



Nuclear Energy Information Service

Illinois' Nuclear Power Watchdog since 1981

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29 November, 2014

Environmental Protection Agency
EPA Docket Center (EPA/DC)
Mailcode 28221T
Attention: Docket ID No. OAR-2013-0602
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Attention: Docket ID No. OAR-2013-0602

Greetings:

We provide comments here for the EPA's draft carbon rule, Docket ID No. OAR-2013-0602, which we ask be entered into the official record for this Docket.

Additionally, we attach petitions directed to the EPA pertaining to this Docket, and ask that they also be entered as part of our formal comments to this Docket.

Thank you for your consideration in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'David A. Kraft'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

David A. Kraft
Director

Cc: files
Encl: Comments
Petitions

In the Matter of)	
)	Docket EPA-HQ-OAR-2013-0602
Carbon Pollution Emission Guidelines)	RIN 2060-AR33
for Existing Stationary Sources:)	
Electric Utility Generating Units)	

COMMENTS ON Docket ID No. OAR-2013-0602
EPA DRAFT CARBON RULES
SUBMITTED BY
NUCLEAR ENERGY INFORMATION SERVICE, CHICAGO
NOVEMBER 29, 2014

COMMENT SUMMARY:

1. Retaining nuclear power as a BSER undermines the express purpose of the EPA’s Carbon Rule
2. Prioritization of BSERs to remove the most carbon at the least expense in the shortest time suggests that energy efficiency and renewable energy resources should be the preferred BSER method of removing carbon.
3. EPA’s goals both are an underestimate of what is possible to achieve; and vastly underestimate the potential contribution of energy efficiency and renewable energy resources.
4. Natural gas, specifically that coming from fracking, has too many downsides to be included as an effective BSER or “bridging fuel”
5. While limiting its Rule to stationary power plant sources, the EPA ignores significant other sources of added atmospheric carbon, such as tar sands. These should be revisited in their own Rule making docket at a future date.

RECOMMENDATIONS:

1. Remove nuclear power from the Carbon Rules.
2. Should nuclear power remain in the Rule, do not define it as a “clean” energy resource for any purpose; do not provide any subsidies for uneconomic or new nuclear plants; do not permit its use for carbon emissions trading purposes that result in keeping fossil fuel plants operating.
3. Give priority to use of renewable energy resources and energy efficiency for maximum carbon reduction. Place state compliance emphasis on the implementation of renewables and energy efficiency, the more the better
4. Abandon fracking gas as an acceptable BSER and “bridging fuel.”
5. Develop additional rules to cover non-powerplant sources of carbon and greenhouse gases

I. Introduction – A Transformational Moment in Energy Policy

Nuclear Energy Information Service (NEIS) is a 33-year old safe-energy, environmental organization based in Chicago, Illinois. We represent over 900 individual and organizational members. NEIS supports the establishment of EPA rules for the reduction of CO2 (and other greenhouse gases). We believe that the establishment of such rules provides what could be a *transformational* moment for U.S. energy policy if

the primary and preferred methods for implementing those reductions are the aggressive expansion of energy efficiency and renewable energy.

The implementation of the EPA Rule could be treated as just another “check box” exercise in incrementalized approaches for dealing with the climate problem; or, by contrast, it could be used as an opportunity to transition **irrevocably and completely away from fossil and nuclear fuels**. Such an energy future has been demonstrated repeatedly in the literature to be more than possible, cost effectively done, and on timelines compatible with the EPA’s proposed Rule. We sincerely hope that the EPA recognizes this, and does not squander a rare and critical opportunity.

That support aside, it is equally important for us to point out several weaknesses and significant omissions in the Draft Rule; as well as proposals with which we do not agree:

II. Critiques

A. Retaining nuclear power as a BSER undermines the express purpose of the EPA’s Carbon Rule.

DISCUSSION:

The stated purpose of the EPA’s Carbon Rule is, “...to **lower** the carbon intensity of power generation in the United States (U.S.). Lower carbon intensity means **fewer** emissions of CO2...” Paradoxically, retaining nuclear power as a BSER, especially the unwarranted and artificial subsidization of economically unviable reactors, undermines the express purpose of the EPA’s Carbon Rule.

1. Nuclear defeats the express purpose of the EPA Rule:

Inclusion of support mechanisms for nuclear power in the EPA Rule would have the effect of inhibiting the growth of both energy efficiency and renewable energy,[1] both far more effective per dollar spent at removing carbon from the atmosphere (see below). We have repeatedly seen this effect first hand in Illinois. The reality is that Exelon and other nuclear utilities are already using the cover of the EPA Carbon Rule to launch a well-funded and orchestrated campaign under the banner of “Nuclear Matters” that is designed to subsidize unprofitable nuclear reactors, diminish if not thwart the expansion of renewable energy, and maintain a “status quo” energy system. None of their goals will have the effect of “lowering carbon intensity of power generation.”

2. Nuclear power is not “clean,” and should not be defined as such for any purpose.

BSERs must also include analysis of **non**-air quality impacts. In the case of nuclear power, this would include the perpetually unresolved nuclear waste and uranium mine pollution and remediation issues.

A December, 1998 ruling by the Better Business Bureau’s National Advertising Division (BBB/NAD) [1] criticizes the Nuclear Energy Institute’s (NEI) ad claims of being a “clean” energy resource, by writing,

In advertising law, “...a claim that is technically truthful can still be misleading....while it may be true that nuclear power produces fewer greenhouse gases and other air pollution emissions than other forms of electricity generation, NAD concluded that it is inaccurate to make an unqualified claim that nuclear electricity does not ‘pollute the air.’” [p.21]....NAD was not persuaded by NEI’s arguments that,...nuclear power plants can make an unqualified claim that ‘nuclear energy generates electricity without polluting the water.’” [p.21.] [2]

Two hundred million tons of uranium mill tailings have yet to be properly disposed of. Over 10,000 abandoned uranium mines exist, which must be remediated. In November, 2014, the uranium hexafluoride manufacturing facility in Metropolis, Illinois, experienced a release of hazardous gases, some of which went

offsite. With continue nuclear operation, these and other examples will continue and escalate. This is **not** an environmentally friendly energy resource and the EPA Rule must take this into account.

Trading plutonium and other radioactive waste nuclides for carbon is poor energy policy and unnecessary. Because of the perpetually unresolved nuclear waste and uranium mine pollution and remediation issues, nuclear power should not be defined or referred to as “clean” energy.

3. Nuclear should not be permitted to sell carbon offsets or credits that would keep coal plants operating

The potential in some states for nuclear power operators to establish credits or offsets which could then be sold to utilities operating coal facilities defeats the very purpose of the EPA’s Rules, “...to lower the carbon intensity of power generation in the United States (U.S.). Lower carbon intensity means fewer emissions of CO2....” [3]

4. EPA makes additional unsupported assumptions that result in favoring nuclear reactors.

- EPA (and others) repeatedly assume that power deficits resulting from the elimination of fossil fuel plants must be made up by nuclear capacity. There is no basis for this assertion, since capacity can be made up by renewables (if they are permitted to be built and operated), and by reduced demand coming from energy efficiency. These options have not been sufficiently analysed.
- EPA assumes that new reactors will be licensed, and old ones relicensed. While the historical record seems to justify this optimism, some plants may not receive licenses or extensions for technical and economic reasons.

We would urge EPA to consider removing nuclear from its Draft Rules altogether. In the hard-copy packet of our submittal, we attach the signed petitions with the signatures of over 600 individuals who also support this recommendation.

RECOMMENDATION: Remove nuclear power from the Carbon Rule. Should nuclear power remain in the Rule, do not define it as a “clean” energy resource for any purpose; do not provide any subsidies for uneconomic or new nuclear plants; do not permit its use for carbon trading purposes that keep fossil fuel plants operating.

B. Prioritization of BSERs to remove the most carbon at the least expense in the shortest time suggests that energy efficiency and renewable energy resources should be the preferred BSER method of removing carbon.

DISCUSSION:

An effective and responsible carbon reduction plan would have as its overarching goal: 1.) the removal of the **most** carbon, 2.) at the **least** cost, 3.) in the **shortest** amount of time, 4.) **without creating** additional environment or social problems. The only BSER energy resources that meet this goal are energy efficiency and renewable energy resources. Consequently, if the EPA is serious about its carbon reduction goal, it should prioritize energy programs that promote energy efficiency and renewable energy resources. EE/RE should become its first and prioritized BSER.

We believe that states should not use dirty and dangerous energy sources like nuclear power (or natural gas, especially from fracking) to meet their targets, but instead rely on and prioritize use of energy efficiency and renewables. Further, most states will have limited resources with which to attain their carbon targets. It is therefore imperative that they get the most carbon removed for the resources spent.

Energy efficiency programs have the ability to remove 2-½ to 7 times the amount of carbon from the atmosphere (per dollar spent) as nuclear, and can do so in time frames ranging from 6 months to 4 years,

compared to 5 to 10 years for nuclear construction and licensing.[4] Both energy efficiency and renewables are experiencing growth in double digits, in contrast to stagnant to declining nuclear power. The recent drop in oil prices is making fracking less attractive and cost-competitive as a BSER.

Rather than wasting irreplaceable time and resources on rescuing less-desirable and environmentally problematic energy resources like nuclear power and natural (frack) gas, EPA should promulgate Rules that recognize that prioritizing use of energy efficiency and renewables is a preferable route to carbon reduction.

RECOMMENDATION: Give priority to use of renewable energy resources and energy efficiency for maximum carbon reduction. Guide state compliance mechanisms towards an emphasis on the implementation of renewables and energy efficiency, the more the better.

C. EPA's goals both are an underestimate of what is possible to achieve; and vastly underestimate the potential contribution of energy efficiency and renewable energy resources.

DISCUSSION:

In preparation of comments for this Rule, several major Illinois environmental organizations conducted an analysis that concluded if the State of Illinois did NOTHING other than what is already being done and what is currently planned in energy efficiency and renewable energy growth, Illinois would be able to meet its EPA target. They also observe what Illinois has the capacity to do much more than what is currently being planned.

As was recently demonstrated in a report by the Union of Concerned Scientists, *Strengthening the EPA's Clean Power Plan* (Oct. 14, 2014),[5] the contribution for CO2 reduction to be expected from renewable energy sources has been greatly underestimated by both EPA and the EIA. The UCS reports that, "increased renewable electricity growth could allow states to collectively cut heat-trapping carbon emissions from power plants 40 percent below 2005 levels by 2030 rather than the 30 percent reduction EPA included in its draft rule." We believe that the EPA needs to correct this underestimate in its Draft Rule, which would then either allow for greater expectation for CO2 reduction, a prioritization of renewable energy as a CO2 reduction source, or both.

RECOMMENDATION: Give priority to use of renewable energy resources and energy efficiency for maximum carbon reduction. Place state compliance emphasis on the implementation of renewables and energy efficiency, the more the better.

D. Natural gas, specifically that coming from fracking, has too many downsides to be included as an effective BSER or "bridging fuel".

DISCUSSION:

A recent study published in Nature Magazine, *Limited impact on decadal-scale climate change from increased use of natural gas* (Oct. 15, 2014),[6] indicates that gas from fracking will not contribute in a meaningful way to reduction of greenhouse gases, and in some analyses, may actually unintentionally add to the carbon inventory. Thus, it cannot be seen as a "bridging" fuel. But, because in most markets natural gas *will* inhibit the needed growth in renewable energy choices, gas represents an inhibitor of a preferable and necessary energy choice to meet the EPA's stated goal of "...fewer emissions of CO2...."

RECOMMENDATION: Abandon fracking gas as an acceptable BSER and "bridging fuel."

E. While limiting its Rule to stationary power plant sources, the EPA ignores significant other sources of added atmospheric carbon, such as tar sands. These should be revisited in their own Rule making docket at a future date.

DISCUSSION:

While this Rule is a commendable start at dealing with the looming climate crisis, it illustrates the important difference between what's "necessary" vs. what's "sufficient." In the future methane sources will likely become more important; as could other non-CO2 sources, such as nitrous oxides.

RECOMMENDATION: *Initiate future Rules for all carbon sources, and for other greenhouse gases.*

SOURCES

[1] http://www.ucsusa.org/clean_energy/smart-energy-solutions/increase-renewables/barriers-to-renewable-energy.html#2.

[2] Better Business Bureau, National Advertising Division Ruling, December, 1998. Contact the Council of Better Business Bureaus, (212)754-1320.

[3] Such language appears in an Illinois Legislature Resolution, HR1146, which passed in May of 2014. Available at NEIS website: <http://neis.org/wp-content/uploads/Exelon-legislation-5-23-14-09800HR1146lv-resolution.pdf>

[4] Lovins, Amory B., Sheikh, Imran, The Nuclear Illusion, 27 May 2008, pp. 13, 16, 18, available at [http://www.rmi.org/cms/Download.aspx?id=5039&file=E08-1_NuclearIllusion+\(1\).pdf&title=The+Nuclear+Illusion](http://www.rmi.org/cms/Download.aspx?id=5039&file=E08-1_NuclearIllusion+(1).pdf&title=The+Nuclear+Illusion)

[5] Strengthening the EPA's Clean Power Plan (Oct. 14, 2014), available at <http://www.ucsusa.org/sites/default/files/attach/2014/10/Strengthening-the-EPA-Clean-Power-Plan.pdf>.

[6] Nature, *Limited impact on decadal-scale climate change from increased use of natural gas* (Oct. 15, 2014), abstract available at <http://www.nature.com/nature/journal/v514/n7523/full/nature13837.html>.