DUKE ENERGY OHIO EXHIBIT _______

BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio, Inc., for Approval of an Alternative Form of Regulation.	)))	Case No. 19-0791-GA-ALT

DIRECT TESTIMONY IN SUPPORT OF THE STIPULATION

OF

MARTIN P. PETCHUL,

ON BEHALF OF DUKE ENERGY OHIO, INC.

January 6, 2020

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I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Martin P. Petchul, and my business address is 4720 Piedmont Row Drive, Charlotte, North Carolina 28210.

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

A. I am employed by Duke Energy Business Services LLC (DEBS), as General Manager, Gas Asset Management and Engineering. DEBS provide various administrative and other services to Duke Energy Ohio, Inc., (Duke Energy Ohio or Company) and other affiliated companies of Duke Energy Corporation (Duke Energy).

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. I graduated from The University of Virginia in 1983 with a B.S. in Mechanical Engineering and in 1988 I completed studies to achieve a Masters in Engineering Administration from George Washington University. I acquired my Professional Engineering license in 1994 and am currently registered in numerous states. In 1998 I became a Certified Energy Manager.

I have worked in the energy industry in various capacities since 1984. I started my career at Washington Gas as a Measurement Engineer and held progressive positions until I moved to Pittsburgh in 1989 to become the Managing Director of Interior Piping Systems Inc. – the first U.S. manufacturer of Corrugated Stainless Steel Tubing (CSST) gas piping. From there I joined the National Association of Homebuilders Research Center as a Program Manager leading

Natural Gas Research and Development efforts sponsored by the Gas Research Institute (GRI). In the mid-nineties I became the Manager of Codes and Standards for Columbia Gas providing technical and regulatory support to service territories in Ohio, Kentucky, Pennsylvania, Virginia and Maryland.

I joined Piedmont Natural Gas in 2001 and have held various positions over the last 19 years managing and directing numerous teams and divisions (Codes & Standards, Operator Qualifications (OQ), Technical Training, Field Measurement, Compression, SCADA, Gas Control, Engineering Design, Technical Support, Geographic Information Systems (GIS), Data Analytics, System Modeling/Planning, Major Projects, Pipeline Safety Management, Distribution Integrity Management, Transmission Integrity Management, Capital Project/Program Development, *etc*.) I am currently the General Manager of Asset Management and Engineering.

Q. PLEASE DESCRIBE YOUR DUTIES AS GENERAL MANAGER, GAS ASSET MANAGEMENT AND ENGINEERING.

A. I am responsible for the following areas: Engineering and Asset Planning (EAP); Asset Data Quality (ADQ); Asset Risk Management (ARM); and Asset and Technology Planning for Piedmont Natural Gas, Duke Energy Ohio and Duke Energy Kentucky, Inc.

The EAP team provides technical and engineering support for the design, construction, operating & maintenance and emergency activities of the Natural Gas Business Unit (NGBU). This is accomplished via teams of engineers, technologists and technicians who provide construction design drawings and bills of materials;

analyze the pipeline systems pressure and capacity needs; review and authorize field hydraulic changes; and evaluate and update procedures, etc.

The ADQ team supports the NGBU by maintaining quality GIS data, asset records, and providing interactive mapping solutions. The team is responsible for updating data in GIS based on applicable documentation, maintaining asset records in the Document Management System, performing spatial analysis services, and defining data capture requirements. This includes ensuring that asset data and records processes meet the "know your system" and reliable, traceable, verifiable, and complete (RTVC) regulatory requirements. In addition, the team plans and executes a risk based roadmap for historical data and records enhancement initiatives.

The ARM team is responsible for managing the Transmission Integrity Management Program (TIMP) and Distribution Integrity Management Program (DIMP). The ARM Team is also responsible for developing and implementing our Damage Prevention Program.

The Asset & Technology Planning team oversees the NGBU capital charter budgeting process to perform short and long term planning and strategy for physical pipeline and facility assets. In addition, the team supports oversight, planning, and future road mapping of applications and technologies that support the NGBU. The team incorporates input from various capital category owners and utilizes prioritization and risk ranking methodologies to develop a comprehensive five-year capital pipeline asset plan.

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

A. No.

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY IN THESE PROCEEDINGS?

A. The purpose of my testimony is to support the Stipulation and Recommendation filed on November 16, 2020, in these proceedings (Stipulation). In doing so, I discuss the types of investments that were addressed in the Stipulation and are subject to the negotiated Rider CEP revenue requirement caps for residential customers. Finally, I will briefly describe the Company's forecasted investments beginning in 2021, which will be subject to the negotiated Rider CEP residential revenue requirement cap beginning in 2021 and subsequent years thereafter. I explain why these investments are necessary and the current estimated cost of these investments.

II. <u>OVERVIEW OF THE COMPANY'S NATURAL GAS SYSTEM AND CAPITAL PLAN INVESTMENTS</u>

Q. PLEASE BRIEFLY DESCRIBE THE DRIVERS OF THE COMPANY'S NATURAL GAS CAPITAL EXPENDITURES UNDER ITS CEP PROGRAM.

A. Duke Energy Ohio has been providing reliable natural gas distribution service to our customers in southwest Ohio for over 180 years. The Company's natural gas capital investments fall into several categories, but are primarily driven by customer growth, government-driven relocations, replacing aging infrastructure (*i.e.* Measurement and Regulation), system infrastructure improvements, and investments required to meet existing and emerging state and federal regulatory requirements for distribution and transmission integrity management.

Q. PLEASE BRIEFLY EXPLAIN HOW CUSTOMER GROWTH AND AGING INFRASTRUCTURE DRIVE NATURAL GAS SYSTEM INVESTMENTS.

A. Since its inception, Duke Energy Ohio's natural gas delivery system has expanded over time to serve the organic growth in our communities. Accordingly, the natural gas delivery system comprises infrastructure installed at varying points of time, including infrastructure that is now nearing the end of its useful life. For example, over a third of the Company's natural gas mains were put into service over 30 years ago. As a result, the Company is continually analyzing its system to make necessary improvements to continue to safely operate and maintain its system.

Additionally, as new load locates in our service territory, system upgrades and expansions become necessary, especially in areas toward the eastern part of our service area that are prime for economic development expansion. The Company must be able to keep up with the pace of development to support jobs in our communities and to ensure our system continues to provide reliable, safe, and efficient natural gas service.

Q. PLEASE EXPLAIN HOW GOVERNMENT RELOCATIONS DRIVE INVESTMENT.

A. As the category implies, the Company must respond to our communities that require relocations of existing infrastructure located in the local right-of way. This is typically done as part of road improvement and widening projects. The Company must respond to these requests in accordance with local ordinances and unless the

Company has an actual property right, such as through a private easement, the costs of the relocation are not chargeable directly back to the municipality requiring the relocation.

Q. PLEASE EXPLAIN WHY SYSTEM INFRASTRUCTURE IMPROVEMENTS ARE NECESSARY.

A. New infrastructure investments are necessary to improve the overall reliability of the natural gas delivery system. These investments may or may not be driven directly by customer growth or replacement of aging infrastructure, but may support both of those categories. Examples of new infrastructure investments could be for purposes of achieving a better balance of the system, adjusting operating pressures of existing systems, or to increase reliability.

Q. PLEASE EXPLAIN HOW DISTRIBUTION AND TRANSMISSION INTEGRITY MANAGEMENT DRIVE NATURAL GAS INVESTMENTS?

A. Integrity management is an overall approach to ensure the safety of the gas distribution and transmission system. Investments are driven by existing and emerging state and federal regulations in the industry. These regulations impose upon the Company an obligation to continuously evaluate the reliability of its natural gas distribution and transmission system and to maintain and improve its safety and performance.

Q. PLEASE DESCRIBE DUKE ENERGY OHIO'S CURRENT DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM (DIMP).

A. Duke Energy Ohio's DIMP meets all the requirements of CFR 192 Subpart P – Gas Distribution Pipeline Integrity Management and follows the following seven elements outlined in the regulation:

1) Knowledge of the gas distribution system;
2) Identify threats;
3) Evaluate and rank risk;
4) Identify and implement measures to address risks;
5) Measure performance, monitor results, and evaluate effectiveness;
6) Periodic evaluation and improvement; and
7) Report results.

These elements support the basis of the DIMP and provide direction in evaluating initiatives and projects to reduce risks in the distribution system. The DIMP process is a continual improvement program. Duke Energy Ohio identifies, evaluates, and ranks risks in its distribution system and prioritizes measures to address these risks based on a relative risk model, that takes into consideration threats to the system, as defined in CFR 192.1007, which include corrosion, natural forces, excavation damage, material, weld or joint failure, incorrect operation, and other concerns that would threaten the integrity of the pipeline.

Some of the current DIMP initiatives include the following Replacement Programs (Aldyl -A Pipe, Service Lines, Farm Taps and High Pressure Meter Sets, Normac Couplings); Historic Pipeline Data Management (HPDM) Program; and

Shorted Casing Replacement Program. These initiatives comprise a significant portion of the CEP-related investments and the associated deferrals for the period January 2013 through December 2018, as well as investments made in calendar years 2019 and 2020 to date. These DIMP-related investments will continue to drive investments going forward.

Q. PLEASE EXPLAIN THE TRANSMISSION INTEGRITY MANAGEMENT PROGRAM (TIMP).

A. Duke Energy Ohio's TIMP meets all the requirements of CFR 192 Subpart O – Gas Transmission Pipeline Integrity Management. TIMP consists of seven main steps:

1) High Consequence Area (HCA) identification;
2) Data integration;
3) Risk analysis;
4) Assessment;
5) Repair;
6) Minimize risk; and
7) Improve.

As a whole, this is a continuous evaluation and assessment process. As stated in 49 CFR 192, "An operator's initial integrity management program begins with a framework and evolves into a more detailed and comprehensive integrity management program, as information is gained and incorporated into the program. An operator must make continual improvements to its program."

Q. WILL THOSE DIMP AND TIMP PROJECTS CONTINUE GOING FORWARD?

A. Yes. As previously discussed, the Company continually evaluates its natural gas system under the DIMP and TIMP to identify and respond to system risks. To the extent additional programs are identified and capital expenditures are necessary to address those risks identified through the DIMP and TIMP processes, the Company will make those investments.

Q. CAN YOU PLEASE BRIEFLY EXPLAIN THE CHANGES IN STATE OR FEDERAL REGULATIONS THAT HAVE OCCURRED IN RECENT YEARS?

A. In December 2011, Congress passed the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, an amendment of Title 49 United States Code 60101 (Pipeline Safety Act of 2011). The resulting federal regulations required more stringent safety and reliability protocols for both Department of Transportation and Owners/Operators. Among other things, the Pipeline Safety Act of 2011, and advisory bulletins by PHMSA clarified expectations of requirements for operators of gas transmission lines to verify accuracy of records of their system which includes providing traceable, verifiable, and complete documentation to support Maximum Allowable Operating Pressure (MAOP).

More recently, the new Transmission regulation - (§192.710) "Mega Rule" was split into three separate rules. The first part of the Mega Rule was adopted in October 2019 with an effective date of July 2020 which focused on Safety of Gas Transmission Pipelines, MAOP Reconfirmation, Expansion of Assessment

Requirements, *etc.* The other two rules are pending with anticipated release dates of 2021 and beyond.

Among other things, the newly adopted Mega Rule includes expanded and ongoing assessment requirements in specifically identified areas. Additionally, the new rule reconfirms requirements for maintaining traceable, verifiable and complete records for confirming MAOP. The rule requires 50% MAOP re-confirmation be completed by July 2028 and 100% completion by July 2035. MAOP reconfirmation program documentation and associated procedures must be completed by July 2021. Finally, the new rule also contains a requirement for operators to validate pipeline component material specifications under various conditions in accordance with new regulations (Material Validation Program). Those documentation and associated procedures must be completed by July 2021. This will be an ongoing program with no end date.

These new regulations have greatly expanded the scope of impacted pipelines, in terms of overall miles of pipes, that are now subject to these regulations. Also, the reconfirmation of MAOP via pressure test records and material documentation will be an extensive effort that may result in component and pipeline replacements. The ongoing, never ending "Opportunistic" material verification effort will also impact operational costs and processes. As a general statement, the new regulatory posture is guiding operators to utilize Inline Inspection (ILI) as an assessment tool going forward. To accomplish this, most pipelines must be retrofitted or replaced to accommodate the ILI tools.

Looking forward, there are additional regulations on the horizon that will likely necessitate additional investments. There is a Notice of Proposed Rule Making that will require more remote control valves on transmission systems. Also, there are proposed regulations and an overall regulatory trend to limit the use of Direct Assessment (DA) for evaluating pipelines. This will drive operators to utilize ILI more and incur capital costs associated with retrofitting pipelines to accept ILI tools. Also, since the "Mega Rule" was split into three separate rules, the true impact of Rules #2 and #3 will not be fully understood until they are released.

Q. DO THOSE TIMP AND DIMP PROGRAMS AND OTHER CEP INVESTMENTS RESULT IN NET OPERATIONAL SAVINGS?

A. The assumption that the CEP program has resulted in operational savings has not and cannot be verified. In fact, in some instances, operational and maintenance expense has increased as the Company is having to investigate records and conduct the various ongoing inspections. The program encompasses different types of assets, many of which are completely new or relate to an expansion of our service territory, and these assets may actually increase our operation and maintenance expenses over time. Any operational savings that do occur will happen over time. Customers will experience those savings, to the extent they do occur, when the Company files its next natural gas base rate case proceeding, which per the Stipulation in this case will be much sooner than it otherwise could have been absent the settlement.

III. STIPULATION AND RECOMMENDATION

Q. CAN YOU PLEASE EXPLAIN HOW THE SETTLEMENT IMPACTS THE COMPANY'S NATURAL GAS SYSTEM INVESTMENTS?

A. As explained to me by Company Witness Brown, the Stipulation resolves the Company's recovery of the return on and of CEP-related investments through December 31, 2018. It also addresses how the recovery of the return on and of capital investments made during calendar years 2019 and 2020 (while this application was pending) will be treated, as well as future investments.

The Staff of the Commission (Staff) and the external auditor have both examined the Company's investments through December 31, 2018. These investments were reviewed for prudency, reasonableness, and verification of their being in-service. The Stipulation resolves those issues, deferring to the external audit report in nearly all instances. Those investments are recommended for recovery.

Perhaps the most significant portion of the Stipulation, as it relates to CEP-related investments and customer rates, is the agreed-upon Rider CEP revenue requirement caps for the residential revenue requirement. These caps were carefully negotiated by the parties. Rider CEP caps on the residential revenue requirement have been negotiated and are established at a level that provides the Company an opportunity, but not a guarantee, for recovery of a return on and of its CEP-related investments made in 2019 and 2020.

Q. PLEASE BRIEFLY DESCRIBE THE NATURAL GAS PROJECTS ALREADY COMPLETED IN 2019 AND TO DATE IN 2020.

A. These projects will be subject to audit and review for prudency with the Company's next Rider CEP filing in 2021. Given that these investments were already made or in the process of being made while the current proceeding was under review, important provisions regarding eligibility for recovery of these investments, subject to audit, were addressed in the Stipulation via the agreed-upon Rider CEP residential revenue requirement caps. The investments were in the same categories I previously discussed and were driven primarily by replacement of aging infrastructure, customer growth, governmental relocations, and integrity management. In 2019 we placed approximately $141 million of capital in-service. In 2020 we are projecting to place approximately $161 million of capital in-service.

Q. PLEASE EXPLAIN WHY THE 2019 AND 2020 RIDER CEP REVENUE REQUIREMENT CAPS DO NOT GUARANTEE RECOVERY OF THESE INVESTMENTS?

A. The Company's 2019 and 2020 CEP-related investments will still be subject to audit by the Staff and, if necessary, a third-party auditor. These costs will still be examined for determination of prudence, in-service status, and reasonableness. The negotiated Rider CEP revenue requirement caps will provide a limitation on the amount of CEP-related investments that are eligible for recovery through Rider CEP for those two years. Because the Company had already made these investments while this matter was pending before the Commission, it was reasonable to negotiate Rider CEP revenue requirement caps at a level that reflected an opportunity for the Company to recover its costs, particularly when the Company had not yet reached the initial $1.50 deferral cap that was initially established. These Rider CEP revenue requirement caps provide a limitation on what the Company is able to recover in its next Rider CEP filing.

Similarly, for investments made beginning in 2021, the Company has agreed to an even lower Rider CEP revenue requirement cap to mitigate future rate increases to customers.

Q. PLEASE DESCRIBE THE TYPES AND LEVEL OF NATURAL GAS CAPITAL INVESTMENTS FORECASTED FOR 2021 AND BEYOND.

A. The main categories of capital investments include: Customer growth (New Service), Government Mandated Relocations, Aging Infrastructure (*i.e.* Measurement and Regulation), Integrity Management (DIMP, TIMP, Casings, *etc.*) and System Infrastructure Improvements. The Company estimates the following total capital investments are necessary, encompassing all categories, for the next three years:

	2021*	2022*	2023*
Integrity Management	$41	$37	$97
Government Mandated Relocations	$6	$6	$6
Measurement & Regulation	$20	$42	$40
Customer Growth	$27	$27	$27
System Infrastructure Improvements	$193	$83	$94
Other	$1	$1	$0
	$288	**$196**	**$263**

* In millions

M&R work included in the plan is primarily the result of a field safety survey of existing stations by an external engineering firm that was conducted in 2020. The firm identified M&R stations that needed capital improvements based upon safety and operational considerations. The stations were risk ranked and a multi-year year plan to correct the deficiencies was developed. Most of the stations in question have been in service for decades, represent aging infrastructure, and need to be improved upon or replaced to ensure the safety of our employees, the public, and the environment.

The upcoming DIMP include projects identified via leak data from the field in concert with a risk model. It is focuses on reducing system risk by replacing obsolete materials that are prone to higher leak rates, replacing vintage steel pipe that cannot be adequately cathodically protected, and or implementing new improved installation methods.

The upcoming TIMP includes projects to retrofit exiting pipelines to allow ILI tools to help mitigate risk from manufacturing and construction defects, and replace pipelines constructed with higher risk pipe (*e.g.*, spiral wound, hard spots, Low Frequency Electric Resistance Weld). Investments are also necessary to address new regulatory requirements (New Gas Transmission Rule) and include projects for MAOP Reconfirmation to validate Traceable, Verifiable and Complete (TVC) pressure test and material records. Casing remediation is an ongoing program to identify and correct pipeline casings that are no longer performing as designed and thus, creating potential safety concerns. In most cases the casing is in contact with the carrier pipe creating a short circuit and must be replaced.

The upcoming System Infrastructure includes projects necessary to ensure pressure and flow are maintained to all customers during our highest demand periods. This is done by evaluating customer equipment demands during extreme cold conditions against the available pipeline facilities. As the pipeline system is fully utilized and is projected to fall below design minimum requirements during these analyzed conditions, additional infrastructure projects are proposed to ensure service can be maintained.

Q. WILL THE LOWER RIDER CEP REVENUE REQUIREMENT CAP ASSOCIATED WITH CAPITAL INVESTMENTS PLACE IN SERVICE BEGINNING IN 2021 IMPACT THE COMPANY'S ABILITY TO PROVIDE SAFE AND RELIABLE NATURAL GAS SERVICE?

A. The Company will continue to make the necessary investments for all of the reasons I have discussed. The agreed upon caps to the Rider CEP revenue requirement means that the potential Rider CEP customer rate increases associated with the necessary investments will be limited. However, the Company will continue to make investments it deems necessary to serve its customers, as it would without the CEP process. Any capital investments made resulting in a revenue requirement in excess of those negotiated Rider CEP revenue requirement caps would be included for recovery in the Company's next natural gas base rate case, just not in the CEP rider.

Q. HOW DO THOSE FORECASTS COMPARE TO THE NEGOTIATED $1.00 RIDER CEP RESIDENTIAL RATE REVENUE REQUIREMENT CAP?

A. As Witness Brown explains, the revenue requirement calculated on these investments would be significantly higher than the revenue requirement that will be recovered by the Company through the stipulated Rider CEP residential rate caps associated with investments placed in service beginning in 2021.

IV. <u>CONCLUSION</u>

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.