

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Duke :  
Energy Ohio, Inc. for Approval of the : Case No. 19-2223-EL-BGN  
McMann Battery Storage Project :

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**COMMENTS  
SUBMITTED ON BEHALF OF THE STAFF OF  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

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**I. Procedural History**

On March 2, 2017, Duke Energy Ohio, Inc. (“Duke” or “the Company”) filed a distribution rate case (“Rate Case”) in Case No. 17-0032-EL-AIR.<sup>1</sup> On June 1, 2017, the Company filed an application for an Electric Security Plan (“ESP”) in Case No. 17-1263-EL-SSO. Among other things, the ESP application proposed a pilot battery storage project to “allow Duke Energy Ohio to confirm the value energy storage can provide to the electric grid and ultimately, Duke Energy customers.”<sup>2</sup>

On April 13, 2018, a Stipulation and Recommendation (“Stipulation”) was filed recommending a resolution for the *Rate Case*, the *ESP*, as well as the financial impacts of the Tax Cuts and Jobs Act of 2017 on the Company (“Duke Consolidated Case”).<sup>3</sup> The Signatory Parties agreed that Duke “may install a battery storage project(s) for the purpose of deferring circuit investments or addressing distribution reliability issues.”<sup>4</sup> Under the

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<sup>1</sup> *In re Duke Energy Ohio, Inc.*, Case No. 17-32-EL-AIR (“*Rate Case*”).

<sup>2</sup> *In re Duke Energy Ohio, Inc.*, Case No. 17-1263-EL-SSO (“*ESP Case*”), Kuznar Direct Testimony at 3 (June 1, 2016).

<sup>3</sup> Case No. 17-32-EL-AIR, *et al.*, Stipulation and Recommendation (April 13, 2018).

<sup>4</sup> *Id.* at 13.

terms of the Stipulation, Duke shall invest no more than \$20 million in such beneficial battery storage project(s) in its service territory during the term of the ESP (June 1, 2018-- May 31, 2025), with costs being eligible and recovered through Rider DCI.<sup>5</sup> Finally, the Signatory Parties proposed that for costs to be eligible for recovery under Rider DCI, they “[m]ust qualify as distribution equipment under the FERC uniform system of accounts authorized for collection via the Rider DCI and subject to the Rider DCI caps.”<sup>6</sup>

The Stipulation was approved by the Public Utilities Commission of Ohio (“Commission” or “PUCO”) on December 19, 2018.<sup>7</sup> In the Order, the Commission found that the Company should file an application in a separate proceeding detailing the proposed battery storage project(s) and that the project(s) be pre-approved by the Commission and subject to ongoing monitoring.

## **II. Company Filing**

On December 20, 2019, the Company filed an application in Case No. 19-2223-EL-UNC seeking approval of one battery storage pilot project (“Application”). The Company proposes to install a lithium ion battery, rated for approximately 3.95MW/8.9MWH, adjacent to the existing McMann substation in Union Township, Ohio. Duke will own, operate and maintain the battery storage project. The primary application of the project will be to reduce the peak load on the circuit in order to defer the need for an additional transformer and other distribution upgrades at that location. If authorized by the Commission, Duke proposes that the battery will also participate in the PJM regulation

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<sup>5</sup> *Id.*

<sup>6</sup> *Id.* at 13, fn.10.

<sup>7</sup> Case No. 17-32-EL-AIR, *et al.*, Opinion and Order at 70-73 (December 19, 2018).

market when it is not otherwise needed to reduce peak load on the circuit. Revenue from participation in the PJM regulation market, net of any associated costs, would be credited to customers through Rider DCI, thereby reducing the overall cost of the project to customers.

The Company estimates the total capital cost of the project at approximately \$11.7 million. When the project/facility is placed in service, the operation and maintenance (“O&M”) costs to maintain the asset over its life will be proposed for recovery through the Company's next distribution base rate case.<sup>8</sup> The Company plans to allocate the entire cost of the project to the Federal Energy Regulatory Commission (FERC) Uniform System of Accounts (USoA) Account 363 (Energy Storage Equipment – Distribution) because, according to the Company, the primary purpose of the project is to provide load managing services to the distribution system at the McMann substation.<sup>9</sup>

Within six months after the project has been placed into service, the Company will provide the Commission with a report detailing the construction progress along with the final actual project costs. Within one year after placement in service, the Company will provide a report detailing operational knowledge gained from the project and detailed information on the operational benefits of the project. This latter report will be updated annually for a total of five years.<sup>10</sup>

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<sup>8</sup> Case No. 19-2223-EL-UNC, Brown Direct Testimony at 4 (December 20, 2019).

<sup>9</sup> Case No. 19-2223-EL-UNC, Miller Direct Testimony at 3 (December 20, 2019).

<sup>10</sup> Case No. 19-2223-EL-UNC, Schultz Direct Testimony at 7 (December 20, 2019).

### **III. Staff Comments**

Staff has reviewed the Application and offers the following observations and comments.

#### **A. Scope & Cost of the Project**

Energy storage systems are uniquely capable of a variety of applications and uses. Because of its many applications and the broad range of value streams it offers, energy storage represents a potentially useful and intriguing resource for distribution utilities across the country. As such, Staff is generally supportive of a pilot project to learn more about energy storage as a non-wires' alternative to traditional distribution grid solutions.

The primary objective for considering non-wires alternatives options is to identify solutions that mitigate grid risks or that enable grid-operating efficiency at a lower total cost when compared to traditional grid solutions. In the Duke Consolidated Case, the Stipulation directed that the project be instituted to address a reliability issue or avoid future distribution investment. Staff is unaware of any reference within the Order approving the Stipulation that created a least cost standard. However, while the battery storage facility chosen by Duke will avoid the need for a new transformer, the typical remedy for an overloaded circuit, it should be noted that the cost of the battery storage facility is significantly higher than that of installing a transformer.

Accordingly, additional value streams—or uses of the battery beyond its primary distribution system purpose—play an important role in justifying the economics of battery storage projects. If constrained in the ability to extract additional value from an energy storage device during the majority of hours of the year (“value stacking”), the investment

becomes wholly dependent on the distribution deferral value which, as noted above, will likely prove insufficient to justify the investment.

Should the Commission approve the project, Staff recommends that the Commission limit the capital costs to \$9.41 million, which is Duke's projected costs without the addition of a \$2.28 million (20%) contingency fund, regardless of whether the project participates in the wholesale market.<sup>11</sup>

In addition, because the Commission directed the battery storage facility investment be used to defer future investment and given the cost of the project compared to the cost of a transformer, any subsequent investment in the installation of transformers and other devices to relieve overloading on this circuit should be carefully reviewed.

### **B. Participation in the PJM Wholesale Market**

To add additional value streams, Duke has requested the authority to allow its proposed battery storage facility to also participate in the PJM "Regulation D" frequency market when it is not needed and when it will not affect the ability of the project to provide its primary function for distribution services. The Company has committed to credit the Rider DCI revenue requirement with all of the net revenues associated with participating in the wholesale market.<sup>12</sup> The Company cites that it has previously been authorized to bid energy efficiency resources into the PJM wholesale market, both PJM's capacity and

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<sup>11</sup> Case No. 19-2223-EL-UNC, Lowder Direct Testimony at 4 (December 20, 2019).

<sup>12</sup> Case No. 19-2223-EL-UNC, Shultz Direct Testimony at 3, 5, 8; Brown Direct Testimony at 4 (December 20, 2019).

energy markets, and then use the revenues to offset the cost of the energy efficiency programs through the applicable rider.<sup>13</sup>

As stated earlier, the Stipulation in the Duke Consolidated Case states that to qualify for cost recovery under Rider DCI, the battery investments “[m]ust qualify as distribution equipment under the FERC uniform system of accounts authorized for collection via the Rider DCI and subject to the Rider DCI caps.”<sup>14</sup>

On July 18, 2013, FERC issued Order 784, which, among other things, modified the accounting and reporting requirements under the FERC USoA “to better account for and report transactions associated with the use of energy storage devices in public utility operations.”<sup>15</sup> FERC concluded that where energy storage equipment can perform more than one function or purpose, the cost of the equipment shall be allocated among production, transmission, and distribution plant based on the services provided by the asset and the allocation of the asset's cost through rates approved by a relevant regulatory agency.<sup>16</sup> Accordingly, FERC established the following plant accounts associated with energy storage equipment:

- Account 348 (Energy Storage Equipment-Production),
- Account 351 (Energy Storage Equipment-Transmission), and
- Account 363 (Energy Storage Equipment-Distribution).<sup>17</sup>

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<sup>13</sup> Case No. 19-2223-EL-UNC, Shultz Direct Testimony at 8 (December 20, 2019).

<sup>14</sup> Case No. 17-32-EL-AIR, *et al.*, Stipulation at 13, fn. 10.

<sup>15</sup> *FERC Order 784, Third-Party Provision of Ancillary Services; Accounting and Financial Reporting for New Electric Storage Technologies* at ¶ 1, 144 FERC ¶ 61,056 (July 18, 2013).

<sup>16</sup> *Id.* at ¶ 136.

<sup>17</sup> *Id.* at ¶ 141.

Subsequently, on January 19, 2017, the FERC issued a policy statement to “clarify its precedent and provide guidance on the ability of energy storage resources to provide services at and seek to recover their costs through both cost-based and market-based rates concurrently.”<sup>18</sup> FERC clarified that an electric storage resource could eliminate the potential for double recovery from both ratepayers (through cost-based recovery) and wholesale market revenues (through market-based recovery) by crediting all revenues back to the ratepayers funding the cost-based recovery.<sup>19</sup> An alternative concept discussed suggested that the estimated revenues from the future market-based recovery could be used to reduce the up-front request for cost recovery from ratepayers.<sup>20</sup>

As described in the recent Distribution System Planning Workgroup report, under the current regulatory structure in Ohio, it is unclear whether electric distribution utilities (EDU) are eligible to own and operate energy storage, as it relates to EDU utilization of storage as a supply source.<sup>21</sup> Until Commission guidance on this issue is provided, Staff generally supports battery storage pilot projects where EDUs participate in the wholesale market in order to optimize the project and generate revenues that will offset the cost of the investment. Staff notes that inclusion of these revenues may be what make the investment levels for the battery storage system commensurate with the cost of traditional grid solutions (i.e. the transformer and associated distribution system upgrades). Further, in the instant case, although Duke plans to install the battery storage facility before June

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<sup>18</sup> See *Utilization of Electric Storage Resources for Multiple Services When Receiving Cost-Based Rate Recovery*, 158 FERC ¶ 61,051 (January 19, 2017).

<sup>19</sup> *Id.* at ¶ 16.

<sup>20</sup> *Id.* at ¶ 18.

2022, its use to relieve circuit peak overloading in the distribution plant is not expected to occur before peak season 2024. Allowing the battery to participate in the PJM market could impact whether the battery would be fully used and useful before peak season 2024.

However, Staff believes that, if Duke participates in the PJM wholesale market, the Company's currently proposed allocation of the entire cost of the project to FERC USoA Account 363 (Energy Storage Equipment-Distribution) is inconsistent with the system of accounts prescribed by FERC in Order 748, the Duke Consolidated Case Stipulation, and the structure of Rider DCI. If the battery storage project operates in the PJM wholesale market, it would be providing a wholesale service and receiving revenue from that wholesale market. Therefore, the costs and revenues associated with these activities would not qualify as distribution functions under FERC USoA Account 363. The more appropriate account to allocate such battery assets is FERC Account 348, which relates to Energy Storage Equipment— Production. Rider DCI is only authorized to collect capital costs associated with FERC USoA distribution plant accounts 360-374, and not the production and transmission accounts listed above. Because the battery storage project is only authorized to recover costs that qualify for recovery under the Rider DCI FERC USoA accounts, Staff does not believe Duke can recover costs or credit revenues related to this battery storage project's participation in the PJM wholesale market through Rider DCI as it is currently proposed.

If the Company wishes to participate in the PJM wholesale market, Staff recommends that the Commission direct the Company to propose an alternate allocation method in which it designates costs and revenues between the appropriate FERC USoA



accounts. One possible alternative would be for the Company to appropriately allocate the costs of the project, based on the distribution and production services provided, and then request recovery of only those costs associated with distribution service through Rider DCI. That way, both production-related costs and revenues could be dealt with separate from the distribution costs, as requested by FERC.

If the Commission authorizes the project to participate in the wholesale market, Staff recommends the authority be limited to the “Regulation D” frequency market, and any expansion into other wholesale markets should require the Company to receive prior-approval from the Commission.

#### **IV. Conclusion**

Staff recommends that the Commission require Duke make a subsequent filing to address the accounting concerns associated with the participation of the Company’s battery storage facility in the PJM market before the Commission authorizes the Application in the current case.

Respectfully submitted,

**Dave Yost**  
Ohio Attorney General

**John H. Jones**  
Section Chief

*/s/Steven Darnell*  
**Steven T. Darnell**  
**Thomas G. Lindgren**  
Assistant Attorneys General  
30 East Broad Street, Floor 16  
Columbus, Ohio 43215-3414  
614.644.8599 (telephone)

steven.darnell@ohioattorneygeneral.gov  
thomas.lindgren@ohioattorneygeneral.gov

**On Behalf of the Staff of the  
Public Utilities Commission of Ohio**

## PROOF OF SERVICE

I hereby certify that a true copy of the foregoing **Comments** submitted on behalf of the Staff of the Ohio Power Siting Board, was served via electronic mail upon the following Parties of Record, this 19<sup>th</sup> day of May, 2020.

*/s/ Steven Darnell*

**Steven Darnell**

Assistant Attorney General

### Parties of Record:

#### **Duke Energy Ohio**

Jeanne W. Kingery  
Rocco D'Ascenzo  
Larisa M. Vaysman  
155 E. Broad St., Floor 20  
Columbus, OH 43215

[Jeanne.Kingery@duke-energy.com](mailto:Jeanne.Kingery@duke-energy.com)  
[Rocco.DAscenzo@duke-energy.com](mailto:Rocco.DAscenzo@duke-energy.com)  
[Larisa.Vaysman@duke-energy.com](mailto:Larisa.Vaysman@duke-energy.com)

#### **Ohio Consumers' Counsel**

Amy Botschner O'Brien  
65 E. State St., Floor 7  
Columbus, OH 43215  
[amy.botschner.obrien@occ.ohio.gov](mailto:amy.botschner.obrien@occ.ohio.gov)

#### **Interstate Gas Supply, Inc.**

Michael A. Nugent  
Bethany Allen  
Joseph Olikier  
6100 Emerald Parkway  
Dublin, OH 43016  
[mnugent@igsenergy.com](mailto:mnugent@igsenergy.com)  
[ballen@igsenergy.com](mailto:ballen@igsenergy.com)  
[joliker@igsenergy.com](mailto:joliker@igsenergy.com)

#### **Ohio Energy Group**

Michael L. Kurtz  
Kurt J. Boehm  
Jody Kyler Cohn  
36 E. Seventh St., Ste. 1510  
Cincinnati, OH 45202  
[mkurtz@BKLawfirm.com](mailto:mkurtz@BKLawfirm.com)  
[kboehm@BKLawfirm.com](mailto:kboehm@BKLawfirm.com)  
[jkylercohn@BKLawfirm.com](mailto:jkylercohn@BKLawfirm.com)

#### **The Environmental Law & Policy Center**

Caroline Cox  
21 W. Broad St., Floor 8  
Columbus, OH 43215  
[ccox@elpc.org](mailto:ccox@elpc.org)

#### **Natural Resources Defense Council**

Robert Dove  
Kegler Brown Hill + Ritter Co., L.P.A.  
65 E. State St., Ste. 1800  
[rdove@keglerbrown.com](mailto:rdove@keglerbrown.com)

Attorney Examiner: [Lauren.Augostini@puco.ohio.gov](mailto:Lauren.Augostini@puco.ohio.gov)

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Summary: Comments Submitted on Behalf of The Staff of The Public Utilities Commission of Ohio electronically filed by Mrs. Kimberly M Naeder on behalf of PUCO