Senate Energy and Public Utilities Committee

Ohio Energy Policy

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Ohio Energy Policy Testimony

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I. Introduction

The Office of the Ohio Consumers' Counsel is pleased to have the opportunity to provide written testimony on the subject of Ohio's energy strategy. We applaud the Senate for taking steps in this direction as the issue of energy affordability is becoming an increased concern for consumers. Energy is a necessity to our citizens and our economy and therefore, a high priority. Affordable and reliable energy are the two key components that drive energy policy, planning and regulations. Customers and businesses alike need the assurance that electricity will be available on demand as needed. They also need to be able to afford this electricity. For residential customers, high energy costs may have any number of adverse economic impacts based upon the household's income level. It can mean the threat of disconnection; having to make difficult decisions in choosing whether to pay a utility bill, buy groceries or medicine; or, it can mean less disposable income to spend on elastic items. For commercial businesses, less disposable income for customers means lower sales volumes and less revenue. For governments, this translates into less tax revenues. And, for large industrial customers that are energy intensive, this means increasing difficulty in competing in world markets.

When Senate Bill 3 was passed in July of 1999, the State of Ohio moved towards electric deregulation and competition as a means of giving customers more control over

their energy use. No longer would an act of geography determine the electric rates a customer would be forced to pay to its monopoly provider. No longer would residential customers in the northern half of the state have to pay almost twice the amount as its counterparts in the southern part of the state.[1] And, no longer would industries be forced into tough decisions because their energy costs were making them less profitable than their competitors in other states who enjoyed lower electric rates. While much work remains to turn the vision into a reality, progress has been made over the last several years and Ohio should stay the course to see the goals of SB 3 reach fruition.

Assuring Affordable, Reliable Power

Given the rising costs of energy, policymakers need to look at the impacts of decisions made today not only from a short-term perspective, but also from a long-term perspective. Short term electricity markets produce short term prices. Over a longer period, short term markets produce volatile prices and tend not to factor in the long run risk of fuel costs, new environmental regulations and long run generation costs. The goal needs to be assuring that reliable energy will continue to be available at affordable rates today and into the future.

It is critical that attention be given to the State's portfolio of resources in order to assure that the goals of affordability, reliability, energy independence, national security and safe environment are met. Achievement of these goals should be central to any energy policy developed by the State of Ohio. There are several ways to achieve these objectives. One mechanism is to require that all utilities engage in all cost-effective

[1] See Appendix A.

energy efficiency programs prior to new power plant construction or purchase. This has at least two advantages. First, by being cost-effective, it means that the cost of reducing demand is less than the cost of supply. Second, energy efficiency is one of the best ways to achieve reliability in the short term in that programs can be implemented faster than a new plant can be built. Once all cost-effective energy efficiency has been accomplished, the next step would be the deployment of renewable energy sources which may well be cheaper in the long-run when examining life-cycle costs since there are no fuel and little environmental costs associated with these options. (Compare this to natural gas for heating or for power plants and for coal which have all been subjected to dramatic price increases with no near-term expectation that they will go down). As a recent American Council for an Energy Efficient Economy (ACEEE) study[2] notes, Ohio imports most of its coal (61%) and natural gas (89%). This results in a huge drain on our state economy as an estimated $24 billion of dollars go to pay for these energy imports every year.

With respect to renewable energy sources, Ohio needs to implement uniform interconnection standards for distributed generation. This would allow renewable energy facilities to operate off as well as on the grid to provide additional sources of energy. The Federal Energy Regulatory Commission recently implemented rules for interconnection of small distributed generation units to the transmission system. We need similar action here in Ohio. In fact, Senate Bill 3 requires the Public Utilities Commission of Ohio to establish rules that create "…uniform interconnection standards to ensure transmission

[2] See "Examining the Potential For Energy Efficiency to Help Address The Natural Gas Crises In The Midwest" by Martin Kushler, Kan York and Patti Witte, produced by the American Council for an Energy Efficient Economy, December 2004. Also see Martin Kushler presentation "The Midwest Energy Crises & Why Energy Efficiency Should Be a Top Priority", May 25, 2005.

and distribution safety and reliability…" Further, "(t)he rules regarding interconnection shall seek to prevent barriers to new technology and shall not make compliance unduly burdensome or expensive." ORC Sec. 4928.11. The PUCO has created rules that apply mostly to net-metered small residential facilities not greater than the 300 kW range. Moreover, the regulation's 1% of electric company peak load subscription restriction and its 100 kW microturbine capacity limit further hinder distributed generation. It does not apply to larger units that could become commercially available alternative sources of energy. This needs to be done if we are to make advancements in renewable energy.

One of the benefits of distributed generation is the ability of the system to operate off grid in an emergency. This means that in the case of a power outage, the distributed generation unit can provide power locally to either a factory or to operate a gas station, for example. This helps avoid the massive economic losses sustained during an outage and also can play an important role in emergency planning for the state.

After exhausting the immediate possibilities afforded by energy efficiency and renewable energy, the next step would be the construction of traditional power plants using state of the art technologies such as Integrated Gasification Combined Cycle (IGCC) for coal. IGCC makes sense because it is capable of responding to new environmental regulations, making it a more economical option in the long run. The key issue with respect to the deployment of IGCC is to assure that the cost recovery mechanism is fair to ratepayers and not overly burdensome.

Senate Bill 3 also provides us with tools to accomplish the goals of energy affordability and reliability, among others through competitive bidding as the Provider of

Last Resort (POLR). As opposed to short-term bids for all the capacity, Ohio should take a portfolio approach to serving customers. Just as in a private investment portfolio, one would not place all of one's money in one stock, but would instead hedge the investments with a mix of holdings, such should be the case with supplying load. Under a portfolio approach for serving load, the capacity could be supplied by diverse sources that include short and long term purchases as well as from different fuel sources. A portfolio manager could be employed to recommend a portfolio of options for bidding which would be filed and approved in a PUCO proceeding. An example might be something like the following hypothetical:

1. 45% of the power would be bid under short-term contracts for a three year term which would be staggered such that 15% of the load would expire each year and be re-bid.

2. The remaining 55% would be bid on a long-term basis under staggered long-term contracts ranging from five to twenty years. The contracts could be designed to start years into the future in order to give bidders the lead time necessary to construct a unit. This is not much different than scenarios under which independent power producers (IPPs) build plants and utilize non-recourse financing to build a plant. The plans for long-term capacity can include a tranche to finance the construction of an Integrated Gasification Combined Cycle (IGCC) plant, a leading clean coal technology.

3. Among the tranches for short and long-term purchases can be tranches for renewable energy. Wind and biomass are becoming competitive with fossil fuels especially as fossil fuel prices rise. Current contracts for utility scale wind energy range from 2.5 to 3.2 cents per kWh. [3] The advantage of renewable energy is that there is no fuel cost associated with this source. Thus, customers are not at the mercy of a market or price volatility. Fostering the development of renewable energy options makes sense in terms of increasing reliability and fuel diversity.

[3] The 2.5 cents figure is based on data filed in Oklahoma Corporation Commission Case No. PUD 200300363, and the 3.2 cents figure is from Lamar Wind Case in Colorado PUC Decision No. 01-295.

It also does not have the environmental problems and costs associated with traditional fossil fuel facilities and finally, it is good for the local economy in terms of creating jobs.[4] (See Appendix A attached showing that Ohio can gain 12,000 jobs if wind energy investments are strengthened nationwide.) Many states have acknowledged the renewable energy benefits discussed above as reflected in the 21 states having adopted some form of a renewable portfolio standard (RPS).[5] In fact, 3 of Ohio's major electric investor owned utilities operate in RPS states. Ohio's neighbor, Pennsylvania adopted an RPS last year and is on schedule to bring 170 megawatts of wind power over the next two years. In California, the Public Service Commission has adopted the Energy Action Plan that requires that cost effective renewable energy investments are second in the loading order of future energy resources (behind only energy efficiency investments).

4. A long-term and short-term supply tranche can also be created for energy efficiency under which reductions in energy demand are bid along side supply options such that programs that reduce demand are created for customers. The advantage of a program such as this is that not only does it provide a hedge to rising prices as part of a portfolio but it also enables customers to reduce their bills through energy reduction measures in which they participate. Ohio is seriously under-invested in energy efficiency as historically utility sponsored energy efficiency efforts have been ephemeral and currently no utility sponsored energy efficiency programs exist (with the exception of low income weatherization). Moreover, the Public Benefit Charge for efficiency on a mills per kWh basis ranks at the bottom amongst states with such a charge.[6] This situation is unfortunate as a recent study co-sponsored by our Office found that if Ohio's major natural gas and electric utility companies implement energy efficiency programs, residential consumers could save a total of approximately $1.2 billion on their energy bills through decreased consumption by the year 2010.

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[4] Ohio's economy stands to gain from a nationwide shift to wind energy given its industrial base. See Wind Turbine Development: Location of Manufacturing Activity, Renewable Energy Policy Project, October 2004.

[5] See the 2005 report, Renewable Energy: The Bottom Line by Global Energy Decisions. They estimate that current state RPS standards will require 52,000 mW to come on line driving $53 billion in new investment.

[6] For a comparison of Energy Efficiency Public Benefit charges see "Five Years In: An Examination of the First Half-Decade of Public Benefits Energy Efficiency Policies" by Martin Kushler, Dan York, and Patti Witte, produced by the American Council for an Energy-Efficient Economy, April 2004.

[7]According to the report, the benefits to consumers exceed the costs by nearly a 4 to 1 margin and provide a significant economic boost in terms of jobs created when energy efficiency programs are utilized. Electricity specific energy efficiency costs of conserved energy ranging from 1.3 cents/kwh to 3.2 cents/kwh are found in Appendix B.

5. Since this approach is used for customers who do not switch or POLR service, as customers switch to competitive retail electric providers, the annual short-term bid amounts can be reduced to reflect this reduction in load served.

6. As for long-term power commitments, these contracts for capacity can be front-loaded if necessary so that the supplier receives recovery earlier.

Many details need to be worked out with respect to this option, but it does present a framework for combining the best attributes for power plant supply. It should be noted that New York, New Jersey, the District of Columbia and Maine have adopted longer term laddered bids for POLR type service. Moreover, Montana uses long term portfolio management and as mentioned earlier, California has adopted a prioritized portfolio management system favoring energy efficiency and renewables, which is another way to structure the portfolio. The importance of a longer term portfolio management perspective has not escaped states that did not restructure as evidenced by the different Integrated Resource Planning Processes in Utah, Washington, Nevada, Arizona, and Oregon. In these states, demand and supply side electricity resources are bid against each other with the least cost option to ratepayers given the nod. What is important to remember is that competitive bidding for supply options

[7] See "Examining The Potential For Energy Efficiency To Help Address The Natural Gas Crisis In The Midwest" by Martin Kushler, Dan York, and Patti Witte, produced by the American Council for an Energy-Efficient Economy, December 2004.

sets a price for the supply option. If the supplier builds the plant for less than anticipated, the supplier reaps the benefits in terms of increased profits. More importantly from a ratepayer standpoint, if the plant comes in over cost, those costs cannot be passed on to customers, but must be absorbed by the supplier. This creates a strong incentive for suppliers to stay within budget.

II. Conclusion

We are at a juncture where we need to look at options to create reliable and affordable power. Ohio can benefit from a sound and comprehensive energy policy that is implemented on a statewide basis. Key to any strategy is doing whatever we can to reduce demand through energy efficiency, the benefits of which are manifold. Energy efficiency programs can: minimize the impact of high charges on customers' bills through decreased consumption; reduce the price of energy on a system-wide basis due to lower demand (thereby also preserving the availability of nonrenewable resources); aid in the achievement of energy independence in that we will be less reliant on foreign sources of fuel; enhance national security by reducing the number of large facilities that could be subject to a terrorist attack; and protect the environment by decreasing the use of fossil fuel plants that contribute to pollution and create adverse health affects. Ohio also needs to increase its reliance on renewable resources as part of the portfolio mix. Renewable energy also can achieve the objectives set forth above and can provide a hedge against rising fuel costs associated with traditional sources of energy. As to traditional sources of energy, we need to develop solutions that are viable for both ratepayers and investors and that provide

some certainty of recovery of reasonable costs for investors without transferring the risk of power plant construction to consumers. In sum, Ohio should develop a strategy that maximizes the utilization of options that accomplish the following:

-Affordability of energy for all Ohioans
-Reliable supplies of energy that keep our customers safe and fuels our economy
-Preserves energy independence
-Protects national security
-Provides a clean and safe environment.

Appendix A

Top 20 States Benefiting from Wind Investment, with Population and Job Loss Demographics

State	Potential Number of Jobs	Average Investment ($ Billions)	2001 Population	Rank in U.S.	Manufacturing Jobs Lost, Jan. 2001 - May 2004*	Rank in U.S.
California	12,717	4.24	34,501,130	1	318,000	1
Ohio	11,688	3.90	11,373,541	7	165,500	3
Texas	8,943	2.98	21,325,018	2	169,600	2
Michigan	8,549	2.85	9,990,817	8	129,300	8
Illinois	8,530	2.84	12,482,301	5	131,500	6
Indiana	8,317	2.77	6,114,745	14	63,500	13
Pennsylvania	7,622	2.54	12,287,150	6	155,200	5
Wisconsin	6,956	2.32	5,401,906	18	68,300	10
New York	6,549	2.18	19,011,378	3	130,500	7
South Carolina	4,964	1.65	4,063,011	26	56,800	17
North Carolina	4,661	1.55	8,186,268	11	156,600	4
Tennessee	4,233	1.41	5,740,021	16	59,700	15
Alabama	3,571	1.19	4,464,356	23	45,300	19
Georgia	3,532	1.18	8,383,915	10	65,700	11
Virginia	3,386	1.13	7,187,734	12	57,500	16
Florida	3,371	1.12	16,396,515	4	56,800	18
Missouri	3,234	1.08	5,629,707	17	36,700	23
Massachusetts	3,210	1.07	6,379,304	13	84,900	9
Minnesota	3,064	1.02	4,972,294	21	38,800	21
New Jersey	2,920	0.97	8,484,431	9	65,400	12
20 State Total	120,017	40	212,375,542		2,055,600	
% U.S. Total	80%	80%	75%		76%	

Source: "Renewable Energy: The Bottom Line" by Global Energy Decisions, 2005.

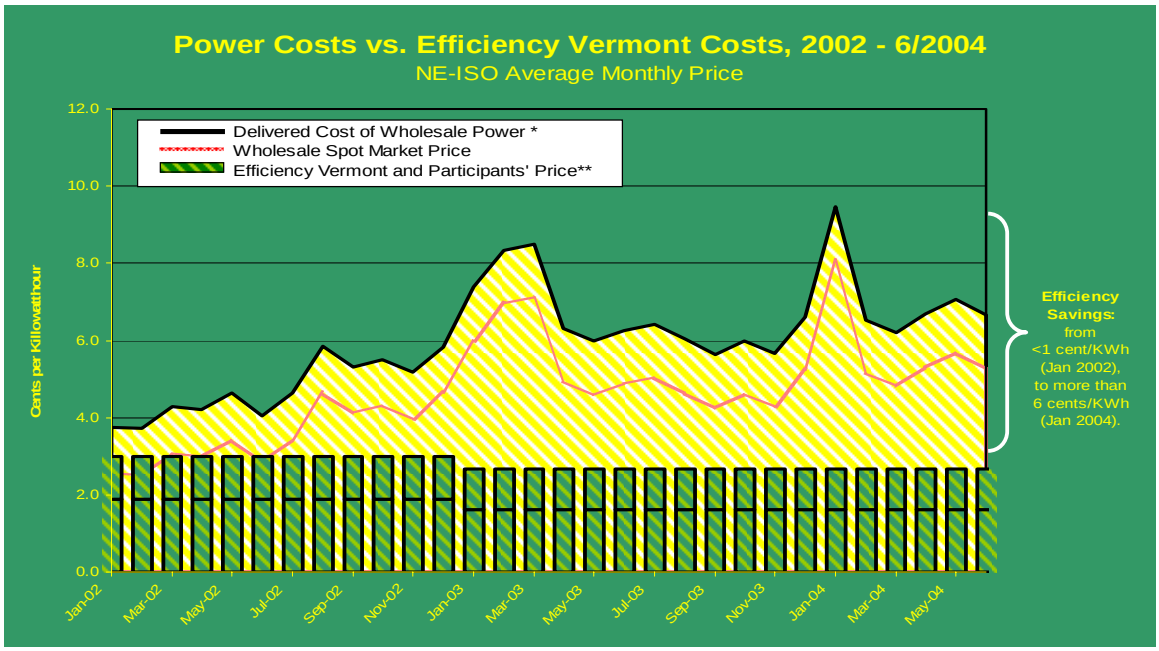
ENERGY EFFICIENCY HAS BEEN SHOWN TO BE VERY COST-EFFECTIVE

COST OF CONSERVED ENERGY ACHIEVED[1]

California	1.6 cents to 2.9 cents/kWh
Connecticut	2.3 cents/kWh
Massachusetts	3.2 cents/kWh
Minnesota	1.3 cents/kWh
Mich CPCo	2.6 cents/kWh
Mich DECo	1.5 cents/kWh
Vermont	2.6 cents/kWh

Typical current market cost, generation only: 5.0 cents/kWh
Fully loaded costs, incl. generation, transmission, distribution: 6.0 to 10.0 cents/kWh
[1]Levelized cost of saving electricity, over the useful measure lifetimes

Source: Martin Kushler presentation "The Midwest Energy Crisis & Why Energy Efficiency Should Be a Top Priority". May 25, 2005.



Source: Chris Neme presentation, "Energy Efficiency Program Design, Savings Verification and Market Transformation, May 25, 2005"