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# OHIO LEGISLATIVE SERVICE COMMISSION

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Legislative Budget  
Office

R-133-4783

**To:** The Honorable Laura Lanese  
Ohio House of Representatives

**From:** Russ Keller, Senior Economist *RK*

**Date:** September 9, 2020

**Subject:** Questions about H.B. 6 memorandum

Your aide forwarded, on September 2, correspondence that contained numerous questions about a previously prepared LSC memorandum, R-133-4096. The questions in that correspondence can largely be answered with a broad treatment on (1) cost-based utility regulation, (2) cost effectiveness of energy efficiency, (3) the recently enacted decoupling mechanism, and (4) alternative energy requirements.

R-133-4096 provided an estimate of the effect of H.B. 6 of the 133<sup>rd</sup> General Assembly on utility compliance costs over a multiyear period. The questions forwarded by your aide included the request that “LSC should clarify whether its existing analysis [i.e., the memorandum] addresses the following points . . . .” To clarify, the LBO analysis did not attempt to evaluate the broader impact of H.B. 6 on federally regulated wholesale electricity markets, or on wholesale electricity prices or the associated transmission costs. The remainder of the memorandum expands upon that brief summary response.

## **Overview: market-based pricing versus cost-based regulation**

Ohio’s six regulated electric distribution utilities (EDUs) deliver more than 87% of Ohio’s power to distinct territories across the state. Given the inherent monopolies, their distribution business is subject to state regulation. The Revised Code offers utilities the option of pricing the generation portion of the electricity they deliver through a “market rate offer” or an “electric security plan” (ESP), of which the latter can be approved by the Public Utilities Commission of Ohio (PUCO) only if it offers quantitative and qualitative benefits over the market rate offer.

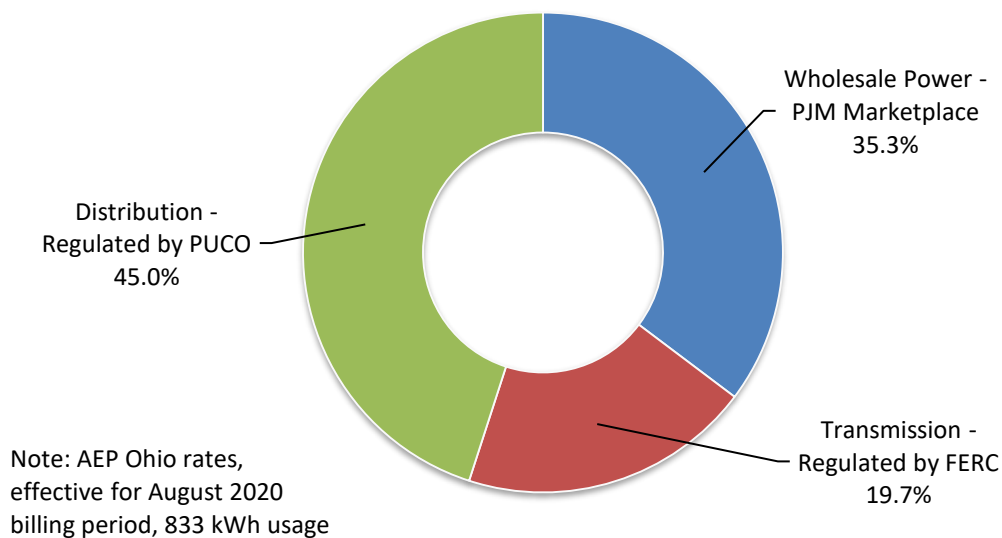
All six EDUs operate under ESPs, so their customers’ retail prices are directly influenced by compliance costs incurred by their respective EDU. The Revised Code delegates ratemaking authority to PUCO and codifies certain allowable costs. The result is a PUCO-approved “tariff” that specifies which costs can be recovered from the varying types of customers.

Power generation is not regulated by the state, nor is it subject to PUCO’s regulatory authority. Similarly, the transmission of electricity from regional power plants to consumer hubs is subject to federal regulation. For an illustrative example, refer to the chart below. It relies on the current residential electric rate within AEP Ohio’s territory to estimate the share of

electricity costs subject to PUCO's cost-based regulation. For a typical residential customer that consumes 833 kilowatt-hours (kWh) per month, the utility would charge \$105.23 for electricity. The largest share of this bill, \$47.37 (or 45.0%), is directly attributable to PUCO-approved distribution costs. The next largest charge is for the cost of wholesale power, \$37.12 (or 35.3%), which is determined by the regional marketplace. PJM Interconnection, L.L.C. (PJM) operates a competitive wholesale electricity market where rates for a multistate region (inclusive of Ohio) are set. The Federal Energy Regulatory Commission (FERC) regulates the transmission and wholesale sales of electricity in interstate commerce. The transmission costs for a typical residential customer are the smallest portion of the monthly bill, \$20.74 (or 19.7%).

The General Assembly and PUCO have a direct impact on the state-regulated portion of a customer's electric bill. In general, a reduction in EDU compliance costs subsequently reduces costs paid by applicable ratepayers. A state policy may have indirect effects on the other two portions of a customer's bill – wholesale power price and transmission costs – but state policymakers have limited impact on those broader aspects. Ohio is a part of PJM's regional transmission organization, which includes all or parts of 13 states. The regulatory decisions of the federal government and those other states influence the price of wholesale power and associated transmission costs of electricity from power plants located in those states.

**Decomposition of Typical Residential Electric Bill in AEP Ohio's Territory**



## Energy efficiency and long-term cost effectiveness

The wholesale price paid for a single kWh of electricity is not immediately affected by a newly implemented energy efficiency initiative. The principal benefit of energy efficiency is reduced consumption rather than a lower retail price for the commodity. Therefore, when an energy efficiency rider imposed on customers is eliminated, customers see an immediate decrease in their rates due to the elimination of the rider, but do not immediately see offsetting increases in the retail price of electricity flowing through from increased wholesale prices.

The benefit-cost ratios provided by utilities in their PUCO filings demonstrate that energy efficiency programs are cost effective over the initiative's life cycle, which can average between ten to 12 years. According to the EDUs' reports filed with PUCO, the energy efficiency costs exceed associated benefits in the first year the program is implemented. The utilities' 2019 compliance reports offer a tangible example of this long-term cost effectiveness. The Revised Code required EDUs to save 1% and the utilities collectively reported savings of 1,747,042 Megawatt-hours (MWh). Therefore, electricity suppliers avoided the cost of purchasing that energy for their customers in 2019. During that year, the average cost for one MWh, inclusive of both energy and capacity costs, was \$38.59. Based on that figure, electric suppliers avoided \$67.4 million in purchases due to energy efficiency initiatives implemented in 2019. Separately, PUCO reported that ratepayers paid \$301.5 million for the energy efficiency rider in that year. Customers did not financially benefit in that single year, but as their benefits continue to accumulate in future years, the 2019 compliance costs will be eclipsed.

The repeal of the energy efficiency requirements may ultimately spur an increase in the portion of a customer's electric bill attributable to wholesale power or transmission. However, as noted above, those components reflect many other marketplace conditions within a multistate region. When submitting reports to PUCO, the EDUs do not quantify the impact of their energy efficiency programs on these pricing components. Absent detailed historical information on energy savings and wholesale prices from the utilities, PJM, or another similarly situated entity, LBO does not have a basis for projecting these potential indirect costs derived from higher wholesale electric prices or higher transmission costs.

Repealing the energy efficiency mandates may not end energy efficiency practices among regulated utilities. H.B. 6 eliminated the energy efficiency requirements that would otherwise apply in 2021 through 2027. It further required utilities to terminate their current portfolio plans by December 31, 2020, but those multiyear plans were already scheduled to expire by that date. AEP Ohio recently proposed a voluntary energy efficiency program to begin in 2021, but PUCO has yet to rule on its application.<sup>1</sup> Even if the utility's proposal is denied, some customers, especially nonresidential, have financial incentive to implement their own improvements in the absence of a utility-sponsored program.

## **Decoupling mechanism**

Another aspect of ESPs prevents all the benefits of energy efficiency from flowing to customers. Most of the regulated utilities administer a "decoupling" mechanism in one form or another. A decoupling mechanism ensures that an EDU's revenue target is reached, regardless of how much electricity is delivered. Therefore, this separate charge can prevent an EDU's revenues from declining based on lower consumer demand spurred by energy efficiency. Customers' savings from avoided consumption are partially offset by higher charges from their applicable decoupling rider.

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<sup>1</sup> PUCO Case No. 20-0585-EL-AIR, Direct Testimony of Jon F. Williams on Behalf of Ohio Power Company (June 15, 2020).

Only one type of decoupling rider was authorized by H.B. 6, whereas PUCO approved earlier iterations for other utilities using a different basis in codified law. The H.B. 6 decoupling rider only applies to the three FirstEnergy EDUs, as of this writing. Duke Energy is statutorily prohibited from applying for the H.B. 6 decoupling rider. Dayton Power and Light is currently eligible but unlikely to apply for this rider until their revenues drop below the baseline specified in H.B. 6, at which point the utility will have a financial incentive to seek PUCO's approval. AEP Ohio already has its own decoupling rider, so PUCO recently denied its application to impose the H.B. 6 version.

When generating future estimates for H.B. 6 compliance costs, LBO assumed FirstEnergy would continue to collect \$17.1 million per year through May 31, 2024. Any decoupling mechanism relying on the H.B. 6 legal authority "shall remain in effect until the next time that the electric distribution utility applies for and the commission approves base distribution rates for the utility."<sup>2</sup> The three FirstEnergy EDUs are currently operating under a base distribution rate freeze through May 31, 2024. Actual amounts collected by FirstEnergy could vary based on a number of factors, such as further energy conservation, weather, and business-cycle fluctuations.

## **Alternative energy**

Your office identified research showing the benefits of renewable energy supply. LBO's analysis was strictly limited to financial projections using the most currently available data. For example, LBO assumed the current renewable energy credit prices separately paid by EDUs and other electricity suppliers would continue at their current level. Nevertheless, the projected compliance costs submitted by your office are largely similar to what LBO used for its analysis.

The LBO analysis of EDU compliance costs under H.B. 6 did not account for financial benefits from renewable energy generation. The financial benefit manifests in lower wholesale electricity prices. As previously cited, LBO does not have data sufficient to provide a comprehensive evaluation of the legislation's impact on wholesale electricity markets. The source you cited, the U.S. Department of Energy, is a reputable analysis isolating the impact of wind and solar energy. It aligns with another analysis that LBO previously obtained, in which IHS Markit observed that wind energy suppressed PJM prices by a significant amount in 2015.<sup>3</sup>

LBO did not incorporate any wholesale electricity price effects in the previously prepared memorandum, R-133-4096. Although some research is available to enable a piecemeal analysis, only a comprehensive evaluation is suitable for inclusion. PJM previously provided such an analysis<sup>4</sup> in 2019 to the Senate Energy and Public Utilities Committee, but the wholesale energy market has undergone several changes since then. FERC subsequently

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<sup>2</sup> R.C. 4928.471(C).

<sup>3</sup> Preconference comments of Lawrence Makovich, IHS Markit, for the May 1-2, 2017 Technical Conference under FERC Docket Number AD17-11-000.

<sup>4</sup> Refer to Asim Haque's testimony on behalf of PJM dated June 5, 2019.

required PJM to revise its auction rules applicable to generators benefiting from state subsidies. This new Minimum Offer Price Rule (MOPR) changed the dynamics of future capacity auctions. On June 2, 2020, PJM submitted a second compliance filing regarding capacity market price rules to FERC.<sup>5</sup> The rules will shape future capacity auctions administered by PJM.

I hope you find this information helpful. Please call if you have any questions. My telephone number is (614) 644-1751.

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<sup>5</sup> <https://pjm.com/directory/etariff/FercDockets/4571/20200601-er18-1314-006.pdf>.