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**Cross-Cutting Issues (CCI)
Technical Work Group**

Summary List of Pending Priority Policy Options for Analysis

Policy No.	Policy Option	GHG Reductions (MMtCO ₂ e)			Net Present Value (Million \$)	Cost-Effectiveness (\$/tCO ₂ e)	Level of Support
		2020	2030	Total (2010–2030)			
CCI-1	Greenhouse Gas (GHG) Emission Inventories, Forecasts, Reporting, and Registry	<i>Not Quantified</i>					Pending
CCI-2	Public Education and Outreach	<i>Not Quantified</i>					Pending
CCI-3	Adaptation and Vulnerability	<i>Not Quantified</i>					Pending
CCI-4	Statewide GHG Emission Reduction, Energy Intensity, and Energy Efficiency Goals and Targets	<i>Not Quantified</i>					Pending
CCI-5	State and Local Government GHG Emission Reduction, Energy Intensity, and Energy Efficiency Activities (Lead by Example)	<i>Not Quantified</i>					Pending
CCI-6	Local GHG Emission Reduction, Energy Intensity, and Energy Efficiency Actions	<i>Not Quantified</i>					Pending
CCI-7	Financial Policies	<i>Not Quantified</i>					Pending
CCI-8	Conduct an Impact Analysis of Federal GHG Constraints on Kentucky	<i>Not Quantified</i>					Pending

GHG = greenhouse gas; MMtCO₂e = million metric tons of carbon dioxide equivalent; \$/tCO₂e = dollars per metric ton of carbon dioxide equivalent.

Note: The numbering used to denote the above pending priority policy options is for reference purposes only; it does not reflect prioritization among these important draft policy options.

CCI-1. Greenhouse Gas (GHG) Emission Inventories, Forecasts, Reporting, and Registry

Policy Description

Inventories inform state leaders and the public on statewide trends, opportunities for mitigating greenhouse gas (GHG) emissions or enhancing sinks, and verifying GHG reductions associated with implementation of all future regulatory and reporting requirements. GHG emission inventories are a critical component of all GHG policy development. This should also be the case in the Commonwealth of Kentucky.

Emission inventories serve as a regulatory platform by establishing a baseline rate of annual GHG emissions. A comprehensive GHG inventory of all direct emission sources within the borders of the Commonwealth, both point and fugitive sources, should be developed and updated annually.¹ An effective inventory is comprised of specific components:

- This GHG inventory should serve as the official GHG emissions inventory of anthropogenic sources and sinks within the borders of the Commonwealth.
- The inventories should be transparent and consistent with the GHG inventory reporting guidelines and requirements of the U.S. Environmental Protection Agency (EPA) and the United Nations Framework Convention on Climate Change.²
- GHG emission factors should be consistent with national and international guidance documents.
- Threshold reporting levels should be determined by the Commonwealth to adequately and accurately compile a comprehensive inventory of GHG emission sources and sinks.
- State emission inventories should serve as a compilation tool for organizing city and county GHG emission inventory efforts.
- Emission inventories should be verified by certified independent third-party verifiers.
- Direct emissions (Scope 1) and indirect emissions (Scope 2) should be included in the GHG emissions inventory. Emission sinks and carbon sequestration credits should only occur within the physical boundaries of the Commonwealth of Kentucky.
- GHG emission projections should be transparent, and all assumptions should be clearly disclosed.
- The inventory will include the following GHGs: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulfur

¹ The U.S. Environmental Protection Agency (EPA) has demonstrated the importance of GHG inventory reporting as a precursor to policy making with the General Provisions of 40 CFR Part 98. The Final Rule requires affected source categories to begin tracking GHG emissions on January 1, 2010, and report annual emissions for calendar year 2010 by April 2011.

² See http://unfccc.int/national_reports/annex_i_ghg_inventories/reporting_requirements/items/2759.php.

hexafluoride (SF₆), and will weight these gases according to global warming potentials reported by the Intergovernmental Panel on Climate Change.

Policy Design

The comprehensive GHG emissions inventory will serve as a foundation for developing emission projections and all future GHG emission regulatory requirements. An effective inventory system is aligned with national protocols and tailored to specific sources and sinks found in Kentucky. Two essential mechanisms of an inventory are reporting and registry functions.

Reporting

GHG reporting reflects the measurement and reporting of GHG emissions to support goal development, tracking of GHG emissions, and efficient management of resources. GHG reporting can help sources identify GHG emission reduction opportunities, reduce risks, and potentially develop revenue associated with future GHG mandates by developing the required infrastructure in advance. GHG reporting is a precursor for sources to participate in GHG reduction programs, opportunities for recognition, and a GHG emission reduction registry, as well as to secure “baseline protection” (i.e., credit for early reductions).

Registry

A GHG registry enables recording of GHG emission reductions in a central repository with “transaction ledger” capacity to support tracking, management, and “ownership” of emission reductions; establish baseline protection; enable recognition of environmental leadership; and/or provide a mechanism for regional, multistate, and cross-border cooperation. Properly designed registry structures also provide a foundation for possible future trading programs. The reporting protocol and format must be aligned with the requirements of the registry provider.

Goals:

- Gather all inventory-related information for calendar years (CY) 2005 and 2010; 2010 will serve as the inventory base, with 2005 being used to develop trends. For 2011 and beyond, a GHG emissions inventory should be compiled by the Commonwealth on a biennial basis. These biennial inventories should be compiled in a biennial report that shows trends and includes recommendations for improvements.
- Coordinate with federal agencies to ensure consistency in GHG reporting rules.
- Strive to avoid duplication of reporting requirements on GHG emission sources. Rely on the use of data that GHG emission sources already report under existing and future state and federal programs to avoid duplication of reporting burden on the sources. Utilize existing air pollution reporting systems and processes where applicable. Utilize existing government structures to identify an appropriate home for this work.
- Facilitate and encourage voluntary participation in an approved registry program.
- Encourage cross-departmental collaboration at the local and state levels.
- Educate and engage key private and public stakeholder in understanding the benefits of GHG emission measurement and stabilization.

- Develop a forecasting protocol based on CY 2010. Generate projections of future GHG emissions in 5-year increments extending to 2050.
- Create the institutional capacity for continued broad stakeholder involvement in the climate action planning process.
- Included all anthropogenic GHG emission sources and sinks.

Timing: Encourage state participation as quickly as possible.

Parties Involved:

- Place the responsibility for this requirement within the Kentucky Energy and Environment Cabinet (KEEC).
- Coordinate with all relevant Departments within the Commonwealth of Kentucky.
- Local governments, academic, nonprofit institutions, businesses, and regulated industries.

Other: None.

Implementation Mechanisms

Related Policies/Programs in Place

Type(s) of GHG Reductions

Estimated GHG Reductions and Net Costs or Cost Savings

Data Sources:

Quantification Methods:

Key Assumptions:

Key Uncertainties

Additional Benefits and Costs

Feasibility Issues

Status of Group Approval

Level of Group Support

Barriers to Consensus

CCI-2. Public Education and Outreach

Policy Description

The Kentucky Climate Action Plan Council (KCAPC) recognizes the importance of public involvement and education on the issues of climate change to enhance communication and dialogue on climate issues. An essential element of addressing climate change for Kentucky is education and outreach. An effective process must be developed that increases understanding and awareness of the issue and the impact of climate change on the economy, environment, and lifestyle of Kentuckians and involves a broad range of stakeholders in implementing strategies to address climate change. The outreach and education component will target six specific groups of stakeholders. The process should be initiated early in the planning stages and should continue through the development and implementation of a Climate Action Plan.

The purpose of an education and outreach policy is to raise understanding of the technical and policy issues surrounding climate change, open lines of communication with stakeholders, and involve those stakeholders in the implementation process. Each identified group may have a different level of understanding and stake in the outcome of climate change and may be affected differently by strategies to address climate change. Effective public outreach involves listening to multiple perspectives, sharing information, and addressing concerns through proactive community engagement.

Public outreach can be used to help identify the main values and concerns of a host community as well as the perceived benefits of an action plan. This process will help the KCAPC to address the issues of relevance to a particular community. The involvement through outreach and education of these groups will assist in developing lasting commitments to improving Kentucky's environment and economy through methods that minimize negative impacts and enhance positive outcomes. An additional goal of this policy is to facilitate funding for climate change and carbon mitigation research, and ensure the results of this research are used when developing new policies and regulations. Funding will target research in Kentucky that focuses on these main areas: climate science, energy efficiency enhancement, development and implementation of low-carbon technologies for industrial, residential, and transportation sectors, carbon capture technology, and carbon storage technology. Outreach and technology transfer will be an important part of this research, to help educate and engage the public.

Policy Design

Goals: The goals of the public education and outreach policy option are to increase awareness of the issues and understanding of the costs of and benefits from adopting new policies and/or goals for current and future generations, to involve stakeholders in ongoing dialogue, and to effect behavioral change in a way that minimizes the negative impact of climate change. Education of Kentucky's citizens, business leaders, and policymakers is integral to the successful implementation of behavioral and infrastructural changes necessary to minimize potential negative effects of climate change on the state's environment, economy, and lifestyle. The four major elements of the education and outreach component are:

1. Improve communication and dialogue about climate change.
2. Provide education about climate and climate change.
3. Involve multiple stakeholders in the process and understand their concerns and awareness of climate change.
4. Facilitate research funding opportunities within Kentucky, and leverage federal funding in the areas of climate science and carbon capture and storage technologies. Communicate research results to the public, policymakers, and legislators.

The steps of the public education and outreach policy are:

1. Appoint a Public Education and Outreach Team. The team would be selected by the KEEC Secretary or his or her designee. Individuals with experience in environmental education, communications, and technical fields (energy production, conservation, and management; climate science; or environmental sciences) are preferred. The team should have a broad representation of these fields from state agencies and public/private and educational/industrial interests, and would develop a plan for public education and outreach to the stakeholder groups. A KEEC representative will be designated as member and staff coordinator for the team.
2. Identify key stakeholders and outreach messages related to the Climate Action Plan and associated policies. The Public Education and Outreach Team should first establish a baseline of public understanding of the impacts of climate change and variability of proposed state-specific actions to deal with climate change. Second, the group must identify key messages for each party involved, by conducting a series of public forums and interviews.
3. Develop outreach materials based on identified outreach messages for specific stakeholders. Transfer information to the stakeholders and allow for feedback. While the goal of the group should be education-based—that is, showing all sides of the issue and teaching how to think critically about this issue rather than telling people what to think about the issue, it may also be necessary for the group to identify and utilize social marketing techniques to better establish new social norms in terms of certain behavioral changes, such as conserving energy and living a low-energy lifestyle.
4. Evaluate the effectiveness of the materials through implementation of the Climate Action Plan and monitor levels of understanding and changes in public perception and concerns. Refine the materials based on the evaluation.

Timing:

- Year 1, first 6 months:
 - Appoint and train group members.
 - Evaluate existing surveys conducted by the Kentucky Environmental Education Council and conduct a baseline survey about attitudes, understanding, and behavior related to climate change.
- Year 1, second 6 months:

- Identify existing outreach and educational materials and processes that are already being conducted.
- Develop a detailed policy and plan for public outreach and education.
- Year 2:
 - Coordinate with existing forums to conduct teacher workshops.
 - Conduct outreach to public officials in collaboration with state and local government agencies.
 - Assist with outreach activities at conferences for involved parties.
- Periodic Resurvey:
 - Conduct periodic follow-up surveys to gauge changes in behavior and understanding.
 - Refine the strategy as needed.

Parties Involved: The following entities are targeted for education and outreach: state government agencies and employees, local and state policymakers, future generations, community leaders and community-based organizations, business and industry representatives, general public, interest and advocacy groups, Climate Change and Solution Research Funding Panel.

Other: None.

Implementation Mechanisms

Related Policies/Programs in Place

Type(s) of GHG Reductions

Estimated GHG Reductions and Net Costs or Cost Savings

Data Sources:

Quantification Methods:

Key Assumptions:

Key Uncertainties

Additional Benefits and Costs

Feasibility Issues

Status of Group Approval

Level of Group Support

Barriers to Consensus

CCI-3. Adaptation and Vulnerability

Policy Description

The Commonwealth of Kentucky should undertake a comprehensive planning effort to assess the state's vulnerability to climate change and to identify and evaluate adaptation opportunities. Various organizations and agencies in the state are already collecting some of the information needed to make such an assessment, and efforts should be made to coordinate and consolidate these information-gathering activities.

Policy Design

Goals:

- Undertake a comprehensive planning effort to assess the impact of climate change on Kentucky, including, but not limited to, impacts on water quality and quantity, agriculture, recreation, fish and wildlife habitat, industry, and human health. The analysis, to the extent possible, will include the economic impacts on these sectors.
- Suggest adaptation strategies to minimize the effects of climate change on the above sectors within the Commonwealth.

Timing: As part of the Kentucky Climate Action Plan, KEEC should begin to coordinate collection of existing information and identification of data gaps in 2010, and continue in 2011. Assessment of the state's vulnerability to climate change impacts in the above sectors will begin in 2011.

Parties Involved: RRC, including Department for Environmental Protection (DEP), Department for Energy Development and Independence (DEDI), Department for Natural Resources (DNR); Kentucky Fish and Wildlife; Kentucky Water Resources Research Institute; Kentucky Geological Survey; U.S. Fish and Wildlife Service ; Kentucky Department of Agriculture; Governor's Office of Agricultural Policy, Kentucky Cabinet for Health and Family Services; Kentucky Tourism, Arts and Heritage Cabinet; U.S. Army Corps of Engineers; state and regional universities.

Other: None.

Implementation Mechanisms

Related Policies/Programs in Place

Type(s) of GHG Reductions

Not applicable.

Estimated GHG Reductions and Net Costs or Cost Savings

Not applicable.

Data Sources:

Quantification Methods:

Key Assumptions:

Key Uncertainties

Additional Benefits and Costs

Feasibility Issues

Status of Group Approval

Level of Group Support

Barriers to Consensus

CCI-4. Statewide GHG Emission Reduction, Energy Intensity, and Energy Efficiency Goals and Targets

Policy Description

Kentucky is the third-largest coal producer in the United States, has an electricity generation fleet that is more than 90% coal-fired, and more than 40% of that power is delivered to an industrial sector that produces automobiles, appliances, aluminum, stainless steel, chemicals, and other products. With its high reliance on coal to meet its electric energy needs, Kentucky may be subject to disproportionately large economic and infrastructure impacts as a result of federal action to limit GHG emissions, relative to states with more options available to them (see CCI-8). Simultaneously, Kentucky is also a developing economy, depending heavily on manufacturing and production for a significant majority of gross state product (GSP). It is imperative that any goal or target for reductions in GHGs that would be applicable to Kentucky must consider (1) the Commonwealth's dependence on coal as a primary driver in electrical production and cost, (2) the limited renewable resource options available to the state, and (3) the need to maintain costs of electricity that are competitive for the Commonwealth's manufacturing economy and affordable for the poorest segments of Kentucky's citizenry.

In November 2008, Governor Steven Beshear's office published *Intelligent Energy Choices for Kentucky's Future, Kentucky's 7-Point Strategy for Energy Independence*.³ The energy plan includes outcome-based goals that are anticipated to result from implementation of the seven strategies, which are described in the Policy Design section below.

Kentucky recognizes that collaboration is a key to the successful implementation of the state climate change strategies. Federal legislation tends to assume that one size fits all, which is not the case for Kentucky and several of its neighbors. Because the execution of policies designed to reduce climate change affects regions of the country differently, and the availability and feasibility of energy solutions vary among regions, the one-size-fits-all approach can result in inequitable regional impacts. For this reason, in developing and implementing any such targets, it is necessary to develop a system of guidance that rewards those who make optimal use of resources over those who, while performing an equivalent activity, make less efficient use of resources.

Within this context, Kentucky should take the leadership role in forming a regional group or consortium with surrounding coal states to ensure regional interests are represented and protected, while meeting the overarching goal of reducing the national carbon footprint, ensuring both continued economic expansion within the region and the availability of affordable energy to Kentucky's citizens.

³ Governor Steven L. Beshear, *Intelligent Energy Choices for Kentucky's Future: Kentucky's 7-Point Strategy for Energy Independence*, page v, November 2008. Available at: www.energy.ky.gov/.

Policy Design

Goals: The following GHG emission reduction goals are from the *7-Point Energy Strategy* and can be a starting point for the analysis of potential statewide GHG emission reduction goals for the Kentucky Climate Action Plan being developed by KCAPC. Before the end of this process they could be adjusted to reflect results of the quantification of policy options, if desired.

- “GHG emissions will be more than 50% lower in 2025 than they would otherwise be.”
- “GHG emissions in Kentucky will be 20% lower in 2025 than were our 1990 emissions.”⁴

Note: These targets can be amended to reflect reductions projected from a 2005 or 2010 baseline year and for target years 2020 and 2030.

In addition to formulating proposed GHG emission reduction goals as part of the KCAPC process, the Council has indicated an interest in identifying potential goals, targets, and/or metrics for energy intensity and energy efficiency. Therefore, three elements are proposed in this policy:

- *GHG Emission Reductions*—Caps on total emissions, with future goals of reducing those emissions by a specific percentage in the future (e.g., 20% below 1990 levels by 2025). This yields an absolute reduction in tons of emissions, but does not allow for economic expansion.
- *Energy Intensity*—Standards set that require a particular industry to meet a certain maximum level in power usage, or CO₂ emissions, per unit of product or service provided (e.g., 1 ton of CO₂ per megawatt-hour (MWh) of power delivered, or 3 MWh used per \$1 million of product value). This is also sometimes called carbon intensity. These values are determined by comparison to regional or national averages within the same sector and industry.
- *Energy Efficiency*—Targets for gaining more GSP per unit of power consumed (industrial), or less overall energy use per hour of operation (homes, buildings, etc.). This is a means of maintaining current energy use, while reducing overall emissions through improvements that allow more energy use or more GSP for the same amount of fuel consumed in the process. (For example, improve power plant efficiency by 1%, manufactured homes built after 2012 must have an energy efficiency 20% better than the average equivalent housing stock in place, and no more than 60,000 British thermal units per square foot).

Timing: Initiate in 2011 and ramp up by 2015.

Parties Involved: KEEC, PSC, and the Cabinet for Economic Development (CED) will be primarily responsible for implementation of the goals. The legislature, representative organizations from within each of the economic sectors, citizen groups, regional and national partnerships, etc., must be consulted during this process.

Other: The goals and targets must be reviewed within each sector periodically, with standards or targets adjusted accordingly as regional and national equivalencies change. For that reason,

⁴ Governor Steven L. Beshear, *Intelligent Energy Choices for Kentucky's Future: Kentucky's 7-Point Strategy for Energy Independence*, page v, November 2008. Available at: www.energy.ky.gov/.

implementation of this strategy will require a long-term commitment by the Commonwealth to fund and enforce reporting, monitoring, and special tariff enactments.

Implementation Mechanisms

Related Policies/Programs in Place

Type(s) of GHG Reductions

Estimated GHG Reductions and Net Costs or Cost Savings

Data Sources:

Quantification Methods:

Key Assumptions:

Key Uncertainties

Additional Benefits and Costs

Feasibility Issues

Status of Group Approval

Level of Group Support

Barriers to Consensus

CCI-5. State and Local Government GHG Emission Reduction, Energy Intensity, and Energy Efficiency Activities (Lead by Example)

Policy Description

To effectively reduce GHG emissions, improve energy intensity and energy efficiency results, and improve air quality throughout the state, the Commonwealth will lead by example and will encourage and support local governmental entities to take similar actions.

The state will adopt policies, goals, benchmarks, and reduction targets for energy efficiency and intensity strategies for state-owned or state-operated buildings, facilities, and vehicle fleets. To encourage broad adoption of and compliance with these new policies, the state will develop incentives for agencies, offices and organizations that meet or exceed these established state benchmarks. To implement these new policies, the Governor should assign or create a multi-agency governmental body represented by staff from the Governor's Office, and all three branches of government (legislative, executive, and judicial), to direct ongoing state climate efforts, including coordination with local government activities. Additionally, all programs and capital development funded through state bonding mechanisms should be required to meet these new policies.

Kentucky's adherence to its own policies, goals, and targets will inform and encourage local governmental entities to adopt similar policies, goals, and targets by highlighting the financial, social, and environmental benefits inherent in these policies. Development of the goals in this policy will help make energy efficiency practices available and accessible to Kentucky's cities and smaller communities.

Policy Design

Goals:

- The multi-agency body should be appointed and organized by June 30, 2011.
- By December 31, 2011, the agency will establish goals and targets to accomplish the following:
 - The Commonwealth will increase its use alternative fuel in the state fleet. This effort may include increased use of electric and hybrid cars and alternative fuels like biodiesel, ethanol, and natural gas, preferably from in-state sources. These changes will be implemented to the maximum extent possible throughout all branches of state government.
 - The Commonwealth will identify roadblocks to development of alternative fuel stations or access to recharge points, and will implement a plan to increase the number and accessibility of recharge and refueling stations for alternative fuels.
 - The state will identify ways to design, encourage, and provide incentives for regional interconnected energy systems (e.g., smart grid, building management systems, energy mapping, energy data collection, customer utility demand management, decentralized

energy production, transmission line upgrades for intermittent power sources) needed to improve state and local government energy use and encourage innovative approaches to energy supply and use. While many of these initiatives are not within the state’s power, the state can serve as abettor, facilitator, and the coordinator in ways no individual community, organization, agency, or company can.

- All new building and renovation projects funded by state dollars and bonding will be required to incorporate energy efficiency aspects in the design, construction, or renovation. Where feasible, projects should strive to achieve Leadership in Energy and Environmental Design (LEED) standards.
 - All state building and renovation projects that include new or substantial revision to heating, ventilating, and air conditioning (HVAC) and building systems will utilize commissioning to maximize energy-efficient operation.
 - The state purchasing practices will include the use of energy-efficient products where feasible, especially in areas of lighting, HVAC units, etc.
 - Accomplish culture change within state agencies, including educational institutions at all levels, to continually identify efficiency measures that can reduce energy use without damage to the institution’s essential functions.
 - As part of the culture change, promulgate and enforce a no-idling policy for state vehicles, except in traffic or required for health or safety. The state has probably the largest fleet in Kentucky; this is a great opportunity to lead by example.
- The multi-agency body will issue challenges to local governmental entities to address their energy use and attitudes in the same manner.

Timing: The multi-agency entity should be established by the Governor by the end of June 2011 and will immediately begin to design and develop specific goals and targets for state government. The goals and targets for state-owned and state-operated buildings will be more aggressive than those for buildings owned and operated by private entities. These goals and targets will be adopted no later than December 2012, and implementation will begin immediately.

Parties Involved: The multi-agency entity will include representatives from each cabinet and a representative from the Governor’s Office, the state court system, and the legislature.

Other: State government efforts to reduce GHG emissions and improve energy efficiency and energy intensity will have direct ancillary benefits of improving air quality by reducing corresponding emissions to the ambient air.

Implementation Mechanisms

Related Policies/Programs in Place

Type(s) of GHG Reductions

Estimated GHG Reductions and Net Costs or Cost Savings

Data Sources:

Quantification Methods:

Key Assumptions:

Key Uncertainties

Additional Benefits and Costs

Feasibility Issues

Status of Group Approval

Level of Group Support

Barriers to Consensus

CCI-6. Local GHG Emission Reduction, Energy Intensity, and Energy Efficiency Actions

Policy Description

Many communities across Kentucky are actively engaged in developing GHG emission reduction strategies, are seeking energy savings through energy intensity and energy efficiency initiatives, and are striving to achieve effective air quality improvements. These communities' existing efforts will be encouraged and supported by the Commonwealth. Additional communities interested in evaluating the vulnerabilities and opportunities posed by pending state and federal legislative changes and by predicted climate change will be provided encouragement and tools for developing a local plan of action.

To centralize these efforts, the state will develop a tool kit for local governments, institutions, and individuals to assist in planning and implementing effective strategies. The tool kit will utilize nationally recognized best practices (ICLEI–Local Governments for Sustainability, Energy Star, LEED, etc.) to provide assistance with GHG emission reduction, energy intensity, and energy efficiency actions and will collect “best lessons learned” by entities throughout the Commonwealth. It is not the intent of the state to utilize this policy to mandate how local governments or organizations should address this planning process. Rather, the state will be a partner to local communities by supporting, assisting, and coordinating these efforts where appropriate or beneficial.

The Commonwealth also recognizes that its communities need assistance with implementing their plans. The state will establish a “help desk” to share information and resources with its communities.

Policy Design

Goals: The state will make available to local communities the necessary tools for planning for potential climate change and associated legislative changes. These tools will be designed to include educational materials, coordination with state and other communities, facilitation of planning sessions, and information about potential economic impacts and opportunities ahead.

Local government units, whether county, city, or otherwise, will have the opportunity to participate in learning about and commenting on the state's plan of action. This opportunity will help local planners better coordinate with planning activities already underway and use and learn from work already completed.

The state will establish a help desk to provide assistance to communities in preparing and implementing plans through actions to reduce energy use, educate their communities, and lead in efficiency, reduction, and intensity. This help desk can provide technical assistance with questions like:

- How do I get an energy audit done?

- What materials are available to use for education and outreach to commercial and industrial businesses and organizations in my community?
- How can I get help on writing a bid specifications proposal for procuring energy-efficient equipment.
- How do I identify and apply for available grant funding to tackle our projects?

Timing: As the state, through its many initiatives developed under the Kentucky Climate Action Plan, learns about and identifies processes or actions that are effective in increasing energy efficiency, reducing GHG emissions, and addressing energy intensity, it will make those tools available to local governments. This process will be ongoing and will begin with development of the first action plan. The statewide process to develop consensus on targets and goals for GHG reduction, energy efficiency, and energy intensity will serve as a means to communicate the tools under development by the state, and most important, as a means to listen to the needs of the local communities across the state to guide further development, both of helpful tools and of the goals and targets themselves.

Parties Involved: This effort should be coordinated by the multi-agency body established by the Governor to direct the state “lead by example” policy. Other participants will be representatives of local governmental bodies and interested citizens engaged in local planning and implementation actions.

Other: None.

Implementation Mechanisms

Related Policies/Programs in Place

Type(s) of GHG Reductions

Estimated GHG Reductions and Net Costs or Cost Savings

Data Sources:

Quantification Methods:

Key Assumptions:

Key Uncertainties

Additional Benefits and Costs

Feasibility Issues

Status of Group Approval

Level of Group Support

Barriers to Consensus

CCI-7. Financial Policies

Policy Description

Recognizing that some policy decisions to reduce GHG emissions will have costs, Kentucky must develop long-term funding to implement KCAPC-adopted actions. This will require that a framework be established and funding sources be identified that will be available to public-private partnerships focused on improving energy efficiency and intensity.

To accomplish this policy, Kentucky will:

- Develop a state revolving loan fund for investments needed to improve energy efficiency and energy intensity, as well as to encourage economic development identified as appropriate to further the goals as proposed by the KCAPC and approved by the state legislature.
- Position itself to receive and benefit from federal and international assistance where available.
- Choose the most cost-effective alternative in making decisions about climate change adaptation, considering investment and operating costs as well as potential savings from improved energy efficiency and energy intensity.
- Develop clear partnerships with private business, local government, and the higher education community to identify and attract economic development that will benefit from the resources Kentucky has to offer.
- Identify ways in which Kentucky can shorten regulatory time frames for new permitting or revised permitting occasioned by changes in law and policy, in order to conserve both time and money in making required changes, while continuing to provide appropriate protections of Kentucky's natural resources and the health of its citizens.
- Identify regulatory hurdles to implementation of energy efficiency and energy intensity improvements across all sectors from energy production, use, transportation, and manufacturing.

Policy Design

Goals:

- Establish a revolving loan program, initially funded by the legislature, and supported by receipt of low-interest payments, to fund required changes that improve energy efficiency and intensity, potentially structured as a performance savings contract.
- Identify and aggressively pursue available grants, loans, and other funding to provide capital funding and operational assistance for changes within the public and private sectors in adapting to climate change and related policy changes.
- Provide for an economic analysis that identifies the least-cost and most effective alternative to improve energy efficiency and energy intensity for each goal in the Climate Action Plan.

- Develop a marketing plan to attract appropriate investment by existing companies and new investors in Kentucky's resources, taking into consideration the potential for increased energy costs.
- Identify streamlining actions that can be implemented for permitting new businesses or adopting revised permits for existing businesses, in order to best address changes in policy, law, and regulation.
- Take advantage of existing programs as vehicles for funding (e.g., Kentucky Bluegrass Turns Green, Green Bank of Kentucky).

Timing:

- The legislature will consider and adopt a revolving loan fund during the 2011 session to be administered by the Finance and Administration Cabinet, and will identify the source and amount of funding to initiate and support the loan fund.
- The state will immediately create a point of contact within each appropriate cabinet to aggressively seek and pursue funding from sources outside the state. All state employees charged with this goal will coordinate with each other to ensure efficient use of resources.
- The KCAPC will include the requirement for the economic analysis in its Climate Action Plan and will recommend the means for implementing this plan.
- The Climate Action Plan will immediately be reviewed by the CED, with appropriate assistance from the DEDI, and will develop a plan of action by June 30, 2011.
- KEEC will develop a plan to streamline permitting processes likely to be impacted by changes in policy, law, and regulation, no later than March 30, 2011, and will then provide that proposed plan to stakeholders throughout the Commonwealth for input and final plan development by June 30, 2011.

Parties Involved: State government, especially KEEC, CED, and the Finance and Administration Cabinet, will be primarily responsible for implementing the goals. They will seek the input of stakeholders in business, local government, and the higher education community.

Other: None.

Implementation Mechanisms

Related Policies/Programs in Place

Type(s) of GHG Reductions

Estimated GHG Reductions and Net Costs or Cost Savings

Data Sources:

Quantification Methods:

Key Assumptions:

Key Uncertainties

Additional Benefits and Costs

Feasibility Issues

Status of Group Approval

Level of Group Support

Barriers to Consensus

CCI-8. Conduct an Impact Analysis of Federal GHG Constraints on Kentucky

Policy Description

Kentucky is the third-largest coal producer in the United States, has an electricity generation fleet that is more than 90% coal-fired, and more than 40% of that power is delivered to an industrial sector that produces automobiles, appliances, aluminum, stainless steel, chemicals, and other products. With its high reliance on coal to meet its electric energy needs, Kentucky may be subject to disproportionately large economic and infrastructure impacts as a result of federal action to limit GHG emissions, relative to states with more options available to them. It is therefore imperative for Kentucky to have a thorough understanding of its vulnerability and have in place an adaptation plan if and when such legislation is adopted. (See CCI-3.)

As a part of this assessment, Kentucky should conduct an ongoing study of the various proposals and approaches so that the state can meet national GHG reduction requirements in the most efficient and effective manner, whether these are market-based, multisector cap-and-trade systems, systems that limit GHG emissions through administrative actions and regulations, or systems that limit GHG emissions through implementation of efficiency standards to require a specific minimum level of productivity per ton of CO₂-equivalent (CO₂e) emissions. This study should involve a rigorous, quantitative economic model, with the various proposals and approaches as inputs and the suite of feasible responses as outputs. The economic model should be supplemented with quantitative technological and engineering data that will inform the response alternatives. The study should consider the economic tradeoffs between simple caps on emissions in comparison to an efficiency-based standard comparing net state economic productivity per CO₂e emissions for similar industrial sectors, both regionally and nationally. The study should be developed and overseen by DEDI's Division of Carbon Management, with assistance and participation by interested state government agencies and universities.

Any adaptation plan ultimately adopted by Kentucky should ensure the cost-effective reduction of GHG emissions in a manner that maximizes public benefits, sustains and improves Kentucky's economy, mitigates adverse socioeconomic impacts, encourages innovation in energy production technologies, energy efficiency and sustainable energy technologies, and avoids inequitable interstate and interregional impacts. Any such reductions should be considered in light of comparable economic productivity for comparable industrial sectors with regional and national averages, and any mandated reductions should preferentially favor the mitigation of emissions by setting comparative efficiency standards per unit of GSP. The completed adaptation plan and study should be presented to KEEC and the Governor's Office for inclusion in the Kentucky Climate Action Plan, and subsequently to the state legislature in order to develop and enact appropriate response legislation.

Kentucky recognizes that collaboration is a key to the successful implementation of the state climate change strategies. Federal legislation tends to assume that one size fits all, which is not the case for Kentucky and several of its neighbors. Because the execution of policies designed to reduce climate change affects regions of the country differently, and the availability and feasibility of energy solutions vary between regions, the one-size-fits-all approach can result in

inequitable regional impacts. For this reason, collaborative regional and multistate reduction efforts offer promising possibility for developing compliance strategies that provide for greater opportunities for effective and sustainable successes. Kentucky and several of its neighboring states rely heavily on coal for their current energy supply, and coal is a major part of their economies. Utilizing alternative energy resources, clean coal technology, energy efficiency, and renewable resources through blended energy portfolios can result in the region transitioning from a predominately coal-based energy economy to a more diverse energy economy with acceptable economic costs.

The collaborative effort being recommended would be to focus on two tracks. First is to ensure that the region is treated equitably in federal legislation and that feasible energy solutions are not precluded by the one-size-fits-all approach at the national level. Second is to develop regional response alternatives that mitigate adverse impacts and promote positive economic growth through new energy initiatives. Kentucky should take the leadership role in forming a regional climate action group or consortium with surrounding coal states, to ensure regional interests are represented and protected while meeting the overarching goal of reducing the national carbon footprint.

Policy Design

Goals:

- Have a clear understanding of the sources of GHGs, and analyze the potential effects of federal climate change policy, including legislation and/or regulations affecting these sources.
- Address the ability and costs to adapt and integrate potential federal actions and programs
- Develop an adaptation plan and strategies that show what alternatives are available and their costs for mitigating GHG emissions required by various federal proposals. Such strategies would propose to mitigate and adapt in various sectors, including energy supply, residential, commercial, industrial, transportation, land use, agriculture, forestry, and waste management.
- Present and inform Kentucky's government, business leaders, and the public of the results of these analyses and adaptation plans.
- Work to form and develop these regional programs so that Kentucky's interests are protected.
- Maximize economic and employment opportunities, while minimizing transitional job losses.
- Establish links to other jurisdictions and systems to create economies of scale, increasing efficiency and diversity.
- Create the institutional capacity for continued broad stakeholder involvement in the climate action planning process. Include entities not currently represented on the KCAPC both geographically and economically, such as small and medium-size manufacturing companies and local Chambers of Commerce.

Timing: The KCAPC effort will result in a suite of options for GHG mitigation, including discussion of any limitations (technological or economic) and will provide an estimated cost per ton mitigated. DEDI is currently analyzing and will continue to analyze the impacts of various federal actions and the resulting cost impacts on energy for residential, commercial, and industrial sectors. These estimates, combined with the estimated economic benefits of energy-

related economic development, will be used to estimate the overall economic impact on Kentucky. The study is to be undertaken during fiscal year (FY) 2010–2011. DEDI will periodically report progress and issues.

Independently, Kentucky will take on a leadership role in the identification of partner states with similar interests regarding federal GHG mitigation policies, and will work to develop partnerships that protected the state’s interests. Initial contact and discussions among potential partner states will be undertaken during FY 2010–2011. DEDI will periodically report progress and issues.

Parties Involved: DEDI.

Other: None.

Implementation Mechanisms

Related Policies/Programs in Place

Type(s) of GHG Reductions

Estimated GHG Reductions and Net Costs or Cost Savings

Data Sources:

Quantification Methods:

Key Assumptions:

Key Uncertainties

Additional Benefits and Costs

Feasibility Issues

Status of Group Approval

Level of Group Support

Barriers to Consensus