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In the quest to provide safe, affordable, reliable, sustainable energy

Alternatives to the proposed natural-gas power plants in Louisville and Mercer County

Notes from Investing in America: Climate Action Funding Fair Aug 9 - 13, 2023

and

Consideration of distress from loss of coal employment resulting from retiring Coal Plants

<https://www.epa.gov/inflation-reduction-act/investing-america-climate-action-funding-fair>
representing EPA, USDA, DOE, HUD, DOI, DOT and Treasury

<https://www.epa.gov/inflation-reduction-act/investing-america-climate-action-funding-resource-guide>

Offered by
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Opportunity: Planned reduction in energy demand

The world of American business seems to be predicated on eternal mandatory growth, but the mission of providing clean, reliable, affordable energy can be different.

Rewiring America

See rewiringamerica.org/app/ira-calculator

Here is the original argument of the RewiringAmerica program, which was put in place nationally within the Inflation Reduction Act one year ago—reduction of household energy demand thru energy efficiency. (Similar incentives are offered for commercial and non-profit entities)

Current households vs. electrified

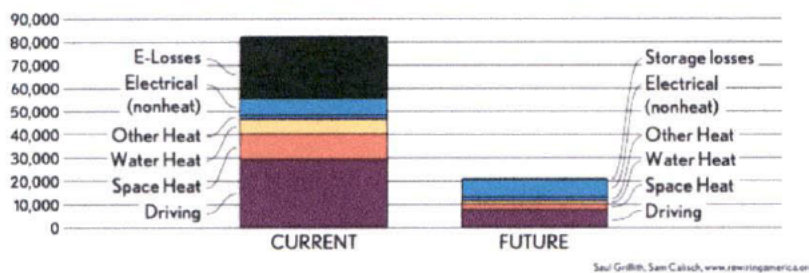
The electrified U.S. household uses substantially less energy than current homes.

One area of enormous savings is the elimination of thermoelectric losses in electricity generation, assuming we will provide our future loads with renewables.

The efficiency of electric cars over internal combustion engine (ICE) vehicles also generates substantial savings.

Similarly, we show the substantial savings derived from the high efficiency of heat pumps for space and water heating.

Annual average energy use per U.S. household, kWh equivalents



Looking at this graph, the black section (thermoelectric losses in electricity generation) is out of householders' control, and very much in the hands of their electric utilities.

If we look at just the colored parts (Current: 55,000 — Future:20,000kWh) we see that the program provides much reduced need for electric generation. It can be reduced by more than half.

Is LGE/KU taking this into account investing for future need?

The IRA/Rewiring America program started right off the bat with tax incentives for a variety of these upgrades, but we all know that tax-based incentives do not reach everyone. As it expands next year with upfront discounts, this bottleneck should be resolved.

PS. Public Service Commission Building, LGE/KU buildings: Do YOU own or rent buildings? Efficiency and electrification upgrades are available, which lower cost of operation and maintenance. Savings there put more capital into your mission, same as for everybody else.

Opportunity: Home Energy Audits

A in this first year of the EPA Electrification and Energy Efficiency program is in the development of easily-available Home Energy Audits and advisory services. Utilities and RECCs concerned about their business plan and perhaps losing employment because of a planned decline in energy use could shift into this area where their expertise is so valuable going forward.

Climate Pollution Reduction Grants (CPRG)

Generous CPRG grants are available to develop and implement plans for reducing greenhouse gas emissions, which providing Home Energy Audits in prep for widely-available building upgrades clearly qualifies.

<https://www.epa.gov/inflation-reduction-act/climate-pollution-reduction-grants>

The State of Kentucky declined to accept the \$3 planning grant, but the City of Louisville is taking up the slack for its area. To be considered for \$2 million - \$500 million implementation grants, an application would go through the City of Louisville Sustainability Office. For states and municipalities – Priority Climate Action Plans are due by March 1, 2024. Applications for the general implementation grants competition will likely be due on or around April 1, 2024.

EPA encourages applicants incorporate other level (state, local) grant programs and let CPRG be a jump-starter of something that can continue.

Kentucky entities should contact Louisville, Lexington, Bowling Green or Cincinnati to request being part of the planning process.

Funding for training of electricians, HVAC, construction workers, designers, programmers and other necessary workers is available

Opportunity: Reliability through Distributed Solar

Department of Energy (DOE) wants to address transmission infrastructure—close in transmission (ie distributed solar to the grid for stability and resilience of the entire grid)

When connected to the electric utility's lower voltage distribution lines, distributed generation can help support delivery of clean, reliable power to additional customers and reduce electricity losses along transmission and distribution lines.

Distributed solar and wind can also reduce the demand for new transmission lines.

In the IRA and other current initiatives, rooftop solar is highly encouraged, with 30% –70% funding for residential, commercial and non-profits.

Applicants are encouraged to propose single projects throughout the area, bring them into the grid and the planning. Funds are available for building and selling energy including staffing, with 40% loans forgiveness, up to 70%.

Solar for All

<https://www.epa.gov/greenhouse-gas-reduction-fund/solar-all>

"In addition to existing local and state incentives, the unprecedented Solar for All program is one example of how the Investing in America agenda is delivering for families across the country. Through Solar for All, the Greenhouse Gas Reduction Fund will transform the status quo, putting billions of dollars of solar panels on the homes of low-income families and closing the equity gap in access to solar energy."

Administration and coordination is being sought.

notes:

<https://www.epa.gov/energy/distributed-generation-electricity-and-its-environmental-impacts#impacts>

Talk to EPA's Carrie Jenks (2:30 in Monday EPA Funding Fair recording) (CPRG Developments & "Baseload resources")

Distributed Energy Resources \$27/MWH of \$50/MWH don't sunset for quite a while, ? maybe dependent on GHG reductions.

For help in avoiding stranded assets, contact the EPA directly. They will talk to you.

Also, see EPA's "Overview of Transferability for business that don't have tax liability."

Mitigation of distress from loss of coal employment resulting from retiring Coal Plants

Inflation Reduction Act Benefits: Billions In Just Transition Funding For Coal Communities (Forbes Magazine)

<https://www.forbes.com/sites/energyinnovation/2022/08/24/inflation-reduction-act-benefits-billions-in-just-transition-funding-for-coal-communities/?sh=4a4c48a36ebd>

Without mandating fossil fuel reductions or clean electricity targets, the IRA is largely an incentive bill. However, it goes beyond simply making wind, solar, and storage cheaper than gas and coal. By pairing clean energy tax credits with these refinancing programs to pay off remaining plant balances, we finally have a more level playing field for clean resources to compete, while also bringing new economic opportunities to fossil-dependent communities.

Repurposing retired coal and gas infrastructure with renewables in the same communities

This article includes patterns and best practice for repurposing existing coal plant infrastructure. It includes the cost of hiring and training persons from those same neighborhoods in the cost of building new renewable utility-scale wind and solar.

The conclusion, years in the making, is that here in Kentucky, it has become less expensive to build new utility-scale wind and solar than to continue to operate the existing facilities, not even considering benefits to climate and health.

Coal Cost Crossover 3.0 <https://energyinnovation.org/publication/the-coal-cost-crossover-3-0/>

https://rmi.org/wp-content/uploads/2018/09/RMI_Managing_the_Coal_Capital_Transition_2018.pdf

decision go reverse or power over financial incentives or benefits.
is not the result of a federal agency financial incentives or benefits.

Personal statement, M. Hettinger

Reviewing the Hazard PSC comment session online, I hear people's pain in the loss of traditional livelihoods around the coal industry. This is real.

I also applaud the bravery of the student who stood up for her generation's insight and need, recognizing the magnitude of facing down old habits and misunderstandings around our ability to do something about climate instability and wild weather. Her pain is also real.

On a personal level, we all want to keep our jobs, our children, our communities and our homes safe, predictable and nurturing. That goes for everyone whose job is upgraded by new goals and/or new technology.

Unstable climate, even if we address it now, is going to continue to cause disruption to all our lives, so I will do anything I can to help us find ways to cut the chase and make a difference. Right now we have unprecedented help from our own tax money in federal programs. *I say this for people*

From last week's EPA Funding Fair and other IRA materials, I am pretty sure that each and every application for funding requires attention to Environmental Justice for coal and brownfield communities and other communities impacted by industrial pollution. Each and every dollar awarded has a specific percentage allocated for these communities as well. So, on that level, the people in Hazard and other like them should find assistance from all of us. I hope it can make a difference.

For the question at hand, I have to weigh in on the pressing issue of Climate, with the challenge to end our addiction to fossil fuel and its insidious poison as quickly as possible, which means immediately. I can't say it strongly enough, and I'm not going to try here.

I have selected three areas of potential action to bring to your attention, newly obtained from the EPA in its role as lead agency in federal level implementation of incentives and programs, existing and new, presented in Aug 9-11 Climate Action Funding Fair. They are (1) Planned Reduction in Energy Demand through Electrification and Efficiency Upgrades, (2) Increased availability of Energy Audits, and (3) Increased reliability through Distributed Solar. If these are not included in current planning, they should be, and can all make significant financial difference to the industry and to the customer.

I very much affirm the current federal emphasis on Environmental Justice, and the fact that it is a major part of every one of the three opportunities above, and more.

In the Electrification and Energy Efficiency department, can we add to the GHG reductions the fact that so many people will have the opportunity to live in warmer, more comfortable homes and workplaces?

My husband and I support the retirement of the coal plants as requested by LGE & KU.

I believe the three opportunities provide a rationale for saying NO to new fossil fuel infrastructure, including natural gas, be it in Louisville, Mercer County, or my own backyard in Bullitt County.

Thank you for hearing our comments.

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