

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF SOUTHERN INDIANA GAS )  
AND ELECTRIC COMPANY d/b/a )  
CENTERPOINT ENERGY INDIANA SOUTH )  
("CEI SOUTH") FOR (1) ISSUANCE OF A )  
CERTIFICATE OF PUBLIC CONVENIENCE )  
AND NECESSITY PURSUANT TO IND. CODE )  
CH. 8-1-8.5 FOR THE CONSTRUCTION OF )  
TWO NATURAL GAS COMBUSTION )  
TURBINES ("CTs") PROVIDING )  
APPROXIMATELY 460 MW OF BASELOAD )  
CAPACITY ("CT PROJECT"); (2) APPROVAL )  
OF ASSOCIATED RATEMAKING AND ) CAUSE NO. 45564  
ACCOUNTING TREATMENT FOR THE CT )  
PROJECT; (3) ISSUANCE OF A )  
CERTIFICATE OF PUBLIC CONVENIENCE )  
AND NECESSITY PURSUANT TO IND. CODE )  
CH. 8-1-8.4 FOR COMPLIANCE PROJECTS )  
TO MEET FEDERALLY MANDATED )  
REQUIREMENTS ("COMPLIANCE )  
PROJECTS"); (4) AUTHORITY TO TIMELY )  
RECOVER 80% OF THE FEDERALLY )  
MANDATED COSTS OF THE COMPLIANCE )  
PROJECTS THROUGH CEI SOUTH'S )  
ENVIRONMENTAL COST ADJUSTMENT )  
MECHANISM ("ECA"); (5) AUTHORITY TO )  
CREATE REGULATORY ASSETS TO )  
RECORD (A) 20% OF THE FEDERALLY )  
MANDATED COSTS OF THE COMPLIANCE )  
PROJECTS AND (B) POST-IN-SERVICE )  
CARRYING CHARGES, BOTH DEBT AND )  
EQUITY, AND DEFERRED DEPRECIATION )  
ASSOCIATED WITH THE CT PROJECT AND )  
COMPLIANCE PROJECTS UNTIL SUCH )  
COSTS ARE REFLECTED IN RETAIL )  
ELECTRIC RATES; (6) IN THE EVENT THE )  
CPCN IS NOT GRANTED OR THE CTs )

OTHERWISE ARE NOT PLACED IN )  
 SERVICE, AUTHORITY TO DEFER, AS A )  
 REGULATORY ASSET, COSTS INCURRED IN )  
 PLANNING PETITIONER’S 2019/2020 IRP )  
 AND PRESENTING THIS CASE FOR )  
 CONSIDERATION FOR FUTURE RECOVERY )  
 THROUGH RETAIL ELECTRIC RATES; (7) )  
 ONGOING REVIEW OF THE CT PROJECT; )  
 AND (8) AUTHORITY TO ESTABLISH )  
 DEPRECIATION RATES FOR THE CT )  
 PROJECT AND COMPLIANCE PROJECTS )  
 ALL UNDER IND. CODE §§ 8-1-2-6.7, 8-1-2-23, )  
 8-1-8.4-1 *ET SEQ.*, AND 8-1-8.5-1 *ET SEQ.*

**SIERRA CLUB’S BRIEF IN SUPPORT OF  
 JOINT INTERVENORS’ PROPOSED ORDER**

Sierra Club respectfully asks that the Commission deny CEI South’s request for a CPCN for two combustion turbines (“CTs”) because the costs and three decades-long risks of the Company’s proposal far outweigh the purported benefits. All parties to this proceeding, other than CEI South, oppose construction of the proposed CTs, as do the vast majority of individual residential customers who participated in the public hearing and who have commented to the Commission. The electric system in Indiana and around the country is experiencing a period of transition. This case is primarily about the Commission’s responsibility to ensure, in the face of transition and uncertainty, that a regulated utility maintains flexibility, and that customers do not bear unreasonably long-term financial risk. CEI South has proposed an inflexible, large investment in a potentially soon-to-be obsolete technology that will burden its customers with increased rates for decades even if the generation units become useless. The Commission should reject the proposed CTs.

Sierra Club joins fully in the Proposed Order submitted today by the Joint Intervenor and writes separately to emphasize these discrete points:

1. CEI South's two large CTs and its expensive pipeline contract are an \$1 billion proposal that would saddle customers with both high costs and long-term risks.
2. CEI South's own modeling does not support its request for two CTs, as none of its modeling included two CTs in the 2020s as part of a lowest-cost plan. Further, CEI South's modeling shows that the proposed CTs would rarely operate, rendering them vulnerable to obsolesce during their three decades proposed useful life.
3. CEI South's near-term resource adequacy requirements do not justify the high cost and long-term risks of the proposed CTs and pipeline contract. The record is clear that a flexible portfolio of solar and wind additions, Demand Response, and short-term capacity purchases will meet MISO resource adequacy needs at lower cost, while maintaining CEI South's flexibility as it begins another Integrated Resource Plan ("IRP") process this year. Further, CEI South is overstating its capacity shortfall through 2028 by overstating electric demand growth and by undercounting the capacity value of its 835 MW of solar resources. In addition, short-term capacity purchases are far cheaper and less risky than the proposed CTs, and remain an available option, in combination with Demand Response and, potentially, storage resources to meet resource adequacy needs.
4. Batteries are a preferable long-term option for peaking power needs and grid services when compared to the proposed CTs.
5. CEI South underrates the reliability risks of gas generation.

**I. The Company's Proposal of Two Combustion Turbines is High Cost, Eliminates Flexibility to Respond to Changes Over Coming Decades, and Foists Long-Term Risk on Customers.**

The Company has put forward a nearly \$1 billion proposal to address a manageable short-term capacity deficit. CEI South's original cost estimate of \$323 million for the construction of the two CTs has now increased to a cost of up to \$351 million.<sup>1</sup> To provide gas service to the AB Brown site, CEI South has negotiated a contract that requires it to pay a Texas pipeline company \$27.3 million for gas transportation annually for 20 years with no opportunity to exit,<sup>2</sup> for a total contract cost of \$546 million. By asking its electricity customers to pay \$897 million in committed costs (excluding fuel costs), the Company's proposal presumes that both CTs will remain economic resources during the 2030s, 2040s, and mid-2050s.<sup>3</sup> Whether that's possible is speculative at best and, for CEI South's customers, a risky proposition.

CEI South has presented the proposed CTs as dispatchable resources, intended to ramp up and down quickly to address gaps in energy supply due to the variability of solar and wind power. But CEI South is asking customers to foot an enormous bill for little benefit. CEI South's own modeling shows the units will have a miniscule capacity factor, and each startup will cost \$9,500 per start per unit, excluding fuel costs.<sup>4</sup> That the units are already intended to be of marginal use render them, and the pipeline proposed to serve them, vulnerable to becoming stranded assets during the next three decades. In the coming years, utility-scale batteries, which have zero startup

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<sup>1</sup> CEI South Ex. 2-R (Games Rebuttal), page 33.

<sup>2</sup> CEI South Ex. 8 (Grizzle Direct), page 7.

<sup>3</sup> CEI South Ex. Exhibit No. 5-R (Rice Rebuttal), page 37 (suggesting a 30-year depreciation period for the CTs).

<sup>4</sup> Sierra Club Ex. 1 (Goggin Direct), page 43.

costs,<sup>5</sup> or other resources, are likely to make these CTs obsolete. Carbon regulation may increase the cost for both the pipeline and the proposed CTs. While CEI South downplays the carbon regulation risk for the CTs, noting correctly that the CTs are not projected to operate very often, carbon regulation would increase their startup costs and decrease the times the CTs would dispatch into the MISO energy market.

During a period of a changing grid, there is an advantage for customers of incremental, smaller additions that maintain over-all flexibility. The Commission affirmed this principle in its 2018 Statewide Analysis (at page 5), which stated:

A key consideration in long-term resource planning is the need to retain maximum flexibility in utility resource decisions to minimize risks. An IRP developed by a utility should be regarded as illustrative and not a commitment for the utility to undertake.

CEI South has taken the opposite approach. By building two CTs now, with a total nameplate capacity almost half of CEI South's total load, and entering into a 20-year pipeline contract, the utility is making a long-term bet with customers' money, without an off-ramp. Building these two CTs now, in the face of significant change and uncertainty, would increase the chance that CEI South's customers experience regret in the event that battery storage and renewable costs continue to decline, that the need for or cost of capacity is lower than CEI South's assumes, or that carbon regulation reduces the competitiveness of gas-burning generation.

## **II. The Company's 2019-2020 IRP Modeling Does Not Support Its Request for Two CTs.**

CEI South chose not to update its modeling for this case, and its 2019-2020 IRP does not support its choice of two CTs. In three of the five scenarios modeled, including the Reference

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<sup>5</sup> Sierra Club Ex. 1 (Goggin Direct), page 43.

Case Scenario that represents the “most likely future conditions,”<sup>6</sup> the Renewables 2030 Portfolio, which includes no new CTs, had a lower cost than the portfolio that CEI South selected as preferred, the High Technology Portfolio.<sup>7</sup> Only in two scenarios, High Technology and Low Regulation, did the High Technology Portfolio rate lower cost than the Renewables 2030 Portfolio. Further, in every scenario, the Renewables+Flexible Gas Portfolio, which has one CT in the 2020s, was found to be lower cost than two CTs in the 2020s.<sup>8</sup> Thus, if the Commission takes the CEI South modeling on its face, there is no basis for finding that a two CTs proposal is part of the lowest-cost solution to serve customers.

Further, CEI South’s IRP modeling projects that the proposed gas turbines will almost never operate and thus renders them vulnerable to becoming stranded assets. Specifically, in the Reference Case Scenario (again, the “most likely”) one of the CTs operates at a 0% capacity factor (after rounding) for each year 2025-2039, after operating at a 3% capacity factor in 2024.<sup>9</sup> In the High Regulation Scenario, it operates at a 1.5% capacity factor in 2024, and does not operate again until dispatched for a single hour in the year 2038.<sup>10</sup> Even in the Low Regulation Scenario, this CT does not operate in 2025-2027, operates for less than one hour in 2028-2029, less than three hours in 2030, and then averages 44 hours per year in 2031-2035, before finally averaging a 2% capacity factor or 165 hours per year in 2036-2039.<sup>11</sup> In the modeled Reference Case Scenario dispatch for the year 2025, which is the only modeled year and scenario in which both CTs were

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<sup>6</sup> CEI South Exhibit 5 (Rice Direct), Attachment MAR-1, page 91 of 341.

<sup>7</sup> CEI South Exhibit 5 (Rice Direct), Attachment MAR-1, Figure 8-2.

<sup>8</sup> CEI South Exhibit 5 (Rice Direct), Attachment MAR-1, Figure 8-2.

<sup>9</sup> Sierra Club Ex. 1 (Goggin Direct), page 8.

<sup>10</sup> Sierra Club Ex. 1 (Goggin Direct), page 8.

<sup>11</sup> Sierra Club Ex. 1 (Goggin Direct), page 8.

operating that CEI South retained and was able to provide in discovery, this second CT never operates for more than 4 hours at a time, with an annual capacity factor of 0.07%.<sup>12</sup> The low usage of these CTs demonstrates their vulnerability to being replaced by other resources over the next three decades. Because one of the CTs does not operate more than four hours at a time, a standard 4-hour battery resource would have adequate dispatch duration to fully provide the services being provided by this CTs.

In sum, CEI South's own modeling therefore provides a tenuous demonstration at best for the need for these proposed CTs.

### **III. No Resource Adequacy Need Justifies the High Cost of The Proposed CTs.**

The proposed CTs are a high cost and high risk solution to a manageable near-term resource adequacy shortfall. The risks faced by ratepayers if the Commission denies CEI South's request are of lower magnitude and, contrary to CEI South's repeated insinuations, primarily a financial risk related to the price of capacity purchases in the next five years. In short, the risks of approving the two CTs far outweigh the purported benefits.

CEI South claims that without the proposed CTs it will confront a capacity shortfall. As an initial matter, although the CT units have a depreciable life of 30 years and the pipeline contract has a term of 20 years, the risks associated with a resulting capacity shortfall (and need for purchases) are far more time-limited: from the time the CTs would have gone into service (2024 or so) through when CEI South will have fully implemented its upcoming 2022-2023 IRP (2027 or so).<sup>13</sup> The shortfall during this period will very likely be smaller than CEI South is projecting,

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<sup>12</sup> Sierra Club Ex. 1 (Goggin Direct), page 9.

<sup>13</sup> CEI South's proposal for long lead time resources in this proceeding demonstrates that it can theoretically install such resources within approximately four years of completing an IRP. Other resources, such as solar, wind, batteries, and Demand Response can be deployed faster.

as CEI South has overestimated electric demand growth and undervalued the capacity accreditation of the 835 MW of solar that the Company has built or is proposing to build to replace retiring coal units. To bridge the modest capacity shortfall before full implementation of the 2022-2023 IRP, CEI South should go forward with a low-risk, flexible combination of renewables, Demand Response, and short-term capacity resources, and should consider building some of the battery resources the company included in its 2019-2020 IRP preferred plan.

**a. The CTs would provide capacity at a very high cost.**

Because the CTs are designed to almost never operate, they provide negligible energy value. The units' value to ratepayers is therefore almost exclusively as a capacity resource. But as a capacity product to meet CEI South's MISO reserve margin requirements, the two proposed CTs are an extremely high cost solution. The capacity costs of the CTs, including the annual cost of the pipeline contract, is \$385.50/MW-day over the next 30 years.<sup>14</sup> MISO's cost of new entry for Zone 6, by contract, which sets the ceiling of prices in the capacity auction, is \$244/MW-day.<sup>15</sup> Further, and more importantly, the capacity cost of the proposed CTs is vastly higher than the

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<sup>14</sup> The annualized capital cost and ongoing fixed operations and maintenance costs of the CTs, plus the annual fixed contractual cost of the pipeline is. \$385.50/MW-day. This figure is derived per the following calculation of the annualized capital cost of the CTs plus the ongoing fixed costs of the CTs and pipeline  $(\$351,400,000 * 7.71\% / (1 - (1 + 7.71\%)^{-30}) + \$27,300,000 + \$2,725,000) / 428.9 \text{ MW} / 365.24 \text{ days} = \$385.50/\text{MW-day}$ , where \$351,400,000 is the high-range capital cost of two CTs per Games Rebuttal at page 33, 7.71% is CEIS's weighted average cost of capital, 30 years is the proposed book lifetime of two CTs per page 27 of MAR-2, \$27,300,000 is the annual fixed cost of the pipeline contract, and \$2,725,000 is the annual fixed operations and maintenance cost of the two CTs, 428.9 MW is the MISO-accredited capacity of the two CTs, and 365.24 is the number of days in a year. While the pipeline cost for years 21-30 of the CTs' operation is unknown because it is outside of the 20-year pipeline contract, even if the cost were drastically lower than under the 20-year contract it would not meaningfully reduce the discounted annual average total cost of the CTs and pipeline below \$385.50/MW-day, as any pipeline cost savings realized in years 21-30 will have little net present value due to the 7.71% discount rate. Sierra Club asks the Commission take administrative notice of this calculation, which relies on inputs that are in the record.

<sup>15</sup> Sierra Club Ex. 1 (Goggin Direct), pages 17-18.



prices of the actual capacity purchases that CEI South has entered into for the years 2023/2024 through 2027/2028.<sup>16</sup> Lastly, the capacity cost of the two CTs is over double the price of CEI South's capacity price forecast for the years 2023/2024 through 2027/2028, which never exceeds \$150 MW-Day in these years (or at any time in the study period).<sup>17</sup> Under any measure, the capacity these two CTs would provide would come at an unusually high cost.

**b. The two proposed CTS are not needed for resource adequacy.**

There is no near- or medium-term need for these CTs projects as a capacity resource that justifies their high cost. CEI South has secured sufficient capacity without the CTs to meet its MISO resource adequacy requirements for 2024/2025.<sup>18</sup> Because the Company can have new projects installed after its upcoming 2022-23 IRP by approximately 2027, of primary importance to the Commission's decision in this case are the planning years up through 2026/2027. Crucially, however, determining how to meet its resource adequacy needs in these years is primarily a financial risk for customers, not an operational reliability one. Electrons do not flow directly from CEI South's units to its customers' homes and businesses; CEI South is part of the MISO grid, which ensures continuous electrical service, in part, by imposing resource adequacy obligations on its member utilities. If the Commission denies the proposed CTs, the Company will have a capacity shortfall relative to its obligations to MISO beginning in 2025/2026. There are several reasons to think customers will be better off without the CTs during these planning years and that

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<sup>16</sup> Compare \$385.50 to the confidential prices of the Company's actual purchases reported at CEI South's Exhibit No. 11-R (CONF), Bradford Rebuttal, p. 11, Table FSB-R1.

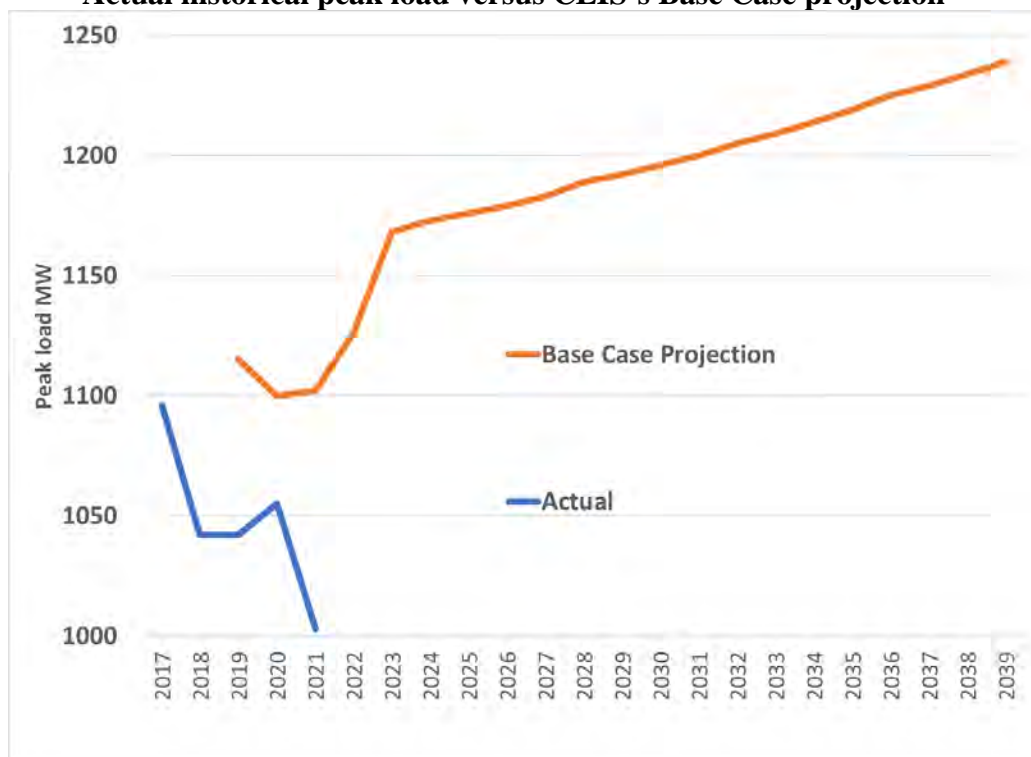
<sup>17</sup> Compare CEI South Ex. 5 (Rice Direct), Attachment MAR-2, page 326 of 1721 (IRP Consensus Capacity Price Forecast) to the confidential prices of the Company's actual purchases reported at CEI South's Exhibit No. 11-R (CONF), Bradford Rebuttal, p. 11, Table FSB-R1.

<sup>18</sup> Exhibit No. 11-R (Bradford Rebuttal), CONFIDENTIAL Workpaper FSB-R1 Table 1 2024-2033 Capacity Position Table.

CEI South can manage the near-term capacity shortfall consistent with its obligations to the grid operator without new gas generation.

First, CEI South's load will likely be lower than the Company has assumed in its 2019-2020 IRP, reducing its need for MISO-accredited capacity. CEI South's peak load has steadily declined by nearly 10% over the last five years, from 1,096 in 2016-2017 to 1,003 MW in 2021. Yet CEI South's IRP forecasts rapid peak load growth that approaches 1200 MW by 2028. CEIS's peak load in 2021 was 10% below what the IRP forecast, and these declines began before the pandemic.<sup>19</sup>

**Goggin Direct Testimony, Figure 7:  
Actual historical peak load versus CEIS's Base Case projection<sup>20</sup>**



<sup>19</sup> Sierra Club Exhibit 1 (Goggin Direct), page 15.

<sup>20</sup> Sierra Club Exhibit 1 (Goggin Direct), pages 15-16.

Despite the disconnect between the steadily downward recent trend in peak demand and CEI South's projections for rapid load growth, CEI South has not updated its peak load forecast in this case. Instead, in this proceeding, CEI South has focused the Commission's attention on a new industrial customer that, the Company says, will increase its industrial load. But the Commission should be cautious in crediting that information: without updating the entire load forecast, including recognition of the continued residential and commercial load declines, CEI South asks the Commission to make an apples to oranges comparison, with its 2018-2019 IRP load forecast (known to be incorrect), shamboolically updated only with one new data point. The reality is that CEI South's overall load is lower than it has projected, and therefore its need for capacity to meet MISO reserve requirements will likely be lower.

Second, another source of additional capacity to fill the gap in the years through 2027/2028 will come from the solar projects that CEI South is already installing. CEI South assumes a decrease in the capacity credit for solar in the years 2024/2025, 2025/2026, and 2026/2027 that is far greater than MISO's own assumptions.<sup>21</sup> Solar capacity value declines are only projected to become significant at high solar penetrations across the entire MISO system, and CEI South's assumed rate of decline for solar capacity value is much more rapid than that assumed in the MISO Transmission Expansion Plan ("MTEP") modeling. The MTEP 2019 modeling assumes that solar's capacity value remains at 50% until 2023, at which point it declines by two percentage points per year until reaching 30% in 2033.<sup>22</sup> In contrast, CEI South assumes capacity value will fall to approximately 25% by 2026.<sup>23</sup> The MTEP 2019 assumptions likely overstate the decline

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<sup>21</sup> Sierra Club Exhibit 1 (Goggin Direct), page 30-32.

<sup>22</sup> Sierra Club Exhibit 1 (Goggin Direct), page 30.

<sup>23</sup> CEI South Exhibit 5-R (Rice Rebuttal), pages 8-9.

of solar accreditation because the pandemic's supply chain problems have slowed solar installations, as the 2021 MISO figures confirm.<sup>24</sup> Relying on MTEP 2019, instead of CEI South's projections, would provide the company with an extra 150 MW of capacity in planning year 2026/2027 than the utility's projection assumes.<sup>25</sup>

Third, short-term capacity purchases are available to meet CEI South's capacity needs through full implementation of the next IRP. Compared to the cost of the proposed CTs, these purchases are a good deal for customers. This benefit is most apparent from the low prices that CEI South has actually paid for capacity in these years.<sup>26</sup> There is also no indication—contrary to CEI South's insinuations—that either bilateral or auction capacity prices will dramatically increase in the near term. For one thing, CEI South's own capacity price forecast from its 2019-2020 IRP does not assume such increases as prices remain below \$150 per MW-Day.<sup>27</sup> Further, Indiana, MISO Zone 6, has a capacity import limit of around 7,000 MW, but in the most-recent capacity auction the state only imported 2,400 MW of capacity, indicating that there is remaining room to import further capacity.<sup>28</sup> And MISO recently released a capacity outlook indicating that in the year 2026, it is expected to have more than enough capacity to meet Indiana's Local Clearing Requirement.<sup>29</sup> While CEI South may continue to choose not to rely on the auction, MISO's most-recent auction for Zone 6 cleared at the extremely low market price of \$5/MW-day,<sup>30</sup> indicating

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<sup>24</sup> CAC Ex. 2 (Sommer Direct), p. 21 (citing MISO Futures Report, dated April 2021)

<sup>25</sup> See Joint Parties Proposed Order, page 65.

<sup>26</sup> Exhibit No. 11-R (Bradford Rebuttal), CONFIDENTIAL Workpaper FSB-R1 Table 1 2024-2033 Capacity Position Table.

<sup>27</sup> CEI South Ex. 5 (Rice Direct), Attachment MAR-2, page 326 of 1721 (IRP Consensus Capacity Price Forecast).

<sup>28</sup> Sierra Club Ex. 1 (Goggin Direct), pages 18-19.

<sup>29</sup> Sierra Club Ex. 1 (Goggin Direct), pages 19.

<sup>30</sup> Sierra Club Ex. 1 (Goggin Direct), page 17.

the availability of cheap capacity. There simply is no evidence in the record of a significant increase in capacity prices.

Last, CEI South should also consider Demand Response and batteries as a potential partial solution to its near-term resource adequacy requirements. Both Demand Response and batteries can be deployed rapidly. CEI South currently relies on miniscule amounts of Demand Response in its resource adequacy planning,<sup>31</sup> and if the utility devoted resources at even a small fraction of the \$385-MW/day it proposes to spend on the CTs, it could incentivize more customers to participate, while promoting economic development in its service territory. Batteries are highly modular and have a small footprint, so they can be deployed in the sizes and locations on the grid where they are most needed, and in some cases can even be moved if grid conditions evolve. In addition, batteries' modularity allows capacity additions to be tailored to an incremental need for capacity. Importantly, battery installations can be completed within a few months of signing a contract, in contrast to a typical minimum of several years to build a gas CT, allowing lower financing costs and a more-nimble response to evolving market conditions and need for capacity.<sup>32</sup> CEI South could build even half of the batteries that it proposed in the 2019-2020 IRP and solve a substantial part of its resource adequacy problem.

#### **IV. Batteries are the Preferable Long-Term Alternative for Meeting CEI South's Capacity and Ancillary Service Needs.**

Batteries' quick deployment time make them a short-term solution for the capacity gap CEI South has identified between now and its next IRP; they also present a longer-term solution to the limitations of a heavily solar and wind portfolio that CEI South claims the proposed CTs will

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<sup>31</sup> See Joint Parties Proposed Order, pages 40-42.

<sup>32</sup> Sierra Club Ex. 1 (Goggin Direct), page 45.

address. Batteries complement high renewable systems better than CTs do.<sup>33</sup> CEI South acknowledges that “Battery storage has faster start time, faster ramp rate, and can absorb excess renewable production via charging[.]”<sup>34</sup> Relative to batteries, gas CTs tend to increase renewable curtailment, as they cannot change their level of output as quickly and have high minimum output levels. Batteries can discharge in seconds; CEI South’s proposed CTs take ten minutes to start and ramp up to full load.<sup>35</sup> Batteries have no minimum operating level;<sup>36</sup> CEI South’s proposed CTs have a minimum operating level 90–99 MWs depending on the ambient temperature.<sup>37</sup> Batteries can absorb excess renewable output by charging; gas CTs do not. Each of CEI South’s proposed gas CTs incur a \$9,500 cost each time they start due to mechanical wear and tear, for a total of \$19,000 each time both CTs are started plus the cost of fuel burned during startup, costs that are not incurred by dispatching lithium-ion batteries.<sup>38</sup> As a result, batteries will be used far more frequently to address changing power system needs or market conditions, while the CTs will seldom be dispatched due to the high-cost hurdle of turning them on.<sup>39</sup>

Power prices are typically at their highest when natural gas prices are high, so batteries (which do not have a fuel cost) present a hedge against increased natural gas prices and corresponding risk of higher energy prices, which CTs do not.<sup>40</sup> Batteries are also faster and more accurate than gas generators in providing frequency regulation, which is used to accommodate

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<sup>33</sup> Sierra Club Exhibit 1 (Goggin Direct), page 42.

<sup>34</sup> Sierra Club Ex. 1 (Goggin Direct), page 42.

<sup>35</sup> Sierra Club Ex. 1 (Goggin Direct), page 43.

<sup>36</sup> Sierra Club Ex. 1 (Goggin Direct), page 42-43.

<sup>37</sup> Sierra Club Ex. 17 (CEI South Response to Sierra Club DR 7-4).

<sup>38</sup> Sierra Club Ex. 1 (Goggin Direct), page 43

<sup>39</sup> Sierra Club Ex. 1 (Goggin Direct), page 43.

<sup>40</sup> Sierra Club Ex. 1 (Goggin Direct), page 43.

second-to-second fluctuations in electricity supply and demand on the grid. FERC has documented that faster and more accurate response reduces the amount of frequency regulation reserves needed to maintain grid reliability. Battery storage also provides extremely fast primary frequency response, which is used to restore power system frequency in the seconds following a large disturbance on the grid such as the loss of a large generator, while gas generators take many seconds or minutes to respond and can only provide frequency response if they were already online, which in the case of CEI South's CTs will be almost never. Batteries also quickly and accurately regulate voltage on the power system, while gas generators must be online and synchronized to provide that service.<sup>41</sup>

In short: Batteries are superior to gas combustion turbines for quickly responding to market prices and providing a range of reliability services. Nevertheless, despite including 126 MW of battery storage in its preferred portfolio for the 2019-2020 IRP,<sup>42</sup> CEI South has not come forward with any battery projects. The Commission should deny the proposed CTs and urge CEI South to develop the battery projects CEI South has already recognized as an important component of its generation mix.

## **V. CEIS Understates the Risk of Gas Supply Failures.**

CEI South's argument for construction of the two CTs has focused on reliability. But as NERC observed in their 2021 Long Term Reliability Assessment, "capacity alone does not provide for reliability unless the fuel behind it is assured even in extreme weather."<sup>43</sup> In its IRP and in the forecast of capacity accreditation for the two proposed CTs, CEI South did not consider the risk

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<sup>41</sup> Sierra Club Ex. 1 (Goggin Direct), page 43-44.

<sup>42</sup> CEI South Ex. 5 (Rice Direct), page 17 (High Technology portfolio includes 126 MW of storage in 2023); *see also* Sierra Club Ex. 1 (Goggin Direct), p. 7.

<sup>43</sup> NERC LTRA, Dec. 2021, page 6, available at: [https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC\\_LTRA\\_2021.pdf](https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2021.pdf)

of sudden disturbances of gas supply. As Sierra Club witness Goggin testified, and the recent example of Winter Storm Uri shows, gas generation is particularly vulnerable to correlated outages, especially during extreme winter weather. In contrast, inter-zone imports within MISO “reduce exposure to localized failures,” as evidenced by the contrast experiences between Indiana and Texas in during the February 2021 storm.<sup>44</sup> Neither CEI South’s IRP process, nor its decision to accelerate the construction of a second CT, adequately accounted for these risks.

## **VI. Conclusion**

As any good carpenter says, measure twice and cut once. CEI South should measure again in its 2022-2023 IRP before charting a more-definitive path to replace its retiring coal-burning generation. For the foregoing reasons, Sierra Club respectfully asks that the Commission deny the requested CPCN and protect CEI South’s customers from the high risk and high cost proposal to build two CTs.

Dated: March 18, 2022

Respectfully submitted,

/s/ Kathryn A. Watson

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<sup>44</sup> Sierra Club Ex. 1 (Goggin Direct), pages 22-23, 49-52.



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## **CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a copy of the foregoing was electronically delivered  
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