

BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

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

DIRECT TESTIMONY OF

JAY P. BROWN

ON BEHALF OF

DUKE ENERGY OHIO, INC.

December 20, 2019

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Attachment:

JPB-1 - Estimated revenue requirement of the McMann Battery Storage Project.

I. INTRODUCTION

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Jay P. Brown, and my business address is 139 East Fourth Street,
3 Cincinnati, Ohio, 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS), as Lead Rates &
6 Regulatory Strategy Analyst. DEBS provides various administrative and other
7 services to Duke Energy Ohio, Inc., (Duke Energy Ohio or Company) and other
8 affiliated companies of Duke Energy Corporation (Duke Energy).

9 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND**
10 **PROFESSIONAL EXPERIENCE.**

11 A. I earned a Bachelor of Science degree in Business Administration with a major in
12 Business: Finance, Investment and Banking from University of Wisconsin -
13 Madison. I began my career with The Alexander Companies, a real estate
14 development company, as an Assistant Project Manager in January 2002,
15 managing and developing real estate. Subsequently, in December 2003, I began
16 working for Dell Inc., mainly as a Financial Analyst in Worldwide Procurement
17 Finance, accounting for and reporting on supplier rebates. In January 2008, I
18 began working for Bigfoot Networks, a technology start-up. I was in charge of
19 developing distribution, online, and retail channels for a new networking product.
20 Beginning in April 2009, I also served as a Financial Advisor for Edward Jones.
21 In June 2011, I began working as a contractor for Progress Energy and, since
22 February 2012, I have been employed by, and worked for, companies within

1 Duke Energy. I began in Duke Energy as a Senior Business Finance Analyst and,
2 in December 2012, I took the position of Manager Nuclear Station Finance. I
3 assumed my current role as Lead Rates & Regulatory Strategy Analyst in August
4 of 2018.

5 **Q. PLEASE DESCRIBE YOUR DUTIES AS LEAD RATES &**
6 **REGULATORY STRATEGY ANALYST.**

7 A. I am responsible for preparing financial and accounting data used in retail rate
8 filings and various other rate recovery mechanisms for Duke Energy Ohio and
9 Duke Energy Kentucky, Inc.

10 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC**
11 **UTILITIES COMMISSION OF OHIO?**

12 A. Yes, I have filed written direct testimony in two cases.

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THESE**
14 **PROCEEDINGS?**

15 A. The purpose of my testimony is to provide an overview of the estimated revenue
16 requirement associated with the McMann Battery Storage Pilot being proposed
17 for recovery through the Distribution Capital Investment Rider (Rider DCI) in this
18 application. I will also describe how the company proposes to provide savings to
19 customers for any net revenues associated with the battery storage project
20 received by the Company through participation in the PJM frequency regulation
21 market.

II. DISCUSSION

1 **Q. ARE EXPENSES ASSOCIATED WITH THE MCMANN BATTERY**
2 **STORAGE PROJECT INCLUDED IN CURRENT BASE RATES?**

3 A. No. All expenditures that the Company is proposing for recovery in this
4 application are incremental to base rates and are not being recovered through
5 current riders.

6 **Q. HAS THE PUBLIC UTILITIES COMMISSION OF OHIO GRANTED**
7 **THE COMPANY RECOVERY OF THESE COSTS THROUGH RIDER**
8 **DCI?**

9 A. As outlined in the Stipulation and Recommendation in Case No. 17-32-EL-AIR,
10 *et al.*, “Duke may install a battery storage project(s) for the purpose of deferring
11 circuit investments or addressing distribution reliability issues. During the term
12 of the ESP, Duke shall invest no more than \$20 million in such beneficial battery
13 storage project(s) in its service territory, with such costs being eligible and
14 recovered through Rider DCI”. In its Opinion and Order in Case No. 17-32-EL-
15 AIR, *et al.*, the Commission allowed battery storage to move forward as a pilot
16 project but noted that the project should be subject to pre-approval via a separate
17 application, with recovery of the project costs in Rider DCI.

18 **Q. PLEASE EXPLAIN HOW THE COSTS AND NET REVENUES**
19 **ASSOCIATED WITH THE COMPANY’S MCMANN BATTERY**
20 **STORAGE PILOT WILL BE INCLUDED IN RIDER DCI.**

21 A. As outlined in the direct testimony of Company witness Will Lowder, the
22 estimated cost to Duke Energy Ohio’s electric customers for the implementation

1 of the McMann Battery Storage Pilot is approximately \$11.7 million in capital
2 costs. A more detailed breakdown of these costs is discussed in Mr. Lowder's
3 testimony. As shown on Attachment JPB-1, Rider DCI will include a return on
4 net plant in service less accumulated depreciation and accumulated deferred
5 income taxes. It will also include recovery of depreciation expense and property
6 tax expense associated with the project. In-service plant balances are expected to
7 be recorded in FERC Account 363, as explained in the direct testimony of
8 Company witness Linda Miller.

9 If approved, the Company will offset the Rider DCI revenue requirement
10 with net revenues (revenue minus costs) related to participation in PJM markets,
11 as explained by Company witness Matthew Schultz.

12 **Q. HOW DOES THE COMPANY PLAN TO RECOVER ONGOING**
13 **OPERATION AND MAINTENANCE (O&M) EXPENSES?**

14 A. When the McMann Battery Storage Project is placed in service, the O&M costs to
15 maintain the asset over its life will be proposed for recovery through the
16 Company's next distribution base rate case.

17 **Q. WHAT RATE OF RETURN IS THE COMPANY PROPOSING TO APPLY**
18 **TO THE NET RATE BASE ASSOCIATED WITH THIS PROJECT?**

19 A. The Company will apply an 8.94 percent rate of return, consistent with the current
20 Rider DCI, which was approved in the Company's most recent electric
21 distribution base rate case. The return on equity supporting this rate of return is
22 9.84 percent.

III. CONCLUSION

1 **Q. WAS ATTACHMENT JPB-1 PREPARED BY YOU OR UNDER YOUR**
2 **DIRECTION AND CONTROL?**

3 A. Yes.

4 **Q. IS ATTACHMENT JPB-1 TRUE AND ACCURATE TO THE BEST OF**
5 **YOUR KNOWLEDGE?**

6 A. Yes.

7 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

8 A. Yes.

Duke Energy Ohio
Estimated Revenue Requirement
Battery Storage Project

Line	Description	2021	2022	2023	2024	2025	2026
1	Gross Plant ^(a)	\$11,694,616	\$11,694,616	\$11,694,616	\$11,694,616	\$11,694,616	\$11,694,616
2	Accumulated Depreciation	(389,821)	(1,169,462)	(1,949,103)	(2,728,744)	(3,508,385)	(4,288,026)
3	Net Plant in Service	\$11,304,795	\$10,525,154	\$9,745,513	\$8,965,872	\$8,186,231	\$7,406,590
4	Accum Def Income Taxes on Plant	(\$40,931)	(\$110,514)	(\$156,766)	(\$182,144)	(\$188,611)	(\$177,887)
5	Rate Base	\$11,263,864	\$10,414,640	\$9,588,747	\$8,783,728	\$7,997,620	\$7,228,703
6	Return on Rate Base (Pre-Tax %) ^(b)	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%
7	Return on Rate Base (Pre-Tax)	\$1,006,989	\$931,069	\$857,234	\$785,265	\$714,987	\$646,246
8	Depreciation Expense	389,821	779,641	779,641	779,641	779,641	779,641
9	Annualized Property Tax Expense ^(c)	214,791	199,978	185,165	170,352	155,538	140,725
10	Revenue Requirement Before CAT (Lines 7 - 9)	\$1,611,601	\$1,910,688	\$1,822,040	\$1,735,258	\$1,650,167	\$1,566,612
11	Commercial Activities Tax	\$4,201	\$4,981	\$4,750	\$4,523	\$4,302	\$4,084
12	Total Rider DCI Revenue Requirement	\$1,615,802	\$1,915,669	\$1,826,789	\$1,739,781	\$1,654,468	\$1,570,696

Assumptions:

^(a) Capital costs are assumed in service in the year spent

^(b) Weighted-Average Cost of Capital in Case No. 17-032-EL-AIR

^(c) Assumes 1.9% of net plant.

Duke Energy Ohio
Estimated Revenue Requirement

Project	Property, Plant and Equipment (Capital)									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Battery Program	\$0	\$0	\$11,694,616	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cumulative Gross Plant	-	-	11,694,616	11,694,616	11,694,616	11,694,616	11,694,616	11,694,616	11,694,616	11,694,616
Depreciation Expense	-	\$0	\$389,821	\$779,641	\$779,641	\$779,641	\$779,641	\$779,641	779,641	779,641
Accumulated Depreciation	\$0	\$0	(\$389,821)	(\$1,169,462)	(\$1,949,103)	(\$2,728,744)	(\$3,508,385)	(\$4,288,026)	(\$5,067,667)	(\$5,847,308)
Accumulated Deferred Income Tax	\$0	\$0	(\$40,931)	(\$110,514)	(\$156,766)	(\$182,144)	(\$188,611)	(\$177,887)	159,058	140,230

Book Life	Tax Life
15.00	15.00

	15 Yr MACRS	Cap Additions	Tax Depreciation on					Total Tax Depr	Book Depreciation	Gross Plant	Accumulated Depreciation	Deferred Tax	ADIT
			2019 Spend	2020 Spend	2021 Spend	2022 Spend	2023 Spend						
2019	5.00%	\$0	\$0					\$0	-	\$0	-	\$0	
2020	9.50%	-	-	\$0				-	-	-	-	-	
2021	8.55%	11,694,616	-	-	\$584,731			584,731	389,821	11,694,616	389,821	40,931	40,931
2022	7.70%	-	-	-	1,110,989	\$0		1,110,989	779,641	11,694,616	1,169,462	69,583	110,514
2023	6.93%	-	-	-	999,890		\$0	999,890	779,641	11,694,616	1,949,103	46,252	156,766
2024	6.23%	-	-	-	900,485		-	900,485	779,641	11,694,616	2,728,744	25,377	182,144
2025	5.90%	-	-	-	810,437		-	810,437	779,641	11,694,616	3,508,385	6,467	188,611
2026	5.90%	-	-	-	728,575		-	728,575	779,641	11,694,616	4,288,026	(10,724)	177,887
2027	5.91%	-	-	-	689,982		-	689,982	779,641	11,694,616	5,067,667	(18,828)	159,058
2028	5.90%	-	-	-	689,982		-	689,982	779,641	11,694,616	5,847,308	(18,828)	140,230
2029	5.91%	-	-	-	691,152		-	691,152	779,641	11,694,616	6,626,949	(18,583)	121,647
2030	5.90%	-	-	-	689,982		-	689,982	779,641	11,694,616	7,406,590	(18,828)	102,819
2031	5.91%	-	-	-	691,152		-	691,152	779,641	11,694,616	8,186,231	(18,583)	84,236
2032	5.90%	-	-	-	689,982		-	689,982	779,641	11,694,616	8,965,872	(18,828)	65,408
2033	5.91%	-	-	-	691,152		-	691,152	779,641	11,694,616	9,745,513	(18,583)	46,825
2034	2.95%	-	-	-	689,982		-	689,982	779,641	11,694,616	10,525,154	(18,828)	27,997
2035		-	-	-	691,152		-	691,152	779,641	11,694,616	11,304,795	(18,583)	9,414
2036		-	-	-	344,991		-	344,991	389,821	11,694,616	11,694,616	(9,414)	-
	100.0%	\$11,694,616	\$0	\$0	\$11,694,616	\$0	\$0	\$11,694,616	\$11,694,616			(\$0)	

