Exhibit C

Rev 5-29-23

Proposed GHG Section 111 Rules
Specific areas for which EPA is soliciting comment

No.	Comment Topic	Page Number
1.	The EPA is proposing emission guidelines for GHG emissions from the largest, most frequently operated existing stationary combustion turbines and is soliciting comment on approaches for emission guidelines for GHG emissions for the remainder of the existing combustion turbine category.	1, 2
2.	The EPA is soliciting comment on how the Agency should approach its legal obligation to establish emission guidelines for the remaining existing fossil fuel-fired combustion turbines not covered by this proposal, including smaller frequently used, and less frequently used, combustion turbines.	13
3.	As noted above, these actions include . . . solicitation for comment on potential BSER options and emission guidelines for existing fossil fuel-fired stationary combustion turbines not otherwise covered by the proposal.	15
4.	The EPA seeks comment specifically upon the percentages of hydrogen co-firing and CO2 capture as well as the dates that meet the statutory BSER criteria for each pathway.	18
5.	The EPA solicits comment on the differences in emissions reductions in both scale and time that would result from the two standards and BSER pathways, including how to calculate the different amounts of emission reductions, how to compare them, and what conclusions to draw from those differences.	18
6.	The EPA also seeks comment on whether the Agency should finalize both pathways as separate subcategories with separate standards of performance, or whether it should finalize one pathway with the option of meeting the standard of performance using either system of emission reduction, e.g., a single standard based on application of CCS with 90 percent capture, which could also be met by co-firing 96 percent (by volume) low-GHG hydrogen.	18
7.	With respect to the second phase of the standards of performance, for the intermediate load subcategory, the EPA is proposing that the BSER includes co-firing 30 percent by volume low-GHG hydrogen (unless otherwise noted, all co-firing hydrogen percentages are on a volume basis) with an associated standard of 1,000 lb CO2/MWh-gross, compliance with which would be required starting in 2032. For the base load subcategory, to elicit comment on both pathways, the EPA is proposing to subcategorize further into base load units that are adopting the CCS pathway and base load units that are adopting the low-GHG hydrogen co-firing pathway. For the subcategory of base load units that are adopting the CCS pathway, the EPA is proposing that the BSER includes the use of CCS with 90	20

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	percent capture of CO2 with an associated standard of 90 lb CO2/MWh-gross, compliance with which would be required starting in 2035.	
8.	While this [medium-term operating horizons] subcategory is based on a 10-year operating horizon (i.e., January 1, 2040), the EPA is specifically soliciting comment on the potential for a different operating horizon between 8 and 10 years to define the threshold date between the definition of medium-term and long-term coal-fired steam generating units (i.e., January 1, 2038 to January 1, 2040), given that the costs for CCS may be reasonable for units with amortization periods as short as 8 years.	22
9.	For units with operating horizons that are imminent-term, i.e., those that (1) Have elected to commit to permanently cease operations before January 1, 2032, and (2) elect to make that commitment federally enforceable and continuing by including it in the state plan, the EPA is proposing that the BSER is routine methods of operation and maintenance with an associated degree of emission limitation of no increase in emission rate (lb CO2/MWh-gross basis). The EPA is proposing the same BSER determination for units in the near-term operating horizon subcategory, i.e., units that (1) Have elected to commit to permanently cease operations by December 31, 2034, as well as to adopt an annual capacity factor limit of 20 percent, and (2) elect to make both of these conditions federally enforceable by including them in the state plan. The EPA is also soliciting comment on a potential BSER based on low levels of natural gas cofiring for units in these last two subcategories.	22-23
10.	Finally, the EPA is soliciting comment on a number of variations to the subcategories and BSER determinations, as well as the associated degrees of emission limitation and standards of performance, summarized above.	24
11.	The EPA is soliciting comment on the capacity and capacity factor threshold for inclusion in the subcategory of large, frequently operated turbines (e.g., capacities between 100 MW and 300 MW for the capacity threshold and a lower capacity factor threshold (e.g., 40 percent).	24
12.	EPA is also soliciting comment on BSER options and associated degrees of emission limitation for existing fossil fuel-fired stationary combustion turbines for which no BSER is being proposed (i.e., fossil fuel-fired stationary combustion turbines that are not large, frequently operated turbines).	24-25
13.	EPA is soliciting comment on localized impacts of these proposals [both proposed NSPS and emissions guidelines] on resource adequacy and reliability, and on opportunities to enhance reliable integration of the proposals into the power system.	28

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14.	The EPA invites public comment and feedback from stakeholders on all aspects of its proposed determination that CCS represents the BSER for certain new and existing fossil fuel-fired EGUs, including its evaluation of the various regulatory frameworks that apply to CCS.	31
15.	EPA is requesting comment on what assistance states and pertinent stakeholders may need in conducting meaningful engagement with affected communities to ensure that there are adequate opportunities for public input on decisions to implement emissions control technology (including but not limited to CCS or low-GHG hydrogen).	32
16.	This rulemaking includes several proposed actions: (1) The EPA's proposed amendments to the Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64510; October 23, 2015) (2015 NSPS) and (2) proposed requirements for GHG emissions from new and reconstructed fossil fuel-fired stationary combustion turbine EGUs. These actions also (3) propose to repeal the ACE Rule (84 FR 32523; July 8, 2019), (4) propose new emission guidelines for states in developing plans to reduce GHG emissions from existing fossil fuel-fired steam generating EGUs, which include both coal-fired and oil- and natural gas-fired steam generating EGUs, and (5) propose new emission guidelines for states in developing plans to reduce GHG emissions from existing fossil fuel-fired stationary combustion turbines. The EPA proposes that each of these actions function independently and are therefore severable. The EPA invites comment on the question of which portions of these proposed rules, if any, should be severable.	34-35
17.	EPA is soliciting comment on power sector modeling of the IRA, including the assumptions and potential impacts, including assumptions about growth in electric demand, rates at which renewable generation can be built, and cost and performance assumptions about all relevant technologies, including carbon capture, renewables, energy storage and other generation technologies.	95
18.	The EPA is also soliciting comment on whether intermediate load combustion turbines should be subject to a more stringent third-phase standard based on higher levels of low-GHG hydrogen co-firing by 2038.	143
19.	EPA is soliciting comment on whether the electric sales threshold used to define intermediate and base load units should be reduced further.	143
20.	EPA seeks comment specifically on the percentages of hydrogen co-firing and CO2 capture, the dates that meet the statutory BSER criteria for each pathway, whether the Agency should finalize both pathways as separate subcategories with separate standards of performance, or whether it should	144-145

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	finalize one pathway with the option of meeting the standard of performance using either system of emission reduction—e.g., a single standard of 90 lb CO2/MWh-gross based on the application of CCS with 90 percent capture, which could also be met by co-firing 96 percent low-GHG hydrogen.	
21.	Consequently, in the future, natural gas-fired stationary combustion turbine EGUs may run at more stable operation and, thus, more efficiently (i.e., at higher duty cycles and for longer periods of operation per start). The EPA is soliciting comment on whether this a likely scenario.	149
22.	The EPA is proposing to apply the same requirements to combustion turbines in noncontinental areas (i.e., Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, and the Northern Mariana Islands) and non-contiguous areas (non-continental areas and Alaska) as the EPA is proposing for comparable units in the contiguous 48 states. However, new units in non-continental and non-contiguous areas may operate on small, isolated electric grids, may operate differently from units in the contiguous 48 states, and may have limited access to certain components of the proposed BSER due to their uniquely isolated geography or infrastructure. Therefore, the EPA is soliciting comment on whether combustion turbines in non-continental and non-contiguous areas should be subject to different requirements. ii. Applicability to CHP units.	161-162
23.	The EPA is also soliciting comment on whether the intermediate load subcategory should apply a third component of BSER, which is co-firing 96 percent (by volume) low-GHG hydrogen by 2038.	165
24.	EPA is also soliciting comment on whether the low load subcategory should apply the second component of BSER, which is co-firing 30 percent (by volume) low-GHG hydrogen by 2032. These latter components of BSER would also include the continued application of highly efficient generation.	165
25.	EPA is also soliciting comment on the potential for an earlier compliance date for the second phase, for instance, 2030 for units cofiring 30 percent hydrogen by volume and 2032 for units installing CCS.	166
26.	For the base load subcategory, the EPA is proposing both potential BSER pathways because it believes there may be more than one viable BSER pathway for base load combustion turbines to significantly reduce their CO2 emissions and believes there is value in receiving comment on, and potentially finalizing, both BSER pathways to enable project developers to elect how they will reduce their CO2 emissions on timeframes that make sense for each BSER pathway. The EPA solicits comment on whether co-firing of low-GHG hydrogen should be considered a compliance pathway for sources to meet a single standard of performance based on application of CCS rather than a separate BSER pathway.	166-167

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27.	Therefore, in this proposal, the EPA presents these pathways as separate subcategories, while soliciting comment on the option of finalizing a single standard of performance based on application of CCS.	167
28.	The EPA solicits comment on whether, and the extent to which, high-efficiency designs also operate more efficiently at part loads and can start more quickly and reach the desired load more rapidly than combustion turbines with less efficient design efficiencies. If high-efficiency simple cycle turbines do operate at higher part-load efficiencies and are able to reach the intended operating load more quickly, the use of highly efficient simple cycle turbines for low load applications would result in lower GHG reductions.	173
29.	In addition, the EPA solicits comment on the cost premium of high-efficiency simple cycle turbines. If the use of highly efficient simple cycle turbines results in GHG reductions at reasonable cost, their use could qualify as the BSER for low load combustion turbines.	173
30.	The EPA is soliciting comment on whether the BSER for new low load combustion turbines should be the use of high efficiency simple cycle technology.	173
31.	However, since the method of operation has a substantial impact on the emissions rate, it may not be feasible for to prescribe or enforce a single numerical standard of performance for affected sources strictly based on design efficiency. Accordingly, the EPA solicits comment on whether it would be appropriate to promulgate such a requirement as a design standard pursuant to CAA section 111(h).	173-174
32.	The EPA is soliciting comment on if the initial performance test for low load combustion turbines could be conducted by the manufacturer certifying the design GHG emissions rate or if the owner or operator should be required to conduct separate testing to verify the emissions rate.	174
33.	The EPA is soliciting comment on whether this development could limit the availability of low load combustion turbines that are capable of burning higher percentages of hydrogen.	176
34.	The EPA is also soliciting comment on technologies to reduce potential costs and technical challenges for the transport and storage of hydrogen for owners/operators of low load combustion turbines.	176
35.	In particular, the EPA is soliciting comment on approaches that could be used for owners/operators of low load combustion turbines located in high demand centers (e.g., dense urban areas).	176
36.	To the extent these factors are not significant, the EPA is soliciting comment, with the intention of determining whether it would be appropriate to consider such a requirement in a future rulemaking, on whether the EPA should add a second component of the BSER for low load combustion turbines, based on hydrogen co-firing that would begin in 2032.	176

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37.	The EPA is soliciting comment on whether these technologies should be incorporated into a standard of performance based on an efficient generation BSER. To the extent commenters support the inclusion of emission reductions from the use of these technologies, the EPA requests that cost information and potential emission reductions be included.	179
38.	The EPA is also soliciting comment on whether intermediate load combustion turbines should be subject to a more stringent third phase standard based on 96 percent low-GHG hydrogen co-firing by 2038.	185
39.	The Agency is soliciting comment on the range of the capture rate of CO2 at the stack from 90 to 95 percent or greater. The EPA also notes that the operating availability (the fraction of time CCS equipment is operational relative to the operation of the combustion turbine) may be less than 100 percent and is therefore soliciting comment on a range in emission reduction from 75 to 90 percent, as further discussed in section VII.G.2 of this preamble.	192-193
40.	The EPA is soliciting comment on information relevant to the expected operational availability of new and retrofit CO2 capture systems.	197
41.	The EPA is soliciting comment on whether the CCS transport, storage, and monitoring costs are appropriate for determining the BSER costs for combustion turbines.	232
42.	Furthermore, the EPA is soliciting comment on additional ways that may be identified to responsibly advance the deployment of CCS and ensure meaningful engagement with local communities.	237
43.	The EPA also recognizes that commenters may have more information about implementing CCS on a broader scale that would help to assess whether 2030 or 2035 (or somewhere in between) would be an appropriate start date for phase 2 of the standards of performance that are based, in part, on the use of CCS. For this reason, the EPA solicits comment on whether the compliance date for phase 2 of the standards of performance should begin earlier than 2035, including as early as 2030.	243
44.	The EPA is also soliciting comment on whether, in lieu of providing a subcategory for base load combustion turbines that adopt the low-GHG hydrogen co-firing pathway, a single BSER for base load combustion turbines should be selected based on application of CCS with 90 percent capture—which could also be met by co-firing 96 percent (by volume) low-GHG hydrogen.	244
45.	However, the EPA is also soliciting comment on whether a specific definition of low-GHG hydrogen should be included in the final rule.	245
46.	The EPA solicits comment on flexible CCS technologies that could be used by intermediate load combustion turbines.	246

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47.	The EPA is soliciting comment on whether the new and reconstructed combustion turbines will have available combustion turbine designs that would allow higher levels of hydrogen co-firing, such as 50 percent or more by volume by 2030 or 2032.	258
48.	The EPA is soliciting comment on the expected low-GHG hydrogen availability by those dates [co-fire 30% by 2032; 96% by 2038].	262
49.	The EPA is also soliciting comment on whether hydrogen infrastructure is likely to be sufficiently developed by 2030 to provide access to low-GHG hydrogen for new and reconstructed combustion turbines.	262
50.	The EPA is soliciting comment on whether sufficient quantities of low-GHG hydrogen are likely to be available at reasonable costs by 2030. If so, this would support moving forward the compliance date of the second component of the BSER and/or increase the percent of hydrogen co-firing assumed in establishing the standard of performance.	264
51.	EPA is soliciting comment broadly on its proposed definition for low-GHG hydrogen, and on alternative approaches, to ensure that co-firing low-GHG hydrogen minimizes GHG emissions, and that combustion turbines subject to this standard utilize only low-GHG hydrogen.	268
52.	The EPA is also taking comment on whether it is necessary to provide a definition of low-GHG hydrogen in this rule.	268
53.	The combination of competitive pricing and widespread net-zero commitments throughout the utility and merchant electricity generation market has the potential to drive future hydrogen co-firing applications to be low-GHG hydrogen. The EPA is therefore soliciting comment on whether low-GHG hydrogen needs to be defined as part of the BSER in this proposed rulemaking.	270
54.	The industrial combustion turbines currently burning hydrogen are smaller than the larger utility combustion turbines and use diffusion flame combustion, often in combination with water injection, for NOX control. While water injection requires demineralized water and is generally only a NOX control option for simple cycle turbines, existing simple cycle combustion turbines have successfully demonstrated that relatively high levels of hydrogen can be co-fired in combustion turbines using diffusion flame and supports the EPA's proposal to determine that co-firing 30 percent hydrogen is technically feasible for new base load and intermediate load stationary combustion turbine EGUs by 2032 and that co-firing higher levels—up to 96 percent by volume—is feasible by 2038. The EPA solicits comment on these proposed findings.	272-273

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55.	The EPA specifically solicits comment on whether rural areas and small utility distribution systems (serving 50,000 customers or less) can expect to have access to low-GHG hydrogen.	279
56.	To the extent low-GHG hydrogen might be less available in rural areas compared to areas with higher population densities, the EPA solicits comment if sufficient electric transmission capacity is available, or could be constructed, such that electricity generated from low-GHG hydrogen could be transmitted to these rural areas.	279
57.	However, the EPA is soliciting comment on what additional costs would be required to ensure that combustion turbines are able to co-fire between 30 to 96 percent (by volume) hydrogen and if there are efficiency impacts from co-firing hydrogen.	280
58.	The EPA is soliciting comment on if additional infrastructure costs, such as bulk hydrogen storage in salt caverns, should be accounted for when determining the costs of hydrogen co-firing.	281
59.	The EPA solicits comment on whether it is necessary to define and require low-GHG in this rulemaking. Similarly, the EPA also solicits comment as to whether the low-GHG hydrogen requirement could be treated as severable from the remainder of the standard such that the standard could function without this requirement.	290
60.	The EPA is soliciting comment on updated costs for hybrid power plants and if the use of hybrid power plants could be incorporated as part of the BSER for base load combustion turbines.	295
61.	Under the proposed definition, simple cycle turbines would be able to sell no more than between 33 and 40 percent of their potential electric output without moving into the base load subcategory. A design efficiency definition based on the HHV will have the effect of decreasing the electric sales threshold in relative terms by 19 percent and absolute terms by 7 to 9 percent.476 The EPA is soliciting comment on whether the intermediate/base load electric sales threshold should be reduced further.	302
62.	Nearly 80 percent of recently constructed simple cycle turbines maintain maximum 12-operating-month capacity factors of 25 percent or less. Based on this information, the EPA is proposing the low load electric sales threshold—again, the dividing line to distinguish between the intermediate- and low-load subcategories—to be 20 percent and is soliciting comment on a range of 15 to 25 percent. The EPA is also soliciting comment on whether the low load electric sales threshold should be determined by a site-specific threshold based on three quarters of the design efficiency of the combustion turbine.	307-308
63.	EPA is soliciting comment on whether the use of alternate working fluid, such as supercritical CO2, or other potential efficiency improvements would make this emissions rate [730 lb CO2/MWh-gross] an appropriate standard of performance for base load combustion turbines.	317

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64.	Nearly half of recently constructed combined cycle EGUs have maintained an emissions rate of 800 lb CO2/MWh-gross. However, the EPA is soliciting comment on whether this higher emissions rate is appropriate on grounds that it would increase flexibility and reduce costs to the regulated community by allowing more available designs to operate as base load combustion turbines.	318
65.	Therefore, the Agency is soliciting comment on whether the small natural gas-fired base load combustion turbine standard of performance should be 850 lb CO2/MWh-gross.	319
66.	In summary, the Agency solicits comment on the following range of potential standards of performance: • New and reconstructed natural gas-fired base load combustion turbines with a heat input rating that is greater than 2,000 MMBtu/h: a range of 730–800 lb CO2/MWh-gross; • New and reconstructed natural gas-fired base load combustion turbines with a heat input rating of 250 MMBtu/h: a range of 850 to 900 lb CO2/MWh-gross.	319
67.	The Agency is soliciting comment on whether the standard should be 1,100 lb CO2/MWh-gross, or whether that would result in unacceptably high costs because currently only a single design for a large aeroderivative simple cycle turbine would be able to meet this standard. The Agency is also soliciting comment on a standard of performance of 1,200 lb CO2/MWh-gross.	320
68.	The EPA is also soliciting comment on whether the use of steam injection is applicable to intermediate load combustion turbines.	320
69.	The EPA requests that commenters include information on whether this [single combustion turbine using steam injection] technology would be applicable to intermediate load combustion turbines and could be part of either the first or second component of the BSER along with cost information.	321
70.	If the combustion turbine were not permitted to operate when CCS was unavailable, there may be local reliability consequences or issues during startup or shutdown, and the EPA is soliciting comment on how to balance these issues.	323
71.	Additionally, the EPA is soliciting comment on the range of reduction in emission rate of 75 to 90 percent.	323
72.	As a variation on proposing the date for meeting this standard as 2038, the EPA solicits comment on proposing the date as 2035, coupled with authorizing an approach for crediting early reductions, under which a source that achieves reductions due to co-firing low-GHG hydrogen starting in 2032 may apply credit for those reductions to its emission rate beginning in 2035.	324
73.	The EPA has attempted to ensure that the general provisions we are proposing to override are inappropriate, unnecessary, or redundant in the absence of the SSM exemption. The EPA is	328

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	specifically seeking comment on whether we have successfully done so. [In reference to Subpart TTTTa to add a new Table 3 to override general provisions for SSM]	
74.	However, the EPA requests comment on whether continuous carbon dioxide and flow measurements should become the sole means of compliance for this rule.	331
75.	The EPA is taking comment on its proposal to closely follow Treasury protocols in determining how EGUs demonstrate compliance with the fuel characteristics required in this rulemaking.	334
76.	The EPA is taking comment on what forms of acceptable mechanisms and documentary evidence should be required for EGUs to demonstrate compliance with the obligation to co-fire low-GHG hydrogen, including proof of production pathway, overall emissions calculations or modeling results and input, purchasing agreements, contracts, and energy attribute certificates.	334
77.	Given the complexities of tracking produced hydrogen and the public interest in such data, the EPA is also taking comment on whether EGUs should be required to make fully transparent their sources of low-GHG hydrogen and the corresponding quantities procured.	334
78.	The EPA is also seeking comment on requiring that EGUs using low-GHG hydrogen demonstrate that their hydrogen is exclusively from facilities that only produce low-GHG hydrogen, as a means of reducing demonstration burden and opportunities for double counting that could otherwise occur for hydrogen purchased from facilities that produce multiple types of hydrogen and the complex recordkeeping and documentation that would be necessary to reliably verify that the hydrogen purchased from such facilities qualifies. The EPA solicits comment on a mechanism to operationalize such a provision.	334-335
79.	The EPA solicits comment on whether the Agency should consider unrelated or third-party verification as part of the standards required for EGUs to demonstrate compliance.	335-336
80.	The EPA requests comment on its proposal to adopt as much as possible the methodology specified in IRC section 45V and any associated implementing requirements established by Treasury, once the methodology and implementing requirements are finalized, as part of the obligations for EGUs to demonstrate compliance with the requirement to combust low-GHG hydrogen under this NSPS.	336
81.	The EPA is also taking comment on several underlying policy issues relevant to ensuring that hydrogen used to comply with this rule is low-GHG hydrogen.	336
82.	EPA is taking comment on issues that would be relevant should the Agency develop its own protocols for EGUs to demonstrate compliance with the overall emissions rate in IRC section 45V(b)(2)(D) for co-firing as BSER in this rulemaking.	336

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83.	The EPA is also taking comment on strategies the EPA could adopt to inform its own eligibility, monitoring, reporting and verification protocols for ensuring compliance with the 0.45 kg CO2e/kg H2 or less emission rate for compliance with the low-GHG provisions of this rule, if the EPA does not adopt Treasury's protocols.	336-337
84.	The EPA is taking comment on the appropriateness of requiring EGUs to provide verification that the hydrogen they use complies with this standard, as demonstrated by the GREET model for estimating the GHG emissions associated with hydrogen production from well-to-gate, and to what extent EGUs should be required to verify the accuracy of the energy inputs and conclusions of the GREET model for the hydrogen used by the EGU to comply with this rule.	337
85.	Given the importance of these issues, the recent accumulation of relevant research, and the range of stakeholder positions, the EPA is taking comment on the need for (and design of) approaches and appropriate timeframes for allowing EGUs to meet requirements for geographic and temporal alignment requirements to verify that the hydrogen used by the EGU is compliant with this rulemaking, recognizing that EPA's low-GHG standard for compliance would not begin until 2032.	337
86.	The EPA is soliciting comment on these issues, as they relate to co-firing low-GHG hydrogen in combustion turbines and the requisite need to only utilize the lowest-GHG hydrogen in these applications as specified in IRC section 45V, specifically IRC section 45V(b)(2)(D).	337
87.	The EPA is taking comment on how methane leak rates can be appropriately quantified and conservatively estimated given the inherent uncertainties and wide range of basin-specific characteristics.	338
88.	The EPA is soliciting comment on whether EGUs should be required to produce a demonstration of augmented in-situ monitoring requirements to determine upstream emissions when methane feedstock is used for low-GHG hydrogen used by the EGU for compliance with this rule.	338
89.	The EPA is also taking comment on whether EGUs should use a default assumption for upstream methane leak rates in the event monitoring protocols are not finalized as part of this rulemaking, and what an appropriate default leak rate should be, including what evidence would be necessary for the EGU to deviate from that default assumption.	338
90.	The EPA is also taking comment on the appropriateness of requiring EGUs to provide CEMS data for SMR or ATR processes seeking to produce qualifying low-GHG hydrogen for co-firing to ensure the amount of carbon captured by CCS is properly and consistently monitored and outage rates and times are recorded and considered.	338-339

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91.	The EPA is soliciting comment on providing EGUs with a representative and climate-protective default assumption for carbon capture rates associated with SMR and ATR hydrogen pathways, inclusive of outages, if CCS is used for low-GHG hydrogen production as part of this rulemaking, including what evidence would be necessary for the EGU to deviate from that default assumption.	339
92.	The EPA is taking comment on requiring substantiation of energy inputs used in any overall GHG emissions assessment for hydrogen production used by EGUs for compliance with this requirement.	339
93.	For EGUs relying on hydrogen produced using this pathway, the EPA is seeking comment on the method for assuring that energy inputs to that production are consistent with the low-GHG hydrogen standard that EGUs would be required to meet under this rule.	339
94.	EPA is taking comment on requiring EGUs to provide substantiation of low-GHG energy inputs into any overall emissions assessment for electrolytic hydrogen production pathways for hydrogen used by the EGUs to comply with the low-GHG hydrogen standard in this rule.	339
95.	The EPA is taking comment on requiring EGUs to provide EAC verification for low-GHG emission energy inputs into GHG emissions assessments for hydrogen used by that EGU to comply with the low-GHG standard in this rule, for all hydrogen pathways. T	340
96.	EPA is seeking comment on allowing EGUs to use EACs [Energy Attribute Credits] as part of the documentation required for verifying the use of low-GHG hydrogen.	340
97.	The EPA is taking comment on allowing EGUs to comply with the low-GHG hydrogen standard in this rule if they demonstrate that the hydrogen used is produced from: (1) dedicated low-GHG emitting electricity from a generator sited on the utility side of a meter that is contractually obligated to a electrolyzer, (2) a generator collocated with an electrolyzer and sited behind a common utility meter, or (3) a generator whereby the electrolyzer and generator are collocated but not interconnected to the grid and have no grid exchanges of power.	340
98.	The EPA is also taking comment on approaches for EGUs to demonstrate that purchased hydrogen produced from an electrolyzer could meet the low-GHG standard, in whole or part, through an allotment of zero emitting electricity to a portion of the electrolyzer's hydrogen output. Many announced hydrogen production projects pair electrolyzers with renewable (including hydroelectric) or nuclear energy, which are likely capable of producing low-GHG hydrogen.	340
99.	The EPA is soliciting comment on requiring EGUs to use geographic and temporal alignment approaches for EAC-related requirements and the appropriate timing and trade-offs of such approaches.	344

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100.	The EPA is soliciting comment on the appropriateness of requiring geographic alignment for EACs used in conjunction with energy inputs at the balancing authority level at the onset of the compliance period for BSER in 2032.	344
101.	Similarly, the EPA is soliciting comments on the appropriateness of requiring hourly EAC alignment requirements at the onset of the compliance period for BSER in 2032.	344
102.	Relatedly, the EPA is taking comment on whether any hourly EAC alignment requirements should affect both existing and new projects beginning in 2032, regardless of when a project became operational and a recipient of IRC section 45V credits.	344
103.	Recognizing that the timing of EPA's proposed regulations would not require such tracking systems to be fully functional until the 2030s, the EPA is taking comment on the suitability of emerging and differentiated tracking systems to provide the infrastructure for hourly energy attribute tracking for EGUs complying with low-GHG hydrogen standards.	345
104.	The EPA is also taking comment on the need for energy attribute tracking systems to uniformly approach the issuance, allocation, tracking and retirement of hourly EACs using similar approaches to ensure a common and consistent national practice.	345
105.	The EPA is soliciting comment on appropriate mechanisms to ensure that the low-GHG hydrogen used by EGUs is actually low-GHG, and guard against EGU use of hydrogen that is falsely claimed to be low-GHG hydrogen.	345
106.	The EPA solicits comment on whether EGUs should be required to provide an independent third-party verification that hydrogen the EGU uses to comply with this regulation meets the requirements for low-GHG hydrogen.	345
107.	EPA also solicits comment on whether any such verifying third party must hold an active accreditation from an accrediting body, such as the California Air Resources Board's Low Carbon Fuels Standards Program or the International Standards Organization 14064 Code.	345
108.	EPA seeks comment on any other mechanisms to ensure that hydrogen used by EGUs meets the low-GHG standard and what the remedy should be if an EGU uses hydrogen that is determined not to meet the definition of low-GHG hydrogen.	345-346
109.	In other sections of this preamble, the EPA solicits comment on variations in the amount of emissions reduction and the dates for compliance for each pathway [CCS and Co-firing low-GHG Hydrogen].	347
110.	The EPA solicits comment on the differences in emissions reductions in both scale and time that would result from the two standards [CCS and Co-firing low-GHG Hydrogen] and BSER pathways, including	347

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	how to calculate the different amounts of emission reductions, how to compare them, and what conclusions to draw from those differences.	
111.	The EPA solicits comment on the differences in emissions reductions in both scale and time that would result from the two standards [CCS and Co-firing low-GHG Hydrogen] and BSER pathways, including how to calculate the different amounts of emission reductions, how to compare them, and what conclusions to draw from those differences.	348
112.	The EPA also solicits comment on the potential benefits of prescribing two separate standards [CCS and Co-firing low-GHG Hydrogen] for new base load combustion turbines. Owners and operators of new combustion turbine EGUs are currently pursuing both CCS and cofiring with low-GHG hydrogen as approaches for reducing GHG emissions, and both require the development of infrastructure that may proceed at a different pace and scale and achieve emissions reductions on different timelines with respect to each technology.	348
113.	Although both CCS and co-firing with low-GHG hydrogen are, or are expected to be, broadly available throughout the United States, the EPA solicits comment on whether individual locations where new base load combustion turbines might be constructed might lend themselves more to one technology than the other (based on pipeline availability, proximity to hydrogen production or geologic sequestration sites, etc.).	348
114.	As an alternative to the proposed approach of two standards and BSER pathways for the base load subcategory, the EPA is soliciting comment on having a single standard, which would be based on CCS with 90 percent capture (along with efficiency as the initial component of the BSER).	349
115.	The EPA solicits comment on whether finalizing a single, CCS-based standard for the baseload subcategory better reflects the more likely uses of hydrogen as a source of fuel in new combustion turbines.	349
116.	The EPA is also soliciting comment on subcategorizing intermediate load combustion turbines into an intermediate load combined cycle subcategory and an intermediate load simple cycle subcategory.	350
117.	Integrated equipment is currently included as part of the affected facility and the EPA is soliciting comment on the best approach to recognizing the environmental benefits of onsite integrated non-emitting generation and energy storage.	350
118.	In reference to onsite generation and energy storage, EPA is soliciting comment on whether instead of exempting the generation from the integrated renewables from counting toward electric sales, the	351

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	potential output from the integrated renewables would be included when determining the design efficiency of the facility.	
119.	For integrated energy storage technologies, the EPA is soliciting comment on including the rated output of the energy storage when determining the design efficiency of the affected facility	351
120.	The EPA is soliciting comments on amending the definition of system emergency [in Subpart TTTT and TTTTa] to clarify how it would be implemented.	352
121.	The EPA is soliciting comment on if the exclusions for specific gases such as landfill gas, etc. are necessary of if they should be deleted [in Subpart TTTT and TTTTa].	353
122.	For the low load subcategory, the EPA is soliciting comment on: • An electric sales threshold of between 15 to 25 percent for all combustion turbines regardless of the specific design efficiency. • An electric sales threshold based on three quarters of the design efficiency of the combustion turbine. This would result in electric sales thresholds of 18 to 22 percent for simple cycle turbines and 26 to 31 percent for combined cycle turbines. • Applying a second component of BSER, co-firing 30 percent (by volume) lowGHG hydrogen by 2032.	353-354
123.	For the intermediate load subcategory, the EPA is soliciting comment on: • An efficiency-based standard of performance of between 1,000 to 1,200 lb CO2/MWh-gross. • The use of steam injection as part of the first BSER component. • An electric sales threshold based on 94 percent of the design efficiency. This would result in electric sales thresholds of 29 to 35 percent for simple cycle turbines and 40 to 49 percent for combined cycle turbines. • A hydrogen co-firing range of 30 to 50 percent by volume as the second component of the BSER. • Beginning implementation of the second component of the BSER (i.e., hydrogen co-firing) as early as 2030. • The second component of the BSER would establish separate subcategories for simple and combined cycle intermediate load combustion turbines, both based on co-firing low-GHG hydrogen. • Adding a third phase standard based on higher levels of low-GHG hydrogen cofiring by 2038.	354
124.	For the base load subcategory, the EPA is soliciting comment on: • An efficiency-based standard of performance of between 730 to 800 lb CO2/MWh-gross for large combustion turbines.	355

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	• An efficiency-based standard of performance of between 850 to 900 lb CO2/MWh-gross for small combustion turbines. • Beginning implementation of the second component of the BSER (i.e., CCS or hydrogen co-firing) as early as 2030. • Beginning implementation of the third component of the co-firing low-GHG hydrogen-based BSER earlier than 2038. • Whether the third component of the hydrogen BSER should be 96 percent by volume or a lower volume – note that if it is a lower volume that raises issues as to whether the BSER would be appropriate if EPA found that a CCS BSER of 90% for NGCCs was generally applicable • A hydrogen co-firing range of 30 to 50 percent as the second component of the BSER for combustion turbines co-firing hydrogen. • A single standard based on either a CCS-based BSER or a co-firing low-GHG hydrogen based BSER for all base load combustion turbines. • A carbon capture rate of 90 to 95 percent as the second component of the CCS-based BSER.	
125.	The EPA is not reopening for comment or soliciting comment on the 2018 NSPS Proposal, and intends to further address it in a separate action.	356
126.	Specifically, for EGUs serving a common electric generator, the EPA is soliciting comment on whether the Administrator should be able to approve alternate methods for determining energy output.	357
127.	For EGUs using a common stack, the EPA is soliciting comment on whether specific procedures should be added for apportioning the emissions and/or if the Administrator should be able to approve site-specific alternate procedures.	357
128.	The EPA does not believe there are any considerations relative to a source undertaking a large modification that point towards a control system other than CCS with 90 percent capture qualifying as the BSER. The Agency solicits comment on this issue.	360
129.	EPA is proposing that the BSER is routine methods of operation and maintenance, with associated presumptive standards of performance that do not permit an increased emission rate and are not anticipated to have a rebound effect; and the EPA is soliciting comment on whether co-firing some amount of natural gas should be part of the BSER.	371
130.	As discussed in section XII.E, the EPA is proposing to allow trading and averaging under the proposed emission guidelines and requesting comment on whether and how such compliance mechanisms could	381

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	be implemented to ensure equivalency with the emission reductions that would be achieved if each affected source was achieving its applicable standard of performance.	
131.	The EPA is soliciting comment on a range of maximum capture rates (90 to 95 percent or greater) and, to potentially account for the amount of time the capture equipment operates relative to operation of the steam generating unit, a slightly lower achievable degree of emission limitation (75 to 90 percent reduction in average annual emission rate, defined in terms of pounds of CO2 per unit of generation).	382
132.	The EPA is soliciting comment on the percent of natural gas co-firing from 30 to 50 percent and the degree of emission limitation defined by a reduction in emission rate from 12 to 20 percent.	382-383
133.	For imminent-term and near-term coal-fired steam generating units, the EPA is also soliciting comment on a potential BSER based on low levels of natural gas co-firing.	383
134.	However, the EPA is soliciting comment on a potential BSER of “uniform fuels” and degree of emission limitation defined on a heat input basis by 120 to 130 lb CO2/MMBtu for low load natural gas-fired steam generating units and 150 to 170 lb CO2/MMBtu for low load oil-fired steam generating units.	383
135.	The EPA is soliciting comment on ranges of annual capacity factors to define the thresholds between the load levels and ranges in the degrees of emission limitation, as specified in section X.E of this preamble.	384
136.	The EPA solicits comment on the proposed definition of “designated facility” and applicability exemptions for fossil fuel-fired steam generating units.	386
137.	EPA is soliciting comment on the proposed BSER and degrees of emission limitation for units in non-continental and noncontiguous areas, and the EPA is soliciting comment on whether those units in non-continental and non-contiguous areas should be subject to different, if any, requirements.	387
138.	The EPA notes that in section XII.B of this preamble comment is solicited on the compliance deadline (i.e., January 1, 2030), for imminent-term and near-term coal-fired steam generating units, and different subcategories of natural gas- and oilfired steam generating units.	388
139.	In addition, the EPA is soliciting comment on a range from 5 to 20 percent to define the threshold value between low and intermediate load and a range from 40 to 50 percent to define the threshold value between intermediate and base load.	390
140.	The EPA is soliciting comment on a range of maximum capture rates (90 to 95 percent or greater) and, to potentially account for the amount of time the capture equipment operates relative to operation of the steam generating unit, a slightly lower achievable degree of emission limitation (75 to 90 percent reduction in average annual emission rate, defined in terms of pounds of CO2 per unit of generation).	390-391

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141.	The EPA also solicits comment on whether the existence of the near-term subcategory makes the imminent-term subcategory unnecessary. More specifically, the EPA requests comment on the potential to remove the imminent-term subcategory, which as proposed includes coal-fired steam generating units that have elected to commit to permanently cease operations prior to January 1, 2032.	395
142.	The EPA further requests comment on an alternative, modified approach for units in the imminent-term subcategory that could take into account how units intending to cease operations operate in practice in the period leading up to such cessation.	395
143.	The EPA solicits comment on whether it would be appropriate for the imminent-term units' standards of performance to reflect the reduced utilization and higher emission rates through the use of an annual mass emission limitation.	395
144.	The EPA is soliciting comment on the dates and load levels used to define the coal-fired subcategories and is seeking data and analysis on the impact of those alternative dates and load levels on the compliance requirements.	396
145.	Therefore, the EPA is specifically soliciting comment on an operating horizon of between 8 and 10 years (i.e., January 1, 2038, to January 1, 2040) to define the date for the threshold between medium-term and long term coal-fired steam generating units.	397
146.	However, the EPA is taking comment on the operating horizon (i.e., between 8 and 10 years, instead of the proposed 10-year operating horizon) that defines the threshold date between medium-term and long-term coal-fired steam generating units, and it is possible that the costs of CCS may be considered reasonable for some portion of the units that may be covered by the medium-term subcategory as proposed.	400-401
147.	The EPA is also soliciting comment on a potential BSER based on low levels of natural gas cofiring for imminent- and near-term units.	401
148.	The Agency is taking comment on the range of the amount of capture of CO2 from 90 to 95 percent or greater.	401
149.	The EPA is soliciting comment on the assumptions in the cost analysis, particularly with respect to the capacity factor assumption. As elsewhere in this section of the preamble, costs are presented in 2019 dollars.	407
150.	As noted in section X.C.3 of this preamble, the EPA is also taking comment on the operating horizon that defines the threshold date between the definition of medium-term and long-term coal-fired steam generating units, specifically an operating horizon between 8 and 10 years (i.e., January 1, 2038 to	410

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	January 1, 2040), instead of the proposed 10-year operating horizon. For a 70 percent annual capacity factor and an 8-year amortization period, annualized costs of applying CCS for the reference unit are $24/ton of CO2 reduced and $21/MWh, and it is possible that the cost of generation may be reasonable relative to the representative cost for wet FGD.	
151.	The EPA is proposing that the water use and siting requirements are manageable and therefore the EPA does not expect any of these considerations to preclude coal-fired power plants generally from being able to install and operate CCS. However, the EPA is soliciting comment on these issues.	417
152.	Although the EPA believes that long-lived coal-fired power plants will generally be able to implement and operate CCS within the cost parameters calculated as part of the BSER analysis, and therefore that they would be able to meet a standard of performance based on CCS with 90 percent capture, the EPA solicits comment on whether particular plants would be unable to do so, including details of the circumstances that might make retrofitting with CCS unreasonable or infeasible.	420
153.	While the EPA is not proposing CCS as BSER for the proposed subcategory of medium term units, the EPA is taking comment on the operating horizon (i.e., between 8 and 10 years, instead of the proposed 10-year operating horizon) that most appropriately defines the threshold date between medium-term and long-term units and the EPA is also taking comment on the level of costs of CCS that should be considered reasonable.	422
154.	While the EPA is not proposing CCS as BSER for the proposed subcategory definition of medium-term units, the EPA is taking comment on the operating horizons that define the threshold date between medium-term and long-term units (i.e., between 8 and 10 years, instead of the proposed 10-year operating horizon) and on what amount of costs should be considered reasonable.	434
155.	Therefore, the EPA is soliciting comment on low levels of natural gas cofiring as a potential component of the BSER for imminent-term and near-term coal-fired steam generating units.	436
156.	The EPA recognizes that different coal-fired units may be already capable of different natural gas co-firing rates (as discussed in section X.D.2.b.i of this preamble) and is therefore soliciting comment on defining a potential BSER on the basis of the maximum hourly heat input of natural gas fired in the unit (MMBtu/hr) relative to the maximum hourly heat input the unit is capable of (i.e., the nameplate capacity on an MMBtu/hr basis).	436
157.	Alternatively, the EPA is soliciting comment on a fixed value of annual heat input percentage that represents a low level of natural gas co-firing, as well as the definition of a low level of natural gas co-	436

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	firing that is based on the characteristics of an existing facility (e.g., the capacity of the existing pipeline).	
158.	The EPA is also soliciting comment on a degree of emission limitation resulting from low levels of natural gas co-firing, as detailed in section X.D.4.c of this preamble.	437
159.	As noted in section X.D.1.a of this preamble, new CO2 capture retrofits on existing coalfired steam generating units may achieve capture rates greater than 90 percent, and the EPA is taking comment on a range of capture rates that may be achievable.	439-440
160.	If the steam generating unit were not permitted to operate when CCS was unavailable, there may be local reliability consequences, and the EPA is soliciting comment on how to balance these issues.	440
161.	Additionally, the EPA is soliciting comment on a range of the degree of emission limitation achievable, in the form of a reduction in emission rate of 75 to 90 percent when determined over an extended period (e.g., an annual calendar-year basis).	440
162.	Because the EPA is soliciting comment on low levels of natural gas co-firing as a potential BSER for imminent-term and near-term units,	441
163.	EPA is also soliciting comment on the degree of emission limitation that may be achievable by application of low levels of natural gas co-firing.	441
164.	EPA is soliciting comment on degrees of emission limitation defined by reductions in emission rate on a lb CO2/MWh-gross basis that are equal to the percent of heat input times 0.4, the percent of reduction in emission rate that may be achieved for each percent of natural gas heat input.	441
165.	More specifically, the EPA solicits comment on the degree of emission limitation based on the calculation method defined in the preceding text up to a 4 percent reduction in emission rate (lb CO2/MWh-gross) over an extended period of time.	441
166.	Alternatively, as the EPA is also soliciting comment on a fixed percent of low levels of natural gas co-firing, the EPA is additionally soliciting comment on a fixed degree of emission limitation based on the same calculation method.	441
167.	Because the reductions in GHG emissions from low levels of natural gas co-firing are relatively low and may be challenging to measure, the EPA is also soliciting comment on a degree of emission limitation defined on a percent of heat input basis, although the EPA also recognizes that measurement of fuel flow may also have challenges.	441
168.	At this time, the EPA is not proposing requirements for low load units but is taking comment on a BSER of lower emitting fuels for those units.	445

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169.	The EPA is also taking comment on, but not proposing, a BSER of lower emitting fuels for low load natural gas- and oil-fired steam generating units.	449
170.	EPA is soliciting comment on the fuel types that would constitute “uniform fuels” specific to low load natural gas- and oil-fired steam generating units.	450
171.	In response to industry stakeholder input and recognizing that the cost effectiveness of controls depends on a unit’s expected operating time horizon, which dictates the amortization period for the capital costs of the controls, the EPA is proposing other BSER for coal-fired units with shorter operating horizons while taking comment on what dates most appropriately define the thresholds between these different subcategories.	451
172.	EPA solicits comment on the proposed BSER and degrees of emission limitation, as well as the proposed subcategorization, including the potential to remove the imminent-term subcategory and include units with earlier commitments to permanently cease operations in either the near-term or medium-term subcategory.	451
173.	It is noted that for imminent term and near-term coal-fired steam generating units, the EPA is also soliciting comment on potential BSERs based on co-firing low levels of natural gas.	451
174.	In this notice, the EPA is proposing emission guidelines for certain existing fossil fuel-fired stationary combustion turbines and soliciting comment on approaches that could be used to establish emission guidelines for the remaining units in the fleet.	456-457
175.	In this notice, the EPA is soliciting comment on both the scope of these proposed emission guidelines (in other words, the applicability thresholds that would determine which existing combustion turbines are in the first segment) as well as the BSER for units covered in this rulemaking.	458
176.	In section XII of this preamble, the EPA is also taking comment on the associated state plan requirements associated with the BSER for existing fossil fuel-fired turbines.	458-459
177.	In the rest of this section, the EPA proposes regulations for the first segment and solicits comment on specific elements of the approach. This section also briefly discusses what BSER might look like for units in the second rulemaking, and requests comments that could inform the development of a rulemaking defining BSER, degrees of emission limitation, compliance deadlines and other elements of an emission guideline for those units at a later date.	459-460
178.	As with the proposal for new base load turbines, the EPA is taking comment on whether to finalize a BSER with a single pathway based on application of CCS with 90 percent capture, which could also be met by co-firing with low-GHG hydrogen as a compliance option, or vice-versa.	460

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179.	The EPA is also taking comment on whether the compliance date should begin earlier, including as early as 2030.	460
180.	In section XI.C, the EPA proposes an approach for units covered in this rulemaking and in section XI.D, the EPA summarizes the key topics for which we are soliciting comment relative to existing combustion turbines.	461
181.	The EPA is proposing emission guidelines for units with a capacity factor greater than 50 percent and a capacity of greater than 300 MW, but is also taking comment on whether that capacity factor threshold or capacity threshold should be lower (for instance 40 percent for the capacity factor and 200 MW or 100 MW for the capacity).	464
182.	The EPA is taking comment on whether HRI [heat rate improvements] should be considered BSER (or a component of BSER) for combined cycle units with a capacity factor of greater than 50 percent and a capacity of less than 300 MW as part of this initial rulemaking.	466
183.	The EPA is soliciting comment on what additional costs would be required to ensure that combustion turbines are able to co-fire between 30 to 96 percent low-GHG hydrogen and if there are efficiency impacts from co-firing hydrogen.	475
184.	To the extent it is appropriate to account for additional costs associated with a hydrogen co-firing BSER for existing combustion turbines, the EPA is soliciting comment on whether capital and fixed costs should be increased by 9 percent, consistent with the NETL estimated retrofit costs of CCS relative to new combustion turbines.	475-476
185.	Similar to new base load combined cycle turbines, the EPA is also taking comment on an alternative approach in which the BSER for these units would be based on CCS with 90 percent capture, for the reasons discussed next, but units could follow a pathway that would enable them to achieve the same reductions using low-GHG hydrogen.	478
186.	While the EPA believes that it is possible that the industry could install that amount of CCS on this timeline, the EPA believes it is important to gather more information on the question of how quickly CCS can be deployed and is therefore taking comment on, but not proposing, a lower capacity threshold of 200 MW or 100 MW, and taking comment on whether it would be feasible to install CCS and or co-fire hydrogen for the 85 GW or 134 GW of units it projects would be covered under those thresholds and a capacity factor of greater than 50 percent.	481
187.	The EPA seeks comment on the feasibility of setting a threshold of 100 or 200 MW and a 40 percent capacity factor in light of these examples and other relevant considerations.	482

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188.	The EPA seeks comment on the feasibility of setting a threshold for inclusion in the existing combustion turbine segment to be addressed by the emission guidelines proposed here of 100 or 200 MW and a 40 percent capacity factor in light of the examples of other historic deployment of pollution controls and other relevant considerations.	488
189.	The EPA is seeking comment on four general areas related to selecting the BSER for existing combustion turbines. First, the EPA is soliciting comment on general assumptions about potential future utilization of combustion turbines. Second, the EPA is soliciting comment on assumptions about the appropriate group of existing combustion turbine units to be addressed in this rulemaking. Third, the EPA is requesting comment on the appropriate BSER for those turbines. Fourth, the EPA is requesting comment on the timing of BSER requirements for existing combustion turbines.	490
190.	The EPA is seeking comment on a number of issues related to how its consideration of projected future utilization of combined cycles informed its consideration of a potential BSER for existing combustion turbines. First, the EPA is taking comment on its projections of how combustion turbines will operate in the future and the key factors that influence those changes in operations	490
191.	The EPA is taking comment on all aspects of these assumptions including: the speed at which new low-emitting generation will come on-line and the impact that it has on likely capacity factors for combined cycle units (in particular the projection that capacity factors will grow in the 2028/30 timeframe but decrease in later years).	491
192.	With regard to the size and definition of the category to be covered in a first rulemaking covering only part of the existing turbine category, the EPA is also taking comment on how its assumptions about the potential operation of combustion turbines in future years coupled with considerations about the availability of infrastructure should inform which units should be covered in a first rulemaking.	491
193.	More specifically, the EPA is requesting comment on how to consider the rate of CCS (and potentially hydrogen) infrastructure development in determining a BSER that could potentially impact hundreds of sources.	491
194.	[For existing CTs] EPA is also taking comment on a lower capacity factor threshold (e.g., 40 percent) and a lower capacity threshold (200 MW or 100 MW, and capacities between 100 and 300 MW).	492
195.	[For existing CTs] with regards to units with a capacity factor of greater than 50 percent that are under 300 MW and units with a capacity factor of 50 percent or less the EPA is taking comment on the appropriateness of CCS and/or hydrogen as a BSER.	492

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196.	[For existing CTs] with regards to hydrogen, the EPA is taking comment on the appropriate level of and timing for hydrogen co-firing.	492
197.	More generally, [for existing CTs] EPA is requesting comment on any feasibility issues related to broader CCS deployment should those thresholds be adjusted such that more coal capacity is affected, and how such issues could be addressed.	492
198.	With regards to the BSER itself, the EPA is soliciting comment on the applicability of CCS retrofits to existing combustion turbines and its focus on base load turbines (e.g., those with a capacity factor of greater than 50 percent).	492
199.	This solicitation includes comment on whether particular plants would be unable to retrofit CCS, including details of the circumstances that might make retrofitting with CCS unreasonable or infeasible.	492
200.	The EPA is also taking comment on the role of low-GHG hydrogen as part of BSER. More specifically, the EPA is requesting comment on the appropriateness of low-GHG hydrogen as a BSER for combustion turbines larger than 300 MW with capacity factors of greater than 50 percent.	492
201.	The EPA is interested in the question of whether, in this case, it would be likely that a combined cycle turbine burning low-GHG hydrogen would operate near base load, and whether it be prudent to have an alternative BSER or an alternative compliance pathway for units combusting low-GHG hydrogen and solicits comments on these questions.	492-493
202.	Similar to the NSPS for base load combustion turbines, the EPA is also taking comment on whether to finalize both the proposed low-GHG hydrogen BSER and the proposed CCS with 90 percent capture BSER, or finalize a BSER with a single pathway, such as based on application of CCS with 90 percent capture, which could also be met by co-firing with low-GHG hydrogen.	493
203.	With regard to the timing for BSER, the EPA is taking comment on a 2035 CCS based BSER standard and whether that standard could reasonably be applied earlier.	493
204.	Similarly, the EPA is taking comment on the timing of a low-GHG hydrogen based BSER and whether a 30 percent low-GHG hydrogen standard could be implemented earlier than 2032, or if low-GHG hydrogen supply infrastructure development suggests it should be later.	493
205.	The EPA is taking comment on the same questions with regard to a 96 percent low-GHG hydrogen co-firing BSER in 2038.	493
206.	As noted above, the EPA is taking comment on what units should be part of whatever action the EPA finalizes as a result of the proposal.	494
207.	For intermediate turbines, the EPA is taking comment on a BSER similar to that for new turbines.	494

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208.	In particular, the EPA is interested in comment about an appropriate pathway and timing for a BSER that would ultimately require 96 percent low-GHG hydrogen by volume.	494
209.	Finally, for peaking turbines, the EPA is interested in comment about whether a clean hydrogen BSER would be appropriate, what the timing of such a requirement should be and whether there should be any phasing.	494
210.	The EPA is also interested in any comments related to: potential changes in operational patterns for turbines, particularly as more renewables and storage enter the grid. For instance, the EPA is interested in comments as to whether improvements in energy storage will reduce reliance on intermediate and peaking turbines.	494
211.	The EPA is also interested in comments on any potential technology developments that could impact its determination of BSER. For instance, the EPA is aware that in addition to electrolyzer based hydrogen and natural gas based hydrogen, there are other means of hydrogen production receiving significant attention such as naturally occurring hydrogen, and solicits comments on whether any of these potential technology developments should impact the EPA's consideration of the appropriate BSER for the remaining turbines.	494-495
212.	In sections X and XI of this preamble, the EPA is soliciting comment on ranges for dates and values for defining subcategories, BSER, and degrees of emission limitation; those solicitations for comment extend to the proposed values and dates discussed in this section of the preamble.	496
213.	EPA is soliciting comment on compliance dates defined by the date of approval of the state plan or January 1, 2030, whichever is earlier, for imminent-term coal-fired steam generating units, near-term coal-fired steam generating units, and the different subcategories of natural gas- and oil-fired steam generating units.	497-498
214.	The EPA requests comment on whether using a period of 3.5 years after state plan submission is appropriate for establishing a compliance deadline for these emission guidelines.	501
215.	The EPA is also requesting comment on potential compliance dates between 1.5 and 5.5 years after state plan submission (i.e., January 1, 2028, to January 1, 2032), including on the feasibility of completing all the steps to implement natural gas co-firing and CCS within a shorter or longer timeframe. To the extent that commenters believe more or less time after state plan submission is more appropriate than the proposed 3.5 years, the EPA requests that commenters provide information supporting the provision of a different compliance date.	501

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216.	The EPA requests comment on its proposed compliance deadline for combustion turbine EGUs in the CCS subcategory, including on whether an earlier or later compliance date would be more reasonable given the time needed to analyze, design, and construct carbon capture and CO2 transport and storage systems and the overlapping timeframes for installation of CCS on EGUs under the proposed CAA section 111(b) standards of performance for new combustion turbines and on existing coalfired steam generating units under these proposed emission guidelines.	503-504
217.	The EPA requests comment on this assessment [that sufficient low-GHG hydrogen will be available for both new and affected existing CTs], as well as on whether compliance dates other that January 1, 2032, and January 1, 2038, would be more reasonable for the first and second phases of the standards for affected units in the hydrogen cofired subcategory, and why.	505
218.	The EPA is soliciting comment on the proposed baseline-setting approach and specifically on the applicability of such an approach for each of the different subcategories. The EPA is proposing a continuous 8-quarter period to better average out operating variability but solicits comment on whether a different time period would be more appropriate for assessing baseline emission performance, as well as on the 5-year window from which the period for baseline emission performance is chosen.	513
219.	The EPA also solicits comment on the use of total mass CO2 emissions and total electric generation over a consecutive 8-quarter time period as representative and on whether the EPA's proposed approach is appropriate.	513
220.	In section X of this preamble, for the long-term coal-fired subcategory, the EPA is soliciting comment on a capture rate of 90 to 95 percent and a degree of emission limitation defined by a reduction in emission rate on a gross basis from 75 to 90 percent.	515-516
221.	The EPA solicits comments on this proposed methodology for calculating presumptively approvable standards of performance for long-term coal-fired steam generating units.	516
222.	In section X of this preamble, for the medium-term coal-fired subcategory, the EPA is soliciting comment on a natural gas co-firing level of 30 to 50 percent and a degree of emission limitation from 12 to 20 percent.	517
223.	The EPA believes this approach is a more straightforward mathematical adjustment than adjusting the baseline to appropriately reflect a preexisting level of co-firing. However, the EPA solicits comment on whether the adjustment of a standard of performance based on preexisting levels of natural gas co-firing should be done through the baseline.	518

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224.	The EPA is not proposing this methodology, because parsing the attributable emissions and electric generation associated with natural gas cofiring from the attributable emissions and electric generation associated with coal-fired generation requires manipulation of the emissions and electric generation data. However, the EPA solicits comment on whether baseline adjustment is more appropriate and also why that may be so.	518
225.	The EPA solicits comment on the proposed methodology for calculating presumptively approvable standards of performance for medium-term coal-fired steam generating units, including on the proposed approach for adjusting a presumptively approvable standard of performance to accommodate preexisting natural gas co-firing.	519
226.	Although the EPA believes that the baseline performance level adequately accounts for variability in annual emission rate, the EPA is also soliciting comment on a methodology for a presumptive standard above the baseline emission performance. For the imminent-term coalfired subcategory, the EPA is soliciting comment on a presumptive standard that is defined by 0 to 2 standard deviations in annual emission rate (using the 5-year period of data) above the baseline emission performance, or that is 0 to 10 percent above the baseline emission performance.	520
227.	Because the EPA is soliciting comment on a potential BSER for this subcategory based on low levels of natural gas co-firing, as described in section X.D.3.b.ii, comment is also being solicited on the presumptively approvable standards for that potential BSER.	520
228.	The EPA is soliciting comment on the baseline natural gas co-firing level being determined from the 5 years of data preceding the publication of the final rule, or based on engineering limitations (i.e., extent of startup guns or size of pipeline to unit).	521
229.	Alternatively, the EPA is soliciting comment on a degree of emission limitation on a fuel heat input basis. For a potential BSER of low levels of natural gas co-firing, the EPA is therefore also soliciting comment on a presumptively approvable standard defined on a heat input basis.	521
230.	The EPA solicits comment on the proposed methodology for establishing presumptively approvable standards of performance for imminent-term coal-fired steam generating units.	522
231.	For the near-term coal-fired subcategory, the EPA is soliciting comment on a presumptive standard that is defined by 0 to 2 standard deviations in annual emission rate (using the 5-year period of data) above the baseline emission performance, or that is 0 to 10 percent above the baseline emission performance.	522-523

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232.	Because the EPA is soliciting comment on a potential BSER for this subcategory based on low levels of natural gas co-firing, as described in section X.D.3.b.ii, comment is also being solicited on the presumptively approvable standards for that potential BSER.	523
233.	The EPA is soliciting comment on the baseline natural gas co-firing level being determined from the 5 years of data preceding the publication of the final rule, or based on engineering limitations (i.e., extent of startup guns or size of pipeline to unit).	523
234.	Alternatively, the EPA is soliciting comment on a degree of emission limitation on a fuel heat input basis. For a potential BSER of low levels of natural gas co-firing, the EPA is therefore also soliciting comment on a presumptively approvable standard defined on a heat input basis.	523
235.	The EPA solicits comment on the proposed methodology for establishing presumptively approvable standards of performance for near-term coal-fired steam generating units.	524
236.	However, as noted above, the EPA is soliciting comment on determining a BSER of uniform fuels for these units.	524
237.	In addition, the EPA is soliciting comment on a presumptive standard of performance for these units based on heat input. Specifically, the EPA is soliciting comment on a range of presumptive standards of performance from 120 to 130 lb CO2/MMBtu for low load natural gas-fired steam generating units, and from 160 to 170 lb CO2/MMBtu for low load oil-fired steam generating units.	524
238.	The EPA is also taking comment on a range of presumptive standards of performance for natural gas- and oil-fired steam generating units. Specifically, the EPA is soliciting comment on standards between (1) 1,400 and 1,600 lb CO2/MWh-gross for intermediate load natural gas-fired units, (2) 1,250 and 1,400 lb CO2/MWh-gross for base load natural gas-fired units, (3) 1,400 and 2,000 lb CO2/MWh-gross for intermediate load oil-fired units, and (4) 1,250 and 1,800 lb CO2/MWh-gross for base load oil-fired units.	526
239.	For the intermediate and base load non-continental oil-fired subcategory, the EPA is soliciting comment on a presumptive standard that is defined by 0 to 2 standard deviations in annual emission rate (using the 5-year period of data) above the baseline emission performance, or that is 0 to 10 percent above the baseline emission performance.	527
240.	The EPA solicits comment on the proposed methodology for establishing presumptively approvable standards of performance for non-continental oil-fired steam generating units in the intermediate and base load subcategories	527

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241.	Given this practical reality [that if there is a chance that an EGU will operate over a 50% capacity factor it will plan to meet the standard], the EPA is taking comment on whether it 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.	529
242.	The EPA solicits comments on this proposed methodology for calculating presumptively approvable standards of performance for existing combustion turbines in the CCS subcategory.	531
243.	The EPA solicits comment on the proposed methodology for calculating presumptively approvable standards of performance for existing combustion turbine EGUs in the hydrogen cofired subcategory.	533
244.	While the EPA is not taking comment on the proposed provisions of subpart Ba themselves, the EPA is requesting comment on how each of the RULOF provisions that the EPA proposed in December 2022 would be implemented in the context of these particular emission guidelines.	535
245.	The EPA solicits comment on the application of the RULOF provisions of proposed subpart Ba, both in sum and as individual, segregable pieces, to these emission guidelines. In particular, the EPA requests comment on factual circumstances in which it may or may not be appropriate for states to invoke RULOF for affected EGUs, given the proposed BSER determinations and presumptive standards of performance, and the EPA's proposed "fundamental difference" standard in the subpart Ba rulemaking.	544
246.	For the consideration of cost, the EPA requests comment on whether it should provide further guidance or requirements for determining when the costs of a control technology for a particular source are "fundamentally different" from the Agency's BSER determination and thus a basis for invoking RULOF.	544
247.	EPA additionally seeks comment on any source category-specific considerations for invoking RULOF for affected EGUs, including any additional or different requirements that might be necessary to ensure that use of RULOF does not undermine the presumptive stringency of these emission guidelines	545
248.	However, the EPA is also requesting comment on whether to provide lists of controls to be evaluated in a source-specific BSER analysis as a presumptively approvable approach, as opposed to requirements.	546
249.	The EPA requests comment on the proposed requirement to consider certain control technologies as part of source-specific BSER determinations, and specifically on whether the Agency should require this approach as proposed or, in the alternative, provide it as a presumptively approvable approach to conducting a source-specific BSER analysis.	548

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250.	The EPA requests comment on its proposal to supersede the requirements in subpart Ba to set imminent and outermost dates for the consideration of remaining useful life for affected combustion turbine EGUs. If commenters believe such dates would be useful to guide states' consideration of remaining useful life for affected existing combustion turbines, the EPA further requests input on what those dates could be, and why.	550
251.	The EPA seeks comment on implementation of the proposed subpart Ba requirements pertaining to determining a source-specific BSER and calculating a less stringent standard for sources invoking RULOF under these emission guidelines.	552
252.	EPA seeks comment on the proposed requirements that are specific to these emission guidelines, including but not limited to the proposed requirement that states evaluate certain control options for affected coal-fired steam generating units in the long-term and medium-term subcategories and for affected combustion turbine EGUs as part of their source-specific BSER determination, the proposal to not provide outermost or imminent dates to cease operations for the consideration of remaining useful life, and the proposal to require RULOF standards of performance to be in the form of lb CO2/MWh emission limitations.	552
253.	The EPA solicits comments on additional ways in which states might consider potential pollution impacts and benefits of control to communities most affected by and vulnerable to emissions from affected EGUs when determining a less-stringent standard pursuant to RULOF. In particular, the Agency is requesting comment on metrics or information concerning health and environmental impacts from affected EGUs that states can consider in source-specific RULOF determinations.	554
254.	As discussed in section XII.F.1.b, the EPA is also requesting comment on tools and methodologies for identifying communities that are most affected by and vulnerable to emissions from affected EGUs under these emission guidelines.	554
255.	The EPA solicits comment on the types of source-specific and other information that states should be required to provide to support the inclusion of standards of performance based on RULOF in state plans, as well as on any additional sources of information that may be appropriate for states to use in this context.	556
256.	The EPA requests comment on the implementation of the proposed subpart Ba provisions pertaining to more stringent standards of performance in the context of these particular emission guidelines.	558
257.	The EPA solicits comment on this approach [states having the discretion to identify increment of progress deadlines] as well as whether the EPA should instead finalize date-specific deadlines or more	562

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	general timeframes for achieving increments of progress rather than leaving the timing for most increments to state discretion.	
258.	The EPA also seeks comment on the specific deadlines or timeframes that the EPA could assign to each increment under a more prescriptive approach.	562
259.	The EPA also seeks comment on the specific deadlines or timeframes that the EPA could assign to each increment under a more prescriptive approach.	566
260.	The EPA seeks comment on whether the increments contain an appropriate level of specificity to establish clear, verifiable criteria to ensure that states and affected EGUs are taking the steps necessary to reach full compliance. If commenters believe they do not, the EPA requests comment on the appropriate level of specificity for each increment.	566-567
261.	The EPA requests comment on this proposed approach [milestone framework], specifically whether any jurisdictions present unique state circumstances that should be considered when defining milestones and the required reporting elements.	569-570
262.	The EPA requests comment on monitoring and reporting requirements for captured CO2 mass emissions and net electricity output, and on allowable testing methods for stack gas flow rate.	571
263.	The EPA requests comment on the following questions related to additional monitoring and reporting of hourly captured CO2 under 40 CFR part 75: a) should EGUs with carbon capture technologies be required to monitor and report the hourly captured CO2 mass emissions under 40 CFR part 75, b) if EGUs with carbon capture technologies are not required to monitor and report the hourly captured CO2 mass emissions, the calculation procedures for total heat input and NOX rate in appendix F to 40 CFR part 75 may no longer provide accurate results; therefore, what changes might be necessary to accurately determine total heat input and NOX rate, c) to ensure accurate and complete accounting of CO2 mass emissions emitted to the atmosphere and captured for use or sequestration, at what locations should CO2 concentration and stack gas flow be monitored, and should other values also be monitored at those locations, d) are there quality assurance activities outside of those required under 40 CFR part 75 for CO2 concentration monitors and stack gas flow monitors that should be required of the monitors to accurately and reliably measure captured CO2 mass emissions, and e) what monitoring plan, quality assurance, and emissions data should be reported to the EPA to support evaluation and ensure consistent and accurate data as it relates to CO2 emissions capture.	573-574
264.	The EPA requests comment on the following questions related to reporting of net electricity output: a) should EGUs be required to measure and report total net electricity output, including useful thermal	574

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	output, under 40 CFR part 75, b) what guidance should the EPA provide on how to measure and apportion net electricity output, c) should EGUs measure and report net electricity output at the unit or facility level, and d) what monitoring plan, quality assurance, and output data should be reported to the EPA to support evaluation and ensure consistent and accurate data as it relates to total net electricity output.	
265.	The EPA requests comment on the following questions related to the use of EPA Reference Method 2 and its allowable alternatives for stack gas flow monitors under 40 CFR part 75: a) should or under what conditions should EGUs be required to conduct a flow study and choose the appropriate EPA reference method for each stack gas flow monitor based on the results of the study, b) once an EGU selects the use of an EPA reference method for a stack gas flow monitor, regardless of the basis for that selection, should the EGU be required to continue using the same EPA reference method until a flow study or other engineering justification is made to change the EPA reference method, and c) what additional monitoring plan, quality assurance, and emissions data should be reported to the EPA to support evaluation and ensure consistent and accurate data as it relates stack gas flow rate and performance of the stack gas flow monitor.	575
266.	This section discusses considerations related to such compliance flexibilities in the context of this particular rule and set of regulated sources—existing steam generating units and existing combustion turbine EGUs—and solicits comment on whether certain types of averaging and trading maintain the stringency of the EPA's BSER.	576
267.	Section XII.E.2 of this preamble also discusses program design examples as well as potential design elements and takes comment on whether these or other designs or design elements could ensure that use of emission trading or averaging does not undermine the stringency of the EPA's BSER.	578
268.	The EPA is proposing to allow state plans to include emission trading programs as a compliance flexibility for affected existing EGUs under these emission guidelines and is taking comment on whether certain types of trading programs could satisfy the requirement to maintain equivalence with source-specific application of standards of performance.	578
269.	The EPA requests comment on these challenges [appropriateness of emissions trading for certain subcategories of EGUs] and on whether, in light of these and other considerations, emission trading should be permitted for certain subcategories and not permitted for others, and on whether emission trading should be limited to within certain subcategories, and why.	583

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270.	In the following sections, the EPA discusses potential rate-based and mass-based emission trading program approaches that could potentially be included in a state plan and solicits comment on applied implementation issues in the context of these proposed emission guidelines and the considerations discussed in this subsection XII.E.2.a of the preamble.	583
271.	The EPA requests comment on whether this or another method of rate-based trading could demonstrate equivalent stringency as would be achieved if each affected EGU was achieving its standard of performance	583
272.	The EPA is seeking comment on whether rate-based emission trading might be appropriate under these emission guidelines, taking into consideration the discussion of the appropriateness of trading for certain subcategories in section XII.E.2.a of this preamble. In particular, the EPA requests comment on whether and how a rate-based emission trading program could be designed to ensure equivalent stringency as would be achieved if each participating affected EGU was achieving its source-specific standard of performance, given the structure of the proposed subcategories and their proposed BSERs.	585
273.	The EPA also requests comment on any other methods of rate-based trading that would preserve the stringency of the BSER.	585
274.	The EPA requests comment on whether this or another method of mass-based trading could ensure equivalent stringency as would be achieved if each participating affected EGU was achieving its source-specific standard of performance.	585
275.	The EPA is seeking comment on whether mass-based emission trading might be appropriate under these emission guidelines, taking into consideration the discussion of the appropriateness of trading for certain subcategories in section XII.E.2.a of this preamble.	585
276.	The EPA requests comment on whether and how a mass-based emission trading program could be designed to ensure equivalent stringency as each participating affected EGU achieving its source-specific standard of performance, given the structure of the proposed subcategories and their proposed BSERs.	588
277.	The EPA is also seeking comment on whether the method of mass-based emission trading using dynamic budgeting, as discussed in this section, might be appropriate under these emission guidelines.	588
278.	The EPA is also seeking comment on other approaches or features that could ensure that emission budgets reflect the stringency that would be achieved through unit-specific application of rate-based standards of performance.	588

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279.	The Agency requests comment on potential ways to address this implementation issue [varying compliance deadlines for EGUs and how trading would work] in the context of a state plan, and whether this issue impacts the utility or feasibility of trading across subcategories.	589
280.	The EPA is also requesting comment on whether and to what extent there would be a desire to capitalize on the EPA's existing reporting and compliance tracking infrastructure to support state implementation of an emission trading program included in a state plan.	589
281.	The EPA requests comment on whether state plans should be allowed to provide for banking of tradable compliance instruments (hereafter referred to as "allowance banking," although it is relevant for both mass-based and rate-based trading programs).	589
282.	In addition to requesting comment on whether the EPA should permit allowance banking, the EPA requests comment on the treatment of banked allowances, specifically whether all or only some portion of an allowance bank could be carried over for use in future control periods or if additional program design elements would be necessary to accommodate allowance banking.	590
283.	The EPA is requesting comment on whether, and under what circumstances or conditions, to allow interstate emission trading under these emission guidelines.	590
284.	Given the increased level of program complexity that would be necessary to accommodate interstate trading and the operational flexibilities already provided by the structure of the proposed subcategories and their proposed BSERs, the EPA requests comment on whether there is utility in providing for it under these emission guidelines. In addition, the EPA requests comment on the information, guidance, and requirements the EPA would need to provide for states to implement successful interstate emission trading programs.	590
285.	The EPA is seeking comment on one potential method, described in this section, as well as other methods that could maintain the required level of emission performance equivalent to each source individually achieving its standard of performance.	591
286.	The EPA is seeking comment on the utility of rate-based averaging as a compliance flexibility, as well as on the illustrative method for developing a composite standard of performance for the purposes of rate-based averaging.	592
287.	The EPA is also seeking comment on any other considerations related to rate-based averaging, including whether the scope of averaging should be limited to a certain level of aggregation (e.g., to facility-level rate-based averaging) or to certain subcategories.	592

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288.	The EPA seeks comment on whether there are any elements of the proposed emission guidelines that might interfere with the implementation of state requirements that limit CO2 emissions from EGUs that may be subject to the proposed emission guidelines.	593
289.	The EPA solicits comment on how meaningful engagement should apply to pertinent stakeholders outside a state's borders.	601
290.	The EPA is requesting comment on what assistance states and pertinent stakeholders may need in conducting meaningful engagement with affected communities to ensure that there are adequate opportunities for public input on decisions to implement emissions control technology (including but not limited to CCS or low-GHG hydrogen).	604
291.	The EPA is also requesting comment on any tools or methodologies that states may find helpful for identifying communities that are most affected by and vulnerable to emissions from affected EGUs under these emission guidelines.	604
292.	The EPA is also requesting comment on whether it would be useful for the Agency to promulgate minimum approvability requirements for meaningful engagement that are specific to these emission guidelines and, if so, what those requirements should be.	604
293.	In the context of the proposed CAA section 111(b) rule for new combustion turbines, the EPA is taking comment on what forms of acceptable mechanisms and documentary evidence should be required for EGUs to demonstrate compliance with the obligation to co-fire low-GHG hydrogen, including proof of production pathway, overall emissions calculations or modeling results and input, purchasing agreements, contracts, and attribute certificates.	605
294.	The EPA is also taking comment, in the context of the CAA section 111(b) rule, on whether EGUs should be required to make fully transparent their sources of low-GHG hydrogen and the corresponding quantities procured, as well as on whether the EPA should require EGUs to demonstrate that their hydrogen is exclusively from facilities that produce only low-GHG hydrogen, as a means of reducing burden and opportunities for double counting.	605-606
295.	The EPA therefore requests comment on the proposed approaches for verifying that low-GHG hydrogen is used for complying with an applicable standard of performance discussed in section VII.K.3 of this preamble.	606
296.	Additionally, the EPA requests comment on any unique considerations regarding the implementation of such verification requirements through state plans, including whether any additional or different requirements may be necessary to ensure that affected existing combustion turbine EGUs in the	606

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	hydrogen co-firing subcategory that co-fire hydrogen to meet their standards of performance co-fire with low-GHG hydrogen.	
297.	The EPA is proposing or requesting comment on several requirements designed to help states ensure compliance by affected EGUs with standards of performance, as well as to assist the public in tracking increments of progress toward the final compliance date.	606
298.	The EPA is requesting comment on whether to require that an affected EGU's enforceable commitment to permanently cease operations, when a state relies on that commitment for subcategory applicability (e.g., a state elects to rely on an affected coal-fired steam-generating unit's commitment to permanently cease operations by December 31, 2034, to meet the applicability requirements for the near-term subcategory), must be in the form of an emission limit of 0 lb CO2/MWh that applies on the relevant date.	606-607
299.	The EPA is requesting comment on whether such an emission limit would have any advantages or disadvantages for compliance and enforceability relative to the alternative, which is an enforceable commitment in a state plan to cease operation by a date certain.	607
300.	[Regarding requirements to post information to websites regarding subcategory designations and compliance schedules], the EPA solicits comment on these timeframes for posting and information retention, as well as on any concerns related to confidential business information.	608
301.	The EPA solicits comment on other ways to reduce redundancy and burden while satisfying the objective of making it easier for pertinent stakeholders to access affected EGUs' reporting and recordkeeping information.	609
302.	The EPA requests comment on whether to promulgate requirements in the final emission guidelines pertaining to the demonstrations, analysis, and information the owner or operator of an affected EGU would have to submit to the EPA in order to be considered for an Administrative Compliance Order (ACO).	612
303.	The EPA solicits comment on the 24-month state planning period. The EPA specifically requests comments from owners and operators of affected EGUs regarding the steps, and amount of time needed for each step, that they would have to undertake to determine the applicable subcategories and to plan and implement the associated control strategies for each of their affected EGUs.	615-616
304.	Additionally, the EPA requests comment on the 24-month planning period from states, including on any unique characteristics of the fossil fuel-fired EGU source category that they believe merit planning timeframes longer than 15 months. Through outreach, many states have expressed a need for longer	616

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	planning periods and the EPA solicits comment on whether this 24-month planning period accommodates that need.	
305.	The EPA also requests comment from potentially impacted communities and other pertinent stakeholders on any considerations related to providing a longer state plan submission timeframe under these emission guidelines.	616
306.	The EPA is additionally requesting comment on a potential bifurcated approach to state plan submissions for affected steam generating units and affected combustion turbine EGUs.	616
307.	The EPA is therefore requesting comment on an approach in which states would submit two different plans on different timelines: a state plan addressing affected steam-generating units due 24 months after promulgation of these emission guidelines and a second state plan addressing affected combustion turbine EGUs due 36 months after promulgation of these emission guidelines.	617
308.	The EPA solicits comment on this staggered approach and on whether 36 months, or a longer or shorter period, could be an appropriate state plan submission deadline for combustion turbine EGUs, and why.	617
309.	The EPA requests that commenters explain if and how a longer state plan submission timeline for affected combustion turbine EGUs would be consistent with achieving the emission reductions under these emission guidelines as quickly as reasonably practicable, as well as on the potential interactions between the state plan submission time frame and the proposed compliance deadlines for combustion turbine EGUs.	617
310.	The EPA also solicits comment from potentially impacted communities and other pertinent stakeholders on any considerations related to providing a longer state plan submission timeframe for combustion turbine EGUs under these emission guidelines.	617
311.	The EPA requests comment on whether it would be helpful to states to impose a cut-off date for the submission of plan revisions ahead of the January 1, 2030, compliance date for coal-fired steam generating affected EGUs or ahead of the separate compliance dates for achieving the CCS-based or hydrogen co-firing-based standards for existing combustion turbines.	619
312.	As an alternative to a cut-off date for state plan revisions ahead of the compliance date, the EPA requests comment on the dual-path standards of performance approach discussed in section XII.F.4 of this preamble.	619

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313.	The EPA requests comment on whether to set a deadline for states to provide plan revisions within a certain timeframe of knowing that an affected EGU needs to switch subcategories and on what timeframe would be appropriate.	623
314.	The EPA is therefore soliciting comment on the following dual-path approach that may result in an additional flexibility for owners or operators of affected coal-fired steam generating units and affected combustion turbine EGUs that want additional time to commit to a particular subcategory without the need for a state plan revision.	624
315.	The EPA is soliciting comment on an approach that allows coal-fired steam generating units and combustion turbine EGUs to have two different standards of performance submitted to the EPA in a state plan based on potential inclusion in two different subcategories.	624
316.	The EPA is soliciting comment on this approach [regarding EGUs that miss an enforceable increment of progress] to provide flexibility to states and affected coal-fired steam generating units and affected combustion turbine EGUs.	626
317.	The EPA solicits comment on whether this proposed dual-path flexibility would have utility and on whether it could be implemented in a manner that ensures that states and affected coal-fired steam generating units and affected combustion turbine EGUs would be able to comply with applicable requirements in a timely manner.	626
318.	Additionally, the EPA solicits comment on whether notification deadlines of July 1, 2029, for coal-fired steam generating units, and July 1, 2031, for combustion turbine EGUs are the appropriate dates for a final decision between two potential standards of performance and why	626
319.	The EPA requests comment on the use of the timeframes provided in subpart Ba, as the EPA has proposed to revise it, for EPA actions on state plan submissions and for the promulgation of Federal plans for these particular emission guidelines.	628
320.	The EPA solicits comment on whether, and under what circumstances, states might use this mechanism [to include provisions related to the state plan in a source's Title V permit before submitting the plan to EPA and labeling them as "not federally enforceable" until EPA has approved the state plan].	638
321.	The EPA also seeks comment on all aspects of the [RIA benefit-cost] analysis, including modeling assumptions.	640
322.	The EPA solicits comment on its [compliance] cost estimation generally [in the RIA].	643

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323.	The EPA solicits comment on the SAGE analysis [economy-wide impacts of the rules including annualized social costs] presented in the RIA appendix.	645