

## Putting Ohio's assets to work

The time is right for an Ohio Alternative Energy Standard or AES. An AES sets statewide requirements for clean, advanced energy production and purchase, spurring development and technology innovation. For Ohio, such legislation is imperative; our state is unusually reliant on old, dirty coal plants that are nearing the end of their lifecycle. It is time for change and modernization in Ohio's energy production infrastructure. Our state needs to be inspired to lead on these issues, for either we will adapt or will we let our economy further atrophy in its twentieth-century model. Right now, Ohio's energy is 90% coal dependent. Our state must diversify.

### Taking advantage of strengths

In many ways, Ohio is blessed. Last century's industrial boom left us with an impressive and functional manufacturing infrastructure. Our state is a transportation hub, with unique access to the major interstate highways, the St. Lawrence and the Gulf of Mexico, and our universities offer top-notch intellectual capital. An Ohio AES will put these assets to work.

By spurring alternative and advanced energy, Ohio can reinvigorate its manufacturing in the new economy. Companies like Canton Drop Forge, which manufactures efficient cogeneration components, Midwest Mechanical Power of Plain City, which manufactures biomass energy system components, and The Monarch Group of Cleveland, which manufactures large wind turbines and solar components would all directly benefit.

Additionally, a good AES would empower and enrich Ohio's largest industry, agriculture. Biomass energy production can provide a constant growing market for a number of crops, and biomass energy production requires localized crops for its economic model. This means that biomass electric facilities will be located in Ohio, employing Ohioans, and will use Ohio agricultural products to fuel plants that will provide power for Ohio homes and businesses. This is an in-state energy cycle. Development will be fostered and dollars will stay in-state.

### Energy efficiency and coal power

Energy efficiency is the cheapest, most readily available and environmentally friendly energy solution for Ohio, and must be included in any Ohio AES. The lowest-cost new generation of power runs over *seven cents per KWH*, while energy



**AES would empower and enrich Ohio's largest industry, agriculture, through increased biomass energy production.**



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efficiency measures, which create more local jobs, cost just over *three cents per KWH*. The facts are clear - energy efficiency is the cheapest, cleanest energy resource available. Energy efficiency must be put at the center of any Ohio AES.

Ohio is a large coal producer and is inordinately reliant on coal energy production. Coal energy may seem cheap, but it creates extensive unseen costs. Repairing lands damaged by coal mining operations costs billions, and most of this expense must be borne on the backs of taxpayers. As well, traditional coal burning releases huge amounts of deadly

mercury, harmful sulfur and greenhouse gases into the air. However, an Ohio Alternative Energy Standard which embraces advanced coal-burning techniques can alleviate some of these costs.

Gasification is a particularly attractive option. Gasification with carbon capture is 15% more energy efficient, uses 40% less water and emits 90% less mercury, 80% less sulfur, 35% less nitrogen oxide, and 80% less greenhouse gas than conventional coal combustion. Moreover, when gasification is employed, Ohio coal can be burned exclusively. With traditional coal-burning techniques, Ohio coal must be combined with more expensive coal from Wyoming and points west.

Gasification does not address mining impacts, but it does go a long way to mitigate the other harmful effects of coal for energy use, and provide local markets for Ohio coal. To the extent Ohio must rely on coal for energy, we must employ the least polluting technology, coal gasification.

## Capitalizing on easy steps to save money and create value

For these reasons, the OEC recommends a three-part Alternative Energy Standard:

### Part 1: Energy Efficiency

Ohio should embrace an energy efficiency initiative that requires utilities to produce annual energy savings of 1.25% of previous year's sales. This number would start out small, and gradually increase to 1.25%. Ohio has an ageing and inefficient electricity transmission and distribution infrastructure, so distribution efficiency improvements should be included in this standard. It should focus on industrial and commercial users, promoting large savings as through combined heat and power. There should be a carve out for specific savings for residential and low-income consumers.

Savings should be achieved with flexibility in mind. End-use efficiency improvements at customer facilities should be stressed. Cost recovery should be available, and least-cost efficiency improvements should be encouraged.

### Part 2: Renewable Energy 15% by 2025

By 2025, 15% of power sold by utilities in the state should come from renewable sources. These include:

- solar photovoltaic energy
- biomass energy
- clean fuel cells
- wind power
- geothermal energy
- low-impact certified hydropower

### Part 3: Alternative Energy 10% by 2025

By 2025, 10% of power sold by utilities in the state should come from alternative sources. These include:



By 2025, 15% of power sold by utilities in the state should come from renewable sources, such as photovoltaic energy.

- landfill methane digestion
- agricultural methane digestion
- advanced coal technologies, integrated combined-cycle coal gasification with carbon capture and storage

Utilities should be provided with flexible means to meet these standards, but a few key principles must be upheld in any legislation:

1. Penalties for failure to meet standards must be real and designed to ensure compliance.
2. Cost recovery should be available, but only until units are online and producing power.
3. In-state production should be favored – Ohioans should benefit from the Ohio standard with Ohio jobs and local power.

**A proposal for an alternative energy standard is key for the future of Ohio's economy and environment. It is time for change and modernization in Ohio's energy production infrastructure. Our state needs to be inspired to lead on these issues. Ohio has the geography, the know-how, and the resources to tackle these important issues. It is time to marshal the will.**

#### For more information contact:

Nolan Moser, Law Fellow, [nolan@theOEC.org](mailto:nolan@theOEC.org) or 614-487-7506.