SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
d/b/a CENTERPOINT ENERGY INDIANA SOUTH
(CENTERPOINT INDIANA SOUTH)

IURC CAUSE NO. 45600

DIRECT TESTIMONY
OF
ROLAND A. ROSARIO
MARKET DEVELOPMENT MANAGER

ON

POWER PURCHASE AGREEMENTS AND
REGIONAL TRANSMISSION OPERATOR REQUIREMENTS

SPONSORING PETITIONER'S EXHIBIT NO. 2 (PUBLIC)
ATTACHMENTS RAR-1 THROUGH RAR-4

DIRECT TESTIMONY OF ROLAND A. ROSARIO

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Roland A. Rosario. My business address is 211 NW Riverside Drive, Evansville, Indiana, 47708.

Q. By whom are you employed?

A. I am employed by Southern Indiana Gas and Electric Company d/b/a CenterPoint Energy Indiana South ("Petitioner", "CenterPoint Indiana South", or "Company").

Q. On whose behalf are you submitting this direct testimony?

A. I am submitting testimony on behalf of CenterPoint Indiana South, which is an indirect subsidiary of CenterPoint Energy, Inc.

Q. What is your role with respect to Petitioner?

A. I am Market Development Manager.

Q. Please describe your educational background.

A. I earned a Bachelor of Science degree in Aeronautical Engineering from the United States Air Force Academy in 2002 and Master of Science degrees in Aeronautical and Systems Engineering from the Air Force Institute of Technology in 2007. I also earned a Master of Business Administration from the University of Southern Indiana in 2016.

Q. Please describe your professional experience.

A. I have been employed by the Company since 2013 in a variety of positions including as load forecast analyst and underground gas storage engineer. I have been in my current position for approximately five years concentrating in emerging technologies, competitive energy business development, and generation transition.

Q. What are your present duties and responsibilities as Market Development Manager?

A. I have primary responsibility in Petitioner's generation transition department aiding in the

execution of projects to support the Company's transition to sources of renewable energy. I also have responsibility for research in emerging energy technology including as project manager and primary investigator in a Department of Energy funded research partnership.

Q. Have you previously testified before the Indiana Utility Regulatory Commission (the "Commission")?

A. Yes, I testified on behalf of Petitioner in Cause No. 44909-CECA 3, in support of the Clean Energy Cost Adjustment and provided an update on the Urban Living Research Center rooftop-based solar generating facility.

II. PURPOSE & SCOPE OF TESTIMONY

Q. What is the purpose of your testimony in this proceeding?

A. My testimony describes the Company's 2020 Request for Proposal ("RFP") process to identify a combination of wind, solar, and solar + storage resources to meet the future needs of its 145,000 electric customers in southwestern Indiana. I support Petitioner's request for an Order in this Cause authorizing Petitioner to: (1) enter into a Power Purchase Agreement ("PPA") with Oriden LLC affiliate, Vermillion Rise Solar LLC ("Oriden"), to purchase energy, capacity, and Renewable Energy Credits ("RECs") from a 185 megawatt alternating current ("MWac") solar project in Vermillion County, Indiana (the "Vermillion County Solar Project" or "Vermillion Project"), over a 15-year term; and (2) enter into a PPA with Origis Energy affiliate, IN Solar 1, LLC ("Origis"), to purchase energy, capacity, and RECs from a 150 MWac solar project in Knox County, Indiana (the "Knox County Solar Project" or "Knox Project"), over a 20-year term. I explain CenterPoint Indiana South's decision to pursue the two solar projects and describe the impact the two PPAs will have on CenterPoint Indiana South's Midwest Independent System Operator ("MISO") Planning Reserve Margin Requirements ("PRMR").

Q. Are you sponsoring any attachments to your direct testimony in this proceeding?

A. Yes. I sponsor the following attachments:

- Petitioner's Exhibit No. 2, **Attachment RAR-1 (CONFIDENTIAL)**: PPA with Oriden;

- Petitioner's Exhibit No. 2, **Attachment RAR-2 (CONFIDENTIAL)**: PPA with Origis;
- Petitioner's Exhibit No. 2, **Attachment RAR-3**: Company's 2020 RFP; and
- Petitioner's Exhibit No. 2, **Attachment RAR-4 (CONFIDENTIAL)**: 2020 RFP Proposal Scoring Summary.

Q. Were these attachments prepared by you or under your supervision?

A. Yes, they were.

III. OVERVIEW OF GENERATION TRANSITION PLAN, PROJECTS, AND THE 2020 RFP PROCESS

Q. Please provide an overview of CenterPoint Indiana South's Generation Transition Plan (the "Plan").

A. Consistent with the Preferred Portfolio set forth in the Company's 2019/2020 Integrated Resource Plan ("IRP") findings, CenterPoint Indiana South developed a Generation Transition Plan focused on implementation of our IRP which concludes that timely retirement of certain identified existing generation resources and replacement with new generation resources provides a lower cost and reduces risk for future for customers. The Plan requires an initial step of identifying and selecting approximately 700 – 1,000 MWac of solar generation, 300 MWac of wind generation, and approximately 500 MW of natural gas Combustion Turbine ("CT") generation.

Timing of this initial step is important since a generation transition period is a lengthy process typically lasting at least 3.5 years including project solicitation, evaluation and negotiation, the MISO Interconnection Queue process, development tasks such as obtaining site control and permitting, construction, and various other factors. As such, there will be a period -- between when the Company's coal generation units are retired and the new generation comes online -- during which the Company will need to rely on the capacity and wholesale energy market. To minimize this dependence period and cost to customers, CenterPoint Indiana South acted immediately to select projects to come online in the 2023-2024 timeline. This timeframe is critical since additional baseload units in the same MISO Local Resource Zone (CenterPoint Indiana South's Local Resource

Zone 6) are expected to be taken offline by 2023, thereby increasing the risk of reliance on the wholesale energy and capacity market. The Vermillion County Solar Project and Knox County Solar Project are both slated to come online in the second half of 2023, which is generally consistent with the Company's 2019/2020 IRP.

Q. Please briefly describe the Company's RFP process.

A. To date, the Company has conducted two RFPs. CenterPoint Indiana South retained 1898 & Co., a division of Burns & McDonnell Engineering Company, Inc. ("Burns & McDonnell"), to act as its agent in managing its RFPs and the RFP process. First, on June 12, 2019, in connection with the preparation of its 2019/2020 IRP, CenterPoint Indiana South conducted an All-Source RFP for 10 to 700 MWac of capacity from all sources. That All-Source RFP was used to select the initial projects for its Generation Transition Plan – the Posey County and Warrick County Solar Projects. Those projects are the subject of Cause No. 45501, which is pending before the Commission (hereinafter referred to as "45501 Solar Projects"). Then, on August 12, 2020, CenterPoint Indiana South issued a second RFP (the "2020 RFP") seeking a combination of wind, solar, and solar + storage resources to meet the need identified in the Plan. As with the All-Source RFP, the 2020 RFP was used to help Petitioner identify replacement generation capacity beginning in 2023. Petitioner selected the Vermillion County Solar Project and Knox County Solar Project as a result of the 2020 RFP process.

Q. Please describe Petitioner's Exhibit No. 2, Attachments RAR-1 and RAR-2, respectively.

A. Petitioner's Exhibit No. 2, Attachment RAR-1 (CONFIDENTIAL) is a copy of the PPA with Oriden. Petitioner's Exhibit No. 2, Attachment RAR-2 (CONFIDENTIAL) is a copy of the PPA with Origis.

IV. COMPETITIVE PROCUREMENT PROCESS

A. REQUEST FOR PROPOSAL PROCESS

Q. Please describe your role in the Company's RFP process.

A. I oversaw the 2020 RFP process, the evaluation of proposals, and the selection and commercial negotiation of the PPAs for the Vermillion County Solar Project and Knox County Solar Project.

Q. How was the 2020 RFP process managed and advertised?

A. Burns & McDonnell managed the RFP process, served as a direct interface for all RFP communications, and worked with the Company to quantitatively and qualitatively evaluate the proposals. Burns & McDonnell has provided consulting services to various utilities, developers, and other organizations involving power supply proposal requests totaling more than 25,000 MW. Burns and McDonnell issued the 2020 RFP on behalf of the Company on August 12, 2020 and distributed the RFP by: (1) posting notice on the Company's website;[1] (2) sending notice of its issuance to known stakeholders; (3) advertising notice of its issuance in the North American Energy Markets Association (140 members); and (4) directly emailing notice to the Company's prior RFP participants, CenterPoint Indiana South's industry contacts and stakeholders as well as to an internal Burns & McDonnell RFP contact list (containing more than 700 industry contacts). Key parameters in the RFP were as follows:

Proposal type	Both asset purchases and power purchase agreements
Total amount of wind	300 MW
Total amount of solar (or solar paired with storage)	700-1,000 MW
Minimum capacity	50 MW for wind and solar 12.5 MW/50 MWh for paired storage
Transfer/contract start date	Preferred prior to MISO 2023/2024 PRA
MISO generator interconnection	Existing GIA or already in MISO GI Queue
MISO transmission service	NRIS is required
Project attributes	All capacity, energy, ancillary services, and renewable energy credits related to the resource should be offered

Bid submittals were due September 23, 2020, to ensure that projects could come online

[1] http://vectren2020rfp.rfpmanager.biz/

in late-2023 or early-2024. Respondents were directed to interface with Burns and McDonnell for all RFP communications including questions, clarification of RFP issues, and all other matters related to RFP bid submittal.

The RFP is attached to my testimony as Petitioner's Exhibit No. 2, Attachment RAR-3.

Q. How many responses did the Company receive to the 2020 RFP?

A. Twenty-five individual respondents submitted complete responses resulting in 232 proposals, 191 of which were for projects located in Indiana. The proposal types were broken out as follows: 154 solar (31 asset purchase + 113 PPA + 10 other), 60 solar + storage, and 18 wind. While the proposals contained altogether approximately 40 GW of total installed capacity, many of the projects were included in multiple proposals such that there were approximately 9 GW of unique project installed capacity from 53 unique projects.

Overall, the 2020 RFP process resulted in the Company's selection of the Vermillion County Solar Project and Knox County Solar Project as the best two projects based on their scoring among the top proposals, lowest cost to the customer, and confirmation of the quality of the projects through due diligence with the vendors.

Q. Please provide a brief overview of the Vermillion County Solar Project.

A. Oriden, a renewable energy solutions developer and a venture of Mitsubishi Hitachi Power Systems Americas, Inc. ("Mitsubishi Power"), is constructing a photovoltaic electric generating facility with aggregate nameplate capacity of approximately 185 MWac in Vermillion County, Indiana. The Company is seeking to enter into a 15-year PPA with Oriden to purchase all product and attributes (energy, capacity, and RECs) from the project. The Vermillion County Solar Project will be within the footprint of MISO Local Resource Zone 6 ("LRZ 6") interconnecting at Duke Energy's Hillsdale 230 kV substation. The Vermillion County Solar Project is undergoing the MISO Definitive Planning Phase ("DPP") study process and is estimated to secure a MISO interconnection agreement in December 2022 and be operational during the second half of 2023.

Q. Please provide a brief overview of the Knox County Solar Project.

A. The Knox County Solar Project is a 20-year PPA offering from Origis, for all product and attributes (energy, capacity, and RECs) from a photovoltaic electric generating facility to be constructed with aggregate nameplate capacity of approximately 150 MWac. The project will be located within MISO's LRZ 6 footprint interconnecting on the Washington-Pea 138 kV Transmission Line owned by Duke Energy; is undergoing the MISO DPP study process; and is estimated to secure a MISO interconnection agreement in August 2022 and be operational during the second half of 2023.

B. EVALUATING RESULTS FROM THE 2020 RFP

Q. How were RFP proposals grouped, evaluated, and scored?

A. Burns & McDonnell initially reviewed proposals for completeness and contacted respondents, as needed, to clarify proposal attributes or request additional information where details were incomplete using a dedicated RFP e-mail address.[2] The Company, assisted by Burns & McDonnell, then evaluated, and scored each complete proposal based on established scoring criteria that assessed reliability, cost, and certainty. This assessment included: Levelized Cost of Energy ("LCOE"), energy settlement location, interconnection and development status, and project risk factors like credit worthiness, development experience, delivery date, project site control status, permits, and zoning. The RFP, Petitioner's Exhibit No. 2, Attachment RAR-3, sets forth the proposal requirements and scoring criteria. During the evaluation phase, some proposals were excluded from the ranking if they were found to not meet all the requirements of the 2020 RFP such as not having a queue position or having a late commercial operation date. The Company also excluded out-of-state proposals since there were so many competitive in-State proposals.

Proposals were ranked based on quantitative and qualitative scoring criteria established in the RFP. This evaluation was used to determine which proposals were most capable of providing CenterPoint Indiana South customers with a safe, reliable, and affordable power supply. The solar proposals were grouped by type (asset purchase, PPA), and the top-half scoring proposals were ordered by LCOE and underwent due-diligence. Please see

[2] VectrenRFP@burnsmcd.com

the scoring summary attached in Petitioner's Exhibit No. 2, Attachment RAR-4 (CONFIDENTIAL).

Q. How was pricing for the proposals specifically evaluated?

A. PPA proposals were submitted with a flat rate or constant escalator so the customer impact and LCOE could be evaluated. Proposals making it into the top-half were validated through live meetings with the developer to ensure the pricing accurately represented the bid. Key project and contract terms and conditions were validated and standardized for comparison against other top-half PPA scoring proposals. Most proposals included "delivered" pricing, which means essentially that the cost risk of congestion in the transmission system related to the plant output was already included in the PPA price. In cases where PPA proposals did not include delivered pricing, [redacted] was used to compare proposals with delivered pricing to those that did not include delivered pricing.

Q. Was the process used to evaluate the result of the 2020 RFP consistent with the process CenterPoint Indiana South used to evaluate responses to its All-Source RFP?

A. Yes. Moreover, the process CenterPoint Indiana South used is consistent with the process used by other utilities in evaluating power supply options. LCOE is a typical quantitative measure used to compare proposals on an equivalent economic basis especially when the options differ in attributes such as size, pricing, operating characteristics, ownership structures, etc. Qualitative criteria considered in this RFP evaluation also were consistent with industry practices, such as the preference for projects showing greater maturity in the development cycle, project and energy settlement location, as well as relevant developer experience.

Q. Please overview the factors identified, apart from cost, in qualitatively evaluating the resource bids that led to the two proposed projects.

A. The 2020 RFP scoring criteria are presented in detail in Petitioner's Exhibit No. 2, Attachment RAR-4 (CONFIDENTIAL). While several qualitative criteria were used to evaluate proposals, they fall into three broad categories: (1) Energy Settlement Location, (2) Interconnection Status, and (3) Project Risk Factors.

The Energy Settlement Location criteria assessed reliability and cost risk related to congestion and delivery of energy to CenterPoint Indiana South's load node ("SIGE.SIGW"). In particular, minimal separation between the project interconnection and the load it serves is a favorable reliability attribute. Projects located within the Company's service territory, or that otherwise assumed congestion and delivery risk by pricing energy delivered to the Company's load node, received maximum points for Energy Settlement Location. Many of the proposals were either on-system or assumed congestion and delivery risk as "delivered" pricing in their proposal. There were other competitive and high-quality proposals that priced delivery to the point of interconnection ("busbar"). To economically compare the two types of proposals, busbar and delivered, the Company undertook analysis of typical price separation as well as consultation with subject matter experts to identify a fair but sufficiently conservative value of the congestion risk associated with busbar PPAs. [redacted]

The Interconnection Status criteria evaluated the risk to projects of increasing network upgrades and affected system costs. Projects with completed interconnection agreements or that were further along in the MISO Interconnection Queue were generally favored over projects just starting out in the queue and thus having less certainty related to interconnection and system upgrade costs.

The Project Risk Factors criteria evaluated various other operational and control risk factors associated with the project such as project parent company creditworthiness, developer experience, delivery date, project site control, permits, and zoning.

Q. Please describe any other relevant quantitative evaluation methods and determinations.

A. Due to varying term lengths of the proposals, it was important to compare the projects on a consistent basis when considering total project costs and benefits. Evaluating all proposals over a 35-year term provided an equitable measurement of the proposals that was also consistent with the approach used during evaluation of the All Source RFP and selection of CenterPoint Energy Indiana South's first two projects, the Posey County Solar Project and the Warrick County Solar Project, which are the subject of Cause No. 45501.

To normalize the LCOE over the 35-year period, a market replacement methodology was adopted using CenterPoint Indiana South's 2019/2020 IRP forecasts for energy price (Locational Marginal Pricing or "LMP") and capacity price in the MISO wholesale market. The forecasted pricing was applied to the balance of the 35-year term for each proposal's expected generation output.

In addition, the impacts of imputed debt also were factored into the LCOE calculation: as discussed in Petitioner's Witness Brett A. Jerasa's testimony, the equity compensation required to offset financial impacts due to long-term debt equivalence was included in the PPA LCOE.

Therefore, the evaluation LCOE ("35-year LCOE") was determined based on the following three fundamental components – base price, market replacements from the end of the term through 35 years, and imputed debt adder. The 35-year LCOE was used for evaluation purposes to have a standard measure of comparison between PPAs of different term lengths, and build-transfer or asset purchase agreements.

Q. Following the above-described analysis, were any proposals carried forward from the RFP for further consideration?

A. Yes. Using the previously described process, CenterPoint Indiana South scored and ranked the bids to identify the top proposals that merited further analysis and consideration. CenterPoint Indiana South then engaged with the top-ranked bidders to discuss their proposal and clarify aspects of the proposals under consideration. After full evaluation, the Vermillion County Solar Project and Knox County Solar Project ranked as the two best, based on qualitative scoring and LCOE ranking. The final ranking is attached to my testimony as Petitioner's Exhibit No. 2, Attachment RAR-4 (CONFIDENTIAL).

C. SELECTION OF PROJECTS BASED ON RESULTS OF ANALYSIS FROM RFP

Q. Please discuss the two proposed projects in relation to the RFP.

A. The Vermillion County Solar Project and Knox County Solar Project are competitively

priced solar projects scoring high in their groupings. The base price of the Vermillion Project is [redacted] compared to the [redacted] bid into the 2020 RFP. Similarly, the base price of the Knox Project is [redacted] compared to the [redacted] bid into the 2020 RFP. [redacted]

The Vermillion County Solar Project, structured as a 15-year PPA, offers [redacted] The Vermillion County Solar Project scored the highest and had the lowest LCOE among 15-year PPAs making it the best selection in the group. Oriden is a group company of Mitsubishi Power and has experienced personnel on its development team. The project site has a single owner and is a repurposed, brownfield site – factors that decrease the development risk associated with site control and permitting.

The Knox County Solar Project is structured as a 20-year PPA and also offers competitive, [redacted] The Knox County Solar Project is developed by Origis which has experience in developing 170 projects worldwide totaling more than 4 GW to date of developed solar and energy storage capacity. The project is located in close proximity to CenterPoint Indiana South's electric service territory minimizing the potential for price separation between the point of interconnection and the Company's load node. Historical analysis of the congestion risk showed an average, favorable impact on the price. [redacted] the Knox Project still scored as one of the top projects in the group of 20-year PPAs; [redacted] as shown in Petitioner's Exhibit No. 2, Attachment RAR-4 (CONFIDENTIAL). During due diligence, [redacted] was ruled out because of [redacted] The Knox

County Solar Project was the best option from the 20-year PPA group, which had almost as many proposals as the rest of the PPA groups combined.

Q. How did the results of the 2020 RFP compare to the results of the 2019 All-Source RFP?

A. Both RFPs used similar evaluation methodologies and produced similar results. In the All-Source RFP, proposals were grouped into Tier 1 and Tier 2 proposals, corresponding to whether the proposals had reliable pricing and were located on-system, for purposes related to the use of the aggregated proposal data as IRP inputs. Coincidentally, the most competitive proposals from the All-Source RFP were also Tier 1 proposals. Compared to the earlier All-Source RFP, the number of proposals bid into the 2020 RFP was greater with many of the most competitive proposals located off-system. This prompted the need for [redacted], as discussed above, to evaluate and compare the off-system busbar proposals to the on-system or delivered ones. The Vermillion County Solar Project and Knox County Solar Project PPAs are comparable in price, quality, and risk to the Warrick County Solar Project PPA resulting from the All-Source RFP and for which approval is sought in Cause No. 45501. Finally, just as in the Warrick County Solar Project, output guarantees, performance security, risk mitigation measures, and protections for CenterPoint Indiana South's customers were all secured in the Vermillion and Knox County Solar Project PPAs.

Q. How did the Knox County and Vermillion County Solar Projects originate?

A. The Vermillion County Solar Project originated as an independent submittal to 2020 RFP. The Knox County Solar Project was originally bid into the All-Source RFP, scored highly, and was resubmitted into the 2020 RFP where it was selected. The respective developers independently developed the projects, registered the projects for MISO study, and performed all necessary preliminary tasks for establishing the projects, including land acquisition, county government engagement, permitting, and environmental studies, preliminary design and cost estimating, and equipment safe-harboring for tax purposes, etc.

Q. What additional steps did the Company take to further evaluate the competitiveness of the two proposed projects?

A. CenterPoint Indiana South verified the proposals were consistent with the Company's requirements as to project maturity and timing, reliability, price certainty, and development risk. The Company evaluated the MISO interconnection queue physical point of interconnection, queue cycle placement and any independent power flow study results performed by the developers to de-risk the interconnection study process. CenterPoint Indiana South contacted the vendors associated with the top-half PPA scoring proposals to confirm bid accuracy concerning project status, proposal revisions, development risks and project certainty, and opportunities to improve the project terms. CenterPoint Indiana South performed due diligence by questioning risk areas in the proposals and performing financial analysis of the creditworthiness of the parent companies. The Company also analyzed the project economics, sensitivity to interconnection risk, customer rate impact, and compared the projects to each other to validate the ranking and quality of the projects.

Q. Does the competitive procurement evaluation process have value for customers?

A. Yes. The 2020 RFP and resulting evaluation process benefited customers by allowing CenterPoint Indiana South to identify the best projects at the best available prices. The Company's evaluation process compared projects based on similar reliability, timing, price, maturity, and risk attributes, and projects were evenly measured against each other to maximize customer benefit. The competitive process provided a pool of competitive market choices that increased CenterPoint Indiana South's optionality during project negotiation and served as a benchmark for each project's terms and characteristics.

Q. Based on your experience with the 2020 RFP, was Petitioner's approach in evaluating the RFP and selecting the renewable projects reasonable?

A. Yes. CenterPoint Indiana South's Generation Transition Plan, as a whole, is grounded in extensive, credible, and well-reasoned analysis. The approach CenterPoint Indiana South took to evaluate the projects from the 2020 RFP resulted in the selection of the best solar projects available at the lowest costs reasonably possible.

Q. Briefly provide an overview of how Petitioner began the negotiation process for the Vermillion County and Knox County Solar Projects.

A. Following the due diligence and proposal verification process described above, CenterPoint Indiana South identified the Vermillion County Solar Project and Knox County

Solar Project as the two projects to pursue. By February 2021, CenterPoint Indiana South began the negotiation process with a term sheet based on the validated project proposals. The term sheet facilitated agreement on key commercial terms around which a full PPA deal could be structured.

V. THE VERMILLION COUNTY SOLAR PROJECT

A. OVERVIEW OF VERMILLION COUNTY PPA AND TERMS

Q. Please describe the negotiation process for the Vermillion County Solar Project.

A. Negotiations effectively began in February 2021 when the Company notified Oriden of its interest in negotiating the key commercial terms ("Term Sheet") for the Vermillion County Solar Project. Terms and conditions subject to negotiation in the Term Sheet included price, market attributes, project timing, performance guarantees, and defined damages in case of failure to deliver the project on time or within certain parameters. Upon execution of the Term Sheet, the parties then began to negotiate the full PPA, further refining the commercial and legal details of the project. Negotiations culminated in a final PPA executed in August 2021.

Q. How do initial bids from the RFP compare to the PPA for the Vermillion County Solar Project?

A. Oriden [redacted] Most projects submitted in the 2020 RFP were in the early stages of development and typically were best-case estimates that included optimistic offers for project attributes and certainty. For example, project economics were largely dependent upon DPP study results which have been delayed extensively. Not only do the DPP study results affect the price directly, but also affect the timing of the project in-service date, which casts additional uncertainty on the project due to tax benefit eligibility and other financing considerations. [redacted]

[redacted].

Q. What accommodations for interconnection cost were negotiated?

A. [redacted]

Q. When is the Vermillion County Solar Project expected to be completed?

A. The Vermillion County Solar Project is in the 2020 MISO DPP Study cycle and is slated for commercial operation no later than December 31, 2023. Land rights and project design are in progress. Civil testing and permitting also are underway and construction is scheduled to begin no later than March 3, 2023, although civil work and other construction activities may proceed sooner under limited notices to proceed. Development and construction milestones are set forth in Exhibit 6 to the PPA.

Q. Please describe the structure and terms of the Vermillion PPA.

A. Oriden will provide attributes of a 185 MWac solar plant including energy, capacity, and RECs to CenterPoint Indiana South for a period of 15 years at [redacted] The PPA price is [redacted] The Commercial Operation Date ("COD"), upon which the delivery term and payment begin, [redacted]

[redacted]

Q. Does the Vermillion PPA provide any financial assurances that Oriden will meet its obligations under the PPA?

A. [redacted]

Q. Please describe how Petitioner will account for the energy produced by the project in the market.

A. CenterPoint Indiana South will adhere to MISO tariff and Business Practice Manual ("BPM") requirements regarding the offering and interaction of the Vermillion County Solar Project into the MISO wholesale market. Under the terms of the Vermillion Project PPA, [redacted] CenterPoint Indiana South must take all as-available energy output from the Vermillion County Solar Project, except as prohibited by the MISO tariff and MISO's BPM. [redacted]

B. BENEFITS OF PPA PROJECT

Q. Please describe any benefits to the location of the Vermillion County Solar Project.

A. The Vermillion Project is located on a former brownfield site that has been repurposed for industrial use. Brownfield redevelopment returns environmentally impacted and underused properties to productive use by mitigating environmental impacts, reducing environmental safety risks, and promoting economic revitalization. In this case, the project is sited at Vermillion Rise Mega Park ("Vermillion Rise") at the historical Newport Chemical Depot ("NECD"). Vermillion Rise had a distinguished history initially serving as a U.S. defense facility during World War II and now has been transformed to a 7,000 acre shovel ready industrial park. In 2012, the U.S. Army completed the environmental remediation in coordination with the U.S. Environmental Protection Agency and the Indiana Department

of Environmental Management and issued a Finding of Suitability to Transfer ("FOST"). The Vermillion County Redevelopment Authority ("Authority") was formed to manage the acquisition and transformation of the defense facility to Vermillion Rise.

From a local economic standpoint, Oriden has been in communication with Vermillion County and provided details of the project and resulting benefits. In addition to being a part of the county's tax base upon completion, the Vermillion County Solar Project serves as a valuable marketing tool for industry that is considering Vermillion County as a location and that values renewable energy and its attributes.

Q. Please describe the benefits of the Vermillion County Solar Project PPA.

A. The Vermillion County Solar Project provides very low cost PPA pricing to the customer [redacted] for a period of 15 years. The PPA is responsive to the Commission's Order in Cause No. 45052 which encouraged supply-side resource flexibility to allow for changing market conditions and technological advancements. Use of PPAs including various term lengths diversifies the solar portfolio and optimizes cost, flexibility, and reduces risks for the customer. All of these benefits are provided while supplying accredited capacity and energy to meet the PRMR in the MISO wholesale market and Local Clearing Requirements.

Q. Please explain any unique opportunities presented by working with Oriden.

A. While Oriden is a relatively new developer, it is an offshoot of Mitsubishi Power, a partner with a wealth of experience in power generating facilities. Oriden is well-backed financially and able to provide financial surety for CenterPoint Indiana South customers. The project is being developed by an experienced team working together with [redacted] with deep experience in renewables. Working with Oriden on this PPA will establish a partnership for potential future endeavors and coordination within the state of Indiana.

Q. Is timely approval of the PPA also important?

A. Yes. Timely approval is needed to allow Oriden to begin construction of the facility, to avoid delays that could impact project economics (such as tax benefits), and to ensure reliability and minimize dependence on the wholesale market during CenterPoint Indiana

South's Generation Transition Plan, which is consistent with the 2019/2020 IRP.

Witness Rice's testimony details the findings of the 2019/2020 IRP and the need to retire portions of our coal generation. Timely approval of the PPA will reduce energy and capacity purchases from the wholesale market during a period of projected tight margins that could lead to costly purchases on behalf of the customer and potential for Maximum Generation events.

Q. Please explain whether the costs (and risks) associated with the Vermillion County Solar Project are reasonable or aligned in comparison to similar projects that have been undertaken in Indiana (or elsewhere).

A. The price is reasonable based upon its attributes and the pricing terms are competitive with all PPA proposals submitted to CenterPoint Indiana South in its 2020 RFP. The risks associated with this project are typical to any solar development but have been mitigated through the PPA structure and financial guarantees outlined above. This project, in fact, provides fewer risks than other PPAs due to [redacted]

Q. Is the PPA prudent and in the public interest?

A. Yes. Solar energy is a low-cost energy and capacity resource that provides diversity to CenterPoint Indiana South's resource mix. The PPA structure of the Vermillion County Solar Project is responsive to the Commission's 2019 Order in Cause No. 45052 that requested diversity of our generation fleet and encouraged supply-side resource flexibility to allow for changing market conditions and technological shifts. Further, the PPA structure diversifies the solar portfolio to optimize cost and reliability and reduce customer risk. It is a valuable project with highly competitive pricing. In my opinion, Commission approval of the PPA for the Vermillion County Solar Project and associated relief sought herein is in the public interest, will enhance or maintain the reliability and efficiency of service provided by Petitioner, and is otherwise consistent with Ind. Code ch. 8-1-8.8.

VI. THE KNOX COUNTY SOLAR PROJECT

A. OVERVIEW OF KNOX COUNTY TRANSACTION AND TERMS

Q. Please describe the negotiation process for the Knox County Solar Project.

A. Negotiations effectively began in February 2021 when the Company notified Origis of its interest in negotiating the Term Sheet for the Knox County Solar Project, and the Term Sheet and full contract negotiation proceeded similar to the Vermillion County Solar Project PPA. Negotiations culminated in a final PPA executed in August 2021.

Q. How do initial bids from the RFP compare to the PPA for the Knox County Solar Project?

A. [redacted] In addition, the Knox Project PPA price is highly competitive [redacted]

Q. What accommodations for interconnection cost were negotiated?

A. [redacted]

[redacted]

Q. When is the Knox County Solar Project expected to be completed?

A. The Knox County Solar Project is in the 2019 MISO DPP Study cycle Generator Interconnection Queue cycle and is slated for commercial operation no later than December 31, 2023. Land rights and project design are in progress. Civil testing and permitting are also underway and construction is scheduled to begin no later than January 31, 2023. Development and construction milestones are set forth in Exhibit 6 to the PPA.

Q. Please describe the structure and terms of the Knox County Solar Project PPA.

A. Origis will provide attributes of a 150 MWac solar plant including energy, capacity, and RECs to CenterPoint Indiana South for a period of 20 years [redacted] The base PPA price is [redacted]

Q. Does the Knox County PPA provide any financial assurances that Origis will meet its obligations under the PPA?

A. [redacted]

[redacted]

Q. Please describe how Petitioner will account for the energy produced by the project in the market.

A. CenterPoint Indiana South will adhere to MISO tariff and BPM requirements regarding the offering and interaction of the Knox County Solar Project into the MISO wholesale market. Under the terms of the Knox County Solar Project PPA, CenterPoint Indiana South must take all as-available energy output from the Knox County Solar Project, except as prohibited by the MISO tariff and BPM. [redacted]

B. BENEFITS OF PPA PROJECT

Q. Please describe any benefits to the location of the Knox County Solar Project.

A. The Knox County Project interconnects on the Duke Energy transmission system immediately north of CenterPoint Indiana South's electric service territory. Proximity to the Company's load reduces the probability of economic and physical congestion. As described above, the Knox Project PPA [redacted] In addition, as with other solar projects in southern Indiana, the site is highly favorable to maximize performance and optimize the project economics given southwest Indiana, on average, receives the highest amount of solar irradiance in the state. Moreover, from a local economic standpoint, Origis has been in communication with Knox County. In addition to being a part of the county's tax base upon completion, the Knox County Project serves as a valuable marketing tool for industry that is considering Knox County as a location and that values renewable energy and its attributes.

Q. Please describe the benefits of the Knox County Solar Project PPA.

A. The Knox County Solar Project provides low cost solar energy, capacity, and RECs to the customer [redacted] for a period of 20 years. Use of PPAs including various term lengths diversifies the solar portfolio and optimizes cost and flexibility and reduces risk for the customer. All of these benefits are provided while providing accredited capacity and energy to meet PRMR in the MISO wholesale market and Local Clearing Requirements.

Q. Please explain any unique opportunities presented by working with Origis.

A. Origis is an experienced developer, involved in approximately 170 solar and storage projects since 2008. This wealth of experience in the solar industry includes 4 GW to date of developed solar and energy storage capacity that is located in multiple states and abroad and affiliated with various utilities. Origis is familiar with PPA structures and the necessary protections and contingencies to protect both parties and ensure the project is a success. Furthermore, Origis is well-backed financially [redacted] and able to provide financial surety for CenterPoint Indiana South customers. Moreover, working with Origis provides access to a network of experts experienced in solar development and best practices, offering the opportunity for the Company to enhance its institutional knowledge around solar and renewable development for consideration in future projects and improvements. Working with Origis on this PPA will establish a partnership for potential future endeavors and coordination within the state of Indiana.

Q. Is timely approval of the PPA also important?

A. Yes. As with the Knox County Solar Project, timely approval is needed to ensure the benefits of the project will be realized and allow Origis to begin construction of the facility, which will help ensure reliability and minimize dependence on the wholesale market during CenterPoint Indiana South's Generation Transition Plan.

Q. Do you believe the costs (and risks) associated with the Knox County Solar Project are reasonable and comparable to similar projects that have been undertaken in Indiana (or elsewhere)?

A. Yes. The price is reasonable based upon its attributes and competitive pricing terms relative to all PPA proposals submitted to CenterPoint Indiana South in its 2020 RFP. The risks associated with this project are typical to any solar development but have been

mitigated through PPA structure and financial guarantees. This project in fact provides fewer risks than other PPAs due [redacted]

Q. Is the PPA prudent and in the public interest?

A. Yes. The PPA structure of the Knox County Solar Project diversifies the solar portfolio to optimize cost, reliability, and reduce customer risk. It is a valuable project with highly competitive pricing. In my opinion, Commission approval of the PPA for the Knox County Solar Project and associated relief sought herein is in the public interest, will enhance or maintain the reliability and efficiency of service provided by Petitioner, and is otherwise consistent with Ind. Code ch. 8-1-8.8.

VII. MISO PRMR

Q. Please describe the MISO Energy market.

A. In 2005, Indiana electric utilities, with encouragement from the Commission and the Federal Energy Regulatory Commission ("FERC"), transferred operation of their transmission facilities to a Regional Transmission Operator ("RTO") – MISO for Petitioner. The purpose of MISO's energy market is to dispatch the lowest cost generation within the MISO footprint required to maintain system reliability, giving MISO members the lowest cost energy available. As a member of MISO, Petitioner, like all MISO members, projects and submits its hourly energy needs and offers 100 percent of available generation for each hour of each day throughout the year into this market at the avoided costs. MISO collects all load projections and monetary energy offers and after ensuring grid reliability is maintained, dispatches the lowest cost generation facilities to meet the projected system needs for each hour of the day. At the beginning of the MISO market, coal-fired generation was often the lowest cost generation in the MISO region and was frequently dispatched. However, falling natural gas prices, efficient gas turbines, and the growth of renewable resources have changed how Petitioner's coal-fired generation facilities are operating in MISO.

Q. How has the growth of renewable resources impacted MISO's dispatch?

A. The dispatch of renewable resources has changed the generation stack within MISO. The Production Tax Credit ("PTC") for wind motivates operators of these facilities to offer generation into the market at very low to negative prices or designate them as must run resources because the tax credits are earned only if the facilities are operating. The ITC incentivizes the build of solar facilities. Once the capital is invested in solar which has zero fuel costs, they can be offered at very low prices or as must run generation. This means that wind and solar resources are dispatched before other forms of generation unless curtailment of renewables is necessary to ensure the reliability of the grid. Of course, these facilities only generate energy whenever the wind or sun allows. Therefore, due to the intermittency of wind and solar, fossil-fuel based resources are left to balance the system when the output of the renewable resources changes (for example when the wind subsides or cloud cover blocks the sun). This impacts the dispatch of Petitioner's coal-fired generation units causing them to cycle up and down throughout the day and increases the frequency of stop and start cycles throughout the year. Coal units, however, were designed to run continuously; therefore, the frequent cycling can affect unit efficiency due to the thermal contraction and expansion of large masses of metal causing wear and tear, which can lead to increased maintenance and reduced unit life.

Q. Why procure the requested solar in this case?

A. Per MISO requirements, CenterPoint Indiana South must hold adequate generating capacity to serve the annual peak demand of our customer base plus a PRMR. If the Company does not have the required capacity, it would be obligated to procure the capacity through MISO's Planning Resource Auction or purchase from a third party and designate in a Fixed Resource Adequacy Plan ("FRAP"). In order for capacity to qualify for a given planning year, it must meet required testing protocol prior to the last business day of May of each year. Due to potential MISO-wide unit retirements, it is uncertain if capacity will be available to purchase and at what cost if it is available. If capacity is not available in the long-term, based on current MISO rules, CenterPoint Indiana South would need to pay a penalty in the form of Cost of New Entry ("CONE"). CONE is determined annually by MISO which has traditionally been the cost to construct a new natural gas combustion turbine. The 2021-2022 CONE price for MISO Zone 6 was set at $244.16 per MW-day. At this price purchasing 350 MWs of capacity at CONE would cost $31,191,440

million annually.

400 MW of first year installed solar is accredited by MISO as 200 MW of capacity, also known as Unforced Capacity ("UCAP"). The UCAP is then, in future years, based on the generator's actual performance during peak load conditions. As discussed in the 2019/2020 IRP Preferred Portfolio and shown in the figure below, the added solar capacity from the Vermillion and Knox County Solar Projects moves CenterPoint Indiana South toward meeting its PRMR beyond the 2023/2024 time period.

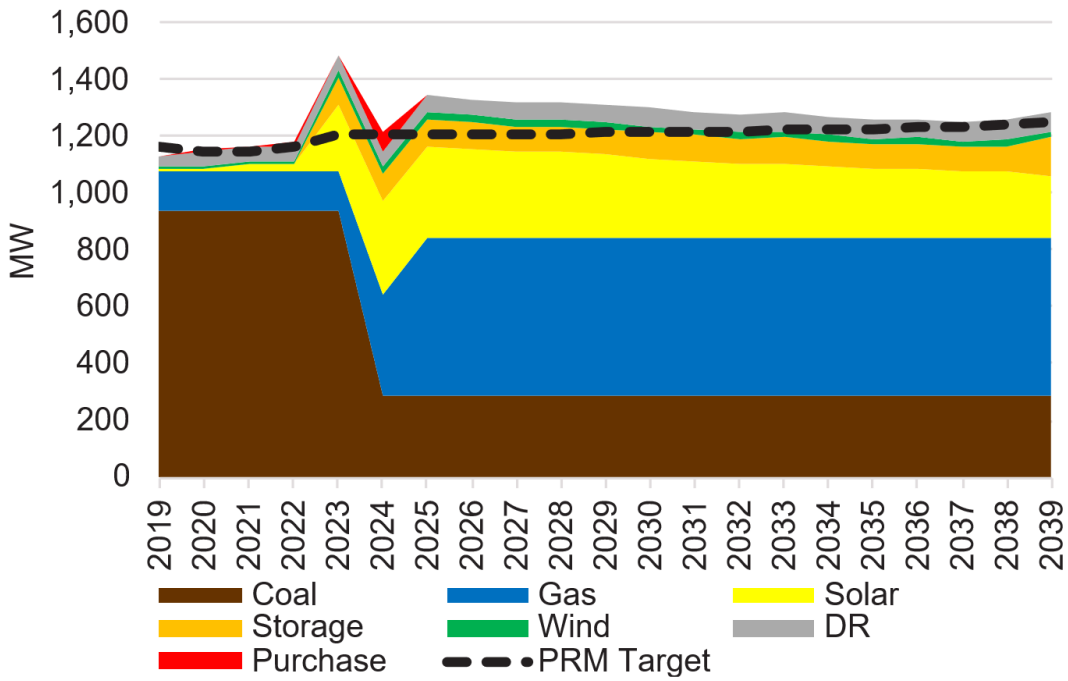


Figure 1: MISO Accredited capacity (UCAP) through 2039[3]. See also Preferred Portfolio Additions and Retirements, IRP Public Stakeholder Meeting #4, slide 18

Q. Does the MISO PRMR change from year to year?

A. Yes. Within the past five years, MISO's PRMR, based on installed capacity, has swung between 14.3 percent and 17.1 percent and has been trending upward. In one year, the UCAP PRM changed by 30 percent. The PRMR calculation is driven by four factors: external non-firm support, load forecast uncertainty, load, and generation performance.

[3] PRM Target assumes coincident peak factor of 95.99 percent, PRM 8.9 percent, and Transmission Losses of 1.7 percent

External non-firm support refers to the diversity of load between MISO and neighboring systems and areas outside of MISO that allow for limited support and transfer of capacity through transmission. An example would be generators in Pennsylvania, Jersey, Maryland Power Pool ("PJM") providing capacity to MISO load. Load forecast uncertainty exists due to the variability of economics, weather, and customer behavior that impact the demand for energy. The greater the Load Forecast Uncertainty, the greater the PRMR. Finally, generation, as it is modeled in terms of capacity and firm imports, impacts the PRMR calculation based on the size and outage history of the generators.

Q. Please describe MISO's RIIA initiative.

A. In February 2021, MISO produced a RIIA Executive Summary in which it described RIIA as follows:

> RIIA is a technically rigorous systematic analysis that evaluates increasing amounts of wind and solar resources on the Eastern Interconnection bulk electric systems, with a focus on the MISO footprint. RIIA examines renewable penetration levels in 10% increments up to 50% to better understand the complexities of integration at each level. This assessment provides examples of integration issues and examines potential mitigation solutions.
>
> RIIA is a footprint wide analysis of the impact of increasing levels of renewable penetration on the bulk electric system. The results of RIIA were not intended to be applied on a utility-by-utility basis. Instead, the study was designed to assist MISO in identifying renewable integration issues and examining potential mitigation solutions.

Q. In its RIIA study, MISO defines 30 percent renewable penetration as an "inflection point." Please discuss what that means.

A. MISO provided an explanation of the significance of the 30 percent penetration level within the RIIA Executive Summary. It states:

> RIIA found when the percentage of system-wide annual load served by renewable resources is less than 30%, the integration of wind and solar will require transmission expansion as well as significant changes to current operating, market, and planning practices — all of which appear manageable within MISO's existing framework. Beyond 30%, transformative thinking and coordinated action between MISO and its members are required to prepare for the significant challenges that arise (Figure 1). It is important to note that renewable growth does not happen uniformly across the MISO footprint, or the broader interconnected system. Growth occurs fastest in areas with high

quality wind and solar resources, available transmission capacity, and favorable regulatory environments. For example, when MISO reaches 30% renewable energy penetration, some Local Resource Zones are likely to be approaching 100% renewable energy penetration. Locations which experience the fastest renewable growth experience challenges first, but beyond 30% renewable penetration the system as a whole facing new and shifting risks rather than simply local issues.

Q. Explain how the addition of the two solar projects in this proceeding is consistent with the MISO RIIA.

A. First, MISO's RIIA findings are not a directive as to the amount or proportion of renewables that load serving entities may offer their customers. Rather, the findings are a call to action for thoughtful consideration and the timely buildout of the transmission system that must occur to allow the most efficient and effective utilization of the large penetration of renewables that is expected. It is important to recognize that MISO's inflection point occurs when the MISO system-wide annual load served by renewable resources is reached. The study recognizes that by the time MISO's system-wide annual load served by renewables reaches 30 percent penetration, some Local Resource Zones will be approaching 100 percent.

Q. Does the Company have any concerns that serving 30 percent or more of its load with renewable generation will create additional costs to consumers?

A. No. RIIA identified bulk electric system issues that arise when 30 percent or more of system-wide annual load is served by renewable generation. There is no indication that the same issues will be experienced at the individual utility level when it reaches 30 percent renewable penetration.

VIII. CONCLUSION

Q. Does this conclude your direct testimony?

A. Yes, at the present time.

VERIFICATION

I, Roland A. Rosario, Market Development Manager for Southern Indiana Gas and Electric Company d/b/a CenterPoint Energy Indiana South, under the penalty of perjury, affirm that the answers in the foregoing Direct Testimony are true to the best of my knowledge, information, and belief.

Roland A. Rosario
Market Development Manager

Attachment RAR-1 (CONFIDENTIAL) provided separately

Attachment RAR-2 (CONFIDENTIAL) provided separately

1898 & CO SM
PART OF BURNS & MCDONNELL

Wind, Solar, and Solar paired with Storage Request for Proposals

VECTREN
A CenterPoint Energy Company

Vectren, a CenterPoint Energy Company

Issued 8/12/2020
NOI, NDA, and Respondent Application Due 8/27/2020
Proposals Due 9/23/2020

TABLE OF CONTENTS

Page No.

LIST OF TABLES

Page No.

LIST OF FIGURES

Page No.

LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
1898 & Co.	1898 & Co., part of Burns & McDonnell
COD	Commercial Operating Date
DA	Definitive Agreement
DIR	Dispatchable Intermittent Resource
EPC	Engineering, Procurement, and Construction
GI	Generation Interconnection
GIA	Generator Interconnection Agreement
ICAP	Installed Capacity
IRP	Integrated Resource Plan
IURC	Indiana Utility Regulatory Commission
LCOE	Levelized Cost of Energy
LCR	Local Clearing Requirement
LRZ	Local Resource Zone
LSE	Load Serving Entity
MISO	Midcontinent Independent System Operator
MW	Megawatt
MWh	Megawatt-Hour
NDA	Non-Disclosure Agreement
NRIS	Network Resource Integration Service
OVEC	Ohio Valley Electric Corporation
PPA	Power Purchase Agreements
PRM	Planning Reserve Margin
RFP	Request for Proposal
Vectren	Southern Indiana Gas and Electric

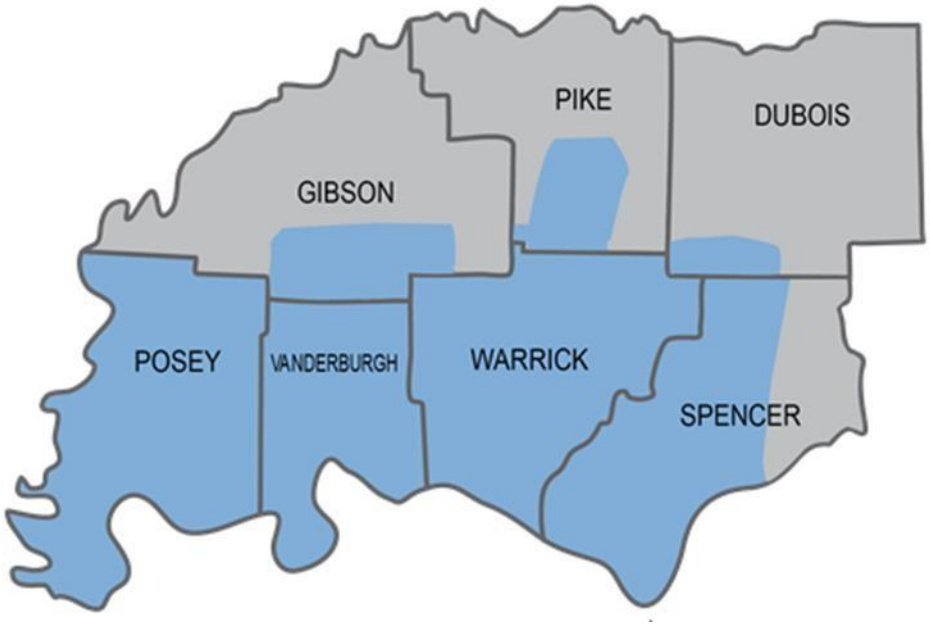
1.0 RFP OVERVIEW

1.1 Introduction

Southern Indiana Gas and Electric (Vectren) is a subsidiary of CenterPoint Energy, headquartered in Houston, Texas. Vectren provides energy delivery services to 144,000 electric customers located in southwestern Indiana. Vectren also owns and operates electric generation to serve its electric customers and optimizes those assets in the wholesale power market.

Vectren's electric customers are currently served by a mixed portfolio of 1,000 megawatts (MW) of coalfired generation, up to 160 MW of gas-fired generation and 4 MWs of solar coupled with 1 MW of storage. The portfolio also contains 3 MW from a landfill gas to electric project and purchases from the Ohio Valley Electric Corporation (OVEC) of up to 32 MW, wind purchases of up to 80 MW, and purchases from the Midcontinent Independent System Operator (MISO) power pool as needed to meet Vectren's load requirements. Furthermore, interruptible load and demand-side management initiatives can reduce load by approximately 60 MW if needed.

Figure 1: Vectren Electric Service Area



1.2 Purpose

Vectren has issued this Request for Proposals (RFP) seeking renewable and storage power supply to meet the needs of its customers. For asset purchases and power purchase agreements (PPAs), the capacity is preferred to be fully accredited for the 2023/2024 MISO Planning Year (PY). Vectren submitted an Integrated Resource Plan (2019/2020 IRP) to the Indiana Utility Regulatory Commission (IURC) in June 2020 which identified a need for 700-1,000 MWs of solar (some paired with storage) and 300 MWs of wind as part of its preferred resource options to meet capacity and energy requirements. Only resources capable of firm

deliverability, further outlined in Section 4.1.2, to MISO Local Resource Zone (LRZ) 6 will be considered.

Vectren prefers Proposals for resources that are directly interconnected to Vectren's system or Proposals that reflect all the costs and characteristics of the resource necessary for energy to be financially settled or delivered to Vectren's load node (SIGE.SIGW). All potential agreements are subject to IURC and CenterPoint Board of Director's approval and are not effective until such approval is final.

All Proposals must be received by the contact designated in Section 2.1 no later than the Proposal Submittal Due Date shown in Section 2.4. Vectren reserves the right in its sole discretion to modify this schedule for any reason.

In connection with this RFP, Vectren has retained the services of an independent third-party consultant, 1898 & Co., a division of Burns and McDonnell, to help manage the RFP process and work with Vectren to perform the quantitative and qualitative evaluations of all Proposals. However, Vectren will make final decisions (subject to IURC review, as applicable) at its sole discretion.

All Respondents will directly interface with 1898 & Co. for all communications including questions, RFP clarification issues, and Proposal submission. All correspondence concerning this RFP should be sent via e-mail to VectrenRFP@1898andco.com.

Vectren has concluded that it is in the best interest of its customers to seek resources that qualify as MISO internal resources (i.e. not pseudo-tied into MISO) with physical deliverability utilizing Network Resource Integration Service (NRIS). Vectren is soliciting this RFP for supply-side wind, solar, and solar paired with storage resources. Vectren has identified a need of approximately 700-1,000 MW of solar (some paired with storage) and 300 MW of wind by the start of the 2023/2024 planning year. Vectren will also consider alternative timelines related to the capacity acquisition to the extent Respondents provide more competitive pricing and/or terms for delivery beginning prior to or after the 2023/2024 planning year.

Vectren is seeking to provide reliable generation supply resources for its customers. This RFP is issued to:

- Acquire generation facilities described further in Section 4.0, including existing or planned utility scale wind, solar, and solar paired with storage resources.
  - Planned resources should be in the MISO generator interconnection queue or provide justification as to why the resource is able to meet Vectren's timing needs absent current queue position (e.g. reuse or sharing of existing interconnection).
- Procure power purchase contract options for capacity, energy, and Renewable Energy Credits (RECs) described further in Section 5.0.

Accordingly, you are invited to submit a written, binding Proposal in accordance with the requirements described in this RFP. Entities that submit a Proposal are referred to as Respondents.

The milestone dates for this RFP process are presented below. Additional information about milestone dates is provided in Section 2.4.

Table 1: RFP Milestone Dates

Milestone	Date
Issue RFP	Wednesday, August 12, 2020
Notice of Intent with Application Documents Due	Thursday, August 27, 2020
Proposals Due	Wednesday, September 23, 2020

2.0 INFORMATION AND SCHEDULE

2.1 Information Provided to Potential Respondents

This RFP and all of its Appendices are available on the RFP website (http://Vectren2020RFP.rfpmanager.biz/). Interested parties are expected to be able to download this RFP with its required forms and complete the forms in Microsoft Word, Microsoft Excel[1], and/or PDF format. Respondents should submit properly completed forms by the specified due date to the RFP e-mail address (VectrenRFP@1898andco.com). 1898 & Co. will accept only Proposals that are complete. Proposals that are nonconforming, not complete, mailed, or hand delivered may be deemed ineligible and may not be considered for further evaluation. By submitting a Proposal in response to this RFP, the Respondent certifies that it has not divulged, discussed, or compared any commercial terms of its Proposal with any other party (including any other Respondent and/or prospective Respondent), and has not colluded whatsoever with any other party.

2.2 Information on the RFP Website

The information on the RFP website (http://Vectren2020RFP.rfpmanager.biz/) contains the following:

- This RFP and associated appendices
- Frequently asked questions and answers about this RFP
- Updates on this RFP process and other relevant information

2.3 Questions

An e-mail address (VectrenRFP@1898andco.com) has been set up to collect all communications and questions from potential Respondents as well as a website (http://Vectren2020RFP.rfpmanager.biz/) to download the RFP and provide uniform communications, relevant questions and answers, including updates and other details as may be provided throughout the RFP process. Phone calls and verbal conversations with Respondents regarding this RFP are not permitted before the Proposal Submittal Due Date. All Respondents will directly interface with 1898 & Co. through the RFP e-mail address for all communications regarding this resource request. Proposals will be opened in private by 1898 & Co. on a confidential basis, but written questions will not be considered confidential. Individual questions submitted by e-mail to 1898 & Co. before the submittal due date will be answered and responses sent back via e-mail to the Respondent as soon as practical. Responses to any questions may be placed on the RFP website for the benefit of all Respondents, with any identifying information redacted from the question.

[1] Microsoft Excel format is required for the submission of Appendix D.

Proposals will be reviewed by 1898 & Co. for completeness and offers that do not include the information requirements of this RFP may be notified by 1898 & Co. and allowed five business days to conform. After Proposals are submitted, 1898 & Co. will review, and both quantitatively and qualitatively evaluate all conforming Proposals. During the evaluation process Respondents may be contacted for additional data or clarifications by 1898 & Co. Any Respondents contacted for further clarifications may or may not be invited to begin further negotiations of terms and details of the offers.

2.4 Schedule

Vectren has retained 1898 & Co. to act as an independent third-party consultant to assist with this RFP. All Respondents will directly interface with 1898 & Co. for all communications including questions, RFP clarification issues, and Proposal submission. All correspondence concerning this RFP should be sent via e-mail to VectrenRFP@1898andco.com.

The schedule below represents Vectren's expected timeline for conducting this resource solicitation. Vectren reserves the right to modify this schedule as circumstances warrant and/or as Vectren deems appropriate.

Table 2: RFP Schedule

Step	Date
RFP Issued	Wednesday, August 12, 2020
Notice of Intent, NDA, and Respondent Application Due	5:00 p.m. CDT, Thursday, August 27, 2020
Proposal Submittal Due Date	5:00 p.m. CDT, Wednesday, September 23, 2020
Initial Proposal Review and Evaluation Period	Wednesday, September 23, 2020 – Wednesday, November 4, 2020
Proposal Evaluation Completion Target and Short List to Vectren	Thursday November 5, 2020
Due Diligence and Negotiations Period	Late 2020
Definitive Agreement(s) Executed (subject to regulatory approvals) with Selected Respondent(s)	Q1 2021
Petitions (if required) filed with the IURC and any other required agency/commission	Q2 2021

3.0 RFP GENERAL REQUIREMENTS

Proposals must meet the general minimum eligibility requirements described below. 1898 & Co. will screen all Proposals for compliance with these requirements. Proposals that fail to meet one or more of the general minimum eligibility requirements may be disqualified from further consideration as part of this RFP process. Respondents should refer to the Proposal Checklist in Appendix E for high-level guidance on Proposal requirements.

For a Proposal to be eligible under this RFP, it must:

- Offer MISO LRZ 6 zonal resource credits (using NRIS transmission service) from projects with an installed capacity (ICAP) of no less than 50 MW[2].
- Offer capacity, energy, and RECs for utility scale[3] wind, solar, and solar paired with storage resources.
- Have an existing MISO Generator Interconnection Agreement (GIA), be in the MISO generator interconnection queue, or provide justification how the resource is able to meet Vectren's timing needs absent current queue position.

3.1 Respondent Notice of Intent and Non-Disclosure Agreement

Respondents to this RFP are required to fill out and sign Appendix A: Notice of Intent to Respond and Appendix B: Non-Disclosure Agreement (NDA), in its present form. Respondents shall submit the signed forms to the RFP email address (VectrenRFP@1898andco.com) by 5:00 p.m. CDT on August 27, 2020. Respondents may download the form from the RFP website (http://Vectren2020RFP.rfpmanager.biz/).

3.2 Multiple Proposals

In the event that multiple Proposals are submitted by the same Respondent, the Respondent must indicate whether the Proposals are to be evaluated independently of one another or if Proposals are to be considered together.

Respondents may submit up to three Proposals at no cost in response to this RFP. Respondents submitting more than three responses will incur a Proposal Evaluation Fee for each additional Proposal submitted. The non-refundable fee for evaluating each additional Proposal is $5,000. This sum will serve to defray evaluation costs. Respondents can find

[2] Paired storage proposals can have a storage facility that has an ICAP no less than 25% of the paired resource (assuming 4-hour duration). For example, if a 100 MW ICAP solar resource is paired with storage, then the paired storage can have an ICAP of no less than 25 MW (and 100 MWh).

[3] Behind-the-meter generation will not be accepted in this RFP.

instructions for paying fees for their Proposal(s) on the RFP website (http://Vectren2020RFP.rfpmanager.biz/).

Vectren does encourage Respondents to offer their projects in a variety of ways. Projects that are offered as PPA and Purchase options will count as one Proposal as it relates to the evaluation fee. Projects that offer several PPA term lengths and/or PPA settlement at different locations (Project busbar, Vectren's load node, or Indiana Hub) will also not be considered separate Proposals. Vectren and 1898 & Co. will have sole discretion to determine whether a submission is deemed a single Proposal or multiple Proposals.

3.3 Valid Proposal Duration

Respondents Proposal pricing shall remain valid for six (6) months from the Proposal Submittal Due Date. Proposals must include pricing that is firm and not subject to any revisions during the initial evaluation process. Vectren will receive all associated allowances or credits, if any. Seller agrees to transfer any Financial Transmission Rights or Auction Revenue Rights associated with the asset to the Buyer.

All pricing should be provided in Appendix D in terms of US dollars as of the date the term of the contract begins and not subject to a currency exchange rate adjustment. Respondents are strongly encouraged to provide their best pricing with their initial submittal. Vectren is not obligated to provide an opportunity in the evaluation schedule for Respondents to refresh or update their pricing before the final selection(s) are made (if any).

3.4 Acknowledgement of RFP Terms and Conditions

The submission of a Proposal shall constitute Respondent's acknowledgment and acceptance of all the terms, conditions, and requirements of this RFP.

3.5 RFP Response Summary Information

All Proposals must include a table of contents and provide concise and complete information on the topics described below, organized as follows:

3.5.1 Executive Summary

Please provide a one-page executive summary of the Proposal in the form of a cover letter. Include the facility's location, age or development status, MISO generator interconnection project number, ICAP size, the primary contact's name, e-mail, and phone number, and an overview of the major features of the Proposal. The Executive Summary must be signed by an officer of the Respondent who is duly authorized to commit the firm to carry out the proposed transaction should Vectren accept the Proposal (this does not have to be the primary contact). A Table of Contents should be the first page and immediately precede the Executive Summary.

3.5.2 General Information

3.5.2.1 Respondent's Information and Experience

Please include information on the Respondent's corporate structure (including identification of any parent companies), the project's financing plan, the Respondent's most recent credit rating, quarterly report containing unaudited consolidated financial statements that is signed and verified by an authorized officer of Respondent attesting to its accuracy, a copy of

Respondent's annual report for the prior three years containing audited consolidated financial statements and a summary of Respondent's relevant experience. Please describe any current litigation or environmental fines involving the Respondent within the last five years, including but not limited to, any litigation, settlements of litigation or fines, that could potentially affect the facility or its operation. Please identify all bankruptcy or insolvency proceedings relating to the Respondent in any way. Please describe any litigation related to PPAs or asset purchases similar to the transactions solicited in this RFP that the Respondent or its parent company have been a party to in the last six years. All financial statements, annual reports and other large documents may be referenced via a website address.

Proposals shall include a list of projects with a brief description of Respondent's experience in the areas of development, financing, permitting, ownership, construction, and operation of all utility-scale power generation facilities.

Please provide a list of projects with a brief description of the Engineering, Procurement and Construction (EPC) contractor's experience as it relates to utility-scale power generation.

4.0 ASSET PURCHASE PROPOSALS

This section describes Vectren's requirements for the content of any Proposal that is submitted in response to this RFP as an offer to sell a generation facility to Vectren. For asset purchase Proposals, Vectren will only consider offers for facilities that have an estimated remaining useful life of ten (10) or more years from acquisition date. In all cases, Respondents shall describe the expected useful life of all facilities included in their Proposals.

If, during the RFP process, there is a material change to the generation facility or the circumstances of the Respondent that could affect the outcome of the RFP evaluation, the Respondent is obligated to inform 1898 & Co. within five business days. In addition, any winning Respondent must provide such additional information and data as may be requested by Vectren to support regulatory approvals of the generation facility purchase transaction.

4.1 Capacity Characteristics

Respondents shall state the nameplate capacity, net summer operating capacity, net winter operating capacity and the awarded unforced capacity (UCAP) of the generation facility for the last five MISO planning years (existing facilities).

4.1.1 Acquisition Date

Vectren will accept Proposals for planned generation facilities that will be complete and operational in advance of the expected acquisition date. A project will be defined as complete and commercially operable if, and only if, it includes all facilities necessary to generate and deliver energy to at least one single point of interconnection within MISO. More detail on the development milestone requirements for planned facilities are included in Section 4.7.

Vectren has a strong preference for the acquisition of the facility to be closed and transfer of title to occur on or before the start of the 2023/24 Planning Resource Auction window, subject to regulatory approvals. If the Respondent is able to offer more competitive pricing and terms for title transferring prior to or after this time period, Respondent should detail the drivers and the optimal date for title transfer.

4.1.2 Capacity Availability and Deliverability

For Proposals to sell an existing generation facility to Vectren, the existing generating facility must be commercially operable, including all facilities and requirements necessary to deliver capacity (Zonal Resource Credits) to MISO LRZ 6. To accomplish this, NRIS transmission service is required. Respondents must identify the specific point of interconnection.

Vectren reserves the right to reject any Proposal that does not include the full cost of any known or potential interconnection or network upgrades costs that may be required by MISO. Respondents should detail any interconnection and network upgrade cost allowances in their Proposal. Respondents should also offer a maximum limit on interconnection and network upgrade costs that will be passed through to Vectren.

4.2 Technical and Economic Detail

4.2.1 Generation Technology

Respondents shall describe the generation technology of the facility, including the make, model, country of origin, and name of the supplier of all major equipment.

All Proposals to sell a generation facility to Vectren must utilize an existing, proven technology, with demonstrated reliable generation performance that is capable of sustained, predictable operation.

4.2.2 Dispatch

Respondents shall provide expected capacity factors, including 8760 hourly profiles (actual or based on weather data) and the expected useful life of the asset. Respondents shall also provide expected annual degradation rates.

Regarding any major current and/or historical operational limitations, Respondents shall provide a description of the root causes of the limitations. To the extent that expected performance deviates from observed performance, the Respondent shall provide the basis for the assumption.

4.2.3 Revenues and Operating Costs

For existing generation facilities, Respondents shall provide a detailed breakout of the facility's actual annual revenues for each of the past five years. This will include energy, capacity, and ancillary service market revenues, as well as any other revenues the facility earned, including any congestion revenue (positive or negative), as well as uplift revenues. Associated with these revenues, Respondents shall state the estimated annual output in MWh as well as the operation and maintenance costs of the facility on a fixed ($) and variable ($/MWh) basis and provide the actual annual operation and maintenance costs of the facility for each of the past five years in nominal dollars.

Respondents shall provide a detailed breakout of the generation facility's estimated and actual annual fixed costs for the following categories: labor, benefits, materials, and all others for the past five years. Respondents shall provide a breakdown of the number of people employed at the facility, including permanent and contracted employees, and whether those employees are organized under any labor agreement.

If fixed or variable costs for the generation facility are expected to change in the foreseeable future (e.g., following planned upgrades, etc.), the Respondent should provide both the new expected cost(s) and the year(s) in which the costs are expected to change.

Respondents shall also state and describe any property, state, and local taxes and tax abatements associated with the generation facility. Respondents should specify whether tax abatements have been requested or received and any terms and conditions related to receiving tax abatements.

New generation facilities also must provide reasonable expectations for all of the above details associated with plant revenues and costs, including market revenues, fixed and variable operations costs, expected upgrades, and taxes.

4.3 Operating Considerations

4.3.1 Operating Data

For an existing generation facility, Respondents shall provide historical operating data consisting of:

- The commercial operation date (COD) of the facility
- The annual operating cycles per year (for battery storage)
- The annual facility capacity and availability factors

The above annual data may be limited to the most recent five years. Generating facilities considered a Dispatchable Intermittent Resource (DIR) in MISO shall provide historical curtailments over the most recent years. New facilities shall put forth a best effort forecast of curtailments by MISO.

Respondents shall provide details on any current generation facility equipment issues and concerns, including the potential drivers and recommended mitigation procedures for the issues and/or concerns. Respondents shall provide a list of any redundant equipment that is currently bypassed or out of service, and the related reason. Respondents shall also provide historical information on such issues and concerns that have arisen, how they were resolved, and the associated costs for the last ten years of operation, or for the commercial life of the generation facility, whichever is lesser.

Respondents shall provide maintenance history for the lesser of the past ten years of operation or the commercial life of the generation facility consisting of: (i) dates of last full resource inspection and findings based on Original Equipment Manufacturer recommendations; and (ii) outstanding Original Equipment Manufacturer recommendations remaining to be implemented, including the cost and outage duration for any major maintenance requirements expected over the coming ten years. Respondents shall provide the outage reports for major planned and forced outages for each of the past five years.

For new or planned generation facilities, Proposals should include the manufacturer or developer quoted expected performance, as well as historical performance of similar facilities in MISO.

As noted in Section 4.5.5, below, Proposals shall disclose if the generation facility or any parts thereof are subject to a service agreement.

4.3.2 Operating Plan

Proposals should include a summary of the operating plan for the generation facility. Such plan should include software management system(s) and personnel roles and responsibilities for operating, maintaining, and servicing the facility, including any contractual arrangements currently in place.

Respondent shall provide an overview of key scheduled outage and maintenance plans, as well as plans for procuring and maintaining key spare parts.

4.4 Environmental Considerations

4.4.1 Environmental Attributes

New and existing resources must be in compliance with all applicable environmental rules and regulations. To the extent applicable, all environmental attributes should be conveyed to Vectren. Respondents shall provide a description of any identified environmental liabilities (e.g. potential site remediation requirements) for the facility, and shall demonstrate the process being undertaken to demonstrate compliance with the identified environmental liabilities (e.g. correspondence from regulatory agencies and/or due diligence documentation).

For Asset Purchase Proposals, the Seller will retain all pre-closing environmental liabilities and obligations as well as all known future environmental liabilities and obligations, in each case associated with the real and personal property transferred with or as part of a sale of the facility. This includes both on and off-site liabilities.

4.4.2 Permits and Zoning

The generation facility must have all relevant environmental and other permits necessary for construction and operation. Facilities without such permits may be disqualified from consideration at Vectren's sole discretion. Respondents shall provide a description of all permits currently in place for the facility. Respondents must also state whether there are any provisions that would prohibit the assignment or transfer of such permits and/or any consents required for the assignment or transfer of such permits.

Respondents should provide all known zoning requirement language for the project location (e.g. county, city, township, etc.) and describe any current discussions with the relevant zoning authorities. Respondents should provide current status of project zoning.

4.5 Financial Considerations

4.5.1 Capital Expenditures

Respondents shall provide historical actual and budgeted capital expenditures for the generation facility.

Historical capital expenditures shall be provided for each of the past five years in nominal dollars. Planned and budgeted capital expenditures shall be provided for each of next five years in nominal dollars along with a description of the projects involved. Respondents also shall disclose any known capital expenditure needs outside of the five-year time horizon that are expected to exceed $1 million dollars.

Respondents shall supply a summary list of all spare parts and components currently owned by the facility and their approximate dollar value. Respondents shall also identify any spare parts or components that are currently needed and/or on order as of the date the Proposal is submitted.

4.5.2 Acquisition Price

Respondents shall submit an acquisition price consisting of a single fixed payment that is inclusive of all monetary consideration for the generation facility, working inventory, and, if

applicable, ancillary facilities and contractual arrangements. Respondents must submit their best and final price with their Proposal. Respondents must provide details regarding any liabilities that Vectren might assume as a buyer of a generation facility.

For new or planned generation facilities, the price offered in the Proposal shall include all costs associated with providing a completed generating asset whose UCAP can be accredited to MISO LRZ 6. This includes costs associated with transmission interconnection, engineering studies, siting, permitting, acquisition, and construction.

4.5.3 Tax Credits

Respondents shall state the qualifications of the project for any applicable tax credits and provide all related documentation. Investment Tax Credits shall be available to be realized by Vectren. Respondents should provide a discussion of the method for acquiring tax incentives through safe harbor and attest whether safe harbored equipment is specifically dedicated to the project.

4.5.4 Tax Abatements

Respondents shall include a discussion of any tax abatements acquired by the project. Respondents should provide all terms, conditions, and relevant documentation related to tax abatements.

4.5.5 Other Contractual Commitments

Respondents shall provide a description, including detailed cost information, of any other contracts that are currently necessary for generation facility operations, including, but not limited to, long-term service agreements, state union labor contracts and/or technical support contracts, agreements related to capacity and/or energy sales from the facility and any capacity offers submitted to any independent system operator/regional transmission organization related to the generation facility that, if accepted, would be binding on Vectren as a result of an acquisition. Respondents must also state whether there are any provisions that would prohibit the assignment and/or affect the performance obligations of either party under the respective contract, including transfer or cancellation fees.

4.6 Legal Considerations

4.6.1 Legal Proceedings, Liabilities & Risks

The Proposal shall include a summary of all material actions, suits, claims or proceedings (threatened or pending) against Respondent, its Guarantor (if applicable) or involving the generation facility or the site as of the Proposal due date, including existing liabilities whether or not publicly disclosed, including but not limited to those related to employment and labor laws, environmental laws, or contractual disputes for the development, construction, maintenance, fueling, or operation of the facility.

4.6.2 Material Contingencies

Proposals that have material contingencies, such as for financing, may not be considered.

4.7 Additional Items Specific to New Facilities

All Proposals for new generation facilities must have a well-defined and credible development plan for Respondent to complete the development, construction, and commissioning of the

facility on their proposed development timeline. Respondents submitting Proposals for new or planned facilities should review the Evaluation Criteria and be sure to discuss key development milestones in their Proposal.

If available, Respondents shall submit:

1. A copy of an executed MISO Generator Interconnection Agreement
2. A copy of a completed MISO Facilities Study
3. A copy of a completed MISO System Impact Study

If Respondent cannot provide this information, Respondent must indicate why it cannot be provided and must provide a timeline showing ability to complete key development milestone requirements by the acquisition date including the above referenced items for the MISO generator interconnection queue.

Respondent shall also detail its MISO generator interconnection queue position and the types and amounts of NRIS transmission service requested. Respondents submitting Proposals for a new or planned generation facility should submit a copy of a fully executed EPC contract if available.

Respondents should also provide the following:

- Roles and responsibilities of the companies involved in the design, development, procurement, and construction of the facility. Information about key contributors shall extend to the status of contractual relationship with each key contributor; key contractual assurances, guarantees, warranties or commitments supporting the Proposal, and any past experience of Respondent working with each key contributor.
- Description of status of major equipment procurement, as well as processes for engineering, procurement, and construction bids and awards.
- Description of the facility site and Respondent's rights (whether owned, leased, or under option). Please quantify the percentage of the land requirement that is already under control and indicate whether additional land rights are necessary for the development, construction, and/or operation of the facility.
- Discussion of the development schedule and associated risks and risk mitigation plans for that schedule, including whether there are contract commitments from contractors supporting the proposed schedule. The Respondent should be prepared to document and commit to a proposed development schedule, which should include a COD.
- Discussion of the financing arrangements secured by the Respondent, including an overview of the sources of funds, and level of commitment from debt, equity, or other investors.
- Discussion on permitting, including a list of all required permits, status of each, and key risks to securing necessary future permit approvals.
- Description of status in MISO queue process and presentation of documents described above.
- Financial information regarding guarantors and sources of equity funding along with either the Respondent's or guarantors' senior unsecured debt and/or corporate issuer ratings documentation from Moody's and Standard & Poor's showing the name of the rating agency, the type of rating, and the rating of the Respondent or guarantor.

Vectren will not assume any responsibility for the successful development, construction, and/or completion of a proposed facility. Accordingly, development schedule, budget, permits and approval risk will be the sole responsibility of the Respondent.

5.0 POWER PURCHASE AGREEMENT PROPOSALS

Vectren will consider meeting some of its resource requirements through PPAs that have a term of ten (10) years or greater. Vectren will only consider PPAs that offer all applicable energy, capacity, and RECs.

5.1 Name and Location

Respondents shall state the name of the generating facility, the county where the generating facility is located, the owner of the facility, and the commercial pricing node associated with the facility, if applicable. The facility must qualify as MISO internal generation (i.e. not pseudo-tied into MISO) and be qualified to receive Zonal Resource Credits for Zone 6 consistent with MISO's Module E Planning Resource Auction. Should the facility not be qualified in Zone 6, Respondents shall detail in their Proposals the means by which Zonal Resource Credits will be delivered/fulfilled in Zone 6.

5.2 Net Capability of Generating Facility

Respondents proposing a PPA for existing assets shall state the nameplate capacity, net summer operating capacity, net winter operating capacity and the UCAP of the facility for the 2020/2021 MISO planning year.

5.3 Generation Technology

Respondents shall describe the generation technology of the facility, including the make, model, country of origin, and name of supplier for all major components (panels, inverter, blades, batteries, etc.).

5.4 Dispatch

Generating facilities considered a DIR in MISO shall provide historical curtailments over the most recent five years. Respondents shall also specify how MISO DIR requirements will be achieved within submitted Proposals. Generally, Proposals shall also take into consideration Vectren acting as the MISO Market Participant (responsible for market offers). However, Vectren is willing to consider Proposals where Vectren is not acting as the MISO Market Participant to the extent it is beneficial to Vectren's customers.

5.5 Financial Considerations

5.5.1 Power Purchase Agreement

Respondents shall submit an annual power purchase price ($ and/or $/MWh as applicable) consisting of a payment that is inclusive of all monetary consideration for the capacity, energy, RECs, and, if applicable, ancillary facilities and contractual arrangements related to the generation facility. Respondents must submit their best and final price with their Proposal. Respondents must provide details regarding any liabilities that Vectren might assume.

For new or planned generation facilities, the price offered in the Proposal shall include all costs associated with providing a completed generating asset whose UCAP can be accredited to the MISO LRZ 6. This includes costs associated with transmission interconnection, engineering studies, siting, permitting, acquisition, and construction.

5.5.2 Asset Specific Financial Information

Respondents shall submit audited or unaudited Financial Statements including Balance Sheets, Income Statements and Cash Flow Statements for the proposed asset(s) for the past three years. Respondents shall clearly indicate book value of the asset(s) in the financial information submitted.

5.5.3 Other Contractual Commitments

Respondents shall state whether there are other contractual commitments limiting or affecting the operation of the facility. Respondents shall state whether there are any other agreements in place for or claims on output from the facility. Such information should include any obligations that may restrict or compromise Vectren's ability to dispatch the facility.

5.5.4 Assets in Development

For PPA supported by proposed assets or assets that have not yet achieved their COD, Respondents must provide the same information requested in Section 4.0 for facilities to be developed.

6.0 PROPOSAL EVALUATION AND CONTRACT NEGOTIATIONS

6.1 Initial Proposal Review

An initial review of the Proposals will be performed by 1898 & Co. Proposals will be reviewed for completeness. Proposals that do not include all of the required information as described herein may be deemed ineligible and may not be considered for further evaluation. If it appears that certain information has inadvertently been omitted from a Proposal, 1898 & Co. may, but is not obligated to, contact the Respondent to obtain the missing information, per Section 2.3. These communications will be initiated via e-mail (VectrenRFP@1898andco.com).

Each complete Proposal will be evaluated by quantitative and qualitative factors. The evaluation criteria outlined in this section are intended to relatively compare each Proposal to analogous submissions and will be the starting guidelines for the evaluation. If needed, the scoring may be adjusted to provide distinction between Proposals. This evaluation will be used to determine which projects are most capable of providing Vectren customers with a safe, reliable, and affordable power supply. Project scoring will be used to narrow the field down to a short list.

6.2 Evaluation Criteria - Generation Facility

1898 & Co. will quantitatively and qualitatively evaluate all conforming generation facility Proposals' ability to meet power supply needs. During this evaluation process, 1898 & Co. may or may not choose to initiate more detailed clarification discussions with one or more Respondents. Discussions with a Respondent shall in no way be construed as commencing contract negotiations.

Table 3: Generation Facility Scoring Criteria Summary

	LCOE Evaluation	Energy Settlement Location	Interconnection and Development Status	Project Risk Factors
Points	150	100	100	150
%	30%	20%	20%	30%

6.2.1 Levelized Cost of Energy - 150 Points

The initial evaluation will be primarily based on a comparison of each Proposal's Levelized Cost of Energy (LCOE). A LCOE allows for Proposals within asset classes, which have different sizes, pricing, operating characteristics, ownership structures, etc. to be evaluated and compared to each other on an equivalent economic basis. The LCOE analysis will incorporate all costs associated with an asset purchase or PPA. These costs will include the applicable purchase or PPA cost, fixed costs, and variable operating expenses across standard technology respective operating parameters. The levelized value of these costs over this time period are then divided by the energy produced by the respective Proposal.

Vectren specific assumptions used in this analysis will be in accordance with Vectren's 2019/2020 IRP assumptions, including but not limited to

- Discount rate

- Capital recovery factor
- Escalation
- Fixed operations and maintenance expenses
- Variable operations and maintenance expense

The LCOE evaluation is a screening level economic evaluation which will determine the cost of energy provided by each Proposal relative to similar technology types. Proposals within an evaluation class with the lowest LCOE will receive full scoring for this metric. Based on variance of costs and number of Proposals in each class, points awarded to higher cost Proposals will be scaled accordingly.

The rules for performing the LCOE analysis will be determined by 1898 & Co. and Vectren in advance of the receipt and review of any Proposals. However, as part of the process of evaluating Proposals, cases may arise where, in order to adequately project asset costs or to facilitate a comparison between qualified Proposals, the rules related to the LCOE analysis may require review and/or adjustment. To the extent that any additions or adjustments are required, such additions or adjustments will be made solely by 1898 & Co. In such cases, any and all rules will be applied consistently across all Respondents.

While performing LCOE analyses of Proposals, 1898 & Co. may request additional or clarifying information from a given Respondent regarding resource performance, operating costs, or other factors that influence the LCOE calculation for a given resource. This evaluation may also include grid congestion analysis. Requests for additional information may be required to ensure that all qualified Proposals are fairly and consistently evaluated. Consistent with Section 2.3, in such cases, Respondents will be required to respond within five business days of receipt of such request. 1898 & Co. will not consider unsolicited updates from Respondents related to the cost of any power supply resource.

6.2.2 Energy Settlement Location - 100 points

Vectren has a preference for Proposals that include all costs to have energy financially settled or directly delivered to Vectren's load node (SIGE.SIGW). Proposals that settle at SIGE.SIGW will receive 100 points. Proposals that settle at a node in Vectren electric service territory will receive 90 points. Proposals that settle at Indiana Hub will receive 50 points. Proposals that settle at a different node in LRZ 6, but outside of Vectren electric service territory will receive 25 points. Proposals that settle at a node outside of LRZ 6 will receive 0 points.

6.2.3 Interconnection and Development Status - 100 Points

Existing resources will receive full credit under this evaluation category. Plants that have not achieved commercial operation but that are in the MISO Generation Interconnection (GI) Queue will be awarded points based on the Definitive Planning Phase they are in. Facilities failing to meet critical development milestones may be disqualified from consideration at Vectren's sole discretion.

Up to 100 points will be will awarded based on the achievement of certain development milestones towards the facility COD. Four milestones have been selected and 25 points will be awarded for each equally. The selected milestones are as follows:

- Completed a MISO System Impact Study

- Completed a MISO Facilities Study
- Executed a MISO Generator Interconnection Agreement
- A maximum limit on interconnection and network upgrade costs that will be passed through to Vectren is included in the Proposal

6.2.4 Project Risk Factors - 150 Points

Certain risk factors may be unique to a Proposal. Such factors may be significant enough to independently impact the overall ability of the Proposal to meet Vectren's needs. This category is intended to capture unspecified risk that may be highlighted by a Respondent or identified during the Proposal review. The Project Risk Factors attempt to identify and score potential risks which may compromise the future performance of the asset. In situations where the level of risk is not accurately represented, scoring may be adjusted. Potential considerations include, but may not be limited to the following:

- Credit and financial plan - Proposals will be evaluated based on a rating 0 through 10 that takes into account credit ratings from S&P, Moody's, and D&B, years in business, and provided financial statements. The points will be awarded as percent of the maximum financial score as shown below[4]:

$$Points\ Awarded = \frac{Financial\ Score}{10} \times 30$$

- Development experience - Relevant technology development experience is an important risk factor. Proposals will receive up to 30 points based on the following formula:

$$Points\ Awarded = \frac{Nameplate\ MW\ In\ Service\ (same\ technology\ as\ proposed)}{1{,}500} \times 30$$

- Delivery date - For each year prior or after 2023/2024 Planning Resource Auction, 25% of the 30 possible points will be deducted.
- Site Control - Proposals will receive points based on the amount of verifiable site control. Respondents should be as detailed and thorough as possible in describing and providing evidence of site control. Proposals will receive up to 30 points based on the following formula:

$$Points\ Awarded = \frac{Percent\ of\ Verifiable\ Site\ Control}{100\%} \times 30$$

- Permits - Proposals that have all permits necessary for construction and operation will receive 15 points. Partial points may be assigned based on level of documentation provided.

[4] Vectren reserves the right to re-evaluate credit rating and exclude Respondents at its sole discretion.

- Zoning - Proposals that have fulfilled zoning requirements will receive 15 points. Partial points may be assigned based on level of documentation provided.

Any such risks shall be disclosed along with a description of the associated measures taken to mitigate the risk. Failure to disclose a reasonably foreseeable risk or risks may be a basis to disqualify a Proposal.

Proposals with no such risks as determined by 1898 & Co. will receive the full number of points available in this category. Proposals with asset or project-specific risks that are not able to be fully mitigated may receive fewer points depending on 1898 & Co.'s assessment.

6.3 Discussion of Proposals During Evaluation Period

Vectren may or may not select candidates for further discussions. Vectren will contact any selected Respondent in writing to confirm interest in commencing contract negotiations. All negotiations will begin with Vectren's standard contract as a starting point. Vectren's commencement of and participation in negotiations shall not be construed as a commitment to execute a contract. If a contract is negotiated, it will not be effective unless and until it is fully executed with the receipt of all required regulatory approvals.

6.4 Selection of Highest Scoring Proposal(s)

Proposals will be rank ordered consistent with the evaluation criteria and assets will be selected consistent with the RFP evaluation and the IRP determined need. Consistent with that objective, Vectren may need to contract with multiple generating assets. Cost certainty and project implementation are key considerations that will be included in qualitative analysis and that will include the ranking of projects with firm price offers and price caps, projects in the MISO GI queue or with signed Generator Interconnection Agreements (GIAs), recent prior development experience, etc. Vectren will seek to secure, subject to CenterPoint board approval, resources consistent with the preferred portfolio identified in the 2019/2020 IRP. There is no assurance that the individual, highest-scoring qualified Proposal(s) will be selected.

6.5 Contract Execution

Vectren does not, by this RFP, obligate itself to purchase any generation facility or facilities, or to execute an Asset Purchase or PPA with any Respondent. Vectren may, in its discretion, reject any or all Proposals, as such are described in this RFP.

Selection of a winning Proposal shall not be construed as a commitment by Vectren to execute an agreement. During the period between 1898 & Co.'s delivery of results to Vectren and the date of execution of any agreement, Vectren will conduct additional due diligence on the Proposal which may include, but not be limited to, onsite visits, management interviews, legal and regulatory due diligence, and detailed engineering assessments and facility dispatch modeling.

7.0 PROPOSAL SUBMISSION

All Proposal documents must be submitted to the RFP Manager via e-mail at VectrenRFP@1898andco.com.

7.1 Format and Documentation

All Proposals submitted in response to this RFP must be received by 1898 & Co. (VectrenRFP@1898andco.com) no later than the Proposal Submittal Due Date shown in Section 2.4. 1898 & Co. and Vectren will not evaluate Proposals as part of this RFP process if submitted after this date and time. Multiple Proposals submitted by the same Respondent must be identified and submitted separately. Financial statements, annual reports, technical specification documents, and other large documents can be sent electronically to the RFP e-mail address. Each Proposal must contain the following:

1. Appendix B: Non-Disclosure Agreement (NDA) in its present form
2. Appendix D: Proposal Data in Excel format

7.2 Certification

A Respondent's Proposal must certify that:

1. There are no pending legal or civil actions that would impair the Respondent's ability to perform its obligations under the proposed PPA or Asset Purchase
2. The Respondent has not directly or indirectly induced or solicited any other Respondent to submit a false Proposal
3. The Respondent has not solicited or induced any other person, firm, or corporation to refrain from submitting a Proposal
4. The Respondent has not sought by collusion to obtain any advantage over any other Respondent.

8.0 RESERVATION OF RIGHTS

Nothing contained in this RFP shall be construed to require or obligate Vectren to select any Proposals or limit the ability of Vectren to reject all Proposals in its sole and exclusive discretion. Vectren further reserves the right to withdraw and terminate this RFP at any time prior to the Proposal Submittal Due Date, selection of projects or execution of a contract. All final contracts will be contingent on IURC and CenterPoint board approval.

All Proposals submitted to Vectren pursuant to this RFP shall become the exclusive property of Vectren and may be used for any reasonable purpose by Vectren. Vectren and 1898 & Co. shall consider materials provided by Respondent in response to this RFP to be confidential only if such materials are clearly designated as Confidential. Respondents should be aware that their Proposal, even if marked Confidential, may be subject to discovery and disclosure in regulatory or judicial proceedings that may or may not be initiated by Vectren. Respondents may be required to justify the requested confidential treatment under the provisions of a protective order issued in such proceedings. If required by an order of an agency or court of competent jurisdiction, Vectren may produce the material in response to such order without prior consultation with the Respondent.

9.0 CONFIDENTIALITY OF INFORMATION

All Proposals submitted in response to this RFP become the responsibility of 1898 & Co. and Vectren upon submittal. Respondents should clearly identify each page of information considered to be confidential or proprietary. Consistent with the RFP NDA (Appendix B), 1898 & Co. will take reasonable precautions and use reasonable efforts to maintain the confidentiality of all information so identified. Vectren reserves the right to release any Proposals, or portions thereof, to agents, attorneys, or consultants for purposes of Proposal evaluation. Regardless of the confidentiality claimed, however, and regardless of the provisions of this RFP, all such information may be subject to review by, and disclosable by Vectren, to the appropriate state authority, or any other governmental authority or judicial body with jurisdiction relating to these matters, and may also be subject to discovery by other parties subject to fully executed NDAs/confidentiality agreements.

10.0 REGULATORY APPROVALS

Pursuant to the terms of the definitive agreement(s), the Respondent will agree to use its reasonable best efforts, including, if necessary, providing data and testimony, to obtain any and all State, Federal, or other regulatory approvals required for the consummation of the transaction.

Please note in particular that approval by the IURC and MISO may be required before the transaction can be consummated between the selected Respondent and Vectren. As part of the regulatory process, responses to the RFP may be provided to parties who have executed an NDA/confidentiality agreement, specifically acknowledging that they are neither affiliated with any party responding to the RFP or serving as a conduit for any party responding to the RFP.

11.0 CREDIT QUALIFICATION AND COLLATERAL

As a condition to participation in the RFP, Respondents shall meet the creditworthiness requirements established by Southern Indiana Gas and Electric Company, Inc., d/b/a Vectren Energy Delivery of Indiana, Inc. As a result, the Respondent should have a credit rating for its senior unsecured debt of at least BBB+/Baa1 for S&P and Moody's, respectively. If a Respondent is unrated or does not meet the rating requirement, the Respondent may provide credit support from a corporate guarantor that meets the rating requirement. If the Respondent and/or corporate guarantor are unrated then CenterPoint will review its credit worthiness and determine if additional credit support (e.g., corporate guarantees, surety bonds, letters of credit, etc.) is required.

.As part of a final binding contract, and depending on the structure of the transaction, Vectren will further review the credit of the Respondent and the risk associated with the transaction to determine what, if any, additional credit requirements may be necessary to protect its ability to serve its customers in a reliable manner.

For asset purchases, a Respondent shall have the corresponding obligation to post Definitive Agreement (DA) collateral as determined in accordance with its Proposal if selected for the definitive agreement phase of the RFP. DA Collateral must be posted at the execution of the definitive agreement and will be in force until the transfer of title to Vectren for generating asset Proposals.

For PPAs winning Respondents may be required to post operating collateral over the term of any PPA agreement consistent with the terms and conditions of final agreements as negotiated between Vectren and the supplier.

In each case, the collateral must be in the form of either: (a) a letter of credit, (b) cash, or (c) a construction bond. 1898 & Co. and Vectren reserve the right to require a Respondent to post DA Collateral in an amount that exceeds the amounts listed herein as conditions warrant.

Table 4: Collateral

Asset	Collateral Amount
Asset Purchase	$50/kW at execution of definitive agreement
Asset Purchase	$150/kW at regulatory approval
Power Purchase Agreement	12-months expected revenues

12.0 MISCELLANEOUS

12.1 Non-Exclusive Nature of RFP

Vectren may procure more or less than the amount of assets solicited in this RFP from one or more Respondent(s). Respondents are advised that any definitive agreement executed by Vectren and any selected Respondent may not be an exclusive contract for the provision of assets. In submitting a Proposal(s), Respondent will be deemed to have acknowledged that Vectren may contract with others for the same or similar deliverables or may otherwise obtain the same or similar deliverables by other means and on different terms.

12.2 Information Provided in RFP

The information provided in this RFP, or on the RFP website (http://Vectren2020RFP.rfpmanager.biz/), has been prepared to assist Respondents in evaluating this RFP. It does not purport to contain all the information that may be relevant to Respondent in satisfying its due diligence efforts. Vectren makes no representation or warranty, express or implied, as to the accuracy, reliability or completeness of the information in this RFP, and shall not be liable for any representation, expressed or implied, in this RFP or any omissions from this RFP, or any information provided to a Respondent by any other source.

12.3 Proposal Costs

Vectren shall not reimburse Respondent and Respondent is responsible for any cost incurred in the preparation or submission of a Proposal(s), in negotiations for an agreement, and/or any other activity contemplated by the Proposal(s) submitted in connection with this RFP. The information provided in this RFP, or on Vectren's RFP website, has been prepared to assist Respondents in evaluating this RFP. It does not purport to contain all the information that may be relevant to Respondent in satisfying its due diligence efforts.

12.4 Indemnity

Supplementing Respondent's assumption of liability pursuant to this RFP, Respondent shall indemnify, hold harmless and defend Vectren and its parent company, officers, employees and agents, from any and all damages, liabilities, claims, expenses (including reasonable attorneys' fees), losses, judgments, proceedings or investigations incurred by, or asserted against, Vectren or its officers, employees or agents, arising from, or are related to, this RFP, or the execution or performance of one or more definitive agreements.

12.5 Hold Harmless

Respondent shall hold Vectren harmless from all damages and costs, including, but not limited, to legal costs in connection with all claims, expenses, losses, proceedings or investigations that arise as a result of this RFP or the award of a Proposal pursuant to the RFP or the execution or performance of a definitive agreement.

12.6 Further Assurances

By submitting a Proposal, Respondent agrees, at its expense, to enter into additional agreements, and to provide additional information and documents, in either case as requested by 1898 & Co. in order to facilitate: (a) the review of a Proposal, (b) the execution

of one or more definitive agreements, or (c) the procurement of regulatory approvals required for the effectiveness of one or more definitive agreements.

12.7 Licenses and Permits

Respondent shall obtain, at its cost and expense, all licenses and permits that may be required by any governmental body or agency necessary to conduct Respondent's business or to perform hereunder. Respondent's subcontractors, employees, agents and representatives of each in performance hereunder shall comply with all applicable governmental laws, ordinances, rules, regulations, orders and all other governmental requirements.

APPENDIX A – NOTICE OF INTENT TO RESPOND

See attachment: Appendix A - Notice of Intent to Respond.docx

APPENDIX B – NON-DISCLOSURE AGREEMENT

See attachment: Appendix B - Non-Disclosure Agreement.pdf

APPENDIX C – APPLICATION

See attachment: Appendix C - Application.docx

APPENDIX D – PROPOSAL DATA

See attachment: Appendix D - Proposal Data.xlsx

APPENDIX E – PROPOSAL CHECKLIST

See attachment: Appendix E - Proposal Checklist.docx

1898 & CO SM

PART OF BURNS McDONNELL

9400 Ward Parkway

Kansas City, MO

Attachment RAR-4 (CONFIDENTIAL) provided separately