EEI ESG/Sustainability Template, Version 1 (2018)

FirstEnergy

The metrics and statements provided in this report demonstrate FirstEnergy's commitment to Environmental, Social and Governance/Sustainability (ESG) strategies and initiatives that benefit our customers, employees, investors and other key stakeholders. These efforts are highlighted in a format that is consistent across the electric sector in terms of accessibility, content, timing and presentation.

Headquartered in Akron, Ohio, FirstEnergy is a forward-thinking electric utility powered by a diverse team of employees committed to making customers' lives brighter, the environment better and communities stronger. Our subsidiaries are involved in the transmission, distribution and generation of electricity.

Our workforce of more than 15,000 employees is dedicated to safety, reliability and operational excellence. FirstEnergy's 10 electric distribution companies form one of the nation's largest investor-owned electric systems, based on serving 6 million customers in Ohio, Pennsylvania, New Jersey, West Virginia, Maryland and New York. Our transmission subsidiaries operate approximately 24,500 miles of transmission lines connecting the Midwest and Mid-Atlantic regions.

On March 31, 2018, FirstEnergy Solutions (FES) and FirstEnergy Nuclear Operating Company (FENOC) filed voluntary petitions under Chapter 11 of the United States Bankruptcy Code with the Bankruptcy Court to facilitate an orderly financial restructuring. As a result of these filings, FirstEnergy no longer has a controlling interest in FES or FENOC: These entities are subject to the control of the Bankruptcy Court and, as of March 31, 2018, were deconsolidated from FirstEnergy's consolidated financial statements.

As we continue to make our company more customer-focused and technology-driven, we expect our ESG strategies, initiatives and disclosures to evolve as well.

ESG Governance

FirstEnergy's President and Chief Executive Officer, Charles E. Jones, is responsible for setting the strategic direction for addressing ESG issues, including those related to climate change. Mr. Jones serves on FirstEnergy's Board of Directors, which oversees significant ESG matters. Senior executives provide periodic updates to the Board and committees on our climate change-related business strategy, legislative and regulatory policies, and other initiatives. The Board's Audit Committee (comprising three independent members) and the Governance Committee (comprising four independent members) have primary responsibility for oversight of ESG compliance activities, as well for identifying, assessing and managing climate-related risks and opportunities.

We have established a cross-functional, executive-level-led ESG Steering Committee. In conjunction with our Strategy Department, this group is actively engaged in providing the overall direction for our ESG strategy as well as in making decisions regarding disclosures and reporting.

Our ESG strategy reflects a strong focus on building a better future for our customers, company and communities as we make the transition to a cleaner, smarter and more sustainable energy future. Moreover, our commitment to maintaining high standards for practices and policies that help ensure good corporate governance also plays a vital role.

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Managing and Adapting to Future ESG Risks and Opportunities

Our Risk Management group identifies, assesses and manages climate-related risk and opportunities through an Enterprise-Wide Risk (EWR) management program. This group also works with various stakeholders to help minimize our risks and maximize our opportunities associated with climate-related issues.

As part of the EWR process, FirstEnergy assesses risk regarding our transition to a fully regulated utility company and physical risks, including acute and chronic risks attributed to changing weather patterns. Transition risks include those arising from policy, legal, technology and market changes. For example, we are subject to energy efficiency and peak-demand-reduction requirements in Ohio, Pennsylvania, Maryland and West Virginia. Legislation in Ohio and Maryland set targets of 2 percent annual incremental energy efficiency savings, while Pennsylvania and West Virginia have less stringent targets.

State mandates require us to provide a portfolio of programs to meet energy efficiency and peak-demand targets. We offer multiple programs to residential, commercial and industrial customers to help them better manage their energy use. These include major electricity end-uses, such as HVAC equipment, lighting and building technologies, and commercial and industrial equipment, in addition to consumer behavioral programs.

We established an Energy Efficiency Department that mitigates the potential risks inherent in meeting requirements for energy efficiency and peak demand reduction targets by managing our response to state mandates. In 2017, this department conducted monthly progress reviews and forecast our performance against state requirements. Programs offered by our utility companies have a solid track record for meeting or significantly exceeding each state's energy efficiency targets. In 2017, we produced energy efficiency savings of approximately 1.33 million megawatts across our service area.

FirstEnergy also has identified climate-related opportunities that could impact our operations, supply chain and customers. For example, we support our customers' rights to safely use distributed energy resources (DER). We also support the use of DERs by critical facilities during emergencies. Emerging technologies include utility-scale solar, microgrids, energy storage and electric vehicles. When owned and operated by an electric utility and sited at optimal locations, DER can benefit the distribution grid by reducing peak load, providing voltage support, reducing line losses, and enhancing reliability and resiliency. Electric utilities are best positioned to maximize the benefits of DER and ensure its safety and reliability.

To further assess potential climate-related risks and opportunities, we plan to publish a climate risk report in 2019. This report will include a discussion on how we view, assess and manage carbon and climate risks and opportunities. We anticipate a scenario analysis will be evaluated as part of the report, using guidance from the Task Force on Climate-related Financial Disclosures. The report also will disclose our strategy for achieving our goal to reduce carbon dioxide (CO_2) emissions by 90 percent below 2005 levels by 2045. This goal builds on the significant reduction in CO_2 emissions we have already achieved since 2005, and reductions resulting from exiting the competitive generation business.

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ESG Plans and Progress

FirstEnergy is dedicated to meeting our customers' energy needs while protecting the environment, investing in new technologies and making our communities stronger. For example, we have installed nearly 1.7 million smart meters across our four utility operating companies in Pennsylvania since 2013, and we plan to deploy these devices to nearly all of our 2 million Pennsylvania customers by mid-2019.

Through our partnership with the Electric Power Research Institute (EPRI), we're helping fuel the next generation of electric vehicles while minimizing the related costs and impact on electric system reliability. In addition, through our multibillion-dollar Energizing the Future program, we continue to upgrade and modernize our transmission system. We plan to invest an additional $4.0 billion to $4.8 billion from 2018 through 2021 on projects that include upgrading or replacing aging infrastructure, enhancing performance, increasing flexibility, and maintaining grid security. These efforts benefit customers by supporting smart technologies, new load growth, and increased reliability and grid security.

FirstEnergy also supports a wide range of social initiatives that help improve our region's quality of life. We're dedicated to sustaining a high-performing team by attracting, retaining and developing a diverse workforce that better reflects the demographics of the regions we serve. Toward that end, we place a strong focus on diversity and inclusion (D&I) training, developing Employee Business Resource Groups, supporting the use of qualified diverse suppliers, and tracking our progress through a Key Performance Indicator for D&I that measures diverse succession planning and hiring as well as employee commitment to these key priorities. We're honored to be one of 120-plus companies that support the CEO Action for Diversity & Inclusion initiative and have made its three major imperatives – open dialogue, training and sharing best practices – the cornerstones of our company's D&I strategy.

We recognize that a highly trained, dedicated and motivated workforce is essential to delivering electricity safely and reliably to our customers. For more than a decade, FirstEnergy has partnered with local community colleges to train the next generation of highly skilled line workers and substation electricians for the electric utility industry. Our Power Systems Institute (PSI) and Power Plant Technology (PTI) workforce development programs combine classroom learning with hands-on skills training at company facilities. To date, more than 1,700 graduates have earned associate degrees and joined our company through these unique two-year programs.

In addition, we're bringing good energy to our communities through the strong funding support of FirstEnergy and the FirstEnergy Foundation, as well as the many volunteer efforts and contributions of our employees. In 2017, our foundation granted more than $6.1 million to support over 1,000 community-based organizations, and our employees lent their time and talents to assist hundreds of charitable groups.

Additional information regarding FirstEnergy's ESG Strategy and initiatives can be found in our 2017 Annual Report and 2016 Sustainability Report, and we expect that numerous ESG disclosures will be available – including an updated Sustainability Report, ESG Strategy and Climate Risk Report – as our strategies and initiatives continue to evolve. Links to the current reports are provided below:

http://www.readmaterial.com/FE/FE_17AR.PDF

https://www.firstenergycorp.com/environmental.html

ESG/Sustainability Template – Section 2: Quantitative Information

Disclaimer: All information below is being provided on a voluntarily basis, and as such, companies may elect to include or exclude any of the topics outlined below and customize the template to their specific needs. The decision to include data for historical and future years is at the discretion of each company and the specific years (e.g., historical baseline) should be chosen as appropriate for each company.

Parent Company: FirstEnergy
Operating Company(s): Ohio Edison, The Illuminating Company, Toledo Edison, Met-Ed, Penelec, Penn Power, West Penn Power, Jersey Central Power & Light, Mon Power, Potomac Edison
Business Type(s): Vertically integrated
State(s) of Operation: Ohio, West Virginia, Maryland, Pennsylvania, New York, New Jersey, Virginia
State(s) with RPS Programs: Ohio, Maryland, Pennsylvania, New York, New Jersey, Virginia
Regulatory Environment: Both
Report Date: 8/27/2018

Ref. No.	Refer to the 'Definitions' tab for more information on each metric	Baseline 2005	Last Year 2016	Current Year 2017	Next Year 2018	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	9,406	3,082		Net demonstrated capacity as reported in FE's 10-K Filing.
1.2	Natural Gas		1,327	1,327	0		2018 data represents anticipated year end nameplate capacity.
1.3	Nuclear		4,048	4,048	0		
1.4	Petroleum		179	179	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		
2.i	**Owned Net Generation for the data year (MWh)**						
2.1.i	Coal		47,277,978	42,028,983			Net generation data as reported on EIA's Form 923, and FE's internal numbers.
2.2.i	Natural Gas		4,967,409	4,104,592			
2.3.i	Nuclear		32,036,962	32,999,296			
2.4.i	Petroleum		-3,382	-4,920			
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		-511,925	-596,012			
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)**		39,995,747	37,783,219			Total Purchased Generation as found in FE's 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.
2.1.ii	Coal						
2.2.ii	Natural Gas						
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)		$ 2,972,000,000	$ 2,751,000,000			
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)		676,571	1,330,680			
3.3	Incremental Annual Investment in Electric EE Programs (nominal dollars)		$82,276,000	$ 139,118,000			
3.4	Percent of Total Electric Customers with Smart Meters (at end of year)		13%	23%			
4	**Retail Electric Customer Count (at end of year)**						
4.1	Commercial		715,028	712,168			
4.2	Industrial		30,466	30,771			
4.3	Residential		5,333,047	5,307,210			

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	Emissions						
5	**GHG Emissions: Carbon Dioxide (CO2) and Carbon Dioxide Equivalent (CO2e)**						
5.1	**Owned Generation (1) (2) (3)**						
5.1.1	Carbon Dioxide (CO2)						GHG emissions for 2016 and 2017 as reported for EPA's GHG MRR.
5.1.1.1	Total Owned Generation CO2 Emissions (MT)	86,403,130	46,100,223	42,162,660		8,640,313	
5.1.1.2	Total Owned Generation CO2 Emissions Intensity (MT/Net MWh)		0.550	0.537			
5.1.2	Carbon Dioxide Equivalent (CO2e)						
5.1.2.1	Total Owned Generation CO2e Emissions (MT)		46,333,442	42,354,899			
5.1.2.2	Total Owned Generation CO2e Emissions Intensity (MT/Net MWh)		0.553	0.539			
5.2	**Purchased Power (4)**						
5.2.1	Carbon Dioxide (CO2)						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.
5.2.1.1	Total Purchased Generation CO2 Emissions (MT)		22,336,317	17,971,063			
5.2.1.2	Total Purchased Generation CO2 Emissions Intensity (MT/Net MWh)		0.558	0.476			
5.2.2	Carbon Dioxide Equivalent (CO2e)						
5.2.2.1	Total Purchased Generation CO2e Emissions (MT)		22,494,336	180,079,772			
5.2.2.2	Total Purchased Generation CO2e Emissions Intensity (MT/Net MWh)		0.562	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)		68,436,540	60,133,723			
5.3.1.2	Total Owned + Purchased Generation CO2 Emissions Intensity (MT/Net MWh)		0.553	0.517			
5.3.2	Carbon Dioxide Equivalent (CO2e)						
5.3.2.1	Total Owned + Purchased Generation CO2e Emissions (MT)		68,436,540	60,434,671			
5.3.2.2	Total Owned + Purchased Generation CO2e Emissions Intensity (MT/Net MWh)		0.553	0.520			
5.4	**Non-Generation CO2e Emissions**						
5.4.1	Fugitive CO2e emissions of sulfur hexafluoride (MT) (5)		102,882	119,182			
5.4.2	Fugitive CO2e emissions from natural gas distribution (MT) (6)						
6	**Nitrogen Oxide (NOx), Sulfur Dioxide (SO2), Mercury (Hg)**						
6.1	Generation basis for calculation (7)			Total			
6.2	**Nitrogen Oxide (NOx)**						
6.2.1	Total NOx Emissions (MT)		39,936	28,446			
6.2.2	Total NOx Emissions Intensity (MT/Net MWh)		0.000508	0.000386			
6.3	**Sulfur Dioxide (SO2)**						
6.3.1	Total SO2 Emissions (MT)		40,599	32,094			
6.3.2	Total SO2 Emissions Intensity (MT/Net MWh)		0.000516	0.000436			
6.4	**Mercury (Hg)**						
6.4.1	Total Hg Emissions (kg)		124.7	119.8			
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)		0.000002	0.000002			

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	Resources						
7	**Human Resources**						
7.1	Total Number of Employees		15,707	15,617			
7.2	Total Number on Board of Directors/Trustees		14	13			
7.3	Total Women on Board of Directors/Trustees		2	2			
7.4	Total Minorities on Board of Directors/Trustees		4	4			
7.5	Employee Safety Metrics						
7.5.1	Recordable Incident Rate		0.59	0.99			2017 numbers do not include FES.
7.5.2	Lost-time Case Rate		0.18	0.29			
7.5.3	Days Away, Restricted, and Transfer (DART) Rate		0.32	0.50			
7.5.4	Work-related Fatalities		0.00	2.00			
8	**Fresh Water Resources**						
8.1	Water Withdrawals - Consumptive (Billions of Liters/Net MWh)		0.0000036	0.0000021			
8.2	Water Withdrawals - Non-Consumptive (Billions of Liters/Net MWh)		0.0000204	0.0000204			
9	**Waste Products**						
9.1	Amount of Hazardous Waste Manifested for Disposal		81	180			
9.2	Percent of Coal Combustion Products Beneficially Used		26.7	55			

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