



The Public Service Commission

Wisconsin Energy Statistics and Strategic Energy Assessment (SEA)

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Public Service Commission of Wisconsin

The state agency responsible for regulating:

- Public Utility and Wholesale Merchant Plant construction projects
- Public utility rates (except telephone)
- Public utility service quality

The primary agency responsible for siting:

- Electric generation projects
- Electric transmission lines
- Natural gas distribution pipelines (not interstate)
- Water utility infrastructure

Contains the State Energy Office (SEO) for Wisconsin

PSC – Division of Digital Access, Consumer and Environmental Affairs

The Division of Digital Access, Consumer and Environmental Affairs (DACEA) is responsible for ensuring customer access to essential services, analyzing environmental impact of applications before the Commission, and managing the Commission's grant, energy innovation, and statewide energy efficiency and renewables programs.



Broadband Expansion

Learn more about broadband grants, planning, and additional broadband resources.



Highlighted Cases

Access overview information and interactive maps for some of the current and recently decided cases before the Commission.



Office of Energy Innovation

Learn about grants, federal funding opportunities through Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), technical resources, and other initiatives.



Public Participation

Find out how you can participate in the cases going before the Commission for a decision.

Public Service Commission Office of Energy Innovation (OEI)

Vision

Our vision is that Wisconsin homes, businesses, and vehicles are powered with clean, efficient, reliable energy that creates jobs and grows our economy in an equitable manner where all can share in the benefits.

Mission

Developing Wisconsin's energy landscape to be secure, reliable, environmentally responsible, and growing the state's economy for all.



- Wisconsin Energy Statistics,
- Statewide Convening and Support,
- Energy Security & Resiliency
- Grants & Pilots for Renewables, Efficiency, Planning and Clean Transportation.



OEI - Energy Statistics



Energy Statistics

Learn about Wisconsin's energy generation, consumption, pricing, and efficiency data across all sectors.

Since 1976, Wisconsin has used data from several sources to provide Energy Statistics for the state. Originally this took the form of physical books.

In 2020, key figures and data from the Energy Statistics book were also presented as static images on the Public Service Commission webpage. Feedback was requested on what datasets were of interest.

In 2023, the Energy Statistics Portal came online, making the data more readily accessible and up-to-date. Currently it shows energy statistics data from 2000-2022.

OEI – Energy Statistics



- Wisconsin Energy Statistics depicts data for all energy used in the state, from petroleum for transportation, to renewables and natural gas for electricity generation.
- Information includes: Energy generation, Energy use, Energy prices.
- Also includes some demographic data, economic data, emissions data.
- Intended to be used for researchers, policymakers, advocates, and decision-makers.

OEI – Energy Statistics

Resource Energy Use, by Source

Resource Energy Use, by Economic Sector

Energy Use for Electricity Generation

End-Use Energy Consumption, by Source

Energy End Use, by Economic Sector

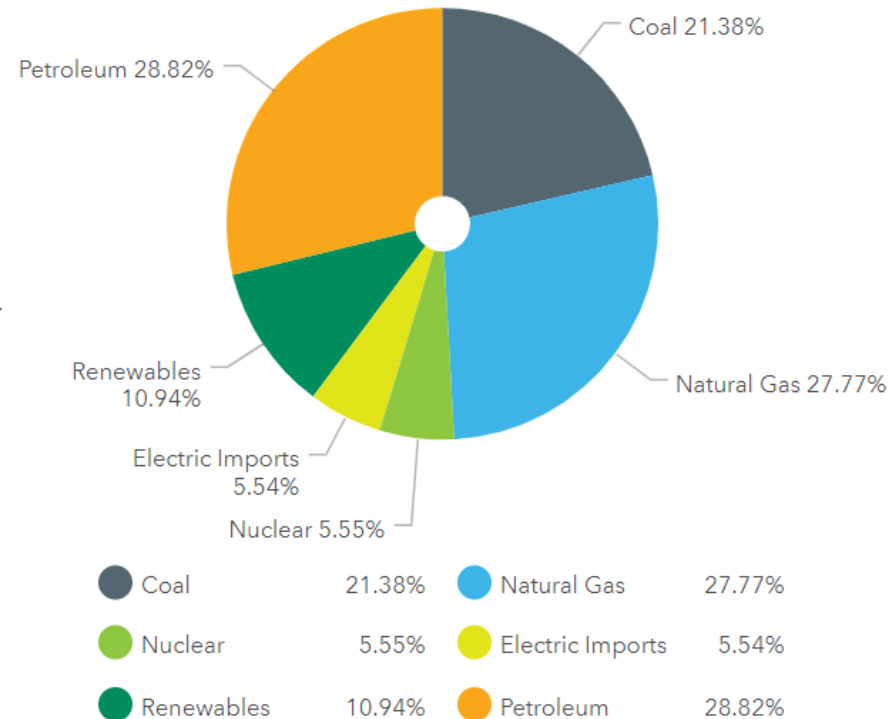
End Use Energy Expenditure, by Source

End Use Energy Expenditure, by Economic Sector

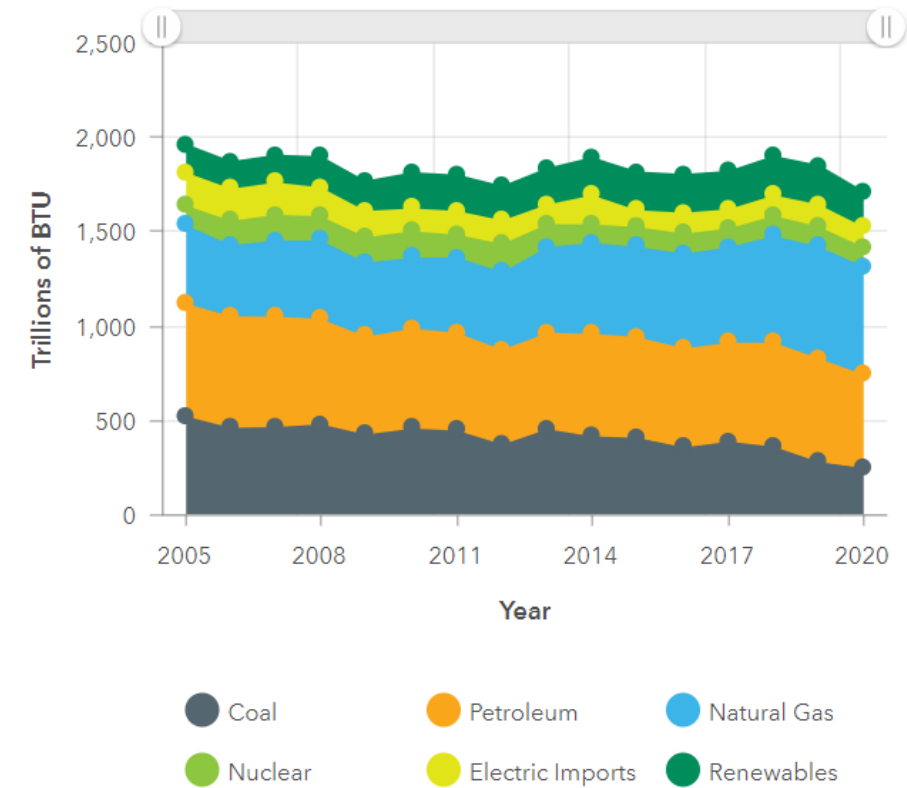
Energy Use by Source and Sector

Midwest Utility Electricity and Natural Gas Prices

Wisconsin Resource Energy Use, by Source 2020

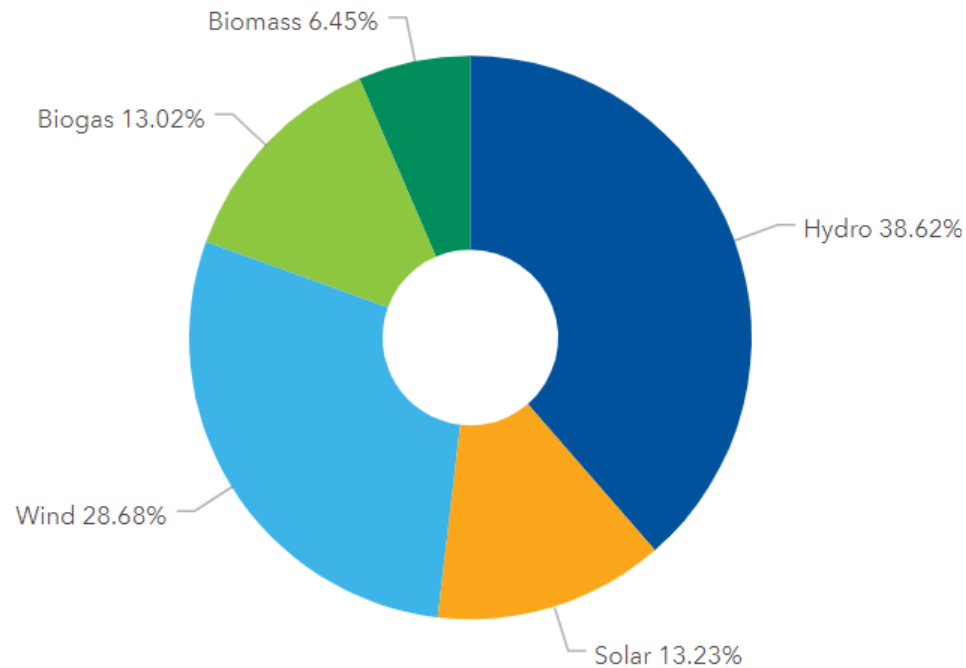


Wisconsin Resource Energy Use, by Source 2005-2020 (Trillions of Btu)



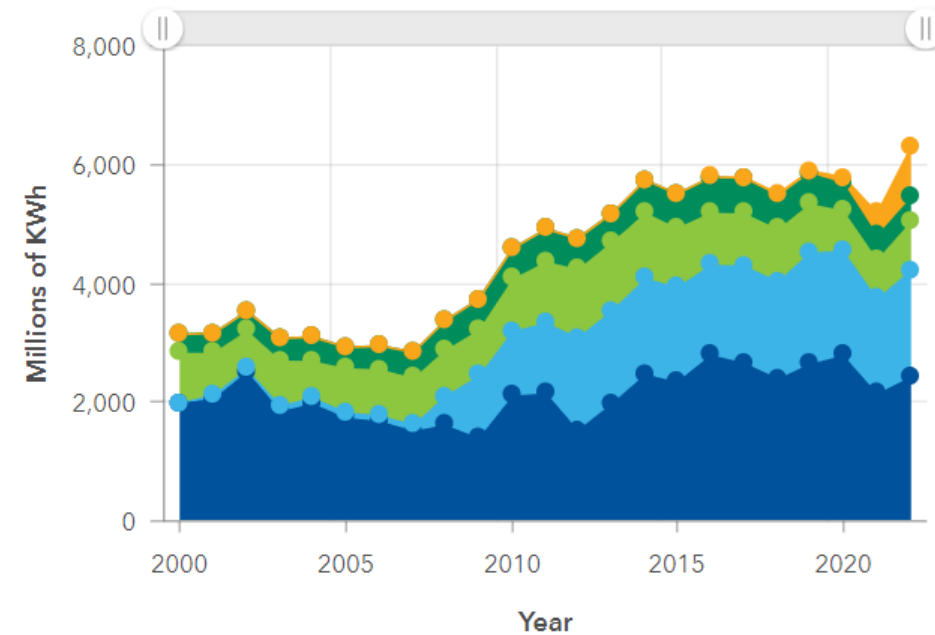
OEI – Energy Statistics

Electricity Generation from Renewable Energy- 2022 mkWh



Hydro	38.62%	Solar	13.23%	Wind	28.68%
Biogas	13.02%	Biomass	6.45%		

Wisconsin Renewable Energy Electricity Generation, by Type of Fuel
2000-2022(Millions of kWh)



Hydro	Wind	Biogas	Biomass
Solar			

OEI – Energy Statistics

Wisconsin Electricity Generation from Renewable Energy

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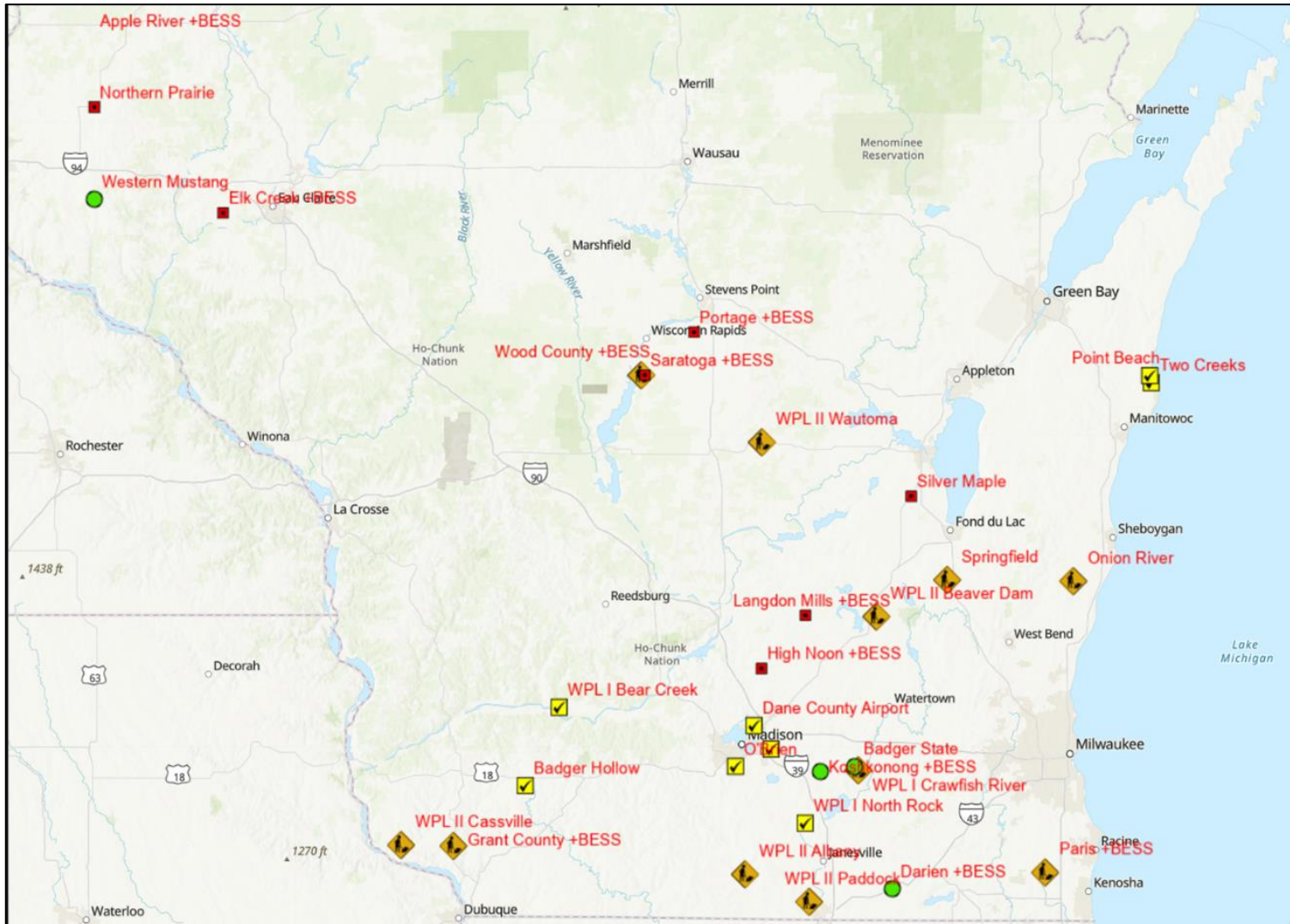
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Year ⚡ ...	Biogas ⚡ ...	Biomass ⚡ ...	Hydro ⚡ ...	Solar ⚡ ...	Wind ⚡ ...	Total
2022	817.87	404.86	2,425.387	830.54	1,800.99	6,279.647
2021	660.595	411.05	2,144.883	366.806	1,593.479	5,176.813
2020	675.212	460.433	2,787.757	93.016	1,763.375	5,779.793
2019	816.462	516.083	2,641.014	37.892	1,877.809	5,889.26
2018	883.115	554.039	2,392.01	39.682	1,637.658	5,506.504
2017	877.601	582.312	2,657.226	21.465	1,640.687	5,779.291
2016	879.648	590.152	2,795.258	2.671	1,515.261	5,782.99
2015	999.861	571.059	2,340.681	1.417	1,589.381	5,502.399
2014	1,100.881	542.315	2,471.773	1.194	1,618.001	5,734.164
2013	1,149.717	484.34	1,978.872	0	1,557.924	5,170.853
2012	1,148.874	516.726	1,530.263	0	1,557.578	4,753.441

Energy Project Reviews at the PSC



Since 2019, the PSC has approved 3,976 MW of solar projects and the PSC has approved 1,104 MW of battery energy storage.

More information on large or significant construction cases at the PSC can be found on our Highlighted Cases Page, which includes an interactive webmap and list:

[PSC Highlighted Commission Cases \(wi.gov\)](https://www.wisconsin.gov/psc/highlighted-cases)

PSC – Division of Energy Regulation and Analysis

The Division of Energy Regulation and Analysis (DERA) is responsible for is responsible for supporting the mission of the Commission through its focus on Wisconsin's electric and natural gas industries to ensure safe, reliable, affordable, and environmentally responsible energy services.



Highlighted Cases

Access overview information and interactive maps for some of the current and recently decided cases before the Commission.



Public Participation

Find out how you can participate in the cases going before the Commission for a decision.

SEA Purpose

- Evaluate the adequacy and reliability of the state's current and future electrical supply. [s.196.491\(2\)\(a\), Wis. Stats](#) and [PSC 111](#)
- Encompasses 7-year period
 - 2 year biennium starting in the even-number year plus 5 succeeding years (2024-2030)
 - Also must include 2 years of historical data

Chapters/Content

Electricity Generation in Wisconsin Today

Supply

Reliability

Emissions

Future Electricity Generation in Wisconsin

Generation Retirements and Additions

Resource Planning in Wisconsin

Grid Inertia

Clean Energy Programs and Policies

Focus on Energy

Demand Response

Renewable Energy

Electric Vehicles

Electric Transmission in Wisconsin

Transmission Costs

Resilience and Cybersecurity

Resilience

Cybersecurity

Customer Rates and Bills

Utility Cost Drivers

Determining Customer's Bills

Types of Customers

Time of Use

Alternative Rate Options

Customer Affordability

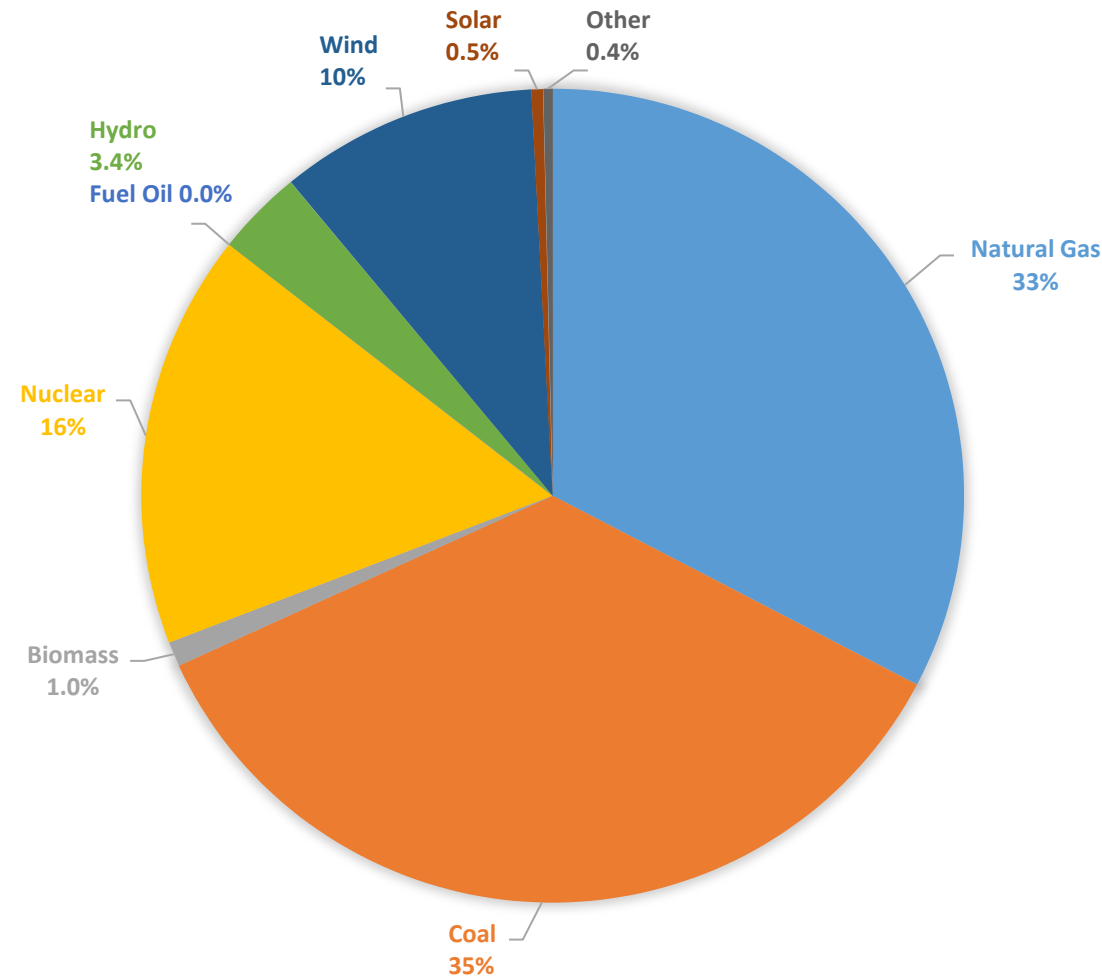
Energy Burden

Helping Customers with Bills

Electricity Generation -- 2020

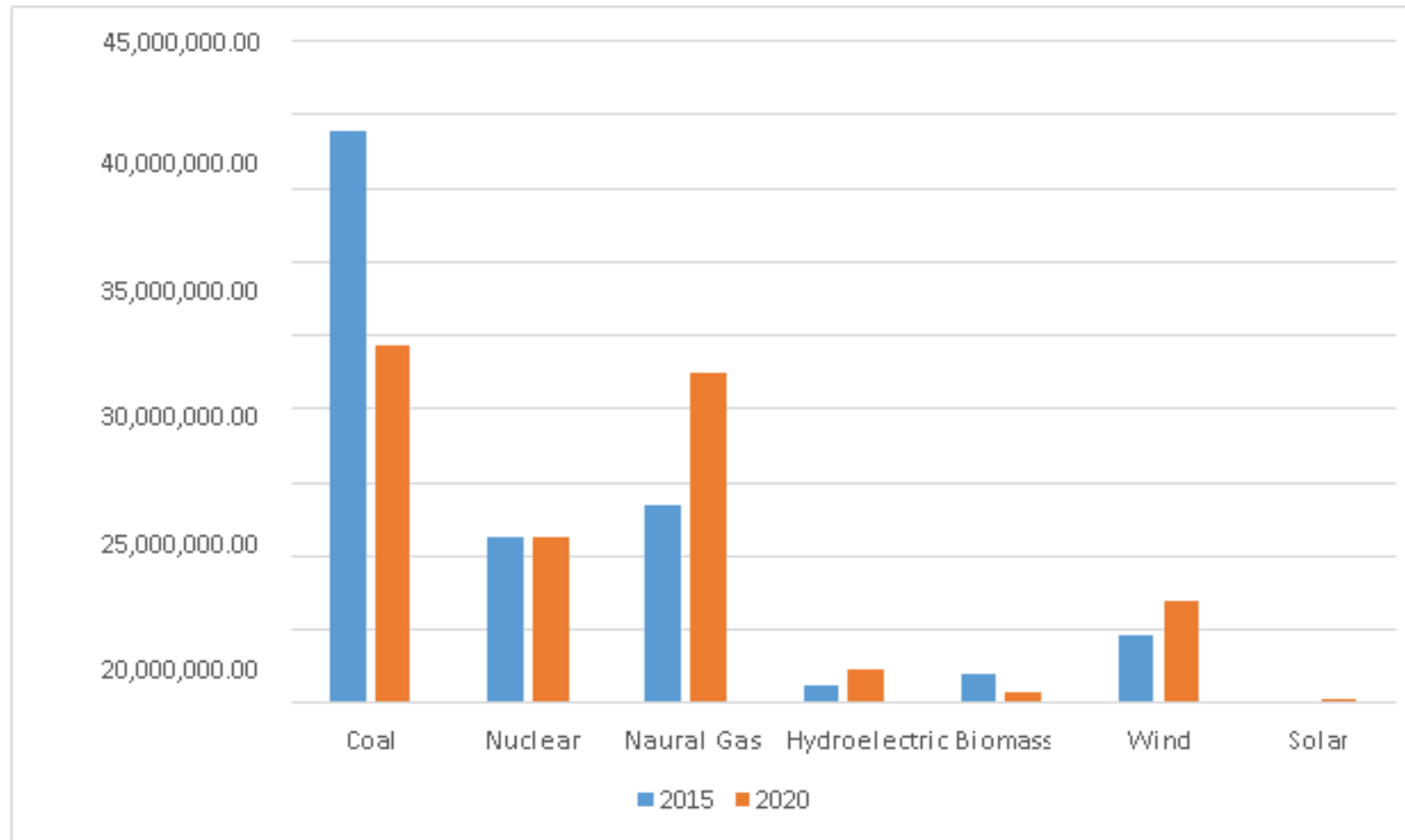
Figure 1-7

Wisconsin Electric Provider Generation by Resource – 2020



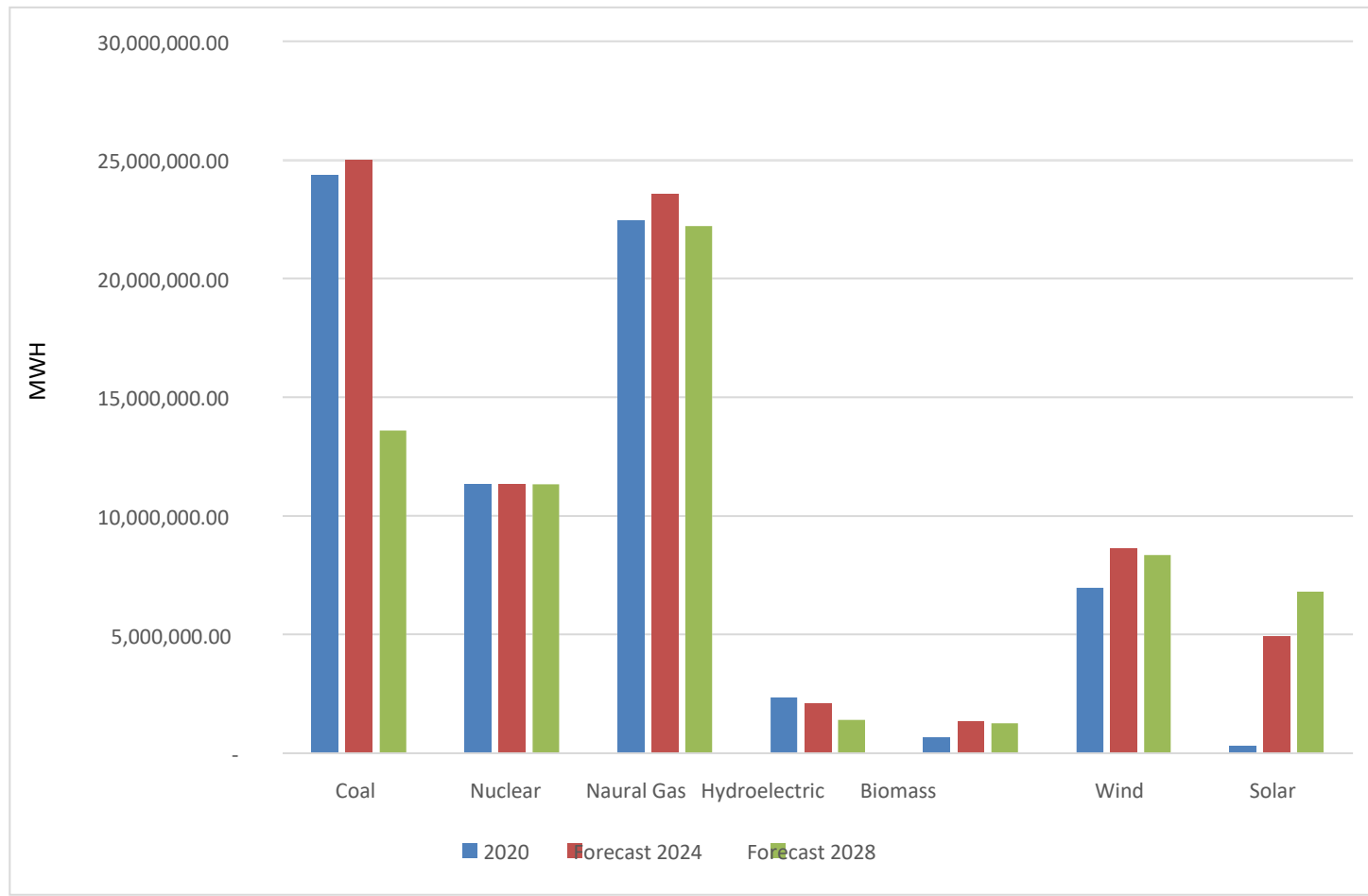
Electricity Generation 2015 vs 2020

Figure 1-8 Comparison of 2015 and 2020 Wisconsin Electric Provider Generation by Resource



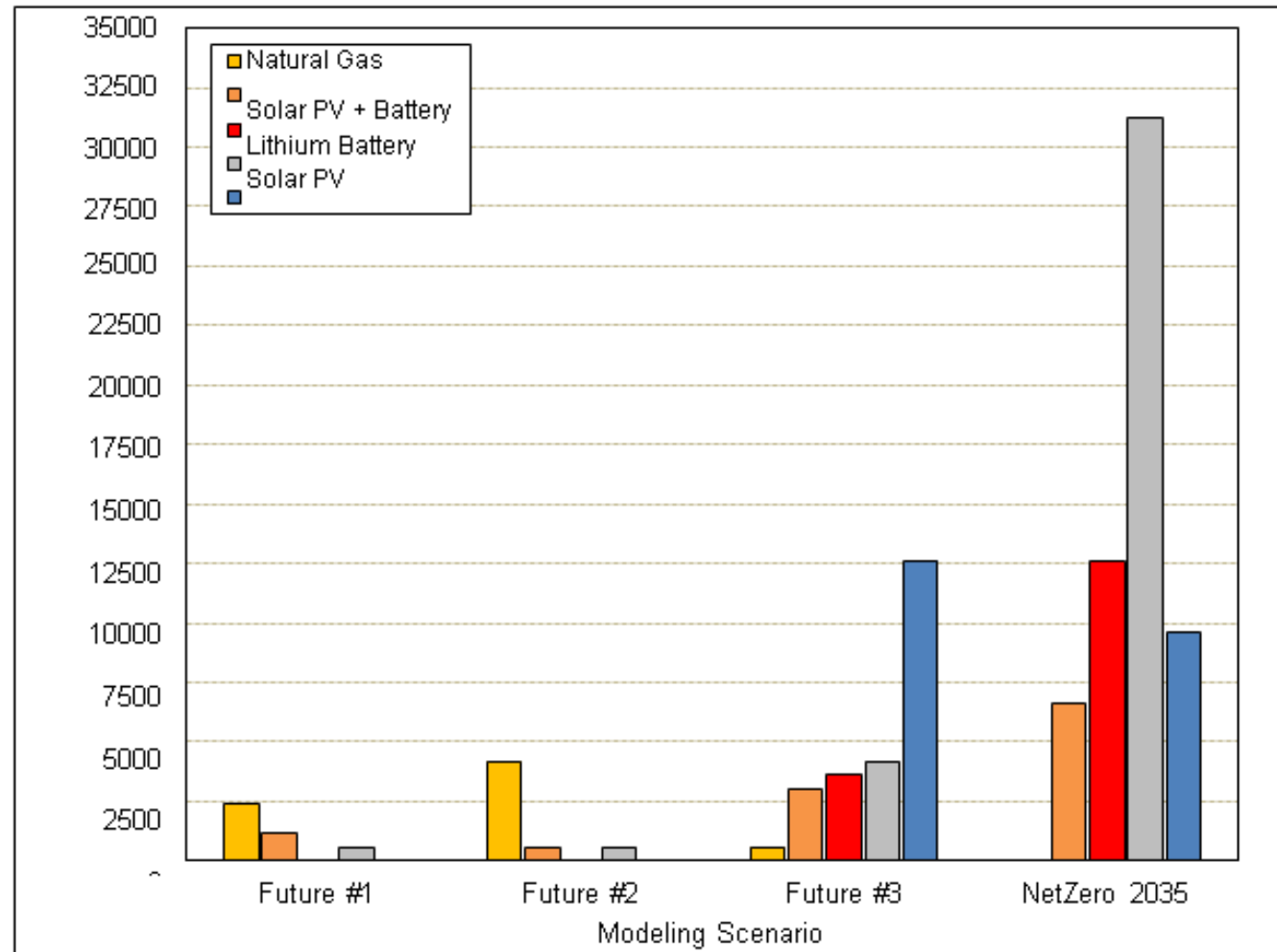
Forecasted Energy Generation 2024, 2028

Figure 2-2 Generation Comparison by Resource - 2020, 2024, and 2028



EGEAS Modeling of Future Energy Mix

Figure 2-7 EGEAS Capacity Expansion Modeling Results, Future 3 and Net Zero CO2 Reduction by 2035



Planned Generation Retirement

Table 2-1 Planned Utility-Owned or Leased Generation Capacity Retirement through 2028

Year	Name	Capacity (MW)	Fuel	Owner/Leaser	Recent Updates
2023	Weston 2, 31, 32	75, 20, 58	Natural Gas	WPSC	
2024	West Marinette 31, 32	42, 42	Natural Gas	WPSC	
2024	Rosiere Wind Farm	11	Wind	MGE	
2024	Oak Creek 5, 6	299, 299	Coal	WEPCO	Delayed from 2023
2025	Wheaton 1, 2, 3, 4, 6	56, 68, 56, 61, 70	Natural Gas and Fuel Oil	NSPW	
2025	Edgewater 5	406	Coal	WP&L	Delayed from 2023
2025	Oak Creek 7, 8	318, 324	Coal	WEPCO	Delayed from 2024
2026	Columbia 1, 2	566, 565	Coal	WP&L, WPSC, MGE	Delayed from 2024 (Unit 1) and 2025 (Unit 2)

Planned Generation Additions

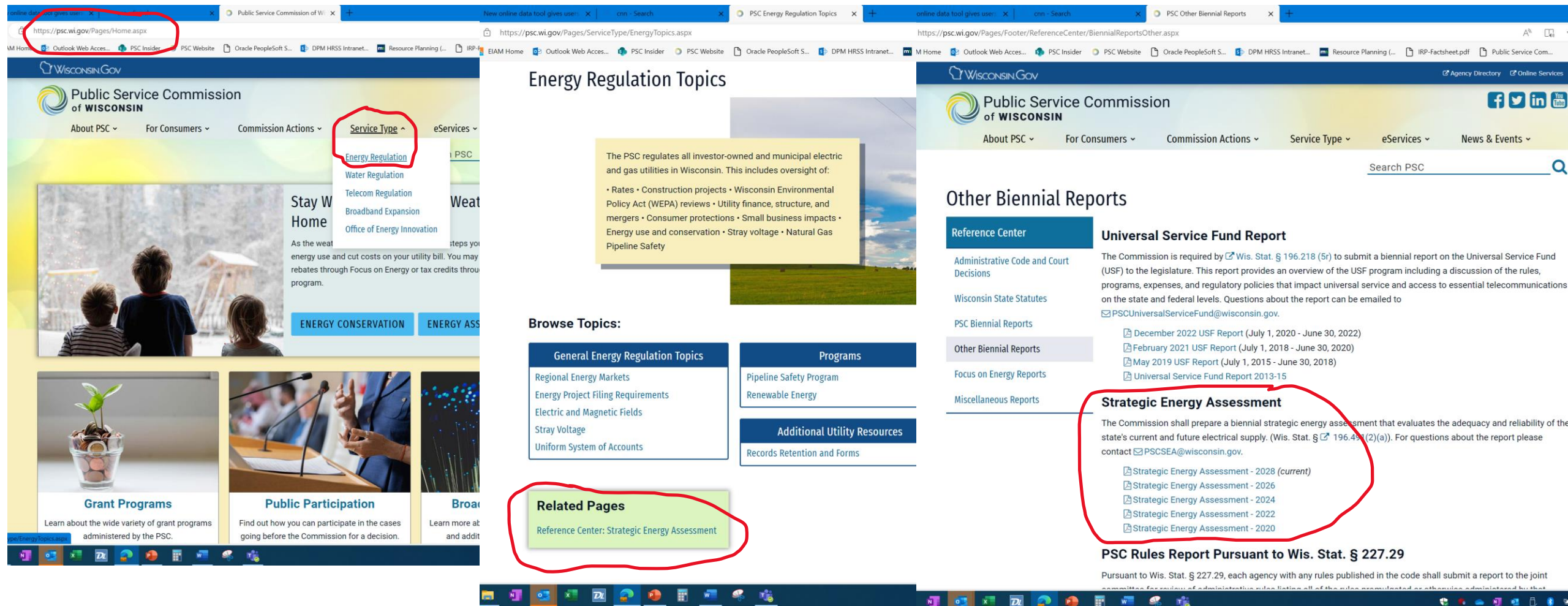
Table 2-2 New Additions and Transfers of Utility-Owned or Leased Generation Capacity by Wisconsin Electric Providers 2021 through 2028

Year	Nameplate Capacity (MW)	Name	New or Existing Site	Owner/ Leaser	Source	PSC status and Docket Number	Recent Updates
2021	150 ²⁹	Badger Hollow (phase 1)	New	WPSC/ MGE	Solar	5-BS-228, approved	
2022	8	Hernsdorf Solar	New	MGE	Solar	3270-CE-130, approved	
2022	489	Rock Gen 1-3	Existing	DPC	Natural Gas		
2022	0.5	Superior Solar	New	SWL&P	Solar		
2023 ³⁰	74	Western Mustang	New	NSPW	Solar	4220-BS-100, approved	Delayed from 2022
2023	150 ³¹	Badger Hollow (phase 2)	New	WEPCO / MGE	Solar	5-BS-234, approved	
2023	92 ³²	Red Barn Wind	New	WPSC / MGE	Wind	5-BS-256, approved	
2023	200 ³³	Paris Solar	New	WEPCO / WPSC / MGE	Solar	9801-CE-100, approved; 5-BS-254, approved	
2023	110 ³⁴	Paris Solar BESS	New	WEPCO / WPSC / MGE	Battery Storage	9801-CE-100, approved; 5-BS-254, approved	
2023	75	Crawfish River Solar	New	WP&L	Solar	6680-CE-182, approved	
2023	150	Onion River Solar	New	WP&L	Solar	9805-CE-100, approved; 6680-CE-182, approved	
2023	200	Grant County Solar	New	WP&L	Solar	9804-CE-100, approved; 6680-CE-182, approved	
2023	50	North Rock Solar	New	WP&L	Solar	6680-CE-182, approved	
2023	50	Albany Solar	New	WP&L	Solar	6680-CE-183, approved	
2023	50	Bear Creek Solar	New	WP&L	Solar	6680-CE-182, approved	Delayed from 2022

Year	Nameplate Capacity (MW)	Name	New or Existing Site	Owner/ Leaser	Source	PSC status and Docket Number	Recent Updates
2023	150	Wood County Solar	New	WP&L	Solar	6680-CE-182, approved; 9803-CE-100, approved	Delayed from 2022
2023	50	Beaver Dam Solar	New	WP&L	Solar	6680-CE-183, approved	
2023	50	Cassville Solar	New	WP&L	Solar	6680-CE-183, approved	
2023	65	Paddock Solar	New	WP&L	Solar	6680-CE-183, approved	
2023	100	Springfield Solar	New	WP&L	Solar	9807-CE-100, approved; 6680-CE-183, approved	
2023	99	Wautoma Solar	New	WP&L	Solar	6680-CE-183, approved	
2023	132 ³⁵	Weston RICE	New	WPSC/ WEPCO	Natural Gas	5-CE-153, approved	
2023	236 ³⁶	Whitewater Cogeneration Facility	Existing	WPSC/WEPCO	Natural Gas	5-BS-264, pending	
2023	25 ³⁷	West Riverside	Existing	MGE	Natural Gas	5-BS-265, pending	
2023	100 ³⁸	West Riverside	Existing	WPSC	Natural Gas	5-BS-265, pending	
2024	250 ³⁹	Darien Solar	New	WEPCO / WPSC / MGE	Solar	9806-CE-100, approved; 5-BS-255, pending	
2024	75 ⁴⁰	Darien Solar Storage	New	WEPCO / WPSC / MGE	Battery Storage	9806-CE-100 approved; 5-BS-255, pending	
2025	300 ⁴¹	Koshkonong Solar	New	WEPCO / WPSC / MGE	Solar	9811-CE-100, approved; 5-BS-258, pending	
2025	165 ⁴²	Koshkonong Solar Storage	New	WEPCO / WPSC / MGE	Battery Storage	9811-CE-100, approved; 5-BS-258, pending	
2025	Unknown	Wheaton replacement	New	NSPW	Natural Gas		
2026	300 ⁴³	Solar 6	New	WEPCO / WPSC / MGE	Solar	9814-CE-100, pending	Delayed from 2025
2026	165 ⁴⁴	Battery 6	New	WEPCO / WPSC / MGE	Battery Storage	9814-CE-100, pending	Delayed from 2025

Where to Find SEA Report

[PSC Other Biennial Reports \(wi.gov\)](https://psc.wi.gov/Pages/ServiceType/EnergyTopics.aspx)



The screenshot shows the Wisconsin Public Service Commission website with several red circles highlighting the navigation path to the Strategic Energy Assessment report:

- Home Page:** The URL <https://psc.wi.gov/Pages/Home.aspx> is circled in the browser's address bar. The "Service Type" menu is circled, with "Energy Regulation" selected.
- Energy Regulation Topics Page:** The URL <https://psc.wi.gov/Pages/ServiceType/EnergyTopics.aspx> is shown. A yellow box highlights the text: "The PSC regulates all investor-owned and municipal electric and gas utilities in Wisconsin. This includes oversight of: Rates • Construction projects • Wisconsin Environmental Policy Act (WEPA) reviews • Utility finance, structure, and mergers • Consumer protections • Small business impacts • Energy use and conservation • Stray voltage • Natural Gas Pipeline Safety".
- Other Biennial Reports Page:** The URL <https://psc.wi.gov/Pages/Footer/ReferenceCenter/BiennialReportsOther.aspx> is shown. The "Strategic Energy Assessment" section is circled, listing the following reports:
 - December 2022 USF Report (July 1, 2020 - June 30, 2022)
 - February 2021 USF Report (July 1, 2018 - June 30, 2020)
 - May 2019 USF Report (July 1, 2015 - June 30, 2018)
 - Universal Service Fund Report 2013-15
 - Strategic Energy Assessment - 2028 (current)
 - Strategic Energy Assessment - 2026
 - Strategic Energy Assessment - 2024
 - Strategic Energy Assessment - 2022
 - Strategic Energy Assessment - 2020
- Related Pages:** A green box at the bottom highlights the "Reference Center: Strategic Energy Assessment" link.

PSC Contact Information

- **Phone:**
 - General Inquiries: 1-888-816-3831
 - Consumer Affairs: 1-800-225-7729
- **Web Site:** <https://psc.wi.gov/Pages/Home.aspx>
- **Facebook:** <http://www.facebook.com/PSCWisconsin>
- **Twitter:** <http://twitter.com/PSCWisconsin>
- **Address:** 4822 Madison Yards Way
Madison, WI 53705-9100
- **Email:** PSCRECS@wisconsin.gov

Questions?