Economic Growth From

Hoosier Homegrown Energy

Indiana's Strategic Energy Plan

energy.IN.gov

2006

VISION

Grow Indiana jobs and incomes by producing more of the energy we need from our own natural resources while encouraging conservation and energy efficiency.

GOALS

TRADE CURRENT ENERGY IMPORTS FOR FUTURE INDIANA ECONOMIC GROWTH

- Importing energy exports growth potential
- New plants bring new jobs
- Reduce energy dependency and increase reliability

PRODUCE ELECTRICITY, NATURAL GAS AND TRANSPORTATION FUELS FROM CLEAN COAL AND BIOENERGY

- Build needed new power plants using 'clean coal' technology
- Make gas from coal versus importing natural gas
- Unlock biomass and build on biofuels success

IMPROVE ENERGY EFFICIENCY AND INFRASTRUCTURE

- Create new tools and incentives
- Support flex-fuel fleets
- Strengthen/expand energy infrastructure (including rail)

WHAT WE NEED TO DO NOW

A listing of some of the steps that need to be taken to achieve the outlined goals is included at the end of this document.

SUMMARY

Hoosier Homegrown Energy has the potential to bring several thousand new, high-paying jobs and more reliable, competitively priced energy supplies.

A Message from the Governor and Lt. Governor of Indiana

An Indiana economic comeback depends heavily on the successful development of our energy potential. First, we must maintain and extend our competitive advantage of reliable, low-cost power for industry. Secondly, we must generate more income here in Indiana from our energy production potential. A winning energy plan is thus a critical underpinning of our overall economic strategy.

Our Hoosier homegrown energy strategy is to grow Indiana jobs and incomes by producing more of the energy we need from our own natural resources, while encouraging conservation and energy efficiency. This plan is the energy component of the state's "Accelerating Growth" economic plan and agricultural growth strategy.

Gasoline and diesel fuel prices at record levels, volatile natural gas prices and ongoing troubles in the Middle East present us with an historic opportunity: Substitute Indiana coal and biomass for current coal, natural gas and petroleum imports to supply the energy we need. Current-and projected-world energy prices make such homegrown alternatives economically viable, and we should seize this chance to make it happen.

Today, 75 percent of our energy expenditures leave the state in exchange for coal, natural gas and oil. However, new energy development in Indiana would bring large investments and thousands of jobs to the state, while ensuring us greater control over our energy future. These new plants-and the infrastructure to support them-will be funded by private industry. Government will support this investment through tax incentives, loan guarantees and efficient regulation. Future pollution controls are likely to make new clean coal and biomass plants even more economically viable than current energy sources.

Our strategic energy plan calls for Indiana to make a long-term commitment to meet much of its own energy needs through the greater use of our in-state resources.

In the late 19th and early 20th centuries, Indiana built its first big industrial powerhouse on top of huge underground stores of natural gas and fields of Illinois Basin coal and oil. Our economy and our social fabric were literally built on a foundation of homegrown energy.

This time, new technology will allow us to fully utilize Indiana coal and biomass to generate needed electricity, create synthetic gas from coal and biomass, turn our agricultural products into motor fuels, and unleash our ingenuity toward the goal of aggressive energy efficiency.

We will build and modernize the energy generation capacity we need to meet the needs of a growing Indiana economy and, if we like, export energy to our neighbors.

We will unleash the power of biomass and use our animal waste, agricultural products and landfills to produce clean, affordable gas. This fuel will power rural communities and create self-sustaining agricultural campuses where odor, waste and pollutants will be contained. And, Indiana intends to meet or even exceed the national goal of producing 25 percent of the energy we consume by the year 2025 from our own alternative sources.

The Midwest really can be the Middle East of biofuels. Our numerous new E85 pumps, more than a dozen new ethanol plants, the world's largest soy biodiesel facility, and the establishment of BioTown are evidence that we won't rest until Indiana is the nation's biofuels capital. Beyond the use of traditional grain for ethanol, Indiana will strive to be a leader in cellulosic ethanol. Cellulosic is the future of biofuels and can be maximized by Indiana's research universities like Purdue.

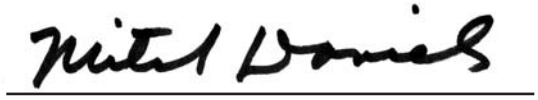
Thousands of new, high paying jobs in our state will be in mining, energy plant operations and management. Our universities will train highly skilled workers to run sophisticated, computer-driven power plants and to manage safer, new coal mines.

Our research universities, with funding from the state and from innovative new federal research and development programs, will find ways to make our homegrown energy more economical, while commercializing energy technology and creating high-wage energy jobs. Residential customers also will benefit from more aggressive efforts by their energy providers to help them use energy more efficiently.

Our state's large, industrial energy users already know it is simply good business to "spend a dime to save a dollar" through efficiency. This plan will help smaller, more typical Hoosier employers-often the most vulnerable to energy prices-to become more energy efficient as well.

In the 21st century, Indiana's powerhouse economy will once again be built upon a foundation of energy supply and manufacturing. This time it will be one that is cleaner, stronger and more lasting. It will give our children and their children more reliable, affordable energy. And, just as importantly, our new energy industry will create high-tech, high-paying jobs while making Indiana more energy independent and a major manufacturer of dependable, clean energy.

In the era after September 11, 2001, our President and the nation have placed a great deal of importance on creating energy independence. Indiana will play a significant role in helping the United States reduce its dependence on foreign oil, while creating a whole new advanced manufacturing sector. And the jobs and income that will come with it will be right here at home in Indiana!



Governor Mitchell E. Daniels, Jr.

Lt. Governor Rebecca S. Skillman

GOAL: TRADE CURRENT ENERGY IMPORTS FOR FUTURE INDIANA ECONOMIC GROWTH

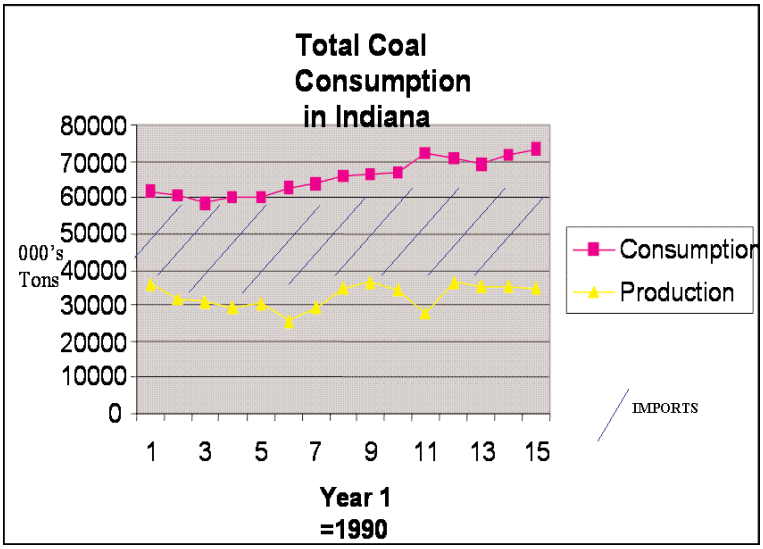
IMPORTING ENERGY, EXPORTING CAPITAL

Indiana will spend approximately $14 billion for imported energy in 2006 including natural gas, coal and petroleum.

Petroleum prices have increased 50% in the past 2 years; natural gas prices rose that much in one year. Both directly affect the cost of living and doing business in the U.S.

Today, 75 percent of our energy expenditures leave the state in exchange for out-of-state coal, natural gas and oil products. This makes current Indiana consumers dependent on outside suppliers and hostage to whatever future energy prices we are charged. Importing energy and exporting capital does not increase energy investment in Indiana.

Consumers and businesses are suffering from increased costs. Workers are missing opportunities for employment. The state of Indiana is losing additional options to harvest economic growth and capital investment. The country as a whole is struggling with energy independence. What if we made much of the energy we need ourselves through a Hoosier homegrown energy policy?



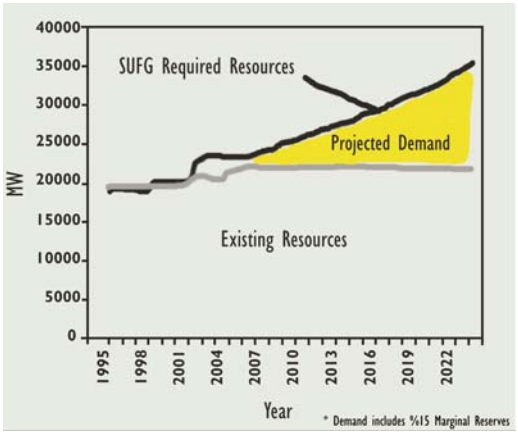
In addition to direct economic benefits, a Hoosier homegrown strategy will reduce our dependency upon outside sources for basic energy needs. We cannot travel, live, prosper or create economic growth without a dependable, affordable and growing supply of energy. Making it here keeps the considerable investment required at home in Indiana.

We will work with Indiana's energy providers and their regulators, the Indiana Utility Regulatory Commission (IURC) to continue their good work of keeping our lights on, pipelines full and prices competitive.

New energy plants mean jobs. A new 650 megawatt coal gasification power plant would create 800 - 900 construction jobs, 700 new mining and related jobs, require 70 full-time operators and consume $40 million in coal annually.

GOAL: PRODUCE ELECTRICITY, NATURAL GAS AND TRANSPORTATION FUELS FROM CLEAN COAL AND BIOENERGY

ELECTRICITY



Inexpensive coal has been a key reason for the relatively low electricity prices that Indiana has historically enjoyed. Our total electrical generation capacity has grown at a modest rate, and our estimated base load capacity now stands at 23,000 megawatts annually.

Currently, 13 percent of Indiana's generating capacity, and so-called "peaker" plants, run on imported natural gas. As natural gas prices rise these plants either do not generate electricity or do it expensively. This dependence on piped-in natural gas connects volatile natural gas prices with electricity prices. This linkage in Indiana's energy supply chain compounds the negative affect of volatile natural gas costs, placing pressure on both electricity and natural gas prices for home heating, commercial and industrial users.

'Negawatts' from energy savings equal megawatts we don't need to produce.

Purdue University's State Utility Forecasting Group (SUFG) predicts that Indiana will need over 10,600 megawatts of additional electricity-the equivalent of 15 new baseload plants-by 2023. Building 15 new baseload plants is not practical and we must maximize our development of

Indiana has not built a new baseload generation plant in the last 20 years.

alternative energy and efficiency to achieve future needs. The SUFG estimates that Indiana will become a net importer of electricity in three years, forcing us to rely on outside markets that cannot be controlled by our energy producers.

Currently, our most plentiful stocks of "ready energy," are abundant coal reserves. However, they are high in sulfur content, requiring expensive clean air technologies to use productively. While coal still supplies over 90 percent of electric generation in Indiana, over 50% of coal consumed comes from outside Indiana.

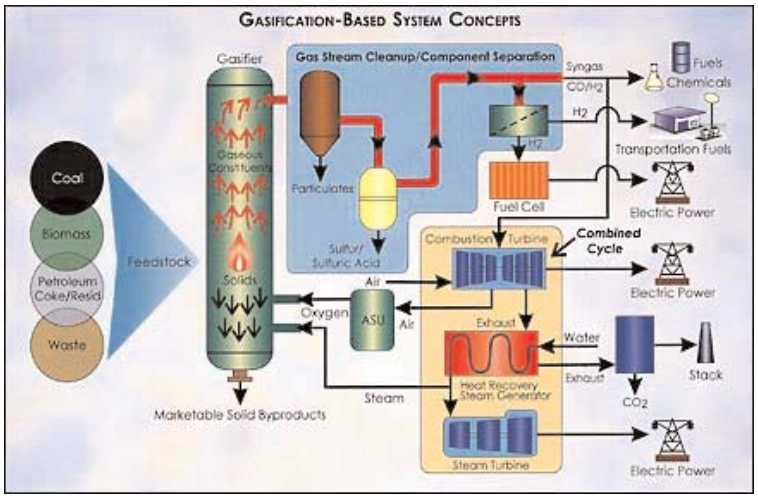
Current Indiana coal reserves equal roughly 17 billion tons and Indiana mines roughly 35 million tons a year.
17 Billion / 35 Million = 485.71 years of coal supply

Therefore, Indiana should quickly develop clean energy opportunities to use our own coal before we increase the use of outdated plants and expensive pollution control technologies, to use coal imported from other states. This importation creates no economic advantage for Hoosiers.

Clean Coal Technology Is the Best Option

The best way to use our abundant coal reserves and meet the Environmental Protection Agency's (EPA) clean air mandates is to adopt clean coal technologies. While natural gas and petroleum prices have increased and fluctuated drastically, coal prices have remained steady.

By pursuing clean coal technologies and building new generation facilities, Indiana will enjoy new jobs resulting from the average per plant investment of over $1 billion. And, it will strengthen its hand from an economic development perspective, attracting outside earnings by exporting excess electricity.



Integrated Gasification Combined Cycle (IGCC)

Indiana will best use its coal reserves and rely less on imported coal through coal gasification, or Integrated Gasification Combined Cycle (IGCC). This process takes highly sulfuric coal and converts it to gas as a clean source of fuel to fire the generation of electricity. An example of this can be found in West Terre Haute at the Wabash River Gasification facility.

Fluidized Bed Technology

Fluidized Bed Combustion (FBC) is another combustion technology which may be used in Indiana power plants. Such plants are more flexible than conventional units because they can be fired on both coal and biomass, among other fuels, and provide more effective chemical reactions and heat transfer.

We should rely upon new clean coal power plants for a substantial part of the new electricity supplies we need by 2023. The balance should come from retro-fitting existing units with pollution control devices, from greater energy efficiency, and from the further development of renewable energy sources.

Both IGCC and fluidized bed technologies show significant decreases in emissions of Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), and increases the ability to capture more Carbon Dioxide (CO2) than current coal combustion techniques. Both will also be able to more easily accommodate new CO2 emission controls, if required.

New clean coal projects are expensive investments and Indiana energy costs need to stay competitive to attract future economic development. Our current low electricity rates give us some cushion to make needed new investments, but we cannot rely solely on new coal development

for all of our future megawatt production. Nonetheless, we have abundant coal reserves and will need to use them in a future of increasingly stringent environmental rules to help meet our growing electricity needs. These plants are by far the best environmental use of coal.

Unlock the Potential of Biomass

Electricity has long been provided by coal, petroleum and natural gas. However, new electric generating sources from biomass are becoming more economically viable. Biomass-to-electric development uses processes like anaerobic digestion or waste gasification to make power. These technologies provide byproducts that can be used in fertilizer or as feed additives for Indiana's expanding livestock base. As environmental pressures mount, new uses for these products will bring value-added opportunities to Indiana communities, particularly those whose waste streams are either land-filled or discarded as worthless. A current example of biomass use in Indiana is seen at several landfills using methane gas to make electricity.

Biomass conversion to electric will allow for expansion of Indiana's agriculture, food processing and other waste-producing ventures without increasing the amount of waste product for land filling or land application. Our abundant supply of waste streams, such as animal waste, landfill gas, and woody biomass will serve as key resources that will be readily available for energy development.

Through policy and cooperation with our current utility providers, Indiana will look for incentives to encourage aggressive development of biomass conversion to energy. Our hope is to emulate our dramatic success with ethanol plants the past 18 months and rely upon the future demand for megawatts and rural development potential to drive to progress.

Realizing the potential of biomass energy, the State of Indiana is developing a unique concept in Reynolds, Indiana; also known as **BioTown, USA.** The long term expectation of the **BioTown, USA**, project is to completely meet all the energy needs of the town of Reynolds via biorenewable resources including electricity, natural gas replacement, and transportation fuel.

Meeting the energy needs of this town with renewable sources will be the first success of its kind in the world, Bio Town, USA, uses environmentally friendly technologies that will convert animal and human waste to biogas, which translates into energy.

Maximize Indiana's Wind Energy Potential:

Wind power, electricity generated by capturing the wind's energy with modern wind turbines, is one of the lowest-cost, renewable electricity alternatives currently available.

Utility-scale wind farms can provide rural areas with significant investment and provide farmers with new sources of revenue by

opening their land to new energy development, while at the same time allowing present farming activities to continue virtually unchanged.

Indiana possesses viable wind resources in limited pockets scattered across the northern half of the state. Wind power could provide the electricity capacity of a new baseload power plant within the next ten years. As wind power technology improves, wholesale markets increase and green energy becomes more valuable, Indiana can maximize its wind resources by selling wind power into markets with higher electricity costs. This would allow wind producers to find the best markets without jeopardizing Indiana's low electricity rates.

NATURAL GAS

Following nearly two decades of declining prices, natural gas costs skyrocketed nationally in the winter of 2000 and again in 2005. The increases hit homes and businesses hard. Since 1995, average natural gas prices have increased from about $2.00 per cubic foot, to $7-$8 per cubic foot today. And, prices are unlikely to return to pre-1995 levels.

Indiana is the sixth-largest per capita natural gas consuming state in the nation.

The state of Indiana has significant natural gas resources that can be utilized to increase economic development and enhance the energy security of our state.

In contrast with the conventional natural gas resources, such as the largely depleted, turn-of-the-century Trenton Gas Field in northeastern Indiana, these resources are unconventional and are just now beginning to be developed. This development is taking place for two reasons:

1. The price of natural gas is now of a significant value that companies can economically utilize relatively expensive specialized drilling and completion technologies to produce the resource, and
2. These new technologies have been tested, tailored, and proven to be successful in Indiana’s natural gas fields.

The volumes of natural gas located within the state are significant. Estimates are of 3-5 trillion cubic feet (TCF) potentially recoverable from coalbed methane (CBM) and 5-8 TCF from the New Albany Shale. For perspective: The state of Indiana consumes approximately 600 billion cubic feet (0.6 TCF) of gas per year. The potentially recoverable resource of unconventional gas located in the state is estimated at 8-13 TCF. This could be considered as a 13 to 22 year supply.

Coal to SYNGAS

Using local coal sources for synthetic gas production beyond electric generation would reduce our reliance on natural gas imports and should reduce costs for home heating and industry. Indiana could produce synthetic gas at home and reduce our reliance on volatile foreign suppliers likeVenezuela, Bolivia and the Middle East, while keeping the economic benefits

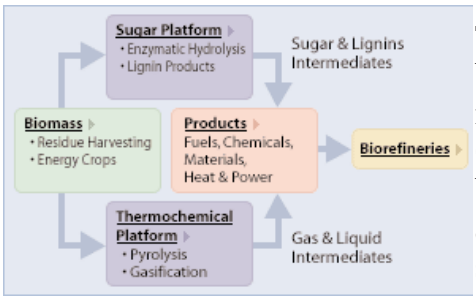
Indiana used to be a major natural gas producer, but now essentially imports 100 percent of the natural gas typically used for home heating, electricity generation and to power manufacturing facilities.

of such production here at home. Indiana still has substantial natural gas reserves locked under shale formations, but major economic and technology constraints continue to block their use in the near term.

Synthetic natural gas plants are $1 billion capital investments that mirror the economic development potential of the clean coal electric plants. Once again, these plants would rely on local sources of energy and revitalize our coal industry, while creating new jobs and revenue in areas of the state hungry for economic development

Biomass to Biogas

Biomass conversion can also help Indiana rely less on natural gas imports. There are now projects statewide that use animal waste, landfill gas and wood waste to offset the use of traditional natural gas imports.



U.S. Department of Energy

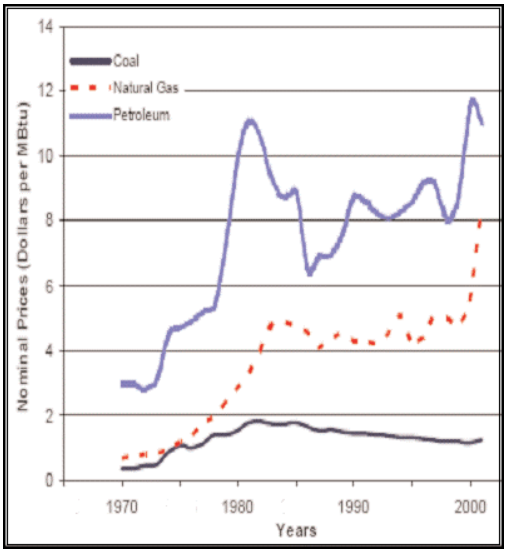
The same technologies used to produce electricity from biomass can be used to make biogas for natural gas replacement. Some biomass conversion units use Combined Heat and Power or CHP technology to make both electric and gas, making a closed loop process and allowing the user to rely less on traditional energy feedstocks and utility providers for energy.

Using waste streams to produce biogas also helps Indiana environmentally by turning once worthless products into value added resources. As with the BioTown initiative, we will maximize the use of both solid and liquid municipal waste to produce not only electricity but also natural gas replacement for home heating and manufacturing processes. Biomass conversion uses clean technologies with little emissions and removes environmental hazards by utilizing waste streams that may have been landfilled or stored in open lagoon systems.

Indiana Historic Energy prices (nominal dollars) Source EIA

Build "SYNGAS" Plants

The benefits from new synthetic gas production plants will be significant. First, Hoosiers will enjoy greater freedom from the current expensive, volatile natural gas markets. We will enjoy the direct benefits of using our natural feedstocks-coal and biomass, and the economic returns created by generating high-value byproducts and pipeline quality gas will stay at home. Just three such plants could replace 25 percent of current residential and commercial natural gas consumption.



By tying synthetic gas to future coal prices instead of natural gas or petroleum, Indiana gas customers should see substantial savings and be less dependent on foreign imports. (See Previous Graph)

Natural gas has a volatile market that fluctuates drastically in price. Indiana is one of the states that relies the most on natural gas. Coal syngas offers Indiana a homegrown solution by developing syngas from Indiana coal. The syngas prices will then be based on coal prices, which are less volatile than natural gas prices.

Additionally, these plants would create a large jobs multiplier. Each plant would require a new coal mine with new industries providing a multiplier of 3.2 support jobs per one mine job.

TRANSPORTATION FUEL

A recent report by the President's Committee of Advisors on Science and Technology predicted that U.S. oil imports will approximately double between 1996 and 2030, from 8.5 million barrels per day, at a cost of $64 billion, to nearly 16 million barrels per day, at a cost of $120 billion. They estimated, however, that with concentrated efforts in fundamental energy research and investment in renewable fuel technologies, this could be reduced to 6 million barrels per day in 2030.

Indiana consumes 1.8 million gallons of petroleum every day, an increase of 300,000 gallons from 1999.

U.S. Department of Energy

The nation has limited refinery capabilities though it is currently running its facilities at full capacity. The United States has not built new refineries in decades. At the same time, gasoline demand continues to increase. New demand for oil will be filled largely by the Middle East, meaning a transfer of more than $1 trillion over the next 15 years to the unstable states of the Persian Gulf alone. This will prove costly for Indiana consumers at the pump.

The cost for transportation fuels also is affected by regional environmental standards that require refineries to make multiple blends of gasoline to achieve air quality standards. The Federal Clean Air Act, which established emission standards for certain engines, sets fuel formulation requirements and requires emissions from transportation activities to be accounted for in states' plans to attain national ambient air quality standards. However, environmental agencies across the nation are concerned that progress made through cleaner burning fuels and low emission vehicles could soon be offset by increases in vehicle miles traveled.

Indiana produced an estimated 1.3 million barrels of petroleum in 2003. This is down substantially from just 10 years earlier, and represents only 3.7 percent of the petroleum our state consumes. On average, Indiana oil wells generate about one barrel of crude oil per well per day, making oil exploration a good opportunity for Hoosier oil producers, but not a fundamental solution to our problems.

Promote the Production of Synthetic Transportation Fuels

In the past 18 months Indiana has made enormous strides in using homegrown resources to replace the use of traditional transportation fuels. Our efforts in biofuels will not only help break our dependence on traditional fuels from abroad, but also will enhance economic development for our state's agricultural sector.

In the early days of his Administration, Governor Daniels emphasized the production and use of biofuels in the strategic plan for Indiana's agriculture sector. The Clean Indiana Energy Bill of 2005 and subsequent legislation in 2006 laid the groundwork for more biofuel production. The legislation provides incentives for new production facilities and gives tax credits to retailers who carry biofuels.

The Midwest can become the Middle East of biofuels.

Along with production incentives, the state is aggressively promoting the use of biofuels via the Alternative Fuels Vehicle Grant program. It is offered through the Office of Energy and Defense Development in partnership with the Indiana State Department of Agriculture.

Build on Current Success in Biofuels Development

The economic benefits of ethanol for farmers and local governments are very substantial. Eleven ethanol plants will produce about 750 high-wage jobs in rural communities. Combined, these ethanol plants should provide about $1.5 billion in investment for the state.
The Alternative Fuels Vehicle Grant program through the Office of Energy & Defense Development and the Indiana Department of Agriculture aggressively funded biofuels infrastructure in 2005. Indiana had zero E85 pumps in January of 2005, but now has more than 40 E85 pumps in commercial use, exceeding the original goal of 40 pumps by the end of 2006. This number makes Indiana one of the top five states in E85 retail availability.

Information about where to buy biofuels can be found at:
www.energy.in.gov/pumpmap

The recently enacted Federal biofuel mandate has created guaranteed demand for ethanol for the next several years, regardless of price.

Indiana Biofuel Planned Production

2005 **One Year Later - 2006** **Breaking News**

Indiana is optimistic about the potential of corn-based ethanol, but realizes that to achieve the national target of 25 percent, or 60 billion gallons, we need to see a breakthrough in cellulosic ethanol. Advances in ethanol production efficiency and new feed stocks (corn stover, wood, switch grass, etc.) will be vital to making the fuel a lasting and economical substitute for petroleum.

Indiana is well positioned to become a top biodiesel producer in the nation. Our ranking as one of the country's top corn and soybean producers and our central location have created a tremendous opportunity to not only fully utilize Hoosier agricultural products, but also to improve air quality, create value-added byproducts and stimulate enormous investment in rural parts of Indiana.

Ethanol is an important fuel for the future and Indiana has moved from the back to the front of the pack in producing it!

At least three new biodiesel production facilities are being planned in the State at this time, and others are emerging. In March 2006, Indiana became the home of what will be the world's largest soy biodiesel facility in the world. This project will greatly enhance Indiana's economy while making us a leader in biodiesel production. In addition, Purdue University is a national leader in researching the use of highly refined soy byproducts.

Promote Cellulosic Ethanol Production-The Next Horizon

Indiana Senator Richard Lugar has been a leader in raising the discussion of energy policy in the country. In 1999, Senator Lugar wrote about the breakthroughs in genetic engineering and processing that are already leading today's efforts to convert virtually any plant or plant product, called cellulosic biomass, to produce ethanol fuel.

Indiana has positioned itself to create the first cellulosic ethanol plant in the United States.

The raw material for cellulosic biomass is all around us. It is present in agricultural waste and in every plant, including wood, straw and grass.

Purdue University has achieved major breakthroughs in cellulosic biomass research making Indiana a true innovator in this area. Hoosier farmers and our rural economies stand to benefit from that innovation. Indiana will grow its own energy crops and harvest its own agricultural waste. Some experts have predicted that the global market for biofuels such as cellulosic ethanol will grow to exceed $10 billion by 2012. For Indiana, it means an increase in the value of farm crops which can lead to jobs and increased incomes. For example, corn stover left over from the harvest process can be processed into transportation fuel that would have the potential to pay back Hoosier farmers upwards of $130 per acre.

Convert Coal to Liquids

There are significant opportunities for the expanded use of coal as a means to replace crude oil for transportation fuels and chemicals by using coal-to-liquids (CTL) technology. The use of coal for this purpose can provide additional independence from oil imports, safeguard the nation's security, allow for the development of new industries, and provide new incentives for coal mining.

Through the Clean Fuel Initiative, authorized by Congress, the Pentagon is working at an urgent pace to significantly reduce its dependence on traditional fossil fuels, use cleaner fuels, and eventually develop a single battlefield fuel for its fleet. The U.S. military consumes 300,000 barrels of transportation fuel per day.

The Department of Defense (DOD) has a keen interest in securing alternatives to petroleum for reliable supplies of battlefield fuels and to reduce their dependence on foreign oils. Moreover, coal-derived fuels are superior for the production of ultra-clean diesel and jet fuel of interest to the aviation, heavy equipment and trucking industries. Illinois Basin coals, which are present in Indiana, are suitable feedstocks for these purposes.

Indiana will work to become a major source of that new fuel, relying primarily on our coal processing, but also looking for opportunities to utilize our significant oil shale, bio-fuels and other technologies. Estimates suggest that Indiana has the potential to create 20 billion barrels of oil equivalent from coal.

GOAL: IMPROVE ENERGY EFFICIENCY AND INFRASTRUCTURE

IMPROVING ENERGY EFFICIENCY

All levels and uses of energy are on the rise. At the same time, we are mindful of the impact of this growing use of energy on our environment. Indiana will be challenged to meet its energy needs while maintaining and improving environmental quality and keeping electricity prices relatively low. Effective and market-driven conservation measures will be important in achieving these goals.

Expanding on current energy efficiency efforts will keep money in Indiana and contribute to our local economies. We will continue to:

- Build name recognition among Indiana's residential, building and commercial sectors for ENERGY STAR products and practices through OED's website, public events and partnerships with federal government and private industry.
- Put together a stronger energy efficiency culture in Indiana's energy intensive manufacturing sector through increased federal and state support for Purdue University's Technical Assistance Program (TAP) and the Clean Manufacturing Technology & Safe Materials Institute. Technical assistance and training from these programs will provide energy managers at manufacturing facilities, both large and small, with the necessary tools and knowledge to reduce their energy usage and costs, benefiting all Indiana sectors through reduced demand for electricity and natural gas.
- Maintain the work of the Governor's Heating Season Task Force to help Hoosiers who cannot pay their energy bills. The Governor expanded eligibility for the state's Energy Assistance Program (EAP) to include families whose incomes are at a level of 150 percent of poverty (up from 125 percent). This made assistance available to an additional 95,000 Hoosier households. To ensure full funding for the EAP through the winter heating season the Governor identified $10 million in Temporary Assistance for Needy Families funds to assist households eligible for bill assistance.

- Recognizing that rising natural gas prices were impacting more Hoosiers households then every before, Governor Daniels called for the creation of a public-private initiative that for the first time will provide assistance to families whose incomes are at 200 percent of the poverty level. The "Help Thy Neighbor" Heating Fund was created with a $5 million seed grant from the Lilly Endowment and a $1 million grant from the state's three largest gas utilities to give one-time bill assistance to Hoosiers who make between 150-200% of the poverty level and who have received a disconnect notice from their natural gas utility. Between January 1st and May 31st of 2006 the Help Thy Neighbor Heating Fund provided $3.3 million in bill assistance to more than 16,000 households across all 92 counties.
- Update building codes for public housing and other buildings to emphasize green technologies and methods.

STRENGTHEN INDIANA'S ENERGY INFRASTRUCTURE

The state will continue to work with the Midwest Independent System Operator (MISO), other transmission organizations, and energy providers to augment energy transportation systems as appropriate.

Electrical transmission constraints can represent a major challenge to reliable, competitive supplies, the development of competitive wholesale and retail supply markets and the development of renewable resources.

Since electricity cannot be stored, the transmission system must permit the sufficient movement of electricity by various suppliers when demand for electricity is at or near its peak. A transmission system incapable of unrestricted flows of electricity is a system at risk of allowing localized market power outages and extreme fluctuations in prices.

Transmission constraints have a direct impact on the supply of power to end-users. Regulatory siting requirements, zoning and resident opposition also act as a deterrent in the initiation of transmission improvement projects. Uncertainty, due to state and federal jurisdiction disputes and shifting federal transmission policy has, suppressed investment in new transmission. Without an efficient means of transmission there is little reason to build new generation capacity.

The regional transmission system is being used today in ways that were never envisioned when it was designed and built.

Pipeline infrastructure for coal and biomass-based synthetic fuels will be needed to supplement existing surface transportation (e.g. trucks and rail).

REVITALIZE RAIL INFRASTRUCTURE

One of the most frustrating structural barriers within Indiana's energy infrastructure is a bottleneck in our rail service routes between southern and northern parts of the state. Only one line linked the southern Indiana coalfields with the northern part of the state, and it did not directly serve the power plants that would eventually demand increasing supplies of coal. As a result, coal from western states has been more affordable. Due to diminishing transportation corridors and subsequent cost increases, this is no longer true. As Indiana coal once again becomes more marketable due to clean coal technology, we must make every effort to resolve this bottleneck and facilitate competitive shipments of coal north.

ENHANCE HUMAN CAPITAL TO SUPPORT ENERGY SECTOR

In order to support all of the State's energy initiatives, it will be critical that Indiana have the workforce to build and maintain them.

We will continue to work with state universities to further develop educational programs involving coal gasification, carbon sequestration, coal mining and renewable energy technologies applicable to Indiana to keep our best and brightest in Indiana working in energy related fields. The state will take the lead to recruit and train Hoosier talent for jobs in Indiana's energy sector. We'll follow a very similar strategy based on the exciting model we've constructed in the coal industry that includes education, training and promotion of the field.

Indiana can maximize jobs in the energy sector beyond renewable energy production through manufacturing. Manufacturing wind turbines, digesters, gasifiers and other renewable energy components can bring millions of dollars in new investment to Indiana. With an available workforce and the manufacturing infrastructure to supply the nation from the crossroads of America, Indiana should work to attract businesses making the systems for renewable energy development.

A recent study by the Renewable Energy Policy Project (REPP) estimates that Indiana has the greatest per capita, renewable energy job generation potential in the country. (www.in.gov/energy/research/professionals/papers.html)

GROWTH & STEWARDSHIP THROUGH R & D

Indiana will compete for federal funding, promote innovation, and commercialize jobs from emerging energy technology. As a result, we will expand the state's 21st Century Research and Development Fund to target a dedicated portion to energy technology development and commercialization. We'll fully leverage federal opportunities, particularly those offered in the federal government's $1.3 trillion Energy Policy Act of 2005. The state must also engage and partner with our robust major research universities and defense assets such as Crane and other technology centers to optimize development of needed new technologies.

WHAT WE NEED TO DO NOW

- Use the Clean Indiana Energy Acts of 2005-06 to provide tax credits to qualifying clean coal utility and biofuel facilities.

  - Expand the Act to include non-utility clean coal and biomass investments using Indiana-based feed stocks.

- Seek federal tax credits and loan guarantees under 2005 U.S. Energy Policy Act (EPACT) for Indiana energy facilities

- Assist energy supply and infrastructure projects in federal, state and local regulatory proceedings to attain needed permits, approvals and tariffs.

- Encourage non-utility power and other energy producers to accept the jurisdiction of the IURC to obtain the siting capability of utilities.

- Enhance the ability to site non-utility energy and infrastructure projects that contribute to the state's energy independence and system reliability.

- Develop policies to ease interconnection to the power grid by non-utility electricity producers.

- Develop 'up front' financial incentives for clean coal projects competitive with other Illinois Basin state incentives available to both utility and non-utility projects.

- Explore the creation of an 'Energy Corridor' of new pipeline, transmission infrastructure beneath the extended I-69 from the coal fields of Southwest Indiana north.

- Replace all State of Indiana fleet vehicles with flexible-fuel capable units as they are retired, with the goal of the entire fleet being flexible-fuel capable by 2010.

- Commit the State of Indiana to purchasing 10% of its electric load for all state government buildings in Marion County from renewable Indiana generators by 2010 and 25% by 2025.

- Insist that the Department of Local Government Finance require applicants seeking heating and cooling units for new buildings, additions and retrofits to compare long-term energy savings through geothermal heating and cooling systems, versus traditional natural gas or electric solutions.

- Use proceeds of the Clean Air Interstate Rule (CAIR) Nitrogen Oxide (NOx) Trading program to fund small and medium size efficiency and renewable energy projects.

- Provide incentives for energy efficiency investments that make power while maximizing the use of waste heat that also can be used in another process or for additional power, as well as fuel cells.

- Support alternative pricing regulatory mechanisms that encourage utilities to promote efficiency and conservation by their customers without incurring negative financial results.

- Encourage creative pricing mechanisms to ensure a reliable and reasonably priced energy supply, including interruptible rates, seasonal rate differentials and restructuring of fixed and variable charges.

- Use the Indiana Finance Authority's (IFA) "Volume Cap" funds to assist utility companies to help install new pollution prevention devices at coal-fired plants.

    - Explore expanding the scope of "Volume Cap" dollars to also cover renewable energy investment, and/or include new clean coal development as pollution prevention.

- Support the National Action Plan for Energy Efficiency through gas and electric utilities, regulators and industry partners to create a sustainable, aggressive U.S. commitment to energy efficiency.

- Create an Interagency Council on Energy to coordinate the ongoing development and implementation of Indiana’s Strategic Energy Plan.

- Seek U.S. and private funding to enhance state support of major research universities to develop and demonstrate new energy supply and more efficient utilization technologies.

SUMMARY

Our new Hoosier Homegrown Energy plan commits Indiana to using new and emerging technologies to convert Indiana coal, corn, soy and other renewable sources to energy and reduce our dependency upon imports.

The payoff will be:

- Thousands of new high paying jobs

- Economic and energy security

- A stronger hand in attracting new employers to our state

- More stable, affordable energy supplies for consumers

Instead of exporting our hard-earned capital to create jobs elsewhere, we'll add value to our tremendous natural resources here at home, then use them ourselves or sell the finished products outside our state, creating a whole new advanced manufacturing industry and generating untold new wealth for our state.

UPDATES

For a copy and ongoing updates of the Indiana Strategic Energy Plan, please visit **energy.IN.gov**

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