Fiscal Note & Local Impact Statement

127 th General Assembly of Ohio

Ohio Legislative Service Commission
77 South High Street, 9th Floor, Columbus, OH 43215-6136 ✧ Phone: (614) 466-3615
✧ *Internet Web Site:* http://www.lsc.state.oh.us/

BILL: **Sub. S.B. 221 (LSC 127 1419-21)** DATE: **April 14, 2008**

STATUS: **In House Public Utilities** SPONSOR: **Sen. Schuler**

LOCAL IMPACT STATEMENT REQUIRED: **Yes**

CONTENTS: **To revise state energy policy principally to address electric service price regulation, alternative energy portfolio standards, and the establishment of the Office of Federal Energy Advocate**

State Fiscal Highlights

STATE FUND	FY 2009	FY 2010	FUTURE YEARS
General Revenue Fund			
Revenues	- 0 -	- 0 -	- 0 -
Expenditures	- 0 -	- 0 -	- 0 -
Public Utilities Fund (Fund 5F60) – Public Utilities Commission			
Revenues	- 0 -	- 0 -	- 0 -
Expenditures	Increase, probably in the hundreds of thousands	Increase, probably $500,000 or more	Increase, probably $500,000 or more
Federal Energy Advocate Fund (new) – Public Utilities Commission			
Revenues	Gain, probably in the hundreds of thousands	Gain, probably in the hundreds of thousands	Gain, probably in the hundreds of thousands
Expenditures	Increase, probably in the hundreds of thousands	Increase, probably in the hundreds of thousands	Increase, probably in the hundreds of thousands
Advanced Energy Fund (Fund 5M50) – Department of Development			
Revenues	Potential increase	Potential increase	Potential increase
Expenditures	Possible increase in development loans/grants for advanced energy facilities	Possible increase in development loans/grants for advanced energy facilities	Possible increase in development loans/grants for advanced energy facilities

General Revenue Fund – expenditures for electricity			
Revenues	- 0 -	- 0 -	- 0 -
Expenditures	- 0 -	Potential decrease up to $13.6 million or more	Potential decrease up to $13.6 million or more, or potential increase up to $2.5 million or more, or anywhere in between
Highway Operating Fund (Fund 002) – expenditures for electricity			
Revenues	- 0 -	- 0 -	- 0 -
Expenditures	- 0 -	Potential decrease up to $3.8 million or more	Potential decrease up to $3.8 million or more, or potential increase up to $0.7 million or more, or anywhere in between
Other State Funds – expenditures for electricity			
Revenues	- 0 -	- 0 -	- 0 -
Expenditures	- 0 -	Potential decrease in the millions	Potential decrease in the millions, or potential increase up to between $1.0 million and $2.0 million, or anywhere in between

Note: The state fiscal year is July 1 through June 30. For example, FY 2007 is July 1, 2006 – June 30, 2007.

- The Public Utilities Commission (PUCO) staff have not had time to analyze this version of the bill. Based on their cost estimates for previous versions, the cost of this version would probably exceed $500,000 in the first full fiscal year after the bill is enacted. These expenditures would be paid from Fund 5F60.

- The bill establishes the Office of Federal Energy Advocate within PUCO. The Advocate is authorized to hire staff as needed to perform assigned duties. Funding for the Office's activities would come from the Federal Energy Advocate Fund, newly established by the bill. Revenue to the fund would come from an assessment on electric utilities and electric services companies. The amount of the assessments would be set by the Advocate.

- There is a potential increase in expenditures under the Department of Development's Advanced Energy Program. The bill specifies that assistance under the program may be provided to Edison Technology Centers and to universities, under specified circumstances. Revenue to the Advanced Energy Fund may increase due to new sources of funding; specifically, fines assessed companies for failure to comply with either the renewable energy requirements or the energy efficiency requirements of the bill.

- The bill would grant stronger regulatory authority over electric generation rates to PUCO and would require electric utilities subject to PUCO regulation to meet an alternative energy portfolio requirement. Both provisions have the potential to impact prices the state pays for electricity. The most likely effect of the former provision is to reduce electricity rates, as compared with what they would be without the authority granted to PUCO by the bill, while the most likely effect of the latter would be to increase rates. The net result could be either a savings for the state or a cost, depending on which provision has the stronger effect on electricity prices.

- The timing is different for the potential savings on expenditures for electricity as compared with the potential cost. The potential savings, if realized, would begin in FY 2009 for most state spending, after the

expiration of the rate stabilization plan for most electric utilities; facilities in the Dayton Power & Light area would experience the savings, if realized, beginning in FY 2011. The potential cost would not materialize until nearly 2025, when the alternative energy requirement is imposed.

Local Fiscal Highlights

LOCAL GOVERNMENT	FY 2008	FY 2009	FUTURE YEARS
Counties, municipalities, townships, school districts			
Revenues	- 0 -	- 0 -	- 0 -
Expenditures	- 0 -	Potential decrease up to $227.6 million	Potential decrease up to $227.6 million or more, or potential increase up to $42.3 million or more, or anywhere in between
Other Local Governments			
Revenues	- 0 -	- 0 -	- 0 -
Expenditures	- 0 -	- 0 -	- 0 -

Note: For most local governments, the fiscal year is the calendar year. The school district fiscal year is July 1 through June 30.

- The bill would grant stronger regulatory authority over electric generation rates to PUCO and would require electric utilities subject to PUCO regulation to meet an alternative energy portfolio requirement. Both provisions have the potential to impact prices local governments pay for electricity. The most likely effect of the former provision is to reduce electricity rates, as compared with what they would be without the authority granted to PUCO by the bill, while the most likely effect of the latter would be to increase rates. The net result could be either a savings for local governments or a cost, depending on which provision has the stronger effect on electricity prices.

- The timing is different for the potential savings as compared with the potential cost. The potential savings, if realized, would begin in FY 2009 for most political subdivisions, after the expiration of the rate stabilization plan of their local electric utility; customers of Dayton Power & Light would experience the savings, if realized, beginning in FY 2011. The potential cost would not materialize until nearly 2025, when the alternative energy requirement is imposed.

Detailed Fiscal Analysis

S.B. 221 would make a number of changes to state law related to the generation and sale of electric power in Ohio. Some provisions of the bill have no significant fiscal effect. Those provisions that would have the most significant fiscal effects include changes to the authority and duties of the Public Utilities Commission (PUCO), alternative energy portfolio standard requirements imposed by the bill on utilities regulated by PUCO, and the establishment of the Office of Federal Energy Advocate within PUCO.

Changes to PUCO authority

The bill would increase the authority of PUCO over the generation of electricity in Ohio.[1] The bill requires that electric distribution utilities provide standard service offers beginning January 1, 2009, and requires them to file an application with PUCO to establish the standard service offer. That standard service offer could come in either of two types: an "electric security plan" (ESP) or a "market rate option" (MRO). A utility's first application for a standard service offer is required to include an application for an ESP; it may also include an application for an MRO. A market rate option is defined to be a plan under which the utility's prices are determined through a competitive bidding process. An electric security plan would be generally similar to the cost-based rate regulation that was practiced prior to S.B. 3. PUCO is required to adopt rules that would govern the application for a standard service offer (of both types) and the competitive bidding process under an MRO.

The bill specifies several requirements that must be met before a utility may initiate a competitive bidding process under the MRO, and gives PUCO 90 days from receipt of the application to determine whether the requirements are met before a bidding process may be initiated.[2] The bidding process is to be overseen by an independent third party. The bill does not specify how this third party would be compensated, but allows the utility to recover costs related to the bidding process through a PUCO-approved recovery mechanism added on to the bid price and included in the standard service offer price; possibly compensation of the third party comes from the utility paid for by the recovery mechanism. After the bidding process is complete, the bill specifies additional requirements that the bidding process must have met before the utility may begin to implement an MRO based on the results, and it gives PUCO three days after completion of the bidding process to determine whether those requirements were met. In addition, MRO-based standard service offers for those utilities that directly own generating facilities as of the bill's effective date are to be phased in over a period of five years, with PUCO being given authority to extend the period of the phase-in if that is needed to avoid abrupt changes in the standard service offer price. A utility that receives PUCO approval of an MRO standard service offer need not ever file an ESP standard service offer application again.

[1] The statutory electric services policy is found in section 4928.02 of the Revised Code. PUCO authority over generation was limited by Am. Sub. S.B. 3 of the 123rd General Assembly (S.B. 3) often referred to as the electric restructuring (or electric deregulation) bill.

[2] For more detail on these requirements, please see section 4928.142 of the bill or the LSC bill analysis.

All utilities would be required to file an application for an ESP-based standard service offer initially. The application is permitted to allow for recovery of a variety of costs, including for example, costs of fuel used to generate electricity, costs of electricity purchased wholesale, costs of emission allowances, federally mandated carbon taxes, and certain capital costs related to expenditures made after January 1, 2009.[3] PUCO would be required to schedule a hearing on the application, and to issue an order within 120 days of the application filing indicating whether it approves the application, modifies and approves it, or disapproves the application.[4] If the application is modified and approved, the utility would have the option to withdraw its application and submit a new one. If the application is disapproved, or if the utility withdraws its application, the Commission shall issue an order that continues in force that utility's most recent standard service offer. An approved ESP that has a term longer than three years is required to be tested every fourth year to determine whether the plan continues to be favorable in the aggregate. If it is not, PUCO may terminate the ESP.

Alternative energy portfolio requirements

The bill would require electric utilities to provide 25% of the electricity supplied under their standard service offers using alternative energy sources by 2025; a comparable requirement would apply to electric services companies. At least 50% of the electricity produced using an alternative energy technology must be produced using a renewable energy source, and it must include a specified percentage of solar power. Half may be met using an advanced energy resource, which includes clean coal technology using carbon controls, advanced nuclear plants, fuel cells, cogeneration projects, or energy efficiency improvements. To count toward the 25% requirement, the alternative energy facility must have been placed in service after January 1, 1998, except for certain mercantile customer-sited projects. Phasing in of the renewable energy requirement begins by the end of 2009, when 0.25% of electricity generated must come from renewable sources, and 0.005% must come from solar energy sources. These percentages increase to 0.5% and 0.025%, respectively, by the end of 2010, and continue to increase each year until they reach 12.5% and 1.0%, respectively, by the end of 2024. Companies are permitted to purchase renewable energy credits to meet these requirements. PUCO is required to adopt rules governing the renewable energy credit program.

The Commission would be required to issue an annual report to the General Assembly describing compliance by electric utilities (and electric services companies) with the alternative energy portfolio requirement, and progress toward achieving it. Companies found not to be in compliance with the renewable energy requirements would be subject to fines, referred to as "compliance payments" by the bill. Compliance payments are to be deposited into the Advanced Energy Fund.

Office of Federal Energy Advocate

The bill establishes the Office of Federal Energy Advocate within PUCO. The Advocate would be appointed by a majority vote of the Governor, the Speaker of the House, and the Senate

[3] For further details about ESP standard service offers, please see section 4928.143 of the bill or the LSC bill analysis.

[4] The Commission would be required to approve the plan, or modify and approve it, if it finds that the application's terms and conditions are "favorable in the aggregate as compared to the expected results that would otherwise apply." Otherwise the Commission would be required to disapprove it.

President. The Advocate is assigned to monitor the activities of the Federal Energy Regulatory Commission (FERC), other federal agencies, market monitors employed by regional transmission organizations, and regulatory authorities of other states, and to work with them to achieve the state policy outlined in section 4928.02 of the Revised Code. The Advocate is empowered to institute and to intervene in state, regional, and federal proceedings. The Advocate is required to submit a report to the Commission within 180 days of taking office regarding whether continued participation by the state's electric utilities in regional transmission organizations is the most effective and efficient means of achieving the state policy. The Advocate would be permitted to hire staff as necessary to perform these duties. Funding for the Advocate would come from the Federal Energy Advocate Fund, established by the bill, which would receive funds from assessments on electric distribution utilities and electric services companies. The amount of the assessments would be set by the Advocate.

Other provisions

The Governor is required to form an alternative energy advisory committee to provide recommendations semiannually to PUCO on technology and costs associated with alternative energy. The bill does not specify the number of members on the committee, any conditions on who should be appointed, or whether members would be compensated in any way.

The bill would require electric utilities to adopt energy efficiency programs beginning in 2009 that would reduce energy usage by 0.3% compared to annual average usage over the preceding three years. The required percentage reduction increases steadily to 22% by the end of 2025. Similarly, the bill would require electric utilities to adopt peak demand reduction programs that meet required reduction in peak demand each year beginning in 2009 (with a 1% reduction) and increasing by .75 percentage point each year until 2018. PUCO is required to adopt rules regarding these requirements and to produce an annual report describing compliance with these requirements. The rules may allow for a revenue decoupling mechanism. PUCO is required to assess a forfeiture on companies that fail to comply with the required reductions, with revenue resulting from any such forfeiture to be deposited into the Advanced Energy Fund. PUCO is also required to adopt rules regarding greenhouse gas reporting requirements.

The bill permits the state and local governments to enter into energy price risk management contracts. The term of such contracts is limited to the end of the fiscal year during which the contract is entered into. Money received by the state as a result of such a contract is to be deposited into the GRF. Legislative authorities of local governments are permitted to determine the fund that receives any such money.

The bill would permit PUCO to approve alternative rate plans for natural gas utilities that feature a revenue decoupling mechanism, and would specify that an alternative rate plan filed by a natural gas utility that proposes such a mechanism "may be an application not for an increase in rates," under specified conditions. The bill defines a revenue decoupling mechanism to be "a rate design or other cost recovery mechanism that provides recovery of the fixed costs of service and a fair and reasonable rate of return, irrespective of system throughput or volumetric sales."

Background

Since S.B. 3 of the 123rd General Assembly, PUCO authority over electric generation has been limited. Electric generators are required to provide a "standard service offer" to certain customers, and must file it with PUCO. Currently, electric generation rates in Ohio are subject to "rate stabilization plans" (RSPs), most of which are scheduled to expire at the end of 2008. The RSPs were developed under current (*i.e.*, post-S.B. 3) law,[5] but many observers express concern that generation rates will increase significantly when the RSPs expire.

Illinois and Maryland also enacted legislation to restructure their electric industries in the late 1990s. As part of Illinois' restructuring, they reduced rates charged by Commonwealth Edison by 20%, and froze rates across the state for nine years. In Maryland, the legislation reduced rates a required 6.5% (from 1993 levels) and froze them for six years. The Illinois Commerce Commission oversaw a reverse auction to supply power in the territories of two major utilities starting January 1, 2007, and received bids that were 22% higher than the frozen rate in the territory of Commonwealth Edison and between 40% and 55% higher in the territory of Ameren. The Maryland Public Service Commission oversaw a reverse auction to supply power in the territories of its utilities starting July 1, 2006. The auction yielded a bid to supply power in the territory of Baltimore Gas and Electric that was 72% higher than the frozen rate. Bids in other utility territories of the state were 35% and 39% higher than the frozen rates. By way of comparison, S.B. 3 required a reduction of 5% in electric rates for residential customers as part of Ohio's restructuring. Also, rates in Ohio have already risen somewhat from the frozen rates as part of the RSPs.

Reputable studies find that renewable portfolio standard (RPS) requirements would increase the price of electricity to consumers (including governments). For example, the U.S. Energy Information Administration (EIA) published a study in August 2007 titled *Energy and Economic Impacts of Implementing Both a 25-Percent Renewable Portfolio Standard and a 25-Percent Renewable Fuel Standard by 2025*.[6] As implied by the title, the specific policy proposal that that study examined differed from the current bill: it required a 25% renewable portfolio standard rather than a 25% advanced energy portfolio standard, it allowed for a system of tradable energy credits (which the bill does not), and it required a 25% renewable fuel standard in addition to the RPS requirement. The study projected that average retail electricity prices would increase by about 3.3% due to the proposal by 2025, and by 6.2% by 2030. It also projected that about one-half of the renewable generation required by the proposal would be met by biomass electricity generation, and that wind generation would account for slightly over one-third. For purposes of comparison, another EIA study, released in June,[7] analyzed the affect of a 15% RPS proposal, finding that that proposal would increase electricity prices by about 2.0% by 2030.

The more recent study included many caveats, which are appropriate given the long-term nature of the projections. It was based on federal laws and regulations as they were on

[5] A fuller explanation of the historical and legal background of RSPs can be found in the LSC Bill Analysis, which can be found at www.lsc.state.oh.us. Click on "bill documents," then on "bill analyses" to find it.

[6] The study can be found at the EIA web site, www.eia.doe.gov/fuelrenewable.html. Click on "more renewable reports" to find it.

[7] This study is titled *Impacts of a 15-Percent Renewable Portfolio Standard*.

September 1, 2006; in particular any tax incentives that were scheduled to expire under the law on that date were assumed to expire. It made projections about the cost, performance, and commercial feasibility of types of generation, such as advanced biomass generation, for which no commercial generation currently exists. Any of those assumptions may prove to be overly optimistic (in which case the price increases could be greater than projected) or overly pessimistic (in which case they could be smaller than projected). And, of course, it projected the prices of commodities like oil, coal, natural gas, and uranium that are very hard to predict. Given the differences between the proposal analyzed in this study and the advanced energy requirement of S.B. 221, as well as the uncertainties highlighted in the study itself, the projected effects on electricity prices would differ from the effects that S.B. 221 is likely to have. Nevertheless the advanced energy requirement of S.B. 221 is likely to affect electricity prices. This point is elaborated below.

Both the state and local governments are consumers of electricity. OBM reports that state agencies spent slightly over $52.1 million on electricity in FY 2007. The agencies that spent the largest amounts were the Department of Rehabilitation and Correction (DRC, $14.2 million), the Department of Transportation (DOT, $11.4 million), the Adjutant General (ADJ, $3.6 million), the Department of Mental Health (DMH, $3.5 million), the Department of Administrative Services (DAS, $3.4 million), and the Department of Natural Resources (DNR, $3.3 million). No other agency spent more than $3 million that year, though one spent over $2 million and four spent over $1 million. In addition to direct spending on electricity, some agencies pay for electricity indirectly, as part of the amount they pay for leased office space. The U.S. Census Bureau estimates that local governments in Ohio collectively spent approximately $682.7 million on electricity during the fiscal year that ended between July 1, 2004 and June 30, 2005. The definition of local governments appears to include counties, municipalities, townships, special districts, and school districts.

The authority given PUCO by the bill to adopt rules that provide for decoupling in connection with energy efficiency standards and as part of alternative rate plans for natural gas utilities is probably a reference to revenue decoupling. The National Regulatory Research Institute (NRRI), the research arm of the National Association of Regulatory Utility Commissioners (NARUC), published a briefing paper on this subject in April 2006. Titled *Revenue Decoupling for Natural Gas Utilities*, the paper is available on the NRRI web site.[8] Although the title may seem to suggest that revenue decoupling is an issue specific to natural gas utilities, in fact the briefing paper states that the concept applies to other types of utilities as well. And as reported there, the NARUC passed a resolution in 2005 advising state commissions to consider the implementation of revenue decoupling.

Although the bill would leave the definition of decoupling up to PUCO, the NRRI briefing paper explains the basic structure of a revenue decoupling plan (on page 9). Under such a plan rates adjust automatically when natural gas (or in this case, electricity) usage deviates from the level that was expected at the time of the utility's most recent rate case. The paper presents a simplified example of usage falling by 5% relative to the expected amount, and a revenue decoupling plan increasing rates automatically by 5.3% to ensure that the utility receives the level of revenue that had been expected. Conversely, if usage exceeded the expected amount, then that would automatically trigger a rate decrease.

[8] The paper can be found at the web address www.nrri.ohio-state.edu/NaturalGas.

According to the briefing paper, revenue decoupling proposals result from the effects of the time lags between traditional rate setting cases. In such a case, a portion of the electricity rate per unit sold that is set is intended to allow the utility to recover its fixed costs. Since fixed costs by definition are independent of the amount of electricity sold, some volume of electricity sold must be assumed during the rate case to arrive at a per unit rate. If the number of actual units sold exceeds expectations, then the utility will earn profits that are higher than expected; conversely, if the number of actual units sold is less than expected, then the utility will earn lower profits. High natural gas prices since the year 2000 have led many analysts to suggest that U.S. regulators need to focus on policies that promote conservation of natural gas. Traditional rate-making approaches discourage natural gas utilities themselves from promoting conservation, since that involves promoting lower profits for themselves. Revenue decoupling mechanisms are intended to break the link between lower natural gas (or electricity) usage and lower profits (or losses) for utilities. As summarized in the briefing paper, "while RD [revenue decoupling] does not provide the utility with an explicit incentive to promote energy efficiency, it eliminates the disincentive."

Fiscal effect

Public Utilities Commission of Ohio

The bill contains a number of new duties for PUCO. The Commission is required to adopt rules governing standard service offer applications of two types (MRO and ESP), to conduct hearings on those applications, to issue annual reports to the General Assembly regarding the compliance of electric utilities with the alternative energy requirements and energy efficiency requirements of the bill, to monitor compliance with both sets of requirements, to adopt rules regarding a system of registering renewable energy credits, and to adopt rules regarding greenhouse gas emission requirements. Moreover, PUCO officials anticipate that they will be expected to provide staff time and resources to support the advanced energy advisory committee that the Governor is required to establish.

PUCO officials have not had time to analyze the budgetary impact of this version of the bill. Based on previous versions, the increased resources needed will likely exceed $500,000 in the first full fiscal year that the bill is in force. These expenditures would be paid from the Public Utilities Fund (Fund 5F60). Fund 5F60 receives funding primarily from assessments on utilities regulated by PUCO. The amount of the assessment is based on appropriations to line item 870-622, Utility & Railroad Regulation, in the PUCO budget. Since there are no appropriations in the bill, the increase in expenditures would have to be absorbed in the Commission's existing budget, at least through FY 2009.

Department of Development

The bill expands the authority of the Department to provide assistance under the Advanced Energy Program. The bill specifies that the Department may provide assistance to Edison Technology Centers for the purpose of creating an advanced energy manufacturing center in Ohio. It also specifies that the Department may provide assistance to a university (or group of universities) in Ohio if it conducts research on any advanced energy resource.

Revenue to the Advanced Energy Fund may increase, due to new sources of funding, *i.e.*, compliance payments by companies that fail to comply with the renewable energy requirements

of the bill and forfeitures assessed companies that fail to comply with the energy efficiency requirements. In the case of failure to comply with the renewable energy requirements, PUCO is required to assess a compliance payment of $45 for each renewable energy credit the company would have needed to comply with the standard, with the $45 figure adjusted for inflation after 2009. In the case of failure to comply with the solar energy standard, the amount of the compliance payment is to be $450 per megawatt hour that the company falls short of the solar requirement in 2009, $400 (per megawatt hour) of shortfall in 2010 and 2011, followed by payment amounts that are similarly reduced by $50 per megawatt hour every two years thereafter (to a minimum of $50). In the cases of violations of energy efficiency requirements, the forfeiture amount may be up to $10,000 per day.

Thus the bill may increase expenditures under the program generally. The amount of any increase in revenue to the Advanced Energy Fund would depend upon compliance with the two sets of requirements.

Effect on electricity bills paid by state and local government

Two categories of provisions in the bill have the potential to affect electricity prices, and thus the amount that state and local governments spend for electricity. The first category of provisions is all those related to PUCO authority over electric generation rates. The second category is the alternative energy portfolio requirement. Please note that unless otherwise indicated all discussions below about electric generation rates "increasing" or "decreasing" due to the bill's provisions mean an increase or decrease relative to the level at which the rates would be under existing law. Specifically, a reference to a "decrease" in rates means such a relative decrease—not necessarily an absolute decrease in rates.

Regarding the first category, many observers believe that when the current RSPs expire there will not be effective competition over generation rates, and that existing PUCO authority will be insufficient to prevent companies from exercising their market power to raise electricity prices significantly. If this assessment is accurate, then this category of provisions in the bill would act to decrease electricity prices paid by state and local governments (and other consumers). However, given that the current RSPs were themselves the result of the existing legal framework, the widespread belief that rates would rise significantly without increased authority may not be correct. Certainly the bill would strengthen PUCO authority, meaning that this category of provisions would be unlikely to cause electric generation rates to increase. But whether those rates would decrease, and how much they would decrease, would depend on the effective leverage that PUCO gains, relative to existing authority, over rates.

LSC staff believe that the effect on electricity prices of the increase in PUCO authority may be to decrease electricity rates. But we are unaware of any research that would provide a reliable basis for predicting the magnitude of such a rate decrease. The experiences in Maryland, where bids were received that were up to 72% higher than their frozen rates, and in Illinois, where they were up to 55% higher, suggest that the increase in PUCO authority could result in a decrease in rates of as much as 50%, or more. There are significant differences between Ohio's situation and that of those states, however. S.B. 3 reduced rates by a smaller percentage (5%) than those states did, for example, and rates in Ohio have already risen somewhat from their

initial fixed levels as part of the RSPs.[9] LSC staff think that these differences would significantly reduce the jump in rates that Ohio would be likely to experience under current law when the RSPs expire compared to Illinois' and Maryland's experience. LSC staff, therefore, think it likely that the decrease in rates attributable to the first category of provisions of the bill would be up to one-third or more. LSC staff cannot rule out the possibility that the increase in authority will have no effect on rates.

The second category of bill provisions is the alternative energy requirement. Based on EIA studies of similar renewable portfolio standards being imposed nationwide, it seems likely that this requirement would increase electric generation rates. While EIA studies cited above projected increases in electricity prices of 2.0% to 6.2% by 2030 from somewhat similar provisions, there are a number of differences between the proposals that were analyzed in generating those projections and the requirement in S.B. 221. The principal differences are that S.B. 221:

(1) would effectively impose a 12.5% RPS, with another 12.5% of generation subject to a requirement to employ some combination of renewable and advanced energy technologies; and

(2) would apply only to Ohio, as compared with nationwide application.

While LSC staff are unable to determine the magnitude of the impacts of these differences on EIA projections, economic theory does suggest the direction of the impacts. The second difference would make the S.B. 221 provision more expensive than the programs EIA analyzed, in the sense that electricity prices would be expected to increase more. EIA has found in past studies that reduced prices for fossil fuels roughly offset the fact that renewable energy sources are generally costlier than fossil fuels, so that offsetting savings prevented the average cost of producing electricity from rising much. Since the markets for fossil fuels are generally national (if not international), meaning Ohio generators are a small part of the overall market, then the offsetting savings would be smaller—on average electricity prices would rise more.

The first difference is less straightforward. On one hand, a 25% portfolio standard that allows for advanced energy technologies as well as renewable technologies allows greater flexibility (in theory) than a simple 25% RPS, which implies that the increase in electricity prices in Ohio would be less than the magnitudes projected by EIA for the national projects. On the other hand, during a conversation with an EIA official involved in producing these studies he indicated that the examples of advanced energy technologies given in the bill are all currently more expensive than renewable energy technologies. Thus, it may be that in practice the bill's advanced energy requirement provides no greater flexibility than would an RPS requirement of the same percentage. That would suggest that the first difference above may have no effect on the increase in electricity prices as compared to those projected by EIA.

There are substantial uncertainties involved in long-range forecasting, especially when technological change may change some of the cost variables significantly at some point during

[9] Data published by the U.S. Energy Information Administration indicate that Ohio's residential average retail price for electricity rose 16.1% between July 2005 and July 2007. This was higher than the increase in Illinois (15.4%) despite the expiration of their freeze, though lower than the increase in Maryland (45.0%).

the next 17 years. Many of those uncertainties are highlighted in the EIA study cited above, making their projections themselves subject to significant uncertainty. And given the differences between the advanced energy requirement of S.B. 221 and the national proposals examined by EIA, it would appear to be possible that EIA's projections that electricity prices could increase by 2.0% or even 6.2% by 2030 may overstate Ohio's experience under the requirement, due to the first difference between the proposals. It seems more likely, though, that EIA's projections would understate Ohio's experience due to the second difference, suggesting a reasonable likelihood that electricity prices would increase by up to 6% or more.

Looking at both categories of bill provisions together, then, LSC staff cannot predict the magnitude or even the direction of changes in electricity prices that the bill would cause. If the first category of bill provisions is dominant, then the bill could create savings for electricity consumers up to one-third or more. For the state, that would imply savings up to $17.4 million per year, or more, starting after the RSPs expire. The timing implies that the state would receive a partial year's savings in FY 2009, a full year's saving in FY 2010 based on expiration of all the RSPs except Dayton Power and Light's (DP&L's), and full savings benefits after DP&L's RSP expires. For local governments that would imply savings across all local governments statewide, including counties, municipalities, townships, special districts, and school districts, of up to $227.6 million or more per year after expiration of the RSPs. For most local governments the savings would begin in FY 2009.

The other possibility is that both categories taken together would lead to increased prices, if the alternative energy portfolio requirement outweighs the effect of the increased authority of PUCO. The portfolio requirement will have little effect until 2025, when it is fully phased in, so any increase in prices would be delayed until that time. Under this scenario, electricity bills for the state could increase by up to $3.2 million or more per year by FY 2030. For local governments, they could increase by up to $42.3 million or more per year by FY 2030. The costs would increase gradually over the course of the intervening period for both state and local governments.

The state pays for electricity from a variety of different funds in the budget. The GRF is certainly the largest single source of funding, providing the source of funding for purchases by DRC ($14.2 million in FY 2007), DAS ($3.4 million), and at least a portion of the funding for two other large users (ADJ and DMH). The second largest user, DOT ($11.4 million in FY 2007), pays for electricity out of the Highway Operating Fund (Fund 002).

LSC fiscal staff: Ross Miller, Senior Economist
Brian Hoffmeister, Budget Analyst

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