Mr. Victor M. McCree  
Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Submitted electronically to Petition_Resource@nrc.gov

RE:  Citizen Complaint and Request for Enforcement Action Regarding FirstEnergy Nuclear Facility Operations in Ohio and Pennsylvania

Dear Mr. McCree,

Pursuant to 10 CFR § 2.206, the Environmental Law & Policy Center (“ELPC”) submits this Petition to the U.S. Nuclear Regulatory Commission (“NRC”) requesting enforcement action against First Energy Corp. (“FE”), First Energy Solutions (“FES”), FirstEnergy Nuclear Generation (“NG”) and FirstEnergy Nuclear Operating Company (“FENOC”) for failure to comply with nuclear decommissioning funding requirements under 42 U.S.C.A. § 2201(x)(1) for the Davis-Besse, Perry and Beaver Valley Units 1 and 2 nuclear plants located in Ohio and Pennsylvania (“the Nuclear Plants”). FE is the parent company of FES and FENOC, which are wholly-owned subsidiaries. The Nuclear Plants are owned by NG, which is, in turn a wholly-owned subsidiary of FES, and are operated by FENOC. See Attachment 1 (Organizational Chart). FENOC and NG are the licensees for the Nuclear Plants.

FE is the ultimate parent company guarantor for the Nuclear Plants. FE states in its recent Form 10-K report filing to the United States Securities and Exchange Commission as follows: “Under NRC regulations, FirstEnergy must ensure that adequate funds will be available to decommission its nuclear facilities. As of December 31, 2017, FirstEnergy had approximately $2.7 billion (FES $1.9 billion) invested in external trusts to be used for the decommissioning and environmental remediation of its nuclear generating facilities.” FirstEnergy Corp. Annual Report (Form 10-K) (Feb. 20, 2018) at 18,

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1 ELPC is a public interest environmental legal advocacy and eco-business innovation organization working throughout the Midwest states to improve environmental quality and protect natural resources in the Midwest on behalf of our organization, members and clients. ELPC works to avoid risks and injuries to public health, clean water, clean air and landscapes in ways that are good for the environment and good for the economy.
As licensees, NG and FENOC are violating financial assurance requirements in the Atomic Energy Act because they have insufficient funds set aside for decommissioning costs. Licensees are legally responsible under the Atomic Energy Act, 42 U.S.C.A. § 2201(x)(1), and NRC regulations, 10 CFR § 50.75, for demonstrating the availability of funds to decommission their nuclear facilities. NG and FENOC have historically relied on two means of providing this financial assurance: (1) nuclear decommissioning trusts; and (2) parent company guarantees. The existing decommissioning trusts for Beaver Valley Units 1 and 2 and Perry contain insufficient funds to decommission those three plants. When properly estimated, the same might be the case with the Davis-Besse nuclear plant. Due to the rapidly deteriorating financial condition of NG’s parent company FES, as well as the financial circumstances of parent company FE, it is clear that NG and FENOC can no longer rely on parent company guarantees. As a result, NG and FENOC are not currently providing reasonable assurance of decommissioning funding in violation of 42 U.S.C.A. § 2201(x)(1) and 10 CFR § 50.75(a).

Importantly, since these nuclear plants are merchant plants, as more fully explained below, FE cannot request that the public utilities commissions require retail ratepayers to pay rate increases to support financial shortfalls for the merchant nuclear plants’ decommissioning costs.

FES is on the verge of bankruptcy, and it is highly likely that NG and FENOC will file as well. See Attachments 2–6. FE CEO Chuck Jones recently stated that he would be “shocked” if FES did not file for bankruptcy by the end of March. Attachment 3 at 1. In FES Form 10-K Report filed on Feb. 20, 2018, the company’s independent auditor, Pricewaterhouse Coopers LLP, noted that “FirstEnergy Solution Corp.’s current financial position and the challenging market conditions impacting liquidity raise substantial doubt about its ability to continue as a going concern.” FES Annual Report (Form 10-K) (Feb. 20, 2018) at 119. In addition to its $515 million of maturing debt, FES’ precarious financial position is evidenced by its senior unsecured debt rating, capital structure and long-term cash flow projections. FES’ Form 10-K Report admits that “these obligations and their impact to liquidity raise substantial doubt about FES’ ability to meet its obligations as they come due over the next twelve months and, as such, its ability to continue as a going concern.” Id. at 4 (emphasis added).

FE, FES, NG and FENOC are no longer demonstrating, as they must, that they meet the standards for providing reasonable financial assurances for decommissioning, decontaminating and restoring the nuclear reactors and plant sites. Licensees NG and FENOC and the parent companies FE and FES should not now be allowed to place taxpayers at risk of bearing costs for decommissioning, decontaminating, and restoring reactor sites, and the risks that the nuclear plants’ decommissioning and site clean ups will be deferred and delayed. In light of FES, NG and FENOC’s impending bankruptcy proceedings, and FE’s rapidly deteriorating financial situation, in order to ensure compliance with federal laws and regulations, ELPC requests that the NRC give this petition immediate consideration and promptly issue Demands for Information and Notices of Violation to licensees NG and FENOC and parent companies FE and FES.
1. NG and FENOC’s Nuclear Plants are in Violation of Financial Assurance Requirements Under 42 U.S.C.A. § 2201(x)(1) and 10 CFR § 50.75

As directed by the Atomic Energy Act, the NRC has established requirements to ensure that licensees provide “an adequate bond, surety, or other financial arrangement . . . to permit the completion of all requirements established by the Commission for the decontamination, decommissioning, and reclamation of sites, structures, and equipment . . .” 42 U.S.C.A. § 2201(x)(1). These requirements specify that licensees provide “reasonable assurance that funds will be available for the decommissioning process.” 10 CFR § 50.75(a). Licensees NG and FENOC have consistently struggled to prove reasonable assurance of funding for decommissioning their nuclear plants. They have historically relied on two means to secure financial assurance of decommissioning funding: nuclear decommissioning trusts (“Trusts”); and (2) parent company guarantees (“Parent Guarantees”).

NG and FENOC do not have sufficient funds in Trusts to meet financial assurance requirements under 42 U.S.C.A. § 2201(x)(1) and 10 CFR § 50.75. The external trusts for Beaver Valley Units 1 and 2 and Perry are insufficient to cover the estimated decommissioning costs at each of these facilities. NG and FENOC’s most recent estimates from March 2017, compiled in the table below, demonstrate a $350 million shortfall in decommissioning funds available in external trust funds for Beaver Valley Units 1 and 2, Davis-Besse, and Perry. See ML17083B221.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Estimated Decommissioning Cost (March 2017)</th>
<th>Amount Accumulated in External Trust Funds (March 2017)</th>
<th>Total Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beaver Valley Unit 1</td>
<td>$481,892,880</td>
<td>$286,595,306</td>
<td>$195,297,574</td>
</tr>
<tr>
<td>Beaver Valley Unit 2</td>
<td>$481,892,880</td>
<td>$378,702,702</td>
<td>$103,190,178</td>
</tr>
<tr>
<td>Davis-Besse</td>
<td>$467,414,486</td>
<td>$552,423,474</td>
<td>-$85,008,988</td>
</tr>
<tr>
<td>Perry</td>
<td>$651,915,000</td>
<td>$515,467,559</td>
<td>$136,447,441</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$2,083,115,246</strong></td>
<td><strong>$1,733,189,041</strong></td>
<td><strong>$349,926,205</strong></td>
</tr>
</tbody>
</table>

FE’s shortfalls are even greater when considering its decommissioning responsibilities for Three Mile Island Unit 2 (“TMI-2”), licensed by GPU Nuclear—a wholly owned subsidiary of FirstEnergy Corp. FE Quarterly Report (Form 10-Q) (Nov. 4, 2016) at 45. TMI-2 requires nearly $1.2 billion for decommissioning, although as of March 2017, only $778 million has accumulated in its decommissioning trust fund. See ML17083B223 at 6. According to its own DFS Reports, FE’s estimated decommissioning cost for all five of its nuclear units (Beaver Valley Units 1 and 2, Davis-Besse, Perry, and TMI-2), as of March 2017, totals $3,318 million, bringing its total shortfall to $806 million. See ML17083B221 (costs for Beaver Valley Units 1 and 2, Davis-Besse and Perry) and ML17083B223 (costs for TMI-2).
FE’s actual decommissioning costs and corresponding shortfalls are likely to be much greater than those reported by NG and FENOC. For example, the respected Callan Institute’s 2017 Nuclear Decommissioning Funding Study, which includes TMI-2, specifies $5,260 million in estimated decommissioning costs, bringing the total shortfall to $2,749 million. See THE CALLAN INSTITUTE, 2017 Nuclear Decommissioning Funding Study 5 (Dec. 31, 2016), https://www.callan.com/wp-content/uploads/2017/09/Callan-2017-NDT-Survey.pdf. These estimated shortfalls are nearly 3.5 times the size of those reported by FENOC and NG in March 2017. The Callan Report generated its calculations using the same sources: DFS reports, 10-K filings and NRC website data as of December 2016. Compare id. at 5 with ML17083B221; ML17083B223.

In addition to these shortfalls, FE, FES, NG and FENOC are not currently funding the decommissioning trusts. As confirmed by their SEC reports, neither FES nor parent company FE made any contributions during 2017. FES Annual Report (Form 10-K) (Feb. 20, 2018) at 88, 114. Furthermore, nearly 70% of the decommissioning trust funds reported by FE are held by nearly-bankrupt FES. In December 31, 2017, parent company FE reported $2,678 million in external funds, of which $1,856 million was held by FES. FES Annual Report (Form 10-K) (Feb. 20, 2018) at 181.

In addition to the higher costs and larger shortfalls identified by the Callan Report, FE’s shortfalls reported in March 2017 are also likely understated due to the formula NG and FENOC used to calculate their cost estimates. The licensees estimated their decommissioning costs for Beaver Valley Unit 2, Davis-Besse, and Perry using the NRC formula as opposed to a site-specific formula. See ML17083B221at 10, 12, 15. The NRC formula is only designed to estimate a “bulk” of the costs—a term that the NRC has failed to define, but likely represents less than the full costs of decommissioning. GA0-12-258, Nuclear Regulation - NRC's Oversight of Nuclear Power Reactors' Decommissioning Funds Could Be Further Strengthened 13 (2014), https://www.gao.gov/assets/590/589923.pdf.

A 2014 GAO report explained that “without changes to the NRC formula, it is possible that the NRC formula estimates could be significantly less than the licensees’ site-specific cost estimates . . . .” Id. at 14 (emphasis added). For example, in the case of Three Mile Island-2, the site-specific cost was nearly three times that of the formula’s estimate. See ML17083B223 at 3, 6. Given that Beaver Valley 2, Davis-Besse and Perry all used the NRC formula, it is likely that the actual costs of decommissioning will be higher than anticipated, thereby making the shortfalls in decommissioning funds even greater.

Despite its weakening financial position, FE is the actual parent guarantor for the nuclear plants owned and operated by NG and FENOC. See FirstEnergy Corp. Annual Report (Form 10-K) (Feb. 20, 2018) at 18. FE has historically played this role; when NG and FENOC needed to take out large parent guarantees between 2011 and 2013 to remedy decommissioning shortfalls for Beaver Valley Unit 1 and Perry, FE was the guarantor. See ML113640029 at 4 (citing $95 million parental guaranty from FE dated December 19, 2011); ML12363A037 at 4 (citing $95.5 million parental guaranty from FE dated December 17, 2012); ML13169A262 at 7 (citing $125 million parental guaranty from FE dated June 11, 2013).
The financial condition of FE raises serious concerns about its ability to issue the types of guarantees that it has in the past. FE recently represented to the Public Utilities Commission of Ohio (“PUCO”) that it needs a financial bailout and special rates in order to retain its financial integrity and solvency. See In the Matter of the Application of Ohio Edison Company, the Cleveland Electric Illuminating Company, and the Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. 4928.143 In the Form of an Electric Security Plan, Case No. 14-1297-EL-SSO, Order at 23 (Pub. Util. Comm’n of Ohio Aug. 16, 2017). In these proceedings, FE admitted to its risk of credit downgrade to below investment grade. Id. at 23 (“FirstEnergy states there is sufficient evidence in the record, including intervenor testimony, showing that the credit ratings of FirstEnergy Corp. and the Companies falling to a non-investment grade rating is a matter of concern . . . .”). The company also acknowledged that “Moody’s and S&P had both recently issued negative outlooks on FirstEnergy Corp. and expressed concern with its financial health moving forward . . . .” Id.

FES is on the verge of filing for bankruptcy. The NRC may only approve a company’s use of Parent Guarantees as reasonable assurance of its availability of decommissioning funds if the parent company passes the financial test outlined under 10 CFR Part 30, Appendix A. 10 CFR § 50.75(e)(1)(iii)(B). To pass the financial test, the parent company must meet all criteria under either Paragraph A.1 or A.2 (referred hereafter as “Tests A.1 and A.2”). FES fails these financial tests and therefore cannot provide Parent Guaranties for NG. Accordingly, FE must demonstrate how it will provide the funds required by its parent guaranty.

**Financial Test A.1**

FES cannot pass Test A.1 based on the financials reported in its most recent 10-K. Under Financial Test A.1, FES must have two of the following three ratios: (1) A ratio of total liabilities to total net worth less than 2.0; (2) a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and (3) a ratio of current assets to current liabilities greater than 1.5. Appendix A, A.1(i). Even in its dire financial condition, FES manages to meet the first ratio requirement, but it cannot establish the ratios required under (2) and (3).

FES cannot establish the second ratio requirement because its ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities is not greater than 0.1. The ratio of FES’ sum of net income (-$2,391M) plus depreciation, depletion and amortization ($333M) to total liabilities ($24M) equals -85.75 million. FES cannot establish the third ratio requirement because the ratio of its current assets ($796M) to current liabilities ($1,254M) is only .635 – not greater than the 1.5 required. FES fails Test A.1 because it cannot meet two of the three ratio requirements.

**Financial Test A.2**

FES cannot pass Financial Test A.2 on account of its poor credit ratings. A threshold requirement for meeting Test A.2 is that the parent company have a current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, A, or BBB
(including adjustments of + and −) as issued by Standard and Poor’s or Aaa, Aa, A, or Baa (including adjustment of 1, 2, or 3) as issued by Moody’s. Appendix A, A.2(i). FES’ credit ratings have been downgraded to CCC- (Standard and Poor) and Ca (Moody’s)—both far below the required ratings under Appendix A, A.2(i). Since FES cannot pass the financial test under Tests A.1 or A.2, the company’s reliance on a poorly described $400 million support agreement violates the law.

Recognizing FES’ inability to meet the applicable financial tests, in December 2016, FENOC notified the NRC to terminate existing Parent Guarantees from FES for the independent spent fuel storage installations (ISFSIs) for Beaver Valley, Davis-Besse, and Perry nuclear plants because FES could no longer satisfy the financial test criteria for decommissioning ISFSIs pursuant to 10 CFR § 72.30(e). See ML17251A061 at 1 (terminating all Parent Guarantees for the ISFSIs at these facilities). The FES Parent Guaranty test for decommissioning ISFSIs, Appendix A to 10 CFR Part 30, is the same test for decommissioning the main power reactors under 10 CFR § 50.75.

There is a $500 million credit line from FE to FES, and this credit line can be drawn out: “Due to FES’ financial condition, there is a substantial risk that it may be necessary for FES and FENOC to seek protection under U.S. bankruptcy laws. . . . [I]t is expected that prior to the commencement of any such proceeding, FES will fully draw down its $500 million secured credit facility from FE, which FE would likely fund by borrowing under its bank facility.” FES Annual Report (Form 10-K) (Feb. 20, 2018) at 28. If FES funds are exhausted in bankruptcy, FE will therefore be obligated to secure the full amount of NG and FENOC’s underfunded decommissioning costs. According to a March 16, 2018 Moody’s report, FES appears to have already drawn out this credit line. See MOODY’S Issuer Comment: FirstEnergy Solutions’ Credit Facility Now Fully Drawn (March 16, 2018), https://www.moodys.com/MdcAccessDeniedCh.aspx?lang=en&cy=global&Source=https%3a%2f%2fwww.moodys.com%2fviewresearchdoc.aspx%3fdocid%3dPBC_1116777%26lang%3den%26cy%3dglobal.

In its most recent 10-K report, FES cites to a general FES “parental support agreement to NG of up to $400 million” designated for FES to satisfy its nuclear support obligations. FES Annual Report (Form 10-K) (Feb. 20, 2018) at 18. If FENOC and NG intend to rely on this “parental support agreement” to meet decommissioning funding obligations, they are in violation of financial assurance requirements. FES does not meet the requirements under either test, and therefore cannot provide any Parent Guarantees to NG of any dollar amount – let alone this $400 million guaranty.

2. These Nuclear Plants are Merchant Plants, and FE Cannot Rely on Rate Increases Forced on Retail Ratepayers to Meet Its Decommissioning Funding Shortfalls

FE cannot charge retail ratepayers to meet nuclear decommissioning obligations. The Nuclear Plants operate as merchant plants in Ohio’s deregulated, competitive market, and the time has long passed for FE to collect decommissioning costs as transitional revenue. On June 22, 1999, the Ohio General Assembly passed legislation requiring the restructuring of Ohio’s electric utility industry and providing for retail competition with regard to the generation
component of electric service. Am.Sub.S.B. No. 3, 148 Ohio Laws, Part IV, 7962. This legislation became effective on October 5, 1999, and required each electric utility – including FirstEnergy – to file a transition plan with the Public Utilities Commission of Ohio (“PUCO”) for the company’s provision of retail electric service in Ohio following deregulation. R.C. 4928.31. The legislature anticipated that utilities would have “transition costs,” which are costs incurred by the utility before retail competition began that would not be recoverable through market-based rates. See FirstEnergy Corp. v. Pub. Util. Comm., 768 N.E.2d 648 (Ohio 2002), R.C. 4928.37 and 4928.39.

The law thus provided each electric utility with a limited opportunity “to receive transition revenues that may assist it in making the transition to a fully competitive retail electric generation market.” R.C. 4928.37. Utilities had until December 31, 2005, to receive generation transition revenue. R.C. 4928.01(A)(26); 4928.38 and 4928.40(A). After that date, Ohio law is clear that “the utility shall be fully on its own in the competitive market. The commission shall not authorize the receipt of transition revenues or any equivalent revenues by an electric utility,” with certain exceptions not applicable here. R.C. 4928.38 (emphasis added). The Ohio Supreme Court upheld this clear language prohibiting recovery of transition costs after December 31, 2005, and it has flatly rejected utility attempts to recover from customers anything that is “the equivalent of transition revenues.” See In re Application of Columbus S. Power Co., 147 Ohio St.3d 439 (2016) (overturning the Commission’s approval of an AEP “Retail Stability Rider” used to recover deferred capacity costs and to maintain AEP’s financial integrity).

FE’s financial condition does not justify an exception from the prohibition on recovery of decommissioning funds past the bar date for transition revenue recovery. While PUCO concluded that FE’s first transition plan filing would not conform to the requirements of Ohio law, FE eventually did file a transition plan that was approved by PUCO. In re FirstEnergy Corp., 2000 WL 1791792 at *60-61 (Pub. Util. Comm’n of Ohio July 19, 2000). FE sought and PUCO granted inclusion of decommissioning costs for nuclear generating facilities in FirstEnergy’s authorized transition costs. Id. at *54. These costs were to be recovered on a jurisdictional basis between January 1, 2001 and December 31, 2005. Id. FE has already recovered from Ohio retail ratepayers the maximum amount of decommissioning costs allowable under Ohio law.

3. NG and FENOC Should Not Be Allowed to Defer Their Financial Obligations through SAFSTOR.

Even if NG and FENOC use SAFSTOR as a way to defer actual payment of decommissioning costs, they still may lack the necessary funds. In light of NG and FENOC’s precarious financial situations, the NRC should investigate whether NG and FENOC should be required to reevaluate use of SAFSTOR. FENOC and NG have calculated decommissioning cost estimates based on a period of SAFSTOR for at least one of their plants, Beaver Valley Unit 1, and have clarified that “FENOC has not made a final determination on the nuclear decommissioning approach for any of the listed nuclear units.” ML17083B221 at 1, 6.

Although licensees may select their decommissioning option, NRC regulations require the licensee to reevaluate its selection if the option (a) includes activities that would endanger the
health and safety of the public by being outside of the NRC’s health and safety regulations; or (b) will result in a significant impact to the environment. NRC Regulatory Guide 1.202, ML050230008 at 1.202-3. If a bankrupt company cannot immediately decommission its nuclear plants because it lacks the financial resources to do so, it cannot reasonably be expected to invest the resources necessary to safeguard intact or partially dismantled nuclear structures for an indefinite number of years. As cited by NRC guidance document NUREG-0586, the time gap between cessation of operations and decommissioning can result in a shortage of personnel familiar with the facility and requires ongoing maintenance, security, and surveillance. See ML023470304 at 3-20. A bankrupt company placing its nuclear plants in a period of SAFSTOR lacks the resources to implement these necessary maintenance, security, and surveillance measures.

NG and FENOC should not be allowed to defer decommissioning responsibilities simply because they failed to allocate sufficient funds towards decommissioning. In this situation, SAFSTOR amounts to an improper management approach.

For the foregoing reasons, licensees NG and FENOC and parent companies FE and FES are in violation of the Atomic Energy Act and 10 CFR 50.75 because: (1) their decommissioning trust amounts are insufficient on their own to provide reasonable assurance of funding and parent companies FE and FES are in perilous financial positions; (2) FE cannot force retail ratepayers to pay for the decommissioning trust fund shortfalls; and (3) the costs, including SAFSTOR costs, may still be much higher than expected due to significantly higher shortfalls as reported by the Callan Institute and recognized flaws in the NRC’s cost estimate formula. ELPC respectfully requests that the NRC take the following actions:

**Demands for Information**

(1) Promptly issue a Demand for Information to FE, FES, NG and FENOC requesting site-specific decommissioning funding plans for the Beaver Valley 2, Davis-Besse, and Perry nuclear plants;

(2) Promptly issue a Demand for Information to FE, FES, NG and FENOC regarding their reliance on external trust funds from FE and FES to satisfy their decommissioning financial obligations;

(3) Promptly issue a Demand for Information to FE, FES, NG and FENOC regarding their continued reliance on Parent Guarantees from FE to satisfy decommissioning funding obligations, including the ability of FE to satisfy the Parent Guaranty financial test under Appendix A to 10 CFR Part 30;

(4) Promptly issue a Demand for Information to FES, NG and FENOC to the extent that they are relying on Parent Guarantees from FES to satisfy decommissioning funding obligations,
including the ability of FES to satisfy the Parent Guaranty financial test under Appendix A to 10 CFR Part 30;

(5) Promptly issue a Demand for Information to FE, FES, NG and FENOC regarding their proposed investment and financial contribution plans to make up the current decommissioning shortfall; and

(6) Promptly issue a Demand for Information to FE and FES, respectively, regarding each of their commitments to guarantee NG and FENOC’s decommissioning shortfall in the event of bankruptcy.

Notice of Violation and Penalties

(1) Promptly issue a Notice of Violation against FE, FES, NG and FENOC for operating nuclear facilities without sufficient decommissioning funds in violation of 42 U.S.C.A. § 2201(x)(1) and 10 CFR § 50.75;

(2) Promptly issue civil penalties against FE, FES, NG and FENOC for operating nuclear facilities without sufficient decommissioning funds in violation of 42 U.S.C.A. § 2201(x)(1) and 10 CFR § 50.75; and

(3) Promptly issue an Order to suspend NG and FENOC’s licenses for Beaver Valley Units 1 and 2, Davis-Besse, and Perry nuclear plants.

ELPC also urges the NRC to prohibit NG and FENOC from placing their nuclear facilities into SAFSTOR for purely financial reasons. In addition, ELPC requests that this Petition be given immediate emergency consideration in light of FE’s and FES’ rapidly deteriorating financial conditions.

Thank you for your consideration.

Respectfully submitted,

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