STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF SOUTHERN INDIANA GAS AND ELECTRIC COMPANY D/B/A VECTREN ENERGY DELIVERY OF INDIANA, INC. ("VECTREN SOUTH") FOR APPROVAL OF A DEMAND SIDE MANAGEMENT ADJUSTMENT FOR ELECTRIC SERVICE IN ACCORDANCE WITH ORDERS OF THE COMMISSION IN CAUSE NO. 43111 DATED AUGUST 15, 2007, CAUSE NO. 43427 DATED DECEMBER 16, 2009, CAUSE NO. 43839 DATED APRIL 27, 2011, CAUSE NO. 43938 DATED AUGUST 31, 2011, CAUSE NO. 43405 DSMA9-S1 DATED JUNE 20, 2012, CAUSE NO. 43405-DSMA10 DATED AUGUST 29, 2012, CAUSE NO. 43405-DSMA13 DATED MAY 25, 2016, CAUSE NO. 43405-DSMA14 DATED NOVEMBER 30, 2016.	)	**CAUSE NO. 43405 DSMA-17**

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

PROPOSED ORDER

Respectfully submitted,

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NOTE: The OUCC does not object to, and adopts Petitioner's Proposed Order for the introduction and Sections 1-4. The parties shared versions of these sections and incorporated edits proposed by each other in an effort to streamline the uncontested portions of the Proposed Order. The OUCC is offering its proposed Commission Discussion and Findings below.

5. Commission Findings and Discussion

UTILITY COST TEST ("UCT") CALCULATIONS AND AVOIDED COSTS

OUCC witness Loveman took no issue with the mechanical, mathematical calculations offered by Vectren South in this proceeding. OUCC witness Haselden similarly took no issue with the process of calculating the UCT for each DSM measure / program, nor with process of using the UCT to calculate each program's UCT Net Present Value ("NPV") for program year 2018. Mr. Haselden did not challenge that Vectren South is entitled to some shareholder or "performance" incentive based on the success of Vectren South's 2018 DSM programs. The primary dispute between the parties concerns Vectren South's inclusion of avoided capacity costs in its UCT calculation, which flows through to the UCT net benefit calculation and, ultimately, to the shareholder/performance incentive calculation. With respect to avoided costs, the parties agree that it is proper to include avoided generation capacity costs in the UCT calculation for all DSM measures beginning in 2023 through the end of each measure's useful life. The only dispute between the parties regarding avoided costs is what VALUE of avoided capacity costs should be included in the UCT calculation.

Before any further discussion regarding that dispute, we must address a fatal flaw in Vectren South's request for recovery of any shareholder/performance incentive in this proceeding. Vectren South asks to recover $1,972,543.58 from ratepayers based on the performance of its 2018 DSM programs. That amount is 10% of the UCT NPV (net of costs) for Vectren South's entire 2018 DSM portfolio, $19,725,436 (Harris direct @ 11, Table RHH-3). A review of Petitioner's direct and rebuttal testimonies and exhibits reveals that there is no evidence of record that explains or demonstrates how these UCT NPV benefit amounts were calculated. Ms. Harris testified in cross-examination the input data for calculating the UCT for the programs was contained in the EM&V report, RHH-5. Morgan Marketing Partners conducted the actual DSMore modeling. Haselden Direct at 3/3; Attachment JEH -1, page 4 – Vectren South response to OUCC DR 1.5.It is unknown whether Morgan Marketing Partners' staff were able to cull from the EM&V report all of the necessary information and whether anyone from Vectren South checked their work. To understand how these amounts were derived, it would be necessary to see the UCT NPV calculation of each measure within each program. In order to verify and validate these requested amounts, each input, each formulae, and each computation would need to be provided. Without a clear, transparent explanation and a complete copy of all data, formulae, inputs and calculations at the measure level, we are left with "black box" numbers for each program and no method to determine if they contain computational errors, let alone whether they are just and reasonable. This lack of supporting data was confirmed by Ms. Harris, who testified under cross-examination that the UCT NPV amounts

were calculated using the DSMore modeling software. There are no DSMore modeling runs included in Petitioner's evidence.

Ms. Harris testified in redirect that the OUCC could have had access to this information as a member of the Vectren DSM Oversight Board ("VOSB") or could have inquired via discovery. Neither of these alternatives relieve Petitioner of its burden of proof in presenting its case. The OUCC is never required to alert Petitioner, as part of the discovery process, to their omissions of critical evidence, and data request responses are not part of the record evidence unless offered and admitted. The OUCC's participation in the VOSB does not place evidence into the record. The Commission is not a member of the VOSB, and even if some members of staff participated in some VOSB meetings, it would not change the fact that essential evidence is absent from the record.

We find Petitioner has failed to present a *prima facie* case demonstrating the UCT NPV Benefits amounts shown in Table RHH-3 are properly calculated. Therefore, we also find Petitioner has failed to demonstrate it is reasonably entitled to the claimed $1.972M shareholder / performance incentive. With a complete lack of transparency, no supporting inputs or calculations and no ability for the Commission to replicate or verify these amounts, Petitioner's requested shareholder / performance incentive is denied. Importantly, even if this data had been provided, the evidence in the case compels us to require Vectren South to recalculate its UCT NPV Benefits to address problems with these amounts related to the inclusion of avoided costs.

Vectren South argues both avoided generation capacity costs and avoided transmission and distribution ("T&D") capacity costs should be included in the UCT calculation for all years of each measure's life. Vectren South argues the appropriate avoided capacity costs are shown in Ms. Harris' Rebuttal at page 7, Figure 10.13, in the column "Total Capacity Avoided Cost $/kW". Figure 10.13 comes from Vectren South's 2016 IRP (Harris rebuttal at 7/9; OUCC CX-1). The data in Figure 10.13, particularly Columns 4, 5, & 6, is Vectren South's 2016 IRP estimate of future avoided costs.

The OUCC argues the value of avoided generation capacity costs and T&D capacity costs properly included in the UCT calculation for the years 2018-2022 for all measures should be zero. For all years 2023 through the life of the DSM measure, Vectren South's UCT calculation should include Vectren South's most recently calculated avoided capacity costs rather than the 2016 IRP estimates of today's costs. OUCC witness Haselden bases his zero-dollar ($0) 2018-2022 recommendation on Vectren South's current generation capacity surplus – Vectren South's DSM savings are not currently avoiding building or buying new capacity, they are simply not using Vectren South's current generation capacity surplus. Mr. Haselden's 2023 – forward recommendation is based on Vectren South's February 28, 2019 Rate CSP tariff filing and its calculation of avoided generation capacity costs at $70.80 per kW per year (Haselden Direct, Attachment JEH-3, page 8 of 23 ($5.90 per month * 12 months = $70.80)), 24% less than Vectren South's $93.41 2016 IRP estimate for 2019 avoided costs (Harris Direct at 7, Figure 10.13, column "Economic Carrying Charge $/kW). We address the topics of avoided generating capacity costs and avoided T&D capacity costs separately below.

AVOIDED GENERATING CAPACITY COSTS

Vectren South's rebuttal repeatedly argues that its avoided cost proposals should be accepted by the Commission to maintain "linkage" to, or remain "consistent" with its 2016 IRP. It is important to recognize that IRP's in Indiana are a snapshot in time, taken once every three years, while DSM programs are constantly evolving – unsuccessful programs are retired or modified, new programs are developed and added, popular programs increase spending with funds shifted from under-performing programs or from a pre-approved flexible spending amount. EM&V results can demonstrate measures themselves saving less (or more) energy than expected. A DSM Plan is almost never identical to the DSM options modeled in an IRP, as the sheer number of DSM options require combining measures and programs into generic "DSM bundles" for the IRP process. Changes to elements within a DSM plan do not, in and of themselves, render the plan "inconsistent" with the IRP. The flipside, of course, is that it would be inappropriate to continue blindly utilizing IRP inputs, data, assumptions or outputs where the evidence is such that to do so would produce unjust or unreasonable results.

Section 10.3.4 of Vectren South's 2016 IRP addresses Avoided Costs. It describes in the first paragraph how, for the IRP modeling analysis, the avoided generating capacity inputs used an "F-class simple cycle gas turbine." OUXX CX-1, page 260. It also includes the following language as the last sentence of the paragraph:

> Avoided capacity costs should only be considered avoidable when there is a planning reserve margin deficit that would otherwise need to be met through a new capacity resource.

The uncontradicted evidence in this case is that Vectren South currently has excess capacity, and does not expect to require additional capacity until June 2023. Haselden Attachment JEH-1, page 3 – Vectren South's Response to OUCC DR 1-4. By its own admission, Vectren South does not have "a planning reserve margin deficit that would otherwise need to be met through a new capacity resource" and does not expect to have one for several years. Vectren South argues (Harris rebuttal @ 8/13-14) that "[w]hether or not a utility requires capacity in a given year is not part of the consideration on investing in DSM." Whether Vectren South should or should not invest in DSM while it has excess capacity is not at issue. Rather, our concern is whether Vectren South shareholders should profit from a "performance incentive" artificially inflated by a UCT calculation that includes avoided costs in excess of $100/kW (and increasing annually) in direct contradiction to explicit language in the company's IRP not to consider these costs unless there is a planning reserve margin deficit.

Vectren South also argues including avoided costs is appropriate because DSM avoids the cost of investing in another resource. Harris Rebuttal at 7/7-8. While a basic tenet of DSM investment is that it can help delay construction of future additional generation or purchase long-term capacity, neither of those principles support Vectren South's position regarding including avoided costs in its UCT calculation solely for the purpose of calculating additional shareholder profit. Vectren South's 2018 DSM programs simply will not *avoid* costs related to new generation construction

or long-term capacity purchases until 2023. Vectren South's recent CPCN request to construct new generation in the form of a gas-fired turbine was denied earlier this year. Cause No. 45052, final order dated April 24, 2019. Vectren South provided no evidence of capacity purchases during Program Year 2018. Not using excess capacity Petitioner already owns (with all fixed costs embedded in rates and fully recovered from customers whether or not it is used) does not avoid additional generation costs Petitioner did not need to make in the first place. Including those imaginary avoided costs in a calculation to inflate the incentive ratepayers must pay to Vectren South's shareholders is unacceptable. We find Vectren South's proposal to include in its UCT calculation avoided capacity costs values from Figure 10.13 for years 2018-2022 is inappropriate. We agree that avoided capacity costs should only be considered avoidable when there is a planning reserve margin deficit that would otherwise need to be met through a new capacity resource, and find the evidence demonstrates Vectren South did not experience a planning reserve margin deficit and does not expect to until mid-2023. Therefore, we also find the appropriate avoided generating capacity cost value to include in the UCT calculation for years 2018-2022, for all measures, is zero dollars.

Turning to the appropriate UCT generating avoided capacity values for 2023 and beyond, Vectren South again proposes to use the 2016 IRP estimates of future years' Total Capacity Avoided Cost amounts from Figure 10.13. While doing so would be consistent with the IRP, it also requires the Commission to ignore Vectren South's actual generating avoided cost information, as calculated by Vectren South, filed with the Commission and included with another Vectren South tariff.

Despite being labeled as "Economic Carrying Charge" in Figure 10.13, we recognize the amounts in this column as the estimated avoided generating capacity costs. This is easily demonstrated, as the "Total Capacity Avoided Cost" in Figure 10.13 is the sum of the "Economic Carrying Charge" and the "Transmission/Distribution Avoided Cost". We know from Vectren South's response to OUCC DR 1.3 (Haselden Attachment JEH-1, page 2) that the avoided capacity costs in Figure 10.13 "are based on the estimated capital and fixed operation and maintenance cost for a 1x F-Class simple cycle gas turbine." This turbine's net operating capacity is 220 MW. OUCC CX-1, page 262 of Vectren South's 2016 IRP, row 4.

On February 28, 2019, Vectren South filed with the Commission its Tariff for Rate CSP, Cogeneration and Small Power Production. Haselden Attachment JEH-2. This tariff includes, in part, Vectren South's calculation of the credit Vectren South will pay cogeneration and small power producers ("CSP") based in part on Vectren South's avoided generating capacity costs. Page 7 provides the formula for "Calculation of Cogeneration Rate For Purchase of Capacity 2019." Two of the elements of the formula are *C* and *Ca*, which are defined on page 8 of the tariff as, respectively, the unadjusted and adjusted capacity payment values. Both *C* and *Ca* carry a value of $5.90 per kW month. Multiplying by 12 converts this to an annual (kW / year) avoided generating capacity cost of $70.80. Page 9 of the tariff explains that the avoided costs are "[b]ased on SIGECO generic 220 MW simple cycle turbine." A further review of tariff CSP reveals the avoided capacity cost value does not include T&D avoided capacity costs. The avoided generating capacity costs for both the 2016 IRP Figure 10.13 "Economic Carrying Charge" and 20199 Rate CSP tariff are based on 220 MW, simple cycle gas turbines.

Rather than propose the 2016 estimated $93.41 avoided generating capacity cost from the IRP as the basis for Rate CSP (where a lower avoided cost reduces what Vectren South must pay), Vectren South used 2019 avoided costs 24% less than the comparable 2016 IRP estimate. In this proceeding, for the purposes of calculating the shareholder incentive ratepayers must pay Vectren South, the company argues that we should ignore the 2019 avoided cost data, calculated by Vectren South, based on same gas turbine, and instead apply to outdated 2016 IRP estimates. We reject Vectren South's proposal and find that to do so would serve no other purpose than to artificially inflate Vectren South's UCT NPV values and in turn, Vectren South's shareholder's "performance incentive". Updating the UCT calculation with the most accurate, most recent avoided cost data is essentially the same idea as updating the annual DSM cost and savings projections via the EM&V process. The EM&V trues-up initial estimates and recognizes the effects of changes to the estimates such as free riders, spillover, program adoption rates, costs, measure efficiency, etc. We find the appropriate avoided generating capacity cost values for use in the UCT calculation in this cause, for years 2023 through the end of each measure's useful life, should be $70.80 mW / year.

AVOIDED T&D CAPACITY COSTS

In addition to including avoided generation capacity costs in the UCT calculation, Vectren South adds avoided T&D capacity costs. Ms. Harris confirmed under cross-examination that Vectren South's UCT calculation uses the "Total Capacity Avoided Cost $/kW" from column 6, Figure 10.13 (originally from Vectren South's 2016 IRP and included on page 7 of her rebuttal). She also confirmed that the amounts in column 6 are the sum of the figures in columns 4 ("Economic Carrying Charge $/kW") and 5 ("Transmission/Distribution Avoided Cost $/kW (10% of Carrying Charge")). Vectren South claimed using 10% of avoided generation capacity as an estimate for the associated T&D avoided capacity was "widely recognized" and "not aggressive". Harris Rebuttal at 7/12 – 8/12. In support of her claim the 10% figure was "widely recognized", Footnote 1 at the bottom of page 8 of Ms. Harris' rebuttal directs the reader to https://nationalefficiencyscreening.org where the footnote claims "Including T&D avoided costs in cost-benefit testing is standard practice within the energy efficiency industry and has been adopted in 39 states". This URL is simply the homepage for the National Efficiency Screening Project. While that page does include approximately 25 hypertext links, it contains no discussion of either whether including T&D avoided costs in cost-benefit testing is standard practice within the energy efficiency industry or how many states have adopted the practice. Most importantly, it offers no evidence as to why it would be reasonable for Vectren South to assume its specific DSM measures produce avoided capacity costs equivalent to 10% of the associated avoided generation capacity costs. Vectren South's claim that the 10% figure is "not aggressive" is equally unsupported and unpersuasive. Vectren South's evidence in the case does not include any study or analysis by Vectren South demonstrating Vectren South's T&D avoided costs are 10% of generating avoided costs – or any causal connection or nexus between the actual avoided generating capacity of any DSM measure or program and the amount of avoided T&D capacity. We find Vectren South has not provided sufficient evidence to support its proposed value of avoided T&D capacity costs equivalent to 10% of avoided generating capacity. We therefore find

that Vectren South shall recalculate its UCT in this proceeding including T&D avoided capacity at zero.

GENERAL SERVICE LIGHTING BASELINE CHANGE

OUCC witness Haselden argues that compact fluorescent ("CFL") bulbs have practically "disappeared from retail shelves" and that while halogen bulbs currently remain available for retail purchase, they will soon no longer be available considering the upcoming 1/1/20 EISA backstop provision and their comparatively short life / high cost of operation relative to LEDs (see Attachment JEH-3). Combining these factors with the estimated two-year life of halogen bulbs, his observations of the predominance of GSL bulbs available in the market (relative to CFLs and halogens), and language from Vectren South's EM&V provider Cadmus (see Attachment RHH-5, page 154 of 368), Mr. Haselden recommended, effective January 1, 2020, 9-watt LED bulbs replace the 43-watt halogen bulbs Vectren South currently uses as the baseline against which to measure energy savings of the LED bulbs in the DSM program.

Ms. Harris agreed during cross-examination that Mr. Haselden's proposal would have no impact on lost revenues from bulbs being reconciled in this proceeding, nor any lost revenue impact for the lighting program in 2019 when that program year's costs are ultimately reconciled. Along with the proposed 1/1/20 start date for the new LED bulb baseline, OUCC recommended a 1/1/21 sunset date for LED bulbs as the baseline calculation, along with a one year "burn-out period for halogen bulbs." We understand Mr. Haselden's recommendation to mean that for all GSL bulbs (verified via EM&V) prior to 1/1/20 would continue to earn lost revenues through 12/31/20 (the one year burn out period). However, GSLs installed on or after 1/1/20 would no longer be eligible for lost revenue recovery, and that no GSLs, regardless of installation date, would be eligible for lost revenues effective 1/1/21.

In her rebuttal testimony, Ms. Harris focuses on the price of Energy Star LED GSL bulbs compared to non-Energy-Star GSL LED bulbs, noting the packaging claims that an Energy-Star LED bulb life is twice that of the non-Energy Star LED bulb and costs much more. While true in some cases, the appropriate comparison is to the halogen bulb alternative. Unsubsidized, the non-Energy Star LED is more cost effective for customers in view of the fact a customer would need to purchase five halogens to obtain an equivalent life to an LED in addition to nine years of energy savings. The non-Energy Star LED is far less expensive on a life-cycle basis. The fact that Energy-Star LED GSLs have an initial cost premium will be important to some consumers. However, just as we know that consumer's comparison shop in grocery stores by comparing the cost per ounce of an item, we know those same consumers are equally capable of comparing the average energy costs and life expectancy for each type of bulb. The vast majority of these consumers will continue to purchase the lower cost, higher efficiency LED bulbs.

Vectren South's economic interests are driving its request to continue to earn lost revenues and a shareholder incentive for 15 years despite the overwhelming evidence that LEDs are the predominantly commercially available bulb now. Vectren South would earn no shareholder

incentive or lost revenues should a customer choose the 9-year GSL LED since Vectren South did not influence the purchasing decision.

The shareholder incentive is a powerful incentive for Vectren South to push Energy Star bulbs. For example, the Food Bank-LED program distributed 50,496 GSL LED bulbs in 2018[1] and realized a NPV of benefits of $903,690.[2] The shareholder incentive for this single measure program is calculated to be 10% of the $903,690, or $90,369. This is equivalent to $1.79 shareholder incentive per bulb distributed ($90,369 / 50,496 = $1.78), regardless of whether or not the bulb was ever placed in service. See Attachment RHH-5, page 180 of 368, Table 133.Ms. Harris admitted under cross examination that between the Food Bank, Energy Efficient Schools, and Residential Lighting programs, Vectren South delivered nearly 220,000 GSLs in program year 2018. The longer halogen bulbs remain the baseline in Vectren South's calculation of UCT NPV program benefits, the greater its shareholder incentive as well as the longer period it will be paid for by ratepayers.

Ms. Harris argues the fact halogen and other bulbs are available for purchase is sufficient proof halogens are the baseline. She stated in her rebuttal testimony that Vectren South will re-evaluate the lighting baseline for their 2021-2023 program plan.[3] We find it would be inappropriate for Vectren South to continue collecting 10% of the estimated NPV of the UCT for this measure over the 15-year life of this measure with no true-up should their assumptions prove wrong as discussed by Mr. Haselden.

Based on the evidence of record, we find that while halogen, and even CFL, bulbs continue to be commercially available products, and while there is some chance the EISA backstop provision may not become effective 1/1/20, LED bulbs are now the predominantly available GSL bulb, and appear they will be for the foreseeable future. We find that Vectren South shall, beginning 1/1/20, consider LED GSL's the new baseline bulb to be used in its UCT calculations. While the 44927 DSM plan was considered in light of the best evidence available at the time, it would be poor public policy and a disservice to the regulatory process to remain tethered to assumptions so obviously out dated, and that serve no purpose other than to permit lost revenue recovery and shareholder incentives which have been overcome by events in the consumer marketplace.2. Effective 1/1/20, Petitioner shall use LED GSLs as the baseline bulb in its UCT calculations.

[1] RHH-5, page 180
[2] RHH Direct at page 11, Table RHH-3
[3] RHH Rebuttal, page 11, lines 28-29.

NOTE: - The OUCC believes Vectren may offer certain findings which the OUCC could potentially adopt. For the purposes of this proposed order, the OUCC offers only the following finding, but reserves the right to propose additional findings in its Reply filing.

FINDINGS:

1. Consistent with the discussion and findings above, Petitioner is ordered to recalculate its UCT for all measures in all DSM programs along the following parameters:
    a) For avoided generating capacity costs, for years 2018-2022, use a value of zero dollars.
    b) For avoided generating capacity costs for years 2023 – the end of each measures' life, use a value of $70.80, escalated annually to reflect inflation
    c) For avoided T&D capacity costs for all years, use a value of zero dollars.
    d) For the effective useful life of LED GSL bulbs installed though and including 12/31/19, use an effective life that terminates 12/31/20.
2. Effective 1/1/20, Petitioner shall use LED GSLs as the baseline bulb in its UCT calculations.

CERTIFICATE OF SERVICE

This is to certify that a copy of has been served upon the following parties of record in the captioned proceeding by electronic service on December 3, 2019.

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