Executive Summary

KENTUCKY'S CHALLENGE for the 21st century is to develop clean, reliable, affordable energy sources that help us improve our energy security, reduce our carbon dioxide emissions, and provide economic prosperity. Kentucky can be – and in fact must be – a leader in this energy revolution.

Energy independence is a top challenge to the state and the nation in the 21st century, a challenge that has been made at once more urgent and more complex by the equally pressing issue of global climate change. For a major coal-producing state that also relies on coal to generate more than 90 percent of its electricity, addressing these two issues – energy security and climate change – is especially problematic.

We have to contend with the reality that, going forward, our state's energy policy will be increasingly shaped by decisions at the national level, decisions which in turn are being driven by significant global issues and events. As a state, it is imperative that we have policies and programs in place that allow us to shape our own energy future by making sure we utilize our energy resources in an environmentally sound manner. This strategic action plan, *Intelligent Energy Choices for Kentucky's Future*, is intended to place Kentucky on such a path.

Intelligent Energy Choices is an action plan for our state that is intended, first and foremost, to improve the quality and security of life for all Kentuckians by creating efficient, sustainable energy solutions and strategies; by protecting the environment; and by creating a base for strong economic growth over the long term. We must make changes in order to accomplish these objectives. In addition to identifying new initiatives, the plan provides an important framework around existing policies and activities so that we can aggressively increase our use of renewable energy sources; improve the energy efficiency of our homes and buildings; develop cleaner methods to utilize our fossil energy resources; diversify our electricity and transportation energy portfolios; and more fully integrate our agricultural and energy economies.

Intelligent Energy Choices is designed to be a 'living' document that serves as a means for the state – the general public, public officials, educators, business and industry at all levels, and others – to craft a consensus for a comprehensive, holistic energy plan for the betterment of all. It is an evolutionary plan that is not intended to be exhaustive at the outset. We cannot address every single issue in this relatively comprehensive document; thus, there will be additional issues that need action on a case-by-case basis. We have made a concerted effort to include all the highest priority actions that will serve as an underpinning, a foundation, for great progress and for future actions through 2025.

Kentucky Must Act Now

Kentucky's energy use is projected to grow by slightly more than 40 percent between now and 2025 under a Business-As-Usual scenario. This energy growth encompasses all sectors, including electricity generation, natural gas use, and transportation fuels. For example, between now and 2025, according to estimates from the Kentucky Public Service Commission, Kentucky will need an additional 7,000 megawatts of electricity generation (PSC, 2005).

Intelligent Energy Choices is designed to lead to a much more diversified energy portfolio for the commonwealth and provide economic, environmental and energy security benefits. In the future, primarily relying on one source of power for electricity generation will not be prudent in the face of imminent climate change legislation at the federal level. While we anticipate retrofits of existing power

plants for carbon dioxide capture, our electricity generation must be diversified to include renewables and other sources, such as nuclear power.

This plan allows us to develop flexibility in our energy portfolio so that we can take timely advantage of technological advances in such areas as cellulosic biofuels, solar and wind, and carbon management. A diverse portfolio gives us the flexibility to effectively utilize lower carbon-emitting technologies and fundamentally more environmentally benign energy solutions.

Just as we will experience growth in our demand for energy, our greenhouse gas (GHG) emissions will escalate if we continue down the same path. With such a high reliance on fossil fuels, Kentucky's projected GHG emissions could be more than 40 percent higher than they are today if we do not take action. With implementation of the seven proposed strategies, however, our GHG emissions will be more than 50 percent lower in 2025 than they would otherwise be. More significantly, GHG emissions in Kentucky will actually be 20 percent lower in 2025 than were our 1990 emissions (Figure ES-1).

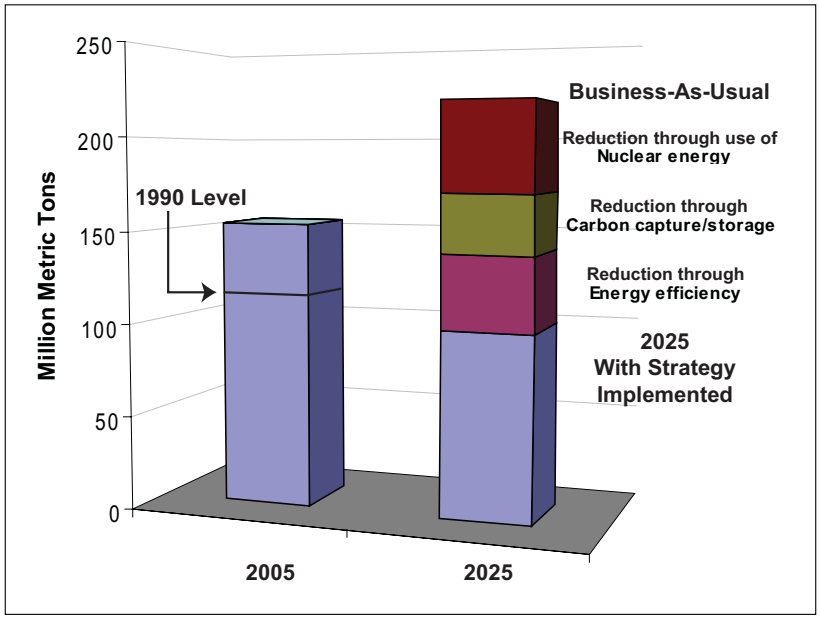

Figure ES-1: Reductions In Carbon Dioxide Emissions

Relying on coal-fired power generation in the state will not be sufficient to support Kentucky's coal industry if other states cease purchase of Kentucky coal. By diversifying the coal industry's product line into transportation fuels and synthetic natural gas, we support our efforts to become less vulnerable to imports and ensure a continued market for Kentucky coal, sustaining the 17,000 plus jobs in the coal industry, as well as the industry's other economic effects.

Kentucky's Plan Outlines Seven Strategies

The plan proposes a Renewable and Efficiency Portfolio Standard (REPS) whereby 25 percent of Kentucky's energy needs in 2025 will be met by reductions through energy efficiency and conservation and through use of renewable resources. *Strategies 1, 2, and 3* are designed to help the commonwealth achieve the REPS. Leading with energy efficiency, conservation, and renewable energy allows us to implement actions to reduce energy use and carbon dioxide emissions in a timely and cost-effective manner. However, even with an aggressive REPS, Kentucky will still need to look at our traditional energy source – coal, with an expanded cleaner product line – and other options such as nuclear.

Our growing reliance on imported oil presents economic and security threats that are untenable. Therefore, the plan also proposes an Alternative Transportation Fuel Standard (ATFS) to help us

transition away from dependence on foreign petroleum. Kentucky can displace 60 percent of its reliance on foreign petroleum by utilizing fuels such as those derived from biomass and coal, plug-in hybrid vehicles, and compressed natural gas (CNG), and we can do this by building upon our existing infrastructure. Elements of the ATFS are captured in *Strategies 1* (plug-in hybrids), *3* (biofuels) and *4* (coal-to-liquids and natural gas).

Equally important as weaning the state from imports of foreign oil is reducing our dependence on imported natural gas. *Strategy 5* establishes an action plan directed toward increased natural gas production in the commonwealth and production of synthetic natural gas from Kentucky's coal resources.

To achieve our greenhouse gas reduction goals, deployment of carbon dioxide capture and storage technologies on a large scale is crucial. The action plan in *Strategy 6* will help Kentucky initiate aggressive carbon capture and storage projects, with a goal that by 2025, 50 percent of Kentucky's coal-based energy facilities will be equipped with carbon management technologies.

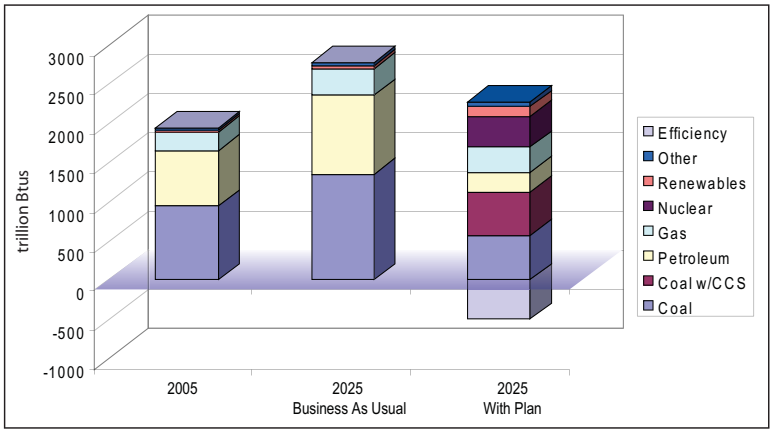

Figure ES-2: Kentucky's Total Energy Use

A final key component to reducing Kentucky's carbon dioxide emissions is deploying non-carbon dioxide emitting technologies to meet our baseload electricity generation needs in the future. One option that must be considered is nuclear power. *Strategy 7* provides an important discussion of the environmental, security and economic issues surrounding nuclear power.

Figure ES-2 summarizes Kentucky's current energy demand and what can be accomplished with this plan. The bar charts show the current energy mix, what it will look like in a Business-As-Usual scenario, and how this plan will provide a much more flexible and effective energy portfolio.

Following is an overview of the goals and actions of each of the seven strategies. It is important to note that *Strategies 1, 2 and 3*, as part of the Renewable and Efficiency Portfolio Standard, form a three-part vision to provide 25 percent of Kentucky's energy needs by 2025 through energy efficiency, renewable energy and biofuels. Additionally, *Strategies 1, 3, and 4*, as part of an Alternative Transportation Fuel Standard, are part of a goal to reduce Kentucky's dependence on imported oil by 60 percent by 2025.

Strategy 1: Improve the Energy Efficiency of Kentucky's Homes, Buildings, Industries, and Transportation Fleet

Kentucky has been a high user of energy largely because of our historically low electricity rates. We have had little incentive to conserve, and thus we are over-users. This must change. Kentucky can achieve its greatest and most cost-effective reduction in GHG emissions through energy

efficiency in all sectors: residential, commercial, industrial and transportation. We can forestall construction of some additional generation facilities through energy efficiency. Therefore, our leading strategy, and our utmost advantage in achieving the overall objectives of this plan, is greater energy efficiency.

Goal: Energy efficiency will offset at least 18 percent of Kentucky's projected 2025 energy demand.

Both nationally and worldwide, we are experiencing dramatic increases in costs for our traditional nonrenewable sources of energy – coal, natural gas and petroleum. It is likely that the prices for these global commodities will continue to increase, and therefore consumers' energy bills will continue to rise. Most would agree that the era of cheap energy is over. The choice we face is to take no action and see large price increases with limited economic security, or to take prudent actions now and realize a better chance for smaller price increases as well as increased economic security. In the near term, energy efficiency and conservation represent the fastest, cleanest, most cost-effective, and most secure methods we have to reduce our growing demand for energy and to help us address issues surrounding global climate change.

Actions to Achieve the Goal

- An Energy Efficiency Resource Standard (EERS) will be established to support the energy efficiency portion of the REPS with a goal of reducing energy consumption by at least 16 percent below projected (with no changes) 2025 energy consumption. To achieve the EERS a combination of both utility-sponsored and non-utility-sponsored energy efficiency programs will be developed and implemented.
- Transportation energy efficiency programs will contribute another two percent reduction representing energy savings corresponding to approximately 500 million gallons of motor fuel annually. Elements of this component of *Strategy 1* support the objectives of the ATFS.
- Kentucky will initiate strong education, outreach and marketing programs that will support all energy efficiency activities.
- An energy efficiency program will also be established for state government that has aggressive internal energy savings targets. This program is important as it establishes a leadership role for state government, and creates many new, well informed energy efficiency advocates for Kentucky.

Strategy 2: Increase Kentucky's Use of Renewable Energy

Kentucky currently relies on renewable resources for less than three percent of its electricity generation. The commonwealth has the 5th largest hydro power production east of the Mississippi, and several of our utilities are utilizing landfill gas for electricity generation. The potential to increase both of these resources, especially through landfill gas, is encouraging. However, with today's technologies, our ability to use some resources such as wind and solar for baseload generation is limited in Kentucky. As technologies advance in the next few decades, this scenario can change. In the meantime, especially as part of the utility resource planning process, Kentucky

should aggressively pursue its options for renewable generation in order to achieve greenhouse gas reductions and diversify our energy portfolio.

Goal: By 2025, Kentucky's renewable energy generation will triple to provide the equivalent of 1,000 megawatts of clean energy while continuing to produce safe, abundant, and affordable food, feed and fiber.

Kentucky does have supplies of non-fossil natural resources that can help contribute to a clean and secure energy future, natural resources such as wind, solar, hydropower, biomass and methane. Energy from renewable resources benefits the environment while creating economic opportunities – the "green collar" jobs for businesses, industries and rural communities. To achieve this goal, the commonwealth must aggressively invest in the development of its renewable energy resources.

Actions to Achieve the Goal

- State government will lead by example by requiring new or substantially renovated public buildings to use renewable energy as a percentage of total energy consumption. The requirements will escalate over time to reflect the state's renewable energy and energy efficiency goals. The High Performance Building Committee established in House Bill 2 (2008 regular session) will establish renewable energy targets for 2012, 2018, and 2025 for new or substantially renovated buildings.
- Kentucky's Energy and Environment Cabinet (EEC) will recommend policies and incentives necessary to achieve the state's renewable energy goal. The analysis will include implementation plans for the REPS for Kentucky's electric utilities.
- As Kentucky's forest resources can potentially contribute more than 50 percent of Kentucky's renewable energy potential, the state will review its policies and regulations to encourage the responsible, sustainable use of woody biomass within the guidelines of environmental protection.

Strategy 3: Sustainably Grow Kentucky's Production of Biofuels

Kentucky currently uses only five to 10 percent of its potential biomass resources for the production of biofuels such as ethanol and biodiesel. Kentucky can significantly grow its agricultural and forestry resources in an environmentally and economically sustainable way to provide more biofuels for transportation, particularly as biofuel technologies expand in the next decade. We can thereby strengthen our energy security while growing and diversifying our agricultural and forestry economies, as well as reducing our GHG emissions. Through a concerted effort and collaboration with agricultural producers, researchers at universities, and policy makers, Kentucky can grow its biofuels industry to meet 20 percent of our current transportation fuel needs.

Goal: By 2025, Kentucky will derive from biofuels 12 percent of its motor fuels demand (775 million gallons per year, which represents approximately 20 percent of Kentucky's current transportation fuels demand), while continuing to produce safe, abundant, and affordable food, feed, and fiber.

As part of the ATFS, *Strategy 3* focuses on research and development (R&D) as well as deployment of commercial-scale facilities to address technical or infrastructure challenges, thereby enhancing the potential to grow the biofuels market. Kentucky will begin a statewide initiative to ensure that the needed infrastructure, human resources, research and development support, and policies are in place to enable meaningful and sustainable growth in biofuels. Current studies indicate there could be a nearly 10-fold increase in current bio-based fuels in Kentucky.

Actions to Achieve the Goal

- Kentucky will invest in algae and other non-food crops as a feedstock for biodiesel.
- Kentucky will aggressively seek federal support for and invest in ventures that promote a market for ethanol from non-traditional feedstocks, especially feedstocks that do not negatively affect food prices or availability.
- Kentucky will establish an escalating renewable fuel standard (RFS) for the state vehicle fleet.
- Incentives will be created to encourage production, distribution, and demand for biofuels in Kentucky in an environmentally sustainable manner.

Strategy 4: Develop a Coal-to-Liquids Industry in Kentucky to Replace Petroleum-Based Liquids

Energy independence and economic security are major objectives of this plan for Kentucky and for the United States. Volatile petroleum prices beyond our control promise to rise again as the economy recovers. The United States imports 60 percent of its petroleum, largely from unstable regions in the Middle East and South America. But, Kentucky has abundant coal resources and is the third largest coal producer in the United States. The high emissions of carbon dioxide into the environment must be addressed now, as the United States moves toward federal mandates and penalties for coal-fired power generation. Kentucky can diversify ultimate coal utilization, producing cleaner and more efficient energy for state and domestic use. Coal-to-liquid and coal-to-gas technologies can replace petroleum-based liquids and imported natural gas, respectively.

Goal: Kentucky will develop a coal-to-liquids (CTL) industry that will use 50 million tons of coal per year to produce four billion gallons of liquid fuel per year by 2025.

With its vast coal resources, proven support from elected officials, and dedicated research and development program, Kentucky is uniquely positioned to develop a CTL industry that can serve as an engine for economic growth, while helping to reduce our dependence on foreign oil. The actions in *Strategy 4* further support the implementation of the state's ATFS.

Actions to Achieve the Goal

- Kentucky will sanction two 500 million-gallon per year (approximately 35,000 barrels per day) CTL fuel facilities in both 2013 and 2014, and then two additional 480 million-gallon per year CTL fuel facilities by 2018, and two more by 2025, for a total of eight new CTL facilities.
- To ensure that trained personnel are available to staff increased coal consumption required by the CTL industry, Kentucky's EEC will work with the Community and Technical College System to

identify appropriate training programs. To achieve the required employment levels, increased training capabilities should be available within the next three years.

- Kentucky will evaluate its current coal mining capabilities to ensure that it can achieve the necessary levels of coal production to support both coal-fired electricity generation and the development of a CTL industry in the near-term.

Strategy 5: Implement a Major and Comprehensive Effort to Increase Gas Supplies, Including Coal-to-Gas in Kentucky

Today, about 44 percent of Kentucky's total natural gas requirements are met by in-state production; the remainder is imported. The same threats of volatile prices and unstable sources apply to our increasing dependence on imported natural gas, just as they do on our imported oil. Moreover, being largely dependent on external sources of natural gas, Kentucky's consumers pay added transportation costs for the gas we use. As utilities increase the use of natural gas for electricity generation, in order to comply with imminent GHG mandates, both natural gas and electricity prices will increase. We need to increase our energy independence with natural gas, also. Coal gasification technology is neither new, nor experimental. Virtually all of Kentucky's gas needs can be met if we increase our in-state natural gas production and produce synthetic natural gas derived from coal, both of which help us to achieve our overall objectives of economic security and energy independence. A strong coal-to-gas industry will build upon Kentucky's economic development and increase the number of jobs created by the coal-to-liquids industry.

Goal: Kentucky will produce the equivalent of 100 percent of our annual natural gas requirement by 2025 by augmenting in-state natural gas production with synthetic natural gas (SNG) from coal-to-gas (CTG) processing.

Being significantly dependent on external sources of gas today, consumers in Kentucky pay added transportation costs for most of the natural gas that they use. More important, consumers in Kentucky, as in other states, have become vulnerable to possible supply uncertainties and price increases and spikes as these may occur in the U.S. natural gas system and market. Virtually all of the gas needs of Kentucky can be met by increasing Kentucky's own domestic natural gas production supplemented by synthetic natural gas produced by gasifying coal.

Actions to Achieve the Goal

- Research at the University of Kentucky's Center for Applied Energy Research (CAER) should be expanded to achieve optimal processes for converting coal to gas under various combinations of coals and operating conditions.
- Research at CAER should be enhanced to include the life-cycle carbon reduction potential of gasifying biomass with coal in CTG processes.
- A Public Service Commission (PSC) administrative case should be initiated to ensure that Kentucky Local Distribution Companies and customers are not harmed by direct sales of gas from SNG producers to industrial plants.
- Assessments of new natural gas resources in Kentucky should be expanded and accelerated.

- A comprehensive study of pipeline infrastructure in Kentucky should be initiated to determine needs in relation to expanded production of Kentucky's domestic natural gas and coal-bed methane resources.

Strategy 6: Initiate Aggressive Carbon Capture/Sequestration (CCS) Projects for Coal-Generated Electricity in Kentucky

More than 90 percent of Kentucky's electricity is derived from coal-fired power, and we rank 13th in total carbon dioxide emissions. Carbon capture and sequestration (CCS) is crucial to continued use of coal as an energy resource in Kentucky. Success of CCS will determine our ability to meet our future energy needs. Currently, CCS development emphasizes geologic sequestration. We need more technical options for cost-effective carbon management so that coal can be a cleaner energy resource. Of all the technologies addressed in this plan, CCS has the greatest technological uncertainty, which is why this strategy emphasizes the need for research, demonstration, and deployment. Beyond geologic sequestration, the federal government has provided little leadership in carbon management, but will likely establish CCS as a priority in the new administration. Kentucky must protect its coal industry and initiate its own solutions to managing carbon dioxide emissions as it diversifies its product line.

Goal: By 2025, Kentucky will have evaluated and deployed technologies for carbon management, with use in 50 percent of our coal-based energy applications.

There are unique challenges to be faced in a carbon-constrained world, given Kentucky's reliance on coal-fired power generation. The threats associated with climate change will require Kentucky to make a concerted effort to control emissions of carbon dioxide, one of the greenhouse gases, while at the same time recognizing that coal will continue to be a vital component of our energy mix. We must find ways to reduce carbon dioxide emissions and meet our energy needs for the future.

Actions to Achieve the Goal

- The work of the Carbon Management Research Group (CMRG), a consortium of Kentucky's major power companies, the University of Kentucky's Center for Applied Energy Research (CAER), and the Commonwealth of Kentucky's Energy and Environment Cabinet (EEC) should be supported. The CMRG will carry out a ten-year program of research to develop and demonstrate cost-effective and practical technologies for reducing and managing carbon dioxide emissions in existing coal-fired electric power plants.
- Legal hurdles to successful CCS should be examined with recommended legislative solutions provided to the 2010 General Assembly.
- Necessary staff positions in the Division of Oil and Gas should be funded to support Kentucky's primacy over the underground injection control permitting program.
- The EEC should work closely with university researchers and industry partners to undertake one large-scale carbon mitigation project to utilize algae to capture carbon from flue gases, and then convert the algae to biofuels.

- The Consortium for Carbon Storage, which was established by the Kentucky Geological Survey with a seed grant from the EEC should be supported. The Consortium will determine the potential for sequestration and for enhanced oil and gas recovery and enhanced coal-bed methane recovery using carbon dioxide.

Strategy 7: Examine the Use of Nuclear Power for Electricity Generation in Kentucky

With major increases in efficiency and conservation, aggressively utilizing alternative and bio-based energy sources, and more effective use of cleaner coal technologies, we still will not be able to achieve the projected energy demands in 2025 along with meaningful GHG reductions. Thus, other sources of base-load electricity generation will be necessary. Many of our neighboring states are considering nuclear energy. Nuclear power production has no direct carbon dioxide emissions and is already a significant component of the global energy system. Current technologies for nuclear production are superior to the previous generation of plants, complementing an already safe industry in the United States. Improved reliability and efficiency have allowed the industry to maintain its 20 percent share of the growing U.S. electricity market. While the issue of disposal of spent fuel has not been completely resolved, progress will continue to be made to arrive at a solution that addresses the nation's needs.

Goal: Nuclear power will be an important and growing component of the nation's energy mix, and Kentucky must decide whether nuclear power will become a significant part of meeting the state's energy needs by 2025.

In a carbon constrained world, the interdependencies among energy, the environment and the economy will lead to broad sweeping economic transformations in the 21st century. To find solutions that address climate challenges, use our abundant natural resources to gain energy security, and provide the power needed to drive our economy will require pursuit of a diversified mix of energy options. In weighing the benefits and limitations of potential solutions we must be willing to fully assess and understand the societal, technical, and financial trade-offs involved. Nuclear power is one such option that deserves our full attention, as its technology and safety have significantly improved in the last three decades. It also is likely to become a national priority.

Actions to Achieve the Goal

- Legal hurdles to successful inclusion of nuclear power in Kentucky's energy mix should be examined. Specifically, removal or revision of the legislative ban on new nuclear power plants must be addressed.
- A public engagement plan should be implemented to gather and address stakeholder feedback and concerns and to provide education about nuclear power today.
- Research should be conducted to assess the desirability of co-locating nuclear power plants with advanced coal conversion plants to assess the effects on reducing carbon dioxide emissions, providing ready access to electricity and/or steam, and possibly using waste heat for the coal conversion process.
- Incentives that reduce the risk of capitalizing and financing a new power plant should be considered in developing these programs.

- The EEC should work with the Community and Technical College System to ensure that trained personnel are available to staff the construction and operation of nuclear power plants.
- The state universities should explore now the possibility of adding nuclear engineering, health physics, and radiological science programs to their curricula.

Conclusion

An overarching goal of this action plan has been to identify and address those actions that can be implemented in sufficient time to help citizens and businesses prepare for the inevitable changes that will occur in the national and global energy landscape in the years ahead. The scientific community worldwide and global consortia are concerned that we must act immediately to reduce the impact of greenhouse gases on global warming. Environmental protection includes intelligent use of land as well as nonrenewable and renewable resources. This thoughtful strategy will help Kentucky ensure the viability of two signature industries – our mining and agricultural industries – while addressing the global issue of climate change and, at the same time, allowing new vibrant industries that provide high-paying, quality jobs to flourish.

For Kentucky to be a national energy leader, we must fully integrate the development of our energy resources with our mission to protect the environment. Therefore, these strategies address measures to utilize our coal resources in a cleaner, more efficient manner, and in a way that will help us assure energy security. In fully utilizing our biomass, solar, wind, hydro and other renewable energy resources, we not only strengthen our energy and economic security – by diversifying our electricity and transportation fuels portfolios – but we also help the state reduce its carbon dioxide and other greenhouse gas emissions and other pollutants in a significant way. The seven strategies, when implemented, will restructure our energy portfolio in such a way that we can use energy in its broadest sense as a tool for economic development, which Kentucky desperately needs.

With this action-oriented energy plan, by 2025 Kentucky will accomplish the following:

- Provide 30,000-40,000 new Kentucky jobs as a result of a booming diversified energy sector – at least 12,000 directly in our new energy producing sector (3,500 from coal-to-liquids production; 1,800 producing fuels from biomass; 1,700 at coal-to-gas facilities; 4,400 at nuclear plants; and 1,000 at other "green collar," or renewable energy, industries), and another 20,000-25,000 jobs as a result of the domino effect – jobs which provide indirect support to the new booming energy industry. The increase assumes sustaining current employment, maintaining annual coal production in Kentucky at current levels, with coal mining employment at 17,000.
- Achieve energy independence for Kentucky from imported oil.
- Produce annually approximately four billion gallons of liquid fuels from coal (utilizing about 50 million tons of coal annually).
- Produce annually 135 billion cubic feet of synthetic gas from coal (utilizing about nine million tons of coal annually) to augment Kentucky's natural gas supply.
- Reduce the net per capita carbon emissions into the atmosphere by 50 percent, while ensuring Kentucky's economic viability by protecting Kentucky's coal industry against negative impacts of federally mandated carbon management legislation. This will be accomplished by the combination of implementing the carbon capture and sequestration possibilities as determined by the research conducted in *Strategy 6*, and building nuclear and renewable generating capacities as

described in *Strategies 2 and 7*. The mix of nuclear power, renewable energy, coal-to-liquids and coal-to-gas production, and reduced coal-fired electricity generation will enable compliance with federal mandates while increasing the use of Kentucky's home-grown and most abundant energy resource, coal.

- Optimize our renewable energy resources, utilizing wind, solar, hydropower, landfill gas, and biomass.
- Maintain current energy per capita use despite major energy growth requirements.

Should we fail in these efforts, by 2025 we will be using over 40 percent more energy; paying 20 to 50 percent more for each unit of energy purchased; still bemoaning our reliance on foreign sources of energy; facing a declining coal industry; and finding ourselves captive to limited economic development opportunities.

If we succeed, we shall have produced greater economic and energy security for all Kentuckians, while creating significant job growth and economic development in a wide diversity of agricultural, energy, high tech and service companies; a cleaner and healthier environment; a reduction in Kentucky's contribution to global warming; greater energy efficiencies and independence; and a more substantial corporate tax base to support higher quality healthcare, education and transportation for all of us throughout the Commonwealth of Kentucky.