KREC
Kentucky Rural Energy Consortium

Kentucky 25x'25 Roadmap

Charting Kentucky's Renewable Energy Future

Legislative Prospectus

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KREC and the 25x'25 Roadmap for Kentucky

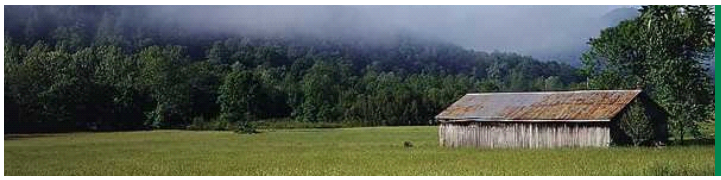
The Kentucky Rural Energy Consortium (KREC) supports the goals and vision of the national 25x'25 Action Plan. The national plan is a grassroots renewable energy initiative backed by businesses, organizations and individuals united by a common interest in making America's energy future more secure, affordable and environmentally sustainable. Their vision statement identifies the organization's goal.

25x'25
AMERICA'S ENERGY FUTURE

"By the year 2025, America's farms, ranches and forests will provide 25 percent of the total energy consumed in the United States, while continuing to produce safe, abundant and affordable food, feed and fiber."

National 25x'25 Initiative – www.25x25.org

KREC 25x'25 Web site – www.louisville.edu/kppc/25x25



Introduction and Overview

Rising energy prices, climate change and political instability among the world's oil producing nations are of growing concern to the citizens, business leaders and policy makers of Kentucky.

The Commonwealth's, and the nation's, prosperity depends on having a reliable supply of clean, sustainable energy now and far into the future. Yet world events, uncertain supplies and an ever-growing global demand for fossil fuels have converged to place our collective energy future in jeopardy.

Responding effectively to the world's new energy realities will be one of the most urgent and important challenges of our time. To meet these challenges, we must identify aggressive, yet achievable, solutions to meet our energy needs. Now, more than ever, there are abundant new business opportunities in safe, clean energy alternatives. New innovative technologies are emerging every day while both private and public investments in alternative energy research and development are growing at a rapid pace.

Government, industry and financial leaders who continue to hold on to business-as-usual policies will find themselves far behind as new opportunities open new markets around the globe. All across Kentucky, people are looking for alternatives to the high cost and often uncertain future of fossil fuel-based energy and trying to find ways to develop and use renewable sources of energy that are clean, affordable and sustainable for generations to come.

In order to move Kentucky toward including energy efficiency and renewable energy in the energy mix of the state, two documents have been prepared based on input from the organizations represented on the KREC Core Team. In addition to this Legislative Prospectus, which sets out 6 recommendations, a 25 x '25 Kentucky Roadmap document (white paper) has been drafted which depicts renewable energy targets for Kentucky, the current energy mix for the state, explains Kentucky's natural resource base (via landcover mapping), documents Kentucky's current renewable energy incentives, policies and regulations, examines possible job creation in the renewable energy sector, and establishes intended numbers for achieving Kentucky's renewable energy target of 25% by the year 2025.

The 25x'25 Legislative Prospectus and Roadmap for Kentucky

In early 2007, the Kentucky Rural Energy Consortium (KREC) convened a diverse group of stakeholders and launched a state-wide renewable energy and energy efficiency initiative. The vision of the Consortium was to promote and recommend an ambitious goal for Kentucky–

"By the year 2025, Kentucky will use renewable energy and energy efficiency as means to get at least 25 percent of its total energy from improved technologies and renewable resources such as solar, wind, biomass and biofuels."

While developing the Kentucky initiative, KREC found common ground with the national 25x'25 Action Plan. The national plan is a grassroots renewable energy initiative backed by businesses, organizations and individuals united by a common interest in making America's energy future more secure, affordable and environmentally sustainable. Kentucky's former governor, along with twenty eight former and current U.S. governors and twelve state legislatures, support the 25 x '25 action plan.

Harnessing Kentucky's extensive resources and ingenuity can provide energy security for our state and nation, create jobs and stimulate economic development.

Public Involvement/Cooperative Efforts

From the beginning, KREC understood the value of providing a state-wide forum for the discussion of Kentucky's long term energy needs and economic development potential. KREC team members decided that developing this Legislative Prospectus and a Roadmap document would involve input from as many people, organizations and perspectives as possible. Along with input from industry experts, university researchers, environmental professionals and government officials, this Prospectus and the

Roadmap reflect ideas and opinions from the people who work the land and who have an enormous stake in the state's energy and economic future.

To encourage public support and input, KREC held three "town hall" public meetings across the state in August, September and October of 2007 to enable an active exchange of information and allow stakeholders to voice their concerns, ideas and perspectives on energy development and environmental stewardship. The meetings were held in Frankfort, Somerset and Princeton and were attended by more than 160 people representing many diverse interests and backgrounds. At the same time, an energy survey was sent to KREC members, agricultural organizations and citizens asking for their perspectives on renewable energy opportunities and challenges.

KREC also recognizes the importance of Kentucky's existing fossil fuel industry base and the state's comparative advantages as an industry leader in these important fossil fuel sectors, such as coal and natural gas. Industry leaders from these sectors should play an expanded role in developing future energy strategies for the Commonwealth that incorporate new and existing renewable and energy efficiency technologies. Working cooperatively with all energy producers, consumers and stakeholders is key in developing comprehensive energy strategies that have the best chance for success in a real world economy.

The Legislative Prospectus does not prescribe a single path forward or a quick fix for our energy problems, it instead offers a range of policy options – many already vetted by those with a stake in the transition – for seizing existing opportunities and initiating new ones. The governor, legislators, regulators, utility and fuel industry executives, agricultural leaders, farmers, environmental advocates and concerned citizens will need to act cooperatively to make the recommendations a reality.

The Center for Renewable Energy Research and Environmental Stewardship (CRERES)

A key component of developing successful energy strategies is to establish the Center for Renewable Energy Research and Environmental Stewardship (CRERES) as outlined in Section 55 of House Bill 1, entitled *Kentucky's Energy Independence Act*. Such a center has the potential to orchestrate many positive initiatives as Kentucky embarks on the 25x'25 journey. The Kentucky General Assembly should use CRERES to identify and develop goals and priorities for research, development and demonstration activities. CRERES should lead efforts to develop a strategic plan that combines cooperative research efforts from Kentucky's universities, educates the public, industry leaders, and state and local officials about the broad-based benefits of bio-based products, and help create incentives for increasing the number of highly qualified energy and energy efficiency researchers at state universities.

Harnessing Kentucky's extensive resources and ingenuity can provide energy security for our state and nation, create jobs, stimulate economic development, and offer a prudent hedge against volatile energy supplies and prices along with the impending risks of climate change. Rising to this challenge may be one of the most daunting and exciting prospects the people and policy makers of Kentucky face in our lifetime.

KREC held three "town hall" public meetings across the state in August, September and October of 2007 to enable an active exchange of information and allow stakeholders to voice their concerns, ideas and perspectives on energy development and environmental stewardship.

National 25x'25 Foundation Principles

In the national 25 x '25 Action Plan, six foundation principles have been established to help achieve energy efficiency and renewable energy goals nationally. The complete 25x'25 Action Plan publication can be found on the national organization's web site, www.25x25.org.

First —
Energy efficiency improvements must be the option of first choice in all energy decisions.

Second —
We must dramatically increase the production of renewable energy. After efficiency, renewable sources will be the first choice for electricity generation where it is safe, reliable and affordable. Meeting the 25x'25 goal will further lower the costs of renewable energy so that it is competitive with fossil fuels, and lead to the development of a new array of value-added renewable products.

Third —
A key area of focus is the delivery of renewable energy to markets. The 25x'25 vision calls for the creation of an expanded network of infrastructure and facilities. Transmission and distribution systems should be built and better managed. All renewable electricity producers should gain access to the grid to get power to markets, expanding distributed generation that produces power locally which includes a viable method to enact net metering.

Fourth —
A renewable energy market must be built by increasing consumer demand for biofuels and renewable electricity – boosting the number of flex-fueled vehicles (FFV) that can run on either biofuels or gasoline, expanding the number of biofuels pumps to deliver fuel to the customer, simplifying consumer purchase of renewable energy and creating interstate markets for renewable energy credits.

Fifth —
Steps must be taken to conserve, protect and enhance natural resources by utilizing practices and systems that maintain or improve soil, water and air quality; conserve water; reduce invasive species; and improve wildlife habitat through the production of biomass.

Finally, and most importantly —
Funding to develop renewable energy must be increased. A significant private and public investment in renewable energy and energy efficiency must be made in order to realize the 25x'25 goals.

While the 25 X '25 initiative in Kentucky has much in common with the National 25 x '25 movement, Kentucky is unique in its land resources, climate, geography, geology, regional setting, current and potential energy utilities, industries, resource bases, and political climate. After careful consideration by many thoughtful and concerned citizens, private sector individuals, industry, and professional organizations, KREC's own set of 6 recommendations have been developed and are presented in the following section.

Kentucky 25x'25 Roadmap Recommendations

1. **Center of Excellence**

   It is vital to Kentucky's energy future that a center of excellence for renewable energy and energy efficiency be established, supported and held accountable for results. Such a center could well be the Center for Renewable Energy Research and Environmental Stewardship (CRERES) that is identified in House Bill 1.

   The center of excellence must support and encourage research, development, demonstration and commercialization of renewable energy, biomass co-products and energy efficiency technologies that benefit Kentucky. The center should be funded with state funds at an adequate and consistent level to ensure a vital, effective center that produces results.

   KREC believes that the HB 1 proposal establishing CRERES and requesting input from the Advisory Conference of Presidents is a positive step. However, we encourage our state leadership to build upon the success of the KREC model for creating this important Kentucky center of excellence. KREC also believes that research funding should be competitively awarded to institutions, rather than arbitrarily allocated, and based on the merits of research proposals of importance to the Commonwealth. Governance of the center should include a balance between representatives from Kentucky's public universities, the legislative and executive branches, renewable energy and energy efficiency advocates, Kentucky's agriculture community and business and industry stakeholders.

2. **Highly Qualified Renewable Energy and Energy Efficiency Expertise**

   Create incentives for increasing the number of highly qualified renewable energy and energy efficiency faculty and researchers at state universities.

3. **Renewable Energy and Energy Efficiency Outreach**

   Establish a statewide public awareness and education program utilizing the Cooperative Extension Service to develop and disseminate curriculum and other educational materials on renewable energy opportunities and energy efficiency savings. Partnering agencies and programs would include, but not be limited to; 4H, Future Farmers of America (FFA), Kentucky Department of Agriculture, Ag in the Classroom and National Energy Education Development (NEED) project.

4. **Energy Efficient Homes and Buildings**

   Require that all new buildings built for the Executive Branch, Judicial Branch and public universities be designed and constructed to meet or exceed ENERGY STAR® certification requirements. Through state incentives, encourage home builders to build homes that meet or exceed ENERGY STAR® certification requirements. Provide state incentives for homeowners to improve the energy efficiency of their own homes, improving overall efficiency of the state's existing housing stock.

5. **Net Metering and Renewable Energy**

   Expand net metering opportunities to other renewable energy resources like wind, hydropower and smaller, distributed biomass facilities. Provide state incentives for residential and commercial renewable energy applications.

6. **Biofuels**

   Require a renewable fuel standard (RFS) using ethanol and biodiesel for state agencies and public universities that operate state-owned vehicle fleets and hold state agencies accountable for achieving targets.

Conclusions

With this Legislative Prospectus, the KREC Core Team sets out an important part of its strategic vision for the energy future of Kentucky. With the addition of the Kentucky 25 x '25 Roadmap document, KREC will identify targets and opportunities that can significantly accelerate the growth in energy efficiency and renewable energy, and propose that the Commonwealth achieve a contribution of 25% of its energy mix from renewable energy sources and energy efficiency efforts by 2025. KREC requests that the state legislature, the Governor, utility companies, the PSC, the Attorney General, environmental groups and other public, commercial, and industrial sector stakeholders endorse these targets.

This Prospectus is only the beginning of a longer process that will require substantial planning and further analysis of the opportunities and Kentucky's regulatory and infrastructure framework. Most importantly, KREC is convinced that targets for the overall contribution of renewables to Kentucky's energy mix plus mandatory targets for biofuels are now needed. These policy recommendations have been vetted extensively by KREC membership and are being submitted for consideration to the Kentucky General Assembly for the 2008 Legislative session. KREC is convinced that these recommendations are achievable goals that can be implemented in the short term. In order for the 25 x '25 vision to be successfully achieved further, refinement and development of state policy must be an ongoing process.

KREC feels that if these recommendations are acted on by the General Assembly the result will be the creation of a true business, policy, and political climate in which renewable technologies and energy efficiency improvements can thrive. It will provide the business community with the certainty and stability it needs to make investment decisions while at the same time giving utilities the flexibility they need to support this policy in line with their individual business models and circumstances as service providers.

The Kentucky 25 x '25 initiative builds on the reputation and leading role Kentucky enjoys as an energy provider and agricultural producer. Failure to act on these advantages, through inaction or lack of vision , would seriously endanger our leadership in these fields, the importance of which reaches far beyond the energy and agricultural sectors. Most importantly, this Legislative Prospectus provides Kentucky citizens with the assurance they seek from their policy makers – that the serious problems of climate change and environmental degradation and security of their energy supply are being given equally serious consideration.