

Reliable Energy, Inc.'s (REI) Comments on CenterPoint Energy Indiana South's (CEI South's) Integrated Resource Plan (IRP)

September 28, 2023

Summary

HEA House Enrolled Act 1007 (HEA 1007) went into effect just a few weeks after CEI South submitted its latest IRP. That legislation was a result of the legislature's recognition that the IRP and CPCN processes in Indiana need improvement. HEA 1007 requires the IURC to consider the following five "pillars" of regulatory policy in its IRP evaluation, including: reliability, affordability, resiliency, stability and environmental sustainability.

HEA 1007, however, does not stop with the five pillars. HEA 1007 also initiates efforts to consider performance-based ratemaking for utilities in Indiana. Currently, regulated utilities achieve a considerable share of their earnings through their return on undepreciated dollars in rate base. Hence, there is an undeniable incentive to maximize these investments. By incorporating performance-based ratemaking, the goal is to look to managing their assets rather than simply focusing on dollars in rate base.

For these reasons, REI believes it is appropriate for the Executive Director, who generally addresses issues as he deems relevant, to consider the five pillars in his report. This is particularly appropriate, given that these pillars were first discussed in the context of IRPs more than three years ago by Indiana's 21st Century Energy Task Force.¹

With respect to affordability, CEI South merely changed the name of its historic Net Present Value (NPV) analysis to an "Affordability" analysis. CEI South's discounted revenue requirement provides no information as to the relative impact of each scenario on customer rates. For example, if the lowest NPV case is two percent below the cost of the next highest case, this does not necessarily mean that rates in one case will be two percent lower. In fact, it could turn out that the higher cost case had lower rates in the first 10 years than the lower cost case. The only way to assess affordability is to estimate rates under each case. Ironically, CEI South essentially acknowledged this by stating the affordability goal is to "(p)rovide all customers with an affordable supply of energy."² Yet, CEI South did nothing in the IRP beyond the NPV analysis to confirm actual affordability.

Utilities approach reliability differently. What has become more common is loss of load expectation (LOLE) as a proxy for reliability. However, it appears CEI South did not perform its own LOLE analysis, choosing instead to rely on MISO's Planning Reserve Margin Requirement ("PRMR").

With respect to resiliency, CEI South makes a brief, conclusory and unsupported statement that "dispatchable generation with firm gas service at F.B. Culley will allow this resource to be available to meet

¹ <https://www.in.gov/iurc/files/2020-Report-to-the-21st-Century-Energy-Policy-Development-Task-Force.updated-min.pdf>

² IRP Volume 1, page 90.

peak conditions during long duration weather events, providing resiliency”³ and ignores the higher resiliency provided by coal plants with on-site inventory.

Stability refers to “the ability of a portfolio to maintain system frequency and voltage, thermal limits, and power transfer capability.”⁴ With the transition to intermittent resources, CEI South recognizes that will become increasingly important with respect to transmission. MISO is spear-heading much of this effort, accordingly.

CEI South defines the last pillar, environmental sustainability, as providing “environmentally responsible power, leading to a low carbon future with fewer impacts to air and water quality and less waste generated.”⁵ CEI South’s commitment to this goal is unclear. CEI South touts the replacement of coal at Culley Unit 3 with natural gas is attractive because it allows CEI South to “maintain this critical capacity resource, protecting customers from a volatile MISO capacity market and considerably lowering CO2 emissions.” Yet it actually appears that it may be the earnings growth associated with transitioning its fleet that is the real appeal to CEI South.

The Greenhouse Gas (GHG) protocol⁶ categorizes a company’s GHG footprint into three different scopes: Scopes 1, 2 and 3. While CEI South had the opportunity to include Scope 3 emissions⁷ related to the production and transport of the natural gas consumed in its power plants in its targets, CEI South has declined to do so. According to CEI South’s most recent sustainability report, CEI South has established a goal of Net Zero CO2 for its Scope 1 emissions and certain Scope 2 emissions by 2035.⁸ Notably missing from the targets are Scope 3 greenhouse gas (GHG) emissions related to the production and transport of natural gas it consumes in its powerplants. This was not an omission. According to its 2023 Proxy Statement, CEI South made a deliberate decision to mask its continuing high level of GHG emissions tied to natural gas production and transport. CEI South disclosed certain shareholders’ request to disclose and a set a goal for reducing the Company’s Scope 3 emissions, which the CenterPoint Board advised its remaining shareholders to vote against.⁹ A majority of CenterPoint shareholders voted down the proposal in April 2023, consistent with the Board’s recommendations.¹⁰ Instead, CenterPoint masks the truth with a “customer end use” Scope 3 goal, which is not the same as tracking and reducing its own Scope 3 emissions.¹¹

It is reasonable to assume that Scope 3 emissions will ultimately be reportable¹² and, therefore, should be included in the Net Zero corporate goal. As a result, future investments in gas should consider these costs

³ IRP Volume 1, page 57.

⁴ IRP Volume 1, page 91.

⁵ IRP Volume 1, page 91.

⁶ <https://ghgprotocol.org/>

⁷ Scope 3 encompasses emissions that are not produced by the company itself and are not the result of activities from assets owned or controlled by them, but by those that it’s indirectly responsible for up and down its value chain. An example of this is when we buy, use and dispose of products from suppliers. Scope 3 emissions include all sources not within the scope 1 and 2 boundaries.

⁸ <https://sustainability.centerpointenergy.com/net-zero/>

⁹ <https://investors.centerpointenergy.com/static-files/97f5770e-8431-4897-8b70-6fdb7fa43844>, pages 107-110.

¹⁰ <https://www.marketscreener.com/quote/stock/CENTERPOINT-ENERGY-INC-12964/news/Declaration-of-Voting-Results-by-CenterPoint-Energy-43629993/>

¹¹ <https://sustainability.centerpointenergy.com/energy-transition-goals/#scope-3>

¹² The SEC has a current proposal to include Scope 3. <https://www.sec.gov/news/press-release/2022-46>

unless CEI South wants to hold ratepayers harmless for any associated costs associated with their future reduction.¹³

Affordability

The remaining comments address specifically affordability and the reasons why a decision regarding the future of Culley Unit 3 as a coal plant is premature. REI recognizes that coal plants have a useful life. However, maintaining Culley Unit 3 on coal in the short term is very likely to not only be the most affordable, but also the most prudent strategy, given the number of industry unknowns over the next five years. A true and complete affordability analysis would prioritize the affordable and reliable provision of service to customers, rather than shareholder interests for profit.

The plain definition of affordability is the cost or pricing of something, the ability to be afforded, and its expensiveness.¹⁴ When discussing affordability in the context of utility customers, affordability is whether the price of power to customers is manageable. As REI has pointed out in multiple sets of IRP comments,¹⁵ an NPV analysis bears no meaningful relationship to affordability. As HEA 1007 provides, affordability includes ratemaking constructs that result in retail electric utility service that is affordable and competitive across residential, commercial, and industrial customer classes. IC 8-1-2-0.6(2). Choosing a resource plan through a comparative NPV analysis says *nothing* about its affordability. At best, it shows that one case may have the lowest NPV. It does not say what the impact on rates will be from that case. Said simply, the NPV and affordability analyses are two separate analyses and should not be conflated into one.

The legislative concern in HEA 1007 regarding affordability no doubt relates to the recent and significant increases in power rates in Indiana. As shown in Exhibit 1, Indiana has experienced above average increases in power pricing over the last 12 years. Residential rates have increased by 57 percent (versus 31 percent nationally), commercial rates by 58 percent (versus 23 percent nationally) and industrial rates by 52 percent (versus 25 percent nationally). As a result of the disproportionate increase in rates, Indiana's rankings with respect to other states have significantly deteriorated. For residential rates, Indiana now ranks 36 (up from 17); for commercial rates Indiana now ranks 38 (up from 18), and for industrial rates, Indiana now ranks (36 up from 16).

¹³ This would include early termination costs and/or the costs associated with mitigating such emissions.

¹⁴ <https://www.merriam-webster.com/dictionary/affordability>

¹⁵ NPVs are based upon levelized costs. In many cases, utilities exclude sunk costs. However, rates are not based upon levelized costs. If a new resource is replacing a resource that has not been fully depreciated, the cost to ratepayers will be even higher as the utility expects a return of and on the remaining undepreciated capital. In ratemaking, stranded costs and undepreciated capital are still charged to customers. The exclusion of these costs in an NPV analysis means that the NPV metric is inaccurate and misleading for purposes of determining whether a resource decision is affordable to ratepayers.

Exhibit 1

Power Rates in Indiana (Cents/kwh)

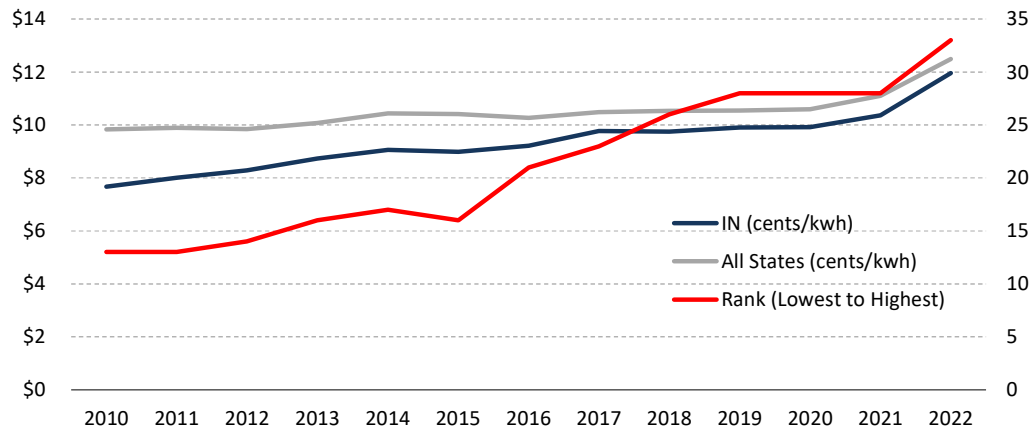
	RESIDENTIAL			COMMERCIAL			INDUSTRIAL			TOTAL		
	IN	All States	Rank	IN	All States	Rank	IN	All States	Rank	IN	All States	Rank
2010	9.56	11.54	17	8.38	10.19	18	5.87	6.77	16	7.67	9.83	13
2011	10.06	11.72	17	8.77	10.24	20	6.17	6.82	17	8.01	9.9	13
2012	10.53	11.88	18	9.14	10.09	23	6.34	6.67	23	8.29	9.84	14
2013	10.99	12.13	21	9.6	10.26	26	6.7	6.89	29	8.73	10.07	16
2014	11.46	12.52	21	9.96	10.74	26	6.97	7.1	28	9.06	10.44	17
2015	11.57	12.65	22	9.78	10.64	24	6.86	6.91	26	8.99	10.41	16
2016	11.79	12.55	24	10.01	10.43	29	6.97	6.76	28	9.22	10.27	21
2017	12.29	12.89	25	10.54	10.66	32	7.54	6.88	33	9.77	10.48	23
2018	12.26	12.87	27	10.6	10.67	34	7.38	6.92	31	9.75	10.53	26
2019	12.58	13.01	31	11.03	10.68	37	7.36	6.81	32	9.91	10.54	28
2020	12.83	13.15	32	11.21	10.59	37	6.98	6.67	30	9.92	10.59	28
2021	13.37	13.66	35	11.58	11.22	37	7.39	7.18	32	10.36	11.1	28
2022	14.98	15.12	36	13.07	12.55	38	8.93	8.45	36	11.96	12.49	33
2022 vs 2010	57%	31%		56%	23%		52%	25%		56%	27%	

Source: www.eia.gov/electricity/data/browser

For obvious reasons, power rates are an important determinant of desirability of location for businesses. As shown in Exhibit 2, Indiana’s power rates have increased at a greater pace than All States and its ranking has significantly worsened.

Exhibit 2

Indiana Rates versus All States and Indiana Rank



Source: www.eia.gov/electricity/data/browser

The Indiana legislature is raising the issue of affordability not because of a concern about the relative NPV rankings, but rather a concern about the rate impact upon consumers and economic competitiveness of the state.

Indiana is not the only state to include affordability as a consideration required for IRPs. Most recently, on March 29, 2023, Senate Bill 4 became law in Kentucky. It requires an affordability analysis specifically related to any coal plant retirements. Senate Bill 4 requires utilities to demonstrate “retirement no harm to the utility’s ratepayers by causing the utility to incur any net incremental costs to be recovered from

ratepayers that could be avoided by continuing to operate the electric generating unit proposed for retirement in compliance with applicable law”.¹⁶

CEI South should be required to develop annual estimates of rates at least for residential customers for the first 10 years of the analysis, as residential customers often bear a disproportionate share of the burden of rate increases.

Preferred Plan

CEI South’s preferred plan, which is relatively limited, includes:

- The addition of significant solar and wind energy resources in the near to midterm,
- The conversion of Culley Unit 3 from coal to natural gas by 2027, and
- Continued investment in energy efficiency and demand response resources.

CEI South’s decision to convert Culley Unit 3 to natural gas is premature , given the flaws in CEI South’s IRP analysis.

Prior Preferred Portfolio

The prior CEI South IRP concluded a generation transition was needed, “calling for replacement of the majority of CEI South’s coal fleet by the end of 2023 with 700-1,000 MWs of solar, 300 MWs of wind, energy efficiency and two gas combustion turbines while **retaining** FB Culley 3 coal resource”.¹⁷ With the new gas units at Brown just complete, CEI South is now seeking to convert FB Culley Unit 3 from a coal resource to natural gas despite its own reasoned IRP conclusion that it helped maintain diversity from less than three years ago.

Reasons Why Continued Coal Operations at Culley Unit 3 are Warranted

The IRP (without meaning to) provides multiple reasons for continuing to operate Culley Unit 3 as a coal plant.

- The estimated cost of the conversion in the IRP is \$53 million¹⁸, which does not include the cost of Firm Transportation. CEI South notes that based upon its experience at Brown with Firm Transportation these costs can be significant.¹⁹ Ratepayers will be asked to pay for the new capital, volatile gas prices, and firm transportation costs even if CEI South decides again in three years it would rather have a different type of plant.
- When operated as a coal plant, Culley Unit 3 is a hedge against power prices which are largely determined by natural gas prices. In 2021, the capacity factor for Culley Units 2/3 was 65.5%²⁰, the highest it had been in a decade due to high power and natural gas prices. Had this plant not been available as a coal plant, the produced cost of electricity would have been much higher.

¹⁶ <https://apps.legislature.ky.gov/law/acts/23RS/documents/0118.pdf>

¹⁷ IRP Volume 1, page 35 (emphasis added).

¹⁸ IRP Volume 1, Page 186.

¹⁹ IRP Volume 1, Page 187.

²⁰ EIA Form 923

- CEI South asked for and received approval in Cause No. 45052 for certain costs that would allow Culley Unit 3 to continue to operate, including the costs associated with compliance with Effluent Limitation Guidelines and Coal Combustion Rules. According to the IRP, the bottom ash system at F.B. Culley Unit 3 conversion to a dry system was completed in December 2020. The conversion of the FGD system to Zero Liquid Discharge (“ZLD”) technology was completed and in service on May 1, 2023. These two technologies make Culley Unit 3 fully compliant with the Effluent Limitation Guidelines (“ELG”) rule and the National Pollutant Discharge Elimination System (NPDES) permit requirements for Culley Unit 3.²¹ These compliance costs (which have significantly increased the undepreciated Culley costs) will not be fully depreciated by 2027.
- EPA issued its final rule regarding Section 316(b) of the Clean Water Act which established requirements for Cooling Water Intake Structures (CWIS) at existing facilities. Standard fine mesh and fish-friendly screens and fish return systems were estimated to be \$21 million at F. B. Culley. The F.B. Culley NPDES renewal permit was issued on February 1, 2023 with a March 1, 2023 effective date.²²
- Delivered fuel costs to Culley are as attractive as they were to AB Brown. Natural gas prices in 2022 were more than three times the price of coal.

Exhibit 3
Delivered Fuel Prices in 2022 (\$/MMBtu)

Plant	COAL		Natural Gas	
	Tons	\$/MMBtu	MMBtu	\$/MMBtu
AB Brown	1,449,395	228.9	1,307,857	770.5
Culley 2/3	467,428	238.3		

Source: EIA 923

- CEI South does not appear to have solicited bids from coal suppliers for its analysis of post-2023 operations. Competitive bids would be more reliable inputs into the IRP analysis, particularly given CEI South’s consent to increase assumed coal prices based solely upon an unnamed “stakeholder’s” recommendation.²³
- Culley Unit 3 has on-site coal inventory which provides a physical hedge against delivery problems. Gas supply would not have physical storage on-site and delivery is not guaranteed even if there is a firm transportation agreement.
- CEI South alleges a natural gas conversion saves customers nearly \$80 million over the next 20 years when compared to the operation of F.B. Culley with coal, and avoids \$170 million cost risk over this time period. These numbers are inflated. There is no basis to assume that CEI South

²¹Volume 1, page 78.

²² Volume 1, page 220.

²³ Volume 1, page 22.

would keep Culley Unit 3 on coal for more than a five to 10 year horizon, unless a future evaluation would show it had continuing economic value. On the other hand, retaining Culley Unit 3 on coal for the next five to 10 years is very likely to not only be economic but the safest strategy given the number of unknowns over the next five years. CEI South would have known this if it performed a true affordability analyses.

- Alternative strategies, such as long duration battery storage²⁴, could be available in the next five to 10 years. To state the obvious, Culley Unit 3 could continue to operate on coal during this period both (a) without incurring significant new investment costs that will increase undepreciated dollars in rate base and (2) with a continued reduction in its stranded costs, thereby reducing the costs associated with its closure when that occurs. Today, there are no long duration (multiple day) battery storage options that are commercially viable. When such resources, or other new technologies, become cost competitive, CEI South can reevaluate this option in future IRPs. Until such time, CEI South customers will benefit having F.B. Culley 3 operate with coal and they will not pay for the cost of converting it to natural gas.
- The addition of significant renewables will require generation from Culley Unit 3 due to the intermittent generation of renewables. Given CEI South's representation that a refueled Culley Unit 3 will only operate intermittently, challenges the appropriateness of the conversion.
- CEI South's justification for the conversion is as a protection for customers from a volatile MISO capacity market and that the conversion of Culley Unit 3 from coal to natural gas will only provide "peaking generation" and "will not run much"²⁵ is not believable given Culley's high capacity factor in 2021.²⁶

Good Neighbor Plan Stay and Proposed EPA Changes to Section 111(b) and 111(d) of the Clean Air Act

Recent developments in proposed changes to rules implemented under the Clean Air Act are also important to consider in analyzing the reasonableness of CEI South's Preferred Portfolio. Subsequent to the preparation (but not the publication) of the IRP, the Environmental Protection Agency's (EPA) final Good Neighbor Plan was stayed and EPA proposed changes to Sections 111(b) and 111(d) of the Clean Air Act related to Greenhouse Gas (GHG) emissions. Multiple courts supported the stay applications. This is significant, as the granting of the stay suggests legal merit of the arguments on appeal combined with irreparable harm if the rule is enforced pending legal resolution. The stay delays implementation of the Plan, which will affect the timing of the rule if the EPA prevails. As a number of utilities had announced plans to shutter if required to install Selective Catalytic Reduction (SCR), there could also be delayed retirements. Culley Unit 3 is already equipped with an SCR.

EPA's proposed changes to Section 111(b) and Section 111(d) of the Clean Air Act are related to GHG emissions from new gas and existing gas and coal plants, respectively. EPA, which received over one million comments on these proposed regulations, has plans to finalize the regulations in June 2024. New rules

²⁴ IRP Volume 1, Page 267.

²⁵ IRP Volume 1, Page 185.

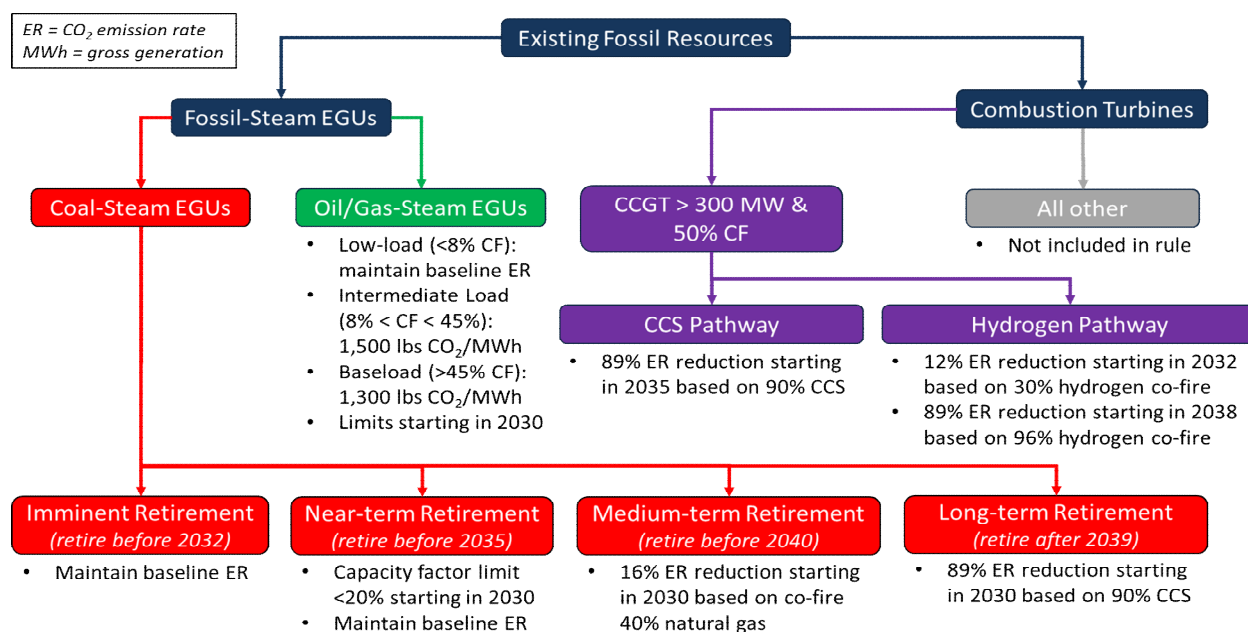
²⁶ EIA Form 923

cannot be legally challenged until finalized and published in the *Federal Register*. With respect to Section 111(b), new baseload natural gas combined cycle plants would by a date certain either be required to retrofit carbon capture or switch to low GHG hydrogen if they want to operate as baseload units, which are defined as 50% or greater capacity factor. New gas plants could comply by becoming intermediate load plants, with less than a 50% capacity factor. While this would not necessarily require an additional capital investment to the plant, it would increase costs per kwh as additional capacity will need to be constructed to meet system generation requirements.

Section 111(d)'s requirements for existing fossil plants are displayed in Exhibit 4. Existing coal plants have no compliance requirements if they retire by 2032. If not retired, existing oil/steam gas plants' requirements are tied to the capacity factor beginning in 2030. *In other words, no actions are required in this decade.* Thereafter, emission rates are set for the plants based upon load and, in the case of coal plants, retirement dates.

Exhibit 4

Section 111(d) Proposed Requirements



There is no basis in the interim for making commitments to close and/or convert Culley Unit 3 as the final rule will no doubt have differences with the proposed rule. Clearly, if the requirement to close Culley Unit 3 is the same as proposed for coal and natural gas in the final rule, there would be no reason to convert Culley Unit 3 to gas.

Conclusions

1. The Pillars in House Bill 1007 should be considered in the Director's Report. At a minimum, CEI South should perform a residential ratepayer analysis for the first 10 years of each proposal.

2. The IRP does not adequately demonstrate that the conversion of Culley Unit 3 is economic or in ratepayer's interest. Any CPCN request affecting Culley Unit 3 should include a true and accurate affordability analysis consistent with the spirit of HEA 1007. The Director should consider making this recommendation sooner rather than later, in order to provide CEI South with an adequate time to review and revise its IRP analysis prior to making its next CPCN filing.
3. It is inconsistent for CEI South to justify its resource plans related to carbon emissions given its failure to disclose the relevant Scope 3 emissions related to the production and transport of natural gas to AB Brown and potentially Culley Unit 3.
4. Given the pending EPA GHG Rules, it is premature and imprudent for CEI South to commit to close and/or convert Culley Unit 3 as the final rule will likely differ from the proposed rule. If the requirement to close Culley Unit 3 is the same as proposed for coal and natural gas in the final rule, there would be no reason to convert Culley Unit 3 to gas.