REBUTTAL TESTIMONY OF KAREN K. HOLBROOK
DIRECTOR, PORTFOLIO REGULATORY STRATEGY AND SUPPORT
DUKE ENERGY BUSINESS SERVICES LLC
ON BEHALF OF DUKE ENERGY INDIANA, LLC
CAUSE NO. 43955 DSM-7
BEFORE THE INDIANA UTILITY REGULATORY COMMISSION

I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Karen K. Holbrook. My business address is 400 South Tryon Street, Charlotte, North Carolina.

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

A. I am employed by Duke Energy Business Services LLC ("Duke Energy Business Services"), a service company affiliate of Duke Energy Indiana, LLC ("Duke Energy Indiana" or "Company") and a subsidiary of Duke Energy Corporation ("Duke Energy"), as Director, Portfolio Regulatory Strategy and Support. In this capacity, I provide services to Duke Energy Indiana, LLC and other regulated utility subsidiaries of Duke Energy Corp.

Q. ARE YOU THE SAME KAREN K. HOLBROOK THAT PRESENTED DIRECT TESTIMONY IN THIS CAUSE IDENTIFIED AS PETITIONER'S EXHIBIT 1?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS PROCEEDING.

A. I will respond to the testimony filed by Mr. John Haselden of the Indiana Utility Consumer Counselor ("OUCC") regarding our reconciliation in this proceeding.

Specifically, I will respond to Mr. Haselden's concerns that (1) the Company applied the wrong values for avoided capacity costs; (2) that the avoided Transmission and Distribution ("T&D") capacity cost estimates included in the calculations should be zero; and (3) the Company should not be allowed to use halogen light bulbs as the baseline to project future energy and demand savings.

II. DUKE ENERGY INDIANA'S RECONCILIATION

Q. WHAT RELIEF IS DUKE ENERGY INDIANA SEEKING IN THIS PROCEEDING?

A. The Company is seeking approval of the reconciliation of costs for 2018 incurred pursuant to the approved Order in Cause No. 43955 DSM-4 ("DSM-4"). DSM-4 approved Duke Energy Indiana's programs for 2017 through 2019 along with the program cost, lost revenue and shareholder incentive recovery framework as described below.

Q. IS THIS THE FIRST RECONCILIATION SINCE THE COMMISSION APPROVED THE COMPANY'S PLAN IN DSM-4?

A. No. The Commission approved the Company's reconciliation of 2016 costs with rates set using the 2018 forecast approved in DSM-4 in Cause No. 43955 DSM-5 ("DSM-5") and the reconciliation of 2017 costs (and 2019 forecast approved in DSM-4) in Cause No. 43955 DSM-6 ("DSM-6").

Q. HAS DUKE ENERGY INDIANA CHANGED THE MANNER IN WHICH IT CALCULATES ANY OF ITS REVENUE REQUIREMENTS SINCE THE FINAL ORDER IN DSM-4?

A. No. All calculations, including the avoided costs used in determining the shared savings incentive, are consistent with what was approved in DSM-4 and as applied to the reconciliation approved in DSM-6.

Q. PLEASE SUMMARIZE THE VARIOUS COMPONENTS OF REVENUE REQUIREMENTS APPROVED IN DSM-4.

A. Aside from program cost recovery, the Commission approved lost revenues for the life of the measure and a shared savings shareholder incentive. The shared savings incentive approved was a tiered shared savings mechanism. To calculate the shared savings incentive, the Company takes the net benefits as calculated by the Utility Cost Test ("UCT") of the programs, then receives a percentage of that net benefit, while the Company's customers retain the remainder of the benefit.

Q. DID THE COMMISSION FIND THAT THE PLAN APPROVED IN DSM-4 WAS CONSISTENT WITH ITS IRP?

A. Yes, the Commission found that the Company complied with the requirement that the EE Plan was consistent with the Company's then most current IRP, submitted in 2015. Although Duke Energy Indiana has subsequently filed another IRP, the Plan approved in DSM-4 was consistent with the 2015 IRP, and that is the baseline for this proceeding.

Q. ARE DUKE ENERGY INDIANA'S AVOIDED COST ASSUMPTIONS, FOR THE PURPOSES OF CALCULATING ITS SHARED SAVINGS INCENTIVE IN THIS RECONCILIATION PROCEEDING, CONSISTENT WITH THE COMMISSION'S ORDER IN DSM-4?

A. Yes. I would also note that the OUCC did not raise any of these issues with avoided cost calculations in that proceeding, nor in the DSM-5 or DSM-6 reconciliation proceedings, both of which used forecasts from DSM-4.

Q. DID DUKE ENERGY INDIANA USE THE SAME METHODOLOGY IN DSM-6?

A. Yes. I would also note that the OUCC did not raise any of these issues in that proceeding.

Q. MR. HASELDEN ARGUES THAT THE AVOIDED CAPACITY COSTS SHOULD BE VALUED AT ZERO FOR PURPOSES OF CALCULATING THE UCT TEST BECAUSE THE COMPANY DOES NOT HAVE A PLANNING RESERVE MARGIN DEFICIT. DO YOU AGREE?

A. No. It is my understanding that Mr. Haselden is relying on the 2018 IRP for his arguments regarding avoided capacity costs. Mr. Haselden believes that the Company's avoided capacity costs should be set to zero because the Company's 2018 IRP shows one specific future scenario where the Company has a surplus of generation capacity until 2023. However, the 2018 IRP is not the IRP that is tied to the 2018 program costs and performance under DSM-4 as discussed above.

The 2015 IRP is the appropriate IRP to use for this analysis. That 2015 IRP clearly shows that the Company had an expectation of a need to add capacity resources over and above the EE and DR programs in each year during 2017 – 2019. The 2015 IRP assumed the inclusion of peak reductions from DSM programs that greatly exceeded the required reserve margin. This means that without these programs, the Company would have had an immediate need to install over 800 MW of generation capacity. It is completely

illogical to conclude that these DSM programs do not represent a tangible capacity resource that is clearly being "avoided".

In any event, whether the Company has a planning reserve margin deficit is of no consequence in how it should calculate its avoided costs. To follow the OUCC's argument to its conclusion would have the Company frequently changing the avoided costs used in analyzing its programs and would not provide for a consistent set of energy efficiency programs, which is one key to a successful program. The Company needs consistency in how it applies avoided costs to its programs for those programs to provide value to customers on an ongoing basis.

Q. MR. HASELDEN ALSO ARGUES THAT T&D SAVINGS CREATED BY DSM PROGRAMS MAY NOT EXIST. PLEASE EXPLAIN WHY YOU DISAGREE.

A. It is my understanding that Mr. Haselden believes that the addition of EE and the continuation of DR programs provide no avoided T&D capacity benefits. Mr. Haselden attempts to justify this contention by stating that DSM programs only provide value when they relieve capacity problems on specific circuits and he states that none of the Company's DSM programs target specific circuits. The Company's methodology to determine the value of avoided T&D is based on a system average spending associated with investments to accommodate load growth divided by expected load growth. It is reasonable to assume that customers adopt DSM programs across the system in a manner that will result in load reduction across all circuits, including those with and without immediate capacity concerns. Therefore, by utilizing a calculation that is an average across the system, it can be relied upon to be reflective of the adoption of DSM programs.

Mr. Haselden further argues that certain projects under its TDSIC Plan could impact both current and future T&D capacity issues. This argument ignores the nature of the TDSIC projects and the impacts to the Company's system that can occur over the longer term, which is the focus of the IRP and the EE plan. The purpose of many of the TDSIC projects is to replace assets that have served their useful life. These projects do not necessarily address future load growth or changing demands on the system over time. Finally, Mr. Haselden makes the statement that "DEI is artificially inflating both its generating and T&D avoided capacity cost estimates" with no supporting facts. The Company has been transparent with its calculations and maintained continuity and consistency with approved assumptions in DSM-4.

Q. PLEASE SUMMARIZE YOUR RESPONSE TO MR. HASELDEN'S RECOMMENDED ADJUSTMENTS TO THE COMPANY'S FINANCIAL INCENTIVES RELATED TO COST EFFECTIVENESS AND SHARED SAVINGS INCENTIVES CALCULATIONS.

A. The inputs into the calculations of the Company's shared savings incentive are consistent with those approved in DSM-4. Changing those inputs would make these calculations inconsistent with the 2015 IRP and inconsistent with the Commission's ruling that relied upon the underlying calculations and assumptions of cost effectiveness in the plan. Therefore, the 2018 reconciliation must continue to rely on these approved inputs and assumptions as it has for every other reconciliation under DSM-4.

The reliance on the avoided cost assumptions approved in DSM-4 is of tantamount importance. If the Company were to change underlying avoided cost

assumptions while executing the portfolio, there would be the potential for continual program disruption which would deprive customers of the opportunity to participate.

Q. DO YOU AGREE WITH THE CONCERNS MR. HASELDEN EXPRESSES WITH THE COMPANY'S CALCULATIONS OF BENEFIT/COST TEST RESULTS?

A. No, I do not. Mr. Haselden states that there is "no transparency and the modeling results cannot be replicated or verified by any other party." First, the DSMore software is a widely accepted industry standard, which Duke Energy Indiana has used for many years. This program is available for OUCC's review and use onsite at Duke Energy Indiana's offices. It is used in approximately 30 states and by several independent evaluators. Second, the OUCC has not requested access to Duke Energy Indiana's DSMore program for independent validation of the Company's calculations, despite offers of assistance by both Integral Analytics and the Company.

III. THE PROCESS FOR EVALUATION OF DUKE ENERGY INDIANA'S LIGHTING PROGRAM AS APPROVED IN DSM-4

Q. PLEASE DESCRIBE MR. HASELDEN'S CONCERNS WITH THE COMPANY'S LIGHTING ASSUMPTIONS IN THIS PROCEEDING.

A. Mr. Haselden takes issue with the benefits used in calculating the UCT and subsequent shared savings incentive for standard General Lamp Shape ("GSL") A-line light emitting diode ("LED") bulbs. In essence, Mr. Haselden argues that there have been significant changes in the lighting market and therefore savings attributable to GSL LED bulbs delivered through DSM programs will cease within the next few years due to this

changed baseline.

Q. HOW DO YOU RESPOND TO HIS ARGUMENT?

A. I disagree with Mr. Haselden's proposal to change the useful life and modeling approach for these bulbs to something different than what was used in the 2015 IRP and approved in DSM-4. As explained above, these assumptions were approved in our plan under DSM-4 as well as subsequent reconciliations under this mechanism.

Additionally, I disagree with Mr. Haselden's premise that LED lamps have become the baseline due to price and performance as well as the Energy Independence and Security Act EISA backstop. The backstop provision established in EISA essentially said that if the DOE did not issue new energy conservation standards by a certain date, a backstop energy conservation standard of 45 lumens/W would apply, which would effectively eliminate the sale of halogen and incandescent A lamps on January 1, 2020. Retail stores continue to offer incandescent, halogen and CFL bulbs in the Company's service territory. Mr. Haselden attempts to show minimal price differential between halogen and LED bulbs. However, this is misleading in that he is comparing the halogen bulbs to non-Energy Star certified LEDs that do not have the same performance or measure life as Energy Star certified LEDs. The Company's programs offer incentives on the Energy Star certified LEDs only. These bulbs have longer lives, offer greater energy savings, and have a larger price differential than what he is showing in his photograph attached to his testimony as OUCC Attachment JEH-4.

Q. DO YOU AGREE WITH WITNESS HASELDEN'S CONCERN WITH THE EXTENDED APPLICATION OF HALOGEN BULBS AS A BASELINE FOR RESIDENTIAL GSL MEASURES?

A. No, I do not agree. Mr. Haselden contends that Duke Energy Indiana is inaccurately recognizing a 15-year measure life (which was updated to a 12-year measure life in 2018 through the EM&V process) associated with a GSL LED bulb because the GSL baseline has changed. However, many of the facts underlying his position have fundamentally changed due to actions taken by the US Department of Energy ("DOE") regarding the implementation of GSL lighting efficiency standard, as explained below.

Q. PLEASE EXPLAIN WHAT ACTIONS TAKEN BY THE DOE HAVE FUNDAMENTALLY CHANGED AND CONTRADICT MR. HASELDEN'S CONTENTIONS REGARDING CHANGES TO THE GSL BASELINE.

A. On September 4, 2019, the DOE issued a final Order withdrawing the 2017 DOE expanded definition of GSL that covered specialty bulbs. In the Order, which is a Final Order, not a Notice of Proposed Rulemaking as indicated in Witness Haselden's testimony, the DOE made clear that the backstop requirement that would have prohibited the sale of GSL bulbs that exceed 45 lumens per watt effective January 1, 2020, is not triggered. For this reason, many of the documents cited by Mr. Haselden that assumed the backstop requirement would be triggered on January 1, 2020, are no longer current. The studies referenced by Mr. Haselden refer to the impending January 1, 2020, backstop requirement as a key driver toward the market transformation that he believes justifies a change in the baseline. However, the fact is that backstop requirement will not go in

place January 1, 2020, and customers will still be able to purchase GSL bulbs that are below the 45 Lumen per watt efficiency standard.

Q. PLEASE GIVE EXAMPLES OF STUDIES CITED BY MR. HASELDEN THAT HAVE BEEN IMPACTED BY THE DOE'S FINAL DECISION TO NOT TRIGGER THE JANUARY 1, 2020, BACKSTOP REQUIREMENT FOR GSL BULBS.

A. The Uniform Methods Project ("UMP") Chapter 6, Section 4.3.2, referenced on page 14 of Mr. Haselden's testimony is a document that was clearly written under the pretense that the January 1, 2020, backstop requirement was going to occur. Section 4.3.2 is actually entitled "Calculating Post 2020 Savings" and begins with the statement, "Bulbs expected to be in use in 2020 and beyond will be affected by the EISA backstop provision mentioned in Section 1." In other words, the UMP recommendation to set a sunset date that was referenced was based on the presumption that the backstop requirement would no longer allow alternatives to LED bulbs to be available for purchase.

Additionally, in the very information that Mr. Haselden presents regarding the Illinois Technical Reference Manual v8.0, it states: "that lamps *subject to the EISA backstop* provision shall have measure life of two years." (emphasis added). Since the lamps are no longer "subject to the EISA backstop provision" his argument is moot.

Q. DO YOU AGREE WITH MR. HASELDEN'S CONTENTION THAT THE MARKET HAS TRANSFORMED, AND THAT WHETHER THE

GOVERNMENT MANDATE EXISTS OR NOT, THE BASELINE FOR GSLS SHOULD CHANGE?

A. I do not agree with Mr. Haselden. Other than the 2018 NEEA Study which appears to be from a different region of the country, and Mr. Haselden's anecdotal evidence and estimate of shelfing stock, he has not provided any conclusive evidence that the baseline has shifted. The reality is that both the study performed by Northwest Energy Efficiency Alliance ("NEEA") and his own anecdotal evidence were likely greatly influenced by retailers believing the backstop requirement would be triggered on January 1, 2020. With the DOE ruling, the market transformation that Mr. Haselden believes is occurring could revert to prior market conditions. The DOE ruling that the backstop requirement was not triggered will likely serve as a green light for retailers that had planned on no longer being able to sell bulbs that are below the 45 lumen per watt standard after December 31, 2019 to start restocking and selling these bulbs.

Q. PLEASE PROVIDE SUPPORT FOR THIS POTENTIAL REPURCUSSION OF THE DOE SEPTEMBER RULING.

A. After the DOE's final rule was issued on September 4, 2019, Noah Horowitz, Director of the Center for Energy Efficiency Standards at the National Resource Defense Council said, "Today's action sets the United States up to become the world's dumping ground for inefficient incandescent and halogen bulbs being phased out around the world."[1] Clearly this efficiency expert is concerned that the finding that the backstop requirement

[1] DOE Rollback of Energy Savings Light Bulb Standards is Senseless and Illegal, NRDC Press Release September 4, 2019.

not being triggered will lead to low cost inefficient bulbs flooding into the U.S. Market, including Indiana, for sale to the public.

Q. DO YOU AGREE WITH MR. HASELDEN'S CONTENTION THAT THE COMPANY SHOULD NOT HAVE BEEN INCENTIVIZING ENERGY STAR LEDs?

A. No, I do not agree with his contention. Although I do agree that by incentivizing Energy Star LEDs with longer measure lives the program's UCT benefit is higher, I disagree this is done to increase the utility incentives. Increasing the UCT benefit of a program, by definition, makes the program more cost effective. Therefore, all customers benefit given that approximately 90% of the benefit accrues to the customer base via decreased net system costs. Additionally, Mr. Haselden appears to ignore the fact that there are multiple benefits of installing an Energy Star LED in lieu of a low cost (value line) LED. According to EnergyStar.gov, Energy Star LED lighting must be certified to display the following characteristics:

- Brightness is equal to or greater than existing lighting technologies (incandescent or fluorescent) and light is well distributed over the area.
- Light output remains constant over time, only decreasing towards the end of the rated lifetime (at least 35,000 hours or 12 years based on use of 8 hours per day).
- Excellent color quality. The shade of white light appears clear and consistent over time.
- Efficiency is as good as or better than fluorescent lighting.
- Light comes on instantly when turned on.

- No flicker when dimmed.
- No off-state power draw. The fixture does not use power when it is turned off, with the exception of external controls, whose power should not exceed 0.5 watts in the off state.

In addition to providing a more cost-effective program than if it incentivized the cheaper non-Energy Star LED, by incentivizing Energy Star LEDS, the Company's program provides an efficient and quality light that will make customers want to continue to adopt LEDs, rather than reverting back to less efficient options. In fact, in Chapter 6, Section 4.4 of the Uniform Methods Project that was referenced by Witness Haselden, it specifically discusses the differences between Value Line and Energy Star LEDs. In the discussion the UMP points out that "the vast majority of program administrators have incented Energy Star LEDs and have not chosen to include non-Energy Star -referred to as "value line" LEDs in their programs." It then goes on to explain, "This is typically in response to some of the earlier quality challenges with CFLs and concern that if customers have a negative experience (due to poor quality or shorter-than-expected lifetimes) as they first try and then increasingly adopt LEDs that this could lead to backsliding and negative impressions of this burgeoning technology." Clearly Duke Energy Indiana's decision to incentivize the more cost-effective Energy Star LEDs is not unique and is intended to benefit customer efficiency and improve the customer experience.

IV. CONCLUSION

Q. ASIDE FROM THE POLICY POSITIONS DISCUSSED ABOVE, DID THE OUCC TAKE EXCEPTION WITH THE RECONCILIATION PROPOSED IN THIS PROCEEDING?

A. No. In Mr. Caleb Loveman's testimony, he states that during his review of the Company's exhibits and workpapers, nothing came to his attention that would indicate the Company's calculation (based on its current proposal) is incorrect.

Q. DO YOU HAVE ANY FINAL THOUGHTS?

A. Yes. Duke Energy Indiana is using the same methodology to calculate its avoided costs as was used in the 2015 IRP and as approved in DSM-4. The avoided cost methodology is unchanged from that used in DSM-5 and DSM-6. This reconciliation proceeding is not the appropriate proceeding to argue policy issues such as inputs to the avoided cost calculation. Duke Energy Indiana recently filed its next EE Plan filing for 2020 through 2023, and it is currently pending. Mr. Haselden and OUCC can more appropriately raise these issues in that proceeding.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY AT THIS TIME?

A. Yes.

VERIFICATION

I hereby verify under the penalties of perjury that the foregoing representations are true to the best of my knowledge, information and belief.

Signed: _____ Dated: 12/18/2019
Karen K. Holbrook