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August 8, 2023

U.S. Environmental Protection Agency  
EPA Docket Center  
Docket ID No. EPA-HQ-OAR-2023-0072  
Mail Code 28221T  
1200 Pennsylvania Avenue NW  
Washington, DC 20460 (submitted via regulations.gov)

**Re: New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule (88 FR 33240; 05/23/2023).**

Dear Administrator Regan:

The Connecticut Department of Energy and Environmental Protection (DEEP) submits these comments on the U.S. Environmental Protection Agency's (EPA) proposal (the Proposal) to modify standards of performance for greenhouse gas (GHG) emissions from new and existing fossil fuel-fired electric generating units (EGUs) and repeal the Affordable Clean Energy Rule (ACE). DEEP is tasked with conserving, improving, and protecting Connecticut's natural resources and the environment, as well as increasing the availability of cleaner, more affordable, and more reliable energy. We offer these comments from our experience, as an integrated agency with responsibilities developing and implementing both energy and environmental policy in Connecticut.

DEEP supports EPA's efforts to address GHG emissions from EGUs and recommends that EPA finalize regulations that establish aggressive and stringent standards for the nation that will advance our efforts to achieve clean air, address climate change, and protect the public health of our citizens. This proposal comes at a critical time where many states, including Connecticut, are experiencing the devastating impacts of climate change including extreme heat, dangerous flooding and alarmingly high levels of fine particulate matter pollution caused by ongoing wildfires.

#### *Recommendations for Final Rule*

While we are generally supportive of the proposed rule, we have several suggestions outlined in brief here for EPA's consideration in the final rule:

- ***EPA should provide for an alternative Best System of Emission Reduction (BSER)***  
EPA should provide alternative options for determining an alternative BSER recognizing that many states have unique conditions, limitations or constraints that impact the implementation of certain options such as clean hydrogen or carbon capture and sequestration. Some states, for example, have geologic limitations or other constraints, such as ozone nonattainment status, that may impede implementation of certain options. Therefore, providing alternative options is necessary.
- ***EPA should specifically allow trading and averaging under the emission guidelines.***  
DEEP recommends that EPA allow states to use emissions trading and/or averaging in state plans to achieve the standards of performance applicable to subject EGUs. EPA and the states have shared the experience of achieving significant, cost-effective emissions reductions through emissions trading programs. Examples of these programs include:
  - *EPA's Good Neighbor (GN) Plan.* The 2027 GN power plant emissions budget reflects a 50% reduction in ozone season NOx emissions from 2021 levels.<sup>1</sup>
  - *The Regional Greenhouse Gas Initiative (RGGI).* Between 2008 and 2021, RGGI significantly reduced CO<sub>2</sub> emissions from fossil fuel-fired EGUs with a capacity of 25 MW and greater through a CO<sub>2</sub> budget trading program.
  - *The Acid Rain Program.* The Acid Rain Program along with more recent power sector cap and trade programs, has helped to deliver annual sulfur dioxide reductions of over 93% and annual NOx emissions reductions of over 87%.
- ***EPA should expand the applicability thresholds for the gas-fired combustion turbines to achieve greater overall GHG reductions.*** Only about one-quarter of existing gas-fired units are included in the Proposal. Decreasing the applicability threshold to a level less than 300 MW and decreasing the capacity factor to a level below 50% will increase the covered generation.
- ***EPA should include procedures and definitions to ensure that hydrogen used for compliance is truly low-GHG hydrogen.*** EPA should finalize a definition of low GHG-hydrogen including a process for verification.
- ***EPA should provide states flexibility in the timing for developing state plans and enforceable mechanisms to comply with the Proposal.*** EPA should allow for timeframes longer than 24 months for states that demonstrate that more time is necessary to complete the process of meaningful engagement, to adopt a regulation or to obtain necessary legislative authority before a state plan may be finalized.

These recommendations are explained in more detail in an attachment to this letter.

### *Background on Climate Change Impacts in Connecticut*

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<sup>1</sup> EPA. (2023, March). EPA's "good neighbor" plan cuts Ozone Pollution -- Overview Fact Sheet. [https://www.epa.gov/system/files/documents/2023-03/Final%20Good%20Neighbor%20Rule%20Fact%20Sheet\\_0.pdf](https://www.epa.gov/system/files/documents/2023-03/Final%20Good%20Neighbor%20Rule%20Fact%20Sheet_0.pdf)

There is no doubt that GHG emissions must be significantly reduced to limit the environmental, economic, and public health impacts of climate change in our state, our country, and our world. According to the Climate Change and Health in Connecticut 2020 Report developed by the Yale Center on Climate Change and Health, Connecticut has already experienced significant negative consequences of climate change. In the absence of swift and decisive action, these consequences would likely become more severe.

Between 1895 and 2019, the average annual temperature in Connecticut has increased by 3.0-3.5°F.<sup>2</sup> The number of annual frost days in Connecticut has decreased since 1950, which can lead to an increase in the population size of agricultural pests, allergens such as pollen, and disease vectors such as ticks and mosquitos.<sup>3</sup> In fact, 10 mosquito species which carry viruses transmissible to humans increased in abundance in Connecticut during 2001-2019.<sup>4</sup> As ocean temperatures have risen, Connecticut residents have also seen an increase in the number of foodborne *Vibrio* infections due to contamination of seafood, as the *Vibrio* bacterium thrives in warm waters.<sup>5</sup>

Connecticut has been burdened by other public health and economic impacts due to an increase in heavy rainfall events, which can lead to flooding, causing damage to infrastructure and contamination of surface and drinking water.<sup>6</sup> This summer has been a clear illustration of this change as Connecticut has faced weeks of heavy rainfall, severe thunderstorms, and flooding in parts of the state, causing road closures, limitations to travel, property damage due to falling trees, and damage to agricultural land due to flooding.<sup>7</sup> Furthermore, superstorms are not unfamiliar to Connecticut residents. Superstorm Sandy hit Connecticut in October 2012, damaging approximately 3,000 homes<sup>8</sup> and causing over 600,000 to lose power.<sup>9</sup> Recovery from this superstorm cost the state of Connecticut over \$145 million in housing costs not covered by private insurance.<sup>10</sup> Estimates place the total cost of the storm at over \$360 million.<sup>11</sup> In August of 2020, Connecticut was hit by Tropical Storm Isaias, causing over 750,000 power

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<sup>2</sup> Bozzi, L. and Dubrow R. (2020). Climate Change and Health in Connecticut: 2020 Report. New Haven, Connecticut, Yale Center on Climate Change and Health. [https://ysph.yale.edu/yale-center-on-climate-change-and-health/yccch\\_cchc2020report\\_395366\\_5\\_v1.pdf](https://ysph.yale.edu/yale-center-on-climate-change-and-health/yccch_cchc2020report_395366_5_v1.pdf)

<sup>3</sup> *Id.* at 1

<sup>4</sup> *Id.* at 1

<sup>5</sup> *Id.* at 1

<sup>6</sup> *Id.* at 1

<sup>7</sup> Bravo, J. (2023, July 17). *Heavy rain brings more flooding, microburst knocks down trees in CT*. CT Insider. [https://owl.purdue.edu/owl/research\\_and\\_citation/apa\\_style/apa\\_formatting\\_and\\_style\\_guide/general\\_format.html](https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html)

<sup>8</sup> Blake, E.S., Kimberlain, T.B., Berg, R.J., Cangialosi, J.P., and Beven, J.L. (2013, February 12). *Tropical Cyclone Report: Hurricane Sandy*. NOAA. [https://www.nhc.noaa.gov/data/tcr/AL182012\\_Sandy.pdf](https://www.nhc.noaa.gov/data/tcr/AL182012_Sandy.pdf)

<sup>9</sup> Lund, K. (2022, November 7). *Ten Year Anniversary of Super Storm Sandy*. University of Connecticut. <https://circa.uconn.edu/2022/11/07/ten-year-anniversary-of-super-storm-sandy/>

<sup>10</sup> Connecticut State Department of Housing (2022, December 31). *Sandy Recovery Spending Dashboard*. <https://portal.ct.gov/DOH/DOH/Sandy-Pages/Homepage-Grid/Spending-Dashboard>

<sup>11</sup> *Id.* at 8.

outages statewide, some of which lasted for up to a week.<sup>12</sup> Repairing the damage from this storm cost over \$295 million.<sup>13</sup>

Although rainfall has increased in Connecticut, the state has also experienced drought, with a 46-week dry spell occurring in 2016 and 2017.<sup>14</sup> Coastal Connecticut has experienced an increase in the number of days of high tide flooding, which is particularly damaging to this well-developed part of the state.<sup>15</sup> If this coastal flooding continues, it may force Connecticut residents to abandon their homes and move. Under a “business as usual” scenario of GHG emissions, it is expected that average annual temperatures in Connecticut will increase ~5°F above 1970-1999 levels by midcentury,<sup>16</sup> exacerbating all the consequences listed above. This makes mitigation of the effects of climate change one of Connecticut’s highest priorities.

### *Action in Connecticut to Reduce GHG Emissions*

As a leadership state, Connecticut has already taken strong action to reduce GHG emissions, and one of our central strategies has been to target emissions from the electric sector. In 1998, Connecticut set a target to reduce GHG emissions by 80% below 2001 levels by 2050.<sup>17</sup> Connecticut has already made significant progress toward this goal. One of the main mechanisms for this achievement has been participation in the Regional Greenhouse Gas Initiative (RGGI), of which Connecticut is a founding member. RGGI aims to reduce carbon dioxide (CO<sub>2</sub>) emissions from fossil fuel fired EGUs with a capacity of 25 megawatts (MW) or greater through a CO<sub>2</sub> budget trading program. Between 2008 and 2021, the nine founding states of RGGI—Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New York, Rhode Island, and Vermont—have reduced CO<sub>2</sub> emissions from power plants by nearly 50% while increasing economic growth per capita by 50%.<sup>18</sup> Connecticut has been able to invest

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<sup>12</sup> Lamont, N. (2021, January 13). *Governor Lamont Announces Approval of Major Disaster Declaration for Tropical Storm Isaias*. The Office of Governor Ned Lamont. <https://portal.ct.gov/Office-of-the-Governor/News/Press-Releases/2021/01-2021/Governor-Lamont-Announces-Approval-of-Major-Disaster-Declaration-for-Tropical-Storm-Isaias>

<sup>13</sup> Gillett, M.P., Betkosi, J.W., and Caron, M.A. (2022, August 31). PURA Investigation into Distribution System Planning of the Electric Distribution Companies—Resilience and Reliability Standards and Programs. State of Connecticut Public Utilities Regulatory Authority. [https://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/4bcecc163d47d814852588af005bca09/\\$FILE/171203RE08-083122.pdf](https://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/4bcecc163d47d814852588af005bca09/$FILE/171203RE08-083122.pdf)

<sup>14</sup> *Id.* at 1

<sup>15</sup> *Id.* at 1

<sup>16</sup> Seth A, Wang G, Kirchoff C, Lombardo K, Stephenson S, Anyah R, et al. Connecticut Physical Climate Science Assessment Report (PCSAR): Observed Trends and Projections of Temperature and Precipitation. Connecticut Institute for Resilience and Climate Adaptation; 2019. <https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/08/CTPCSAR-Aug2019.pdf>

<sup>17</sup> Public Act 08-98. AN ACT CONCERNING CONNECTICUT GLOBAL WARMING SOLUTIONS. Effective October 1, 2008.

<sup>18</sup> Butterworth, B., Tamayo, P.A., and Boyd, A. (2023). Regional Greenhouse Gas Initiative Findings and Recommendations for the Third Program Review. Acadia Center. [https://acadiacenter.wpenginpowered.com/wp-content/uploads/2023/04/AC\\_RGGI\\_2023\\_Layout\\_R6.pdf](https://acadiacenter.wpenginpowered.com/wp-content/uploads/2023/04/AC_RGGI_2023_Layout_R6.pdf)

over \$210 million in energy efficiency programs and renewable energy technologies using RGGI auction proceeds, further avoiding emissions in our state.<sup>19</sup>

Connecticut's Renewable Portfolio Standard (RPS) has steadily increased the amount of renewable energy generated in our state. In 2018, Connecticut set a target for 40% of our energy to be generated by renewable sources by 2030.<sup>20</sup> Furthermore, Connecticut set a goal in 2022 for all electricity supplied in the state to come from zero GHG-emitting sources by 2040.<sup>21</sup> Since 2011, DEEP has conducted nine procurements for grid-scale renewable resources, and it is currently in the process of procuring additional solar, land-based wind, offshore wind, and other renewable resource projects.<sup>22</sup> For instance, Connecticut has procured a total of 1,158 MW of offshore wind power. In addition, projects like the Innovative Energy Solutions Program,<sup>23</sup> the Energy Storage Solutions Program,<sup>24</sup> and solar incentive programs,<sup>25,26</sup> are all furthering Connecticut's progress towards achieving our clean energy target. These actions are necessary to reduce GHG emissions from electricity generation, and such actions are important to Connecticut's progress on decarbonizing the buildings and transportation sectors.<sup>27</sup>

Connecticut has already made significant progress in the deployment of electric vehicles through incentives<sup>28</sup> and the installation of charging infrastructure.<sup>29</sup> Additionally, every four years, DEEP prepares a Comprehensive Energy Strategy (CES), which examines future energy needs and provides recommendations for actions to address those needs.<sup>30</sup> In the upcoming CES, DEEP has committed to addressing building decarbonization and updating the Integrated Resources Plan for the electric sector and the Electric Vehicle Roadmap for the transportation

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<sup>19</sup> The Investment of RGGI Proceeds in 2020. May 2022.

[https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI\\_Proceeds\\_Report\\_2020.pdf](https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2020.pdf)

<sup>20</sup> Public Act 18-50. AN ACT CONCERNING CONNECTICUT'S ENERGY FUTURE. Effective May 24, 2018.

<sup>21</sup> Public Act 22-5. AN ACT CONCERNING CLIMATE CHANGE MITIGATION. Effective July 1, 2022.

<sup>22</sup> 2022 Clean & Renewable Energy Report. February 22, 2023. <https://portal.ct.gov/-/media/PURA/2022-Clean--Renewable-Energy-Report.pdf>

<sup>23</sup> PURA. (2023). *Innovative Energy Solutions Program*. State of Connecticut Public Utilities Regulatory Authority. <https://portal.ct.gov/PURA/Electric/Office-of-Technical-and-Regulatory-Analysis/Clean-Energy-Programs/Innovative-Energy-Solutions-Program>

<sup>24</sup> PURA. (2022). *Energy Storage Solutions*. State of Connecticut Public Utilities Regulatory Authority. <https://portal.ct.gov/pura/electric/office-of-technical-and-regulatory-analysis/clean-energy-programs/energy-storage-solutions-program>

<sup>25</sup> PURA. (2023). *Residential Renewable Energy Solutions Program*. State of Connecticut Public Utilities Regulatory Authority. <https://portal.ct.gov/pura/electric/office-of-technical-and-regulatory-analysis/clean-energy-programs/residential-renewable-energy-solutions-program>

<sup>26</sup> PURA. (2023). *Non-Residential Renewable Energy Solutions Program*. State of Connecticut Public Utilities Regulatory Authority. <https://portal.ct.gov/pura/electric/office-of-technical-and-regulatory-analysis/clean-energy-programs/non-residential-renewable-energy-solutions-program>

<sup>27</sup> Integrated Resources Plan, October 2021. <https://portal.ct.gov/-/media/DEEP/energy/IRP/2020-IRP/2020-Connecticut-Integrated-Resources-Plan-10-7-2021.pdf>

<sup>28</sup> DEEP. (2023). *CHEAPR*. Connecticut Department of Energy and Environmental Protection. <https://portal.ct.gov/DEEP/Air/Mobile-Sources/CHEAPR/CHEAPR---Home>

<sup>29</sup> PURA. (2023). *Electric Vehicle Charging Program*. State of Connecticut Public Utilities Regulatory Authority. <https://portal.ct.gov/pura/electric/office-of-technical-and-regulatory-analysis/clean-energy-programs/electric-vehicle-charging-program>

<sup>30</sup> DEEP. (2022). *Comprehensive Energy Strategy (CES)*. Connecticut Department of Energy and Environmental Protection. <https://portal.ct.gov/DEEP/Energy/Comprehensive-Energy-Plan/Comprehensive-Energy-Strategy>

sector.<sup>31</sup> The success of decarbonization relies on a clean energy grid, so GHG emissions from electricity generation must be mitigated.

Connecticut and other leadership states are taking decisive action to significantly reduce GHG emissions across all sectors by deploying ever increasing amounts of renewable energy, energy storage, and energy efficiency in our electric power sector. Nonetheless, intense national and global action is yet required to protect Connecticut residents from the worst impacts of climate change.

EPA's Proposal is a good starting point and is clearly informed by the various challenges to past attempts to regulate GHG emissions from the EGU sector. However, as noted, we have concerns with the proposed BSER and other aspects of the Proposal. We offer more detailed suggestions on those topics in the Attachment that follows here, with the goal of strengthening the Proposal to help it fulfill its goals.

Sincerely,



Katie S. Dykes  
Commissioner

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<sup>31</sup> DEEP. (2022, January 6). *DEEP Launches 2022 Comprehensive Energy Strategy Scoping Process*. Connecticut Department of Energy and Environmental Protection. <https://portal.ct.gov/DEEP/News-Releases/News-Releases---2022/DEEP-Launches-2022-Comprehensive-Energy-Strategy-Scoping-Process>

## ATTACHMENT

### CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION WRITTEN COMMENTS ON THE PROPOSAL ADDRESSING GREENHOUSE GAS STANDARDS OF PERFORMANCE FROM NEW OR EXISTING FOSSIL FUEL-FIRED EGUS AND REPEAL OF ACE RULE.

DEEP submits the following recommendations for EPA's consideration. (Proposal page numbers associated with EPA's requests for comment are included if applicable.)

**EPA should provide an alternative BSER for affected EGUs in areas with geologic limitations or other constraints, such as ozone nonattainment status, that could impede implementation of low-GHG hydrogen and carbon capture and sequestration/storage (CCS) BSER (pages 33361 and 33369-33370).**

While DEEP supports GHG standards for new and existing fossil fuel-fired EGUs, DEEP has concerns that the proposed BSER for affected EGUs may be unavailable in some parts of the country. According to the U.S. DOE NETL's *Carbon Storage Atlas* as cited in the [Greenhouse Gas Mitigation Measures for Steam Generating Units TSD](#), a number of states, including all of New England, have either not been assessed as to geologic sequestration potential/distance from areas with potential, or have been assessed to have minimal CO<sub>2</sub> storage resources with >100 km distance to the closest sequestration resource. This information suggests that any CCS activities in these states may be more costly and challenging to implement than in states with or close to geologic sequestration potential.

Furthermore, the alternative to CCS, low-GHG hydrogen, may exacerbate long-standing ozone nonattainment in Connecticut and other states struggling with ozone attainment. In terms of the proposed low-GHG hydrogen co-firing BSER, on page 33306 of the preamble, EPA discusses hydrogen's known reduction potential of the hydroxyl radical and how that will lead to increased lifetimes of atmospheric gases such as methane and tropospheric ozone. Additionally, according to EPA's [Hydrogen in Combustion Turbine EGU TSD](#), the flame speed and flame temperature of hydrogen can lead to formation of greater volumes of NO<sub>x</sub> when hydrogen blends are burned in gas turbines. NO<sub>x</sub> is a known precursor of tropospheric ozone, and NO<sub>x</sub> generated in upwind states has been proven to exacerbate ozone nonattainment in downwind states. It is important that the benefits of low-GHG hydrogen as part of the BSER pathway outweigh negative effects in the future. As Connecticut experiences some of the highest tropospheric ozone levels in the country, achieving reductions of NO<sub>x</sub> emissions remains a central goal across all emission reduction strategies. Connecticut continues to identify options to reduce ozone precursors to satisfy reasonably available control technology requirements, control measure and contingency measure obligations under the Clean Air Act.

There is also the need to consider and mitigate stressors affecting environmental justice communities where fossil fuel-fired EGUs are located. Facility retrofits and infrastructure projects, like new pipeline construction or reconfiguration of current pipelines to deploy CCS and low-GHG hydrogen, could bring additional health and safety concerns for already

overburdened communities. Many jurisdictions, including Connecticut<sup>32</sup> have or are developing environmental justice laws to protect these communities from activities that causes these communities to bear disparate environmental impacts.

Taking all of these concerns into account, EPA should provide an alternative BSER that considers geographic areas with constraints that inhibit the feasibility of implementation of the proposed BSER. The alternative BSER should include heat rate improvements (HRI) and any other relevant considerations to establish an aggressive standard of performance for subject EGUs that respects the concerns raised above.

**EPA should specifically allow trading and averaging under the emission guidelines (pages 33340-33341, 33393-33395). State plans should allow for banking and interstate trading (page 33396 of the proposal).**

Following up on DEEP's suggestion of an alternative BSER, DEEP recommends that EPA allow states to use emissions trading and/or averaging in state plans to achieve the standards of performance applicable to subject EGUs. Such plans should allow for banking of emissions reductions with reasonable restrictions such as periodic recalibration of banked reductions. For example, subject EGUs could comply via a mass-based trading program that employs a dynamic budgeting process, like that finalized in the 2015 ozone National Ambient Air Quality Standard (NAAQS) Good Neighbor Plan (GN Plan). As EPA explains in the Proposal, a dynamic budgeting process would provide for regular updates to account for unit retirements and changes in utilization. The budget would be derived from unit-specific standards of performance multiplied by recent affected EGU generation.

EPA and the states have shared the experience of achieving significant, cost-effective emissions reductions through emissions trading programs:

1. Under EPA's GN Plan, the 2027 power plant emissions budget reflects a 50% reduction in ozone season NO<sub>x</sub> emissions from 2021 levels<sup>33</sup>.
2. Between 2008 and 2021, RGGI significantly reduced CO<sub>2</sub> emissions from fossil fuel-fired EGUs with a capacity of 25 MW and greater through a CO<sub>2</sub> budget trading program.
3. The Acid Rain Program, together with more recent power sector cap and trade programs, has helped to deliver annual sulfur dioxide reductions of over 93% and annual NO<sub>x</sub> emissions reductions of over 87%.

**EPA should include the proposed definition of low-GHG hydrogen in the final rule (page 33304, 33310, 33311 and 33316).**

The low GHG-hydrogen definition that EPA included in the proposal specifies an amount of CO<sub>2</sub> equivalent emissions generated (0.45 kilograms of CO<sub>2</sub> equivalent overall emissions per kilogram of hydrogen) that is consistent with hydrogen production by electrolysis. If a specific

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<sup>32</sup> PA 23-202. AN ACT CONCERNING THE ENVIRONMENTAL JUSTICE PROGRAM OF THE DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION.

<sup>33</sup> EPA. (2023, March). EPA's "good neighbor" plan cuts Ozone Pollution -- Overview Fact Sheet. [https://www.epa.gov/system/files/documents/2023-03/Final%20Good%20Neighbor%20Rule%20Fact%20Sheet\\_0.pdf](https://www.epa.gov/system/files/documents/2023-03/Final%20Good%20Neighbor%20Rule%20Fact%20Sheet_0.pdf)



definition of low-GHG hydrogen is not included, there could be an unintended consequence of generating more CO<sub>2</sub> emissions compared with traditional fossil fuel burning. For example, according to EPA's [Hydrogen in Combustion Turbine EGU TSD](#), published May 23, 2023, from an overall GHG emissions perspective, the use of hydrogen from Steam Methane Reforming (SMR) would increase emissions compared to using the natural gas directly in a combustion turbine to produce electricity because the thermal efficiency of SMR of natural gas is generally 80% or less, so less overall energy is in the produced hydrogen than in the natural gas required to produce the hydrogen. Therefore, EPA should finalize the proposed definition for low-GHG hydrogen.

**Affected EGUs should be required to make fully transparent their sources of low-GHG hydrogen and the corresponding quantities procured. EPA should closely follow Treasury protocols in determining how affected EGUs demonstrate compliance with the low GHG hydrogen fuel characteristics (page 33328).**

Along with finalizing the proposed definition for low-GHG hydrogen, EPA should require affected EGUs to make fully transparent their sources of low-GHG hydrogen and the corresponding quantities procured to avoid use of hydrogen that is not low-GHG. As suggested in the previous comment, the use of hydrogen that does not meet the definition of low-GHG works at cross purposes to reducing energy use and corresponding emissions. Therefore, measures are necessary to ensure that low-GHG hydrogen is indeed being used as claimed. Also, even though Treasury's Internal Revenue Code (IRC) 45V tax credit for low-GHG hydrogen expires in 2032 and addresses hydrogen production instead of hydrogen use, EPA should adopt in whole or in part Treasury's eligibility, monitoring, verification, and reporting protocols associated with IRC section 45V(b)(2)(D) when finalized for the production of low-GHG hydrogen, and apply those protocols, as applicable, to requirements the EPA establishes for the demonstration by affected EGUs that they are using low-GHG hydrogen. Such protocols would provide clarity and certainty for the regulated community. EPA mentioned several methods and documentation that could be used for affected EGUs to demonstrate compliance with the low-GHG hydrogen requirement, such as proof of production pathway, overall emissions calculations or modeling results and input, purchasing agreements, contracts, and energy attribute certificates; DEEP supports those options.

**EPA should add specific procedures for apportioning emissions from EGUs using a common stack and/or the Administrator should be able to approve site-specific alternate procedures (page 33334).**

It would be helpful and clearer for EPA to add specific procedures for apportioning emissions for EGUs using a common stack. If EPA would prefer not to add specific procedures, it would be useful for the Administrator to be able to approve site-specific alternate procedures. Site-specific alternate procedures may include issues beyond common stacks, so that option may be preferable to simply adding specific procedures for apportioning emissions for EGUs using a common stack.

**EPA should finalize the proposed subcategorizations for fossil fuel-fired steam generating units in Table 5 of the proposal for compliance flexibility purposes (pages 33359 - 33360).**

DEEP supports EPA's proposed subcategorizations for existing fossil fuel-fired steam generating units in Table 5 of the proposal. The subcategorization appears to provide a reasonable level of compliance flexibility for affected EGUs.

**EPA should retain the proposed imminent-term subcategory for existing fossil fuel-fired steam generating units (page 33344 and 33359).**

EPA asks if the proposed imminent-term subcategory, which includes coal-fired steam generating units that commit to permanently cease operations prior to January 1, 2032, should be removed due to the proposed near-term subcategory, which includes coal-fired steam generating units that commit to permanently cease operations prior to January 1, 2035. Given the transported emissions impact of coal-fired steam generating units<sup>34</sup>, the 2008 ozone NAAQS extreme nonattainment area attainment deadline of July 2032, and the 2015 ozone NAAQS severe nonattainment area attainment deadline of August 2033, affected EGU enforceable commitments to permanently cease operations prior to 2032 are important, and the proposed imminent-term subcategory for existing fossil fuel-fired steam generating units should be retained.

**EPA should, at a minimum, provide guidance on approvability requirements for meaningful engagement specific to the emissions guidelines (pages 33399-33400).**

Many states have expressed concerns about what is required for engagement to be considered meaningful, as well as concerns about the level of resources needed to conduct the meaningful engagement. States or even different EPA regions could have varying opinions about what constitutes meaningful engagement. Therefore, it is important for EPA to provide consistent guidance or another mechanism to establish minimum approvability requirements for meaningful engagement, so that states are on a level playing field and can plan for resource needs.

**EPA should reduce the applicability thresholds for the first segment of existing combustion turbines from 300 MW to 200 MW or 100 MW and from a 50% capacity factor to a 40% capacity factor, but only if EPA provides an alternative BSER such as interstate trading (pages 33361-33362, 33367, and 33369).**

On page 33367 of the proposal, EPA said it believes that it is possible that the industry has the capability to build CCS for existing 100 MW or 200 MW combustion turbines with a 40% capacity factor, but EPA believes it is important to collect information on how quickly the technology could be deployed. According to Table 6 on page 33363 of the proposal, a little less than one-quarter of natural gas combined cycle generation (NGCC) operates at the 300 MW, >50% capacity factor thresholds. Moving the applicability threshold to 200 MW or 100 MW increases the covered generation to about one-half or three-quarters, respectively. To alleviate EPA's concern about technology deployment capability yet still address the majority of NGCC generation, EPA should provide an alternative BSER, such as a RGGI-like interstate trading program, as recommended in the first and second comments.

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<sup>34</sup> The U.S. Energy Information Administration estimates (as of October 2022) that in 2021, CO<sub>2</sub> emissions from burning coal for energy accounted for about 20% of total U.S. energy-related CO<sub>2</sub> emissions and for nearly 60% of total CO<sub>2</sub> emissions from the [electric power sector](#). ([Coal and the environment - U.S. Energy Information Administration \(EIA\)](#)).

**If EPA changes the applicability threshold for existing combustion turbines to <300 MW and >50% capacity factor, EPA should consider HRI as BSER (or a component of BSER) for combined cycle units (page 33363).**

The EPA is taking comment on whether HRI should be considered BSER (or a component of BSER) for NGCC units with a capacity factor of greater than 50 percent and a capacity of less than 300 MW. DEEP recommends that if EPA changes the applicability threshold for existing combustion turbines to <300 MW and a >50% capacity factor, EPA should consider HRI as BSER (or a component of BSER) for NGCC units.

**If EPA finalizes the proposed BSER, EPA should not move up the timing for the 30% low-GHG hydrogen co-firing BSER before 2032 or the 96% low-GHG hydrogen co-firing BSER prior to 2038 (pages 33369-33370).**

DEEP does not support accelerating the timing of the BSER phases recognizing that infrastructure and technology development associated low GHG hydrogen co-firing may need the timeframes proposed for development.

**EPA should allow 36 months instead of the proposed 24 months for submitting a state plan (pages 33372, and 33402-33403).**

If a state must adopt regulations to implement new programs, it takes many states, including Connecticut, at least one year to complete the process. With the proposed meaningful engagement requirements, the already lengthy regulatory process will be extended further. Additional time needs to be added to the process given the complicated and controversial nature of the infrastructure associated with the proposed BSER. Finally, some states, including Connecticut, may need to establish the legal authority to regulate GHG from EGUs, which would delay the state's ability to begin the regulatory adoption process and finalize a state plan. For all of these reasons, EPA should allow 36 months instead of the proposed 24 months for states to submit state plans to EPA. DEEP also urges EPA to finalize the emissions guidelines as soon as possible so that states can move forward expeditiously on needed regulatory changes.

**EPA should require that once an affected existing combustion turbine EGU has exceeded the 50 percent annual capacity factor threshold and triggered application of its standard of performance for a given compliance period, that EGU must continue to meet its standard in subsequent compliance periods (page 33380).**

Affected EGUs should not be allowed to switch back and forth between having to comply with the performance standard and not having to comply with the performance standard based on exceeding or not exceeding the capacity factor threshold in a given compliance period due to likely difficulties with tracking and enforcement. However, the wording in the preamble sends mixed messages in that it suggests that EPA may be referring to an affected EGU making an enforceable commitment in the state plan to not exceed the proposed 50% capacity factor threshold in 2032 and beyond. Such an enforceable commitment should be allowed, but the preamble also says that "The EPA is proposing that States may structure the requirements for affected combustion turbine EGUs in their State plans so that the applicable standard of performance must be met for years in which the unit operates above the 50 percent annual capacity factor threshold." If that language means that the affected combustion turbine EGU can

switch back and forth in compliance status based on changes in capacity factor thresholds, that should not be allowed.

**EPA should finalize the proposed legally enforceable milestone state plan requirements for imminent-term, near-term, and medium-term subcategory coal-fired steam generating units, including the 6-month reporting milestone after the federally enforceable closure date for affected EGUs that have elected to commit to cease operations (Final Milestone Status Report) (page 33390).**

For states such as Connecticut that are heavily impacted by transported emissions from coal-fired power plants, it is imperative that affected EGU compliance commitments are set out in the state plan and that documentation associated with completion of the compliance commitments is provided in a timely manner. Otherwise, it is difficult to verify the status of compliance measures, including unit retirements.