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<b>Project Title:</b>	SMUD Cosumnes Power Plant - Compliance
<b>TN #:</b>	226034
<b>Document Title:</b>	Cosumnes Power Plant - Petition to Amend - Staff Response to Non-Agency Comments
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**COSUMNES POWER PLANT (01-AFC-19C)**  
**Petition to Amend Commission Decision**  
**Staff Response to Non-Agency Comments**

## **RESPONSE TO NON-AGENCY COMMENTS**

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On August 29, 2018, the Sacramento Municipal Utility District Financing Authority (SFA) filed a petition to amend with the California Energy Commission requesting to modify the Cosumnes Power Plant (CPP) to operate the previously installed GE “Power FlexEfficiency Package” including Advanced Gas Path components and Dry-Low-NOx combustors, and an oxidation catalyst emission control system (TN 224625). SFA filed supplemental information on October 1, 2018 providing a transmission analysis of the proposed capacity addition at CPP (TN 224837).

Staff published their Notice of Receipt on September 11, 2018 (TN 224683). On November 8, 2018, Energy Commission staff published their Staff Analysis of the petition to amend (TN 225863). Staff reviewed the petition pursuant to Title 20, California Code of Regulations, section 1769 (Post Certification Amendments and Changes) and concluded that the increase in electrical production and fuel consumption would not result in a significant impact on the environment, or cause the project to not comply with applicable laws, ordinances, regulations, and standards.

Public comments have been docketed in response to both the petition and staff’s analysis of the petition. Staff attempted to respond to many of the comments on the petition in their November 8, 2018 analysis. On November 2, 2018, SFA filed specific responses (TN 225760) to comments filed between October 11, 2018 and November 2, 2018.

On December 3, 2018, SFA provided comments (TN 225863) on staff’s November 8, 2018 analysis. Staff has reviewed the comments provided and concurs with the proposed condition changes with one exception to the requested language for **AQ-15 A.i.** For consistency with the SMAQMD draft permit, the subsection will read:

*AQ-15 For purposes of determining compliance with SMAQMD Rule 413:*

- A. Startup is defined as the time period commencing with the introduction of fuel to the gas turbine and ending immediately prior to the time that the 15-minute average NOx concentrations do not exceed 9.0 ppmvd at 15% O<sub>2</sub>.*
- i. The startup period must not exceed 1-hour following a shutdown of the associated steam turbine or associated HRSG and steam piping of less than or equal to 8-hours.*

In order to assist the Commissioners and the parties, staff is providing in this document a complete set of responses to all non-agency public comments.

## **TN 224945, COMMENTS SUBMITTED 10/11/18**

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**TN 224945 10/11/18 - Comment 1:** “CCP PTA NERC Compliance errors in TN 224837. Capacity for Hedge appears to be incorrect in Table 4.”

**Response to TN 224945 10/11/18 - Comment 1:** Staff responded to this comment in their analysis published on November 8, 2018 (TN 225863). The capacity of the SMUD Hedges PV is listed anywhere for 0.2 MW<sup>1</sup> to 0.485 MW<sup>2</sup> to 1.0 MW<sup>3</sup> to 1.5 MW<sup>4</sup>. The Hedge PV was included by SMUD when considering the transmission impact of the incremental increase in capacity at the SMUD CPP proposed by the petition, but the exact capacity of Hedge is not significant to the modeling or evaluation of this petition.

**TN 224945 10/11/18 - Comment 2:** “What are the CEC Plant IDs for the generation in Table 4?”

**Response to TN 224945 10/11/18 - Comment 2:** Staff responded to this comment in their analysis published on November 8, 2018 (TN 225863). There are many identification numbers applied to power plants. Transmission staff do not typically use any Plant ID numbers and instead use the name of the power plant, its size, and its location as identifiers. For plants connecting to the California ISO controlled system staff will sometimes refer to the interconnection queue number.

**TN 224945 10/11/18 - Comment 3:** “Has the Energy Commission verified the modeling?”

**Response to TN 224945 10/11/18 - Comment 3:** Staff responded to this comment in their analysis published on November 8, 2018 (TN 225863). Yes, staff has verified the modeling.

**TN 224945 10/11/18 - Comment 4:** “How was the verification done?”

**Response to TN 224945 10/11/18 - Comment 4:** Staff responded to this comment in their analysis published on November 8, 2018 (TN 225863). Staff verifies the data and assumptions that are significant to the evaluation of the project. The capacity of the SMUD Hedges PV is listed anywhere for 0.2 MW to 1.5 MW, and the 0.485 MW rating is used in the modeling the Hedge substation PV plant.

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<sup>1</sup> 2017 QFER data. [https://www.energy.ca.gov/almanac/electricity\\_data/web\\_qfer/Annual\\_Generation-Plant\\_Unit.php](https://www.energy.ca.gov/almanac/electricity_data/web_qfer/Annual_Generation-Plant_Unit.php)

<sup>2</sup> Hedge PV. <https://rps.energy.ca.gov/Pages/Search/SearchApplications.aspx>

<sup>3</sup> Table 4 - Solar generation dispatch used in the Study. Dispatch (MW).

TN224837\_20181001T104531\_SFA\_Cosumnes\_Power\_Plant\_Supplemental\_PTA\_NERC\_Compliance\_Documentation%20(1).pdf

<sup>4</sup> Table 4 - Solar generation dispatch used in the Study. Maximum Operating Capacity.

TN224837\_20181001T104531\_SFA\_Cosumnes\_Power\_Plant\_Supplemental\_PTA\_NERC\_Compliance\_Documentation%20(1).pdf

The CPP was originally licensed and analyzed at 1,000 MW and the Petition would only increase the output by about 69 MW to a total of 603 MW, still well under the licensed 1,000 MW. The CPP is connected to the transmission network near the retired Rancho Seco Nuclear Generating Station. The transmission network in this area was designed to deliver at least 917 MW from Rancho Seco. Increasing generation in the area by 69 MW to a total of 603 MW still well under 917 MW is not expected to have any adverse impacts on the transmission network. The SFA CPP Supplemental PTA NERC Compliance Documentation (TN 224837) did not identify any adverse transmission impacts.

## **TN 224946, COMMENTS SUBMITTED 10/11/18**

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**TN 224946 10/11/18 - Comment 1:** “Is Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) considered in Authorities to Construct 25800 & 25801 (Cosumnes Power Plant)?”

**Response to TN 224946 10/11/18 - Comment 1:** No, TENORMs are not identified in the Sacramento Metropolitan Air Quality Management District (SMAQMD) issued Authorities to Construct (ATCs) 25800 and 25801 (CPP turbines No. 3 and No. 2, respectively). The SMAQMD evaluation included a review of potential emissions of criteria pollutants and toxic air contaminants identified in AP-42-Compilation of Air Emissions Factors maintained by the United States Environmental Protection Agency (U.S. EPA). TENORM is not included in the ATCs as it is not identified a potential toxic air contaminant or hazardous air pollutant from turbines No. 3 or No. 2, or for the proposed pipeline natural gas and digester gas fuels.

SFA clarified in their response (TN 225760) that TENORMs are “[n]aturally occurring materials that have been concentrated or exposed to the accessible environment as a result of human activities such as manufacturing, mineral extraction or water processing.” The digester gas injected into the natural gas supply line serving CPP is from the Sacramento Regional Wastewater Treatment Plant (SRWTP). Staff is not aware of Sacramento industries discharging radioactive materials to the SRWTP that might be concentrated during treatment, resulting in TENORMs in the facility waste streams or in digester gas fuel delivered to CPP.

**TN 224946 10/11/18 - Comment 2:** “Table 1-1. Turbine Emission Rate lists Lead (CAS 7439921) as a emission from turbines (TURB01, TURB02) in Sacramento Municipal Utility District (SMUD) petition to Energy Commission (CEC), <https://efiling.energy.ca.gov/GetDocument.aspx?tn=224625> (PDF page 140). Is the source known for Lead (CAS 7439921) listed in the SMUD petition to CEC?”

**Response to TN 224946 10/11/18 - Comment 2:** This comment refers to Table 1-1 Turbine Emission rates in the Health Risk Assessment Analysis in Appendix E, which identifies lead as a potential CPP emission. Lead is a criteria pollutant. Air Quality staff included a discussion of lead emissions from the facility in the air quality analysis (TN 225863) of the proposed amendment on page 11. Staff noted the

potential for lead emissions from the combustion of digester gas at CPP. Staff described the ambient air quality attainment status for lead at the project site on pages 8 and 9. Staff also included a brief discussion of the ambient monitoring stations for criteria pollutants, including lead, in proximity to the facility on page 20.

Staff included a statement there were no proposed changes to the lead emissions from the combustion of digester gas for this amendment. See staff's response to TN 224980 10/13/18 – Comment 3 below for additional discussion of the lead emission rate.

**TN 224946 10/11/18 - Comment 3:** “SMAQMD BACT CLEARINGHOUSE BACT No 203 Determination Information in <http://www.airquality.org/StationarySources/Documents/BACT%20Determination%20No%202%2003%20-%20Gas%20Turbine.pdf#search=Cosumnes%20Power%20Plant> has space for Lead, but no data. Was Lead overlooked by SMAQMD?”

**Response to TN 224946 10/11/18 - Comment 3:** Staff included in its air quality analysis a discussion of SMAQMD Best Available Control Technology (BACT) requirements on pages 16-17. **Air Quality Table 12** on page 17 summarized staff's analysis of proposed changes for criteria pollutant emissions for the purpose of demonstrating if BACT requirements are triggered from the proposed amendment. **Air Quality Table 12** indicates there are no proposed changes to lead emissions resulting from the proposed changes in operation. **Air Quality Table 12** also includes the BACT threshold and the conclusion that BACT requirements are not triggered for lead from the proposed amendment.

SFA provide responses in TN 225760 and TN 225839, noting that SMAQMD's lead BACT trigger level is 3.3 pounds per day. CPP's annual lead emissions are estimated at not more than 2.8 pounds per year.

**TN 224946 10/11/18 - Comment 4:** “Is (222)Ra or (210)Pb that may be found in Natural Gas Pipelines feeding Cosumnes Power Plant a source of Lead emissions produced by power plant turbines (TURB01, TURB02) as shown in SMUD petition to CEC?”

**Response to TN 224946 10/11/18 - Comment 4:** This comment refers to <sup>222</sup>Ra and <sup>210</sup>Pb radioactive isotopes, which are intermediate decay products that could occur if the gaseous fuels contained, or were exposed to, radioactive nuclides (e.g., uranium or thorium). Radioactive materials/decay products can be concentrated at the well head in drilling and production wastes, and in the natural gas cleanup waste streams. Radioactive materials and isotopes are not an environmental concern at the consumer end of the pipeline given the natural gas cleanup processes and time duration of recovery, cleanup, transmission, storage, and distribution.

The presence of lead in the digester gas fuel would be from elemental lead in the industrial and residential waste streams fed to the water treatment facility. Elemental lead (<sup>204</sup>Pb) is not a radioactive nuclide, meaning it is stable and would not create radioactive isotopes such as <sup>210</sup>Pb.

**TN 224946 10/11/18 - Comment 5:** "Below are links to some information on Lead (210)Pb that is Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) that may be delivered to and emitted as exhaust emissions by the Cosumnes Power Plant turbines.

<https://www.ingaa.org/File.aspx?id=34488&v=d719ea13>

<https://pubs.usgs.gov/fs/fs-0142-99/fs-0142-99.pdf>"

**Response to TN 224946 10/11/18 - Comment 5:** See Response to TN 224946 10/11/18 - Comment 4 above.

## **TN 224947, COMMENTS SUBMITTED 10/11/18**

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**TN 224947 10/11/18 - Comment 1:** "CPP PTA LORS (210)Pb

Applicable Laws, Ordinances, Regulations and Standards (LORS).

Is Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) covered by HSC 115000.1?

<https://www.cdph.ca.gov/Programs/CEH/DRSEM/CDPH%20Document%20Library/RHB/LLRW/FAQ.pdf>

[http://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=HSC&sectionNum=115000.1](http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=115000.1).

Example, (222)Ra or (210)Pb that may be found in Natural Gas Pipelines feeding Natural Gas Power Plants and in any emissions produced by the power plant.

<https://www.ingaa.org/File.aspx?id=34488&v=d719ea13>

<https://pubs.usgs.gov/fs/fs-0142-99/fs-0142-99.pdf>"

**Response to TN 224947 10/11/18 - Comment 1:** Yes, TENORM would probably be covered by HSC 11500.1. However, CPP is not a generator of TENORM or a generator of low level radioactive waste. See also Response to TN 224946 10/11/18 - Comment 4.

## **TN 224948, COMMENTS SUBMITTED 10/11/18**

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**TN 224948 10/11/18 - Comment 1:** "CPP TOD Timer adoption model. Reliability Modeling Time of Day rates and Timer adoption. SMUD Cosumnes River-Compliance SFA Cosumnes Power Plant Supplemental PTA NERC Compliance Documentation, TN224837.

What level of timer use adoption such as SMUD recommends in the SMUD video clip below was used in modeling reliability?"

**Response to TN 224948 10/11/18 - Comment 1:** This comment does not relate to the petition.

## **TN 224980, COMMENTS SUBMITTED 10/13/18**

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**TN 224980 10/13/18 - Comment 1:** “What is the makeup of the fuel content for CPP?”

**Response to TN 224980 10/13/18 - Comment 1: Air Quality:** SFA responses in TN 225760 and TN 225839 highlight that no more than 4.97 percent of the CPP fuel would be from digester gas, on an energy input basis. The fuel would predominately be CPUC pipeline quality natural gas. The CPP digester gas is stripped of hydrogen sulfide to bring sulfur levels down to that of pipeline natural gas.

**TN 224980 10/13/18 - Comment 2:** “How is the fuel content monitored?”

**Response to TN 224980 10/13/18 - Comment 2:** See SFA’s response in TN 225760. CPP continuously measures the fuel input at the combustion turbines using several fuel monitors as required in the District permits and Energy Commission license.

**TN 224980 10/13/18 - Comment 3:** “How much Lead (Pb) is in the fuel? How much Radon (Ra) is in the fuel?”

**Response to TN 224980 10/13/18 - Comment 3:** AP-42 emission factors were used to determine the emissions of lead from the combustion of both natural gas and digester gas. AP-42 notes lead emissions are non-detect from the combustion of natural gas in a turbine. Therefore, there is no applicable emission factor for lead from the combustion of natural gas at CPP.

AP-42 includes an emission factor of less than 3.4E-06 pound per million British thermal units for emission of lead for turbines combusting digester gas. Using this emission factor, emissions of lead equate to up to approximately 2.8 pounds of lead per year. The digester component of the gas combusted is limited and as stated the amendment is proposing no changes to the limit for digester gas combustion. AP-42 notes that the testing performed to establish the lead emission factor for digester gas combustion in a turbine was non-detect for lead. The emission factor included in AP-42 for lead from digester gas combustion is based on one-half the detection limit for lead. Therefore, the AP-42 emission factor applied to determine lead emissions is conservative. The AP-42 emission factor for lead from the combustion of digester gas is based on testing of turbines in operation including units located in California. AP-42 documents are accessible from the following link:

<https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors>.

Radon is Rn. Radium is Ra. Staff is aware that both radon and radium can be found in commercial grade natural gas and natural gas production waste streams. Radium isotopes generally have short half-lives such that no radium is still in the natural gas delivered to customers such as CPP given the natural gas cleanup processes and time duration of recovery, cleanup, transmission, storage, and distribution.

Radon isotopes are not likely to pose a radiation risk to natural gas customers. Generally, the radon hazard arises from radon collecting in basements and subterranean spaces built into uranium bearing soils. Natural gas is not stored onsite. Natural gas and digester gas post-combustion byproducts are vented through the stacks, and not allowed to be collected, potentially concentrating radon, in spaces where humans would be exposed to radon.

**TN 224980 10/13/18 - Comment 4:** “What is the (210)Pb and (222)Ra content?”

**Response to TN 224980 10/13/18 - Comment 4:** They are non-detect for California pipeline natural gas. Please see staff Response to TN 224946 10/11/18 - Comment 4 and Response to TN 224980 10/13/18 - Comment 3 above.

**TN 224980 10/13/18 - Comment 5:** “Please view this link <https://www.ncbi.nlm.nih.gov/pubmed/15885858> for example of finding (210)Pb and (222)Ra in pipelines.”

**Response to TN 224980 10/13/18 - Comment 5:** The link describes “... (210)Pb content in “black-powder” found in pigging operations on gas pipelines in Brazil, in particular, on the Campos Basin gas pipeline.” Staff agrees that natural gas production can recover radioactive isotopes. They can be found in elevated levels in production waste streams or near the production well in the natural gas infrastructure. Radioactive isotopes are non-detect for California pipeline natural gas. Please see staff Response to TN 224946 10/11/18 - Comment 4 and Response to TN 224980 10/13/18 - Comment 3 above.

## **TN 224983, COMMENTS SUBMITTED 10/15/18**

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**TN 224983 10/15/18 - Comment 1:** “How does the heat rate in the SFA petition compare with SFA budget for correctness?”

**Response to TN 224983 10/15/18 - Comment 1:** This comment is not relevant to this proceeding, however SFA responded in TN 225760.

**TN 224983 10/15/18 - Comment 2:** “SFA 2018 budget on PDF page 7 lists average heat rate as 6,380. That number appears to come from the table on PDF page 8. See The SFA 2018 Budget at this [smud.org](https://www.smud.org/-/media/Documents/Corporate/About-Us/Board-Meetings-andAgendas/05_SFA-Proposed-Budget2018.pdf) link below (SMUD Board approved posted document is not ADA compliant). [https://www.smud.org/-/media/Documents/Corporate/About-Us/Board-Meetings-andAgendas/05\\_SFA-Proposed-Budget2018.pdf](https://www.smud.org/-/media/Documents/Corporate/About-Us/Board-Meetings-andAgendas/05_SFA-Proposed-Budget2018.pdf)

There appears to be math errors in this SMUD Board approved budget document.”

**Response to TN 224983 10/15/18 - Comment 2:** This comment is not relevant to this proceeding.



**TN 224983 10/15/18 - Comment 3:** "Perhaps the math in SFA's petition and supporting documents should be validated?"

**Response to TN 224983 10/15/18 - Comment 3:** This comment is not relevant to this proceeding. Regardless, staff performs due diligence on filings and in their analyses. Staff performed an independent analysis of the proposed amendment and verified relevant calculations provided in the petition.

**TN 224983 10/15/18 - Comment 4:** "What is the correct heat rate for SMUD's Cosumnes Power Plant?"

**Response to TN 224983 10/15/18 – Comment 4:** See SFA's response in TN 225760. If the current proposed increase to the electrical generation is approved the heat rate is expected to be nominal 6,818 British thermal units per kilowatt-hour.

## **TN 225800, COMMENTS SUBMITTED 11/5/18:**

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**TN 225800 11/5/18 - (Statement 1) Comment 1:** "Perhaps the Energy Commission can confirm the Hedge Solar plant's true capacity?"

**Response to TN 225800 11/5/18 - (Statement 1) Comment 1:** See Response to TN 225963 11/27/18 - Comment 1 regarding the capacity of Hedge PV.

**TN 225800 11/5/18 - (Statement 1) Comment 2:** "Please compare these two views, scaled about the same, the CEC RPS ID for Hedge is 60687. Photovoltaic Power Plant CEC RPS ID 60703 Capacity 1.0 MW  
<https://www.google.com/maps/place/13345+Apple+Rd,+Wilton,+CA+95693/@38.4500581,-121.1653877,293m/data=!3m1!1e3!4m5!3m4!1s0x809a9351506394c1:0x50ca10b268733273!8m2!3d38.449382!4d-121.164657>

Photovoltaic Power Plant CEC RPS ID 60687 Capacity 0.485 MW

<https://www.google.com/maps/place/9250+Elder+Creek+Rd,+Sacramento,+CA+95829/@38.5046529,-121.3554721,289m/data=!3m1!1e3!4m5!3m4!1s0x809ac47f1ed951b9:0x577d6ddb01970f9c!8m2!3d38.5085184!4d-121.3567299>

I believe each of the two views are the entirety of the power plants and are of about the same land area."

**Response to TN 225800 11/5/18 - (Statement 1) Comment 2:** See Response to TN 225963 11/27/18 - Comment 1 regarding the capacity of Hedge PV. Solar PV capacity can vary by locations, type and mounting technologies. A comparison of PV footprint (area) between two PV projects would not be determinative of the relevant capacities that might be used by modelers, regulators, policy makers, planners, or energy or asset sellers and purchasers.

**TN 225800 11/5/18 - (Statement 1) Comment 3:** “Please confirm the existence of the other solar power plants listed in petition documents.”

**Response to TN 225800 11/5/18 - (Statement 1) Comment 3:** This comment is not relevant to this proceeding.

**TN 225800 11/5/18 - (Statement 2) Comment 1:** “Please confirm the actual sources for lead (Pb).”

**Response to TN 225800 11/5/18 - (Statement 2) Comment 1:** Please see staff’s Response to TN 224980 10/13/18 - Comment 3 above.

**TN 225800 11/5/18 – (Statement 3) Comment 1:** “Please have SFA identify the supervising attorney responsible for the LORS in this reply.”

**Response to TN 225800 11/5/18 - (Statement 3) Comment 1:** This comment is not relevant to staff’s analysis of the petition.

**TN 225800 11/5/18 - (Statement 3) Comment 2:** “Please have SFA clarify "Therefore, California Health and Safety Code 115000.1 to the CPP." in their statement. Perhaps SFA staff have overlooked <https://www.ingaa.org/File.aspx?id=34488&v=d719ea13> as it addresses Natural Gas Transmission and Storage.”

**Response to TN 225800 11/5/18 - (Statement 3) Comment 2:** CPP is not a generator of low level radioactive waste. HSC 115000.1 does not apply to CCP. See also Response to N 224946 10/11/18 - Comment 4.

**TN 225800 11/5/18 - (Statement 3) Comment 3:** “I believe Natural Gas Transmission and Storage is required to operate the Cosumnes Power Plant.”

**Response to TN 225800 11/5/18 - (Statement 3) Comment 3:** This comment is not relevant to staff’s analysis of the petition. CPP combusts natural gas therefore a natural gas supply line serves CPP. The current petition is not proposing any change to the natural gas supply infrastructure.

**TN 225800 11/5/18 - Statement 4:** “Perhaps SFA staff are unaware that SMUD's Time of Day (TOD) rates change rates based on modeled peak energy demands (loads)? The petition modeling appears to address peak loads. I believe how peak loads are addressed will have an effect on system reliability, therefore TOD rates and consumer response may pose a reliability problem that has been overlooked.”

**Response to TN 225800 11/5/18 - Statement 4:** This comment is not relevant to this proceeding. Staff has concluded that the petition will not impact CCP’s reliability.

**TN 225800 11/5/18 - Statement 5:** “I believe PG&E is to make available the contents per “The Safe Drinking Water and Toxic Enforcement Act of 1986 “ (Prop 65).

[https://www.pge.com/includes/docs/pdfs/myhome/myaccount/explanationofbill/billinserts/5.16\\_Prop65.pdf](https://www.pge.com/includes/docs/pdfs/myhome/myaccount/explanationofbill/billinserts/5.16_Prop65.pdf) “

**Response to TN 225800 11/5/18 - Statement 5:** This comment is not relevant to this proceeding.

**TN 225800 11/5/18 - Statement 6:** “Perhaps the math should be checked in the petition, this is why a bring up identified math errors in SMUD's approved 2018 budget. If no math was used to prepare the petition, my comment is not relevant to the petition.”

**Response to TN 225800 11/5/18 - Statement 6:** This comment is not relevant to this proceeding. Staff performed an independent analysis of the proposed amendment and verified relevant calculations provided in the petition.

## **TN 225954, COMMENTS SUBMITTED 11/26/18**

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**TN 225954 11/26/18 - Comment 1:** “Please tell me about your staff's training and private agreements they have made with SMUD.”

**Response to TN 225954 11/26/18 - Comment 1:** Staff has reviewed the petition as an independent party and has no private agreements with SMUD.

**TN 225954 11/26/18 - Comment 2:** “Why is it that your staff say they are not certain what is meant by “Plant IDs” in Cosumnes Power Plant - Petition to Amend - AGP Upgrades - Staff Analysis TN225863 of proceeding 01-AFC-19C for SMUD Cosumnes Power Plant - Compliance? Perhaps there is a training issue?”

See PDF page 12 of TN225863.

Uhler Comment #2:

What are the CEC Plant IDs for the generation in Table 4?

Response #2:

Energy Commission staff is not certain what is meant by “plant IDs for the generation in Table 4.” These are not power plants that were licensed by the Energy Commission. The plant names and output (MW) generally serve as an identifier for power plants.

The CEC has a number of IDs that have been given to power plants as shown below, such as CEC RPS Certification Number, CEC ID Number and CEC Plant ID Number.

The Energy Commission tracks power plants with these IDs, licensed by the Energy Commission or not. The below is found in RPS Verification Report Commission Report, Adopted August 1, 2007 – CEC300-2007-001-CMF.PDF on PDF page 50 for example of CEC plant IDs.”

**Response to TN 225954 11/26/18 - Comment 2:** For purposes of facility licensing, transmission staff do not typically use any Plant ID numbers and instead use the

name of the power plant, its size and location as identification for discussion purposes. For plants connecting to the California ISO controlled system staff will sometimes refer to the interconnection queue number.

**TN 225954 11/26/18 - Comment 3:**

“Uhler Comment #3:

Has the Energy Commission verified the modeling?

Response #3:

Staff is not certain what is meant by “verification”, “but the study results are what staff expected”.

Was the expectation from the “family of models” the Energy Commission uses, as spoke of by Energy Commission Chair Robert B. Weisenmiller, Ph.D. Appointment Designation: Engineer/Scientist, in this video clip <https://youtu.be/yjlk15hMRGE?>”

**Response to TN 225954 11/26/18 - Comment 3:** See staff Response to TN 224945 10/11/18 - Comment 3 and Response to TN 224945 10/11/18 - Comment 4.

**TN 225954 11/26/18 - Comment 4:** “Is it possible that staff have overlooked these models and the models went unused in confirming the errors in table 4 have no effect on the result or if the result can be arrived at with the given product structure? In other words, did they just assume the results are correct?”

**Response to TN 225954 11/26/18 - Comment 4:** See staff Response to TN 224945 10/11/18 - Comment 4.

**TN 225954 11/26/18 - Comment 5:** “Has the Energy Commission made another private agreement with SMUD not to use the tools at hand to check SMUD's results. By private agreement, I mean like the private agreement the Energy Commission made with SMUD for Power Source Disclosure notwithstanding Title 20, 1393. See TN225914\_20181116T142943\_Transcript\_of\_1172018\_Business\_Meeting.pdf PDF page 142.”

**Response to TN 225954 11/26/18 - Comment 5:** Staff has no private agreements with SMUD and has evaluated this petition as an independent party.

**TN 225954 11/26/18 - Comment 6:** “I have asked to inspect this private agreement for SMUD power source disclosure, your staff have not provided me with the details of this private agreement.”

**Response to TN 225954 11/26/18 - Comment 6:** Staff has no private agreements with SMUD and has evaluated this petition as an independent party.

**TN 225954 11/26/18 - Comment 7:** “Will I find that my effort here is for not because of another undisclosed private agreement between the Energy Commission and SMUD?”

**Response to TN 225954 11/26/18 - Comment 7:** Staff has no private agreements with SMUD and has evaluated this petition as an independent party.

**TN 225954 11/26/18 - Comment 8:** “Please note that your staff did not summarize all of my comments, please review the comments they overlooked, TN224946, TN224947, TN224948, TN224980, TN224983 and TN225800.”

**Response to TN 225954 11/26/18 - Comment 8:** While not legally required, staff has provided this document to address the commenter’s request. No comments have been overlooked. Staff includes responses to comments only to the extent that they are determined to be relevant to the petition or staff’s analysis.

**TN 225954 11/26/18 - Comment 9:** “Please review these natural gas transmission and storage health, safety, and environmental guidelines and tell me if you are aware of these guidelines and how they are applied and monitored in Sacramento county. Do the guidelines mean there is a change in circumstances that should be considered in the petition?”

**Response to TN 225954 11/26/18 - Comment 9:** Staff reviewed the attached working group guidelines, which “...do not supersede or replace regulatory requirements, nor are they intended to be all-inclusive of the applicable regulatory requirements. Instead, they are intended to be supportive and complementary to such requirements.”<sup>5</sup> The natural gas infrastructure operated by SMUD for their power plants, including CPP, was licensed by the Energy Commission.<sup>6</sup> The pipeline is regulated by the Pipeline and Hazardous Materials Safety Administration (PHMSA), which is part of the US Department of Transportation. Staff is not intending to recommend using the guidelines in lieu of the existing controlling regulations. The guidelines do not constitute a change in circumstance requiring reevaluation of the project’s natural gas infrastructure by staff or the Energy Commission.

## **TN 225955, COMMENTS SUBMITTED 11/26/18**

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**TN 225955 11/26/18 - Comment 1:** “Energy Commission Commissioners, tell me about SMUD’s natural gas transmission and storage health, safety, and environmental guidelines,”

**Response to TN 225955 11/26/18 - Comment 1:** The natural gas infrastructure operated by SMUD for their power plants, including CPP, was licensed by the Energy Commission.<sup>7</sup> The pipeline is regulated by the Pipeline and Hazardous Materials Safety Administration (PHMSA), which is part of the US Department of Transportation. The modifications to the project proposed by the petition do not

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<sup>5</sup> Section 1.3, Construction Safety & Quality Consensus Guidelines. Document: CS-H-03 Revision: 0  
Publication Date: May 3, 2018

<sup>6</sup> SMUD Cogeneration Pipeline Project (92-AFC-2PC)

<sup>7</sup> SMUD Cogeneration Pipeline Project (92-AFC-2PC)

affect the project's natural gas infrastructure or require reconsideration of the Energy Commission's original conclusions and findings.

**TN 225955 11/26/18 - Comment 2:** "Your staff appear to have overlooked the attached natural gas transmission and storage health, safety, and environmental guidelines."

**Response to TN 225955 11/26/18 - Comment 2:** See staff Response to TN 225955 11/26/18 Comment 1, and Response to TN 225954 11/26/18 - Comment 9.

**TN 225955 11/26/18 - Comment 3:** "Please review these natural gas transmission and storage health, safety, and environmental guidelines and tell me if you are aware of these guidelines and how they are applied and monitored in Sacramento county."

**Response to TN 225955 11/26/18 - Comment 3:** Staff reviewed the attached working group guidelines. Staff believes the natural gas infrastructure operated by SMUD for their power plants, including CPP, is adequately regulated by PHMSA, which is part of the US Department of Transportation. See staff Response to TN 225955 11/26/18 Comment 1, and Response to TN 225954 11/26/18 - Comment 9.

**TN 225955 11/26/18 - Comment 4:** "Do the guidelines mean there is a change in circumstances that should be considered in the petition?"

**Response to TN 225955 11/26/18 - Comment 4:** No. The proposed incremental potential increase in natural gas consumption at CPP has been being analyzed. The guidelines do not apply nor do they require or justify reconsideration of the original Commission decision. See staff Response to TN 225955 11/26/18 Comment 1, and Response to TN 225954 11/26/18 - Comment 9.

## **TN 225963, COMMENTS SUBMITTED 11/27/18**

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**TN 225963 11/27/18 - Comment 1:** "Please confirm the capacity of SMUD's Hedge Power Plant. SMUD claims Hedge Photo Voltaic Power Plant is 1.5 MW, please compare this photo of Hedge with photo of a 1 MW photo voltaic power plant. Why does SMUD claim Hedge Power Plant capacity is 1.5 MW?"

**Response to TN 225963 11/27/18 - Comment 1:** See staff Response to TN 224945 10/11/18 - Comment 1.

**TN 225963 11/27/18 - Comment 2:** "What other incorrect conditions are there in the NERC modeling in SFA Cosumnes Supplemental PTA NERC Compliance Documentation (TN224837)? Conditions are things such as equipment set, capacities, and timings."

**Response to TN 225963 11/27/18 - Comment 2:** A 0.485 MW output is used in the modeling. It is not consistent with Table 4 of the CPP Supplemental PTA NERC Compliance Documentation for the Hedge plant; however, whether that output is

0.485 MW or 1.0M MW or 1.5 MW would not change the conclusions of the transmission study.

**TN 225963 11/27/18 - Comment 3:** “SMUD's Hedge Photo Voltaic Power Plant CEC RPS ID 60687 [photo] and Photo Voltaic Power Plant CEC RPS ID 60703 Capacity 1.0 MW [photo]. Please note width of roadways is about the same in each photo, the scale in each photo is about the same. Based on a comparison of photos, Hedge power plant does not appear to have the capacity of 1.5 MW.”

**Response to TN 225963 11/27/18 - Comment 3:** See Response to TN 225963 11/27/18 - Comment 1 above regarding the capacity of Hedge PV. Staff believes solar PV capacity can vary by locations, type and mounting technologies. A comparison of PV footprint (area) between two PV projects would not be determinative of the capacities that might be used by modelers, regulators, policy makers, planners, or energy or asset sellers and purchasers.

**TN 225963 11/27/18 - Comment 4:** “Why are there no charts like these in the modeling report? How were these conditions modeled? Without CEC verification of the conditions used to model, the SFA Cosumnes Supplemental PTA NERC Compliance Documentation (TN224837) may be invalid.”

**Response to TN 225963 11/27/18 - Comment 4:** Staff reviewed the modeling (TN 224837) and the charts supplied in the comments. The potential existence of broader, system-wide renewable integration issues is not relevant to whether or not CPP can safely and reliability interconnect. Staff has verified that the incremental MW increase proposed in the CPP petition was addressed, and did not result in system impacts.