

Hello. The State of Ohio is committed to making targeted, strategic investments in advanced energy, one of the growing industries that we believe is strengthening Ohio's economy and creating jobs now and in the future for Ohioans. We know the work you are doing and the partnerships we have developed are helping earn Ohio the reputation as an innovation leader in clean energy and clean energy technologies.

We wanted to share with you a speech that Governor Ted Strickland gave today in Washington, D.C. at the EnergyBiz Leadership Forum, a gathering of national energy industry leaders and policy makers. Governor Strickland was invited to speak because opinion leaders on the national and international scale are taking notice of Ohio's leadership in innovating and supplying the world's clean energy economies. The Governor was proud to have the opportunity to talk about all the important work Ohio is doing, and we wanted to share this with you and say thank you for everything you do on behalf of Ohio, and the world.



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## Strickland Discusses Ohio's Strategic Energy Investments at National Energy Forum in Washington, D.C.

**Washington, D.C.** - Ohio Governor Ted Strickland today discussed how strategic investments and a skilled workforce are positioning Ohio to be a leading global supplier in clean energy at the EnergyBiz Leadership Forum, a gathering of national energy industry leaders and policy makers, in Washington, D.C.

Strickland was the only U.S. governor to make a keynote address at the forum, which was produced by Energy Central, which publishes *EnergyBiz* magazine, a leading national energy trade publication. Other forum speakers include representatives from utilities, government, consumer advocacy groups, research laboratories, energy associations, businesses, regulators, and the energy vendor community.

Full text of the governor's remarks below and available for download [here](#).

The winners of the 20<sup>th</sup> Century energy economy were chosen millions of years ago. And they were determined by dead dinosaurs. An abundance of which Ohio was not blessed.

The winners of the 21<sup>st</sup> Century energy economy are being chosen today. And they will be determined by ingenuity and skill, infrastructure and location, far-sighted investments and visionary policies. All of that, you'll find in Ohio.

Midwesterners are modest by nature. And so am I. But today I'm going to do a little bragging. Because an audience of energy experts and people in the energy business needs to know that Ohio is an advanced energy state. My prediction is...Ohio will one day be *the* advanced energy state.

Now you might be skeptical, but let me ask you this. According to the Council of State Governments, what state was first in the nation last year in creating new green energy jobs?

Ohio.

According to Conway Data, what state has the most renewable and advanced energy manufacturing projects in the nation?

Ohio.

What state went from not one drop of ethanol in 2007 to producing 295 million gallons last year?

Ohio.

According to a Pew study, what state has more than 2,500 companies working in clean energy?

Ohio.

What state is home to the largest thin film solar manufacturing plant in the country, and the development of the most powerful fuel cell in the world?

Ohio.

You hear Ohio and I know what you think. You think football and steel mills. And I'll tell you - we're enormously proud of both. But that's not the whole story, that's not even the first chapter.

There's an **Ohio Advantage** - knowledge and people, facilities and supply chain, location and policy - an advantage we're telling the world about. And when people hear it they will come to Ohio for energy solutions.

First Solar opened its production facility in Ohio in 2000.

They had 50 employees in Ohio. Then they doubled that number. Then they doubled that number. Then doubled that number. Now they're in the process of doubling it again.

First Solar hired all those folks and just spent 100 million dollars to double the size of their manufacturing facility because they have orders that will consume their production output for the next five years.

First Solar has supplied massive utility-scale solar fields near Las Vegas, in Southern California, in Ontario; and they are in talks with the Chinese government to build the largest solar field in Asia.

In northwest Ohio, they are supplying the Midwest's largest solar installation with 160,000 First Solar panels. And they have an order for what would become the largest solar array in the nation - covering nearly seven square miles.

First Solar has been added to the S&P 500 reflecting its status as one of the country's most important companies.

With First Solar, ten percent of all solar cells produced in the nation emanate from Perrysburg, Ohio.

*Ohio.*

Every step of the way, First Solar has grown with **the Ohio advantage**.

They've grown with Ohio's knowledge workers and skilled manufacturing workers.

They've grown from a research facility on the campus of the University of Toledo.

They've grown with state tax credits and state investments in our research and energy economy.

They've grown with Ohio policies that require our utilities to make use of advanced and renewable energy.

Ohio is a leader in advanced energy. Not a leader on paper. Not a leader in our minds. This is real. It's here. It's happening right now.

Because, **the Ohio advantage, is knowledge and know-how.**

Ohio universities invest 2 billion dollars annually in research and development. And I have set the goal of seeing Ohio's universities be the best in the nation at turning research into economic development and new jobs.

We formed the University Clean Energy Alliance of Ohio to unite 15 Ohio universities in their efforts to conduct research and develop new energy technologies.

Our universities host a wide array of advanced research institutes, startup incubators, and other partnerships with businesses to help commercialize great ideas.

The company Sunpower was born in a laboratory at Ohio University and has been nurtured by the school's Innovation Center.

Sunpower makes free-piston Stirling engines, a device that converts fuel to electric power with super efficiency and reliability.

From their headquarters in Athens, Ohio, Sunpower has developed 39 patents and served clients around the world.

And now they are extending their reach beyond even that.

Sunpower has won a contract with NASA to power vehicles in deep space missions.

NASA chose Sunpower because their engine will run for 100,000 hours straight without stopping. That's every minute of every day for more than 11 years.

At Case Western Reserve University, the Great Lakes Institute for Energy Innovation is studying offshore freshwater wind farms.

Ohio State University's Department of Engineering is working to remove carbon dioxide and other pollutants from coal fired power plants.

Ohio's Photovoltaic Innovation Center is one of the top three centers for solar research and product development in the nation.

One of the great, innovative companies the center has advanced is Xunlight.

Xunlight started with a research paper. A pair of University of Toledo professors contemplated the possibilities of a revolutionary flexible solar panel that would be easier to ship, easier to install, and could be utilized in more settings than traditional solar panels.

With the aid of the Photovoltaic Innovation Center, that research paper turned into a product design, a business plan, and then a business.

Today, as they prepare for mass production, Xunlight's solar panels are powering test sites including a giant video billboard in New York's Times Square.

Already Xunlight has been lauded by *Businessweek* magazine as one of "America's Most Promising Startup" companies.

Xunlight's flexible solar panels. Designed, developed, and manufactured in Ohio - and serving the world.

Ohio is a center of federal government energy innovation with the NASA Glenn Research Center and Wright Patterson Air Force Base continually seeking new ways to propel planes and space craft.

In the private sector, Ohio is home to Battelle, one of the nation's preeminent research institutions. With 5 billion dollars in annual revenue, Battelle would hold a place in the Fortune 500 if it weren't a non-profit entity. In Ohio, companies like GE Aviation and the

giants of the auto industry are also raising their research commitments to find better energy solutions for their products.

But **the Ohio advantage** is more than patents and products, business incubators and laboratories. **The Ohio advantage is our people.**

The Education Commission of the States just cited Ohio's comprehensive education reform as the most innovative in the nation. And in the last three years, enrollment in Ohio's public colleges and universities is up 14 percent.

In terms of job experience, more than 1 million Ohioans have worked in manufacturing.

What does that have to do with advanced energy? Well, there's a perception out there that green collar jobs are incompatible with blue collar jobs. But wind turbines aren't built by folks wearing Birkenstocks and sipping lattes. Green power doesn't come from space age widgets, it comes from the same stuff as automobiles - steel, glass, bolts, gear boxes. The same stuff Ohioans have made for generations.

Minster Machine in Minster, Ohio began as a blacksmith in the 1890s. Then it served the auto industry. Today workers who once made auto parts are forging the giant cast-iron hubs that keep the blades attached to the center of a wind turbine.

Ohio's people advantage doesn't just make us ready to fill jobs, it creates jobs.

What happens when you have a state where manufacturing veterans live down the street from scientists? You get practical, tangible innovations.

In Bath Township, Ohio, Green Energy Technologies brought together a machine tool shop owner and a former NASA aerospace engineer to design a better small-scale wind turbine.

Their WindCube design concentrates wind to allow it to produce electricity with nothing more than a five mile an hour breeze.

Their system can be attached to the roof of a building to provide on-site power. It's ideal for markets like island hotels located where electricity is expensive and wind is plentiful.

Designed, developed, and manufactured in Ohio - and serving the world.

**The Ohio advantage is our manufacturing infrastructure.**

It takes 8,000 components to construct a typical utility-sized wind turbine.

You need a company to make bearings, to make fasteners, to make control systems, composites, gear boxes, brakes, generators, metal coatings, gears, hydraulics, sensors, electronics - the list goes on.

You can't have green energy without them. And Ohio has companies to make them.

You know, it gets kind of windy in the places where they put wind turbines. So they need the best bolts to secure the turbine tower to its platform.

For forty years, Cardinal Fastener in Cleveland has made bolts for various commercial needs.

Now they've turned their attention to wind. Supplying bolts to the wind market has led Cardinal Fastener to strong sales growth and a planned workforce expansion of up to 40 percent.

The global economic downturn has hurt this country and most every state. The downturn cost Ohio jobs and hit manufacturing particularly hard. But not for a moment are we giving up.

"A pessimist is one who makes difficulties of his opportunities," Harry Truman once said. "And an optimist is one who makes opportunities of his difficulties."

I'm an optimist. And we are going to create an opportunity here.

Because the demand for advanced energy can only go up. And Ohio has the capacity to meet that demand. In fact, the Renewable Energy Policy Project found Ohio is among the top five states in our potential to create renewable energy jobs and attract renewable energy investments.

### **The Ohio advantage is location.**

Location matters in every business. But it matters more in energy because of the tremendous cost to ship many of the components involved.

Ohio is within a day's drive of more than 60 percent of U.S. manufacturing facilities, and 60 percent of the U.S. population.

Ohio is within a day's drive of at least 16 states with renewable energy portfolio standards.

### **The Ohio advantage is our policies.**

In Ohio, we will leave no good idea behind in the laboratory.

Ohio made a commitment to take its place at the front of the research economy with a bold investment program called the Ohio Third Frontier.

In 2002, the Third Frontier began investing 1.6 billion dollars to advance technology-based products, companies, industries, and jobs.

The results have been extraordinary.

48,000 jobs created.

6.6 billion dollars in outside investments leveraged.

It's a major reason why venture capital investments in Ohio have been growing more than 20 percent a year, well more than twice the rate of growth nationwide.

In Dayton, the Third Frontier has accelerated UltraCell's development of a fuel cell battery that could power military laptops and communication equipment in the field for days on end without needing to be re-charged.

Across Ohio, the Third Frontier has helped accelerate product development and growth at First Solar, Xunlight, and a host of other advanced energy companies.

With bipartisan support from elected officials, in May we are asking Ohio voters to renew our Third Frontier commitment.

Two years ago, Ohio was one of the first states to respond to the international economic crisis with a bipartisan jobs bill that made key investments in several high growth industries, including a 150 million dollar commitment to advanced energy.

Ohio's Advanced Energy Fund has provided millions in incentives to encourage utilities and consumers to improve their energy technology and to expand manufacturing of energy components. For every dollar invested in the fund, we have leveraged more than 43 dollars in private investment.

And I recently announced a new investment called Ohio's Energy Gateway Fund.

This 40 million dollar commitment will offer access to capital for new and expanding advanced energy companies. And we will at least double the impact of our efforts by partnering with private fund managers who will, at a minimum, match our investment dollar for dollar. Revenue generated from the fund's investments will keep powering Ohio's economy because it will be reinvested in additional energy companies.

As the new chair of the Midwestern Governor's Association, I will ask my fellow governors to consider the potential dynamic power of a regional approach that makes energy investments across the Midwest.

A Pew study found several Midwestern states rank among the top 10 job-creators in advanced energy, energy efficiency, pollution mitigation, and the like. And I want to continue the Midwest's move forward into the new energy economy.

With the federal tax credit currently in place for renewable energy, companies will be making commitments to new facilities in the coming months.

So I am working with the Ohio legislature to give those companies even more reasons to choose Ohio. I have proposed a major tax cut for wind and solar electricity generation facilities that break ground this year, create Ohio jobs, and begin producing energy by 2012.

Ohio's electricity reform two years ago accomplished several major priorities that better serve residents and businesses and the future of energy.

We ensured that electricity service in Ohio was reliable, sustainable, and that the price would be predictable.

We established one of the ten most aggressive renewable energy standards in the nation.

By 2025, we require that electric utilities generate at least 25 percent of their power from advanced energy sources including wind, solar, biofuels, nuclear, and clean coal. At least half of that advanced energy must come from renewable sources.

Our policy recognizes that nuclear power will play a critical role in our energy future. So we are working closely with the Southern Ohio Clean Energy Park Alliance, an effort led by Duke Energy and Areva, to explore building a nuclear power generating facility in Piketon, Ohio. The plant there would redevelop a U.S. Department of Energy weapons facility site. And, we should capitalize on United States Enrichment Corporation's efforts to deploy American uranium enrichment technology at that location as well.

Some people think they detect the smell of yesterday on us - but Ohio is the future. We have **the Ohio advantage** - the knowledge, people, facilities, supply chain, location, and policy.

What we need now is to believe in our future and pursue it relentlessly.

I heard Jim Rogers, CEO of Duke Energy, speak a few months ago.

I was struck by a story he told about visiting the Notre Dame Cathedral in Paris and contemplating how it was built.

The cathedral was designed in 1160. But the architects never saw it finished.

Men spent their entire lives laying the foundation, but they never saw the building finished. They never saw the cathedral walls and the spires and the stained glass windows.

The people who built the walls and the spires and stained glass windows dedicated their lives to the cathedral, but they never saw it finished. They never saw the towers built.

The people who built the towers had to invent new ways to support the weight of its walls. But they never saw it finished.

Construction was completed 182 years after it began.

For generations, men committed their lives even though they could not finish the job themselves. They committed though no one even knew *how* to finish the job.

But that cathedral stands today because they had a vision for what could be done and they believed in what they were doing.

We need their vision and belief today. We need cathedral thinking. We need to see that energy is not our problem, it's our solution.

To all the business leaders here today considering where to develop your next energy product, where to buy advanced energy components, where to make the energy of the future, have the vision to see what can only be done in Ohio.

Christopher Clark was a college student at Miami University. For a class project he designed a business plan for a manually movable solar system - in essence, a solar panel on a pole that can be moved to track the sun's path.

Christopher's professors were impressed by his plan and told him he should actually make this product. And so he did.

Aided by the Civic Innovation Lab in Cleveland, Christopher formed Sunflower Solutions to develop his system.

His design generates 40 percent more power than a roof mounted system allowing customers to generate more power with fewer panels.

One of his prototypes is now in use at the Oromo Primary School in rural western Kenya.

The school uses it to power lights and computers. And, when the school is closed they rent access to their electricity to area residents. With the rent money, the school has created a new meal program to feed local children.

Sunflower Solutions. Dreamed up in Ohio. Designed in Ohio. Made in Ohio. And serving the world.

Ronald Reagan once said, "There are no great limits to growth because there are no limits of human intelligence, imagination, and wonder."

I believe that. And I believe in Ohio. Because the dinosaurs had their say. Now it's our turn.