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

DIRECT TESTIMONY OF JOSHUA A. SWANSON DIRECTOR, POWER SUPPLY SERVICES

ON

POWER PURCHASE AGREEMENT

SPONSORING PETITIONER'S EXHIBIT NO. 2 (PUBLIC), ATTACHMENTS JAS-1 THROUGH JAS-3

DIRECT TESTIMONY OF JOSHUA A. SWANSON

1 I. INTRODUCTION

2 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Joshua A Swanson. My business address is 211 NW Riverside Drive,
Evansville, Indiana 47708.

5 Q. BY WHOM ARE YOU EMPLOYED?

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

8 Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS DIRECT TESTIMONY?

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

11 Q. WHAT IS YOUR ROLE WITH RESPECT TO PETITIONER CEI SOUTH?

12 A. I am Director, Power Supply Services.

13 Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I received a Bachelor of Science in Industrial Management (2002) from Purdue
University and a Master of Business Administration (2022) from Jack Welch
Management Institute.

17 Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.

A. I began my career in the utility industry with CEI South¹ in the gas engineering department from 2007 through 2009. From 2009 until 2018, I managed different departments in electric system operations, including Distribution System Operations, Transmission System Operations, and the electric Supervisory Control and Date Acquisition (SCADA) group. From 2019 through 2023, I served as Manager of Electric Program and Capital Management, responsible for providing strategic oversight to infrastructure investment programs including Transmission Distribution System

¹ For the sake of clarity, my testimony refers to CEI South, even though in certain situations, I may be referring to Southern Indiana Gas and Electric Company operating under a prior assumed business name.

Improvement Charge ("TDSIC"). In 2023, I was promoted to my current role, Director,
 Power Supply Service.

Q. WHAT ARE YOUR PRESENT DUTIES AND RESPONSIBILITIES AS DIRECTOR, POWER SUPPLY SERVICES?

A. As Director of Power Supply Services, I am responsible for Wholesale Power
Marketing, Market Settlements, and Market Development, serve as the Commercial
Lead for negotiations and dealings with generation resources, and manage the
budgeting, operation, and maintenance for CEI South's electric renewable generation
fleet. This aligns with areas related to generation and wholesale market initiatives and
the Company's future generation plans.

11Q.HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE INDIANA UTILITY12REGULATORY COMMISSION ("THE COMMISSION")?

A. Yes. I have testified before the Commission on behalf of CEI South in its Clean Energy
Cost Adjustment ("CECA") under Cause No. 44909.

15 II. PURPOSE & SCOPE OF TESTIMONY

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

17 A. My testimony supports Petitioner's request for an Order in this Cause authorizing 18 Petitioner to enter into a Power Purchase Agreement ("PPA") with an affiliate of 19 NextEra Energy, Inc., Knox County Wind Farm, LLC ("NextEra Energy"), to purchase 20 energy, capacity, and Renewable Energy Credits ("RECs") from a 147 megawatt 21 ("MW") wind generating facility in Knox County, Illinois (the "Galesburg Wind Project"), 22 over a 25-year term (the "Galesburg Wind PPA" or "Wind PPA"). I explain CEI South's 23 decision to pursue the Wind PPA and discuss how the Galesburg Wind PPA compares 24 to wind projects from the 2022 All-Source Request for Proposal (the "2022 All-Source 25 RFP"). I explain why the Galesburg Wind PPA price is reasonable, as well as why it is 26 necessary and in the public interest for CEI South to pursue the Wind PPA at this time. 27 To that end, I provide a high-level overview of the significant terms that were 28 negotiated in the Galesburg Wind PPA and share how the Wind PPA impacts CEI 29 South's Midcontinent Independent System Operator ("MISO") Planning Reserve 30 Margin Requirements ("PRMR"). In addition, I provide information related to the

- 1 Galesburg Wind Project's interconnection to the MISO system, which the Commission
- 2 has indicated should be provided in General Administrative Order ("GAO") 2022-01.

3 Q. ARE YOU SPONSORING ANY ATTACHMENTS IN THIS PROCEEDING?

- 4 A. Yes. I sponsor the following attachments:
- Petitioner's Exhibit No. 2, Attachment JAS-1 (CONFIDENTIAL): Executed
 Galesburg Wind PPA;
- Petitioner's Exhibit No. 2, Attachment JAS-2 (CONFIDENTIAL): 2022 All Source RFP Wind Project Results; and
- 9 <u>Petitioner's Exhibit No. 2</u>, Attachment JAS-3: Summary of Evidence Provided
 10 in Accordance with GAO 2022-01.

11Q.WERE THESE ATTACHMENTS PREPARED OR ASSEMBLED BY YOU OR12UNDER YOUR SUPERVISION?

A. For the most part, yes. I was directly involved in the negotiation of the Galesburg Wind
 PPA, provided as Attachment JAS-1 (CONFIDENTIAL). The 2022 All-Source RFP
 Wind Project Results, provided as Attachment JAS-2 (CONFIDENTIAL), were
 obtained before I was named to my current position, but I have reviewed and confirmed
 the results in my role as Director of Power Supply Services. I prepared or supervised
 the preparation of the Summary of Evidence Provided in Accordance with GAO 2022 01, which is included as Attachment JAS-3.

20 III. OVERVIEW OF GENERATION TRANSITION PLAN

21 Q. PLEASE PROVIDE AN OVERVIEW OF CEI SOUTH'S GENERATION TRANSITION

23 The Company's 2019/2020 Integrated Resource Plan ("IRP") identified a Preferred A. 24 Portfolio, which called for timely retirement of certain identified existing generation 25 resources and replacement of the capacity derived from those units with new 26 generation resources. Consistent with the findings of the 2019/2020 IRP, CEI South 27 developed the Generation Transition Plan to effectuate the transition. The Plan 28 required an initial step of identifying and selecting approximately 700 – 1,000 MW 29 alternating current ("MWac") of solar generation, 300 MW of wind generation, and 30 approximately 460 MW of natural gas Combustion Turbine ("CT") generation. In May 2023, the Company submitted its 2022/2023 IRP, the Preferred Portfolio of which
 builds upon the Plan. As described in greater detail by Petitioner's Witness Matthew
 A. Rice, the Preferred Portfolio of the 2022/2023 IRP includes the 200 MWs of wind
 identified by the 2019/2020 IRP (and approved in Cause No. 45836) as well as an
 additional 200 MWs of wind and 200 MWac solar by 2030, followed by 400 MWs of
 wind in the years that ensue.

Q. DOES CEI SOUTH PLAN TO RENEW THE TWO EXISTING WIND PPAS THAT 8 EXPIRE IN 2028 AND 2029?

9 Α. CEI South has engaged the respective wind owners and is evaluating whether 10 extension or renewal of the PPAs or purchase of the assets is the best option. This 11 process will take some time, requiring negotiation with each wind owner. In its 12 evaluation, CEI South will evaluate market dynamics, pricing, and generation needs 13 to ensure the option is competitive and satisfies CEI South's portfolio requirements. 14 Because analyzing the option for each site will be a lengthy process, CEI South has 15 place holders within its Generation Transition Plan in years 2030 and beyond as seen 16 within its Generation Timeline² to address these potential retirements. Due to scarcity 17 of wind projects, it is important to evaluate all options to meet system and customer 18 needs.

19Q.PLEASE DESCRIBE CEISOUTH'SPROGRESSINEXECUTINGITS20GENERATION TRANSITION PLAN.

- A. CEI South has begun making filings to implement the initial step of its Generation
 Transition Plan and has received approval for approximately 626³ MWac of solar, 200
 MW of wind, and the 460 MW for the CTs as follows:
- approval in the Commission's June 28, 2022 Order in Cause No. 45564 to
 construct two CTs ("A.B. Brown Units 5 & 6");
- approval in the Commission's February 24, 2023 Order in Cause No. 45786
 for the amendments to a solar PPA in Knox County, Indiana (the "Knox County

² Direct Testimony of F. Shane Bradford, Petitioner's Exhibit No. 1, Attachment FSB-2.

³ CEI South received approval in June 2022 in Cause No. 45754 to acquire a 130 MW solar project in Pike County, Indiana (the "Pike County Solar Project" or "Crosstrack Solar Project"). On March 15, 2024, CEI South filed notice in Cause No. 45754 explaining due to market dynamics, the build transfer agreement between CEI South and the developer has been terminated.

1 PPA"⁴);

- approval in the Commission's May 30, 2023 Order in Cause No. 45839 for the
 amendments to PPAs located in Warrick County, Indiana (the "Warrick County
 PPA"⁵) and Vermillion County, Indiana (the "Vermillion County PPA"⁶);
- approval in the Commission's June 6, 2023 Order in Cause No. 45836 to
 acquire a 200 MW wind project located in MISO Zone 4 (the "Cause No. 45836
 Wind Project"); and
- most recently, approval in the Commission's September 6, 2023 Order in
 Cause No. 45847 to acquire, subject to the Amended and Restated Build
 Transfer Agreement ("BTA"), a 191 MWac solar project located in Posey
 County (the "Posey County Solar Project"⁷).

12 Q. ARE ANY OF THE FOREGOING PROJECTS IN-SERVICE?

13 Α. No, currently, none of those projects are in-service. The CTs (approved in Cause No. 14 45564) are under construction and on schedule. Getting the renewable projects in 15 service and available to meet the Company's capacity needs, however, has been more 16 challenging, with renewable projects experiencing delays, generally. For example, the 17 Posey County Solar Project is now under construction with a commercial operation 18 date ("COD") in 2025. The COD for the Knox County PPA, originally in 2024, has 19 pushed to 2025; and the CODs for Vermillion County and Warrick County PPAs, 20 originally in 2024 and 2023, respectively, have both shifted to 2026.

21Q.ARE THE DELAYS CEI SOUTH HAS EXPERIENCED IN GETTING RENEWABLE22PROJECTS ON-LINE CONSISTENT WITH EXPERIENCE ACROSS THE23INDUSTRY?

A. Yes. It is not uncommon for renewable projects to take longer than expected due to a
 number of factors. First, global supply chain constraints, escalating commodity costs,
 and labor shortages have impacted project schedules and timelines, creating

⁴ Knox County Solar PPA originally approved in the Commission's May 4, 2022 Order in Cause No. 45600.

⁵ Warrick County Solar PPA originally approved in the Commission's October 27, 2021 Order in Cause No. 45501.

⁶ Vermillion County Solar PPA originally approved in the Commission's May 4, 2022 Order in Cause No. 45600.

⁷ Posey County Solar Project originally approved in the Commission's October 27, 2021 Order in Cause No. 45501.

challenges to completing renewable projects. Negotiating terms of BTAs and PPAs
 has also become more challenging not only because of these cost increases and
 supply chain constraints but also because of interconnection delays the industry has
 been facing. Other broad economic factors facing the industry include factors specific
 to electric generator projects, such as obtaining permits or testing equipment. Specific
 to wind, market liquidity and transparency has toughened due to low inventory and
 reduced deal flow, particularly in Indiana.

8 Q. PLEASE EXPLAIN THE IMPACT OF THESE DELAYS ON GETTING RENEWABLE 9 PROJECTS IN-SERVICE.

10 Α. A generation transition period has proven to be a lengthy process, previously taking at 11 least 3.5 years and now taking upwards of 5 or more years including project 12 solicitation, evaluation and negotiation, the MISO Interconnection Queue process, 13 development tasks such as obtaining site control and permitting, construction, and 14 various other factors. MISO has seen an overwhelming amount of generation 15 resources enter the last several MISO Interconnection Queues which has extensively 16 lengthened each interconnection queue process. Initially, the MISO schedule 17 estimated that projects in the 2020 cycle would be complete the DPP1 planning stage 18 by August 3, 2021. DPP1 actual completion date was July 17, 2023, a total delay of 19 23 months. DPP2 results were supposed to follow a few months after and are currently 20 planned for May 6, 2024. The lengthening of interconnection Queue timeline is made 21 worse by the increasing number of projects in the Queue. Correspondingly, the 22 estimated time to completion for new projects that have not entered the Queue, or 23 have entered only recently, is also increasing substantially.

24 As such, there will be a period -- between when the Company's coal generation units 25 are retired, and the new generation comes online -- during which CEI South will need 26 to rely on the capacity and wholesale energy market. Later in my testimony, I discuss 27 CEI South's forecasted capacity position and how the Wind PPA supports CEI South's 28 PRMR position and ensures the required capacity in each season is met. However, 29 to minimize this dependence period and cost to customers, CEI South has acted swiftly 30 to identify projects that could come online in the near-term (2025-2026 timeline), which 31 is critical since additional baseload units in the same MISO Local Resource Zone 32 (Zone 6 - CEI South's Local Resource Zone) are expected to be taken offline in 33 relatively the same timeframe, thereby increasing the risk of reliance on the wholesale energy and capacity market. It is critical that CEI South continue to work to bring these
 projects online and identify new projects to meet system needs. Obtaining approval
 of this Wind PPA is key in that regard.

4Q.HOW DOES THE WIND PPA ALIGN WITH CEI SOUTH'S GENERATION5TRANSITION PLAN?

- 6 Α. As Mr. Rice describes in more detail, the Galesburg Wind Project is a viable, reliable, 7 and carbon free energy resource that is an important component to fulfilling CEI 8 South's Generation Transition Plan. In developing its Generation Transition Plan, the 9 Company selected a Preferred Portfolio that offers a balanced and prudently diverse 10 mix of traditional and emerging generation resources (wind, solar, storage, energy 11 efficiency, natural gas, coal) with flexibility to hedge against risk and opportunity to 12 pivot and react to changing circumstances as opposed to placing too much emphasis 13 on a few large resources.
- 14 Adding wind resources helps diversify CEI South's resource mix with clean renewable 15 energy while adding value through a balanced portfolio that reduces risk by having a 16 proportional set of resources available to serve customer load (including wind, solar, 17 energy efficiency, gas, and coal). One of the simplest and best ways to plan in an 18 uncertain environment is to provide a diverse portfolio, which provides a hedge against 19 unforeseen changes in regulations, technologies, and market. Wind resources 20 inherently complement solar resources – meaning the resources hit their peaks at 21 different times of the day as well as different seasons of the year. In addition, varying 22 PPA terms can provide additional options and/or off-ramps. The Galesburg Wind PPA 23 not only diversifies CEI South's generation resource mix by resource type but offers 24 the advantage of diversifying investment type (PPA versus ownership) and duration 25 (varying PPA term lengths) that when combined with CEI South's other approved solar 26 and wind BTAs and PPAs, provides additional options and/or off-ramps and flexibility 27 for our customers.

28 IV. COMPETITIVE BID PROCESS

29 Q. BRIEFLY DESCRIBE THE COMPANY'S RFP PROCESS TO DATE.

A. To date, the Company has conducted three RFPs. First, on June 12, 2019, per
 Commission feedback in Cause No. 45052 and in connection with the preparation of

- its 2019/2020 IRP, CEI South conducted an All-Source RFP (the "2019 All-Source
 RFP") for 10 to 700 MW of capacity from all sources. The 2019 All-Source RFP was
 used to select the initial projects for CEI South's Generation Transition Plan,
 specifically, the Posey County Solar Project and Warrick County Solar PPA.
- On August 12, 2020, CEI South issued a second RFP (the "2020 Renewable RFP"),
 seeking a combination of wind, solar, and solar + storage resources to meet the need
 identified in the Plan. The 2020 Renewable RFP was used to identify the Vermillion
 County and Knox County Solar PPAs.
- 9 On May 11, 2022, CEI South issued its third RFP (the 2022 All-Source RFP), seeking 10 a combination of resources including renewables (wind, solar and battery storage), 11 thermal and demand-side resources, and short-term capacity. The 2022 All-Source 12 RFP has been used to assist in identifying additional generation technologies that can 13 provide fully accredited capacity no later than March 1, 2027. As Mr. Rice explains, 14 CEI South also used the 2022 All-Source RFP to inform its 2022/2023 IRP process to 15 determine the best mix of generation and demand side resources to meet customers' 16 needs over the next twenty years.

17 Q. PLEASE DESCRIBE HOW CEI SOUTH HAS EVALUATED RFP PROPOSALS.

18 In general, to evaluate RFPs, CEI South has engaged 1898 & Co., a Burns and Α. 19 McDonnell company, to evaluate, score, and rank each complete proposal based on 20 established quantitative and qualitative scoring criteria that assesses reliability, cost, 21 and certainty. For renewable proposals, including wind projects, the assessment 22 included: levelized cost of energy ("LCOE"), energy settlement location, 23 interconnection and development status, and project risk factors like credit worthiness, 24 development experience, project maturity, delivery date, project site control status, 25 permits, and zoning.

Q. ATTACHMENT JAS-2 (CONFIDENTIAL) CONTAINS A COMPARISON OF WIND BTA AND PPA PRICING. PLEASE EXPLAIN HOW CEI SOUTH DEVELOPED A COMMON METRIC TO COMPARE THE PROPOSALS.

A. Due to varying term lengths in the PPAs and inclusion of BTAs, it is important to
 compare the projects on a common basis or over a standard (equivalent) period when
 considering total project costs and benefits, or total economic value. During the

evaluation stage, CEI South used an LCOE of 30-years for wind to have a common
 reference from which a comparison could be made between PPAs of different term
 lengths and BTAs. Additionally, to normalize the LCOE over the 30-year period, a
 market replacement methodology is used 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 30-year term for each proposal's expected
 generation output.

8Q.YOU HAVE EXPLAINED ATTACHMENT JAS-2 (CONFIDENTIAL) SUMMARIZES9WIND PROJECTS FROM THE 2022 ALL-SOURCE RFP. PLEASE IDENTIFY10FROM WHICH RFP OR COMPETITIVE BID PROCESS CEI SOUTH IDENTIFIED11THE WIND PPA THAT IS THE SUBJECT OF THIS CAUSE AS A POTENTIAL12PROJECT.

- A. As will be explained in greater detail later in my testimony, the Wind PPA was not
 submitted into one of CEI South's RFPs but rather was identified when NextEra Energy
 approached CEI South with the opportunity in November 2023, after
- 16

17 Q. WHY DID NEXTERA ENERGY APPROACH CEI SOUTH WITH THE GALESBURG 18 PROJECT?

A. CEI South and NextEra Energy had been discussing a different wind project, which
ultimately
between the developer and CEI South. Because of those previous discussions and
CEI South's most recent IRP – the 2022/2023 IRP, NextEra Energy knew of CEI
South's wind needs and therefore reached out to CEI South to determine interest in
the Galesburg Wind Project.

25Q.WHY WERE CEI SOUTH AND NEXTERA ENERGY DISCUSSING WIND26PROJECTS?

A. As discussed earlier in my testimony, CEI South's initial Generation Transition Plan
called for an initial step of identifying and selecting approximately 700 – 1,000 MWac
of solar generation, 300 MW of wind generation, and approximately 460 MW of natural
gas CT generation. The Cause No. 45836 Wind Project, in MISO Zone 4, fulfills just
200 MW of that 300 MW of originally identified wind capacity. Moreover, as Mr. Rice
testifies, the Company's 2022/2023 IRP confirmed the need for even more wind

- 1 generation and reflects the need to add 200 MW of additional wind generation by 2030.
- Accordingly, CEI South had been working with NextEra Energy to attempt to fill those
 known capacity needs with a project. NextEra Energy presented the Galesburg Wind
- 4 Project to CEI South as a project that will help fill a portion of its capacity need identified
 5 in the 2022/2023 IRP at an attractive price.

6 V. GALESBURG WIND PPA OVERVIEW

7 Q. PLEASE BRIEFLY DESCRIBE THE PROJECT COMPANY.

A. The Galesburg Wind Project is a 147 MW wind generating facility owned by the
Developer, Knox County Wind Farm, LLC, which is an indirect subsidiary of NextEra
Energy, Inc., which is a publicly traded holding company (NYSE ticker symbol: NEE).
NextEra Energy is a diversified clean energy business with a strategy that emphasizes
the development, construction, and operation of long-term contracted assets with a
focus on renewable projects.

14Q.WHAT EXPERIENCE DOES THE DEVELOPER HAVE IN THE RENEWABLE15BUSINESS?

16 A. Through its subsidiaries and affiliates, NextEra Energy owns and operates 17 approximately 27,400 MW of total net electric generating capacity as of year-end 2023, 18 which includes, in the U.S. and Canada: approximately 23,380 MW of wind generation 19 capacity in 22 states in the U.S. and 4 provinces in Canada; and approximately 3,924 20 MWac of solar generating capacity in 30 states in the U.S. NextEra Energy also owns 21 approximately 1,208 MW of battery storage capacity as of December 31, 2023; and 22 approximately 164 MW of operational energy storage projects. NextEra Energy, 23 through its subsidiaries and affiliates, also owns and operates approximately 215 24 substations and 1,910 circuit miles of transmission lines as of year-end 2023.

25 Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE GALESBURG WIND PROJECT.

A. The Galesburg Wind Project is a wind generating facility with an aggregate nameplate
 capacity of approximately 147 MW in Knox County, Illinois – located in MISO Local
 Resource Zone 4 ("LRZ 4") and interconnecting at Ameren's 138kV substation. The
 Galesburg Wind Project has cleared the MISO Definitive Planning Phase ("DPP")
 study process and has secured a MISO Generation Interconnect Agreement ("GIA")

1 in 2022 and an Amended and Restated GIA in September 2023. The Galesburg Wind 2 Project is expected to be operational at the end of 2025.

3 Q. PLEASE DISCUSS WHETHER CEI SOUTH RECEIVED, AS PART OF THE 2022 4 ALL-SOURCE RFP, OR CONSIDERED, ANY WIND PROPOSALS IN INDIANA.

5 Α. The 2022 All-Source RFP had two projects located in Indiana, one of which was 6 previously evaluated and deemed to have a significantly higher price than the 7 competing proposals at the time, and a second that was very early in development 8 and had not entered the MISO Interconnection queue at the time the proposal was 9 submitted. Please refer to the Wind Project Results, provided as Petitioner's Exhibit 10 No. 2, Attachment JAS-2 (CONFIDENTIAL) for additional details.

11 Q. PLEASE EXPLAIN THE PRIMARY CONSIDERATIONS WHEN EVALUATING A 12 WIND PROJECT AND WHETHER OR HOW THE GALESBURG WIND PROJECT 13 MEETS ANY OF THE CRITERIA.

- 14 A. Primary considerations of choosing a wind facility are (1) sufficiency of wind resource. 15 (2) viable point of interconnection nearby to offtake the energy generated by the wind 16 turbines, (3) sufficiency of land to site wind turbines, (4) community support for a wind 17 project, (5) environmental considerations (e.g., endangered species) that would cause 18 negative impacts. (6) geotechnical conditions in the area conducive to supporting a 19 large structure like a wind turbine, (7) local ordinances (e.g., height or noise 20 restrictions) that may inhibit the use of utility scale wind turbines, and (8) turbine 21 location potential hazard to air navigation.
- 22 The proposed location for the Galesburg Wind Project accounts for all of these 23 considerations. Specifically, the Galesburg Wind Project has several benefits, 24 including a good wind resource location; close proximity to a substation where there 25 is available offtake capacity; abundant, geotechnically sound acreage to 26 accommodate a wind project; a community supportive of wind development; a 27 favorable avian environmental study; Federal Aviation Administration ("FAA") 28 approval; and close proximity to a large interstate for simplified turbine transport, 29 construction, and operation. As seen in the responses to the 2022 All-Source RFP, 30 there are not a large number of wind projects available, which therefore limits the 31 amount of substitute or replacement wind projects. As discussed later, the price for 32 wind PPAs also continues to rise. When taking these two considerations together it

further illustrates how the Galesburg Wind Project is a benefit to the supporting system
 needs at a price that good for customers.

3 Q.WHAT STEPS DID THE COMPANY TAKE TO EVALUATE THE4COMPETITIVENESS OF THE PROPOSED WIND PPA PROJECT?

- 5 Α. First, CEI South confirmed that each of the considerations above was satisfied to 6 ensure that the facility will be able to reliably meet CEI South's capacity needs. CEI 7 South further compared the proposed rate of the Wind PPA with the results of the 2022 8 All-Source RFP, provided in Attachment JAS-2 (CONFIDENTIAL), as well as the rate 9 approved in Cause No. 45836 for CEI South's 200 MW Wind Project. As illustrated in 10 Petitioner's Exhibit No. 2, Attachment JAS-2 (CONFIDENTIAL), the 2022 All-Source 11 RFP received five wind proposals based on two unique projects. The Wind PPA rate 12 compares favorably with the five LCOEs for wind projects that resulted from the 2022 13 All-Source RFP, particularly once one outlier project is removed. The developer of the 14 outlier project has indicated that the price was very preliminary, included multiple 15 assumptions, and the project had not yet been entered into the MISO queue at the 16 time of the RFP. Currently this outlier project
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19Q.DO THE RESULTS OF THE 2022 ALL-SOURCE RFP INCLUDED IN ATTACHMENT20JAS-2 (CONFIDENTIAL) INCLUDE AN ADJUSTMENT FOR INFLATION?

A. No. If you incorporate a modest 3% annual factor in inflation, the average LCOE of
 wind projects in 2022 (excluding the outlier project mentioned above) exceeds the
 LCOE of the Galesburg Wind Project. Three percent is modest because renewable
 prices have far outpaced inflation.

25 Q. DID CEI SOUTH TAKE ANY ADDITIONAL STEPS TO EVALUATE THE WIND PPA 26 COMPETITIVENESS?

A. Yes. Because the 2022 All-Source RFP is considered outdated, CEI South compared
the Galesburg Wind Project to the LevelTen Energy PPA pricing index. LevelTen
Energy creates reports that are a source of PPA price data based on actual market
activity. Wind PPA prices averaged across MISO have risen from just below
in second quarter of 2018 to over
fourth quarters 2023 and first quarter 2024, Level Ten Energy has shown the PPA

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- 1 price index at the MISO Illinois Hub as , \$59.50/MWh, and \$62.60
- respectively. Per LevelTen Energy, the PPA prices climbed considerably over the last
 year, taking another uptick in Q1 2024.

Wind PPA Prices Continue Rising – North American wind PPA prices increased by 2% during Q1 2024, and have risen by 20% year-over-year. In general, a scarcity of wind PPA offers has driven this upward price trajectory – though recent years' inflationary pressures have also pushed many wind projects into uneconomic financial territory. The double-edge sword of inflation and high interest rates aimed at combating it has created a difficult financing journey for many wind projects.⁸

- 12 The chart below reflects the significant increase in prices for wind PPA prices. Note
- 13 that in the MISO area, the chart shows a dramatic uptick since the 2022 All-Source
- 14 RFP was conducted. The fact that the Galesburg Wind Project price is consistent with
- 15 the 2022 All-Source RFP price reflects that it is a competitive price.

CHART JAS-1: WIND PRICE INDICES (Q2 2018 – Q1 2024) BY ISO⁹



⁸ Level10 Energy Q1 2024 PPA Price Index. <u>https://www.leveltenenergy.com/post/2024-q1-ppa-price-index</u>

⁹ Level10 Energy Q1 2024 PPA Price Index. https://www.leveltenenergy.com/post/2024-q1-ppa-price-index

1 Q. WHY DOESN'T CEI SOUTH WAIT TO ISSUE A NEW RFP BEFORE ADDING WIND 2 CAPACITY?

3 Α. As indicated above, the addition of renewable projects has generally taken longer than 4 expected and CEI South will have a need for additional capacity in the near term. As 5 I discuss below, the Galesburg Wind PPA is needed to ensure the required capacity 6 is met, especially in the near term (2025/2026) and in 2029 and beyond. CEI South 7 does not expect to issue a new RFP until the Summer of 2024. Projects that will be 8 bid into that RFP would not be available in time to meet the capacity needs identified 9 in 2025/2026. Moreover, given the general increase in prices, I would expect projects 10 responsive to the next RFP to have a higher cost.

11Q.DO YOU BELIEVE CEI SOUTH'S USE OF THE LCOE OF VARIOUS PROJECTS IN12EVALUATING THE GALESBURG WIND PPA IS REASONABLE?

13 A. Yes, CEI South used a similar process in evaluating reasonableness of projects from 14 the 2019 All-Source RFP and the 2020 Renewable RFP; and the process used by CEI 15 South is consistent with the process used by other utilities in evaluating power supply 16 options. LCOE is a typical quantitative measure used to compare proposals. 17 Qualitative criteria, consistent with industry practices, were also considered in the 18 Galesburg Wind Project, such as the preference for projects showing greater maturity 19 in the development cycle, interconnection status, project and energy settlement 20 location, as well as relevant developer experience.

21Q.WHAT IS YOUR CONCLUSION WITH RESPECT TO THE PRICE OF THE22GALESBURG WIND PPA?

A. In my opinion, the pricing of the Galesburg Wind PPA is favorable in comparison to
other comparable options, and it would not be prudent for CEI South to pass on this
Wind PPA in the hope that a PPA with better terms might materialize.

26 VI. PPA TERMS

27Q.BRIEFLY PROVIDE AN OVERVIEW OF HOW PETITIONER BEGAN THE28NEGOTIATION PROCESS FOR THE GALESBURG WIND PROJECT.

A. In December 2023, based on the validated project considerations, CEI South began
the negotiation process, identifying key commercial terms around which a full PPA
deal could be structured.

| 1 | Q. | PLEASE DESCRIBE THE STRUCTURED TERMS OF THE GALESBURG WIND |
|----|----|---|
| 2 | | PPA. |
| 3 | Α. | NextEra Energy will provide attributes of a 147 MW wind facility including energy, |
| 4 | | capacity, and RECs to CEI South for a period of 25 years at |
| 5 | | The PPA price is |
| 6 | | . This price incorporates the Inflation Reduction Act ("IRA") impacts of |
| 7 | | production tax credit (PTC), |
| 8 | | |
| 9 | | . The price will also not go up due to |
| 10 | | interconnection costs as the project has an executed GIA. The Commercial Operation |
| 11 | | Date ("COD"), upon which the delivery term and payment begin, |
| 12 | | |
| 13 | | |
| 14 | | . The Galesburg Wind Project has a |
| 15 | | target COD of December 31, 2025; and . Construction |
| 16 | | milestones are set forth in Exhibit B to the PPA. However, |
| 17 | | , but in any case, the |
| 18 | | |
| 10 | 0 | |
| 19 | Q. | IS TIMELT AFFROVAL OF THE PPA IMPORTANT? |
| 20 | Α. | Yes. Timely approval is needed to allow NextEra Energy to begin construction of the |

21 facility and avoid delays, ensuring reliability and minimizing dependence on the 22 wholesale market during CEI South's Generation Transition Plan, which is consistent 23 with the 2022/2023 IRP. The Galesburg Wind Project has already been through the 24 MISO Generator Interconnection Queue process and has an executed GIA with MISO 25 and the local transmission owner. Once a GIA is executed there is a three-year period 26 in which the project is expected to be placed in service. The Galesburg Wind Project 27 expected COD is within the three-year GIA window; however, approval is needed this 28 year to keep this schedule.

Q. WHAT ACCOMMODATIONS FOR INTERCONNECTION COST ("IC") WERE 30 NEGOTIATED?

- 31 A. Due to the maturity of this project having an executed GIA
- 32



A. The PPA contains customary indemnifications to protect CEI South in the case that
 NextEra Energy does not deliver on all the requirements, representations, and



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Q. DOES THE GALESBURG WIND PROJECT PPA PROVIDE ANY FINANCIAL ASSURANCES THAT NEXTERA ENERGY WILL MEET ITS OBLIGATIONS UNDER THE PPA?

A. Yes, to ensure financial protection on behalf of CEI South and its customers, NextEra Energy must provide a development and operating security of

. These securities may be in the form of a

17 Q. IS THE PPA PRUDENT AND IN THE PUBLIC INTEREST?

18 Yes. Wind energy is a relatively low-cost energy and capacity resource that provides A. 19 diversity to CEI South's resource mix. The PPA structure of the Galesburg Wind 20 Project is responsive to the Commission's 2019 Order in Cause No. 45052 that 21 requested diversity of our generation fleet and encouraged supply-side resource 22 flexibility to allow for changing market conditions and technological shifts. Further, the 23 PPA structure diversifies the renewables portfolio to optimize cost and reliability and 24 reduce customer risk. It is a valuable project with competitive pricing. In my opinion, 25 Commission approval of the PPA and associated relief sought herein is in the public 26 interest, will enhance or maintain the reliability and efficiency of service provided by 27 Petitioner, and is otherwise consistent with Ind. Code ch. 8-1-8.8.

28 VII. BENEFITS OF THE GALESBURG WIND PROJECT

29 Q. PLEASE DESCRIBE THE BENEFITS OF THE GALESBURG WIND PROJECT PPA.

A. As discussed in Mr. Bradford's testimony, the Galesburg Wind Project aligns with the
 Five Pillars as codified by the Indiana General Assembly (effective July 1, 2023) and

CEI SOUTH - PET.'S EX. NO. 2 (PUBLIC)

1 formally adopted by the Commission on June 28, 2023 as GAO 2023-04. The 2 Galesburg Wind PPA provides a for a period of 25 years. The PPA is 3 responsive to the Commission's Order in Cause No. 45052 which encouraged supply-4 side resource flexibility to allow for changing market conditions and technological 5 advancements. Use of PPAs including various term lengths diversifies the renewable 6 portfolio and optimizes cost, flexibility, and reduces risks for the customer. This project 7 adds to a balanced mix of generation resources (wind, solar, gas, coal, and energy 8 efficiency) to serve customers, and fills a portion of the capacity and energy necessary 9 to meet CEI South's system load and adequate reserve margins. All of these benefits 10 are provided while supplying accredited capacity and energy to meet the PRMR in the 11 MISO wholesale market and Local Clearing Requirements.

12 Q. WHY IS A TERM OF 25 YEARS APPROPRIATE FOR THE WIND PPA?

- A. The 25-year term for the Galesburg Wind Project fits well into CEI South's generation
 mix when combined with CEI South's other approved solar and wind BTAs and PPAs.
 It provides additional options and/or off-ramps and flexibility for our customers. As
 noted above the wind PPA market continues to see rising prices and securing a longer
 25-year term hedges against that trend to benefit our customers. Not only is the price
 Additionally, the
 other approved PPAs have different term durations that help prevent multiple
- 19other approved PPAs have different term durations that help prevent multiple20generation sources ending at the same time.

21 VIII. MISO MARKET

22Q.PLEASE DESCRIBE HOW PETITIONER WILL ACCOUNT FOR THE WIND23ENERGY PRODUCED BY THE PROJECT IN THE MARKET.

A. Energy output from the Wind PPA will be offered into the MISO energy market daily
per MISO tariff and Business Practice Manual ("BPM") requirements. This involves
offering the expected energy output on a day-ahead basis and settling the actual realtime output against day-ahead awarded volume and market clearing price versus dayahead awarded price. Additionally, all accredited capacity will be used to satisfy
MISO's PRMR and Local Clearing Requirements ("LCR") prescribed by the MISO
tariff.

1 Q. PLEASE DESCRIBE THE MISO ENERGY MARKET.

2 A. In 2005, Indiana electric utilities, with encouragement from the Commission and the 3 Federal Energy Regulatory Commission ("FERC"), transferred operation of their 4 transmission facilities to a Regional Transmission Operator ("RTO") - MISO for 5 Petitioner. The purpose of MISO's energy market is to dispatch the lowest cost 6 generation within the MISO footprint required to maintain system reliability, giving 7 MISO members the lowest cost energy available. As a member of MISO, Petitioner, 8 like all MISO members, projects and submits its hourly energy needs and offers 100 9 percent of available generation for each hour of each day throughout the year into this 10 market at the avoided costs. MISO collects all load projections and monetary energy 11 offers and after ensuring grid reliability is maintained, dispatches the lowest cost 12 generation facilities to meet the projected system needs for each hour of the day.

13 Q. WHAT IS ELECTRIC TRANSMISSION CONGESTION?

A. Electric transmission congestion refers to a limitation or constraint on the transmission
system that prevents MISO from dispatching the most efficient generation. The
economic impact is usually reflected by the Locational Marginal Pricing ("LMP")
separation between the generator and load nodes. CEI South will manage this unit in
the MISO market just as it does its other units and PPAs both inside and outside its
service territory. The difference in LMPs, whether favorable or unfavorable, is handled
through the Fuel Adjustment Clause.

21 Q. HOW HAVE CONGESTION RISKS OF THE GALESBURG WIND PROJECT BEEN 22 ASSESSED?

23 Minimal separation between the project interconnection and the load it serves is ideal Α. 24 to reduce the probability of congestion. Unfortunately, a wind project development has 25 not materialized within CEI South's service territory. On a historical basis, since 2016, 26 the day-ahead LMP difference between Illinois Hub, geographically the closest pricing 27 node to the Galesburg Wind Project point of interconnection, and CEI South's load 28 node (SIGE.SIGW) is MMWh, with most years having a favorable average 29 difference. In comparison, the average LMP difference for Benton County over the 30 31 good indication that the Galesburg Wind Project may experience limited congestion 32 relative to delivery to SIGE's load. In addition, expansion of transmission facilities 33 through the MISO Transmission Expansion Planning process should limit the 1 2 congestion across MISO generally and potentially the deliverability costs for energy generated by the Wind Project.

3 Q. WHY PROCURE THE REQUESTED WIND PPA IN THIS CASE?

- 4 Α. Per MISO requirements, CEI South must hold adequate generating capacity to serve 5 the annual peak demand of our customer base plus a PRMR. If the Company does 6 not have the required capacity, it would be obligated to procure the capacity through 7 MISO's Planning Resource Auction or purchase from a third party and designate in a 8 Fixed Resource Adequacy Plan ("FRAP"). In order for capacity to qualify for a given 9 planning year, it must meet required testing protocol prior to the last business day of 10 May of each year. Due to potential MISO-wide unit retirements, it is uncertain if 11 capacity will be available to purchase and at what cost if it is available. If capacity is 12 not available in the long-term, based on current MISO rules, CEI South would need to 13 pay a penalty in the form of Cost of New Entry ("CONE"). CONE is determined annually 14 by MISO which has traditionally been the cost to construct a new natural gas 15 combustion turbine. The 2024-2025 CONE price for MISO Zone 6 was set at \$329.70 16 per MW-day. At this price purchasing 50 MWs of capacity at CONE would cost 17 \$6,017,025 million annually.
- In the initial year of operation, a 147 MW wind project would receive 38.4 MW of average Seasonal Accredited Capacity, based on the resource class average. In future years, Seasonal Accredited Capacity would be awarded based on results of the Loss of Load Expectation ("LOLE") study and unit performance during times of need. The added wind capacity from the Galesburg Wind PPA moves CEI South toward meeting its PRMR beyond the 2025/2026 time period.

24 Q. WHAT DOES THE PRA CLEARING PRICE OF CONE REALLY MEAN?

A. It essentially means those utilities needing to purchase capacity in a PRA would pay
 the CONE. Using 2022 PRA as an example when CONE was utilized, 100 MW
 capacity purchased in the 2022 PRA at \$236.66/MW-day, equates to approximately
 \$8.6 Million – this is substantial to customers and illustrates reliance on others to meet
 CEI South's PRMR should not be a long-term strategy. These costs may be even

higher in the future; for example, MISO requested the 2024/2025 PRA CONE be set
 at \$329.70/MW-day.¹⁰

3 Q. DOES A CAPACITY SHORTFALL PRESENT RISKS TO CUSTOMERS?

A. Yes, as MISO pointed out in their prior PRA results: "The auction results indicate that
MISO North/Central Regions have a slightly increased risk of needing to implement
temporary controlled load sheds."¹¹ The potential load shed impact to customers
illustrates how imperative it is for each MISO zone, and each utility to meet its own
PRMR.

9 Q. WHAT HAPPENS IF CEI SOUTH DOES NOT HAVE ENOUGH CAPACITY TO MEET 10 ITS PRMR?

A. If CEI South did not to meet its PRMR then CEI South would have to participate in the
 MISO PRA, which is an annual capacity auction where CEI South and other utilities
 can procure capacity to meet MISO's resource adequacy requirements which would
 expose CEI South and its customers to risk of price increases.

15Q.ASIDE FROM PRICING RISKS, IS IT POSSIBLE TO OVER-RELY ON THE PRA16FOR CAPACITY?

A. Yes. The Indiana House Bill 1007 requires each public utility can reasonably acquire
not more than 15% of its PRMR from the PRA. This is a reduction from 30% that was
set by Indiana House Bill 1520. In the most recent PRA there was shortfall in Zone 5.

20 Q. DOES THE MISO PRMR CHANGE FROM YEAR TO YEAR?

21 A. Yes. Within the past five years, MISO's PRMR, based on installed capacity, has swung 22 between 15.9 percent and 18.3 percent. In one year, the unforced capacity ("UCAP") 23 PRMR changed by 22 percent. The PRMR calculation is driven by four factors: 24 external non-firm support, load forecast uncertainty, load, and generation 25 performance. External non-firm support refers to the diversity of load between MISO 26 and neighboring systems and areas outside of MISO that allow for limited support and 27 transfer of capacity through transmission. An example would be generators in 28 Pennsylvania, Jersey, Maryland Power Pool ("PJM") providing capacity to MISO load. 29 Load forecast uncertainty exists due to the variability of economics, weather, and

¹⁰. <u>2024 PRA Results Posting 20240425632665.pdf (misoenergy.org)</u>

¹¹ See https://cdn.misoenergy.org/2022%20PRA%20Results624053.pdf.

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.

5 Q. HOW DOES THE WIND PROJECT SUSTAIN CEI SOUTH'S PRMR POSITION?

A. Table JAS-1 below shows CEI South's forecasted capacity position for 5 years starting
with the Wind PPA's first year of commercial operation – the 2025/2026 MISO capacity
planning year. The Galesburg Wind PPA has planned accredited capacity of summer
36.2, fall 46.2, winter 80.6, and spring 46. As you can see, the Wind PPA is needed to
support CEI South's PRMR position and ensure the required capacity in each season
is met, especially in the near term (2025/2026) and in 2028/2029 and beyond.

Projected
2025/2026Projected
2026/2027Projected
2027/2028Projected
2028/2029Projected
2029/2030SummerFallWinterSpring

TABLE JAS-1: PRMR POSITION (MW)

Q. DOES THE RETIREMENT OF F.B. CULLEY UNIT 2 IN 2025, THE EXPIRATION OF THE BENTON COUNTY PPA IN 2028, AND EXPIRATION OF THE FOWLER RIDGE PPA IN 2029 AFFECT CAPACITY AND ENERGY?

15 A. Yes. The retirement of F.B. Culley Unit 2 and expiration of the two wind PPAs will 16 create a gap in capacity and energy for CEI South. The projects that are identified in 17 the CEI South's Generation Transition Plan, including those place holders in 2030 and 18 beyond are needed to help meeting CEI South's system needs for capacity and 19 energy. The Galesburg Wind PPA is one of these projects. If Generation Transition 20 Plan projects are delayed or cancelled, CEI South will need replacement projects or 21 to purchase capacity and energy until the delayed or replacement projects are 22 operational.

- 1 Q. PLEASE DESCRIBE PETITIONER'S EXHIBIT NO.2, ATTACHMENT JAS-3.
- 2 A. <u>Petitioner's Exhibit No. 2</u>, **Attachment JAS-3** is a chart setting forth additional details
- 3 regarding the Galesburg Wind Project interconnection to the MISO system with the
- 4 Commission indicated should be provided in PPA cases pursuant to GAO 2022-1.
- 5 IX. CONCLUSION
- 6 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
- 7 A. Yes, at the present time.

VERIFICATION

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

> SOUTHERN INDIANA GAS AND ELECTRIC COMPANY D/B/A CENTERPOINT ENERGY INDIANA SOUTH

Joshua A. Swanson Director Power Supply Services

4-29-24

Date

Petitioner's Exhibit No. 2, Attachment JAS-1 (CONFIDENTIAL)

Executed Galesburg Wind PPA

The foregoing Attachment is confidential and trade secret and will be provided under seal to the Commission.

Petitioner's Exhibit No. 2, Attachment JAS-2 (CONFIDENTIAL)

2022 RFP Wind Project Results

The foregoing Attachment is confidential and trade secret and will be provided under seal to the Commission.

| The name of the RTO to which the generation will be connected. | Midwest Independent System Operator ("MISO"). Please see Petitioner's Exhibit No. 2 direct testimony of Joshua A Swanson, page 11. |
|--|---|
| A description of the new generation's anticipated impact on the submitting utility's resource adequacy and reliability. | The Galesburg Wind Project is expected to contribute to meeting resource adequacy requirements and contribute to the overall reliability of CEI South's system. Please see Petitioner's, direct testimony of Joshua A Swanson on page 21 for discussion on how the projects will help sustain CEI South's PRMR position. |
| An explanation regarding whether the generation is required to be in the RTO's interconnection queue and, if so, its status in the queue. | The projects will be located within MISO's LRZ 4 footprint and was in the 2017 queue cycle and has completed the MISO DPP study process. This project secured its respective MISO interconnection. |
| A description of the generation's expected capacity factors, dispatchability, and accreditation characteristics. | Please see Petitioner's Exhibit 2, direct testimony of Joshua A Swanson on pages 10-11 and pages 15-17 for a description of the structure and terms of the PPA. |
| | The project will be intermittent generating resources. |
| | Please see Petitioner's Exhibit 2, direct testimony of Joshua A Swanson on pages 21 for a description and table of the projected seasonal, combined PRMR position and capacity accreditation for the Galesburg Wind Project. |
| A description of how the generation is expected to perform at the relevant RTO's peak pursuant to its capacity construct (for example, summer and/or winter and/or other, as may be applicable). | Please see Petitioner's Exhibit 2, direct testimony of Joshua A Swanson page 19-22 for discussion on how the Galesburg Wind Project will help meet CEI South's capacity needs. |