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INDIANA UTILITY
REGULATORY COMMISSION

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

VERIFIED PETITION OF SOUTHERN INDIANA GAS AND ELECTRIC COMPANY D/B/A VECTREN ENERGY DELIVERY OF INDIANA, INC. REQUESTING THE INDIANA UTILITY REGULATORY COMMISSION TO APPROVE CERTAIN DEMAND SIDE MANAGEMENT PROGRAMS AND GRANT COMPANY AUTHORITY TO RECOVER COSTS, INCLUDING PROGRAM COSTS, INCENTIVES AND LOST MARGINS, ASSOCIATED WITH THE DEMAND SIDE MANAGEMENT PROGRAMS VIA THE COMPANY'S DEMAND SIDE MANAGEMENT ADJUSTMENT	)	**CAUSE NO. 44927**

<u>BY THE COMMISSION</u>:
David E. Ziegner, Commissioner
Loraine Seyfried, Administrative Law Judge

On April 10, 2017, Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc. ("Petitioner", "Company" or "Vectren South") filed with the Indiana Utility Regulatory Commission ("Commission") a Verified Petition and the Verified Direct Testimony, including attachments, of Rina H. Harris, Richard G. Stevie, Matthew E. Lind, J. Cas Swiz and Scott E. Albertson establishing this Cause, constituting its case-in-chief and seeking approval of Vectren South's 2018 – 2020 Energy Efficiency Plan ("2018 – 2020 Plan" or "Plan"). The 2018 – 2020 Plan is to be effective during calendar years 2018, 2019 and 2020 and is designed to save 111 million kilowatt hours ("kWh") of energy and to reduce demand by 26 thousand kilowatts ("kW") over the three year period.

On April 10, 2017, the Citizens Action Coalition of Indiana, Inc. ("CAC") filed a Petition to Intervene and on May 2, 2017, the Commission issued a Docket Entry granting the request.

On July 5, 2017, Vectren South filed the Verified, Supplemental Direct Testimony of Rina H. Harris and M. Sami Khawaja. On July 18, 2017, Vectren South filed Corrections to the Direct Testimony of Rina H. Harris and J. Cas Swiz.

On July 26, 2017, the Indiana Office of Utility Consumer Counselor filed the Verified Direct Testimony of Edward T. Rutter and Crystal L. Thacker. The next day, the CAC filed the Verified Direct Testimony, including attachments, of Anna Sommer, Karl Rábago, and Elizabeth Stanton.

On July 31, 2017, the CAC filed an Agreed Motion for a One Day Extension and August 3, 2017, the Commission issued a Docket Entry granting the Motion.

On July 31, 2017, Vectren South filed a Motion for Protection of Confidential and Proprietary Information seeking a determination that designated confidential information

("Confidential Information") involved in this proceeding be exempt from public disclosure under Ind. Code § 8-1-2-29 and Ind. Code ch. 5-14-3. The Confidential Information was granted protection on a preliminary basis through a docket entry on August 10, 2017 and submitted by the CAC on August 21, 2017.

On August 7, 2017, the CAC filed corrections to CAC Exhibit 1 and Attachment EAS-2.

On August 16, 2017, Vectren South filed the Verified Rebuttal Testimony, including Attachments, of witnesses Harris, Albertson, Stevie and Lind, K. Chase Kelley and Gary Vicinus. On August 29, 2017, Vectren South filed corrections to the Rebuttal Testimony of witnesses Harris and Stevie.

On September 5, 2017, the CAC filed corrections to CAC Exhibit No. 3.

Pursuant to public notice duly given and published, proof of which was incorporated into the record by reference and placed in the Commission's official file, an evidentiary hearing was held in this Cause on September 6, 2017 at 9:30 a.m. EST in Hearing Room 222 of the PNC Center, 101 W. Washington Street, Indianapolis, Indiana. At the hearing, Vectren South, the OUCC and the CAC appeared by counsel and offered into the record their respective prefiled, cases-in-chief, supplemental testimony and rebuttal testimony and corresponding attachments, which were admitted into evidence. No other party or members of the general public appeared.

Based upon the applicable law and the evidence of record, the Commission now finds:

1. **Notice and Jurisdiction.** Proper notice of the hearing in this Cause was given as required by law. Vectren South is a "public utility" within the meaning of Ind. Code § 8-1-2-1 of the Public Service Commission Act, as amended, an electricity supplier pursuant to Ind. Code § 8-1-8.5-10 and is subject to the jurisdiction of the Commission. The Commission has jurisdiction over Petitioner and the subject matter of this Cause in the manner and to the extent provided by the laws of the State of Indiana.

2. **Petitioner's Organization and Business.** Petitioner is an operating public utility, incorporated under the laws of the State of Indiana, with its principal office and place of business in the City of Evansville, Indiana. Petitioner is subject to regulation by the Commission in the manner and to the extent provided by the laws of the State of Indiana. Petitioner has both a gas division and an electric division. Vectren South provides electric utility service to approximately 140,000 customers in six (6) counties in southwestern Indiana. Vectren South renders such electric utility service by means of utility plant, property, equipment and related facilities owned, leased, operated, managed and controlled by it which are used and useful for the convenience of the public in the production, treatment, transmission, distribution and sale of electricity.

3. **Applicable Rules and Statutes**. The Commission has developed a regulatory framework that allows a utility to meet long-term resource needs with both supply-side and demand-side resource options in a least-cost manner. As part of its Integrated Resource Plan ("IRP"), an electric utility must consider alternative methods of meeting future demand for electric service, including a comprehensive array of demand-side measures that provide an opportunity for all customers to participate in demand side management ("DSM"), including low-income residential customers. 170 IAC 4-7-6(b). The Commission adopted 170 IAC 4-8 providing guidelines for DSM cost recovery ("DSM Rules"). The DSM Rules were specifically designed to assist the Commission in its administration of the Utility Powerplant Construction Act, Ind. Code ch. 8-1-8.5, and to facilitate increased use of DSM as part of the utility resource mix.

Ind. Code § 8-1-8.5-9 ("SEA 340" or "Section 9"), which became law on March 27, 2014, allowed an electric utility to offer a cost-effective portfolio of energy efficiency ("EE") programs to customers, and, if the Commission determined that the portfolio was reasonable and cost effective, to recover EE program costs in the same manner as such costs were recoverable under the Commission's Phase II Order dated December 9, 2009 in Cause No. 42693. It also created the ability for certain industrial customers to opt out of participation in an electric utility's EE program.

Vectren South entered into a Stipulation and Settlement Agreement with the OUCC dated August 13, 2014 (the "2014 Settlement Agreement") that allowed the Company to continue offering a cost effective portfolio of DSM programs during calendar year 2015 (the "2015 Plan"). We approved the 2014 Settlement Agreement in our October 15, 2014 Order in Cause No. 44495. The 2015 Plan contained cost effective DSM programs designed to achieve energy savings approximately equal to 1% of retail sales, adjusted for large customer opt-out. The 2015 Plan was designed assuming eighty percent (80%) of eligible customers would opt-out of participation in Company sponsored DSM programs. To date 74% of eligible load has opted out of participation and none of the customers that have opted-out have expressed an interest in opting back in. In our original Order issued in Cause No. 44645 on March 23, 2016, we approved Vectren South's 2016 – 2017 Plan pursuant to Ind. Code § 8-1-8.5-10 ("Section 10"). The Order was vacated and remanded back to us for additional findings. Vectren South has been implementing programs pursuant to that order since March 2016.

Section 10, which became law on May 6, 2015 through Senate Enrolled Act 412 ("SEA 412"), mandates the periodic filing, beginning no later than 2017 and not less than once every three years, of EE plans by electricity suppliers that includes EE goals, EE programs to achieve the goals, program budgets and program costs, and evaluation, measurement and verification ("EM&V") procedures that must include independent EM&V. Upon submittal of a plan, the Commission is required to consider ten factors in determining the overall reasonableness of a plan. This review includes reference to the utility's most recent IRP. If the Commission finds a plan to be reasonable in its entirety, the Commission shall: (1) approve the plan in its entirety, (2) allow the electricity supplier to recover all associated program costs on a timely basis through a periodic rate adjustment mechanism, (3) allocate and assign costs associated with a program to the class or classes of customers that are eligible to participate in the program, and (4) allow recovery of reasonable performance incentives and lost revenues. If the Commission finds that a plan is not reasonable because costs associated with one or more programs included in the plan exceed the projected benefits of the program(s), the Commission may exclude the program(s) and approve the remainder. And, if the Commission finds the plan is not reasonable in its entirety, then the Commission's order shall set forth the reasons for its determination and the electricity supplier shall submit a modified plan within a reasonable amount of time.

It is against this backdrop of the Commission's rules and Indiana statutes that we consider the DSM programs and ratemaking proposals made by Vectren South in this Cause.

4. **Petitioner's Request.** In this proceeding, Vectren South requests Commission approval of its 2018 – 2020 Plan. The 2018 – 2020 Plan includes EE goals, EE programs to achieve the EE goals, program budgets and costs, and procedures for independent EM&V of programs included in the plan. The Plan has an estimated cost of $28.6 million, with $9.5 million in 2018, $9.6 million in 2019, and $9.5 million in 2020. The Vectren South 2018 – 2020 Plan includes a cost effective portfolio of programs designed to achieve 111 million kWh in energy savings and 26 thousand kW in demand reduction during the three-year period. The 2018 – 2020 Plan includes both residential and commercial EE programs, some of which include a demand response ("DR") component. The Plan's goals were modeled as part of the Company's 2016 IRP. Vectren South requests authority to continue recovering all program costs, including lost margins and financial incentives via its existing Demand Side Management Adjustment ("DSMA"), which includes components for the recovery of program costs, lost margins for all customer classes and performance incentives. Vectren South is requesting that all of the components of the DSMA remain in place, unchanged, except that Vectren South requests approval to recover lost revenues based upon the weighted average measure life ("WAML") of measures included in the 2018 – 2020 Plan less a 10% saving reduction, as discussed below, and annual depreciation and operating expenses associated with the proposed conservation voltage reduction ("CVR") program investment via the DSMA. Vectren South is proposing a performance incentive mechanism consistent with the methodology approved in the Commission Order dated March 23, 2016 in Cause No. 44645[1], applicable to all programs included in the 2018 – 2020 Plan except for the CVR program, the smart thermostat program[2] and the income qualified weatherization ("IQW") program. Vectren South has requested that the Vectren Oversight Board ("Oversight Board") continue to remain in place unchanged during the 2018 – 2020 Plan period, with authority to roll forward unused funds from year to year, exceed Commission-approved budgets for DSM programs by up to 10% without having to seek additional approval from the Commission and authority to continue shifting funds from sector to sector, provided gas and electric funds are not commingled.

5. **Vectren South 2018 – 2020 Plan.** The 2018 – 2020 Plan includes the following DSM programs, the majority of which are current programs and many of which are integrated with Vectren South's gas programs:

Residential

- Residential Lighting
- Residential Prescriptive
- Residential New Construction
- Home Energy Assessment & Weatherization
- Income Qualified Weatherization
- Food Bank – LED Bulb Distribution

Commercial & Industrial ("C&I")

- Commercial Prescriptive
- Commercial Custom
- Small Business Direct Install
- Commercial New Construction
- Building Tune-up
- Multi-Family Retrofit

[1] Although this Order was vacated by the Court of Appeals and remanded back to this Commission for additional findings, this methodology is not one of the issues on remand.
[2] The smart thermostat program is separate and distinct from the SmartDLC – Wifi DR/DLC Change-out program for which Vectren South is seeking an incentive.

- Energy Efficient Schools
- Residential Behavioral Savings
- Appliance Recycling
- Smart Thermostat
- Conservation Voltage Reduction (CVR)
- SmartDLC – WiFi DR/DLC Change-out
- BYOT (Bring Your Own Thermostat)
- CVR Commercial

6. Evidence.

A. Petitioner's Case-in-Chief. Rina H. Harris, Director of Energy Efficiency for Vectren Utility Holdings, Inc. ("VUHI"), testified that Vectren South is requesting authority to implement the EE and DR programs defined in the 2018 – 2020 Plan beginning January 1, 2018 through December 31, 2020 ("Plan Period"), with the goal of achieving approximately 111 million kWh in energy savings and 26 thousand kW in demand reduction during the three-year period. She said this level of energy savings is roughly equal to a one percent (1%) reduction in eligible energy consumption from current customer usage levels and that this amount excludes the approximately seventy four percent (74%)[3] of large C&I customer load that has opted out of participation in Company sponsored EE programs. She said that along with approval of the 2018 – 2020 Plan, the Company seeks to recover all costs associated with offering the DSM programs in the 2018-2020 Plan, consistent with the provisions of Section 9, Section 10 and the Commission's DSM Rules. She testified that the 2018-2020 Electric EE Program cost recovery includes a request for accounting and ratemaking procedures to recover, through Vectren South's DSMA Mechanism, all program costs, including direct and indirect program costs, lost revenues and financial incentives, consistent with Section 10 and the Commission's DSM Rules. Ms. Harris testified that the 2018-2020 Plan has an estimated cost of $28.6 million, with $9.5 million in 2018, $9.6 million in 2019, and $9.5 million in 2020. These amounts include anticipated evaluation costs. In addition, she confirmed that the Company is proposing to capitalize and defer for future recovery the costs associated with installing CVR technology and to recover through the annual DSMA filings carrying costs and annual depreciation expense on CVR program investments.

Witness Harris testified that Vectren South anticipates that approximately $4 million of incremental lost revenues is associated with the 2018-2020 Plan during the three year Plan term and that Vectren South initially was seeking authority in this Cause to collect lost revenues for the life of the measure. Under cross examination, Ms. Harris explained that her use of the term "incremental lost revenues" described only the lost revenues associated with the first year of a measure or program. She specified that "incremental" did not indicate something added, gained or

[3] In 2015, Vectren South reported that approximately 80% of eligible load had opted out of participation in Company sponsored EE programs. The 74% opt-out level reported herein reflects the impact of a large customer conversion to a combined heat and power system.

additional. 44927 Tr. at 15-16.[4,5] When asked if Vectren South's ratepayers that paid DSM charges in 2017, would pay an incremental, or additional $1.395M in lost revenues during 2018 associated with those programs as reflected in her Table RHH-5, she answered "No." 44927 Tr. at 18.

Ms. Harris admitted that Vectren uses the half-year convention, assuming all measures for a program year are installed July 1. 44645 Tr. at 49.[6] Ms. Harris said she would "need to confirm" whether lost revenues for the following year were again calculated using the half-year convention or were calculated assuming all measures were installed January 1 of the following year, but did not offer any subsequent confirmation. 44645 Tr. at 50-54.

Witness Harris also filed supplemental direct testimony in which she requested approval for the Company to implement lost revenue recovery based upon the weighted average measure life ("WAML") of all measures included in the 2018 – 2020 Plan, with a 10% reduction in savings to account for measure persistence. During cross-examination, Ms. Harris confirmed that Vectren South was no longer seeking approval of its original request to recover lost revenues over full measure lives. 44645 Tr. at 11. Witness Harris testified that using this method, Vectren South would recover the reasonable amount of lost revenues associated with the WAML of its EE programs or the measure life, whichever is less. To determine individual measure lives ("ML"), Ms. Harris said all inputs into Vectren South's WAML calculation were grounded in the latest Indiana Technical Resource Manual ("TRM") or evaluation. She said that the WAML is the average life, weighted by savings in years, of all the various measures installed or actions taken in the portfolio of programs.[7] Ms. Harris testified that the WAML for the residential programs was 11 years, and 14 years for the commercial and industrial programs. She said the overall portfolio WAML was 12 years. Ms. Harris confirmed, under cross-examination, that Vectren South sought to recover lost revenues for all programs over either the 12-year WAML or the WAML of a particular program, whichever was less. 44927 Tr. at 40-41. Ms. Harris admitted her prefiled testimony did not contain the WAML calculations but claimed that with only her prefiled testimony and a working version of Microsoft Excel, she could make those calculations "very easily." 44927 Tr. at 38.

Ms. Harris said that capping recovery of lost revenues based upon WAML is reasonable because it limits lost revenue recovery based on the average equipment life and measure persistence of the entire program plan. In addition, only 90% of annual savings would be recovered, reflecting the statistical certainty EM&V providers can obtain for lost revenues. She said that as explained by witness Khawaja, the EM&V process utilizes at minimum a 90% confidence interval (an industry accepted standard).

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[4] "44927 Tr." refers to the hearing transcript from this Cause, September 6, 2017.

[5] Later, while discussing the impact of rollover funds on Vectren South's annual Flexible Spending budget, Ms. Harris said any rollover funds should be "incremental" to those budgets – not netted against or "eating into" the Flexible Spending budgets. She went on to testify that she did not believe she had two different definitions for that word. 44927 Tr. at 34-35.

[6] "44645 Tr." refers to the hearing transcript from Cause No. 44645, Vectren South's DSM Hearing on Remand, September 5, 2017. The transcript from that Cause was incorporated into the record of this Cause by agreement of the parties. 44927 Tr. at 3.

[7] Under cross examination, Ms. Harris clarified that her use of the term "portfolio" in her prefiled testimony was meant to include all programs within a DSM Plan, both residential and commercial. 44927 Tr. at 39.

Ms. Harris said that the WAML of the portfolio would be re-evaluated and adjusted with each EE filing, but confirmed that once EM&V for measures in a program year is completed those savings carry forward for the duration of the measure life and programs are not reevaluated later. 44645 Tr. at 17. She also conceded that future savings of installed measures are more uncertain than savings measures in Year One. 44645 Tr. at 19. She testified that Vectren South does not, in years after a DSM measure is installed, try to assess if a customer would have installed that measure sometime in the future or at what point in the future and that Vectren claims the first year savings over the life of the measure because Vectren South is "taking credit for that early adoption." 44645 Tr. at 23-23.

In response to a pending alternative proposal by CAC in Cause No. 44645, the 2016-2017 remand case, witness Harris testified a three- or four-year cap is arbitrary and is not tied to EM&V, cost effectiveness or any economic study suggesting a four-year cap is a reasonable time period. Furthermore, Ms. Harris testified that for the 2018-2020 Plan, a four-year cap would cause approximately $52M of financial harm to Vectren South in lost revenues over the life of the programs, which equates to approximately 70% of lost revenues. She said that a four-year cap would incent utilities to offer programs with a shorter measure life, as it is in the utility's best interest to recover its fixed costs associated with the life of the measure. For those reasons, allowing a utility to collect lost revenues based upon verified savings for the life of the measure is reasonable given it links to estimated savings, but providing a cap based upon the WAML, with a 10% reduction in savings to account for the verification uncertainty that exists simply provides even greater assurance of a reasonable recovery approach. Ms. Harris testified that for the 2018-2020 Plan, the WAML approach would reduce lost margin recovery by approximately $18.8M over the life of the programs included in the 2018-2020 Plan as compared to recovery using full measure life. She said that under the WAML approach, lost revenues would be reduced by 26% with a 12-year weighted average cap plus 10% savings reduction.

Ms. Harris described all of the programs included in the Plan and said that the Plan is a plan as defined by Section 10 in that it includes EE goals, EE programs to achieve the goals, program budgets and program costs and procedures for EM&V that include independent EM&V. Ms. Harris confirmed that approval of the 2018-2020 Plan is in the public interest and approving it will allow Vectren South to continue providing opportunities for customers to reduce their energy usage and make more educated choices about how they consume energy. Ms. Harris testified that the 2018-2020 Plan meets the criteria set forth in Section 10 for the Commission to find it reasonable.

Under cross examination about Vectren South's proposed Emerging Markets budget, Ms. Harris confirmed these funds will not be used to support existing measures or programs but to support new program development or new measures. When questioned about whether Vectren South had offered testimony showing projected changes in customer consumption of electricity based on the new Emerging Markets programs, she admitted Vectren South did not present any evidence regarding energy savings associated with the Emerging Markets budget. She testified this was because Vectren South was unclear if those funds will be utilized and what programs might be approved by the Vectren Oversight Board. 44927 Tr. at 18-19. She admitted that her testimony did not include a cost and benefit analysis of the programs or measures that might be funded by the Emerging Markets budget. She testified her testimony did not include evidence as to whether or not the measures or programs would be in compliance with Vectren South's IRP because the programs have not yet been identified. 44927 Tr. 19-20. She admitted that because the programs have yet to be identified, the Company presented no evidence about how those programs would be EM&V'd, whether or not any undue or unreasonable customer class preferences existed; the effect or potential effect on either long- or short-term customer bills or the associated lost revenues and incentives. 44927 Tr. at 20.

Ms. Harris also testified at length under cross-examination about Vectren South's proposal to roll forward unused and approved budget funds from one program year to the next. 44927 Tr. at 20-34, 49. Ms. Harris testified that, to avoid using the next plan year's budget to pay for the previous plan year's rebates or other expenses that cannot be processed by December 31st, Vectren sought to roll over both the unpaid previous year costs and any unused previous year budget. 44927 Tr. at 21. She reiterated this as the purpose for the rollover funds during redirect examination by Vectren South's counsel. 44927 Tr. at 49. Ms. Harris agreed that the DSM tracker is intended to recover all costs for the DSM programs within the Plan year, and hypothetically, if the Company only spent $40M of a $50M plan year budget, but the DSM tracker recovered the entire $50M budget, Vectren South would collect $10M more than it spent. 44927 Tr. at 22-23, 26. In the same hypothetical, but assuming the Company had $1M in unpaid previous year costs, she testified the Company would carry forward that amount and, with Vectren Oversight Board approval, also carry forward $1M of the collected-but-unspent $10M previous year's budget. 44927 Tr. at 26-27.

However, when asked to explain what would happen to the remaining $9M over collection from the previous year, Ms. Harris said it would get reconciled through the DSMA tracker the following year, adjusting customer rates to insure they are not overpaying or underpaying. 44927 Tr. at 27-28. She later testified that the over collection would not automatically be reconciled as a credit to ratepayers. 44927 Tr. at 30. Instead of returning the $9M to ratepayers via the DSMA over the next 12 months, Vectren "would work with the Vectren Oversight Board to do something else" such as allocate that money for future projects in the next plan year, expand its budget or add new programs. 44927 Tr. at 28-30. Ms. Harris then testified that any rollover funds not used to pay rollover expenses become part of the next year's total budget, but said also that the Vectren Oversight Board decides whether or not it gets utilized at all. 44927 Tr. at 34.

Richard G. Stevie, Vice President, Forecasting, at Integral Analytics, Inc. ("IA"), presented the results of the cost-effectiveness analysis of the 2018 - 2020 Plan and confirmed that the Plan is cost effective. He described each of the tests and the costs considered and information provided by each of the tests. In addition, he reviewed and commented on the long-term impact of the 2018-2020 Plan on the rates and bills of participants and non-participants. Dr. Stevie said that the long-term effect on rates and bills of participants are demonstrated through the Participant Test, which compares the benefits to the participant through bill savings plus incentives from the utility relative to the incremental costs to the participant for implementing the energy efficiency measure. A score greater than 1 indicates the customer is saving more money than expended, thus reducing the participant's energy bill over the life of the measure. All of the programs included in Vectren South's 2018-2020 Plan have a Participant Test score greater than 1, except for those programs where the Participant Test score could not be calculated because there were no costs to participants for participating in the program.

Dr. Stevie discussed the process used to project the cost of Vectren South's energy efficiency portfolio for use in the development of the Company's IRP. Dr. Stevie testified that Vectren South chose to make available up to 2% of eligible retail sales as DSM resource options for selection in the IRP process for each year beginning in 2018 and explained the rationale behind the decision. He said that to facilitate the IRP resource selection process, the 2% of eligible retail sales was broken into 8 blocks of 0.25% each. Taking this over the 18 year horizon means that over 144 incremental blocks of 0.25% each were available to be selected in the IRP process. From this structure, Vectren South expected that the appropriate IRP determined cost-effective level of EE would be identified. He then discussed how Vectren South projected the cost of its DSM resource options over a 20-year horizon with increasing market penetration. He said that the energy efficiency literature does not provide adequate guidance. He said that based upon his research into this issue, he provided Vectren South with a methodology to estimate how the cost to achieve an increment of EE could change as the cumulative EE market penetration rises. He testified that the study found that EE program costs per kWh increase as the cumulative penetration of EE increases, as measured by the percent of retail sales. He then explained how EE costs were projected over the 20 year planning horizon.

Matthew E. Lind, Associate Project Manager within the Business & Technology Services global practice of Burns & McDonnell provided background for and an explanation of Vectren South's modeling of EE programs within its 2016 IRP through the use of the optimization software program Strategist. He said that Strategist is a dynamic optimization program which uses reserve margin requirement logic to identify portfolios of electric supply resources based on an identified objective function. For purposes of the 2016 IRP analysis, the objective function was to minimize cost to customers. He confirmed that EE was included as an electric demand side resource that Strategist could select to serve customer energy requirements. He testified that at a high level, up to a maximum of 2% per year of eligible retail sales were considered for possible conservation through an incremental block of EE which was divided into eight (8) equal blocks (0.25% per block). The savings associated with each block was initially based on the characteristics associated with current EE programs with consideration for changes over time. He described the EE modeling assumptions and how EE competes with supply side resources in the model. Mr. Lind testified that once Strategist selects EE, it assumes that level of EE throughout the study horizon. This was required to consider the many power supply alternatives evaluated in the IRP including EE, new power supply and individual unit plant retirement decisions. He said there could be eight (8) different possible combinations of EE blocks that could possibly be selected in an individual year over the course of nineteen (19) years (2018-2036). Mr. Lind testified that after an October 14, 2016 meeting with the Vectren Oversight Board and staff from the Commission, Vectren South requested that Burns & McDonnell conduct additional analyses whereby EE was not held constant throughout the applicable IRP planning period. Burns & McDonnell evaluated selecting EE blocks for only a three (3) year period beginning in 2018. This would align with the timeframe the next EE Plan would cover and indicate whether increasing costs over time would discourage the economic selection of EE blocks in a shorter duration. He said the results of this analysis are provided in Vectren South's 2016 IRP and confirmed that the additional analysis did not change the results of the low cost portfolio identified under base assumptions.

J. Cas Swiz, Director, Rates and Regulatory Analysis for VUHI, discussed the Company's proposed accounting and rate making treatment, and bill impacts of Vectren South's 2018-2020

Plan. Specifically, he addressed how Vectren South will account for carrying costs and depreciation expense associated with the capital expenditures the Company plans to make related to the CVR program and the associated deferral authority related to CVR requested by the Company. He testified that Vectren South will calculate the monthly carrying costs using its approved weighted average cost of capital ("WACC"), grossed up for income taxes, and multiplied by the net plant balance (gross investment less accumulated depreciation) as of the end of the prior month. The WACC rate used will be based upon the current capital structure balances, with the cost of equity fixed at the 10.40% approved in Cause No. 43839. This calculation reflects the incremental pre-tax cost, both debt and equity, of financing the investment. Finally, he addressed the Section 10 requirement specific to the short term impact on electric rates and customer bills resulting from a proposed EE plan. Mr. Swiz testified that Vectren South plans to continue using its DSMA to recover costs associated with customer participation in Company sponsored EE and DR programs, including direct load control ("DLC") programs. Mr. Swiz then discussed the estimated rates and bill impacts of the 2018 – 2020 Plan on Vectren South's Rate Schedules and how the estimated rates were derived.

Scott E. Albertson, Vice President, Regulatory Affairs and Gas Supply, summarized the legislative and regulatory foundation supporting the recovery of lost revenues associated with the implementation of utility-sponsored EE programs and measures. Mr. Albertson testified that in simple terms, lost revenues (sometimes referred to as "lost margins") are the fixed costs previously approved by the Commission and included in rates that are not recovered as a result of the implementation of EE programs. He said that this definition is consistent with his understanding of Indiana Code § 8-1-8.5-10. He testified that in Cause No. 43938, the Company's initial three-year DSM plan ("2011 Plan"), the Company requested, and the Commission found, that "…recovery of lost margins is intended as a tool to remove the disincentive utilities would otherwise face as a result of promoting DSM in its service territory." The Commission went on to say, "the purpose of recovery of lost margins on verified energy savings from DSM programs is to *return the utility to the position it would have been in absent implementation of a DSM measure."* 43938 Order at 41 (Emphasis added).

Mr. Albertson described the history of lost revenue recovery approved by the Commission for Vectren South and testified that from the 1990's through program year 2015, the Commission has consistently found in every case involving approval for Vectren South to offer EE Programs, that in order to remove the disincentive associated with EE-driven sales reductions, Vectren South should recoup all lost revenues for the life of each utility-sponsored EE measure that has been implemented. He said the last of these orders, approving the Company's Revised DSM Plan for 2015, explicitly rejected a proposal to artificially cap such lost revenue recovery at two years versus relying on the life of each EE measure (see Cause No. 44495).

Mr. Albertson discussed Section 10 and said that in the 2015 Indiana Legislative session, the Legislature passed SEA 412 which required electric utilities to submit EE plans to the Commission at least every three years, and confirmed that IRPs must assess DSM in meeting service requirements. For the first time, the Legislature also made the recovery of lost revenue associated with EE Programs mandatory. He said that in 2016, after the Legislature mandated recovery of lost revenues, the Commission for the first time placed a four (4) year recovery cap on Vectren South's lost revenue adjustment mechanism ("LRAM"). (Cause No. 44645, March 23, 2016).[8] He described the implications of the cap. He explained that the statute does not provide for a cap on lost revenues. Rather, the Statute provides for the EE cost recovery mechanism, if based on a forecast, to be reconciled to ensure only the recovery of "actual program costs," which it goes on to define as "including reasonable lost revenues and financial incentives based on the evaluation, measurement, and verification of the energy efficiency programs under the plan." Section 10(o). He said that far from an arbitrary recovery cap, the Legislature envisions that lost revenue will be determined using EM&V for the specific EE programs implemented by customers. Mr. Albertson then discussed the legislative history associated with the passage of Section 10 which explicitly supports continued reliance on EM&V for purposes of determining lost revenue recovery.

Mr. Albertson discussed the concept of pancaking and testified that the pancaking of lost revenues is not inappropriate and should not be viewed in a negative light. He said EE benefits *and* lost revenues build over time (i.e. they "pancake"), and so too should the corresponding levels of lost revenue recovery. He then discussed the relationship between rate case frequency and lost revenues. He said that while the costs recovered via an LRAM would be lessened if rate cases were filed more frequently, the revenues lost as a result of EE are included in base rates each time the utility files a rate case. In either case, the appropriate level of fixed costs will be included in customers' bills. Thus, via an LRAM or new base rates, the utility should recover the revenues needed to recover the approved level of fixed costs.

Dr. M. Sami Khawaja, Ph. D and Chief Economist at The Cadmus Group ("Cadmus"), an energy efficiency evaluation firm, filed supplemental direct testimony and testified under cross examination on behalf of the Company.[9] Dr. Khawaja holds a doctorate degree in Systems Science/Economics and is an expert in DSM program evaluation, including nearly 35 years conducting impact evaluations for over 100 energy efficiency programs. He stated he co-authored to the following documents:

- U.S. Department of Energy Uniform Methods Project
- National Action Plan for Energy Efficiency Program Impact Evaluation Guide
- Electric Power Research Institute Impact Evaluation Guide
- U.S. Department of Energy Uniform Methods Project

Dr. Khawaja testified he had provided expert testimony to Public Utilities Commissions in five states, including Ohio and Michigan, and has published work in *Contemporary Policy Issues, Energy Services Journal*, *The Journal of Applied Mathematics and Decision Sciences, Water Policy, Quirk's Market Research*, *Electricity Journal*, *Energy Magazine*, and *The American Journal of Agricultural Economics.* In addition, he had made over 50 conference presentations / papers and has conducted over 50 training workshops on evaluation methods all over the US and internationally.

[8] The Order was reversed and remanded to this Commission by the Court of Appeals for additional findings with respect to reasonable lost revenue recovery.
[9] Other than the Cause No. and his references to the 2018-2020 WAML years (instead of the 2016-2017 WAML years), Dr. Khawaja's prefiled testimony was essentially identical to his Direct Testimony on Remand in Cause No. 44645.

Dr. Khawaja explained that Cadmus was a member of the TECMarket Works team selected by the statewide Demand Side Management Coordination Commission ("DSMCC") that performed evaluation services for Energizing Indiana and his participation in those activities. He described that Cadmus was selected by the Vectren Oversight Board to perform evaluation services for gas and electric EE programs at Southern Indiana Gas and Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc., ("Vectren South") and Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren North"). He noted Cadmus had been retained to do this work for the last approximately eight (8) years. In addition, the Vectren Energy Delivery of Ohio, Inc. ("VEDO") Collaborative selected Cadmus to perform evaluation services in Ohio for VEDO's gas programs. As a result, Dr. Khawaja testified he was familiar with the gas and electric EE efforts at Vectren South, Vectren North and VEDO.

Dr. Khawaja stated that he understood relationship between Vectren's Oversight Board and the delivery of Vectren South's DSM programs, admitting that Vectren Oversight Board members were not consulted about his testimony. 44645 Tr. at 66. He agreed that EM&V methods and results involve some degree of professional judgment. 44645 Tr. At 64. He testified that confidence and precision in energy program evaluation is typically based on estimating energy impacts using a representative sample of program participants to determine how measures are installed and used. The results of these efforts are used to estimate savings for the program. For Vectren South, program evaluations are in line with the industry standard of obtaining estimates with a confidence level of 90% with a relative precision of ±10%.

Dr. Khawaja testified that it is appropriate to recover lost revenues for the life of the measure because as long as the measure is installed and is saving energy, the utility is losing revenue. He acknowledged that measures may be removed for many reasons, but that effective useful life ("EUL") estimates account for measure removal and failure.

Dr. Khawaja testified that it is appropriate to cap lost revenues based upon the weighted average measure life of a plan. He said that lost revenues will take place for the duration of the measure life. That is the time upon which recovery should be based. He said that it is important to appreciate that EUL is not an actual end of life metric for a measure. It is simply the median of measure life. In fact, 50% of all measures will fail before that date. But, 50% will also live long after the EUL. The survival rate of measures is not linear. Most of the 50% that will fail by the EUL will actually be operational for the great majority of the EUL. During that time period, revenues are lost almost consistently. For a time period after the EUL, revenues will continue to be lost for some period of time. As such, EUL is a conservative estimate of the length of revenue lost period. The EULs currently used by Vectren South are conservative.

Dr. Khawaja testified that the EM&V impacts were estimated at 90% confidence and ±10% precision. He recommended going to the low end of the confidence interval and using those estimated savings to calculate the WAML. He said this approach will, in essence, conservatively use values that have a 95% chance of being at that level or higher. This will reduce the weighted average measure life calculation by 10%. He admitted there was no study included with his testimony that supported his assertion that a 10% reduction in EM&V'ed savings would provide "a level of customer safeguards that assure reasonable recovery of lost revenue." 44645 Tr. at 73.

He also admitted neither he, nor anyone he was aware of, performed a study evaluating whether the proposed 10% reduction in EM&V'ed savings would offset the risk of measure removal in later years. 44645 Tr. at 77-78.

Dr. Khawaja discussed his concerns with a three (3) or four (4) year measure life cap. He said that utilities should be allowed a reasonable opportunity to recover their program cost and lost revenues. Otherwise, demand side and supply side options are not comparable from a financial perspective (the playing fields are not level). He said that failure to recover these costs will reduce utility earnings. Also, he said a three or four-year cap will incent utilities to pursue measures with short lives at the expense of more deep reaching long lasting measures (e.g. insulation). Dr. Khawaja, however, admitted that the Commission's decision to apply a four-year cap to Vectren South's 2016-2017 DSM Plan in Cause No. 44645 was not "arbitrary" as it was based the IURC's consideration of all testimony filed by all parties in the underlying case, Ind. Code ch. 8-1-8.5, and ratemaking principles used to establish just and reasonable rates. 44645 Tr. at 66-69. He testified his use of "arbitrary" was meant to convey there was "no sound economic theory behind a four year choice." 44645 Tr. at 69. He further admitted that the Commission does, and should, consider factors other than pure economics, to determine reasonable lost revenues. 44645 Tr. at 70. He testified that in his opinion, there should be no dispute regarding the estimated lives of DSM measures, that this information was based on manufacturer and national laboratory studies and that he relied on the Indiana TRM or federal TRM as sources for Vectren's measure lives. 44645 Tr. at 71-73. But, Dr. Khawaja also admitted that how measure lives are used to determine lost revenues, or the length of time lost revenues occur, are subjective decisions. 44645 Tr. at 72.

Dr. Khawaja admitted the amount of lost revenues should be included in considering an economic rationale, and that there was an economic rationale for capping lost revenues based on an amount. He testified that Mr. Rutter with the OUCC was "on the right track" in recommending a cap based on splitting the UCT net benefit between the utility and ratepayers, but had no opinion on how to split that amount because that was a policy decision. Dr. Khawaja testified that if lost revenues exceeded 100% of the UCT net benefit ratepayers would receive no benefit from the DSM plan, and that the DSM plan would be more expensive than an alternate fuel source. 44645 Tr. at 82-85.

On redirect examination, Dr. Khawaja explained in detail the UCT Test, including the net present value benefit and program cost components. He described the net present value benefit as the reduction in the utility's revenue requirement. He testified that the revenue requirement reduction ought to be compared to the present value of the utility's lost margins and performance incentives. He stated that the combined lost margins and performance incentives should not exceed the UCT net present value benefit. Dr. Khawaja said it would not be appropriate to include program costs with lost margins and performance incentives in that comparison because program costs are already subtracted from the net present value of the benefits. 44645 Tr. at 88-90.

B. OUCC's Case-in-Chief. Edward T. Rutter, Chief Technical Advisor in the Resource Planning and Communications Division of the OUCC pre-filed direct testimony on behalf of the OUCC. Mr. Rutter testified Vectren South's 2018-2020 Plan is unreasonable and should be rejected by the Commission for several reasons. He described the cost per kWh saved of the Plan and concluded that a residential customer using 1,000 kWh at an average cost of $0.16 who saves 10% a month or 100 kWh will experience a bill savings of approximately $16.00. However, the cost of those savings, based on the overall cost to the customer of $0.65 per kWh saved, would be $65.00. He said that legacy DSM costs are creating an enormous disincentive to participate in the energy savings programs proposed by Vectren South in the 2018 – 2020 Plan.

Mr. Rutter testified that the definition of "lost revenue" is established in Section 10 and provides recovery of both fixed costs and net operating income not realized by the electricity supplier. He testified that the Section 10 definition generously allows the utility to recover fixed costs for unrealized sales despite the fact that the fixed costs approved in the last rate case do not vary with an increase or decrease in the amount of energy sold. Mr. Rutter testified that in order to return the utility to the position it would have been in absent the implementation of a DSM measure, the utility should be entitled to recover the "lost margin" associated with the lost sale, not the revenue associated with the lost sale. He said that if lost revenue recovery provides the utility with anything more than the return opportunity, or margin lost, this creates a bias in favor of DSM over what would be experienced by the utility if it were to build, own and operate a supply-side resource.

Mr. Rutter testified that fixed costs embedded in base rates have been audited, vetted and approved as being instrumental and appropriate in the delivery of energy service. Fixed costs do not change with an increase or decrease in the amount of energy sold. Fixed costs are expenses that must be paid by Vectren South independent of any business activity. He testified that when Vectren South's fixed costs rise, the utility may find it more difficult to achieve its authorized return and that the traditional remedy for a utility not achieving the authorized rate of return is to file a base rate case, not thru a DSM lost revenue tracker. Mr. Rutter discussed his analysis of Vectren South's fixed costs approved in the Company's most recent base rate case compared to actual past and forecasted future sales. He concluded that Vectren South has historically been able to recover all fixed costs approved by the Commission in Cause No. 43829 and should continue to recover all approved fixed costs through the term of the 2018 – 2020 DSM Plan.

Mr. Rutter concluded that Vectren South's proposed recovery of lost revenues is unreasonable and should be denied. He said a reasonable method of balancing ratepayer and shareholder interests would be to share the Utility Cost Test ("UCT") net benefit 50-50. He said that program costs, lost revenue recovery and financial incentives awarded should not total more than $19,334,837. He said that it is only fair that the consumers and the utility receive their benefits at the same time. He said that a 50-50 split does a better job of balancing the interests of the investor and customer and results in a sharing of the benefits produced through investments in DSM. He testified that Vectren South is seeking to collect 97.44% of the UCT net benefit from implementation of the 2018 – 2020 Plan. He said that does not balance the interests of the consumer and the shareholder and that given the imbalance, the rates and charges sought by Vectren South in this proceeding are skewed in Vectren South's favor and are not just and reasonable.

Mr. Rutter testified that the OUCC supports the concept of performance incentives, but not the amount proposed by Vectren South. He said that it may not be unreasonable to award some financial incentive to programs that meet or exceed savings goals approved by the Commission, but that there is no logical reason to award an incentive that is greater than the weighted average cost of capital approved in Vectren South's last rate case. In addition, he testified that financial incentives should not be calculated at the portfolio level, but rather on the savings achieved at the program level, and only for programs achieving 100% of the estimated savings contained within the Plan. Mr. Rutter testified that the Commission is required to determine whether the Plan is consistent with Vectren South's most recent IRP and that this requirement impacts the OUCC's recommended financial incentive treatment. He said that given that the 2016 IRP has selected a DSM energy savings level of 1% of eligible retail sales as part of its preferred portfolio plan, to reward Vectren South for achieving something less than what was selected in the 2016 IRP and what the future generation mix is based upon is irresponsible.

Mr. Rutter testified that Vectren South's Plan does not comply with Section 10's reasonableness requirements set forth in subsection (j). He said that the proposed Plan does not provide a cost and benefit analysis provided for in subsection (j)(2) that includes program costs defined in subsection (g). Furthermore, Mr. Rutter testified that the Plan does not consider the long-term and short-term effect on non-residential customers that participate in energy efficiency programs compared to non-residential customer that do not participate in energy efficiency programs, which is required under subsection (j)(7). He said that lack of compliance with this subsection is another reason the proposed Plan is unreasonable in its entirety.

Crystal Thacker, a utility analyst in the OUCC's Electric Division pre-filed direct testimony on behalf of the OUCC. Ms. Thacker testified that the design and mechanics of Vectren South's DSM tracker are reasonable.

C. CAC's Case-in-Chief. [THE OUCC ACCEPTS CAC'S SUMMARY OF ITS WITNESSES.]

D. Petitioner's Rebuttal. Petitioner's witness Harris pre-filed rebuttal testimony to respond to claims by the OUCC and CAC (collectively, "Intervenors") that the Commission should reject the Plan. She testified that the Intervenors have not provided a basis to find the Plan unreasonable and that, despite their protests, the Plan is consistent with the IRP. She discussed flaws with the OUCC's lost revenues proposal and addressed the Intervenors' criticisms of Vectren South's WAML proposal. She said the following two key factors make it a superior approach to other recommendations: (1) lost revenue recovery remains connected to measure life; and (2) lost revenue recovery remains connected to EM&V, which has been relied upon for decades in the determination of lost revenues.

Ms. Harris discussed witness Rábago's misrepresentation of program costs, performance incentives and lost revenues for the 2018-2020 Plan. She said that while there are no concerns with the mathematical calculation of the figures, there is an inherent bias in the illustrations, as they compare the program costs and performance incentive for the plan period (2018-2020) to various other periods of LRAM, without acknowledgement of lifetime/ongoing savings. Ms. Harris offered Figure RHH-1, a tri-color pie chart which she said illustrated Vectren South's 2018-2020 DSM program costs, performance incentives (PI) and "incremental" lost revenues (LRAM). However, under cross examination Ms. Harris admitted Figure RHH-1's $4.1M "incremental" lost revenue portion is the sum of the annual "incremental" lost revenues shown in her direct testimony in Table RHH-5 and those amounts only include the first year of lost revenues to be collected for of each of those three Plan years. 44927 Tr. at 43-44. While Ms. Harris stated that the lost revenues collected after the "incremental" year amounts were shown in her Supplemental Direct Testimony, Attachment RHH-1, page 3 in the "Total LRAM Lifetime Dollars" columns, she also admitted those total amounts did not reflect Vectren's proposed 10% reduction. 44927 Tr. at 44-45. Ms. Harris said page 5 of that same attachment showed "what the 10% reduction would be over the lifetime." 44927 Tr. at 45..

Ms. Harris discussed witness Rutter's inconsistency and flaws related to the proposed 50% UCT cap. She said the proposal is flawed, as the UCT net benefits have already accounted for program costs, thus capping the recovery of program costs based on the UCT net benefits is a form of double counting. In other words, since program costs are already accounted for in the calculation, the net benefits of the UCT reflect the difference between the costs avoided and costs incurred by DSM. She states that his approach also ignores the other benefits to customers including bill savings that occur as part of program implementation and incentives paid to encourage customer participation.

Ms. Harris then described Vectren South's current performance incentive mechanism and said it is reasonable and should remain in place, unchanged. She said it is based on a shared savings approach, as it is tied to both a tiered level of energy savings achieved and the net present value of UCT benefits. The OUCC's recommended approach creates a disincentive to offer new programs, which the performance incentives under Section 10 were meant to avoid and that it discourages the utility allocating resources toward hard to reach markets due to the difficulty in reaching goals within those markets. Disagreeing with the OUCC's recommendation to limit performance incentives to Vectren South's weighted average cost of capital ("WACC"), Ms. Harris testified there was no direct correlation between the Company's WACC and the awarding of performance incentives. Under cross examination Ms. Harris said she was "not the rates expert",[10] admitted she did not know how to calculate the WACC,[11] and "could not confirm" whether or not the cost of common equity was a component.[12]

Mr. Albertson pre-filed rebuttal testimony where he addressed issues raised by CAC witness Rábago regarding the recovery of lost revenues associated with Vectren South's 2018-2020 Plan. Mr. Albertson said that CAC witness Rábago does not explain why Vectren South's continued reliance on EM&V to determine the amount of lost revenues associated with Vectren South's DSM programs is unreasonable. In other words, the CAC does not dispute that EM&V appropriately measures the amount of energy that a customer will not consume as a direct result of implementation of an EE measure. Instead, witness Rábago contends that it is not reasonable for Vectren South to recover lost revenues that are demonstrated to result from implementation of DSM measures.

Mr. Albertson testified that Vectren South's modified LRAM proposal sets a reasonable limit on the collection of lost revenues. He said that unlike an arbitrary cap not linked to measure

[10] 44927 Tr. at 31, 33.
[11] 44927 Tr. at 36.
[12] 44927 Tr. at 37.

life, the Company's WAML proposal is EM&V-based, and thus inherently takes into account the corresponding savings being provided to customers via the EE measures implemented. Second, it limits recoveries to the weighted average life of the EE programs by rate class, and in turn limits the time period for lost revenue recovery to a period less than the full life of some of the measures – in many cases about 6-7 years for residential programs. Third, by reducing the results of the EM&V calculation by 10% to reflect statistical uncertainty in the EM&V process, it produces a conservative calculation of savings to be used to determine lost revenue. In this manner, the objective of addressing the throughput incentive is properly balanced with the need to establish a reasonable level of revenue recovery that still has a logical and important relationship to the lost sales driven by EE programs.

Mr. Albertson testified that since 2011[13], customers have seen a very slow and relatively small increase in average monthly bills and a proportionately small and steady increase in the DSM component of the monthly bill. The data shows that the year-over-year impact on the average monthly residential customer bill as a result of Vectren South's DSMA averaged (or is expected to average) an increase of $1.15 per month during the period 2011-2018, and an increase of $0.43 per month during the period 2019-2020.[14] Neither the average total bill nor the DSM Component of the average bill has been erratic during this period. Mr. Albertson testified that witness Rábago has not provided any factual support demonstrating that a four year cap will allow Vectren South to recover reasonable lost revenues as provided in Indiana Code § 8-1-8.5-10(o).

K. Chase Kelley, Vice President, Marketing and Communications for VUHI, pre-filed testimony responding to allegations by CAC witness Rábago that Dr. Khawaja and the Cadmus Group are no longer independent. Ms. Kelley testified regarding Dr. Khawaja's expertise. She highlighted his "key role with Indiana's Energizing Indiana initiative" and that his team "led EM&V for the core energy efficiency programs offered in the statewide initiative." She pointed out that The Cadmus Group had previously submitted more than 50 reports to the Commission during its tenure in Indiana, including EM&V reports for Vectren South (gas and electric), Northern Indiana Public Service Company and Indianapolis Power & Light, and that none of those reports had been challenged before the Commission. Pet Ex. 11 at 4.

Ms. Kelley testified that Vectren South did not seek to influence Dr. Khawaja's testimony and that he and the The Cadmus Group remain independent. She explained that Vectren South maintains an arms-length relationship with Cadmus, that Cadmus does not benefit from the findings of the evaluation and that Vectren South is not influencing Cadmus' evaluation. She said that Vectren South approached Dr. Khawaja to address concerns that had been raised about the reliability of the EM&V results for purposes of determining lost revenues. Dr. Khawaja's conclusions on the effective useful lives of EE measures support Vectren South's decision to self-impose a cap tied to the WAML of the EE measures proposed in the Plan. Additionally, Vectren South decided to modify its proposal even further based on Dr. Khawaja's conclusions on statistical EM&V confidence level/uncertainty. Ms. Kelley then explained the reasons she disagrees with the CAC regarding implementation of an Independent Evaluation Monitor.

[13] 2011-2017 Average Bill detail as reflected in the IURC Electric Residential Bill Survey results. http://www.in.gov/iurc/2761.htm

[14] Based on average usage of 1,000 kWh per month.

Petitioner's witness Stevie pre-filed rebuttal testimony to respond to criticisms of Vectren South's methodology for modeling EE in its IRP asserted by CAC witnesses Dr. Stanton and Sommer. He said the CAC's criticisms of his methodology are misplaced and that Vectren South acted reasonably in modeling EE as becoming more expensive as greater quantities are called for in any one year. Dr. Stevie testified that CAC witnesses Stanton and Sommer made several faulty and unfounded assertions and conclusions about his research and cost projection. He said their concerns are largely based on their inability to replicate his analysis, which failure was driven by two errors in their attempt to replicate his analysis. One, they did not utilize the same econometric technique he utilized. Two, they included the wrong data from the sources he relied upon. Dr. Stevie responded to criticisms made by CAC witness Stanton regarding application of his regression analysis. In addition, Dr. Stevie responded to claims made by CAC witness Sommer related to Vectren South's decision to model EE at 40% of retail sales and he responded to her proposed alternative approach to determining whether a DSM Plan is consistent with an IRP.

Petitioner's witness Lind pre-filed rebuttal testimony to respond to criticisms made by CAC witnesses Sommer and Stanton regarding certain aspects of the modeling of EE programs within Vectren South's 2016 IRP. CAC witnesses Sommer and Stanton both asserted their belief that the 2016 IRP does not provide an optimal balance of energy resources. Witness Lind responded to claims that Vectren South constrained Strategist from selecting certain resource options. In addition, he addressed the three questions raised by CAC witness Sommer related to the iterative process and other specific questions related to EE modeling in the IRP. Witness Lind responded to criticisms made by the CAC related to Warrick Unit 4 and testified that extending operation of the plant by approximately 3 to 4 years is not a material change. Witness Lind responded to claims that Vectren South did not take seriously decisions regarding whether to retire uneconomic units or whether to build renewables before the sun setting of the renewable tax credits. He testified that Vectren South considered the earliest retirement dates for all of its coal facilities with the exception of Warrick Unit 4 based on the availability of replacement capacity and the time needed for transmission reliability upgrades that would be required with retirements. He stated resources that could take advantage of renewable tax credits were considered as early as possible based on construction timelines. Moreover, the preferred portfolio adds 54 MWs of solar resources early on in the resource plan.

Gary Vicinus, Regional Director at Pace Global, a Siemens business ("Pace Global"), testified on rebuttal and responded to the following three issues raised by CAC witness Anna Sommer: (1) the use of a balanced scorecard to select the preferred portfolio; (2) the selection of metrics; and (3) the manner of differentiation of the metrics for making recommendations.

Witness Vicinus testified that Pace Global is a leading consultant for integrated resource planning, with extensive experience in structuring and facilitating IRPs for utilities throughout the United States and Caribbean. He said utilities have multiple objectives in planning that include competitive costs, stability of costs, reliability, environmental stewardship and diversity among others and that a balanced scorecard approach allows the utility to find the right balance between competing objectives. He then explained the balance scorecard methodology and color rankings. He discussed the selection of metrics and testified that each utility has its own objectives, priorities, and metrics for judging the success of meeting its objectives, every utility views the risks to its business differently. He testified that the business process that Pace Global follows in developing an IRP is the same for all clients, but the selection of objectives and metrics will always vary from utility to utility. He testified that the metrics selected by Vectren South are generally consistent with those used by other utilities.

Witness Vicinus testified that cost and risk are not the only appropriate measures that should be considered and that the metrics were not "distorted to create nonexistent differences." He said there are clear differences between groups of portfolios for nearly every metric. Ms. Sommer only provided criticism of the use of a balanced scorecard, of the selection of the metrics, and of the significance of the differences between portfolios. He testified that even in her flawed, rounded, ordinal ranking, the Stakeholder portfolios (I and J) are ranked lower than the preferred portfolio (L). Portfolio L is still in the top group.

7. <u>Discussion and Commission Findings.</u> Petitioner requests approval of its Demand Side Management and Energy Efficiency Plan for 2018-2020 and authority to recover direct and indirect program costs, lost revenues, and a shareholder incentive pursuant to Ind. Code § 8-1-8.5-10 ("Section 10").

Section 10 requires:

[b]eginning not later than calendar year 2017, and not less than one (1) time every three (3) years, an electricity supplier shall petition the Commission for approval of a Plan that includes:

(1) energy efficiency goals;

(2) energy efficiency programs to achieve the energy efficiency goals;

(3) program budgets and program costs; and

(4) evaluation, measurement, and verification procedures that must include independent evaluation, measurement, and verification.

Ind. Code § 8-1-8.5-10(h).

Section 10(h) further requires us to consider the "overall reasonableness" of the utility's plan. Section 10(j) enumerates ten (10) factors we are to take into account in assessing the overall reasonableness of the proposed Plan. Sections 10(k), (l) and (m) provide us with three paths. We may conclude the plan is "reasonable in its entirety" (Section 10(k)), conclude that it is not reasonable because the cost of one or more of the programs exceed the benefits of the program(s) (Section 10(l)), or we may conclude that the plan is "not reasonable in its entirety" and set forth the reasons supporting this determination. (Section 10(m)). If we conclude that the plan is not "reasonable in its entirety", the utility must file a modified plan within a "reasonable time."

A recent decision by the Indiana Court of Appeals guides our interpretation of Section 10, and particularly the interrelationship between the ten factors we consider in Section 10(j) and our determination of the plan's "overall reasonableness." In Southern Indiana Gas & Electric Co. v. IURC, Vectren South challenged our approval of the company's Section 10 plan after modifying the plan to limit the recovery of lost revenues to the lesser of 4-years, life of the measure, or until the implementation of new base rates. 2017 WL 899947 at *1 (Ind. Ct. App. March 7, 2017). As noted by the Court, Vectren South argued that we "erred as a matter of law by approving [the plan] but rejecting a portion of that plan addressing lost revenue recovery." *Id*. at *6. Vectren South further argued that "Section 10 'calls for a single reasonableness inquiry'" under Section 10(j), including the proposed lost revenue recovery. *Id*. The Court agreed and concluded that by "capping lost revenue at four years, the Commission implicitly found the Vectren South's lost revenue recovery policy to be unreasonable." *Id*.

After also concluding that we did not make specifically sufficient findings that a four-year cap would allow Vectren South to recover reasonable lost revenues under Section 10(o), the Court then reversed and remanded with instructions. *Id*. at *7. Those directions stated the Commission:

> may either (1) issue specific factual findings to justify its implicit determination that Vectren South's lost revenue recovery proposals are unreasonable, determine that the Plan is not reasonable in its entirety pursuant to Section 10(m), and allow Vectren South to submit a modified plan within a reasonable time; or (2) issue specific factual findings to justify a determination that the Plan is in fact reasonable in its entirety pursuant to Section 10(k) and allow Vectren South to recover reasonable lost revenues in accordance with the Plan.

Id. at *7.

Based on the Court's decision, we note two important conclusions. First, our analysis under Section 10(j) is a "single reasonableness inquiry." Thus, if we conclude that a portion of the proposed plan is unreasonable through our analysis, except for the limited circumstances outlined in Section 10(l), the correct approach is to follow the requirements of Section 10(m). That is, we must reject the plan in its entirety, issue an order setting forth the reasons in support of this determination, and allow the utility an opportunity to submit a modified plan within a reasonable time.

Second, the Court of Appeals opinion indicated that if we approve a plan, the recovery of "reasonable" lost revenues and financial incentives under Section 10(o) remains subject to our own assessment as to the reasonableness of the authorized recovery. Although the opinion speaks in terms of reasonableness of a four year cap on lost revenues to the utility, the opinion never states that the four year period is unreasonable, that lost revenues must be tied to life of the measure, nor that the only reasonable lost revenues are those for the life of the measure. Further, nothing in the opinion indicates the Court of Appeals intended that we disregard our statutory charge and long-standing precedent declaring that our obligation is to ensure just and reasonable rates for both the utility and ratepayers.

The Court's conclusion, instead, goes to the adequacy of our findings as to the reasonableness of a four-year cap. The opinion does not impose a restraint on our conclusion that some proposal, different from that presented by the utility, may be reasonable. The opinion only stated that we must explain why the recovery of lost revenue and incentives under Section 10(o) is reasonable. It does not foreclose the conclusion that some level of lost revenue recovery short of life of the measure is reasonable. Thus, to the extent we approve a DSM Plan, we are required only to approve recovery of "reasonable" financial incentives and lost revenues.

As the petitioner, Vectren South bears the burden of supporting the elements of its claims for relief, including satisfaction of the statutory standard of reasonableness with respect to all aspects of the proposed Plan. The burden is not on opposing parties to prove the Vectren South proposal is unreasonable. The statute does not establish any presumption in favor of the utility's proposal. While the parties have offered evidence and arguments on the merits of different approaches, it is not the case that Vectren South's proposal must be approved by default unless another party can prove a specified alternative is the correct outcome. The question is whether or not Vectren South has sustained its burden of demonstrating that its proposed 2018 – 2020 DSM Plan is reasonable. Given this legal background, we begin by considering Vectren South's request for approval of its 2018-2020 Plan under Section 10.

A. <u>Section 10 - Presentation of a Plan</u>.

[THE OUCC OFFERED NO DIRECT EVIDENCE REGARDING WHETHER VECTREN SOUTH PRESENTED A PLAN, AS DEFINED BY SECTION 10(H), CONTAINING "ENERGY EFFICIENCY GOALS" AS DEFINED BY SECTION 10(C). THE OUCC DOES NOT CONTEST THAT THE PLAN CONTAINS PROPOSED PROGRAMS, BUDGETS, OR A PROCEDURE FOR EM&V.]

The evidence is uncontroverted that Petitioner is an electricity supplier as defined by Section 10(a) and that it has made a submission under Section 10(h) seeking approval of a proposed Plan. Problematic for Vectren South's Plan, however, is its request for the Emerging Markets budget. Under this proposal the Vectren Oversight Board ("VOSB") would have the authority to make modifications and additions to its DSM portfolio for future technologies not currently identified. Pet. Ex. 1 at 28; 44927 Tr. at 18-20. Ms. Harris admitted that the new programs contemplated under this request "have not been developed." *Id*.

When questioned about whether Vectren South had offered testimony showing projected changes in customer consumption of electricity based on the new Emerging Markets programs, she admitted Vectren South did not present any evidence regarding energy savings associated with the Emerging Markets budget. She testified this was because Vectren South was unclear if those funds will be utilized and what programs might be approved by the Vectren Oversight Board. 44927 Tr. at 18-19. She admitted that her testimony did not include a cost and benefit analysis of the programs or measures that might be funded by the Emerging Markets budget. She said her testimony did not include evidence as to whether or not the measures or programs would be in compliance with Vectren South's IRP because the programs have not yet been identified. 44927 Tr. 19-20. She admitted that because the programs have yet to be identified, the Company presented no evidence about how those programs would be EM&V'd, whether or not any undue or unreasonable customer class preferences existed; the effect or potential effect on either long- or short-term customer bills or the associated lost revenues and incentives. 44927 Tr. at 20.

This presents us with an inadequate record to approve the Emerging Markets budget. It also provides us with an inadequate record on which to consider these unidentified programs as part of the Plan. All we know, ultimately, is the *budget*, distinct from *program costs* as defined in Section 10(g), for the unknown programs. We have no other information as to their cost (such as lost revenues or performance incentives), no other basis to judge the reasonableness of these programs or their effect on the Plan as a whole, nor any ability to weigh them against any factors enumerated in Section 10(j). We cannot assess whether the program costs of these unknown measures "exceed the projected benefits" under Section 10(l) as we have insufficient evidence to conduct such an analysis. In short, there is no basis to approve this request and we cannot, based on the evidence, conclude the requested modification is reasonable.

There are similarities between Indiana's DSM statute, I.C. 8-1-8.5 and the TDSIC Statue, Indiana Code chapter 8-1-39. Under the latter, a utility must submit a "plan" outlining proposed system improvements. Further under the TDSIC Statute, we must also make findings as to the costs of the proposed plan, and whether the plan is reasonable.

Numerous challenges have been raised regarding the TDSIC Statute, and two Court of Appeals decisions are particularly relevant here. First, in *NIPSCO Industrial Group v. NIPSCO*, 31 N.E.3d 1 (Ind. Ct. App. 2015), the Court concluded that we erred in approving a TDSIC Plan which presented detailed information for only the first year of the plan. The Court held that there was insufficient detail to support approval of the plan given the absence of information related to the projects that would be undertaken in subsequent years. *Id*. at *8. Even accepting an argument that some flexibility was necessary under the Plan, the Court stated that the utility bears the obligation to provide a plan that meets the statutory requirements, and that "[a]llowing flexibility in a plan is not the same as not having a plan at all." *Id*. The Court further held that our approval of the plan amounted to the impermissible establishment of a presumption of eligibility in favor of projects to be proposed in years two through seven of the plan. *Id*. at *8-9.

Likewise, in *Indiana Gas Co. v. IURC*, the Court of Appeals affirmed our decision to reject the addition of new projects in a TDSIC plan update proceeding which had never been previously included in the original plan. *See* 75 N.E.3d 568 (Ind. Ct. App. 2017).

As under the TDSIC Statute, Indiana Code 8-1-8.5-10 requires a utility to file a plan outlining its energy efficiency goals, programs to meet those goals, and budgets and program costs, and requires the Commission to evaluate the overall reasonableness of the proposed plan.

Vectren South's request to approve the Emerging Markets budget and allow the VOSB to introduce new, entirely unknown programs during the course of the plan period is ultimately no different from the situation in *NIPSCO Industrial Group* and *Indiana Gas*. Vectren South has failed to provide us with sufficient information to evaluate that part of the plan. To paraphrase, that component of Vectren South's request is "not a plan at all." Were we to approve the authority to implement unknown programs of unknown cost and impact, we would also be creating an impermissible presumption of eligibility in favor of those programs.

In short, Section 10 requires the presentation of a plan, and leaving a portion of that plan unidentified and unsupported is contrary to our obligations under Section 10 to submit that plan to evaluation, as well as the decisions in *Indiana Gas* and *NIPSCO Industrial Group*. We therefore reject Vectren South's request to include the Emerging Markets budget as unreasonable.[15]

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[15] Vectren South argues that we have approved similar discretion for other utilities. With the exception of Vectren South, we have not approved any similar discretion in the context of a contested Section 10 proceeding. Further, the

B. Reasonableness of the 2018-2020 Plan. Assuming Vectren South's Emerging Market budget was not a fatal blow in determining whether Vectren South has submitted an EE Plan as required by Section 10(h), Section 10(j) identifies 10 factors the Commission must consider in determining its overall reasonableness. As explained above, our review of the Section 10(j) factors represents a "single reasonableness inquiry". Under that inquiry, except for the case of programs that fall within the category of Section 10(l), if we conclude that a component of the plan is unreasonable, we must reject the plan as a whole.

i. Projected Changes in Customer Consumption. No party contested that Vectren South's Plan is designed to produce estimated savings over the 2018-2020 plan period and that the goals are achievable. We can thus reasonably expect some change in customer consumption compared to what it might be in the absence of the programs.

ii. Cost and Benefit Analysis. In making our determination of the overall reasonableness of a plan, Section 10(j)(2) requires the Commission to consider "A cost and benefit analysis of the plan, including the likelihood of achieving the goals of the energy efficiency programs included in the plan." In Cause No. 44645 we determined that the legislature did not require us to define the "cost" of this "cost and benefit analysis of the plan" using the Section 10(g) the definition of "program costs" that comprise the programs in the plan we are to analyze. Upon further reflection, we reconsider our earlier interpretation. The purpose of a cost / benefit analysis is acquire an accurate assessment of whether the investment makes economic sense – if an energy efficiency plan saves $1.00 but costs $1.10, that is not an economically rational choice as costs exceed the benefit. The legislature empowered us in Section 10(l)(1) to eliminate individual programs where costs exceed the expected benefit. It then follows statutorily that in order to perform this program-specific analysis, the statutorily provided definition of "program costs" must be utilized. It is most logical to assume then, in our Section 10(j) "overall reasonableness test" that the cost and benefit analysis of the plan would be the same as the analysis of the individual programs that comprise the plan.

Vectren South's DSM Plan does not provide a cost and benefit analysis required in subsection (j)(2) that includes "program costs" as they are defined in IC 8-1-8.5-10(g). The California Standards Practice Manual includes program costs when defining the term "costs" as it is used in calculating the RIM, PACT/UCT and TRC cost and benefit analyses. The DSM statute has defined "program costs" in subsection (g). We find no language within I.C. 8-1-8.5 supporting the idea that costs mandated to be considered in a cost and benefit analysis under subsection (j)(2)

Indiana Gas opinion, prohibiting the addition of new projects to a TDSIC plan was issued after our order approving Vectren South's Section 10 DSM Plan. In addition, under the restrictions of administrative *stare decisis*, we are not prohibited from altering our decisions in subsequent cases provided we set forth reasons for altering our approach. To that end, the question here is not whether we have approved the request in other proceedings, it is whether Vectren South has presented an evidentiary basis on which to approve the request in this case and whether there is a basis to deny the request. As highlighted above, Vectren South presented no evidence to evaluate the proposal and we will not approve the proposal in the absence of a record which enables us to evaluate the proposal against the statutory criteria necessary for Plan approval.

are different than the costs included under "program costs" as set forth in subsection(g) or the "costs associated with one (1) or more programs" in Section 10(l)(1). All "program costs", as that term has been plainly defined by the Indiana Legislature, must be included in calculating the cost and benefit analysis referred to in IC 8-1-8.5-10(j)(2).

iii. Consistent with State Energy Analysis and Utility IRP. [THE OUCC OFFERS NO FINDINGS AND CONCLUSIONS ON THIS ISSUE]

iv. EM&V. Evaluation for all programs in the 2018-2020 Plan will be conducted by an independent evaluator. Evaluation activity will occur every year for the prior year's programs. In general, the independent evaluator will perform three types of evaluations, a process evaluation, impact evaluation, and market effects assessment.

Vectren South asserts that the EM&V process supports the reasonableness of its modified lost revenue proposal based on a 12-year WAML with a 10% reduction in EM&V'd energy savings discussed below. The record shows, however, that EM&V is conducted only once for each Plan year, on a next-year basis. See 44645 Tr. at 17, 44927 Tr. at 47. After that, EM&V is not repeated for earlier Plan years, and Vectren South does not go back subsequently to re-evaluate prior program years. 44645 Tr. at 17. Instead, once a given energy efficiency measure has been attributed to a utility program and a computation of energy savings and associated lost revenues has been established in the first instance, Vectren South carries forward the computed savings for the duration of the measure life. See Pet. Ex. 6 at 5-6.

EM&V'd savings results drive lost revenues. As such, EM&V processes and procedures, deserve further consideration. EM&V results become more susceptible to error over time as new variables, such as changes in customer behavior and technology, are added. Vectren South's 12-year total Plan WAML is unreasonably susceptible to the compounding effects of potential new variables over time. We discuss the impact of EM&V on lost revenues in more detail below.

v. Undue or Unreasonable Preference to Customer Classes. Vectren South's proposal is based on the erroneous premise that C&I measure lives should influence length of time residential ratepayers should pay lost revenues. Residential customers do not pay for C&I programs and cannot participate in those C&I programs. Commercial refrigeration, variable speed motors for assembly lines, industrial lighting, etc. are not DSM measures available to residential customers. These longer-lived C&I measures are unrelated to standard lightbulbs, low-flow shower heads or faucet aerators. But Vectren South's 12-year WAML lost revenue proposal uses longer-lived C&I measures to unreasonably increase the length of time residential customers will pay lost revenues, while the residential portfolio 11-year WAML reduces the amount C&I customers will pay for their DSM measures. Table RHH-1 in Ms. Harris' Supplemental Direct makes this clear. Under Vectren South's 12-year total Plan WAML, all residential ratepayers will pay lost revenues for one additional year for every residential program other than Appliance Recycling and Energy Efficient Schools, the only two residential programs with WAMLs less than the total residential portfolio WAML of 11 years. Simply put, there is no logical, economic or public policy rationale that can support increasing lost revenues paid by residential customers based exclusively on the entirely unrelated measure lives of C&I DSM measures. The converse is also true for reducing cost recovery from C&I customers based on shorter-lived residential measures. This is information we should also properly consider under Indiana Code §8-1-8.5-10(j)(2) and (10) and aids in our decision in finding Vectren South's WAML proposal to be unreasonable.

vi. Stakeholder Comments. This provision requires the Commission to consider comments provided by customers, customer representatives, the OUCC, or other stakeholders concerning the adequacy and reasonableness of the 2018-2020 Plan. The OUCC and CAC provided such comments through the evidence they presented in this proceeding, which the Commission has considered and addressed in making its determinations in this Order.

vii. Effect or Potential Effect of the Plan on Electric Rates and Customer Bills of Participants and Non-participants. Vectren South's cost and benefit analyses demonstrate the impact on participants, but Section (j)(7) requires the Commission to consider more. Vectren South's Plan does include a transparent, verifiable method to understand the long-term effect on customers via the UCT cost and benefit analysis. The Plan does not contain an adequate analysis of the impact on customer bills (as opposed to rates) for non-participants. While it does contain some information regarding the impact on residential customer bills, the statute's language is not limited to that customer class. There is insufficient evidence that demonstrates the impact on commercial and industrial customers' bills.

viii. Lost Revenues and Financial Incentives. In this section, we will consider the reasonableness of Vectren South's proposal to recover lost revenues and performance incentives.

Lost Revenues

Vectren initially sought lost revenue recovery for the life of the measures within its DSM programs. Pet. Ex. 1, Harris Direct at 31. On that same page at line 2 the question asks, "What dollar amount of projected lost revenue is associated with the 2018-2020 Plan?" Table RHH-5 was shown in response.

Table RHH-5 Incremental Lost Revenues

Program Year	Incremental Lost Revenue Resulting from Plan Savings $,000
2018	$1,395
2019	$1,405
2020	$1,332

Table RHH-5 shows a total of $4.1M of "incremental" lost revenues. The Q&A immediately following Table RHH-5 asks:

> Q: Is Vectren South seeking authority in this Cause to collect lost revenues for the life of the measure for programs included in the 2018-2020 Plan?
>
> A: Yes.

The testimony here does not define "incremental" lost revenues, and no explanation is offered regarding whether "incremental" lost revenues are the same as, included within, or distinct from, lost revenues collected "for the life of the measure." Likewise, no testimony here quantifies the "life of measure" amount, nor is there a reference to an exhibit or attachment that might contain this information. The actual amount of "life of measure" lost revenues Vectren South was requesting - $73.6M - is nearly 18 times greater than the $4.1M "incremental" lost revenues set forth in Table RHH-5. Pet. Ex. 6 at 3. It is at this point where it first becomes evident that "incremental lost revenues" ($4.1M) are something distinct and apart from "life of measure" or "lifetime" lost revenues ($73.6M). *Id*., & Table RHH-1 at page 4. It is most troublesome that this information did not appear in Ms. Harris' testimony until her July 5, 2017 Supplemental Direct, two months after her direct testimony was filed. Finally, it is not until cross-examination when the Company was asked to define "incremental lost revenues" that we are provided with a definitive statement that the term is meant to describe only the first year of lost revenues from each of the three years of the Plan. 44927 Tr. at 15-16.

We want to make this clear – this type of apparent attempt to understate the real costs a utility is requesting to collect from ratepayers and avoid a fully transparent disclosure is not well-received by the Commission. Stakeholders, as well as this Commission, demand and deserve to be fully informed with all relevant information, clearly and plainly presented. Otherwise, requests for Plan approval will be denied.

In its July 5, 2017 Supplemental Direct Testimonies from Ms. Harris and Dr. Khawaja, Vectren South presented a modified lost revenue proposal that differed in significant respects from the original proposal. Ms. Harris testified the total for the modified proposal is $40.9M ($4.1M + $36.8M), down from $77.7M ($4.1M "incremental" + $73.6 "lifetime"). *Id*. at 3, 9 (Table RHH-2) and 11(Table RHH-3). We note that neither table RHH-2 nor RHH-3 appears to include the $4.1M "incremental" lost revenues which she describes as a separate item and portrayed as additional annual amounts. Pet. Ex. 6, page 4, Table RHH-1, "Total Portfolio" row & also Pet Ex. 1, page 31, Table RHH-5. In its rebuttal submissions, Vectren South's witnesses reiterated the Company's intent to move forward with the modified lost revenue recovery proposal. Again at the hearing, and in its post-hearing submissions, Vectren South made clear the Company is now seeking approval of the modified proposal and not the original proposal.

The modified proposal seeks to base lost revenue recovery on 90% of the EM&V'd savings for a program's first year, then continuing to recover that amount of lost revenue over the lesser of the measure life or total Plan weighted average measure life across all the programs included in the Plan. Vectren South determined the WAML for the residential programs was 11 years, and 14 years for the commercial and industrial programs. See Pet. Ex. 6 at 10; *id*. at 4, Table RHH-1.

Vectren South stated these results are weighted to produce the proposed 12-year WAML cap on lost revenue recovery. *Id.* at 10.[16] Vectren South also stated the 12-year WAML was based on "weighted savings by years", "weighting the energy of each measure" and then again weighting energy savings for each program, among other things. Pet. Ex. 6 at 7. We note here that, from the evidence included in testimony, it is impossible for us to replicate or verify the calculations of the individual measure lives, the weighting of the measure lives or energy savings within a program, the weighting of energy savings between programs within either the residential or C&I collections of programs, or the weighting of those two groups of programs to create the ultimate 12-year WAML.

In addition, the modified proposal incorporates a 10% reduction in computed energy savings, in light of the limitations of EM&V over time and in recognition that future savings are more uncertain than those in year one. *Id.* at 7, 10-11. According to its witness, the Company's modified proposal involves a substantial reduction in the recoverable lost revenues compared to the original proposal. See Pet. Ex. 6 at 10-11 & Table RHH-3 & Attachment RHH-1, page 7 of 8.

The statutory requirement that Vectren South must commence a rate case before the expiration of its 7-year TDSIC plan does have a bearing on the difference between Vectren South's original proposal and its modified 90% of savings and 12-year WAML proposal. According to Vectren South, the total lost revenues under the original life-of-the-measure proposal were $73.6M and the present value total under the modified proposal are $36.8M, but both of these figures seemingly omit $4.1M in "incremental" lost revenues. See Pet. Ex. 6, Attachment RHH-1, Page 3, "Total Portfolio" row. In addition, these lost revenue amounts are overstated, as they do not reflect Vectren's proposed 10% reduction. 44927 Tr. at 45. Ms. Harris stated that the 90% of savings collected over the 12-year WAML would reduce lost revenues by $18.8M over the life of the programs, a 26% reduction. See Pet. Ex. 6 at 10-11 & Table RHH-3. However, the modified proposal involves a 12-year cap and the original proposal had an even longer recovery period, but both equally would be terminated once Vectren South completes its next rate case within the next 7 years. See 44645 Tr. at 25-27. With a cut-off coming within 7 years, it does not matter whether the proposal involves a cap of 12 years or a longer period. The only effective difference between the proposals is the 10% reduction in savings. *Id.* at 59-60. Any claimed negative impact on lost revenues beyond the estimated rate case date of late 2023 – early 2024, as a factor supporting reasonableness, is overstated.

In light of Vectren South's change of position, and for the reasons explained more fully below, the Commission concludes the original life of measure proposal for lost revenue recovery set forth in the Plan is not reasonable and therefore the Plan as submitted is not reasonable in its entirety.

[16] During cross-examination in Cause No. 44645, there was significant confusion regarding the length of time ratepayers would pay lost revenues. Discussing the 6.6-year WAML for Vectren South's Residential programs in that Cause, the 11-year WAML for C&I programs, and the combined 9-year WAML, Ms. Harris testified that residential ratepayers would not pay lost revenues beyond 6.6 years for any measure (44645 Tr. at 40-41, 43, 45), but also testified that for some measures residential customers would pay lost revenues for 9 years. 44645 Tr. at 41, 44-45. During cross examination in this Cause, the Company's position was that the 12-year total Plan WAML would control.

Pancaking

The period of time over which lost revenues are recoverable has a significant bearing on the issue of reasonableness because the rate impact "pancakes" over time. Vectren South proposes to recover lost revenues for up to 12 years after efficiency measures are installed due to the 2018-2020 programs. In 2019, for example, lost revenues from 2018 will be added to those from 2019, and in 2020 the recovery will be the sum of 2018, 2019 and 2020 lost revenues, and so on for the 12-year period. A chart included in Vectren South's evidence illustrates the steep rise in lost revenue recovery since the time of Vectren South's last rate case through the present. See Pet. Ex. 6, Att. RHH-1 at p.8. Along with decreasing certainty in the savings computation over time and compounded attribution error in successive years, the rate impact of pancaked lost revenue recovery becomes greater and greater throughout the recovery period. For example, during the last year of this Plan, Vectren South forecasts collecting about $14.8M in 2020 total lost revenues. $6.7M of that, or about 45%, is tied to lost revenues for measures installed prior to 2018. Pet Ex. 6, Att. RHH-1, Slide 8.

Vectren South argues that energy savings pancake over time as well, and lost revenue recovery should retain a correlation to those savings. The Commission finds, however, that the eroding certainty of attribution in successive years after the EM&V process is completed has a corresponding effect on the computation of both energy savings and lost revenues. Vectren South proposes a constant level of lost revenues arising from a given Plan year, augmented by added lost revenues from each successive year, for a 12-year period, as if the initial EM&V-based computation preserves undiminished accuracy across that time period. The computed savings, however, are subject to the limitations of EM&V over time and future savings are less certain than those in the first year. See Pet. Ex. 6 at 3; see also 44645 Tr. at 19. Computed savings and computed lost revenues, equally, become less certain with the passage of time.

Duration Between Rate Cases

In light of the pancake effect, the length of time that passes between general rate cases has a material effect on the magnitude of lost revenue recovery. In a rate case, the utility's base rates are established at a level designed to recover fixed costs and earn a reasonable return at a sales volume based on current consumption levels. When rates are reset based on updated consumption in that fashion, the utility no longer faces reduced revenues due to previously installed efficiency measures, and lost revenues are effectively zeroed out. See 44645 Tr. at 24-26. Accordingly, lost revenue recovery is properly regarded as a "tool of limited duration" to cover the period between rate cases.

When DSM regulations went into effect in the early 1990s, utility rate cases typically occurred with a frequency on the order of three to five years. Cause No. 44645 (March 23, 2016), Order at 26. In that context, the Commission could allow lost revenue recovery for the life of the measure with an expectation that the next rate case would occur in the relatively near future. Since the mid-1990s, however, the interval between rate cases has lengthened. Each of the five investor-owned electric utilities in Indiana has gone a decade or more between rate cases in that era. In particular, Vectren South's most recent rate case was commenced in 2009. *Id*. In a recent proceeding, the Commission approved a 7-year TDSIC plan submitted by Vectren South, providing for rate adjustments twice a year to reflect major capital projects without filing a rate case. The TDSIC statute requires a rate case to be commenced by the end of the 7-year period, which for Vectren South will be late 2023. For Vectren South specifically, then, the interval between rate cases may be as much as 14 years. Lost revenues associated with measures installed in 2020, the last year of the Plan, will be a decade removed from Vectren South's last rate order.

As the length of time between rate cases has grown longer in Indiana, the Commission has recognized that factor when addressing proposals for lost revenue recovery. See In re Northern Indiana Public Service Co., 2011 WL 3346770 (IURC 2011) (denying lost revenue recovery where utility had not filed a rate case in over twenty years); In re Indianapolis Power & Light Co., 2010 WL 4499412 (IURC 2010) (denying lost revenue recovery in light of significant length of time since utility's last rate case). Assessing the reasonableness of a lost revenue proposal in light of the interval between rate cases, therefore, is consistent with established regulatory policy.

The Commission finds the interval between rate cases is a relevant consideration that militates against a determination that Vectren South's proposal is reasonable. The requested recovery of lost revenues is a ratemaking proposal that is appropriately evaluated within the broader ratemaking framework administered by the Commission. It has already been 8 years since Vectren South initiated a rate case, and the consumption data on which those rates were predicated is growing stale. It may well be another 7 years before new base rates are set, and over that time under Vectren South's proposal the recoverable lost revenues will compound year over year, despite decreasing assurance that the computed savings accurately track the effects of the programs offered under the Plan at issue.

OUCC's UCT Net Benefits Analysis

At a minimum, the 12-year WAML request associated with measures installed during the 2018-2020 Plan would stretch through 2030 and can reasonably project it will add significantly to the total DSMA charge as Duke recovers lost revenues associated with measures installed in 2020 and beyond. We must reasonably balance both utility and ratepayer interests. We find merit in the OUCC's UCT Net Benefit proposal as a reasonable method to achieve that balance. We have previously found the OUCC's recommendation to consider the RIM test as a reasonable cost/benefit analysis to be misplaced. Now, the OUCC has accepted Vectren South's preferred DSM Plan cost benefit analysis, the UCT, and Vectren South's calculation of the resulting net benefit as measured by that test. Pet Ex. 2 at 11, Table RGS-1. Rather than debate the proper model inputs, the mechanics of the computations or the most appropriate way to classify costs or benefits, the OUCC's proposal puts forth a single, simple question: Based on who actually pays the DSM program costs that produce the avoided revenue requirements benefit, lost revenues and shareholder incentives, how should that benefit be reasonably allocated between ratepayers and Vectren South.

The UCT test produces two metrics: a benefit-cost ratio and a net present value. When a utility employs a DSM program, it avoids a supply-side option. As a result, the utility is either not burning fuel or is deferring investment in capital infrastructure. The present value of the combined benefits of those two, over the life of the DSM measures is the first component of the UCT test. The second component combines all program costs, incentives, and all the costs associated with running a DSM program, regardless of who pays them. The difference that results from subtracting the benefits (value of the program, incentives, administrative costs, EM&V, etc.) from the costs is the net present value of the UCT. Said another way, the difference is the reduction in the revenue requirement. The UCT has other benefits as well. It considers the costs and benefits to both participants and non-participants. As noted by Vectren South's witness Dr. Stevie, the UCT not only provides essentially the same type of information as the benefit cost test analysis conducted by IRP models, but programs passing the UCT reveals whether long-run revenue requirements will increase or decrease. Pet Ex. 2 at 9, 11.

Ratepayers pay the entire cost of Vectren South's program costs in the same year the measures are being installed. There is no evidence the Company will rely on any other funds to support its DSM programs. Yet, despite ratepayers paying 100% of the DSM Plan costs to produce the benefit, the OUCC proposes a 50-50 split, where Vectren South's recovery of combined direct program costs, lost revenues and shareholder incentives is capped at 50% of the UCT Net Benefit. Left uncapped, a utility's combined program cost / lost revenue / incentives request could consume the entire benefit, depriving ratepayers of any benefit and instead making DSM more costly than an alternate fuel source. Mr. Rutter demonstrated that Vectren South's combined request substantially exceeds the 50% threshold, and thus unreasonably deprives ratepayers of a large part of the very benefit they are paying for in its entirety.

Dr. Khawaja, Vectren's highly-credentialed expert witness, is well known to this Commission through his work within the state and the more than 50 reports submitted on behalf multiple utilities. He is, by any measure, an expert in his field and we give his testimony great weight. Dr. Khawaja testified that from a purely economic perspective, it is not unreasonable to collect lost revenues over the operational life of the DSM measure. Thus, any cap based on factors other than a purely economic rationale includes some additional subjectivity. However, Dr. Khawaja also conceded there is an economic rationale for capping the amount of recoverable lost revenues, in order to establish a reasonable sharing of benefits between ratepayers and utility shareholders. See 44645 Tr. at 83-84. As regulators we must consider numerous other factors; Section 10(j) makes that plain and the Court of Appeals opinion in Vectren South affirms that discretion. Dr. Khawaja opined that Mr. Rutter's UCT Net Benefit analysis, capping the utility's combined program cost / lost revenue / incentive recovery at 50% of the UCT Net Benefit, from both an economic and regulatory perspective, was "on the right track" and provides a reasonable alternative to a year-based cap. He noted that if lost revenues exceeded 100% of the UCT net benefit ratepayers would receive no benefit from the DSM plan, and that the DSM plan would be more expensive than an alternate fuel source. 44645 Tr. at 82-85. We agree with his assessment during his redirect that the combined lost margins and performance incentives should not exceed the UCT net present value benefit and that it is reasonable for the OUCC's analysis to consider program costs as a cost to ratepayers. As Dr. Khawaja noted, program costs are already subtracted from the net present value of the benefits in the UCT. 44645 Tr. at 88-90. The Commission finds the total lost revenues proposed by Vectren South are excessive in relation to the costs of providing the programs at issue and would unreasonably diminish the ratepayer benefits that energy efficiency initiatives are meant to promote. The Commission further finds the lost revenue proposal is unreasonable insofar as it undermines the cost-effectiveness of the Plan.

Mr. Rutter's testimony recognizes the UCT as a cost and benefit analysis while OUCC's analysis is a public policy weighing of the appropriate sharing of the UCT net benefits. Ind. Code 8-1-8.5-10(o)(2) states that the Commission shall determine "reasonable" lost revenues (and financial incentives). Over the last several decades, we have repeatedly found an equal split of a disputed cost to result in an equitable and reasonable result. In this instance, where Vectren South and its shareholders bear none of the costs, insuring ratepayers receive at least one-half of the benefit they alone fund is inherently reasonable.

We find the OUCC's UCT Net Benefit sharing analysis to be valuable tool in our assessment of the overall reasonableness of Vectren South's proposed DSM Plan as required by Ind. Code 8-1-8.5-10(j), and specifically find it to be "other information the commission considers necessary" as described in Section 10(j)(10). Based on the above, we find Vectren South's proposed combined program cost / lost revenue / financial incentive request to be unreasonable. As such, we must also find Vectren South's DSM Plan is not reasonable in its entirety pursuant to Ind. Code 8-1-8.5-10(m). We suggest the Company consider and address the issues discussed above in its modified DSM Plan.

Total Lost Revenues and Program Costs

The Commission further finds the magnitude of the total lost revenues that Vectren South seeks to recover is a material consideration in determining whether the proposal is reasonable. The legislative framework and sound regulatory policy have the objective of promoting cost-effective energy efficiency programs that deliver energy savings without excessive impact on rates. See Sections10(j)(2), 10(j)(7), 10(l), 10(o)(1)(A). Lost revenue recovery, accordingly, should bear a reasonable relation to the investment in program costs in order to avoid an adverse impact on the ratepayer benefits those programs are designed to achieve. When lost revenues recovered in rates greatly exceed the costs of the associated programs, the mission of promoting energy efficiency is undermined by the total price tag paid by consumers.

The record provides some insight into the relation between program costs and total lost revenues under different proposals. For the 2018 - 2020 programs in the Plan, the program costs (exclusive of lost revenues and incentives) amount to a combined $28.612M over the three-year period. See Pet. Ex. 9 at 13, Figure RHH-1. Without adjusting for rate case timing, Vectren South's original proposal seeking recovery for the full life of the measure sought a total of $77.7M in lost revenues, which is more than two and a half times the amount of the associated program costs. CAC Ex. 3 at 10-11 & Fig. 1. On the same basis, the modified Vectren South proposal based on 90% of EM&V'd savings collected over a 12-year WAML involves total lost revenues of $40.9 million (including "incremental" lost revenues), an amount more than 40% higher than the associated program costs.[17] Pet. Ex. 6 at 3. By contrast, the 4-year cap would limit total lost revenues to $21.8M, compared to $28.6M in program costs. CAC Ex. 3 at 13-14 & Fig. 4.

Vectren South disputed the relevance of the comparisons put forward by CAC's witness, contending the more relevant comparison is between the program costs in a given year and the incremental lost revenues for just that one-year period arising only from that year's programs. See Pet. Ex. 9 at 13 & Fig. RHH-1. Under Vectren South's proposal, however, the program costs for

[17] CAC witness Rabago calculates total lost revenues at $54.7M, CAC Ex. 3 at 12-13 & Fig. 3.

the Plan will be incurred only in 2018 - 2020, but the lost revenues arising from the 2018 - 2020 programs will continue for a 12-year recovery period. The total lost revenues over the entire recovery period, then, is the amount that Vectren South proposes to recover in rates for the 2018 – 2020 programs, including "incremental" lost revenues. The Commission finds that total lost revenue over the proposed recovery period is the more pertinent basis for comparison to program costs for purposes of determining reasonableness.

Vectren South's reliance on a comparison to "incremental" lost revenues, moreover, understates the amount of lost revenue recovery being sought in a given year. In 2019, for example, Vectren South proposes to collect not only 2019 lost revenues arising from 2019 programs, but also the second year of 2018 lost revenues from 2018 programs and "legacy" lost revenues relating the programs in earlier years. See 44645 Tr. at 28-32. When the legacy lost revenues, the second year of 2018 lost revenues, and first year of 2019 lost revenues are factored in, the total lost revenue during 2019 amounts to $13.913M, 45% more than the $9.593M in program costs for 2019. Compare Pet. Ex. 6, Att. RHH-1 p.8, "2019 Grand Total"; Pet. Ex. 1 at 30, Table RHH-4, 2019 "DSM Portfolio Total Including Other Costs." During 2018 through 2020,Vectren South proposes to collect $41.767M in lost revenues, compared to $28.612M in program costs under the Plan. See Pet. Ex. 6, Att. RHH-1 p.8; Pet Ex. 9 at 13, Fig. RHH-1.

EM&V

As we discussed above, Vectren South asserts that the EM&V process supports the reasonableness of its modified lost revenue proposal based on 90% of its EM&V'd savings recovered over 12-years. The record shows, however, that EM&V is conducted only once for each Plan year, on a next-year basis. After that, EM&V is not repeated for earlier Plan years, and Vectren South does not go back subsequently to re-evaluate prior programs. Instead, once a given energy efficiency measure has been attributed to a utility program and a computation of energy savings and associated lost revenues has been established in the first instance, Vectren South carries forward the computed savings for the duration of the measure life.

Vectren South's proposal, accordingly, is premised on an assumption that energy savings determined through EM&V shortly after a given Plan year, will continue at the same level and will remain attributable to the utility program with the same degree of certainty for the duration of the measure life or at least up to 12 years in the future. The Commission finds, to the contrary, that the assumption is unsound and inconsistent with the evidence of record. Vectren South's witness admitted that EM&V has limitations "over time" and that "future savings of an installed measure [are] more uncertain than the savings in year one." See Pet. Ex. 6 at 3; see also 44645 Tr. at 19. The Commission agrees that an initial EM&V-based determination of energy savings and lost revenues becomes progressively less reliable and more uncertain in successive years.

An initial conclusion that energy is "saved" and revenues are "lost" involves an exercise in drawing a counterfactual comparison to a hypothetical world in which the utility did not offer energy efficiency programs. See 44645 Tr. at 20. As years pass and the counterfactual premise recedes deeper into the past, the accumulation of changing circumstances erodes the strength of an inference that current energy consumption patterns remain causally linked to utility offerings that are increasing remote in time. In early years, measure persistence can be expected to be reasonably coherent, but as time progresses the continued collection of lost revenues becomes more erratic in foundation, fails to reflect intervening changes in customer composition, and leads to mounting deviation from cost-causation principles. See CAC Ex. 3 at 18-19. Over time, the economic, social and climatic environment continually changes, altering the underlying assumptions and impacting later investments in the dynamic energy industry. *Id.*

A feature of the EM&V process involves separating out the reduced energy consumption of "free riders" who would have installed an efficiency measure anyway, regardless of the utility program. See 44645 Tr. at 22. In other words, only energy savings that are fairly attributable to the utility program are counted for purposes of lost revenue recovery. After the initial EM&V is completed, however, Vectren South does not subsequently revisit the question of whether the measure would have been installed at a later point, regardless of the utility program. *Id.* For example, the average expected life of LED lights may be 15 years, but a variety of factors such as reduced pricing, product improvements, market acceptance and changing standards could have led a given customer to install LED lights within an intervening period, even if the earlier adoption was reasonably attributable to a utility program. In that context, Vectren South's proposal would continue to treat the customer's reduced consumption as a basis for lost revenue recovery, even if a time comes when LEDs become the only product available in the market. *Id.* at 22-23. The Vectren South proposal does not include any mechanism to account for changes in the energy baseline, such as the Energy Independence and Security Act of 2007 which set a new baseline for lighting.

While admitting that EM&V has limitations over time and future savings are less certain than those initially computed, Vectren South proposes to account for that phenomenon by incorporating a 10% reduction in annual energy savings. See Pet. Ex. 6 at 7-8. The rationale for that adjustment is that EM&V is designed to achieve a 90% confidence with 10% precision, and therefore a 10% reduction brings the computation closer to 100% certainty. *Id.*; 44645 Tr. at 74. Reducing a computed savings figure with a 90% confidence by 10%, however, does not increase the certainty to 100%. Rather, it results in a 95% confidence in the initial computation. See 44645 Tr. at 74-76. Furthermore, the proposed 10% reduction addresses only the degree of confidence in the threshold EM&V determination, not the eroding reliability of assuming in successive years that the same level of savings remain attributable to the earlier utility program. Said another way, while the strength of that inference becomes more attenuated with each passing year, the proposed 10% reduction applies only to the initial computation and is not compounded over time. See 44645 Tr. at 14. The Commission finds that Vectren South has not shown the proposed 10% reduction reasonably accounts for the progressive reduction in the reliability of computed savings and lost revenues in subsequent years after EM&V is conducted.

Reconciliation within the DSMA Tracker

The reconciliation process does not increase the reliability of the proposed lost revenue recovery mechanism over time. Reconciliation corrects for variances between rate adjustments based on projected sales and actual sales volume as subsequently determined, so that rate factors based on forecasts ultimately match the allowed level of recovery. That kind of true-up mechanism does not address the question of whether the allowed level of recovery is or is not reasonable. Where the proposed recovery is excessive, reconciling periodic variances does not make it reasonable.

Shareholder / Financial Incentives

Vectren South argues it is entitled to a reasonable financial incentive under Ind. Code § 8-1-8.5-10(o). Vectren South proposed a "shared-savings" incentive structure identical to that approved in our original Order in Cause No. 44645. Vectren would earn a 5% incentive if total Plan savings achieve 75-79.99%, 6% between 80-89.99%, 7% between 90-99.99%, 8% between 100-109.99%, and 10% for total plan savings above 110%. Pet. Ex. 1 at 35. No party contested Vectren South's assertion, and we agree that Ind. Code § 8-1-8.5-10(o) states that if Vectren South's DSM Plan is found to be reasonable under Section 10(h), the Commission shall allow the recovery of reasonable financial incentives. The threshold question remains: what is a "reasonable" incentive in today's DSM world?

During the time of the statewide Energizing Indiana program, utilities were required to meet IURC-mandated energy savings goals, savings levels the utilities argued were too burdensome. To that end, it was reasonable to approve higher incentive levels. When the legislature ended the statewide plan and allowed utilities to set their own savings targets, we saw annual savings targets drop by 50%, but utility incentive requests remained high. Ind. Code § 8-1-8.5-10 now governs our consideration of DSM plans with new requirements and new processes.

We begin with the most basic question: is it reasonable to continue to permit utilities to calculate their incentive at the total Plan level rather than for each individual program? We conclude that it is not. Ind. Code § 8-1-8.5-10(l) makes plain that as part of our overall reasonableness determination, we must also analyze whether each program's benefits outweigh that program's costs. If any program's costs outweigh the benefits, we may exclude that specific program from the Plan. To be eligible to earn a reasonable incentive, each program must be cost effective in its own right. Likewise, while it would be reasonable to allow Vectren South to earn an incentive for its residential lighting program that has wildly exceeded its savings target, it is unreasonable to reward Vectren South with an incentive for an underperforming commercial equipment replacement program. The programs serve different classes of customers, measure savings differently (kWh vs. kW), and are managed separately. There is no logical or economic nexus between them. While underperformance for a particular program could be the result of any number of factors, one of those may well be poor management, and there are no circumstances justifying a greater incentive if that were ever to be the case.

Next we must address Vectren South's proposal to earn incentives for programs that achieve less than 100% of their targeted kWh savings. Ind. Code § 8-1-8.5 now requires DSM plans to be consistent with the Utility's IRP. Each utility develops its own IRP that plays a direct role in whether or not DSM is selected by the IRP process. Vectren South's IRP modeling process selected a level of DSM it determined was reasonable and Vectren South's DSM Plan must reflect that selection. It is simply unreasonable to reward Vectren South with an incentive for achieving only three quarters of the energy savings that their own modeling process determined to be reasonable. This is particularly true in any case where the DSM programs included within the Plan varies from the collection of IRP-selected DSM bundles. We conclude that while a shared savings model is still an appropriate model for setting reasonable financial incentives for Vectren South, we find those incentives should be calculated only for programs that achieve at least 100% of their targeted kWh savings.

Along with the methodological process, the amount of any financial incentive must also be analyzed for its reasonableness. As we set forth below, we conclude that Vectren South's proposed incentive rates are also unreasonable.

This Commission has issued several orders that discussed an economic bias against DSM and the importance of "leveling the playing field." Simply put, those days are gone. DSM is now a highly profitable enterprise, embraced by residential, commercial and industrial customers, service providers, utilities, regulators and governments. Its pervasiveness alone speaks volumes to the changed landscape. Utilities no longer require an incentive to offer DSM; their customers, the public interest and Indiana Code 8-1-8.5 with its IRP consistency requirement, demand it.

As we discussed above, the OUCC has accepted Vectren South's preferred cost benefit analysis, the UCT. Using Vectren South's data, the proposed DSM Plan would likely produce tens of millions of dollars in avoided revenue requirements. Those efficiencies, coupled with guaranteed cost recovery and reasonable lost revenues combine to eliminate the need for incentives at levels we have approved prior to the implementation of Indiana Code 8-1-8.5-10.

Vectren South's incentive proposal is not intended put the company in substantially the same place it would be if it had invested in supply side options, but rather it would unreasonably put Vectren South in a far superior financial position while simultaneously essentially eliminating economic risk. A substantial supply side investment typically requires either new debt or equity, which Vectren South would need to acquire in the market, competing against others. Traditionally, recovery of this investment would not begin until the plant was found to be "used and useful" and included in rates through a rate case. Given the lengthy lives of most supply-side generation options, this investment would be recovered over years, and more likely decades. This places investor capital at risk, and warrants a commensurate "return on" the investment.

As we noted above, there is no evidence that Vectren South will issue either debt or equity to fund the 2018-2020 Plan. It will not need to negotiate favorable interest rates or lure equity capital with an 8-, 9- or 10% return on equity. Vectren South's "investment" in DSM will be $0; ratepayers will pay 100% of all direct and indirect program operating costs, including administrative costs, customer incentives, program EM&V costs, lost revenues and incentives. Vectren South's DSM tracker is designed to recover its "return of" 100% of the annual program operating costs and lost revenues in one year, not decades. Any under collection is immediately reconciled the following year. With Vectren South's involvement in the IRP process and inputs, the bundles of DSM available for the IRP model to select, the IRP model selecting "reasonable" levels of DSM and Vectren South selecting the mix of programs and measures to best hit that target, Vectren South's performance incentives, or "return on" are not only virtually guaranteed, they are essentially 100% risk free.

Given the utility's involvement in the IRP process, the IRP selection of reasonably achievable savings, the utility's control over the selection and mix of measures to achieve the savings, and the fact that Vectren South invests no funds while ratepayers of 100% of program costs, it is no longer reasonable to award cost-of-equity-level financial incentives for DSM programs. Vectren South's assertion that there is no direct correlation between Vectren South's weighted average cost of capital and reasonable incentives is unpersuasive given its witness' lack of understanding of either the WACC's components or calculations. Regardless, Vectren South's WACC would still be unreasonably excessive given Vectren South's level of financial risk. The most reasonably comparable, fully transparent return is likely the 30-Year U.S. T-Bill rate.

DSM incentives should help put the utility in a comparable position to a supply-side investment, after weighing all factors. We find that Vectren South's proposed incentive structure would provide an unreasonable incentive and reject that proposal. Given that the DSM statute requires a reasonable incentive be authorized for a reasonable DSM Plan, Vectren South should consider revising its incentive structure in such a fashion that it addresses the concerns discussed above.

ix. Utility's IRP. [THE OUCC OFFERS NO FINDINGS ON THIS ISSUE.]

x. Any other information the Commission considers necessary.

Vectren South's request to roll forward unused and approved budget funds from one program year to the next is both confusing and insufficiently defined. Pet. Ex. 1 at 27, 44927 Tr. at 20-34, 49. The Company could not clearly explain how the process would work. Initially, only over-collected funds with matching unpaid prior year expenses would roll over. Next, the Company said that all over collections from the previous year not associated with prior year expenses would not rollover, but would get will get reconciled through the DSMA tracker the following year, adjusting customer rates to insure they are not overpaying or underpaying. Then we were told the over collection would not automatically be reconciled as a credit to ratepayers, but rather Vectren "would work with the Vectren Oversight Board to do something else" such as allocate that money for future projects in the next plan year, expand its budget or add new programs. Later, the Company said rollover funds not used to pay rollover expenses <u>become part of the next year's total budget</u>, but at the same time, said it might <u>not be utilized.</u> 44927 Tr. at 27-34. Based on our inability to determine how the program would work, we cannot find the proposal to be reasonable. We reject Vectren South's rollover request.

As set forth above, we have found several elements of Vectren South's proposed DSM plan to be unreasonable, including the Emerging Markets budget, both Vectren South's original and modified proposals for lost revenue recovery, incentives and rollover funding. We specifically find, that our Section 10(j) "overall reasonableness" analysis leads us to conclude that Vectren South's Plan is not reasonable in its entirety. Based on this finding and the language of Section 10(m), Vectren South shall submit a modified plan within a reasonable time.

C. **Considerations for Modified Plan**

In the interest of administrative efficiency, and to assist Vectren South in formulating its modified proposals, the Commission provides the following guidance:

Vectren South has questioned whether a cap on lost revenue recovery for a defined period of years would be reasonable. A time-based cap, however, is what Vectren South proposed in its modified request. The weighted average measure life is a computed number of years, specifically 12 years for the total Plan under Vectren South's modified proposal. See Pet. Ex. 6 at 10. The modified proposal was referred to by Vectren South's witness as a "12 year weighted average cap." *Id.* at 11. Having proposed a 12-year cap, Vectren South cannot maintain that a time-based cap is unlawful or inappropriate.

Vectren South's expert agreed that a cap on the amount of recoverable lost revenues may have an economic rationale, but capping the time period would not. See 44645 Tr. at 83-85. The Commission agrees that a cap would reasonably scale recoverable lost revenues to the ratepayer benefits that energy efficiency programs are designed to yield and would promote the objective of supporting utility programs in a cost-effective manner. The Commission disagrees, however, that a cap on the amount is the only reasonable approach, to the exclusion of a time-based cap. Limiting the recovery period also limits the magnitude of lost revenues, and serves the same function to the same end. Vectren South described its modified proposal as both a 12-year cap and as a 26% reduction in the total amount of recoverable lost revenues compared to the original proposal. See Pet. Ex. 6 at 10-11. The question is whether a proposed level of recovery is reasonable, not whether a cap is defined by a number of years or by dollar amount.

Vectren South's expert also conceded that factors other than economic theory may be properly considered by the Commission in determining reasonableness. See 44645 Tr. at 69-70, 82. The Commission agrees, and notes appropriate considerations include at least the increasing uncertainty of EM&V-based computations of energy savings over time, the expected interval between rate cases, and the magnitude of proposed lost revenue recovery in relation to program costs.

Regarding the limitations of EM&V over time, it is undisputed that EM&V occurs once for each Plan year on a next-year basis and is not repeated subsequently. See 44645 Tr. at 17-18. Vectren South contends its modified proposal with a 12-year cap is properly EM&V-based, but that is also the case with any proposal that caps recovery for a defined time period. In the first instance, computed energy savings and lost revenues are tied to the result of the EM&V process. The question, however, is how far into the future those computations should be carried forward, in light of the progressive degree of uncertainty as conditions change in successive years. While we have concluded that a 12-year cap is unreasonable and excessive, a shorter recovery period would involve less erosion in reliability with the passage of time. Likewise, a cap on the recoverable lost revenues, for example one that reasonably balances the UCT net benefits for ratepayers against the utility's requested lost revenues and incentives, might also address this concern.

With respect to the interval between rate cases, it is undisputed that lost revenue recovery pancakes in successive years until new base rates are established in a rate case. In a rate case, fixed cost recovery is predicated on updated consumption data, effectively zeroing out any lost revenue recovery mechanism. At the same time, just and reasonable rates are established in a rate case in light of a comprehensive review of the utility's operations and financial performance, as opposed to adjusting specifically for estimated effects of energy efficiency programs without regard to the overall sufficiency of rates. The anticipated length of time that a lost revenue recovery mechanism will be in effect, until the need for such recovery is eliminated with the establishment of new base rates, is therefore a material consideration affecting the cumulative rate impact of a lost revenue proposal, the extent to which the initial EM&V-based computations will become less reliable over time, and the proximity of a ratemaking mechanism calibrated to current consumption levels. Again a cap on the recoverable lost revenues, for example one that reasonably balances the UCT net benefits for ratepayers against the utility's requested lost revenues and incentives, might also address this concern.

Concerning the relation between proposed lost revenues and program costs, it is undisputed that Section 10 and longstanding regulatory policy seek to promote the provision of cost-effective energy efficiency programs. Program costs represent an investment supported in rates to establish and conduct approved programs, at costs that are reasonably ascertainable in accounting records. Lost revenue recovery, on the other hand, is an effort to offset utility bias in favor of supply-side investments, by compensating for reduced sales attributable to the approved programs, at a level that is based on estimates and limited by a standard of reasonableness. Given that lost revenues pancake over time, with decreasing confidence in the reliability of the underlying estimates, there is a risk that such recovery may expand out of proportion to the scale of the approved programs and unreasonably diminish the intended ratepayer benefits. In determining reasonableness, therefore, the Commission may properly consider the extent to which the proposed lost revenues greatly exceed the costs of the associated programs. Here too, a cap on the recoverable lost revenues, for example one that reasonably balances the UCT net benefits for ratepayers against the utility's requested lost revenues and incentives, might also address this concern.

Contrary to Vectren South's position that the 4-year cap addressed in the 2016 Order is arbitrary and unreasonable, the Commission reiterates that such a proposal for lost revenue recovery could satisfy the statutory standard. A 4-year cap preserves the initial EM&V-based computation of energy savings and lost revenues, while limiting the time period in a manner that addresses the concern as to increasing uncertainty and diminishing reliability of that computation over time. A 4-year cap, furthermore, correlates in several respects to the cycle of base rate review. Under Ind. Code §8-1-2-42.5, the Commission conducts a rate review at least once every 4 years, and may initiate a rate proceeding if base rates require adjustment. As Vectren South has noted, there is an emerging trend of rate cases every 7 years, due to the TDSIC statute, and under Ind. Code §42.7(d)(1) the utility may file a rate case utilizing a future test year ending 3 years subsequent to the filing date. The utility has the option, then, to establish fixed cost recovery in base rates as of a point in time 4 years prior to the next expected rate case. Four years is also the difference between the 7-year TDSIC cycle and the Section 10(h) requirement of energy efficiency plans at least once every 3 years, limiting the extent to which a 4-year cap would restrict recovery before the next rate case. Finally, the record indicates that the total lost revenues recoverable under a 4-year cap would be less than the costs of the programs offered under the Plan, in contrast to Vectren South's original proposal and modified 12-year cap proposal. See CAC Ex. 3 at 10-15.

In all respects, a 4-year cap, or a UCT net benefits sharing analysis, would be responsive to the issues that have led the Commission to conclude that the Vectren South proposals addressed herein are unreasonable.

8. **Confidential Information.** Petitioner filed a Motion for Protection and Nondisclosure of Confidential and Proprietary Information, which was supported by an affidavit, showing some of CAC's testimony and exhibits contained trade secret information within the scope of Ind. Code §§ 5-14-3-4(a)(4) and 24-2-3-2. The Presiding Officers issued a Docket Entry on August 10, 2017 finding such information confidential on a preliminary basis after which such information was entered into evidence under seal. Accordingly, we find that all such information should continue to be held confidential pursuant to Ind. Code §§ 5-14-3-4(a)(4) and 24-2-3-2.

IT IS THEREFORE ORDERED BY THE INDIANA UTILITY REGULATORY COMMISSION that:

1. Vectren South's 2018-2020 Plan is unreasonable in its entirety for the reasons set forth in this Order.

2. Pursuant to Indiana Code §8-1-8.5-10(m), Vectren South is hereby ordered to file a modified plan within a reasonable time.

3. This Order shall be effective on and after the date of its approval.

ATTERHOLT, FREEMAN, HUSTON, WEBER AND ZIEGNER CONCUR:

APPROVED:

I hereby certify that the above is a true
and correct copy of the Order as approved.

Mary Becerra, Secretary to the Commission

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing ***Office of Utility Consumer Counselor Clean Proposed Order*** has been served upon the following counsel of record in the captioned proceeding by electronic service on October 12, 2017.

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