

EEI INVESTOR ESG REPORT

2023



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Section 1

QUALITATIVE REPORT

About AEP

American Electric Power, based in Columbus, Ohio, is powering a cleaner, brighter energy future for its customers and communities. AEP's approximately 17,000 employees operate and maintain the nation's largest electricity transmission system and more than 225,000 miles of distribution lines to safely deliver reliable and affordable power to 5.6 million regulated customers in 11 states. AEP also is one of the nation's largest electricity producers with approximately 30,000 megawatts of diverse generating capacity, including more than 7,000 megawatts of renewable energy. The company's plans include growing its renewable generation portfolio to approximately 50% of total capacity by 2032. AEP is on track to reach an 80% reduction in carbon dioxide emissions from 2005 levels by 2030 and has committed to achieving net zero by 2045. AEP is recognized consistently for its focus on sustainability, community engagement, and diversity, equity and inclusion. AEP's family of companies includes utilities AEP Ohio, AEP Texas, Appalachian Power (in Virginia and West Virginia), AEP Appalachian Power (in Tennessee), Indiana Michigan Power, Kentucky Power, Public Service Company of Oklahoma, and Southwestern Electric Power Company (in Arkansas, Louisiana, east Texas and the Texas Panhandle). AEP also owns AEP Energy, which provides innovative competitive energy solutions nationwide.

For more information, visit [aep.com](https://www.aep.com).



AEP's Strategy & Goals

AEP plays an important role in keeping our customers and communities connected. We deliver an essential service that enables businesses to thrive, homes to provide warmth and hospitals to care for those in need. We also provide a critical commodity that can accelerate advancements in technology and innovation to empower and improve lives.

We are committed to delivering this critical commodity in a safe, reliable and affordable manner, while working with our regulators to seek opportunities to provide our customers with clean energy options. This is reflected in our strategic vision for long-term sustainable growth, which is focused on leading the clean energy transition in an economically responsible manner for our customers and communities. We will do this by expanding our investments in clean energy options, technology and service offerings to enable equitable access to affordable and reliable electricity. We are also advancing how we work to drive financial and operational excellence by empowering teams to integrate technologies, analytics and risk mitigation tools for the benefit of our customers and communities.

Our strategy is influenced by several factors including fuel price volatility, changing customer preferences for cleaner energy options, and regulatory support to enable our investment in clean energy options. We leverage data-driven utility analysis to identify the lowest reasonable cost options for our customers, while ensuring we continue to provide customers with safe and reliable service. These factors are critical drivers of our

AEP's Strategic Pillars



Affordable

Enable equitable access to affordable and reliable electricity



Customer & Community

Expand investments and service offerings



Clean & Reliable

Lead the transformation to a clean energy economy



Advance & Achieve

Advance how we work to drive financial and operational excellence



Engage

Create a high-performance culture where safety comes first and everyone matters

Sustainability Value Proposition

- Clean & Just Energy Transition
- Environmental Compliance & Stewardship
- Social Justice & Equity
- Governance & Oversight

Strategic Goals

- Zero Harm
- Strong, Diverse, & Inclusive Culture
- 6%-7% per Year EPS Growth
- Operational Excellence

clean energy transition, which is reflected in our \$40 billion capital investment strategy with an emphasis on transmission, distribution and regulated renewable energy.

Our ability to execute our strategic vision is dependent on the ingenuity and agility of our employees, who serve as critical enablers of long-term growth and success. They are the heart of our company, grounding us in our values of safety, community, culture and diversity. AEP's strategy focuses on cultivating an inclusive and high-performing culture where employees have the opportunity to thrive at work, at home and within their communities. We are committed to fostering a great place to work where performance reflects our employees' success and happiness.

AEP's Approach to Sustainability

At AEP, we are integrating sustainable business practices into our strategy to deliver clean, reliable and affordable energy to our customers, in partnership with our regulators and other stakeholders, while positively impacting the environment and society. Strong financial and operational performance is inextricably linked to robust environmental, social and governance (ESG) practices and strategy. Awareness of how ESG impacts the full value chain helps to inform business decisions while delivering results. Whether aligning our capital investments with our decarbonization and grid modernization strategy or with our commitment to a strong safety culture and governance practices, AEP's efforts to integrate ESG into the business deliver short- and long-term value for all stakeholders. In addition, we map our efforts to the United Nations Sustainable Development Goals (SDGs) which provide a global blueprint to achieve a better and more sustained future for people and the planet, demonstrating the contributions AEP is making to create shared value for our customers, communities, investors and our company.

Monitoring ESG Risks & Opportunities

For more than a decade, AEP has been monitoring and managing material ESG-related risks and opportunities. We leverage insights from key stakeholders, third-party ESG ratings and rankings, and our materiality priority assessment to identify ESG issues, risks and emerging trends that could potentially have a significant impact on our finances and operations. This insight serves as critical input for our corporate strategy, risk management, disclosure and engagement efforts, and meets growing stakeholder expectations.

Our sustainability value proposition is guided by these key focus areas:



Clean & Just Energy Transition

We are committed to responsibly decarbonizing our operations by investing in cleaner energy options and modernization of the electric power grid in partnership with our regulators. This includes putting strategies in place to support our employees through the transition and collaborating with our communities for a sustainable future.



Environmental Compliance & Stewardship

We are committed to complying with all applicable environmental regulations and being good stewards of natural resources. Our goal is zero violations of environmental laws and regulations and zero enforcement actions.

























Social Justice & Equity

We are committed to considering the social impacts of our operations and decisions and putting mechanisms in place that provide equitable access to clean and modern energy options. This includes meaningful engagement with customers and communities to ensure fair treatment and equitable decision-making.



Governance & Oversight

We are committed to strong governance practices that protect the long-term interests of our stakeholders. Leadership and governance are foundational to building and strengthening sustained business value and ensuring transparency, fairness and accountability while providing structure to ethically manage the challenges of a changing society.

Performance Metric	Status	Governance		2022 Performance	UN SDG Mapping
		Leadership Oversight	Tied to Specific Executive Comp Goal		
Environmental					
GHG Emission Reduction: Reduce AEP's Scope 1 GHG emissions 80% by 2030 (compared to 2005 levels) and achieve net-zero Scope 1 and 2 emissions by 2045.		Yes	No	Achieved a 66% reduction in Scope 1 GHG emissions since 2005	
Carbon-free Capacity: Grow AEP's carbon-free capacity as a percentage of our total generating capacity.		Yes	Yes	In 2022, 32% of AEP's total generating capacity was carbon-free	
Regulated Renewables: Obtain approval for 350 MWs of regulated renewables and file for 1,800 MW of new regulated renewables projects.		Yes	Yes	Received approval for 409 MW in regulated renewables and filed 2,148.5 MW of new regulated renewable projects	
Fleet Electrification: By 2030, electrify 40% of our on-road fleet and 50% of our forklifts.		Yes	No	From 2020 thru 2022, electrified 5% of our on-road fleet and 40% of our forklifts	
Environmental Performance: Two or less environmental enforcement actions.		Yes	Yes	Two environmental enforcement actions were resolved in 2022	
Social					
Achieve Zero Harm: Zero employee and contractor fatalities.		Yes	Yes	Experienced one employee and one contractor fatality in 2022	
Employee & Contractor Safety: Achieve 10% employee & contractor DART rate improvement.		Yes	Yes	Experienced little to no improvement in employee & contractor DART rates in 2022	
Supplier Diversity: Achieve 15% of our total managed spend with diverse suppliers by the end of 2025 [includes Tier 1 (prime) and Tier 2 (subcontractors) suppliers].		Yes	Yes	Increased supplier diversity spend by 12%, exceeding our 2022 goal	
Employee Diversity: Measure employee diversity efforts through improvement in employee response to diversity, equity and inclusion questions in AEP's annual culture survey.		Yes	Yes	Improved employee response scores to DEI questions in annual culture survey	
Culture: Ensure an engaged, collaborative and appreciated workforce by measuring our culture journey through our annual employee culture survey.		Yes	Yes	Improved our Accountability Index scores in our annual culture survey and remained in top decile	
Customer Reliability: Complete 90% of our proactive, reliability driven projects to improve the minutes of non-momentary electric interruptions experienced by the average customer.		Yes	Yes	Completed 88% of our proactive customer reliability projects	

AEP's Decarbonization Strategy

Climate change and the drive to a low-carbon future are creating an unprecedented economic and cultural transformation. Through our efforts to diversify our generation portfolio, our investments to modernize the electric power grid, and our resolve to ensure a just transition that is inclusive, equitable and collaborative, we are confident in our ability to power a brighter and cleaner energy future for all. Our goal to achieve net-zero greenhouse gas (GHG) emissions by 2045 is a work in progress, but our commitment is unwavering.

We have the tools and technology we need today to achieve an 80% Scope 1 GHG emissions reduction by 2030 from a new 2005 baseline; the challenge facing our industry is the uncertainty in the timing of new and advanced technologies and alternative resources that will be needed to get all the way to net-zero. We are actively engaged and investing in industry research, development and deployment of solutions for the future while balancing the need for reliable and affordable 24/7 electricity for all customers. The Biden administration's unparalleled focus on climate change, infrastructure investment and support for underserved and disadvantaged communities further reinforces the need to power a clean and equitable energy transition. Our efforts reflect the spirit and determination of our workforce to do what's right for our customers, communities, investors and other stakeholders.

Clean Energy Strategy

In 2022, AEP updated our net-zero GHG emission reduction goals from 2050 to 2045 and revised our baseline from 2000 to 2005. Our goal to reduce GHG emissions 80% by 2030 is now measured against the 2005 baseline and includes all Scope 1 emissions. AEP's future resource portfolio, supported by the Integrated Resource Plans we develop to meet the regulated capacity requirements within our operating

GHG Emissions Reduction Goal



Net-zero by 2045

Scope 1 & Scope 2 GHG emissions

80% reduction by 2030*

Scope 1 GHG emissions

Compared to 2005 levels

66% reduction

Scope 1 GHG emissions through 2022

companies, gives us confidence that we can meet these goals while also balancing risks and customer affordability. Through 2022, we achieved a 66% reduction in Scope 1 GHG emissions (inclusive of emission reductions that result from assets sold and retired), or a 62% reduction according to the GHG Protocol, which excludes reductions that result from assets sold. We remain confident we will achieve this goal.

AEP's Strategy for a Clean Energy Future:

- Building and enabling renewables
- Transforming our fossil fleet for a net-zero carbon future
- Scenario planning for the future to understand risks and opportunities
- Investing to ensure reliability, resilience, affordability and security of the grid
- Engaging in the public policy process
- Engaging employees and supporting communities

We are working with our regulators, policymakers, customers and other stakeholders to modernize, strengthen and transition the electric power system to support growing demand for clean energy at a pace that works for our stakeholders. We are doing this while maintaining reliability, affordability and equitable access to clean resources, in addition to ensuring adequate capacity is available to meet customers' 24/7 energy needs. As we transform our generation fleet, we are making significant investments in our transmission and distribution systems to accommodate new technology, new forms of electricity

generation and distribution, the advanced use of smart meters, the accelerating electrification of the economy, and more.

We are making significant progress. AEP already retired or sold nearly 13,500 megawatts (MW) of coal-fueled generation during the past decade. We have plans to stop burning coal at additional power plants over the next decade, representing approximately 4,800 MW of coal-fired generation. By 2032, remaining coal plants are projected to represent approximately 19% of AEP's nameplate generating capacity.

AEP's Strategy to Power the Future

At American Electric Power, we understand the importance of our role in decarbonization while also delivering clean and reliable electricity at competitive rates to our customers. Our decarbonization strategy will require an "all of the above strategy" that is focused on investing in our people, communities and the grid.



Delivering consistent, strong performance



Operating attractive transmission and distribution assets



Leading the clean energy transition



Actively managing the business and portfolio

CapEx Strategy

\$40B Planned Capital Investment 2023-2027

Capital investment strategy emphasized investment in wires and renewables

Allocations:

\$26B / 65%

transmission & distribution investments



Plans to add 15 GW of renewables to grow regulated renewables to approximately 50% of our generating capacity by 2032

\$9B / 22%

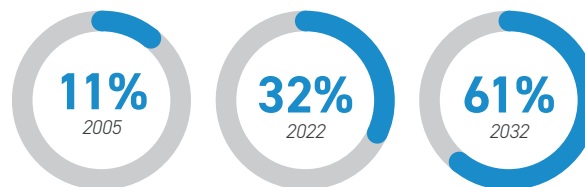
regulated renewable generation



Approximately 22,600 MW of renewable generation is interconnected across the U.S. via AEP's transmission system

Carbon-free Capacity Strategy

Growth in AEP's carbon free capacity as a percentage of our total generating capacity.



AEP retired or sold nearly **13,500 MW** of coal-fueled generation during the last decade. Between 2023 through 2028 AEP will stop burning approximately **4,800 MW of coal** to generate electricity.

GHG Emissions Reduction Goal

Net-zero by 2045

Scope 1 & Scope 2 GHG emissions

80% reduction by 2030*

Scope 1 GHG emissions

Compared to 2005 levels

66% reduction

Scope 1 GHG emissions through 2022

Other Generation Fleet Emission Reductions



Direct annual emissions of SO₂ and NO_x from AEP's ownership share of generation as reported under Title IV of the 1990 Clean Air Act.

Climate Governance

AEP's Board of Directors is actively engaged in working with management to oversee the company's planning and response to climate impacts. The Board understands the importance of climate change issues and their significance to our employees, customers, investors and other stakeholders. The Board regularly discusses issues related to climate change, including carbon reduction goals, public policy and legislation, renewable investments and AEP's strategy for a clean energy transition.

The Committee on Directors and Corporate Governance leads the governance of climate risks, and the full Board is engaged in approving AEP's strategy to invest in renewable energy and grid modernization, reduce carbon emissions, and support our local communities and regional economies. AEP's management recently formed an executive-level climate change group to provide additional oversight on the company's transition pathway and decarbonization goals and strategy. This group is supported by multiple business unit-

ESG Governance Oversight

Board of Directors Board Committee Oversight									
Audit Committee Oversees AEP’s financial statements, financial reporting and internal controls over financial reporting, compliance, independent auditor, internal audits and managing major risks.	Directors & Corporate Governance Oversees Board qualifications and selection; Board independence, composition, size and committees; Board evaluation and education; Corporate Governance Principles; corporate compliance; Corporate Sustainability Report; and political engagement.	Executive Committee Acts on behalf of the Board of Directors in handling matters that need immediate attention.	Finance Committee Oversees monitoring capital requirements, capital deployment and financing plans and programs of AEP and its subsidiaries; and short- and long-term financing plans and programs of AEP and its subsidiaries.	Human Resources Committee Oversees CEO and senior executive goals, performance, salaries and compensation; employee incentive, long-term and equity compensation plans; benefit programs; culture and employee engagement; DEI strategy and performance; succession planning; and human capital risks.	Nuclear Oversight Committee Oversees management, operation, safety, reliability of nuclear operations; compliance with nuclear safety, operations and environmental law and regulations; and control or mitigation of nuclear risks.	Policy Committee Oversight of AEP’s policies on major public issues affecting the AEP System.	Technology Committee Oversees AEP’s IT strategy, investments and internal and external labor strategy; IT policies, standards and controls; information, cybersecurity and data privacy risk management; and response to address cyber, operational and other business disruptive incidents.		
Executive Leadership Teams Executive/Senior Leader Working Committee & Councils									
Risk Executive Committee	Climate Change Executive Group	Reliability Compliance Strategy Team	Reliability Compliance Committee	Safety & Health Committee	Diversity, Equity & Inclusion Advisory Council	Social Issues Advisory Council	Environmental & Social Justice Advisory Team	Third-Party Risk Governance Committee	Executive Policy Advisory Committee
Vice President & Chief Sustainability Officer Cross-Functional Committee & Councils									
Enterprise Sustainability Council Members represent all aspects of our business, serving as strategic ambassadors and providing guidance and support to ensure the success of our sustainable development strategy. They do this by integrating sustainability across the enterprise and in corporate strategy.					Corporate ESG Committee Representing cross-functional leaders across AEP, this team supports the fast-paced growth and evolution of ESG and focuses on how we manage our ESG performance and disclosure. This includes monitoring new and emerging issues and developing strategies for how we respond.				

level teams that manage AEP's climate-related policy and regulatory priorities, system and resource planning, risk management and other essential tasks. AEP measures its progress annually and is transparent about our efforts. Part of this includes holding ourselves accountable to achieving our goal to add approximately 15 GW of regulated renewables to our generation portfolio by 2032.

Each year, we update our climate-related incentive metrics that are disclosed in the proxy statement. For 2023, these metrics include annual and long-term incentive compensation goals that encourage the development of regulated renewable generation. A portion of long-term compensation for the 2021-2023 and 2022-2024 periods is tied to increasing the percentage of carbon-free capacity in the generation mix over these three-year periods. These goals are aligned with our long-term strategy and commitment to invest substantial resources to reduce GHG emissions. We report our progress annually.

Just Transition

The transition from a fossil fuel-dependent economy to a clean energy economy has practical challenges affecting people, communities and society at large. These challenges are particularly apparent in communities and regions dependent upon the fossil fuel industry for jobs, tax base, corporate philanthropic support and volunteerism. AEP recognizes these challenges and is committed to building upon its long history of caring for and supporting our employees and communities in areas where we have retired coal plants. This commitment is especially important as we plan to stop burning approximately 4,800 MW of coal at additional power plants over the next decade.

The idea of "Just Transition" is that people and communities are not left behind as the nation moves to a clean energy economy. Coal-fired power plants and their workers are deeply rooted in their local communities. They pay taxes, spend wages locally, volunteer in the community, serve on local nonprofit boards and are involved in their

local faith community. If they are unable to find jobs that keep them local, the social ecosystem supported by the plant and its workforce can be negatively affected.

At AEP, our commitment is to help our workers and our communities prepare for and make the transition to new skills, new industries, and new partnerships that enable them to thrive long after a plant has retired. Our power plants are the primary employers and tax-paying entities in many communities. We also serve and live in many of these communities, and we want them to be economically stable and successful, long after the plants cease operations.



Grid Security

As one of the largest electric utilities in the U.S., we have a responsibility to keep our customers' lights on 24/7. The nation's power grid is subject to an array of threats including extreme weather, vandalism, terrorism, cyberattacks and insider threats. All of these risks have the potential to jeopardize reliability, safety and data security and require companies to implement leading security practices, policies and oversight to prevent, protect against or reduce the impacts of attacks. The need to protect the power grid from these threats is especially heightened during times of elevated geopolitical tensions.

Cyber threats are among the top risks companies face today. As businesses continue to rapidly digitize, both the opportunity for and the level of sophistication of cyber criminals threatening or infiltrating critical assets increases. Adoption of new technologies such as automation, mobile apps or online bill pay, opens the door to new threats and security risks to the electric power grid. Physical security is also becoming more of an area of concern; the number of attacks

on critical infrastructure reported in the national media has increased in recent years. Just one physical attack of an asset has the potential to cause outages to thousands of customers. In response to these attacks, NERC was ordered by FERC to complete a review of the effectiveness and applicability of current physical security rules. AEP will continue to monitor these developments as NERC completes the review of their standards.

AEP continually evaluates cyber and physical security risks enterprise-wide using our comprehensive security strategy known as "Defense in Depth." This strategy allows us to deal with threats in real time and assumes a broad range of threat possibilities, such as physical theft, unauthorized access to data, third-party risk and incidental threats that do not specifically target protected assets. This comprehensive approach enables us to make decisions based on the level of acceptable risk while informing priorities and resource needs.

AEP is a leader in security, and participates in industry- and regulator-hosted discussions. We engage with public utility commissions and governors' offices in many of our regulated states, frequently responding to questions on global security events and providing updates on our program and capabilities.

Human Capital Management

Our employees are the pillars of AEP's success. Which is why we are focused not only on hiring, developing, progressing and retaining our employees but also on holistically supporting the financial, cultural and physical well-being of our workforce. This is done through effective and strategic human capital management, which is a critical enabler of business value. We are investing in our people to ensure we have the right practices and policies in place to provide a safe and healthy work environment; competitive and fair compensation and benefits; equitable access to career growth and development; and a

supportive, inclusive and engaging culture. This is even more critical as we shift and plan for an ever-changing workforce.

As our company transitions toward a clean energy future, we are working to better understand the types of jobs and talent needed. We must consider several factors, including a changing and competitive job market; demographic and generational shifts; future employee retirements; and even where and how work gets done. We track and forecast the number of employees who plan to leave over the next several years. AEP's overall turnover rate is below 10%, including voluntary, involuntary and retirement turnover. Employee retirement presents the challenge of replacing legacy knowledge; however, it also creates opportunities to identify our future talent needs, diversify our workforce and leverage advancements in technology to shift more manual, resource-intensive and sometimes high-risk work to more automated processes.

At AEP, we provide development opportunities for employees at every level, whether through informal professional development or formal development programs. In addition, several of our Employee Resource Groups and utility professional groups sponsor programs and events that focus on employee education, career advancement and personal and professional development.

AEP strives to support employees in achieving balance in their personal and professional lives. We offer a comprehensive set of employee benefits and regularly benchmark our offerings to ensure that we keep pace with our competitive labor market and evolving employee needs. Supporting our employees in a variety of areas is a commitment that we take to heart. We are committed to the well-being of our employees and ensuring they have a safe and productive work environment; achieve financial security; feel supported, heard and engaged; have access to healthcare for their physical and mental health; have networks and camaraderie that provide social support; and feel included and connected to the mission and values of our company.

Diversity, Equity & Inclusion

AEP is committed to cultivating a diverse, equitable and inclusive work environment that supports the development and advancement of all. We foster an inclusive workplace that celebrates and values all forms of diversity including culture, background and diversity of thought while actively working to eliminate unconscious biases. In addition, we believe our workforce should generally reflect the diversity of our customers and the communities we serve so that we may better understand how to tailor our services to meet their expectations.

AEP DEI Strategy in Action

- **Inclusion, Diversity, Equity & Accessibility Summit** – AEP furthered DEI learnings through its first Inclusion, Diversity, Equity and Accessibility (I.D.E.A.) Summit in 2022.
- **Gallup Pulse Survey** – To learn more about employee sentiment regarding AEP's DEI efforts and workplace equity, AEP launched the company's first Pulse Survey in partnership with Gallup.
- **DEI Advisory Council** – AEP relaunched its DEI Advisory Council, which consists of decision-makers from across the company who own AEP's DEI strategy.
- **Pay Equity Study** – AEP analyzes pay variances for female and minority employees to ensure equal and fair employee compensation, regardless of race or gender.
- **Affirmative Action Program** – In 2022, AEP's Human Resources team developed 93 affirmative action plans for all AEP sites with more than 50 employees to improve minority and women representation across all areas of our business.
- **Employee Resource Groups** – AEP's eight ERGs reflect the diverse makeup of our workforce and provide valuable insight into the diverse communities

DEI Strategic Priorities

Principle	Priority	Objectives
Leadership	Business Unit Objectives & Metrics	Establish leadership accountability around DEI outcomes <ul style="list-style-type: none"> • Set leader DEI targets for representation, talent development, learning and succession • Implement DEI leader accountability tool to track progress • Increase communication across the enterprise about DEI progress
Diverse Workforce	Talent Retention & Recruitment	Build and maintain a workforce that reflects the communities we serve <ul style="list-style-type: none"> • Increase the number of leaders from underrepresented groups within the enterprise and within successor pools
Inclusion	Employee Engagement	<ul style="list-style-type: none"> • Promote an inclusive culture where all employees can thrive • Increase DEI engagement through programming, mentoring and development • Measure ERG participation and effectiveness
Community	Community Visibility	<ul style="list-style-type: none"> • Support the communities we serve so they will prosper • Increase volunteerism and amplify community impact stories across service territories • Increase spend with small and diverse businesses within our home office and operating company communities

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AEP's Disclosure Strategy

We developed a robust disclosure strategy to help drive our goal of being transparent and accessible. AEP's disclosure includes our annual Corporate Sustainability Report and ESG Data Center, which features a three-year trend on approximately 250 of the most requested ESG metrics. In addition, we publish several supplemental reports leveraging guidance from voluntary reporting standards and industry efforts in order to meet the unique needs of our stakeholders. This includes a GRI Report, SASB Report, TCFD Report, Edison Electric Institute (EEI) ESG Investor Report, and an EEI Customer Emissions Report. We also respond to multiple ESG surveys, ratings and rankings including, CDP Climate, CDP Water and EcoVadis Sustainability Ratings for Global Supply Chains.

Section 2

QUANTITATIVE REPORT

American Electric Power

Ref. No.	Portfolio	Baseline Year		
		2005	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	35,547	24,857	25,050
1.1	Coal	25,027	11,858	11,263
1.2	Natural Gas	7,520	7,615	7,613
1.3	Nuclear	2,130	2,296	2,296
1.4	Petroleum	0	0	0
1.5	Total Renewable Energy Resources	870	3,088	3,858
1.5.1	Biomass/Biogas	0	0	0
1.5.2	Geothermal	0	0	0
1.5.3	Hydroelectric	870	805	805
1.5.4	Solar	0	362	369
1.5.5	Wind	0	1,921	2,684
1.6	Other	0	0	20

American Electric Power

Ref. No.	Portfolio	Baseline Year		
		2005	2021	2022
2	Net Generation for the Data Year (MWh)	187,188,901	148,879,787	153,810,473
2.1	Coal	155,681,562	49,601,849	43,822,578
2.2	Natural Gas	10,978,285	16,046,688	15,892,193
2.3	Nuclear	19,219,383	17,960,716	16,621,031
2.4	Petroleum	0	0	0
2.5	Total Renewable Energy Resources	1,309,671	15,383,784	19,647,847
2.5.1	Biomass/Biogas	0	0	0
2.5.2	Geothermal	0	0	0
2.5.3	Hydroelectric	1,024,664	999,943	835,750
2.5.4	Solar	0	769,830	921,720
2.5.5	Wind	285,007	13,614,011	17,890,377
2.6	Other	0	49,886,750	57,826,824

American Electric Power

Ref. No.	Portfolio	Baseline Year		
		2005	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	186,903,894	82,567,070	78,674,590
2.1.i	Coal	155,681,562	45,052,460	37,058,587
2.2.i	Natural Gas	10,978,285	13,077,646	14,740,697
2.3.i	Nuclear	19,219,283	17,960,716	16,621,031
2.4.i	Petroleum	0	0	0
2.5.i	Total Renewable Energy Resources	1,024,664	6,476,248	10,254,275
2.5.1.i	Biomass/Biogas	0	0	0
2.5.2.i	Geothermal	0	0	0
2.5.3.i	Hydroelectric	1,024,664	860,163	623,425
2.5.4.i	Solar	0	745,647	840,748
2.5.5.i	Wind	0	4,870,438	8,790,102
2.6.i	Other	0	0	0

American Electric Power

Ref. No.	Portfolio	Baseline Year		
		2005	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	285,007	66,312,717	75,135,883
2.1.ii	Coal	0	4,549,389	6,763,991
2.2.ii	Natural Gas	0	2,969,042	1,151,496
2.3.ii	Nuclear	0	0	0
2.4.ii	Petroleum	0	0	0
2.5.ii	Total Renewable Energy Resources	285,007	8,907,536	9,393,572
2.5.1.ii	Biomass/Biogas	0	0	0
2.5.2.ii	Geothermal	0	0	0
2.5.3.ii	Hydroelectric	0	139,780	212,325
2.5.4.ii	Solar	0	24,183	80,972
2.5.5.ii	Wind	285,007	8,743,573	9,100,275
2.6.ii	Other	0	49,886,750	57,826,824

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

American Electric Power

Ref. No.	Portfolio	Baseline Year		
		2005	2021	2022
3	Investing in the Future: Capital Expenditures, Energy Efficiency (EE) & Smart Meters			
3.1	Total Annual Capital Expenditures (Nominal Dollars)	–	\$6,547,000,000	\$7,982,000,000
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)	–	406,737	349,952
3.3	Incremental Annual Investment in Electric EE Programs (Nominal Dollars)	–	\$95,681,983	\$86,806,298
3.4	Percent of Total Electric Customers with Smart Meters (At End of Year)	–	63%	72%
4	Retail Electric Customer Count (At End of Year)	–	5,543,467	5,567,863
4.1	Commercial	–	732,211	736,491
4.2	Industrial	–	45,741	45,189
4.3	Residential	–	4,735,221	4,755,584
4.4	Other	–	30,294	30,599

American Electric Power

Ref. No.	Emissions	Baseline Year		
		2005	2021	2022
5	GHG Emissions: Carbon Dioxide (CO ₂) & Carbon Dioxide Equivalent (CO ₂ e)			
5.1	Owned Generation ^{2,3}			
5.1.1	Carbon Dioxide (CO ₂)			
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	145,868,723	50,991,159	45,077,248
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.780	0.618	0.573
5.1.2	Carbon Dioxide Equivalent (CO ₂ e)			
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	146,889,804	51,554,092	45,388,856
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.855	0.624	0.577

² Owned Generation and emissions are adjusted for equity ownership share.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:
 CO₂ = 1 N₂O = 298
 CH₄ = 25 SF₆ = 22,800

American Electric Power

Ref. No.	Emissions	Baseline Year		
		2005	2021	2022
5.2	Purchased Power⁴			
5.2.1	Carbon Dioxide (CO₂)			
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	/	27,133,939	34,655,246
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	/	0.409	0.461
5.2.2	Carbon Dioxide Equivalent (CO₂e)			
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	/	27,330,769	34,922,422
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	/	0.412	0.465
5.3	Owned Generation + Purchased Power			
5.3.1	Carbon Dioxide (CO₂)			
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	145,868,723	78,125,098	79,732,494
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.780	0.525	0.518
5.3.2	Carbon Dioxide Equivalent (CO₂e)			
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	146,889,804	78,884,861	80,311,278
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.786	0.530	0.522

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

American Electric Power

Ref. No.	Emissions	Baseline Year		
		2005	2021	2022
5.4	Non-Generation CO₂e Emissions⁵			
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT)	–	399,391	73,920
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	–	0.00484	0.00094
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)			
6.1	Generation Basis for Calculation ⁶	Total	Total	Total
6.2	Nitrogen Oxide (NO_x)			
6.2.1	Total NO _x Emissions (MT)	260,844	26,926	25,775
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0.001396	0.000326	0.000328
6.3	Sulfur Dioxide (SO₂)			
6.3.1	Total SO ₂ Emissions (MT)	824,773	33,987	29,819
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.004413	0.000412	0.000379
6.4	Mercury (Hg)			
6.4.1	Total Hg Emissions (kg)	3,640	116	87
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.000019	0.000001	0.000001

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart DD).
If not required to report, leave blank.

⁶ NO_x, SO₂, and Mercury Emissions are based on owned generation emissions

MT = metric tons =tonne
1 lb = 453.59 grams
1 tonne = 1,000,000 grams
1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

American Electric Power

Ref. No.	Resources	Baseline Year		
		2000	2020	2021
7	Human Resources			
7.1	Total Number of Employees	19,630	16,688	16,974
7.2	Total Number on Board of Directors/Trustees	11	12	13
7.3	Total Women on Board of Directors/Trustees	1	4	6
7.4	Total Minorities on Board of Directors/Trustees	1	3	4
7.5	Employee Safety Metrics			
7.5.1	Recordable Incident Rate	2.350	0.648	0.719
7.5.2	Lost-Time Case Rate	.593	0.333	0.312
7.5.3	Days Away, Restricted, and Transfer (DART) Rate	.953	0.430	0.424
7.5.4	Work-Related Employee Fatalities	1	0	1

American Electric Power

Ref. No.	Resources	Baseline Year		
		2005	2021	2022
8	Fresh Water Resources			
8.1	Water Withdrawals — Consumptive (Millions of Gallons)	–	58,702	21,079
8.2	Water Withdrawals — Non-Consumptive (Millions of Gallons)	–	1,560,629	905,689
8.3	Water Withdrawals — Consumptive Rate (Millions of Gallons/Net MWh)	–	0.000780	0.000314
8.4	Water Withdrawals — Non-Consumptive Rate (Millions of Gallons/Net MWh)	–	0.037917	0.013183
9	Waste Products			
9.1	Amount of Hazardous Waste Manifested for Disposal (Metric Ton)	–	237.0	70.6
9.2	Percent of Coal Combustion Products Beneficially Used	–	31%	43%

Appalachian Power

Ref. No.	Portfolio	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	6,681	6,681
1.1	Coal	4,250	4,250
1.2	Natural Gas	1,646	1,646
1.3	Nuclear	0	0
1.4	Petroleum	0	0
1.5	Total Renewable Energy Resources	785	785
1.5.1	Biomass/Biogas	0	0
1.5.2	Geothermal	0	0
1.5.3	Hydroelectric	785	785
1.5.4	Solar	0	0
1.5.5	Wind	0	0
1.6	Other	0	0

Appalachian Power

Ref. No.	Portfolio	2021	2022
2	Net Generation for the Data Year (MWh)	35,607,798	33,400,899
2.1	Coal	20,786,041	14,226,619
2.2	Natural Gas	4,558,792	4,977,033
2.3	Nuclear	0	0
2.4	Petroleum	0	0
2.5	Total Renewable Energy Resources	1,956,297	2,117,212
2.5.1	Biomass/Biogas	0	0
2.5.2	Geothermal	0	0
2.5.3	Hydroelectric	708,195	745,699
2.5.4	Solar	11,018	68,265
2.5.5	Wind	1,237,084	1,303,248
2.6	Other	8,306,668	12,080,035

Appalachian Power

Ref. No.	Portfolio	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	24,271,076	17,936,505
2.1.i	Coal	19,143,869	12,426,098
2.2.i	Natural Gas	4,588,792	4,977,033
2.3.i	Nuclear	0	0
2.4.i	Petroleum	0	0
2.5.i	Total Renewable Energy Resources	568,415	533,374
2.5.1.i	Biomass/Biogas	0	0
2.5.2.i	Geothermal	0	0
2.5.3.i	Hydroelectric	568,415	533,374
2.5.4.i	Solar	0	0
2.5.5.i	Wind	0	0
2.6.i	Other	0	0

Appalachian Power

Ref. No.	Portfolio	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	11,336,722	15,464,394
2.1.ii	Coal	1,642,172	1,800,521
2.2.ii	Natural Gas	0	0
2.3.ii	Nuclear	0	0
2.4.ii	Petroleum	0	0
2.5.ii	Total Renewable Energy Resources	1,387,882	1,583,838
2.5.1.ii	Biomass/Biogas	0	0
2.5.2.ii	Geothermal	0	0
2.5.3.ii	Hydroelectric	139,780	212,325
2.5.4.ii	Solar	11,018	68,625
2.5.5.ii	Wind	1,237,084	1,303,248
2.6.ii	Other	8,306,668	12,080,035

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

Appalachian Power

Ref. No.	Emissions	2021	2022
5	GHG Emissions: Carbon Dioxide (CO₂) & Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation^{2,3}		
5.1.1	Carbon Dioxide (CO₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	19,935,285	14,314,188
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.821	0.798
5.1.2	Carbon Dioxide Equivalent (CO₂e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	20,283,362	14,415,620
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.836	0.804

² Generation and emissions are adjusted for equity ownership share to reflect the percentage of output owned by reporting entity.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Appalachian Power

Ref. No.	Emissions	2021	2022
5.2	Purchased Power⁴		
5.2.1	Carbon Dioxide (CO₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	5,332,861	7,712,888
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.470	0.499
5.2.2	Carbon Dioxide Equivalent (CO₂e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	5,373,281	7,769,374
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.474	0.502
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	25,268,146	22,027,076
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.710	0.659
5.3.2	Carbon Dioxide Equivalent (CO₂e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	25,656,643	22,184,994
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.721	0.664

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Appalachian Power

Ref. No.	Emissions	2021	2022
5.4	Non-Generation CO₂e Emissions⁵		
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT)	86,789	16,208
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	0.00358	0.00090
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation Basis for Calculation ⁶	Total	Total
6.2	Nitrogen Oxide (NO_x)		
6.2.1	Total NO _x Emissions (MT)	8,783	7,111
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0.000247	0.000213
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)	9,512	8,231
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.000267	0.000246
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	31.1	21.6
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.000001	0.000001

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart W).
If not required to report, leave blank.

⁶ Owned and purchased generation.

MT = metric tons =tonne
1 lb = 453.59 grams
1 tonne = 1,000,000 grams
1 metric ton = 1.1023 short tons

CO₂e is calculated using
the following global warming
potentials (GWPs) from the
IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Kentucky Power

Ref. No.	Portfolio	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	1,468	1,075
1.1	Coal	1,173	780
1.2	Natural Gas	295	295
1.3	Nuclear	0	0
1.4	Petroleum	0	0
1.5	Total Renewable Energy Resources	0	0
1.5.1	Biomass/Biogas	0	0
1.5.2	Geothermal	0	0
1.5.3	Hydroelectric	0	0
1.5.4	Solar	0	0
1.5.5	Wind	0	0
1.6	Other	0	0

Kentucky Power

Ref. No.	Portfolio	2020	2021
2	Net Generation for the Data Year (MWh)	7,131,388	7,157,556
2.1	Coal	3,104,878	2,480,860
2.2	Natural Gas	550,540	504,678
2.3	Nuclear	0	0
2.4	Petroleum	0	0
2.5	Total Renewable Energy Resources	0	0
2.5.1	Biomass/Biogas	0	0
2.5.2	Geothermal	0	0
2.5.3	Hydroelectric	0	0
2.5.4	Solar	0	0
2.5.5	Wind	0	0
2.6	Other	3,475,970	4,172,018

Kentucky Power

Ref. No.	Portfolio	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	3,655,418	2,985,538
2.1.i	Coal	3,104,878	2,480,860
2.2.i	Natural Gas	550,540	504,678
2.3.i	Nuclear	0	0
2.4.i	Petroleum	0	0
2.5.i	Total Renewable Energy Resources	0	0
2.5.1.i	Biomass/Biogas	0	0
2.5.2.i	Geothermal	0	0
2.5.3.i	Hydroelectric	0	0
2.5.4.i	Solar	0	0
2.5.5.i	Wind	0	0
2.6.i	Other	0	0

Kentucky Power

Ref. No.	Portfolio	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	3,475,970	4,172,018
2.1.ii	Coal	0	0
2.2.ii	Natural Gas	0	0
2.3.ii	Nuclear	0	0
2.4.ii	Petroleum	0	0
2.5.ii	Total Renewable Energy Resources	0	0
2.5.1.ii	Biomass/Biogas	0	0
2.5.2.ii	Geothermal	0	0
2.5.3.ii	Hydroelectric	0	0
2.5.4.ii	Solar	0	0
2.5.5.ii	Wind	0	0
2.6.ii	Other	3,475,970	4,172,018

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

Kentucky Power

Ref. No.	Emissions	2020	2021
5	GHG Emissions: Carbon Dioxide (CO₂) & Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation^{2,3}		
5.1.1	Carbon Dioxide (CO₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	3,399,868	3,090,680
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.930	1.035
5.1.2	Carbon Dioxide Equivalent (CO₂e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	3,424,938	3,113,397
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.937	1.043

² Generation and emissions are adjusted for equity ownership share to reflect the percentage of output owned by reporting entity.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Kentucky Power

Ref. No.	Emissions	2021	2022
5.2	Purchased Power⁴		
5.2.1	Carbon Dioxide (CO₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	1,315,254	1,762,000
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.378	0.422
5.2.2	Carbon Dioxide Equivalent (CO₂e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	1,324,987	1,775,039
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.381	0.425
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	4,715,122	4,852,680
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.661	0.678
5.3.2	Carbon Dioxide Equivalent (CO₂e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	4,749,925	4,888,436
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.666	0.683

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Kentucky Power

Ref. No.	Emissions	2021	2022
5.4	Non-Generation CO₂e Emissions⁵		
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT) ⁵	18,367	3,425
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	0.00502	0.00115
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation Basis for Calculation ⁶	Total	Total
6.2	Nitrogen Oxide (NO_x)		
6.2.1	Total NO _x Emissions (MT)	1,519	1,467
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0.000213	0.000205
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)	1,269	1,314
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.000178	0.000184
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	6.6	5.1
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.000001	0.000001

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart W).

If not required to report, leave blank.

⁶ Owned and purchased generation.

MT = metric tons =tonne

1 lb = 453.59 grams

1 tonne = 1,000,000 grams

1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO₂ = 1 N₂O = 298

CH₄ = 25 SF₆ = 22,800

Kingsport Power

Ref. No.	Portfolio	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	0	0
1.1	Coal	0	0
1.2	Natural Gas	0	0
1.3	Nuclear	0	0
1.4	Petroleum	0	0
1.5	Total Renewable Energy Resources	0	0
1.5.1	Biomass/Biogas	0	0
1.5.2	Geothermal	0	0
1.5.3	Hydroelectric	0	0
1.5.4	Solar	0	0
1.5.5	Wind	0	0
1.6	Other	0	0

Kingsport Power

Ref. No.	Portfolio	2021	2022
2	Net Generation for the Data Year (MWh)	1,675,182	1,938,878
2.1	Coal	0	0
2.2	Natural Gas	0	0
2.3	Nuclear	0	0
2.4	Petroleum	0	0
2.5	Total Renewable Energy Resources	0	0
2.5.1	Biomass/Biogas	0	0
2.5.2	Geothermal	0	0
2.5.3	Hydroelectric	0	0
2.5.4	Solar	0	0
2.5.5	Wind	0	0
2.6	Other	1,675,182	1,938,878

Kingsport Power

Ref. No.	Portfolio	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	0	0
2.1.i	Coal	0	0
2.2.i	Natural Gas	0	0
2.3.i	Nuclear	0	0
2.4.i	Petroleum	0	0
2.5.i	Total Renewable Energy Resources	0	0
2.5.1.i	Biomass/Biogas	0	0
2.5.2.i	Geothermal	0	0
2.5.3.i	Hydroelectric	0	0
2.5.4.i	Solar	0	0
2.5.5.i	Wind	0	0
2.6.i	Other	0	0

Kingsport Power

Ref. No.	Portfolio	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	1,675,182	1,938,878
2.1.ii	Coal		
2.2.ii	Natural Gas	0	0
2.3.ii	Nuclear	0	0
2.4.ii	Petroleum	0	0
2.5.ii	Total Renewable Energy Resources	0	0
2.5.1.ii	Biomass/Biogas	0	0
2.5.2.ii	Geothermal	0	0
2.5.3.ii	Hydroelectric	0	0
2.5.4.ii	Solar	0	0
2.5.5.ii	Wind	0	0
2.6.ii	Other	1,675,182	1,938,878

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

Kingsport Power

Ref. No.	Emissions	2021	2022
5	GHG Emissions: Carbon Dioxide (CO₂) & Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation^{2,3}		
5.1.1	Carbon Dioxide (CO₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	0	0
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)	0	0
5.1.2	Carbon Dioxide Equivalent (CO₂e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	0	0
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0	0

² Generation and emissions are adjusted for equity ownership share to reflect the percentage of output owned by reporting entity.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Kingsport Power

Ref. No.	Emissions	2021	2022
5.2	Purchased Power⁴		
5.2.1	Carbon Dioxide (CO₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	633,863	819,301
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.378	0.423
5.2.2	Carbon Dioxide Equivalent (CO₂e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	638,554	825,364
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.381	0.426
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	633,863	819,301
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.378	0.423
5.3.2	Carbon Dioxide Equivalent (CO₂e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	638,554	825,364
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.381	0.426

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Kingsport Power

Ref. No.	Emissions	2021	2022
5.4	Non-Generation CO₂e Emissions⁵		
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT)	0	0
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	0	0
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation Basis for Calculation ⁶	Total	Total
6.2	Nitrogen Oxide (NO_x)		
6.2.1	Total NO _x Emissions (MT)		
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0	0
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)		
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0	0
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	0	0
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0	0

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart W).

If not required to report, leave blank..

⁶ Owned and purchased generation.

MT = metric tons =tonne

1 lb = 453.59 grams

1 tonne = 1,000,000 grams

1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO₂ = 1 N₂O = 298

CH₄ = 25 SF₆ = 22,800

Indiana Michigan Power

Ref. No.	Portfolio	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	4,579	4,972
1.1	Coal	2,227	2,620
1.2	Natural Gas	0	0
1.3	Nuclear	2,296	2,296
1.4	Petroleum	0	0
1.5	Total Renewable Energy Resources	56	56
1.5.1	Biomass/Biogas	0	0
1.5.2	Geothermal	0	0
1.5.3	Hydroelectric	20	20
1.5.4	Solar	36	36
1.5.5	Wind	0	0
1.6	Other	0	0

Indiana Michigan Power

Ref. No.	Portfolio	2021	2022
2	Net Generation for the Data Year (MWh)	27,900,940	29,372,992
2.1	Coal	4,902,926	6,052,758
2.2	Natural Gas	0	0
2.3	Nuclear	17,960,716	16,621,031
2.4	Petroleum	0	0
2.5	Total Renewable Energy Resources	1,261,931	1,486,518
2.5.1	Biomass/Biogas	0	0
2.5.2	Geothermal	0	0
2.5.3	Hydroelectric	83,918	90,051
2.5.4	Solar	48,550	43,714
2.5.5	Wind	1,129,463	1,352,753
2.6	Other	3,775,367	5,212,685

Indiana Michigan Power

Ref. No.	Portfolio	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	22,175,024	21,907,294
2.1.i	Coal	4,081,840	5,152,498
2.2.i	Natural Gas	0	0
2.3.i	Nuclear	17,960,716	16,621,031
2.4.i	Petroleum	0	0
2.5.i	Total Renewable Energy Resources	132,468	133,765
2.5.1.i	Biomass/Biogas	0	0
2.5.2.i	Geothermal	0	0
2.5.3.i	Hydroelectric	83,918	90,051
2.5.4.i	Solar	48,550	43,714
2.5.5.i	Wind	0	0
2.6.i	Other	0	0

Indiana Michigan Power

Ref. No.	Portfolio	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	5,725,916	7,465,698
2.1.ii	Coal	821,086	900,260
2.2.ii	Natural Gas	0	0
2.3.ii	Nuclear	0	0
2.4.ii	Petroleum	0	0
2.5.ii	Total Renewable Energy Resources	1,129,463	1,352,753
2.5.1.ii	Biomass/Biogas	0	0
2.5.2.ii	Geothermal	0	0
2.5.3.ii	Hydroelectric	0	0
2.5.4.ii	Solar	0	0
2.5.5.ii	Wind	1,129,463	1,352,753
2.6.ii	Other	3,775,367	5,212,685

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

Indiana Michigan Power

Ref. No.	Emissions	2021	2022
5	GHG Emissions: Carbon Dioxide (CO₂) & Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation^{2,3}		
5.1.1	Carbon Dioxide (CO₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	4,337,693	5,426,783
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh) 0.625	0.196	0.248
5.1.2	Carbon Dioxide Equivalent (CO₂e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	4,371,884	5,469,618
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.197	0.250

² Generation and emissions are adjusted for equity ownership share to reflect the percentage of output owned by reporting entity.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Indiana Michigan Power

Ref. No.	Emissions	2021	2022
5.2	Purchased Power⁴		
5.2.1	Carbon Dioxide (CO₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	2,497,560	3,463,874
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.436	0.464
5.2.2	Carbon Dioxide Equivalent (CO₂e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	2,517,364	3,491,308
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.440	0.468
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	6,835,253	8,890,657
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.245	0.303
5.3.2	Carbon Dioxide Equivalent (CO₂e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	6,889,248	8,960,926
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.247	0.305

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Indiana Michigan Power

Ref. No.	Emissions	2021	2022
5.4	Non-Generation CO₂e Emissions⁵		
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT)	66,357	11,695
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	0.00299	0.00053
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation Basis for Calculation ⁶	Total	Total
6.2	Nitrogen Oxide (NO_x)		
6.2.1	Total NO _x Emissions (MT)	1,953	2,426
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0.000070	0.000083
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)	2,646	3,388
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.000095	0.000115
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	7.6	9.6
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0	0

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart W).

If not required to report, leave blank..

⁶ Owned and purchased generation.

MT = metric tons =tonne

1 lb = 453.59 grams

1 tonne = 1,000,000 grams

1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO₂ = 1 N₂O = 298

CH₄ = 25 SF₆ = 22,800

Wheeling Power

Ref. No.	Portfolio	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	780	780
1.1	Coal	780	780
1.2	Natural Gas	0	0
1.3	Nuclear	0	0
1.4	Petroleum	0	0
1.5	Total Renewable Energy Resources	0	0
1.5.1	Biomass/Biogas	0	0
1.5.2	Geothermal	0	0
1.5.3	Hydroelectric	0	0
1.5.4	Solar	0	0
1.5.5	Wind	0	0
1.6	Other	0	0

Wheeling Power

Ref. No.	Portfolio	2021	2022
2	Net Generation for the Data Year (MWh)	5,271,244	5,249,058
2.1	Coal	2,384,122	1,750,943
2.2	Natural Gas	0	0
2.3	Nuclear	0	0
2.4	Petroleum	0	0
2.5	Total Renewable Energy Resources	0	0
2.5.1	Biomass/Biogas	0	0
2.5.2	Geothermal	0	0
2.5.3	Hydroelectric	0	0
2.5.4	Solar	0	0
2.5.5	Wind	0	0
2.6	Other	2,887,122	3,498,115

Wheeling Power

Ref. No.	Portfolio	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	2,384,122	1,750,943
2.1.i	Coal	2,384,122	1,750,943
2.2.i	Natural Gas	0	0
2.3.i	Nuclear	0	0
2.4.i	Petroleum	0	0
2.5.i	Total Renewable Energy Resources	0	0
2.5.1.i	Biomass/Biogas	0	0
2.5.2.i	Geothermal	0	0
2.5.3.i	Hydroelectric	0	0
2.5.4.i	Solar	0	0
2.5.5.i	Wind	0	0
2.6.i	Other	0	0

Wheeling Power

Ref. No.	Portfolio	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	2,877,122	3,498,115
2.1.ii	Coal	0	0
2.2.ii	Natural Gas	0	0
2.3.ii	Nuclear	0	0
2.4.ii	Petroleum	0	0
2.5.ii	Total Renewable Energy Resources	0	0
2.5.1.ii	Biomass/Biogas	0	0
2.5.2.ii	Geothermal	0	0
2.5.3.ii	Hydroelectric	0	0
2.5.4.ii	Solar	0	0
2.5.5.ii	Wind	0	0
2.6.ii	Other	2,877,122	3,498,115

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

Wheeling Power

Ref. No.	Emissions	2021	2022
5	GHG Emissions: Carbon Dioxide (CO₂) & Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation^{2,3}		
5.1.1	Carbon Dioxide (CO₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	2,327,533	1,848,734
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.976	1.056
5.1.2	Carbon Dioxide Equivalent (CO₂e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	2,346,258	1,863,604
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.984	1.064

² Generation and emissions are adjusted for equity ownership share to reflect the percentage of output owned by reporting entity.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Wheeling Power

Ref. No.	Emissions	2021	2022
5.2	Purchased Power⁴		
5.2.1	Carbon Dioxide (CO₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	1,289,926	1,659,857
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.447	0.475
5.2.2	Carbon Dioxide Equivalent (CO₂e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	1,300,246	1,673,136
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.450	0.478
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	3,617,459	3,508,591
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.686	0.668
5.3.2	Carbon Dioxide Equivalent (CO₂e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	3,646,504	3,536,740
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.692	0.674

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Wheeling Power

Ref. No.	Emissions	2021	2022
5.4	Non-Generation CO₂e Emissions⁵		
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT)	4,334	792
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	0.00182	0.00045
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation Basis for Calculation ⁶	Total	Total
6.2	Nitrogen Oxide (NO_x)		
6.2.1	Total NO _x Emissions (MT)	867	753
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0.000165	0.000143
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)	873	795
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.000166	0.000151
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	5.2	3.4
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.000001	0.000001

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart W).

If not required to report, leave blank.

⁶ Owned and purchased generation.

MT = metric tons =tonne

1 lb = 453.59 grams

1 tonne = 1,000,000 grams

1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO₂ = 1 N₂O = 298

CH₄ = 25 SF₆ = 22,800

Public Service Company of Oklahoma

Ref. No.	Portfolio	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	3,931	4,380
1.1	Coal	465	465
1.2	Natural Gas	3,244	3,240
1.3	Nuclear	0	0
1.4	Petroleum	0	0
1.5	Total Renewable Energy Resources	222	675
1.5.1	Biomass/Biogas	0	0
1.5.2	Geothermal	0	0
1.5.3	Hydroelectric	0	0
1.5.4	Solar	0	0
1.5.5	Wind	222	675
1.6	Other	0	0

Public Service Company of Oklahoma

Ref. No.	Portfolio	2021	2022
2	Net Generation for the Data Year (MWh)	24,111,243	21,935,780
2.1	Coal	2,327,362	2,433,601
2.2	Natural Gas	6,734,261	5,430,512
2.3	Nuclear	0	0
2.4	Petroleum	0	0
2.5	Total Renewable Energy Resources	4,172,453	5,798,881
2.5.1	Biomass/Biogas	0	0
2.5.2	Geothermal	0	0
2.5.3	Hydroelectric	0	0
2.5.4	Solar	0	0
2.5.5	Wind	4,172,453	5,798,881
2.6	Other	10,877,167	8,272,786

Public Service Company of Oklahoma

Ref. No.	Portfolio	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	6,362,646	8,617,582
2.1.i	Coal	2,327,362	2,433,601
2.2.i	Natural Gas	3,783,419	4,300,616
2.3.i	Nuclear	0	0
2.4.i	Petroleum	0	0
2.5.i	Total Renewable Energy Resources	251,865	1,883,365
2.5.1.i	Biomass/Biogas	0	0
2.5.2.i	Geothermal	0	0
2.5.3.i	Hydroelectric	0	0
2.5.4.i	Solar	0	0
2.5.5.i	Wind	251,865	1,883,365
2.6.i	Other	0	0

Public Service Company of Oklahoma

Ref. No.	Portfolio	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	17,748,597	13,318,198
2.1.ii	Coal	0	0
2.2.ii	Natural Gas	2,950,842	1,129,896
2.3.ii	Nuclear	0	0
2.4.ii	Petroleum	0	0
2.5.ii	Total Renewable Energy Resources	3,920,588	3,915,516
2.5.1.ii	Biomass/Biogas	0	0
2.5.2.ii	Geothermal	0	0
2.5.3.ii	Hydroelectric	0	0
2.5.4.ii	Solar	0	0
2.5.5.ii	Wind	3,920,588	3,915,516
2.6.ii	Other	10,877,167	8,272,786

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

Public Service Company of Oklahoma

Ref. No.	Emissions	2021	2022
5	GHG Emissions: Carbon Dioxide (CO₂) & Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation^{2,3}		
5.1.1	Carbon Dioxide (CO₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	4,630,135	4,827,143
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.728	0.560
5.1.2	Carbon Dioxide Equivalent (CO₂e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	4,652,410	4,849,810
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.731	0.563

² Generation and emissions are adjusted for equity ownership share to reflect the percentage of output owned by reporting entity.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

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 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Public Service Company of Oklahoma

Ref. No.	Emissions	2021	2022
5.2	Purchased Power⁴		
5.2.1	Carbon Dioxide (CO₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	5,744,745	4,317,664
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.324	0.324
5.2.2	Carbon Dioxide Equivalent (CO₂e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	5,777,492	4,340,014
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.326	0.326
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	10,374,880	9,144,807
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.430	0.417
5.3.2	Carbon Dioxide Equivalent (CO₂e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	10,429,902	9,189,824
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.433	0.419

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Public Service Company of Oklahoma

Ref. No.	Emissions	2021	2022
5.4	Non-Generation CO₂e Emissions⁵		
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT)	41,591	7,509
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	0.00654	0.00087
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation Basis for Calculation ⁶	Total	Total
6.2	Nitrogen Oxide (NO_x)		
6.2.1	Total NO _x Emissions (MT)	3,846	5,388
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0.000160	0.000246
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)	4,150	4,305
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.000172	0.000196
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	4.1	4.8
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.000000	0.000000

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart W).

If not required to report, leave blank.

⁶ Owned and purchased generation.

MT = metric tons =tonne

1 lb = 453.59 grams

1 tonne = 1,000,000 grams

1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO₂ = 1 N₂O = 298

CH₄ = 25 SF₆ = 22,800

Southwestern Electric Power Company

Ref. No.	Portfolio	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	5,040	5,585
1.1	Coal	2,368	2,368
1.2	Natural Gas	2,408	2,408
1.3	Nuclear	0	0
1.4	Petroleum	0	0
1.5	Total Renewable Energy Resources	264	809
1.5.1	Biomass/Biogas	0	0
1.5.2	Geothermal	0	0
1.5.3	Hydroelectric	0	0
1.5.4	Solar	0	0
1.5.5	Wind	264	809
1.6	Other	0	0

Southwestern Electric Power Company

Ref. No.	Portfolio	2021	2022
2	Net Generation for the Data Year (MWh)	24,844,803	24,978,854
2.1	Coal	10,949,398	10,642,803
2.2	Natural Gas	4,166,052	4,906,490
2.3	Nuclear	0	0
2.4	Petroleum	0	0
2.5	Total Renewable Energy Resources	1,985,175	3,776,006
2.5.1	Biomass/Biogas	0	0
2.5.2	Geothermal	0	0
2.5.3	Hydroelectric	0	0
2.5.4	Solar	0	0
2.5.5	Wind	1,985,175	3,776,006
2.6	Other	7,744,178	5,653,555

Southwestern Electric Power Company

Ref. No.	Portfolio	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	15,398,934	17,783,597
2.1.i	Coal	10,949,398	10,642,803
2.2.i	Natural Gas	4,147,852	4,884,890
2.3.i	Nuclear	0	0
2.4.i	Petroleum	0	0
2.5.i	Total Renewable Energy Resources	301,684	2,255,904
2.5.1.i	Biomass/Biogas	0	0
2.5.2.i	Geothermal	0	0
2.5.3.i	Hydroelectric	0	0
2.5.4.i	Solar	0	0
2.5.5.i	Wind	301,684	2,255,904
2.6.i	Other	0	0

Southwestern Electric Power Company

Ref. No.	Portfolio	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	9,445,869	7,195,257
2.1.ii	Coal	0	0
2.2.ii	Natural Gas	18,200	21,600
2.3.ii	Nuclear	0	0
2.4.ii	Petroleum	0	0
2.5.ii	Total Renewable Energy Resources	1,683,491	1,520,102
2.5.1.ii	Biomass/Biogas	0	0
2.5.2.ii	Geothermal	0	0
2.5.3.ii	Hydroelectric	0	0
2.5.4.ii	Solar	0	0
2.5.5.ii	Wind	1,683,491	1,520,102
2.6.ii	Other	7,744,178	5,653,555

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

Southwestern Electric Power Company

Ref. No.	Emissions	2021	2022
5	GHG Emissions: Carbon Dioxide (CO₂) & Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation^{2,3}		
5.1.1	Carbon Dioxide (CO₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	13,463,512	13,545,443
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.874	0.762
5.1.2	Carbon Dioxide Equivalent (CO₂e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	13,554,725	13,636,249
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.880	0.767

² Generation and emissions are adjusted for equity ownership share to reflect the percentage of output owned by reporting entity.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Southwestern Electric Power Company

Ref. No.	Emissions	2021	2022
5.2	Purchased Power⁴		
5.2.1	Carbon Dioxide (CO₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	3,280,311	2,653,969
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.347	0.369
5.2.2	Carbon Dioxide Equivalent (CO₂e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	3,302,635	2,671,773
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.350	0.371
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	16,743,823	16,199,412
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.674	0.649
5.3.2	Carbon Dioxide Equivalent (CO₂e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	16,857,360	16,308,022
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.679	0.653

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Southwestern Electric Power Company

Ref. No.	Emissions	2021	2022
5.4	Non-Generation CO₂e Emissions of Sulfur Hexafluoride (SF₆)⁵		
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT)	60,002	11,194
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	0.00390	0.00063
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation Basis for Calculation ⁶	Total	Total
6.2	Nitrogen Oxide (NO_x)		
6.2.1	Total NO _x Emissions (MT)	10,312	9,718
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0.000415	0.000389
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)	14,037	11,682
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.000565	0.000468
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	44.0	38.6
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.000002	0.000002

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart W).

If not required to report, leave blank..

⁶ Owned and purchased generation.

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Ohio Power Company

Ref. No.	Portfolio	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	0	0
1.1	Coal	0	0
1.2	Natural Gas	0	0
1.3	Nuclear	0	0
1.4	Petroleum	0	0
1.5	Total Renewable Energy Resources	0	0
1.5.1	Biomass/Biogas	0	0
1.5.2	Geothermal	0	0
1.5.3	Hydroelectric	0	0
1.5.4	Solar	0	0
1.5.5	Wind	0	0
1.6	Other	0	0

Ohio Power Company

Ref. No.	Portfolio	2021	2022
2	Net Generation for the Data Year (MWh)	13,750,545	19,867,121
2.1	Coal	2,086,131	2,285,276
2.2	Natural Gas	0	0
2.3	Nuclear	0	0
2.4	Petroleum	0	0
2.5	Total Renewable Energy Resources	519,318	583,093
2.5.1	Biomass/Biogas	0	0
2.5.2	Geothermal	0	0
2.5.3	Hydroelectric	0	0
2.5.4	Solar	13,165	12,707
2.5.5	Wind	506,153	570,386
2.6	Other	11,145,096	16,998,752

Ohio Power Company

Ref. No.	Portfolio	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	0	0
2.1.i	Coal	0	0
2.2.i	Natural Gas	0	0
2.3.i	Nuclear	0	0
2.4.i	Petroleum	0	0
2.5.i	Total Renewable Energy Resources	0	0
2.5.1.i	Biomass/Biogas	0	0
2.5.2.i	Geothermal	0	0
2.5.3.i	Hydroelectric	0	0
2.5.4.i	Solar	0	0
2.5.5.i	Wind	0	0
2.6.i	Other	0	0

Ohio Power Company

Ref. No.	Portfolio	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	13,750,545	19,867,121
2.1.ii	Coal	2,086,131	2,285,276
2.2.ii	Natural Gas	0	0
2.3.ii	Nuclear	0	0
2.4.ii	Petroleum	0	0
2.5.ii	Total Renewable Energy Resources	519,318	583,093
2.5.1.ii	Biomass/Biogas	0	0
2.5.2.ii	Geothermal	0	0
2.5.3.ii	Hydroelectric	0	0
2.5.4.ii	Solar	13,165	12,707
2.5.5.ii	Wind	506,153	570,386
2.6.ii	Other	11,145,096	16,998,752

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

Ohio Power Company

Ref. No.	Emissions	2021	2022
5	GHG Emissions: Carbon Dioxide (CO₂) & Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation^{2,3}		
5.1.1	Carbon Dioxide (CO₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	0	13,545,443
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.000	0.000
5.1.2	Carbon Dioxide Equivalent (CO₂e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	0	0
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.000	0.000

² Generation and emissions are adjusted for equity ownership share to reflect the percentage of output owned by reporting entity.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Ohio Power Company

Ref. No.	Emissions	2021	2022
5.2	Purchased Power⁴		
5.2.1	Carbon Dioxide (CO₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	7,039,418	10,580,142
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.512	0.533
5.2.2	Carbon Dioxide Equivalent (CO₂e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	7,096,210	10,664,709
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.516	0.537
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	7,039,418	10,580,142
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.512	0.533
5.3.2	Carbon Dioxide Equivalent (CO₂e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	7,096,210	10,664,709
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.516	0.537

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Ohio Power Company

Ref. No.	Emissions	2021	2022
5.4	Non-Generation CO₂e Emissions of Sulfur Hexafluoride (SF₆)⁵		
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT)	0	0
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	0	0
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation Basis for Calculation ⁶	Total	Total
6.2	Nitrogen Oxide (NO_x)		
6.2.1	Total NO _x Emissions (MT)	1,450	1,417
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0.000105	0.000071
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)	1,339	1,308
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.000097	0.000066
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	0	0
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.000000	0.000000

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart W).

If not required to report, leave blank.

⁶ Owned and purchased generation.

MT = metric tons =tonne

1 lb = 453.59 grams

1 tonne = 1,000,000 grams

1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO₂ = 1 N₂O = 298

CH₄ = 25 SF₆ = 22,800

Energy Supply

Ref. No.	Portfolio	2021	2022
1	Owned Nameplate Generation Capacity at End of Year (MW)	2,378	1,577
1.1	Coal	595	0
1.2	Natural Gas	22	24
1.3	Nuclear	0	0
1.4	Petroleum	0	0
1.5	Total Renewable Energy Resources	1,761	1,533
1.5.1	Biomass/Biogas	0	0
1.5.2	Geothermal	0	0
1.5.3	Hydroelectric	0	0
1.5.4	Solar	326	333
1.5.5	Wind	1,435	1,200
1.6	Other	0	20

Energy Supply

Ref. No.	Portfolio	2021	2022
2	Net Generation for the Data Year (MWh)	8,586,644	9,909,335
2.1	Coal	3,060,991	3,949,718
2.2	Natural Gas	37,043	73,480
2.3	Nuclear	0	0
2.4	Petroleum	0	0
2.5	Total Renewable Energy Resources	5,488,610	5,886,137
2.5.1	Biomass/Biogas	0	0
2.5.2	Geothermal	0	0
2.5.3	Hydroelectric	207,830	0
2.5.4	Solar	697,097	797,034
2.5.5	Wind	4,583,683	5,089,103
2.6	Other	0	0

Energy Supply

Ref. No.	Portfolio	2021	2022
2.i	Owned Net Generation for the Data Year (MWh)	8,319,850	7,693,131
2.1.i	Coal	3,060,991	2,171,784
2.2.i	Natural Gas	37,043	73,480
2.3.i	Nuclear	0	0
2.4.i	Petroleum	0	0
2.5.i	Total Renewable Energy Resources	5,221,816	5,447,867
2.5.1.i	Biomass/Biogas	0	0
2.5.2.i	Geothermal	0	0
2.5.3.i	Hydroelectric	207,830	0
2.5.4.i	Solar	697,097	797,034
2.5.5.i	Wind	4,316,889	4,650,833
2.6.i	Other	0	0

Energy Supply

Ref. No.	Portfolio	2021	2022
2.ii	Purchased Net Generation for the Data Year (MWh)¹	266,794	2,216,204
2.1.ii	Coal	0	1,777,934
2.2.ii	Natural Gas	0	0
2.3.ii	Nuclear	0	0
2.4.ii	Petroleum	0	0
2.5.ii	Total Renewable Energy Resources	266,794	438,270
2.5.1.ii	Biomass/Biogas	0	0
2.5.2.ii	Geothermal	0	0
2.5.3.ii	Hydroelectric	0	0
2.5.4.ii	Solar	0	0
2.5.5.ii	Wind	266,794	438,270
2.6.ii	Other	0	0

¹ Purchased Net Generation reporting methodology was updated and is applied to both 2022 and 2021 data. 2021 data has been restated to align with this new methodology. Methodology now includes all purchased power from unknown and known sources.

Energy Supply

Ref. No.	Emissions	2021	2022
5	GHG Emissions: Carbon Dioxide (CO₂) & Carbon Dioxide Equivalent (CO₂e)		
5.1	Owned Generation^{2,3}		
5.1.1	Carbon Dioxide (CO₂)		
5.1.1.1	Total Owned Generation CO ₂ Emissions (MT)	2,897,133	2,024,277
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.348	0.263
5.1.2	Carbon Dioxide Equivalent (CO₂e)		
5.1.2.1	Total Owned Generation CO ₂ e Emissions (MT)	2,920,515	2,040,558
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.351	0.265

² Generation and emissions are adjusted for equity ownership share to reflect the percentage of output owned by reporting entity.

³ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subparts C and D).

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:
 CO₂ = 1 N₂O = 298
 CH₄ = 25 SF₆ = 22,800

Energy Supply

Ref. No.	Emissions	2021	2022
5.2	Purchased Power⁴		
5.2.1	Carbon Dioxide (CO₂)		
5.2.1.1	Total Purchased Generation CO ₂ Emissions (MT)	0	1,685,551
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.000	0.761
5.2.2	Carbon Dioxide Equivalent (CO₂e)		
5.2.2.1	Total Purchased Generation CO ₂ e Emissions (MT)	0	1,711,705
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.000	0.772
5.3	Owned Generation + Purchased Power		
5.3.1	Carbon Dioxide (CO₂)		
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions (MT)	2,897,133	3,709,828
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh)	0.337	0.374
5.3.2	Carbon Dioxide Equivalent (CO₂e)		
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions (MT)	2,920,515	3,752,263
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh)	0.340	0.379

⁴ Purchased power emissions have been calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- E-Grid Emission Factors used

MT = metric tons =tonne
 1 lb = 453.59 grams
 1 tonne = 1,000,000 grams
 1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO ₂ = 1	N ₂ O = 298
CH ₄ = 25	SF ₆ = 22,800

Energy Supply

Ref. No.	Emissions	2021	2022
5.4	Non-Generation CO₂e Emissions⁵		
5.4.1	Fugitive CO ₂ e Emissions of Sulfur Hexafluoride (MT)	121,952	23,098
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆ (MT/Net MWh)	0.01466	0.00300
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)		
6.1	Generation Basis for Calculation ⁶	Total	Total
6.2	Nitrogen Oxide (NO_x)		
6.2.1	Total NO _x Emissions (MT)	1,199	589
6.2.2	Total NO _x Emissions Intensity (MT/Net MWh)	0.000140	0.000059
6.3	Sulfur Dioxide (SO₂)		
6.3.1	Total SO ₂ Emissions (MT)	2,934	1,650
6.3.2	Total SO ₂ Emissions Intensity (MT/Net MWh)	0.000342	0.000167
6.4	Mercury (Hg)		
6.4.1	Total Hg Emissions (kg)	6.8	7.6
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	0.000001	0.000001

⁵ As reported to EPA under the mandatory GHG Reporting Protocols (40 CFR Part 98, Subpart W).

If not required to report, leave blank.

⁶ Owned and purchased generation.

MT = metric tons =tonne

1 lb = 453.59 grams

1 tonne = 1,000,000 grams

1 metric ton = 1.1023 short tons

CO₂e is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

CO₂ = 1 N₂O = 298

CH₄ = 25 SF₆ = 22,800

Appendix

Ref. No.	Metric: Portfolio	Definition	Units	Period	Source
1	Owned Nameplate Generation Capacity at End of Year (MW)	Provide generation capacity data that is consistent with other external reporting by your company. The alternative default is to use the summation of the nameplate capacity of installed owned generation in the company portfolio, as reported to the U.S. Energy Information Administration (EIA) on Form 860 Generator Information. Note that data should be provided in terms of equity ownership for shared facilities. Nameplate capacity is defined as the maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer. Installed generator nameplate capacity is commonly expressed in megawatts (MW) and is usually indicated on a nameplate physically attached to the generator.	Megawatt (MW): One million watts of electricity	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary Form 860 Instructions: www.eia.gov/survey/form/eia_860/instructions.pdf
1.1	Coal	Nameplate capacity of generation resources that produce electricity through the combustion of coal (a readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time).	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary

Appendix

Ref. No.	Metric: Portfolio	Definitions	Units	Period	Source
1.2	Natural Gas	Nameplate capacity of generation resources that produce electricity through the combustion of natural gas (a gaseous mixture of hydrocarbon compounds, the primary one being methane).	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
1.3	Nuclear	Nameplate capacity of generation resources that produce electricity through the use of thermal energy released from the fission of nuclear fuel in a reactor.	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
1.4	Petroleum	Nameplate capacity of generation resources that produce electricity through the combustion of petroleum (a broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids).	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary

Appendix

Ref. No.	Metric: Portfolio	Definitions	Units	Period	Source
1.5	Total Renewable Energy Resources	Energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include biomass, hydro, geothermal, solar, wind, ocean thermal, wave action, and tidal action.	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
1.5.1	Biomass/ Biogas	Nameplate capacity of generation resources that produce electricity through the combustion of biomass (an organic non-fossil material of biological origin constituting a renewable energy source).	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
1.5.2	Geothermal	Nameplate capacity of generation resources that produce electricity through the use of thermal energy released from hot water or steam extracted from geothermal reservoirs in the earth's crust.	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
1.5.3	Hydroelectric	Nameplate capacity of generation resources that produce electricity through the use of flowing water.	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary

Appendix

Ref. No.	Metric: Portfolio	Definitions	Units	Period	Source
1.5.4	Solar	Nameplate capacity of generation resources that produce electricity through the use of the radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
1.5.5	Wind	Nameplate capacity of generation resources that produce electricity through the use of kinetic energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators.	MW	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
1.6	Other	Nameplate capacity of generation resources that are not defined above.	MW	End of Year	

Appendix

Ref. No.	Metric: Portfolio	Definition	Units	Period	Source
2	Net Generation for the data year (MWh) - Broken down by Owned, Purchased and Total	<p>Net generation is defined as the summation of the amount of gross generation less the electrical energy consumed at the generating station(s) for station service or auxiliaries. Data can be provided in terms of total, owned, and/or purchased, depending on how the company prefers to disseminate data in this template. Provide net generation data that is consistent with other external reporting by your company. The alternative default is to provide owned generation data as reported to EIA on Form 923 Schedule 3 and align purchased power data with the Federal Energy Regulatory Commission (FERC) Form 1 Purchased Power Schedule, Reference Pages numbers 326-327. Note: Electricity required for pumping at pumped-storage plants is regarded as electricity for station service and is deducted from gross generation.</p>	Megawatt hour (MWh): One thousand kilowatt-hours or one million watt-hours	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary Form 923 Instructions: www.eia.gov/survey/form/eia_923/instructions.pdf
2.1	Coal	<p>Net electricity generated by the combustion of coal (a readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time).</p>	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary

Appendix

Ref. No.	Metric: Portfolio	Definition	Units	Period	Source
2.2	Natural Gas	Net electricity generated by the combustion of natural gas (a gaseous mixture of hydrocarbon compounds, the primary one being methane).	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
2.3	Nuclear	Net electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
2.4	Petroleum	Net electricity generated by the combustion of petroleum (a broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids).	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary

Appendix

Ref. No.	Metric: Portfolio	Definition	Units	Period	Source
2.5	Total Renewable Energy Resources	Energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include biomass, hydro, geothermal, solar, wind, ocean thermal, wave action, and tidal action.	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
2.5.1	Biomass/ Biogas	Net electricity generated by the combustion of biomass (an organic non-fossil material of biological origin constituting a renewable energy source).	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
2.5.2	Geothermal	Net electricity generated by the use of thermal energy released from hot water or steam extracted from geothermal reservoirs in the earth's crust.	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
2.5.3	Hydroelectric	Net electricity generated by the use of flowing water.	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary

Appendix

Ref. No.	Metric: Portfolio	Definition	Units	Period	Source
2.5.4	Solar	Net electricity generated by the use of the radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
2.5.5	Wind	Net electricity generated by the use of kinetic energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators.	MWh	Annual	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
2.6	Other	Net electricity generated by other resources that are not defined above. If applicable, this metric should also include market purchases where the generation resource is unknown.	MWh	Annual	

Appendix

Ref. No.	Metric: Portfolio	Definition	Units	Period	Source
3	Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters				
3.1	Total Annual Capital Expenditures	Align annual capital expenditures with data reported in recent investor presentations. A capital expenditure is the use of funds or assumption of a liability in order to obtain physical assets that are to be used for productive purposes for at least one year. This type of expenditure is made in order to expand the productive or competitive posture of a business.	Nominal Dollars	Annual	Accounting Tools, Q&A: www.accountingtools.com/questions-and-answers/what-is-a-capital-expenditure
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)	Incremental Annual Electricity Savings for the reporting year as reported to EIA on Form 861. Incremental Annual Savings for the reporting year are those changes in energy use caused in the current reporting year by: (1) new participants in DSM programs that operated in the previous reporting year, and (2) participants in new DSM programs that operated for the first time in the current reporting year. A "New program" is a program for which the reporting year is the first year the program achieved savings, regardless of when program development and expenditures began.	MWh	End of Year	U.S. Energy Information Administration, Form EIA-861 Annual Electric Power Industry Report Instructions: www.eia.gov/survey/form/eia_861/instructions.pdf

Appendix

Ref. No.	Metric: Portfolio	Definition	Units	Period	Source
3.3	Incremental Annual Investment in Electric EE Programs (Nominal Dollars)	Total annual investment in electric energy efficiency programs as reported to EIA on Form 861.	Nominal Dollars	End of Year	U.S. Energy Information Administration, Form EIA-861 Annual Electric Power Industry Report Instructions: www.eia.gov/survey/form/eia_861/instructions.pdf
3.4	Percent of Total Electric Customers with Smart Meters (At End of Year)	Number of electric smart meters installed at end-use customer locations, divided by number of total electric meters installed at end-use customer locations. Smart meters are defined as electricity meters that measure and record usage data at a minimum, in hourly intervals, and provide usage data to both consumers and energy companies at least once daily. Align reporting with EIA Form 861 meter data, which lists all types of meter technology used in the system as well as total meters in the system.	Percent	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary

Appendix

Ref. No.	Metric: Portfolio	Definition	Units	Period	Source
4	Retail Electric Customer Count (At End of Year)	Electric customer counts should be aligned with the data provided to EIA on Form 861 - Sales to Utility Customers.			U.S. Energy Information Administration, Form EIA-861 Annual Electric Power Industry Report Instructions: www.eia.gov/survey/form/eia_861/instructions.pdf
4.1	Commercial	An energy-consuming sector that consists of service-providing facilities and equipment of businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. It also includes sewage treatment facilities. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the activities of the above-mentioned commercial establishments.	Number of end-use retail customers receiving electricity (Individual homes and businesses count as one)	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary

Appendix

Ref. No.	Metric: Portfolio	Definition	Units	Period	Source
4.2	Industrial	An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity manufacturing (NAICS codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); and construction (NAICS code 23). Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the above-mentioned industrial activities. Various EIA programs differ in sectoral coverage.	Number of end-use retail customers receiving electricity (Individual homes and businesses count as one)	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary
4.3	Commercial	An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters. Note: Various EIA programs differ in sectoral coverage.	Number of end-use retail customers receiving electricity (Individual homes and businesses count as one)	End of Year	U.S. Energy Information Administration, Online Glossary: www.eia.gov/tools/glossary

Appendix

Ref. No.	Metric: Emissions	Definition	Units	Period	Source
5	GHG Emissions: Carbon Dioxide (CO₂) and Carbon Dioxide Equivalent (CO₂e)				
5.1	Owned Generation^{1,2,3}				
5.1.1	Carbon Dioxide (CO₂)				
5.1.1.1	Total Owned Generation CO ₂ Emissions	Total direct CO ₂ emissions from company equity-owned fossil fuel combustion generation in accordance with EPA's GHG Reporting Program (40 CFR, part 98, Subpart C – General Stationary Fuel Combustion and Subpart D – Electricity Production), using a continuous emission monitoring system (CEMS) or other approved methodology.	Metric Tons	Annual	U.S. Environmental Protection Agency, Greenhouse Gas Reporting Program (40 CFR, part 98, Subparts C and D)
5.1.1.2	Total Owned Generation CO ₂ Emissions Intensity	Total direct CO ₂ emissions from 5.1.1.1, divided by total MWh of owned net generation reported in the Utility Portfolio section.	Metric Tons/ Net MWh	Annual	

Appendix

Ref. No.	Metric: Emissions	Definition	Units	Period	Source
5.1.2	Carbon Dioxide Equivalent (CO ₂ e)				
5.1.2.1	Total Owned Generation CO ₂ e Emissions	Total direct CO ₂ e emissions (CO ₂ , CH ₄ , and N ₂ O) from company equity-owned fossil fuel combustion generation in accordance with EPA's GHG Reporting Program (40 CFR, part 98, Subpart C – General Stationary Fuel Combustion and Subpart D – Electricity Production), using a continuous emission monitoring system (CEMS) or other approved methodology.	Metric Tons	Annual	U.S. Environmental Protection Agency, Greenhouse Gas Reporting Program (40 CFR, part 98, Subparts C and D)
5.1.2.2	Total Owned Generation CO ₂ e Emissions Intensity	Total direct CO ₂ e emissions from 5.1.2.1, divided by total MWh of owned net generation reported in the Utility Portfolio section.	Metric Tons/ Net MWh	Annual	

Appendix

Ref. No.	Metric: Emissions	Definition	Units	Period	Source
5.2	Purchased Power ⁴				
5.2.1	Carbon Dioxide (CO ₂)				
5.2.1.1	Total Purchased Generation CO ₂ Emissions	<p>Purchased power CO₂ emissions should be calculated using the most relevant and accurate of the following methods:</p> <p>(1) For direct purchases, such as PPAs, use the direct emissions data as reported to EPA.</p> <p>(2) For market purchases where emissions attributes are unknown, use applicable regional or national emissions rate:</p> <ul style="list-style-type: none"> - ISO/RTO-level emission factors - Climate Registry emission factors - E-Grid emission factors 	Metric Tons	Annual	
5.2.1.2	Total Purchased Generation CO ₂ Emissions Intensity	Total purchased power CO ₂ emissions from 5.2.1.1, divided by total MWh of purchased net generation reported in the Utility Portfolio section.	Metric Tons/ Net MWh	Annual	

Appendix

Ref. No.	Metric: Emissions	Definition	Units	Period	Source
5.2.2	Carbon Dioxide Equivalent (CO ₂ e)				
5.2.2.1	Total Purchased Generation CO ₂ e Emissions	<p>Purchased power CO₂e emissions should be calculated using the most relevant and accurate of the following methods:</p> <p>(1) For direct purchases, such as PPAs, use the direct emissions data as reported to EPA.</p> <p>(2) For market purchases where emissions attributes are unknown, use applicable regional or national emissions rate:</p> <ul style="list-style-type: none"> - ISO/RTO-level emission factors - Climate Registry emission factors - E-Grid emission factors 	Metric Tons	Annual	
5.2.2.2	Total Purchased Generation CO ₂ e Emissions Intensity	Total purchased power CO ₂ e emissions from 5.2.2.1, divided by total MWh of purchased net generation reported in the Utility Portfolio section.	Metric Tons/ Net MWh	Annual	

Appendix

Ref. No.	Metric: Emissions	Definition	Units	Period	Source
5.3	Owned Generation + Purchased Power				
5.3.1	Carbon Dioxide (CO ₂)				
5.3.1.1	Total Owned + Purchased Generation CO ₂ Emissions	Sum of total CO ₂ emissions reported under 5.1.1.1 and 5.2.1.1.	Metric Tons	Annual	
5.3.1.2	Total Owned + Purchased Generation CO ₂ Emissions Intensity	Total emissions from 5.3.1.1, divided by total MWh of owned and purchased net generation reported in the Utility Portfolio section.	Metric Tons/ Net MWh	Annual	
5.3.2	Carbon Dioxide Equivalent (CO ₂ e)	Sum of total CO ₂ e emissions reported under 5.1.2.1 and 5.2.2.1.			
5.3.2.1	Total Owned + Purchased Generation CO ₂ e Emissions	Sum of total CO ₂ e emissions reported under 5.1.2.1 and 5.2.2.1.	Metric Tons	Annual	

Appendix

Ref. No.	Metric: Emissions	Definition	Units	Period	Source
5.3.2.2	Total Owned + Purchased Generation CO ₂ e Emissions Intensity	Total emissions from 5.3.2.1, divided by total MWh of owned and purchased net generation reported in the Utility Portfolio section.	Metric Tons/ Net MWh	Annual	
5.4	Non-Generation CO₂e Emissions of Sulfur Hexafluoride (SF₆)				
5.4.1	Total CO ₂ e Emissions of SF ₆	Total CO ₂ e emissions of SF ₆ in accordance with EPA's GHG Reporting Program (40 CFR Part 98, Subpart DD).	Metric Tons	Annual	U.S. Environmental Protection Agency, Greenhouse Gas Reporting Program (40 CFR, part 98, Subpart DD)
5.4.2	Leak Rate of CO ₂ e Emissions of SF ₆	Leak rate of CO ₂ e emissions of SF ₆ in accordance with EPA's GHG Reporting Program (40 CFR Part 98, Subpart DD).	Metric Tons/ Net MWh	Annual	U.S. Environmental Protection Agency, Greenhouse Gas Reporting Program (40 CFR, part 98, Subpart DD)

Appendix

Ref. No.	Metric: Emissions	Definition	Units	Period	Source
6	Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg)				
6.1	Generation Basis for Calculation	Indicate the generation basis for calculating SO ₂ , NO _x , and Hg emissions and intensity. Fossil: Fossil Fuel Generation Only Total: Total System Generation Other: Other (please specify in comment section)			
6.2	Nitrogen Oxide (NO_x)				
6.2.1	Total NO _x Emissions	Total NO _x emissions from company equity-owned fossil fuel combustion generation. In accordance with EPA's Acid Rain Reporting Program (40 CFR, part 75) or regulatory equivalent.	Metric Tons	Annual	U.S. Environmental Protection Agency, Acid Rain Reporting Program (40 CFR, part 75)
6.2.2	Total NO _x Emissions Intensity	Total from above, divided by the MWh of generation basis as indicated in 6.1.	Metric Tons/ Net MWh	Annual	

Appendix

Ref. No.	Metric: Emissions	Definition	Units	Period	Source
6.3	Sulfur Dioxide (SO₂)				
6.3.1	Total SO ₂ Emissions	Total SO ₂ emissions from company equity-owned fossil fuel combustion generation. In accordance with EPA's Acid Rain Reporting Program (40 CFR, part 75) or regulatory equivalent.	Metric Tons	Annual	U.S. Environmental Protection Agency, Acid Rain Reporting Program (40 CFR, part 75)
6.3.2	Total SO ₂ Emissions Intensity	Total from above, divided by the MWh of generation basis as indicated in 6.1.	Metric Tons/ Net MWh	Annual	
6.4	Mercury (Hg)				
6.4.1	Total Hg Emissions	Total Mercury emissions from company equity-owned fossil fuel combustion generation. Preferred methods of measurement are performance-based, direct measurement as outlined in the EPA Mercury and Air Toxics Standard (MATS). In the absence of performance-based measures, report value aligned with Toxics Release Inventory (TRI) or regulatory equivalent for international operations.	Kilograms	Annual	EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report
6.4.2	Total Hg Emissions Intensity	Total from above, divided by the MWh of generation basis as indicated in 6.1.	Kilograms/ Net MWh	Annual	

Appendix

Ref. No.	Metric: Resources	Definition	Units	Period	Source
7	Human Resources				
7.1	Total Number of Employees	Average number of employees over the year. To calculate the annual average number of employees: (1) Calculate the total number of employees your establishment paid for all periods. Add the number of employees your establishment paid in every pay period during the data year. Count all employees that you paid at any time during the year and include full-time, part-time, temporary, seasonal, salaried, and hourly workers. Note that pay periods could be monthly, weekly, bi-weekly, and so on. (2) Divide the total number of employees (from step 1) by the number of pay periods your establishment had in during the data year. Be sure to count any pay periods when you had no (zero) employees. (3) Round the answer you computed in step 2 to the next highest whole number.	Number of Employees	Annual	U.S. Department of Labor, Bureau of Labor Statistics, Steps to estimate annual average number of employees: www.bls.gov/respondents/iif/annualavghours.htm EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report
7.2	Percentage of Women in Total Workforce	Percentage of women (defined as employees who identify as female) in workforce.	Percent of Employees	Annual	U.S. Equal Employment Opportunity Commission, EEO Terminology: www.archives.gov/eoo/terminology.html EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report

Appendix

Ref. No.	Metric: Resources	Definition	Units	Period	Source
7.3	Percentage of Minorities in Total Workforce	<p>Percentage of minorities in workforce. Minority employees are defined as "the smaller part of a group. A group within a country or state that differs in race, religion or national origin from the dominant group. Minority is used to mean four particular groups who share a race, color or national origin." These groups are: "(1) American Indian or Alaskan Native. A person having origins in any of the original peoples of North America, and who maintain their culture through a tribe or community; (2) Asian or Pacific Islander. A person having origins in any of the original people of the Far East, Southeast Asia, India, or the Pacific Islands. These areas include, for example, China, India, Korea, the Philippine Islands, and Samoa; (3) Black (except Hispanic). A person having origins in any of the black racial groups of Africa; (4) Hispanic. A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race."</p>	Percent of Employees	Annual	<p>U.S. Equal Employment Opportunity Commission, EEO Terminology: www.archives.gov/eo/terminology.html</p> <p>EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report</p>
7.4	Total Number of Board of Directors/ Trustees	<p>Average number of employees on the Board of Directors/Trustees over the year.</p>	Number of Employees	Annual	

Appendix

Ref. No.	Metric: Resources	Definition	Units	Period	Source
7.5	Percentage of Women on Board of Directors/ Trustees	Percentage of women (defined as employees who identify as female) on Board of Directors/Trustees.	Percent of Employees	Annual	U.S. Equal Employment Opportunity Commission, EEO Terminology: www.archives.gov/eo/terminology.html EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report
7.6	Percentage of Minorities on Board of Directors/ Trustees	Percentage of minorities on Board of Directors/ Trustees. Minority employees are defined as "the smaller part of a group. A group within a country or state that differs in race, religion or national origin from the dominant group. Minority is used to mean four particular groups who share a race, color or national origin." These groups are: "(1) American Indian or Alaskan Native. A person having origins in any of the original peoples of North America, and who maintain their culture through a tribe or community; (2) Asian or Pacific Islander. A person having origins in any of the original people of the Far East, Southeast Asia, India, or the Pacific Islands. These areas include, for example, China, India, Korea, the Philippine Islands, and Samoa; (3) Black (except Hispanic). A person having origins in any of the black racial groups of Africa; (4) Hispanic. A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race."	Percent of Employees	Annual	U.S. Equal Employment Opportunity Commission, EEO Terminology: www.archives.gov/eo/terminology.html EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report

Appendix

Ref. No.	Metric: Resources	Definition	Units	Period	Source
7.7	Employee Safety Metrics				
7.7.1	Recordable Incident Rate	<p>Number of injuries or illnesses x 200,000 / Number of employee labor hours worked. Injury or illness is recordable if it results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. You must also consider a case to meet the general recording criteria if it involves a significant injury or illness diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness. Record the injuries and illnesses of all employees on your payroll, whether they are labor, executive, hourly, salary, part-time, seasonal, or migrant workers. You also must record the recordable injuries and illnesses that occur to employees who are not on your payroll if you supervise these employees on a day-to-day basis. If your business is organized as a sole proprietorship or partnership, the owner or partners are not considered employees for recordkeeping purposes. For temporary employees, you must record these injuries and illnesses if you supervise these employees on a day-to-day basis. If the contractor's employee is under the day-to-day supervision of the contractor, the contractor is responsible for recording the injury or illness. If you supervise the contractor employee's work on a day-to-day basis, you must record the injury or illness.</p>	Percent	Annual	<p>U.S. Department of Labor, Occupational Health and Safety Administration, OSHA Recordable Incidents.</p> <p>EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report</p>

Appendix

Ref. No.	Metric: Resources	Definition	Units	Period	Source
7.7.2	Lost-time Case Rate	Calculated as: Number of lost-time cases x 200,000 / Number of employee labor hours worked. Only report for employees of the company as defined for the "recordable incident rate for employees" metric. A lost-time incident is one that resulted in an employee's inability to work the next full work day.	Percent	Annual	U.S. Department of Labor, Occupational Health and Safety Administration, OSHA Recordable Incidents. EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report
7.7.3	Days Away, Restricted, and Transfer (DART) Rate	Calculated as: Total number of DART incidents x 200,000 / Number of employee labor hours worked. A DART incident is one in which there were one or more lost days or one or more restricted days, or one that resulted in an employee transferring to a different job within the company.	Percent	Annual	U.S. Department of Labor, Occupational Health and Safety Administration, OSHA Recordable Incidents. EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report
7.7.4	Work-related Fatalities	Total employee fatalities. Record for all employees on your payroll, whether they are labor, executive, hourly, salary, part-time, seasonal, or migrant workers. Include fatalities to those that occur to employees who are not on your payroll if you supervise these employees on a day-to-day basis. For temporary employees, report fatalities if you supervise these employees on a day-to-day basis.	Number of Employees	Annual	U.S. Department of Labor, Occupational Health and Safety Administration, OSHA Recordable Incidents. EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report

Appendix

Ref. No.	Metric: Resources	Definition	Units	Period	Source
8	Fresh Water Resources				
8.1	Water Withdrawals - Consumptive (Millions of Gallons)	Amount of freshwater consumed for use in thermal generation. "Freshwater" includes water sourced from fresh surface water, groundwater, rain water, and fresh municipal water. Do NOT include recycled, reclaimed, or gray water. Water consumption is defined as water that is not returned to the original water source after being withdrawn, including evaporation to the atmosphere.	Millions of Gallons	Annual	Partially sourced from EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report
8.2	Water Withdrawals - Non-Consumptive (Millions of Gallons)	Amount of freshwater consumed for use in thermal generation."Freshwater" includes water sourced from fresh surface water, groundwater, rain water, and fresh municipal water. Do NOT include recycled, reclaimed, or gray water. Information on organizational water withdrawal may be drawn from water meters, water bills, calculations derived from other available water data or (if neither water meters nor bills or reference data exist) the organization's own estimates.	Millions of Gallons	Annual	Partially sourced from EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report

Appendix

Ref. No.	Metric: Resources	Definition	Units	Period	Source
8.3	Water Withdrawals - Consumptive (Millions of Gallons/Net MWh)	Rate of freshwater consumed for use in thermal generation. "Freshwater" includes water sourced from fresh surface water, groundwater, rain water, and fresh municipal water. Do NOT include recycled, reclaimed, or gray water. Water consumption is defined as water that is not returned to the original water source after being withdrawn, including evaporation to the atmosphere. Divide millions of gallons by equity-owned total net generation from all electric generation as reported under Metric 2, Net Generation for the data year (MWh).	Millions of Gallons/Net MWh	Annual	Partially sourced from EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report
8.4	Water Withdrawals - Non-Consumptive (Millions of Gallons/Net MWh)	Rate of fresh water withdrawn, but not consumed, for use in thermal generation."Freshwater" includes water sourced from fresh surface water, groundwater, rain water, and fresh municipal water. Do NOT include recycled, reclaimed, or gray water. Information on organizational water withdrawal may be drawn from water meters, water bills, calculations derived from other available water data or (if neither water meters nor bills or reference data exist) the organization's own estimates. Divide millions of gallons by equity-owned total net generation from all electric generation as reported under Metric 2, Net Generation for the data year (MWh).	Millions of Gallons/Net MWh	Annual	Partially sourced from EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report

Appendix

Ref. No.	Metric: Resources	Definition	Units	Period	Source
9	Waste Products				
9.1	Amount of Hazardous Waste Manifested for Disposal	Metric tons of hazardous waste, as defined by the Resource Conservation and Recovery Act (RCRA), manifested for disposal at a Treatment Storage and Disposal (TSD) facility. Methods of disposal include disposing to landfill, surface impoundment, waste pile, and land treatment units. Hazardous wastes include either listed wastes (F, K, P and U lists) or characteristic wastes (wastes which exhibit at least one of the following characteristics — ignitability, corrosivity, reactivity, toxicity). Include hazardous waste from all company operations including generation, transmissions, distribution, and other operations.	Metric Tons	Annual	Partially sourced from EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report
9.2	Percent of Coal Combustion Products Beneficially Used	Percent of coal combustion products (CCPs) - fly ash, bottom ash, boiler slag, flue gas desulfurization materials, scrubber bi-product - diverted from disposal into beneficial uses, including being sold. Include any CCP that is generated during the data year and stored for beneficial use in a future year. Only include CCP generated at company equity-owned facilities. If no weight data are available, estimate the weight using available information on waste density and volume collected, mass balances, or similar information.	Percent	Annual	Partially sourced from EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report