



November 13, 2020

Via Electronic mail

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's Comments on Vectren's 2019/2020 Integrated Resource Plan

Dear Dr. Borum:

On behalf of Sierra Club and its more than 11,100 Indiana members, including many who are Vectren electric customers, we submit these comments regarding Vectren's 2019/2020 Integrated Resource Plan ("Vectren IRP"). Vectren's IRP will have tremendous consequences for the health and well-being of Hoosiers for years to come. Throughout this IRP process, Sierra Club has urged Vectren to prepare for a clean-energy transition, to gather up-to-date data from industry through a wide-reaching request for proposals ("RFP"), and to select a preferred portfolio that minimizes future risks for both the Company and its customers, while reducing public health and climate harms from electric generation. While we commend Vectren for its issuance of an all-source RFP that was integrated into the IRP process and its intent to invest in renewable resources, Vectren's IRP has two core failures that are likely to increase customers' costs and harm to the environment.

First, Vectren should reevaluate its decision to sink customers' money into Cully unit 3 now that the Effluent Limitations Guidelines ("ELG Rule") has been revised to allow that unit to operate through 2028 with no additional ELG Rule capital spending. In 2019, the Commission granted a CPCN to allow Vectren to charge the costs of a Culley unit 3 retrofit—\$62 million—to ratepayers based on the ELG Rule that existed at the time. Since that CPCN was issued, however, the ELG Rule was changed, allowing operators to avoid such extensive retrofit costs *if* the facility retires by 2028. Given this change, which allows Vectren and ratepayers to avoid these significant compliance costs entirely if Vectren retires Culley unit 3 by 2028, Vectren should reevaluate the economics of Culley unit 3's continued operation after this date and assess whether the retrofit costs are worth its continued operation, especially given the long-term trends

in relative cost of coal and other resources. Customers should not be assessed an avoidable cost to enable the open-ended use of a facility whose long-term viability has not been adequately studied. We respectfully ask that when the Director issues his report on this IRP that the Director urge Vectren to supplement its IRP to study the ELG Rule compliance options as they exist today, before Vectren sinks costs into a coal-fired unit that the Company acknowledges is high-cost compared to alternatives.

Second, we ask that the Commission Staff caution Vectren against proceeding with procuring two new large combustion turbine gas plants because Vectren failed to weigh the risk that these units would become stranded assets during the otherwise expected useful life. Related, Vectren found that the “Renewables By 2030” portfolio cost a mere \$23 million more (present value) than the selected preferred portfolio (which includes the CTs), and results in an 80% reduction in CO₂ (versus 60% in the preferred portfolio). As Vectren has acknowledged, its customers prefer clean energy. Vectren appears to have selected the “High Technology” portfolio based on weighing overall market-purchases related risk and, in part, with an overstatement of load growth. But Vectren should have weighed the risk that new gas units will become stranded assets far earlier than their intended useful lives. Simply put, customers could have more clean energy for the same price, lower long-term risk, and much less pollution. At a minimum, Vectren should study the best means to meet its separate needs for summer and winter peaking power in its next IRP or at least before it commits to any new peaking resources.

As explained below, both of these failures of evaluation constitute failure to comply with the Indiana IRP rule requirements.¹ The IRP Rule requires Vectren to study costs of compliance with environmental regulation and the risks associated with resource planning decisions. Vectren had failed to do both.

I. Vectren should update its 2019/2020 IRP Report to reflect recent changes to environmental regulations and model a potential 2028 retirement of Culley Unit 3.

Before committing customers' money—\$62 million in ELG Rule compliance costs²—into a potential stranded asset, Vectren should reevaluate the decision to convert Culley unit 3 to dry ash handling to comply with the ELG Rule, rather than meet the ELG Rule requirements by retiring the unit in 2028. Last year, as Vectren was beginning its IRP process, the U.S. Environmental Protection Agency (“EPA”) proposed a revision to the ELG Rule that allowed a utility to avoid converting to dry ash handling by the then-existing December 2023 deadline if the unit was committed to cease coal-burning by December 2028.³ Soon after Vectren filed this

¹ See 170 IAC 4-7.

² Vectren IRP, page 208.

³ Proposed ELG 84 Fed. Reg. 64,620, 64640 (Nov. 19, 2019) (“The EPA is proposing to establish a new subcategory for boilers retiring by 2028 based on the statutory factors of cost, the

IRP, the EPA finalized that 2028 retirement option provision.⁴ The other major federal rule that applies to coal ash handling, the Coal Combustion Residuals (“CCR”) Rule, 40 C.F.R. § 257, also includes provisions that allow continued use of coal waste units, such as the Culley ash pond, beyond otherwise-required deadlines where an operator commits to retiring the unit by dates certain.⁵ Before spending customers’ money to complete a major retrofit project, Vectren should evaluate whether a retirement date for Culley unit 3 by 2028 serves customers’ best interests. As filed, Vectren’s 2019/2020 IRP neglects to study the economics of Culley unit 3 under the revised ELG Rule; however, the utility has an ongoing obligation to assess the prudence of its operations at every stage of implementation of compliance, including where the underlying law has changed during the IRP process.

In February 2018, Vectren filed a case at the Commission seeking Certificates of Public Convenience and Necessity (“CPCN”) to make modifications for bottom ash conversion to dry processing at Culley unit 3 in order to continue operating the unit while complying with environmental regulations and to construct a proposed 700-850 MW Combined Cycle Gas Turbine (“CCGT”). In its final order in April 2019, the Commission approved issuance of CPCN authorizing Vectren’s application to retrofit Culley unit 3, Vectren’s preferred means to comply with the federal ELG and CCR Rules at the time of the proceeding.

In that same order, the Commission denied a CPCN for a proposed CCGT facility. In rejecting the construction project, the Commission cautioned that Vectren had not sufficiently evaluated the risks associated with a long-term commitment to the use of gas resources, given energy market trends. The Commission observed that “[t]he pre-approval of long-lived power plant investment and the concurrent assurance of that investment’s recovery is . . . the creation of fixed costs that customers will be required to pay . . . years into the future.”⁶ Such fixed costs over such a long time frame should be entered into with an abundance of caution. This reasoning applies equally to the Culley unit 3 retrofits now that the ELG Rule has changed. Rather than a federally-mandated expenditure, the \$62 million retrofit cost is effectively an investment in the operation of that coal facility *after* 2028, an operation which Vectren has not adequately evaluated.

Crucially, however, Vectren did not incorporate the proposed revisions to the ELG Rule in its IRP and instead *relied* on the Commission’s approval of the retrofit project to justify its continued operation of Culley unit 3 without further modeling. In August 2019, Vectren began

age of the equipment and facilities involved, non-water quality environmental impacts (including energy requirements), and other factors as the Administrator deems appropriate.”).

⁴ Final ELG, 85 Fed. Reg. 64,650 (Oct. 13, 2020).

⁵ 40 C.F.R. § 257.103(f) (CCR provisions related to coal units that cease operation by a date certain).

⁶ Order, 2019 Vectren CPCN, Cause No. 45052 at 20 (April, 24, 2019).

work on its 2019/2020 IRP, which culminated in the submission of their report in June 2020. Vectren's report cites the Commission's 2019 approval of the ELG retrofit project as reason not to evaluate the economics of Culley unit 3's continued operation.⁷ But Vectren should have known based on EPA's November 2019 proposed rule that the ELG Rule requirements were likely to change, making the retrofit project an *option* rather than a *mandate* and should have at least studied the retirement option(s) that were provided in the proposed rule. In its IRP, Vectren should have at least modeled some scenarios that considered how the economics of the 2028 retirement option in the proposed ELG Rule might compare to the retrofit that had previously been approved. In any event, now that those options are final rule requirements, Vectren must update its evaluation.

The final ELG Rule includes an extension of the compliance deadline for elimination of bottom ash discharges until the end of 2025 and a provision that allows sources to avoid compliance if the operator commits to cease burning coal and retire the coal plant by 2028.⁸ Vectren should halt work on the bottom ash conversion project and study whether the 2028 ELG retirement option combined with similar options in CCR rule would benefit customers.

The failure to study the compliance options as they exist today means that Vectren has failed to comply with a core requirement of the Indiana IRP rule, namely by failing to include a "discussion of how compliance costs for existing or *reasonably anticipated* air, land, or water environmental regulations impacting generation assets have been taken into account and influenced the IRP development."⁹ Specifically, there is no discussion at all of the ELG and CCR compliance costs as they exist today in the Vectren IRP. And while Vectren did not study the ELG or CCR compliance options that exist today, it did acknowledge that maintaining Culley unit 3 will increase customers' costs: "Based on updated reference case modeling in this IRP, that premium [for maintaining Culley unit 3] is estimated to be about ~0.5% in total NPV for continuing to run the plant through 2034."¹⁰

Sierra Club respectfully asks that the Director's Report on Vectren's IRP acknowledge that Vectren has failed to address the IRP rule requirement to study the costs of compliance with existing environmental regulations, specifically the ELG Rule and the CCR Rule as they exist today. Vectren should update its resource planning to study the retirement option for compliance with these rules. As filed, the Vectren IRP fails to comply with the IRP Rule's requirements to

⁷ Vectren IRP, page 284 ("Based on the Commission's 2019 approval, Vectren is proceeding with the installation of the F.B. Culley Unit 3 mandated environmental compliance projects. The new pollution control equipment installations are in various stages of engineering and planning with the expected in-service dates meeting the defined timelines.").

⁸ 85 Fed. Reg. 64,650 (Oct. 13, 2020).

⁹ 170- IAC 4-7-4(23) (emphasis added).

¹⁰ Vectren IRP, page 211.

even discuss compliance costs for existing and reasonably anticipated environmental compliance costs facing Cully unit 3.¹¹

II. Vectren’s Stated Need for New Combustion Turbine Peaking Gas Plants Is Unsupported, and Vectren’s Plan to Build Those Gas Plants is Risky.

The Indiana Commission has repeatedly stated that maintaining flexibility with respect to generation resources should be a priority for Indiana utilities. In this light, Vectren should reevaluate its selection of a portfolio that includes the construction of two combustion turbines—two 236.6 MW units, one in 2024 and another in 2025¹²—as a near-term part of its preferred portfolio for several reasons. The portfolio that includes these turbines, the preferred High Technology Portfolio, was projected to have roughly the same cost as the Renewable 2030 portfolio, which entails the construction of new wind, solar, and storage resources but no new gas. (Based on Vectren’s report the anticipated net present value revenue requirement cost difference would be a mere 0.8%.) But with carbon regulation likely over the 25-to-30-year lifespan of any new gas plant and the cost of renewables and storage continuing to decline, spending on new gas plants is likely to lead to stranded assets. Given the existence of an alternative portfolio that involves similar costs to customers but that does not require the construction of new gas resources, Vectren cannot justify its selection of an option requiring the stranded asset risk and increased emissions associated with new gas construction, especially where Vectren has failed to adequately study that stranded asset risk.

Vectren’s selection of the High Technology portfolio and thus of new gas construction over the Renewables 2030 portfolio rests on two faulty assumptions. First, Vectren justifies the selection of the gas plants as a means of meeting peak energy needs. In doing so, however, Vectren failed to weigh the benefits of such peaking availability against the risk of these units becoming stranded assets. It is unclear what Vectren’s asset lifetime assumption is for the combustion turbines, but it is reasonable to assume that Vectren plans to run the CTs for 20 or more years. (Indeed, the absence of an asset lifetime estimate for these proposed facilities within the IRP raises concerns about how thoroughly Vectren investigated this alternative.) Construction of the CTs thus creates a huge stranding risk for Vectren and its customers. A resource becomes stranded when the cost of its continued operation actually *exceeds* the cost of new construction to replace it. Given the price and performance trajectories of wind, solar, and storage technologies, the stranding risk for CTs (which will entail potentially volatile fuel costs for their entire lifespan) is high. Vectren, however, did not evaluate this risk. Vectren *did* consider the risk that these CTs would become “uneconomic,” *i.e.*, incur negative energy sale

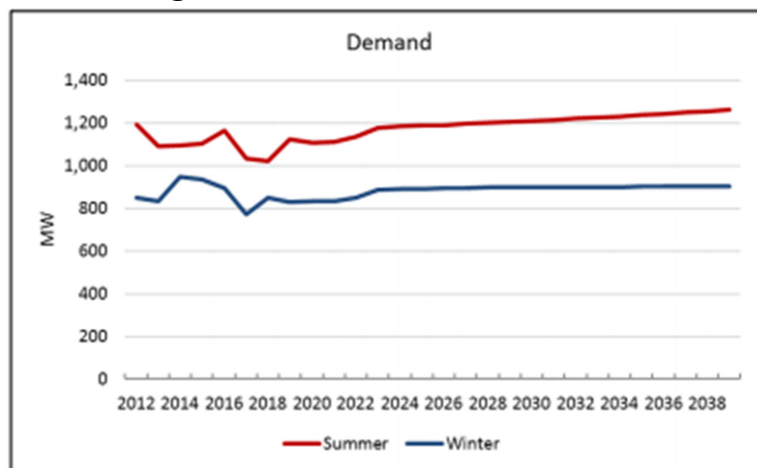
¹¹ 170- IAC 4-7-4 (“A discussion of how compliance costs for existing or reasonably anticipated air, land, or water environmental regulations impacting generation assets have been taken into account and influenced the IRP development.”).

¹² Vectren IRP, page 254.

margins over a three year period, due to the decreased price of renewables and concomitant drops in energy prices in the MISO market. This was a fine start and related to studying stranding risk, as energy market prices are related to the cost of new alternative construction. But Vectren ultimately downplayed this risk and did not incorporate it into its final portfolio selection, stating: “Ultimately the value of this metric is questionable.”¹³ But the core task of an utility embarking on an IRP is to evaluate precisely whether the construction of a resource will be the best economic option for the utility and its customers over the life of that resource, and develop a portfolio and plan for resource selection and construction accordingly. Stranded asset risk assessments provide one metric toward making this determination. Vectren abdicated its core responsibility as part of the IRP process by failing to incorporate this forward-looking viewpoint in its assessment of the expected value of the proposed CT facilities.

Second, Vectren’s projection of increasing load during the 2020s, especially an abrupt jump upwards around 2025, is unsupported and should be reevaluated before the Company invests significant customer funds into the construction of peaking resources.

Figure 1: Vectren IRP Demand Forecast



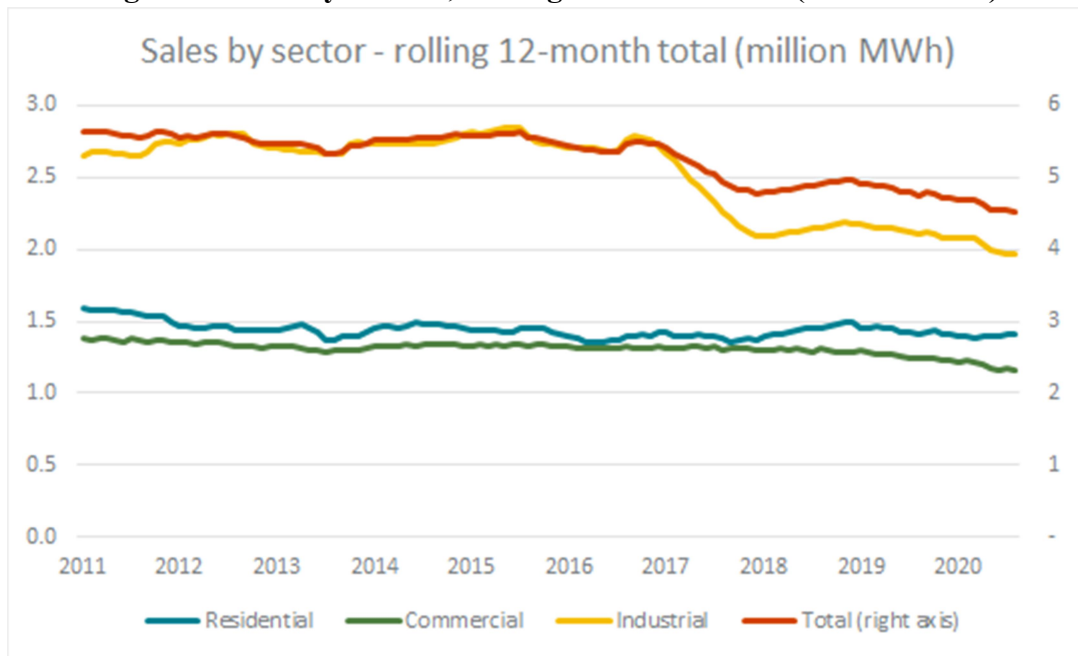
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Vectren’s projection of significantly increased load is in stark contrast to the decreasing demand that the Company has experienced for the last decade and in particular the last three years. In Figure 7.1 in the IRP, Vectren’s reference load forecast begins at 5.4 million MWh in 2020. Its 2019 sales were 4.7 million MWh (a discrepancy with the 2020 load forecast of 15%!) and the 12-month rolling total through Aug 2020 has fallen to 4.5 million MWh (due in part to the pandemic).

¹³ Vectren IRP, page 262.

¹⁴ Vectren IRP, page 40.

Figure 2: Sales by Section, Rolling 12-Month Total (million MWh)



Most strikingly, the industrial customer segment has shown a dramatic decrease in demand in recent years. Residential and commercial demand has been flat or slightly declining. Vectren studied the mean absolute error for its past energy requirements forecasts for each customer segment and found errors of -1.5% for residential, -7.2% for commercial, and -3.2% for industrial comparing 2016 IRP forecast for 2018 levels to actual 2018 levels.¹⁵ In other words, Vectren’s past load forecasts have all been incorrect in the same direction: projecting load that is too high.

In sum, Vectren’s case for the new CTs is weak while the risks associated with building new gas plants are high. At a minimum, the Company should wait until its next IRP before committing itself and customers to spending on the CTs. As the Company acknowledges these units can be built quickly if in fact they are needed at all.¹⁶ The Company is planning to begin its 2022 IRP process just one year from now, which will provide another opportunity for Vectren to consider new construction if there is a significant change in the direction of load trends. In the meantime, Vectren should not plan on the construction of new unneeded fossil generation in a regulatory climate in which carbon regulation is increasingly likely.

¹⁵ Vectren IRP, page 295-304 (Section 11.1.3).

¹⁶ Vectren IRP, page 36 (“New combustion turbines can come online quickly . . .”).

Sierra Club respectfully asks that the Director's Report on this IRP acknowledge that Vectren's current IRP fails to address the requirement that it evaluates this core risk to customers of the CTs becoming stranded assets.

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Sierra Club appreciates the opportunity to comment on this Vectren IRP and we would be pleased to discuss these comments further with the Director.

Respectfully submitted,

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