,946	1,904	1,964	2,108	2,286	2,375

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11/7/2023	1,886	1,846	1,815	1,846	1,845	1,989	2,127	2,130
11/8/2023	1,983	1,965	1,936	1,955	1,977	2,104	2,228	2,296
11/9/2023	1,970	1,884	1,863	1,871	1,855	1,982	2,162	2,260
11/10/2023	1,878	1,915	1,880	1,874	1,896	1,999	2,140	2,100
11/11/2023	1,806	1,850	1,854	1,854	1,856	1,870	1,931	1,950
11/12/2023	1,847	1,826	1,755	1,824	1,819	1,814	1,867	1,936
11/13/2023	1,962	1,931	1,951	1,937	2,029	2,138	2,264	2,319
11/14/2023	1,920	1,956	1,962	1,944	2,027	2,145	2,267	2,374
11/15/2023	1,986	1,975	1,973	1,922	1,894	1,978	2,144	2,204
11/16/2023	1,956	1,937	1,911	1,935	2,009	2,087	2,262	2,281
11/17/2023	1,869	1,890	1,869	1,882	1,881	2,004	2,147	2,201
11/18/2023	1,855	1,843	1,788	1,849	1,820	1,854	1,926	1,996
11/19/2023	1,887	1,818	1,793	1,803	1,808	1,839	1,878	1,971
11/20/2023	1,934	1,933	1,921	1,926	2,005	2,091	2,224	2,397
11/21/2023	2,109	2,049	2,025	2,026	1,962	2,121	2,204	2,309
11/22/2023	1,958	1,955	1,916	1,924	1,970	2,050	2,135	2,228
11/23/2023	1,894	1,852	1,834	1,836	1,834	1,850	1,847	1,927
11/24/2023	1,768	1,748	1,753	1,762	1,765	1,815	1,860	1,910
11/25/2023	1,866	1,822	1,772	1,813	1,824	1,846	1,946	1,871
11/26/2023	1,907	1,851	1,824	1,841	1,841	1,887	1,923	1,994
11/27/2023	2,123	2,074	2,088	2,027	2,145	2,233	2,400	2,498
11/28/2023	2,229	2,256	2,238	2,238	2,324	2,436	2,578	2,649
11/29/2023	2,285	2,264	2,223	2,260	2,308	2,439	2,556	2,623
11/30/2023	2,146	2,145	2,139	2,148	2,218	2,350	2,476	2,557
12/1/2023	1,965	1,932	1,935	1,960	2,042	2,132	2,238	2,351
12/2/2023	1,935	1,882	1,842	1,849	1,868	1,882	1,936	1,978
12/3/2023	1,885	1,823	1,789	1,783	1,788	1,785	1,831	1,898
12/4/2023	1,989	1,957	1,912	1,945	2,017	2,032	2,267	2,408
12/5/2023	2,047	2,002	1,991	1,997	2,044	2,101	2,180	2,260
12/6/2023	2,071	2,016	2,047	2,072	2,089	2,215	2,372	2,466
12/7/2023	2,136	2,097	2,097	2,115	2,132	2,257	2,451	2,527

Indiana Michigan Power Company - Indiana
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DATE	HR01	HR02	HR03	HR04	HR05	HR06	HR07	HR08
12/8/2023	2,043	2,043	2,008	2,012	2,065	2,104	2,288	2,372
12/9/2023	1,935	1,912	1,854	1,830	1,870	1,904	1,958	2,020
12/10/2023	1,899	1,853	1,883	1,848	1,863	1,859	1,897	1,989
12/11/2023	2,041	2,001	1,984	1,982	2,054	2,140	2,325	2,456
12/12/2023	2,243	2,247	2,257	2,231	2,295	2,360	2,542	2,635
12/13/2023	2,179	2,162	2,165	2,179	2,255	2,344	2,483	2,566
12/14/2023	2,228	2,180	2,203	2,213	2,273	2,362	2,547	2,631
12/15/2023	2,183	2,133	2,145	2,151	2,237	2,313	2,475	2,554
12/16/2023	2,028	1,970	1,929	1,925	1,926	1,985	2,020	2,111
12/17/2023	1,928	1,882	1,849	1,853	1,825	1,884	1,881	1,976
12/18/2023	2,022	2,027	2,008	2,059	2,078	2,159	2,337	2,442
12/19/2023	2,223	2,187	2,165	2,128	2,188	2,306	2,426	2,518
12/20/2023	2,195	2,155	2,136	2,133	2,176	2,284	2,373	2,438
12/21/2023	2,088	2,091	2,074	2,072	2,044	2,163	2,323	2,423
12/22/2023	2,001	1,955	1,935	1,952	1,969	1,970	2,099	2,211
12/23/2023	1,896	1,819	1,810	1,799	1,797	1,805	1,845	1,924
12/24/2023	1,765	1,715	1,703	1,684	1,691	1,701	1,722	1,700
12/25/2023	1,520	1,482	1,459	1,455	1,462	1,488	1,528	1,574
12/26/2023	1,471	1,423	1,394	1,389	1,423	1,461	1,545	1,690
12/27/2023	1,805	1,776	1,722	1,765	1,799	1,863	2,047	2,138
12/28/2023	1,822	1,796	1,791	1,824	1,860	1,938	2,033	2,128
12/29/2023	1,941	1,885	1,907	1,887	1,898	2,003	2,096	2,147
12/30/2023	1,937	1,896	1,872	1,828	1,878	1,895	1,940	1,953
12/31/2023	1,901	1,841	1,824	1,825	1,840	1,861	1,897	1,962

Indiana Michigan Power Company - Indiana
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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
1/1/2023	1,818	1,812	1,709	1,844	1,851	1,826	1,843	1,829
1/2/2023	1,873	1,908	1,949	1,969	1,937	1,963	1,955	1,970
1/3/2023	2,244	2,227	2,190	2,208	2,143	2,208	2,173	2,164
1/4/2023	2,244	2,292	2,244	2,246	2,272	2,276	2,243	2,266
1/5/2023	2,451	2,437	2,436	2,476	2,407	2,450	2,408	2,401
1/6/2023	2,470	2,468	2,481	2,470	2,474	2,423	2,354	2,370
1/7/2023	2,196	2,200	2,207	2,177	2,164	2,102	2,115	2,108
1/8/2023	2,136	2,068	2,117	2,078	2,122	2,103	2,088	2,093
1/9/2023	2,548	2,561	2,526	2,475	2,452	2,424	2,397	2,372
1/10/2023	2,537	2,526	2,489	2,468	2,427	2,358	2,296	2,262
1/11/2023	2,264	2,241	2,209	2,167	2,143	2,143	2,111	2,095
1/12/2023	2,421	2,469	2,461	2,423	2,447	2,391	2,340	2,361
1/13/2023	2,500	2,510	2,492	2,494	2,484	2,444	2,440	2,378
1/14/2023	2,210	2,260	2,248	2,239	2,213	2,197	2,137	2,120
1/15/2023	2,235	2,212	2,145	2,215	2,208	2,155	2,146	2,045
1/16/2023	2,430	2,436	2,474	2,453	2,502	2,538	2,518	2,478
1/17/2023	2,359	2,380	2,418	2,413	2,418	2,428	2,386	2,389
1/18/2023	2,433	2,408	2,434	2,289	2,338	2,322	2,311	2,346
1/19/2023	2,345	2,385	2,290	2,354	2,370	2,374	2,359	2,368
1/20/2023	2,497	2,482	2,486	2,456	2,458	2,460	2,343	2,337
1/21/2023	2,207	2,204	2,175	2,187	2,197	2,208	2,189	2,198
1/22/2023	2,267	2,304	2,263	2,220	2,195	2,216	2,200	2,213
1/23/2023	2,413	2,463	2,546	2,535	2,588	2,562	2,544	2,530
1/24/2023	2,486	2,510	2,514	2,484	2,492	2,454	2,405	2,369
1/25/2023	2,626	2,624	2,617	2,628	2,606	2,553	2,476	2,455
1/26/2023	2,569	2,521	2,571	2,552	2,540	2,515	2,484	2,452
1/27/2023	2,563	2,546	2,559	2,576	2,565	2,431	2,477	2,482
1/28/2023	2,179	2,203	2,204	2,179	2,151	2,141	2,094	2,085
1/29/2023	2,056	2,062	2,085	2,075	2,112	2,079	2,055	2,056
1/30/2023	2,460	2,486	2,493	2,491	2,501	2,523	2,484	2,464
1/31/2023	2,597	2,626	2,564	2,552	2,537	2,489	2,400	2,428

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
2/1/2023	2,752	2,716	2,667	2,538	2,563	2,505	2,464	2,414
2/2/2023	2,495	2,471	2,424	2,384	2,351	2,332	2,277	2,253
2/3/2023	2,647	2,649	2,573	2,570	2,552	2,545	2,513	2,495
2/4/2023	2,453	2,440	2,466	2,430	2,367	2,332	2,264	2,239
2/5/2023	2,183	2,203	2,093	2,101	2,090	2,056	2,060	2,054
2/6/2023	2,509	2,496	2,454	2,410	2,429	2,404	2,262	2,367
2/7/2023	2,438	2,424	2,370	2,333	2,275	2,246	2,189	2,150
2/8/2023	2,433	2,444	2,367	2,359	2,330	2,310	2,255	2,229
2/9/2023	2,460	2,458	2,406	2,380	2,309	2,330	2,312	2,313
2/10/2023	2,360	2,363	2,362	2,312	2,315	2,258	2,195	2,168
2/11/2023	2,210	2,121	2,107	2,070	2,020	1,980	1,912	1,949
2/12/2023	2,128	2,024	1,919	1,996	1,954	1,957	1,908	1,892
2/13/2023	2,376	2,358	2,270	2,257	2,247	2,201	2,111	2,089
2/14/2023	2,529	2,502	2,446	2,368	2,363	2,343	2,283	2,268
2/15/2023	2,168	2,159	2,142	2,102	2,102	2,076	2,024	1,957
2/16/2023	2,390	2,389	2,375	2,378	2,366	2,326	2,332	2,264
2/17/2023	2,447	2,449	2,383	2,422	2,455	2,434	2,412	2,402
2/18/2023	2,322	2,286	2,220	2,190	2,164	2,071	2,038	2,049
2/19/2023	2,062	2,019	2,003	1,964	1,963	1,937	1,896	1,876
2/20/2023	2,317	2,299	2,281	2,247	2,265	2,228	2,178	2,159
2/21/2023	2,397	2,357	2,340	2,327	2,275	2,238	2,188	2,151
2/22/2023	2,561	2,543	2,526	2,488	2,527	2,527	2,509	2,424
2/23/2023	2,392	2,373	2,293	2,212	2,225	2,201	2,170	2,150
2/24/2023	2,385	2,362	2,359	2,374	2,352	2,297	2,201	2,119
2/25/2023	2,081	2,080	2,047	2,037	2,022	2,024	2,000	2,020
2/26/2023	2,056	2,005	1,991	1,952	1,916	1,880	1,846	1,847
2/27/2023	2,508	2,435	2,473	2,482	2,458	2,403	2,401	2,345
2/28/2023	2,248	2,319	2,297	2,308	2,265	2,229	2,156	2,067
3/1/2023	2,343	2,278	2,267	2,235	2,192	2,179	2,085	2,105
3/2/2023	2,318	2,317	2,305	2,252	2,242	2,172	2,165	2,115
3/3/2023	2,469	2,431	2,529	2,509	2,546	2,490	2,520	2,416

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
3/4/2023	2,074	2,082	2,054	2,022	1,959	1,930	1,881	1,884
3/5/2023	1,943	1,911	1,863	1,887	1,883	1,860	1,835	1,854
3/6/2023	2,250	2,280	2,282	2,245	2,217	2,171	2,125	2,111
3/7/2023	2,351	2,310	2,251	2,269	2,256	2,166	2,106	2,045
3/8/2023	2,262	2,229	2,199	2,127	2,068	2,047	1,988	1,955
3/9/2023	2,372	2,354	2,325	2,230	2,202	2,189	2,198	2,207
3/10/2023	2,460	2,435	2,418	2,369	2,386	2,388	2,326	2,295
3/11/2023	2,031	2,044	1,981	1,982	1,938	1,896	1,840	1,895
3/12/2023	2,057	2,062	2,080	2,088	2,065	2,051	2,022	2,054
3/13/2023	2,477	2,529	2,482	2,486	2,451	2,366	2,346	2,342
3/14/2023	2,537	2,522	2,499	2,479	2,434	2,396	2,281	2,317
3/15/2023	2,449	2,435	2,417	2,380	2,322	2,251	2,171	2,158
3/16/2023	2,400	2,326	2,294	2,295	2,292	2,224	2,238	2,196
3/17/2023	2,355	2,376	2,422	2,420	2,407	2,362	2,336	2,333
3/18/2023	2,310	2,272	2,294	2,290	2,283	2,254	2,251	2,226
3/19/2023	2,223	2,171	2,165	2,102	2,062	2,067	2,032	2,032
3/20/2023	2,490	2,451	2,421	2,389	2,353	2,276	2,199	2,170
3/21/2023	2,367	2,272	2,249	2,231	2,207	2,174	2,129	2,095
3/22/2023	2,344	2,330	2,339	2,322	2,289	2,269	2,229	2,222
3/23/2023	2,081	2,102	2,082	2,065	2,037	1,998	1,986	1,959
3/24/2023	2,358	2,316	2,319	2,307	2,192	2,193	2,167	2,177
3/25/2023	2,060	2,089	2,080	2,082	2,075	2,063	2,048	2,066
3/26/2023	1,936	1,897	1,855	1,794	1,824	1,800	1,768	1,790
3/27/2023	2,256	2,251	2,310	2,278	2,260	2,176	2,147	2,145
3/28/2023	2,347	2,337	2,284	2,267	2,220	2,232	2,140	2,115
3/29/2023	2,353	2,312	2,331	2,307	2,309	2,280	2,232	2,205
3/30/2023	2,411	2,401	2,226	2,119	2,064	1,999	1,920	1,883
3/31/2023	2,084	2,133	2,240	2,240	2,216	2,154	2,096	2,072
4/1/2023	1,958	1,995	2,048	2,009	2,055	2,055	1,991	2,023
4/2/2023	1,960	1,920	1,936	1,907	1,888	1,837	1,801	1,777
4/3/2023	2,138	2,185	2,207	2,139	2,102	2,086	2,071	2,009

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
4/4/2023	2,222	2,215	2,199	2,196	2,194	2,187	2,179	2,124
4/5/2023	2,196	2,237	2,213	2,264	2,232	2,202	2,183	2,167
4/6/2023	2,207	2,242	2,214	2,192	2,125	2,095	2,056	2,002
4/7/2023	2,044	1,996	1,983	1,933	1,902	1,865	1,835	1,770
4/8/2023	1,837	1,810	1,808	1,758	1,740	1,677	1,655	1,666
4/9/2023	1,764	1,706	1,695	1,624	1,646	1,608	1,584	1,625
4/10/2023	2,080	2,098	2,131	2,106	2,107	2,049	2,023	1,984
4/11/2023	2,156	2,145	2,150	2,138	2,123	2,077	2,041	2,025
4/12/2023	1,954	1,950	1,955	1,980	1,999	1,985	1,964	1,963
4/13/2023	2,067	2,084	2,077	2,166	2,202	2,196	2,151	2,166
4/14/2023	2,090	2,113	2,077	2,073	2,156	2,179	2,141	2,147
4/15/2023	1,878	1,893	1,872	1,847	1,935	1,959	1,983	1,999
4/16/2023	1,815	1,868	1,917	1,917	1,891	1,819	1,814	1,864
4/17/2023	2,332	2,326	2,321	2,345	2,328	2,289	2,223	2,229
4/18/2023	2,249	2,175	2,151	2,130	2,125	2,095	2,034	2,030
4/19/2023	2,229	2,168	2,172	2,063	2,104	2,076	2,075	2,064
4/20/2023	2,149	2,125	2,103	2,146	2,185	2,141	2,087	2,125
4/21/2023	2,126	2,140	2,165	2,144	2,136	2,101	2,048	2,076
4/22/2023	1,860	1,758	1,873	1,785	1,835	1,841	1,848	1,890
4/23/2023	1,820	1,790	1,850	1,862	1,860	1,809	1,869	1,884
4/24/2023	2,191	2,219	2,253	2,232	2,222	2,138	2,115	2,048
4/25/2023	2,282	2,311	2,234	2,241	2,262	2,232	2,111	2,081
4/26/2023	2,210	2,165	2,136	2,053	2,057	2,026	1,999	1,969
4/27/2023	2,198	2,168	2,158	2,074	2,082	2,075	2,058	2,058
4/28/2023	2,227	2,203	2,208	2,150	2,187	2,159	2,130	2,084
4/29/2023	1,818	1,801	1,794	1,790	1,755	1,757	1,747	1,773
4/30/2023	1,546	1,547	1,546	1,570	1,583	1,573	1,610	1,620
5/1/2023	2,106	2,122	2,118	2,111	2,103	2,063	2,035	2,015
5/2/2023	2,064	2,069	2,063	2,072	2,070	2,035	1,996	1,983
5/3/2023	2,035	2,032	1,989	1,975	1,927	1,869	1,833	1,792
5/4/2023	1,959	1,923	1,882	1,903	1,880	1,839	1,806	1,773

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
5/5/2023	2,015	1,996	1,997	2,018	1,973	1,912	1,816	1,804
5/6/2023	1,811	1,787	1,745	1,782	1,748	1,742	1,775	1,735
5/7/2023	1,747	1,748	1,697	1,757	1,835	1,852	1,925	1,974
5/8/2023	2,156	2,208	2,200	2,083	2,168	2,164	2,124	2,095
5/9/2023	2,083	1,993	2,082	2,134	2,111	2,111	2,105	2,098
5/10/2023	2,089	2,068	2,120	2,124	2,122	2,128	2,138	2,117
5/11/2023	2,173	2,176	2,151	2,186	2,248	2,221	2,251	2,293
5/12/2023	2,170	2,188	2,214	2,204	2,252	2,258	2,282	2,231
5/13/2023	1,879	1,928	1,899	1,982	2,061	2,075	2,081	2,033
5/14/2023	1,714	1,725	1,768	1,847	1,819	1,852	1,880	1,882
5/15/2023	2,132	2,106	2,118	2,130	2,083	2,131	2,135	2,144
5/16/2023	2,199	2,193	2,247	2,186	2,216	2,155	2,218	2,200
5/17/2023	2,091	2,082	2,121	2,142	2,138	2,059	2,065	2,056
5/18/2023	1,911	1,923	1,891	1,908	1,925	1,925	1,893	1,886
5/19/2023	2,088	2,098	2,106	2,155	2,211	2,187	2,127	2,162
5/20/2023	1,770	1,715	1,779	1,794	1,719	1,779	1,753	1,773
5/21/2023	1,627	1,579	1,678	1,725	1,651	1,758	1,784	1,822
5/22/2023	2,102	2,131	2,185	2,184	2,220	2,261	2,279	2,277
5/23/2023	2,161	2,203	2,191	2,296	2,340	2,303	2,394	2,421
5/24/2023	2,078	2,227	2,309	2,336	2,396	2,428	2,373	2,383
5/25/2023	2,071	2,052	2,022	2,063	2,085	1,985	2,068	2,000
5/26/2023	1,974	2,018	2,001	1,972	2,013	2,009	2,007	2,009
5/27/2023	1,618	1,648	1,761	1,777	1,801	1,815	1,857	1,888
5/28/2023	1,558	1,566	1,660	1,765	1,800	1,821	1,838	1,881
5/29/2023	1,596	1,651	1,742	1,768	1,900	1,941	2,053	2,101
5/30/2023	2,273	2,383	2,469	2,587	2,659	2,688	2,692	2,717
5/31/2023	2,388	2,557	2,607	2,549	2,660	2,748	2,727	2,792
6/1/2023	2,455	2,528	2,654	2,769	2,825	2,830	2,788	2,812
6/2/2023	2,305	2,443	2,539	2,599	2,715	2,707	2,754	2,743
6/3/2023	2,055	2,173	2,336	2,404	2,516	2,548	2,598	2,584
6/4/2023	1,765	1,791	1,836	1,952	2,023	2,089	2,179	2,257

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
6/5/2023	2,170	2,207	2,231	2,310	2,367	2,371	2,365	2,425
6/6/2023	2,199	2,270	2,338	2,347	2,322	2,352	2,436	2,356
6/7/2023	1,948	1,990	2,011	2,048	2,068	2,081	2,085	2,105
6/8/2023	2,090	2,133	2,180	2,169	2,237	2,216	2,207	2,242
6/9/2023	2,062	2,139	2,147	2,160	2,197	2,209	2,240	2,261
6/10/2023	1,780	1,843	1,884	1,966	2,044	2,101	2,170	2,269
6/11/2023	1,826	1,874	1,909	1,939	1,979	1,988	2,042	2,009
6/12/2023	2,141	2,216	2,203	2,208	2,192	2,161	2,082	2,058
6/13/2023	2,142	2,162	2,185	2,207	2,212	2,081	2,120	2,151
6/14/2023	2,149	2,117	2,151	2,175	2,211	2,184	2,204	2,155
6/15/2023	2,142	2,143	2,181	2,281	2,370	2,383	2,392	2,410
6/16/2023	2,083	2,098	2,094	2,107	2,120	2,074	2,160	2,142
6/17/2023	1,795	1,845	1,859	1,882	1,936	2,002	2,042	2,091
6/18/2023	1,744	1,762	1,897	2,008	2,085	2,152	2,171	2,297
6/19/2023	2,260	2,368	2,408	2,492	2,571	2,566	2,568	2,549
6/20/2023	2,129	2,218	2,325	2,440	2,514	2,565	2,587	2,589
6/21/2023	2,476	2,554	2,596	2,676	2,783	2,765	2,781	2,805
6/22/2023	2,364	2,444	2,513	2,581	2,623	2,600	2,535	2,496
6/23/2023	2,177	2,321	2,404	2,460	2,460	2,474	2,441	2,401
6/24/2023	2,002	2,078	2,167	2,319	2,379	2,390	2,442	2,489
6/25/2023	1,926	1,993	2,100	2,253	2,310	2,382	2,446	2,387
6/26/2023	2,378	2,433	2,434	2,522	2,555	2,504	2,464	2,429
6/27/2023	2,142	2,209	2,211	2,235	2,259	2,249	2,243	2,219
6/28/2023	2,149	2,188	2,311	2,362	2,430	2,422	2,453	2,508
6/29/2023	2,277	2,351	2,437	2,499	2,592	2,710	2,777	2,778
6/30/2023	2,252	2,326	2,356	2,458	2,541	2,572	2,640	2,690
7/1/2023	1,852	1,903	1,867	1,884	1,943	2,047	2,157	2,213
7/2/2023	1,710	1,793	1,862	1,932	2,025	2,189	2,271	2,282
7/3/2023	2,023	2,089	2,184	2,200	2,316	2,381	2,402	2,477
7/4/2023	1,916	2,058	2,226	2,371	2,444	2,484	2,555	2,557
7/5/2023	2,388	2,554	2,683	2,815	2,890	2,907	2,945	2,963

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
7/6/2023	2,429	2,535	2,613	2,681	2,659	2,741	2,792	2,793
7/7/2023	2,266	2,399	2,521	2,626	2,648	2,603	2,714	2,720
7/8/2023	2,061	2,078	2,168	2,181	2,199	2,213	2,214	2,227
7/9/2023	1,740	1,817	1,907	2,037	2,091	2,152	2,216	2,283
7/10/2023	2,316	2,428	2,509	2,546	2,692	2,672	2,713	2,762
7/11/2023	2,452	2,590	2,662	2,747	2,857	2,898	2,898	2,882
7/12/2023	2,363	2,457	2,535	2,639	2,702	2,717	2,744	2,727
7/13/2023	2,391	2,390	2,507	2,569	2,553	2,623	2,690	2,698
7/14/2023	2,301	2,489	2,549	2,702	2,734	2,792	2,832	2,925
7/15/2023	2,166	2,179	2,182	2,220	2,284	2,309	2,334	2,375
7/16/2023	1,995	2,028	2,184	2,226	2,305	2,383	2,406	2,478
7/17/2023	2,401	2,424	2,531	2,593	2,662	2,707	2,688	2,694
7/18/2023	2,119	2,192	2,278	2,365	2,421	2,447	2,475	2,498
7/19/2023	2,339	2,427	2,479	2,621	2,692	2,744	2,771	2,784
7/20/2023	2,448	2,515	2,589	2,730	2,843	2,883	2,869	2,833
7/21/2023	2,313	2,351	2,378	2,398	2,497	2,531	2,530	2,529
7/22/2023	2,030	2,113	2,244	2,268	2,323	2,374	2,426	2,377
7/23/2023	1,909	1,971	2,061	2,128	2,158	2,224	2,274	2,350
7/24/2023	2,374	2,435	2,555	2,671	2,801	2,830	2,838	2,850
7/25/2023	2,389	2,461	2,594	2,714	2,803	2,859	2,913	2,955
7/26/2023	2,551	2,679	2,770	2,888	2,841	2,728	2,729	2,683
7/27/2023	2,635	2,777	2,880	2,987	3,013	3,085	3,136	3,087
7/28/2023	2,563	2,502	2,584	2,607	2,637	2,759	2,837	2,859
7/29/2023	2,113	2,267	2,338	2,393	2,456	2,503	2,558	2,551
7/30/2023	1,918	2,074	2,205	2,304	2,371	2,426	2,459	2,511
7/31/2023	2,247	2,269	2,424	2,427	2,488	2,569	2,597	2,591
8/1/2023	2,265	2,372	2,390	2,485	2,591	2,602	2,676	2,676
8/2/2023	2,212	2,297	2,356	2,459	2,546	2,587	2,619	2,637
8/3/2023	2,348	2,451	2,562	2,654	2,775	2,853	2,860	2,920
8/4/2023	2,469	2,526	2,642	2,745	2,852	2,884	2,913	2,897
8/5/2023	2,119	2,241	2,283	2,319	2,306	2,328	2,342	2,397

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
8/6/2023	1,964	2,007	2,050	2,058	2,047	2,106	2,066	2,142
8/7/2023	2,339	2,411	2,377	2,148	2,187	2,194	2,178	2,155
8/8/2023	2,248	2,401	2,478	2,562	2,628	2,584	2,612	2,624
8/9/2023	2,380	2,485	2,534	2,628	2,696	2,695	2,724	2,707
8/10/2023	2,361	2,422	2,432	2,514	2,616	2,666	2,666	2,661
8/11/2023	2,391	2,494	2,558	2,630	2,649	2,672	2,620	2,675
8/12/2023	2,196	2,270	2,306	2,378	2,498	2,462	2,510	2,529
8/13/2023	1,835	1,949	2,106	2,252	2,387	2,438	2,503	2,543
8/14/2023	2,422	2,470	2,483	2,512	2,590	2,561	2,540	2,407
8/15/2023	2,118	2,134	2,142	2,159	2,175	2,154	2,140	2,152
8/16/2023	2,253	2,268	2,298	2,399	2,443	2,530	2,571	2,577
8/17/2023	2,330	2,391	2,457	2,483	2,523	2,422	2,475	2,475
8/18/2023	2,034	2,134	2,172	2,218	2,252	2,229	2,292	2,318
8/19/2023	1,764	1,807	1,843	1,837	1,951	2,044	2,112	2,160
8/20/2023	1,778	1,952	2,076	2,250	2,306	2,509	2,613	2,672
8/21/2023	2,588	2,668	2,771	2,870	3,023	3,053	3,106	3,118
8/22/2023	2,438	2,473	2,546	2,650	2,735	2,752	2,797	2,840
8/23/2023	2,528	2,615	2,789	2,914	3,039	3,156	3,240	3,259
8/24/2023	2,667	2,724	2,863	2,941	3,070	3,104	3,225	3,257
8/25/2023	2,644	2,764	2,844	2,891	2,939	2,939	2,927	2,926
8/26/2023	2,183	2,240	2,346	2,471	2,525	2,560	2,622	2,587
8/27/2023	1,912	1,894	1,965	2,043	2,120	2,193	2,241	2,322
8/28/2023	2,159	2,252	2,268	2,375	2,423	2,432	2,451	2,452
8/29/2023	2,242	2,288	2,332	2,368	2,446	2,481	2,554	2,554
8/30/2023	2,204	2,192	2,232	2,269	2,290	2,289	2,328	2,370
8/31/2023	2,153	2,183	2,177	2,222	2,273	2,260	2,292	2,317
9/1/2023	2,021	2,108	2,119	2,183	2,239	2,268	2,342	2,404
9/2/2023	1,825	1,911	1,957	2,100	2,222	2,303	2,413	2,461
9/3/2023	1,988	2,123	2,277	2,380	2,477	2,482	2,483	2,649
9/4/2023	2,054	2,224	2,398	2,496	2,610	2,689	2,738	2,778
9/5/2023	2,598	2,798	2,984	3,122	3,174	3,212	3,163	3,141

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
9/6/2023	2,545	2,595	2,684	2,708	2,808	2,845	2,880	2,909
9/7/2023	2,247	2,286	2,296	2,324	2,354	2,353	2,315	2,286
9/8/2023	2,237	2,293	2,269	2,302	2,378	2,335	2,326	2,317
9/9/2023	1,847	1,955	2,023	2,049	2,069	2,074	2,106	2,087
9/10/2023	1,791	1,841	1,894	1,927	1,968	2,045	2,110	2,184
9/11/2023	2,257	2,276	2,327	2,384	2,431	2,434	2,422	2,455
9/12/2023	2,329	2,370	2,367	2,403	2,452	2,424	2,407	2,404
9/13/2023	2,233	2,184	2,240	2,229	2,318	2,308	2,281	2,279
9/14/2023	2,159	2,221	2,210	2,202	2,263	2,251	2,286	2,305
9/15/2023	2,095	2,157	2,175	2,224	2,239	2,185	2,222	2,205
9/16/2023	1,814	1,810	1,841	1,907	1,919	1,907	2,011	1,989
9/17/2023	1,731	1,787	1,858	1,895	1,961	1,981	1,987	2,018
9/18/2023	2,220	2,195	2,216	2,264	2,305	2,280	2,285	2,256
9/19/2023	2,098	2,127	2,165	2,280	2,311	2,288	2,268	2,279
9/20/2023	2,010	2,035	2,085	2,142	2,200	2,229	2,265	2,285
9/21/2023	2,256	2,234	2,324	2,372	2,478	2,499	2,509	2,502
9/22/2023	2,238	2,258	2,349	2,402	2,438	2,487	2,509	2,469
9/23/2023	1,771	1,855	1,859	1,941	1,983	2,000	2,071	2,120
9/24/2023	1,668	1,766	1,854	1,948	1,999	2,052	2,094	2,225
9/25/2023	2,219	2,273	2,296	2,324	2,364	2,369	2,351	2,379
9/26/2023	2,208	2,271	2,319	2,401	2,422	2,407	2,401	2,392
9/27/2023	2,238	2,260	2,284	2,279	2,240	2,207	2,167	2,182
9/28/2023	2,232	2,260	2,271	2,263	2,271	2,195	2,152	2,096
9/29/2023	2,202	2,165	2,176	2,205	2,214	2,171	2,160	2,117
9/30/2023	1,798	1,813	1,856	1,915	1,922	1,974	2,009	2,108
10/1/2023	1,769	1,792	1,903	1,975	2,048	2,143	2,199	2,241
10/2/2023	2,213	2,306	2,299	2,438	2,542	2,539	2,592	2,633
10/3/2023	2,206	2,274	2,382	2,465	2,537	2,625	2,678	2,639
10/4/2023	2,239	2,292	2,409	2,476	2,509	2,518	2,564	2,582
10/5/2023	2,138	2,151	2,158	2,200	2,207	2,171	2,136	2,087
10/6/2023	2,157	2,157	2,139	2,190	2,195	2,176	2,153	2,131

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
10/7/2023	1,795	1,795	1,825	1,822	1,779	1,774	1,769	1,733
10/8/2023	1,768	1,756	1,734	1,707	1,719	1,751	1,779	1,790
10/9/2023	2,181	2,101	2,164	2,150	2,133	2,079	2,058	2,103
10/10/2023	2,207	2,139	2,098	2,179	2,147	2,108	2,078	2,069
10/11/2023	2,105	2,121	2,091	2,160	2,143	2,108	2,046	2,006
10/12/2023	2,137	2,143	2,140	2,131	2,134	2,122	2,078	2,063
10/13/2023	2,034	2,144	2,152	2,169	2,146	2,056	2,017	2,070
10/14/2023	1,823	1,868	1,950	1,924	1,921	1,902	1,868	1,851
10/15/2023	1,554	1,559	1,561	1,593	1,598	1,600	1,611	1,624
10/16/2023	1,932	1,927	1,906	1,905	1,910	1,869	1,833	1,811
10/17/2023	1,915	1,919	1,914	1,924	1,912	1,859	1,819	1,793
10/18/2023	1,957	1,918	1,918	1,925	1,901	1,900	1,862	1,839
10/19/2023	1,991	2,011	2,014	2,007	1,979	1,948	1,927	1,926
10/20/2023	2,005	2,042	2,013	2,047	2,084	2,037	2,021	2,012
10/21/2023	1,902	1,941	1,928	1,949	1,923	1,864	1,817	1,828
10/22/2023	1,737	1,755	1,746	1,749	1,716	1,728	1,733	1,771
10/23/2023	2,278	2,175	2,174	2,183	2,202	2,113	2,066	2,066
10/24/2023	2,226	2,179	2,188	2,196	2,215	2,205	2,183	2,177
10/25/2023	2,148	2,197	2,190	2,211	2,185	2,161	2,140	2,130
10/26/2023	2,102	2,224	2,204	2,263	2,258	2,185	2,188	2,178
10/27/2023	2,097	2,157	2,206	2,213	2,225	2,161	2,169	2,127
10/28/2023	1,841	1,840	1,870	1,860	1,831	1,828	1,816	1,865
10/29/2023	1,841	1,843	1,887	1,889	1,857	1,931	1,838	2,013
10/30/2023	2,314	2,331	2,349	2,346	2,323	2,300	2,239	2,219
10/31/2023	2,384	2,362	2,311	2,330	2,354	2,345	2,283	2,286
11/1/2023	2,469	2,428	2,327	2,303	2,241	2,224	2,186	2,184
11/2/2023	2,196	2,138	2,091	2,059	2,032	1,974	1,948	1,942
11/3/2023	2,221	2,209	2,215	2,160	2,196	2,151	2,084	2,105
11/4/2023	1,973	1,952	1,921	1,874	1,820	1,813	1,794	1,839
11/5/2023	1,917	1,887	1,900	1,929	1,896	1,901	1,899	1,897
11/6/2023	2,336	2,333	2,308	2,288	2,263	2,274	2,205	2,144

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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
11/7/2023	2,145	2,195	2,157	2,191	2,170	2,182	2,155	2,130
11/8/2023	2,274	2,264	2,271	2,276	2,253	2,234	2,158	2,167
11/9/2023	2,245	2,246	2,197	2,174	2,212	2,233	2,168	2,127
11/10/2023	2,142	2,050	2,119	2,114	2,129	2,100	2,012	2,009
11/11/2023	2,007	1,957	1,931	1,921	1,915	1,850	1,775	1,808
11/12/2023	1,929	1,882	1,844	1,855	1,868	1,825	1,841	1,848
11/13/2023	2,322	2,248	2,188	2,212	2,177	2,184	2,190	2,083
11/14/2023	2,367	2,336	2,237	2,185	2,219	2,177	2,106	2,078
11/15/2023	2,146	2,072	2,017	1,988	1,961	1,953	1,912	1,889
11/16/2023	2,276	2,222	2,190	2,218	2,226	2,167	2,150	2,169
11/17/2023	2,224	2,245	2,250	2,212	2,168	2,199	2,158	2,126
11/18/2023	2,071	2,040	1,962	1,972	1,910	1,907	1,869	1,877
11/19/2023	1,987	1,915	1,939	1,913	1,878	1,837	1,789	1,833
11/20/2023	2,397	2,428	2,409	2,410	2,391	2,328	2,322	2,305
11/21/2023	2,280	2,295	2,312	2,326	2,333	2,326	2,281	2,302
11/22/2023	2,239	2,251	2,238	2,251	2,231	2,210	2,155	2,150
11/23/2023	1,912	1,920	1,880	1,905	1,832	1,756	1,705	1,706
11/24/2023	1,923	1,931	1,920	1,890	1,863	1,847	1,846	1,878
11/25/2023	2,006	2,029	2,020	2,014	1,977	1,962	1,914	1,926
11/26/2023	2,016	2,051	2,128	2,120	2,188	2,193	2,139	2,121
11/27/2023	2,499	2,516	2,461	2,546	2,555	2,564	2,530	2,512
11/28/2023	2,632	2,629	2,571	2,571	2,548	2,496	2,488	2,454
11/29/2023	2,589	2,553	2,477	2,423	2,397	2,374	2,326	2,297
11/30/2023	2,495	2,434	2,407	2,334	2,321	2,298	2,269	2,248
12/1/2023	2,372	2,392	2,293	2,286	2,364	2,294	2,265	2,213
12/2/2023	2,025	2,018	2,044	2,082	2,064	2,067	2,028	2,006
12/3/2023	1,948	1,973	1,990	1,992	2,081	2,078	2,084	2,071
12/4/2023	2,326	2,285	2,387	2,363	2,362	2,359	2,292	2,281
12/5/2023	2,276	2,267	2,274	2,245	2,239	2,214	2,162	2,139
12/6/2023	2,438	2,458	2,411	2,397	2,396	2,349	2,318	2,222
12/7/2023	2,494	2,468	2,368	2,364	2,311	2,302	2,214	2,198

Indiana Michigan Power Company - Indiana
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DATE	HR09	HR10	HR11	HR12	HR13	HR14	HR15	HR16
12/8/2023	2,377	2,400	2,373	2,325	2,285	2,274	2,228	2,186
12/9/2023	2,045	2,073	2,071	2,068	2,061	2,042	2,043	2,030
12/10/2023	2,015	2,069	2,080	2,069	2,102	2,105	2,105	2,120
12/11/2023	2,465	2,467	2,468	2,444	2,509	2,478	2,423	2,378
12/12/2023	2,612	2,536	2,453	2,354	2,332	2,317	2,246	2,233
12/13/2023	2,567	2,474	2,463	2,406	2,277	2,343	2,281	2,281
12/14/2023	2,611	2,511	2,457	2,405	2,341	2,298	2,239	2,260
12/15/2023	2,507	2,433	2,388	2,294	2,268	2,226	2,172	2,179
12/16/2023	2,139	2,150	2,114	2,148	2,100	2,062	2,050	2,051
12/17/2023	1,991	2,002	2,009	1,994	2,057	2,075	2,068	2,095
12/18/2023	2,471	2,464	2,446	2,533	2,554	2,538	2,514	2,488
12/19/2023	2,490	2,478	2,401	2,407	2,350	2,318	2,321	2,301
12/20/2023	2,386	2,343	2,270	2,209	2,163	2,139	2,074	2,068
12/21/2023	2,386	2,395	2,351	2,324	2,317	2,257	2,196	2,174
12/22/2023	2,233	2,239	2,209	2,209	2,102	2,127	2,036	2,080
12/23/2023	1,970	1,981	1,983	1,993	1,992	1,976	1,959	1,950
12/24/2023	1,764	1,705	1,714	1,701	1,689	1,647	1,613	1,598
12/25/2023	1,625	1,645	1,675	1,668	1,640	1,619	1,624	1,624
12/26/2023	1,714	1,844	1,876	1,918	1,933	1,930	1,901	1,937
12/27/2023	2,181	2,169	2,126	2,122	2,071	2,040	2,008	1,982
12/28/2023	2,058	2,135	2,154	2,120	2,106	2,127	2,096	2,117
12/29/2023	2,165	2,140	2,154	2,144	2,146	2,130	2,070	2,045
12/30/2023	1,991	2,053	2,060	2,030	2,033	2,006	2,015	2,028
12/31/2023	1,957	2,001	2,022	2,065	2,077	2,089	2,107	2,088

Indiana Michigan Power Company - Indiana
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DATE	HR17	HR18	HR19	HR20	HR21	HR22	HR23	HR24
1/1/2023	1,860	1,900	1,942	1,917	1,868	1,862	1,782	1,739
1/2/2023	2,002	2,067	2,095	2,067	2,075	2,020	1,970	1,968
1/3/2023	2,163	2,193	2,193	2,223	2,182	2,067	2,008	1,964
1/4/2023	2,269	2,312	2,352	2,304	2,328	2,268	2,193	2,163
1/5/2023	2,382	2,444	2,412	2,397	2,396	2,357	2,273	2,217
1/6/2023	2,365	2,358	2,371	2,362	2,330	2,256	2,241	2,164
1/7/2023	2,152	2,201	2,251	2,217	2,183	2,164	2,102	2,031
1/8/2023	2,140	2,156	2,256	2,263	2,283	2,230	2,201	2,141
1/9/2023	2,387	2,440	2,489	2,502	2,479	2,436	2,306	2,238
1/10/2023	2,274	2,307	2,346	2,350	2,324	2,289	2,202	2,168
1/11/2023	2,093	2,131	2,137	2,142	2,154	2,157	2,114	2,046
1/12/2023	2,378	2,449	2,427	2,407	2,379	2,321	2,263	2,181
1/13/2023	2,416	2,430	2,421	2,404	2,352	2,318	2,232	2,131
1/14/2023	2,152	2,170	2,288	2,308	2,302	2,276	2,245	2,198
1/15/2023	2,169	2,259	2,321	2,279	2,311	2,243	2,210	2,228
1/16/2023	2,422	2,537	2,531	2,474	2,442	2,379	2,288	2,236
1/17/2023	2,385	2,333	2,415	2,365	2,347	2,208	2,125	2,132
1/18/2023	2,380	2,415	2,476	2,479	2,433	2,361	2,254	2,291
1/19/2023	2,373	2,374	2,472	2,441	2,361	2,323	2,291	2,264
1/20/2023	2,347	2,390	2,378	2,350	2,306	2,221	2,193	2,135
1/21/2023	2,196	2,205	2,275	2,247	2,197	2,165	2,098	2,060
1/22/2023	2,267	2,309	2,368	2,369	2,287	2,280	2,189	2,173
1/23/2023	2,518	2,466	2,529	2,500	2,506	2,451	2,370	2,311
1/24/2023	2,379	2,380	2,436	2,409	2,374	2,328	2,262	2,196
1/25/2023	2,455	2,450	2,464	2,444	2,327	2,345	2,292	2,254
1/26/2023	2,465	2,480	2,547	2,542	2,508	2,472	2,365	2,287
1/27/2023	2,484	2,459	2,446	2,382	2,351	2,298	2,170	2,169
1/28/2023	2,112	2,156	2,201	2,206	2,174	2,127	2,078	2,008
1/29/2023	2,139	2,179	2,220	2,201	2,224	2,178	2,095	2,097
1/30/2023	2,454	2,486	2,565	2,557	2,496	2,467	2,371	2,338
1/31/2023	2,428	2,477	2,586	2,561	2,524	2,511	2,439	2,378

Indiana Michigan Power Company - Indiana
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DATE	HR17	HR18	HR19	HR20	HR21	HR22	HR23	HR24
2/1/2023	2,394	2,432	2,534	2,556	2,546	2,515	2,459	2,393
2/2/2023	2,245	2,331	2,393	2,440	2,451	2,478	2,355	2,325
2/3/2023	2,491	2,536	2,601	2,549	2,577	2,527	2,440	2,375
2/4/2023	2,268	2,294	2,343	2,339	2,294	2,251	2,228	2,189
2/5/2023	2,080	2,109	2,149	2,170	2,159	2,124	2,103	2,051
2/6/2023	2,339	2,380	2,442	2,461	2,444	2,404	2,323	2,292
2/7/2023	2,129	2,178	2,238	2,276	2,254	2,185	2,122	2,055
2/8/2023	2,226	2,228	2,298	2,328	2,284	2,266	2,194	2,139
2/9/2023	2,315	2,289	2,365	2,385	2,367	2,287	2,137	2,106
2/10/2023	2,131	2,146	2,164	2,183	2,178	2,113	2,067	2,039
2/11/2023	1,938	1,962	2,107	2,106	2,110	2,086	2,059	2,035
2/12/2023	1,918	1,998	2,072	2,086	2,140	2,139	2,137	2,103
2/13/2023	2,100	2,130	2,204	2,240	2,203	2,206	2,097	2,110
2/14/2023	2,233	2,253	2,300	2,345	2,261	2,169	2,115	2,090
2/15/2023	1,927	1,924	1,984	2,014	2,044	2,088	2,037	1,991
2/16/2023	2,314	2,326	2,309	2,276	2,305	2,232	2,202	2,161
2/17/2023	2,359	2,348	2,393	2,384	2,358	2,338	2,303	2,208
2/18/2023	2,068	2,088	2,200	2,201	2,223	2,211	2,144	2,103
2/19/2023	1,879	1,917	2,018	2,067	2,060	2,020	1,967	1,859
2/20/2023	2,142	2,163	2,173	2,225	2,219	2,174	2,171	2,132
2/21/2023	2,165	2,195	2,277	2,281	2,217	2,133	2,110	2,045
2/22/2023	2,446	2,440	2,489	2,450	2,382	2,268	2,197	2,121
2/23/2023	2,192	2,211	2,281	2,322	2,300	2,263	2,194	2,179
2/24/2023	2,137	2,183	2,266	2,286	2,278	2,216	2,166	2,050
2/25/2023	2,042	2,019	2,126	2,122	2,142	2,131	2,091	2,049
2/26/2023	1,850	1,937	2,056	2,144	2,157	2,091	2,023	2,046
2/27/2023	2,335	2,321	2,331	2,302	2,285	2,217	2,132	2,141
2/28/2023	2,073	2,133	2,170	2,257	2,272	2,251	2,177	2,154
3/1/2023	2,122	2,104	2,142	2,218	2,177	2,138	2,068	2,020
3/2/2023	2,107	2,128	2,191	2,229	2,250	2,189	2,118	2,049
3/3/2023	2,462	2,464	2,468	2,432	2,349	2,255	2,133	2,090

Indiana Michigan Power Company - Indiana
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DATE	HR17	HR18	HR19	HR20	HR21	HR22	HR23	HR24
3/4/2023	1,909	1,961	1,992	2,037	2,012	1,969	1,910	1,824
3/5/2023	1,825	1,923	2,009	2,073	2,074	2,061	2,039	1,980
3/6/2023	2,155	2,093	2,195	2,248	2,230	2,183	2,088	2,031
3/7/2023	2,107	2,175	2,234	2,304	2,290	2,237	2,185	2,134
3/8/2023	1,950	1,985	2,055	2,178	2,219	2,161	2,110	2,043
3/9/2023	2,189	2,209	2,242	2,264	2,224	2,231	2,228	2,171
3/10/2023	2,280	2,230	2,234	2,251	2,207	2,170	2,094	2,023
3/11/2023	1,905	1,960	2,024	2,041	2,033	1,985	1,961	1,936
3/12/2023	2,124	2,131	2,178	2,144	2,225	2,159	2,110	2,039
3/13/2023	2,332	2,336	2,273	2,367	2,368	2,288	2,229	2,185
3/14/2023	2,271	2,236	2,267	2,327	2,307	2,265	2,174	2,162
3/15/2023	2,109	2,168	2,153	2,201	2,226	2,124	2,094	2,045
3/16/2023	2,191	2,192	2,232	2,272	2,237	2,170	2,115	2,047
3/17/2023	2,301	2,279	2,248	2,307	2,260	2,171	2,131	2,091
3/18/2023	2,248	2,236	2,289	2,330	2,275	2,185	2,174	2,124
3/19/2023	2,033	2,065	2,107	2,221	2,229	2,203	2,180	2,117
3/20/2023	2,137	2,213	2,244	2,273	2,235	2,168	2,092	2,100
3/21/2023	2,097	2,121	2,170	2,217	2,170	2,062	2,021	2,006
3/22/2023	2,169	2,186	2,205	2,194	2,157	2,110	1,998	1,969
3/23/2023	2,011	2,022	2,025	2,143	2,132	2,095	2,016	1,928
3/24/2023	2,176	2,165	2,165	2,198	2,165	2,158	2,045	1,996
3/25/2023	2,075	2,047	2,035	2,057	2,031	1,956	1,937	1,899
3/26/2023	1,812	1,852	1,919	2,026	1,995	1,899	1,861	1,805
3/27/2023	2,145	2,179	2,179	2,233	2,182	2,083	2,031	1,978
3/28/2023	2,077	2,103	2,089	2,135	2,091	2,074	2,047	1,995
3/29/2023	2,180	2,146	2,161	2,255	2,200	2,146	2,063	2,082
3/30/2023	1,886	1,898	1,932	2,038	2,088	2,035	2,014	1,975
3/31/2023	2,035	2,048	2,047	2,021	1,970	1,913	1,892	1,731
4/1/2023	2,008	2,046	2,063	2,080	2,041	1,927	1,924	1,884
4/2/2023	1,796	1,874	1,928	2,000	1,972	1,966	1,892	1,888
4/3/2023	2,026	2,046	2,086	2,114	2,055	1,937	1,894	1,839

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DATE	HR17	HR18	HR19	HR20	HR21	HR22	HR23	HR24
4/4/2023	2,106	2,100	2,137	2,162	2,092	1,944	1,969	1,873
4/5/2023	2,099	2,088	2,075	2,090	2,040	1,987	1,932	1,895
4/6/2023	2,024	2,028	2,048	2,106	2,067	2,011	1,943	1,898
4/7/2023	1,777	1,829	1,849	1,870	1,887	1,869	1,819	1,765
4/8/2023	1,673	1,700	1,778	1,836	1,842	1,799	1,684	1,732
4/9/2023	1,637	1,606	1,663	1,775	1,855	1,736	1,733	1,683
4/10/2023	1,973	2,021	2,039	2,073	2,052	1,918	1,870	1,811
4/11/2023	2,035	2,053	2,056	2,095	2,097	1,993	1,935	1,860
4/12/2023	1,969	2,000	2,031	2,056	2,076	1,983	1,929	1,859
4/13/2023	2,153	2,142	2,137	2,111	2,120	2,007	1,901	1,808
4/14/2023	2,145	2,111	2,097	2,101	2,080	1,987	1,860	1,773
4/15/2023	2,002	2,017	2,040	2,012	2,008	1,921	1,819	1,760
4/16/2023	1,892	1,880	1,940	1,985	1,991	1,913	1,894	1,852
4/17/2023	2,272	2,261	2,239	2,246	2,207	2,109	2,025	1,974
4/18/2023	2,000	1,991	2,057	2,089	2,055	1,985	1,920	1,887
4/19/2023	1,959	2,076	2,111	2,103	2,094	1,983	1,908	1,799
4/20/2023	2,091	2,120	2,085	2,172	2,113	2,018	1,942	1,828
4/21/2023	2,008	2,018	1,980	2,016	2,023	1,902	1,819	1,788
4/22/2023	1,885	1,952	1,928	1,971	1,940	1,844	1,796	1,744
4/23/2023	1,940	1,941	1,950	2,043	2,012	1,972	1,886	1,848
4/24/2023	2,062	2,050	2,088	2,087	2,118	2,050	1,976	1,947
4/25/2023	2,058	2,061	2,084	2,098	2,141	2,034	1,975	1,946
4/26/2023	1,944	1,964	2,030	2,065	2,078	1,938	1,928	1,896
4/27/2023	2,033	2,008	2,014	2,042	2,056	2,002	1,922	1,847
4/28/2023	2,052	2,016	1,959	2,008	2,008	1,914	1,836	1,759
4/29/2023	1,816	1,776	1,743	1,745	1,773	1,741	1,610	1,507
4/30/2023	1,644	1,684	1,726	1,768	1,765	1,714	1,677	1,641
5/1/2023	2,010	2,032	2,034	2,047	2,003	1,922	1,833	1,757
5/2/2023	1,957	1,938	1,932	1,949	1,941	1,847	1,788	1,736
5/3/2023	1,743	1,748	1,785	1,825	1,857	1,784	1,724	1,697
5/4/2023	1,755	1,765	1,821	1,835	1,858	1,788	1,687	1,631

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DATE	HR17	HR18	HR19	HR20	HR21	HR22	HR23	HR24
5/5/2023	1,794	1,802	1,792	1,821	1,826	1,894	1,792	1,710
5/6/2023	1,747	1,710	1,840	1,836	1,804	1,793	1,727	1,644
5/7/2023	1,996	2,039	1,949	1,989	2,088	2,007	1,922	1,813
5/8/2023	2,099	2,135	2,094	2,139	2,081	1,972	1,874	1,846
5/9/2023	2,086	2,080	2,148	2,120	2,088	2,022	1,915	1,850
5/10/2023	2,120	2,188	2,209	2,162	2,200	2,086	1,934	1,887
5/11/2023	2,290	2,228	2,196	2,229	2,222	2,107	1,994	1,941
5/12/2023	2,259	2,233	2,255	2,263	2,186	2,029	1,981	1,868
5/13/2023	1,997	2,002	2,038	2,014	2,069	1,947	1,838	1,767
5/14/2023	1,879	1,887	1,939	1,909	1,928	1,887	1,762	1,765
5/15/2023	2,159	2,198	2,182	2,173	2,157	2,046	1,926	1,850
5/16/2023	2,164	2,140	2,105	2,126	2,122	2,038	1,866	1,835
5/17/2023	2,043	2,089	2,074	2,102	2,110	1,984	1,891	1,843
5/18/2023	1,900	1,911	1,914	1,911	1,950	1,930	1,900	1,844
5/19/2023	2,144	2,128	2,084	2,069	1,897	1,919	1,884	1,799
5/20/2023	1,785	1,796	1,819	1,822	1,823	1,779	1,686	1,668
5/21/2023	1,907	1,941	1,977	1,987	1,982	1,880	1,850	1,769
5/22/2023	2,262	2,316	2,280	2,240	2,220	2,090	1,992	1,882
5/23/2023	2,417	2,404	2,369	2,344	2,287	2,140	2,019	1,928
5/24/2023	2,399	2,377	2,279	2,225	2,139	2,055	1,909	1,842
5/25/2023	1,992	1,985	2,048	2,038	2,054	1,991	1,881	1,797
5/26/2023	1,996	1,990	2,004	1,993	1,971	1,868	1,795	1,655
5/27/2023	1,937	1,903	1,895	1,891	1,885	1,798	1,739	1,679
5/28/2023	1,908	1,926	1,925	1,867	1,854	1,790	1,701	1,633
5/29/2023	2,142	2,176	2,155	2,145	2,117	2,006	1,994	1,876
5/30/2023	2,700	2,666	2,583	2,573	2,519	2,333	2,215	2,099
5/31/2023	2,784	2,764	2,753	2,687	2,547	2,369	2,240	2,175
6/1/2023	2,818	2,782	2,728	2,612	2,486	2,377	2,160	2,055
6/2/2023	2,800	2,774	2,692	2,571	2,455	2,336	2,178	2,043
6/3/2023	2,581	2,556	2,423	2,295	2,215	2,189	2,094	1,970
6/4/2023	2,297	2,328	2,305	2,183	2,139	2,027	1,898	1,776

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DATE	HR17	HR18	HR19	HR20	HR21	HR22	HR23	HR24
6/5/2023	2,442	2,399	2,407	2,339	2,291	2,170	2,085	1,993
6/6/2023	2,276	2,284	2,172	2,216	2,175	2,089	1,980	1,906
6/7/2023	2,102	2,093	2,097	2,089	2,092	2,054	1,953	1,887
6/8/2023	2,205	2,280	2,146	2,180	2,175	2,096	1,954	1,887
6/9/2023	2,279	2,285	2,242	2,155	2,090	1,963	1,922	1,807
6/10/2023	2,276	2,344	2,319	2,261	2,111	2,078	1,964	1,844
6/11/2023	2,058	2,085	2,060	2,017	2,023	1,995	1,873	1,849
6/12/2023	2,075	2,080	2,056	2,065	2,087	2,015	1,946	1,870
6/13/2023	2,166	2,158	2,130	2,152	2,112	2,025	1,951	1,878
6/14/2023	2,200	2,163	2,151	2,133	2,120	2,032	1,932	1,836
6/15/2023	2,385	2,330	2,271	2,204	2,116	2,088	1,985	1,918
6/16/2023	2,162	2,124	2,105	2,020	2,001	1,931	1,836	1,786
6/17/2023	2,145	2,151	2,116	2,066	1,962	1,880	1,850	1,778
6/18/2023	2,345	2,329	2,320	2,276	2,187	2,129	2,025	1,933
6/19/2023	2,628	2,601	2,537	2,459	2,386	2,298	2,165	2,030
6/20/2023	2,565	2,566	2,573	2,540	2,492	2,318	2,117	2,029
6/21/2023	2,762	2,741	2,637	2,585	2,470	2,387	2,231	2,156
6/22/2023	2,448	2,361	2,343	2,290	2,274	2,143	2,125	2,015
6/23/2023	2,365	2,334	2,333	2,269	2,256	2,179	2,096	2,022
6/24/2023	2,486	2,554	2,509	2,448	2,291	2,152	2,134	2,058
6/25/2023	2,319	2,365	2,402	2,398	2,342	2,244	2,148	2,061
6/26/2023	2,400	2,405	2,361	2,269	2,232	2,155	2,059	1,970
6/27/2023	2,186	2,213	2,204	2,169	2,146	2,078	1,967	1,859
6/28/2023	2,520	2,527	2,486	2,409	2,365	2,260	2,099	2,040
6/29/2023	2,670	2,564	2,433	2,311	2,314	2,226	2,113	1,892
6/30/2023	2,628	2,588	2,525	2,468	2,391	2,224	2,166	2,054
7/1/2023	2,228	2,247	2,199	2,145	2,122	2,060	1,970	1,846
7/2/2023	2,262	2,204	2,231	2,062	2,106	2,023	1,934	1,807
7/3/2023	2,439	2,481	2,415	2,269	2,212	2,145	2,055	1,951
7/4/2023	2,571	2,609	2,516	2,413	2,395	2,283	2,213	2,042
7/5/2023	2,952	2,947	2,907	2,811	2,708	2,566	2,364	2,229

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DATE	HR17	HR18	HR19	HR20	HR21	HR22	HR23	HR24
7/6/2023	2,791	2,738	2,672	2,550	2,474	2,363	2,221	2,123
7/7/2023	2,730	2,694	2,619	2,553	2,449	2,352	2,228	2,128
7/8/2023	2,300	2,277	2,214	2,118	2,054	2,025	1,933	1,848
7/9/2023	2,363	2,366	2,344	2,305	2,229	2,159	2,069	1,977
7/10/2023	2,754	2,787	2,732	2,628	2,505	2,396	2,238	2,117
7/11/2023	2,883	2,865	2,801	2,721	2,654	2,538	2,392	2,259
7/12/2023	2,699	2,690	2,648	2,619	2,510	2,458	2,359	2,207
7/13/2023	2,706	2,706	2,674	2,584	2,468	2,382	2,234	2,068
7/14/2023	2,883	2,898	2,833	2,749	2,664	2,539	2,331	2,244
7/15/2023	2,369	2,329	2,368	2,292	2,256	2,203	2,082	2,012
7/16/2023	2,463	2,451	2,401	2,376	2,325	2,248	2,129	2,055
7/17/2023	2,664	2,617	2,573	2,495	2,398	2,322	2,192	2,071
7/18/2023	2,564	2,545	2,519	2,452	2,386	2,253	2,185	2,061
7/19/2023	2,785	2,771	2,702	2,614	2,568	2,459	2,297	2,169
7/20/2023	2,719	2,703	2,606	2,518	2,475	2,376	2,222	2,123
7/21/2023	2,514	2,500	2,441	2,363	2,294	2,173	2,059	1,875
7/22/2023	2,390	2,346	2,417	2,342	2,268	2,174	1,993	1,964
7/23/2023	2,428	2,476	2,446	2,330	2,322	2,252	2,140	1,979
7/24/2023	2,799	2,781	2,715	2,605	2,521	2,394	2,249	2,100
7/25/2023	2,962	2,918	2,879	2,766	2,654	2,518	2,310	2,199
7/26/2023	2,714	2,754	2,783	2,735	2,645	2,467	2,374	2,310
7/27/2023	3,133	3,096	3,068	2,968	2,908	2,778	2,579	2,431
7/28/2023	2,978	2,966	2,878	2,852	2,830	2,695	2,430	2,311
7/29/2023	2,595	2,618	2,572	2,462	2,371	2,288	2,138	1,994
7/30/2023	2,541	2,500	2,438	2,348	2,279	2,224	2,099	1,986
7/31/2023	2,610	2,583	2,512	2,448	2,378	2,276	2,129	2,011
8/1/2023	2,629	2,661	2,590	2,471	2,421	2,294	2,153	2,060
8/2/2023	2,632	2,558	2,570	2,473	2,416	2,326	2,233	2,104
8/3/2023	2,935	2,896	2,836	2,691	2,625	2,419	2,297	2,185
8/4/2023	2,904	2,853	2,742	2,629	2,540	2,391	2,196	2,084
8/5/2023	2,366	2,347	2,310	2,248	2,213	2,160	2,096	2,003

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8/6/2023	2,152	2,217	2,171	2,150	2,150	2,134	2,066	1,994
8/7/2023	2,147	2,157	2,163	2,125	2,100	1,972	1,899	1,821
8/8/2023	2,651	2,647	2,612	2,522	2,431	2,297	2,155	2,043
8/9/2023	2,660	2,617	2,526	2,510	2,475	2,348	2,221	2,147
8/10/2023	2,631	2,662	2,585	2,529	2,481	2,334	2,234	2,087
8/11/2023	2,643	2,637	2,568	2,508	2,431	2,327	2,184	2,049
8/12/2023	2,535	2,522	2,438	2,301	2,210	2,055	1,908	1,849
8/13/2023	2,545	2,543	2,472	2,442	2,401	2,301	2,199	2,062
8/14/2023	2,482	2,505	2,476	2,413	2,402	2,262	2,144	2,049
8/15/2023	2,124	2,238	2,182	2,202	2,219	2,137	1,987	1,977
8/16/2023	2,594	2,589	2,576	2,504	2,464	2,336	2,164	2,059
8/17/2023	2,515	2,456	2,391	2,358	2,319	2,198	2,071	1,949
8/18/2023	2,312	2,318	2,261	2,154	2,127	2,020	1,941	1,819
8/19/2023	2,211	2,200	2,177	2,121	2,084	1,953	1,902	1,767
8/20/2023	2,759	2,722	2,736	2,708	2,661	2,502	2,343	2,276
8/21/2023	3,072	3,087	3,025	2,929	2,850	2,663	2,507	2,398
8/22/2023	2,853	2,847	2,768	2,688	2,576	2,437	2,276	2,118
8/23/2023	3,272	3,226	3,185	3,093	3,011	2,846	2,706	2,565
8/24/2023	3,288	3,293	3,221	3,211	3,065	2,872	2,738	2,603
8/25/2023	2,935	2,846	2,776	2,710	2,649	2,515	2,378	2,249
8/26/2023	2,660	2,580	2,527	2,408	2,404	2,267	2,089	1,995
8/27/2023	2,336	2,354	2,319	2,174	2,217	2,104	1,967	1,949
8/28/2023	2,522	2,493	2,457	2,312	2,313	2,151	2,067	1,965
8/29/2023	2,552	2,571	2,503	2,459	2,379	2,228	2,128	2,031
8/30/2023	2,321	2,352	2,310	2,247	2,232	2,105	1,999	1,873
8/31/2023	2,347	2,342	2,263	2,244	2,206	2,096	1,972	1,909
9/1/2023	2,433	2,439	2,339	2,266	2,178	2,035	1,936	1,747
9/2/2023	2,451	2,450	2,347	2,314	2,239	2,068	1,971	1,908
9/3/2023	2,666	2,619	2,539	2,483	2,425	2,289	2,198	2,117
9/4/2023	2,815	2,779	2,697	2,636	2,561	2,405	2,299	2,223
9/5/2023	3,124	3,117	2,994	2,953	2,817	2,629	2,466	2,345

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9/6/2023	2,859	2,813	2,693	2,623	2,486	2,368	2,226	2,094
9/7/2023	2,280	2,236	2,193	2,239	2,193	2,126	1,974	1,974
9/8/2023	2,206	2,130	2,158	2,117	2,104	2,041	1,936	1,891
9/9/2023	2,155	2,052	2,069	2,049	1,987	1,923	1,861	1,789
9/10/2023	2,234	2,224	2,241	2,212	2,144	2,006	1,950	1,866
9/11/2023	2,463	2,413	2,376	2,337	2,314	2,234	2,119	2,043
9/12/2023	2,391	2,360	2,307	2,315	2,217	2,105	2,011	1,952
9/13/2023	2,268	2,262	2,203	2,207	2,158	2,078	1,950	1,885
9/14/2023	2,301	2,317	2,273	2,237	2,222	2,107	1,961	1,943
9/15/2023	2,253	2,218	2,195	2,157	2,080	1,980	1,885	1,820
9/16/2023	2,047	1,997	1,998	2,012	1,967	1,865	1,816	1,688
9/17/2023	2,055	2,048	2,076	2,099	2,027	1,983	1,841	1,861
9/18/2023	2,287	2,248	2,224	2,216	2,122	2,045	1,976	1,883
9/19/2023	2,135	2,218	2,202	2,222	2,172	2,055	1,987	1,936
9/20/2023	2,289	2,288	2,266	2,260	2,202	2,117	2,036	1,967
9/21/2023	2,482	2,429	2,373	2,425	2,268	2,164	2,114	2,012
9/22/2023	2,494	2,406	2,285	2,242	2,192	2,069	1,944	1,842
9/23/2023	2,128	2,131	2,067	2,003	1,957	1,886	1,810	1,725
9/24/2023	2,255	2,133	2,216	2,177	2,099	1,968	1,924	1,858
9/25/2023	2,392	2,371	2,310	2,310	2,206	2,130	2,015	1,940
9/26/2023	2,320	2,263	2,345	2,295	2,247	2,143	2,062	1,989
9/27/2023	2,135	2,113	2,097	2,203	2,153	2,074	2,010	1,974
9/28/2023	2,137	2,187	2,182	2,214	2,150	2,086	1,984	1,927
9/29/2023	2,174	2,121	2,106	2,119	2,071	1,978	1,889	1,825
9/30/2023	2,173	2,154	2,120	2,082	2,004	1,881	1,814	1,780
10/1/2023	2,312	2,313	2,262	2,247	2,146	2,027	1,917	1,869
10/2/2023	2,664	2,554	2,556	2,479	2,348	2,197	2,091	1,981
10/3/2023	2,684	2,597	2,540	2,494	2,283	2,156	2,113	1,980
10/4/2023	2,547	2,497	2,365	2,351	2,281	2,173	2,071	2,007
10/5/2023	2,071	2,100	2,176	2,173	2,148	2,067	2,006	1,959
10/6/2023	2,132	2,071	2,017	2,041	2,000	1,923	1,803	1,767

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10/7/2023	1,742	1,818	1,866	1,849	1,780	1,748	1,684	1,624
10/8/2023	1,820	1,876	1,895	1,954	1,881	1,862	1,839	1,814
10/9/2023	2,114	2,075	2,138	2,107	2,087	1,991	1,934	1,904
10/10/2023	2,087	2,103	2,100	2,083	2,000	1,959	1,879	1,843
10/11/2023	2,034	2,043	2,122	2,121	2,114	2,005	1,929	1,824
10/12/2023	2,092	2,090	2,126	2,129	2,037	2,011	1,916	1,830
10/13/2023	2,064	2,091	2,099	2,026	2,030	2,008	1,930	1,846
10/14/2023	1,857	1,858	1,883	1,862	1,834	1,752	1,635	1,521
10/15/2023	1,649	1,678	1,724	1,736	1,715	1,669	1,639	1,612
10/16/2023	1,822	1,829	1,854	1,837	1,766	1,684	1,625	1,576
10/17/2023	1,782	1,805	1,853	1,837	1,787	1,717	1,657	1,611
10/18/2023	1,848	1,852	1,879	1,868	1,801	1,730	1,667	1,607
10/19/2023	1,921	1,963	1,977	1,962	1,914	1,858	1,760	1,685
10/20/2023	2,001	1,994	2,004	1,991	1,894	1,823	1,783	1,724
10/21/2023	1,848	1,875	1,881	1,815	1,844	1,782	1,753	1,685
10/22/2023	1,780	1,883	1,951	1,914	1,907	1,831	1,709	1,830
10/23/2023	2,065	2,114	2,131	2,086	1,986	2,006	1,908	1,879
10/24/2023	2,166	2,187	2,228	2,153	2,124	2,021	1,955	1,881
10/25/2023	2,088	2,107	2,144	2,123	2,053	2,000	1,954	1,909
10/26/2023	2,124	2,171	2,173	2,124	2,077	1,976	1,960	1,915
10/27/2023	2,151	2,105	2,132	2,120	2,035	2,007	1,921	1,867
10/28/2023	1,869	1,814	1,910	1,908	1,843	1,839	1,835	1,771
10/29/2023	2,022	2,041	2,097	2,078	2,026	1,917	1,854	1,817
10/30/2023	2,220	2,243	2,250	2,178	2,168	2,093	2,052	1,992
10/31/2023	2,181	2,265	2,340	2,324	2,307	2,197	2,028	2,019
11/1/2023	2,202	2,214	2,252	2,283	2,215	2,122	2,084	2,047
11/2/2023	2,006	2,078	2,129	2,191	2,169	2,101	2,078	2,023
11/3/2023	2,170	2,134	2,135	2,154	2,111	1,964	1,954	1,897
11/4/2023	1,894	1,853	1,927	1,888	1,867	1,844	1,798	1,784
11/5/2023	1,988	2,049	2,096	2,096	2,059	2,059	2,018	1,985
11/6/2023	2,129	2,167	2,224	2,202	2,144	2,070	2,009	1,952

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11/7/2023	2,147	2,197	2,228	2,233	2,197	2,106	2,059	2,011
11/8/2023	2,170	2,230	2,236	2,236	2,207	2,095	2,084	2,000
11/9/2023	2,096	2,156	2,186	2,166	2,166	2,100	2,019	1,906
11/10/2023	2,065	2,099	2,135	2,096	2,050	2,034	1,964	1,876
11/11/2023	1,890	1,976	2,036	1,989	1,985	1,928	1,929	1,909
11/12/2023	1,904	2,002	2,077	2,081	2,100	2,051	1,992	1,969
11/13/2023	2,119	2,138	2,218	2,218	2,182	2,126	2,037	2,038
11/14/2023	2,083	2,148	2,193	2,208	2,169	2,155	2,092	2,018
11/15/2023	1,902	1,963	2,000	2,003	2,052	2,017	1,963	1,922
11/16/2023	2,151	2,188	2,185	2,174	2,127	2,055	1,998	1,965
11/17/2023	2,109	2,119	2,093	2,064	2,083	2,024	1,955	1,909
11/18/2023	1,901	1,976	2,046	2,018	2,023	1,993	1,975	1,882
11/19/2023	1,897	1,997	2,060	2,060	2,086	2,048	2,022	1,998
11/20/2023	2,333	2,367	2,349	2,358	2,297	2,216	2,187	2,140
11/21/2023	2,276	2,306	2,256	2,217	2,202	2,150	2,067	1,944
11/22/2023	2,149	2,170	2,159	2,085	2,162	2,102	2,004	1,943
11/23/2023	1,742	1,788	1,836	1,832	1,856	1,849	1,849	1,791
11/24/2023	1,936	2,016	2,041	2,025	2,029	1,972	1,930	1,887
11/25/2023	1,969	1,960	2,014	2,043	2,038	1,992	1,941	1,893
11/26/2023	2,134	2,241	2,277	2,228	2,203	2,147	2,150	2,061
11/27/2023	2,505	2,528	2,538	2,544	2,495	2,460	2,353	2,284
11/28/2023	2,481	2,546	2,580	2,579	2,522	2,493	2,419	2,337
11/29/2023	2,292	2,361	2,420	2,419	2,409	2,372	2,282	2,226
11/30/2023	2,271	2,292	2,324	2,286	2,305	2,231	2,141	2,029
12/1/2023	2,241	2,261	2,237	2,210	2,202	2,156	2,086	1,977
12/2/2023	2,021	2,057	2,088	2,068	1,959	1,864	1,811	1,843
12/3/2023	2,100	2,149	2,182	2,169	2,160	2,126	2,038	2,016
12/4/2023	2,272	2,325	2,330	2,333	2,297	2,174	2,124	2,107
12/5/2023	2,153	2,206	2,249	2,305	2,295	2,173	2,155	2,114
12/6/2023	2,035	2,088	2,303	2,367	2,358	2,329	2,253	2,198
12/7/2023	2,230	2,282	2,338	2,316	2,331	2,280	2,140	2,063

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12/8/2023	2,201	2,230	2,214	2,111	2,085	2,094	2,033	1,991
12/9/2023	1,987	1,932	2,043	2,046	2,084	2,004	1,946	1,975
12/10/2023	2,135	2,236	2,266	2,212	2,237	2,192	2,128	2,067
12/11/2023	2,366	2,459	2,525	2,527	2,501	2,437	2,353	2,295
12/12/2023	2,265	2,352	2,420	2,402	2,382	2,303	2,293	2,240
12/13/2023	2,300	2,381	2,409	2,394	2,440	2,353	2,291	2,229
12/14/2023	2,224	2,310	2,370	2,386	2,374	2,310	2,282	2,226
12/15/2023	2,158	2,182	2,108	2,187	2,159	2,193	2,141	2,068
12/16/2023	1,995	2,028	2,086	2,112	2,101	2,081	2,028	1,956
12/17/2023	2,112	2,189	2,120	2,183	2,191	2,110	2,111	2,080
12/18/2023	2,486	2,574	2,598	2,567	2,529	2,450	2,352	2,264
12/19/2023	2,356	2,439	2,465	2,374	2,387	2,402	2,330	2,253
12/20/2023	2,102	2,171	2,238	2,262	2,256	2,275	2,182	2,124
12/21/2023	2,195	2,240	2,230	2,246	2,226	2,204	2,131	2,062
12/22/2023	2,134	2,178	2,167	2,157	2,141	2,112	2,029	1,982
12/23/2023	1,954	2,012	2,002	1,996	1,968	1,940	1,875	1,833
12/24/2023	1,608	1,678	1,687	1,664	1,662	1,644	1,611	1,568
12/25/2023	1,656	1,694	1,720	1,708	1,677	1,638	1,595	1,528
12/26/2023	1,935	2,015	2,041	2,029	2,003	1,971	1,899	1,862
12/27/2023	2,036	2,126	2,159	2,107	2,076	2,040	1,926	1,796
12/28/2023	2,118	2,180	2,188	2,157	2,106	2,098	1,994	1,996
12/29/2023	2,079	2,135	2,097	2,104	2,133	2,039	2,042	1,981
12/30/2023	2,037	2,110	2,150	2,148	2,118	2,071	2,003	1,921
12/31/2023	2,151	2,168	2,107	2,103	2,097	2,052	2,002	1,941

Indiana Michigan Power Company

2024 IN IRP: Appendix 1

Exhibit M FERC Form 715

AMERICAN ELECTRIC POWER – 2024 Filing

FERC FORM 715 – ANNUAL TRANSMISSION PLANNING AND EVALUATION REPORT

PART 4 – TRANSMISSION PLANNING RELIABILITY CRITERIA

Attached is a document entitled "The American Electric Power System Transmission Planning Criteria". This document provides the criteria to test and assess the strength of AEP's transmission system to meet its load serving responsibility and provides a description of transmission planning criteria for the AEP System.

The American Electric Power System Transmission Planning Criteria

Purpose

This report presents an overview of AEP's transmission planning criteria.

The AEP criteria described herein supplements the: 1) North American Electric Reliability Corporation (NERC) Reliability Standards; 2) ReliabilityFirst Corporation (RFC) Standards, 3) PJM Planning and Operating Manuals: Manual 14B, 4) SPP Criteria with Appendices Section 3, Regional Transmission Planning, and 5) ERCOT Planning Guide Section 4, Transmission Planning Criteria, and 6) MISO Transmission Planning Business Practices Manual – Manual No. 020 where applicable.

Nominal Voltage Levels

Nominal 765 kV, 345 kV, 161 kV, and 138 kV voltage levels will normally be used for most new power transmission lines and are considered Bulk Electric System (BES). Some interconnection lines may be at 500 kV, 230 kV, or 115 kV to match neighboring utilities' voltage, and some 69 kV lines may be constructed in appropriate situations.

The AEP transmission facilities for the PJM and MISO regions are divided into the following three performance categories:

- EHV Facilities:
  Transmission lines rated 765 kV, 500 kV, and 345 kV, and transformers with secondary voltages at or above 345 kV, are considered Extra High Voltage (EHV) facilities, and are referred to as "EHV facilities" in this document. These facilities are part of the BES.

- HV Facilities:
  Transmission lines rated 230 kV, 161 kV, and 138 kV, and transformers with secondary voltages above 100 kV but below 345 kV, are considered High Voltage (HV) facilities, and are referred to as "HV facilities" in this document. These facilities are part of the BES.

- Sub-T Facilities:
  Transmission lines rated below 100 kV, and transformers with secondary voltages below 100 kV are considered sub-transmission (Sub-T) facilities, and are referred to as "Sub-T facilities" in this document. These facilities are not part of the BES.

Voltage Limits

For the SPP and ERCOT Regions:

Transmission level buses above 60 kV shall meet the following steady state voltage response and post-contingency voltage deviation criteria:

- 0.95 per unit to 1.05 per unit in the pre-contingency state following the occurrence of any operating condition in category P0 of the NERC Reliability Standard TPL-001 addressing

Transmission System Planning Performance Requirements. Facilities associated with series line compensating capacitors are permitted to operate above 1.05 per unit.

- 0.92 per unit to 1.05 per unit in the post-contingency state following the occurrence of any operating condition in categories P1 through P7 of the NERC Reliability Standard TPL-001 addressing Transmission System Planning Performance Requirements. Facilities associated with series line compensating capacitors are permitted to operate above 1.05 per unit.
- Following the occurrence of any operating condition in categories P1 through P7 of the NERC Reliability Standard TPL-001, further analysis is required in the event of a post-contingency steady-state voltage deviation that exceeds 8% at any load-serving bus above 100 kV, exclusive of buses on a radial system that serve only Resource Entities and/or Load.

For the PJM and MISO Regions:

Transmission level buses shall meet the following steady state voltage response and post-contingency voltage deviation criteria:

- 0.95 per unit to 1.05 per unit in the pre-contingency state following the occurrence of any operating condition in category P0 of the NERC Reliability Standard TPL-001 addressing Transmission System Planning Performance Requirements. Certain 500 kV facilities are permitted to operate above 1.05 per unit to match neighboring utilities operating criteria.
- 0.92 per unit to 1.05 per unit in the post-contingency state following the occurrence of any operating condition in categories P1 through P7 of the NERC Reliability Standard TPL-001 addressing Transmission System Planning Performance Requirements. Certain 500 kV facilities are permitted to operate above 1.05 per unit to match neighboring utilities operating criteria.
- Following the occurrence of any operating condition in categories P1 through P7 of the NERC Reliability Standard TPL-001, a voltage deviation from system normal of 8% or greater is not acceptable at any station.

Transmission voltages during emergencies should not result in customer voltages exceeding or falling below prescribed limits at distribution substations on the transmission system and voltages at generating stations below minimum acceptable levels established for each station must be avoided to prevent tripping of the generating units. Static and dynamic reactive devices and LTC auto-transformers are used in transmission substations to hold voltage levels within acceptable ranges during normal and emergency conditions. The voltage limits of these reactive devices can exceed prescribed limits if distribution regulating equipment maintains customer voltage within acceptable limits. Voltage fluctuations (flicker) are addressed in the AEP Interconnection Guidelines.

Thermal Limits

Thermal ratings define transmission facility loading limits. Normal ratings are generally based upon no abnormal loss of facility life or equipment damage. Emergency ratings accept some loss of life or strength, over a defined time limit for operation at the rated loading level. The thermal

rating for a transmission line is defined by the most limiting element, be it a conductor capability, sag clearance, or terminal equipment rating. Thermal limits establish the maximum amount of electrical current that a transmission circuit or electrical facility can conduct over a specified time period before it sustains permanent damage by overheating or before it violates public safety requirements. Normal and emergency transmission equipment ratings are documented by AEP standards and guidelines.

For the SPP and ERCOT Regions:

Transmission level buses above 60 kV shall meet the following performance criteria:

- No facility may exceed its normal rating in the pre-contingency state following the occurrence of any operating condition in category P0 of the NERC Reliability Standard TPL-001 addressing Transmission System Planning Performance Requirements.
- No facility may exceed its emergency rating in the post-contingency state following the occurrence of any operating condition in categories P1 through P7 of the NERC Reliability Standard TPL-001 addressing Transmission System Planning Performance Requirements.

For the PJM and MISO Regions:

Transmission level buses shall meet the following performance criteria:

- No facility may exceed its normal rating in the pre-contingency state following the occurrence of any operating condition in category P0 of the NERC Reliability Standard TPL-001 addressing Transmission System Planning Performance Requirements.
- No facility may exceed its emergency rating in the post-contingency state following the occurrence of any operating condition in categories P1 through P7 of the NERC Reliability Standard TPL-001 addressing Transmission System Planning Performance Requirements.

Steady State Testing Criteria

The AEP transmission system will be designed so that there are no thermal or voltage criteria violations for a maintenance outage followed by an unscheduled outage of any transmission element during off-peak load periods. Load shedding is not permitted to maintain facilities within thermal and voltage limits.

For the ERCOT Region:

Steady State testing of the AEP transmission system is in accordance with NERC Reliability Standard TPL-001 and the ERCOT Planning Guide Section 4.

For the PJM Region:

Steady State testing of the AEP transmission system is in accordance with NERC Reliability Standard TPL-001 and PJM Manual 14B as applicable

For the MISO and SPP Regions:

Steady State testing of the AEP transmission system is in accordance with NERC Reliability

Standard TPL-001.

Short Circuit Testing Criteria

For the SPP and ERCOT Regions:

AEP steady state planning criteria requires that no bus voltage on AEP system shall exceed 1.05 per unit under system normal or contingency conditions. This voltage limit takes into consideration the equipment capabilities on AEP system. Short circuit assessment is performed assuming 1.05 per unit voltage at all the AEP system buses.

For the PJM and MISO Regions:

AEP steady state planning criteria requires that no bus voltage on AEP system shall exceed 1.05 per unit under system normal or contingency conditions. This voltage limit takes into consideration the equipment capabilities on AEP system. Short circuit assessment is performed assuming 1.05 per unit voltage at all the AEP system buses. This is a conservative approach but accounts for a wide range of system conditions. Circuit breakers at or near a generator plant shall be analyzed differently based on the scheduled voltage at the generator bus. This exception only applies to generator plants already in operation with established scheduled voltages.

Stability Testing and Generation Ride-Through Performance Criteria

Stability testing of the AEP transmission system is in accordance with the currently enforceable version of NERC TPL-001. In addition, testing of the AEP system in the ERCOT Region is in accordance with the ERCOT Planning Guide Section 4.

TPL-001 R4.1.3 acceptable damping and R5 transient voltage response criteria may be found in PJM Manual 14B Section G.2.2, ERCOT Planning Guide Sections 4.1.1.5 and 4.1.1.6, and the SPP Disturbance Performance Requirements document for the PJM, ERCOT, and SPP areas, respectively.

An exception to TPL-001 stability testing criteria is that P7 category Planning Events are simulated with three-phase faults instead of phase-to-ground faults because three-phase is more appropriate in considering common tower structure outages.

All transmission and sub-transmission connected generation, including wind, solar, and battery projects, are required to maintain stability and continuity of real and reactive power delivery through all TPL-001 planning events. ERCOT generation is further required to abide by the low and high voltage ride-through requirements of Nodal Operating Guide Section 2.9.

Generation that becomes radial through a series capacitor bank or multiple series capacitor banks may be exposed to voltages greater than NERC PRC-024 and RTO High-Voltage Ride-Through (HVRT) no-trip zone levels. If such radial configuration results from TPL-001 planning event transmission outages, the generation must remain connected and producing power for the duration of such configuration even if voltages exceed the HVRT no-trip zone boundaries. However, an HVRT ride-through waiver may be granted by the RTO.

AMERICAN ELECTRIC POWER – 2025 FILING

FERC FORM 715 – ANNUAL TRANSMISSION PLANNING AND EVALUATION REPORT

PART 5 – TRANSMISSION PLANNING ASSESSMENT PRACTICES EASTERN AEP

On an annual basis, AEP, in conjunction with PJM, develops base case power flow models for the eastern AEP transmission system, representing the summer peak, winter peak, and light load conditions. These models are developed to represent the composite transmission/generation system into the future, although not for every year or season.

On an as-needed basis, AEP performs system reliability studies for the eastern AEP operating companies to determine future system needs. Such studies analyze the effect of single contingency outages of transmission lines, transformers, and generation units. In addition, the effects of less probable contingencies are also analyzed. These less probable contingencies involve outages such as loss of all generating units at a station, loss of all transmission lines on a common right-of-way, and other events resulting in loss of two or more components. If violations of the Planning Criteria are identified by the studies, alternative solutions are developed and analyzed. The recommended solutions then become part of the PJM Regional Transmission Expansion Plan (RTEP). In the annual PJM RTEP process, PJM performs power flow analyses as outlined in Manual 14b, checking for base case and contingency thermal and voltage violations. PJM tests the mitigation plans for effectiveness in mitigating the violations. PJM also performs a Short Circuit evaluation and coordinates with AEPSC on the interrupting capabilities of fault interrupting devices and mitigation plans for any capability exceedances. The resulting mitigation plans become a part of the PJM RTEP, along with PJM interconnection projects and other AEP projects.

In performing such studies, AEP and PJM follow the practices outlined in the NERC Reliability Standards, the Reliability*First* Reliability Standards, and the AEP Transmission Planning Criteria described in Part 4.