



SIERRA CLUB

September 28, 2023

Via email

Indiana Utility Regulatory Commission
Attn: Research, Policy, and Planning Division
101 W. Washington Street, Suite 1500 E.
Indianapolis, IN 46204-3407
bborum@urc.in.gov

Re: Sierra Club Comments on CenterPoint Energy Indiana South's 2022/2023 Integrated Resource Plan

Dear Dr. Borum:

Sierra Club offers these comments on CenterPoint Energy Indiana South's 2022/2023 Integrated Resource Plan. We have four recommendations for CenterPoint's resource planning. *First*, the costs and risks of operating Culley 3 on coal beyond 2027 and of maintaining Warrick 4 beyond 2023 are significant such that CenterPoint should end reliance on coal-burning as soon as possible. *Second*, CenterPoint should minimize its customers' exposure to gas risk by operating its gas units as peaking resources and continuing to work to deliver most of its customers' energy needs from zero-fuel-cost solar and wind resources. *Third*, CenterPoint should engage in a proactive procurement of renewables to limit the harm of interconnection and other delays toward achieving the lowest-cost, lowest-risk plan for customers. *Fourth*, CenterPoint should continue to evaluate and take advantage of the benefits that the Inflation Reduction Act can provide to CenterPoint and its customers, including with respect to the U.S. Department of Energy loan program for Energy Infrastructure Reinvestment.

I. The Costs And Risks of Burning Coal at Culley and Warrick Exceed the Benefits, And CenterPoint Should End Coal-Burning Operations As Soon as Possible.

CenterPoint's current plan to stop burning coal at the Culley plant by 2027 and to exit the Warrick unit 4 lease in 2023 is a good one for customers and the environment. In addition to the negative climate, air quality, and water impacts that come from burning coal, coal is an increasingly risky and expensive fuel source. We urge CenterPoint to fully commit to this 2027 deadline at Culley and begin work to transition that site off coal-burning as soon as possible. We make this appeal, even in light of the Company's stated plan to transition off coal, because failure to act quickly to procure replacement resources can result in delayed retirement, as we have seen for some coal units in Indiana and across the country. These delays expose customers to additional risk from fuel and energy market exposure. Ending coal-burning operations at Culley by 2027 and exiting the Warrick 4 lease in 2023 is the best option for CenterPoint and its customers. The Company should proactively procure sufficient replacement resources to achieve cessation of coal-burning as scheduled.

Environmental requirements will increase the cost of burning coal at Culley and Warrick. U.S. EPA's March 2023 Good Neighbor Plan final rule to reduce cross-state ground-level ozone will significantly increase the cost of burning coal at Warrick and Culley. For ozone season 2025, for example, U.S. EPA has allocated nitrogen oxide ("NOx") emissions allowances for Culley unit 3 of 336 tons, which is significantly lower than 2021 actual ozone-season emissions, which were 650 tons.¹ To operate Culley unit 3 through ozone season 2025, CenterPoint would likely have to buy costly NOx allowances. While U.S. EPA has not yet calculated NOx allowances for ozone seasons after 2025, the Culley NOx allowances will decline each year along with Indiana's overall state allocation up till the rule is fully implemented in 2029.² Specifically, Indiana's allocation decreases by roughly half from 2025 (11,413 tons) to 2029 (5,808 tons).³ The specific price for NOx allowances in future years is not known of course, but they are expected to be more expensive than recent-year NOx allowances as U.S. EPA seeks to reduce the public health harms caused by ground-level ozone. As AES Indiana witness David Jackson has explained in that company's fuel docket, the cost of these allowances has already been impacting coal plant operations:

Seasonal NOx pricing saw a dramatic increase and impacted power pricing for the three months of the historical FAC period. Seasonal NOx prices began the year near \$3,300/ton and increased to \$30,000/ton to start the Seasonal NOx period (May through September).

¹ See U.S. EPA, "Unit-level Allocations and Underlying Data For The Final Rule," *Underlying Data on FIP tab, lines 210, 358*, available at: <https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs>

² See U.S. EPA, *State Budgets Under the Good Neighbor Plan for the 2015 Ozone NAAQS*, available at: <https://www.epa.gov/csapr/state-budgets-under-good-neighbor-plan-2015-ozone-naaqs>

³ *Id.*

Seasonal NOx pricing continued higher during the historical FAC period approaching \$40,000/ton. This increases the cost of generation significantly in units without NOx removal equipment and was a factor in higher power prices.⁴

These costs will increase now that a more stringent cross-state ozone rule has been made final by U.S. EPA. If we assume that NOx allowances cost \$40,000/ton—they will likely be higher because the Good Neighbor Plan is more stringent than existing requirements—then CenterPoint would have to spend \$13 million on NOx allowances simply to operate Culley Unit 3 for the 2025 ozone season. The cost in subsequent ozone seasons would be higher.

Furthermore, U.S. EPA's currently pending review of Indiana's Regional Haze plan could impose NOx, sulfur dioxide, and particulate matter reductions at Culley and Warrick, and other Indiana coal plants. Such a federal rule would increase the cost to operate Culley and Warrick, beyond those costs modeled in this CenterPoint IRP.

Finally, by retiring its coal units before 2032, CenterPoint avoids potentially costly environmental regulation under the proposed Clean Air Act Section 111(d) performance standards for greenhouse gas emissions.⁵ Under EPA's proposed rulemaking, coal units that retire before 2030 will not need to install additional control measures or limit their operations, while those that remain online longer will need to limit their capacity factors, co-fire with natural gas, or install carbon capture and storage.

Coal-burning units, including CenterPoint's units, are increasingly unreliable.

Recent events show clearly that the risks of continued reliance on CenterPoint's coal-fired generation resources are not just hypothetical but very real. The boiler feed pump turbine at F.B. Culley 3 failed in June 2022,⁶ and it was offline until March 2023.⁷ CenterPoint's best repair option was to procure a replacement part from a retired coal plant in Montana.⁸ This is just one example of how maintaining and repairing aging legacy resources can cause reliability

⁴ IURC Cause No. 38703, FAC 137, Direct Testimony of David Jackson on Behalf of AES Indiana, prefiled on Sept. 16, 2022, p. 22.

⁵ New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, 88 FR 33240, May 23, 2023 (requiring coal units that operate beyond 2030 to reduce GHG emissions by reducing operation, installing CCS, or by other means).

⁶ Indiana Utility Regulatory Commission Cause No. 38708 FAC 137. Direct testimony of Wayne D. Games. Page 19.

⁷ EIA Form 923 with data through March 2023.

⁸ Indiana Utility Regulatory Commission Cause No. 38708 FAC 137. Direct testimony of Wayne D. Games. Page 19.

challenges and increasing risks to customers in general. Similarly, A.B. Brown 1 and 2 both experienced forced outages during winter storm Elliott in December 2022.⁹ On December 22, Brown Unit 1 was operating at full load when the level transmitter on its deaerator froze and it tripped offline. Brown Unit 2 also tripped offline on December 22 due to frozen transmitters. Over the next ten days, the plant experienced an additional three forced outages caused by frozen equipment and inability to operate while maintaining environmental compliance. In addition to equipment failures, coal plants are susceptible to forced outages caused by external factors, including fuel supply delays or shortages. Indiana utilities have had difficulties with coal deliveries in recently years, including CenterPoint and Duke Energy Indiana, and those difficulties are certain to increase as coal mines close and remaining firms increase their market power.

CenterPoint's modeling in this IRP clearly shows economic benefits to customers from exiting coal as the Company has proposed. Because of the poor performance of these units in recent years, there are also strong reliability imperatives for retiring these coal-burning units.

Coal plants, including those that rely on Illinois Basin coal like CenterPoint's units, expose ratepayers to risk from fuel price volatility and seller-side market power. Coal plants also expose ratepayers to risk from fuel price volatility and, increasingly, market power from an industry with a declining number of sellers. In 2022, coal prices rose dramatically in several regions of the United States,¹⁰ including the Illinois Basin, where CenterPoint sources its coal (Figure 1).¹¹ As the number of mines declines, the remaining coal producers have increased market power; in 2022, they responded to global market conditions that increased the price of gas by increasing their own coal prices. As an executive for a Kentucky utility explains, this market power problem for coal procurement will only increase over time:

[C]oal production and the number of mines have been declining for years, and the trend in increases in coal prices is likely to continue as U.S. coal generation is retired. [] [In the past coal-on-coal competition kept coal prices in check when natural gas prices increased. That form of competition is disappearing and will not improve in the future as domestic coal generation retires.¹²

⁹ Indiana Utility Regulatory Commission Cause No. 38708 FAC 138. Direct Testimony of Wayne D. Games. Page 22.

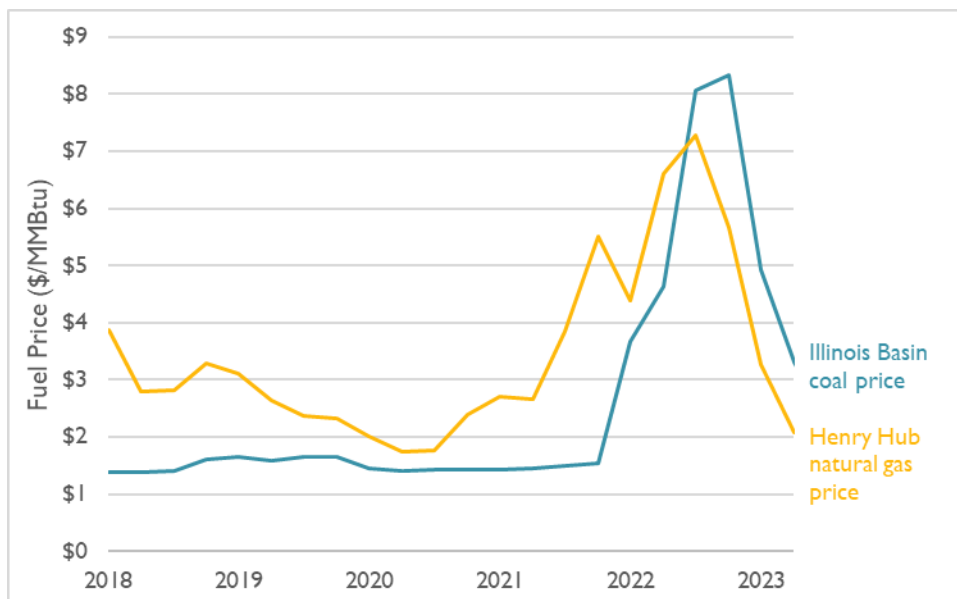
¹⁰ U.S. Energy Information Administration. 2023. *Coal Markets Archive*. Available at: <https://www.eia.gov/coal/markets/>

¹¹ U.S. Energy Information Administration. 2023. *Form EIA-923 detailed data with previous form data*. Available at: <https://www.eia.gov/electricity/data/eia923/>

¹² Rebuttal Testimony of David Sinclair on behalf of LGE&KU, Docket No. 2022-00402, Kentucky Public Service Commission, pp. 52-54, dated Aug. 9, 2023, *available online at*: https://psc.ky.gov/pscccf/2022-00402/rick.lovekamp%40lge-ku.com/08092023092551/06-Sinclair_Rebuttal_Testimony_2022_00402.pdf

The coal and gas price spike in 2022 is notable because it marks the beginning of a new era in the nation’s energy supply; the coal industry will continue to contract as the U.S. economy decarbonizes, and coal price volatility will likely become the norm. Coal procurement will face the continued challenge of seller-side market power during times of high gas prices where there is no viable alternative for a utility that has remained committed to coal generation.

Figure 1. Coal and natural gas spot prices, 2018 – 2023. Prices rose sharply in 2022 and will likely continue to be volatile in the future.



Exposure to fuel price volatility has direct negative effects on Indiana electric customers. For example, Duke Energy Indiana sought two large residential rate increases in 2022 (the first one a 16 percent rate increase and the second an additional 7.5 percent) as a result of the increases in coal and natural gas prices.¹³ While Duke was able to lower rates in 2023 as fuel prices fell,¹⁴ this lack of stability hurts customers financially and makes it more difficult for them to plan for their energy bills.

¹³ Schneider, K., “Duke Energy Indiana seeking new temporary rate hike due to increasing fuel costs.” *IndyStar*. August 4, 2022, available at: <https://www.indystar.com/story/news/2022/08/04/duke-energy-customers-second-temporary-rate-hike-2022/65392076007/>

¹⁴ Duke Energy Press Release. “Duke Energy request to reduce fuel electric rate approved by Indiana Regulators.” March 30, 2023. <https://investors.duke-energy.com/news/news-details/2023/Duke-Energy-request-to-reduce-fuel-electric-rate-approved-by-Indiana-regulators/default.aspx>

II. As CenterPoint Transitions From Coal, the Company Should Minimize its Pivot Towards Gas Resources.

While removing coal capacity is a major step forward, the Company plans to add over 700 MW of natural gas capacity over the next five years (two new 230 MW combustion turbines and 270 MW from the conversion of F.B. Culley 3). Reliance on natural gas creates risk of its own, so CenterPoint should be careful to adhere to its plan to operate these units as primarily as capacity resources, not energy resources. The Company should strive to procure renewables as quickly as possible, as explained below, to reduce how much it relies on its fossil plants for energy.

We strongly urge against the future conversion of the two new combustion turbines to combined cycle units. This would create a similarly risky situation as the coal units, making CenterPoint vulnerable to fuel price volatility and stranded asset risk, as well as reducing the Company's future flexibility to decarbonize its generation mix. In particular, CenterPoint will be vulnerable to fluctuations in natural gas prices, which were also at their highest level in a decade in 2022 (Figure 1, above). Furthermore, CenterPoint's plan to operate the combined cycle units as baseload if a large load is added to the system¹⁵ would open up the units to more stringent regulation under Section 111(d). For gas combustion turbine and combined cycle units that come online in 2025 and after, the level of regulation under the proposed 111(d) regulations depends on the capacity factor of the units. Baseload units (capacity factor of 50 percent or greater) face the strictest requirements to either blend hydrogen or install carbon capture and storage.¹⁶

III. CenterPoint Should Engage in Proactive Procurement of Renewables to Limit the Harm of Interconnection and Other Delays Toward Achieving the Lowest-Cost, Lowest-Risk Plan for Customers.

Solar and wind provide low-cost energy, but siting and constructing these resources takes time, especially with supply chain challenges. As a result, just-in-time resource planning is increasingly inadequate to meet the needs of ratepayers now and will likely become even more so over the next decade and beyond. As the Company notes in its Short Term Action Plan, "Given fundamental changes in the market, renewables projects now require much longer lead times than in previous IRP cycles. There will not be time to wait for the next IRP to begin pursuing suitable projects to meet the needs of CEI South customers by 2030."¹⁷

¹⁵ CenterPoint Energy. "2022/2023 Integrated Resource Plan." Page 39. Available at: <https://midwest.centerpointenergy.com/assets/downloads/planning/irp/2022-2023%20IRP%20-%20Volume%201%20of%202.pdf>

¹⁶ Knight, P. 2023. "EPA Tees Up Latest Set of Greenhouse Gas Standards for Power Plants." <https://www.synapse-energy.com/epa-tees-latest-set-greenhouse-gas-standards-power-plants>

¹⁷ CenterPoint Energy. "2022/2023 Integrated Resource Plan." Page 281. Available at: <https://midwest.centerpointenergy.com/assets/downloads/planning/irp/2022-2023%20IRP%20-%20Volume%201%20of%202.pdf>

To adapt to changing paradigms in the power sector—including broad-scale decarbonization—CenterPoint should recognize the energy value of renewables and push to bring renewables online on a rolling basis and whenever they are economically available, rather than trying to align resource additions perfectly with capacity needs. Early renewable procurement will ensure that CenterPoint has a back-up if an existing resource fails or new ones are delayed, it will help CenterPoint keeps pace with national policy development, and it will give the Company an opportunity to learn how to manage a system with a high level of renewable penetration, providing a safety net for system reliability. Proactive renewable procurement is especially important given the delays that existing renewable projects throughout Indiana are facing, including some projects planned by CenterPoint.

Starting to site renewables now is important so that any delay do not harm customers by forcing them to pay for additional fossil generation, gas conversions, or capacity purchases to make up for shortfalls when existing resources fail or new projects are delayed. Once constructed, solar, wind, and storage resources have zero fuel costs, so they shield customers from the fuel price volatility inherent with reliance on fossil resources.

Finally, as a voting member of MISO, CenterPoint should push for reform in the MISO interconnection queue to enable the timely addition of renewables in the future. While recent FERC reforms will help to reduce interconnection wait-times by moving to a first ready, first served approach for project approval and mandating clustered interconnection studies,¹⁸ there are additional opportunities for reforms specific to MISO, including the ongoing work of the Interconnection Process Working Group.¹⁹ CenterPoint should not passively accept long wait-times for renewable interconnection but should instead work to open up this bottleneck on renewable expansion in the region.

IV. CenterPoint Should Continue to Evaluate and Take Advantage of the Benefits That the Inflation Reduction Act Can Provide to its Customers, Including from the U.S. DOE’s Loan Programs.

CenterPoint should take full advantage of the Inflation Reduction Act (“IRA”) opportunities and tax credits in future procurements of renewables and battery storage, and explore what other opportunities and incentives the IRA offers for its ratepayers.

First, CenterPoint should consider an application to the U.S. DOE Energy Infrastructure Reinvestment Loan Program to lower the cost of replacing its retired or retiring coal units. To incentivize replacement of fossil fuel infrastructure with clean energy investments, U.S. DOE’s Loan Programs Office (“LPO”) has been allocated \$250 billion in loan guarantee authority to fund “projects that retool, repower, repurpose, or replace energy infrastructure that has ceased

¹⁸ FERC Order 2023. Available at: <https://www.ferc.gov/media/e-1-order-2023-rm22-14-000>.

¹⁹ MISO. 2023. “Generator Interconnection Queue Improvements.” Available at: <https://cdn.misoenergy.org/20230719%20PAC%20Item%20006%20GI%20Queue%20Improvements%20Proposal629634.pdf>

operations”²⁰ for conditional project commitments through September 30, 2026. LPO’s guidance on EIR eligibility illustrates several hypothetically-qualifying projects such as the replacement of retired coal and gas-fired power plants with renewable energy sources and storage, including environmental remediation efforts for on-site coal ash ponds as eligible activities.²¹ This program can also fund transmission-related projects to bring renewables online.²² Under the EIR, utilities such as CenterPoint receive loan guarantees at much lower interest rates than the utility’s rate of return or compared to commercial interest rates,²³ which can cover up to 80% of projects costs, with many applicants receiving loans to cover 50-70% of project costs.²⁴ Given that CenterPoint is already planning to retire Brown and Culley coal units, the Company should take advantage of this opportunity for low-interest and relatively low-risk refinancing, which could lower the costs of retiring and replacing the units with clean energy sources. It would be a missed opportunity for CenterPoint to forgo applying to the EIR program to reduce costs.

Second, in addition to generous base clean energy tax credits, many sites within the CenterPoint service area will be eligible for bonus tax credits from the energy community adder (Figure 2).²⁵ All census tracts in which a coal mine has closed after 1999 or a coal-burning electric generating unit after 2009—and all census tracts adjacent to a tract where a coal-fired unit retired—are eligible.²⁶ This means that if renewables are sited at or near any retiring coal plants or closed coal mines, they are eligible for additional tax credits. In this way, tax credits should be incorporated not just into modeling analysis, but they should help drive siting decisions.

²⁰ Inflation Reduction Act, Section 1706(a)1-2.

²¹ Department of Energy, Loan Programs Office, “Program Guidance for Title 17 Clean Energy Financing Program” at 28-30, (May 19, 2023), *available at*: <https://www.energy.gov/lpo/articles/program-guidance-title-17-clean-energy-program#page=1>.

²² *Id.*

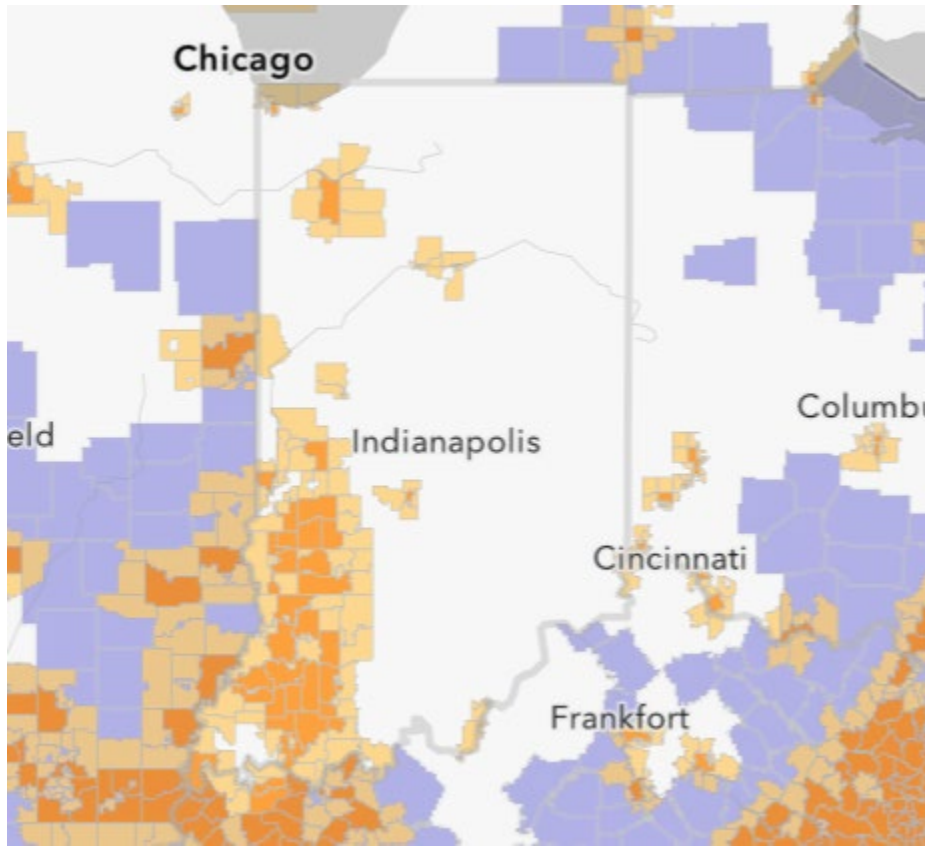
²³ Christian Fong et al., “The Most Important Clean Energy Policy You’ve Never Heard About,” Rocky Mountain Institute, (Sept. 13, 2023), *available at*: <https://rmi.org/important-clean-energy-policy-youve-never-heard-about/>.

²⁴ Department of Energy, Loan Programs Office, “Program Guidance for Title 17 Clean Energy Financing Program” at 9, (May 19, 2023), *available at*: <https://www.energy.gov/lpo/articles/program-guidance-title-17-clean-energy-program#page=1>.

²⁵ U.S. Department of Energy. 2023. “Energy Community Tax Credit Bonus.” Available at: <https://arcgis.netl.doe.gov/portal/apps/experiencebuilder/experience/?id=a2ce47d4721a477a8701bd0e08495e1d>

²⁶ Raimi, D and Pesek, S. 2022. “What Is An “Energy Community”? Alternative Approaches for Geographically Targeted Energy Policy.” Resources for the Future. Report 22-12.

Figure 2. Eligibility for the IRA energy community adder. Dark orange indicates census tracts with coal closures and light orange the directly adjoining tracts. Purple areas meet the fossil fuel employment and unemployment rate thresholds.



CenterPoint should keep a careful eye on the incentive and opportunities that the IRA tax credits creates for CenterPoint to procure low-cost renewables and storage, even in the current market with supply chain disruptions and inflationary pressures.

* * *

If you have any questions or would otherwise like to discuss this letter, please do not hesitate to contact us. Thank you for your consideration.

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