# AEP'S 2021
# EEI ESG/SUSTAINABILITY REPORT

AMERICAN ELECTRIC POWER

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## Qualitative Report



## Quantitative Report (aggregate & by Operating Company)



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# ABOUT AEP

**American Electric Power, based in Columbus, Ohio, is focused on building a smarter energy infrastructure and delivering new technologies and custom energy solutions to our customers. AEP's approximately 16,800 employees operate and maintain the nation's largest electricity transmission system and more than 223,000 miles of distribution lines to efficiently deliver safe, reliable power to nearly 5.5 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 5,500 megawatts of renewable energy. 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, AEP Energy Partners, AEP OnSite Partners, and AEP Renewables, which provide innovative competitive energy solutions nationwide. For more information, visit aep.com.**

## AEP'S STRATEGY FOR A CLEAN ENERGY FUTURE

The security and reliability of the electric power system protects our nation's interests, and, increasingly, so does a cleaner energy future. Achieving America's clean energy objectives requires a transformation of the electric sector. Our smart investments in clean energy today — including renewables and advanced technologies — aim to stabilize energy costs for customers and stimulate economic growth in the future.

AEP's Future Forward strategy for clean energy growth will transform our generating capacity portfolio from a majority coal-fueled resource base to a majority renewable portfolio by 2030. We continuously review our resource needs for each of our regulated operating companies. We are proposing to add nearly 16,600 megawatts of new, clean wind and solar generation to our fleet by 2030. This will grow our renewable generating portfolio to 51% of our total capacity.

We are positioned to be an industry leader in the regulated clean energy space. This is reflected in our capital investment plans with the bulk earmarked for regulated businesses and renewables between 2021-2025. This includes $26.7 billion

## Advancing AEP's Clean Energy Transformation

Proposing to add nearly **16,600 MW** of new, clean wind and solar generation by 2030

By 2030, AEP's renewable generating portfolio will represent **51% of our total capacity**

**72% of our capital investments** allocated to modernize the energy grid (from 2021 through 2025)

Carbon Emission Reduction Goals: **80% reduction by 2030, Net-Zero by 2050** (from 2000 baseline)

**5,574 MW planned reduction in coal capacity** (from 2021 through 2030)

for transmission and distribution modernization projects and technologies to better serve customers through improved reliability and resilience.

During this same period, we plan to invest $2.8 billion in regulated renewable generation and $2.1 billion in competitive, contracted renewable projects. The capital plan will evolve as we identify renewable projects and achieve regulatory approvals from our jurisdictions.

Regulatory support for AEP's largest renewable project to date — North Central Wind Energy Facilities (NCWEF) — adds momentum to our clean energy transformation. In April 2021, the first of three NCWEF wind farms for 199 MW began commercial operation. In total, NCWEF will deliver 1,485 MW of clean energy to customers of Southwestern Electric Power Company and Public Service Company of Oklahoma in Arkansas, Louisiana and Oklahoma.

At the core of our transformation must be reliability, resilience and affordability of the electric power system. Unprecedented cold weather, snow and ice in early 2021 stretching from Texas to West Virginia demonstrated the critical nature of our nation's energy supply. Extreme weather impacts every source of energy, from natural gas units to wind turbines. These events, along with others across the country, demonstrate the need for policy changes that focus on refining the reliability and resiliency of the grid to promote adequate energy capacity levels and regional support. We will continue to engage in the policymaking process at the federal, state and local levels to ensure the best interests and needs of our customers and communities are met, as we grow and transition to a clean energy future.

### Net-Zero Carbon Emissions

We have made significant progress reducing our carbon footprint, year after year. Through 2020, we reduced our carbon emissions by 74% (from a 2000 baseline). This achievement puts us a decade ahead of our original goal to reduce carbon emissions by 70% by 2030. In February 2021, we announced a new goal to achieve net-zero by 2050 and an interim goal to reduce our carbon footprint by 80% by 2030 (from a 2000 baseline). These goals include a commitment to review them annually.

**AEP's New Carbon Emission Reduction Goals**

**80% reduction by 2030**

**Net-Zero by 2050**

(goals are from a 2000 baseline)

Since 2010, we have retired, sold or converted to natural gas nearly 13,500 MW of coal-fueled generation. We have plans to reduce our coal capacity an additional 5,574 MW from 2021 through 2030. By the close of this decade, we will reduce our coal generating capacity by approximately 74% — a major achievement by any measure.

The transformation of our generation portfolio includes ongoing evaluation of our power plants. In 2021, Indiana Michigan Power and AEP Generating Company reached an agreement to acquire the 1,310 MW Rockport Plant Unit 2 from the current owners when the lease expires at the end of 2022. This acquisition will provide a short-term capacity bridge for customers as we transition to more renewable generation and will ensure both Rockport Plant units are retired by the end of 2028. These investments in our generation portfolio support our goals of making our generation fleet cleaner, more economical and achieving net zero carbon dioxide emissions by 2050.

Our transformation also includes investments in the development of integrated grid solutions such as advanced energy storage with solar, electrification and research into modular nuclear and the future use of hydrogen. Learn more about the role of technology in our journey to a clean energy future in the Technology section of AEP's Climate Impact Analysis Report.

### COVID-19 Response

AEP's response to the COVID-19 pandemic was immediate and comprehensive. The critical nature of the service we provide became a lifeline for many during the COVID-19 pandemic and extreme weather events throughout the year. Our workforce remained committed to keeping our economies and communities connected as efficiently and safely as possible, all while remaining dedicated to continued operational excellence and financial discipline.

We activated our emergency oversight structure and incident management teams in accordance with AEP's Infectious Disease Response Plan. We created a COVID-19 Task Force to closely monitor the virus and regularly educate and communicate with our employees, partners and customers about the impacts and threats it posed. We collaborated with peer companies, government experts and public health agencies to adjust our response as the situation rapidly evolved. Portions of our COVID-19 response structure remain in place to closely monitor the virus and its potential mutations that could affect our company.

### Supporting Our Employees

**Expanded Medical Risk & Family Care Leave** to include Paid Pandemic Leave

**Enhanced Paid Time Off**
for full-time employees unable to work from home

Gave all employees accelerated access to half of their **2021 Vacation Hours**

**Enhanced AEP's Medical Plan** & Retirement Savings 401(k) Plan
for employees impacted by COVID-19

To support our customers and communities, we voluntarily suspended all service disconnections for nonpayment and waived credit card fees. We also stood up a team to help small business customers apply for federal aid. The AEP Foundation donated nearly $4 million in COVID-related emergency relief funds to support basic human needs and address the hardships faced by our customers and communities.

### Human Capital Management

Human capital management (HCM) is one of the most significant corporate governance issues that affects the workforce, investors and customers. Increasingly, it is viewed as material to long-term performance and risk mitigation. Our workforce of the future will look very different than it does today. So, too, will the work we do, as well as where and how we do it. AEP was already working to frame the future of work, including developing the workforce of the future, prior to the pandemic. We are providing development opportunities for employees at every level, as well as a broad range of training and assistance that supports lifelong learning and transition development. Culture is integral to our success; in 2021, AEP was proud to be recognized for the second consecutive year with the Gallup Exceptional Workplace Award.

### Diversity, Equity & Inclusion

Diversity, equity and inclusion are core components of our business strategy. We believe a highly diverse, inclusive and engaged workforce not only improves organizational performance but also improves our culture. We value a supportive, inclusive environment for our employees that reflects the communities where we live, work and operate.

In 2020, racial and social justice movements took center stage in the public consciousness as activism for equal rights, social equity, racial justice and public safety grew. Many companies took a stand on social issues, seeking to be part of the change,

whether through corporate activism or social responsibility. AEP was among them. In 2020, we launched "Seize the Moment" to help accelerate our diversity and inclusion strategy. To move forward, we believe we have to understand how race, racism, biases and beliefs impact the workplace. In 2021, we created a new social and racial justice program through the AEP Foundation. The $5 million dollar grant program — "Delivering On the Dream" — will target organizations that play a pivotal role in eliminating systemic racism and embrace change and equity for neighbors of color, customers and employees.

### Securing the Grid

As our business needs continue to evolve, so do the security risks. This requires constant monitoring and protection from potential cyber and physical threats. Our cyber and physical security strategy includes proactive threat intelligence, monitoring, alerting and emergency response; employee education; forensic analysis; disaster recovery; and criminal activity reporting. Through rapid notification and response when attacks and disasters are underway, we can reduce the impacts of cyberattacks and avoid or mitigate the damage before experiencing the full impact of the threat.

To protect the grid, strong governance, oversight and regulations are vital. AEP's centralized enterprise security program focuses on managing security risk across the entire system. The Chief Security and Privacy Officer leads our efforts to ensure security controls are comprehensive, effective and in compliance with best practices and regulatory requirements.

## SUSTAINABILITY & ESG STRATEGY

Today, sustainability strategy and environmental, social and governance (ESG) performance are as important as a company's financial health. In 2020, the public health crisis and racial, social and civil unrest raised the stature of the "S" in ESG, prompting an expanded and more granular focus on how we manage AEP's ESG performance, disclosure and governance.

The prominence of material sustainability issues in 2020 created an ESG trifecta: climate change strategy, risks and management; human capital management, including diversity, equity and inclusion; and the resilience and management of a company's strategy and business model. Awareness of how ESG impacts the full value-chain helps to strengthen and inform business decisions and strategies. At AEP, we are integrating our sustainability practices and ESG initiatives into our corporate strategies and sharing our progress and goals with all of our stakeholders.

# AEP's Strategic Vision and Execution

| TOP 10 MATERIAL ESG ISSUES | EXECUTE STRATEGY | TOP PRIORITIES |
|---|---|---|
| Clean Energy Transition<br>Electrification | Promote clean energy transformation | • Invest in regulated and contracted renewables<br>• Optimize the generation fleet |
| Public Safety<br>D&I, Equity<br>Electrification | Enable growth and prosperity for our communities | • Grow top line revenue<br>• Champion economic development<br>• Be good neighbors |
| Customer Experience<br>Data Privacy | Innovate for the benefit of our customers | • Improve customer experience through use of technology and business innovation<br>• Modernize regulatory mechanisms to support customer expectations |
| Reliability & Resilience<br>Cyber/Physical Security | Build a modern, secure and resilient grid | • Deploy technologies that enhance grid safety, security and value<br>• Invest in leveraging energy infrastructure |
| Safety & Health<br>D&I, Equity<br>Ethics & Compliance | Drive operational excellence | • Achieve Zero Harm<br>• Drive relentless O&M optimization<br>• Implement automation, digitization and process improvements<br>• Be a great place to work |

To identify material and emerging issues, in 2020 we conducted a materiality assessment that provides critical input to the development of our corporate strategy, risk management, and disclosure and engagement, as well as meets growing stakeholder expectations.

## SUSTAINABILITY/ESG GOVERNANCE

At AEP, we have strong governance to support sustainability and ESG performance, ensuring alignment with corporate purpose and strategy. Our approach to transparency links tangibles (such as financial capital and physical assets) with intangibles (such as reputation, brand, customer loyalty, risk management, trust and credibility) to show bottom line results and benefits.

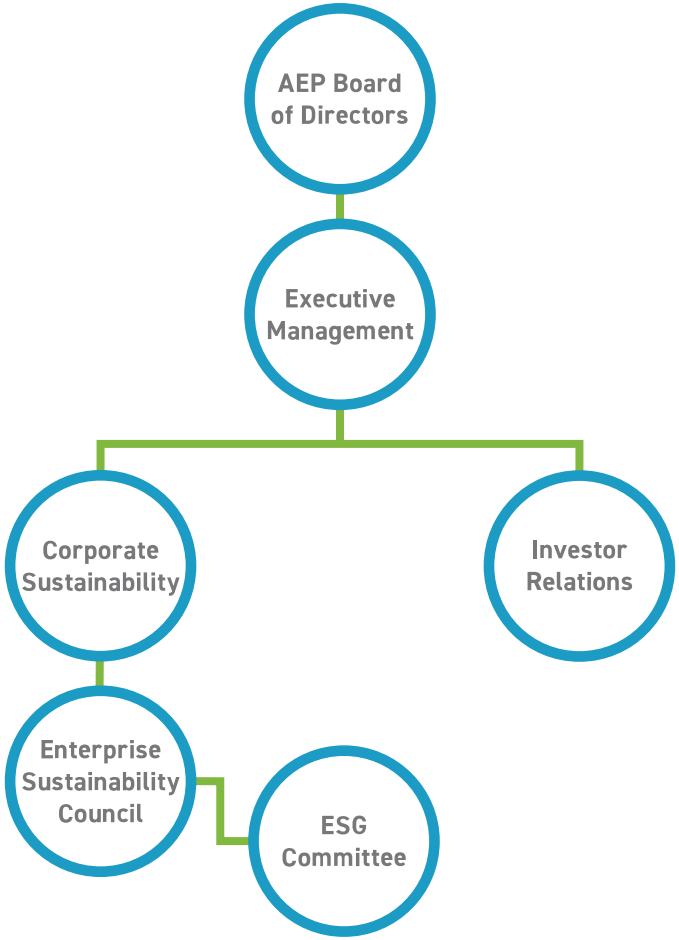
AEP's Board of Directors works closely with our executive team to ensure we continually meet or exceed the highest standards of performance, innovation, ethics and service. In addition, the Board receives educational presentations from outside experts and board members independently attend educational sessions.

Through our Enterprise Sustainability Council (ESC) — with oversight from executive management and the Committee on Directors and Corporate Governance of the Board of Directors — we have clear guidance on our ESG responsibilities for sustainable business development. ESC members, who represent all aspects of our business, serve as strategic ambassadors, providing guidance and support to ensure the success of our sustainable development strategy. They do this by enabling integration of sustainability across the enterprise and in corporate strategy.

We also have a dedicated cross-functional ESG Team that has been in place for more than two years and meets monthly. The team monitors new and emerging ESG issues and develops strategies for responding to them. Because ESG performance is also a business risk, it is on our risk register. Our engagement with all of our stakeholders serves as an important control to managing this risk.

In addition to the ESC and ESG Team, the Committee on Directors and Corporate Governance of the Board of Directors reviews the Corporate Accountability Report annually and monitors our ESG performance. We publish a statement from the Board annually supporting our commitment to sustainable business development. Since 2010, AEP's internal Audit Services team has conducted an annual limited review of selected company performance statements. The combined internal audit and governance from the Board of Directors, executive management and the ESC helps us ensure our disclosure undergoes a disciplined review and validation process.

## AEP's ESG Sustainability Governance Structure



# INDEX OF LINKS

# SECTION II: QUANTITATIVE REPORT

| Ref. No. | American Electric Power | Baseline 2000 | Last Year 2019 | Current Year 2020 |
|---|---|---|---|---|
| | **Portfolio** | | | |
| **1** | **Owned Nameplate Generation Capacity at end of year (MW)** | **37,369** | **25,490** | **25,496** |
| 1.1 | Coal | 25,556 | 13,230 | 13,230 |
| 1.2 | Natural Gas | 8,195 | 7,678 | 7,684 |
| 1.3 | Nuclear | 2,740 | 2,288 | 2,288 |
| 1.4 | Petroleum | 36 | 0 | 0 |
| 1.5 | Total Renewable Energy Resources | 842 | 2,294 | 2,294 |
| 1.5.1 | · Biomass/Biogas | 0 | 0 | 0 |
| 1.5.2 | · Geothermal | 0 | 0 | 0 |
| 1.5.3 | · Hydroelectric | 842 | 853 | 853 |
| 1.5.4 | · Solar | 0 | 229 | 229 |
| 1.5.5 | · Wind | 0 | 1,212 | 1,212 |
| 1.6 | Other | 0 | 0 | 0 |
| **2** | **Net Generation for the data year (MWh)** | **196,942,749** | **106,382,813** | **94,529,102** |
| 2.1 | Coal | 160,080,902 | 57,716,972 | 42,595,308 |
| 2.2 | Natural Gas | 26,388,802 | 19,042,844 | 18,530,960 |
| 2.3 | Nuclear | 9,745,654 | 16,157,850 | 18,268,937 |
| 2.4 | Petroleum | 44 | 20,335 | 0 |
| 2.5 | Total Renewable Energy Resources | 727,347 | 13,465,147 | 15,133,897 |
| 2.5.1 | · Biomass/Biogas | 0 | 0 | 0 |
| 2.5.2 | · Geothermal | 0 | 0 | 0 |
| 2.5.3 | · Hydroelectric | 727,347 | 1,018,253 | 1,356,104 |
| 2.5.4 | · Solar | 0 | 261,952 | 547,025 |
| 2.5.5 | · Wind | 0 | 12,184,942 | 13,230,768 |
| 2.6 | Other | 0 | 0 | 0 |

| Ref. No. | American Electric Power | Baseline 2000 | Last Year 2019 | Current Year 2020 |
|---|---|---|---|---|
| **2.i** | **Owned Net Generation for the data year (MWh)** | **196,942,749** | **86,252,165** | **76,459,882** |
| 2.1.i | Coal | 160,080,902 | 52,275,888 | 38,184,507 |
| 2.2.i | Natural Gas | 26,388,802 | 13,953,693 | 14,175,228 |
| 2.3.i | Nuclear | 9,745,654 | 16,157,850 | 18,268,937 |
| 2.4.i | Petroleum | 44 | 0 | 0 |
| 2.5.i | Total Renewable Energy Resources | 727,347 | 3,864,733 | 5,831,210 |
| 2.5.1.i | · Biomass/Biogas | 0 | 0 | 0 |
| 2.5.2.i | · Geothermal | 0 | 0 | 0 |
| 2.5.3.i | · Hydroelectric | 727,347 | 843,360 | 1,121,235 |
| 2.5.4.i | · Solar | 0 | 249,440 | 535,200 |
| 2.5.5.i | · Wind | 0 | 2,771,933 | 4,174,775 |
| 2.6.i | Other | 0 | 0 | 0 |
| **2.ii** | **Purchased Net Generation for the data year (MWh)** | **0** | **20,130,649** | **18,069,220** |
| 2.1.ii | Coal | 0 | 5,441,084 | 4,410,801 |
| 2.2.ii | Natural Gas | 0 | 5,089,151 | 4,355,732 |
| 2.3.ii | Nuclear | 0 | 0 | 0 |
| 2.4.ii | Petroleum | 0 | 0 | 0 |
| 2.5.ii | Total Renewable Energy Resources | 0 | 9,600,414 | 9,302,687 |
| 2.5.1.ii | · Biomass/Biogas | 0 | 0 | 0 |
| 2.5.2.ii | · Geothermal | 0 | 0 | 0 |
| 2.5.3.ii | · Hydroelectric | 0 | 174,893 | 234,869 |
| 2.5.4.ii | · Solar | 0 | 12,512 | 11,825 |
| 2.5.5.ii | · Wind | 0 | 9,413,009 | 9,055,993 |
| 2.6.ii | Other | 0 | 0 | 0 |

| Ref. No. | American Electric Power | Baseline 2000 | Last Year 2019 | Current Year 2020 |
|---|---|---|---|---|
| **3** | **Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters** | | | |
| 3.1 | Total Annual Capital Expenditures (nominal dollars) | — | $7,567,000,000 | $5,893,000,000 |
| 3.2 | Incremental Annual Electricity Savings from EE Measures (MWh) | — | 1,098,444 | 1,148,334 |
| 3.3 | Incremental Annual Investment in Electric EE Programs (nominal dollars) | — | $161,000,000 | $150,299,080 |
| 3.4 | Percent of Total Electric Customers with Smart Meters (at end of year) | — | 56% | 67% |
| **4** | **Retail Electric Customer Count (at end of year)** | | | |
| 4.1 | Commercial | — | 712,800 | 721,900 |
| 4.2 | Industrial | — | 47,676 | 46,576 |
| 4.3 | Residential | — | 4,661,713 | 4,709,111 |
| 4.4 | Other | — | 30,177 | 30,183 |
| | **Total** | **—** | **5,452,366** | **5,507,770** |
| | **Emissions** | | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) and Carbon Dioxide Equivalent ($CO_2e$)** Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company. | | | |
| 5.1 | Owned Generation [1, 2, 3] | | | |
| 5.1.1 | • Carbon Dioxide ($CO_2$) | | | |
| 5.1.1.1 | – Total Owned Generation $CO_2$ Emissions (MT) | 167,100,561 | 58,447,520 | 44,495,585 |
| 5.1.1.2 | – Total Owned Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.848 | 0.678 | 0.582 |
| 5.1.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | | |
| 5.1.2.1 | – Total Owned Generation $CO_2e$ Emissions (MT) | 168,470,786 | 59,439,006 | 44,902,836 |
| 5.1.2.2 | – Total Owned Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.855 | 0.689 | 0.587 |

| Ref. No. | American Electric Power | Baseline 2000 | Last Year 2019 | Current Year 2020 |
|---|---|---|---|---|
| 5.2 | Purchased Power [4] | | | |
| 5.2.1 | • Carbon Dioxide ($CO_2$) | | | |
| 5.2.1.1 | – Total Purchased Generation $CO_2$ Emissions (MT) | 0 | 8,565,214 | 6,398,498 |
| 5.2.1.2 | – Total Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0 | 0.425 | 0.354 |
| 5.2.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | | |
| 5.2.2.1 | – Total Purchased Generation $CO_2e$ Emissions (MT) | 0 | 8,608,544 | 6,440,084 |
| 5.2.2.2 | – Total Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0 | 0.428 | 0.356 |
| 5.3 | Owned Generation + Purchased Power | | | |
| 5.3.1 | • Carbon Dioxide ($CO_2$) | | | |
| 5.3.1.1 | – Total Owned + Purchased Generation $CO_2$ Emissions (MT) | 167,100,561 | 67,012,734 | 50,894,083 |
| 5.3.1.2 | – Total Owned + Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.848 | 0.630 | 0.538 |
| 5.3.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | | |
| 5.3.2.1 | – Total Owned + Purchased Generation $CO_2e$ Emissions (MT) | 168,470,786 | 68,047,550 | 51,342,920 |
| 5.3.2.2 | – Total Owned + Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.855 | 0.640 | 0.543 |
| 5.4 | Non-Generation $CO_2e$ Emissions | | | |
| 5.4.1 | • Fugitive $CO_2e$ emissions of sulfur hexafluoride (lbs) [5] | 123,140 | 166,149 | 127,667 |
| 5.4.2 | • Leak rate of $CO_2e$ emissions of SF6 (lbs/Net MWh) | — | — | 2.9775 |
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | | |
| 6.1 | Generation basis for calculation [7] | | **Total** | |
| 6.2 | Nitrogen Oxide (NOx) | | | |
| 6.2.1 | • Total NOx Emissions (MT) | 417,826 | 39,986 | 28,112 |
| 6.2.2 | • Total NOx Emissions Intensity (MT/Net MWh) | 0.002122 | 0.000464 | 0.000368 |
| 6.3 | Sulfur Dioxide ($SO_2$) | | | |
| 6.3.1 | • Total $SO_2$ Emissions (MT) | 929,796 | 50,517 | 32,138 |
| 6.3.2 | • Total $SO_2$ Emissions Intensity (MT/Net MWh) | 0.004721 | 0.000586 | 0.000420 |

| Ref. No. | American Electric Power | Baseline 2000 | Last Year 2019 | Current Year 2020 |
|---|---|---|---|---|
| 6.4 | Mercury (Hg) | | | |
| 6.4.1 | • Total Hg Emissions (kg) | 4,289.0 | 130.7 | 81.5 |
| 6.4.2 | • Total Hg Emissions Intensity (kg/Net MWh) | 0.000022 | 0.000002 | 0.000001 |
| | **Resources** | | | |
| **7** | **Human Resources** | | | |
| 7.1 | Total Number of Employees | 19,998 | 17,487 | 16,864 |
| 7.2 | Percentage of Women in Total Workforce | — | 20% | 20% |
| 7.3 | Percentage of Minorities in Total Workforce | — | 18% | 19% |
| 7.4 | Total Number on Board of Directors/Trustees | 11 | 13 | 12 |
| 7.5 | Percentage of Women on Board of Directors/Trustees | — | 30.77% | 33.33% |
| 7.6 | Percentage of Minorities on Board of Directors/Trustees | — | 15% | 25% |
| **7.7** | **Employee Safety Metrics** | | | |
| 7.7.1 | • Recordable Incident Rate | 2.35 | 0.673 | 0.576 |
| 7.7.2 | • Lost-time Case Rate | 0.60 | 0.329 | 0.58 |
| 7.7.3 | • Days Away, Restricted, and Transfer (DART) Rate | 0.96 | 0.412 | 0.31 |
| 7.7.4 | • Work-related Fatalities | 1 | 1 | 0 |
| **8** | **Fresh Water Resources** | | | |
| 8.1 | Water Withdrawals — Consumptive (Millions of Gallons) | — | 44,230 | 51,405 |
| 8.2 | Water Withdrawals — Non-Consumptive (Millions of Gallons) | — | 1,454,614 | 1,471,202 |
| 8.3 | Water Withdrawals — Consumptive Rate (Millions of Gallons/Net MWh) | — | 0.000556 | 0.000764 |
| 8.4 | Water Withdrawals — Non-Consumptive Rate (Millions of Gallons/Net MWh) | — | 0.017814 | 0.021210 |
| **9** | **Waste Products** | | | |
| 9.1 | Amount of Hazardous Waste Manifested for Disposal (Metric Ton) | — | 19.00 | 19.40 |
| 9.2 | Percent of Coal Combustion Products Beneficially Used | — | 39% | 35% |

| Ref. No. | Appalachian Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Portfolio** | | |
| **1** | **Owned Nameplate Generation Capacity at end of year (MW)** | **6,629** | **6,629** |
| 1.1 | Coal | 4,250 | 4,250 |
| 1.2 | Natural Gas | 1,594 | 1,594 |
| 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 |
| **2** | **Net Generation for the data year (MWh)** | **27,275,881** | **24,756,215** |
| 2.1 | Coal | 20,015,480 | 17,320,245 |
| 2.2 | Natural Gas | 5,162,482 | 4,996,751 |
| 2.3 | Nuclear | 0 | 0 |
| 2.4 | Petroleum | 0 | 0 |
| 2.5 | Total Renewable Energy Resources | 2,097,919 | 2,439,219 |
| 2.5.1 | · Biomass/Biogas | 0 | 0 |
| 2.5.2 | · Geothermal | 0 | 0 |
| 2.5.3 | · Hydroelectric | 774,461 | 1,138,117 |
| 2.5.4 | · Solar | 0 | 0 |
| 2.5.5 | · Wind | 1,323,458 | 1,301,102 |
| 2.6 | Other | 0 | 0 |

| Ref. No. | Appalachian Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| **2.i** | **Owned Net Generation for the data year (MWh)** | **23,813,487** | **21,628,098** |
| 2.1.i | Coal | 18,051,437 | 15,728,099 |
| 2.2.i | Natural Gas | 5,162,482 | 4,996,751 |
| 2.3.i | Nuclear | 0 | 0 |
| 2.4.i | Petroleum | 0 | 0 |
| 2.5.i | Total Renewable Energy Resources | 599,568 | 903,248 |
| 2.5.1.i | · Biomass/Biogas | 0 | 0 |
| 2.5.2.i | · Geothermal | 0 | 0 |
| 2.5.3.i | · Hydroelectric | 599,568 | 903,248 |
| 2.5.4.i | · Solar | 0 | 0 |
| 2.5.5.i | · Wind | 0 | 0 |
| 2.6.i | Other | 0 | 0 |
| **2.ii** | **Purchased Net Generation for the data year (MWh)** | **3,462,394** | **3,128,117** |
| 2.1.ii | Coal | 1,964,043 | 1,592,146 |
| 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 | 1,498,351 | 1,535,971 |
| 2.5.1.ii | · Biomass/Biogas | 0 | 0 |
| 2.5.2.ii | · Geothermal | 0 | 0 |
| 2.5.3.ii | · Hydroelectric | 174,893 | 234,869 |
| 2.5.4.ii | · Solar | 0 | 0 |
| 2.5.5.ii | · Wind | 1,323,458 | 1,301,102 |
| 2.6.ii | Other | 0 | 0 |

| Ref. No. | Appalachian Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Emissions** | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) and Carbon Dioxide Equivalent ($CO_2e$)**<br>Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company. | | |
| 5.1 | Owned Generation [1, 2, 3] | | |
| 5.1.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.1.1.1 | – Total Owned Generation $CO_2$ Emissions (MT) | 19,093,085 | 17,100,611 |
| 5.1.1.2 | – Total Owned Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.802 | 0.791 |
| 5.1.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.1.2.1 | – Total Owned Generation $CO_2e$ Emissions (MT) | 19,333,045 | 17,224,888 |
| 5.1.2.2 | – Total Owned Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.812 | 0.796 |
| 5.2 | Purchased Power [4] | | |
| 5.2.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.2.1.1 | – Total Purchased Generation $CO_2$ Emissions (MT) | 1,793,712 | 1,467,531 |
| 5.2.1.2 | – Total Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.518 | 0.469 |
| 5.2.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.2.2.1 | – Total Purchased Generation $CO_2e$ Emissions (MT) | 1,808,041 | 1,479,259 |
| 5.2.2.2 | – Total Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.522 | 0.473 |
| 5.3 | Owned Generation + Purchased Power | | |
| 5.3.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.3.1.1 | – Total Owned + Purchased Generation $CO_2$ Emissions (MT) | 20,886,796 | 18,568,142 |
| 5.3.1.2 | – Total Owned + Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.766 | 0.750 |
| 5.3.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.3.2.1 | – Total Owned + Purchased Generation $CO_2e$ Emissions (MT) | 21,141,086 | 18,704,147 |
| 5.3.2.2 | – Total Owned + Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.775 | 0.756 |

| Ref. No. | Appalachian Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| 5.4 | Non-Generation $CO_2e$ Emissions | | |
| 5.4.1 | • Fugitive $CO_2e$ emissions of sulfur hexafluoride (MT)[5] | 35,285 | 27,574 |
| 5.4.2 | • Fugitive $CO_2e$ emissions from natural gas distribution (MT)[6] | 0 | 0 |
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | |
| 6.1 | Generation basis for calculation[7] | Total | |
| 6.2 | Nitrogen Oxide (NOx) | | |
| 6.2.1 | • Total NOx Emissions (MT) | 9,444 | 8,427 |
| 6.2.2 | • Total NOx Emissions Intensity (MT/Net MWh) | 0.000346 | 0.000340 |
| 6.3 | Sulfur Dioxide ($SO_2$) | | |
| 6.3.1 | • Total $SO_2$ Emissions (MT) | 8,598 | 7,129 |
| 6.3.2 | • Total $SO_2$ Emissions Intensity (MT/Net MWh) | 0.000315 | 0.000288 |
| 6.4 | Mercury (Hg) | | |
| 6.4.1 | • Total Hg Emissions (kg) | 34.1 | 30.8 |
| 6.4.2 | • Total Hg Emissions Intensity (kg/Net MWh) | 0.000001 | 0.000001 |

| Ref. No. | Kentucky Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Portfolio** | | |
| **1** | **Owned Nameplate Generation Capacity at end of year (MW)** | **1,453** | **1,453** |
| 1.1 | Coal | 1,173 | 1,173 |
| 1.2 | Natural Gas | 280 | 280 |
| 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 |
| **2** | **Net Generation for the data year (MWh)** | **4,805,120** | **3,324,794** |
| 2.1 | Coal | 3,742,395 | 2,412,157 |
| 2.2 | Natural Gas | 1,062,725 | 912,637 |
| 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 | 0 | 0 |

| Ref. No. | Kentucky Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| **2.i** | **Owned Net Generation for the data year (MWh)** | **4,805,120** | **3,324,794** |
| 2.1.i | Coal | 3,742,395 | 2,412,157 |
| 2.2.i | Natural Gas | 1,062,725 | 912,637 |
| 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 |
| **2.ii** | **Purchased Net Generation for the data year (MWh)** | **0** | **0** |
| 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 | 0 | 0 |

| Ref. No. | Kentucky Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Emissions** | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) and Carbon Dioxide Equivalent ($CO_2e$)**<br>Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company. | | |
| 5.1 | Owned Generation [1, 2, 3] | | |
| 5.1.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.1.1.1 | – Total Owned Generation $CO_2$ Emissions (MT) | 4,236,089 | 2,911,207 |
| 5.1.1.2 | – Total Owned Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.882 | 0.876 |
| 5.1.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.1.2.1 | – Total Owned Generation $CO_2e$ Emissions (MT) | 4,271,459 | 2,931,114 |
| 5.1.2.2 | – Total Owned Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.889 | 0.882 |
| 5.2 | Purchased Power [4] | | |
| 5.2.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.2.1.1 | – Total Purchased Generation $CO_2$ Emissions (MT) | 0 | 0 |
| 5.2.1.2 | – Total Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0 | 0 |
| 5.2.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.2.2.1 | – Total Purchased Generation $CO_2e$ Emissions (MT) | 0 | 0 |
| 5.2.2.2 | – Total Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0 | 0 |
| 5.3 | Owned Generation + Purchased Power | | |
| 5.3.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.3.1.1 | – Total Owned + Purchased Generation $CO_2$ Emissions (MT) | 4,236,089 | 2,911,207 |
| 5.3.1.2 | – Total Owned + Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.882 | 0.876 |
| 5.3.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.3.2.1 | – Total Owned + Purchased Generation $CO_2e$ Emissions (MT) | 4,271,459 | 2,931,114 |
| 5.3.2.2 | – Total Owned + Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.889 | 0.882 |

| Ref. No. | Kentucky Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| 5.4 | Non-Generation $CO_2e$ Emissions | | |
| 5.4.1 | • Fugitive $CO_2e$ emissions of sulfur hexafluoride (MT) [5] | 7,533 | 5,862 |
| 5.4.2 | • Fugitive $CO_2e$ emissions from natural gas distribution (MT) [6] | 0 | 0 |
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | |
| 6.1 | Generation basis for calculation [7] | Total | |
| 6.2 | Nitrogen Oxide (NOx) | | |
| 6.2.1 | • Total NOx Emissions (MT) | 2,683 | 1,625 |
| 6.2.2 | • Total NOx Emissions Intensity (MT/Net MWh) | 0.000558 | 0.000489 |
| 6.3 | Sulfur Dioxide ($SO_2$) | | |
| 6.3.1 | • Total $SO_2$ Emissions (MT) | 2,911 | 1,318 |
| 6.3.2 | • Total $SO_2$ Emissions Intensity (MT/Net MWh) | 0.000606 | 0.000396 |
| 6.4 | Mercury (Hg) | | |
| 6.4.1 | • Total Hg Emissions (kg) | 7.6 | 4.5 |
| 6.4.2 | • Total Hg Emissions Intensity (kg/Net MWh) | 0.000002 | 0.000001 |

| Ref. No. | Indiana Michigan Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Portfolio** | | |
| **1** | **Owned Nameplate Generation Capacity at end of year (MW)** | **4,551** | **4,551** |
| 1.1 | Coal | 2,227 | 2,227 |
| 1.2 | Natural Gas | 0 | 0 |
| 1.3 | Nuclear | 2,288 | 2,288 |
| 1.4 | Petroleum | 0 | 0 |
| 1.5 | Total Renewable Energy Resources | 36 | 36 |
| 1.5.1 | · Biomass/Biogas | 0 | 0 |
| 1.5.2 | · Geothermal | 0 | 0 |
| 1.5.3 | · Hydroelectric | 20 | 20 |
| 1.5.4 | · Solar | 16 | 16 |
| 1.5.5 | · Wind | 0 | 0 |
| 1.6 | Other | 0 | 0 |
| **2** | **Net Generation for the data year (MWh)** | **25,497,956** | **23,886,073** |
| 2.1 | Coal | 7,906,924 | 4,229,799 |
| 2.2 | Natural Gas | 0 | 0 |
| 2.3 | Nuclear | 16,157,850 | 18,268,937 |
| 2.4 | Petroleum | 0 | 0 |
| 2.5 | Total Renewable Energy Resources | 1,433,181 | 1,387,337 |
| 2.5.1 | · Biomass/Biogas | 0 | 0 |
| 2.5.2 | · Geothermal | 0 | 0 |
| 2.5.3 | · Hydroelectric | 114,666 | 93,393 |
| 2.5.4 | · Solar | 19,463 | 19,355 |
| 2.5.5 | · Wind | 1,299,052 | 1,274,589 |
| 2.6 | Other | 0 | 0 |

| Ref. No. | Indiana Michigan Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| **2.i** | **Owned Net Generation for the data year (MWh)** | **23,216,882** | **21,815,411** |
| 2.1.i | Coal | 6,924,902 | 3,433,726 |
| 2.2.i | Natural Gas | 0 | 0 |
| 2.3.i | Nuclear | 16,157,850 | 18,268,937 |
| 2.4.i | Petroleum | 0 | 0 |
| 2.5.i | Total Renewable Energy Resources | 134,129 | 112,748 |
| 2.5.1.i | · Biomass/Biogas | 0 | 0 |
| 2.5.2.i | · Geothermal | 0 | 0 |
| 2.5.3.i | · Hydroelectric | 114,666 | 93,393 |
| 2.5.4.i | · Solar | 19,463 | 19,355 |
| 2.5.5.i | · Wind | 0 | 0 |
| 2.6.i | Other | 0 | 0 |
| **2.ii** | **Purchased Net Generation for the data year (MWh)** | **2,281,074** | **2,070,662** |
| 2.1.ii | Coal | 982,021 | 796,073 |
| 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 | 1,299,052 | 1,274,589 |
| 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 | 1,299,052 | 1,274,589 |
| 2.6.ii | Other | 0 | 0 |

| Ref. No. | Indiana Michigan Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Emissions** | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) and Carbon Dioxide Equivalent ($CO_2e$)**<br>Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company. | | |
| 5.1 | Owned Generation [1, 2, 3] | | |
| 5.1.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.1.1.1 | – Total Owned Generation $CO_2$ Emissions (MT) | 6,469,765 | 3,409,865 |
| 5.1.1.2 | – Total Owned Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.279 | 0.156 |
| 5.1.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.1.2.1 | – Total Owned Generation $CO_2e$ Emissions (MT) | 6,532,404 | 3,436,683 |
| 5.1.2.2 | – Total Owned Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.281 | 0.158 |
| 5.2 | Purchased Power [4] | | |
| 5.2.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.2.1.1 | – Total Purchased Generation $CO_2$ Emissions (MT) | 896,856 | 733,765 |
| 5.2.1.2 | – Total Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.393 | 0.354 |
| 5.2.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.2.2.1 | – Total Purchased Generation $CO_2e$ Emissions (MT) | 904,021 | 739,630 |
| 5.2.2.2 | – Total Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.396 | 0.357 |
| 5.3 | Owned Generation + Purchased Power | | |
| 5.3.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.3.1.1 | – Total Owned + Purchased Generation $CO_2$ Emissions (MT) | 7,366,621 | 4,143,630 |
| 5.3.1.2 | – Total Owned + Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.289 | 0.173 |
| 5.3.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.3.2.1 | – Total Owned + Purchased Generation $CO_2e$ Emissions (MT) | 7,436,425 | 4,176,313 |
| 5.3.2.2 | – Total Owned + Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.292 | 0.175 |

| Ref. No. | Indiana Michigan Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| 5.4 | Non-Generation $CO_2e$ Emissions | | |
| 5.4.1 | • Fugitive $CO_2e$ emissions of sulfur hexafluoride (MT) [5] | 28,871 | 21,624 |
| 5.4.2 | • Fugitive $CO_2e$ emissions from natural gas distribution (MT) [6] | 0 | 0 |
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | |
| 6.1 | Generation basis for calculation [7] | Total | |
| 6.2 | Nitrogen Oxide (NOx) | | |
| 6.2.1 | • Total NOx Emissions (MT) | 5,464 | 2,070 |
| 6.2.2 | • Total NOx Emissions Intensity (MT/Net MWh) | 0.000214 | 0.000087 |
| 6.3 | Sulfur Dioxide ($SO_2$) | | |
| 6.3.1 | • Total $SO_2$ Emissions (MT) | 11,624 | 5,672 |
| 6.3.2 | • Total $SO_2$ Emissions Intensity (MT/Net MWh) | 0.000456 | 0.000237 |
| 6.4 | Mercury (Hg) | | |
| 6.4.1 | • Total Hg Emissions (kg) | 12.9 | 4.7 |
| 6.4.2 | • Total Hg Emissions Intensity (kg/Net MWh) | 0.000001 | 0.000000 |

| Ref. No. | Wheeling Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Portfolio** | | |
| **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 |
| **2** | **Net Generation for the data year (MWh)** | **2,520,353** | **1,806,206** |
| 2.1 | Coal | 2,520,353 | 1,806,206 |
| 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 | 0 | 0 |

| Ref. No. | Wheeling Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| **2.i** | **Owned Net Generation for the data year (MWh)** | **2,520,353** | **1,806,206** |
| 2.1.i | Coal | 2,520,353 | 1,806,206 |
| 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 |
| **2.ii** | **Purchased Net Generation for the data year (MWh)** | **0** | **0** |
| 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 | 0 | 0 |

| Ref. No. | Wheeling Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Emissions** | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) and Carbon Dioxide Equivalent ($CO_2e$)**<br>Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company. | | |
| 5.1 | Owned Generation [1, 2, 3] | | |
| 5.1.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.1.1.1 | – Total Owned Generation $CO_2$ Emissions (MT) | 2,520,498 | 1,820,004 |
| 5.1.1.2 | – Total Owned Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 1.000 | 1.008 |
| 5.1.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.1.2.1 | – Total Owned Generation $CO_2e$ Emissions (MT) | 2,544,223 | 1,834,679 |
| 5.1.2.2 | – Total Owned Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 1.009 | 1.016 |
| 5.2 | Purchased Power [4] | | |
| 5.2.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.2.1.1 | – Total Purchased Generation $CO_2$ Emissions (MT) | 0 | 0 |
| 5.2.1.2 | – Total Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0 | 0 |
| 5.2.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.2.2.1 | – Total Purchased Generation $CO_2e$ Emissions (MT) | 0 | 0 |
| 5.2.2.2 | – Total Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0 | 0 |
| 5.3 | Owned Generation + Purchased Power | | |
| 5.3.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.3.1.1 | – Total Owned + Purchased Generation $CO_2$ Emissions (MT) | 2,520,498 | 1,820,004 |
| 5.3.1.2 | – Total Owned + Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 1.000 | 1.008 |
| 5.3.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.3.2.1 | – Total Owned + Purchased Generation $CO_2e$ Emissions (MT) | 2,544,223 | 1,834,679 |
| 5.3.2.2 | – Total Owned + Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 1.009 | 1.016 |

| Ref. No. | Wheeling Power | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| 5.4 | Non-Generation $CO_2e$ Emissions | | |
| 5.4.1 | • Fugitive $CO_2e$ emissions of sulfur hexafluoride (MT) [5] | 1,842 | 1,416 |
| 5.4.2 | • Fugitive $CO_2e$ emissions from natural gas distribution (MT) [6] | 0 | 0 |
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | |
| 6.1 | Generation basis for calculation [7] | Total | |
| 6.2 | Nitrogen Oxide (NOx) | | |
| 6.2.1 | • Total NOx Emissions (MT) | 1,030 | 684 |
| 6.2.2 | • Total NOx Emissions Intensity (MT/Net MWh) | 0.000409 | 0.000379 |
| 6.3 | Sulfur Dioxide ($SO_2$) | | |
| 6.3.1 | • Total $SO_2$ Emissions (MT) | 935 | 369 |
| 6.3.2 | • Total $SO_2$ Emissions Intensity (MT/Net MWh) | 0.000371 | 0.000204 |
| 6.4 | Mercury (Hg) | | |
| 6.4.1 | • Total Hg Emissions (kg) | 5.3 | 3.7 |
| 6.4.2 | • Total Hg Emissions Intensity (kg/Net MWh) | 0.000002 | 0.000002 |

| Ref. No. | Public Service Company of Oklahoma | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Portfolio** | | |
| **1** | **Owned Nameplate Generation Capacity at end of year (MW)** | **3,833** | **3,833** |
| 1.1 | Coal | 574 | 574 |
| 1.2 | Natural Gas | 3,259 | 3,259 |
| 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 |
| **2** | **Net Generation for the data year (MWh)** | **16,118,253** | **13,457,164** |
| 2.1 | Coal | 2,784,464 | 1,317,989 |
| 2.2 | Natural Gas | 9,241,755 | 8,156,916 |
| 2.3 | Nuclear | 0 | 0 |
| 2.4 | Petroleum | 0 | 0 |
| 2.5 | Total Renewable Energy Resources | 4,092,034 | 3,982,259 |
| 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 | 4,092,034 | 3,982,259 |
| 2.6 | Other | 0 | 0 |

| Ref. No. | Public Service Company of Oklahoma | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| **2.i** | **Owned Net Generation for the data year (MWh)** | **6,937,068** | **5,119,173** |
| 2.1.i | Coal | 2,784,464 | 1,317,989 |
| 2.2.i | Natural Gas | 4,152,604 | 3,801,184 |
| 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 |
| **2.ii** | **Purchased Net Generation for the data year (MWh)** | **9,181,185** | **8,337,991** |
| 2.1.ii | Coal | 0 | 0 |
| 2.2.ii | Natural Gas | 5,089,151 | 4,355,732 |
| 2.3.ii | Nuclear | 0 | 0 |
| 2.4.ii | Petroleum | 0 | 0 |
| 2.5.ii | Total Renewable Energy Resources | 4,092,034 | 3,982,259 |
| 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 | 4,092,034 | 3,982,259 |
| 2.6.ii | Other | 0 | 0 |

| Ref. No. | Public Service Company of Oklahoma | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Emissions** | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) and Carbon Dioxide Equivalent ($CO_2e$)**<br>Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company. | | |
| 5.1 | Owned Generation [1, 2, 3] | | |
| 5.1.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.1.1.1 | – Total Owned Generation $CO_2$ Emissions (MT) | 5,239,138 | 3,500,782 |
| 5.1.1.2 | – Total Owned Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.755 | 0.684 |
| 5.1.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.1.2.1 | – Total Owned Generation $CO_2e$ Emissions (MT) | 5,202,267 | 3,514,429 |
| 5.1.2.2 | – Total Owned Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.750 | 0.687 |
| 5.2 | Purchased Power [4] | | |
| 5.2.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.2.1.1 | – Total Purchased Generation $CO_2$ Emissions (MT) | 3,596,007 | 2,332,926 |
| 5.2.1.2 | – Total Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.392 | 0.280 |
| 5.2.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.2.2.1 | – Total Purchased Generation $CO_2e$ Emissions (MT) | 3,599,639 | 2,342,020 |
| 5.2.2.2 | – Total Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.392 | 0.281 |
| 5.3 | Owned Generation + Purchased Power | | |
| 5.3.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.3.1.1 | – Total Owned + Purchased Generation $CO_2$ Emissions (MT) | 8,835,145 | 5,833,708 |
| 5.3.1.2 | – Total Owned + Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.548 | 0.434 |
| 5.3.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.3.2.1 | – Total Owned + Purchased Generation $CO_2e$ Emissions (MT) | 8,801,906 | 5,856,449 |
| 5.3.2.2 | – Total Owned + Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.546 | 0.435 |

| Ref. No. | Public Service Company of Oklahoma | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| 5.4 | Non-Generation $CO_2e$ Emissions | | |
| 5.4.1 | • Fugitive $CO_2e$ emissions of sulfur hexafluoride (MT) [5] | 18,158 | 13,582 |
| 5.4.2 | • Fugitive $CO_2e$ emissions from natural gas distribution (MT) [6] | 0 | 0 |
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | |
| 6.1 | Generation basis for calculation [7] | Total | |
| 6.2 | Nitrogen Oxide (NOx) | | |
| 6.2.1 | • Total NOx Emissions (MT) | 5,341 | 3,179 |
| 6.2.2 | • Total NOx Emissions Intensity (MT/Net MWh) | 0.000331 | 0.000236 |
| 6.3 | Sulfur Dioxide ($SO_2$) | | |
| 6.3.1 | • Total $SO_2$ Emissions (MT) | 4,122 | 2,184 |
| 6.3.2 | • Total $SO_2$ Emissions Intensity (MT/Net MWh) | 0.000256 | 0.000162 |
| 6.4 | Mercury (Hg) | | |
| 6.4.1 | • Total Hg Emissions (kg) | 7.1 | 2.4 |
| 6.4.2 | • Total Hg Emissions Intensity (kg/Net MWh) | 0 | 0 |

| Ref. No. | Southwestern Electric Power Company | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Portfolio** | | |
| **1** | **Owned Nameplate Generation Capacity at end of year (MW)** | **5,169** | **5,169** |
| 1.1 | Coal | 2,625 | 2,625 |
| 1.2 | Natural Gas | 2,544 | 2,544 |
| 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 |
| **2** | **Net Generation for the data year (MWh)** | **16,564,892** | **15,049,398** |
| 2.1 | Coal | 11,223,895 | 8,917,927 |
| 2.2 | Natural Gas | 3,575,882 | 4,464,159 |
| 2.3 | Nuclear | 0 | 0 |
| 2.4 | Petroleum | 0 | 0 |
| 2.5 | Total Renewable Energy Resources | 1,765,115 | 1,667,312 |
| 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 | 1,765,115 | 1,667,312 |
| 2.6 | Other | 0 | 0 |

| Ref. No. | Southwestern Electric Power Company | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| **2.i** | **Owned Net Generation for the data year (MWh)** | **14,799,777** | **13,382,086** |
| 2.1.i | Coal | 11,223,895 | 8,917,927 |
| 2.2.i | Natural Gas | 3,575,882 | 4,464,159 |
| 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 |
| **2.ii** | **Purchased Net Generation for the data year (MWh)** | **1,765,115** | **1,667,312** |
| 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 | 1,765,115 | 1,667,312 |
| 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 | 1,765,115 | 1,667,312 |
| 2.6.ii | Other | 0 | 0 |

| Ref. No. | Southwestern Electric Power Company | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Emissions** | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) and Carbon Dioxide Equivalent ($CO_2e$)**<br>Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company. | | |
| 5.1 | Owned Generation [1, 2, 3] | | |
| 5.1.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.1.1.1 | – Total Owned Generation $CO_2$ Emissions (MT) | 13,616,106 | 11,027,434 |
| 5.1.1.2 | – Total Owned Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.920 | 0.824 |
| 5.1.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.1.2.1 | – Total Owned Generation $CO_2e$ Emissions (MT) | 13,860,349 | 11,100,244 |
| 5.1.2.2 | – Total Owned Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.937 | 0.829 |
| 5.2 | Purchased Power [4] | | |
| 5.2.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.2.1.1 | – Total Purchased Generation $CO_2$ Emissions (MT) | 0 | 0 |
| 5.2.1.2 | – Total Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0 | 0 |
| 5.2.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.2.2.1 | – Total Purchased Generation $CO_2e$ Emissions (MT) | 0 | 0 |
| 5.2.2.2 | – Total Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0 | 0 |
| 5.3 | Owned Generation + Purchased Power | | |
| 5.3.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.3.1.1 | – Total Owned + Purchased Generation $CO_2$ Emissions (MT) | 13,616,106 | 11,027,434 |
| 5.3.1.2 | – Total Owned + Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.822 | 0.733 |
| 5.3.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.3.2.1 | – Total Owned + Purchased Generation $CO_2e$ Emissions (MT) | 13,860,349 | 11,100,244 |
| 5.3.2.2 | – Total Owned + Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.837 | 0.738 |

| Ref. No. | Southwestern Electric Power Company | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| 5.4 | Non-Generation $CO_2e$ Emissions | | |
| 5.4.1 | • Fugitive $CO_2e$ emissions of sulfur hexafluoride (MT) [5] | 24,506 | 19,019 |
| 5.4.2 | • Fugitive $CO_2e$ emissions from natural gas distribution (MT) [6] | 0 | 0 |
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | |
| 6.1 | Generation basis for calculation [7] | Total | |
| 6.2 | Nitrogen Oxide (NOx) | | |
| 6.2.1 | • Total NOx Emissions (MT) | 9,468 | 7,486 |
| 6.2.2 | • Total NOx Emissions Intensity (MT/Net MWh) | 0.000572 | 0.000497 |
| 6.3 | Sulfur Dioxide ($SO_2$) | | |
| 6.3.1 | • Total $SO_2$ Emissions (MT) | 15,060 | 10,646 |
| 6.3.2 | • Total $SO_2$ Emissions Intensity (MT/Net MWh) | 0.000909 | 0.000707 |
| 6.4 | Mercury (Hg) | | |
| 6.4.1 | • Total Hg Emissions (kg) | 56.5 | 32.4 |
| 6.4.2 | • Total Hg Emissions Intensity (kg/Net MWh) | 0.000003 | 0.000002 |

| Ref. No. | Ohio Power Company | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Portfolio** | | |
| **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 |
| **2** | **Net Generation for the data year (MWh)** | **3,109,929** | **2,598,814** |
| 2.1 | Coal | 2,495,020 | 2,022,581 |
| 2.2 | Natural Gas | 0 | 0 |
| 2.3 | Nuclear | 0 | 0 |
| 2.4 | Petroleum | 0 | 0 |
| 2.5 | Total Renewable Energy Resources | 614,909 | 576,233 |
| 2.5.1 | · Biomass/Biogas | 0 | 0 |
| 2.5.2 | · Geothermal | 0 | 0 |
| 2.5.3 | · Hydroelectric | 0 | 0 |
| 2.5.4 | · Solar | 12,512 | 11,825 |
| 2.5.5 | · Wind | 602,397 | 564,408 |
| 2.6 | Other | 0 | 0 |

| Ref. No. | Ohio Power Company | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| **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 |
| **2.ii** | **Purchased Net Generation for the data year (MWh)** | **3,109,929** | **2,598,814** |
| 2.1.ii | Coal | 2,495,020 | 2,022,581 |
| 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 | 614,909 | 576,233 |
| 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 | 12,512 | 11,825 |
| 2.6.ii | Other | 602,397 | 564,408 |

| Ref. No. | Ohio Power Company | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Emissions** | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) and Carbon Dioxide Equivalent ($CO_2e$)**<br>Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company. | | |
| 5.1 | Owned Generation [1, 2, 3] | | |
| 5.1.1 | • Carbon Dioxide ($CO_2$) | | |
| 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 ($CO_2e$) | | |
| 5.1.2.1 | – Total Owned Generation $CO_2e$ Emissions (MT) | 0 | 0 |
| 5.1.2.2 | – Total Owned Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0 | 0 |
| 5.2 | Purchased Power [4] | | |
| 5.2.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.2.1.1 | – Total Purchased Generation $CO_2$ Emissions (MT) | 2,278,640 | 1,864,276 |
| 5.2.1.2 | – Total Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.733 | 0.717 |
| 5.2.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.2.2.1 | – Total Purchased Generation $CO_2e$ Emissions (MT) | 2,296,843 | 1,879,175 |
| 5.2.2.2 | – Total Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.739 | 0.723 |
| 5.3 | Owned Generation + Purchased Power | | |
| 5.3.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.3.1.1 | – Total Owned + Purchased Generation $CO_2$ Emissions (MT) | 2,278,640 | 1,864,276 |
| 5.3.1.2 | – Total Owned + Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.733 | 0.717 |
| 5.3.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.3.2.1 | – Total Owned + Purchased Generation $CO_2e$ Emissions (MT) | 2,296,843 | 1,879,175 |
| 5.3.2.2 | – Total Owned + Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.739 | 0.723 |

| Ref. No. | Ohio Power Company | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| 5.4 | Non-Generation $CO_2e$ Emissions | | |
| 5.4.1 | • Fugitive $CO_2e$ emissions of sulfur hexafluoride (MT) [5] | 0 | 0 |
| 5.4.2 | • Fugitive $CO_2e$ emissions from natural gas distribution (MT) [6] | 0 | 0 |
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | |
| 6.1 | Generation basis for calculation [7] | Total | |
| 6.2 | Nitrogen Oxide (NOx) | | |
| 6.2.1 | • Total NOx Emissions (MT) | 1,944 | 1,990 |
| 6.2.2 | • Total NOx Emissions Intensity (MT/Net MWh) | 0.000625 | 0.000766 |
| 6.3 | Sulfur Dioxide ($SO_2$) | | |
| 6.3.1 | • Total $SO_2$ Emissions (MT) | 1,436 | 1,167 |
| 6.3.2 | • Total $SO_2$ Emissions Intensity (MT/Net MWh) | 0.000462 | 0.000449 |
| 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 |

| Ref. No. | Energy Supply | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Portfolio** | | |
| **1** | **Owned Nameplate Generation Capacity at end of year (MW)** | **3,075** | **3,081** |
| 1.1 | Coal | 1,601 | 1,601 |
| 1.2 | Natural Gas | 1 | 7 |
| 1.3 | Nuclear | 0 | 0 |
| 1.4 | Petroleum | 0 | 0 |
| 1.5 | Total Renewable Energy Resources | 1,473 | 1,473 |
| 1.5.1 | · Biomass/Biogas | 0 | 0 |
| 1.5.2 | · Geothermal | 0 | 0 |
| 1.5.3 | · Hydroelectric | 48 | 48 |
| 1.5.4 | · Solar | 213 | 213 |
| 1.5.5 | · Wind | 1,212 | 1,212 |
| 1.6 | Other | 0 | 0 |
| **2** | **Net Generation for the data year (MWh)** | **10,490,431** | **9,650,437** |
| 2.1 | Coal | 7,028,442 | 4,568,403 |
| 2.2 | Natural Gas | 0 | 497 |
| 2.3 | Nuclear | 0 | 0 |
| 2.4 | Petroleum | 0 | 0 |
| 2.5 | Total Renewable Energy Resources | 3,461,989 | 5,081,537 |
| 2.5.1 | · Biomass/Biogas | 0 | 0 |
| 2.5.2 | · Geothermal | 0 | 0 |
| 2.5.3 | · Hydroelectric | 129,126 | 124,594 |
| 2.5.4 | · Solar | 229,977 | 515,845 |
| 2.5.5 | · Wind | 3,102,886 | 4,441,098 |
| 2.6 | Other | 0 | 0 |

| Ref. No. | Energy Supply | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| **2.i** | **Owned Net Generation for the data year (MWh)** | **10,159,478** | **9,384,114** |
| 2.1.i | Coal | 7,028,442 | 4,568,403 |
| 2.2.i | Natural Gas | 0 | 497 |
| 2.3.i | Nuclear | 0 | 0 |
| 2.4.i | Petroleum | 0 | 0 |
| 2.5.i | Total Renewable Energy Resources | 3,131,036 | 4,815,214 |
| 2.5.1.i | · Biomass/Biogas | 0 | 0 |
| 2.5.2.i | · Geothermal | 0 | 0 |
| 2.5.3.i | · Hydroelectric | 129,126 | 124,594 |
| 2.5.4.i | · Solar | 229,977 | 515,845 |
| 2.5.5.i | · Wind | 2,771,933 | 4,174,775 |
| 2.6.i | Other | 0 | 0 |
| **2.ii** | **Purchased Net Generation for the data year (MWh)** | **330,953** | **266,323** |
| 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 | 330,953 | 266,323 |
| 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 | 330,953 | 266,323 |
| 2.6.ii | Other | 0 | 0 |

| Ref. No. | Energy Supply | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| | **Emissions** | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) and Carbon Dioxide Equivalent ($CO_2e$)**<br>Note: The alternatives available below are intended to provide flexibility in reporting GHG emissions, and should be used to the extent appropriate for each company. | | |
| 5.1 | Owned Generation [1, 2, 3] | | |
| 5.1.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.1.1.1 | – Total Owned Generation $CO_2$ Emissions (MT) | 7,272,840 | 4,725,682 |
| 5.1.1.2 | – Total Owned Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.716 | 0.504 |
| 5.1.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.1.2.1 | – Total Owned Generation $CO_2e$ Emissions (MT) | 7,695,259 | 4,860,799 |
| 5.1.2.2 | – Total Owned Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.757 | 0.518 |
| 5.2 | Purchased Power [4] | | |
| 5.2.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.2.1.1 | – Total Purchased Generation $CO_2$ Emissions (MT) | 0 | 0 |
| 5.2.1.2 | – Total Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0 | 0 |
| 5.2.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.2.2.1 | – Total Purchased Generation $CO_2e$ Emissions (MT) | 0 | 0 |
| 5.2.2.2 | – Total Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0 | 0 |
| 5.3 | Owned Generation + Purchased Power | | |
| 5.3.1 | • Carbon Dioxide ($CO_2$) | | |
| 5.3.1.1 | – Total Owned + Purchased Generation $CO_2$ Emissions (MT) | 7,272,840 | 4,725,682 |
| 5.3.1.2 | – Total Owned + Purchased Generation $CO_2$ Emissions Intensity (MT/Net MWh) | 0.693 | 0.490 |
| 5.3.2 | • Carbon Dioxide Equivalent ($CO_2e$) | | |
| 5.3.2.1 | – Total Owned + Purchased Generation $CO_2e$ Emissions (MT) | 7,695,259 | 4,860,799 |
| 5.3.2.2 | – Total Owned + Purchased Generation $CO_2e$ Emissions Intensity (MT/Net MWh) | 0.734 | 0.504 |

| Ref. No. | Energy Supply | Last Year 2019 | Current Year 2020 |
|---|---|---|---|
| 5.4 | Non-Generation $CO_2e$ Emissions | | |
| 5.4.1 | • Fugitive $CO_2e$ emissions of sulfur hexafluoride (MT)[5] | 49,954 | 38,591 |
| 5.4.2 | • Fugitive $CO_2e$ emissions from natural gas distribution (MT)[6] | 0 | 0 |
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | |
| 6.1 | Generation basis for calculation[7] | Total | |
| 6.2 | Nitrogen Oxide (NOx) | | |
| 6.2.1 | • Total NOx Emissions (MT) | 4,612 | 2,652 |
| 6.2.2 | • Total NOx Emissions Intensity (MT/Net MWh) | 0.000440 | 0.000275 |
| 6.3 | Sulfur Dioxide ($SO_2$) | | |
| 6.3.1 | • Total $SO_2$ Emissions (MT) | 5,831 | 3,652 |
| 6.3.2 | • Total $SO_2$ Emissions Intensity (MT/Net MWh) | 0.000556 | 0.000378 |
| 6.4 | Mercury (Hg) | | |
| 6.4.1 | • Total Hg Emissions (kg) | 7.2 | 3.0 |
| 6.4.2 | • Total Hg Emissions Intensity (kg/Net MWh) | 0.000001 | 0 |

## Key

MT = metric tons

1 lb. = 453.59 grams

1 tonne = 1,000,000.00 grams

1 metric ton = 1.1023 short tons

Total output-based emissions factor = (insert emissions factor and source)

## Notes

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

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

[3] Purchased power emissions should be calculated using the most relevant and accurate method:

- Direct emissions data as reported to EPA for direct purchases, such as PPAs
- Use applicable system average emissions rate for market purchases where emissions are unknown (please specify which rate was used in the calculation):
  - ISO/RTO-level emission factors
  - Climate Registry emission factors
  - E-Grid emission factors
- Power purchases that require the use of different emissions factors should be listed separately

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

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

## $CO_2e$ is calculated using the following global warming potentials (GWPs) from the IPCC Fourth Assessment Report:

$CO_2$ = 1

CH4 = 25

N2O = 298

SF6 = 22,800

# APPENDIX

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| | **Portfolio** | | | | |
| 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, https://www.eia.gov/tools/glossary/. Form 860 instructions available at: 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, https://www.eia.gov/tools/glossary/. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to 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, https://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, https://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, https://www.eia.gov/tools/glossary/. |
| 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, https://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 nonfossil material of biological origin constituting a renewable energy source). | MW | End of Year | U.S. Energy Information Administration, Online Glossary, https://www.eia.gov/tools/glossary/. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| 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, https://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, https://www.eia.gov/tools/glossary/. |
| 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, https://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, https://www.eia.gov/tools/glossary/. |
| 1.6 | Other | Nameplate capacity of generation resources that are not defined above. | MW | End of Year | |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| 2 | **Net Generation for the data year (MWh)** | 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. | Megawatthour (MWh): One thousand kilowatt-hours or one million watt-hours. | Annual | "U.S. Energy Information Administration, Online Glossary, https://www.eia.gov/tools/glossary/. Form 923 instructions available at: www.eia.gov/survey/form/eia_923/instructions.pdf." |
| 2.1 | Coal | 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). | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://www.eia.gov/tools/glossary/. |
| 2.2 | Natural Gas | Net electricity generated by the combustion of natural gas (a gaseous mixture of hydrocarbon compounds, the primary one being methane). | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://www.eia.gov/tools/glossary/. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| 2.3 | Nuclear | Net electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor. | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://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). | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://www.eia.gov/tools/glossary/. |
| 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. | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://www.eia.gov/tools/glossary/. |
| 2.5.1 | Biomass/Biogas | Net electricity generated by the combustion of biomass (an organic nonfossil material of biological origin constituting a renewable energy source). | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://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. | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://www.eia.gov/tools/glossary/. |
| 2.5.3 | Hydroelectric | Net electricity generated by the use of flowing water. | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://www.eia.gov/tools/glossary/. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to 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. | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://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. | MW | Annual | U.S. Energy Information Administration, Online Glossary, https://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. | MW | Annual | |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| **3** | **Investing in the Future: Capital Expenditures, Energy Efficiency (EE), & Smart Meters** | | | | |
| 3.1 | Total Annual Capital Expenditures | Align annual capital expenditures with data reported in recent investor presentations or financial filings. Total capital expenditures should reflect all investments made at the company level (i.e., parent level or operating company) for which other data (e.g., number of customers, emissions, etc.) is reported. 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, http://www.accountingtools.com/questions-and-answers/what-is-a-capital-expenditure.html |
| 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. | Nominal Dollars | Annual | U.S. Energy Information Administration, Form EIA-861 Annual Electric Power Industry Report Instructions. Available at: www.eia.gov/survey/form/eia_861/instructions.pdf. |
| 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. | MW | Annual | U.S. Energy Information Administration, Form EIA-861 Annual Electric Power Industry Report Instructions. Available at: www.eia.gov/survey/form/eia_861/instructions.pdf. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to 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. | Number of end-use retail customers receiving electricity (individual homes and businesses count as one). | End of Year | U.S. Energy Information Administration, Form EIA-861 Annual Electric Power Industry Report Instructions. Available at: 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. | | | U.S. Energy Information Administration, Online Glossary, https://www.eia.gov/tools/glossary/. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| 4.2 | Industrial (at end of year) | 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, https://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, https://www.eia.gov/tools/glossary/. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| | **Emissions** | | | | |
| **5** | **GHG Emissions: Carbon Dioxide ($CO_2$) & Carbon Dioxide Equivalent ($CO_2e$)** | | | | |
| 5.1 | Owned Generation | | | | |
| 5.1.1 | Carbon Dioxide ($CO_2$) | | | | |
| 5.1.1.1 | Total Owned Generation $CO_2$ Emissions | Total direct $CO_2$ emissions from company equity-owned fossil fuel combustion generation based on 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 relevant protocols. | 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 | |
| 5.1.2 | Carbon Dioxide Equivalent ($CO_2e$) | | | | |
| 5.1.2.1 | Total Owned Generation $CO_2e$ Emissions | Total direct $CO_2e$ emissions ($CO_2$, CH4, and $N_2O$) 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 $CO_2e$ Emissions Intensity | Total direct $CO_2e$ 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 | |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| **5.2** | **Purchased Power** | | | | |
| 5.2.1 | Carbon Dioxide ($CO_2$) | | | | |
| 5.2.1.1 | Total Purchased Generation $CO_2$ Emissions | "Purchased power $CO_2$ emissions should be calculated using the most relevant and accurate of the following methods:<br>(1) For direct purchases, such as PPAs, use the direct emissions data as reported to EPA.<br>(2) For market purchases where emissions attributes are unknown, use applicable regional or national emissions rate:<br>– ISO/RTO-level emission factors<br>– Climate Registry emission factors<br>– E-Grid emission factors" | Metric Tons /Net MWh | 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 | Annual | |
| 5.2.2 | Carbon Dioxide Equivalent ($CO_2e$) | | | | |
| 5.2.2.1 | Total Purchased Generation $CO_2e$ Emissions | "Purchased power $CO_2e$ emissions should be calculated using the most relevant and accurate of the following methods:<br>(1) For direct purchases, such as PPAs, use the direct emissions data as reported to EPA.<br>(2) For market purchases where emissions attributes are unknown, use applicable regional or national emissions rate:<br>– ISO/RTO-level emission factors<br>– Climate Registry emission factors<br>– E-Grid emission factors" | Metric Tons | Annual | |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| 5.2.2.2 | Total Purchased Generation $CO_2e$ Emissions Intensity | Total purchased power $CO_2e$ 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 | |
| **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 ($CO_2e$) | Sum of total $CO_2e$ emissions reported under 5.1.2.1 and 5.2.2.1. | | | |
| 5.3.2.1 | Total Owned + Purchased Generation $CO_2e$ Emissions | 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 | Annual | |
| 5.3.2.2 | Total Owned + Purchased Generation $CO_2e$ Emissions Intensity | Total fugitive $CO_2e$ emissions of sulfur hexafluoride in accordance with EPA's GHG Reporting Program (40 CFR Part 98, Subpart DD). | Metric Tons /Net MWh | Annual | |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| **5.4** | **Non-Generation $CO_2e$ Emissions of Sulfur Hexafluoride ($SF_6$)** | | | | |
| 5.4.1 | Total $CO_2e$ emissions of $SF_6$ | Total fugitive $CO_2e$ emissions of $SF_6$ in accordance with EPA's GHG Reporting Program (40 CFR Part 98, Subpart DD). | Pounds | Annual | U.S. Environmental Protection Agency, Greenhouse Gas Reporting Program (40 CFR, part 98, Subpart DD).. |
| 5.4.2 | Leak rate of $CO_2e$ emissions of $SF_6$ | Leak rate of $CO_2e$ emissions of $SF_6$ in accordance with EPA's GHG Reporting Program (40 CFR Part 98, Subpart DD) | Pounds/ Net MWh | Annual | U.S. Environmental Protection Agency, Greenhouse Gas Reporting Program (40 CFR, part 98, Subpart W). |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| **6** | **Nitrogen Oxide (NOx), Sulfur Dioxide ($SO_2$), Mercury (Hg)** | | | | |
| 6.1 | Generation Basis for Calculation | Indicate the generation basis for calculating $SO_2$, NOx, and Hg emissions and intensity.<br>Fossil: Fossil Fuel Generation Only<br>Total: Total System Generation<br>Other: Other (please specify in comment section | | | |
| **6.2** | **Nitrogen Oxide (NOx)** | | | | |
| 6.2.1 | Total NOx Emissions | Total NOx 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, Greenhouse Gas Reporting Program (40 CFR, part 98, Subpart DD). |
| 6.2.2 | Total NOx Emissions Intensity | Total from above, divided by the MWh of generation basis as indicated in 6.1. | Metric Tons /Net MWh | Annual | |
| **6.3** | **Sulfur Dioxide ($SO_2$)** | | | | |
| 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, Greenhouse Gas Reporting Program (40 CFR, part 98, Subpart W). |
| 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 | |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| **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 | U.S. Environmental Protection Agency, Greenhouse Gas Reporting Program (40 CFR, part 98, Subpart W). |
| 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 | |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| | **Resources** | | | | |
| **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/eeo/terminology.html. EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| 7.3 | Percentage of Minorities in Total Workforce | 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." | Percent of Employees | Annual | U.S. Equal Employment Opportunity Commission, EEO Terminology, www.archives.gov/eeo/terminology.html. EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| 7.4 | Total Number of Board of Directors /Trustees | Average number of employees on the Board of Directors/Trustees over the year. | Number of Employees | Annual | |
| 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/eeo/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/eeo/terminology.html. EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| 7.7 | Employee Safety Metrics | | | | |
| 7.7.1 | Recordable Incident Rate | 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. | Percent | Annual | U.S. Department of Labor, Occupational Health and Safety Administration, OSHA Recordable Incidents.<br>EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to 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, & 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 Sustainability Performance for the Electric Power Industry, 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. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| **8** | **Fresh Water Resources used in Thermal Power Generation Activities** | | | | |
| 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 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. | Millions of Gallons | Annual | Partially sourced from EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance,2018 Technical Report. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to Source |
|---|---|---|---|---|---|
| 8.3 | Water Withdrawals — Consumptive Rate (Millions of Gallon /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 equity-owned net 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 Rate (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 equity-owned net 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. |

| Ref. No. | Metric Name | Definition | Reported in | Period | Reference to 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. | Metric Tons | Annual | Partially sourced from EPRI, Metrics to Benchmark Electric Power Company Sustainability Performance, 2018 Technical Report. |

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