

Section 1: Qualitative Information

ESG/Sustainability Governance

Consistent with our mission and core values, FirstEnergy is committed to providing our shareholders, customers and employees with comprehensive information on our strategies regarding environmental, social and governance (ESG) issues. We assess and manage corporate responsibility and ESG through defined processes and key groups within the organization that are dedicated to corporate governance.

At FirstEnergy, overall management of corporate responsibility, ESG-related issues and strategy rests with our president and chief executive officer, Charles E. Jones. Our Board of Directors provides oversight and feedback on these initiatives as part of its established and engaged Corporate Governance and Corporate Responsibility Committee. The committee comprises independent Directors and meets five times per year.

Our organization includes a dedicated Corporate Responsibility team which is situated in our Strategy Department and overseen by FirstEnergy's senior vice president of strategy. This team is working to fully embed corporate responsibility and ESG into our company culture, develop initiatives that support our mission statement, meet and exceed our stakeholders' expectations, and demonstrate that we are on a strategic journey that will ensure that we are sustainable into the future.

In addition, a cross-functional, executive-level steering committee reviews and guides governance topics, including risks and opportunities associated with corporate responsibility and the climate. Members of this group include senior leadership from the Community Involvement, Corporate Secretary, Environmental, Human Resources, Investor Relations, Risk and Strategy departments.

ESG/Sustainability Strategy

1. Provide an overview of regional factors and related challenges that affect or could affect the business model, and company strategies for responding to these challenges.

Regional factors and related challenges: The potential changes to energy sources, delivery and end-use in different regions we serve could present challenges and/or impact FirstEnergy's business model. This includes customer use of distributed energy resources and the transition to lower-carbon resources. A changing generation and delivery mix could challenge FirstEnergy's ability to provide safe and reliable service to customers. Challenges include the inability to implement utility-owned generation projects due to regulatory constructs in some states; the need for growth in energy-storage technologies; and a transmission and distribution system that is unable to reliably support a grid with fewer dispatchable resources.

Company Strategy: Our regulated utility business strategy provides a strong foundation for our company's growth and alignment with current market and technology trends. It also positions FirstEnergy to adapt to challenges such as the potential changes to energy sources, delivery and end-use in our regions, such as the transition to a lower-carbon energy future and customers' evolving expectations. For example, the regulated utility industry, including our regulated utility business, is uniquely positioned to support multi-sector CO₂ emission reductions through electrification in the transportation, buildings and industrial sectors. At the same time, we can enable the technologies that support a grid with fewer dispatchable resources, and customer use of distributed energy resources.

We are working within the public policies and processes in our region to fully implement these strategies. For example, four of the five states in which FirstEnergy principally operates (Ohio, Pennsylvania, New Jersey and Maryland) operate deregulated electricity markets. With a few exceptions, our utilities are prohibited from owning generation in these states, including renewable generation assets such as solar and wind, as well as certain energy storage assets. We will continue to explore opportunities for utility-owned renewable generation in the states where we operate, and work with policymakers to address other regulatory matters that could impact our ability to meet customers' expectations.

2. Managing and adapting to future ESG/Sustainability risks and opportunities

FirstEnergy is working to maximize opportunities related to corporate responsibility and ESG/Sustainability initiatives, while managing the associated risks.

Our ongoing grid modernization efforts, together with our focus on delivering new technologies and services that meet the future energy needs of our customers, presents significant opportunities for FirstEnergy. As the operator of one of the largest investor-owned electric systems in the United States, we have opportunities to make substantial investments in our system to implement customer solutions. This includes smart grid technology, distributed energy resources, energy storage, electric vehicle chargers and energy efficiency. We are also evaluating opportunities for microgrids to improve the reliability and resiliency of the electric system during natural disasters.

FirstEnergy also supports moving forward with transportation electrification. Our company recognizes that regulated electric utilities are well-positioned to offer public charging services for electric vehicles because utilities can best plan and manage regular maintenance and upkeep to avoid long service equipment downtime, optimize charging retail rates and plan for long-term infrastructure rollouts that are not subject to short-term profitability goals.

Electric utility support for electric vehicle adoption, charging infrastructure and the efficient use of electricity will yield tremendous environmental benefits, including significant CO₂ reductions, by lowering emissions from transportation fuels. We will continue to research opportunities to support electrification of the transportation sector.

FirstEnergy is also focused on understanding and managing risks that could impact our system and using our organization's strength to convert them into opportunities that maximize shareholder value while providing exceptional service to customers. We utilize a formal, comprehensive Enterprise-Wide Risk Management (EWRM) program to assess and address risks and opportunities, including those posed by changes in the climate.

This includes strategic, operational, compliance and financial risks:

- Strategic risks deal with the ability to implement new customer solutions that are dependent on future public policy and regulatory decisions.
- Operational risks include impacts of a changing generation mix in a carbon-constrained economy and implications of increased electrification of end-use technologies.
- Compliance risks include implementation of future carbon policies such as carbon pricing mechanisms, as well as a dramatic expansion or acceleration of state targets for renewable and energy efficiency programs.
- Financial risks are associated with climate change, low demand growth in our region, and carbon policy. In addition, because we recover our investments and associated expenses for utility operations through the regulated ratemaking process, we will be challenged to meet our commitment to provide reliable

and cost-effective electricity to our customers while making necessary investments to strengthen our transmission grid, integrate technology on our distribution system and support a changing generation fleet and policy environment.

3. Sustainability Plans and Progress – Innovative practices, programs, and initiatives designed to support the company’s transition to a lower carbon and increasingly sustainable energy future.

Progress: In 2015, we set an aggressive goal to reduce CO₂ emissions by at least 90% below 2005 levels by 2045. We use CO₂ emissions from our generating facilities (as reported to the U.S. Environmental Protection Agency for compliance with the Clean Air Act) as the metric to assess our progress toward the established goal, and we believe our 90% reduction target is in line with the ambition of the 2015 Paris Agreement within the United Nations Framework Convention on Climate Change.

We have made significant progress toward achieving our CO₂ emissions reduction goal. By the end of 2018, we reduced CO₂ emissions by 62% from our 2005 baseline, which represents a total reduction of about 59 million tons of emissions. In 2020, we anticipate FirstEnergy’s carbon emissions will be 80% below our 2005 baseline – placing us well ahead of schedule to achieve our goal of a 90% CO₂ reduction by 2045.

Plans: Our newly created Emerging Technologies (EmT) Strategy group is charged with exploring and implementing advanced technologies that benefit customers and support federal and state policy efforts to improve grid performance and energy security. These technologies build on our existing regulated business platform while offering customers the flexibility and functionality they want. Our EmT Program team leads the implementation of the advanced technologies that our Strategy team has determined is a strategic fit for the company.

Further, we are continually looking for and acting on opportunities to decrease our environmental impact. Plans include partnering with conservation and regulatory agencies, reducing waste, implementing recycling initiatives and increasing beneficial re-use of materials.

Engagement: We believe it is important to engage regularly with our shareholders, so we maintain an active outreach program. Our shareholder engagement efforts focus on a variety of topics, including corporate responsibility and climate-related disclosures. This outreach gives us an opportunity to discuss our continuing goal of implementing strategies that are in the best interest of our shareholders. FirstEnergy will continue to focus significant efforts on engaging our shareholders and the investment community and will consider their views when making business decisions.

To learn more about FirstEnergy’s commitment to Corporate Responsibility and view our Climate Report, please visit our website at www.fecorporateresponsibility.com.



Electric Company ESG/Sustainability Quantitative Information

Parent Company:
Operating Company(s):
Business Type(s): *(e.g., vertically integrated, T&D only, competitive integrated)*
State(s) of Operation:
State(s) with RPS Programs:
Regulatory Environment: *(e.g., deregulated, regulated, both)*
Report Date:

Ref. No.	Refer to the 'EEI Definitions' tab for more information on each metric	Baseline 2005	Last Year 2017	Current Year 2018	Next Year 2019	Future Year 2045	Comments, Links, Additional Information, and Notes	
Portfolio								
1	Owned Nameplate Generation Capacity at end of year (MW)							
1.1	Coal		9,406	9,270	3,082		Net demonstrated capacity as reported in FE's 10-K Filing 2019 data represents anticipated year end nameplate capacity	
1.2	Natural Gas		1,327	545	0			
1.3	Nuclear		4,048	4,048	0			
1.4	Petroleum		179	59	0			
1.5	Total Renewable Energy Resources							
1.5.1	Biomass/Biogas		0	0	0			
1.5.2	Geothermal		0	0	0			
1.5.3	Hydroelectric		1,410	1,410	697			
1.5.4	Solar		0	0	0			
1.5.5	Wind		0	0	0			
1.6	Other		0	0	0			
Use the data organizer on the left (i.e., the plus/minus symbol) to open/close the alternative generation reporting options								
2	Net Generation for the data year (MWh)		116,315,158	109,322,672				
2.1	Coal							Net generation data as reported on EIA's Form 923, and FE's internal numbers
2.2	Natural Gas							
2.3	Nuclear							
2.4	Petroleum							
2.5	Total Renewable Energy Resources							
2.5.1	Biomass/Biogas							
2.5.2	Geothermal							
2.5.3	Hydroelectric							
2.5.4	Solar							
2.5.5	Wind							
2.6	Other							
Use the data organizer on the left (i.e., the plus/minus symbol) to open/close the alternative generation reporting options								
2.i	Owned Net Generation for the data year (MWh)						Net generation data as reported on EIA's Form 923, and FE's internal numbers	
2.1.i	Coal		42,028,983	34,240,820				
2.2.i	Natural Gas		4,104,592	0				
2.3.i	Nuclear		32,999,296	32,944,220				
2.4.i	Petroleum		-4,920	45,239				
2.5.i	Total Renewable Energy Resources							
2.5.1.i	Biomass/Biogas		0	0				
2.5.2.i	Geothermal		0	0				
2.5.3.i	Hydroelectric		-596,012	-115,190				
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)		37,783,219	42,207,583				Total Purchased Generation as found in FE's FERC Form 1's. MWh purchased from an FE owned company were removed to avoid double
2.1.ii	Coal							



Electric Company ESG/Sustainability Quantitative Information

Parent Company:
Operating Company(s):
Business Type(s): *(e.g., vertically integrated, T&D only, competitive integrated)*
State(s) of Operation:
State(s) with RPS Programs:
Regulatory Environment: *(e.g., deregulated, regulated, both)*
Report Date:

Ref. No.	Refer to the 'EEI Definitions' tab for more information on each metric	Baseline 2005	Last Year 2017	Current Year 2018	Next Year 2019	Future Year 2045	Comments, Links, Additional Information, and Notes
2.2.ii	Natural Gas						counting of emissions. Regional eGRID emission factors used in the calculation.
2.3.ii	Nuclear						
2.4.ii	Petroleum						
2.5.ii	Total Renewable Energy Resources						
2.5.1.ii	Biomass/Biogas						
2.5.2.ii	Geothermal						
2.5.3.ii	Hydroelectric						
2.5.4.ii	Solar						
2.5.5.ii	Wind						
2.6.ii	Other						
3	Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters						
3.1	Total Annual Capital Expenditures (nominal dollars)		\$ 2,751,000,000	\$2,983,000,000			
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)		1,330,680	1,627,000			
3.3	Incremental Annual Investment in Electric EE Programs (nominal dollars)		\$ 139,118,000	\$ 161,649,093			
3.4	Percent of Total Electric Customers with Smart Meters (at end of year)		23%	33%			
4	Retail Electric Customer Count (at end of year)						
4.1	Commercial		712,168	735,242			
4.2	Industrial		30,771	19,538			
4.3	Residential		5,307,210	5,342,283			



Electric Company ESG/Sustainability Quantitative Information

Parent Company:
Operating Company(s):
Business Type(s): *(e.g., vertically integrated, T&D only, competitive integrated)*
State(s) of Operation:
State(s) with RPS Programs:
Regulatory Environment: *(e.g., deregulated, regulated, both)*
Report Date:

Ref. No.	Refer to the 'EEI Definitions' tab for more information on each metric	Baseline 2005	Last Year 2017	Current Year 2018	Next Year 2019	Future Year 2045	Comments, Links, Additional Information, and Notes
Emissions							
5	GHG Emissions: Carbon Dioxide (CO2) and Carbon Dioxide Equivalent (CO2e) <i>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.</i>						
5.1	Owned Generation (1) (2) (3)						
5.1.1	Carbon Dioxide (CO2)						GHG emissions for 2017 and 2018 as reported for EPA's GHG MRR.
5.1.1.1	Total Owned Generation CO2 Emissions (MT)	86,403,130	42,162,660	32,573,923		8,640,313	
5.1.1.2	Total Owned Generation CO2 Emissions Intensity (MT/Net MWh)		0.537	0.485			
5.1.2	Carbon Dioxide Equivalent (CO2e)						
5.1.2.1	Total Owned Generation CO2e Emissions (MT)		42,354,899	32,748,805			
5.1.2.2	Total Owned Generation CO2e Emissions Intensity (MT/Net MWh)		0.539	0.488			
5.2	Purchased Power (4)						Purchase Power calculated based on power purchased for delivery to customers as described on FERC Form 1's. MWh purchased from an FE owned company were removed to avoid double counting of emissions. Regional eGRID emission factors used in the calculation.
5.2.1	Carbon Dioxide (CO2)						
5.2.1.1	Total Purchased Generation CO2 Emissions (MT)		17,971,063	20,097,650			
5.2.1.2	Total Purchased Generation CO2 Emissions Intensity (MT/Net MWh)		0.476	0.476			
5.2.2	Carbon Dioxide Equivalent (CO2e)						
5.2.2.1	Total Purchased Generation CO2e Emissions (MT)		18,079,772	20,223,892			
5.2.2.2	Total Purchased Generation CO2e Emissions Intensity (MT/Net MWh)		0.479	0.479			
5.3	Owned Generation + Purchased Power						
5.3.1	Carbon Dioxide (CO2)						
5.3.1.1	Total Owned + Purchased Generation CO2 Emissions (MT)		60,133,723	52,671,573			
5.3.1.2	Total Owned + Purchased Generation CO2 Emissions Intensity (MT/Net MWh)		0.517	0.482			
5.3.2	Carbon Dioxide Equivalent (CO2e)						
5.3.2.1	Total Owned + Purchased Generation CO2e Emissions (MT)		60,434,671	52,972,697			
5.3.2.2	Total Owned + Purchased Generation CO2e Emissions Intensity (MT/Net MWh)		0.520	0.485			
5.4	Non-Generation CO2e Emissions						
5.4.1	Fugitive CO2e emissions of sulfur hexafluoride (MT) (5)		119,182	120,587			
6	Nitrogen Oxide (NOx), Sulfur Dioxide (SO2), Mercury (Hg)						
6.1	Generation basis for calculation (7)						
6.2	Nitrogen Oxide (NOx)						
6.2.1	Total NOx Emissions (MT)		39,456	34,207			
6.2.2	Total NOx Emissions Intensity (MT/Net MWh)		0.000502	0.000510			
6.3	Sulfur Dioxide (SO2)						
6.3.1	Total SO2 Emissions (MT)		32,094	31,810			
6.3.2	Total SO2 Emissions Intensity (MT/Net MWh)		0.000436	0.000474			
6.4	Mercury (Hg)						
6.4.1	Total Hg Emissions (kg)		119.8	83.6			



Electric Company ESG/Sustainability Quantitative Information

Parent Company:

Operating Company(s):

Business Type(s):

(e.g., vertically integrated, T&D only, competitive integrated)

State(s) of Operation:

State(s) with RPS Programs:

Regulatory Environment:

(e.g., deregulated, regulated, both)

Report Date:

Ref. No.	Refer to the 'EEI Definitions' tab for more information on each metric	Baseline 2005	Last Year 2017	Current Year 2018	Next Year 2019	Future Year 2045	Comments, Links, Additional Information, and Notes
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)		0.000002	0.000001			

Use the data organizer on the left (i.e., the plus/minus symbol) to open/close the Emissions section notes



Electric Company ESG/Sustainability Quantitative Information

Parent Company:
Operating Company(s):
Business Type(s): *(e.g., vertically integrated, T&D only, competitive integrated)*
State(s) of Operation:
State(s) with RPS Programs:
Regulatory Environment: *(e.g., deregulated, regulated, both)*
Report Date:

Ref. No.	Refer to the 'EEI Definitions' tab for more information on each metric	Baseline 2005	Last Year 2017	Current Year 2018	Next Year 2019	Future Year 2045	Comments, Links, Additional Information, and Notes
----------	--	------------------	-------------------	----------------------	-------------------	---------------------	--

Resources

7	Human Resources						
7.1	Total Number of Employees		15,617	14,970			
7.2	Total Number on Board of Directors/Trustees		14	13			
7.3	Total Women on Board of Directors/Trustees		3	4			
7.4	Total Minorities on Board of Directors/Trustees		4	5			
7.5	Employee Safety Metrics						
7.5.1	Recordable Incident Rate		0.99	0.80			
7.5.2	Lost-time Case Rate		0.29	0.25			
7.5.3	Days Away, Restricted, and Transfer (DART) Rate		0.50	0.45			
7.5.4	Work-related Fatalities		2.00	0.00			
8	Fresh Water Resources						
8.1	Water Withdrawals - Consumptive (Billions of Liters/Net MWh)		0.0000021	0.0000022			
8.2	Water Withdrawals - Non-Consumptive (Billions of Liters/Net MWh)		0.0000204	0.0000172			
9	Waste Products						
9.1	Amount of Hazardous Waste Manifested for Disposal		180	537			
9.2	Percent of Coal Combustion Products Beneficially Used		55	34			

Additional Metrics (Optional)

Insert additional rows in this section as necessary.