El Paso Electric Company
Montana Power Station
Prevention of Significant Deterioration Permit for Greenhouse Gas Emissions
PSD-TX-1290-GHG

Responses to Public Comments

U.S. Environmental Protection Agency, Region 6
March 21, 2014

Table of Contents

I. Summary of the Formal Public Participation Process

The U.S. Environmental Protection Agency, Region 6 (EPA) proposed to issue a Prevention of Significant Deterioration (PSD) permit to El Paso Electric Company, Montana Power Station on September 22, 2013. The public comment period on the draft permit began September 22, 2013 and was originally scheduled to close on October 22, 2013. An initial request to extend the comment period was received on October 17, 2013, which the Director of the Multimedia Planning and Permitting Division (the Regional Administrator's authorized representative) subsequently granted on October 21, 2013 to thereby extend the end of the comment period to October 29, 2013. EPA later received multiple additional requests to further extend the comment period that were granted to extend the closing of the comment period to December 4, 2013. EPA announced the public comment period through a public notice published in the *El Paso Times* on September 22, 2013 and on Region 6's website. EPA also notified agencies and municipalities on September 20, 2013 in accordance with 40 CFR Part 124.

The Administrative Record for the draft permit was made available at EPA Region 6's office. EPA also made the draft permit, Statement of Basis and other supporting documentation available on Region 6's website, and available for viewing at the Esperanza Acosta Moreno Library in El Paso, Texas.

EPA's public notice for the draft permit also provided the public with notice of the public hearing, explaining that it was subject to cancellation if no requests for a hearing were to be received or if EPA determined that there was not a significant degree of public interest. During the comment period, EPA received a written request for a public hearing on October 15, 2013, which the Director of the Multimedia Planning and Permitting Division granted. In accordance with the details provided in the notice of the public hearing, the hearing was held on October 24, 2013 from 6:00 pm to 8:00 pm at the East Montana Middle School. Comments were received during the public hearing, and the transcript from the public hearing was posted to EPA's website. In addition to the comments received during the public hearing (26 oral statements and 13 written comment submissions), EPA received 29 comments via U.S. mail or email during the public comment period. Soon after the close of the comment period, an organizational group commenter requested that the commenter's previously submitted oral statements and written comment submission be withdrawn. While maintained as EPA records, these formally withdrawn submissions are not regarded as being received for purposes of issuing the Response to Comments.

II. EPA's Response to Public Comments

This section summarizes the public comments received by EPA and provides our responses to the comments. EPA received 66 comments during the public comment period.

1. Several commenters expressed a concern with the effects of the proposed projects emissions on human health.

   See Index Numbers: A.1, A.2, A.3, A.4, A.5, A.6, A.9, A.10, A.11, A.12, B.14, B.19, B.21, B.24, B.27, B.37, C.43, C.49, C.54, C.59, C.66

EPA Response: EPA has only proposed to permit the greenhouse gas (GHG) emissions associated with the proposed project. Non-GHG pollutants and their levels of control and corresponding health effects

(if any) are not addressed by this permitting action.[1] The Texas Commission on Environmental Quality (TCEQ) is the permitting authority for non-GHG pollutants, and as part of a separate permitting action for the project is the responsible authority for determining that the project will be protective of human health as required by the National Ambient Air Quality Standards (NAAQS) for criteria pollutants such as CO, NOx, SO_2, lead and particulate matter when the PSD requirements are determined to be applicable to those pollutants.

The primary NAAQS are set at a level requisite to protect the public health with an adequate margin of safety, including the health of individuals who may be sensitive to the effects of a particular criteria pollutant. In a separate permitting record applicable to the project, TCEQ has already determined that an appropriate demonstration was made that project emissions would not violate any of the applicable NAAQS. Accordingly, for our purposes in permitting the project, we do not specifically require that this demonstration be made, because it is not needed to set the BACT requirement for GHGs. The purpose of our permitting action is not to oversee TCEQ's determination on the sufficiency of the demonstration made to TCEQ. For informational purposes, however, we note that the applicant has submitted the same air modeling results during our comment period and to our administrative record that TCEQ had reviewed and earlier concluded would not cause or contribute to a violation of the NAAQS. TCEQ issued a PSD permit for this project on January 21, 2014. As a final note, as was originally indicated in our Statement of Basis, the location for the project is currently designated attainment/unclassifiable for all NAAQS, and this project, while it has non-GHG emissions that are significant, only constitutes a major emitting facility due to its GHG emissions.

2. The location for the proposed Montana Power Station is adjacent to the existing Magellan Midstream Partners petroleum products tank farm. Several commenters are concerned with the location of the proposed combustion turbine equipment in close proximity to the existing tank farm. Additionally, some commenters stated that a hazard analysis should have been completed for the proposed project.

   See Index Numbers: A.1, A.4, A.5, A.9, A.11, B.14, B.22, B.24, B.25, B.28, B.30c, B.35, B.36, C.42, C.49, C.50, C.53, C.57

EPA Response: Our permitting action applies the Clean Air Act (CAA) requirements at 40 CFR § 52.21 to the proposed project and principally focuses on the selection of BACT for the project's GHG emissions. We have no regulatory basis to examine safety standards that may pertain to the project for its proximity to an adjoining tank farm. Examining whether safety standards apply or are met on this issue is not part of our permitting action.

3. Several comments were received that noted a general disagreement or question the proposed location of the Montana Power Station.

[1] GHGs are not specifically noted for having direct impacts on human health at this time. The endangerment finding was based on the GHG contributions to climate change. A detailed explanation of climate change and its impact on health, society, and the environment is provided in EPA's "Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act," available at: http://epa.gov/climatechange/Downloads/endangerment/Endangerment_TSD.pdf. Research into the effects of GHGs on the environment is ongoing.

See Index Numbers: A.1, A.10, B.15, B.21, B.22, B.27, B.34, B.36, C.56, C.60

EPA Response: PSD provisions do not require us to perform an independent analysis of alternatives to the project (including alternative locations), even as we may have the discretion to do so when it is warranted. In this case, multiple commenters expressed disagreement with the project's location because of its proximity to a neighboring community. However, we also understand that close to or soon after the conclusion of the comment period, El Paso Electric reached an agreement with some or all members of that neighboring community. We support the applicant's outreach and resolution efforts, especially to the extent those efforts have ameliorated concerns, including location-based concerns, that were raised by members of the neighboring community.[2]

Comments that have disagreed with the location have not specifically identified or proposed any alternative site location for us to evaluate, and we decline to perform our own independent analysis of alternative locations. Even were we to undertake such an analysis, we would not consider it valid to reduce the siting considerations for this project to the simple point of whether there are other locations with undeveloped land within some distance of the project or even further from city limits, because we presume the applicant's siting considerations (as also overseen by state authorities) were based not only on ownership of the available land, but also its proximity to existing infrastructure for a reliable gas supply, its proximity to tie-ins for electric transmission, and its proximity to the materials and workforce for constructing, operating and maintaining the proposed facility.

4. The environmental effects of greenhouse gas emissions were questioned in several comments. In addition, a commenter specifically asked why a National Ambient Air Quality Standard (NAAQS) was not established for greenhouse gas emissions.

   See Index Numbers: A.7, A.8, A.11a

EPA Response: As recognized in EPA regulations, including the PSD regulations that apply to our permitting action, greenhouse gas emissions are a pollutant under the Clean Air Act. Here, the GHG emissions for the project are subject to the requirement that they meet the Best Available Control Technology requirement, which ensures those emissions are appropriately minimized in consideration of the statutory factors. *See* CAA Section 169(3). In accordance with the current guidance, we are not undertaking any effects-based analysis of GHGs from the project, but rather focusing on satisfying all PSD requirements by reducing GHGs as much as possible in accordance with the criteria for determining BACT. Modeling or ambient monitoring for CO_2 or GHGs in the context of PSD permitting is not expected from permit applicants, because there is no NAAQS for GHGs and because existing regulations exempt GHGs from modeling requirements. *See* GHG Guidance at 47-48. Thus, although "it is clear that GHG emissions contribute to global warming and other climate changes that result in impacts on the environment," we are following current guidance that states this should be addressed "with focus on reducing GHG emissions to the maximum extent." *See id*. at 48.

Whether EPA should establish a NAAQS for GHGs is not addressable in this permitting action, which is limited to our proposal on the Draft Permit.

[2] See note 3, *infra*.

5. El Paso Electric Company has several power generation facilities in their generation portfolio. Several commenters have stated a concern with the company's overall compliance history and a potential for future compliance problems with the Montana Power Station.

   See Index Numbers: A.11a, B.21, B.22a, B.23, C.44, C.45, C.49, C.52

EPA Response: There are not provisions in the PSD regulations that provide for consideration of an applicant's compliance history in the permit decision. For our purposes, the question is whether the permit conditions are appropriate to ensure compliance with GHG BACT on a continuous basis and to require that violations be identified and addressed in a timely manner. The Final Permit meets these goals, and there is no basis to further consider the issue of compliance history. There are requirements in the CAA to examine compliance in the context of nonattainment NSR permitting, 42 U.S.C. § 7503(a)(1)(3), but they are not applicable to this permit decision applying the PSD requirements. Even assuming that compliance history details for unrelated facilities were somehow relevant to the permitting action, no such details with any kind of specificity have been presented by commenters.

6. The proposed project includes the construction of cooling ponds as part of the evaporative cooling system. Commenters have noted a concern for potential odors and vector problems associated with the new cooling ponds. An additional comment was received speculating on the potential for risk to birds that may be attracted to the cooling ponds.

   See Index Numbers: A.11a, B.21, B.22a, B.24, B.28, B.30b, B.36, C.49, C.54

EPA Response: As with comments related to the proximity to fuel tanks, the relevant regulatory provisions that apply to our permitting action only concern the Clean Air Act requirements for GHGs that apply to those emission units in the project that would emit GHGs. While the wet cooling system which includes cooling ponds is part of the project design (for this water is used and reused to cool the turbines), it does not constitute an emission unit subject to GHG requirements. Outside of our GHG permitting action, we recognize there may be other design or regulatory considerations that may be relevant to how the company would construct and maintain the cooling ponds for the project. For example, if in fact the breeding of mosquitoes were any cause for concern, then state or local authorities may ensure the issue is addressed, assuming the company does not do so at its own initiative. In any event, while we acknowledge these comments, they all appear to be outside the scope of our permitting action.

7. Several commenters have expressed a concerned about the lack of an environmental justice analysis and the location of the project near a "colonia."

   See Index Numbers: B.13, B.15, B.19, B.21, B.22a, B.24, B.30a, B.31d, B.36, C.43, C.44, C.47, C.51, C.58, C.65,

EPA Response: We appreciate these comments. To again provide the position provided in our Statement of Basis:

> …the EAB has held that environmental justice issues must be considered in connection with the issuance of federal Prevention of Significant Deterioration (PSD) permits issued by EPA

> Regional Offices [See, e.g., *In re Prairie State Generating Company*, 13 E.A.D. 1, 123 (EAB 2006); *In re Knauf Fiber Glass*, Gmbh, 8 E.A.D. 121, 174-75 (EAB 1999)]. This permitting action, if finalized, authorizes emissions of GHG, controlled by what we have determined is the Best Available Control Technology for those emissions. It does not select environmental controls for any other pollutants. Unlike the criteria pollutants for which EPA has historically issued PSD permits, there is no National Ambient Air Quality Standard (NAAQS) for GHGs. The global climate-change inducing effects of GHG emissions, according to the "Endangerment and Cause or Contribute Finding", are far-reaching and multi-dimensional (75 FR 66497). Climate change modeling and evaluations of risks and impacts are typically conducted for changes in emissions that are orders of magnitude larger than the emissions from individual projects that might be analyzed in PSD permit reviews. Quantifying the exact impacts attributable to a specific GHG source obtaining a permit in specific places and points would not be possible [PSD and Title V Permitting Guidance for GHGS at 48]. Thus, we conclude it would not be meaningful to evaluate impacts of GHG emissions on a local community in the context of a single permit. Accordingly, we have determined an environmental justice analysis is not necessary for the permitting record.

Statement of Basis at page 26.

None of the commenters specifically commented on the explanation behind our decision not to provide a formalized environmental justice analysis for the permitting record. Several commenters have mistakenly suggested that the applicant was required to provide the analysis; however, we note that this requirement, when applicable, is an obligation of EPA as the permit issuer. In this case, we believe the rationale provided in the Statement of Basis appropriately addresses the issue of environmental justice for the permitting action. However, we do not mean to discourage (and in fact welcome) comments on environmental justice considerations that may apply for this and other cases.

Although we do not feel in the case of a permit only for GHGs that it is specifically required that we analyze whether the neighboring community is an overburdened community in the meaning of EPA environmental justice policy, we nevertheless did use our discretion to encourage and enhance public participation for this permitting action. The procedural details for this permitting action show that special efforts were made in this case to ensure that we provided public participation opportunities appropriate to the needs of the neighboring community.

Before public notice, we were aware that community concerns, including concerns from community members of what some commenters described as a neighboring "colonia," could be voiced regarding the project, and the Region informally determined that some community members may be best able to provide input, including the submission of comments, in Spanish. Region 6 took the initiative of publishing the Notice of the Draft Permit and Public Hearing in both English and Spanish. On the basis of a single hearing request, the Regional Administrator's designee also decided to hold a public hearing and arranged for a Spanish translation service for commenters at the public hearing. Moreover, the Regional Administrator's designee liberally granted extensions of the public comment period, including one made at the request of the permit applicant to promote separate community and stakeholder engagement efforts. In the end, the comment period was more than two months in duration--longer than that of any other GHG PSD permitting action to date from the Region. Even as we welcome comments on how our outreach may be improved, we believe all of the above described efforts went beyond those undertaken for other GHG PSD permitting actions to date.

Finally, while not specifically part of our permitting considerations in the case or a matter of substance for our administrative record, we take notice that El Paso Electric Company at its own initiative also undertook special efforts to reach resolution with community members, including reaching an agreement for ongoing community engagement through a citizen advisory panel.[3] We believe that many commenters on this GHG PSD permitting action were approving of (if not members of the organizational group that was party to) the agreement. Although every situation is different, EPA has generally recognized that community engagement efforts on the part of a permit applicant are commendable.[4] These efforts appear to have proved beneficial in this case.

8. Comments were received asserting that the proposed project has undergone numerous changes to expand the project scope.

   See Index Numbers: B.14, C.43, C.52, C.57, C.62,

EPA Response: Our permitting action is based on the GHG PSD permit application received by EPA Region 6 on April 20, 2012. We do not believe these comments pertain to our permitting action and permitting record. While El Paso Electric has supplied additional information in support of its application, the scope and project objectives have not substantively changed in any way that could accurately be described as having expanded the project scope in terms of its physical footprint or the project's overall GHG emissions. Our permitting record has always been based on a project that contemplates the use of four simple cycle LMS100 turbines. Whether El Paso Electric had different project plans earlier in its planning process or in the records for other regulatory approvals does not bear on the terms and conditions of the Draft Permit and its supporting analysis. Even assuming there were changes to the permit application, we note that PSD permit applicants are permitted to modify their applications or even to submit entirely new applications provided those requests come with the necessary supporting information.[5]

9. Commenters have noted concerns with the timing allowed for the construction of the combustion turbines.

   See Index Numbers: B.13, C.43

EPA Response: The PSD permit program applies to large stationary sources of emissions that may undergo construction according to an extended schedule. However, consistent with regulation (40 CFR 52.21(r)(2)), the permit requires that construction commence within 18 months of permit issuance (absent a satisfactory showing that an extension is justified). Moreover, once construction begins, it may not discontinue "for a period of 18 months or more." While these outer limits are binding on the

[3] "Agreement ends Montana Vista residents' fight over El Paso Electric's power plant," El Paso Times, Dec 11, 2013, available at http://www.elpasotimes.com/news/ci_24699518/agreement-ends-residents-fight-over-el-paso-electrics (last accessed 3/11/14)

[4] *See generally*, "Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways to Engage Neighboring Communities" at 78 FR 27220 (May 9, 2013).

[5] See, e.g., Memorandum from Stephen Page to Regional Air Division Directors, "Timely Processing of Prevention of Significant Deterioration (PSD) Permits when EPA or a PSD-Delegated Air Agency Issues the Permit," October 15, 2012, at 8 available at http://www.epa.gov/region07/air/nsr/nsrmemos/timely.pdf (last accessed 2/3/2014) ("Project Changes by the Applicant")

applicant and we do not believe it is appropriate to vary from them in this case, we believe that the cost incentives for project development typically favor expeditious construction schedules. This can avoid higher construction costs and put the facility into productive use at an earlier time. In sum, the permit terms and conditions regarding construction will not vary from those provided by regulation.

10. Several comments were received questioning the need for another power generation facility. An additional comment questioned why this community must bear the burden of the project when the power generation is intended for another area.

    See Index Numbers: B.13, B.18, B.23, B.24, B.37, C.46, C.48, C.53, C.56

EPA Response: In this case, the Applicant provided a thorough, reasoned discussion of its needs for the project both for the projected customer demands for its service area and, more generally, for balancing its limited generation portfolio as a public utility. *See, e.g.*, Application, Appendix A, "Alternatives Analysis Used to Define Project Scope." We found this discussion to be thoughtful, well-reasoned, and do not believe its details have been brought into question by any commenter questions regarding the need for the project. We also received no information that contradicts the Applicant's stated need for the project.

As a separate matter, we do not feel it is necessary to conduct any additional or independent analysis. The relevant portion of CAA section 165(a)(2) provides that PSD permitting authorities must provide the public with the opportunity to comment on "the air quality impact of [the proposed] source, *alternatives thereto*, control technology requirements, and other appropriate considerations[.]" CAA § 165(a)(2), 42 U.S.C. § 7475(a)(2) (emphasis added). The EPA interprets this language to allow, but not require, a permitting authority to consider a no-build alternative. *See In re Prairie State Generating Co.*, 13 E.A.D. 1, 32-33 (EAB 2006); *In re City of Palmdale*, PSD Appeal No. 11-07, slip op. at 57 (EAB Sept. 17, 2012), 15 E.A.D. The EPA has made clear that the permit issuer does not have an obligation to independently investigate alternatives beyond those raised in public comments, including a no-build alternative. Further, the EPA has observed the importance of this limitation on the permit issuer's obligation, particularly where the evaluation of need for additional electrical generation capacity would require a rigorous and robust analysis and would be time-consuming and burdensome for the permit issuer. In such circumstances, the permit issuer is granted considerable latitude in exercising its discretion to determine how best to apply scarce administrative resources.

We note that in this case El Paso Electric requires regulatory approvals from the Public Utility Commission of Texas and the New Mexico Public Regulation Commission. These separate regulatory bodies specialize in determining whether the project furthers the need for adequate and secure supplies of electricity. In addition, El Paso Electric is subject to requirements to ensure reliability of supplies as a member of the Western Electricity Coordinating Council. Rather than independently scrutinizing the need for the project, we find it appropriate to defer to the justification furnished by the Applicant, recognizing that El Paso Electric operates as a public utility subject to the approval and oversight authority from these multiple, separate regulatory bodies.

11. General electrical and safety and Magnetic Fields (EMF) concerns associated with the operation of the proposed Montana Power Station and its associated power transmission lines were presented.

See Index Numbers: B.20, B.28

EPA Response: The regulatory provisions of the PSD program do not cover EMF or provide a basis for EMF to be studied or addressed by any permit terms and conditions that would be relevant to the GHG PSD permit. Regulation of EMF is therefore outside the scope of this permitting action. However, additional information related to EMF may be found on EPA's website at: http://www.epa.gov/radtown/power-lines.html. As noted on this webpage, there are no federal standards limiting occupational or residential exposure to power line EMF.

12. Requests for Public Comment Extension and Public Hearing.

See Index Numbers: B.17, B.32, B.33, C.57

EPA Response: As discussed in the "Summary of Formal Public Participation Process," EPA granted multiple requests to extend the comment period. The comment period lasted more than two months total, making it the longest comment period of any GHG PSD permit action from the Region to date.

13. A commenter has stated that the data used in the analysis is 12 years old and is not representative of current contaminants Montana Power Station will be releasing.

See Index Numbers: B.23, B.24

EPA Response: On the basis of the submitted comments, we are unable to determine which data set these comments are referring to and whether the assertions relate to our permit application and the data we used to establish GHG emission limits for the Draft Permit. In any case, we used recently submitted data from the Applicant that we deem reliable to establish the GHG emission limits for the permit.[6] We therefore disagree with the comments. We suspect the commenter references to contaminants may refer to non-GHG pollutants or issues relating to a different facility, in which case the comments are outside the scope of our permitting action.

14. The visibility impacts from the proposed projects emissions were noted as an issue.

See Index Numbers: B.28, C.54

EPA Response: Since our PSD permitting action strictly relates to GHG emissions, the visibility impact protections in the PSD program (e.g., 40 CFR 52.21(o) and (p)), are not relevant to this permitting action. In this case, the Applicant has sought a PSD permit for non-GHG pollutants from the Texas Commission on Environmental Quality. There, the applicant and permitting authority are required to conduct the necessary analyses for visibility protection in accordance with the state implementation plan provisions for the PSD program, as currently approved. *See* GHG Guidance at 49. Since those issues must be addressed for that separate PSD permit proceeding, we decline to revisit them or conduct oversight for them in the context of this GHG PSD permit proceeding. In addition, our approach is fully consistent with current guidance for GHGs, which states it is not necessary to assess impacts from

[6] We note the earliest version of the LMS100 turbine was not available 12 years ago, much less in commercial operation. See "GE Unveils World's Most Efficient Simple-Cycle Gas Turbine For the Power Generation Industry," December 9, 2003, available at http://www.geaviation.com/press/marine/marine_20031209.html (last accessed 2/3/14).

GHGs in the context of the additional impacts analysis or the Class I area provisions of the PSD regulations, but rather to satisfy this requirement by reducing GHGs to the maximum extent. *See* GHG Guidance at 48.

15. Several commenters expressed a concern related to the potential negative economic impacts (e.g., loss in property values) associated with the construction of the proposed Montana Power Station.

    See Index Numbers: B.28, B.37, C.54

EPA Response: The provisions of the PSD program that apply to our permitting determination do not call for an assessment of economic impacts of the project for the surrounding community. We recognize that stakeholders from different perspectives may variously state that a project will be beneficial or negative as an overall matter or with respect to more focused topics such as property values. However, our consideration of economic impacts in the permitting decision for a GHG PSD permit is limited to consideration of the issue as it applies to the Best Available Control Technology for the project emissions.[7]

16. Several concerns were noted with the use of an evaporative cooling system in an area that has experienced numerous drought conditions.

    See Index Numbers: B.28, B.30a, B.36, C.43, C.49, C.50, C.51, C.54, C.61

EPA Response: We agree that this project location is in a water scarce region, as may also generally be said for many of the industrial and electric generation projects being planned throughout the Western United States. While water-saving technologies are beneficial as a general matter, the focus of our permit decision is the GHG BACT requirement to maximize the reduction of GHG emissions in consideration of the statutory factors. As explained in the Statement of Basis, while a dry cooling system can be considered an available option, it would sacrifice "at least 10 percent" of the maximum rated capacity during summer months and reduce available net power by approximately 1 percent due to its higher parasitic load. The wet system intercooler is the more thermally efficient design and results in fewer GHG emissions per unit of electrical output. Since El Paso Electric has an agreement in place for the facility's water needs based on the more efficient wet cooling system, we do not believe unusual circumstances are present to show that the assigned BACT limits should be based on the less effective alternative (i.e., dry cooling) or that use of wet cooling is inappropriate. We also note that El Paso Electric, having accepted wet cooling as the top alternative and having available water for the project, has not argued that the impacts justify selection of BACT limits based on dry cooling.

17. A commenter twice noted a concern for the possibility that the proposed Montana Power Station will more than likely attract more lightning strikes to the area and therefore increase the potential dangers to the community and Magellan Midstream Partners petroleum products tank farm.

[7] For reasons earlier explained, we note again that we are not requiring the applicant to address the requirements of 52.21(o) for GHGs; this provision (when it applies) prompts the study of projected emissions from anticipated associated "growth," commercial or otherwise in the area. This type of economically-related growth study does not appear to relate to the issues raised by commenters.

See Index Numbers: B.28, C.54

EPA Response: The commenter provided no information on this issue for our assessment, and in any event the safety considerations and applicable practices for mitigating lightning strikes do not apply to our permitting action. As may also be relevant for other comments that we received, we note that federal PSD permitting is exempt from the environmental impact statement requirement in the National Environmental Policy Act. See 40 CFR 124.9(b)(6).

18. Commenters expressed concern with the emissions for this proposed project that were recently permitted by the Texas Commission on Environmental Quality and the cumulative effects of those emissions.

See Index Numbers: B.28, B.36, C.54, C.58

EPA Response: Our permitting action relates only to GHG emissions. We note, however, that the PSD program provisions that apply to non-GHG permitting through approved state SIP provisions are designed to account for protectiveness of the NAAQS with due consideration (e.g., in submitted modeling demonstrations) for there being multiple permitted or pending projects in an area. In this case of a permitting action only for GHGs, these comments are beyond the scope of our proposed action. To the extent that commenters had pollutants in mind other than those regulated under the PSD program (e.g., toxic air pollutants), the comments are outside the scope of our permitting action for an additional, separate reason.

19. Several commenters have questioned if the use of solar or wind power generation was a feasible alternative to the proposed plant design.

See Index Numbers: B.28, C.48

EPA Response: The Applicant has documented in its submitted materials (including its comment letter on the Draft Permit) that it is actively pursuing opportunities for greater solar capacity in its power generation portfolio. However, solar and wind generation are intermittent renewable generation resources and do not fit the applicant's asserted (and documented) need and business purpose for additional Peaking/Intermediate load operational capabilities. *See* Statement of Basis at 6.[8] Even assuming that solar or wind power options could match the needed operational capabilities, those options would not be able to generate anything close to the planned-for 400MW capacity within the 260-acre tract of land committed to the project. We are accordingly not requiring the applicant to implement solar or wind power generation options because this would be inconsistent with the fundamental business purpose of the applicant and thus fundamentally redefine the source.

20. A general disapproval of the proposed project was noted by several commenters

See Index Numbers: B.29, B.35, C.63, C.64

EPA Response: EPA acknowledges receipt of these comments.

[8] In fact, the proposed project is one that can provide for grid stability and greater utilization of the new and existing renewable capacity, including the 47 MW of solar generation added to EPEC's system in 2012.

21. A comment was received questioning why an Environmental Impact Statement (EIS) and cumulative impacts and water impacts review was not completed.

    See Index Numbers: B.30a, C.43, C.52, C.58

EPA Response: In PSD permitting decisions, federal law exempts EPA from any requirement to prepare an environmental impact statement or environmental assessment under the National Environmental Policy Act. *See* 15 U.S.C. § 793(c); *see also* 40 CFR 124.9(b)(6). However, the commenter may note that some additional environmental analysis was conducted in preparing the biological assessment that EPA has relied on to satisfy its obligations under Section 7(a)(2) of the Endangered Species Act (ESA)(16 U.S.C. § 1536) and its implementing regulations at 50 CFR Part 402.

22. Several commenters have noted a concern with potential noise and traffic issues associated with the proposed Montana Power Station.

    See Index Numbers: B.37, C.42, C.53

EPA Response: The regulatory provisions of the PSD program do not provide a basis for studying or imposing requirements based on the projected noise effects of a project, in its construction or operation. As a separate matter, however, we note that noise effects were studied in the biological assessment furnished by the Applicant in this case, which calculated and estimated the noise impacts for construction and operation, including the assessment of those impacts for the closest residences in multiple directions.[9]

The biological assessment also states that any increased traffic for construction and operation "would not be much greater than what currently occurs from residential traffic, commercial traffic, and military operations" and that these effects would likely be negligible. While traffic issues are conceivably relevant to a study of additional impacts that might be conducted under 52.21(o) for other pollutants, guidance does not recommend that such an analysis be conducted for GHG impacts. GHG Guidance at 48. In any event, from a GHG perspective, any vehicular emissions that could speculatively count as growth associated with the project would be expected to worsen if the project were to be located in a more remote area. Thus, we do not view these comments as being relevant to the PSD requirements that apply to this permitting action.

23. Region 6 did not support its conclusion that "installing and operating LDAR or remote sensing" for fugitive methane emissions would cause uniquely excessive costs. The region must provide a careful cost analysis and ensure gas emissions are timely, consistently, and accurately monitored and measured. This is especially important because of the fugitive emissions with respect to the adjacent fuel tanks.

    See Index Numbers: B.30-B.31.e

[9] See Biological Assessment at 14-16, available at http://www.epa.gov/earth1r6/6pd/air/pd-r/ghg/el-paso-electric-biological-assessment.pdf

EPA Response: As was stated in the Statement of Basis, estimated fugitive methane emissions account for less than 0.00003% of the project's total CO_2e emissions. In addition, as was stated for informational purposes in the draft permit, on a mass basis this amount of estimated emissions is no greater than 0.15 tons per year of methane. With revisions to the global warming potential for methane, the CO_2e equivalency originally listed at 3.15 tons per year is now 3.75 tons per year (Thus it remains that estimated methane fugitives are still less than 0.01% of total project emissions). Even as this amount of CO_2e might be characterized as nominal or de minimus, our draft permit nevertheless addresses these fugitive emissions, and we consider them to be addressed appropriately for purposes of finalizing the permit. While reasonable efforts should be made to the address the issue of GHG fugitives, this particular amount of pollutants is not of serious concern as a relative area of focus. As a further matter, we find no technical basis to support the commenter's assertion that the small level of estimated fugitive methane emissions would be a cause for any added dangers by their proximity to a petroleum tank farm or that this is an imperative for a stricter BACT analysis for this project. As a separate facility, the tank farm would be expected to have its own fugitive emissions of VOC, benzene, and (though not likely regulated by any current permit) methane. Thus, the commenter's assertions regarding the danger of the fugitive methane are speculative and lacking in technical support.

We do however agree with the comment that a basis of elimination of LDAR (leak detection and repair) on cost effectiveness grounds is not well demonstrated. LDAR and remote sensing are not "installed" controls, as suggested by the commenter. Instead, they are control measures that are better characterized as process monitoring or work practice standards. Because the principal costs of these measures are the costs of applying personnel to the required task of inspecting, recordkeeping, and taking remedial actions, as necessary, a PSD permit writer cannot easily compare the control measures incrementally or by cost effectiveness by the conventional manner for conducting an economic analysis for add-on controls. We do not believe that an effort toward that end is necessary, however. While operating conditions or work practices might be ranked and organized by the rigorousness of the process monitoring contemplated for the permit (e.g., frequency, duration, recordkeeping or techniques applied), we do not think this exercise would be helpful here where there is a negligible difference in emissions. *See In re Prairie State Generating Company* (p. 34-38) (finding that a full cost analysis is not required when a control technology has comparable control effectiveness). *See* also Draft NSR Manual B.20-21. (a fully detailed evaluation in Step 4 may not be needed, if there "is a negligible difference in emissions" between control alternatives). Accordingly, we believe the permit terms and conditions regarding fugitive emissions are justified as BACT for the project. We note that the permit terms and conditions for fugitive emissions could not be considered any less stringent than those recently given to other gas-fired power plants. In the absence of an applicable NSPS for GHGs that addresses fugitives and piping components, we believe the approach applied in this permitting action is appropriately stringent.

24. BACT Requires a Dry-Hybrid System to be Evaluated. Under BACT a dry system should be more thoroughly analyzed and a hybrid system should also be considered and evaluated. Because of the extremely limited water in the El Paso region and the exacerbating impact of the current drought of record, the true cost-both environmentally and monetarily of the wet system is much greater than in other regions.

See Index Numbers: B.17, B.26[10], B.26a, B.30-B.31.e

EPA Response: As was earlier explained in response to comment 16, the basis for additional study of water impacts is not well demonstrated, because the dry system is a less effective option with greater energy impacts and the applicant has not urged that water availability issues justify a lower limit based on a dry cooling system. Therefore, we deem it appropriate to assign BACT limits based on use of the more efficient wet cooling system. We note that EPEC's submitted BACT analysis does not consider wet and dry cooling options to be different control options so much as different available commercial turbines with the more efficient turbine being the one selected for the project. Thus, by their view "dry cooling" is not even a listed option for purposes of Steps 1 through 4 of the BACT analysis such that the environmental impacts would be studied in Step 4. In any event, the BACT analysis in our Statement of Basis explains that the wet cooling system is identified as the most thermally efficient design, and we deem it appropriate for BACT, even accounting for water consumption. The commenter-provided information on the water intensiveness of energy production according to the project plans is not disputed, but these impacts are not significant or unusual for a gas fired energy facility. Moreover, we note that the project will have smaller water impacts by virtue of not using a larger combined cycle process or a carbon capture and sequestration process as contemplated by other commenters.

25. The Draft Permit is Less Stringent than the Proposed GHG NSPS for New Electric Generating Units. The Region's proposed BACT limit of 1,194 lb CO_2/MWhr (gross) is higher than the "small unit" limit of 1,100 lb CO_2/MWhr and the "large unit" limit of 1,000 lb CO_2/MWhr.

    See Index Numbers: B.17, B.26[11], B.26a, B.39-B.40h

EPA Response: On April 13, 2012, the EPA issued a signed notice of a proposed rule for *Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units*, EPA-HQ-OAR-2013-0495 (GHG NSPS). After reviewing the comments received on the proposed rule, EPA has withdrawn the April 13, 2012 proposed rule and has proposed a new rule for electric utility generating units on January 8, 2014. The proposed GHG NSPS could influence the ultimate emission requirements for this source. However, as noted in the statement of basis, the proposed GHG NSPS emission limits are not a controlling floor for BACT purposes since the proposed GHG NSPS is not a final action and the proposed standard may change. The GHG NSPS, should it be finalized, is an independent requirement that will apply to any source subject to the NSPS that commences construction after January 8, 2014. Thus, this facility may ultimately be subject to, and need to comply with, the GHG NSPS after it is finalized, even if the emission limits in the final permit are less stringent than the NSPS.

The proposed GHG NSPS limit of 1,100 lb/MWh is approximately 8% below the proposed BACT limit of 1,194 lb/MWh and is within the anticipated normal operational range of the project. The company has requested EPA Region 6 to lower the BACT limit to 1,100 lb/MWh. EPA Region 6 will grant the

[10] The applicant has submitted multiple statements that lend support to our permitting record and our determinations in response to this comment. See, El Paso Electric Company letter to EPA dated December 4, 2013 and indexed as B.26, B.26a, and B.16.

[11] The applicant has submitted multiple statements that lend support to our permitting record and our determinations in response to this comment. See, El Paso Electric Company letter to EPA dated December 4, 2013 and indexed as B.26, B.26a, and B.16.

Applicant's request that the lower permit limit of 1,100 lb CO_2/MWh be applied to the project. However, based on the existing BACT analysis, EPA views this source-requested limit as being met through reduced margins of compliance, not due to any difference in the technology basis for the limit. Thus, the technical basis for the BACT limit as originally proposed in the Draft Permit remains unaltered.

26. The PSD provisions do not allow the permitting authority to select a higher emitting technology based on the applicant's preference of different turbine designs. While BACT does not require a specific turbine manufacturer, the Region must set the GHG BACT emission rate limit based on the most efficient turbine design.

EPA Response: The commenter essentially advocates that the GHG BACT limitation for any gas-fired combustion turbine must be based on the lowest published design heat rate for any combustion turbine on the market, without regard to distinctions in the types and sizes of turbines and without considering whether all such turbines can be applied to the type of source the applicant proposes to construct. EPA does not consider this an appropriate method for determining BACT for projects that apply to gas-fired combustion turbines, because it overlooks many factors that should be examined in the initial steps of the top-down process for determining BACT.

It is important to recognize that there are different types and sizes of gas turbines available and that they are often designed to serve different functions or to operate in different ways. EPA's proposed NSPS for GHGs for EGUs sets forth different proposed standards based on size of the turbines contemplated for use. The existing, applicable NSPS as it applies for criteria pollutants is much the same. See, e.g., 40 CFR Part 60, Subpart KKKK. It is also important to recognize that there may be more than one model available within a turbine type or size category. Given these characteristics of combustion turbines and the range of models on the market from different vendors, the identification of options at Step 1 of a top-down BACT analysis should focus on identifying categories of gas turbine technology (and differences or similarities across models within each category) so that the differences in the applicability and performance of turbine technologies can, where possible, be meaningfully differentiated through all steps of the top-down BACT analysis. The commenter's approach, which is practically equivalent to placing all gas-fired turbines (plus their combined cycle applications, regardless of type or size) into one category and then ranking them at Step 3 according to their heat rates improperly overlooks relevant considerations at Steps 1 and 2 of the top-down BACT analysis (discussed in response to comments that follow). This approach may also overly complicate the BACT analysis by leading to detailed comparisons and fine distinctions in similar models that do not have meaningful differences in performance and emissions. Thus, we decline to view every turbine model from every manufacturer as a different candidate control option for purposes of this permitting action.

We do acknowledge that gas turbines used at simple-cycle plants and combined cycle power plants are properly considered as differing technologies. In this case, there may be an additional basis to distinguish between aeroderivative turbines and the larger frame turbines. For one, aeroderivative turbines are characteristically smaller turbines that borrow from jet aircraft technology; the larger frame turbines are conventionally used for larger combined cycle applications. Larger frame gas turbines are able to realize greater combined cycle efficiencies because of their higher exhaust temperatures (as well as their size). Aeroderivative turbines have mechanical limits on their scale that make them relatively easy to install, maintain and repair (all desirable traits for peaking plant).

The LMS100 turbines considered in the project plans are among the largest of available aeroderivative turbines. By their capacity range and greater speed in responding to sudden dispatch requirements at variable loads, they are particularly suited to the peaking capabilities sought by EPEC. EPEC submitted information that amply demonstrates the LMS100 is an efficient performer for this category of turbine. See, e.g., Application at Section 10.6.2.3; see also El Paso Response to Completeness Determination, July 31, 2012, page 18. We accordingly do not agree with the commenter's underlying premise that the LMS100 may be shown to be a poor performer or to have a poor "turbine design" with reference to larger, dissimilar turbines. This is particularly the case when all of the commenter listed alternatives assume and provide information only on combined cycle modes of power production. Given that the steam turbine in a combined cycle plant can provide up to 40% of the power, the commenter's data on other projects obscures the issue and does not capably show anything about LMS100 "turbine design," as such. We therefore again consider the applicant's turbine selection to be well-representative of the efficiency capabilities of the type and size class (i.e., an aeroderivative turbine with a nominal capacity of 100MW). The LMS100 turbines have been commercially available for fewer than 10 years, and have been improved and upgraded since their introduction. It is our technical judgment based on review of all available technical data that they are well-representative of the efficiency capabilities of aeroderivative turbines in their size class, particularly as employed for the load profile and business purpose of a peaking intermediate load electric generating unit as sought by the applicant.

As earlier stated, it appears that none of the commenter submitted information pertains to the type and application of turbine considered in the draft permit. Instead, the commenter has listed a variety of larger frame turbines in combined cycle applications, urging that they each be analyzed as control options. We do not believe the commenter has articulated any technological distinctions to warrant such a turbine-by-turbine (or indeed, power plant by power plant) analysis. Even if distinctions could be offered, they would add little to the analysis we deem necessary to the permitting action. Here, considering any one combined cycle turbine configuration from a certain manufacturer to constitute a different "technology" from all others does not lead to any helpful differentiation for purposes of a focused BACT review. One federal appeals court has counseled against making the process of obtaining a PSD permit for a new power plant into a "Sisyphean labor" where "there would always be one more option to consider." *See* Sierra Club v. EPA, 499 F.3d 653, 655 (7th Cir. 2007). Accordingly, the overall implication of the commenter that each commercially available turbine model in a combined cycle application constitutes a different candidate control option (the commenter mentions no fewer than ten in its comment letter) has the potential to stretch the term control technology "beyond the breaking point." *See* id.[12]

Here, the commenter has only argued that the LMS100 turbine is not reflective of BACT by the strategy of comparing its heat rate to that of turbines of a different type and size. But these points are not a valid basis for compelling that the limits for the project should be based on other projects (including conceptual projects) that are not comparable to the fundamental design for the project. See, e.g., *In re Kendall New Century Development*, PSD Appeal No. 03-01, 11 E.A.D. 40 at 54 (EAB 2003).

We note there are multiple factors, independent of air quality permitting, that influence the selection of a turbine model. Efficiency of the gas turbine is an important factor, and indeed the applicant has

[12] It also bears noting that when the commenter argues for a more efficient project design based on the use of considerably larger turbines, the "option" could very well have larger, overall emissions that would be inconsistent with the NAAQS demonstrations made to support the draft permit.

considered it in this case, but it is not the sole factor, nor is it necessarily a dominant factor. An applicant may consider other factors, including but not limited to: reliability requirements, the experience of the utility with the operation and maintenance service of the particular manufacturer and turbine design, and the peak demand which must be met based on regulatory decisions and other factors. In this case, we believe the full record reflects that the applicant has considered several of these additional factors.

In developing proposed BACT limits for the Draft Permit, we had explained that the project (particularly by its use of the same turbine models) was highly similar to the Pio Pico Energy Center project that was first permitted in 2012 (although subject to subsequent revisions for limits other than GHGs). Importantly, the proposed GHG BACT limits for this project were lower than those in the case of Pio Pico. They are now lower still in response to the Applicant's request that they be further tightened. Again, these lower limits have been assigned despite the fact that El Paso, Texas, has less favorable environmental conditions than those that would be expected by Pio Pico Energy Center near San Diego.[13]

EPA agrees that design heat rate is relevant to efficiency considerations for GHGs and that it can be important to the GHG BACT limits for a project, but this metric by itself is not determinative of GHG BACT, nor is it necessarily reliable in isolation to try to make cross comparisons among different project designs with different turbine types. The design heat rate is not necessarily useful, for example, in assigning the ton/year or lb/hr BACT limits that may be needed to account for startup and shutdown emissions or operating scenarios in their full picture. Moreover, the design heat rate is only a measure for optimum performance at set conditions. It does not purport to account for full-range performance characteristics, as well as durability in maintaining those characteristics, under all environmental conditions. It is therefore an over-simplification, and potentially even analytically invalid, to suggest that "design heat rate" comparisons of the LMS100 to other turbines of the same type and size class would be determinative (or indeed, automatically relevant) for the BACT analysis. Even as the numbers may be superficially different, they would not necessarily be meaningful or appreciable in the context of efficiency considerations to establish GHG BACT. Undertaking a comparison with entirely dissimilar turbines (e.g., by type and size class) requires even greater caution.

The commenter's universe of turbine models approach also improperly overlooks the ways in which published ratings can be unreliable. The commenter has noted that "conservative" original equipment manufacturers may cautiously understate efficiency by up to 1% percent because of variations in manufacturing tolerances and test uncertainties. While the commenter presents this point in support of the assignment of lower limits, it also suggests that design heat rate, as relevant for differentiating different turbine options in the manner proposed by the commenter, would not be reliable when the difference in marketed engine efficiency is within 1%. Compounding this fact, the commenter's catalogue source for published heat rates raises several additional words of caution—in fact, when it summarizes the "Gas Turbine Performance Specs" it provides an entire subsection labeled "Word of Caution."[14] To start, the simple cycle ratings take out the variables of customer-specified equipment,

[13] In another part of their comments, the commenter makes the mistake of citing annual mean temperatures for El Paso. The mean temperature for July of 82.2F, as cited by the commenter, has little relevance for turbine operations compared to the average daily high of 95F for July and the wintertime monthly lows of 33F. (We note the outer extremes for San Diego's monthly averaged temperatures are far more pleasant to turbine operations: the high of 77F in August and the low of 48 degrees in December).

[14] 2012 GTW Handbook at 64.

site location and operating conditions—all of which belong to a site-specific BACT determination. Adding to this, for combined cycle ratings, it states that an OEM may "quote better steam cycle performance" by specifying relatively aggressive design parameters—leading to a potential 1.5% impact in marketed efficiency. Under "word of caution," the publication further explains that some OEMs have been quoting net output and heat rate by only quoting performance data for the "main power island equipment." An OEM that takes up this practice may not be accounting for parasitic power consumption of approximately 2% of gross plant power, even while another OEM may be accounting for this factor in its separate published performance data. Finally, the source states that contact with OEMs is a "must" for confirming the accuracy of the ratings data and supplying site-specific performance information. Taking account of all variability and uncertainty, even apart from size and type considerations, we have difficulty seeing the benefit in the commenter having provided abundant additional information on other combined cycle options as though they each represent distinctive "options" for purposes of a BACT analysis. Even with data uncertainty and with various sizes with various performance characteristics, all the commenter provided data on heat rate correlates to less than a five percent difference in efficiency for the listed combined cycles. Therefore, even as we will elsewhere respond to the submitted comments on combined cycle technology, we do not believe the commenter has justified its assertion that the Region "must analyze each of the units" (i.e., all commenter's listed power plant designs 100 to 900MW in capacity, each of them using different combustion turbines and heat recovery steam generators) in order to validate the BACT analysis for the permitting decision.

We agree with the commenter that the BACT requirement generally does not dictate selection of a particular turbine model, particularly where turbines models within a particular category have equivalent performance. However, this does not mean that the particular design specifications of a turbine model selected from within a category determined to be BACT are irrelevant for deriving the BACT limits assigned in the permit. For example, even within a single size class, there may be small variations in turbine capacity that affect the rate of emissions that can be achieved with a particular technology. See, PSD permit for La Paloma Energy Center.

27. Combined Cycle Turbines are More Efficient and Lower Polluting. The Region did not consider any of the available combined cycle units because it improperly concluded in Step 2 that combined cycle units are technically infeasible to meet the projects purpose as asserted by El Paso Electric Company.

    See Index Numbers: B.17, B.26[15], B.26a, B.39-B.40.h

EPA Response: As the commenter notes, the BACT analysis provided in the statement of basis eliminated the option of combined cycle gas turbine technology in Step 2 of the BACT analysis for its technical infeasibility in meeting the project needs. One of the Region's considerations in conducting the analysis in this manner was the portion of the GHG Guidance that recommends, "combined cycle combustion turbines, which generally have higher efficiencies than simple cycle turbines, should be listed as options when an applicant proposes to construct a natural-gas fired facility." GHG Guidance at

[15] The applicant has submitted multiple statements that lend support to our permitting record and our determinations in response to this comment. See, El Paso Electric Company letter to EPA dated December 4, 2013 and indexed as B.26, B.26a, and B.16.

29. This statement means that combined cycle technology for gas-fired facilities should be considered in Step 1 of the BACT analysis in that it is an "available" GHG control option that has the potential for practical application to the source under consideration. The Guidance does not necessarily counsel against a permitting authority having the discretion to exclude combined cycle technology on the basis that it would fundamentally redefine the source. Excluding combined cycle technology on such grounds requires taking a "hard look" at the applicant's proposed design in order to discern which design elements are inherent for the applicant's basic business purpose and which changes to design elements would disrupt that basic business purpose. As a threshold matter, however, the permit issuer may also consider the intended function of an electric generating facility—in this case, as a peaking/intermediate load unit—in assessing the fundamental business purpose of the applicant. To that end, we continue to agree with the applicant that combined cycle technology would warrant elimination if considered as an option after Step 1 of the BACT analysis, but we also, on further study, conclude that the option can be properly excluded on "redefining the source" grounds. Thus, we believe the facts that make combined cycle technology unworkable for the project can be relevant when both viewed for "redefining the source" purposes as well as for purposes of showing technical infeasibility. Here, we conclude that combined cycle technology does not have the potential for practical application to the source type and that, in any event, such technology could not be deemed applicable under a Step 2 feasibility analysis. We acknowledge the commenter's belief that combined cycle technology requires significant consideration, so we will explain and document our reasoning with appropriate thoroughness for the permitting record.

As an initial matter, the commenter has cited *In re Pio Pico Energy*, 16. E.A.D. ___, slip op. at 67 (2013) for the following statement: "Sierra Club's fear that applicants and permit issuers could so narrowly define the source type they consider in step 2 as to make all other control technologies infeasible is well taken." This language omits context, and two points about this decision are especially relevant here.

First, the *Pio Pico* decision upheld Region 9's determination that the relevant "source type" in Step 2 of the BACT analysis was a "peaking and load-shaping facility, one that could provide between 50 and 300 MW of power." The Region appropriately reviewed available technical information that showed combined cycle facilities would be technically infeasible for this type of source. In the case of EPEC, we note the applicant has similar capacity and load profile needs as the Pio Pico application, except that this project would provide up to 400MW of power. On this point, we note the Board in *Pio Pico* additionally stated, "it is not unreasonable for permitting authorities to distinguish between electric generating stations designed to function as peaking/intermediate load facilities and those designed to function as base load facilities or even intermediate-only load facilities." Even as the commenter has submitted additional technical information and it is always true that BACT is conducted on a case-by-case basis, here we have reviewed all available technical information and come to the same conclusions regarding the technical infeasibility of combined cycle technology for this project. It cannot be said that we are defining the source type too narrowly in this case, because our definition of the source type does not functionally differ from that validated by the Board's decision in *Pio Pico*. We are demonstrably not dealing with a source type that is "essentially a category of one." *See* Pio Pico, slip op. at 68. We are also justified in concluding, consistent with Region 9, that combined cycle gas-turbine units are not suitable to peaking operations because of their slower ability to produce the appropriate amount of electricity, their larger size, and their inability to produce the appropriate amount of electricity. Each of these are unresolvable technical difficulties with applying the control that demonstrates "inapplicability"

and thus technical infeasibility. As explained in our response to comment 28, we grant that combined cycle turbine units have increasingly faster capabilities in delivering power, but even if we fully agreed with the commenter, we could not agree that our source type is "all gas turbine facilities" that have fast start capabilities.

The second relevant point is that the *Pio Pico* decision expressly left open that permit issuers may determine that a combined cycle gas turbine would be considered a redefinition of the source for a proposed simple cycle turbine plant. The Pio Pico project developer argued that this could have been done, and the Board stated: "[w]hile it may be true that the Region could have done so, the Region did not explicitly conclude that combined-cycle gas turbines would be a redefinition of the source, and the administrative record does not contain any analysis reflecting such a determination." *Id.* at 64, n. 46. We are accordingly free to examine the permitting record before us and make the determination that the facts of this case warrant eliminating combined cycle technology because it would fundamentally redefine the proposed source.[16] This is not inconsistent with our continued judgment in the alternative that considered combined cycle technology warrants elimination in Step 2 of a BACT analysis on grounds of technical infeasibility for the type of source proposed here and could additionally warrant elimination at later steps of the BACT analysis (as even the commenter suggests to be possible). While Region 9's decision in Pio Pico did was not expressly based on at Step 1 analysis, it was informed by the business purposes of the project applicant. Region 9 did not conclude that combined cycle technology was technically infeasible as a general matter. Rather, Region 9 concluded it was technically infeasible to apply combined cycle technology to the particular type of source that the applicant proposed to build, which was proposed to achieve a fundamental business purpose identified in that permit application. Region 6 concludes likewise in this case, but is making more express in this case that it is eliminating combined cycle technology on both Step 1 and Step 2 grounds

As earlier stated, EPEC's business purpose in this case is to supply power as peaking intermediate load facility, with the ability to dispatch 50 to 400 MW. Even as the commenter has questioned our technical assessment that combined cycle plants have slower start times than needed for peaking plants, we disagree that this single technical question presents the only, defining characteristic of a peaking plant that is important to the applicant. There are other portions of the Statement of Basis and administrative record that make this clear—and our proposal to issue the permit relied on all information contained in our Administrative Record, including all discussion provided by the applicant. The advantages of combined cycle technology best apply to baseload power production, and peaking/intermediate power plants have scale and operational capabilities and other characteristics that do not neatly match what combined cycle technology provides. The peaking/intermediate power plant presented by the applicant's project design has the flexibility of operating at partial load and responding to dispatch requirements in quicker and smaller increments than would be consistent with the operations of a larger integrated combined cycle system. Even putting aside the question of size and operational capabilities, the applicant's project provides for the flexibility and contingency mitigation that can only be met with four individual turbine generators. Even assuming a smaller combined cycle facility could provide power in

[16] We note that another Region recently concluded that elimination of combined cycle as an option for a peaking power plant was justified on redefining the source grounds. It appears our same commenter had submitted similar technical information regarding fast startup capabilities for newer combined cycle turbines. *See* "Response to Public Comments: Draft Greenhouse Gas PSD Air Permit for the Shady Hills Generating Station" (January 2014), 9-10, available at http://www.epa.gov/region04/air/permits/ghgpermits/shadyhills/ShadyHillsRTC%20_011314.pdf (last accessed February 5, 2014). Even as we have a different administrative record that we are obliged to separately review, it should not surprise the commenter that different permit issuers can reach similar technical judgments.

the range of 50-400 MW, which in our technical judgment even on review of all the commenter submitted data is not presently possible, it remains the case that a combined cycle facility does not have the operational resilience of the applicant's project. For example, when a combined cycle facility requires repair or maintenance on any of its turbines or on the HRSG, the entire power delivery system may need to be brought offline. This would not be the case under the applicant's design which provides four power delivery systems that can be separately repaired and maintained.

We also agree with the applicant that generation portfolio diversification is an important and valid consideration for the applicant's business purpose. For example, it is the case that different power delivery systems may face different problems under extreme weather conditions, and El Paso is not free from those extremes. In such a case, having simple cycle turbines as well as combined cycle turbines in the public utility's generation portfolio can be rational and appropriate. EPEC's project purpose is not validly seen as merely satisfying a need for additional generating capacity at 400MW, however delivered. EPEC has thoroughly explained that the project is intended to provide balance to its generation portfolio, promoting system resilience, overall system efficiencies, and the future flexibility to replace older generation capabilities with other new and efficient generation sources. We find reliable the applicant's explanation that a new combined cycle unit, which cannot be cycled off completely without a thermal penalty (i.e., greater emissions), would make a system that better competes with the older-boiler based units that are used during night-time low loads, and would thereby potentially add to the imbalance of EPEC's generation portfolio—which is contrary to the project purposes. The commenter has scrutinized the applicant's long-range power forecasts and contends that EPEC's stated business purpose is "overly narrow" and a "simple assertion" that is insufficient or lacking in credibility. *See* Sierra Club Comments at 18. But these comments in fact illustrate the reasonableness of the determination that combined cycle options would redefine the source, for the commenter has gone further and suggested that we have the role of inquiring into the applicant's overall grid management and its business decisions for unrelated facilities. *See id.* ("…there are a number of units in EPECs system that can be retired or mothballed…."). Consistent with EPA policy, we do not view the BACT requirement to require that we regulate the applicant's business purpose, and much more so, we do not read the BACT requirement to enable EPA to dictate decisions on the applicant's overall grid management as the commenter would have us do.

As earlier stated in a separate response to comments, the commenter has also urged that the Region examine multiple, different additional power delivery systems for the project. Given that we already acknowledge (consistent with what is stated in the GHG Guidance) that combined cycle combustion turbines generally have higher efficiencies, we have difficulty understanding how the commenter has justified its demand for the examination of all the listed options, instead of combined cycle technology with newer ramp rate capabilities more generally. This comment has demanded additional analysis without limits and without any apparent recognition of the duplication of arguments with multiple data sets or the burdens on the permit issuer. The commenter appears to suggest that it may rightfully list as many options and projects with corresponding data from multiple source as it sees fit; however, we note that none of this informational material relates to GHG BACT determinations for GHG BACT permits that have been issued—i.e., the most relevant data set and the one that demonstrates the appropriateness of the assigned limits for the project. In any case, for our review, the company has provided notations to three additional columns for the table supplied on page 5 of the Sierra Club comments: capacity of each CT (MW), Capacity @50% Load (MW) and Comments.[17]

[17] Email from El Paso Electric Company to EPA January 24, 2014.

Unit	MW (net)	CT/HRSG (MW)	Efficiency (%)	Heat Rate (Btu/kWh) LHV	Heat Rate (Btu/kWh) HHV	Part Load	Overnight	Capacity of each CT (MW)	Capacity @50% Load (MW)	Comments
Alstom KA24, 2x1	664	450/214	59.5	5739	6370	>98% of full load efficiency to 80% load; 95% to 50% load	450 MW in 10 minutes	225	112.5	These combustion turbines are too large to meet the expected dispatch scenarios. These units cannot be operated between 50 - 100 MW.
Mitsubishi M501GAC	404	264/132	59.2	5763	6397	---	264 MW in 10 minutes	264	132	
Mitsubishi M701G	498	334/164	59.3	5755	6388	---	---	334	167	
Mitsubishi M501J	470	320/140	61.5	5551	6162	---	320 MW in 10 minutes; 460 MW in 30 minutes	320	160	
GE Flex 60	512	339/181	>61	<5584	6487	>60% efficiency to 87% load	28 minute start-up	339	169.5	
Siemens SCC6-8000-1S	410	274/136	>60	<5687	6313	---	<30 minutes	274	137	
Siemens SCC6-5000F (Lodi)	305	232/73	>57	<5989	6648	---	70 MW in 10 minutes; hot/warm start 200 MW in <30 minutes	232	116	
Proposed 4xLMS100	**392**	**392/0**	**45**	**7580**	**8413.8**	**~35.5% efficiency (80% of full load eff.) at 50% load**	**50 MW/min per turbine**	**100**	**50**	**LMS100s can be operated between 50 MW -100 MW more efficiently than large combined cycle units.**

From the scenarios listed in the table above, the capacity of each combustion turbine is provided in the column titled "Capacity of each CT (MW)." This column shows that each of the referenced scenarios contain combustion turbines that are much larger than the proposed GE LMS100. Even if the larger combustion turbines are operated at 50% loading as noted in the column labeled "Capacity @50% Load (MW)," the capacities are larger than the operational loading scenarios needed by EPEC. EPEC has explained, and we agree, that the project designs proposed by Sierra Club cannot simultaneously provide 50 MW increments of power while also meeting emission limitations: At 50% load, the minimum capacity of the combined cycle plants cited by Sierra Club range from 112.5 MW to 169.5 MW, which is significantly greater than the lower range of power output needed for this project. In order to provide the lower increments needed by EPEC (50 MW), these combustion turbines would need to be operated outside of their design range. Operating turbines outside their design range will compromise GHG efficiency, the control of non-GHG pollutants, and the mechanical integrity of the system; these facts are thereby consistent with a finding that larger, combined cycle turbines are not applicable to the source

type under consideration and thereby do not warrant further consideration on grounds of technical infeasibility. These same facts also squarely demonstrate that these other power plants designs are inconsistent with the Applicant's business purpose. A system over-design will result in time periods of excess power generation and unnecessary fuel use, effectively ignoring the applicant's project needs. As a final note, in this case the commenter gives no valid support for its claim that the applicant's definition of the source to meet its business purpose is "overly narrow," as though it has been unjustifiably contrived to preemptively eliminate combined cycle technology as an option for purposes of the BACT analysis. Our administrative record shows otherwise. Separate from EPEC's air quality permitting efforts, the applicant explains that it undertook a comprehensive process of requesting proposals to fulfill its identified needs for power generation. The applicant represents that 38 responses were received and none of them were for a combined cycle facility. In consideration of the full technical record in this case, we find that all of the commenter suggested alternatives demonstrate how a combined cycle facility will be too large and too slow, and thus incompatible with the business purpose of the applicant.

28. Combined Cycle Turbines are Technically Feasible to Meet the Generation Requirements of El Paso Electric. Specific examples of fast-start combined cycle units have been referenced and are noted to meet fast-start and quick ramping time comparable to simple-cycle units. The company also provided a false rationale for rejecting combined-cycle configurations. Other utility operators have been evaluated as peaking units that were able to utilize combined cycle configurations.

    See Index Numbers: B.17, B.26[18], B.26a, B.39-B.40h

EPA Response: We appreciate the additional information that the commenter provided on fast-start and quick ramping capabilities that are being made available for newer combined-cycle configurations. As earlier explained, while a quick ramp rate is an important characteristic for a peaking and intermediate load facility, it is not the sole defining characteristic. Therefore, even if these newer quick ramping capabilities for combined cycle configurations were on par with the ramping capabilities provided by the applicant's project design, they do not necessarily show that such technology is applicable to the source type proposed by the applicant in this case. The commenter has not addressed that the applicant in this case conducted an analysis of the performance of the most efficient combined cycle unit in its generating portfolio when operated according to the anticipated load profile, and found that it would be less efficient and that it fails, moreover, in meeting EPEC's fundamental needs of being able to start up quickly, cycle off at night, adding capacity in stages to match expected growth prior to peak season. *See* Application, Appendix A. The applicant had already considered fast start technology with a "30 min start," and the commenter submitted information does not significantly change the analytical picture, because the commenter ignores that the applicant's specified project scale and dispatch capability requirements, which are appropriate to a peaking/intermediate load facility.

Sierra Club has provided specific examples to demonstrate the feasibility of fast-start and quick ramping combined-cycle turbines. An important distinction that was noted by Sierra Club and EPEC is the differences between a fast start up and ramping times. Typically when describing the amount of time for "start-up", this amount of time is comprised of the time for the combustion turbine to reach a level for operation of add-on pollution control devices and the expectation to fully meet all air emission

[18] The applicant has submitted multiple statements that lend support to our permitting record and our determinations in response to this comment. See, El Paso Electric Company letter to EPA dated December 4, 2013 and indexed as B.26, B.26a, and B.16.

limitations. In contrast, EPA understands that ramping times in the generation sector can describe the time that a combustion turbine requires to meet a specific electrical output need—in many situations the point where the turbine generation system reaches full or optimal generating capacity. An additional important factor is the time that a power system configuration may require to deliver electricity to the power grid; however, for purposes of this analysis, this comparison will not be included.

Sierra Club's comment letter offered several examples of recent combined cycle power plants that offer fast startup and ramping times; however, the comment does not demonstrate that these projects are intended to serve as peaking plants as opposed to intermediate-to-baseload facilities. A fast startup time can be desirable for a gas-fired energy project of any size, whether or not a peaking project, because the capability promotes system reliability. The table below is offered as a summary of the projects identified by Sierra Club with the relevant startup and ramping times referenced.

Project Name	Size (MW)	Power Generation Need	Efficiency	Startup time
NRG, El Segundo	550	Unit 9-GE Fast Start CT: 75% of base load output[19]	Not Provided	+225 MW in less than 10 min and 550 MW > 1hr.
Footprint Power, Salem Harbor Station	674		Not Provided	300 MW of power to the grid within 10 min; 7F 5-Series Gas Turbine start time of 11 minutes
Oakley Generating Station	624	Intermediate/Baseload	Not Provided	Start up from warm or hot conditions in less than 30 min. Includes an additional 50.6MMBtu/hr auxiliary boiler to provide steam when the plant is offline and during startups.
Lodi Energy Center	300	Intermediate to continuous duty	Not Provided	200 MW to the grid in 30 min; ramping of 13.3 MW/min
Panda Temple II	758		Not Provided	50% power production in 30 min and full baseload capacity in 60 min

EPEC has stated that the Montana Power Station needs the power capacity to "ramp up very quickly over a range of power outputs AND that is also very efficient at both sustained AND varying loads." (emphasis in original).[20] As is quickly seen with all the design examples provided by the Sierra Club, the power plant sizes range from approximately 90% to 56% larger than the total design capacity of the Montana Power Station. Only one option, Lodi Energy Center, has a total design capacity somewhat similar to the Montana Power Station. The Lodi Energy Center is noted to have a 1x1 combined cycle power plant. EPEC has evaluated the projects referenced by the Sierra Club and has responded that "even if operated during certain periods without heat recovery as Sierra Club suggests they could be," the combustion turbines "still have capacities that range from 225 MW- 339 MW for each turbine, far larger than the 100 MW capacity identified by" EPEC's system planning process. The over-design problem is compounded when taking account of the full capacity of these plants when operated in

[19] See: http://www.energy.ca.gov/sitingcases/elsegundo_amendment/2013_amendment/2013_amendment_background.html
[20] See Email from on January 28, 2013

combined cycle as they are designed (with heat recovery steam generation), which increases their capacity to a range of 305-664 MW. As earlier explained, if such a plant were to fail during a period of peak demand, EPEC would not have the redundancy needed to meet power demands. In contrast, having multiple units with the proposed design configuration, EPEC can accommodate unexpected events even during periods of peak demand.

Next, as discussed in the Statement of Basis, EPEC has a contractual obligation to the Western Electricity Coordination Council (WECC) to maintain reserves based on no more than 10-minutes startup time. The commenter is therefore mistaken when it suggests there to be no "evidence to support a 10 minute startup requirement." Sierra Club Comments at 9. The turbines that were selected for this project can achieve a ramp rate of 50 MW per turbine per minute, meaning 200 MW per minute. From the information that is provided by the Sierra Club, this appears to be a faster ramp rate than the projects that are cited. Moreover, the turbines selected for the EPEC project can be efficiently operated at low loads (i.e., 50 MW) without harming their mechanical integrity.

We additionally note the commenter has asserted that Step 2 of the BACT analysis is not the correct stage in the analysis for the inclusion of the applicant's several additional technical concerns. Specifically, the commenter said that points relating to the advantages of simple cycle technology in having fewer maintenance (i.e., thermal) penalties, greater reliability advantages, and superior dispatch coordination with renewable energy are better considered in Step 4 of the BACT analysis. EPA understands that such technical considerations may ultimately result in an economic or environmental impact(s), however, the point remains that the issues under consideration are technical concerns associated with a combustion turbine selection and are discussed in Step 2 of the BACT analysis.

As a final matter, Sierra Club has referenced the proposed Huntington Beach Energy Plant (HBEP) as an example of a combined cycle plant with peaking plant operational capabilities. The project plans for an anticipated load range of 160 to 528 MW for a 3x1 power island. While this project may be an appropriate design for the HBEP project objectives, BACT is established on a case-by-case basis and the Montana Power Station has different project objectives including for providing power as low as 50 MW. The comment does not show that the HBEP project is comparable to the Montana Power Station. The commenter provided chart appears to show that only the LMS100 turbines can provide lower than 100 MW.[21]

29. The Region failed to consider penalties experience by the LMS100 at part load operation. Sierra Club has stated that the load response curves for the LMS100 provided by GE show a sharp decline in efficiency from 43 percent to 35.7 percent at 50 percent load. However, Sierra Club asserts the Alstom KA 24 has a full load efficiency of approximately 59 percent that is held at that level at 80 percent load and still has a more favorable heat rate than the LMS100 at 50 percent load. The region must consider this data as part of its analysis of combined cycle units.

[21] In addition, while we are unsure where the HBEP is in its regulatory approval process, including for air quality permitting, it appears the developer's BACT analysis concludes an emission rate of 1,082 lbs CO2/MWh should be assigned to the project, which is little different from the 1,100 lbs CO2/MWh assigned in the final permit in this case. See "BACT Determination for the Huntington Beach Energy Project," June 2012, available at http://www.energy.ca.gov/sitingcases/huntington_beach_energy/documents/applicant/AFC/Volume%202%20Appendices/HBEP_Appendix%205.1D_BACT%20Determination.pdf (last accessed 2/5/2014).

EPA Response: We believe the commenter is here offering an analytically invalid comparison of the efficiency of a 664 MW gas-fired combined cycle energy system to the efficiency and power delivery capabilities of a smaller, individual turbine that delivers no more than 100 MW. The comment does not demonstrate that 35.7% efficiency at 50% load for a turbine of the size and type reflects inadequate design or poor efficiency. In fact that comment appears to concede that nothing in this performance is uncharacteristic of aeroderivative turbines. *See* Sierra Club Comments at 13.

As a tangential matter, we note the commenter without explanation provided different heat rates for the Alstom KA 24 than it provided on page 5. In our view, this supports our earlier discussion that the commenter-quoted heat rates from various sources for various turbine models cannot, of themselves, be determinative of GHG BACT. The commenter's statement that "GHG emissions are proportional to the heat rate" is only accurate in a limited sense. While we acknowledge that heat rate is a performance specification relevant to overall efficiency, the commenter here inadvertently demonstrates that a 50 Btu/kWh difference in quoted heat rate or 0.5% engine efficiency difference may not be reliable for a single turbine model. Thus, we are justified in questioning the commenter's assertions that it can be reliable or worthwhile for differentiating turbine models with comparable and similar efficiencies.

30. The Operating Scenarios that the Region used to derive BACT limits are unrealistic and inconsistent with the stated purpose of the plant as a peaking and intermediate unit. The Region based the annual CO_2 tonnage cap for each of the units on the assumption that each of those units would operate at full load for the full 5,000 hours of operation. At the same time, EPA based its hourly average CO_2 limit on an assumed operating scenario in which each of the four turbines operates at 50% load and that ambient temperatures are 105°F. The Region also increased the proposed BACT limit by 3% and 6% for safety margin reasons.

    See Index Numbers: B.39-B.40h

EPA Response: Although the annual CO_2 limit assumes worst-case GHG emissions for 5000 hours of operation, each turbine has a 5000 hour limitation that applies on a 12-month rolling basis. We are unclear what the comment is attempting to assert about inconsistencies, since neither of these permit conditions are consistent with a base load facility. As would be expected, these limits are instead consistent with a peaking to intermediate load facility. We see no basis in the BACT requirement to further limit the operational flexibility of the facility by requiring it to operate under a further constrained hours requirement.

We are unable to determine what the commenter is referring to regarding "3%" and "6%" adjustments undertaken by the Region, and the commenter provides no citations to the record to aid our review of this comment. In any event, our action in downward adjusting the limits in the Final Permit addresses the commenter's concern that there is too great an accommodation for process variability even if the basis for this concern is not clearly connected to particular statements in this permit record.

The proposed limits in the Draft Permit were based on manufacturer-provided part load performance data under harsh, but not "unrealistic" temperature conditions. In using this basis for the GHG BACT limits, the proposed BACT limit was not otherwise adjusted to provide for the permittee to achieve compliance on a consistent basis, even as equipment degradation and other inevitable variables are recognized factors for demonstrating and maintaining long-term compliance with the assigned limits. In

this case, we deem it appropriate that the calculation of the BACT limit did not begin with the design heat rate for full load performance under ideal conditions, because the turbines will be operating at variable loads in hot summer conditions and not under optimal loads under optimized atmospheric conditions. We also note the reasonableness of the limits, as proposed, was demonstrated by their favorability as compared to the GHG BACT limits for the Pio Pico Energy Center, even with it being the case that El Paso faces harsher deviations from ISO conditions than would be expected by the Pio Pico Energy Center. Finally, on top of all this, the applicant has requested further stringency in the assigned GHG BACT limit, which we are accommodating in the final permit terms. Therefore, these questions raised by the commenter that apparently all relate to the appropriate compliance margin for setting GHG BACT limits should already be addressed by the limits in the final permit, even as we disagree with the comment in reference to the limits as originally proposed.

31. EPA's rolling 5,000 operational hours limit is unenforceable and unnecessary. This limit could conceivably allow EPEC to operate the units for many years before a baseline is established. This provision is also arbitrary in that there has been no showing in the record of any need to extend the averaging period beyond one year. The Region should base the 1,194 lb CO_2/MWh rate on a 365-day rolling average limit as measured by CEMS.

    See Index Numbers: B.39-B.40h

EPA Response: EPA disagrees with the commenter and believes that a rolling operational hour basis is more restrictive than a 365-day rolling basis. With a rolling operational hour BACT limit, the data collected over an operational hour is averaged and divided by the amount of electricity that is produced during the corresponding operational hour. The quotient of this arithmetic operation is added to the 5,000 operational hour rolling basis. Until the 5,000 operational hour basis has been reached, the company should utilize the performance testing data to establish a plan whereby the company may operate the emission unit in a manner that will not exceed the permitted CO_2 emissions limits. The company is responsible for demonstrating compliance with the permitted emission limits and should evaluate its actual emissions and verify actual compliance from recorded operational data.

In addition, the draft permit contains an annual limit of fuel combusted by each turbine. As explained in the statement of basis, the limitation of fuel combusted achieves the same objective as limiting the number of hours of operation of each turbine to 5,000 hours. The permittee is required to measure and record the natural gas flow rate using an operational non-resettable elapsed flow meter, total amount of fuel combusted on an hourly basis, fuel gross calorific value (GCV) on a high heat value (HHV), carbon content, combustion temperature, exhaust temperature, and gross hourly energy output (MWh).

An arbitrary limitation of the annual hours of operation to meet the "typical" peak operation hours of a peaking unit will hinder the facility's ability to fulfill its purpose to operate as a peaking/intermediate load facility. A peaking/intermediate load plant may operate only a few occasions a day or many times in a given year, and sometimes very differently the next year due to variation in power demand caused by weather, emergencies, maintenance or outages of other power facilities serving the grid, and other factors. If EPA were to restrict operation of EPEC to a reduced number of hours that a unit is to be used,

EPA would impair EPEC's ability to provide reliable peaking/intermediate duty service during any year in which circumstances requiring peak/intermediate duty service occur more frequently than usual.[22]

32. EPEC and the Region have employed out of date ISO ratings for the LMS100. EPEC reported that the LMS100 ISO heat rate was 7,937 Btu/kWh (LHV). However, the 2013 GTW Handbook reports several different versions of the LMS100, the most efficient version identified has a listed heat rate of 7,580 Btu/kWh. The Region and EPEC should clarify whether the proposal is to use the most efficient LMS100 currently available and the ISO heat rate of that unit.

    See Index Numbers: B.39-B.40h

EPA Response: We note again that published heat rates from sources outside the application materials may not be reliable for air permitting purposes—in this case demonstrating a 2% range of uncertainty in examining a turbine option. Here, the commenter uses an outside source that does not purport to provide quoted performance from the manufacturer and may omit losses, customized changes, and site-specific corrections essential to understanding their usefulness for air quality permitting purposes.

For our determination on the appropriate GHG BACT limits, we strive to use the best available data. Here we are relying on the applicant-provided data specifications for the turbines, including data validated by applicant communications with the OEM as recently as April 2012. While not specifically required by our regulations, we note the application was also submitted in April 2012 under the seal of a state-licensed engineer. We do not view the comment to suggest that the applicant submitted data is faulty, but we disagree with any intended suggestion that new publications or newer OEM publicity materials necessarily require an applicant to review or update their data and project plans. For this permitting action, we also do not believe it is necessary to specify that a particular "version" of the LMS100 be installed. We understand that turbine models are periodically subject to small retrofit changes that can improve output and capacity, even in the most marginal ways. If as the commenter suggests, a newer "version" of the turbine is offered or available since April 2012, we decline to specify that it will or will not be used, particularly when the commenter only speculates that a different "current" version is available and that it could warrant a materially different GHG BACT limit. Unless the applicant is contemplating the use of an LMS100 turbine that materially changes the project plans, we note the primary requirement of permit is that the permittee meet the assigned GHG BACT limits. This is required by the terms of the permit and 40 CFR § 52.21(r)(1).

33. The Region must consider energy storage in lieu of natural gas peakers. In addition to more efficient combined cycle natural gas unit, the Region must consider modern energy storage units in Step 1 of the BACT analysis.

    See Index Numbers: B.39-B.40h

EPA Response: We are not able to provide a detailed response because of the lack of specificity in the comment. The comment does not define "energy storage" or provide information to indicate how energy storage would meet the applicant's business purpose and that it has practical application to the project.

[22] We also note that other peaking/intermediate plants have been permitted at or close to 5000 hours. To the extent the commenter suggests that the 5000 hours of operation does not credibly correlate with contingency planning needed for the project type, or for this specific project, we do not agree.

The only source provided by the commenter is a promotional presentation that describes energy storage as "a very broad asset class." As a threshold matter, we fail to see how this non-specific description of energy storage can be considered an "option" for the type of source proposed by EPEC. EPEC's project at its most basic level aims to add generating capacity and is not looking to capture or store energy from existing generating capacity. Moreover, the assertion that energy storage has zero-emissions may not be accurate.[23]

Finally, we are not able to able to understand the commenter's position that an entirely different type of facility (i.e., an energy storage system "in lieu of" peakers) could constitute an option for Step 1 of the BACT analysis, as opposed to being better characterized as an alternative to the proposed facility. *See* Sierra Club v. EPA, 499 F.3d 653, 655 (2007) (noting that the consideration of all means of power production in the permitting of a power plant, "would stretch the term control 'control technology' beyond the breaking point and collide with the 'alternatives' provisions of the statute.")
We therefore disagree with the comment.

34. Phased Construction. EPEC's plan to construct units 3 and 4 in 2016 and 2017 would violate the requirement that a BACT review be completed no sooner than 18 months before the commencement of construction. EPEC cannot assume that the applicable BACT limit will be the same in two or three years from now.

    See Index Numbers: B.39-B.40h

EPA Response: We disagree with the comment to the extent it suggests the applicable BACT limit would not be valid in 2017. Under 40 CFR 52.21(r), PSD permits allow 18 months to begin construction. This does not limit the allowable time for completing construction of the source, which can take one or more years and allows for discontinuation of construction.

In our statement of basis, we provided our initial conclusion that "Provisions for phased construction apply to the project and can be found at 40 CFR 52.21(j)(4) and (4)." On closer review of the facts, we do not believe the provisions for phased construction apply to the project. Under the permit terms, the turbines could be installed at once or across a staggered installation window—e.g., adding one turbine prior to summer peak season until they are all installed. This could be likened to "phased construction," although it does not necessarily match the meaning of 40 CFR 52.21(j). The permit allows that the turbines may undergo initial compliance testing and begin operation at different times, but it does not specify commencement dates for "phases" of a project, nor are they necessarily "independent." The permit also does not envision that EPEC would install fewer than four turbines. In other words, EPEC would likely need to amend its permit if it wanted to change the project plans to have fewer turbines.

The applicant takes the position that major construction for a unified project will be undertaken at the outset.[24] From the outset of construction, its construction efforts will be consistent with completing the final 400 MW project, which is not a build-out with independent phases. The applicants lists the common facilities as follows: land acquisition, site grading, perimeter fencing, transmission and interconnection lines, evaporation ponds, service water tank and pumps, demineralized water tank and

[23] In fact, Region 6 has pending applications for PSD permits for projects having compressor engine emissions that would potentially meet the definition of "energy storage."
[24] *See* EPEC Email (Greywall) to EPA Region 6 on January 28, 2014.

pumps, cooling tower power fire protection pump skid, distribution center, administrative building, sewer line, city water line, gas compressors, air compressors. The applicant also states that substations, circuit breakers and natural gas pipelines will be consistent with the fully constructed capacity. Under this view, the turbine installations are not "independent phases" for project construction, so much as independent equipment installations. We find this persuasive and conclude that standardized provisions for permit expiration from 40 CFR § 52.21(r) appropriately applies to the permit as set forth in Section I.A of the final permit.

Although project completion by 2017 does not provide any cause for concern, we note the permit requires that all construction be completed "within a reasonable time," and that it be constructed in accordance with "plans submitted with the application." Those plans include the case-specific facts we have depended on to conclude that a requirement to redo or revise BACT is not needed for the project, as presented. *See also* 40 CFR § 52.21(r)(1).[25]

35. The cost analysis for Carbon Capture and Sequestration in the Region's Statement of Basis is invalid. The standard for eliminating a technically infeasible alternative for adverse economic impacts was incorrectly applied. Specifically, the Region's determination that CCS is too expensive in relation to the total costs of the entire project is not a valid basis for rejection in Step 4 of the BACT analysis. The Region must consider the average cost effectiveness of CCS compared to the costs borne by other similar facilities and the Region cannot in every single BACT analysis rely on the total annualized capital costs of CCS compared to the total facility costs. Additionally, the cost effectiveness methodology is incorrect. EPEC did not provide any site-specific cost analysis for the Montana Power Station and the CCS analysis lacks basic design elements. The Region must also provide substantial evidence to support its conclusion that CCS is economically infeasible.

    See Index Numbers: B.39-B.40h

EPA Response: First, the commenter's premise that costs in a BACT analysis may be assessed only by use of some type of cost-effectiveness determination is incorrect. There is no regulation or statutory provision that requires that the economic impacts of a BACT option be assessed using a particular methodology. Furthermore, court decisions examining similar provisions of the Act have recognized that EPA retains great flexibility in determining how costs are to be evaluated in making technology-based determinations. See, e.g. Husqvarna AB v. EPA, 254 F. 3d 195, 199-201 (D.C. Cir. 2001). Moreover, the commenter has provided no example where the costs of CCS of the magnitude identified here have been borne in recent BACT determinations by a similar source, and we are aware of no example. The commenter's recitation of past guidance on comparing average cost effectiveness of a control option to those known for other cases where the option was required and applied is not incorrect so far as it applies, but it does not presently apply in any way that has analytical use for considering the costs of CCS.[26] Our consideration of costs in this case is not "invalid on its face," and is supported by the EAB's decision in *In re City of Palmdale*, PSD Appeal No. 11-07, 15 E.A.D. __(Sept. 17, 2012), which the commenter has otherwise cited. This decision supports that it is permissible for a permit issuer to

[25] "Any owner or operator…who constructs…not in accordance with the application submitted…shall be subject to appropriate enforcement action."

[26] In other words, EPEC need not specifically demonstrate it would bear costs that are disproportionate to those borne by other similar source, because the conditions for presuming cost effectiveness have not been shown by the comment or otherwise by our record.

assess the economic impacts of a CCS option by comparing it to project costs. The commenter emphasizes that the Board only stated cost effectiveness of a control option may be assessed in "a less detailed quantitative (or even qualitative) manner" in "some cases." We agree and find this to be a case where assessment in that manner is justified.

The commenter mistakenly questions our conclusion on cost effectiveness by asserting the facts of our case are distinguishable from those at issue in the *Palmdale* case. As an initial matter, the commenter has not accurately presented the "available data" for our review. Our cost comparison provided in the statement of basis did not include annual costs for CCS as was done in *Palmdale*. The comment excerpts several other unrelated permitting actions and claims that "CCS costs range from 25 percent of total project costs to 400 percent of total projects," but this claim too is not demonstrated because the data does not show uniformity in comparisons.[27] Our judgment is not based on the facts of the Palmdale case or other cases, but rather on our own permitting record and our view that an evaluation of CCS costs in relation to project costs is permissible (alongside our evaluation of all other information in Step 4 of the BACT analysis).

The comment contends that the cost estimates used in the case fail to be "specific to the facility in issue" and objects that they are "simply generic price estimates that have been extrapolated based on the expected output of the Montana Power Station." We disagree with the comment that the analysis is not specific to the source, especially since the comment itself concedes that an estimation of costs with benefit of several reference sources was applied to the CO_2 "output" of the project in this case. The comment further asserts that "every single facility" would have the same cost/ton cost effectiveness estimate, but this is not demonstrated. EPEC's cost assumptions borrowed from those studied for a natural gas combined cycle facility, the most similar process with available cost information; it manifestly does not correlate with cost information for "every single facility." The comment also ignores that case-specific adjustments for an appropriately hypothetical pipeline length were made as well as low-end estimations for costs of storage. The comment further omits that costs were estimated on a cost captured basis, i.e., not counting the CO_2 emissions added by the equipment necessary to the CCS, which may differ from cost estimations as prepared in other permitting actions.

We take it as our task to rely on a reasonable estimation of the costs of the option, but we note even with non-GHG BACT determinations, the precision goal for a cost estimation is plus or minus 20 to 30 percent. We disagree that commenter's so-called BACT overnight method must apply to the study of economic impacts of CCS for this case. We note by way of inference that the commenter's approach is explained to not "include all of the costs" over the lifetime of CCS. *See* Sierra Club Comments at 22. For a technology that has not been required by any BACT determination for a similar source, we believe a reasonable estimation of costs can fairly look at all the costs that might apply over the lifetime of CCS.

We assume the commenter's claim that a differing costing approach "overestimates costs compared to those calculated using the BACT 'overnight method,'" only argues for a narrower study of costs that would exclude costs that may nevertheless constitute real costs to a facility. In other words, the commenter does not appear to say that the reference source used for the cost estimation is analytically invalid, only that costs could be presented to appear lower under their favored costing methodology. We agree that this may be done, although it is not here required. We note there are of course also cases, such

[27] We note the commenter also claims the Region identified CCS as a feasible technology for purposes of step 2 of the BACT analysis. We instead stated that CCS was "more than likely technically infeasible." SOB at 14.

as the applicant's here, where lower estimations are conservatively taken, even where higher estimations may be reasonable or where a more burdensome analysis may support a higher estimation. That the applicant has done so here or that this occurs in other cases is also not binding on the approach taken for the study of costs in a different permitting record. This is particularly so for a case where the studied option was eliminated on cost grounds; those are the kinds of cases where an applicant might use conservative, lower bound assumptions, adopt a narrower methodology for presenting costs, or provide a less detailed analysis. Such analytical shortcuts would be valid because the costs prove excessive in any event. Thus, the commenter's references to cost studies in other permitting records where CCS was not required are not a basis for compelling EPEC to follow the same methods or level of detail. If, however, we had an available cost study for CCS where the costs of CCS were borne by a similar source through a recent BACT determination, we would have ensured that any inconsistencies in costing approaches were reconciled and that EPEC had provided cost information, as necessary to show that its costs were reliable if they were argued to be excessive in relation to that source. However, this is not such a case, and the commenter's speculative references to cost data for a 200MW coal plant and an unfinished CCS demonstration project in Scotland do not relate to costs from BACT determinations. The commenter has not provided any cost information and explained why it should prove useful. We cannot agree with the commenter that we are obliged to consider the "cost of CCS at these and other facilities" when the comment does not demonstrate that such costs are reliable and legally relevant to our study of costs in this case.

We also disagree with the commenter's view that a more detailed discussion of CCS design or costs is required to support our Step 4 analysis, although we are not unwelcoming of more detailed cost information whenever it is provided. The comment cites the Draft NSR Manual (1990) at B.33, which states that the basis for equipment cost estimates, should be documented, including with data supplied "by a referenced source." In this case, EPEC documented the basis for its costs with referenced sources—as evident by the comment itself. The comment protests that everything in the cost analysis is based on generic data. We cannot agree with this. As would be expected, the information from the referenced sources was applied to the specifics of the project to assess costs of capture, transportation and storage, thereby making a site-specific analysis. It may not have the details or format preferred by the commenter or correlate in its level of detail with that appropriate for finding excessive costs when an option has been required by earlier BACT determinations for the source type, but it is sufficient for our judgment in this case. Moreover, putting aside the issue of costing methodology, the comment does not argue that the costs are unreliable or actually overstated such that "bid estimates" and details such as hypothetical temperatures, pressures and flow rates for a CCS would have any material bearing on our Step 4 analysis. In other words, an attempt at greater cost precision with a more burdensome level of analysis does not necessarily give greater precision (it may even add additional cost uncertainties).

In this case, the hypothetical design for the CCS system is precisely that envisioned for a natural gas combined cycle facility in the referenced source, i.e., "the most similar process with available cost information to that of the proposed project." The relevant design parameters, including assumed tons of CO_2 controlled by year, were therefore available in our record for the commenter's review. The commenter's demand for greater detail does not provide any grounds showing that the type of CCS system examined would not be appropriate or applicable for the type of source EPEC proposes. Thus, the comment —ironically, itself generic—is not justified and does not place into question any design issues that are material to our conclusions. Thus we continue to believe the applicant's estimations of CCS costs are reliable for purposes of this BACT analysis. The applicant explained that even a

"conservatively estimated cost" for CCS in one year equates to 30% of the initial total capital of the project without CCS. We deem credible the submitted cost information and the applicant's explanation that CCS costs of "$95 million dollars per year would make this project economically infeasible to construct and operate as the total capital cost of this proposed project is estimated at $311 million."

36. The Region failed to consider offsets to the cost of CCS. EPEC's estimate for the cost of CCS does not include offsets to those costs from the income generated from selling the CO_2 for use in enhanced oil recovery or the various tax credits that may be available.

    See Index Numbers: B.39-B.40h

EPA Response: There is no requirement to consider the offsetting cost for EOR revenue for CCS for every BACT analysis, and the comment does not demonstrate that EOR revenue is available for this project. Referencing that EOR occurs in the Gulf Coast region is not a sufficient demonstration. By way of illustration, El Paso to Houston is more than the distance from Chicago to Washington D.C. and little less than the distance from the Seattle to San Francisco. We thus disagree that it "follows" EPEC "would reasonably find a willing buyer in Denbury for its captured CO_2." The commenter quotes speculative EOR revenues of $6 per ton (speculative in that it does not document any basis to believe that this peaking project in El Paso, Texas, can surmount all geographic and business obstacles to have access to the market) and erroneously cites other sources for figures of $20 per ton and $45 per ton.[28] In other cases, we have studied the potential for offsets from sale of CO_2 to change our conclusions on the costs of CCS and determined that, even assuming such income was available, it would not change our overall conclusion. Here, the commenter provides no new information that would keep us from having the same conclusion. As earlier stated, even putting aside admitted uncertainties in GHG BACT costs, more generally, the "costs estimates used in BACT are typically accurate to within ± 20 to 30 percent." GHG Guidance at 39. Thus, even in speculative consideration of some of the offset figures provided by the applicant, we do not change our overall conclusion.[29]

37. EPEC did not consider specific CCS opportunities in the Region. The CCS cost analysis only considered a 110 mile pipeline without explaining how or why that length of pipeline was necessary and additional potential storage options in the El Paso region was not discussed.

    See Index Numbers: B.39-B.40h

EPA Response: The comment is correct that the basis for the hypothetical 110 mile pipeline distance is not well documented. However, we do not believe this assumed distance can be shown to be unreasonable for purposes of the cost estimation. It correlates well, for example, with the general distance from El Paso to basins for oil production as mapped by the Energy Information Administration.[30] More significantly, the assumed transportation costs for CO_2 (i.e., pipeline inclusive)

[28] The source for the $20 per ton figure appears to refer to expenses for transportation, not "offsets." Meanwhile, the source for the $45 per ton figure is a document that speculates on CO2 costs for future scenarios with "next generation CO2-EOR technology," i.e., not a real present-day scenario. Those costs also do not necessarily correlate with "offsets."

[29] As to the question of "various tax credits," the commenter has only referenced 26 USC § 45Q. This credit expires when75,000,000 tons of CO2 have been captured and claimed for credit. Whether EPEC could have benefit of this credit in any way significant to our assessment of costs is both speculative and doubtful. Other permit applicants have projected it will be fully used and unavailable past 2018.

[30] Lower 48 states shale plays. See http://www.eia.gov/oil_gas/rpd/shale_gas.pdf (last accessed 2/7/14)

were no more than 2% of total annual costs for CCS. Thus, we do not believe that even an elimination of the pipeline distance should change our overall conclusions on economic impacts. The comment in any event, neither proposed nor identified any specific locations of less than 110 miles for our review.

38. The Region improperly considered adverse energy and environmental impacts. The Region implies that, aside from adverse economic impacts, CCS should be eliminated as BACT based on environmental impacts due to additional energy demands. The NSR Manual provides that energy impacts that are "significant or unusual" should be examined in a BACT analysis. In this case, there are no significant or unusual energy impacts to install CCS. In this case, whether CCS at the Montana Power Station would increase some criteria pollutants does not constitute an adverse environmental impact because the only impacts the Region points to are increases of other air pollutants. Therefore, there is no basis to reject CCS due to adverse environmental impacts.

    See Index Numbers: B.39-B.40h

EPA Response: We disagree with the comment. First, the commenter fails to acknowledge that *"EPA has recognized that consideration of a wide variety of environmental impacts is appropriate in BACT Step 4, such as solid or hazardous waste generation, discharges of polluted water from a control device, visibility impacts, demand on local water resources, and emissions of* ***other pollutants subject to NSR*** *or pollutants not regulated under NSR such as air toxics."* (emphasis added). GHG Guidance at 39. Consistent with this guidance, EPA believes it is appropriate for the EPEC's BACT analysis to consider the environmental impact of other pollutants subject to NSR. It is also appropriate to note the energy impacts of CCS because it is a particularly energy-intensive add-on control technology. The comment suggests these impacts are improper to cite because they are not "significant or unusual" or unique to EPEC, but rather are representative of use of "CCS at any other site." The presumption that these impacts should generally only be relied on for eliminating an option when the impacts are "significant or unusual" is more appropriate to cases where a technology is in widespread use. We do not agree that it was improper to cite the applicable energy and environmental impacts from CCS; they were appropriately considered in conjunction with the costs of CCS that we deemed excessive. However, we also do not think that the energy impacts or environmental impacts considered alone are demonstrated to be a basis for eliminating CCS in this case. Our decision to eliminate CCS from the BACT analysis is based on economic impacts, but the comment does not validly cite any prohibition against our approach of citing other collateral impacts that could potentially warrant additional study and emphasis if it were less clear that the costs of CCS were excessive.

39. In the Draft GHG PSD Permit, on Pages 11 and 12, Conditions V.A through V.G (captioned "Initial Performance Testing and 5-year Emissions Testing Requirements"), EPEC has identified redundant conditions related to initial and 5-year stack testing. Consistent with EPEC's proposal, EPA has included in the draft permit a condition compelling installation of a Continuous Emissions Monitoring System (CEMS) for carbon dioxide (CO_2) emission in order to demonstrate compliance with the applicable BACT and annual emission limits for CO_2. The CEMS will be subject to relative accuracy test audits (RATA) at initial commissioning and annually thereafter. Those RATA's require performance tests equivalent to those that would also be compelled by Conditions V.A.-V.G. and the CEMS, of course, will be generating emission data on a continuous basis, as well. Therefore, the traditional three-run performance test (i.e., stack test) requirements in conditions V.A. through V.G. are redundant. To eliminate duplication and confusion, EPEC asks that Conditions V.A. and V.G be removed from the draft permit. Condition III.A. already includes the requirements and

procedures to compel periodic performance tests at a frequency greater than that established by Conditions V.A.-V.G.

See Index Numbers: B.17, B.26, B.26a

EPA Response: We cannot entirely agree with the comment because initial stack testing provides data by a different method than CEMS. It has independent value to EPEC for its compliance planning as well as to state or EPA inspectors wishing to familiarize themselves with the commissioning of a new major emissions unit. We therefore do not believe this requirement is properly characterized as being "redundant" to the maintenance of the CEMS. Even under the argument that it may be redundant, it is not unreasonably so. As the comment identifies, initial stack testing is a "traditional" requirement, and we do not believe the comment demonstrates the alleged burdens of "duplication and confusion" justify it being eliminated from this permit. We have, however, considered the commenter's suggestion that five year emissions testing should not be required when CEMS is subject to more frequent audits and will be continuously run during the operations of the emission units. Here, while we disagree that the Draft Permit terms caused confusion, we agree that there is a kind of duplication in requiring the 5 year stack testing that is not necessary to the permit. As explained in the Summary of Revisions, the Final Permit is being revised accordingly.

III. Revisions in Final Permit

The following is a list of changes for the *El Paso Electric Company, Montana Power Stations* (PSD-TX-1290-GHG*) Prevention of Significant Deterioration Permit, Final Permit Conditions.*

1. Section II. Annual Emission Limits

FIN	EPN	Description	GHG Mass Basis		TPY $CO_2e^{1,2,4}$	BACT Requirements
				TPY[1]		
GT-1 GT-2 GT-3 GT-4	GT-1 GT-2 GT-3 GT-4	Natural Gas Fired-Simple Cycle Turbine, each	CO_2	~~250,885.25~~ 262,036.50[3]	~~251,147.64~~ 262,305.79[3]	-BACT limit of ~~1,194~~1,100 lb CO_2/MW-hr (gross). -Not to exceed 5,000 hours of operation on a 12-month rolling basis per turbine. -See permit condition III.A.2 and 4.
			CH_4	~~5.51~~ 5.34[3]		
			N_2O	~~0.47~~0.46[3]		
FWP-1	FWP-1	Firewater Pump Engine	CO_2	8.66	8.69	- Not to exceed 52 hours of non-emergency

FIN	EPN	Description	GHG Mass Basis		TPY CO_2e[1,2,4]	BACT Requirements
				TPY[1]		
			CH_4	No Numerical Limit Established[5]		
			N_2O	No Numerical Limit Established[5]		
CTBR-SF-6	CTBR-SF-6	Fugitive SF_6 Circuit Breaker Emissions	SF_6	0.015	~~358.50~~ 342.00	Work Practices. See permit condition III.C.
FUG-1	FUG-1	Components Fugitive Leak Emissions	CH_4	0.15	~~3.15~~ 3.75	Implementation of AVO Program. See permit condition III.D.
Totals[6]			CO_2	~~1,003,549.66~~ 1,048,154.66	**~~1,004,960.90~~ 1,049,577.60**	
			CH_4	~~22.19~~ 21.50		
			N_2O	~~1.89~~1.82		
			SF_6	~~0.015~~0.02		

1. The TPY emission limits specified in this table are not to be exceeded for this facility and include emissions from the facility during all operations and include MSS activities. All emissions are expressed in terms of short tons.
2. Global Warming Potentials (GWP): CO_2=1, CH_4 = ~~21~~25, N_2O = ~~310~~298, SF_6=~~23,900~~22,800
3. The GHG Mass Basis TPY limit and the CO_2e TPY limit for the natural gas fired simple cycle turbines applies to each turbine and is not a combined limit.
4. Annual CO_2e emissions, in tons per year (TPY) are based on 365-day rolling basis.
5. All values indicated as "No Numerical Limit Established" are less than 0.01 TPY with appropriate rounding. The emission limit will be a design/work practice standard as specified in the permit.
6. Total emissions include the PTE for fugitive emissions. Totals are given for informational purposes only and do not constitute emission limits.

All of the CO_2e emission limits have been changed to reflect the new GWP for CH_4, N_2O and SF_6 as in the final rule effective on January 1, 2014 (78 FR 71948). EPA Region 6 is granting the Applicant's request that the lower permit limit of 1,100 lb CO_2/MWh be applied to the project. The technical basis for the BACT limit as originally proposed in the Draft Permit remains unaltered.

2. Special Condition III.A.2. Turbine BACT Requirements

a. The limit of ~~1,194~~1,100 lbs of CO_2/MW-hr gross output is based on each turbine's daily average of CO_2 emissions measured using a Continuous Emissions Monitoring System (CEMS) and divided by each turbines measured gross electrical output. The Permittee shall calculate each day a combustion turbine operates, CO_2 emissions over the rolling 5,000 hours of operation basis divided by gross electrical output over the same period for comparison to the limit for each combustion turbine.

b. The permittee shall calculate, on a daily basis, the amount of CO_2e emitted from each turbine in tons per year on a 365-day rolling basis based on the measurement of the CO_2 CEMS and the procedures and Global Warming Potentials (GWP) contained in the Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1, ~~as published on October 30, 2009 (74 FR 56395)~~as published on November 29, 2013 (78 FR 71948) for CH_4 and N_2O. Compliance shall be based on a 365-day rolling basis.

c. The annual quantity of fuel used by each turbine (EPNs GT-1, GT-2, GT-3 and GT-4) shall not exceed ~~4,292,750~~4,136,000 MMBtu (HHV). The permittee shall calculate, each day a combustion turbine operates, the quantity of fuel used by each turbine over the trailing 365-day rolling basis by multiplying the gross calorific value of the fuel combusted by volume of fuel metered for comparison to the annual fuel limit for each combustion turbine.

All of the CO_2e emission limits have been changed to reflect the new GWP for CH_4, N_2O and SF_6 as in the final rule effective on January 1, 2014 (78 FR 71948). EPA Region 6 is granting the Applicant's request that the lower permit limit of 1,100 lb CO_2/MWh be applied to the project. The technical basis for the BACT limit as originally proposed in the Draft Permit remains unaltered.

3. Special Condition V. Initial Performance Testing Requirements

G. ~~Emissions testing, as outlined above, shall be performed every five years, plus or minus 6 months, of when the previous performance test was performed, or within 180 days after the issuance of a permit renewal, whichever comes later to verify continued performance at permitted emission limits~~.

~~**H**~~**G.** To verify continued performance at permitted emission limits, the permittee shall conduct its initial and annual CO_2 CEMS relative accuracy test audit (RATA), in accordance with 40 CFR Part 60, Appendix F, Procedure 1, and 40 CFR 75, Appendix B, Section 2.3.1 to evaluate compliance of each turbine with the emission standards on a continuous basis. The initial CO2 CEMS RATA shall be on or before the earlier of 90 unit days or 180 calendar days after the date the unit commences operation.

EPA is revising the requirement for the 5 year stack testing to verify continued performance at the permitted emission limits. The demonstration of compliance will be met through the annual CO_2 CEMS relative accuracy test audit (RATA).

IV. Endangered Species Act (ESA)

EPA determined that issuance of the proposed permit will have no effect on ten listed species, as there are no records of occurrence, no designated critical habitat, nor potential suitable habitat for any of the species within the action area. Because of EPA's "no effect" determination, no further consultation with the U.S. Fish and Wildlife Service was needed.

V. National Historic Preservation Act (NHPA)

EPA determined that no historic properties are located within the area of potential effect (APE) and that a potential for the location of archaeological resources is low within the construction footprint itself, issuance of the permit to EPEC will not affect properties on or potentially eligible for listing on the National Register. On June 12, 2013, EPA sent a letter to the State Historic Preservation Officer (SHPO) requesting concurrence on EPA findings for EPEC's cultural survey. The SHPO sent a letter with concurrence to the EPA on October 23, 2013.