

Several years ago, in a meeting with KFTC members and several top officials from a Kentucky-based electric utility, a company executive shared a revealing story. “Do you know what wakes me up in the middle of the night?” he asked the group. “Carbon pollution. If we ever have to pay for it, we will be in a world of trouble.” Then he added, “But then when I wake up in the morning, I remember that we live in Kentucky. We’ll be the last to change. Whatever happens at the federal level, it will happen here twenty years later.”

The day that utility executive fretted about has now arrived. It remains to be seen whether his prediction of delay and inaction holds true for Kentucky. The EPA’s plan to reduce carbon dioxide pollution from power plants drew immediate praise from some and howls of protest from others. A more complex picture is gradually emerging about what the proposal actually means, and how it might play out in Kentucky. This document is intended to help KFTC members and all Kentuckians gain a better understanding of the EPA’s Clean Power Rule and ways we can make our voices heard.

I. Climate change is happening now, and the risks will intensify for over time.

A flood of recent, comprehensive studies have described the current harmful impact and future threats posed by global climate change. In April 2014 the Intergovernmental Panel on Climate Change (IPCC) published its fifth report in 25 years on the science and impacts of global climate change.¹ In May, the third “National Climate Assessment” was released by the US Global Change Research Program.² Also that month, a US military advisory board released a report called “National Security and the Accelerating Risks of Climate Change.”³ The key messages from all three reports are consistent:

- Global climate disruption is happening now, and the risks will intensify over time.
- The impacts of climate change vary from region to region, but are severe and widespread. Impacts include increased frequency and severity of floods, storms, drought, fires, and extreme heat; sea level rise and ocean acidification; dislocation of many human populations; costly damage to infrastructure; increased water shortages and food insecurity; expanded range and frequency of many diseases; intensification of conflict and violence; and mass extinction of species.
- Comprehensive actions and investments are needed now to reduce greenhouse gas pollution and prepare communities to deal with changing conditions.
- There is time to implement policies, investments, and cultural and economic changes to avoid worst-case scenarios. In fact, many recommended changes can have other co-benefits, including healthier air and water, energy savings, improved infrastructure, reduced poverty and inequality, and job creation. Further delay greatly limits our options and

¹ Intergovernmental Panel on Climate Change 2014 Report: <https://www.ipcc.ch/report/ar5/wg1/>

² National Climate Assessment: <http://www.globalchange.gov/>

³ Center for Naval Analyses Report: <https://www.cna.org/reports/accelerating-risks>

chances of success, and increases the costs.

II. As part of its 2013 National Climate Action Plan, the Obama administration recently announced new rules to reduce carbon pollution from existing power plants.

The clean power rules are part of President Obama's 2013 Climate Action Plan to cut carbon pollution and prepare America for the impacts of climate change.⁴ That plan also calls for doubling renewable energy generation by 2020, modernizing the US electric grid system, investing billions of dollars in carbon capture and sequestration research and projects, improving fuel economy standards and energy efficiency appliance standards, expanding investment in energy efficient buildings, and other strategies.

Announced on June 2, the new guidelines for existing power plants will reduce overall carbon dioxide pollution from the US power sector by 30% over 2005 levels by 2030. The EPA assigned each state different reduction targets based on an assessment of the current energy mix and cost effective opportunities to reduce carbon pollution. Many states that have already made strides to diversify their energy generation and invest in energy efficiency were asked to reach even higher, while coal dependent states like Kentucky that have done comparatively little to prepare for a low-carbon future were asked to meet the smallest targets.

The proposed rule asks states to develop plans to reduce average carbon pollution across their utilities' entire fleet of electric power generation. The rules allow states to reduce their power plant emissions through a variety of strategies, including expanding energy efficiency programs, expanding renewable energy generation, switching to natural gas or other energy sources that pollute less, or establishing emissions-trading programs.

It's important to remember that members of Congress and big utilities and fossil fuel interests have had 20 years to shape a responsible approach to addressing climate change while also accounting for the needs of affected workers and industries. Unfortunately, most of those players chose instead to pursue a path of denial, delay and obstruction. In the face of their inaction, the US EPA was left with both the authority and obligation to regulate carbon dioxide emissions under the Clean Air Act.

III. The EPA set a low bar for Kentucky and gave us flexibility to get over it.

Under the draft proposal, Kentucky's electric utilities need to achieve an overall carbon emissions rate of 1,763 pounds of CO₂ per megawatt hour of electricity produced by 2030. That represents an 18% reduction from the state's rate of carbon pollution per megawatt hour in 2012. Kentucky's reduction target is the third smallest required by the EPA for any state.

⁴ 2013 Whitehouse Climate Action Plan:

<http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>

The rule seems even more modest after several reports indicating that Kentucky is already more than half-way to meeting the 2030 target. Recent closures of older, dirtier coal plants in the Commonwealth have resulted in a 9-10% reduction in CO₂ pollution from Kentucky's power plants since 2012. And, according to an article by James Bruggers of the Louisville *Courier-Journal*, once other planned power plant conversions are completed in the next year, Kentucky could reach 11% of our 18% reduction goal, with 15 years still to go.⁵

In fact, an article by Michael Phillips in Bloomberg Businessweek describes how Kentucky's total carbon emissions could actually *increase* under the new rules by 2030, even if we hit the target emissions rate.⁶ That's because the EPA's rule doesn't put a hard cap on the total amount of carbon pollution from the power plants in any state. If Kentucky's overall energy demand grows significantly, the total amount of carbon pollution dumped into the atmosphere by our utilities could be higher in 2030 than it is today, even if the rate of carbon pollution per megawatt-hour meets the new target.

The EPA also gave Kentucky and other states flexibility to reach the target using a range of strategies that can be tailored to local conditions. Rather than setting a carbon pollution limit for each individual power plant, the EPA set an overall or average carbon emissions rate for the utilities in our state. States are allowed to combine many different strategies to hit that target, including ramping up energy efficiency programs, converting some plants to lower-emissions fuels, keeping some older nuclear plants on-line, and deploying more renewable energy solutions.

IV. Kentucky has an opportunity to seize this moment to create jobs and save money and energy.

While the CO₂ rules for Kentucky are modest, they will still require significant changes in the way we generate, use, and pay for electricity. There are limited ways for utilities to reduce the pollution from their existing fleet of very old coal-fired power plants. Once those steps are taken, utilities will face complex choices about how much to ramp up energy efficiency programs, how much to invest in renewable energy, and how much of their fleet to convert to fuel sources like natural gas or biomass that are considered by the EPA to be less harmful to the climate (more on that point later).

⁵ Kentucky, Indiana get head start on global warming regs, by James Bruggers, Louisville Courier Journal, June 13, 2014: <http://www.courier-journal.com/story/tech/science/environment/2014/06/12/kentucky-indiana-global-warming-regulations/10365821/>

⁶ Why Some States May Get to Increase Carbon Emissions Under New EPA Rules, by Matthew Phillips, Bloomberg Businessweek, June 11, 2014: <http://mobile.businessweek.com/articles/2014-06-11/why-some-states-may-actually-get-to-increase-carbon-emissions-under-new-epa-rules>

Many strategies to reduce carbon emissions can also generate meaningful economic and health co-benefits for Kentuckians. Investments in energy efficiency and renewables, for example, can create thousands of good new jobs in Kentucky, lower electric bills due to energy savings, and reduced rates of asthma, chronic disease, and premature death in many communities where coal is mined and burned today.

A study commissioned by the Mountain Association for Community Economic Development in 2012 found that Kentucky could generate 28,000 net new jobs and lower average utility bills by 8-10% compared to a do-nothing scenario by gradually increasing energy efficiency and renewable energy over ten years.⁷ The kinds of jobs that could be created include jobs in construction, equipment sales and installation, insulation, lighting, heating and cooling, electricians, engineers, and energy auditing.

To make the most of this opportunity will require a shift in thinking for utility executives and regulators, politicians, business leaders and Kentucky residents. Starting now, we must all prioritize energy efficiency as our cheapest and most abundant source of energy. As others have noted, Kentucky is the Saudia Arabia of wasted energy. Our homes use 30% more electricity than the national average; our industrial sector is one of the most energy intensive in the country; our schools and public buildings are burdened by inefficient design, lighting and heating and cooling systems.

Reducing energy waste is highly cost-effective. It costs far less to save energy by upgrading equipment or adding insulation than it does to generate an equivalent amount of new energy from any other energy source. Until recently, however, most of Kentucky's utilities and regulators have treated energy efficiency programs as a customer service, rather than as a core strategy for providing reliable, affordable energy. The EPA's climate rules have the potential to nudge us all in a new and very positive direction.

Kentucky also has significant potential to generate clean renewable energy, including wind, solar, small scale hydro-power, and carefully selected biomass strategies. A 2012 study by Downstream Strategies, Inc concluded that the state could generate 34% of our energy demand from distributed energy sources by 2025.⁸ Distributed energy is a term that refers to electricity or heat generation that is located close to the point of use. Some examples include rooftop solar systems, co-generation systems that extract heat and generate electricity from the same fuel, and systems that generate hydro-power at the spillways of our many lakes and river locks. That's a very different model than our current highly centralized system of power production and distribution in Kentucky. Moving in the direction of a cleaner, more diverse, and more

⁷ Potential Impacts of a Renewable and Energy Efficiency Portfolio Standard in Kentucky, by Synapse Energy Economics, Inc, January 11, 2012: <http://www.maced.org/REPS-release.htm>

⁸ The Opportunities for Distributed Renewable Energy in Kentucky, by Downstream Strategies, Inc., June 18, 2012: http://www.downstreamstrategies.com/documents/reports_publication/DS_ky_distrib_energy_opportunities.pdf

distributed energy system in Kentucky is possible and necessary. But doing so will require a transformation of political and economic power, not just energy production.

The good news is that the cost of renewable energy production and storage have fallen dramatically in recent years. According to major US investment firms, the installed cost of wind power has fallen by 43% since 2009, and today it is cheaper to produce new energy from wind than from coal.⁹ Meanwhile, the cost of solar power in the US has fallen by 20% per year or more in each of the past three years as efficiencies have been gained in design, materials and manufacturing. Solar energy is expected to become cost competitive with conventional fuels in many states over the next 5 years. And rapid advances in battery technology mean that intermittent renewable sources like wind and solar will increasingly provide reliable and affordable power.

In Kentucky, where our utility rates are still comparatively low, solar energy will remain a more expensive option for perhaps the next ten years. But it can still make economic sense to increase investment in solar today in the Commonwealth, since the cost per kilowatt-hour of each solar energy system is fixed and will remain constant over decades of use. That's a very different level of financial risk for rate-payers than an equivalent investment in energy from natural gas or coal, where the price of fuel and pollution controls can climb steeply over the lifetime of the system. Of course, the cost equation for solar is even more favorable when one takes into account the broader economic and health benefits of reduced air and water pollution.

V. Inaction will leave our economy and workers stuck in time as the world changes.

Last fall Kentucky Governor Steve Beshear and Energy and Environment Cabinet Secretary Len Peters wrote a letter to EPA Administrator Gina McCarthy asking for flexibility in reducing carbon pollution from Kentucky's power sector.¹⁰ Nine months later, that's exactly what the EPA delivered. But before the EPA's new rules were even announced, the Kentucky legislature passed a law that forbids our state agency from using that flexible approach to comply with the EPA's clean power rule.

HB 388, which was sponsored by Rep. Jim Gooch and passed unanimously through the Kentucky General Assembly, puts our state on a collision course with the US EPA's new rule.¹¹

⁹ Lazard's Levelized Cost of Energy Comparison, 7.0, September 2013:

http://gallery.mailchimp.com/ce17780900c3d223633ecfa59/files/Lazard_Levelized_Cost_of_Energy_v7.0.1.pdf

¹⁰ Letter to EPA Administrator Gina McCarthy from Kentucky Governor Steve Beshear, October 22, 2013:

<http://eec.ky.gov/Documents/GHG%20Policy%20Report%20with%20Gina%20McCarthy%20letter.pdf>

¹¹ An Act relating to best system emission reduction for existing electric generating units:

<http://www.lrc.ky.gov/record/14RS/HB388.htm>

Unless it is repealed or changed, the law makes it unlikely that Kentucky can submit a plan that complies with the new EPA rule. In that case, the EPA would then have to reject Kentucky's inadequate plan and impose a plan for the state. Legal challenges and long delays will surely follow.

The legislature's early action to block implementation of federal climate rules stands in contrast to the state's response to the Affordable Health Care Act. In that case Governor Steve Beshear's administration implemented a successful health care exchange while many lawmakers fumed from the sidelines. This time around, legislators took early action to tie the hands of the executive branch and made it much more difficult for Kentucky to develop a workable response to new federal requirements.

Unless HB 388 is repealed, Kentucky's ratepayers, workers, utilities, and businesses will continue to lose out as most other states set out to build the next clean energy economy. Kentucky has hundreds of thousands of homes that need to be weatherized now. We have hundreds of factories that are ready to install systems that allow them to co-generate heat and electricity now. We have thousands of unemployed workers who are ready to start installing renewable energy systems and insulating buildings now. We have children and grandparents who deserve to start breathing healthier air now. Continued obstruction by the coal industry and its supporters leaves Kentucky's economy stuck in time, and makes us less able to adapt in a changing world.

VI. Kentuckians must speak out for strong climate protections and a just economic transition for coal impacted workers and communities.

The EPA's draft rules are now open for public comment.¹² A final version of the rule will be announced in June of 2015. States then have a year to develop and submit their compliance plan or request additional planning time.

The EPA will hold public hearings in four cities this summer. Many KFTC members are planning to travel to Atlanta and Denver in late July to make their voices heard. Written comments may also be submitted through October 16, 2014. Comments on the proposed rule should be emailed to A-and-R-Docket@epa.gov or mailed to Environmental Protection Agency, EPA Docket Center (EPA/DC), mailcode 28221T, Attention Docket ID: OAR-2013-0602, 1200 Pennsylvania Avenue, NW, Washington DC 20460. Make sure to put "Docket ID: EPA-HQ-OAR-2013-0602" in the subject line of your email message.

Below are some suggested talking points you are welcome to use or modify as you develop your comments to the EPA.

¹² EPA information about the Clean Power Rule and opportunities for public comment: <http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule>

A. We are Kentuckians. We want what all people want for their communities: good jobs, clean air and water, opportunity for our kids, and healthy and thriving places live, work and raise our families. We have the opportunity, right now, to build a bright future here in the Commonwealth. It won't be easy, but we can create good new jobs and affordable energy options while also shouldering our responsibility to address global climate change.

B. Kentucky should seize this moment to create good new jobs by cleaning up harmful pollution and moving to cleaner and sustainable forms of energy. Many actions that are needed to slow the disruptive impacts of climate change can also generate benefits for Kentuckians in the form of improved health, energy savings and economic opportunity. As one of our nation's most coal-dependent states, Kentucky is also among the states with the most health benefits to gain from reducing power-plant pollution, including reductions in asthma, premature death and chronic heart and lung diseases.

C. The EPA's clean power initiative is urgently needed. We applaud the agency for taking this important step to face our responsibilities and protect our health and climate. Unchecked pollution of greenhouse gases, including carbon dioxide from power plants, is responsible for rising global temperatures. Climate change has already caused costly damage to Kentucky's economy in the form of more frequent and severe storms, droughts and floods. The path we are on poses unacceptable risks to our own health and security, and grave harm to our children and grandchildren. Strong, comprehensive policies and investments are needed at the local, national and international levels to reduce harmful pollution and transition to a clean energy economy.

D. As proposed, the EPA's clean power plant rules are inadequate and must be strengthened. Here are six important ways the rules fall short and should be strengthened before they become final:

- **A just economic transition for coal workers and communities must be a central part of any strategy to address climate pollution.** The world is transitioning away from coal to more affordable and less dangerous energy options, and that has big implications for Kentucky's coal industry, utilities, workers, communities and economy. Our federal, state and local governments must commit to a just economic transition for workers and communities tied to the coal economy. There is no single solution, but we know a lot about what is needed. A meaningful approach should include a fund for displaced workers, increased support for entrepreneurs and businesses, and investment in promising sectors including energy efficiency, renewable energy, agriculture, tourism, sustainable forestry, arts and culture and health care.

The EPA's clean power rule isn't the only or best mechanism for shaping a just transition in Central Appalachia. But there are important ways the rule and Kentucky's implementation of it could be shaped to prioritize job creation in affected communities. One place to start is to require utilities to maximize energy efficiency before pursuing more costly strategies like fuel switching. An aggressive plan to upgrade our homes, schools, public buildings,

businesses and industries could save Kentuckians millions of dollars and generate thousands of good new jobs.

The EPA's rule and Kentucky's implementation plan can and should go much further than that. What if Kentucky were given the flexibility to award extra credit to utilities that pursue energy efficiency or renewable energy projects in economically distressed communities? What if Kentucky offered tax credits to energy efficiency and renewable energy companies that hire a large percentage of their workers from distressed communities and offer good wages and benefits? What if we set up a revolving loan fund focused on financing renewable energy projects in historically coal producing counties? What if we open up our state laws to allow third-party ownership of renewable energy systems so that all Kentuckians have a choice about where their energy comes from?

- **The EPA's targets for reducing carbon dioxide pollution by 2030 are too low and do not do enough to reduce our risk from climate change.** Under the proposed rule, overall US greenhouse gas emissions will still be higher in 2030 than they were in 1990. That's well below the level recommended by the Intergovernmental Panel on Climate Change, which says developed nations must hit targets 20-40% below 1990 levels in order to avoid extreme climate scenarios.

The EPA says that the rule will cause the US power sector to reduce overall carbon pollution in 2030 by 30% from 2005 levels. Using that year as a baseline reflects a more lenient approach than many analysts expected. The US burned a lot of coal in 2005 due to disruptions to the natural gas infrastructure caused by hurricanes Katrina and Rita in the Gulf of Mexico. The 2005 baseline also allows the US to claim credit for pollution reductions that happened when our economy shrank during the great recession. Additionally, the EPA rule allows states to count carbon dioxide reductions from coal plant retirements that were already in the works before the rule was established. For example, by the time the rules take effect next year, Kentucky will have achieved 11 percentage points of our 18 percent reduction target without doing anything more than business as usual.

- **The EPA significantly underestimates the potential for energy efficiency.** The clean power rule assumes that states can ramp up their energy efficiency efforts to achieve annual energy savings equivalent to 1.5% of the energy consumed the year before. Leading states are already at or above that mark, and all states should be pushed to achieve at least 2% annual energy savings. (A 2% target is contained in the Clean Energy Opportunity Act, a bill that has been considered, but not yet adopted, by the Kentucky legislature in recent years.) There is lots of evidence that utilities can but will not deploy energy efficiency programs at that scale unless they are required to do so.
- **The EPA dangerously underestimates the climate and health consequences of switching from coal to gas.** Natural gas is mostly composed of methane (CH₄), a potent greenhouse gas. The EPA's clean power rule allows states to get credit for reducing greenhouse gas pollution when their utilities switch from coal to gas plants because their carbon dioxide

emissions are lower at the power plants where each fuel is burned. The climate benefits of using natural gas evaporate, however, if methane leakage from natural gas drilling sites, pipelines and storage tanks is properly taken into account.

The EPA uses an outdated, inaccurate, and significantly low estimate of how much methane escapes from drilling sites and pipelines on the way to power plants. The EPA assumes a methane leakage rate of 1.5%, while a flood of recent studies calculate that the true rate is 3% or higher. As climate writer Joe Romm notes, “If, as seems likely, natural gas production systems leak 2.7% (or more), then gas-fired power loses its near-term advantage over coal and becomes more of a gangplank than a bridge.”

The EPA should immediately begin a rule-making process to establish a scientifically supported estimate of fugitive methane emissions. It is critically important for the EPA to follow the science and get this estimate right. In Kentucky, our utilities are likely to respond to the EPA rule by investing heavily in natural gas, since the cost of building new gas plants is currently lower than most renewable energy strategies. Those investments will shape our energy landscape for the next 40-50 years. Kentuckians and the world cannot afford for us to simply trade one costly and harmful energy system for another.

- **The EPA rule must be federally enforceable and enforced.** The EPA’s clean power rule is based on Section 111(d) of the Clean Air Act, which gives the EPA the authority to set guidelines for the “best system of emission reduction” available for existing, stationary sources of dangerous air pollution. Each state is then required to develop a state plan that complies with those EPA guidelines. The EPA reviews those plans, and may approve or reject them. But states have the primary responsibility for implementing and enforcing their plans, a process that could require establishing new laws and regulations if needed, and then taking enforcement action against violators.

It is clear from the words and actions of many lawmakers and industry players in Kentucky that they intend to obstruct and delay the rule’s implementation using every tool in the drawer. The EPA must be willing to reject inadequate state plans and swiftly establish meaningful rules for utilities in states that fail to comply. Whether or not a state’s plan meets EPA approval, the federal agency must be prepared and willing to take enforcement action on its own.

After more than 40 years, Kentucky has failed to comply with the requirements of the Clean Water Act, yet the EPA refuses to respond to citizen pleas to take away the state’s enforcement powers. Similarly, Kentucky’s enforcement of the Surface Mining Control and Reclamation Act, Mine Safety and Health Act, and other foundational health and safety laws has been woefully inadequate. The stakes are simply too high to repeat those patterns when it comes to climate change. The EPA must not shy away from taking necessary actions to assert and enforce effective climate protection rules in Kentucky.

- **The rule does not do enough to protect the health of front-line communities, those most affected by the consequences of pollution.** The EPA rule contains a number of provisions that could expand or prolong the use of dangerous and polluting fuels, including coal, natural gas and uranium, rather than encourage a transition to healthier solutions like energy efficiency and clean renewables. For example, the rule allows utilities to get credit for making their existing coal plants more efficient or converting to natural gas. The rule also allows states to set up carbon-trading systems where the pollution from existing coal burning plants can be offset by making payments to farmers, foresters or others who agree to take specific actions to reduce their pollution or sequester carbon dioxide. All of these strategies have questionable long-term results and ensure that people living near the dirtiest plants will continue to be exposed to high levels of toxic pollutants. The EPA rules should be strengthened to prioritize the health of front-line communities and ensure that all utilities and states make rapid and meaningful progress toward a truly clean and sustainable energy economy.