

**TESTIMONY OF THE NATURAL RESOURCES DEFENSE COUNCIL**

**Daniel J. Sawmiller, Ohio Energy Policy Director**

**on Substitute House Bill 6**

**Before the House  
Energy and Natural Resources Committee**



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Chairman Vitale, Vice-Chair Kick, Ranking member Denson and members of the Committee: thank you for inviting me to comment on Substitute House Bill 6.

My name is Dan Sawmiller and I am the Ohio energy policy director for the Natural Resources Defense Council (NRDC), a member-based non-profit environmental organization with more than 52,000 members and activists in Ohio. NRDC works in the U.S. and internationally to protect the air, water, and land that support human health and long-term economic growth. My job is to advocate for Ohio laws and policies that reduce emissions of greenhouse gases and other air pollutants while creating an equitable, sustainable, and prosperous clean energy economy.

The purpose of my written testimony is to indicate that **NRDC currently remains opposed to Sub. HB 6** as the bill has yet to receive the material changes advocated for in our earlier testimony. Namely, the Energy Efficiency Resource Standard (EERS) and the Alternative Energy Portfolio Standards (AEPS or RPS) are two key pillars of state energy policy that we support. However, HB 6 makes each of these voluntary, effectively eliminateing each of these beneficial policies.

My previous testimony before this committee and the subcommittee on generation provides greater detail on why these policies are critical for the state, and also details the set of criteria that NRDC applies when evaluating this type of legislation. HB 6 continues to fail on our principals and as a result, we must remain opposed.

I'm attaching to this testimony two recent pieces that I've written which I hope will serve you well as you seek to understand the reasons that we continue to support both the EERS and RPS.

Thank you for the opportunity to provide these remarks.

Dan Sawmiller  
Ohio Energy Policy Director  
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## Ohio's Renewable Energy Future Deserves Better

### What is the right path to Ohio renewable energy development?

As time begins to run out for the controversial energy legislation (HB 6), both sides of aisle are spending significant time debating the state's energy efficiency and renewable energy standards. On one side, there is fierce opposition to "mandates" with a seeming blindness to anything beyond this philosophical starting point. On the other side, there is broad support for the existing market-based, competition driven, and proven standard as represented by the state's Alternative Energy Portfolio Standard, or "AEPS" (aka the state's Renewable Portfolio Standards or "RPS"). Despite the differences in philosophy or policy preferences, both sides of this debate support the same goal: more renewable energy development for the state.

While I believe that no compromise should be reached on HB 6 without [significant energy efficiency standards](#), a policy design that supports in-state renewable energy generation is also key to a sound energy policy for Ohio.

Energy policy can be extremely complicated, but it is abundantly clear that adding renewable energy to Ohio's generation mix is a good thing and should be accomplished in a way that minimizes cost to the state's electricity customers. With all the competing ideas that are floating around cap square, I want to highlight why the RPS remains the best mechanism for driving new renewable development in the state – and all the jobs, tax revenues, and environmental benefits that come with it – in the least-cost fashion. As the old adage goes: **"If it ain't broke, don't fix it."** The RPS "ain't broke," though there may be tweaks to improve it.

### What is the RPS?

Ohio's RPS is the most cost-effective means for incentivizing new renewable projects by establishing a market-based design that sets an annual percentage of electricity that must come from eligible renewable resources. In 2019, for example, Ohio law states that 5.5 percent of the electricity delivered to customers must come from renewable resources. This annual percentage serves as the demand side of the equation, while renewable energy projects serve as the supply side of the equation. As in any market, the balance of supply and demand results in a market price, and in this instance, the market establishes the price for Renewable Energy Certificates or "RECs" that provide a secure source of revenue for renewable energy projects. Each REC represents the environmental benefits of 1 MWh of clean energy supplied to the market.

### How does the RPS support renewable energy development?

The fidelity of this marketplace product is vital to the market effectiveness, and thus, the Public Utilities Commission and the regional grid operator play a meaningful role in overseeing both certification of renewable generators and compliance with the percent of renewable energy established in statute to make sure the REC market runs smoothly and fairly. This oversight results in a well-functioning marketplace with REC prices fluctuating based not on an administratively doled out and static set of

funds as proposed in HB 6, but on the balance of supply (i.e. the cost of new renewable projects) and demand (i.e. the percentage of electricity sought from renewable sources). As renewable technology has come down the cost curve, REC prices have steadily declined in lock step. This market-based approach that is created by the RPS results in the most cost-effective projects coming online as developers position themselves in a highly competitive environment to secure financing based on the known, dependable construct of the fully established REC market.

The RPS policy design currently applies to more than 55 percent of total U.S. electricity sales with many of the states with RPS policies having [increased their goals](#) as the cost of renewables has declined. Solar energy costs have declined 88 percent since 2010, while wind energy costs have declined 64 percent during the same period. For the past 20 years, state RPS goals have been responsible for a [whopping 60 percent](#) of new non-hydro renewable resource additions in the U.S.

Ohio's renewable energy target is set to increase from today's 5.5 percent up to 12.5 percent by 2026 and Ohio's utilities and competitive generation suppliers must solicit RECs to meet the annual goals. Even this modest growth in the RPS target results in a robust projection of demand into the future, aka a "forward demand curve" for new renewable additions resulting in forecasted REC values derived from market fundamentals of supply and demand. These forecasted REC values, when combined with a forecasted energy price allow for the financing of new renewable energy projects either through bundled long-term contracts where the off-taker purchases both RECs and energy or through unbundled energy and REC forward contracts. These contracts are a key component of renewable energy project financing in the same way that an anchor tenant is needed before a commercial real estate development project can break ground.

As discussed below, the relative depth, fidelity, liquidity and stability of the proven, market-based RPS mechanism stands in stark contrast with the binary, illiquid, and finite pool of administratively doled out funds envisioned in HB 6. This is a clear example of why market-based mechanisms like the RPS are superior in every way to the centrally planned command-and-control style policies like the one outlined in HB 6.

### **How much renewable energy do we have in Ohio?**

Ohio currently has 710MWs of large-scale wind projects operating and 0MWs of large-scale solar projects (>20MW) in operation. Total wind capacity in Ohio is at 756MWs and there is nearly 100MWs of solar in operation currently. Combined, these resources currently make up less than 2 percent of Ohio's electric generating mix. To compare, renewable generating resources (wind and solar) made up nearly 9 percent of the nationwide total power generation in 2018 and in the PJM region that Ohio participates in, wind and solar clock in at more than 5 percent of total generation.

**This sounds like fairly modest renewable development, are you sure the RPS is working?**

Although the level of renewable development in Ohio is modest compared to other states, the RPS is delivering benefits to Ohio. A recent [report](#) by Environmental Entrepreneurs (E2) shows that Ohio's renewable energy industry boasts nearly 10,000 jobs, having increased 5 percent in 2018, adding 472 jobs. As a combat veteran myself, I feel compelled to note that nearly 12 percent of clean energy jobs in the state are held by military veterans.

Another important question we should be asking is: "are we meeting our targets?" Looking at the RPS compliance reports that are filed at the PUCO, we are easily meeting the RPS targets with ample opportunity to go even further. The cost of meeting the targets has been - on average - only 0.3 percent of retail electricity sales costs over the past 5 years.

Looking forward to the RPS demand growth from 5.5 percent today to 12.5 percent in 2026 allows us to ask another question, "Are renewable energy developers motivated by the RPS?" To answer that question, there are two key data points worth considering; the PJM queue and the number of applications pending before the Ohio Power Siting Board (OPSB). The certainty provided by the RPS has generated a lot of interest in Ohio with more than 10,000MW of new solar projects having entered the PJM queue in recent years. Of this, there are currently 1,400MW of solar projects that have either been approved by, or are pending approval before, the OPSB. Just last week, the Highland Solar Farm received approval for a siting permit for a 300MW solar project in Ohio's Appalachian region. This follows approval obtained just a few weeks ago for the 100MW Willowbrook project also slated for Highland County, a 150MW solar project in Hardin County, a 120MW project in Vinton County and the list goes on.

The large amount of solar development currently planned in Ohio came to the state in hopes of monetizing the REC value created by the state's RPS. Said differently, these projects did not start the Ohio siting process in hopes for the new uncertain paradigm envisioned by HB 6. In fact, the binary, inflexible, and arbitrary nature of the HB 6 paradigm in which projects either receive \$9/MWh in subsidies, or \$0/MWh would have never resulted in the kind of investment in Ohio represented by the current queue of renewable projects under development in the state.

**Is Ohio's RPS sending money out of state and wasting Ohioan's money to support our neighboring states? How can we be sure that new renewable energy projects will be built in Ohio?**

Ohio law historically required that half of the renewable energy target must be met by in-state resources, however, lawmakers decided to remove the in-state requirement in 2014 (along with a two year "freeze" of the standard). This change was made with the stated goal of lowering the cost of RPS compliance at a time when the predominant supply of wind energy was available outside of Ohio. The result of the change in law has been that roughly 70 percent of RPS compliance is achieved from renewables in neighboring states. Today, however, utility-scale solar costs have become competitive with wind and natural gas and policy makers are seeing the opportunity for in-state renewable resources to deliver cost-effective clean energy through an Ohio-based standard.

Furthermore, as evidenced by the significant pipeline of in-state renewable energy projects under development in Ohio thanks to the state RPS, it is not a far stretch to imagine that, once we meet the 12.5% renewable target under the RPS, Ohio could become an exporter of renewable energy, which means not only that Ohio's RPS dollars would stay in the state, but also that much of the electricity purchased by neighboring states would provide tax dollars, jobs, and economic development right here in Ohio.

**But the House bill includes a program that would allow the Ohio Air Quality Development Authority to handle all of this, it's not a mandate AND its more money. Why won't that work?**

Proponents of the bill have touted that the new program represents more money for renewable development. HB 6 would charge residential customers around \$1.25 for the portion of the new program that theoretically is reserved for in-state renewable projects, though this is unclear at best as coal and gas facilities can both tap into the pot of funds. By comparison, **the RPS is costing the residential customer only \$0.32/month**. Adding an in-state requirement may result in higher relative compliance costs, but that is expected to be a modest \$0.10 increase. This is significantly more cost-effective than the \$1.25 proposal and achieves precisely the outcome desired by the bill sponsors and proponents. There is ample room to both modify and increase the current RPS to attract new development within the state and stay below the \$1.25/month proposal in HB 6.

But to be clear, this is where HB 6 gets it right. The intent behind the legislation – as it relates to renewables - is to get back to Ohio-based project development. Luckily, this is agreed all around to be a wise policy goal. But instead of taking further regressive steps, **Ohio should re-establish the in-state requirement and increase it's overall RPS goals**. This simple and highly effective solution avoids the delay in setting up an entirely new structure through the OAQDA that would essentially try to re-create the already well-functioning REC market. This is a proposal fraught with uncertainty and delay at a time when there are a significant number of projects ready to move forward now.

**Are there any other renewable policy considerations that have merit in addition to the RPS?**

As the PUCO noted year after year in its annual reports to the General Assembly, the lack of long-term contracting opportunities is a barrier to in-state development. This dilemma is evidenced by a pending case before the PUCO in which stakeholders debate how to define the word "need;" a critical decision in determining whether the largest renewable projects in state history will move forward in our Appalachian region. These projects were awarded long-term contracts by AEP Ohio as a result of a legal case settlement between PUCO Staff and AEP Ohio as well as many other interested parties.

Given the competitive wholesale market construct and the resulting limited opportunity for long-term contracts in a restructured state like Ohio (vs a fully regulated electricity market), there are two paths to solving this dilemma: i) establish a means for long-term contracting with the utilities or ii) ensure that there is robust RPS demand inside Ohio to provide the needed REC price support to build new projects here.

A robust RPS with a portion of that demand met by utility-procured long-term contracts is a highly effective marketplace structure that can deliver significant benefit to Ohio's electricity customers and our economy as a whole. The RPS demand ensures adequate REC pricing to encourage new project development while the long-term utility contracts increase the financing efficiency of the forward contracts (vs unbundled energy and REC contracts) while both stabilizing and lowering rates for electricity customers.

With time supposedly running out to support the nuclear facilities targeted by HB 6, there will be continued debate on the right approach to bringing more least-cost renewable energy to the state and it is my hope that the ideas shared in this blog post are taken into consideration by those driving the state forward towards clean air prosperity.

The solution is clear and almost too easy to implement. The RPS is the most cost-effective means to drive new renewable additions in the state of Ohio and adopting these recommendations would almost certainly find the support needed for the bill to move forward. But remember, there should be [no compromise without energy efficiency](#).

### **No Compromise without Energy Efficiency**

Over the past month, lawmakers in the Ohio House have been debating an energy bill that has led to a lot of confusion around its purpose. It's been a struggle to see how a new program under the bill, dubbed the "Ohio Clean Air Program," would actually provide the cleaner air suggested in its title. The truth behind the proposal is that it aims to support a pair of failing nuclear plants, while eliminating Ohio's successful renewable energy and energy efficiency standards, leading to anything but cleaner air for the state. At best, this proposal maintains status quo. At worst, energy bills will increase significantly as will carbon emissions from Ohio's power sector. Amid all the debate, the focus has once again been placed on Ohio's energy efficiency programs. Any way you slice it, these energy efficiency programs are worth fighting for. Here are some of the key questions that lawmakers have raised during the debate.

#### **What does Ohio's energy efficiency standard do?**

Ohio's energy efficiency standard provides significant economic benefit to the state while reducing energy costs. The standard ends up more than paying for itself since for every dollar invested, Ohio electricity customers save nearly three dollars. These savings usually end up back in the local economy, and the labor to make our homes and business more energy efficient is done by local companies that hire from our communities. Eliminating the standard, like Substitute HB 6 proposes, would eliminate a powerful tool to help keep electricity prices under control, and make the costly 'nuclear bailout tax' harder on Ohio families.

**Do we really need the energy efficiency standard? Haven't we already gotten all the benefits from the energy efficiency program? What's left to do?**

Ohio is far from completing all the work that should be done in energy efficiency – there's a reason why energy efficiency businesses are booming in Ohio and account for close to 82,000 jobs in 2018. Without these programs we are leaving jobs and savings on the table. While some customers will replace appliances with more energy efficient appliances without aid from the energy efficiency standard, the standard motivates customers to buy even more efficient products (not just the cheapest one) and take more measures to reduce the amount of energy wasted in their homes and businesses. The Ohio utilities' own studies show these programs are working and are savings customers much more than what a customer would do on their own, going beyond what we call "business as usual". The filings of Ohio's utilities with the PUCO, evaluated by an independent third party, show that over \$5 billion have been saved to date through these programs.

**Are there jobs in energy efficiency?**

There are 81,676 jobs to be exact that are based right here in Ohio. Gutting the energy efficiency programs will threaten these jobs and halt progress in a job-creating field that continues to grow. Just last year, energy efficiency jobs grew by over 2%, **in other words, 2,000 new jobs were created**. They manufacture ENERGY STAR-rated kitchen appliances; install efficient lighting systems at car dealerships; implement software that optimizes traditional heating, ventilation and air conditioning (HVAC) systems in high schools and handle advanced building materials at new office towers.

**The utilities continued to voluntarily run programs when we had the "freeze" in 2014 and 2015, so why do we need a mandate?**

During this two-year "freeze", FirstEnergy dramatically reduced their program offerings, with significant adverse effects for their customers in the form of foregone savings. Getting rid of the mandate on Ohio's monopoly utilities now would create great inequity between Ohioans in service territories of utilities more interested in efficiency programs and those served by uninterested utilities – for reasons having nothing to do with the potential benefits of such programs. Not all utilities continued to run programs during the two-year "freeze", or at least not at a significant scale.

Since the utilities knew it was only a "pause" and that they could be expected to pick up the programs again in two years, there was a significant disadvantage - or cost risk - to stopping programs when you may have to rebuild the infrastructure to deliver programs again soon. This two-year freeze is not a good indicator of what may happen if the programs are made voluntary going forward.

**Mandates for efficiency programs force some customers to pay for the benefits of others, even though the beneficiaries see improved value in the homes. Isn't that inequitable?**

There are many benefits of efficiency programs that accrue to all customers, regardless of who is participating and generating the savings. That includes not having to build out new utility-scale power plants if we can eliminate electricity waste (yes, we can potentially waste enough electricity to need an



entirely new power plant). By driving down demand, electricity programs also reduce market clearing prices for both energy and capacity – reducing costs for everyone. Finally, they reduce risk of costs associated with potential future environmental regulations.

Many investments on the supply side are paid by all customers, including many customers who do not benefit at all from those investments. Consider the need to upgrade the capacity of a substation because a home-builder built a new subdivision of homes whose demand for electricity could not be served by the existing substation. All of the utilities' customers will pay for that upgrade, not just the builder of the new homes, yet all customers will not benefit from this like they do from efficiency programs.

### **Are we are wasting money, with 50% of the dollars going to “overhead” instead of customer rebates?**

There is nothing bad about spending money on things other than rebates. Utilities also spend money on training of builders and trade allies, technical support to customers, marketing and education of customers so that they are aware of efficiency opportunities, and evaluation of the programs to make sure that they are getting real savings we can count on. In fact, most non-rebate spending isn't overhead.

Efficiency programs exist because many customers face market barriers to investing in efficiency, and it's not just high cost. Other key barriers include lack of information, inadequate technical skill, risk or uncertainty, etc. To be successful, efficiency programs must address all these barriers. For some efficiency measures, it may make most sense to just offer big rebates. For other measures, a greater emphasis on technical support or education and marketing may be more important and appropriate. To consider that wasteful is like telling Pepsi that they are wasting money when they spend it on anything other than producing their product.

In the end, what matters most is whether total program spending is less than the benefits that are returned from efficiency programs. And that's been shown repeatedly to be the case. The programs are wildly cost-effective as currently delivered. Is there any waste? Could they be even more cost-effective? Maybe, but probably not dramatically so. And getting rid of them because they deliver only \$3 in benefits for every \$1 spent when *maybe* they could deliver \$3.50 for every \$1 is “throwing the baby out with the bath water” and it's our fellow Ohioans who will pay the price.

### **Do energy efficiency programs have any impact on Ohio's carbon emissions?**

According to an NRDC review of the bill impacts, carbon emissions under HB 6 would be up to 25 percent higher than if we keep the current efficiency and renewable energy standards. That is equivalent to the carbon emissions of more than 2.5 million cars on the road. This increase in emissions is due to the increased electricity demand caused by eliminating the energy efficiency standard; since Ohio would not be creating workable policies to foster the growth of renewable energy, **fossil fuels are likely to meet the increased demand**. The NRDC analysis also shows that we could achieve a significant drop in carbon pollution by either maintaining or doubling down on energy efficiency measures, even if the low-carbon nuclear plants retire absent HB 6

Eliminating Ohio's energy efficiency standards would be a drastic mistake. Energy bills would increase for Ohio's families and businesses, carbon emissions and other air pollutants would increase, and thousands of jobs would be at risk.