



AN AUDIT REPORT OF THE OHIO COMPANIES' RIDER DMR

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PREPARED FOR

Public Utilities Commission of Ohio

PREPARED BY

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LIST OF ACRONYMS

Bps	Basis points
CAIDI	Customer Average Interruption Duration Index
CEI	The Cleveland Electric Illuminating Co
CFO	Cash from operations
DIV	Dividends
DMR	Distribution Modernization Rider
EBITDA	Earnings before interest, tax, depreciation and amortization
EEI	Edison Electric Institute
EmT	Emerging Technologies Group
ESP	Electric Security Plan
FE	FirstEnergy Corp.
FESC	FirstEnergy Service Company
FFO	Funds from operations
JCP&L	Jersey Central Power and Light
LOSA	Level of Signature Approval
Ohio Companies	Includes Ohio Edison, Toledo Edison, and the Cleveland Electric Illuminating Co.
OE	Ohio Edison
PAPUC	Pennsylvania Public Utility Commission
ROE	Return on Equity
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SEET	Significant Excessive Earnings Test
TE	Toledo Edison
WC	Working Capital

DISCLAIMER

In the context of this report, Daymark Energy Advisors (Daymark) intends the phrase audit as the review of regulatory requirements and evidentiary document review and investigations. This audit report should not be perceived as a financial or systems audit of the company's processes, transactions, or systems, as may be required for financial reporting purposes.

Daymark provides this document and the opinions, analyses, evaluations, and recommendations for the sole use and benefit of the contracting parties. Daymark intends no third-party beneficiaries and, therefore, assumes no liability whatsoever to third parties for any defect, deficiency, error, or omission in any statement contained in or in any way related to this document or the services provided.

Daymark prepared this report based in part on information not within its control. While it is believed that the information that has been provided is reliable, Daymark does not guarantee the accuracy of the information relied upon.

During Daymark's efforts to complete this compliance audit, there was a federal investigation (Case No. 1:21-cr-86) of FirstEnergy Corp. brought by the U.S. Department of Justice surrounding the passage of Amended Substitute House Bill 6 during the 133rd General Assembly. In addition, the Public Utilities Commission of Ohio also opened proceedings for three separate audits – political and charitable spending review (Case No. 20-1502-EL-UNC), corporate separation audit (Case No. 17-974-EL-UNC), and delivery capital recovery rider (Case No. 20-1629-EL-RDR). These concurrent investigations and audits may have impacted what documents and responses Daymark received from FirstEnergy in response to data requests and interviews. Daymark did not receive any indication that information requested was privileged and therefore restricted; however, Daymark cannot guarantee that we had access to all pertinent information.

I. EXECUTIVE SUMMARY

A. Rider DMR

The Distribution Modernization Rider (Rider DMR) was first introduced by the Public Utilities Commission of Ohio (PUCO or Commission) Staff in June 2016 in the rehearing of Ohio Edison, Toledo Edison and the Cleveland Electric Illuminating Company's (the Ohio Companies') fourth Electric Security Plan, or the "ESP IV" case, docket 14-1297-EL-SSO.¹ From July through September 2016, parties to the ESP IV case submitted materials and participated in evidentiary hearings that addressed, among other issues for rehearing, the proposed Rider DMR. The Commission rendered its Fifth Entry on Rehearing on October 12, 2016; it ordered the Rider DMR be approved, and it ordered FE's Ohio electric distribution companies (Ohio Companies) to file tariffs consistent with the Fifth Entry.² The Ohio Companies filed tariff sheets reflecting Rider DMR in November 2016³ and began collecting Rider DMR under those tariffs effective January 1, 2017.⁴

The Commission rendered an Eighth Entry on Rehearing on August 16, 2017, in which it directed Staff to prepare a request for proposals (RFP) for a third-party monitor to ensure that Rider DMR funds were expended appropriately.⁵ The Commission subsequently denied a request by the Ohio Companies for rehearing of the Eighth Entry.⁶

The Commission established docket 17-2474-EL-RDR for the review of Rider DMR.⁷ An RFP was issued in December 2017 and in January 2018, Oxford Advisors, LLC was selected as third-party monitor to assist the Commission and Staff with review of Rider DMR.⁸ The RFP instructed there to be "a mid-term report to be docketed in any proceeding in which the Companies seek an extension of Rider DMR, within 60 days after the filing of an application for extension, and a final report in a separate docket established for the review of Rider DMR, to be filed 90 days after the termination of

¹ See Rehearing Testimonies of Staff witnesses Buckley, Choueiki, and Turkenton, 06/29/2016, in Case No. 14-1297-EL-SSO

² See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶387-388.

³ See Ohio Edison Tariff filing, 11/3/2016, in Case No. 14-1297-EL-SSO.

⁴ *Id.*

⁵ See Case No. 14-1297-EL-SSO, Eighth Entry on Rehearing, 08/16/2017 at ¶113.

⁶ See Case No. 14-1297-EL-SSO, Entry, 10/11/2017 at ¶1.

⁷ See Filing, 12/11/2017, in Case No. 17-2474-EL-RDR.

⁸ See Entry, 1/24/2018, in Case No. 17-2474-EL-RDR.

Rider DMR or its extension.”⁹ Oxford Advisors filed its midterm report on June 14, 2019, in case 17-2474-EL-RDR. An additional final report was never released.

On February 1, 2019, FirstEnergy applied for a two-year extension of Rider DMR in case 19-361-EL-RDR; this extension was an option made available in the Fifth Entry on Rehearing.¹⁰ The Ohio Companies continued to collect Rider DMR funds through August 2019. However, on June 19, 2019, the Ohio Supreme Court ruled “that Rider DMR does not qualify as an incentive under R.C. 4928.143(B)(2)(h) and the conditions placed on the recovery of Rider DMR revenues were not sufficient to protect ratepayers.”¹¹ FirstEnergy filed a motion for reconsideration, which was denied. As a result, on August 22, 2019, the Commission ordered the Ohio Companies to immediately zero out Rider DMR in their tariffs and refund all monies collected under the rider after July 2, 2019.¹² The Ohio Companies filed revised tariff sheets the following day.¹³

The FirstEnergy’s application for an extension of Rider DMR was denied as moot by the Commission given the Ohio Supreme Court’s decision.¹⁴

In an Entry dated December 30, 2020, the Commission granted a motion to reopen the 17-2474-EL-RDR proceeding and directed Staff to issue a request for proposals soliciting services of a third-party auditor to assist with an additional review of Rider DMR.¹⁵ On June 2, 2021, the Commission selected Daymark Energy Advisors, Inc. (Daymark) to assist the Commission and Staff with a further review of Rider DMR.¹⁶ This report presents Daymark’s conclusions upon reviewing of the facts of the relevant cases and discovery requested of FirstEnergy Corp. and the Ohio Companies.

⁹ *Id.*

¹⁰ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶210.

¹¹ See Case No. 19-0361-EL-RDR, Commission Entry, 11/21/2019, referencing *In re Application of Ohio Edison Co. (Ohio Edison)*, Slip Opinion No. 2019- Ohio-2401 at ¶¶ 14-29.

¹² See Order on Remand, 8/22/2019, in Case No. 14-297-EL-SSO.at ¶1.

¹³ See Ohio Edison Tariff filing, 8/23/2019, in Case No. 14-1297-EL-SSO.

¹⁴ See Entry, 11/21/2019, in Case No. 19-0361-EL-RDR.

¹⁵ See Entry, 12/30/2020, in Case No. 17-2474-EL-RDR.

¹⁶ See Entry, 6/2/2021, in Case No. 17-2474-EL-RDR.

Fifth Entry on Rehearing – Rider DMR directive

The Fifth Entry on Rehearing established Rider DMR and outlined the Commission’s expectations for the appropriate use of rider funds. Paragraph 282 summarizes the Commission’s directive regarding Rider DMR:¹⁷

“Although we will not place restrictions on the use of Rider DMR funds, the Commission directs Staff to periodically review how the Companies, and FirstEnergy Corp., use the Rider DMR funds to ensure that such funds are used, directly or indirectly, in support of grid modernization. The Commission notes that grid modernization initiatives, such as smart grid deployment or utility scale battery technology, may involve very large up-front investments, which will be recovered over a number of years (Rehearing Tr. Vol. III at 585-86). Therefore, the Companies may use revenue under Rider DMR to make the large cash up-front investments to fund grid modernization (Co. Ex. 206 at 5-6). On the other hand, we recognize that the Companies and FirstEnergy Corp. may use revenue from Rider DMR to indirectly support grid modernization investments (Co. Ex. 206 at 16). Such steps should lower the cost of borrowing the funds needed to invest in grid modernization and may include reducing outstanding pension obligations, reducing debt, or taking other steps to reduce the long-term costs of accessing capital. The Commission finds that this Staff review will ensure that there is no unlawful subsidy of the Companies’ affiliates.”

Scope of this audit

PUCO sought the services of a firm to conduct an independent audit to perform a review of FirstEnergy’s Rider DMR funds to determine whether FirstEnergy maintained compliance with the Commission’s directives in their approval of FirstEnergy’s fourth Electric Security Plan IV (*ESP IV*). Daymark’s review included a review of these funds, with an examination of the time leading up to the passage of H.B. 6 and the subsequent referendum to clearly understand whether funds collected from ratepayers through Rider DMR were used only for the purposes established in *ESP IV*.

B. Daymark’s compliance approach

The goal of the audit was to establish whether the Rider DMR funds were used for the purposes specified in the *ESP IV* case. To do this, Daymark reviewed and analyzed the available information to arrive at our findings and conclusions. Daymark’s approach

¹⁷ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶282.

included a review of relevant cases, regulations, and Commission directives relative to Rider DMR, as well as a review of associated First Energy policies, procedures and related documents, transactions, and interviews of staff responsible for administering and maintaining the Ohio Company's compliance with the approved uses of Rider DMR funds. Daymark compared reported behaviors, documentary, and transaction-level evidence to regulatory requirements to identify gaps, their causes and recommendations for remedy where appropriate.

The following three-step approach was used to assess compliance:

1. Gathered and reviewed information on relevant Board/State/Federal regulatory requirements.
2. Gathered FirstEnergy's implementing internal policy and process documentation to understand FirstEnergy's approach to compliance.
3. Gathered evidence through comprehensive document review, data requests, transaction examination, and interviews.

Daymark worked closely with Staff throughout the entire audit process, including weekly check-in meetings and Staff attended and participated in most interviews with FirstEnergy personnel. To maintain independence throughout the audit, our communications with Staff were structured to update them on the progress only, as opposed to seeking Staff's direction on what to examine.

C. Analysis conducted

Per the language in the Fifth Entry on Rehearing, Daymark investigated whether Rider DMR funds were used directly and/or indirectly to support grid modernization. Direct support would be the use of Rider DMR dollars to fund capital projects meeting the definition of grid modernization. Indirect support would comprise actions that lower the cost of capital or in some other way improve access to the capital needed to fund grid modernization projects. The set of actions meeting the definition of indirect support is quite broad. Since the Ohio Companies may finance future capital spending through debt, equity, or a combination thereof, we investigated factors impacting both the cost of debt and access to equity.

Daymark also reviewed the money pool construct, invoicing controls, and cost allocation procedures to analyze the business processes that controlled Rider DMR funds.

Listed below are the report sections outlining our analysis and results. Further context regarding the relevance of a specific category to Rider DMR is discussed in the respective section.

- Section III: Direct spending on grid modernization
 - How grid modernization was defined
 - How Rider DMR impacted the capital budgeting process
 - Whether or what level of Rider DMR funds were spent on grid modernization
 - Comparison with the post-DMR Grid Mod I program
- Section IV: The money pool construct
 - Mechanics and purpose
 - The money pool’s importance in analyzing the use of Rider DMR funds
- Section V: Indirect support of grid modernization
 - Debt:
 - Credit rating history & analyst reports
 - Credit metrics
 - Ohio Companies’ cost of short- and long-term debt
 - Impacts of credit downgrades post-DMR period for context
 - Pension underfunding and contributions
 - Equity:
 - Ohio Companies’ dividend history
 - FirstEnergy Corp.’s dividend history
 - Dividend metrics
 - Equity ratios
- Section VI: Other uses of funds
 - Invoice approval controls
 - Corporate separation plan
 - Cost allocation
- Section VII: Overall conclusions and recommendations

Table 1 summarizes the Ohio Companies’ reported cash outflows the Ohio Companies had during the Rider DMR period that fall into direct or indirect support categories for grid modernization. The table provides a brief overview of the relative level of spending across the uses we analyzed; each category has important implications that are discussed further in its respective section in the report. We were not able to tie any of the Rider DMR funds to any specific use, as once collected the funds entered the Utility Money Pool, where dollars spent are not tracked by source. Therefore, we cannot

suggest that Rider DMR funds were used definitively in any of these actions. Please note that in Table 1 we reflect spending amounts for the possible uses for the entirety of 2019; however, the Ohio Companies only retained Rider DMR funds collected through July 1, 2019.

Table 1. Ohio Companies' Major Financial Actions

Possible DMR Uses	Total DMR Period		2017		2018		2019
Grid Mod	\$	39,619,275	\$	9,876,165	\$	18,384,532	\$ 11,358,577
Pay down debt	\$	105,000,000	\$	80,000,000	\$	25,000,000	\$ -
Dividends	\$	1,480,000,000	\$	350,000,000	\$	400,000,000	\$ 730,000,000
Pension	\$	102,000,000	\$	-	\$	57,000,000	\$ 45,000,000
Total	\$	1,726,619,275	\$	439,876,165	\$	500,384,532	\$ 786,358,577
DMR funds collected	\$	485,737,689	\$	201,714,971	\$	173,443,183	\$ 110,579,535
DMR funds refunded	\$	(28,006,233)			\$		\$ (28,006,233)
Total	\$	457,731,456					

Although DMR was only collected through July 2019, we encompassed all of 2019 in this table. This is because financial decisions take time and were not necessarily constrained to the exact months of DMR. All funds are reported from FirstEnergy and have not been adjusted for tax purposes. The DMR funds collected did include a gross up for income tax (35% for 2017 and 21% for 2018-2019).

D. Findings and recommendations

Below are Daymark's major findings and *recommendations*.

Overall

1. During interviews with FirstEnergy and the Ohio Companies staff, it was apparent that there was a general lack of knowledge on the specifics of Rider DMR. Although there have been changes to personnel and their responsibilities since Rider DMR, the overall lack of knowledge suggests that grid modernization was not a well-communicated priority. This was reinforced by a lack of reference to Rider DMR or grid modernization mentioned in corporate and board documents, such as the Audit Committee agendas or Board of Directors strategy and regulatory booklets.¹⁸
2. FirstEnergy did not track any spending directly related to Rider DMR revenues because it was not explicitly required by the enabling regulation.¹⁹ Given that

¹⁸ Set 1 DR 5 Supplemental - Confidential, Set 1 DR 36 - Confidential.

¹⁹ Set 3 DR 2, Set 5 DR 4.

the intent of Rider DMR was clearly to enable grid modernization,²⁰ either directly or indirectly, it should have been incumbent on FirstEnergy to track such spending.

3. All rider revenues, including Rider DMR, are placed into the Utility (Regulated) Money Pool as a matter of routine. Once funds enter the money pool, they lose their identity and can no longer be traced back to any specific rider or tied to specific spending.²¹
4. For riders that will be audited, the Commission should address and order clear data tracking and retention requirements in future orders.
5. We found no documented evidence that ties Rider DMR spending to lobbying for the passage of H.B. 6. However, given the inability to trace how Rider DMR funds were spent, we cannot rule out with certainty use of Rider DMR funds to support of the passage of H.B. 6.
6. The current Grid Mod I program is a much more effective and transparent way to incentivize and track grid modernization spending than the Rider DMR.
7. The first two stipulations from the Fifth Entry on Rehearing ¶208 have been satisfied. The headquarters of FirstEnergy have remained in Akron and there was no change in control over the Ohio Companies.

Grid modernization

8. Grid modernization was never defined in the Rider DMR docket, nor were personnel at FirstEnergy aware of a standard company definition. Discovery responses indicate FirstEnergy categorized capital projects as grid modernization (or “grid mod”) during the Rider DMR period if they “increased the resiliency or intelligence of the Ohio Companies’ distribution system.”²² However, the projects FirstEnergy categorized as grid modernization during the Rider DMR period were recovered under different riders, suggesting that Rider DMR funds did not fund these grid modernization projects.

²⁰ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶282: “Although we will not place restrictions on the use of Rider DMR funds, the Commission directs Staff to periodically review how the Companies, and FirstEnergy Corp., use Rider DMR funds to ensure that such funds are used, either directly or indirectly, in support of grid modernization.”

²¹ Set 3 DR 2, Set 5 DR 4.

²² Set 3 DR 1.

9. There was no significant increase in budgeted capital expenditures (capex) for grid modernization with the passage of Rider DMR. In contrast, there was a notable increase in budgeted capex on grid modernization with the passage of Grid Mod I.

Money pool

10. The Utility Money Pool processes a significant number of transactions each month for the Ohio Companies. However, while there are numerous process controls over the money pool, there have been no internal or external audits of the money pool in the past 5 years. *Recommendation: Audits of the money pool should occur at more frequent intervals, at least every five years.*

Debt

11. Credit agencies had a positive view of Rider DMR. However, FirstEnergy's decision (implemented during the time of Rider DMR) to become a fully regulated company likely influenced their credit rating upgrade more than any other factor.
12. Rider DMR did improve the Ohio Companies' cash flow metrics by providing additional cash flow. Conversely, Rider DMR had only a marginal effect on the cash flow metrics of FirstEnergy Corp.
13. FirstEnergy Corp. did not reduce its long-term debt obligations during the Rider DMR period. Rather, FirstEnergy Corp. took on an additional \$2.4 billion in debt.
14. There was insufficient long-term debt issued by the Ohio Companies during the Rider DMR period to draw any conclusions regarding the Rider DMR impact on the cost of long-term debt. However, the Ohio Companies did pay down approximately \$105 million in debt during the Rider DMR period. Given the inability to trace funds, there is no documented evidence that Rider DMR revenues were used to fund this reduction.
15. The Ohio Companies' portion of the FirstEnergy pension is well funded. The Ohio Companies contributed \$102 million to their pension during the Rider DMR period. However, the Ohio Companies' pension funding status was consistent both during and after Rider DMR with no substantive variations. Therefore,

there is no specific evidence that Rider DMR had any impact on pension plan funding.

Equity

16. The Ohio Companies' dividend payments to FirstEnergy Corp. increased during the Rider DMR period. We do not view this increase as unreasonable. However, the Ohio Companies' dividend payout ratio from 2017-2019 (including the second half of 2019 when Rider DMR was not in place) was above peer averages and stands out. Rider DMR funds may have contributed to this dividend, but there is not documented evidence to prove or disprove a conclusion. Further, we note the Ohio Companies do not have a documented, formal dividend policy whereas other utilities in the FirstEnergy family have formal dividend policies.
Recommendation: We recommend that a documented dividend policy be established for the Ohio Companies. For example, a formal policy could include financial requirements, metrics, restrictions, and procedural guidelines for determining dividend amounts as well as a target range.
17. There is no written policy or formal supporting documentation to justify the equity infusions made to the Ohio Companies during the Rider DMR period. The common equity ratios of the Ohio Companies exceed what is currently allowed in rates, meriting the equivalent of an A rating from Moody's, which is above the Ohio Companies' current overall ratings.

II. INTRODUCTION

A. Scope of work to be performed

PUCO sought the services of a firm to conduct an independent audit to perform a full review of the Ohio Edison, Toledo Edison and the Cleveland Electric Illuminating Company's (the Ohio Companies') Rider DMR funds to determine whether FirstEnergy maintained compliance with the Commission's directives in their approval of FirstEnergy's fourth Electric Security Plan IV (*ESP IV*). The Commission selected Daymark as the independent auditor in its June 2, 2021, entry in case 17-2474-EL-RDR. Daymark's review included an examination of the time leading up to the passage of H.B. 6 and the subsequent referendum to clearly understand whether funds collected from ratepayers through Rider DMR were only used for the purposes established in ESP IV.

B. FirstEnergy Corp. and the Ohio Companies

FirstEnergy Corp. is a utility holding company headquartered in Akron, Ohio. Currently, FirstEnergy owns 10 distribution utilities that primarily operate in the states of Ohio, West Virginia, New Jersey, Maryland, and Pennsylvania.²³ Figure 1 from FirstEnergy's website shows geographically where these territories are.

²³ These utilities include Ohio Edison, Toledo Edison, The Cleveland Illuminating Company, Penn Power, West Penn Power, Met-Ed, Penelec, Jersey Central Power & Light, Mon Power, and Potomac Edison.

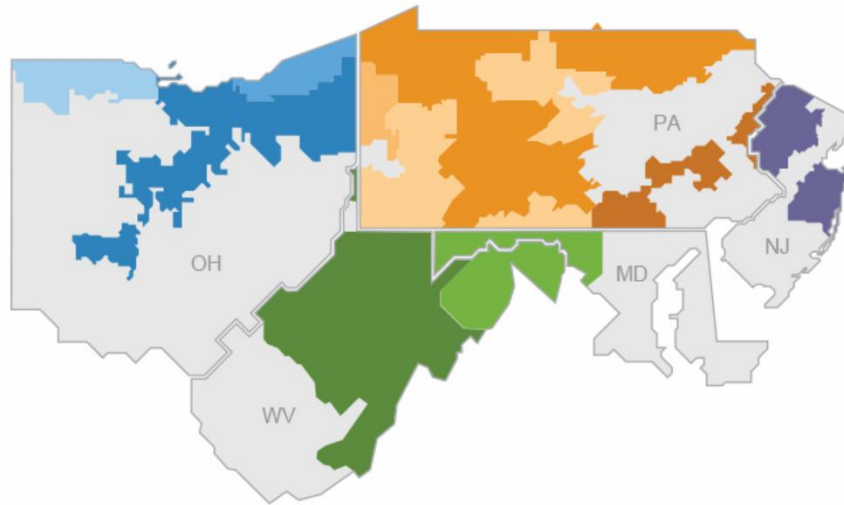


Figure 1. FirstEnergy electric companies' service territories²⁴

Along with FirstEnergy Corp., this report focuses on the three Ohio Companies – Ohio Edison (OE), Toledo Edison (TE), and Cleveland Electric Illuminating Co (CEI). It should be noted that FirstEnergy also includes FirstEnergy Service Company (FESC), a corporate shared services organization, which performs services for all FirstEnergy affiliates including the Ohio Companies.

C. Prior audits

As previously mentioned, there was a review of Rider DMR conducted by Oxford Advisors. Oxford Advisors submitted their midterm report on June 14, 2019. A final report was never issued. Daymark reviewed the midterm report and the discovery responses associated with the Oxford Advisors review. Daymark's analysis and conclusions are independent of Oxford Advisor's review.

D. Organization of this report

This balance of the report is organized in the following manner:

- Section III discusses any direct spending on grid modernization from Rider DMR
- Section IV discusses the money pool construct and its relevance to Rider DMR

²⁴ FirstEnergy website, "About Us," accessed November 2021, available at: <https://firstenergycorp.com/about/utilities.html>.

- Section V discusses the ways Rider DMR may have indirectly supported grid modernization, primarily through the Ohio Companies' and FirstEnergy Corp.'s access to capital markets
- Section VI discusses any potential for Rider DMR funds to have been used elsewhere
- Section VII contains our overall conclusion and recommendations

III. DIRECT USES OF RIDER DMR FUNDS ON GRID MODERNIZATION

In the Fifth Entry on Rehearing the Commission conditioned the recovery of Rider DMR on the following stipulations: “(1) continued retention of the corporate headquarters and nexus of operations of FirstEnergy Corp. in Akron, Ohio; (2) no change in “control” of the Ohio Companies as that term is defined in R.C. 4905.402(A)(1); and (3) a demonstration of sufficient progress in the implementation and deployment of grid modernization programs approved by the Commission.”²⁵ The Commission noted that “for the purposes of the continuation of Rider DMR, ‘sufficient progress’ will be determined at the sole discretion of the Commission; further, ‘sufficient progress’ will only be determined with respect to the implementation and deployment of grid modernization programs actually approved by the Commission.”²⁶

As to defining the acceptable uses for the Rider DMR revenues, the Commission gave FirstEnergy some flexibility: “Therefore, the Companies may use revenue under Rider DMR to make the large cash up front investments to fund grid modernization. On the other hand, we recognize that the Companies and FirstEnergy Corp. may use revenue from Rider DMR to indirectly support grid modernization investments.”²⁷

This section of this report will focus on the direct use of Rider DMR funds and whether there is evidence that the Ohio Companies used the funds to make direct grid modernization investments. We note that the first two stipulations from the Fifth Entry on Rehearing ¶206 have been satisfied. The headquarters of FirstEnergy have remained in Akron and there was no change in control over the Ohio Companies.

In this section, we discuss the Ohio Companies’ budgeting and project prioritization process, any direct spend on projects that the Ohio Companies deemed as grid modernization, and reliability metrics as an indication of the success of any grid modernization. It does not appear that there was any significant progress in the implementation of grid modernization programs until the Commission approved Grid Mod I on July 17, 2019, after the Rider DMR period.²⁸

²⁵ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶206.

²⁶ *Id.*, at ¶208.

²⁷ *Id.*, at ¶282.

²⁸ See Opinion & Order, 7/17/2019, in Case No. 16-0481-EL-UNC.

A. Grid modernization

As provided for in the Order: “The Commission notes that grid modernization initiatives, such as smart grid deployment or utility scale battery technology, may involve very large up-front investments, which will be recovered over a number of years (Rehearing Tr. Vol. III at 585-86). Therefore, the Companies may use revenue under Rider DMR to make the large cash up front investments to fund grid modernization (Co. Ex. 206 at 5-6).”²⁹

Daymark investigated the extent to which the Ohio Companies made any direct investments during the Rider DMR period towards grid modernization. To do this, we first had to determine whether FirstEnergy or the Ohio Companies had defined grid modernization in some way. During our interviews, interviewees were generally unable to reference an established, formal company definition. When asked in the discovery process, FirstEnergy responded that they categorized projects as grid modernization if they increased the “...‘intelligence’ of the distribution system...” or “...its resilience to outage conditions.”³⁰ This is a very broad definition and one that could apply to standard reliability projects. Since the Commission and the Ohio Companies reference the term “grid modernization,” we will use that term in this report; however, the grid modernization discussed is more like “distribution modernization” which is the scope in which the Ohio Companies operate, the distribution network.

Capital budgeting process

To understand whether Rider DMR helped fund grid modernization efforts, Daymark sought to understand FirstEnergy’s capital planning process for the Ohio Companies. We interviewed several staff involved in this process and analyzed information received from discovery responses. Most interviewees described the capital planning process as collaborative between the Ohio Companies (specifically, the engineering groups) and FirstEnergy Service Company (FESC).

According to a discovery response, the capital budget development process involves both the Ohio Companies and FESC. Each Ohio Company participates in three rounds of meetings annually to review proposed capital budgets. “Each Company’s engineering and project management personnel present their proposed capital portfolios to representatives from Corporate Asset & Project Management, FEU Finance, Regional Operations, and Energy Delivery’s Executive Leadership Team (“Executive Leadership

²⁹ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶1282.

³⁰ Set 3 DR 1.

Team”).³¹ After the third meeting, a capital budget is approved. Once the Executive Leadership Team signs off, the Ohio Companies are authorized to proceed with the capital projects.³²

FirstEnergy has a *Project Priority Type* matrix that is used to prioritize capital projects. The highest priority projects are coded “C;” the lowest priority projects are coded “A.” Within each code, there are sub-prioritization levels of high, medium, and low. Additionally, projects are classified as the following: mandatory, required, improve reliability, maintain condition, or value added.³³ Mandatory “C” projects take first precedence and include things that are required by regulations or tariffs. If there is room, additional projects with lower priority are fit into the budget according to the matrix hierarchy. It appears that grid modernization activities that are not specifically required by the Commission would fall under category B-Medium-Improve Reliability, where “examples include SCADA installations and circuit reliability programs/projects.”³⁴ Commission-required programs would be higher on the priority scale. When asked how distribution modernization projects during the Rider DMR period were incorporated using the matrix, the Ohio Companies simply stated that “any grid modernization projects were considered along with all the other capital projects and prioritized in accordance with the matrix.”³⁵ This suggests that the Ohio Companies did not prioritize grid modernization projects above and beyond what they would have absent Rider DMR funds.

The Capital Portfolio team, which is a cross-functional group within FirstEnergy Service Company, synthesizes the information given to them after the three rounds of meetings to make a final budget.³⁶ The Treasury department receives the final consolidated budget and is tasked with determining how to best obtain funding to bridge any gaps between forecasted revenue and capital spend. An interview revealed that once Treasury receives a budget, Treasury may offer an opinion on funding levels and any potential difficulties in obtaining funding, but they are not an ultimate decision maker.

The total budget that is spread across all ten operating companies, including the Ohio Companies, is set by FirstEnergy Corp. There is a five-year forecast that is set by the

³¹ Set 6 DR 1.

³² *Id.* & Set 4 DR 21

³³ Set 5 DR 14 Attachment 1, Set 4 DR 21.

³⁴ *Id.*

³⁵ Set 6 DR 3.

³⁶ Set 4 DR 21.

Business Services group, which starts as a budget target. Then, the annual budgets are subsequently determined by the iterative process as described previously. The budget totals for all ten operating companies must be in line with FirstEnergy Corp.'s target spend for that year.

Direct spend on grid modernization

Daymark discussed budgeting and spend with interviewees and analyzed the Ohio Companies' capital budgets to determine whether the budgets experienced any material changes with the passage of Rider DMR. FirstEnergy provided Daymark with capital budgets and variances for the Ohio Companies from 2014 to 2020.³⁷ Interviewees stated they did not notice a difference in the level of capital available with the passage of Rider DMR. Interviewees also stated there was no specific budget line item set aside for Rider DMR. One interviewee mentioned their understanding of Rider DMR was that it was to prevent any budget cuts, not necessarily contribute to budget increases.

Table 2 shows the actual spend on grid modernization efforts, as identified by FirstEnergy, during the years 2017, 2018, and 2019 while Rider DMR was in place.³⁸ For the data below, FirstEnergy states they categorized projects as grid modernization "based on the criteria that each project increased the resiliency or intelligence of the Companies' distribution system."³⁹ This broad definition makes it very difficult to distinguish between what were "business as usual," or general upkeep projects, and what were "modernization" projects. For example, one project FirstEnergy included in its list was the Toledo LED streetlight conversion. Several other line items are described as "replaced antiquated switching devices or controllers with new more capable units."⁴⁰ These types of projects provide improvements to the system but are not significantly augmenting the distribution system in the way that grid modernization intends. Other projects, such as "adding SCADA, C&I, telemetry and adaptive relaying" are truly improving the intelligence of the system and are more suitable to be qualified as grid modernization.

All these capex investments that FirstEnergy provided in Table 2 were recovered through three already existing avenues: Rider AMI, the Toledo LED lighting pilot, and Rider DCR.⁴¹

³⁷ Set 1 DR 7 & Set 1 DR 8 Supplemental.

³⁸ Set 1 DR 43 Attachment 1.

³⁹ Set 3 DR 1.

⁴⁰ Set 1 DR 43 Attachment 1.

⁴¹ Set 3 DR 1.

If all of these costs were recovered separately, then Rider DMR did not directly fund these grid modernization projects. A complete list of all projects that FirstEnergy included as “grid modernization” is contained in Appendix C to this report.

Table 2. FirstEnergy’s reported grid modernization spend during Rider DMR

COMPANY	2017	2018	2019
Cleveland Electric Co	\$6,653,703	\$10,436,536	\$6,525,187
Ohio Edison Company	\$2,073,751	\$3,114,416	\$1,591,253
Toledo Edison Co	\$1,148,711	\$4,833,581	\$3,242,137
Grand Total	\$9,876,165	\$18,384,532	\$11,358,577

Table 3 shows the budgeted amounts for grid modernization by year.⁴² FirstEnergy categorized budgeted items as grid modernization due to “the nature of the project increasing the “intelligence” of the distribution system or increasing its resilience to outage conditions.”⁴³ The budgeted amounts for years 2020 and 2021 are significantly higher than the previous five years, due to the passage of the Grid Mod I program. More details on the Grid Mod I program are discussed on p. 23.

Table 3. FirstEnergy’s reported budgeted grid modernization capex by year

COMPANY	2016	2017	2018	2019	2020	2021
Cleveland Electric Co	\$4,838,251	\$6,140,554	\$8,410,868	\$7,856,425	\$77,371,940	\$73,415,419
Ohio Edison Company	\$782,706	\$1,211,480	\$1,451,373	\$949,172	\$74,310,671	\$113,109,665
Toledo Edison Co	\$883,445	\$1,142,607	\$1,801,271	\$280,346	\$28,766,934	\$29,733,829
Grand total	\$6,504,403	\$8,494,642	\$11,663,511	\$9,085,943	\$180,449,545	\$216,258,913
<i>Increase from prior year</i>		31%	37%	-22%	1886%	20%

The total capex budgets, provided in Table 4,⁴⁴ followed a similar pattern: 2020 and 2021 saw significant increases from 2016-2019 levels. The budget for 2018 saw an 11% increase over the 2017 budget, with all Ohio Companies receiving some increase in budget. According to FirstEnergy, this increase in 2018 was due to failure costs, highway jobs, and new business costs.⁴⁵

⁴² Set 1 DR 7 Attachments 1-8.

⁴³ Set 6 DR 4.

⁴⁴ Set 1 DR 7 Attachments 1-8.

⁴⁵ Set 6 DR 6.

Table 4. Total capex budgets by year

COMPANY	2016	2017	2018	2019	2020	2021
Cleveland Electric Co	\$123,283,043	\$116,074,615	\$135,953,328	\$140,664,330	\$220,217,793	\$223,508,187
Ohio Edison Company	\$141,551,738	\$144,823,235	\$154,361,838	\$160,001,604	\$233,892,132	\$282,742,011
Toledo Edison Co	\$40,165,598	\$45,876,733	\$49,698,154	\$50,398,048	\$82,255,356	\$82,788,452
Grand Total	\$305,000,379	\$306,774,583	\$340,013,320	\$351,063,982	\$536,365,281	\$589,038,651
<i>Increase from prior year</i>		1%	11%	3%	53%	10%

Another direct action that FirstEnergy claimed was to facilitate grid modernization was to dedicate “significant time to researching and implementing emerging technologies.”⁴⁶ FirstEnergy “spent nearly 1 million for an expert consultant to support this initiative, which spanned multiple months. Following this work, FirstEnergy Corp. created an Emerging Technologies (EmT) organization.”⁴⁷ The EmT group has two departments: one for researching emerging technology options and another department that implements emerging technology. Currently, the implementation group is assisting with Grid Mod I (see below for more information on this separate program).⁴⁸ However, “since the EmT group was formed in June 2018, after Rider DMR had been approved, neither the EmT strategy group nor the EmT implementation group had any role in implementing Rider DMR.”⁴⁹

Reliability metrics

Daymark reviewed the distribution system-wide related reliability metrics for the Ohio Companies to determine how performance was trending during and after the Rider DMR period; the premise being that significantly increasing investment in the distribution system with a modernization emphasis should produce some improvement in the reliability metrics. Admittedly this is an imperfect indicator given that there are several factors that can impact reliability performance (e.g., lightning strike frequency, circuit design, etc.), but nonetheless a review of how system performance trended during the Rider DMR period is informative. Improving overall system-wide reliability takes time given the magnitude and complexity of the grid. A better measure would be individual circuit performance before and after modernization investments, a level of detail beyond the scope of this audit. However, any significant system-wide investment, comparable to

⁴⁶ Set 1 DR 45 OA Set 1 DR 37 Attachment 1 Revised Supplemental.

⁴⁷ *Id.*

⁴⁸ Set 5 DR 30.

⁴⁹ *Id.*

the \$457 million collected through Rider DMR, in grid modernization should have at least some measurable, short-term positive impact on system-wide reliability.

FirstEnergy measures system reliability based on three metrics: System Average Interruption Duration Index (SAIDI), Customer Average Interruption Duration Index (CAIDI) and System Average Interruption Frequency Index (SAIFI). SAIDI measures the total duration of an interruption for the average customer during a year, CAIDI measures the average time to restore service once an outage occurs and lastly, SAIFI is the average number of times that a system customer experiences an outage during the year.

Figures 2 through 4 depict the historical trends in these reliability metrics for each of the Ohio Companies.⁵⁰ The dotted lines depict the linear trend in metric performance for each of the Ohio Companies since Rider DMR began and the solid lines show the actual index values in each year.

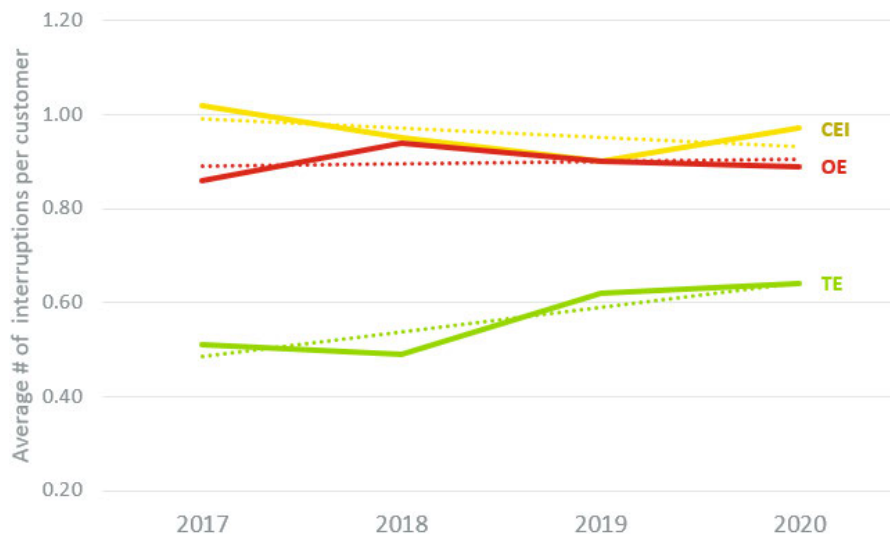


Figure 2. SAIFI metrics for the Ohio Companies

SAIFI performance, shown in Figure 2, was mixed in this timeframe. Cleveland Electric Illuminating (CEI shown in yellow) showed some level of improvement between 2017 and 2019, but that was somewhat offset by year 2020's worsening performance. On the other hand, Ohio Edison performance (OE shown in red) was largely unchanged over the Rider DMR time period and Toledo Edison performance (TE shown in green) worsened.

⁵⁰ Set 1 DR 26.

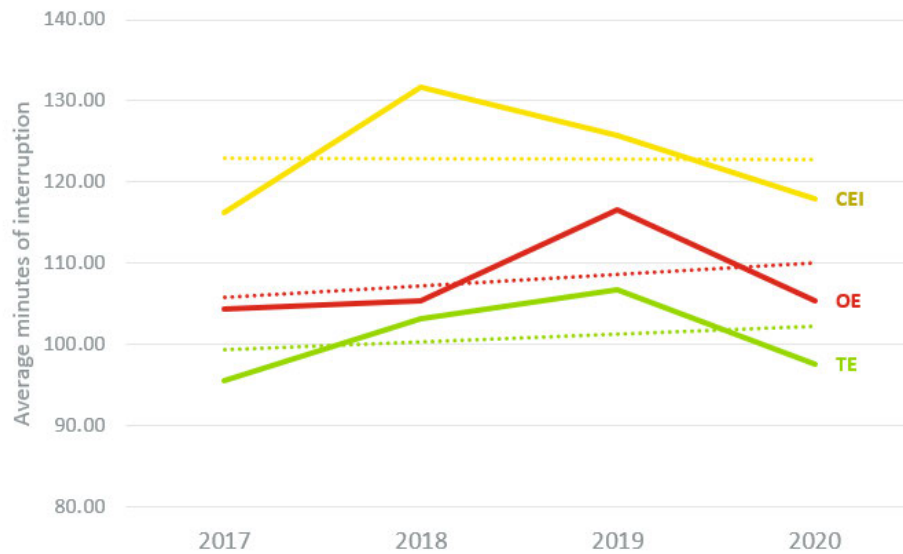


Figure 3. CAIDI metrics for the Ohio Companies

CAIDI performance ranged from no change to worsening over the 2017-2020 period with Cleveland Electric Illuminating trending flat (no change) while Ohio Edison and Toledo Edison worsened. The lone bright spot is performance in 2020, which did improve over 2019 for all three Ohio utilities.

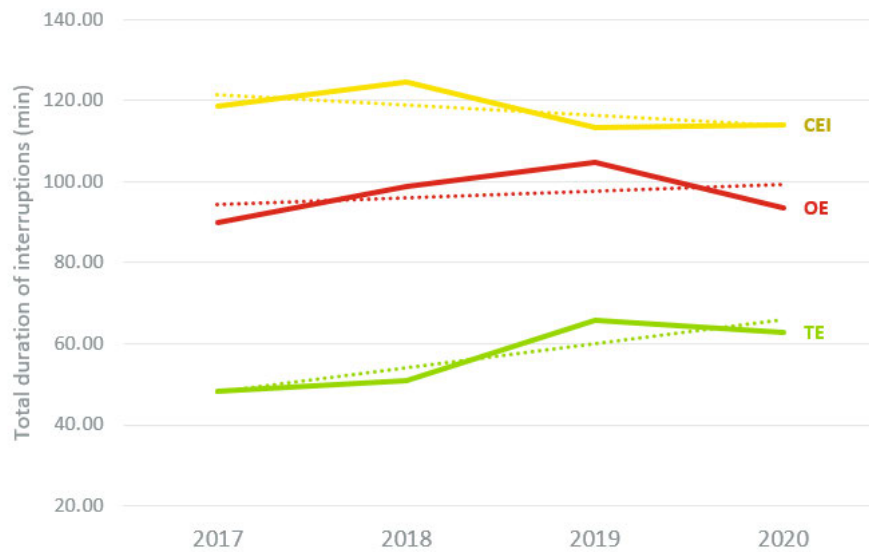


Figure 4. SAIDI metrics for the Ohio Companies

Similar to the SAIFI results, SAIDI performance was also mixed. Cleveland Electric Illuminating showed some level of improvement in 2019 and 2020. On the other hand, performance for both Ohio Edison and Toledo Edison worsened (i.e., had increased interruption duration), offset to a degree by improvements in 2020 as compared to 2019.

In aggregate, these metrics indicate that there was little improvement to generally worsening system-wide reliability performance during the time when Rider DMR was in effect. A result, considering the mitigating caveats as discussed previously, which is generally indicative of an insufficient level or generally unfocused level of reliability-focused investment in the distribution system.

Conclusions

Relying on the data provided in response to data requests it appears as though the Ohio Companies did budget for capital expenditures that could be broadly defined as associated with grid modernization, which FirstEnergy generally defined as any projects that increase the resiliency or intelligence of the distribution system.⁵¹ Table 5, below, summarizes the total annual capital budgets of the three Ohio Companies for 2014 through 2021 and the portion of those capital budgets that FirstEnergy identified as grid modernization.⁵² These levels do not support the “very large up front investments” as noted in the stipulation occurred during the Rider DMR period from 2017 to 2019. As shown in Table 5, however, the period after approval of the Ohio Companies’ grid modernization plan (Grid Mod I) in 2019 does reflect significant anticipated investments on an annual basis supporting grid modernization activities. FirstEnergy budgeted no significant investments in grid modernization until 2020, driven by the approval of Grid Mod I.

⁵¹ Set 3 DR 1, Set 6 DR 4.

⁵² Set 1 DR 7 Attachments 1-8.

Table 5. Grid modernization as a % of total capex budget (all Ohio Companies)

Year	Grid Modernization capital budget	Total Capital Budget	Grid Modernization Budget as % of Total Budget
2014	\$ 9,574,084	\$ 279,490,824	3.4%
2015	\$ 4,075,936	\$ 308,711,758	1.3%
2016	\$ 6,504,403	\$ 305,000,379	2.1%
2017	\$ 8,494,642	\$ 306,774,583	2.8%
2018	\$ 11,663,511	\$ 340,013,320	3.4%
2019	\$ 9,085,943	\$ 351,063,982	2.6%
2020	\$ 180,449,545	\$ 536,365,281	33.6%
2021	\$ 216,258,913	\$ 589,038,651	36.7%

The capital costs for the grid modernization projects identified by FirstEnergy during 2017 to 2019 were recovered under separate riders, so Rider DMR funds did not go directly toward funding those grid modernization projects.⁵³ Rider DCR is subject to revenue caps, however, the Ohio Companies did not exceed those revenue caps in 2017-2019.⁵⁴ Furthermore, as discussed, the reliability metrics in aggregate indicate there was little to no improvement in system-wide reliability during the Rider DMR period. This further supports the conclusion that significant progress was not made towards grid modernization during Rider DMR.

While FE did spend money on an independent consultant that led to the creation of the EmT group, this group did not have any role in the use of Rider DMR funds. It is difficult to attribute the formation of this group to Rider DMR specifically, as we note FirstEnergy was also in the process of submitting a formal grid modernization plan (discussed further below). The EmT group now does implement Grid Mod I; Grid Mod I was the eventual outcome of the Ohio Companies' first grid modernization business plan, which was submitted in 2016.

The Ohio Companies were also part of PowerForward, an initiative led by the PUCO on grid modernization. However, all Ohio electric distribution utilities (EDUs) were part of this stakeholder process. The PowerForward initiative gave rise to a Roadmap published by the PUCO,⁵⁵ which then informed FirstEnergy's Grid Mod I program. This initiative and

⁵³ Set 3 DR 1.

⁵⁴ Case No. 17-2009-EL-RDR, Case No. 18-1542-EL-RDR

⁵⁵ *Power Forward Ohio, A Roadmap to Ohio's Electricity Future*, published by PUCO on August 29, 2018.

the outcome would have occurred with or without Rider DMR. More information on Grid Mod I is provided in Section B, next.

B. Grid Mod I

The current Grid Mod I program resulted from a stipulation in Case No. 14-1297-EL-SSO, or the *ESP IV* case. In the Third Supplement Stipulation, the Ohio Companies were required to submit a grid modernization business plan. This plan was to include a timeline for full smart meter implementation.⁵⁶ The Ohio Companies filed their collective business plan on February 29, 2016 in Case No. 16-481-EL-UNC.

The Commission subsequently undertook a policy review of grid modernization in general (the PowerForward initiative) and the Ohio Companies' plans were put on hold until that was finished. As mentioned, the Ohio Companies were part of the stakeholder process in that PowerForward policy review. As a result of the initiative, the Commission issued a roadmap in 2018, titled *PowerForward: A Roadmap to Ohio's Electricity Future*. During this time, in December of 2017, the Ohio Companies submitted a distribution platform modernization plan in Case No. 17-2436-EL-UNC. The aforementioned grid modernization plans were approved (with changes and among other matters) by the Commission on July 17, 2019 and were thereafter known as Grid Mod I.⁵⁷ Grid Mod I is a three-year program that started in 2019. Costs of the program are recovered through Rider AMI.

Comparison of Grid Mod I to Rider DMR

During Daymark's audit, we found numerous comparisons of Rider DMR to Grid Mod I in discovery responses. While both Rider DMR and Grid Mod I were intended to incentivize grid modernization, they were structured very differently and had very different outcomes. At a basic level, recovery under Rider DMR was not based on any specific expense or action, rather, it was a straight collection of funds. The Grid Mod I program has specific, incremental capex and O&M that is recovered through Rider AMI. We find it relevant to compare Grid Mod I to Rider DMR to further explain what Rider DMR did and did not accomplish. We compare these two below in terms of budgeting and investment tracking, metrics, and auditing.

⁵⁶ See *In the matter of the Grid Modernization Business Plan*, 2/29/2016, in Case No. 16-0481-EL-UNC.

⁵⁷ See *Opinion & Order*, 7/17/2019, in Case No. 16-0481-EL-UNC.

Budgeting

While Grid Mod I is a specific capital budgetary line item, Rider DMR was not treated in the same way. Through numerous interviews and responses to data requests, it was evident that Rider DMR was not called out in a specific line item in the capital budgeting process.⁵⁸ Furthermore, Rider DMR was not directly tied to an increase in the capex available for the Ohio Companies.⁵⁹ As evidence, one interviewee specifically stated they recalled that the capital budget did not increase with the passage of Rider DMR. Their recollection was that Rider DMR was intended to stabilize the budget and prevent any cuts in capex. On the other hand, as shown in Table 3, the passage of Grid Mod I did significantly increase the capital budget. Investments made for Grid Mod I are being recovered under Rider AMI.⁶⁰

Investment Tracking, Metrics, and Auditing

Rider DMR spending on grid modernization was not tracked in the same way that Grid Mod I currently tracks spending. Numerous interviewees spoke to the high level of detail that is involved in tracking Grid Mod I investments. FirstEnergy provided Grid Mod I quarterly metric reports in response to a data request. These reports include 47 metrics that the Ohio Companies track relevant to program progress.⁶¹ Rider DMR, by comparison, was not specifically tracked or tied to any grid modernization investments. Through the discovery process for this audit, FirstEnergy queried their annual budgets to identify any projects that were related to grid modernization. However, this was an after-the-fact measure. FirstEnergy specifically stated it did not track Rider DMR in terms of it being utilized on grid modernization projects: “The PUCO decision authorizing Rider DMR explicitly declined to restrict the use of Rider DMR funds and [FirstEnergy] rejected the use of a separate account for tracking Rider DMR funds.”⁶² The Commission did not require FirstEnergy to track Rider DMR in any specific way. However, the Fifth Entry on Rehearing did order that Staff will periodically review the rider to ensure that “funds are

⁵⁸ Set 3 DR 1.

⁵⁹ Set 6 DR 5.

⁶⁰ See Case No. 16-0481-EL-UNC et. al., Opinion & Order, 7/17/2019 at ¶131.

⁶¹ Set 2 DR 2 Attachment 2 Confidential.

⁶² Set 3 DR 2. Note, we did not find a specific rejection from the Commission to track DMR funds. The Fifth Order said this: “Additionally, FirstEnergy contends that requiring the suggested restrictions directing the Rider DMR revenues to be used by the Companies and for such funds to be accounted for in a separate account are unnecessary, as it would be reasonable to assume that the Rider DMR revenues would be recorded in a separate general ledger account for tracking purposes.” ¶184 However, the Commission did not confirm or deny FirstEnergy’s assertions.

used, directly or indirectly, in support of grid modernization”, similar to what this audit has been charged with.⁶³

FirstEnergy is subject to an annual audit of the Grid Mod I program, as ordered in the July 17, 2019, Commission Order and Opinion in case 16-0481-EL-UNC:

“Annual audits will include, but not be limited to, the following: on-site inspections of new capital assets; tracing capital expenses from continuing property records, invoices, and other supporting documentation to the used and useful assets; verification of proper accounting and computation of annual property tax expense, state, local, and federal income tax expenses, and depreciation expense; verification that incremental labor O&M expense included for recovery in Rider AMI is only associated with employees dedicated to the Grid Mod I plan and in roles not already recovered in current base rates; verification that non-labor O&M expenses are incremental; verification of proper accounting for Rider AMI revenues; and verification that the Grid Mod I investments are used and useful and were prudently incurred.”

Grid Mod I set specific goals for technology deployment as well. The program set thresholds for the number of advanced meter deployments and distribution automation, as well as performance metrics for evaluation of the program.⁶⁴ Rider DMR had no technology requirements and had no associated performance metrics. Rider DMR was specifically set up to allow FirstEnergy full discretion on how the funds would be invested or spent. As the Fifth Entry on Rehearing stated: “Therefore, placing restrictions on the use of Rider DMR funds would defeat the purpose of Rider DMR. Rider DMR is intended to provide credit support to the Companies to avoid a downgrade in credit ratings.”⁶⁵ Table 6 provides a summary comparison of the characteristics and requirements of Rider DMR and Grid Mod I.

⁶³ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶1282.

⁶⁴ See Opinion & Order, 7/17/2019, in Case 16-0481-EL-UNC.

⁶⁵ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶1281.

Table 6. Comparison of Rider DMR and Grid Mod I

	DMR	Grid Mod I
Above and beyond annual CapEx	No	Yes
Specific line item in budget	No	Yes
Related CapEx spend tracked	No	Yes
Evaluation Metrics	No	Yes
Technology goals	No	Yes
Audit requirements	Yes	Yes
Credit Support	Yes	No
Can spend on non-grid mod	Yes	No

Conclusion

Daymark did not find conclusive evidence that Rider DMR did in fact contribute to any significant, incremental direct spend on grid modernization. The budgeted spend on grid modernization that did occur during the Rider DMR period was funded by other riders. Grid Mod I is a much more comprehensive grid modernization program.

IV. MONEY POOL

A. Background

FirstEnergy, through FirstEnergy Service Company (FESC), operates two money pools, the Utility Money Pool, and the Non-Utility Money Pool. A money pool is a financial construct whereby cash is collected, or “pooled”, by multiple entities into a single account and can be used by those same entities for short-term working capital needs. Large organizations with affiliates use this construct to coordinate short-term cash needs between affiliates instead of requiring each affiliate to arrange for external short-term loans or investments. The Commission authorized the Ohio Companies to file their money pool contract with the U.S. Securities and Exchange Commission on December 20, 2001.⁶⁶

The Utility Money Pool comprises the FirstEnergy regulated distribution companies and transmission companies.⁶⁷ FirstEnergy Corp. participates in the Utility Money Pool on a restricted basis. The Non-Utility Money Pool comprises the FirstEnergy companies that are in competitive ventures; FirstEnergy Corp. is also a fully participating member of the Non-Utility Money Pool.⁶⁸ See list below for a summary of the fourteen companies participating in the regulated Utility Money Pool.⁶⁹

Table 7. List of 14 companies participating in the Utility Money Pool

UTILITY MONEY POOL PARTICIPANTS

American Transmission Systems, Inc.
Metropolitan Edison Company
Mid-Atlantic Interstate Transmission, LLC
Monongahela Power Company
Ohio Edison Company
Pennsylvania Electric Company
Pennsylvania Power Company
Cleveland Electric Illuminating Company
Potomac Edison Company

⁶⁶ See Finding and Order, 12/20/2001, in Case No. 01-3183-EL-AIS et al.

⁶⁷ Set 1 DR 38 Attachment 2.

⁶⁸ Set 3 DR 4.

⁶⁹ Participants are per the Second Revised and Restated Utility Money Pool Agreement dated January 31, 2017 (Discovery Set 1 DR 38 Attachment 2). Participants in either money pool may have changed following the agreements.

UTILITY MONEY POOL PARTICIPANTS

Toledo Edison Company

Trans-Allegheny Interstate Line Company

Waverly Electric Power & Light Company

West Penn Power Company

Jersey Central Power & Light Company

The money pool arrangement allows the Ohio Companies, as well as other FirstEnergy subsidiaries, to benefit from FirstEnergy's scale. Excess cash is loaned into the money pool and then borrowed by whichever entity needs it. Lenders to the money pool earn interest; borrowers pay interest. FirstEnergy states the arrangement is intended to allow each of the participants to satisfy its working capital needs at lower cost than would be the case without its existence. They claim it is also designed to give lending subsidiaries a higher return than if their excess cash had been invested externally.⁷⁰

The Utility Money Pool is of interest when examining the collection and uses of Rider DMR funds because customer remittances (collections from customers), including the many riders collected, flow through the money pool. Daymark reviewed Utility Money Pool operations to analyze how they interfaced with the Ohio Companies' use of Rider DMR funds as set out in the *ESP IV* case.

B. Mechanics

All FirstEnergy utility subsidiaries participate in the Utility Money Pool, including the Ohio Companies. Each participant holds a position in the pool. The position represents the extent to which a participant is a net borrower from the pool (negative balance) or a net lender into the pool (positive balance). The position a participant holds constantly changes as their respective inflows and outflows occur. The Treasury department within FESC is the administrator and oversees both the Utility and Non-Utility Money Pools daily.⁷¹

⁷⁰ Set 1 DR 41.

⁷¹ *Id.*

All funds received by the Ohio Companies are put into the Utility Money Pool.⁷² Funds for invoice payments and other disbursements by the Ohio Companies are sourced from the Utility Money Pool.⁷³

A single interest rate is determined for each money pool on a monthly basis. The interest rate is determined as per the money pool agreement and is the higher of the 30-day LIBOR rate or the money market rate that a subsidiary would have earned if it had invested externally. If there are external funds invested, the Utility Money Pool interest rate is a weighted average of the cost of all internal funds and the cost of all external funds.⁷⁴ External funds are proceeds from bank borrowings or sale of commercial paper.⁷⁵ The cost of external funds is the interest rates of those loans. Participants in the pool owe or earn interest daily in accordance with their daily position in the pool. Since the interest rate for all participants is the same, the money pool interest payments sum to zero for all days by design.⁷⁶

Participants borrowing from the money pool borrow from companies lending into the pool pro rata to limit exposure to any particular entity.⁷⁷ At the end of each month, each participant records either a short-term debt (note payable or account 233-990) or a short-term investment (note receivable or account 145-990) reflecting its position in the money pool.⁷⁸

According to FirstEnergy, once cash enters the money pool, it loses its identity and cannot be traced to a specific rider: "Because cash is fungible, the companies are not able to track the specific sources of the funds in the Regulated Money Pool (e.g., collections from individual recovery mechanisms), and the uses of the funds in the Regulated Money Pool cannot be traced back to specific sources."⁷⁹ This means that Rider DMR funds, once collected from utility customers and placed into the Utility Money Pool, are unable to be tracked specifically.

⁷² Set 1 DR 21.

⁷³ Set 5 DR 2.

⁷⁴ Set 1 DR 38 Attachment 2 Section 1.05.

⁷⁵ *Id.*, Section 1.03.

⁷⁶ For instance, if Company 1 loans 100k into the pool and Company 2 borrows 100k from the pool, they will both pay the same interest rate, so the total interest effectively sums to zero (interest income of Company 1 – interest expense of Company 2=0)

⁷⁷ Set 4 DR 15.

⁷⁸ Set 5 DR 9.

⁷⁹ Set 3 DR 4.

At the end of each month, Treasury locks in a final money pool position for each affiliate and General Accounting books the position as part of the monthly close process.⁸⁰ As part of this process, Treasury provides two reports to General Accounting at month-end: one report identifies the balances for each money pool participant and the second report indicates the interest expense or interest income for each participant.⁸¹ Accounting takes that information and completes several journal entries.⁸² A company that has a positive month-end balance ends up with a note receivable, and a company with a negative balance has a note payable.⁸³ On a quarterly basis, FESC sends each of the Ohio Companies a report detailing the daily money pool position of that company for the previous three months.⁸⁴

Figure 5 through Figure 7 depict the month-end positions of each of the Ohio Companies from 2015 to 2019.



Figure 5. Ohio Edison month end money pool position

⁸⁰ Set 3 DR 4.

⁸¹ Set 4 DR 10.

⁸² Set 4 DR 10 Attachment 3.

⁸³ Set 5 DR 9.

⁸⁴ Set 1 DR 40 Attachments 1-29, Set 3 DR 12.

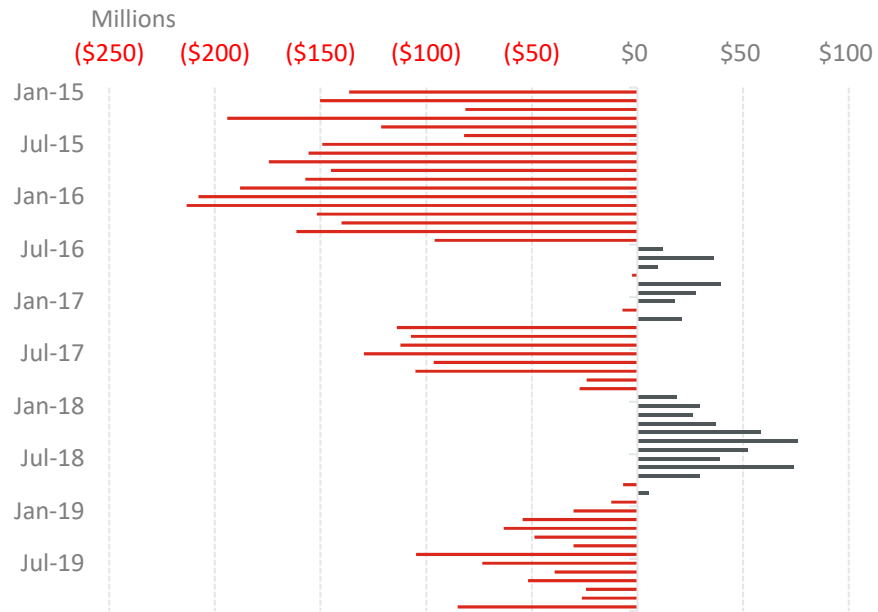


Figure 6. Cleveland Electric Illuminating month end money pool position

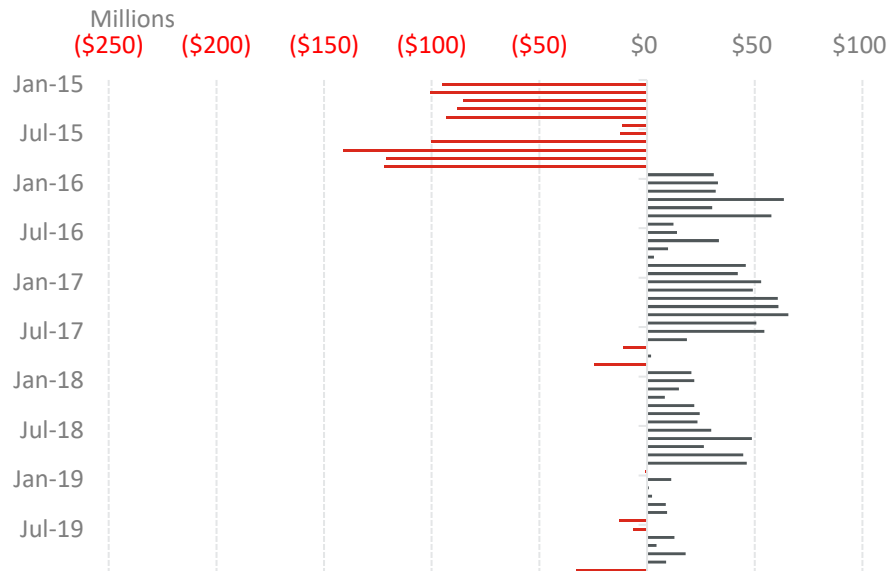


Figure 7. Toledo Edison month end money pool position

During the Rider DMR period from 2017 to 2019, Ohio Edison was a net lender into the money pool for all but one month. Toledo Edison went from being mostly a net borrower in 2015 to mostly a net lender between 2016 and 2019. Cleveland Electric Illuminating was split between being a net borrower and a net lender in the pool over the Rider DMR period. It is difficult to draw any specific significance from these money pool positions since the Ohio Companies had many other sources of cash besides Rider DMR.⁸⁵ Determining whether a Company being a net lender or borrower was of the benefit to customers is outside the scope of this audit.

C. Controls

The Utility Money Pool agreement has the following provisions, which help facilitate control of the money pool:

- FirstEnergy Corp. (or any unregulated affiliate) is not allowed to borrow from the money pool (Section 1.02)
- All borrowing and lending must be authorized by the affiliate's Chief Financial Officer (Section 1.04)
- Loans must be repaid within 364 days (Section 1.08)
- FESC will administer the pool "at cost" (Section 2.01)
- Event of default stipulations (Section 2.04)

Per the Utility Money Pool agreement, FirstEnergy Corp. is not permitted to borrow from the pool at any time.⁸⁶ As such, FirstEnergy Corp. can only lend into the pool, which is facilitated by a revolving line of credit. To ensure that FirstEnergy Corp. does not take a borrowing position in the Utility Money Pool, the administrator must manage the pool such that the utility subsidiaries are collectively net borrowers from the pool. The administrator may on occasion have one or more of the utility participants invest funds externally to ensure compliance is met. Treasury typically targets a net lending position of -\$50M for all non-FirstEnergy Corp. participants to provide a buffer.

Additionally, money pool participants often have individual borrowing limits set by regulators. The Ohio Companies have Commission-approved borrowing limits that pertain to their participation in the Utility Money Pool; the Commission reviews these limits annually. For example, the Commission authorized short-term notes outstanding through the end of 2021 in the amount of \$500 million for Ohio Edison and Cleveland

⁸⁵ The Companies have many different Riders by which they collect funds from customers. Rider DMR was only a part of the Companies' overall revenues.

⁸⁶ Set 1 DR 38 Attachment 2.

Electric, and \$300 million for Toledo Electric.⁸⁷ Further, the Ohio Companies (plus ATSI—one of FirstEnergy’s transmission affiliates) may not collectively lend through the money pool more than \$750 million to non-Ohio based participating companies.⁸⁸ Other states set borrowing limits and rules for their own respective jurisdictions and electric distribution utilities. For example, no New Jersey affiliate can participate in the money pool unless all participants are investment grade.⁸⁹

FirstEnergy prepares a quarterly report and files it with the Commission that details their compliance with the above provisions. Additionally, “at least monthly, FESC reviews and compares the Regulated Money Pool balances with forecasted balances to ensure the reasonableness of the actual Money Pool balances.”⁹⁰ FirstEnergy did not provide any additional explanation of what “reasonableness” entails. A program within SAP calculates the monthly interest rate, as well as the actual interest expense and income for each affiliate.⁹¹

There are no SOX controls⁹² directly related to the Utility Money Pool because there is no financial impact on FirstEnergy Corp. As explained in Set 5 DR 8, “intercompany transactions (the borrowing and lending and interest thereon between subsidiaries) get eliminated in consolidation.”⁹³ FirstEnergy did provide a list of non-SOX controls. We found these controls are relatively vague and sometimes there is no separation of duties. For instance, in several steps, an analyst within the same department approves another analyst’s transaction.⁹⁴ Since the Utility Money Pool processes hundreds of thousands of dollars of transactions, an audit on the Utility Money Pool would be prudent and help to determine if these current controls are sufficient.

D. Analysis of the Rider DMR period

Daymark looked at metrics associated with the Utility Money Pool during the Rider DMR period. Throughout the period when the Ohio Companies were collecting Rider DMR

⁸⁷ See Finding & Order, 12/16/2020, in Case No. 20-1489-EL-AIS et al.

⁸⁸ *Id.*

⁸⁹ Set 5 DR 19.

⁹⁰ Set 3 DR 9.

⁹¹ *Id.*

⁹² SOX stands for Sarbanes Oxley, SOX controls are financial reporting controls

⁹³ Set 5 DR 8.

⁹⁴ *Id.*, Attachment 1.

funds, the Ohio Companies tended to have net lending positions in the pool (see above figures 5 through 7). The Ohio Companies did not exceed any out-of-state lending limits.

In the absence of the Utility Money Pool agreement, the Ohio Companies likely would have had excess cash during certain periods for which they would have sought short-term investment options before committing to other uses. To the extent that there was additional working capital at times during the Rider DMR period, the money pool arrangement may have allowed the Ohio Companies to earn a higher return than they would have received externally. However, we did not explore this further as consideration of the efficacy and implications of FirstEnergy's consolidated working capital structure was beyond the scope of this audit.

The money pool construct *per se* was of little consequence to the analysis of whether the Ohio Companies satisfied the obligations associated with the Rider DMR funds. The Rider DMR funds collected over the period resulted in a debit to the Ohio Companies' cash as all base rates and riders would. Under the money pool agreement this cash is tracked as a company's position in the money pool. In absence of the money pool agreement, vendor invoices, dividends, debt repayments, or any similar events would have resulted in a credit to the operating company's cash account. Under the money pool agreement, these events instead are disbursements from the money pool attributable to the operating company and are not traceable regarding their specific use.

The balance of this report therefore is to examine the uses of the Ohio Companies' Rider DMR funds in comparison to the intended uses set out in the *ESP IV* proceeding, disregarding the largely mechanical impacts of the money pool agreement.

E. Recommendations

FirstEnergy was not aware of any audit of the money pool during the period of 2015 to 2021.⁹⁵ In light of our review of the controls over the money pool and its overall (non-DMR) significance, we recommend that the Utility Money Pool be audited both by FirstEnergy internally and by an external auditor, at a minimum of every 5 years. This audit could delve into an interest rate comparison of the money pool versus external investments to see if the money pool truly does facilitate a lower borrowing cost and higher lending return, as well as ensure the established controls over the money pool are adequate.

⁹⁵ Set 5 DR 5, Set 5 DR 6.

V. INDIRECT USES OF DMR FUNDS FOR CREDIT SUPPORT

The Commission in the Fifth Entry on Rehearing ruled that Staff would review the expenditure of Rider DMR funds to ensure that they were used, directly or indirectly, in support of grid modernization.⁹⁶ Section III discussed the direct use of Rider DMR funds to support grid modernization. This section will discuss the indirect use of Rider DMR funds to support grid modernization. The Fifth Entry gave examples of how Rider DMR could indirectly support grid modernization stating that Rider DMR funds “should lower the cost of borrowing the funds needed to invest in grid modernization and may include reducing outstanding pension obligations, reducing debt, or taking other steps to reduce the long-term costs of accessing capital.”⁹⁷ In order to ascertain whether the goals of the Rider DMR were achieved, we reviewed each of the possible indirect uses stated in the Fifth Entry, as well as other factors that influence the cost of capital. To address these indirect uses, this section is split into the following subsections:

- *Cost of Debt.* This section includes a discussion of credit ratings and associated credit metrics that may affect the cost of borrowing. This section also discusses debt reductions, any long-term debt issued during Rider DMR, and impacts on borrowing in 2020 when FirstEnergy’s credit rating was downgraded to below investment grade, for comparative purposes. Additionally, we discuss any pension contributions made during Rider DMR and the overall funded status of the pension.
- *Equity.* This section discusses factors relevant to accessing equity capital. Here we discuss dividend payments, equity issuances and equity infusions. We also discuss the results of the Ohio Companies SEET tests as well as the recent SEET settlement.

The analysis presented here primarily focused on the period Rider DMR was in effect, 2017-2019, but also contains relevant data and analysis from prior and post DMR time periods for comparative purposes.

⁹⁶ See Case 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016, at ¶1282.

⁹⁷ *Id.*

A. Debt

One way Rider DMR funds could have been used to indirectly support grid modernization was to lower the cost of debt. To investigate whether funds were used to lower debt, we looked at several factors that influence a company's cost of debt: credit ratings, credit metrics, and leverage.⁹⁸ We also analyzed the short- and long-term debt of the Ohio Companies and whether they were able to access the capital markets as needed. In addition, with the credit downgrade of FirstEnergy and the Ohio Companies in 2020 to below investment grade by S&P, we were able to analyze the actual effects on access to and cost of debt as well as other costs (such as posting collateral) when a company falls below investment grade.⁹⁹ Although this downgrade was unrelated to Rider DMR, it provides context as to how credit quality affects the Ohio Companies.

As a result of our audit, Daymark could not ascertain any significant, tangible benefit to customers from the Rider DMR as it relates to the Ohio Companies' cost of debt. There were other major events concerning FirstEnergy and the Ohio Companies unrelated to the Rider DMR that occurred during (and after) Rider DMR that likely had far more significant impact. These events shaped the Ohio Companies' credit ratings and access to capital to a greater extent than Rider DMR and likely masked any use (if attempted) of Rider DMR to affect the cost of debt. The events included: the asset impairments (February 2017); the equity issuance (January 2018); the subsequent bankruptcy of the competitive operations (March 2018); the settlement of the bankruptcy (September 2018); the approval of Grid Mod I and the return of tax savings to customers pursuant to the Tax Cuts and Jobs Act of 2017 (July 2019); the governance allegations (October 2020); and finally, the recent equity issuance (November 2021). Each of these events had positive or negative impacts on FirstEnergy's and the Ohio Companies' credit and made it impossible to separate the effects of Rider DMR funds from these major events. The most significant positive event during Rider DMR was the settlement of the bankruptcy and decision to become a fully regulated company on August 27, 2018, which directly led to an upgrade by S&P.¹⁰⁰

⁹⁸ Credit ratings are given by three rating agencies: Moody's, S&P, and Fitch. These ratings indicate to investors how "credit-worthy" something is: how risky an investment is and the likelihood that a financial obligation will be honored. Each rating agency has its own set of rating levels. Credit metrics are calculations (typically ratios) that help determine and support an entity's overall credit rating. Leverage is an example of a credit metric. Leverage is also known as a debt to equity ratio. A heavily leveraged company has a lot more debt than equity on its balance sheet.

⁹⁹ In November 2021, the Ohio Companies' and FirstEnergy's credit ratings were upgraded to investment grade by S&P. see Set 5 DR 18 Attachment 1 - Confidential.

¹⁰⁰ Set 1 DR 11 Attachment 86 - Confidential.

Although not the key driver of FirstEnergy's or the Ohio Companies' 2018 credit upgrades, Rider DMR funds likely did contribute to improving credit metrics for the Ohio Companies, and to a much lesser extent for FirstEnergy Corp. As evidence, we found that Rider DMR likely did contribute to the improvement in key credit metrics for cash flow (Moody's: CFO/pre-WC/debt and CFO/pre-WC-dividends/debt; S&P: FFO/debt and Debt/EBITDA). We also looked at several other metrics affecting the Ohio Companies' credit ratings, including debt leverage and pension funding. In all instances Rider DMR likely did contribute, at least marginally, to improvement these metrics.

According to FirstEnergy, Rider DMR funds facilitated reductions¹⁰¹ in outstanding obligations for pensions and debt. These reductions in obligations amounted to \$102 million and \$105 million respectively for the Ohio Companies. The weighted average cost of long-term debt for the Ohio Companies also decreased by 1%¹⁰² during the Rider DMR period; however, this weighted average cost of long-term debt was also impacted by market conditions at the time and other actions taken by FirstEnergy.¹⁰³ The following sections discuss our analysis in more detail.

Setting the Rider DMR collection amount

Rider DMR was calibrated to collect an amount of revenue that would keep FE's Cash from Operations (CFO) to debt ratio at a level worthy of an investment grade rating, or "the amount of cash necessary for FirstEnergy Corp. to maintain a CFO to debt ratio of 14.5 percent" (for Moody's methodology).¹⁰⁴ The Order discusses how the level of Rider DMR was set to align with that key credit metric:

"Staff witness Buckley testified that the ratio of CFO to debt is a key metric in avoiding a future downgrade (Staff Ex. 13 at 3, 4). Moody's identified a CFO to debt ratio of 14 to 15 percent as essential to maintain the current investment grade rating (Staff Ex. 13, Att. 2 at 2). Using energy operating revenues, Staff witness Buckley calculated, based upon a five-year historic average, the amount of cash necessary for FirstEnergy Corp. to maintain a CFO to debt ratio of 14.5 percent. Mr. Buckley then allocated 22 percent of that cash necessary to the Companies based upon the Companies' share of operating revenues of

¹⁰¹ Again, the direct linkage of Rider DMR funds to these expenditures is not possible.

¹⁰² Set 5 DR 32.

¹⁰³ *Id.*

¹⁰⁴ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016, at ¶196.

FirstEnergy Corp. overall. This results in the recommendation for the annual revenue amount for Rider DMR of \$131 million.”¹⁰⁵

FirstEnergy indicated that Rider DMR was to be grossed up for federal income taxes, resulting in a pre-tax rider of \$168.2 million on an annual basis in 2018-2019 (using a 21% federal tax rate) and \$204.4 million for 2017 (using a 35% federal tax rate).¹⁰⁶ The Commission further explained that “Rider DMR is intended to assist the Companies in addressing the CFO to debt ratio shortfall for FirstEnergy Corp.”¹⁰⁷ To ensure Ohio did not “bear the full burden of ensuring that FirstEnergy Corp. does not suffer a downgrade”, the Commission reasoned that “the allocation factor recommended by Staff ensures that Rider DMR recovers the Companies’ proportionate share of improving FirstEnergy Corp.’s CFO to debt ratio”.¹⁰⁸ Therefore, we examined both the Ohio Companies and FirstEnergy Corp.’s credit ratings and metrics.

Credit ratings

A credit rating indicates the relative riskiness of a company’s debt securities.¹⁰⁹ Thus, a major driver of the cost and availability of debt is the utility’s credit rating. Daymark reviewed the credit ratings of FirstEnergy and the Ohio Companies for the period before, during, and after Rider DMR was collected. During that time, FirstEnergy and the Ohio Companies held the credit ratings shown in Table 8 from each of the major rating agencies, Standards & Poor’s (S&P), Moody’s, and Fitch.¹¹⁰¹¹¹

¹⁰⁵ *Id.*

¹⁰⁶ Set 1 DR 17.

¹⁰⁷ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016, at ¶202.

¹⁰⁸ *Id.*, ¶203.

¹⁰⁹ Each credit agency has a threshold level that it considers an entity to be “investment grade” worthy. For Moody’s, that rating is Baa3 and for S&P and Fitch that is BBB-. For more information on ratings, see “Moody’s Ratings Scale and Definitions,” available at https://www.moodys.com/sites/products/productattachments/ap075378_1_1408_ki.pdf, S&P Global Ratings, “Guide to Credit Rating Essentials,” available at https://www.spglobal.com/ratings/division-assets/pdfs/guide_to_credit_rating_essentials_digital.pdf, and Fitch Ratings, “Rating Definitions,” available at <https://www.fitchratings.com/products/rating-definitions#about-rating-definitions>.

¹¹⁰ Our review focus on the Issuer Rating from Moody’s, the Corporate Credit Rating from S&P and the Long-Term Issuer Default Rating from Fitch. These rating agencies have other ratings for other types of debt (e.g., secured).

¹¹¹ Set 1 DR 19.

Table 8. Credit ratings for FirstEnergy and the Ohio Companies¹¹²

Moody's-Issuer Rating					S&P-Corporate Credit Rating					Fitch				
Year	FE	OE	CEI	TE	Year	FE	OE	CEI	TE	Year	FE	OE	CEI	TE
2014	Baa3	Baa1	Baa3	Baa3	2014	BBB-	BBB-	BBB-	BBB-	2014	BB+	BBB-	BB+	BB+
2015					2015					2015	BB+			
2015					2015					2015	BBB-			
2016	Baa3	Baa1	Baa3	Baa3	2016	BBB-	BBB-	BBB-	BBB-	2016	BBB-			
2017					2017					2017		BBB	BBB	BBB
2018					2018	BBB	BBB	BBB	BBB	2018	BBB-	BBB	BBB	BBB
2019		A3	Baa2	Baa1	2019					2019	BBB	BBB+	BBB+	BBB+
2020	Ba1-			Baa1	2020	BB+	BB+	BB+	BB+	2020	BBB-	BBB	BBB	BBB
2020					2020	BB	BB	BB	BB	2020	BB+	BBB-	BBB-	BBB-

As indicated in the Table 8 above, Rider DMR had no apparent impact on FirstEnergy Corp.'s and the Ohio Companies' credit ratings immediately following the approval of Rider DMR. S&P and Moody's rated FirstEnergy Corp. and the Ohio Companies at the low end of investment grade at that time. FirstEnergy Corp. was rated Baa3 (Moody's) and BBB- (S&P), which are the bottom investment tiers for both agencies. Ohio Edison was Baa1 and BBB-, Cleveland Electric Illuminating was Baa3 and BBB-, and Toledo Edison was Baa3 and BBB-, respectively. From 2015 to early 2017, Fitch did not rate the individual Ohio Companies. However, when coverage resumed in 2017, Fitch awarded the Ohio Companies "BBB", which is one notch above Fitch's lowest investment grade rating. In 2017, FirstEnergy Corp. still had a BBB- from Fitch, which is its lowest investment grade rating.

S&P's March 7, 2017 research report mentioned Rider DMR [REDACTED]

Moody's mentioned the rider as well, [REDACTED]

However, no credit upgrades were issued in 2017.

On August 27, 2018, S&P upgraded FirstEnergy and the Ohio Companies from BBB- to BBB. This action would be consistent with Staff's description of S&P "'umbrella' approach to credit ratings...[where]...a downgrade to FirstEnergy Corp. would result in a

¹¹² FE is FirstEnergy, OE is Ohio Edison, CEI is Cleveland Electric Illuminating and TE is Toledo Edison

¹¹³ Set 1 DR 11 Attachment 76 Confidential.

¹¹⁴ Set 1 DR 11 Attachment 21 Confidential.

downgrade to the Companies.”¹¹⁵ The Ohio Companies maintained investment grade ratings from Moody’s and Fitch and received positive outlooks. FirstEnergy Corp., which was rated at Fitch’s lowest investment grade, also received positive outlooks. From these rating upgrades and the credit report narratives, there is evidence that the credit rating agencies looked favorably upon Rider DMR and the general regulatory climate in Ohio. However, another major influential event – and likely a more important factor – in 2018 was the separation of FirstEnergy’s competitive business, FirstEnergy Solutions (FES). Credit agencies approved of FirstEnergy’s decision to become a fully regulated and therefore less risky business. From S&P:

[REDACTED]

In July 2019, after the Court struck down Rider DMR,¹¹⁷ Moody’s actually upgraded the Ohio Companies, including placing Ohio Edison in the “A” category. Notably, the other credit agencies made no significant change to FirstEnergy Corp.’s or the Ohio Companies’ credit ratings following the Court’s decision to discontinue Rider DMR. In November of 2019, Fitch also upgraded FirstEnergy Corp. and the Ohio Companies, keeping all these entities in the investment grade category (BBB- or above). The ratings improvement awarded by Moody’s was primarily driven by the constructive regulatory environment in Ohio, and Moody’s pointed to the PUCO’s approval of the Grid Modernization settlement agreement on July 17, 2019. [REDACTED]

¹¹⁵ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016, at ¶193.

¹¹⁶ Set 1 DR 11 Attachment 86 Confidential.

¹¹⁷ See Case No. 14-1297-EL-SSO, Order on Remand, 8/22/2019, at ¶10.

[REDACTED]

We feel it is important to note that FirstEnergy Corp. and the Ohio Companies were all downgraded in 2020 by S&P and Fitch. Both agencies placed FirstEnergy Corp.'s Corporate Credit Rating and Long-Term Issuer Default Rating, respectively in the non-investment grade category and Fitch placed the Ohio Companies at its lowest investment grade rating as of the end of 2020, where they remained until November 2021, just prior to this report publishing. Moody's on the other hand, downgraded only FirstEnergy Corp.'s Issuer Rating, which it rated at Ba1, also below investment grade. Moody's left the Ohio Companies' ratings unchanged. The primary driver for the aforementioned downgrades was related to the ongoing federal investigation, not Rider DMR.¹¹⁹ The downgrade allowed us to analyze the effects of a credit downgrade on the Ohio Companies. Avoidance of a downgrade to non-investment grade was an issue raised by the Ohio Companies during Rider DMR. Results are discussed in the section *Implications of Falling Below Investment Grade* on p. 49.

To better analyze the potential effects of Rider DMR on the Ohio Companies' credit ratings and credit ratios, we delved into the rating agencies' methodologies and associated credit metric calculations. For reference, credit rating methodologies are in Appendix F.

Credit metrics

The primary credit metric Rider DMR targeted was cash flow. The focus was on FirstEnergy Corp., particularly Moody's CFO to debt ratio (CFO Pre-WC/Debt).¹²⁰ S&P's corresponding metric is FFO/Debt metric. Two other core financial metrics that we looked at are Moody's CFO Pre-WC – Dividends/Debt and S&P's Debt/EBITDA.

Moody's CFO to debt ratio and S&P's FFO/Debt

We reviewed the actual and projected cash flow metrics provided in response to data request Set 1 DR 22 and Set 6 DR 24. These metrics show 2017-2020 actual data and

¹¹⁸ Set 1 DR 11 Attachment 40 Confidential.

¹¹⁹ Set 1 DR 11 Attachment 129 Confidential. From Fitch's October 30, 2020 credit report: [REDACTED]

¹²⁰ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016, at ¶196.

2021-2024 forecasted data¹²¹ and are included in Figure 8. The level of Moody's CFO metric that PUCO targeted for FE during Rider DMR development was 14.5%. Because keeping the Ohio Companies investment grade was a priority of Rider DMR, we looked at this metric in terms of the Ohio Companies as well. In addition to reviewing performance relative to that target against Moody's cash flow metric as established in the Rider DMR Order, we also compared the data to the cash flow metric benchmarks that Moody's uses, which are 13.0%-22.0% (for investment grade Baa).¹²² A 13% CFO/debt is the minimum threshold for investment grade.

DM Set 01-DR-022 Attachment 1 Confidential

Confidential - Forecasted Metrics <u>Including</u> Rider DMR									
		2017A	2018A	2019A	2020A	2021F	2022F	2023F	2024F
Moody's (CFO Pre-WC / Debt)	FirstEnergy Corp.	15.9%	12.4%	11.2%	5.3%				
	Ohio Edison	31.1%	40.3%	35.8%	26.8%				
	Cleveland Electric Illuminating	15.1%	22.8%	16.0%	11.9%				
	Toledo Edison	24.2%	34.3%	24.1%	19.9%				
S&P FFO / Debt	FirstEnergy Corp.	13.2%	14.0%	12.7%	9.9%				
	Ohio Edison	47.5%	53.9%	39.1%	39.7%				
	Cleveland Electric Illuminating	15.8%	22.7%	15.6%	10.7%				
	Toledo Edison	24.5%	37.2%	25.2%	20.6%				

Confidential - Forecasted Metrics <u>Excluding</u> Rider DMR									
		2017E ⁽¹⁾	2018E ⁽¹⁾	2019E ⁽¹⁾	2020A	2021F	2022F	2023F	2024F
Moody's (CFO Pre-WC / Debt)	FirstEnergy Corp.	15.3%	11.8%	10.9%	5.3%				
	Ohio Edison	25.5%	33.4%	32.6%	26.8%				
	Cleveland Electric Illuminating	11.7%	18.9%	14.3%	11.9%				
	Toledo Edison	18.0%	26.8%	20.7%	19.9%				
S&P FFO / Debt	FirstEnergy Corp.	12.6%	13.2%	12.4%	9.9%				
	Ohio Edison	36.6%	43.2%	35.1%	39.7%				
	Cleveland Electric Illuminating	11.8%	18.4%	13.8%	10.7%				
	Toledo Edison	17.1%	29.0%	21.6%	20.6%				

⁽¹⁾ 2017, 2018 & 2019 reflect FE's estimate and may vary from actual results. Agencies will not calculate metrics excluding DMR.

Figure 8. Cash credit metrics with and without Rider DMR revenues

With Rider DMR funds, all three Ohio Companies met the 14.5% Moody's target. Without Rider DMR, CEI would not have reached the 14.5% Moody's target in 2017 or 2019. Going forward into 2021 to 2024, the Ohio Companies

¹²¹ Set 1 DR 22 Attachment 1 Confidential.

¹²² Rating Methodology, Regulated Electric and Gas Utilities, Moody's Investors Service, published June 23, 2017, at 24.

Similarly, FirstEnergy Corp.

In addition, we looked at the metrics in 2015 and 2016 (pre-rider time periods) to establish a baseline against which any improvements during the Rider DMR period might be identified.¹²³ Starting with actual cash flow data from Moody's for 2015 through 2020, presented on the left side of Figure 9, each of the Companies' metrics improved in 2016 and during the time Rider DMR was in effect (2017 to 2019). The Ohio Companies' improvements in the cash flow metric were such that they all met the target CFO/debt level (14.5% for Moody's) for the entire time Rider DMR was in effect. Notably, neither CEI nor Toledo Edison met the target in 2015 or 2016 (before Rider DMR) and CEI did not meet the target metric in 2020 (after Rider DMR).

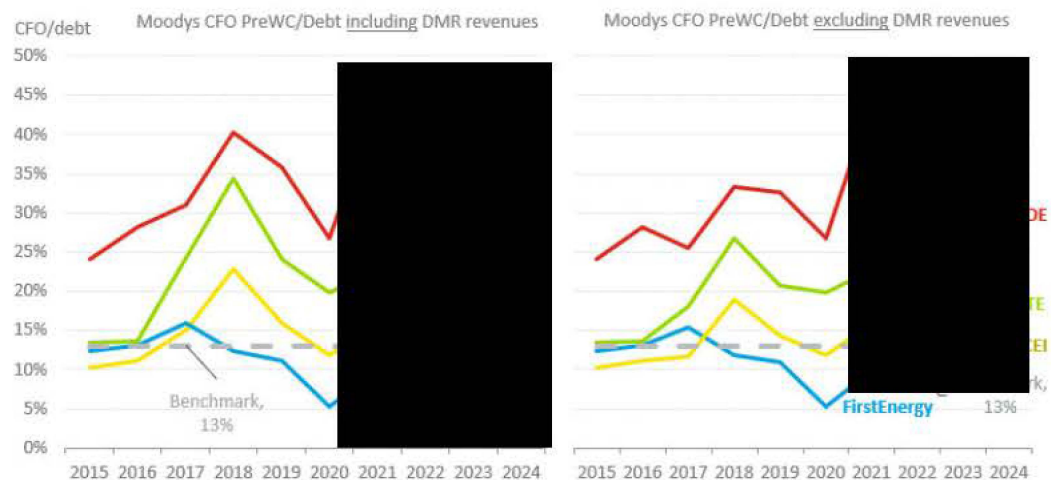


Figure 9. Moody's CFO PreWC/Debt with and without Rider DMR funds

The right side of Figure 9 shows the Moody's cash flow metric without the Rider DMR revenues in 2017 through 2019.¹²⁴ The results are substantially the same as the results *with* the Rider DMR revenues, except that CEI would not have met the 14.5% Moody's CFO/debt target established in the Rider DMR Order in 2017 and 2019.

For FirstEnergy Corp., Rider DMR did not materially affect the achievement of the targeted metric. FirstEnergy Corp. did not meet the target in any years other than 2017, the first year Rider DMR was collected. We note that since Rider DMR was only designed

¹²³ Set 1 DR 20 Attachment 2 Confidential.

¹²⁴ Set 1 DR 22 Attachment 1 Confidential.

to cover the Ohio Companies' portion (22%) of FirstEnergy Corp.'s cash flow, this result is not unexpected.

Moody's actual 2015-2020 data shows that Toledo Edison and Ohio Edison would have met Moody's minimum investment grade metric (13%) in all years regardless of Rider DMR funds. CEI would not have met the minimum threshold in 2017 without Rider DMR funds. However, CEI and the other Ohio Companies

FirstEnergy Corp. did not achieve the minimum 13 % threshold with or without Rider DMR funds for 2018 or 2019. However, it would have met that level in 2017 with or without Rider DMR funds.

While not cited in the Fifth Entry, we found that like Moody's, S&P uses an investment-grade benchmark for FFO/Debt for medial intermediate companies. In S&P's case, this benchmark is 23 to 35%.¹²⁵ Figure 10 below shows the 2015 through 2024 cash flow credit metrics for S&P with and without Rider DMR revenues.¹²⁶

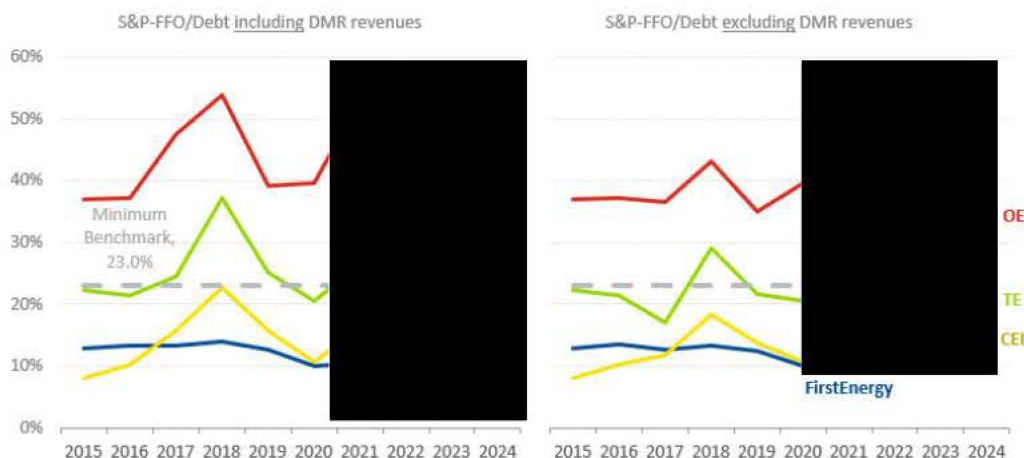


Figure 10. S&P's FFO/debt with and without Rider DMR funds

The Rider DMR Order did not provide an explicit target for the S&P cash flow metric, so we used the minimum benchmark of 23% for medial intermediate companies as per S&P

¹²⁵ *Criteria | Corporates | General: Corporate Methodology*, published by S&P Global Ratings on November 19, 2013. Accessed November 18, 2021 at <https://disclosure.spglobal.com/ratings/en/regulatory/article/-/view/sourceId/8314109>, Table 18.

¹²⁶ Set 1 DR 22 Attachment 1 Confidential.

methodology. As shown above, during the 2017 through 2019 period when Rider DMR revenues were being collected, both Ohio Edison and Toledo Edison met the 23% target, while CEI and FirstEnergy Corp. did not. Without Rider DMR revenues, Toledo Edison would have missed the 23% target in 2017 and 2019.

The Ohio Companies provided forecasts of 2021 through 2024 cash flow metrics for S&P as well. [REDACTED]

Moody's CFO-Div/Debt and S&P Debt/EBITDA

Moody's has two additional ratios that make up 25% of its Financial Strength Factor. Here we discuss the second of these two factors, CFO Pre-WC-Dividends/Debt, which makes up 10% of the category. The benchmark for standard electric utilities is 9%-17% to achieve Baa ratings.¹²⁷

Moody's describes the CFO Pre-Working Capital Minus Dividends / Debt ratio as follows:

"This ratio is an indicator for financial leverage as well as an indicator of the strength of a utility's cash flow after dividend payments are made. Dividend obligations of utilities are often substantial, quasi- permanent outflows that can affect the ability of a utility to cover its debt obligations, and this ratio can also provide insight into the financial policies of a utility or utility holding company. The higher the level of retained cash flow relative to a utility's debt, the more cash the utility has available to support its capital expenditure program. The numerator of this ratio is CFO Pre-WC minus dividends, and the denominator is total debt."¹²⁸

Because dividends are determined on the basis of several factors,¹²⁹ the dividend may exceed the CFO of the entity and therefore result in this metric being negative for a period.

During the period when Rider DMR was in effect, the Ohio Companies achieved mixed results on this second Moody's metric. Ohio Edison and CEI met the minimum metric for two years while Toledo Edison met it for one year. FirstEnergy Corp. met the minimum

¹²⁷ Moody's Investors Service, *supra*, at 22. Standard grid entities is the term Moody's uses for electric utilities.

¹²⁸ Moody's Investors Service, *supra*, at 21.

¹²⁹ Set 4 DR 13.

metric for two years.¹³⁰ Without Rider DMR revenues, only Ohio Edison (in 2017 and 2018) would have met the minimum benchmark. FirstEnergy Corp. only achieved the minimum benchmark in 2017. See below Figure 11. We note that dividends (in particular those paid by the Ohio Companies in 2019 as discussed in the *Dividends* section on p. 65) play a large role in determining the outcome of this particular metric.

In 2020 and going forward, [REDACTED]

[REDACTED]

For the Ohio Companies, this metric is highly sensitive to the amount of the dividend paid in the year under observation. Years where the Ohio Companies fail to meet the benchmark of this metric tend to coincide with large dividend payments. We discuss these dividend payments and their relation to the Ohio Companies' financial position further in the *Equity* section below (p.63).

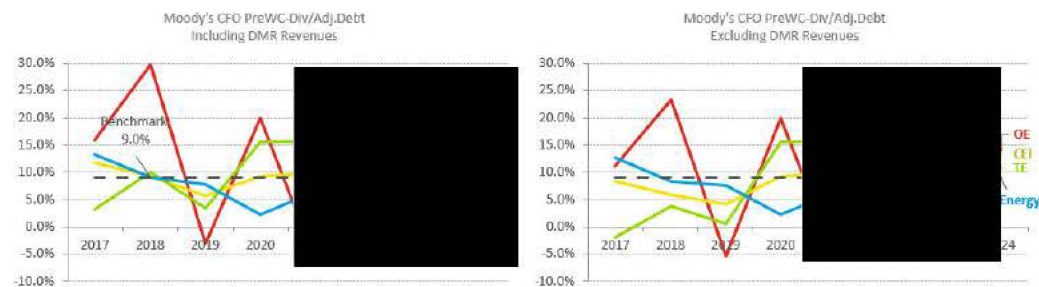


Figure 11. Moody's CFO preWC-Div/Adj. Debt with and without Rider DMR funds

S&P also has two core ratios. The second one we reviewed is called Adj. Debt/Adj. EBITDA.¹³² S&P's Debt/EBITDA measures the ratio of debt to EBITDA and measures the level of a "company's liquidity cushion." The analysis also assesses the potential for a company to breach debt covenant tests tied to EBITDA.¹³³ We found that the benchmark

¹³⁰ Set 6 DR 24 Attachment 1 Confidential.

¹³¹ Set 6 DR 24.

¹³² EBITDA is defined by S&P as earnings before interest, taxes, depreciation, and amortization.

¹³³ S&P Global, *supra*, at ¶185.

for medial volatility entities is 2.5-3.5 times.¹³⁴ In the case of this metric, having a lower value is better as it reflects less debt relative to revenues.

As shown in Figure 12, our review shows that with Rider DMR revenues, the Ohio Companies achieved the target for the Rider DMR period with the exception of CEI in 2017 and 2019. FirstEnergy Corp. failed to meet the benchmark throughout the period. Review of this S&P metric without Rider DMR revenues shows that Ohio Edison and Toledo Edison (except 2017) achieved this target, but CEI and FirstEnergy Corp. did not. In 2020 and going forward, [REDACTED]

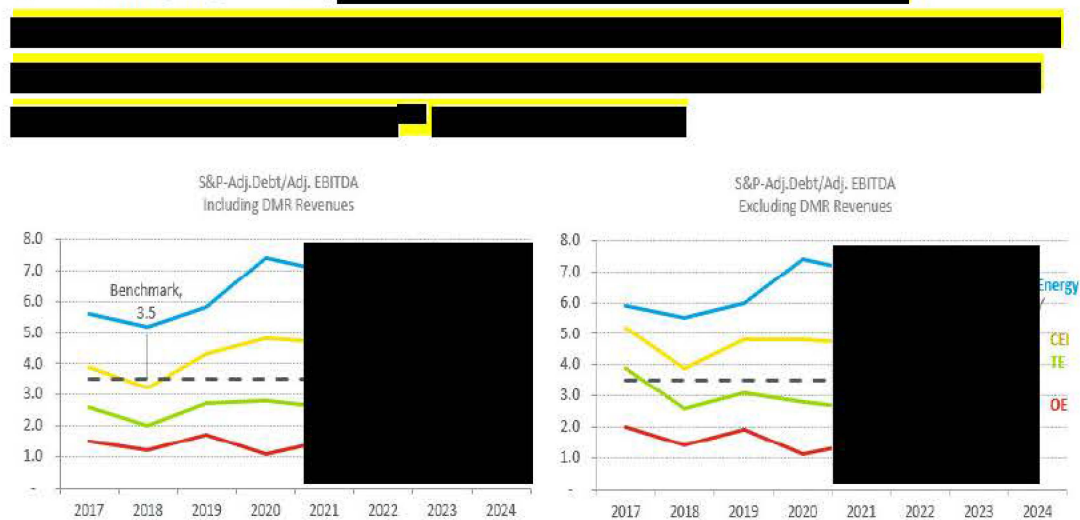


Figure 12. S&P's Adj. Debt/Adj. EBITDA with and without Rider DMR funds

Ability to recover costs in a timely and predictable manner

One other credit consideration from Moody's is the ability to recover costs in a timely and predictable manner. Moody's states:

[REDACTED]

¹³⁴ S&P Global, *supra*, Table 18.

¹³⁵ Set 6 DR 24.



In its credit reports, Moody's provides insights on the overall regulatory framework for the Ohio Companies. We found from our review of the Ohio Companies' credit reports that the PUCO is generally well regarded for its rate regulation.

For example, in its "Credit Opinions" in the summer of 2015, prior to Rider DMR, Moody's gave the three Ohio Companies an "A" rating on its two Regulatory Framework metrics.¹³⁷ Similarly, on June 2, 2017, just after Rider DMR was authorized, Moody's maintained the same "A" rating for all three Companies.¹³⁸ Even the latest Moody's reports dated December 4, 2020, after FirstEnergy was downgraded to non-investment grade, Moody's still maintained an "A" rating for the Ohio Companies in this category.¹³⁹

Leverage ratio

Leverage ratio is another factor considered in the credit ratings analysis of Moody's and S&P. Leverage refers to how much debt a company has in its capital structure. This ratio is an important indicator of default risk. A "highly leveraged" company is financed by substantially more debt than equity and consequently has more fixed obligations in the form of interest payments. For Moody's, leverage is 7.5% of its financial strength metric. Standard leverage ratios vary by industry. For a standard electric utility, debt/capitalization of 45%-55% would be sufficient to provide the utility an investment grade credit rating.¹⁴⁰

Under S&P's criteria, cash flow/leverage analysis is the foundation for assessing a company's financial risk profile. The range of assessments for a company's cash

¹³⁶ Moody's Investors Service, *supra*, at 12-13.

¹³⁷ Set 1 DR 11 Attachments 7-9 Confidential.

¹³⁸ Set 1 DR 11 Attachments 21-23 Confidential.

¹³⁹ Set 1 DR 11 Attachments 56-58 Confidential.

¹⁴⁰ Moody's Investors Service, *supra*, at 22.

flow/leverage is 1, minimal; 2, modest; 3, intermediate; 4, significant; 5, aggressive; and 6, highly leveraged.

Table 9 below presents the annual leverage, or debt/equity, ratio for each of the Ohio Companies and FirstEnergy Corp.^{141 142}

Table 9. Debt/equity ratio¹⁴³

COMPANY	2015	2016	2017	2018	2019	2020	2021*
Ohio Edison	36%	36%	35%	30%	33%	27%	31%
Cleveland Electric Illuminating Co.	55%	49%	45%	45%	45%	49%	49%
Toledo Edison Company	40%	38%	40%	40%	40%	35%	45%
Total Ohio Opcos	46%	43%	41%	39%	40%	39%	42%
FirstEnergy Corp.	61%	74%	84%	72%	74%	75%	76%

*Data as of June '21

Source: FERC Form 1/3Q pg. 112

Based on Moody's criteria, the Ohio Companies were not over leveraged during the Rider DMR period. However, FirstEnergy has been highly leveraged (i.e., which would otherwise support just a B rating) since 2016 and remains highly leveraged to date. We would expect that FirstEnergy should strive to achieve a 55% debt ratio (or lower), which is the maximum allowed to achieve an investment grade credit rating. As discussed in the *Equity* section of this report, actions are being taken to reduce leverage at the parent level.

Implications of credit ratings falling below investment grade

One key issue that was raised by FirstEnergy in the Rider DMR case was the negative implications of losing investment grade credit ratings. Investment grade credit ratings generally enable access to lower cost debt and below investment grade ratings can both impair access to debt capital and substantially increase the cost of debt. In the pre-filed direct testimony of Steven R. Staub, FirstEnergy Service Company Vice President and Treasurer in FirstEnergy's application for an extension of Rider DMR, Mr. Staub lists several detrimental impacts of a non-investment grade rating. These are:

¹⁴¹ FERC Form 1 of Ohio Edison, Cleveland Electric Illuminating, and Toledo Edison, 2015-2020 and FERC Form 3Q at 112.

¹⁴² FirstEnergy 10-K filed 2015-2020 and 10-Q for 2021.

¹⁴³ For the Ohio Companies, the amounts represent the total debt divided by the total debt plus the total proprietary capital (which is the common equity of the Ohio Companies).

“A downgrade to non-investment grade limits a company’s access to capital to higher interest rates. [...] A downgrade to non-investment grade also limits a company’s access to capital to more restrictive terms and conditions, such as requiring a pledge of security and more rigid financial covenants.”¹⁴⁴

“A downgrade may have negative impacts on existing borrowings and other contracts. It may give rise to collateral requirements which further erode liquidity and leave less cash available for the Companies to use in their business operations. For example, FirstEnergy Corp. has existing bonds which have an increase in the interest rate of 25 basis points for every notch that credit ratings fall compared to when the debt was issued. Every 25 basis points would result in approximately \$9.6 million in additional interest costs annually. Furthermore, in the event of a one-notch credit rating downgrade, FirstEnergy Corp. will incur additional interest expense of approximately \$4.7 million per year, on its term loan debt and revolving credit facility. Further, PJM Interconnection LLC (“PJM”) would require additional collateral of the Companies to participate in PJM markets. In addition, FirstEnergy and the Companies may be required to post additional collateral associated with outstanding surety bonds. A downgrade may also trigger more stringent terms in existing agreements, such as a shortened period to pay invoices.”

“In addition, Rider DMR provides for more favorable terms with the Companies’ vendors and suppliers, which should reduce the cost of grid modernization investments collected from customers. When a company is viewed as a credit risk, counterparties to contracts with the company face increased risk of non-payment or delayed payment. This increased risk results in increased contract prices as a result of risk premiums embedded in the pricing.”¹⁴⁵

Maintaining investment grade ratings was a consideration in the Commission’s approval of Rider DMR. In the Fifth Entry on Rehearing, the Commission found that the risk of a downgrade to the Ohio Companies’ credit ratings existed and that such a downgrade would have adverse consequences for the Companies.¹⁴⁶

As noted in the credit ratings section above, the Ohio Companies had maintained investment grade credit ratings from Moody’s and S&P since at least 2014 and from

¹⁴⁴ See Case No. 19-361-EL-RDR, Direct Testimony of Steven R. Staub, 3/1/2019, p. 14 , lines 10-16.

¹⁴⁵ *Id.*, p. 15, lines 1-13.

¹⁴⁶ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016, at ¶194-195.

Fitch since 2017 (when the Ohio Companies' ratings were resumed). FirstEnergy Corp. maintained an investment grade rating as well, except for part of the Rider DMR period where they held non-investment grade ratings from Moody's and S&P. Fitch rated FirstEnergy Corp. BBB- from 2015 through 2018 which is their highest non-investment grade rating.

In November 2020, S&P downgraded the Ohio Companies and FirstEnergy Corp. Corporate Credit Rating to BB+ which is their highest non-investment grade rating. Similarly, Fitch also downgraded the Ohio Companies to BBB and FirstEnergy to BBB-. Moody's downgraded FirstEnergy to non-investment grade but left the Ohio Companies in the investment grade category. The reason for the downgrades was consistent across the rating agencies. Moody's, in its "*Credit Opinion*" on FirstEnergy dated November 30, 2020, cited [REDACTED]

[REDACTED] Similarly, on October 30, 2020, S&P downgraded FirstEnergy and the Ohio Companies to BB+. S&P's "*Research Update*" stated [REDACTED]

[REDACTED] Fitch stated [REDACTED]

The credit ratings the Ohio Companies held during the Rider DMR period are not materially explained by the existence of the rider funds, and the downgrades the Companies experienced were unrelated to the elimination of Rider DMR. However,

¹⁴⁷ Set 1 DR 11 Attachment 55 Confidential.

¹⁴⁸ Set 1 DR 11 Attachment 93 Confidential.

¹⁴⁹ Set 1 DR 11 Attachment 130 Confidential.

because the avoidance of a downgrade was a key factor in the approval of Rider DMR, the actual downgrades and subsequent loss of investment grade credit ratings in late 2020 provides relevant insight into what may have happened upon an actual downgrade. Therefore, we sought to gain information on the impacts of the non-investment grade credit ratings on the Ohio Companies.

According to an interview, the Ohio Companies did not have any critical near-term financial needs during the credit downgrade, which helped mitigate the potential negative effects of the downgrade. We found that Toledo Edison issued \$150 million of long-term debt in May 2021, during the period after its credit ratings were downgraded by S&P. When specifically asked about this debt issuance, FE asserted, “There was no impact from non-investment grade credit ratings. Toledo Edison’s May 6, 2021, senior secured notes had investment grade credit ratings from S&P, Moody’s and Fitch.”¹⁵⁰ The issuance of long-term debt at this time provides evidence of Toledo Edison’s ability to access capital during a time when it’s Corporate Credit Rating was downgraded.¹⁵¹ The debt issued had an interest rate of 2.65% and a 7-year term. As a result of the downgrade, Toledo Edison did experience a 25-bps increase in borrowing costs on \$100 million of short-term borrowing under the credit facility in place at the time.¹⁵²

The Ohio Companies did have to post collateral to PJM because of their downgrade totaling \$100,000.¹⁵³ Additionally, during the period the Ohio Companies were downgraded, their unsecured credit allowance was \$0 under the PJM Credit Risk Management Policy.¹⁵⁴ As a result of a subsequent improvement in S&P unsecured ratings, the Ohio Companies were able to regain their unsecured \$7 million credit allowance.¹⁵⁵

To remedy the downgrade situation, FirstEnergy sought to comply with S&P’s “separateness test” to insulate the Ohio Companies’ credit ratings against FirstEnergy’s group credit profile. The separateness test, if met, allows for subsidiaries to be rated higher than their parent company. On October 19, 2021, S&P [REDACTED]

¹⁵⁰ Set 5 DR 21.

¹⁵¹ Although Toledo Edison’s Corporate Credit Rating was below investment grade, its Senior Secured Debt credit rating was still investment grade

¹⁵² Set 5 DR 19.

¹⁵³ Set 5 DR 29.

¹⁵⁴ Set 5 DR 18 Attachment 6.

¹⁵⁵ Set 5 DR 18.

Other insulating measures that FirstEnergy already had in place include such things as having separate records and books, being a separate legal entity, and other financing provisions. S&P subsequently upgraded the Ohio Companies' credit rating one notch. On November 8, 2021, S&P further upgraded the Ohio Companies (to BBB) and FirstEnergy (BBB-) two notches to investment grade. S&P stated,

We present these findings to show that although a credit downgrade of FirstEnergy was a valid concern, there were and are tools at the Ohio Companies' disposal to maintain their investment credit status for issuing debt.

Cost of short- and long-term debt

We reviewed the Ohio Companies' cost of debt for both the period when Rider DMR was in effect and the years following. The Ohio Companies issued the debt shown in Table 10 within these two periods.

Table 10. Long-term debt issued during or after Rider DMR was in effect

Long Term Debt	Term (Yrs.)	Issue Date	Expire Date	Amount (\$000s)	Rate
CEI-Senior note	10.5	10/5/2017	4/1/2028	350,000	3.50%
CEI-Senior note	12.0	11/2/2018	11/15/2030	300,000	4.55%
TE-Senior secured note	7.0	5/6/2021	5/4/2028	150,000	2.65%

We sought to analyze whether the cost of debt for the Ohio Companies was impacted (favorably or unfavorably) by Rider DMR. Since these debt issuances occur infrequently and have differing structures, it is impossible to directly observe the impacts of Rider DMR. In aggregate across the Ohio Companies, the embedded cost of long-term debt fell

¹⁵⁶ Set 5 DR 18 Attachment 2 Confidential.

¹⁵⁷ Set 5 DR 18.

approximately 1% over the Rider DMR period.¹⁵⁸ However, this decreased cost related to market conditions and other steps taken by FirstEnergy to avoid a downgrade.¹⁵⁹

Regarding short-term debt, as evidenced by the attachments in the response to data request Set 1 DR 40, the Ohio Companies primarily accessed short-term debt from the money pool from 2014-2021, where the interest rate did not rely on their credit ratings.¹⁶⁰ If the Ohio Companies were to take out external short-term debt, the credit facility terms tied interest rates to corporate credit ratings; Every step down in credit rating (within Levels 2-5 as defined in the Agreement) would increase the interest rate by 25 basis points (bps).¹⁶¹ As noted, the Ohio Companies did not borrow from this facility during Rider DMR.

Use of Rider DMR funds to reduce debt

The Ohio Companies have asserted that the Rider DMR funds were used, among other things, to reduce Ohio Companies' and FirstEnergy's debt.¹⁶² According to FERC Form 1 data,¹⁶³ Cleveland Electric Illuminating issued long term debt amounting to \$350 million and \$300 million in 2017 and 2018, respectively. During those years, CEI also retired \$430 million and \$300 million of long-term debt, respectively. This resulted in CEI making a net reduction in long-term debt of \$80 million.¹⁶⁴ FirstEnergy also stated that "in 2018, OE (Ohio Edison) had a long-term debt maturity of \$25 million on 10/15/2018, which was not refinanced, resulting in a long-term debt reduction of \$25 million."¹⁶⁵ This reduction was also reflected in the FERC Form 1 data. Thus, the amount of long-term debt eliminated by the Ohio Companies during the Rider DMR period amounted to \$105 million. As in several other instances, we are unable to tie these specific debt reductions to the use of Rider DMR funds. These debt reductions were part of the ordinary course of business and could have occurred without the additional Rider DMR funds.

Use of Rider DMR funds for debt reduction should be viewed in the context of the Ohio Companies' respective leverage. In other words, debt reduction for an overleveraged

¹⁵⁸ Set 5 DR 32 Attachment 1.

¹⁵⁹ Set 5 DR 32.

¹⁶⁰ The 29 attachments to Set 1 DR 40 provided the quarterly Money Pool reports as well as noted any external short-term borrowings by the Ohio Companies. There were only external borrowings in 2014, 2015, the end of 2020, and beginning of 2021.

¹⁶¹ Set 5 DR 18 Attachment 3.

¹⁶² Set 5 DR 31

¹⁶³ See FERC Form 1, pp. 120-121, Statement of Cash Flows.

¹⁶⁴ Set 5 DR 31.

¹⁶⁵ *Id.*

entity would facilitate potential positive impacts on credit ratings by lowering leverage. However, as explained below, debt reduction for entities that have more than sufficient equity ratios (underleveraged) would be counterproductive.

In Cleveland Electric Illuminating’s case, as shown in Table 9 above, we found that its debt ratio was at Moody’s maximum level of 55% for an investment grade credit rating in 2015 and it was nearing 50% as of the June 2021 quarter. This level of debt leverage is nearing that which would place CEI in a non-investment grade (Ba) category according to Moody’s leverage (debt/equity) metric. Therefore, it is reasonable to conclude that, for CEI, debt reduction was an appropriate use of Rider DMR funds.

On the other hand, Table 9 shows that Ohio Edison’s debt ratio was in the mid to low 30% range. This range is commensurate with Moody’s “A” investment grade rating which was above Ohio Edison’s overall credit rating during Rider DMR. As is further discussed in the *Equity* section of this report, in Ohio Edison’s case, there is more than sufficient equity (i.e., > 65%) to support its regulated capital structure. As further noted in the *Equity* section, the average common equity ratio of a regulated utility is approximately 50%. Therefore, in Ohio Edison’s case, the relatively small reduction in debt (3% of debt) may not be a beneficial use of Rider DMR funds on a standalone basis. This is because when Ohio Edison reduces debt, its already high equity to debt ratio increases.

Regarding FirstEnergy’s debt reductions, FirstEnergy has asserted that “The Companies and other FirstEnergy constituents have acted to improve their financial standing and credit metrics by, among other things: repaying debt totaling \$1.45 billion in January of 2018”.¹⁶⁶ FirstEnergy’s long-term debt during the Rider DMR period is provided in Table 11.

Table 11. FirstEnergy’s long-term debt¹⁶⁷

(\$000s)	2017	2018	June-19	DMR Total
Long term debt, new issuances	\$ 4,675	\$ 1,474	\$ 1,950	\$ 8,099
Long term debt, redemption & repayments	\$ (2,291)	\$ (2,608)	\$ (757)	\$ (5,656)
Net Change in Long Term Debt	\$ 2,384	\$ (1,134)	\$ 1,193	\$ 2,443

As can be seen from Table 11 for the period that Rider DMR was in effect, FirstEnergy’s debt *increased* by over \$2.4 billion. From 2017 through June 2021, FirstEnergy’s debt has grown by over \$4.8 billion. Also, as is shown in Table 9, FirstEnergy’s mid 70%

¹⁶⁶ See Case No. 19-361-EL-RDR, Direct Testimony of Steven R. Staub, 3/1/2019, p. 6 , lines 9-11.

¹⁶⁷ SEC Report cash flow data (10-K/10-Q)

debt/equity ratio is and has been highly leveraged according to Moody's metrics and would place FirstEnergy in a non-investment grade category ("B"). If anything, FirstEnergy's leverage has slightly *increased* since Rider DMR, which was not the desired result.

Although FirstEnergy achieved some debt reduction during the Rider DMR period, it is difficult to pinpoint the use of Rider DMR monies as the funding mechanism for such reduction. FirstEnergy's 2018 SEC 10-K indicates that the proceeds from the 2018 equity issuance was the source of funding for the cited \$1.45 billion debt reduction. The SEC report states, "On January 22, 2018, FE repaid \$1.2 billion of a variable rate syndicated term loan and two separate \$125 million term loans using the proceeds from the \$2.5 billion equity investment as discussed above."¹⁶⁸ Therefore, it does not appear that Rider DMR funds were used to reduce FirstEnergy's long-term debt in any significant way.

Pension

As discussed in the initial approval of Rider DMR, another use for Rider DMR funds could be to fund FirstEnergy's pension. According to FirstEnergy, using Rider DMR funds to fund the pension would help improve credit ratings. In Company exhibit 206, the Ohio Companies' witness Ms. Mikkelsen noted that, "To the extent the dollars collected were used to reduce debt or to fund a pension obligation, it would improve the Companies' Debt to Capitalization credit metric that is another one of the rating factors Moody's considers as part of its rating methodology."¹⁶⁹ The witness goes on to state, "In addition, the Companies could use Rider DMR cash to invest in distribution grid modernization, redeem debt, to fund the pension or to fund other grid modernization initiatives such as battery technology."¹⁷⁰ This section of this report focuses on FirstEnergy's and the Ohio Companies' pension contributions and funding levels throughout the Rider DMR period.

Pension Fund Summary

FirstEnergy maintains one pension fund that is shared by all affiliates with eligible employees.¹⁷¹ Each subsidiary is allocated a portion of the net periodic costs of the plan and is also allocated a portion of the fair value of plan assets and benefit obligations.¹⁷²

¹⁶⁸ FirstEnergy Corp. 10-K, 2/19/19, p. 64.

¹⁶⁹ Case 14-1297-EL-SSO, Rebuttal and Surrebuttal Testimony of Ms. Mikkelsen, Co. Ex. 206, at 8.

¹⁷⁰ *Id.*, at 9.

¹⁷¹ Set 1 DR 28.

¹⁷² Set 3 DR 7.

FirstEnergy discloses net periodic pension and other post-employment benefit (OPEB) costs and net pension and OPEB asset or liability recorded by each subsidiary.¹⁷³

FirstEnergy's pension and OPEB funding policy is based on actuarial computations using the projected unit credit method.¹⁷⁴ FirstEnergy evaluates several factors when allocating company pension contributions to its affiliates. These factors include but are not limited to the funded status, tax implications, cash levels, and capital structure.

Affiliate funded status is the primary factor considered when allocating contributions, and FirstEnergy strives to keep each operating affiliate's funded status similar.¹⁷⁵ Pension funded status is presented by FirstEnergy in the pension-related discovery as the sum of fair value of assets plus contributions divided by the pension benefit obligation.¹⁷⁶ Funded status is a function of the number of participating employees as well as each affiliate's share of the plan's benefit obligation and assets are based on the number of participating employees and their years of service.¹⁷⁷

Credit rating agency guidance

The underfunded pension liability is relevant to Rider DMR because it factors into the credit rating agencies' calculation of debt.¹⁷⁸ Moody's notes that they "treat the pension liability reported on a company's balance sheet as a debt-like liability because of the contractual and regulatory nature of the pension obligations."¹⁷⁹ Moody's also notes that it views [REDACTED]

[REDACTED] S&P notes that they [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Fitch [REDACTED]
[REDACTED]

¹⁷³ *Id.*

¹⁷⁴ FERC Form 1 of Ohio Edison, et. al., Q4 2020, p 123.4.

¹⁷⁵ Set 3 DR 8.

¹⁷⁶ Set 6 DR 12 Attachment 1.

¹⁷⁷ Set 6 DR 21.

¹⁷⁸ Set 1 DR 20 Attachment 1-Confidential at 6.

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ Set 6 DR 11 Attachment 1-Confidential at 7.

¹⁸² 6 DR 11 Attachment 3 at 23-Confidential.

[REDACTED]

To the extent that an entity under review by a Moody's or S&P reduces its underfunded pension liability, considering all else held equal, a metric with debt in the denominator such as CFO pre-WC / Debt would improve, which could contribute to a better outlook or rating. However, in Daymark's review of credit agency reports, we did not come across any discussion of pension underfunding having any impact on the Ohio Companies' ratings during the Rider DMR period. The agencies did discuss large pension contributions at the holding company level, but their conclusions were mixed as these contributions coincided with large debt issuances.¹⁸⁴

Analysis

The funded status of the pension is largely driven by market conditions and actuarial assumptions, a detailed analysis of which is beyond the scope of this audit. Further, the Ohio Companies are three of twenty entities that participate in the single FirstEnergy pension fund.¹⁸⁵ Our focus was on the pension funding status across the Rider DMR period and the level of contributions made by the Ohio Companies during that time.

The balance of each Company's Accumulated Provision for Pensions and Benefits, FERC Form 1 account 228.3, is shown for year-end 2013 through 2021 in Figure 13.¹⁸⁶ We find no measurable reductions in account 228.3 during the Rider DMR period.

¹⁸³ *Id.*

¹⁸⁴ Set 1 DR 11 Attachment 53 - Confidential at 7.

¹⁸⁵ Twenty operating companies had a pension plan balance sheet as of 12/31/2019. Set 6 DR 12 Attachment 1.

¹⁸⁶ FERC Form 1, Ohio Edison, Cleveland Electric Illuminating, and Toledo Edison, 2013-2020.

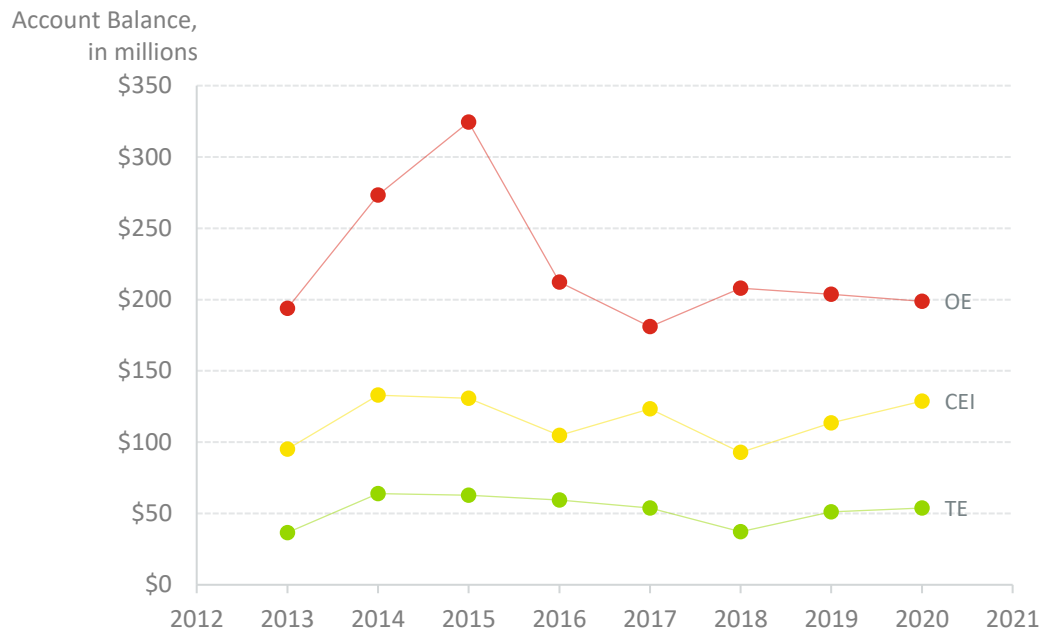


Figure 13. Ohio Companies' pension balances (outstanding liabilities)

The affiliate funded status is the primary factor considered when allocating contributions. The funded status of the Ohio Companies in comparison with FirstEnergy Service Company and the total pension plan over the years 2013 through 2020 is shown in Figure 14. The contributions to the pension fund that each of the Ohio Companies made over the years 2013 through 2020 is shown in Figure 15.¹⁸⁷ As noted in the discussion of Moody's Adjustment Methodology, pension cost provides a proxy for baseline contribution levels. The pension service costs incurred by each of the Ohio Companies for the period 2016 through 2020 is shown in Figure 16.¹⁸⁸

¹⁸⁷ Set 3 DR 8 Attachment 1.

¹⁸⁸ Set 3 DR 6 Attachment 1.

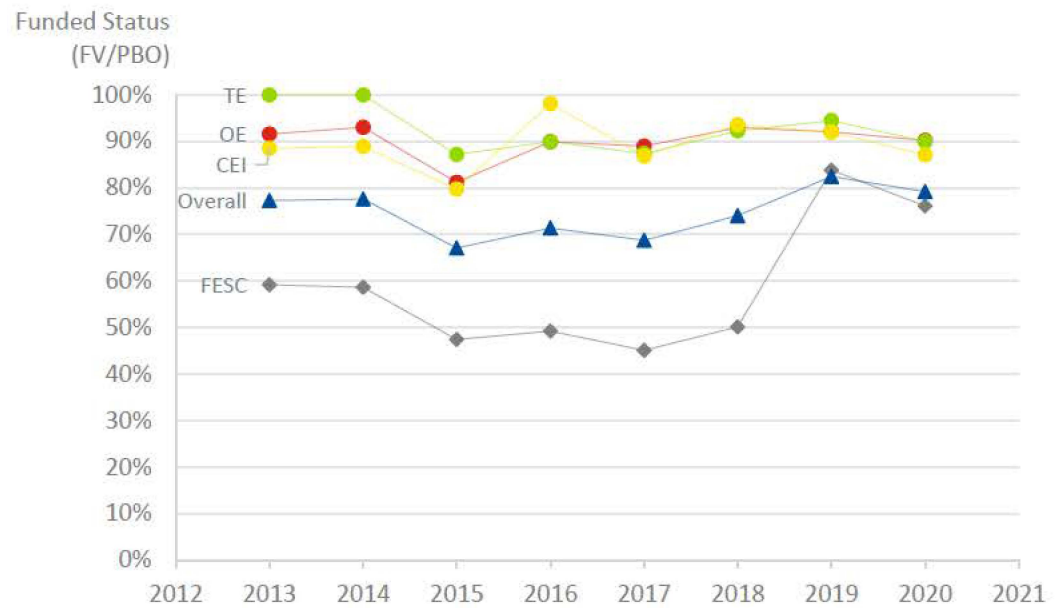


Figure 14. Pension funded status, Ohio Companies, FESC, and overall

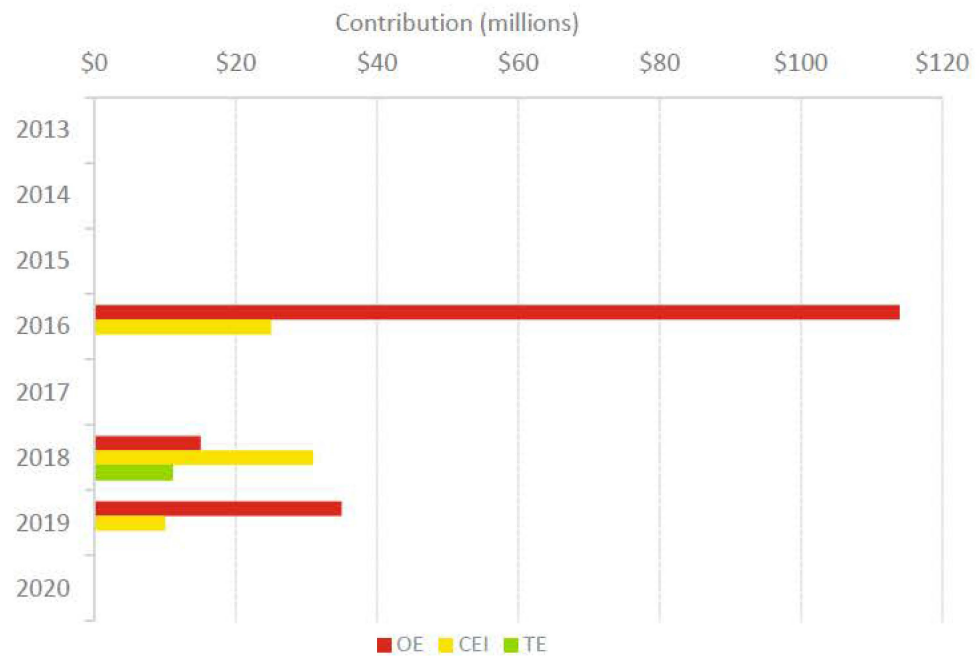


Figure 15. Ohio Companies' pension contributions



Figure 16. Pension service costs

There is no evidence that the Ohio Companies made contributions beyond the level needed to maintain their funding. The Ohio Companies' funded status remained above 87%¹⁸⁹ throughout the Rider DMR period and the Companies' contributions were commensurate with service costs. Conversely, FESC experienced significant underfunding up until 2019. Certain competitive subsidiaries such as FE Nuclear also showed large underfunding as compared to the regulated operating companies.¹⁹⁰

Daymark finds that FirstEnergy appears to have taken steps to reduce the pension underfunding level with a \$1.25 billion contribution in 2018 (\$773 million attributed to FESC) and a \$500 million contribution in 2019 (\$434 million attributed to FESC).¹⁹¹ However, impacts of these contributions on the credit rating was neutral as they coincided with incremental debt. For the purposes of evaluating the uses of Rider DMR funds, Daymark considers these holding company actions as evidence that FirstEnergy has continued to take steps to improve its financial position and transition to a regulated operations focused company as discussed in part in ¶1204 of the Fifth Order on Rehearing.

There is no specific evidence that Rider DMR had any impact on pension plan funding. The Ohio Companies' pension funding status was consistent both during and after Rider DMR with no substantive variations. The Ohio Companies collectively contributed \$102 million to the pension fund in the three years between 2017 and 2019, as compared to \$139 million in the three years prior, 2014 and 2016. The overall pension fund, driven largely by FESC and certain competitive subsidiaries, experienced significant underfunding before and during the Rider DMR period. More recently, the organization seems to have begun addressing the overall pension funding levels, making large pension contributions in 2018 and 2019.

The FirstEnergy pension plan is a significant cost of the Ohio Companies' operations, both through the individual companies' employees and the employees of FESC whose costs are allocated to Ohio because of their use of shared services. A more detailed analysis is beyond the scope of this audit. Given the importance of funding the pension, the Commission should consider more fully addressing pension plan cost allocation and controls in a separate proceeding or as part of the Ohio Companies' next base rate cases.

¹⁸⁹ Set 6 DR 12 Attachment 1.

¹⁹⁰ FE Nuclear had below 50% funding for years 2015-2020. *Id.*

¹⁹¹ Set 3 DR 8 Attachment 1.

Findings

1. Credit agencies did view Rider DMR as positive, however, it appears FirstEnergy's decision to become a fully regulated company influenced their credit ratings during Rider DMR more than any other factor.
2. Rider DMR did improve the Ohio Companies' cash flow metrics by providing additional cash flow. The improvement did push some of the Ohio Companies over the investment grade threshold metrics in some years. However, Rider DMR had only a marginal effect on the cash flow metrics of FirstEnergy.
3. FirstEnergy did not reduce its long-term debt obligations during the Rider DMR period. In fact, it took on an additional \$2.4 billion in debt.
4. There was not enough new long-term borrowing by the Ohio Companies during the Rider DMR period to make any conclusions about impacts on the cost of long-term debt. However, the Ohio Companies did pay down \$105 million in outstanding debt during the Rider DMR period. There is not documentary evidence that ties Rider DMR monies to these debt payoffs.
5. The Ohio Companies' portion of the FirstEnergy pension is well funded. The Ohio Companies contributed \$102 million to their pension during the Rider DMR period. However, the Ohio Companies' pension funding status was consistent both during and after Rider DMR with no substantive variations. Therefore, there is no evidence that Rider DMR impacted pension plan funding.

B. Equity

The goal of Rider DMR was to provide capital, directly or indirectly, for the Ohio Companies to use for grid modernization. The previous section, *Debt*, discussed the cost of debt capital and ability to borrow. Another way for an entity to raise capital is to issue equity. In fact, companies seek an optimal mix of debt and equity to minimize the firm's overall cost of capital. The Commission found that, "Although we agree that issuing equity may be part of the solution to FirstEnergy Corp.'s financial issues, the Commission does not regulate FirstEnergy Corp., and it is up to FirstEnergy Corp.'s management to decide the proper steps to take to strengthen its balance sheet."¹⁹² In this section we discuss FirstEnergy's equity issuances as well as their equity infusions to the Ohio Companies. FirstEnergy's equity infusions to the Ohio Companies do not have to be tied to an equity issuance by FirstEnergy Corp.

¹⁹² Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶205.

Daymark sought to ascertain whether Rider DMR funds supported grid modernization by allowing FirstEnergy and the Ohio Companies to improve their capital structure or access necessary capital. In this section we discuss the available evidence regarding how Rider DMR funds were used to improve the Ohio Companies' access to equity from FirstEnergy, or FirstEnergy's access to equity.

We review data pertaining to the Ohio Companies' equity position and comment on trends observed during the Rider DMR period. We also consider the level of the Ohio Companies' dividend during the period as well as their associated dividend policy. We review the equity ratios of the Ohio Companies and FirstEnergy Corp since the level of equity supports credit ratings, access to debt and therefore access to capital. Finally, as part of the review of equity, we reviewed equity analyst reports concerning FirstEnergy, focusing on the impacts that Rider DMR had on these analysts' perceptions of FirstEnergy Corp and the Ohio Companies.

We reviewed dividends paid by the Ohio Companies to FirstEnergy and those paid by FirstEnergy to shareholders. FirstEnergy is a holding company that is funded by its operating companies, including the Ohio Companies. The primary way that FirstEnergy is funded is through dividends from the Ohio Companies and its other operating companies. Cash flow (and its associated effect on credit ratings) for FirstEnergy was a concern during the Fifth Entry on Rehearing, and Rider DMR was designed to account for the Ohio Companies' portion of FirstEnergy's cash flow: "Rider DMR is intended to assist the Companies in addressing the CFO to debt ratio shortfall for FirstEnergy Corp."¹⁹³ Dividends are a way that cash flows from operating companies, like the Ohio Companies, to their parent, FirstEnergy.

Additionally, dividends are important for attracting equity, especially for investor-owned utilities where investors tend to rely on dividends more so than stock growth. Dividend levels therefore are important to FirstEnergy's ability to raise equity capital. A public company like FirstEnergy typically has a stated dividend payout ratio that they try to meet consistently each year. However, operating companies such as the Ohio Companies do not always have stated payout ratios. In the case of the Ohio Companies, dividends are discretionary funds, and can be a major cash transaction. FirstEnergy does not necessarily have to use the Ohio Companies' dividends to pay FirstEnergy's

¹⁹³ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016, at ¶202.

shareholders. FirstEnergy can use dividends to pay down debt, fund pensions, or other corporate functions.

Our relevant concerns for this audit were whether 1) the Ohio Companies used Rider DMR funds to pay dividends; 2) FirstEnergy had a sufficient dividend level to attract equity investors; and 3) FirstEnergy did not have an unreasonably high dividend due to Rider DMR funds.

Specifically, in terms of dividend metrics, we reviewed data and trends related to dividend payout ratios, dividend yields and dividend growth experienced by the Ohio Companies and FirstEnergy compared to industry peer data. The information and analysis on dividend yield and dividend growth is for FirstEnergy only since the Ohio Companies are not publicly traded.

Based on the various data and trends reviewed, we conclude that the dividends paid by the Ohio Companies to FirstEnergy during Rider DMR (2017 to first half of 2019) were not unreasonable when compared to industry averages. However, the average dividend payout ratio of the Ohio Companies from 2017 to 2019 (including the second half of 2019 when Rider DMR was not in place) was 92%, which is high relative to peers. The dividends in the second half of 2019 may have contained Rider DMR funds; without specific tracking of the uses of DMR funds we cannot state firmly either way. FirstEnergy also paid out increasing dividends to shareholders during the period of 2017 to 2019, but dividend metrics were mostly in line or below peers, which indicates the dividends paid by FirstEnergy were reasonable. We note that the other major events going on during the Rider DMR period likely influenced these same metrics, therefore it is difficult to be certain about Rider DMR's impact on these metrics.

We also reviewed the availability of common equity to finance construction. Specifically, we reviewed data and trends related to common equity ratios, equity issuances, and equity infusions. We found that FirstEnergy has continued access to equity markets but has a very low common equity ratio which is considered credit negative. On the other hand, we found that the Ohio Companies have higher than necessary equity ratios to support their credit ratings.

Dividends

As indicated above, Daymark reviewed the history of dividends paid by the Ohio Companies to FirstEnergy Corp and from FirstEnergy Corp. to shareholders. Dividends are a major consideration for investors who might consider investing in utility related

stocks such as FirstEnergy which now comprises regulated companies; investors acquisition of such stocks contributes equity to the company. As a result, FirstEnergy's access to equity markets is influenced by and somewhat dependent upon its ability to make regular dividend payments to shareholders. FirstEnergy obtains cash flow to pay dividends through its subsidiaries, including the Ohio Companies. The payment of dividends by the Ohio Companies to FirstEnergy, and from FirstEnergy to shareholders is an expected business outcome and if done prudently, should be an ordinary business decision.

Table 12 below shows that the Ohio Companies paid increasing dividends during the Rider DMR period of 2017 through June 2019.¹⁹⁴ FirstEnergy's dividend increased as well, but for context FirstEnergy's dividend needs to be discussed in terms of dividend per share. We will discuss FirstEnergy's dividend level in terms of dividend yield and dividend growth in the section just below.

Table 12. Dividends paid by Ohio Companies to FirstEnergy

COMPANY	2015	2016	2017	2018	2019	2020	2nd Quarter 2021 YTD	DMR Period 2017-2019*
Ohio Edison	\$ 110,000	\$ 141,000	\$ 200,000	\$ 100,000	\$ 475,000	\$ 90,000	\$ 410,000	\$ 350,000
Cleveland Electric Illuminating Co.	\$ 60,000	\$ -	\$ 50,000	\$ 200,000	\$ 160,000	\$ 45,000	\$ 40,000	\$ 320,000
Toledo Edison Company	\$ -	\$ -	\$ 100,000	\$ 100,000	\$ 95,000	\$ 25,000	\$ 22,000	\$ 235,000
Total Ohio Opcos	\$ 170,000	\$ 141,000	\$ 350,000	\$ 400,000	\$ 730,000	\$ 160,000	\$ 472,000	\$ 905,000
FirstEnergy Corporation [Paid to Investors]	\$ 607,000	\$ 611,000	\$ 639,000	\$ 711,000	\$ 814,000	\$ 845,000	\$ 424,000	\$ 1,757,000
% of FirstEnergy Dividends from Ohio	28%	23%	55%	56%	90%	19%	111%	52%

*all values in millions (\$000s)

So: FERC Form 1/SEC 3Q pg. 121

*DMR ended in June 2019

Figure 17 depicts Table 12 data for visualization purposes.

¹⁹⁴ FERC Form 1 and Form 3Q pg. 121 for Ohio Companies dividends; for FirstEnergy dividends see SEC Form 10-K and Form 10-Q Consolidated Statement of Cash Flows.

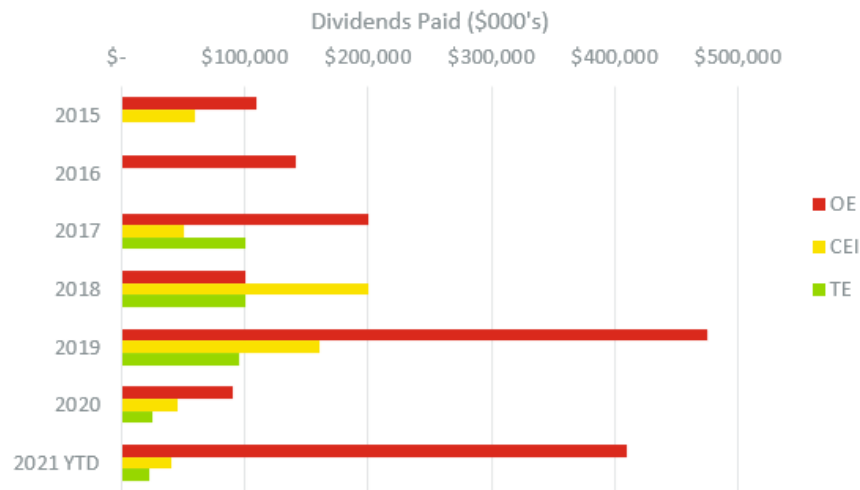


Figure 17. Dividends Paid by Ohio Companies to FirstEnergy

Table 12 shows that \$905 million in dividends were paid by Ohio Companies during the Rider DMR period, an increase compared to the time period before Rider DMR was implemented. FirstEnergy may have used these dividend payments to pay shareholders, or for other FirstEnergy corporate purposes, such as for paying down debt, interest, pension contributions, etc. We received no data that tracked dollar for dollar how all the Ohio Companies' dividends were used. Table 12 also shows that the Ohio Companies' dividends represented 52% of the dividends paid by FirstEnergy to investors during Rider DMR, which is roughly proportional to FirstEnergy Corp.'s common equity position in the Ohio Companies.¹⁹⁵ We found this a relevant statistic to keep in mind when considering dividend levels, as it shows that dividend levels during Rider DMR were roughly proportional to FirstEnergy's equity level in the Ohio Companies.

We reviewed the circumstances underlying the increase in dividends given the infusion of \$331 million (after-tax) from Rider DMR funds during this time by inquiring as to the reason for the increase in dividend payments. First, we asked FirstEnergy if they had a formal dividend policy¹⁹⁶ pertaining to the Ohio Companies so we could evaluate the

¹⁹⁵ FERC Form 1/SEC 10-K. As of 12/31/2020, FirstEnergy had 7,237 million of equity in its operating companies. 3,794 million of that equity was in the Ohio Companies. The ratio of Ohio equity to total FE equity is 52%.

¹⁹⁶ According to Set 5 DR 22 FirstEnergy has a policy for dividend growth and payout ratios but does not have a written policy governing the procedure, roles, and responsibilities involved in the declaration of a dividend.

level of dividends paid. However, the Ohio Companies do not have a formal dividend policy.¹⁹⁷

Considering the lack of a formal dividend policy, we then asked FirstEnergy to provide the factors and metrics it considered in determining the appropriate level of dividend payment from the Ohio Companies. Interviewees stated there were various factors that they considered and that there were multiple people involved in the decision making. FirstEnergy's stated metrics and factors considered include the Company's liquidity position, capital expenditure plan, credit ratings, debt leverage metrics, major storm funding, and funding programs (e.g., pensions). One interviewee recalled SEET being an important consideration. FirstEnergy stated that there is a process where "based on these factors, a team that includes Treasury, Accounting, and Forecasting and Planning proposes a dividend amount, which is reviewed by management, including the Controller and Rates, before being sent to the board(s) of the respective Ohio Company(ies) for approval."¹⁹⁸ However, no formal written analysis is prepared to support these dividend decisions. As indicated in FirstEnergy's SEC 10-K, "In addition to paying dividends from retained earnings, OE, CEI, [and] TE ... have authorization from FERC to pay cash dividends to FirstEnergy from paid-in capital accounts, as long as their FERC-defined equity-to-total-capitalization ratio remains above 35%."¹⁹⁹

The Ohio Companies provided data and communications underlying the payment of the Ohio Companies dividends to FirstEnergy for 2017-2019.²⁰⁰ The data supporting the Ohio Companies dividends paid, included:

- The underlying debt/equity ratios of the Ohio Companies,
- Emails recommending the dividend payment amounts, and
- The Board Certification Letters indicating that retained earnings were available for dividend payments.

The data provided did not include any of the other factors listed in the paragraph above, nor did it show any analysis beyond debt/equity ratios.

¹⁹⁷ Set 5 DR 24. We note that FirstEnergy's Pennsylvania affiliates do have a written dividend policy as a PA regulatory requirement.

¹⁹⁸ Set 4 DR 13.

¹⁹⁹ FirstEnergy 10-K, p. 108.

²⁰⁰ Set 5 DR 26 Attachments 1-45.

Without the ability to examine the specific factors that led FirstEnergy to setting the Ohio Company dividends, we analyzed other factors to assess the reasonableness of Ohio Companies dividend payments and those of FirstEnergy, including 1) the dividend payout ratio, 2) the dividend yield, and 3) dividend growth. For the Ohio Companies, we limited our review to the payout and common equity ratios since they do not issue publicly traded stock. As a check on the reasonableness of the results, we also compared the analytical results to the specified peers of FirstEnergy and broader industry data. The peer analysis looked at dividend yield and dividend growth.

Dividend payout ratios

Dividend payout ratios are a well understood and fairly common metric used to gauge dividend levels. A dividend payout ratio is calculated by dividing the dividend by net income.

In September 2018, the Pennsylvania Public Utility Commission Bureau of Audits issued a report on its Management Efficiency Investigation of the FirstEnergy Pennsylvania Companies (PAPUC Report).²⁰¹ We reviewed the findings of the PAPUC concerning dividend payout ratios as it was the most recent review of the issue. The PAPUC report found that:

“In general, it is not a sound business practice to pay an annual dividend to a parent company that is more than 85% of the utility’s net income on a consistent or long-term basis. Many regulated utilities have established an internal dividend payout ratio of 75% to 85% of net income as a reasonable target.”²⁰²

On the other hand, diversified utility holding companies like FirstEnergy may pay out differing amounts in dividends than pure utilities (such as the Ohio Companies). FirstEnergy indicated it had a payout ratio target of 55% to 65% of net income when it pays a dividend to external shareholders,²⁰³ however, there is no such internal standard used when the Ohio Companies pay dividends to FirstEnergy.

²⁰¹ Metropolitan Edison Company (Met-Ed), Pennsylvania Electric Company (Penelec), Pennsylvania Power Company (Penn Power), and West Penn Power Company (West Penn Power), collectively referred to as the FirstEnergy Pennsylvania Companies (FE-PA companies or companies).

²⁰² PAPUC report at p. 24.

²⁰³ Set 5 DR 22.

The dividend payout ratio may not always control as “there may be situations when higher than normal dividends are warranted for a particular period/year”.²⁰⁴ For example, dividends may be used to align or reduce the regulatory capital structure so that it is closer to a targeted range in order to achieve a desired credit rating (e.g., for Moody’s, an equity ratio between 45% to 55% equity would be in the investment grade range).

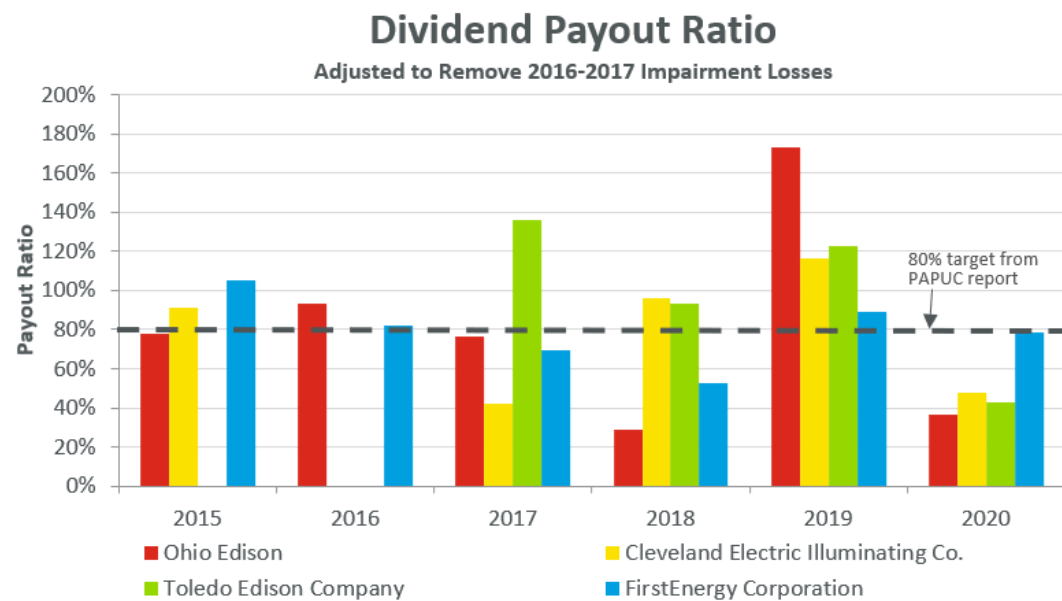


Figure 18. Dividend payout ratios of Ohio Companies and FirstEnergy²⁰⁵

As shown in Figure 18, the Ohio Companies’ dividend payout ratios were generally above 80% (an average between the 75-85% target from PAPUC) between 2015 to 2020. The payout ratio for the first six months of 2019 (when Rider DMR was in effect) was 58% and 259% for the 2nd half of 2019.²⁰⁶ The Ohio Companies paid \$155 million in dividends during the first half of 2019 (during Rider DMR) and \$575 million in the second half of 2019 (after Rider DMR).²⁰⁷ During 2016 to 2019 the Ohio Companies overall paid out 65% of combined net income which is below the lower end of the 75% to 85% target ratio referenced in the PAPUC report. FirstEnergy Corp.’s dividend payments were above

²⁰⁴ PAPUC Report at p. 24.

²⁰⁵ FirstEnergy data from 10-K statements, Ohio Companies data from FERC Form 1.

²⁰⁶ According to the Ohio Companies statements of cash flows, in 2019 they had over \$726 million of cash flows from operations and received \$173 million in advances from FirstEnergy.

²⁰⁷ Set 5 DR 26.

80%²⁰⁸ for three of the six years shown.²⁰⁹ However, FirstEnergy's dividend payout ratio for the DMR period was below 75% in 2017-2018 and was 61% during the Rider DMR period overall, which is in line with their current target payout ratio of 55-65%. To assess the reasonableness of these levels, we looked at peer industry data. See Figure 19.

Category Comparison, Dividend Payout Ratio										
Category	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EEI Index	62.8	64.2	61.5	60.4	67.0	62.9	64.0	63.9	62.6	65.3
Regulated	63.4	62.1	60.5	59.4	68.7	61.1	68.7	60.1	62.1	65.3
Mostly Regulated	63.1	69.7	64.7	63.8	62.6	68.0	53.3	72.8	64.1	65.2
Diversified	54.7	53.4	44.7	56.4	64.9	64.6	—	—	—	—

Regulated: 80% or more of total assets are regulated
 Mostly Regulated: Less than 80% of total assets are regulated
 Diversified: Prior to 2017, less than 50% of total assets are regulated

*2020 figures reflect earnings and dividends through 12/31/2020.

Source: S&P Global Market Intelligence, company reports, and EEI Finance Department

Figure 19. EEI Dividend Payout Ratio Industry Averages.²¹⁰

For our comparison, we looked at the recent history of dividend payout ratios published by the Edison Electric Institute (EEI).²¹¹ The EEI history for dividend payout ratios for the “regulated” category (like the Ohio Companies) suggests a range of 60-69%. The industry average during the Rider DMR period was 64%. The actual dividend payout ratios for the Ohio Companies exceeded the industry average shown by EEI in 2017 and 2019 (by 13% and 85% respectively) and was approximately the industry average in 2018. Overall, during Rider DMR (2017-June 2019), the Ohio Companies paid out 65% in dividends which was approximately the EEI regulated category average of 64% for the same

²⁰⁸ We removed FirstEnergy's after-tax impairment losses for 2016-2017 to compute its dividend payout ratios.

²⁰⁹ FirstEnergy Corp paid dividends out of net losses for 2016 and 2017. Such losses were caused by FirstEnergy's determination “that the carrying value of long-lived assets of the competitive business were not recoverable, specifically given FirstEnergy's target to implement its exit from competitive operations by mid-2018, significantly before the end of their original useful lives, and the anticipated cash flows over this shortened period. As a result, CES recorded a non-cash pre-tax impairment charge of \$9,218 million (\$8,082 million at FES) in the fourth quarter of 2016 to reduce the carrying value of certain assets to their estimated fair value, including long-lived assets such as generating plants and nuclear fuel, as well as other assets such as materials and supplies.” FirstEnergy 2016 SEC 10-K, p. 56.

²¹⁰ 2020 Financial Review, Edison Electric Institute, p. 15.

²¹¹ EEI is a trade association that represents investor-owned utilities.

period. However, the Ohio Companies' average payout ratio for 2017-2019 (including the second half of 2019) was 92%, which is above the EEI average.

We also compared FirstEnergy's dividends to the "mostly regulated" category shown by EEI. FirstEnergy's dividends were above the EEI average in 2017 and 2019 and below the average in 2018.²¹² Overall during Rider DMR, FirstEnergy paid 61% of income, which was just below the EEI "mostly regulated" category average of 63%.

The payment of dividends for the Ohio Companies and FirstEnergy, when viewed in terms of the average industry payout ratios, were in line with industry averages as reported by EEI in 2017-2018. Further, the payout ratio of dividends during Rider DMR in total did not exceed the EEI benchmarks for the Ohio Companies or FirstEnergy. We note however, during the full year of 2019, the dividend payout ratio of the Ohio Companies (149%) was very high and exceeded their net income; FirstEnergy's payout ratio of 89% was also high. For the first six months of 2019 the payout ratios of both the Ohio Companies and FirstEnergy were in line with their peers.

The high dividend payout (\$575 million) in the second half of 2019, which was after Rider DMR was discontinued, raised concerns for us.²¹³ Based on FirstEnergy's cash flow statement for the second half of 2019 (June-December) we found that FirstEnergy only increased dividend payments to shareholders by \$8 million. Also, FirstEnergy increased corporate capital expenditures by \$209 million and its cash balance by \$205 million. Thus, the payment of dividends by the Ohio Companies appeared largely to bolster FirstEnergy's equity ratio which rose to 40% at the end of 2020.

Since we did not have documentary evidence of Rider DMR funds being used directly for grid modernization projects, all we know definitively is that the Rider DMR revenues went into the money pool. In particular, Ohio Edison's lending balance was over \$400 million, on average, in the money pool throughout 2019 until the end of August 2019, when its average balance dropped substantially.²¹⁴ Although the dividend payments were made after Rider DMR, that does not preclude them from being associated with Rider DMR funds, since those funds went into the money pool until they were spent.

²¹² During Rider DMR the status of FirstEnergy evolved from a somewhat diversified company to a regulated company as a result of its exit from competitive businesses.

²¹³ While the dividends paid in the second half of 2019 were higher than during DMR, we note that they had the effect of reducing Ohio Edison's common equity (retained earnings) balance. That has the effect of raising Ohio Edison's SEET ROE. The December 1, 2021 Order providing SEET refunds would have taken Ohio Edison's lower equity balance into account.

²¹⁴ Set 1 DR 40 Attachments 21-24.

FirstEnergy Dividend Yield

The Ohio Companies do not directly issue equity or pay dividends to external shareholders; rather they provide support to FirstEnergy Corp. to do so as a publicly traded entity. As such, we felt it prudent to analyze FirstEnergy's dividend metrics for its tangential implications to the Ohio Companies. FirstEnergy's dividend did increase during Rider DMR. However, it is important to contextualize this dollar amount using dividend metrics. Here, we discuss FirstEnergy's dividend yield.²¹⁵

Dividend yield is the ratio of dividends paid to shareholders relative to the stock price. Typically, utilities tend to pay a relatively high percentage of their earnings to shareholders in the form of dividends. Table 13 provides FirstEnergy's historical dividend yield since 2016 in comparison to a peer group of utilities.²¹⁶

Table 13. FirstEnergy Dividend Yield of Comparison to Industry Peers

Dividend Yield	12/30/2016	12/28/2017	12/31/2018	6/28/2019	12/31/2019	12/31/2020	11/11/2021
FirstEnergy	4.65%	4.70%	3.83%	3.47%	3.13%	5.10%	4.00%
Duke	4.33%	4.15%	4.04%	4.19%	4.11%	4.17%	3.89%
AEP	3.61%	3.25%	3.20%	2.99%	2.87%	3.41%	3.63%
Ameren	3.27%	3.01%	2.73%	2.51%	2.50%	2.56%	2.62%
Exelon	3.56%	3.32%	2.90%	2.95%	3.18%	3.62%	2.80%
AES	3.87%	4.52%	3.39%	3.19%	2.75%	2.43%	2.41%
Simple Average excl. FE	3.73%	3.65%	3.25%	3.17%	3.08%	3.24%	3.07%

FirstEnergy's dividend yield has consistently been one of the highest offered. During the Rider DMR period (2017-2019), it was either the highest or second highest yield compared to peers.

In Table 14, we reviewed FirstEnergy's dividend yield in comparison to broader industry categories (i.e., EEI Index, Regulated, Mostly Regulated categories of peers) as specified by the Edison Electric Institute (EEI). FirstEnergy's dividend yield was above industry averages in 2017 and 2018 (during Rider DMR); and again in 2020. Specifically, it was well above the industry average in 2017 (first year of Rider DMR) and 2020 but approached the category averages in 2018 and 2019 (second and third years of the Rider DMR).

²¹⁵ Since the Ohio Companies do not issue publicly traded stock, a dividend yield cannot be calculated. Thus, for this measure, we only reviewed FirstEnergy's dividend yield. We note that as of the Ohio Companies make up ~26% of the revenue, 52% of the equity, and 23% of the assets of the current FirstEnergy family (as of December 2020).

²¹⁶ The set of peer utilities was chosen to be the same as was used in the Oxford Advisors report. See Case No. 17-2474-EL-RDR, Oxford Advisor's Public Mid-Term Report, 6/14/2019 at 14.

Table 14. FirstEnergy Dividend Yield Comparison to EEI Indices

Category	2017	2018	2019	2020
FirstEnergy	4.7%	3.8%	3.1%	5.1%
EEI Index	3.4%	3.4%	3.0%	3.6%
Regulated	3.4%	3.4%	3.0%	3.6%
Mostly Regulated	3.4%	3.4%	3.1%	3.4%

As of December 31

We note that dividend yields will vary based on the stock price fluctuations, and that FirstEnergy's stock price was impacted first by the bankruptcy then by the governance issues during and after Rider DMR. Table 15 below shows a dip in stock price from 2016 to 2017 and again in 2020. These stock price declines suggest that FirstEnergy's high dividend yield in 2017 and 2020 was not out of line; it was likely tied to their suppressed stock price and not because of a high dividend payout.

Table 15. FirstEnergy and Peers Stock Price

Stock Price	12/30/2016	12/28/2017	12/31/2018	12/31/2019	12/31/2020
FirstEnergy	\$ 30.97	\$ 30.62	\$ 37.55	\$ 48.60	\$ 30.61
Duke	\$ 77.62	\$ 84.11	\$ 86.30	\$ 91.21	\$ 91.56
AEP	\$ 62.96	\$ 73.57	\$ 74.74	\$ 94.51	\$ 83.27
Ameren (AEE)	\$ 52.46	\$ 58.99	\$ 65.23	\$ 76.80	\$ 78.06
Exelon	\$ 35.49	\$ 39.41	\$ 45.10	\$ 45.59	\$ 42.22
AES	\$ 11.62	\$ 10.83	\$ 14.46	\$ 19.90	\$ 23.50

FirstEnergy Dividend Growth

Daymark reviewed the dividend growth rates for FirstEnergy in comparison to industry peers, as another measure of dividend reasonableness.

For some necessary background for context, FirstEnergy cut its dividend from \$0.55 to \$0.36 per share in January 2014. FirstEnergy's dividend remained at \$0.36 per share for five years until February 2019, and near the end of Rider DMR the dividend was raised \$0.02 per share. It was raised again by \$0.02 per share a year later (in early 2020).

As shown in Table 16, FirstEnergy's dividend growth, since Rider DMR began in 2017, is on the lower end of the peer group.²¹⁷ While there were increases in 2019 and 2020, they are not outliers. Significantly, during Rider DMR, FirstEnergy did not increase its

²¹⁷ Since FirstEnergy did not raise its dividend between 2014-2016, we did not analyze dividend growth of its peers for that period.

dividends during 2017 or 2018. However, on February 6, 2019, near the end of Rider DMR, FirstEnergy did increase its quarterly dividend to \$0.38 per share or a 5.6% increase.

Table 16. Dividend Growth % of FirstEnergy and Peers

Dividend growth %	12/28/2017	12/31/2018	12/31/2019	12/31/2020	11/11/2021
FirstEnergy	0.00%	0.00%	5.56%	2.63%	0.00%
Duke	3.86%	3.99%	3.20%	1.84%	2.23%
AEP	5.20%	5.81%	7.11%	4.80%	5.63%
Ameren	3.51%	3.35%	4.07%	4.17%	10.00%
Exelon	3.56%	5.47%	5.07%	5.52%	0.00%
AES	8.86%	6.23%	5.38%	4.38%	4.90%
Simple Average excl. FE	5.00%	4.97%	4.97%	4.14%	4.55%

Overall, FirstEnergy's dividend growth lagged its peers during Rider DMR. Their low rate of dividend growth supports our conclusion that dividends paid by FirstEnergy during the Rider DMR period were reasonable.

Equity ratio: Ohio Companies and FirstEnergy

Another factor to consider in the payment of dividends is the impact of a company's leverage which is measured by its debt-to-equity ratio. Dividend payments reduce retained earnings, which is a component of overall equity. Excess leverage (i.e., having more debt than an optimal capital structure) can put pressure on credit ratings. (A more thorough discussion of the effects of leverage on credit ratings can be found in the *Debt* Section.) Typically, utilities have close to balanced capital structures with debt/equity ratios that approximate 50%/50%; while utility diversified holding companies have slightly more leverage and lower equity ratios.²¹⁸ In the Regulatory Research Associates (RRA) report *Regulatory Focus Major Rate Case Decisions* the average authorized equity ratio for electric utilities was approximately 50% in rate cases decided in 2020.²¹⁹ It has been found that balanced capital structures produce the lowest overall cost of capital for utility customers.

Dividends and equity infusions can be used to maintain a reasonably balanced capital structure for the Ohio Companies. We looked at the Ohio Companies' capital structures when viewing their dividend payments to FirstEnergy and equity infusions from FirstEnergy. Table 17 shows the recent history of the Ohio Companies and FirstEnergy's

²¹⁸ 2020 Financial Review, EEI, p. 65.

²¹⁹ RRA Regulatory Focus Major Rate Case Decisions - January - December 2020 dated February 20, 2021.

equity ratios. The equity ratio is calculated by dividing equity by total capitalization. A ratio above 50% means the company has more equity than debt.

Table 17. Common equity ratio for Ohio Companies and FirstEnergy

COMPANY	2015	2016	2017	2018	2019	2020	2021*
OE	64%	64%	65%	70%	67%	73%	69%
CEI	45%	51%	55%	55%	55%	51%	51%
TE	60%	62%	60%	60%	60%	65%	55%
Total Ohio Opcos	54%	57%	59%	61%	60%	61%	58%
EEl Industry Average			43%	43%	41%	40%	
FirstEnergy Corp.	39%	26%	16%	28%	26%	25%	24%

*Data as of June '21

Source: FERC Form 13Q pg. 112

Table 17 shows that the Ohio Companies' equity ratios ranged between 55% to 70% (average ~60% combined) during the Rider DMR period and are in the high 50%+ range on average before and after. Therefore, to the extent that Rider DMR raised the Ohio Companies' net income, Rider DMR had the effect of slightly increasing the overall equity ratios of the Ohio Companies. These equity ratios are robust for a regulated utility. In particular, Ohio Edison's equity ratio is very high. Cleveland Electric Illuminating is more closely aligned with industry averages. All else equal, equity ratios in this range would be sufficient to place the Ohio Companies in the "A" investment grade category by Moody's. While the Ohio Companies should always be striving for the best rating possible, this A rating is several notches above the investment grade threshold. The Commission decided in the Ohio Companies' last rate cases that a 49% common equity ratio should be used in rates; all things equal, this common equity ratio would place the Companies in the Baa category for Moody's. Thus, there is no reason for customers to support higher equity ratios or credit ratings.

Table 17 also shows how the Ohio Companies equity ratios compare to EEl industry data. The Ohio Companies equity ratios²²⁰ are higher than the industry average, which is in the low 40% range.²²¹ Figure 20 shows the same equity ratio information in bar chart form.

²²⁰ The EEl equity ratios shown include non-controlling interests and preferred stock.

²²¹ 2020 Financial Review, EEl

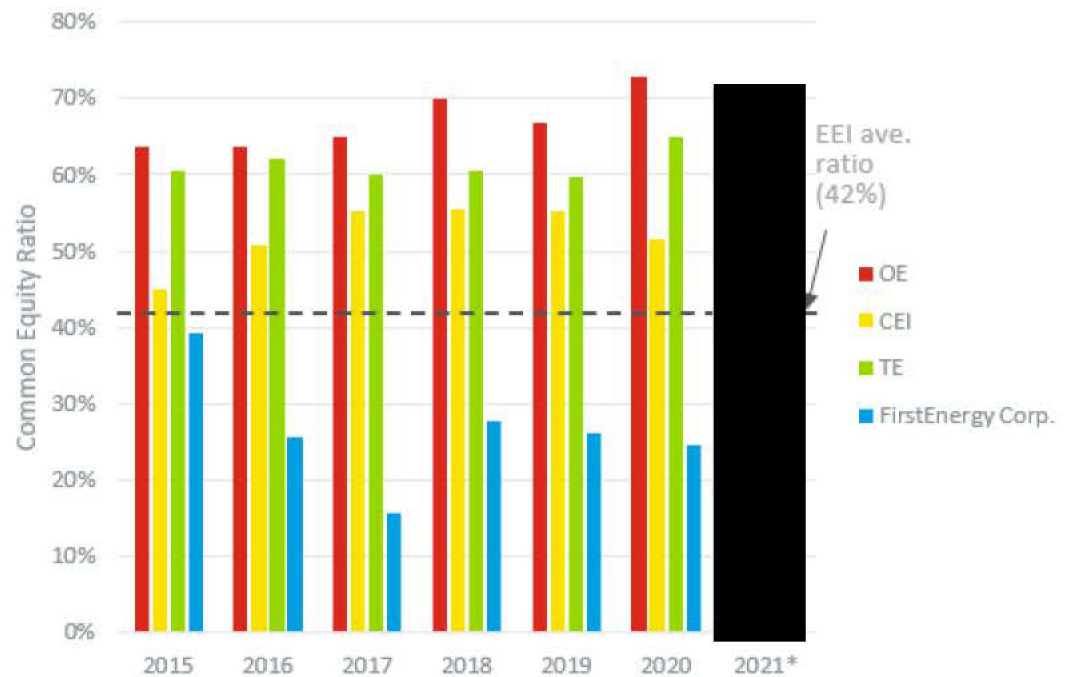


Figure 20. Common equity ratio of Ohio Companies and FirstEnergy

For ratemaking purposes, the Ohio Companies rates are set assuming a 49% equity ratio.²²² The relevant concern in reviewing equity ratios is whether the payment of dividends would significantly reduce the equity ratio from the level set in rates (49%) and as the Table 17 shows, the actual equity ratios were greater than the equity ratios established for ratemaking purposes. Using the ratemaking benchmark equity ratio of 49%, we find that the resulting equity ratios after dividend payments were not deficient. In fact, the Ohio Companies' equity ratios remained relatively high even after dividends were paid. This indicates the equity ratios are more than sufficient to support credit ratings.

Overall, we conclude that the level of dividends paid by the Ohio Companies and FirstEnergy during the period Rider DMR was in place (2017 to June 2019) were reasonable. The dividend payout ratio, dividend yield and dividend growth analysis support all indicated that the dividend level was not out of line with industry standards.

²²² According to FirstEnergy's Investor FactBook dated November 8, 2021, the "allowed" equity ratio for the Ohio Companies is 49%.

However, the Ohio Companies' dividend level inclusive of the second half of 2019 was above industry averages and does stand out. It is possible that Rider DMR funds were part of this dividend, as FirstEnergy did not track specific Rider DMR dollars once they entered the money pool.

Ohio Companies equity infusions

As shown in Table 18, FirstEnergy made equity infusions of \$160 million to the Ohio Companies during Rider DMR. FirstEnergy provided no specific need (e.g., cash flow deficiency) for additional equity for the Ohio Companies. We requested support for the equity infusions. In response to Set 5 DR 27 FirstEnergy stated, "see response to DM Set 05-DR-024. The same factors/metrics used in supporting dividend decisions are also used in supporting equity infusions." The response to Set 5 DR 24 stated that, "Relevant factors considered include, but are not limited to, 1) applicable corporate governance and compliance documents, 2) existing financial agreements and indentures, 3) company performance, 4) financial metrics (e.g., net income and cash, borrowings, total capitalization and associated ratios and retained earnings), 5) authorized equity capitalization for ratemaking purposes, and 6) credit metrics." However, no underlying support, factors/metrics, and associated quantifications were provided by FirstEnergy and based upon our interviews, there was no formal process/documentation required for infusions.

Table 18. Equity infusions

COMPANY	2015	2016	2017	2018	2019	2020	2nd Quarter 2021	DMR Period 2017-2019*
Ohio Edison	\$ -	\$ -	\$ 40,000	\$ -	\$ -	\$ 250,000	\$ -	\$ 40,000
Cleveland Electric Illuminating Co.	\$ -	\$ 200,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
Toledo Edison Company	\$ 150,000	\$ -	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ 20,000
Total Ohio Opcos	\$ 150,000	\$ 200,000	\$ 160,000	\$ -	\$ -	\$ 250,000	\$ -	\$ 160,000
First Energy-Equity Issuances	\$ -	\$ -	\$ -	\$ 2,466,000	\$ -	\$ -	\$ -	\$ 2,466,000

*all values in millions (\$000s)

Source: FERC Form 1/3Q pg. 121

As shown above in Table 17, the robust equity ratios achieved (i.e., > 50%) by the Ohio Companies during 2015 through 2020 exceeded their ratemaking equity ratios and on their own do not appear to justify equity infusions. Based on the lack of explicit documentary evidence supporting a need for these equity infusions, we were unable to find specific reasons for them from the data provided by the Ohio Companies.

However, in reviewing Moody's reports we did find that Moody's had a favorable opinion of the equity infusions for CEI. Moody's stated:

[REDACTED]

The Ohio Companies (i.e., CEI) credit ratings may benefit from these equity infusions; however, the infusions to Toledo Edison and Ohio Edison, while minor in amount, were not needed to support credit ratings.

FirstEnergy equity issuances

FirstEnergy's equity ratio was low during the Rider DMR period and required improvement to support higher credit ratings. As the Commission stated in its Fifth Entry on Rehearing, "we agree that issuing equity may be part of the solution to FirstEnergy Corp.'s financial issues".²²⁴ However, the Commission could not order FirstEnergy to issue equity. Other means of improvement would include retaining more income (e.g., by reducing investor dividends) or selling assets.

FirstEnergy's low equity ratio was of documented concern to credit and equity analysts. As noted in Appendix E; equity analysts were anticipating equity issuances during 2018. On January 23, 2018, Moody issued a Rating Action where it "affirm[ed] FirstEnergy Corp.'s Baa3 rating and stable outlook".²²⁵ Moody's stated [REDACTED]

[REDACTED]

²²³ Set 1 DR 11 Attachment 21 - Confidential p. 2.

²²⁴ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶ 205.

²²⁵ Set 1 DR 11 Attachment 25 Confidential.

Near the conclusion of this audit, Daymark became aware of two significant transactions that will increase the level of common equity at FirstEnergy by \$3.4 billion in 2022. First on November 6, 2021, FirstEnergy Corp. entered into a Common Stock Purchase Agreement with BIP Securities II-B L.P., an affiliate of Blackstone Infrastructure Partners L.P., for the private placement of 25,588,535 shares of the Company's common stock, par value \$0.10 per share, at a price of \$39.08 per share, representing an investment of \$1.0 billion.²³¹ Also on the same day, FirstEnergy Corp., along with FirstEnergy Transmission, LLC, a wholly owned subsidiary of FirstEnergy that primarily owns controlling equity interests of certain of FirstEnergy's transmission assets ("FET"), entered into a Purchase and Sale Agreement with North American Transmission Company II LLC (and associates) where FET agreed to issue and sell certain newly issued membership interests of FET (minority interests), such that Blackstone Infrastructure Partners L.P. will own 19.9% of the issued and outstanding membership interests of FET, for a purchase price of \$2.375 billion.²³²

We estimate that the impact of the \$3.4 billion of equity issuances would raise FirstEnergy's common equity ratio to approximately 32.5% from its September 30, 2021, value of approximately 25%.²³³ A 32.5% equity ratio would improve Moody's rating from "B" currently to "Ba". While this is just one metric, that metric is still in the non-investment grade category.

Like the 2018 equity issuance, credit analysts reacted favorably to the 2021 equity issuance. On November 8, 2021, S&P Global issued a release that stated, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

As a result of this equity issuance and related transactions, S&P raised the credit ratings of FirstEnergy

²³¹ FirstEnergy 8-K issued November 8, 2021.

²³² According to the SEC 8-K concerning the FET transaction certain governance and investor protections are included described as: "Under the LLC Agreement, Investor will be entitled to appoint a number of directors to the board of directors of FET (the "Board") in approximate proportion to Investor's ownership percentage in FET (rounded to the next whole number). Upon the Closing, the Board will consist of five directors, one appointed by Investor and four appointed by FirstEnergy. The LLC Agreement contains certain investor protections, including, among other things, requiring Investor approval for FET to take certain major actions. In addition, certain transfer restrictions and other transfer rights apply to Investor and FirstEnergy under the LLC Agreement."

²³³ FirstEnergy indicated that it was going to use the proceeds of this transaction to also reduce debt. We did not assume any specific level of debt reduction because that information was not specified or readily available. Thus the current estimated equity ratio may be conservative.

(from BB to BBB-) and the Ohio Companies and other utility affiliates (from BB+ to BBB) to investment grade.²³⁴

We find that the issuance of FirstEnergy equity was and continues to be beneficial. FirstEnergy is pursuing an approach to increase equity and decrease leverage, which is credit supportive, a major focus of Rider DMR.

Significant Excess Earnings Test (SEET) and Return on Equity (ROE)

During the course of our review of Rider DMR and credit ratings analysis, we examined issues related to return on equity (ROE) and debt leverage. We found that these issues are somewhat impacted by and interrelated with the Ohio Companies' Significant Excess Earnings Test (SEET) filings since Moody's [REDACTED]

[REDACTED] Moody's states that, "The criteria we consider include statutory protections that assure full cost recovery and a reasonable return for the utility on its investments, the regulatory mechanisms used to determine what a reasonable return should be, and the track record of the utility in actually recovering costs and earning returns."²³⁶ In addition to the consideration of cash flow metrics, these other factors, such as achieving allowed ROE, help influence the overall credit rating of a company. To the extent that the Commission finds that the Ohio Companies have excess earnings as measured by SEET, they are potentially liable to refund any such excess earnings to customers.

We reviewed whether any Rider DMR funds were potentially refunded via SEET.²³⁷ SEET filings are made annually in Ohio to determine whether the Ohio Companies' Electric Security Plan (ESP IV) resulted in significant excess earnings compared to companies facing "comparable risk".²³⁸ Initially, the 2017-2019 SEET tests did not include Rider DMR funds.²³⁹ However, due to a ruling by the Ohio Supreme Court in December of 2020, the Ohio Companies had to recalculate their SEET to include Rider DMR funds.²⁴⁰ At that

²³⁴ Set 5 DR 18 Attachment 1 - Confidential.

²³⁵ Set 1 DR 11 Attachment 56 Confidential, *Credit Opinion*, Moody's, Dec 4, 2020.

²³⁶ Moody's Investors Service, *supra*, at 13.

²³⁷ This additional review became necessary as a result of the Stipulation dated November 1, 2021, in Case No. 13-2173-EL-RDR.

²³⁸ See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶191.

²³⁹ *Id.*, at ¶212.

²⁴⁰ Case 18-857-EL-UNC et. Al.

time, the Ohio Companies still did not meet the excessive earnings threshold as filed by the Companies.

Near the conclusion of our audit, we became aware that all parties to Cases No. 13-2173-EL-RDR et al. filed a Stipulation and Recommendation (Stipulation) on November 1, 2021 with PUCO which had significant impacts on SEET.²⁴¹ The Stipulation called for the Ohio Companies to provide \$306 million to customers; including \$96 million in refunds associated with the 2017-2019 SEET cases. Several parties filed direct testimony supporting the Stipulation on November 15, 2021. On December 1, 2021, the PUCO issued an Opinion and Order adopting the Stipulation and Recommendation.

The Stipulation specifies “\$96 million to be refunded to customers in six months and \$210 million to be provided through annual rate reductions from 2022 to 2025.”²⁴² Further, “The aggregate rate reductions for all customers will total \$80 million in 2022, \$60 million in 2023, \$45 million in 2024, and \$25 million in 2025.”²⁴³

Based upon review of the Stipulation we found that the SEET Thresholds were lowered from the thresholds filed by the Ohio Companies. The lower thresholds resulted in \$70 million of excess earnings plus \$26.1 million of interest to be refunded. Notably, these refunds pertain to the years when Rider DMR was in effect. The Stipulation also concluded “that the Companies did not have significantly excessive earnings in 2020.”²⁴⁴ The SEET ROEs were initially filed without Rider DMR funds, however, they were re-filed to include Rider DMR funds after the Ohio Supreme Court ruling. As a result of adding the Rider DMR funds the ROEs increased, in particular, Ohio Edison’s ROE increased such that they exceeded the agreed upon threshold for each year DMR was in effect. Therefore, it is reasonable to conclude that the Rider DMR funds likely contributed to the excess earnings.

Return on Equity

We reviewed both the allowed ROE and the ROE achieved by the Ohio Companies for 2014-2020 as presented in the companies’ Significant Excess Earnings Test (SEET)

²⁴¹ The Stipulation resolves ten pending regulatory proceedings related to 2017-2020 annual earnings (SEET) tests, a 4-year review of FirstEnergy’s electric security plan, and 2014-2018 energy efficiency audits. In addition, the Stipulation resolves the SEET calculations through 2024. The settlement agreement was recently approved by PUCO on Dec. 1, 2021

²⁴² See Case No. 18-857-EL-UNC, Opinion and Order, 12/1/2021 at ¶167

²⁴³ *Id.*, at ¶153.

²⁴⁴ *Id.*, at ¶156.

filings.²⁴⁵ Initially, the Ohio Companies' SEET ROE excluded Rider DMR revenues. However, as noted above, in December 2020 the Court²⁴⁶ reversed PUCO's decision to exclude Rider DMR revenues from SEET. Thus, we focused our review on the SEET ROE including Rider DMR revenues.

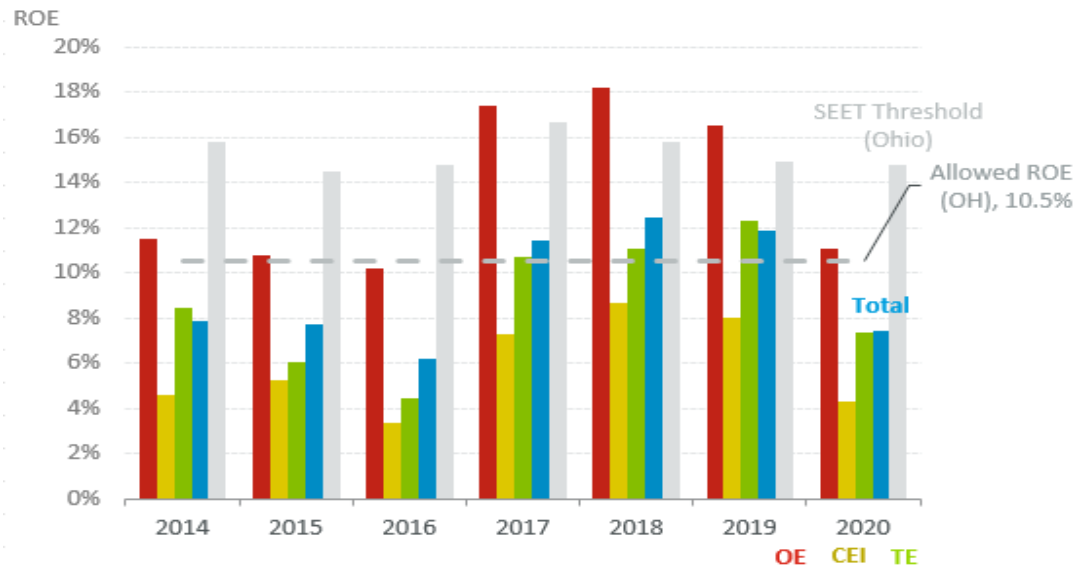


Figure 21. SEET Results and Allowed ROE for Ohio Companies

Figure 21 depicts the SEET ROE including Rider DMR revenues.²⁴⁷ This ROE is compared to the SEET threshold for each year²⁴⁸ (as indicated in the recent Stipulation) and the allowed ROE of 10.5%. As the figure shows, during 2017-2019 (the Rider DMR period) Ohio Edison's ROE exceeded the SEET threshold. According to the Stipulation, refunds of \$70 million will be required.²⁴⁹ Cleveland Electric Illuminating and Toledo Edison did not exceed the SEET Threshold during the Rider DMR period.²⁵⁰

²⁴⁵ Set 1 DR 30-32

²⁴⁶ On December 1, 2020, the Supreme Court of Ohio reversed the Commission's decision to exclude revenue from Ohio Edison Company's Rider DMR from the SEET. See Case No. 13-2173-EL-RDR, et. Al., Stipulation and Recommendation, November 1, 2021 at 7.

²⁴⁷ Set 1 DR 30 attachments 1-8. These ROEs were recommended for approval in the Stipulation.

²⁴⁸ For 2017-2019 we used the SEET Thresholds from the November 1, 2021, Stipulation and Recommendation.

²⁴⁹ See Case No. 18-857-EL-UNC, Stipulation and Recommendation, 11/1/2021 at Exhibit A

²⁵⁰ For 2017-2019 we used the SEET Thresholds from the November 1, 2021 Stipulation and Recommendation.

The figure also shows the Ohio Companies performance as compared to its allowed ROE of 10.5% during Rider DMR.²⁵¹ Ohio Edison and Toledo Edison's ROE exceeded their allowed ROE for each year during Rider DMR, and the aggregate ROE for the Ohio Companies exceeded the allowed ROE. However, Cleveland Electric did not earn its authorized ROE during Rider DMR or for any year going back to 2014. As noted by Moody's, the achievement of the allowed ROE is considered a credit positive. The earnings of the Ohio Companies influence and support credit ratings.

Impact of SEET Refunds on Rider DMR funds

The November 2021 Stipulation will result in \$70 million of refunds due to 2017-2019 SEET for Ohio Edison; largely covering the period during which Rider DMR was in effect. Since Ohio Edison did not have excess earnings before Rider DMR revenues were included in the calculation, it could be inferred that the Rider DMR funds contributed to the excess earnings. However, Ohio Edison has many revenue sources. The Rider DMR funds were simply the last ones accounted for, but that does not mean that those funds necessarily caused the excess earnings.

²⁵⁰ Stipulation, Appendix A. SEET ROE for the Ohio Companies was based on the Companies' higher actual book common equity levels, not the equity levels allowed in rates.

²⁵¹ According to Set 1 DR 31, "the allowed return on equity (ROE) for each of the Ohio Companies' base distribution rates for the years 2014-2021 is 10.5%."

(1)	Line Item	OE	CEI	TE	Total	Notes / Source
(2)						
(3)	2017					
(4)	SEET Income	\$ 184.8	\$ 103.9	\$ 59.1		FE testimony filed 3/1/21
(5)	SEET Equity	\$ 1,062.7	\$ 1,422.8	\$ 549.7		FE testimony filed 3/1/21
(6)	SEET ROE	17.4%	7.3%	10.7%		Line 4 / Line 5
(7)	SEET Threshold	16.7%	16.7%	16.7%		Stipulation
(8)	Income Tax Rate	35.9%	36.2%	35.7%		Income tax rate
(9)	SEET Refund	\$ 10.8	\$ -	\$ -	\$ 10.8	(Ln 4 - Ln 7 x Ln 5) / (1 - Ln 8)
(10)						
(11)	2018					
(12)	SEET Income	\$ 210.6	\$ 134.1	\$ 57.4		FE testimony filed 3/1/21
(13)	SEET Equity	\$ 1,159.4	\$ 1,547.6	\$ 517.8		FE testimony filed 3/1/21
(14)	SEET ROE	18.2%	8.7%	11.1%		Line 12 / Line 13
(15)	SEET Threshold	15.8%	15.8%	15.8%		Stipulation
(16)	Income Tax Rate	22.2%	22.6%	22.4%		Income tax rate
(17)	SEET Refund	\$ 34.6	\$ -	\$ -	\$ 34.6	(Ln 12 - Ln 15 x Ln 13) / (1 - Ln 16)
(18)						
(19)	2019					
(20)	SEET Income	\$ 194.6	\$ 118.2	\$ 58.2		FE testimony filed 3/1/21
(21)	SEET Equity	\$ 1,177.1	\$ 1,475.0	\$ 471.8		FE testimony filed 3/1/21
(22)	SEET ROE	16.5%	8.0%	12.3%		Line 20 / Line 21
(23)	SEET Threshold	14.9%	14.9%	14.9%		Stipulation
(24)	Income Tax Rate	22.2%	22.6%	22.4%		Income tax rate
(25)	SEET Refund	\$ 24.6	\$ -	\$ -	\$ 24.6	(Ln 20 - Ln 23 x Ln 21) / (1 - Ln 24)
(26)						
(27)	Total 2017-2019	\$ 70.0	\$ -	\$ -	\$ 70.0	Ln 9 + Ln 17 + Ln 25

Figure 22. Exhibit A to Stipulation: Ohio Edison's excess earnings

Figure 22 is an excerpt from Exhibit A to the Stipulation. It shows that Ohio Edison (OE) earned SEET excess earnings in each of the three years of Rider DMR. Ohio Edison received the following Rider DMR revenues, as shown in Table 19.²⁵²

Table 19. Ohio Edison DMR Revenues

Year	2017	2018	2019	Sum
DMR Revenues	\$ 91,245	\$ 80,103	\$ 37,071	\$ 208,419

It is our understanding that Rider DMR revenues were not targeted to any specific capital expenditure or dedicated to cost of service. Rather, Rider DMR revenues were provided for credit support. Given that Ohio Edison spent less than \$7 million²⁵³ on direct distribution modernization projects during that time period, it would be reasonable to conclude that some of the Rider DMR revenues were 'clawed back', or refunded, as a result of SEET.

²⁵² Set 1 DR 16 Attachments 1-3.

²⁵³ Set 1 DR 43 Attachment 1

Findings and recommendations

FirstEnergy did not produce any meaningful analysis to support the dividend payments received from the Ohio Companies. As a result, Daymark was unable to directly observe or validate any driving factor behind the Ohio Companies' increase in dividend payments to FirstEnergy during the Rider DMR period. However, we were able to review other related financial metrics pertaining to the Ohio Companies (i.e., payout and equity ratios) that demonstrated that the dividends paid by the Ohio Companies during Rider DMR were not unreasonable. The dividends paid out in the second half of 2019 (after Rider DMR) stand out compared to the Ohio Companies' dividend payout ratio during the 2017 to 2019 Rider DMR period. We cannot rule out the possibility that Rider DMR funds contributed, at least in part, to make this large dividend payment.

The actual equity ratios of the Ohio Companies are higher than the ratios assumed in rates and those of industry peers and appear unnecessarily high to support investment grade credit ratings. We also note that there were some equity infusions to the Ohio Companies during Rider DMR that were neither formally documented, nor supported with analyses. The payment of dividends by the Ohio Companies during Rider DMR did help to reduce their equity ratios, but they are still substantially above typical utility levels.

Below are our overall findings and *recommendations*.

1. The Ohio Companies do not have a formal dividend policy for the dividends they pay to FirstEnergy. *Recommendation: We recommend that a documented policy be established. A formal policy would increase transparency.* For example, a dividend policy could include: the policy's purpose and scope, financial requirements, metrics, restrictions, and procedural guidelines for determining dividend amounts as well as a target range. There is no documentary evidence linking the use of Rider DMR funds to dividend payments.
2. There is no written policy or formal supporting documentation to justify making equity infusions to the Ohio Companies. The common equity ratios of the Ohio Companies exceed what is currently assumed in rates. There is no documentary evidence to show that Rider DMR funds were used to adjust equity positions to produce a more balanced capital structure.

VI. OTHER USES OF FUNDS

The Commission Order in case 17-2474-EL-RDR dated June 2, 2021, directed this audit to investigate whether Rider DMR was used for the purposes established *ESP IV*. The time-period covered by this audit is inclusive of the passage of House Bill 6 (H.B. 6). As part of our review of Rider DMR and whether it was used for the purposes intended by *ESP IV*, Daymark examined if Rider DMR could have been used to fund other activity, such as the funding of H.B. 6. Based on Daymark's review, it is impossible to draw a conclusion regarding whether funds collected from Rider DMR eventually made their way to funding H.B. 6. There are two reasons for this: (1) FirstEnergy was not required to track Rider DMR funds, and (2) all customer remittances are placed into the Utility Money Pool where they lose their identity. In their response to discovery Set 3 DR 2, FirstEnergy stated the following:

“While the Companies tracked Rider DMR revenues, the funds received from these revenues lose their identity upon receipt by the Companies. All funds received by the Companies are placed into the Regulated Utility Money Pool.”²⁵⁴

Additionally, “customer receivables are neither booked nor cleared at the individual rider level, so the Companies do not track the amount of paid remittances attributed to Rider DMR.”²⁵⁵ FirstEnergy explains further: “Because cash is fungible, the Ohio Utilities do not track the specific sources of the funds in the Regulated (Utility) Money Pool (e.g., collections from individual recovery mechanisms), and the uses of the funds in the Regulated Money Pool cannot be traced back to specific sources.”²⁵⁶

For more detail on the mechanics of the Regulated (Utility) Money Pool, please refer to the previous *Section IV*.

The Ohio Companies and all subsidiaries pay their invoices through the Utility Money Pool: “Funds to pay invoices for the Ohio Companies come from the Regulated Money Pool.”²⁵⁷ Furthermore, “disbursements from the money pool are not coded or tied to grid modernization projects.”²⁵⁸ FESC, while an administrator of the Utility Money Pool,

²⁵⁴ Set 3 DR 2.

²⁵⁵ Set 5 DR 12.

²⁵⁶ Set 1 DR 41.

²⁵⁷ Set 5 DR 2.

²⁵⁸ Set 5 DR 4.

is not allowed to take any money out directly for its own purposes.²⁵⁹ However, when the Ohio Companies pay their allocated FESC costs to FESC, that money does come out of the money pool.²⁶⁰ Therefore, it is impossible for Daymark to state whether any monies from Rider DMR were used for other unapproved purposes, including activities related to H.B. 6. We reviewed the controls that FirstEnergy has on the money pool and invoicing as a further check.

A. Controls in place

Daymark investigated the controls FirstEnergy had in place to ensure that specific funds collected from customers are used for their intended purposes and not diverted to other ventures that customers are not obligated to fund. Specifically, we looked at the following:

- Invoice approval controls
- Corporate separation plan
- Cost allocation manual

Our findings relative to each of these types of controls are provided in the next three sections.

Invoice approval controls

Since all Ohio Company invoices are paid with money pool funds, we investigated the invoice controls that FirstEnergy has in place to ensure utility funds are being controlled properly. FirstEnergy follows a decentralized process for approving invoices: “FirstEnergy Corp. and all affiliates and subsidiaries (collectively, “FirstEnergy”) have decentralized invoice processing so that individual Business Service groups within FirstEnergy process their respective invoices for goods and/or services.”²⁶¹ It is essential when invoicing occurs throughout a company like this, and not within one individual department, that there be robust and clearly defined controls in place.

FirstEnergy provided Daymark with their invoice approval controls in a document called *Accounts Payable Business Process Narrative*.²⁶² This document lists and explains the

²⁵⁹ Set 1 DR 38 Attachment 2, *Money Pool Agreement* section 1.02. FirstEnergy Service Company does not have a right to borrow from the pool.

²⁶⁰ Set 5 DR 2.

²⁶¹ Set 4 DR 12.

²⁶² Set 5 DR 1 Attachment 1.

process and controls FirstEnergy uses around invoice approval. In this document, FirstEnergy identifies five payment types that the Ohio Companies use:

1. Payments through purchase orders (POs)
2. Non-POs
3. Check requests
4. Employee expenses
5. Other payments

Some controls FirstEnergy has in place are universal to all payment types. These include Control PNP-CTL-1006 (Approval of New Vendors) and PNP-CTL-1023 (Review of Vendor Changes other than Gatekeeper). These controls are in place so that the designated gatekeeper approves any new vendor.

PO payment controls include PNP-CTL-1000, which requires a 3-way match of the invoice to a valid PO and PO receiving report. Control PNP-CTL-2005 requires all POs to have a spend limit. In general, FirstEnergy requires all materials and services to be procured with a PO unless certain criteria are met, such as falling under a \$10,000 threshold. If there is a non-PO invoice, there is a Level of Signature Approval (LOSA) process. A LOSA process means that for every payment above a certain dollar amount, a certain level of authority needs to approve and sign off on the payment. For example, any transaction above \$1 million requires the approval of certain Vice Presidents or higher positions.²⁶³ Lesser payments require the approval of a director- or manager-level position. Additionally, General Accounting and Accounts Payable (AP) perform quarterly reviews of non-PO invoices. Specifically, AP reviews to “determine if multiple payments were made to a single vendor, circumventing an approver’s LOSA limit.”²⁶⁴

While these invoicing controls may be sufficient, there are still some potential risks. FirstEnergy did not provide any additional guidance as to how a new vendor gatekeeper determines the legitimacy of a vendor other than that they have a valid tax ID, W-9, and is not a duplicate.²⁶⁵ A Level of Signature Approval process is a standard business approach but is dependent on management’s judgment. In light of recent governance

²⁶³ Set 5 DR 1 Supplemental Attachment 4.

²⁶⁴ Set 5 DR 1 Attachment 1.

²⁶⁵ *Id.*

events at FirstEnergy²⁶⁶, it would be prudent to conduct an external audit over FirstEnergy's invoicing controls to ensure they are sufficient at properly controlling the Ohio Companies' funds.

Corporate separation plan

FirstEnergy is required under 4901:1-37 to maintain a corporate separation plan. This plan is to prevent any cross-subsidization of affiliates. Cross-subsidization involves the transfer of something that gives an organization a competitive advantage, such as the transfer of money or information. Corporate separation rules are in place to prevent Ohio ratepayers, via their utility, from subsidizing other FirstEnergy business ventures. FirstEnergy has a corporate separation plan for the Ohio Utilities, which was also recently audited by Daymark in case no. 17-974-EL-UNC. Ideally, a corporate separation plan should help prevent any Ohio Company riders, such as Rider DMR, from being used as a subsidy for another entity.

Cost allocation manual

As part of their corporate separation plan and FERC compliance, FirstEnergy has a cost allocation manual (CAM).²⁶⁷ The CAM provides a description of all the services that FESC provides for FirstEnergy affiliates, including the Ohio Companies. The CAM also dictates the cost allocation methods for each service that FESC provides. If a service cannot be directly charged to a particular affiliate, "the costs of product and services provided by the FESC that cannot be charged directly to the Subsidiary receiving the product or service will be allocated among the associate companies by utilizing one of the methods described below that most accurately distributes the costs."²⁶⁸ There are 19 major cost allocation methods. The CAM is intended to add another level of protection against cross subsidization of affiliates. A well-functioning CAM also ensures protection of customer funds by dictating what for and how FESC can charge the Ohio Companies.

B. Recommendations

Several recommendations regarding FirstEnergy's cost allocation manual and corporate separation plan were provided by Daymark as a result of a separate audit. These can be found in detail in docket 17-974-EL-UNC.²⁶⁹ Daymark believes these recommendations

²⁶⁶ See United States of America vs. FirstEnergy Corp., Deferred Prosecution Agreement, 7/22/2021.

²⁶⁷ Set 1 DR 25 Attachment 1.

²⁶⁸ *Id.*, p. 50.

²⁶⁹ See *Ohio Companies Corporate Separation Audit*, 9/13/2021, in Case No. 17-974-EL-UNC.

are also applicable here because they will help to ensure the protection of Ohio ratepayer funds. The recommendations that most apply to this audit are the following:

- The Ohio Companies should undertake a more robust Cost Allocation review process, including an internal audit
- The Cost Allocation process for the Ohio Companies should be audited by an external source
- The Ohio Companies should have more visibility into the indirect costs they are allocated from the FirstEnergy Service Company

Additionally, as echoed previously in this report, requiring FirstEnergy to track rider funds would assist in preventing these funds from being “lost” or unidentifiable. Requiring the uses of funds to be well documented allows the Commission or an auditor to clearly match the dollars collected from customers to the projects they were spent on. Furthermore, FirstEnergy should conduct an internal audit of the Utility Money Pool and continue to do so on a regular basis. FirstEnergy stated that no audit had occurred during the period from 2015 to 2021.²⁷⁰

²⁷⁰ Set 5 DR 5.

VII. FINDINGS & RECOMMENDATIONS

Summarized below are our major findings and recommendations.

Overall

1. During our interviews of FirstEnergy and the Ohio Companies staff, there was a general lack of knowledge on the specifics of Rider DMR. Although there were many changes to personnel responsibilities since the creation and subsequent termination of Rider DMR, this lack of knowledge suggests grid modernization was not a well-communicated priority throughout the company. Rider DMR or grid modernization strategy was also not emphasized in corporate and board documents, such as the Audit Committee agendas or Board of Directors strategy and regulatory booklets.²⁷¹
2. The objectives of Rider DMR that were laid out by the Commission gave FirstEnergy the ability to spend funds at their discretion. As a result, FirstEnergy did not track any spending directly related to Rider DMR revenues. However, given the intent was to enable grid modernization,²⁷² either directly or indirectly, ultimately FirstEnergy should have tracked specific spending, particularly to facilitate anticipated audits.
3. All collected Rider DMR revenues were placed into the Utility Money Pool. Once funds enter the money pool, they lose their identity and can no longer be traced back to any specific “rider” or spending.²⁷³
4. For riders that will be audited, the Commission should address and order clear data tracking and retention requirements in future orders.
5. It is impossible to trace Rider DMR funds to the passage of H.B. 6 or any other spending for that matter. However, it also cannot be ruled out that these extra funds – with no clear spending requirements – did not allow FirstEnergy to somehow fund the back-channel support of the passage of H.B. 6.

²⁷¹ Set 1 DR 5 Supplemental - Confidential, Set 1 DR 36 - Confidential.

²⁷² See Case No. 14-1297-EL-SSO, Fifth Entry on Rehearing, 10/12/2016 at ¶1282: “Although we will not place restrictions on the use of Rider DMR funds, the Commission directs Staff to periodically review how the Companies, and FirstEnergy Corp., use Rider DMR funds to ensure that such funds are used, either directly or indirectly, in support of grid modernization.”

²⁷³ *Id.*

6. The current Grid Mod I program is a much more robust and transparent way to incentivize and track grid modernization spending.
7. The first two stipulations from the Fifth Entry on Rehearing ¶208 have been satisfied. The headquarters of FirstEnergy have remained in Akron and there was no change in control over the Ohio Companies.

Grid modernization

8. Grid modernization was never defined in the Rider DMR docket, nor were personnel at FirstEnergy aware of a standard company definition. Discovery responses indicate FirstEnergy broadly categorized capital projects as grid modernization (or “grid mod”) during the Rider DMR period if they “increased the resiliency or intelligence of the Ohio Companies’ distribution system.”²⁷⁴ However, the projects that FirstEnergy categorized as grid modernization during the Rider DMR period were recovered under different riders, suggesting that Rider DMR funds did not fund these grid mod projects.
9. There was no significant increase in budgeted capital expenditures (capex) on grid modernization with the passage of Rider DMR. There was a very notable increase in budgeted capex on grid modernization with the passage of Grid Mod I.

Money pool

10. The regulated money pool processes a significant number of transactions each month for the Ohio Companies. However, while there are numerous controls over the money pool, there have not been any internal or external audits of the regulated money pool in the past 5 years. *Recommendation: Audits of the money pool should occur in more frequent intervals.*

Debt

11. Credit agencies did view Rider DMR as positive, however, it appears FirstEnergy’s decision to become a fully regulated company may have influenced their credit upgrade more than any other factor.
12. Rider DMR did improve the Ohio Companies’ cash flow metrics. The improvement did push some of the Ohio Companies over the investment grade

²⁷⁴ Set 3 DR 1.

threshold in some years. However, Rider DMR had only a marginal effect on the cash flow metrics of FirstEnergy.

13. FirstEnergy did not reduce their long-term debt obligations during the Rider DMR period. In fact, they took on an additional \$2.4 billion in debt.
14. There was not enough long-term debt taken out by the Ohio Companies during the Rider DMR period to make any substantive conclusions about reducing their interest rate of long-term debt. However, the Ohio Companies did pay down some debt during the Rider DMR period, for a total reduction of \$105 million. It is difficult to pinpoint whether Rider DMR monies were used as the funding mechanism for this reduction.
15. The Ohio Companies' portion of the FirstEnergy pension is well funded. The Ohio Companies contributed \$102 million to their pension during the Rider DMR period. However, the Ohio Companies' pension funding status was consistent both during and after Rider DMR with no substantive variations. Therefore, there is no specific evidence that Rider DMR had any impact on pension plan funding.

Equity

16. The Ohio Companies' dividend payments to FirstEnergy Corp. increased during the Rider DMR period. We do not view this increase as unreasonable. The dividends paid out in the second half of 2019 (after Rider DMR) stand out compared to the Ohio Companies' dividend payout ratio during the 2017-2019 Rider DMR period. We cannot conclude that Rider DMR funds were not used, at least in part, to make this large dividend payment. Additionally, we note the Ohio Companies do not have a documented, formal dividend policy whereas other utilities in the FirstEnergy family have formal dividend policies.
Recommendation: We recommend that a documented policy be established. For example, a formal policy could include financial requirements, metrics, restrictions, and procedural guidelines for determining dividend amounts as well as a target range. This matter is best explored in a relevant Ohio Company case.
17. There is no written policy or formal supporting documentation to justify making equity infusions to the Ohio Companies. The common equity ratios of the Ohio

Companies are exceeding what is currently allowed in rates, meriting the equivalent of an A rating from Moody's.

APPENDIX A

DISCOVERY QUESTIONS

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
1	1	<p>Refer to the Fifth Entry on Rehearing notes that the FirstEnergy “may use revenue from Rider DMR to indirectly support grid modernization investments. Such steps should lower the cost of borrowing the funds needed to invest in grid modernization and may include reducing outstanding pension obligations, reducing debt, or taking other steps to reduce the long-term costs of accessing capital” (citation omitted).</p> <p>a. Please explain whether there was a specific need for improved credit or lower costs of capital related to grid modernization investments in particular. For example, do such investments have a unique risk profile that requires different lending terms? Provide details about all such investment characteristics driving the need for the DMR Rider.</p> <p>b. Did FirstEnergy have a target for improving its credit or otherwise reducing the costs of accessing capital from the implementation of the DMR Rider, such as an intended credit rating increase or target cost of debt? If so, please provide details of the expected improvement resulting from the DMR Rider.</p> <p>c. Did FirstEnergy receive any guidance indicating that the DMR Rider would improve credit or lower costs of capital, enabling grid modernization investments, from credit ratings agencies, accounting firms, or other professional services firms? If so, please provide all communications, memoranda, reports, or other documentation related to such guidance.</p> <p>d. Did the DMR Rider have a measurable impact on FirstEnergy’s credit rating? Please provide credit ratings for the five years prior to the implementation of the DMR Rider through present day.</p> <p>e. Did the DMR Rider have a measurable impact on FirstEnergy’s cost of accessing capital? Provide any available evidence supporting this response.</p>
1	2	Did the Company conduct any specific borrowing related to grid modernization investments prior to the implementation of the DMR Rider? Please provide details including the specific investments and borrowing terms (rates, terms, etc.).
1	3	Did the Company conduct any specific borrowing related to grid modernization investments after the implementation of the DMR Rider? Please provide details including the specific investments and borrowing terms (rates, terms, etc.).
1	4	Please provide all memoranda, reports, presentations, or other documentation provided to the FirstEnergy senior management related to the DMR Rider.
1	5	Please provide all memoranda, reports, presentations, or other documentation provided to the FirstEnergy Board of Directors related to the DMR Rider.
1	6	Please provide all memoranda, reports, presentations, or other documentation provided to the FirstEnergy investors related to the DMR Rider.
1	7	<p>Please provide annual capital budgets for each of the Ohio utilities (Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company) for the years 2014-2021.</p> <p>a. List any programs or projects (or categories) contained in the above capital budgets that are related to Grid Modernization.</p>
1	8	Please provide annual/year end capital budget variance reports for each of the Ohio utilities for the years 2014-2021.
1	9	<p>Please provide annual operating budgets for each of the Ohio utilities for the years 2014-2021.</p> <p>b. List any programs or projects (or categories) contained in the above capital budgets that are related to Grid Modernization.</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
1	10	Please provide annual/year end operating budget variance reports for each of the Ohio utilities for the years 2014-2021.
1	11	Please provide credit rating agency reports for First Energy and each of the Ohio utilities issued during the years 2014-2021.
1	12	Please provide equity analyst reports for First Energy and each of the Ohio utilities issued during the years 2014-2021.
1	13	Please provide the Ohio Utilities internal accounting flowchart/process for revenues collected from the Distribution Modernization Rider the Ohio Utilities.
1	14	Provided supporting schedules, including working models, that display the methodology for returning Rider DMR revenues collected from customers.
1	15	Please provide the list of cost centers that were used to collect funds associated with DMR Rider.
1	16	For each of the Ohio utilities, please provide the following Rider DMR revenue information by month: a.the amount of Rider DMR revenues collected during its duration by service class; b.the associated billing volumes by service class; c.the amount of any of such Rider DMR revenues that were refunded by service class
1	17	According to Ohio Edison's Federal Energy Regulatory Commission (FERC) Form 1 Annual Report for the 12 months ended December 31, 2020 "ESP IV further provided for the Ohio Companies to collect through the Distribution Modernization Rider (DMR) \$132.5 million annually for three years beginning in 2017, grossed up for federal income taxes, resulting in an approved amount of approximately \$168 million annually in 2018 and 2019." Provide the calculations supporting the factors used to gross up DMR revenues for federal income taxes.
1	18	Provide all current and superseded tariffs for Rider DMR for the Ohio utilities. a.Include all associated schedules used to calculate each iteration of Rider DMR tariffs, including working models.
1	19	For each credit rating agency that reports on First Energy and or its Ohio utilities, please provide the credit ratings history for First Energy and its Ohio utilities starting with the year 2014-2021.
1	20	For metrics used by First Energy to measure the effectiveness of Rider DMR in terms of impacting the financial health of the company a.Please provide the list of metrics used to measure the effectiveness of Rider DMR. b.Please provide the detailed methodology used for developing the metrics. c.Please provide the value of metrics during 2014 – 2019 period.
1	21	Please provide detailed supporting evidence that the funds drawn from the regulated money pool during the audit period were successful in improving the company's financial position. Evidence to include specifics regarding how the funds collected via the DMR Rider, a.Led to improved Rating Agency ratings. b.How those improved agency ratings reduced the Company's cost of borrowing; and c.How the lower cost of borrowing specifically facilitated investment in DMR?
1	22	Provide the Funds from Operations (FFO) metrics for First Energy and its Ohio utilities for the period 2017-2021 (actual) and for 2021-2024 (forecast). Provide such data both including and excluding Rider DMR revenues.

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
1	23	List each of the ring-fencing measures currently in place (and the date implemented) for the Ohio utilities that provide financial separation/protect Ohio utilities from the risks/exposures from First Energy and its non-utility subsidiaries.
1	24	Provide a list of all internal audits or risk assessments conducted during the period 2014-2021 that include the Ohio utilities.
1	25	Provide the cost allocation manual governing cost allocations between First Energy and its Ohio utilities.
1	26	Provide the System Average Interruption Duration Index (SAIDI); the System Average Interruption Frequency Index (SAIFI) and the Consumer Average Interruption Duration Index (CAIDI) metrics for each of the Ohio utilities for the period 2014-2021.
1	27	Provide the system losses, peak load, and load factor metrics for each of the Ohio utilities for the period 2014-2021.
1	28	Do the Ohio utilities maintain separate pension funds either individually or combined with other Ohio utilities? If not, indicate each of the entities that share the pension funds of the Ohio utilities.
1	29	Provide pension actuary reports that are applicable to the pensions of each of the Ohio utilities for the years 2014-2021.
1	30	Provide the Significantly Excessive Earnings Test (SEET) separately for each of the Ohio utilities for the years 2014-2021. Provide the SEET amounts excluding and including Rider DMR revenues. To the extent that such SEET filings were not made, state the reasons they were not required.
1	31	Provide the allowed return on equity (ROE) for each of the Ohio utilities for the years 2014-2021. Indicate the month each time the allowed ROE was changed.
1	32	Provide the actual return on equity (ROE) for each of the Ohio utilities for the years 2014-2021. Provide the ROE amounts excluding and including Rider DMR revenues.
1	33	Provide the consolidated federal and state tax returns that include the Ohio utilities data for the tax years 2016-2020.
1	34	Do the Ohio utilities prepare standalone federal and state tax returns? If so, provide the Ohio utilities tax returns for the tax years 2016-2020.
1	35	Provide strategic plans (or similar documents) that include the Ohio utilities for the period covering 2014-2021.
1	36	Provide the Board of Directors and Committee Meeting Agendas for the years 2014-2021 for the Ohio utilities and First Energy. For any of the above Agendas that list Rider DMR or closely related topics, please provide the minutes of such meetings.
1	37	During the period covering 2014-2021, did First Energy or its Ohio utilities have compensation programs (e.g., bonuses, incentives, etc.) that were tied to performance metrics? If so, list the metrics used for each type of employee (executive, management, hourly, etc.); the related targets, and the actual results covering 2014-2021.
1	38	Provide the agreement (and any amendments) governing the Regulated Money Pool in effect for the period 2014-2021.
1	39	Provide the agreement (and any amendments) governing the Money Pool for unregulated subsidiaries in effect for the period 2014-2021.
1	40	Provide quarterly reports concerning the Regulated Money Pool provided to the Ohio PUC covering the period 2014-2021.

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
1	41	<p>Regarding the FirstEnergy Regulated Money Pool;</p> <p>a. Please provide information regarding the structure of the money pool and how it is managed.</p> <p>b. Please elaborate on the company's philosophy regarding the use of funds from the money pool. When is it acceptable and for what purposes?</p> <p>c. Please provide transaction level detail regarding sources and disposition of funds related to the Ohio utilities.</p> <p>d. Please provide the money pool year-end balance for each of the years of the audit period.</p>
1	42	<p>The 2020 FirstEnergy Annual Report lists the following notations regarding use of the FirstEnergy Regulated Money Pool.</p> <p>a. Regarding the April 20th entry, please explain in greater detail specifically how in section (i) the funds used to refinance indebtedness impacted the borrowings incurred under the FirstEnergy regulated money pool. What changed as a result?</p> <p>b. Regarding the June 29th entry, please explain in greater detail how the proceeds from the issuance of the FMBs specifically impacted the FirstEnergy regulated money pool?</p> <p>"On April 20, 2020, PN issued \$125 million of 3.61% senior unsecured notes due 2032 and \$125 million of 3.71% senior unsecured notes due 2035. Proceeds of the issuance of the notes were used: (i) to refinance indebtedness, including short-term borrowings incurred under the FirstEnergy regulated money pool to repay a portion of the \$250 million aggregate principle amount of PN's 5.20% Senior Notes due April 1, 2020, (ii) to fund capital expenditures, (iii) to fund general corporate purposes, or (iv) for any combination of the above.</p> <p>On June 29, 2020, PE issued \$75 million of 2.67% FMBs due 2032 and \$100 million of 3.43% FMBs due 2051. Proceeds of the issuance of the FMBs were used to repay short-term borrowings under the FirstEnergy regulated money pool, to fund capital expenditures, and for general corporate purposes.</p>
1	43	Please list the specific DMR investments made during the Audit period. Please provide project level detail including funds allocated, scope and schedule for implementation.
1	44	Please provide confidential version of Mid-Term Report prepared by Oxford Advisors in Case No. 17-2474-EL-RDR.
1	45	Please provide copies of all interrogatory questions and responses submitted by Oxford Advisors during its audit of Distribution Modernization Rider of the Ohio Utilities in Case No. 17-2474-EL-RDR.
1	46	On page 4 of Oxford's Mid-Year report in case 17-2472 EL RDR, they summarized the anticipated investment from 2018 to 2021 into the regulated distribution segment of FE (between \$6.2B and \$6.7B), of which \$1.6B was earmarked for 2018. Please provide actual information for 2018 to 2020 by year and anticipated investment in 2021 by category of investment such as advanced meters, distribution automation and other such investment categories.
1	47	Please provide an update of planned and actual grid modernization investments by the company since the program started and by year and by major investment category.

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
2	1	Please provide the detailed organizational charts of Ohio Edison Company, The Cleveland Electric Illuminating Company, and the Toledo Edison Company (collectively, FirstEnergy or Companies) and each affiliate with which the Companies had transactions the audit period. Please show all positions, the reporting relationships, the title of the position, their tenure, the department or the unit's name. If these organization charts for any Companies or its affiliates have changed during the audit period, please provide the earlier versions of the organizational charts as well.
2	2	Previously, the System Average Interruption Duration Index (SAIDI); the System Average Interruption Frequency Index (SAIFI), the Consumer Average Interruption Duration Index (CAIDI), system losses, peak load, and load factor metrics were requested for each of the Ohio utilities for the period 2014-2021 (Refer to Set 1-DR26 & Set 1-DR27). In addition, metrics used for compensation purposes were also requested (Refer to Set 1-DR37). Does First Energy or the Ohio utilities track any other metrics relevant to its financial or operational performance (other than those requested above)? If so, provide the metrics for each of the Ohio utilities for the period 2014-2021. Also indicate the purpose and use of each of these metrics.
2	3	Provide the following information for each of the Ohio utilities and Service Company (e.g., FirstEnergy Service Company) Boards of Directors: a. Page 105 of the FERC Form 1 provides names, titles, and addresses of the Boards of Directors of the Ohio Utilities (these Board Members appear to all be employees of First Energy or its affiliates). For the years 2014-2021, indicate if any of the respective Board Members of the Ohio utilities and Service Company Boards of Directors are not employed by First Energy or any of its affiliates. If any Board Members are not employees, list their current employer; b. State when each Board members term expires, c. Indicate each of the independent directors (as defined by SEC guidelines, if any); d. List each of the respective Board committees and its members for the Ohio utilities and Service Company Boards of Directors.
2	4	According to page 233 of Toledo Edison Company's Federal Energy Regulatory Commission (FERC) Form 1 Annual Report for the 12 months ended December 31, 2020; it has \$500.6 million of goodwill recorded in Account 186 Miscellaneous Deferred Debits. a. Explain the origin of this goodwill; including citations to any orders that approved the underlying transaction(s). b. Has the PUCO issued any orders or provided any written guidance on the regulatory or accounting treatment for this goodwill?
2	5	Provide annual capital budgets for each of the Service Companies (e.g., FirstEnergy Service Company) who charge costs to the Ohio utilities for the years 2014-2021. a. List any programs or projects (or categories) contained in the above Service Companies capital budgets that are related to Grid Modernization.
2	6	Provide annual/year end capital budget variance reports for each of the above Service Companies for the years 2014-2021.
2	7	Provide annual operating budgets for each of the Service Companies (e.g., FirstEnergy Service Company) who charge costs to the Ohio utilities for the years 2014-2021. a. List any programs or projects (or categories) contained in the above Service Companies capital budgets that are related to Grid Modernization.

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
2	8	Provide annual/year end operating budget variance reports for each of the Service Companies who charge the Ohio utilities for the years 2014-2021.
2	9	<p>In the testimony of Olenger L. Pannell Assistant Controller – FirstEnergy Utilities FirstEnergy Service Company dated March 1, 2019, in Case No. 19-361-EL-RDR at page 4 it states: The Companies and other FirstEnergy entities have acted to improve their financial standing and credit metrics by, among other things, implementing an ongoing initiative to align FirstEnergy’s cost structure with that of a fully regulated utility company. This initiative identified \$300 million in costs associated with competitive operations that will be eliminated, and \$85 million of incremental cost savings.</p> <p>a. Provide the documentation supporting (i.e., a plan, report, presentation, etc.) and a summary explaining the above savings initiatives.</p> <p>b. The testimony above indicates these savings initiatives were implemented for “competitive operations” and that “as part of that initiative, in 2018 FirstEnergy implemented a voluntary employee retirement program for approximately 500 employees.”</p> <p>i. Were these initiatives limited to competitive operations? Did any of the above savings benefit the Ohio Utilities?</p> <p>ii. Were similar cost saving initiatives considered and/or implemented for the Ohio Utilities? If not, explain why not.</p> <p>c. Explain the difference between the \$300 million and \$85 million in cost savings above; does the \$300 million figure represent one-time savings?</p> <p>d. Provide a schedule showing by year by company from each of the above initiatives that total the \$300 million cost savings stated above.</p> <p>e. Provide a schedule showing the costs to achieve the above \$300 million in savings by year by company from each of the above initiatives.</p> <p>f. Provide a schedule showing by year by company for each of the above initiatives that total the \$85 million of incremental cost savings.</p> <p>g. Provide a schedule showing the costs to achieve the above \$85 million in incremental cost savings by year from each of the above initiatives.</p>
2	10	<p>In the testimony of Steven R. Staub Vice President and Treasurer FirstEnergy Service Company dated March 1, 2019, in Case No. 19-361-EL-RDR at page 12 it states: “FirstEnergy’s pension is expected to be underfunded by 1 over one billion dollars in 2022 and beyond.”</p> <p>a. Provide the source of this information.</p> <p>b. Provide the most recent update of this projected underfunding, including the source.</p> <p>c. Explain and estimate the each of the major causes of this projected \$1 billion in underfunding (e.g., investment returns, mortality, etc.).</p> <p>d. How much of the projected underfunding is directly or indirectly attributable to the Ohio Utilities?</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
2	11	<p>In the testimony of Steven R. Staub Vice President and Treasurer FirstEnergy Service Company dated March 1, 2019, in Case No. 19-361-EL-RDR at page 13 it states:</p> <p>The Companies' and FirstEnergy's long-term debt maturities total \$350 million and \$1.98 billion (including a \$628 million tax note to be issued upon the emergence of FES from bankruptcy), respectively, through 2024. Additionally, FirstEnergy has \$1.25 billion of bank loans maturing in October 2019 and \$500 million maturing in October 2020.</p> <p>a. Provide a schedule showing the above debt maturities by company, by year. For each maturity, indicate the amount maturing, the term, and the interest rate.</p> <p>b. To the extent that any of the above debt maturities have been replaced with new debt, indicate the company, year, amount, term, and the interest rate.</p>
3	1	<p>Please refer to FE's response to Set 1 DR 43 Attachment 1.</p> <p>a. What criteria did FE use to categorize these items as grid modernization? Were these directed by a Commission Order? If so, what order?</p> <p>b. For each line item, please specify the cost recovery mechanism that FirstEnergy utilized. Please also specify whether each item was a capital investment or an expense.</p>
3	2	<p>Did FirstEnergy in any way track the funds collected from Rider DMR and where they went? If so, please provide the written documentation and an explanation of the tracking that FirstEnergy did. If not, please explain FirstEnergy's decision to not track these funds.</p>
3	3	<p>Please indicate whether the DMR Rider revenues were included (reconciled) or excluded from the Revenue Decoupling Mechanisms (RDM)?</p>
3	4	<p>Please provide the Ohio Utilities internal accounting flowchart/process pertaining to the Money Pools for regulated/unregulated subsidiaries that were in effect during the period 2014-2021.</p>
3	5	<p>Do the Ohio Utilities have internal controls that apply specifically to regulatory accounting and related regulatory compliance requirements? Provide any such controls that were in effect during the period 2014-2021. Indicate which specific internal controls that applied to the Ohio Utilities Distribution Modernization Rider Revenues.</p>
3	6	<p>Please provide the following information that are related to pension costs in 2016-2020, along with all supporting calculations with formulas intact:</p> <p>a. gross pension costs</p> <p>b. the \$ amount cost for each FE affiliate</p> <p>c. the % allocations to each FE affiliate</p>
3	7	<p>Below is an excerpt from Note 5 (p. 104 of PDF) of the Consolidated Financial Statements of FirstEnergy Form 10-K for the fiscal year ending December 31, 2020, concerning pensions and OPEB:</p> <p>a. Are similar tables available/produced for the Ohio Companies? If so, please provide such tables for years 2015-2020. If not, explain why.</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
3	8	<p>The following questions focus strictly on company contributions to respective plans:</p> <p>a.It is indicated in the Ohio Cost Allocation Manual (CAM- see DM set 1 DR 25 Attachment 1, p. 80), that pensions and OPEB costs are indirectly allocated to the Ohio Companies based on “number of participating employees”. Does FirstEnergy allocate pension and OPEB company contributions to all FE affiliates based on “number of participating employees”? If not, state how FirstEnergy determines/allocates the Ohio Companies obligation for each Company contribution to the plans.</p> <p>b.Do the same allocation methods for contribution apply in the event or plan curtailment, settlement (i.e., retirement incentive), or special termination? If not state how FirstEnergy determines/allocates contributions to the Ohio Companies as a result of curtailments/settlements/special terminations.</p> <p>c.Provide the actual contributions to pension and OPEB plans for the years 2017-2021; and show the dollar amounts for each affiliate, the allocation factors used, and the underlying calculations of the respective allocators.</p>
3	9	Provide the Ohio Utilities specific internal controls that apply to the Money Pools for regulated or unregulated subsidiaries were in effect during the period 2014-2021.
3	10	Please refer to DM Set 1 DR 38 Attachment 1, Utility Money Pool Agreement, Section 1.04 (a) which states: “Each loan shall be authorized by the lending Party’s Chief Financial Officer or treasurer, or designee thereof”. Please provide all written procedures and guidance on how the Chief Financial Officer or designee thereof decides whether the Party can lend into the Money Pool and how much there is available to lend.
3	11	Please refer to DM Set 1 DR 38 Attachment 1, Utility Money Pool Agreement, Section 1.04 (c) which states: “All borrowings from the Utility Money Pool shall be authorized by the borrowing Party’s Chief Financial Officer or treasurer or designee thereof.” Please provide all written procedures and guidance on how the Chief Financial Officer or designee thereof decides whether the Party should borrow from the Money Pool and how much they need to borrow.
3	12	Please refer to DM Set 1 DR 38 Attachment 1, Utility Money Pool Agreement, Section 1.04 (b) which states: “FirstEnergy Service, as administrator of the Utility Money Pool, will provide each party with periodic activity and cash accounting reports that include, among other things, reports of cash activity, the daily balance of loans outstanding, and the calculation of interest charged”. Please provide all such reports from FirstEnergy Service to the Ohio Companies from 2016 to 2020.
4	1	<p>In Staff Witness Buckley’s testimony in Case 14-1297-EL-SSO, June 29, 2019, page 6, the witness refers to Staff DR #35 in which the Companies state that if FE were to fall below investment grade they would experience, among other consequences, more stringent terms with suppliers and counterparties.</p> <p>a.Provide examples of terms with suppliers and counterparties that could be impacted if FE were to fall below investment grade.</p> <p>b.Provide actual instances where FE credit downgrades impacted terms with suppliers and counterparties.</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
4	2	<p>In the Fifth Entry on Rehearing in Case 14-1297-EL-SSO, ¶1282, the Commission lists reducing outstanding pension obligations as a way in which Rider DMR revenues might be used to lower the cost of borrowing.</p> <p>a. Describe any steps taken by the Companies to address the pension funding deficit over the period 2014-2021.</p> <p>b. Describe any steps taken by other FirstEnergy subsidiaries to address the pension funding deficit over the period 2014-2021.</p>
4	3	<p>In the Fifth Entry on Rehearing in Case 14-1297-EL-SSO, at ¶206, the Commission conditions the recovery of revenue under Rider DMR on, among other requirements, a demonstration of sufficient progress in the implementation and deployment of grid modernization programs approved by the Commission.</p> <p>a. Identify all programs meeting the definition of grid modernization programs (including pilots) identified by the Companies and their associated case numbers.</p>
4	4	<p>In FERC Docket No. RM02-14-000; Order No. 634, in paragraph 57 it states “Therefore, when a FERC-regulated entity's proprietary capital ratio falls below 30 percent (or conversely, its long-term debt ratio rises above 70 percent), the FERC regulated entity must file a notification with the Commission, detailing its proprietary capital ratio, the significant event(s) or transaction(s) that contributed to the proprietary capital ratio falling below 30 percent, the extent to which the FERC-regulated entity has amounts loaned or money advanced to others within its corporate group through its cash management program(s), and plans, if any, to raise its proprietary capital ratio.”</p> <p>a. Does this Notice provision apply to the Ohio utilities?</p> <p>b. Has such a notice ever been filed by any of the Ohio Utilities?</p> <p>c. Please provide any such notices filed by the Ohio Utilities, if applicable.</p> <p>d. If the Notice provision does not apply, please indicate if any of the Ohio utilities proprietary capital ratios fell below 30 percent since 2014? If so, please indicate the utility/month(s) that such ratio fell below 30 percent.</p>
4	5	<p>Each of the Ohio utilities files FERC Form 1 Annual Reports and they include Statements of Cash Flows on pages 120-121. Which line(s) include lending and borrowing on such Cash Flow Statements?</p>
4	6	<p>According to page 233 of Cleveland Electric Illuminating Company's FERC Form 1 Annual Report for the 12 months ended December 31, 2020; it has \$1.689 billion of goodwill recorded in Account 186 Miscellaneous Deferred Debits.</p> <p>a. Explain the origin of this goodwill; including citations to any orders that approved the underlying transaction(s).</p> <p>b. Has the PUCO issued any orders or provided any written guidance on the regulatory or accounting treatment for this goodwill? Provide if so.</p> <p>c. If applicable, has FERC issued any orders or provided any written guidance on the regulatory or accounting treatment for this goodwill? Provide if so.</p> <p>d. Do the impacts of Goodwill affect the Cleveland Electric Illuminating Company's SEET calculations for 2014-2020 (e.g., is equity supporting goodwill included in common equity balances, is interest cost on debt supporting goodwill included in net income, etc.). Please list and quantify such impacts.</p> <p>e. Please provide an explanation of the income tax treatment related to this goodwill, e.g., is it deductible, is it being amortized for tax purposes?</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
4	7	<p>Please refer to Set 2-DR-004 concerning Toledo Edison's Goodwill, provide the following additional information.</p> <p>a.If applicable, has FERC issued any orders or provided any written guidance on the regulatory or accounting treatment for this goodwill? If so, please provide.</p> <p>b.Other than the impacts of Goodwill affecting Toledo Edison's SEET calculations are there any other impacts of goodwill for 2014-2020 on the SEET calculations (e.g., is equity supporting goodwill included in common equity balances, is interest cost on debt supporting goodwill included in net income, etc.). Please list and quantify such impacts.</p> <p>c.Please provide an explanation of the income tax treatment related to this goodwill, e.g., is it deductible, is it being amortized for tax purposes?</p>
4	8	<p>Refer to Set 01-DR-024 Attachment 1 which provides "the list of relevant Internal Audits involving the Ohio utilities issued during the period 2014-2021." Provide the full audit reports for the following audits listed on Attachment 1.</p> <p>a.8/22/2016 Audit of the Implementation of the Ohio ESP IV Plan as of August 5, 2016</p> <p>b.12/14/2017 Audit of Capital and Operation & Maintenance Expenses as of September 30, 2017</p> <p>c.5/18/2018 Federal Energy Regulatory Commission Form 1 Process as of April 13, 2018</p> <p>d.6/28/2018 Federal Energy Regulatory Commission Standards of Conduct & Affiliate Restrictions as of May 31, 2018</p> <p>e.7/2/2018 FirstEnergy Utilities Regulatory Compliance & Reporting</p> <p>f.12/10/2018 Accounting for Capital & Maintenance Costs</p> <p>g.4/1/2019 Analysis of the Master Pension Plan</p> <p>h.7/15/2020 Financial Transformation - Regulatory Deferral Process Automation</p>
4	9	<p>Please refer to Set 1-DR-035 concerning Strategic Plans. The response states "Strategic Plans for FirstEnergy Corp. and the Ohio Utilities were created beginning in 2019; accordingly, there are no Strategic Plans for the period 2014 through 2018."</p> <p>a.Please clarify, does this response mean that FirstEnergy did not have strategic plans or anything similar before 2019?</p> <p>b.If not, provide the plans for 2014-2018.</p>
4	10	<p>In reference to the Money Pool discussion Daymark held with [REDACTED] on September 1, 2021, he mentioned that the treasury department provides certain money pool data to accounting at month end.</p> <p>a.What data does the treasury department provide accounting? Please provide an example of each data type.</p> <p>b.What does accounting do with that data at month end? Please describe accounting's procedures as well as any controls that are in place.</p> <p>c.Please provide an example report or analysis that accounting puts together as part of their month-end procedures.</p>
4	11	<p>Please describe the controls that are in place within SAP, Accounts Payable system that control money being disbursed.</p>
4	12	<p>Please describe the disbursement process that takes place within each business services group. Please include in that description the authorization process for disbursing monies and all controls that are in place.</p>
4	13	<p>What is the process by which dividends are determined for each of the Ohio Companies? Please describe in detail.</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
4	14	<p>Refer to the Companies' application to the Commission dated December 10, 2001 in Case 01-3183-EL-AIS.</p> <p>a. In paragraph 7, the Companies refer to a utility money pool contract to be filed with the Securities and Exchange Commission. Please provide this contract.</p> <p>b. In paragraph 13, the Companies describe a Form U-1 filed to and ruled on by the Securities and Exchange Commission. Please provide this form and approval order.</p>
4	15	<p>Refer to the Utility Money Pool Agreement, Set1-DR-038 Attachment 2:</p> <p>a. Section 1.03 (b)- Describe the rationale for the requirement that Borrowing Parties borrow pro rata from each lending Party rather than from the lender with the least cost available funds.</p> <p>b. Section 1.05 (a)- In how many months since the utility money pool's inception have Internal Funds comprised the daily outstanding balance of all loans? Within these instances, in how many cases was the 30 day LIBOR rate used as opposed to the obtainable money market rate? Within the instances that Internal Funds comprised the daily outstanding balance of all loans, how did the 30 day LIBOR rate compare to the obtainable money market rate for all cases?</p> <p>c. Section 1.05 (b)- Does FirstEnergy Corp typically borrow at higher or lower interest rates than the regulated subsidiaries? If so, generally how much would the interest rates differ between FirstEnergy Corp and the regulated subsidiaries?</p>
4	16	<p>The response to DR-007, Attachments 1-7 present the annual capital budgets for the Ohio utilities for the years 2014-2021. Similarly, the response to DR-008, Attachments 1-7 present the annual capital budget variance reports for the Ohio utilities for the years 2014-2020. In the years 2014-2020, the annual capital budget variance reports in DR-008 indicates that each of the Ohio utilities respective capital budget amounts were lower than the annual capital budget amounts shown in DR-007 (ranging in total by \$44 million lower in 2017 to \$247 million lower in 2020).</p> <p>a. Please explain why each of the capital budget variance reports provided in DR-008 show lower budgets than the capital budgets provided in DR-007.</p> <p>b. Indicate if each initial (i.e., DR-007, Attachments 1-8) and subsequent revision (i.e., DR-008, Attachments 1-8) to the capital budgets shown in DR-007 and DR-008 were approved by the Ohio utilities Boards of Directors.</p> <p>c. For each year 2014-2020 indicate the major categories of capital budgets that were reduced and explain the major reasons/causes for the subsequent revisions/reductions to the Ohio utilities respective capital budgets.</p>
4	17	<p>The response to DR-008 states "The annual capital budget variance reports for each of the Ohio Utilities for 2021 have not yet been prepared." Provide the YTD capital budget variance reports for each of the Ohio Utilities for 2021.</p> <p>a. Have revisions to the 2021 capital budgets been implemented or are they being contemplated? If so, indicate the major categories of capital budgets that are being changed and explain the reasons for the subsequent revisions to the Ohio utilities respective 2021 capital budgets.</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
4	18	<p>Refer to the O&M Expense Variance reports for the Ohio utilities for years 2014-2021, Set 1-DR-010, Attachments 1-8:</p> <p>a.DR-010 Attachment 4 pertains to 2017; this report presents O&M-OTL actual and budget line items totaling for the Ohio utilities of \$117.5 million and \$136.2 million respectively. Similarly, DR-010 Attachment 3 pertaining to 2016 presents O&M-OTL actual and budget line items totaling for the Ohio utilities of \$53.5 million and \$56.6 million respectively. Explain the reasons for the \$79.6 million budgeted and \$63.9 million actual increases in O&M-OTL for 2017 as compared to 2016.</p>
4	19	<p>Refer to the O&M Expense Variance reports for the Ohio utilities for years 2014-2021, Set 1-DR-010, Attachments 1-8:</p> <p>a.DR-010 Attachments 1-7 indicate that actual O&M expenses range between \$97.9 million (2016) and \$251.9 million (2020); actual O&M expenses that appear on FERC Form 1 pages 320-323 for the Ohio utilities are much greater amounts (e.g., Ohio Edison O&M expenses for 2020 were \$761.3 million per FERC Form 1, pg. 114; the Response to DR-010 Attachment 7 shows actual O&M for Ohio Edison was \$93.8 million).</p> <p>i.Explain why the O&M expenses differ—are the expenses that are budgeted by the companies considered controllable costs?</p> <p>ii.Indicate the categories that are omitted (e.g., purchased power, transmission of electricity by others, etc.)?</p> <p>1.Are Service Company cost allocations (from FirstEnergy or other affiliates) reflected in the Ohio Utilities O&M expenses provided in response DR-010 or are they omitted? If so, explain why (i.e. is budget control administered at the Service Company level)?</p> <p>2.Are these remaining (omitted) categories of expenses budgeted for and their variances tracked? If so, provide such information for 2014-2021. If not, explain why not.</p> <p>a.Please indicate the ratemaking treatment for these remaining (omitted) categories of expenses that are not included in DR-010 Attachments 1-7 (e.g., reconciled, deferral accounting, pass through via automatic adjustment clause, etc.).</p> <p>b.If these costs are not budgeted and tracked, please explain how management monitors and provides oversight over these remaining (omitted) categories of expenses.</p>
4	20	<p>Refer to 2019 tab for Set 02-DR-006 Attachment 1. This tab presents the 2019 Service Company Capital Budget variances for 2019. Line 362 of the Excel file indicates a \$143 million budget variance for the item described as “FEU Formula Port Adj - BUO – Dev.” Also, line 406 of the Excel file indicates a \$30 million budget variance for the item described as “FEU Capital Commitment BUO - Dev.”</p> <p>a.Explain what each of these items represents and indicate why \$0 were expended in 2019.</p> <p>b.Please indicate whether either of these projects was budgeted for in 2020 or 2021.</p> <p>c.Please indicate whether either of these projects will be budgeted for in years after 2021.</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
4	21	<p>Provide a description of the capital budgeting development and planning processes/framework in effect during the years 2016-2019 that apply to the Ohio utilities. This request should cover the following topics at a minimum:</p> <ul style="list-style-type: none"> •Short and long term budgets/plans (e.g. one and five year plans) •Process for selection, ranking and prioritization of projects/categories •How are cost benefit analyses used in the planning/budgeting process •Budget/status monitoring and oversight process and timing (e.g., monthly, quarterly) •Change request process for projects/categories •Overall budget spending modification process •Budget approval process (overall and project level) •Software systems and tools used to track/manage capital budgets, including reports that are used for such tracking •Organization chart(s) of capital budgeting staff (if any) •Guidance documents provided to employees that are used to prepare the short and long term plans/budgets (e.g., assumptions, escalators, contingencies, unit costs, load growth, etc.) <p>b.Indicate if these processes are still in effect or if changes have been made and describe any such changes in processes.</p> <p>c.Indicate if any internal or external audits have reviewed the capital budgeting process.</p> <p>d.Provide internal controls over these processes, including the approval process.</p>
4	22	Indicate if there are any major differences between the capital budgeting development and planning processes used by the Ohio utilities and FirstEnergy's out of state utilities or non-regulated businesses.
5	1	With respect to the interview with [REDACTED], please provide and explain all invoice approval procedures and controls, including the Level of Signature control and SOX controls.
5	2	[REDACTED] mentioned that for an example expenditure, the accounting would be a debit to the specific project expense or capital account and a credit to cash/the money pool. Please confirm that funds to pay Ohio Company invoices come from the regulated utility money pool. If not, where do they come from?
5	3	With respect to the interview with [REDACTED], can FE confirm if there are reports or spreadsheets that track grid modernization investment planned (initially budgeted) \$ amounts versus the \$ amount that is actually spent/implemented in the field? If so, please provide those reports for the audit period.
5	4	Are disbursements from the money pool coded or tied to grid modernization in any way? If so, how?
5	5	Were there any internal audits on the money pool during the period of 2015 to 2021? If so, please provide the audit report
5	6	Were there any external audits specific to the money pool during the period of 2015-2021? If so, please provide the audit report.

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
5	7	Has FERC, the SEC, or Ohio or any other government/state entity asked for an audit on the money pool during the time period of 2015-2021? If so, please provide the associated audit report.
5	8	Provide all SOX controls and procedures related to the Regulated Money Pool.
5	9	Please provide the month-end positions for each of the Ohio Companies from 2015-2021 of notes receivable and payable accounts 145-990 and 233-990 respectively.
5	10	Why would one of the Ohio Companies borrow short term debt instead of accessing it from the money pool? Please explain.
5	11	Is there any detailed breakout of Ohio customer remittances (i.e. by rider) once they are collected and before they enter the money pool? What about after they enter the money pool? Specifically describe any way of tracking rider dollars once collected, before and after entering the money pool.
5	12	For partially paid bills, how would the paid portion be attributed to various components of the bill, specifically Rider DMR? For instance, if a customer's bill in one month was \$150 and the DMR portion accounted for \$4, but the customer only paid \$50, what portion of the paid remittances would be attributed to DMR?
5	13	As referenced in the interview with [REDACTED], please provide the month-end reports that show the net borrowing or lending position and interest earned or expensed for each Ohio Company from 2015-2021.
5	14	As referenced in the interview with [REDACTED], please provide the corporate procedure for ranking capital projects by priority with a descriptor for each ranking. For example, [REDACTED] gave an example of a project rated as "B".
5	15	Please provide a report that shows the month-end balance that FE lent to the Regulated Money pool for the time period of 2015-2021.
5	16	Please provide the monthly amount of interest charged on these FE loans to the Regulated Money Pool for the time period of 2015-2021.
5	17	What role does the Emerging Tech group play in the capital budgeting process for the Ohio Companies? a. Was that group in place during the time DMR was in place? If not, when was the group initiated? Who do they report to? b. If so, did they assist with or provide input on any grid modernization projects that the Ohio Companies undertook? Specifically before Grid Mod 1 was approved.
5	18	What specific actions did/have the companies taken since the time its Ohio Opco's and FirstEnergy's credit ratings were downgraded to improve credit ratings to investment grade? a. Please list all actions taken to meet S&P's "separateness test" and the resulting ratings achieved as a result of meeting such test. b. Provide the estimated cost reduction/improvement (basis points) on revolving credit facilities or similar and the related principal outstanding and impact on collateral posted as a result of actions taken to improve the S&P credit ratings. Please provide all sources of this analysis.

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
5	19	<p>Please list the adverse impacts as a result of the credit rating downgrade to below investment grade that occurred in late 2020.</p> <p>a. Describe any specific restrictive terms and conditions, such as requiring a pledge of security and more rigid financial covenants that were implemented by lenders.</p> <p>b. Estimate the increase cost (basis points) on revolving credit facilities or similar and the related principal outstanding.</p> <p>c. Was there any collateral posted? What was it for? What was the total amount of collateral needed?</p> <p>d. How did the downgrade affect the regulated money pool, if at all? Were any restrictions triggered by the downgrade (e.g., were any Ohio or out of state participants restricted from accessing the pool)? Please explain your conclusions.</p>
5	20	<p>The Direct Testimony of Steven R. Staub dated March 1, 2019 in Case No. 19-361-EL-RDR states at page 15: "FirstEnergy Corp. has existing bonds which have an increase in the interest rate of 25 basis points for every notch that credit ratings fall compared to when the debt was issued. Every 25 basis points would result in approximately \$9.6 million in additional interest costs annually. Furthermore, in the event of a one-notch credit rating downgrade, FirstEnergy Corp. will incur additional interest expense of approximately \$4.7 million per year, on its term loan debt and revolving credit facility."</p> <p>a. Please estimate the impact of the credit rating downgrade to below investment grade that occurred in late 2020 on the above bonds.</p> <p>b. Do any of the Ohio Opcos hold such bonds, if so estimate the impact on the Ohio Opcos.</p>
5	21	<p>According to Toledo Edison's FERC Form 3Q for the 2nd quarter of 2021 "on May 6, 2021, TE issued \$150 million of 2.65% senior secured notes due 2028. Proceeds from the issuance were used to repay short-term borrowings, fund TE's ongoing capital expenditures and for other general corporate purposes." Please estimate and explain how the non-investment grade rating affected the cost, terms, length, etc. of TE's debt issuance, if at all.</p>
5	22	<p>Provide the written dividend policy for FirstEnergy. If no such policy is written, provide the factors/metrics that are considered when a dividend is approved for FirstEnergy.</p>
5	23	<p>Provide any dividend restrictions or limitations for FirstEnergy including any placed by regulatory agencies.</p>
5	24	<p>Provide the written dividend policy for Ohio Opcos. If no such policy is written, provide all the factors/metrics that are considered when a dividend is approved for the Ohio Opcos.</p>
5	25	<p>Provide any dividend restrictions or limitations for the Ohio Opcos, including any placed by regulatory agencies.</p>
5	26	<p>According to line 81 of the Ohio Opcos FERC Form 1 Statement of Cash Flows (pages 120-121) dividends amounting to \$350, \$400, and \$730 million were paid in 2017-2019 respectively.</p> <p>a. Provide the support for the above dividend payments, including any internal communications that support these dividends. Include the factors/metrics and all associated quantifications that were evaluated by the Ohio Opcos to support the decisions to pay the above dividends for 2017-2019.</p> <p>b. Provide all materials that were submitted to the Ohio Opco Boards that supported the approvals of the above dividends.</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
5	27	According to line 69 of the Ohio Opcos FERC Form 1 Statement of Cash Flows (pages 120-121) Equity infusions amounting to \$160 million were made in 2017 to the Ohio Opcos. Provide the factors/metrics and all associated quantifications that were evaluated to support the decisions to invest the above equity in 2017.
5	28	On page 14, lines 11-14 of Mr. Staub's testimony in case 19-361-EL-RDR, he describes the following situation: "When a company is non-investment grade, interest rates increase as much as 1%. In fact, in December 2018, a period of market volatility, indicative interest rates for non-investment grade issuers (who had difficulty even accessing the market) increased by more than 2%." a. Please provide the supporting analysis behind this statement, including the interest rates researched and the companies that had trouble accessing the market
5	29	On page 15 of Mr. Staub's testimony, in lines 9-12, Mr. Staub states: "Further, PJM Interconnection LLC ("PJM") would require additional collateral of the Companies to participate in PJM markets. In addition, FirstEnergy and the Companies may be required to post additional collateral associated with outstanding surety bonds." a. Has FirstEnergy ever had to post the referenced additional collateral to participate in PJM? When? b. What would be the level of collateral that PJM would require FE to post in the above referenced case?
5	30	Please refer to OA Set 1 INT 37 Attachment 1 Revised Supplemental. On the bottom of page 1, the response states: "FirstEnergy Corp. spent nearly \$1 million for an expert consultant to support this initiative, which spanned multiple months. Following this work, FirstEnergy Corp. created an Emerging Technologies (EmT) organization, consisting of two departments responsible for developing strategy and implementing emerging technologies." a. What was the time frame of the engagement with the consultant as mentioned above? Specifically, please provide the month and year of the initiative. b. Please explain the relationship of the two departments of the EmT organization, the developing strategy and implementing technology group, with Rider DMR. What is their relationship with implementing Grid Mod 1?
5	31	Please refer to OA Set 1 INT 37 Attachment 1 Revised Supplemental. On page 4, the response states: "For example, the Companies reduced their long-term debt in support of grid modernization by \$85 million in 2017 and an additional \$30 million in 2018." a. Please provide details on these two debt reductions (85 and 30 million). What type of debt was reduced and at which entity (FE Corp, Ohio Edison, etc.)? b. How did this reduction in long-term debt support grid modernization?
5	32	Please refer to OA Set 1-INT 37 Attachment 1 Revised Supplemental. The response states on page 1: "With Rider DMR, as well as other significant contributions by FirstEnergy employees, management, shareholders and others, the Companies have been able to avoid a downgrade" a. Please detail the other significant contributions referenced in this statement. b. On page 3 it states "For example, the Companies' weighted average cost of long-term debt has decreased by approximately 1% since the approval of Rider DMR." Please explain how/why the cost of debt decreased, was it due to a credit rating upgrade, changes in interest rates, etc.? Provide the quantification supporting the 1% cost of debt.

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
6	1	<p>Please describe the authorization process for developing and finalizing the capital budget.</p> <p>a. Please identify which groups and/or individuals are required to sign off on or approve the annual capital budget for the Ohio Companies and in which order that authorization proceeds.</p> <p>b. Once the capital budget is finalized, what is the authorization process for the Ohio Companies starting any capital project associated with that budget, if any? Please describe.</p> <p>c. How was this process used to fund grid modernization investments while DMR was in effect?</p>
6	2	For the prioritization matrix or procedure referenced in Set 5 DR 14, who or what group is responsible for using the prioritization procedure to prioritize capital projects? At what point in the budget development process is this done?
6	3	For the prioritization matrix or procedures as referenced in Set 5 DR 14 and the above Set 6 DR 2, how was grid modernization incorporated into this procedure while Rider DMR was in place?
6	4	See response to Set-01-DR-007 attachments 1 through 6 which provide capital budgets for 2014 through 2019 covering the time that DMR was in effect. How were capital projects in these budgets defined as grid modernization related and please explain the types of costs associated with the grid modernization budgeted items?
6	5	Please refer to the responses of Set 1 DR 7 Attachments 1-8. How did FirstEnergy determine the items to be included in the "Modernization included in budget" totals?
6	6	Please refer to Set 1 DR 7 attachments 4 and 5. Please explain the major drivers behind budget increases for CEI, OE and TE from 2017 to 2018.
6	7	When was the Emerging Tech group created? Why was it created?
6	8	Have the responsibilities of the Emerging Tech group changed since its inception?
6	9	Was the Emerging Tech group ever focused on DMR funds in any way? If so, how?
6	10	Please refer to the response to Set 4 DR 11, which discusses the controls within SAP, Accounts Payable that control money being disbursed. How are the invoices in SAP validated? Please provide all documentation regarding controls and procedures around invoice processing and validation.
6	11	Please see Set 01-DR-020 Attachment 1. Please provide corresponding documents, that is, ratings methodologies, for Standard & Poor's and Fitch.
6	12	Please refer to Set 03-DR-008 Attachment 2. Please provide the Pension Plan balances by Operating Company, including PBO, Fair Value of Assets, Contributions, and Funded Status, for the years 2013-2020.

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
6	13	<p>Please describe the nature of the records generated and kept for the values for PBO and fair value of assets shown in Set 03-DR-008 Attachment 2.</p> <p>i. How are company-specific PBO and FMV Assets determined as shown in the attachment?</p> <p>ii. Are these formal accounting records? If not, describe the type of records these are considered.</p> <p>iii. Are these separate company figures audited by an internal or outside party?</p> <p>iv. Are these separate company figures used in filings with any government regulatory body?</p> <p>v. Are the underlying separate company pension assets formally or legally segregated for each of the indicated companies?</p>
6	14	<p>Please explain how pension plan assets are treated when an employee transfers: (1) from a regulated Operating Company to another regulated Operating Company (2) between a regulated Operating Company and a competitive affiliate, and (3) between a regulated Operating Company and FirstEnergy Service Company. If assets are transferred, how are they valued?</p>
6	15	<p>Please refer to Set 03-DR-008 Attachment 2. Please explain generally why FirstEnergy Service Company's funded status at the beginning of the year was 43% in comparison to the Ohio Utilities which were at least 87% funded.</p>
6	16	<p>Please refer to Set 03-DR-008 Attachment 2. Were the contributions shown for 2018-2019 fully tax deductible? If not, please indicate the amount of contributions that were tax deductible.</p>
6	17	<p>Did the contributions shown for 2018-2019 have any favorable impacts on any cash flow credit metrics or other favorable impacts on the credit ratings issued by Moody's and S&P? If so, explain how those metrics were affected.</p>
6	18	<p>According to Ohio Edison's 2020 FERC Form 1 (pg. 123.4) "FirstEnergy recognizes a pension and OPEB mark-to-market [MTM] adjustment for the change in the fair value of plan assets and net actuarial gains and losses annually in the fourth quarter of each fiscal year and whenever a plan is determined to qualify for a remeasurement...OE's pension and OPEB mark-to-market adjustments for the years ended December 31, 2020 and 2019, were \$42 million and \$70 million, respectively."</p> <p>a. Explain how the above \$42 and \$70 million amounts for MTM were calculated and provide supporting details.</p> <p>b. Were the above MTM amounts allocations or direct chargers? If they were allocations, please provide the allocation factors.</p> <p>c. Did FirstEnergy Service Company incur MTM adjustments? Were any such MTM adjustments allocated to the Ohio Operating Companies (directly or via payroll loading factors)? If so, provide the amounts allocated to the Ohio Operating Companies for 2019-2020.</p>
6	19	<p>Please refer to DM Set 01-DR-045 – Oxford Advisors Set 5-INT-112 Attachment 1 tab "INT-055 d". Note for Ohio Edison in years 2018 and 2019 that the pension contributions excluding First Energy Service Company were \$27M and \$43M respectively. Please refer to DM Set 3-DR-008 Attachment 1 or Ohio Edison's FERC Form 1 Statement of Cash Flows Line 9, which show pension contributions in 2018 and 2019 of \$15M and \$35M respectively. Please reconcile the Ohio Edison pension contribution figures for years 2018 and 2019.</p>

APPENDIX A- Discovery Questions

An Audit Report of the Ohio Companies' Rider DMR

Set	Q	Data Request
6	20	Refer to Set 03-DR-008 Attachment 2, tab "2018". Do the Operating Companies carry a liability on their books related to the \$1,154M fair value of plan assets against \$2,698M of pension benefit obligations affiliated with the FirstEnergy Services Company? If so, please detail this calculation for each of the Ohio utilities for year 2018 and note any FERC Form 1 line items or figures which this allocation impacts.
6	21	Please describe how pension contributions are funded for FirstEnergy Services Company. When an operating company is allocated a payroll cost for FESC services, does this cost include an allocation for FESC employee pension costs (e.g., included in payroll loading factors)?
6	22	Please explain how FirstEnergy accounts for or allocates payments to retirees from pension assets. Are those payments deducted from company-specific pension assets?
6	23	Is the Net Periodic Benefit Costs amount used for determining pension expense in the Ohio Opcos revenue requirements for ratemaking purposes and for SEET filings? If not, please explain how pension expenses are determined for ratemaking purposes and for SEET filings. Are special termination benefits included in revenue requirements for ratemaking purposes and for SEET filings?
6	24	Please Provide the S&P-Debt/EBITDA and Moody's-CFO Pre-WC-Dividends/Debt metrics for First Energy and its Ohio utilities for the period 2017-2020 (actual) and for 2021-2024 (forecast). Provide such data both including and excluding Rider DMR revenues.

APPENDIX B

LIST OF DOCUMENTS REVIEWED

APPENDIX B- List of Documents Reviewed
An Audit Report of the Ohio Companies' Rider DMR

Document Number	Document Name	Description	Relevant Data Request	Confidential (Yes/No)
1	DM Set 01-DR-011 Attachments 1-131	Credit Rating Agency Reports (FE, OE, CEI, TE), 2014-2021	Set 1 DR 11	Yes
2	DM Set 01-DR-025 Attachment 1	Ohio Cost Allocation Manual	Set 1 DR 25	Yes
3	DM Set 01-DR-038 Attachment 1	Utility Money Pool Agreement, 2011	Set 1 DR 38	No
4	DM Set 01-DR-038 Attachment 2	Utility Money Pool Agreement, 2017	Set 1 DR 38	No
5	DM Set 01-DR-014 Attachment 1	Work Paper, Rider DMR Refund	Set 1 DR 14	No
6	DM Set 01-DR-018 Attachments 1-25	Rider DMR Tariffs and working models, 2017-2019	Set 1 DR 18	No
7	DM Set 01-DR-043 Attachment 1	Grid Modernization Direct Spend, 2017-2019	Set 1 DR 43	No
8	DM Set 01-DR-022 Attachment 1	Credit Metrics, Actual and Forecasted 2014-2024	Set 1 DR 22	Yes
9	DM Set 01-DR-029 Attachments 1-7	Pension Actuarial Reports, 2014-2020	Set 1 DR 29	Yes
10	DM Set 01-DR-030 Attachments 1-8	SEET Calculations 2014-2021	Set 1 DR 30	Yes?
11	DM Set 01-DR-008 Attachments 1-7	Capital Budget Variance Reports, 2014-2020	Set 1 DR 8	No
12	DM Set 01-DR-010 Attachments 1-8	Operating Budget Variance Reports, 2014-2021	Set 1 DR 10	Yes (only 8)
13	DM Set 01-DR-033 Attachments 1-8	Federal/State Tax Returns, 2016-2019	Set 1 DR 33	Yes
14	DM Set 01-DR-034 Attachments 1-24	Standalone Tax Returns, 2016-2019	Set 1 DR 34	Yes
15	DM Set 01-DR-019 Attachment 1	Credit Rating History, FE and Companies, 2014-2021	Set 1 DR 19	Yes
16	DM Set 01-DR-024 Attachment 1	List of Internal Audits Involving Ohio Utilities, 2014-2021	Set 1 DR 24	Yes
17	DM Set 01-DR-024 Attachment 2	List of Risk Interview Meetings	Set 1 DR 24	Yes
18	DM Set 01-DR-027 Attachment 1	System Losses/Peak Load Metrics, 2014-2021	Set 1 DR 27	No
19	DM Set 01-DR-039 Attachments 1-2	Unregulated Money Pool Agreements	Set 1 DR 39	No
20	DM Set 01-DR-044 Attachment 1	Confidential Oxford Report	Set 1 DR 44	Yes
21	DM Set 01-DR-040 Attachments 1-29	Money Pool Quarterly Reports, 2014-2021	Set 1 DR 40	No
22	DM Set 01-DR-007 Attachments 1-8	Annual Capital Budgets, OH Companies, 2014-2021	Set 1 DR 7	Yes (only 8)
23	DM Set 01-DR-009 Attachments 1-8	Annual Operating Budgets, OH Companies, 2014-2021	Set 1 DR 9	Yes (only 8)
24	DM Set 01-DR-046 Attachment 1	Actual/Anticipated Investments by Category, 2018-2021	Set 1 DR 46	No
25	DM Set 01-DR-047 Attachment 1	Actual/Budgeted Spend Under Grid Mod I, 2019-2022	Set 1 DR 47	No
26	DM Set 01-DR-037 Attachments 1-8	Short-Term Incentive Plan Details 2014-2020	Set 1 DR 37	No
27	DM Set 01-DR-037 Attachments 9-16	Long-Term Incentive Plan Details 2014-2020	Set 1 DR 37	No
28	DM Set 01-DR-035 Attachments 1-8	Strategic Plans, FE and Companies, 2019-2021	Set 1 DR 35	Yes
29	DM Set 01-DR-012 Attachment 1-919	Equity Analyst Reports, FE and Companies, 2014-2021	Set 1 DR 12	Yes
30	DM Set 01-DR-013 Attachment 1	Billing/Invoicing Flowchart	Set 1 DR 13	No
31	DM Set 01-DR-020 Attachment 1	Adjustment Methodology, Moody's Investors Service	Set 1 DR 20	Yes
32	DM Set 01-DR-020 Attachment 2	CFO Metric Calculation, 2014-2019	Set 1 DR 20	Yes
33	DM Set 01-DR-016 Attachments 1-3	DMR Revenue by Service Class, 2017-2019	Set 1 DR 16	No
34	DM Set 01-DR-016 Attachments 4-6	Billing Volumes by Service Class, 2017-2019	Set 1 DR 16	No
35	DM Set 01-DR-042 Attachment 1	Money Pool Positions, Penelec and Potomac Edison	Set 1 DR 42	No
36	DM Set 01-DR-004 Attachments 1-6	DMR memoranda	Set 1 DR 4	No
37	DM Set 01-DR-008 Supplemental Attachments 1-7	Capital Budget Variance Reports, 2014-2020, Legal Entity View	Set 1 DR 8	No
38	DM Set 02-DR-006 Attachment 1	Capital Budget Variance Reports 2014-2020	Set 2 DR 6	No

APPENDIX B- List of Documents Reviewed
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Document Number	Document Name	Description	Relevant Data Request	Confidential (Yes/No)
39	DM Set 02-DR-006 Attachment 2	Capital Budget Variance Report 2021	Set 2 DR 6	Yes
40	DM Set 02-DR-007 Attachment 1	Service Company Operating Budgets 2014-2020	Set 2 DR 7	No
41	DM Set 02-DR-007 Attachment 2	Service Company Operating Budgets 2021	Set 2 DR 7	Yes
42	DM Set 02-DR-008 Attachment 1	Service Company Operating Variance Reports 2014-2020	Set 2 DR 8	No
43	DM Set 02-DR-008 Attachment 2	Service Company Operating Variance Report 2021	Set 2 DR 8	Yes
44	DM Set 02-DR-001 Attachments 1-3	Organizational Chart and Employee Tenures	Set 2 DR 1	Yes
45	DM Set 02-DR-002 Attachment 1	FFO Metrics, 2014-2021	Set 2 DR 2	Yes
46	DM Set 02-DR-002 Attachment 2	Grid Mod I Metrics, 2019-2021	Set 2 DR 2	Yes
47	DM Set 02-DR-005 Attachment 1	Service Company Capital Budgets, 2014-2020	Set 2 DR 5	No
48	DM Set 02-DR-005 Attachment 2	Service Company Capital Budget, 2021	Set 2 DR 5	Yes
49	DM Set 02-DR-005 Attachment 3	Service Company Grid Modernization Capital Budget, 2019	Set 2 DR 5	No
50	DM Set 02-DR-010 Attachments 1-3	Pension Forecasts 2018-2026	Set 2 DR 10	Yes (Partial)
51	DM Set 02-DR-009 Attachments 1-3	FE Tomorrow Presentation and Data	Set 2 DR 9	No
52	DM Set 03-DR-005 Attachment 1	Regulatory Accounting SOX Controls	Set 3 DR 5	No
53	DM Set 03-DR-006 Attachment 1	Direct Pension Service Cost, 2016-2020	Set 3 DR 6	No
54	DM Set 03-DR-008 Attachment 1	Pension Contribution History, by Operating Company, 2017-2020	Set 3 DR 8	No
55	DM Set 03-DR-008 Attachment 2	Pension Plan Balance Sheet by OpCo, 2018-2019	Set 3 DR 8	No
56	DM Set 03-DR-007 Attachment 1	Pension and OPEB Costs by Subsidiary, 2014-2020	Set 3 DR 7	No
57	DM Set 04-DR-010 Attachment 1	Internal Money Pool Report, Balances (Sample)	Set 4 DR 10	No
58	DM Set 04-DR-010 Attachment 2	Internal Money Pool Report, Interest (Sample)	Set 4 DR 10	No
59	DM Set 04-DR-010 Attachment 3	Month End Money Pool Accounting Processes	Set 4 DR 10	No
60	DM Set 04-DR-010 Attachment 4	Money Pool Variance Analysis (Sample)	Set 4 DR 10	No
61	DM Set 04-DR-008 Attachments 1-8	Miscellaneous Audit Reports	Set 4 DR 8	Yes
62	DM Set 04-DR-009 Attachments 1-10	Financial Plan, FE and Companies, 2014-2018	Set 4 DR 9	No
63	DM Set 04-DR-002 Attachment 1	Pension Funding Amounts 2014-2021	Set 4 DR 2	No
64	DM Set 04-DR-014 Attachment 1	SEC Approval Order	Set 4 DR 14	No
65	DM Set 04-DR-017 Attachment 1	YTD Variance Report, 2021	Set 4 DR 17	Yes
66	DM Set 05-DR-001 Attachment 1	Accounts Payable Business Process Narrative	Set 5 DR 1	No
67	DM Set 05-DR-001 Attachment 1	Accounts Payable Fraud Risk Assessment for SOX Processes	Set 5 DR 1	No
68	DM Set 05-DR-001 Attachment 1	List and Description of Accounts Payable SOX Controls	Set 5 DR 1	No
69	DM Set 05-DR-009 Attachment 1	Money Pool Positions, Companies, 2015-2021	Set 5 DR 9	No
70	DM Set 05-DR-014 Attachment 1	Project Ranking Corporate Procedure	Set 5 DR 14	No
71	DM Set 05-DR-015 Attachment 1	FirstEnergy Corp Regulated Money Pool Lending, 2015-2021	Set 5 DR 15	No
72	DM Set 05-DR-013 Attachments 1-7	Utility Money Pool Balances, all Participants, 2015-2021	Set 5 DR 13	No
73	DM Set 05-DR-003 Attachments 1-6	Grid Mod I Dashboard and Spending, Nov 2019 - Jan 2020	Set 5 DR 3	No
74	DM Set 06-DR-024 Attachment 1	Credit Metrics, FE and Companies, 2017-2024	Set 6 DR 24	Yes
75	DM Set 06-DR-011 Attachments 1-3	Ratings Methodologies, S&P, Fitch	Set 6 DR 11	Yes
76	DM Set 05-DR-028 Attachments 1-2	Utility Bond Yield Curves, DEC-18 and FEB-19	Set 5 DR 28	No

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Document Number	Document Name	Description	Relevant Data Request	Confidential (Yes/No)
77	DM Set 06-DR-012 Attachment 1	Pension Plan Balance Sheet by Operating Company, 2013-2020	Set 6 DR 12	No
78	DM Set 04-DR-001 Attachment 1	PJM Collateral Email	Set 4 DR 1	Yes
79	DM Set 06-DR-018 Attachments 1-4	Actuarial Valuation Reports, Master Pension and Welfare Plans, 2019-2020	Set 6 DR 18	Yes
80	DM Set 06-DR-018 Attachment 5	Pension Plan MTM Allocations, 2019-2020	Set 6 DR 18	No
81	DM Set 06-DR-017 Attachments 1-2	Ratings Adjustment Methodologies, Moody's and S&P	Set 6 DR 17	No
82	DM Set 05-DR-018 Attachments 1-2	S&P Credit Ratings Actions, October-November 2021	Set 5 DR 18	Yes
83	DM Set 05-DR-018 Attachment 3	Credit Agreement Dated December 6, 2016	Set 5 DR 18	No
84	DM Set 05-DR-018 Attachment 4	Waiver and Amendment to Credit Agreement, Dated November 17, 2020	Set 5 DR 18	No
85	DM Set 05-DR-018 Attachment 5	Credit Agreement Dated October 18, 2021	Set 5 DR 18	No
86	DM Set 05-DR-018 Attachment 6	Credit Overview and Supplement to the PJM Credit Risk Management Policy	Set 5 DR 18	No
87	DM Set 05-DR-022 Attachment 1	Dividend Policy and Dividend Declaration	Set 5 DR 22	Yes
88	DM Set 01-DR-005 Attachments 1-6	Audit Committee Meeting Notes	Set 1 DR 5	Yes
89	DM Set 01-DR-005 Supplemental Attachments 1-27	Board of Direct and Audit Committee Meeting Notes	Set 1 DR 5	Yes
90	DM Set 01-DR-036 Attachments 1-260	Finance, Governance, Audit, Operations and Safety Committee Meeting Note	Set 1 DR 36	Yes
91	DM Set 04-DR-021 Attachment 1	Distribution Portfolio Planning Process Audit Report	Set 4 DR 21	No
92	DM Set 05-DR-026 Attachments 1-12	Monthly Treasury Reports Supporting Ohio Subsidiary Dividend	Set 5 DR 26	No
93	DM Set 05-DR-026 Attachments 13-20	Internal Communications Supporting Ohio Subsidiary Dividend	Set 5 DR 26	No
94	DM Set 05-DR-026 Attachments 21-45	Certification Letters Supporting Ohio Subsidiary Dividend	Set 5 DR 26	Yes
95	DM Set 05-DR-032 Attachment 1	Embedded Cost of Long-Term Debt Calculation	Set 5 DR 32	No
96	DM Set 04-DR-019 Attachments 1-3	FERC Form 1 O&M Cost Breakdown, OH Companies, 2020	Set 4 DR 19	No

APPENDIX C

FIRSTENERGY IDENTIFIED GRID MODERNIZATION PROJECTS

Grid Modernization via DMR - 2016-2019							Scope
Company Code Text	WBS Category	Project Definition With Text	2017	2018	2019	Grand Total	
Cleveland Electric Co	Blanket	CE-700347: ITS - Replace Obsolete RTUs	\$ 164,820	\$ 264,502	\$ 129,867	\$ 559,189	This project is to upgrade Remote Terminal Units (RTUs), which are used at substations for monitoring & control of the distribution system. Replacements are performed on a priority basis (age, protocol, site criticality) with the objective of achieving a 25 year lifecycle schedule by 2025.
Cleveland Electric Co	Specific	CE-700445: IT CDMA FEP for Customer SCADA Circuits	\$ 5,693	\$ 13,886	\$ 3,977	\$ 23,556	This project is to install head-end SCADA communications infrastructure necessary for the migration of legacy leased 4-wire circuits to cellular communications at customer substations. These communications are required for monitoring & control of FirstEnergy's distribution system.
Cleveland Electric Co	Blanket	CE-700564: IT Head-End Infrastructure for IP SCADA		\$ 36,061	\$ 42,387	\$ 78,448	This project is to implement head-end infrastructure necessary to migration SCADA communications from serial to IP. This modernization greatly simplifies the infrastructure and provides greater security, reliability, and scalability for monitoring & control of FirstEnergy's distribution system.
Cleveland Electric Co	Blanket	CE-710001: IT ED Legacy Circuit Replacements	\$ 1,069,303	\$ 1,089,771	\$ 340,420	\$ 2,499,495	This project is to replace legacy leased 4-wire circuits that are being decommissioned by the telecom carriers and move them onto FirstEnergy's private network. These communications are required for monitoring & control of FirstEnergy's distribution system.
Cleveland Electric Co	Blanket	CE-720002: IT Metering Hardware Replacement	\$ 19,165	\$ 17,356		\$ 36,521	This project is to replace meter reading related hardware to ensure the ability to reliably read meters on FirstEnergy's distribution system. As the technology evolves, new equipment must replace the degrading equipment.
Cleveland Electric Co	Blanket	CE-901901: Netwkr Infrastrcure for Smrt Metr (SMIC)			\$ 9,944	\$ 9,944	Install mesh network to support Smart Meter Communications
Cleveland Electric Co	Blanket	CE-730065: ITS - MOSCAD to ACE RTU Replacements	\$ 46,077	\$ 43,717	\$ 20,421	\$ 110,215	This project is to upgrade the degrading reliability of communications provided by the ACE mobile radio system, which is prone to congestion and interference from power line noise and sunspot activity. These communications are moved to 700 Mhz and cellular and are necessary for the monitoring & control of FirstEnergy's distribution system.
Cleveland Electric Co	Blanket	CE-750180: IT Asset Repl Upgd SCADA Wireless Comms		\$ 44,601	\$ 31,066	\$ 75,668	Verizon Wireless is sunsetting 3G cellular service at the end of 2021. The scope of this project is to upgrade Encore Networks Bandit II radios from 3G to 4G to support SCADA and SmartGrid devices used for monitoring & control of FirstEnergy's distribution system.
Cleveland Electric Co	Specific	CN-730961: ITS-Replace Rigel Equipment in CEI*	\$ 199,660	\$ 33,505	\$ 14,842	\$ 248,007	This project was to replace the legacy Rigel alarm RTUs, which was an obsolete communications platform used for monitoring small distribution substations.
Cleveland Electric Co	Specific	CN-731217: ITS-Replace Obsolete RTU's	\$ 9,035	\$ 8,365	\$ 2,831	\$ 20,230	This project is to upgrade Remote Terminal Units (RTUs), which are used at substations for monitoring & control of the distribution system. Replacements are performed on a priority basis (age, protocol, site criticality) with the objective of achieving a 25 year lifecycle schedule by 2025.
Ohio Edison Company	Specific	OC-731217: ITS-Replace Obsolete RTU's	\$ 1,087	\$ 1,203		\$ 2,290	This project is to upgrade Remote Terminal Units (RTUs), which are used at substations for monitoring & control of the distribution system. Replacements are performed on a priority basis (age, protocol, site criticality) with the objective of achieving a 25 year lifecycle schedule by 2025.
Ohio Edison Company	Blanket	OE-700347: ITS - Replace Obsolete RTUs	\$ 218,069	\$ 387,679	\$ 210,917	\$ 816,664	This project is to upgrade Remote Terminal Units (RTUs), which are used at substations for monitoring & control of the distribution system. Replacements are performed on a priority basis (age, protocol, site criticality) with the objective of achieving a 25 year lifecycle schedule by 2025.
Cleveland Electric Co	Program	CE-000490: SX Install new 36KV SCADA switches	\$ 545,412	\$ 645,789	\$ 399,017	\$ 1,590,217	Install Scada controlled switches on subtransmission system to allow remote switching
Cleveland Electric Co	Program	CE-000597: VSA Replacements throughout CEI Terr			\$ 16,618	\$ 16,618	Replace antiquated station exit breakers with new and updated relays
Cleveland Electric Co	Program	CE-000777: Replace Westinghouse MFB Linebacker 138k	\$ 1,747,903	\$ 2,279,760	\$ 602,885	\$ 4,630,548	Replace unreliable switch with more reliable switch and upgraded controls
Cleveland Electric Co	Program	CE-000778: DPU/DPU 2000R relay and ITE-VRK breaker	\$ 803,250	\$ 2,072,371	\$ 1,121,646	\$ 3,997,267	Replace antiquated station exit breakers with new and updated relays
Cleveland Electric Co	Program	CE-000902: UG Oil Switch Replacement Program	\$ 432,664	\$ 558,221	\$ 89,138	\$ 1,080,024	Replace failure prone oil switches with modern vacuum switches
Cleveland Electric Co	Program	CE-000904: UG Network Transformer and Protector Rep			\$ 18,555	\$ 18,555	Rebuild network transformers and replace antiquated network protectors with modern eq
Cleveland Electric Co	Program	CE-001314: Restore/Install SCADA on 13 kV Feeders		\$ 1,927	\$ 3,152	\$ 5,079	Restore remote control of breakers for faster restoration times
Cleveland Electric Co	Specific	CE-000336: SE-Sanborn Sub Voltage Regulation Scheme			\$ 13,786	\$ 13,786	Replace antiquated controllers with new more capable units
Cleveland Electric Co	Specific	CE-000345: SW Emily Substation Replace West MFB 138				\$ -	Replace antiquated switching device and update to modern controls
Cleveland Electric Co	Specific	CE-000460: Lakeshore Unit 18 - Convert to Synchrono				\$ -	Generator converted to synchronous condenser for VAR support
Cleveland Electric Co	Specific	CE-000469: Newburgh Substation 69KV Bus Diff Relays				\$ -	Replace antiquated protection scheme with state of the art microprocessor based relays.
Cleveland Electric Co	Specific	CE-000473: Glenwillow 345 kV Switching Station-PJM				\$ -	Install new substation to strengthen TX system
Cleveland Electric Co	Specific	CE-000690: BKR_REPL-Clark Q-1-CK-T				\$ -	Replace antiquated switching device and update to modern controls
Cleveland Electric Co	Specific	CE-000691: MARTHA SUB REPLACE VOLTAGE REG SCHEME	\$ 21,981			\$ 21,981	Replace antiquated controllers with new more capable units
Cleveland Electric Co	Specific	CE-000692: PURITAS SUB REPLACE VOLTAGE REG SCHEME	\$ 26,751			\$ 26,751	Replace antiquated controllers with new more capable units
Cleveland Electric Co	Specific	CE-000739: Crestwood-Repl ITE-VRK Brkr w/Spare ABB				\$ -	Replace antiquated station exit breakers with new and updated relays
Cleveland Electric Co	Specific	CE-000771: Maplecrest Voltage Regulation	\$ 2,260			\$ 2,260	Replace antiquated controllers with new more capable units
Cleveland Electric Co	Specific	CE-000861: SE 2015 Leroy Center-New 345/138kV Sub			\$ 2,134	\$ 2,134	Install new substation to strengthen TX system
Cleveland Electric Co	Specific	CE-000868: Juniper SS/Northfield SS-Repl SLD Relays				\$ -	Replace electromechanical relays with state of the art microprocessor based relays
Cleveland Electric Co	Specific	CE-000890: SW- Repl 138kV Circuit Switcher at Essex	\$ 82,964			\$ 82,964	Replace antiquated switching device and update to modern controls
Cleveland Electric Co	Specific	CE-000903: UG Replace Underground Oil Fused Cutouts	\$ 121,279			\$ 121,279	Replace antiquated controllers with new more capable units
Cleveland Electric Co	Specific	CE-000907: SE Mayfield Sub - Replace Voltage Regula	\$ 135,399	\$ 2,714		\$ 138,113	Replace antiquated controllers with new more capable units
Cleveland Electric Co	Specific	CE-000926: 36KV SCADA Switch Fault Indicators	\$ 5,020			\$ 5,020	Install fault indicators on SCADA controlled switches to allow operators to determine if fault is upstream or downstream of switch to speed up restoration
Cleveland Electric Co	Specific	CE-000943: SE 41-AL-B Secondary Bank Breaker Replac	\$ 127,412			\$ 127,412	Replace antiquated switching device and update to modern controls

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Cleveland Electric Co	Specific	CE-000989: Installation of G&W Safe-Vu Switches					\$ -	Vacuum switches installed for faster switching capability and quicker restoration times
Cleveland Electric Co	Specific	CE-001051: Hamilton: Replace Failed 138 kV Breaker	\$ 365,610				\$ 365,610	Replace antiquated switching device and update to modern controls
Cleveland Electric Co	Specific	CE-001052: Dawson: Failed R-3-DS-T 34.5 kV Breaker	\$ 115,737				\$ 115,737	Replace antiquated switching device and update to modern controls
Cleveland Electric Co	Specific	CE-001105: Replace PLCs at Horizon Sub	\$ 10,190	\$ 2,648,419	\$ 3,309,715	\$ 5,968,325		Replace antiquated protection scheme with state of the art microprocessor based relays.
Ohio Edison Company	Specific	OE-700445: IT CDMA FEP for Customer SCADA Circuits	\$ 8,379	\$ 21,668	\$ 9,236	\$ 39,282		This project is to install head-end SCADA communications infrastructure necessary for the migration of legacy leased 4-wire circuits to cellular communications at customer substations. These communications are required for monitoring & control of FirstEnergy's distribution system.
Cleveland Electric Co	Specific	CE-001119: Misop Relays-Harper-Pleasant Valley 138	\$ 87,813				\$ 87,813	Install new relays to prevent future misoperations
Cleveland Electric Co	Specific	CE-001188: New LTC Controllers at Clark Sub		\$ 3,593	\$ 8,486	\$ 12,078		Replace antiquated controllers with new more capable units
Cleveland Electric Co	Specific	CE-001299: SW Hickory - Add Load Management Scheme			\$ 105,589	\$ 105,589		Install new control scheme to allow bus tie closing for loss of supply when load is not in excess of planning ratings.
Cleveland Electric Co	Specific	CE-001301: SW Astor - Add Load Management Scheme			\$ 160,502	\$ 160,502		Install new control scheme to allow bus tie closing for loss of supply when load is not in excess of planning ratings.
Cleveland Electric Co	Specific	CE-004000: Smart Grid Modernization Initiative DOE*	\$ 508,306	\$ 671,978	\$ 78,209	\$ 1,258,493		Continued support of existing DOE Pilot area
Ohio Edison Company	Program	OE-001361: OE 2011-2012 ADAPTIVE RELAYING	\$ 65,933		\$ 1,062	\$ 66,995		2011 Install adaptive relaying on distribution circuits with breaker recloser controls (SELS..) capable of accepting adaptive relaying settings. Utilize existing adaptive relaying cabinets currently stored in Pennsylvania warehouse. 2012 Install adaptive relaying on distribution circuits. Scope may require change out of relays. Utilize adaptive relaying cabinets in inventory.
Ohio Edison Company	Specific	OE-001093: 2011 INSTALL SCADA TIER 3 - GRANGER	\$ 1,084			\$ 1,084		Add SCADA, C&I and telemetry to three exits
Ohio Edison Company	Blanket	OE-700564: IT Head-End Infrastructure for IP SCADA		\$ 54,853	\$ 54,999	\$ 109,852		This project is to implement head-end infrastructure necessary to migration SCADA communications from serial to IP. This modernization greatly simplifies the infrastructure and provides greater security, reliability, and scalability for monitoring & control of FirstEnergy's distribution system.
Ohio Edison Company	Specific	OE-001218: 2011 INSTALL SCADA TIER 2 - WEST AKRON S				\$ -		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001220: 2011 INSTALL SCADA TIER 1 - PINE SUB				\$ -		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001221: 2011 INSTALL SCADA TIER 1 - GATES SUB	\$ 5,986			\$ 5,986		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001317: OE 2012 SCADA INSTALL DX FEEDERS*	\$ 655,700	\$ 382,189	\$ 43,169	\$ 1,081,058		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Blanket	OE-750180: IT Asset Repl Upgd SCADA Wireless Comms		\$ 67,602	\$ 45,610	\$ 113,212		Verizon Wireless is sunsetting 3G cellular service at the end of 2021. The scope of this project is to upgrade Encore Networks Bandit II radios from 3G to 4G to support SCADA and SmartGrid devices used for monitoring & control of FirstEnergy's distribution system.
Ohio Edison Company	Specific	OE-001494: SCADA FAIRFIELD SUB ER REGION	\$ 67,588	\$ 27,355		\$ 94,943		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001496: 2013 BAUMHART SUB ADAPTIVE RELAY		\$ 44,959		\$ 44,959		Replace B-9 and Install Adaptive Relaying on Distribution Feeders
Ohio Edison Company	Specific	OE-001497: 2013 SOUTH BASS ADAPTIVE RELAY	\$ 14,994	\$ 16,588	\$ 18,437	\$ 50,019		Add adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001498: 2013 PIKE SUB ADAPTIVE RELAYING	\$ 90,014			\$ 90,014		Replace breakers and add SCADA, C&I and telemetry to all exits
Ohio Edison Company	Specific	OE-001499: 2013 WILLOW CREEK ADAPTIVE RELAY	\$ 10,864	\$ 227,304		\$ 238,168		Add adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001500: 2013 PARK SUB SCADA & ADAPT RELAY	\$ 22,408	\$ 391,542		\$ 413,950		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001501: 2013 SHEFFIELD SUB ADAPTIVE RELAY				\$ -		Add adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001504: 2013 BEXLEY SUB - ADAPT RELAYING				\$ -		Add adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001505: 2013 ORDANCE SUB - ADAPTIVE RELAYING	\$ 18,404	\$ 1,307	\$ 1,373	\$ 21,084		Add SCADA, C&I, telemetry to all exits
Ohio Edison Company	Specific	OE-001506: 2013 EAST AKRON SUB - ADAPTIVE RELAYING	\$ 19,129	\$ 7,698		\$ 26,827		Add adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001507: 2013 CASTALIA SUB SCADA & ADAPTIVE RELAY				\$ -		Add adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001508: 2013 WICKLIFFE SUB SCADA	\$ 30,399	\$ 45,047	\$ 6,154	\$ 81,601		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001509: 2013 PRAIRIE SUB ADAPTIVE RELAYING	\$ 1,243			\$ 1,243		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001849: BLOOMFIELD SUB-INSTALL SCADA C/I AND ADA	\$ 131,477	\$ 53,927	\$ 6,414	\$ 191,817		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001852: LISBON SUB-INSTALL SCADA C/I AND ADAPTIV	\$ 129,049	\$ 287,125	\$ 144,644	\$ 560,818		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001854: ALTA SUB-ADAPTIVE RELAYING ON DIST FEED				\$ -		Add adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001855: LYNCHBURG SUB-SCADA C/I INSTALATIONS ON	\$ 44,091	\$ 17,661		\$ 61,751		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001969: OE URBAN SUB SCADA C/I ON DIST BREAKERS	\$ 35,763	\$ 74,094	\$ 38,779	\$ 148,636		Add SCADA, C&I, telemetry to all exits
Ohio Edison Company	Specific	OE-001970: OE GARDEN SUB SCADA C/I ON BREAKER	\$ 176,133	\$ 61,010		\$ 237,143		Add SCADA C&I to all exits
Ohio Edison Company	Specific	OE-001971: OE WASHINGTON SUB SCADA C/I & ADAPT RELA	\$ 89,640	\$ 280,436	\$ 62,440	\$ 432,517		Add SCADA, C&I, telemetry and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-001972: OE STOW SUB SCADA C/I ON DIST BREAKERS	\$ 10,510	\$ 492,817	\$ 123,693	\$ 627,020		Add SCADA C&I to all exits
Ohio Edison Company	Specific	OE-002010: OE-Columbus Rd Sub-Install SCADA C/I & A	\$ 31,092		\$ 61,897	\$ 92,990		Add SCADA, C&I and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-002012: OE-Leffels Lane Sub - Install SCADA C/I	\$ 67,884	\$ 92,339	\$ 11,743	\$ 171,966		Add SCADA C&I to all exits
Ohio Edison Company	Specific	OE-002013: OE-Crestline Sub-Install SCADA C/I & Ada	\$ 14,111			\$ 14,111		Add SCADA C&I to all exits
Ohio Edison Company	Specific	OE-002014: OE - Dell Sub - Install SCADA C/I & Adap	\$ 53,194	\$ 10,782		\$ 63,975		Add SCADA, C&I and adaptive relaying to all exits
Ohio Edison Company	Specific	OE-002046: OE-Carroll Sub-Install SCADA C/I on Dist	\$ 28,649	\$ 38,260	\$ 612,210	\$ 679,118		Add SCADA C&I to all exits
Ohio Edison Company	Specific	OE-002121: Kent Sub - Install SCADA C/I & Adaptive	\$ 29,248	\$ 28,971	\$ 30,941	\$ 89,160		Add SCADA C&I and adaptive relaying to all exits
Toledo Edison Co	Specific	TW-001464: SCADA Circuit Migration-North Star Steel			\$ 1,438	\$ 1,438		This project is to replace the legacy leased 4-wire SCADA circuit that is being decommissioned by the telecom carrier at North Star Steel substation and move it onto FirstEnergy's private network. These communications are required for monitoring & control of FirstEnergy's distribution system.
Toledo Edison Co	Blanket	TW-700347: ITS - Replace Obsolete RTUs	\$ 92,392	\$ 168,215	\$ 82,962	\$ 343,569		This project is to upgrade Remote Terminal Units (RTUs), which are used at substations for monitoring & control of the distribution system. Replacements are performed on a priority basis (age, protocol, site criticality) with the objective of achieving a 25 year lifecycle schedule by 2025.
Ohio Edison Company	Specific	OE-002265: OE - Eastside Sub - Add SCADA Indication	\$ 1,631			\$ 1,631		Add SCADA Indication to Auto-Switch A-1

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							This project is to install head-end SCADA communications infrastructure necessary for the migration of legacy leased 4-wire circuits to cellular communications at customer substations. These communications are required for monitoring & control of FirstEnergy's distribution system.
Toledo Edison Co	Specific	TW-700445: IT CDMA FEP for Customer SCADA Circuits	\$ 2,998	\$ 7,568	\$ 2,846	\$ 13,412	
Ohio Edison Company	Specific	OE-002738: Cedar Point - Install New Switches SCADA			\$ 107,537	\$ 107,537	Install SCADA on A36, A37, A33, A34, FRLR1 and FRLR102.
Toledo Edison Co	Blanket	TW-900057: N-Recloser Install-Remove- OH	\$ 45,615	\$ 34,856		\$ 80,471	Distribution Reliability Blanket
Toledo Edison Co	Blanket	TW-900061: N-Capacitor Inst-Rem OH -Reliability	\$ 8,788	\$ 105,830	\$ 49,635	\$ 164,253	Distribution Reliability Blanket
Toledo Edison Co	Blanket	TW-700564: IT Head-End Infrastructure for IP SCADA		\$ 18,986	\$ 19,707	\$ 38,693	This project is to implement head-end infrastructure necessary to migration SCADA communications from serial to IP. This modernization greatly simplifies the infrastructure and provides greater security, reliability, and scalability for monitoring & control of FirstEnergy's distribution system.
Toledo Edison Co	Blanket	TW-900065: N-Inst-Rem OH Regulator	\$ 36,691	\$ 118,552	\$ 79,201	\$ 234,444	Distribution Reliability Blanket
Toledo Edison Co	Program	TW-001384: TE Distribution WPC Improvements - 2017	\$ 75,775			\$ 75,775	Reliability improvement - Worst Performing circuits - fuses, animal guards, trees
							Install line fault indications on line regulators over a five year span during ESSS inspections
Toledo Edison Co	Program	TW-001516: Fault Indicator on Line Regulators TE		\$ 7,195	\$ 6,721	\$ 13,916	Cap additions to meet transmission var requirements
Toledo Edison Co	Specific	TW-001295: Capacitors -TE Distr. Additions - 2016				\$ -	Cap additions to meet transmission var requirements
Toledo Edison Co	Specific	TW-001362: TE Distribution Capacitor Installs-2017	\$ 27,797			\$ 27,797	Create a 12kV cross town circuit tie to improve reliability and capacity
Toledo Edison Co	Specific	TW-001416: Downtown Toledo 12kV UD Primary Loop		\$ 494,376		\$ 494,376	Replace 12kV switchgear mounted substation breakers
Toledo Edison Co	Specific	TW-001116: Replace 12kv breakers at Wayne (3)				\$ -	Replace 2 34.5KV substation breakers
Toledo Edison Co	Specific	TW-001144: Weston Substation-Replace 34.5 Breakers				\$ -	Replace DPU distribution feeder relays at nine substation breakers to maintain reliability (these relays are no longer available)
						\$ -	Reliability improvement - Worst Performing circuits - fuses, animal guards, trees
Toledo Edison Co	Specific	TW-001237: Maumee, Silica, and Wentworth Relay Rpl				\$ -	Reliability improvement - Worst Performing circuits - fuses, animal guards, trees
Toledo Edison Co	Specific	TW-001247: TE Distribution WPC Improvements - 2015				\$ -	Reliability improvement - Worst Performing circuits - fuses, animal guards, trees
Toledo Edison Co	Specific	TW-001299: TE Distribution WPC Improvements - 2016	\$ 1,896			\$ 1,896	Replace high side circuit switchers at TE distribution substations
Toledo Edison Co	Specific	TW-001366: Replace Circuit Switchers at TE - 2017	\$ 383,997	\$ 655,300	\$ 1,451	\$ 1,040,748	Replace 12kV switchgear mounted substation breakers at Five Point and Sylvania
Toledo Edison Co	Specific	TW-001368: Replace McGraw-Edison 15kV PSD Breakers	\$ 340,068	\$ 106,213		\$ 446,281	Replace 34.5KV substation breaker due to undesirable power factor readings on the bushings
							Replace high side circuit switchers at Woodville substation
Toledo Edison Co	Specific	TW-001409: WEST FREMONT #3491 BREAKER RPL	\$ 79,684	\$ 277,397	\$ 35,151	\$ 392,231	Replace 12kV switchgear mounted substation breakers at Frey and Reynolds
Toledo Edison Co	Specific	TW-001424: Replace Circuit Switchers at TE - 2018		\$ 32,360	\$ 1,782,990	\$ 1,815,350	Replace 69-35kV Transformer (transformer leaked oil for years and fans rusted away so temporary cooling was required)
Toledo Edison Co	Specific	TW-001427: Replace McGraw-Edison 15kV PSD Breakers		\$ 450,442	\$ 188,482	\$ 638,924	Replace 138kV line relaying (thought to be on the verge of imminent failure and parts no longer available)
Toledo Edison Co	Specific	TW-001492: Replace the Pemberville No. 1 autotfmr		\$ 1,662,346	\$ 390,601	\$ 2,052,946	Replace 69kV Breaker (due to failure to trip several times)
Toledo Edison Co	Specific	TW-001027: PLC Failure-Napoleon	\$ 6,892			\$ 6,892	Structure, Transformer, Relaying for downtown network vault repairs
Toledo Edison Co	Specific	TW-001253: Rep Chrysler-Maclean relaying equip				\$ -	
Toledo Edison Co	Specific	TW-001314: Bryan 7112 Breaker Replacement				\$ -	
Toledo Edison Co	Specific	TW-001574: Vault 53 Spot Network Rebuild due to fir		\$ 430,978	\$ 27,627	\$ 458,606	
Toledo Edison Co	Blanket	TW-730065: ITS - MOSCAD to ACE RTU Replacements			\$ 6,273	\$ 6,273	This project is to upgrade the degrading reliability of communications provided by the ACE mobile radio system, which is prone to congestion and interference from power line noise and sunspot activity. These communications are moved to 700 MHz and cellular and are necessary for the monitoring & control of FirstEnergy's distribution system.
Toledo Edison Co	Specific	TW-001325: LOCUST SUBSTATION - Replace 2352 brkr				\$ -	Replace 23kV breaker (failed, needed to continue reliable service)
Toledo Edison Co	Specific	TW-001348: Carrier Sets and Relaying on Lynch-Ford	\$ 7,585			\$ 7,585	Transmission relaying
Toledo Edison Co	Blanket	TW-750180: IT Asset Repl Upgd SCADA Wireless Comms		\$ 23,227	\$ 17,450	\$ 40,677	Verizon Wireless is sunsetting 3G cellular service at the end of 2021. The scope of this project is to upgrade Encore Networks Bandit II radios from 3G to 4G to support SCADA and SmartGrid devices used for monitoring & control of FirstEnergy's distribution system.
							Add SCADA to TE distribution feeders (due to lengthy outages, potential significant CAIDI improvement)
Toledo Edison Co	Specific	TW-000947: TE Distribution Substation SCADA	\$ 29,637	\$ 200,837		\$ 230,474	Add SCADA to TE high side circuit switcher (permit rapid restoration of customer load following a transmission problem)
Toledo Edison Co	Specific	TW-000993: Add SCADA to Circuit Switchers at Lyons	\$ 4,056	\$ 31,381	\$ 12,755	\$ 48,192	Add SCADA to TE distribution feeders (no real-time data loading available)
Toledo Edison Co	Specific	TW-001208: Pemberville Sub: Add SCADA metering	\$ 1,179	\$ 1,030	\$ 1,010	\$ 3,219	Transmission 69KV bus relaying
Toledo Edison Co	Specific	TW-001394: Pemberville-Repl 69KV bus relay-RADSS	\$ 3,662			\$ 3,662	69kV Transmission line rebuild
Toledo Edison Co	Specific	TW-001418: Midway-Napoleon 69KV Line Rebuild		\$ 6,491		\$ 6,491	City of Maumee and Toledo LED street light conversion
Toledo Edison Co	Specific	TW-001668: Toledo/Maumee LED Streetlight Conversion			\$ 535,839	\$ 535,839	

APPENDIX D- CONFIDENTIAL

CREDIT REPORTS

APPENDIX E- CONFIDENTIAL EQUITY ANALYST REPORTS

APPENDIX F

CREDIT METHODOLOGIES

Moody's Methodology

According to Moody's Regulated Electric and Gas Utilities, Moody's analysis of electric and gas utilities focuses on four broad factors: Regulatory Framework (25%), Ability to Recover Costs and Earn Returns (25%), Diversification (10%), and Financial Strength (40%).¹ There is also a notching factor for holding company structural subordination.² What this means is that utility affiliates of holding companies may be awarded higher credit ratings (by 0-3 notches) than a weaker parent if there are protections placed on the utility debt that protect creditors.³

There are two key factors affecting Ability to Recover Costs and Earn Returns; they are Timeliness of Recovery of Operating and Capital Costs (12.5%) and Sufficiency of Rates and Returns (12.5%). There are two key factors affecting Regulatory Framework; they are Legislative and Judicial Underpinnings of the Regulatory Framework (12.5%) and Consistency and Predictability of Regulation (12.5%). Key factors affecting Financial Strength include CFO pre-Working Capital (WC)/debt (15%), CFO pre-WC - dividends/debt (10%), and debt/capitalization (7.5%).

We focused our review on three of the four major metrics affecting Financial Strength above, which account for 32.5% of the Financial Strength ratings matrix.⁴ These factors are all discussed in the various reports that Moody's issues and culminate in the credit rating. We also review Sufficiency of Returns, and Regulatory Framework.

Moody's General Approach to a Utility Family generally "consider[s] the stand-alone credit profile of an OpCo [operating company] and the credit profile of its ultimate parent HoldCo [holding company] (and any intermediate HoldCos), as well as the profile of the family as a whole, while acknowledging that these elements can have cross-family credit implications in varying degrees, principally based on the regulatory framework of

¹ Rating Methodology, Regulated Electric and Gas Utilities, Moody's Investors Service, Published June 23, 2017, at 4.

² *Id.*, at 22.

³ *Id.*, at 25. Moody's defines structural separation as "However, HoldCo creditors typically have a secondary claim on the group's cash flows and assets after OpCo creditors. We refer to this as structural subordination, because it is the corporate legal structure, rather than specific subordination provisions, that causes creditors at each of the utility and non-utility subsidiaries to have a more direct claim on the cash flows and assets of their respective OpCo obligors."

⁴ Regulatory Framework which accounts for another 25% of the Moody's ratings, has been consistent through out DMR.

the OpCos and the financing model (which has often developed in response to the regulatory framework).”⁵

As a result, subsidiary ratings are constrained by the rating of the parent; in Moody’s case, that constraint would be 3 notches or steps within credit ratings. Thus, the Ohio Companies can be rated no higher than 3 notches above FirstEnergy even if the various underlying metrics could support a higher credit rating.

Grid-indicated ratings of holding companies may be notched down based on structural subordination. Moody’s defines structural subordination as when “HoldCo creditors typically have a secondary claim on the group’s cash flows and assets after OpCo creditors. We refer to this as structural subordination, because it is the corporate legal structure, rather than specific subordination provisions, that causes creditors at each of the utility and non-utility subsidiaries to have a more direct claim on the cash flows and assets of their respective OpCo obligors”.⁶ The risk factors and mitigants that impact structural subordination are varied and can be present in different combinations, such that a formulaic approach is not practical and case-by-case analyst judgment of the interaction of all pertinent factors that may increase or decrease its importance to the credit risk of an issuer are essential.

S&P’s Methodology

As stated by S&P in its Corporate Methodology, key factors affecting the credit ratings of regulated utilities include: its Corporate Industry and Country Risk Assessment (CICRA), Business Risk Profile (competitive position), financial risk profile, diversification/portfolio effect and other modifiers which include: capital structure, financial policy, liquidity, and management/governance.⁷ Cash flow/leverage analysis determines a company’s financial risk profile assessment.

Cash flow is measured by S&P using the core ratios of Funds from Operations (FFO) to debt and debt/EBITDA (Earnings before interest, tax, depreciation and amortization). S&P also considers five supplemental cash flow and interest coverage ratios. We reviewed the two core ratios above.

⁵ *Id.*, at 35.

⁶ *Id.*, at 22.

⁷ *Criteria | Corporates | General: Corporate Methodology*, published by S&P Global Ratings on November 19, 2013. Accessed November 18, 2021 at <https://disclosure.spglobal.com/ratings/en/regulatory/article/-/view/sourceId/8314109>

PUCO Staff has described S&P’s approach as an “ ‘umbrella’ approach to credit ratings...[where]...a downgrade to FirstEnergy Corp. would result in a downgrade to the Companies.”⁸

Figure 1 below outlines the S&P ratings process.⁹

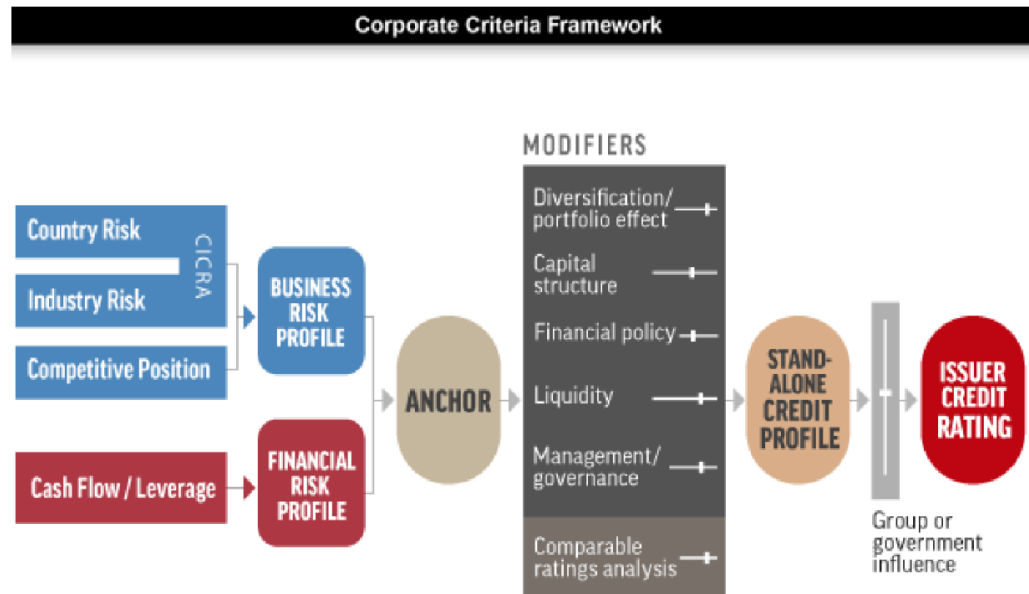


Figure 1. S&P Corporate Ratings Process

Fitch

We did not rely primarily on Fitch’s credit ratings. They did not rate the Ohio Companies individually from 2014 to 2017, they were not referenced in the 5th Order, and they are not as major of a player in credit ratings as Moody’s and S&P. Thus we have not analyzed or relied on Fitch in our analysis. We do however, note the Companies’ Fitch ratings in our report.

⁸ *Id.*, ¶191.

⁹ *Id.*, at ¶14

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Summary: Report Rider DMR Audit Report Redacted electronically filed by Miss
Lauren Rothermich on behalf of Daymark Energy Advisors