

EXHIBIT 6



RESPONSES TO PUBLIC COMMENTS

On the Clean Air Act
Prevention of Significant Deterioration of Air Quality Draft Permit

For

**TUCSON ELECTRIC POWER (TEP) IRVINGTON/H.WILSON
SUNDT GENERATING STATION (IGS)**
3950 E. Irvington Road • Tucson Arizona 85714
Air Quality Permit #1052

August 8, 2018

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I. Introduction

On February 9, 2018 the Pima County Department of Environmental Quality (PDEQ) proposed to approve, subject to public review, a prevention of Significant Deterioration (PSD) permit for Tucson Electric Power (TEP) Irvington/H.Wilson Sundt Generating Station that would authorize construction, and operation of ten natural gas fired, reciprocating internal combustion engines (“RICE”). The permit was developed in collaboration with the Environmental Protection Agency (EPA) and the National Park Service (NPS).

The public comment period for the proposed permit was originally scheduled to last 30 days. However, the public comment was substantially extended, and it was officially closed on March 29, 2018. PDEQ announced the public comment period through public notices published in the Arizona Daily Star and the Daily Territorial (in English and Spanish) and on the PDEQ website. PDEQ also distributed the Spanish and English public notices to a significant number of interested parties in accordance to 40 CFR part 124, including notices sent by mail, and e-mail.

II. Comments on Specific Provisions of the Draft Permit

A. Comments from Public Referencing Specific Permit Conditions

1. Comment:

Referencing Permit Condition V.E.1: TEP should not be allowed to overlap the new units with the operation of the old units and the proposed permit allows this.

Response:

The permit has been revised to address this comment. As described in more detail in Comments II.B.2 through 4 below, the revised permit requires the permanent shutdown of Units I1 and I2 prior to the initial startup of any one of the RICE units (RICE01 through RICE10).

B. Comments from Sierra Club Referencing Specific Permit Conditions

1. Comment:

The commenter asserts that the information provided in the proposed Technical Support Document does not properly document or establish the potential to emit of the project, citing several issues. The commenter asserts that in order to facilitate review and address the noted issues, the Proposed TSD should include tables for BACT emission limits and net emissions increases for all pollutants.

The following excerpt describes the commenter’s assertion in more detail:

[..] The Proposed TSD explains with the “potential to emit” presented in the IGS Facility Wide Potential to Emit (tons/year) Summary table:

The following table summarizes IGS annual potential to emit of air pollutants by each emission unit and by facility-wide total. The emission estimate is to establish “major source” status of IGS pursuant to CAA Sec 501(2). Other use with the estimate may include comparing source potential-to-emit with emissions inventory and test data, or with emission rates allowable by relevant standards. This emission estimate is not meant to establish any baseline emission levels. These emission figures are not meant to be emission limitations of any form.

The Proposed TSD does not explain why the “emission figures” do not reflect the true potential to emit for the Facility and its equipment based on the permit conditions. The term “potential to emit” is a defined term for purposes of PSD review:

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational

limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

PCC §17.04.340(A)(175); 40 CFR 52.21(b)(4). The Proposed TSD should be revised to reflect the potential to emit for all emissions units consistent with this definition.

Further frustrating review, the Proposed TSD presents two different definitions for the term “potential to emit (“PTE”) for the RICE units. Specifically, the emission calculations provided in Attachment A to Appendix C of the Proposed TSD, which purportedly support the potential to emit for these units presented in the summary table IGS Facility Wide Potential to Emit (tons/year) Summary,” refer to “Proposed Potential to Emit” and “Estimated Potential to Emit.” The former is consistent with the potential to emit presented in the summary table and the latter is based on vendor supplied startup and controlled emission rates, which are lower and were used for modeling purposes. (Modeling must be based on the maximum emission rates incorporated into enforceable permit condition; see Comment VII.B). In sum, the Proposed TSD frustrates public review and should be revised to address the issues outlined above. In order to facilitate review, the Proposed TSD should include tables for BACT emission limits and net emissions increases for all pollutants.

The emission calculations provided in Appendix C, Attachment A, to the Proposed TSD, which purport to support the potential to emit provided in the IGS Facility Wide Potential to Emit (tons/year) Summary table, refer a number of times to vendor information provided by TEP in a letter entitled “Vendor Emissions Performance Specifications, H. Wilson Sundt Generating Station Rice Project,” dated September 21, 2017. This document is neither attached to the Proposed TSD nor can it be found in the record. Without the document in the permitting record, the assumed emission rates from this letter, specifically the cold startup emission factors and 60-minute average flue gas emission rates after control system startup for 25% to 100% engine loads, are not supported. Consequently, the emission calculations for potential to emit for the RICE units are not supported. This document must be provided with the Proposed TSD.

Response:

We agree that the Vendor Emissions Performance Specifications, dated September 21, 2017, were not included among the documents available on the Department website during the public comment period. In response to this comment, we obtained a release of a claim of confidentiality on the vendor emission specifications. We have updated the Department website with the vendor specifications, which include the vendor emission data for startup events, as well as emission rates during normal operations that reflect the use of Selective Catalytic Reduction (SCR) for NOx control. In addition, in order to address the commenter’s concern and to facilitate review, we have updated the TSD to include summary tables of BACT emission limits and net emission increases for all pollutants, and have included the vendor emission specifications as an attachment to the TSD..

Regarding the “Facility Wide Potential to Emit Summary” table in Section IV of the Proposed TSD, we wish to clarify that the language explaining the content of the summary table, such as the statement “These emission figures are not meant to be emission limitations of any form”, is not intended to indicate that these values do not reflect the true PTE, as asserted by the commenter. Rather, it is intended to indicate that while the table values represent PTE, they may not themselves represent enforceable emission limitations. For example, CO emissions for each RICE unit are constrained by emission limitations established pursuant to the CO BACT analysis. As described on Page 12 of 34 in Attachment C (BACT Analysis) to Appendix C of the Proposed TSD, CO BACT for nonstartup operations was determined to be 4.43 lb/hr, while CO BACT for startup operations was determined to be specific work practice standards during startup operations that represent a vendor specified startup

emission rate of 9.1 lb/30 min.¹ These BACT limits, in addition to a requirement to limit startups for each RICE unit for each calendar day to no more than 5 startup events, are enforceable limitations that are included in Condition II.A of the Proposed Permit. As presented in the RICE Project Emission Calculations included in Attachment A to Appendix C of the Proposed TSD, these limitations have the effect of limiting the CO PTE of each engine to 11.3 lb/hr and 25.7 tpy, which are the values listed for each engine as CO PTE in the “Facility Wide Potential to Emit Summary” table in Section IV of the Proposed TSD. As a result, while the values for the RICE units contained in this table may not necessarily represent enforceable emission limits themselves, we consider them to accurately reflect PTE of the RICE units.²

The RICE Project Emission Calculations contained in Attachment A to Appendix C of the TSD contain the columns labeled “Proposed Potential to Emit” and “Estimated Potential to Emit” noted by the commenter. We note that the commenter’s assertion that the “Estimated Potential to Emit” values were used for modeling purposes, while not inaccurate, does not adequately characterize the development of model emission rates. Please consult the Air Quality Analysis contained in Attachment A to Appendix C of the TSD, as well as our responses to Comment II.B.13 and 14, for a more detailed explanation of model emission rates.

2. Comment:

The commenter asserts that emission decreases from Units I1 and I2 are not contemporaneous with the project, and therefore cannot be used as creditable emission decreases. The commenter notes that the project nets out of PSD review for NOx by relying upon the emission reductions from the shutdown of Units I1 and I2, combined with the project NOx emission cap of 170 tpy, to limit project increases to below the NOx PSD SER of 40 tpy. Citing to PCC §17.04.340(A)(148) and 40 CFR §52.21(b)(3)(i)(b), the commenter notes that any increases or decreases in actual emissions at the major stationary source that are used to calculate a net emissions increase with respect to any regulated NSR pollutant must be “contemporaneous with the particular change”, and that an increase or decrease in actual emissions is “contemporaneous” only for:

- (a) The date five years before construction on the particular change commences; and
- (b) The date that the increase from the particular change occurs.

The commenter notes that Conditions B.V.E.1 and 2 of the proposed permit do not require shutdown of Units I1 or I2 until within 180 days following initial startup of the RICE units. The commenter asserts that because the shutdown of Units I1 and I2 will not occur until after the emission increase from the particular change occurs (i.e., RICE unit startup), the emission decrease occurs outside of the contemporaneous window and is therefore not creditable.

Response:

We agree with this comment. Conditions B.V.E.1 and 2 of the proposed permit do not ensure that the Unit I1 and I2 shutdowns occur within the contemporaneous window for this project, which would not make their emission reductions creditable. As a result, we have updated these permit conditions to require permanent shutdown of Units I1 and I2 prior to initial startup of the first RICE unit. This will ensure that the shutdown of Units I1 and I2 occur within the contemporaneous window for the RICE

¹ Startup emission rates are expressed in units of both lb/event and lb/30 minutes. Since Condition II.A.5 limits startups to 30 minutes in duration, these terms can be used interchangeably.

² By contrast, NOx PTE does represent an enforceable limitation, as Condition II.A.1.a establishes an emission cap of 170 tpy across the 10 RICE units.

project, and ensures that emission decreases associated with the shutdowns are creditable.

3. Comment:

The commenter asserts that the 180 day period between startup of the new RICE units and shutdown of Units I1 and I2 provided by Condition B.V.E.1 and 2 is relying upon an improper interpretation of the shakedown period allowed for replacement units established in PCC §17.04.340(A)(148)(g) and 40 CFR §52.21(b)(3)(viii). The commenter asserts that the RICE units are not “replacement units”, and that therefore any emission decreases from the shutdown of Units I1 and I2 may not be used as contemporaneous emission decreases in the netting analysis.

The following excerpt describes the commenter’s assertion in more detail:

The proposed overlap period of 180 days between startup of the new RICE units and shutdown of the existing boilers may be relying on misinterpretation of PCC §17.04.340(A)(148)(g) and 40 CFR §52.21(b)(3)(viii), which allow for a “shakedown” period of 180 days for “replacement units:”

An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed one hundred eighty days.

However, the RICE units are not replacement units for the steam electric generators Units I1 and I2. Since the Pima County Code does not include a definition for “replacement unit,” PDEQ should look to the federal definition, and also apply a common-sense definition to define replacement unit. Notably, nowhere does the Applicant claim that the RICE project is a replacement unit.

The meaning of a “replacement unit” is defined in 40 CFR §52.21(b)(33), which requires that all of the criteria listed in the following subsections are met:

- (i) The emissions unit is a reconstructed unit within the meaning of § 60.15(b)(1) of this chapter, or the emissions unit completely takes the place of an existing emissions unit.
- (ii) The emissions unit is identical to or functionally equivalent to the replaced emissions unit.
- (iii) The replacement does not alter the basic design parameters (as discussed in paragraph (cc)(2) of this section)32 of the process unit.
- (iv) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.

Here, the RICE units do not comply with the requirements for “replacement units” specified in in sections (ii) and (iii). First, the RICE units are not “identical or functionally equivalent” to the existing Units I1 and I2 pursuant to 40 CFR §52.21(b)(33)(ii) as they employ fundamentally different technologies to generate electricity, i.e., internal combustion versus steam turbine cycle, respectively, as recognized by the Proposed TSD. Second, the RICE units alter the basic design parameters of the process unit pursuant to 40 CFR §52.21(b)(33)(iii). Here, the steam turbine cycle Units I1 and I2 are permitted to fire different fuels than the RICE units and have substantially different maximum hourly heat input and maximum hourly electric output rates.

Response:

As noted in our response to Comment II.B.2, we have updated Conditions V.E.1 and 2 to require permanent shutdown of Units I1 and I2 prior to initial startup of the first RICE unit. Since this eliminates the 180 day period between startup of the new RICE units and shutdown of Units I1 and I2, we consider the remainder of the comment regarding whether these units are “replacement units” that qualify for the 180 day shakedown period described in 40 CFR 52.21(b)(3)(viii) to be rendered moot.

4. Comment:

The commenter cites the language of Condition B.V.E.1 and 2, which establish the shutdown requirements for Units I1 and I2:

1. The permittee shall shutdown permanently either Unit I1 or Unit I2 within 180 days following initial startup of the first RICE unit.
2. The permittee shall have shutdown permanently both Unit I1 and Unit I2 within 180 days following initial startup of the sixth RICE unit.

The commenter asserts that the language of Condition B.V.E.1 and 2 creates a “phased shutdown” of Units I1 and I2 that does not require both existing units to be shut down should the applicant decide to only construct the first set of RICE units. The commenter notes that this would allow an operating scenario in which one of either Units I1 and I2 could operate and generate emissions that overlap with the first set of RICE units, and assert that the emission decreases associated with the shutdown of the second existing unit cannot be used as creditable emission decreases for purposes of NOx netting.

Response:

As noted in our response to Comment II.B.2, we have updated Conditions V.E.1 and 2 to require the shutdown of both Units I1 and I2 prior to initial startup of the first RICE unit, eliminating what the commenter describes as a “phased shutdown”. As a result, we consider these changes to the final permit sufficient to address the commenter’s concern regarding a “phased shutdown.”

5. Comment:

The commenter asserts that the RICE project constitutes a PSD major modification for NOx because the 170 tpy emission cap for the RICE project does not limit total combined NOx emissions to equal or less than 40 tpy. Specifically, the commenter asserts that NOx emissions from the RICE units are limited only by Proposed Permit, Condition B.II.A.1.a, which implements the proposed permit cap of 170.0 tons/year as a 12-month rolling total for all ten RICE units combined. The Proposed Permit does not include any permit conditions limiting NOx emissions on an annual basis for individual RICE units, which each have a potential to emit of 258.9 tons/year of NOx. The commenter asserts that each RICE unit has a NOx potential to emit of 258.9 tpy, which would emit over 40 tpy NOx after only 270.7 hours/year of operation. In addition, the commenter notes that the applicant has indicated an anticipated operation of one of the RICE units for 8,760 hours/year. As a result, the commenter asserts that an annual emission cap across all of the RICE units is not sufficient to determine compliance with the PSD significant emission rate, and states that permit conditions establishing a 4 tpy NOx limit for each RICE unit are required to ensure the project does not trigger PSD review for NOx.

Response:

We disagree with this comment. First, we disagree with the commenter’s assertion that limits for individual emission units are required to ensure that the project does not result in a NOx increase greater than 40 tpy. As noted in the permit application and proposed TSD, the net emission increase from the project is 30.6 tpy NOx, which is below the NOx PSD significant emission rate (SER) threshold. This net emission increase consists of the project increase of 170 tpy NOx, consistent with the 170 tpy emission cap for the engines, combined with a creditable emission decrease of 139.4 tpy NOx based upon the shutdown of Units I1 and I2.³ We note that the 170 tpy NOx emission cap established by Condition B.II.A.1.a applies to all emissions from all ten proposed engines. Because this emission cap applies to the entire group of ten engines, it constrains NOx emissions from the project to 170 tpy. When combined with the creditable NOx decreases from the Unit I1 and I2 shutdowns, this results in a net increase of NOx below the PSD SER threshold. As a result, we do not

³ The commenter has asserted in a separate comment that the emission decrease from Units I1 and I2 are not creditable. These concerns are addressed separately in Comment II.B.2.

consider emission limits for individual engines necessary to ensure project emission increases remain below the PSD SER for NO_x.

Second, we note that the commenter is correct that the PTE of the engines, based upon 8760 hours/year of operation and a short-term NO_x emission rate of 59.1 lb/hr, which corresponds to the NSPS subpart JJJJ emission standard of 1.0 g/hp-hr, is higher than the 170 tpy NO_x emission cap. However, we note that this calculation does not reflect the vendor emission specifications for these engines. As discussed in our response to Condition II.B.1, we have updated the record to include these vendor emission specifications, which include the vendor emission data for startup events, as well as emission rates during normal operations that reflect the use of Selective Catalytic Reduction (SCR) for NO_x control. If established limitations are practicably enforceable, they may be relied upon to legally restrict potential emissions. As discussed in greater detail in our response to Comment II.B.8, the proposed permit contains an emission cap across all ten proposed engines limiting NO_x PTE to 170 tpy, a requirement for each engine to operate with a Selective Catalytic Reduction (SCR) system for NO_x control, and multiple requirements for emission testing and operational monitoring of the engines. Conditions II.B.9 and 10 contain a compliance determination method to calculate total NO_x emissions from the project on a monthly basis. Taken together, these requirements provide a practicably enforceable limitation on total NO_x emissions to ensure detection of an exceedance of the NO_x PSD significance threshold.

6. Comment:

As described in previous comments, the commenters assert that the project triggers PSD review for NO_x, and that PDEQ must perform a BACT analysis for NO_x and established an emission limit for NO_x that constitutes BACT. The commenters provide a review and description of recent PSD permits for RICE units, and assert that BACT for NO_x is SCR, with a corresponding emission rate of 3.10 lbs/hr based on an emission factor of 0.0525 g/bhp-hr.

Response:

We disagree that the project triggers PSD review for NO_x, and that a NO_x BACT determination is warranted. The commenter has previously asserted that the project is a major modification for NO_x, and has raised multiple concerns regarding the NO_x netting analysis and overall emissions from the RICE project. Please refer to our responses to Comments II.B.2 through 5 for further explanation on why the project does not trigger PSD review for NO_x.

7. Comment:

The commenter notes that the proposed permit determined BACT for PM₁₀/PM_{2.5} as good combustion practices, and established an emission limit of 2.5 lb/hr (per engine) for periods of normal operation based on an emission factor of 0.04 g/hp-hr. The commenter asserts that this emission rate does not represent BACT for PM₁₀/PM_{2.5}. Specifically, the commenter notes that a considerably lower BACT limit was permitted by the Tehama County Air Pollution Control District (APCD) and can be found in CARB's BACT Clearinghouse and the inventory of BACT determinations for RICE units maintained by the South Coast Air Quality Management District. Tehama County APCD established a lower BACT for NEO California Power, LLC, which operates RICE units of a comparable type, as well as comparable fuel use. The PM₁₀ BACT emission limit established for the NEO California Power RICE units is 1.18 lb/hr based upon an emission factor of 0.02 g/hp-hr PM₁₀, which the commenter asserts is BACT for the project.

Response:

We disagree with this comment. We acknowledge that the 0.02 g/hp-hr PM₁₀ BACT limit established by Tehama County APCD for NEO California Power (now California Power Holdings, Inc.) is more stringent than the basis for the PM₁₀/PM_{2.5} BACT limit for the Sundt RICE units, which is 0.04 g/hp-hr. However, we note that the current Permit to Operate for California Power Holdings⁴ indicates that

⁴ Tehama County APCD Permit No. PTO220

compliance with this PM₁₀ limit shall be determined either via EPA Test Method 5/ARB Method 5, or per a calculated emission rate based on 0.02 g/bhp-hr. In conversations with Tehama County APCD, we have not been able to identify either a recent PM₁₀ source test or an initial source test. This would indicate that the California Power Holding RICE units are using a calculated emission rate of 0.02 g/bhp-hr, as opposed to Method 5 source tests, as the method of demonstrating compliance. Given the lack of source test data from the California Power Holdings units demonstrating compliance with their PM₁₀ BACT limit, we do not consider a 0.02 g/bhp-hr PM₁₀ emission limit to be demonstrated in practice, and have not updated the BACT analysis for the RICE project to include this determination.

8. Comment:

The commenter asserts that periodic source tests are insufficient to ensure the practical enforceability of permit emission limits. The commenter specifically notes that NO_x and CO CEMS are routinely required for natural gas-fired combustion units, including RICE units, and asserts that PDEQ must require CEMS in order to ensure that permit emission limits are practicably enforceable.

The following excerpt describes the commenter's assertion in more detail:

The Proposed Permit contains no testing requirements other than these infrequent stack tests (biannual after initial source test for each RICE unit) to determine compliance with the Proposed Permit PSD and BACT emission limits for NO_x, VOC, CO, and PM₁₀/PM_{2.5}. Infrequent stack tests are inadequate to determine whether permit limits are being met routinely, day in and day out. EPA itself has stated that annual stack tests are not sufficient to assure compliance with emissions limits.

First, stack tests normally last only a few hours (two to six hours). Annual testing therefore may not be representative for emissions during routine operations during the remaining hours of the year. Bi-annual testing, as proposed here is even less representative. Second, it is well known that "[m]annual stack tests are generally performed under optimum operating conditions, and as such, do not reflect the full-time emission conditions from a source." A widely used handbook on Continuous Emissions Monitoring ("CEMs") notes, with respect to manual source tests for PM₁₀, that: "Due to the planning and preparations necessary for these manual methods, the source is usually notified prior to the actual testing. This lead time allows the source to optimize both operations and control equipment performance in order to pass the tests." In other words, maintenance is performed in advance of the test to ensure that the emission-generating process is finely tuned. Sometimes, a pre-test is conducted and additional maintenance and tuning performed to assure the source passes.

It is essential that monitoring be performed more frequently than specified by the biannual source test requirements in the Proposed Permit. Stack emissions can be accurately monitored with Continuous Emissions Monitors ("CEMs"). CEMS are electro-mechanical instruments, usually installed in the facility's exhaust or smoke stacks, which sample, analyze, measure, and record the amount of pollutants passing through the stack. CEMS have been developed to measure various types of pollutants emitted by stationary sources, including NO_x, CO, and opacity. NO_x and CO CEMS are routinely required for natural gas-fired combustion units, including RICE units, and can detect violations that inspectors cannot:

According to EPA compliance officials, inspectors have difficulty judging visible emissions at night and in adverse weather, whereas CEMS are not affected by these conditions. More importantly, gaseous emissions, such as SO₂ and NO_x, are generally not visible, whereas CEMS consistently measure these gases directly and reliably. For some gaseous pollutants, inspectors often can only infer compliance by comparing existing process and control system operating conditions with those recorded during stack testing. However, according to EPA, stack test data are collected under finely tuned process and control system operating conditions, and thus may be atypical of tests conducted under normal operations, further adding to the difficulty of detecting violations of permit conditions for gaseous pollutants.

Unless supplemental monitoring such as CEMS is added to the Proposed Permit, community members will not be able to protect themselves against harmful emissions and local, state, and federal regulatory agencies cannot detect and cure violations of permit conditions. Indeed, even when locals observe

conditions that strongly suggest that the plant is violating its permit limits (e.g., plumes are visible at the stacks, odors are present, solids settle in their yards or homes, or they experience adverse health effects), they are often powerless to prove such violations or to stop unlawful pollution because there are no monitoring data to support their claims.

Response:

We disagree with the commenter's assertion that the permit lacks sufficient testing, monitoring, and recordkeeping requirements to ensure that the permit limits are practicably enforceable. For an emissions limit to be enforceable as a practical matter, the permit must clearly specify how emissions will be measured or determined for purposes of demonstrating compliance with the limit^{5,6} In addition, emission limitations must be supported by monitoring, recordkeeping, and reporting requirements that are "sufficient to enable regulators and citizens to determine whether the limit has been exceeded, and if so, to take appropriate enforcement action."⁷

We acknowledge that EPA has indicated, as noted by the commenter, that annual source tests alone are insufficient to assure compliance with emission limits. We note, however, that in the examples cited by the commenter, EPA indicated the insufficiency of annual source tests in the context of permit actions and permit conditions which relied upon source tests to the exclusion of other additional monitoring, either of operation of the emission unit in question, or of control devices being employed. The proposed permit for the RICE project requires annual source tests for NOx, CO, VOC, and PM10/PM2.5, but does not rely solely upon these source tests to ensure practicable enforceability of permit limits.⁸ As described in greater detail below, the proposed permit requires additional monitoring and operating data collection to ensure compliance with the respective emission limits for these pollutants, as well as how compliance should then be demonstrated based on the data collected.

First, we note that the proposed permit requires extensive monitoring of control device operating parameters to assure that the control devices are operating appropriately at all times. The proposed permit requires each engine to operate with a Selective Catalytic Reduction (SCR) system (Proposed Permit Specific Condition II.A.1.c) as an add-on control device for NOx, and includes monitoring, recordkeeping, and reporting requirements of multiple SCR operating parameters on a continuous basis. SCR systems use an ammonia injection system and a catalyst bed to reduce NOx emissions. Ammonia selectively reduces NOx to N₂, and is injected into the exhaust gas stream upstream of a catalyst bed. The ammonia reacts with NOx to form N₂ on the catalyst surface, which specifically promotes the NOx to N₂ reaction. Temperature is a critical variable affecting the reaction, as optimum catalyst performance occurs in operating ranges varying from 400 to 800 deg F, depending upon specific catalyst composition. In addition to temperature, the ammonia injection rate is also crucial, and must be carefully maintained at an ammonia-to-NOx ratio that both effectively reduces NOx emissions and avoids excessive amounts of unreacted ammonia downstream of the catalyst bed. As a result, in addition to hours of operation of the engine, the proposed permit requires monitoring of the SCR ammonia injection rate and SCR outlet temperature, and also requires the use of an SCR process monitor that will calculate outlet NOx concentration (proposed permit specific condition II.A.1.c.iv).

Similarly, the permit includes monitoring of operating parameters for the oxidation catalyst. The proposed permit requires the use of an oxidation catalyst (proposed permit specific condition II.A.2.b and 3.b) as an add-on control device for purposes of meeting CO and VOC BACT limits. Oxidation catalyst systems consist of a specific catalyst mounted on a support material that is installed in a reactor vessel. As exhaust gases pass through the reactor, CO and VOC react with oxygen in the presence of the catalyst to form carbon dioxide. Temperature is a critical variable affecting this reaction, since oxidation catalyst also has an optimum temperature range, as well as a minimum

⁵ Order on Petition No. IX-2011-1 at 10 (February 7, 2014) (Hu Honua I).

⁶ Order on Petition No. IV-2010-4 at 15 (June 22, 2012) (Cash Creek).

⁷ Order on Petition No. II-2000-07 at 7 (May 2, 2001) (Pencor-Masada).

⁸ The proposed permit does not require stack tests for SO₂. Please see our response to Comment II.B. 11 for a discussion of practicable enforceability with regard to SO₂ PTE.

operating temperature below which catalyst effectiveness is negligible. As a result, the proposed permit requires monitoring, reporting, and recordkeeping of oxidation catalyst temperature. It also requires monitoring of pressure drop across the oxidation catalyst, which is an indicator of adequate flow across the catalyst bed. Also, the proposed project triggers Compliance Assurance Monitoring (CAM) requirements with respect to CO. We have updated the proposed permit and TSD to include the applicable requirements from 40 CFR part 64, which includes development of a CAM plan which will establish specific indicator ranges for catalyst temperature and catalyst pressure drop based upon the initial performance test.

Furthermore, to assure proper operation of the engines, the proposed permit requires the engines to operate in accordance with a site-specific monitoring plan and to install, operate, and maintain a continuous parameter monitoring system (CPMS) as required by NSPS subpart JJJJ and MACT subpart ZZZZ. The site specific monitoring plan is required to include elements such as performance criteria and design specifications for monitoring system equipment, and must establish measures for equipment performance evaluations, as well as ongoing operation, maintenance, and reporting and recordkeeping procedures.⁹ The CPMS is required to collect information on engine operating parameters in accordance with the site specific monitoring plan on a continuous basis. The specific contents and operating parameters established in site specific monitoring plans vary, but in general are established based upon a combination of manufacturer specification and upon conditions observed during the initial compliance test. Combined with the CPMS, these measures work to ensure that the engines operate properly in accordance with manufacturer specifications, and in a manner consistent with the initial compliance test.

Finally, the Proposed Permit requires the data generated by the monitoring and testing requirements contained in Section II.B (PSD and BACT Monitoring Requirements) and Section II.D (PSD and BACT Testing Requirements) to be used to demonstrate compliance with the respective pollutant emission limits, including the NO_x annual emission cap. As explained in greater detail in our response to Comment II.B.9 below, fuel usage records, source test results, and vendor startup emission rates shall be used to calculate NO_x emissions from all ten RICE units on a monthly basis, and as a 12-monthly rolling total.

9. Comment:

The commenter asserts that the permit conditions are insufficient to ensure compliance of the proposed RICE units with the 170 tpy NO_x emission cap. The following excerpt describes the commenter's assertion in more detail:

First, the Proposed Permit fails to establish an unambiguous methodology for calculating NO_x emissions from the emission test. Simply referring to the parameters that are part of the calculation is inadequate to ensure that the Applicant correctly calculates NO_x emissions. Thus, the NO_x emission cap is not enforceable. The Proposed Permit should be revised to include an equation that lays out the emission calculation in detail. Preferably, the Proposed Permit should be revised to require installation of NO_x CEMS which would eliminate the need for manual calculations.

Second, one of the parameters that are part of the proposed NO_x emission calculation is the "vendor-guaranteed NO_x emission rate for each startup event." This emission rate is nowhere to be found in the Proposed Permit. Presumably, the Proposed Permit refers to the vendor-supplied (not vendor-guaranteed) startup emission rate of 11.1 lbs/hour of NO_x per RICE unit presented in Attachment A to Appendix of the Proposed TSD, Table A-2. A vendor guarantee for this emission rate is nowhere to be found in the docket. Further, PDEQ recognizes that the emission rates provided by the vendor are not guaranteed. Specifically, Footnote 10 to Table A-2 clearly states "PTE emissions using vendor supplied controlled emission rates for comparative purposes only. Emissions presented are not enforceable by permit limits." Thus, the startup emission rate for NO_x is not supported and, consequently, the emission cap for NO_x emission from all ten

⁹ For a complete list of required site-specific monitoring plan requirements, see [40 CFR 63.6625\(b\)\(1\)](#).

RICE units is not enforceable.. . . .

Response:

While we agree with certain elements of this comment, we disagree with the overall assertion that the NOx emission cap is unenforceable.

As noted by the commenter, and as discussed previously in our response to Comment II.B.1, we agree that the vendor emission specifications were not included in the docket. We have subsequently updated the Department website to include this information, which was summarized in Table A-2 Attachment A to Appendix C of the Proposed TSD.¹⁰ In addition, we wish to clarify that the statement in Table A-2 that “Emissions presented are not enforceable by permit limits” is not intended to indicate that these values are unconstrained by permit limits, as implied by the commenter. As discussed in a similar response to Comment II.B.1, this language instead is intended to indicate that while these values do represent PTE, the literal ton/year and lb/hr values are not enforceable limits themselves. Rather, the permit establishes limitations for these pollutants through a combination of BACT limits and annual emission caps that constrain emissions from the RICE units.

As noted by the commenter, Condition II.C.9 of the proposed permit states that the permittee shall calculate NOx emissions using “[...] the vendor-guaranteed NOx emission rate for each startup event.” We acknowledge that the emission rates provided by the vendor are not guaranteed, and have revised Condition II.C.9 to reference vendor specified rather than vendor guaranteed emission rates. In addition, following the close of the public comment period, we requested additional supporting information from the applicant regarding the development and basis for the startup emission rate specifications. We have included this information along with the original vendor specifications on the list of publicly available documents for this project on the Pima DEQ website.^{11,12,13} As discussed in this supporting information, the engine vendor developed start up emission specifications based upon a combination of information provided by the catalyst supplier, as well as field and laboratory data. In particular, the engine manufacturer relied upon data provided for catalyst conversion efficiencies in order to develop a simulation tool that, when combined with collected temperature and flow data from the engine, estimated NOx emission performance during the startup process. When compared to tested controlled emission rates, the simulation tool produced well correlated results.

More broadly, we disagree with the commenter’s assertion that the NOx emission cap is unenforceable. Condition II.A.1.a of the Proposed Permit clearly establishes a 170.0 tpy NOx limit, based on a rolling 12-month total, that applies to all ten proposed RICE units. Additional specific conditions in the Proposed Permit require the permittee to perform performance tests and develop unit-specific NOx emission factors (Condition II.D.1 and 2), monitor control device and engine operating parameters (Condition II.B) including heat input and hours and modes of operation (i.e., startup/nonstartup), and record and report NOx emissions on a monthly basis (Condition II.C.9 and 10). Condition II.C.9 in particular specifies the variables that shall be used to calculate NOx emissions, and requires the inclusion of all emissions, including startup and non-startup emissions, from all RICE units. For periods of nonstartup operation, this involves calculation of heat input during periods of nonstartup operation combined with the NOx emission factor from the most recent source test. For periods of startup operation, this involves using records of startup emission events combined

¹⁰ We wish to clarify that the 11.1 lb/hr NOx emission rate, which the commenter describes as the NOx startup emission rate, instead represents the maximum 1-hr NOx emission rate. As described in greater detail in the response to Comment II.B.13, this max 1-hr NOx emission rate represents 30 minutes of startup operation followed by 30 minutes of normal operation at full load. As listed in Table A-2 in Attachment A to Appendix C of the Proposed TSD, this corresponds to the startup emission rate of 10.3 lb/30 min, combined with controlled emission factor of 1.5 lb/hr over a 30 minute period. $10.3 + 0.75 = 11.1$ lb/hr.

¹¹ “Estimated Flue Gas Emission Rates & Expected Emissions During Start-Up Rev 1.pdf”, July 2, 2018

¹² “Estimated Flue Gas Emission Rates & Expected Emissions During Start-Up Rev 1.pdf”, July 5, 2018

¹³ “Vendor Emissions Specifications.pdf”, September 21, 2017

with the vendor supplied cold start emission factor applied to each startup event. In addition, Condition II.C.10 requires this calculation be performed on a monthly basis, both for calculating the most recent month's emissions and the 12 month rolling total. However, to address the commenter's concern regarding the lack of an unambiguous methodology for determining compliance, we have revised Condition II.C.9 to include a more detailed compliance determination methodology, expressed in the form of an equation. This methodology clearly indicates the emission factors and monitored data that will be used when calculating total NOx emissions from the engines.

Finally, we note that this compliance determination methodology includes certain elements that will inherently produce a conservative calculation of emissions (i.e., a tendency to over-calculate, rather than under-calculate, engine NOx emissions). When calculating startup emissions, the compliance determination methodology specifies the use of the cold start emission factor for all startup events, regardless of whether the startup event was a cold or warm startup. A cold startup event represents a startup that occurs when the SCR catalyst is at or close to ambient temperature, and generally occurs after a day or more of nonoperation. In this instance, the engine vendor has indicated in its supporting documentation that cold start conditions represent a startup occurring after 2-3 days of engine nonoperation. A warm startup event represents a startup that occurs after a shorter period of engine nonoperation, typically less than 24 hours, in which the SCR catalyst remains above ambient temperature and reaches minimum operating temperature more quickly. As indicated in the vendor specifications, cold startup emissions (10.3 lb/event) are approximately triple that of warm startup emissions (3.5 lb/event).¹⁴ As a result, the majority of the engine startup events will be warm startup events, since even a single cold startup in a single day will ensure that each successive startup event that day is a warm startup. In the event that an engine has up to its 5 permitted startup events in a single day, the compliance determination methodology would assign a cold startup value to each event, resulting in reported emissions of 51.5 lbs of NOx attributable to startup events. Since 4 of the startup events would be warm and not cold startups, the actual amount of NOx emitted would be closer to 24.3 lbs of NOx, which represents an over-calculation margin of approximately 50%.

In addition, we note that for each of these pollutants, multiple source tests must be performed for each pollutant, corresponding to 25, 40, 70, and 100 percent of peak load (Proposed Permit Specific Condition II.D). In certain other instances, such information has been used to establish load-specific emission factors that will be paired with continuously recorded data indicating unit operating load in order to determine emissions on an hourly basis.¹⁵ The methodology required by the proposed permit is more conservative as it does not allow for the use of load-specific emission factors, but instead requires the highest source test load result to be applied to *all* periods of normal (non-startup) operation and operating loads, irrespective of whether the engine actually operated at a lower-emitting load. This methodology inherently produces an over-calculation of reported emissions, and provides a greater assurance that the NOx annual emission limit will not be exceeded.

10. Comment:

The commenter asserts that while the proposed permit contains testing requirements for VOC, CO and PM10/PM2.5 emission limits, it does not include reporting requirements. Thus, the emission limits for these pollutants are not enforceable.

Response:

The permit has been revised to address this comment. Permit Condition II.D.6 in Part B of the permit was added requiring reporting of performance test results to the Department in accordance with Condition XVII in Part A of the permit.

¹⁴ Ibid. We note that the vendor specified startup emissions are expressed in terms of lb/30 min. Since Condition II.A.5 limits each startup to 30 minutes, we have expressed these emissions here on a lb/event basis.

¹⁵ Order on Petition Nos. IV-2014-5 and VI-2017-13 at 1-12 (April 2, 2018) (Yuhuang Chemical II).

11. Comment:

The commenter asserts that permit conditions are inadequate to ensure compliance with SO₂ emission limits for the RICE units, as follows:

Based on a sulfur content in pipeline natural gas of 7,500 grains per million cubic feet, the 12/17 Revised Application determines the potential to emit of SO₂ and sulfuric acid mist (“SAM”) as sulfur trioxide SO₃ for each of the RICE units at 0.32 lbs/hour and 1.4 tons/year SO₂ and 0.050 lbs/hour and 0.22 tons/year SO₃, respectively. The Proposed TSD provides the respective potential to emit for SO₂ and SAM in Attachment A to Appendix C, Table A-1, but the Proposed Permit contains no corresponding emission limits for either SO₂ or SO₃ or the sulfur content in natural gas. The only related permit condition is contained in Condition B.L. Fuel Sulfur Limitations:

Except as otherwise specified in the Specific Conditions of this permit, the Permittee shall be considered in compliance with the fuel sulfur limitations in this permit by demonstrating that only the specified fuel allowed was fired in the applicable equipment. Such a demonstration may be made by making available to the Control Officer for his inspection, documentation, such as invoices or statements from the fuel supplier, or sample analysis which verify the sulfur content of the fuel being piped and/or delivered. [PCC 17.12.180.A.3.c] [Locally Enforceable Condition]

This condition is inadequate to ensure that fuel sulfur content in natural gas is below the 7,500 grains per million cubic feet assumed for the Applicant’s emission calculations upon which PDEQ relies for its potential to emit presented in summary table “IGS Facility Wide Potential to Emit ... Summary.” Instead, the Proposed Permit should be revised to contain a condition specifying the maximum sulfur content in the pipeline natural gas is 7,500 grains per million cubic feet (0.75 grains/100 scf) or less demonstrated by TEP maintaining a copy of the tariff agreement approved by the Federal Energy Regulatory Commission with the same specification or less. Absent such a requirement, the visibility impact analysis for the RICE project is not supported.

Response:

The permit has been revised to address this comment. Permit Condition II.A.11 in Part B has been added to the permit specifying the maximum sulfur content in the pipeline quality natural gas and requiring the Permittee to maintain documentation from the fuel supplier demonstrating compliance with the sulfur content limitation.

12. Comment:

The commenter asserts that visibility modeling results indicate that the RICE project has an adverse visibility impact at Saguaro National Park, as follows:

Pursuant to 40 CFR §52.21(o) and PCC § 17.16.630, the Proposed TSD, Appendix C, Attachment B, Chapter 3.7.1, presents an analysis of the anticipated impacts on visibility due to emissions from the proposed RICE project at nearby federal Class I areas, specifically, at Saguaro National Park (East and West). Both PDEQ and the National Park Service (“NPS”) determined that the RICE project would have a negative impact on visibility at Saguaro National Park as modeled.

Based on the PLUVUE II modeling results, the Proposed TSD finds adverse impacts on visibility at Saguaro National Park for Case I (0.59% of daytime hours assuming grey as background color and 0.82% assuming black as background color) and for Case II (0.52% of daytime hours assuming grey as background color and 0.70% assuming black as background color). The NPS reran the PLUVUE II modeling with the same emission rates for Case I and found “visibility impacts at Saguaro east and west.” Specifically, the NPS determined:

Saguaro east would see 13 hours per year with the highest Delta E of 4.658 and a Cp of 0.184. Saguaro

west will see 48 hours per year with the highest Delta E of 9.612 and a Cp of 0.413.

Based on the PLUVUE model, out of a total of 4,380 daylight hours per year, there will be, on average, 61 hours per year when a plume might be perceptible within the park.

The guidance that FLMs rely on to determine significance for visibility impacts, FLAG 2010, notes that for PLUVUE II analyses, the FLM would likely not object if Delta E is lower than 1.0 and Cp is lower than < 0.02 . In other words, both PDEQ and the NPS determine that the RICE project would have an adverse impact on visibility at Saguaro National Park as modeled.

Response:

We disagree with the commenter's assertion that PDEQ and NPS have determined that the project results in an adverse visibility impact. Specifically, the commenter references FLAG 2010 guidance¹⁶ regarding refined visibility modeling (PLUVUE II) results for color difference index (ΔE) and contrast $|C|$ values, and asserts that therefore PDEQ and NPS have determined adverse visibility impacts because the project results in model results above these referenced values. We disagree with the commenter's characterization of these values from the FLAG 2010 guidance as bright line thresholds that indicate PLUVUE II impacts exceeding these values as adverse visibility impacts, and that PLUVUE II impacts not exceeding these values are not adverse. As noted by the commenter, FLAG 2010 guidance on this issue states that "For PLUVUE II analyses, the FLM would likely not object if $\Delta E < 1.0$ and $|C| < 0.02$." This language does not indicate that impacts above these values require an FLM objection, nor does it preclude FLM objection in instances where PLUVUE II impacts fall below these values.

Rather, as discussed later in FLAG 2010 guidance, "If the estimated plume parameters exceed the aforementioned values, the FLM would rely on a case-by-case effects-based test (NPS 1993), taking into account magnitude, frequency, duration, and other factors, to decide whether to make an adverse impact determination."¹⁷ NPS was consulted extensively during the PLUVUE II modeling to establish certain site-specific elements of the analysis, and was provided the model files developed by TEP for further analysis and model runs. NPS was provided the opportunity to review and comment on the draft permit and visibility modeling, and provided comments on February 8, 2018. In its response to PDEQ, NPS did not raise an objection to the draft permit, and noted that the proposed project would result in an improvement in visibility relative to the existing Units I1 and I2, based primarily upon lower peak 1-hr NOx emission rates.

13. Comment:

The commenter asserts that the visibility modeling results underestimate visibility impacts because the modeled NOx emission rates are unsupported, as follows:

The modeling runs by far underestimate visibility impacts because the modeled NOx emission rates are not consistent with the potential to emit for the RICE units. The Proposed Permit does not contain any permit conditions for the RICE units limiting short-term NOx emission rates to the modeled short-term emission rates and the modeled NOx rates are much lower than the combined potential to emit. Specifically, as shown in the excerpted table from the December 22, 2017 Final Air Quality Dispersion Modeling Protocol above, the modeled worst-case emission rates are 110.50 lbs/hour NOx for Case 1 (30 minutes startup + 30 minutes normal operation) for all ten RICE Units or 11.05 lbs/hour NOx per RICE unit, and 15.00 lbs/hour NOx for Case 2 (60 minutes normal operation) for all ten RICE units, or 1.50 lbs/hour NOx per RICE unit. These emission rates are considerably lower than those indicated as

¹⁶ U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service, Federal Land Managers Air Quality Related Values Work Group (FLAG), Phase I Report—Revised, Report No. NPS/NRPC/NRR—2010/232, page 21, 10/2010

¹⁷ Ibid, page 22

potential to emit in the Proposed TSD of 59.1 lbs/hour NO_x for one RICE unit, i.e., 590.1 lbs/hour NO_x combined for all ten RICE units.

Thus, the results of the PLUVUE II modeling are not supported and the Proposed Permit does not ensure compliance with the modeled impacts. (In contrast, to ensure compliance with the air quality dispersion modeling analysis for PM₁₀ and PM_{2.5}, which determines compliance with the respective short-term (24-hour) NAAQS for these pollutants, the Proposed TSD requires, and the Proposed Permit incorporates, the modeled emission rate as a permit condition. The Proposed Permit must be revised to include a permit condition limiting short term emission rates to the modeled emission rates described above. Alternatively, the PLUVUE II modelling must be rerun with the potential to emit for all 10 RICE units of 591.0 lbs/hour of NO_x.

Response:

We disagree with the commenter's assertions that the PLUVUE II visibility modeling underestimates visibility impacts, and that the Proposed Permit lacks conditions limiting short-term NO_x emission rates to the modeled emission rates. The commenter asserts that visibility impacts are underestimated because the visibility modeling was not performed using the NO_x emission rate of 59.1 lb/hr per engine, which corresponds to the NSPS subpart JJJJ emission standard of 1.0 g/hp-hr established in Condition III.A.1. Instead, as noted by the commenter, and as described in the Proposed TSD, the visibility modeling used the NO_x emission rates based upon vendor specifications for periods of startup and normal operations. Specifically, the two model cases that were evaluated used the worst-case NO_x emission rates that could occur based upon a combination of emissions from startup operations and normal operation at vendor specified emission rates consistent with the use of SCR.¹⁸ We consider the use of these controlled emission rates appropriate, and disagree that the Proposed Permit lacks conditions that limit short-term NO_x emissions to these rates. The proposed permit includes a requirement for each engine to operate with an SCR system (Condition II.A.1.c), as well as requirements for monitoring of SCR operating parameters (Condition II.B.2) and work practice standards to ensure proper operation of the SCR in a manner consistent with manufacturer recommendations (Conditions II.A.1.c.i through iv). In addition, Condition II.A.6 of the Proposed Permit limits total startups per calendar day for each engine to 5 startups, which is consistent with the modeling cases. These permit conditions restrict the NO_x emission rate of each engine to the model emission rates. As a result, we do not consider revised visibility modeling at uncontrolled NO_x emission rates to be warranted, and do not consider the modeled visibility impacts to be underestimated.

14. Comment:

The commenter asserts that the modeling analysis for CO, PM₁₀ and PM_{2.5} is not supported, as follows: The Proposed TSD determines compliance with short-term NAAQS for CO, PM₁₀ and PM_{2.5} based on "average emission rates." These average emission rates are summarized in Tables 3-5 and 3-6 of Attachment B to Appendix C of the Proposed TSD. PDEQ modeled the 1-hour and 8-hour CO concentrations based on the startup emissions rate for this pollutant of 18.2 lbs/hour provided by the vendor. PDEQ modeled the 24-hour PM₁₀ and PM_{2.5} concentrations based on 24-hour average emissions rates calculated based on 21.5 hours of operation at the vendor-supplied emissions rate including a buffer of five startups per day. As discussed in a previous comment, the vendor supplied emissions rates are not guaranteed and are not required as enforceable permit conditions. Thus, the results of PDEQ's Class II significant impact modeling analysis is not supported. Instead, modeling must be based on the maximum emission rates incorporated into an enforceable permit condition.

Response:

We disagree with the commenter's assertion that the modeling for CO, PM₁₀, and PM_{2.5} is unsupported. The commenter is asserting that average, rather than maximum, emission rates were

¹⁸ We note that the commenter has raised concerns regarding the vendor information justifying the NO_x emission rates during startup and SCR operation. We have addressed these issues separately in our response to Comment II.B.9

used as modeled emission rates. We wish to clarify that the term “average emission rate”, as it appears in Table 3-5 of Attachment B (Air Impact Analysis) to Appendix C of the Proposed TSD, is used in column headings to summarize model emissions rates for various pollutant-specific averaging periods (e.g., “CO 1-hour average emission rate”). These column headings are not intended to represent “average” emission rate occurring over that period, but rather the emission rate for a particular “averaging period”. As described in Section 3.3 of the Air Impact Analysis, the emission rates in Table 3-5 are the maximum emission rates that occur over the corresponding averaging period, consistent with operational limitations established by the proposed permit. In addition, we note that because startup emission rates are either equal to or greater than emissions during normal operations, startup emission rates were accounted for in determining maximum modeled emission rates, as discussed in further detail below.

For example, the commenter notes that the modeled 1-hr CO emission rate is 18.20 lb/hr, which represents the maximum CO emission rate over a 1-hr averaging period. As noted in Table 3-5 of the Air Impact Analysis, the CO startup emission rate is 9.1 lb/30 min, which is higher than the CO emissions rate of 2.64 lb/hr during normal operations. Since Condition II.A.5 of the proposed permit limits engines startups to no more 30 minutes in duration, the worst-case CO emissions scenario over a 1-hour period represents two 30-minute startup events in a single hour, or 18.20 lb/hr.

Similarly, the modeled PM₁₀ emission rate of 2.50 lb/hr represents the maximum PM₁₀ emission rate over a 24-hr averaging period. As noted in Table 3-5 of the Air Impact Analysis, the PM₁₀ startup emission rate is 1.8 lb/30 min (equivalent to 3.6 lb/hr), which is higher than the PM₁₀ emission rate of 2.37 lb/hr during normal operations. Since Condition II.A.6 of the proposed permit limits the total number of startups for each RICE in a single calendar day to no more than 5, the worst case PM₁₀ emission scenario over a 24-hour period represents five 30 minute startup events in a single day, combined with the remaining 21.5 hours of the day at normal operation. This calculation is described in detail in footnote 2 in Table 3-5 of the Air Impact Analysis.

As a result, the maximum modeled emission rate for a particular averaging period consists of a combination of emissions rates corresponding to varying periods of startup and normal operation. We disagree with the commenter’s assertion that these emissions rates are unsupported or unenforceable. The BACT limits established in the proposed permit represent short term emission limits that are consistent with the modeled emission rates. As discussed in greater detail in our response to Comment II.B.8, the proposed permit requires sufficient monitoring, recordkeeping and reporting requirements to determine compliance with these BACT limits. With regard to the vendor supplied emissions rates for periods of startup, please refer to our response to Comment II.B.9, in which we discuss the documentation and support for the vendor supplied startup emission rates.

15. Comment:

The commenter asserts that the proposed TSD fails to address the requirement for modeling of secondary PM_{2.5} emissions, as follows:

Modeling of secondary PM_{2.5} emissions is required based on EPA guidance, and PDEQ must model the secondary PM_{2.5} emissions to properly demonstrate compliance with the PM_{2.5} NAAQS. Specifically, the Applicant discusses the May 20, 2014 guidance from EPA regarding PM_{2.5} modeling for permitting purposes, which defines four cases for what type of air quality modeling analysis is needed for consideration of direct and secondary PM_{2.5} emissions.

The Applicant finds that PM_{2.5} modeling for the RICE project falls into Case 2, i.e., direct PM_{2.5} emissions are equal to or greater than the 10 tons/year significant emission rate (“SER”) for this pollutant and NO_x and/or SO₂ emission rates are less than the respective 40 tons/year SER for these pollutants, thus, concludes that an analysis to address secondary PM_{2.5} impacts is not required.

However, as demonstrated in Comment IV, the RICE project in the Proposed Permit would exceed the 40 tons/year SER for NO_x emissions; thus, Case 3 applies, i.e., direct PM_{2.5} emissions are equal to or

greater than the 10 tons/year SER for this pollutant and NO_x and/or SO₂ emission rates are less than the respective 40 tons/year SER for these pollutants. For Case 3, EPA guidance recommends an analysis to address secondary PM_{2.5} impacts. The Proposed Permit and Proposed TSD should be revised to include such an analysis.

Response:

We disagree with the commenter's assertion that the dispersion modeling should include modeling of secondary PM_{2.5} emissions. EPA's PM_{2.5} Modeling Guidance¹⁹ provides recommendations regarding technical approaches for conducting PM_{2.5} NAAQS and PSD increment compliance demonstrations. This includes how to adequately account for contributions from primary PM_{2.5} concentrations from a proposed new or modifying source's direct PM_{2.5} emissions and from secondarily formed PM_{2.5} concentrations resulting from the source's PM_{2.5} precursor emissions. This guidance discusses several assessment cases²⁰, and provides recommendations regarding when secondary impacts of NO_x and SO₂, as PM_{2.5} precursor emissions, should be assessed. The dispersion modeling approach described in the proposed permit and TSD correspond to Case 2, which does not recommend modeling of precursor emissions, while the commenter asserts that the Case 3 applies, which does recommend modeling of precursor emissions. Specifically, the commenter asserts that, due to deficiencies in the NO_x netting analysis (see Comments 2-4), Case 3 applies because the RICE project has a NO_x emission increase greater than the 40 tpy PSD SER for NO_x. As noted in our responses to Comments II.B.2 through 4, we have updated certain permit conditions in the final permit to ensure that the emission reductions from the shutdown of Units I1 and I2 are creditable. The net emission increase of NO_x for the RICE project is 30 tpy, which is below the PSD SER for NO_x of 40 tpy. As a result, PSD review for NO_x is not triggered as a direct pollutant for NO₂, nor as a precursor for PM_{2.5}. Thus, Case 2 of the modeling guidance applies.

16. Comment:

As discussed in Comments 2-4, the commenter asserts that the RICE project triggers PSD review for NO_x, which requires dispersion modeling for demonstrating compliance with the short-term and annual NAAQS for NO₂. The Proposed TSD must be revised to include such an analysis.

Response:

As discussed in our responses to Comments II.B.2-4, we have made several updates to the final permit to reflect our intent of ensuring that the net increase of NO_x from the RICE project does not exceed the 40 tpy PSD SER for NO_x. Thus,, PSD review for NO_x is not triggered, and a Class II dispersion modeling analysis for NO_x is not required.

17. Comment:

The commenter lists certain typographical and other errors in the TSD.

Response:

We acknowledge these errors and typos, and have corrected them in the final permit

¹⁹ Page, Stephen, U.S. EPA, "Guidance for PM_{2.5} Permit Modeling", May 20, 2014. Available online at: https://www3.epa.gov/scram001/guidance/guide/Guidance_for_PM25_Permit_Modeling.pdf

²⁰ Ibid, Table II-1

III. Comments from the Public That Do Not Reference Specific Permit Conditions

A. Comment:

Solar and wind power with battery backup should be used instead of RICE.

- a. Renewable target of 30% by 2030
- b. Study comparing cost/impact of NG versus solar + batteries
- c. Costs of batteries should not be a reason not to employ them
- d. Technology improvements have made batteries viable

Response:

TEP selected RICE units to address a specific business purpose. TEP has set a goal to supply at least 30 percent of retail energy load from renewable resources by 2030. In order to meet this goal, TEP must address the operational challenges that are associated with the intermittency and variability of energy generated by renewable resources. The RICE units were selected by TEP because of their ability to ramp up quickly to provide load carrying capacity to provide reliable, grid-balancing resources to address the variability and intermittency of renewable resources. The details of TEP's goals and the selection of RICE for this project are included in the TEP 2017 Integrated Resource Plan (IRP)²¹

TEP did not propose to install renewable power generation technology, energy storage, or other power production technologies at IGS. Implementation of any of these options would fundamentally redefine the project. PDEQ does not have the authority to require TEP to fundamentally change the nature of the project.

B. Comment:

The increase in pollutant emissions (PM, NO_x, VOC, and HAPs) should not be allowed.

Response:

The Clean Air Act, Arizona Revised Statutes, and Pima County Code allow emission increases provided the increases do not cause a violation of the National Ambient Air Quality Standards and that best available control technology is installed to control emissions. TEP has demonstrated the proposed project meet federal, state, and county requirements.

C. Comment:

TEP should invest in demand management.

Response:

TEP has proposed to install the selected RICE units to address a specific business purpose. As noted previously, TEP is proposing to install the RICE units to address the operational challenges associated with the intermittency and variability of energy generated by renewable resources. The RICE units were selected because of their ability to quickly provide load carrying capacity to address the variability and intermittency of renewable resources. The scope of the proposed project does not include demand management. PDEQ does not have the authority to fundamentally change the nature of a proposed project. Therefore, PDEQ does not have the authority to require TEP to invest in demand management, as this would fundamentally change the nature of the proposed project.

D. Comment:

The proposed permit changes were not sufficiently publicized.

Response:

PCC 17.12.190 provides the requirements for public participation for Class I permits. The public participation requirements were met for the TEP permit. PDEQ is required to provide public notice of receipt of complete applications for major modifications to major sources by publishing a notice in a newspaper of general

²¹ Information obtained from the TEP 2017 IRP at: <http://www.tep.com/wp-content/uploads/2017/04/TEP-2017-Integrated-Resource.pdf>.

circulations in the county where the source will be located. PDEQ provided notification of receipt of the permit application in the Arizona Daily Star on October 2, 2017.

In addition, PDEQ is required to provide public notice, an opportunity for public comment, and an opportunity for a hearing before taking final action on a significant permit revision. This requires publication of a notice once each week for two consecutive weeks in two newspapers of general circulation in the county where the source will be located. PDEQ is also required to mail a copy of the notice to persons who have requested in writing to be placed on the mailing list for notifications. The proposed permit modification was publicized in two newspapers, in four news releases to 144 media sources and elected officials, and in two news releases emailed to 751 air quality advisory/information recipients. The news release was mailed to neighborhood association representatives for the following neighborhoods: Elivra, Mortimore, Pueblo Gardens, South Park, Western Hills II, and Sunnyside. The news release was also sent to: U.S. EPA, City of Tucson, City of South Tucson, Town of Marana, Town of Oro Valley, Green Valley Council, Pasqua Yaqui Nation, Pinal County, Santa Cruz County, National Park Service, National Forest Service, U.S. Air National Guard, Tucson Electric Power, Sierra Club, U.S. Fish and Wildlife, San Xavier District Tohono O'Odham Nation, Vail Chamber of Commerce, Pima Association of Governments, and Davis-Monthan Air Force Base. An article on the proposed project was published in the Pima County Community-wide Newsletter (4,200 subscribers) on February 9, 2018.

A public open house (informational meeting) and two public hearings were held to provide information and receive comment on the proposed permit revision. The open house was held on February 15, 2018 at the Abrams Public Health Center, located at 3950 S. Country Club Road Tucson, Arizona. The public hearings were held on March 1, 2018 at Abrams Public Health Center and March 28, 2018 at the Pima County Public Works Building (located at 130 W. Congress Street, Tucson, Arizona). Invitations to the open house and the public hearing scheduled for March 1, 2018 were mailed to 9,550 residents and businesses located near the TEP facility on February 5, 2018.

Information regarding the open house and the public hearings was published on the Pima County DEQ website and the Pima County Main website. PDEQ tweeted information about the public meetings on February 5th and 15th, and March 15th and posted information on the Pima County Facebook page on February 8, 2018. Additional details regarding the public outreach and notifications is included in Attachment 1.

E. Comment:

The proposed project will increase greenhouse gas (GHG) and carbon dioxide (CO₂) emissions. These emissions contribute to climate change and should not be allowed.

Response:

The Clean Air Act, Arizona Revised Statutes, and Pima County Code allow emission increases including GHG and CO₂ provided that best available control technology (BACT) is installed to control emissions. For existing sources that trigger Prevention of Significant Deterioration (PSD) review, best available control technology (BACT) applies to each proposed emissions unit at which a net emissions increase would result from the change²². The proposed project will cause a net emission increase in GHG, specifically carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and sulfur hexafluoride (SF₆). Therefore, the GHG control technology review applies to the proposed emission units and associated pollutants as follows:

- RICE units – GHG (CO₂, N₂O, CH₄)
- Natural gas piping – GHG (CH₄)
- High voltage circuit breakers – SF₆

²² 40 CFR §52.21(j)(3)

The control technology review was conducted based on EPA guidance including the *New Source Review Workshop Manual*²³ (*NSR Workshop Manual*) and the *PSD and Title V Permitting Guidance for Greenhouse Gases*²⁴ (*GHG Permitting Guidance*). Both of these documents provide general guidance for determining the scope of the best available control technology (BACT) analysis. The GHG Permitting Guidance recommends that BACT analyses for GHG emissions be conducted in the same manner as for other regulated pollutants²⁵. A top-down procedure is used to determine BACT for an emission unit. Before initiating the BACT analysis for a given emission unit and a given pollutant, PDEQ identified the minimum acceptable level of control allowed under an applicable requirement (i.e. New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAP)). This minimum acceptable level of control is commonly called the BACT “baseline”. Next, the five-step “top-down” approach was used to assess BACT. The five steps of a top-down BACT analysis are:

- Step 1: Identify all available control technologies with practical potential for application to the emission unit and regulated pollutant under evaluation;
- Step 2: Eliminate all technically infeasible control technologies;
- Step 3: Rank remaining control technologies by effectiveness and tabulate a control hierarchy;
- Step 4: Evaluate most effective controls and document results; and
- Step 5: Select BACT, which will be the most effective practical option not rejected, based on economic, environmental, and/or energy impacts.

The first step is to identify all control technologies with potential application to the emission unit and pollutant subject to review.²⁶ According to EPA guidance, the review shall include the following types of control technologies:

- Inherently lower-emitting processes and practices
- Add-on controls; and
- Combinations of inherently lower-emitting processes and add-on controls

EPA’s GHG Permitting Guidance²⁷ states that a BACT analysis for GHG should not redefine the source’s purpose and that the proposed design should be assessed to determine which design components are inherent for the proposed purpose and which may be changed for pollution reduction purposes without disrupting the applicant’s basic purpose. It further states that BACT should not be applied to regulate the applicant’s purpose or objective for the proposed facility. The guidance also notes that a decision to exclude an option because it would fundamentally redefine the source must be explained and documented in the permit record.²⁸

The fundamental business purpose of the proposed project is to allow TEP to provide reliable, efficient, grid-balancing resources which can ramp up quickly and provide 100% of the effective load carrying capacity (ELCC) during peak periods of any length. TEP selected RICE units because they provide flexible, fast-responding power and assist in mitigating power fluctuations associated with renewable resources.²⁹ Because renewable resources produce power intermittently, TEP requires back up generation capability with fast start times and the ability to ramping to full load quickly, the ability to operate over a wide range of loads without compromising efficiency, and reduced Operation and Maintenance (O&M) resulting from repeated unit cycling. According to TEP’s 2017 IRP,³⁰ TEP conducted a Flexible Generation Technology Assessment which found

²³ Office of Air Quality Planning & Standards, US EPA, *New Source Review Workshop Manual*, October 1990. (*NSR Workshop Manual*).

²⁴ Office of Air Quality Planning & Standards, US EPA, Document Number EPA-457/B-11-001, *PSD and Title V Permitting Guidance for Greenhouse Gases*, dated March 2011.

²⁵ *PSD and Title V Permitting Guidance for Greenhouse Gases*, EPA-457/B-11-001, March 2011

²⁶ *NSR Workshop Manual*, (Section IV).

²⁷ *PSD and Title V Permitting Guidance for Greenhouse Gases*, EPA-457/B-11-001, March 2011.

²⁸ *PSD and Title V Permitting Guidance for Greenhouse Gases*, EPA-457/B-11-001, March 2011.

²⁹ Information obtained from the TEP 2017 IRP at: <http://www.tep.com/wp-content/uploads/2017/04/TEP-2017-Integrated-Resource.pdf>.

³⁰ TEP 2017 IRP at: <http://www.tep.com/wp-content/uploads/2017/04/TEP-2017-Integrated-Resource.pdf>.

that the RICE technology is the preferred technology to provide capacity and assist in mitigating renewable energy intermittency and variability.³¹

Not installing the RICE units would fundamentally redefine the source, and therefore, this is not considered as part of the control technology analysis. The proposed change (and resulting emission increase) has been demonstrated to meet the control technology requirement and therefore, the increase in emissions is permissible.

F. Comment:

Several commenters made statements to indicate their disappointment to PDEQ's determination that projected emissions of pollutants from the Project will not result in disproportionately high and adverse human health or environmental effects on any population, including minority populations and low-income populations. The Sierra Club requested the environmental justice impacts should include air quality modelling of the nitrogen oxides (NO_x) impacts and that the agencies EJ report wrongly relies on the applicants erroneous "netting" of pollutants that does not comply with the law and does not reflect the reality of the toxic air pollution that people in the community will breathe. Furthermore, the Sierra Club suggested that the EJ analysis should consider the total amount of air pollution that the facility will emit and not subtract the emissions from the shutdown of the 2 existing gas units.

Response:

PDEQ is committed to addressing environmental justice concerns in the TEP RICE project. PDEQ has reviewed the EJ analysis in accordance with the Executive Order 12898, entitled "Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations." For purposes of Executive Order 12898, EPA and PDEQ recognize that, in the context of an environmental justice analysis, compliance with the applicable NAAQS is generally emblematic of achieving a level of public health protection that demonstrates that PDEQ's issuance of the permit for the proposed facility will not have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations due to exposure to the relevant criteria pollutants. This is because NAAQS are health-based standards, designed to protect human health with an adequate margin of safety, including sensitive populations such as children, the elderly, and asthmatics.

PDEQ has considered in detail environmental justice issues associated with this PSD permit decision, and offered the public the opportunity to comment on such issues as part of the notice and comment process. PSD requirements do not necessitate an analysis for criteria pollutants that do not trigger PSD review. The project emissions of NO_x were calculated as the emissions from the proposed ten RICE units minus the emissions from the natural gas-fired units to be retired (No. 1 and No. 2). The resulting NO_x emissions are below the NO_x significant emission rate of 40 tons per year (TPY). Therefore, the NO_x emissions do not trigger New Source Review under PSD regulations and air dispersion modeling was not required to be performed for NO_x. Note: the total amount of air pollution that the facility will emit is calculated with the operation of the ten RICE units. Units 1 and 2 will be shutdown upon the start up of the first RICE unit. The air quality and environmental justice analysis conducted by PDEQ shows that the project meets all applicable requirements and is protective for human health and the environment. Both units 1 and 2 will be shutdown prior to startup of RICE.

G. Comment:

Carbon reduction and Carbon sequestration should be considered; RICE is not the best technology.

Response:

An evaluation of the carbon capture and sequestration (CCS) was conducted within the BACT analysis. CCS has not been effectively demonstrated or made commercially available for RICE units. According to the preamble for the Standards of Performance for Greenhouse Gas Emissions from New Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, CCS has been demonstrated as technically feasible for steady-state (i.e., base load) operations but has not been demonstrated for operations such as

³¹ Information obtained from the footnote on page 22 of the TEP 2017 IRP located at: <http://www.tep.com/wp-content/uploads/2017/04/TEP-2017-Integrated-Resource.pdf>.

intermediate load natural gas combined cycle (NGCC) power plants which start and stop frequently. Although the preamble specifically discusses NGCC plants, the same concept applies to the proposed RICE units which are designed to start and stop frequently and to operate at varying loads. A review of power plant PSD permits for similar natural gas RICE unit applications indicates that CCS has not been found to be technically feasible for other RICE installations.³² Therefore, CCS was identified as technically infeasible.

H. Comment:

Allowing TEP to do this impacts public health and will make the air quality worse in Tucson.

Response:

The Clean Air Act requires EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants that are considered harmful to public health and the environment. There are two national air quality standards:

- primary standards, which are designed to protect public health; and
- secondary standards, which are designed to protect the public welfare from adverse effects, including those related to effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility, and climate; damage to property; transportation hazards; economic values, and personal comfort and well-being.

The project triggers PSD review for carbon monoxide (CO) and particulate matter (PM) with an aerodynamic diameter less than or equal to 10 microns (PM₁₀) and PM with an aerodynamic diameter less than or equal to 2.5 microns (PM_{2.5}). As a result, an air impact analysis is required to evaluate the project impacts with regard to the NAAQS, as well as PSD Class II increments, and PSD Class I increments at the eastern and western units of Saguaro National Park (SNP) and Galiuro Wilderness Area (GWA). The air impact analysis was conducted for the proposed project and demonstrates that the Project does not cause or contribute to an exceedance of any NAAQS or PSD increment for these pollutants.

I. Comment:

TEP states that they are not subject to New Source Climate Change standards codified at 40 CFR 60 Subpart TTTT because the units are small but they should consider the units in total.

Response:

TEP stated that the RICE are not an affected facility under Subpart TTTT because it is not an “electric generating unit”, “integrated gasification combined cycle facility,” “stationary combustion turbine,” or “steam generating unit,” by definition in Subpart TTTT. The following definitions are in 40 CFR Subpart TTTT 60.5580.

J. Comment:

The Sierra Club and TEP are saying different things.

Response:

The TEP and Sierra Club statements that the commenter is referring to are not specifically identified. PDEQ cannot comment on statements or information provided by Sierra Club and TEP. To prepare the proposed permit, PDEQ and EPA evaluated the information provided in the permit application and prepared the emission calculations, a control technology review, the air quality impact analyses, etc. This information formed the basis of the proposed permit and technical support documentation.

K. Comment:

TEP is doing this expansion to provide power to Phoenix. TEP already has an overcapacity, so the proposed change is unnecessary. TEP will send the power generated by the project elsewhere and the pollution will stay here.

Response:

TEP has proposed this project to meet a corporate goal to supply at least 30 percent of retail energy load from

³² BACT reviews conducted for PSD permits for proposed RICE units at power plants (see Attachment 1 of Appendix C - BACT Analysis of the Permit Technical Support Document).

renewable resources by 2030. The RICE units were selected by TEP because of their ability to address the variability and intermittency of renewable resources. The location or region into which the power generated by the proposed project will be supplied has not been identified in the permit application documentation. PDEQ and EPA do not have the authority to disallow the project based on the market that will be supplied by the proposed project. Imposing a restriction on TEP to only provide power to a specific market may fundamentally redefine the project. PDEQ and EPA do not have the authority to require TEP to fundamentally change the nature of the project.

L. Comment:

RICE units are efficient at small sizes but not at the large size proposed by TEP.

Response:

TEP has proposed to install RICE units because of their ability to address the variability and intermittency of renewable resources. The RICE units were selected because they provide flexible, fast-responding power to address power fluctuations associated with renewable resources.³³ Because renewable resources produce power intermittently, TEP requires back up generation capability with fast start times and the ability to ramping to full load quickly, the ability to operate over a wide range of loads without compromising efficiency, and reduced Operation and Maintenance (O&M) resulting from repeated unit cycling. According to TEP's 2017 IRP, TEP conducted a Flexible Generation Technology Assessment which found that the RICE technology is the preferred technology to provide capacity and assist in mitigating renewable energy intermittency and variability.³⁴ Therefore, requiring TEP to select a different technology would fundamentally change the proposed project. PDEQ and EPA does not have the authority to fundamentally change the nature of the project.

M. Comment:

TEP needs to follow state and local regulations.

Response:

The proposed project is required to meet EPA and PDEQ requirements. The proposed project has been reviewed by PDEQ and EPA and has been deemed to meet all applicable requirements.

N. Comment:

Ozone levels will be affected by the increase in ozone precursors and Tucson is at the edge of ozone nonattainment.

Response:

The Prevention of Significant Deterioration (PSD) permitting program is designed to assure that new and modified industrial facilities do not cause adverse impacts on air quality. The proposed project is located in an attainment area for ozone. The proposed project must be evaluated to determine if the modification is "major" based on whether the modification results in an increase in emissions above specified emission rates which define whether the increase in emissions is "significant" or *de minimis*. Ozone levels are attributable to NOx and VOC emissions. Therefore, an assessment of the emissions increase from the proposed project is required. The NOx and VOC net emissions increases from the proposed project are both less than the significant emission rate (40 tons per year). Emission increases that are less than the significant emission rate are considered *de minimis* (not "major") and do not require a PSD review and an air impact analysis is not required.

O. Comment:

TEP should consider the use of internal combustion engines that combust hydrogen instead of natural gas.

³³ Information obtained from the TEP 2017 IRP at: <http://www.tep.com/wp-content/uploads/2017/04/TEP-2017-Integrated-Resource.pdf>.

³⁴ Information obtained from the footnote on page 22 of the TEP 2017 IRP located at: <http://www.tep.com/wp-content/uploads/2017/04/TEP-2017-Integrated-Resource.pdf>.

Response:

TEP has proposed to install RICE units that combust natural gas because of their ability to address the variability and intermittency of renewable resources. The RICE units were selected because they provide flexible, fast-responding power to address power fluctuations associated with renewable resources.³⁵ Because renewable resources produce power intermittently, TEP requires back up generation capability with fast start times and the ability to ramping to full load quickly, the ability to operate over a wide range of loads without compromising efficiency, and reduced Operation and Maintenance (O&M) resulting from repeated unit cycling. It is unclear whether RICE units that combust hydrogen are readily available, and requiring the facility to use an engine that uses a different type of fuel (hydrogen in this case) could fundamentally change the proposed project. Under the PSD program, PDEQ and EPA do not have the authority to fundamentally change the project.

P. Comment:

Allowing TEP to do this impacts our water – proposed change will increase water usage.

Response:

The air permit process does not include an evaluation of the proposed water usage. Water usage is not regulated under the PDEQ air regulations that govern the issuance of the air permit. Therefore, water usage is not considered as part of the air permitting process.

Q. Comment:

The annual NOx emission limit poses a severe operational restriction that would place unusual limitations on allowed capacity factors in order the RICE to remain compliant with the NOx emission limit. Attached calculations indicate that the NOx emission limit would only provide for 144.5 hrs/yr of full power-peaking, which results in a very low capacity factor that is inconsistent with the project's state goal of meeting daily mismatch between (a) distributed and utility solar production and (b) electrical power demand patterns.

Response:

The NOx calculations provided by the commenter are based upon an uncontrolled NOx emission rate of 59.1 lb/hr per engine. As discussed in a response to a similar comment (See Comment II.B.5), these calculations do not account for the effect of the SCR system for NOx control required by Condition II.A.1.c of the Proposed Permit. The controlled NOx emission rate, based upon use of the SCR system, is 1.5 lb/hr per engine during normal operations.³⁶ As a result, the required use of the SCR system will allow the RICE units to operate at sufficient capacity factors (i.e., more hours of operation) while still complying with the NOx annual emission limit.

R. Comment:

In light of the point raised in Comment Q above, there is concern that the severe operational restriction on operating time of the RICE may result in ways to operate outside of the parameters in the proposed permit. It is requested that compliance verification measures be established and agreed upon between PDEQ and TEP to assure compliance with the NOx emission limits.

Response:

As noted in the response to Comment Q above, the Proposed Permit requires the use of SCR on the RICE units for NOx control, which will allow the units to operate within the annual NOx limit at higher capacity factors than indicated by the commenter. As a result, we disagree that the annual NOx limit will result in severe operational restrictions on the engines. For compliance verification purposes, the Proposed Permit requires multiple requirements for source testing, monitoring of the SCR system, and reporting and recordkeeping.

³⁵ Information obtained from the TEP 2017 IRP at: <http://www.tep.com/wp-content/uploads/2017/04/TEP-2017-Integrated-Resource.pdf>.

³⁶ Project emission estimates can be found in Attachment A to Appendix C of the Proposed TSD (page 155 of 229 in the Adobe Acrobat version of the Proposed TSD).

Please refer to our responses to Comment II.B.8 and 9 for more details.

S. Comment:

It is requested that PDEQ consider whether Saguaro Park Superintendent Darla Sidles comment that “The Clean Air Act is working and air quality is improving, but more needs to be done, because air pollution impacts all our parks” be considered to activate 42 U.S.C. §7475. (d)(2)(B) and/or (d)(2)(C)(i), and if so, an evaluation of the adverse impact on the air quality related values (including visibility) should be considered.

Response:

The commenter requests that PDEQ consider whether the statement made by Saguaro Park Superintendent Darla Sidles, as published in an August 1, 2015 article on Tucson.com regarding visibility and regional haze at Saguaro National Park, is sufficient to be considered an indication that the RICE project will have an adverse impact on visibility. As discussed in our response to Comment II.B.12, PDEQ and TEP worked closely with the National Park Service in order to accurately characterize and model the site-specific visibility impact of the project on Saguaro National Park. In its February 8, 2018 letter response to PDEQ, NPS noted that the proposed project would result in an improvement in visibility relative to the existing Units I1 and I2, and did not raise an objection to the draft permit based upon an adverse visibility impact.

T. Comment:

It is requested that PDEQ examine 40 CFR § 52.21(b)(3); 40 CFR § 70.4(b)(12); 40 C.F.R. §51.166(k)(1); 40 CFR. §52.21 (50)(i)(a) and (b)(1) to verify compliance in light of the EPA guidance on illegitimate netting.

Response:

Based upon the regulations and guidance documents cited by the commenter, the NO_x “illegitimate netting” asserted by the commenter refers to “project netting”. Under 40 CFR 52.21(a)(2)(iv)(a), a project is a major modification for PSD if it causes both a significant emissions increase and a significant net emissions increase of a regulated NSR pollutant. Historically, this applicability determination is performed via a two-step process, in which Step 1 involves summing only the emission increases from the project in determining whether a significant emissions increase has occurred, followed by Step 2 in which both emission increases and decreases that are creditable and contemporaneous to the project are totaled to determine if a significant net emissions increase has occurred. Project netting is a practice that differs from this approach in that both project emission increases and decreases are considered in Step 1 of the process.

The RICE project did not make use of project netting, as only emission increases from the RICE project were considered in Step 1 when determining if a significant emission increase occurred. Because an increase of 170 tpy NO_x from the RICE project exceeded the PSD SER, the analysis proceeded to Step 2, in which emission decreases associated with the shutdown of existing Units I1 and I2 were considered. The RICE project did not net out of PSD review for NO_x until Step 2, which is consistent with the historical two-step process described above and not with the use of project netting.

Other commenters have raised different concerns regarding the NO_x netting, such as whether the Unit I1 and I2 emission decreases are contemporaneous and creditable. These concerns have been addressed separately in our response to Comment II.B.2.

U. Comment:

Ozone pollution levels in Pima County have been hovering just below or right at NAAQS nonattainment. DEQ sent out 12 ozone advisories in 2017, compared to two in 2016. Actions that would threaten to push ozone levels even higher than they already are pose a direct threat to the public health and well-being and to the integrity of the uniquely beautiful surrounding region. TEP failed to consider relevant site-specific conditions in its use of “Modeled Emission Rates for Precursors (MERP)”. Among local conditions that aggravate ozone creation and are not reflected by the MERP modeling applied by the applicant are the following:

1. The Sundt Generation Station is located just north of I-10. Vehicle traffic forms ozone pollution through VOC and NO_x emissions. TEP has not demonstrated that vehicle emissions on I-10 combined

with ozone precursor emissions from plant activities are unlikely to cause ozone NAAQS exceedances.

2. Tucson has a higher proportion of non-native trees than most urban settings, and many of them contribute more than has recently been suspected to biogenic ozone formation. TEP has not demonstrated that ozone formation aggravated by this unusual urban feature does not increase the likelihood that plant emissions will cause NAAQS exceedances with unjustifiable hazardous health consequences.

TEP has failed to demonstrate that the proposed facility would not cause or contribute to air pollution in excess of maximum allowable ozone NAAQS concentrations

Response:

Ground-level ozone is a pollutant that is generally not directly emitted into the atmosphere, but instead predominantly formed as a secondary pollutant from precursor emissions of other pollutants, such as NO_x and VOC, that are directly emitted into the atmosphere and subsequently form ozone through complex photochemical reactions. There are multiple source categories of anthropogenic NO_x and VOC in Pima County, including an inventory of large industrial point sources, smaller area sources, as well as mobile sources. Ambient ozone concentrations can be affected by emission increases and decreases in these categories through factors such as population growth and economic development, and the Department examines changes in the emissions of these various categories in its planning efforts to ensure continued attainment of the NAAQS.

By contrast, when evaluating the ozone impact of a single source or project in the context of a permitting action, the EPA has recommended a two-tiered approach for PSD permitting actions.³⁷ As described in the Air Impact Analysis contained in the Proposed TSD, the first tier involves the use of appropriate and technical credible relationships between emission and ambient impacts developed from existing modeling studies that are sufficient for evaluating a project source's impacts. The second tier involves more sophisticated case-specific application of chemical transport modeling. In recommending this two-tiered approach, the EPA also provided draft guidance on the development and use of Modeled Emission Rates for Precursors (MERPs). MERPs are a type of Tier 1 demonstration tool that may be used to describe an emission rate of a precursor that may result in an increase in ambient ozone relative to the 8-hour ozone NAAQS. In its draft guidance, the EPA performed extensive regional photochemical modeling of hypothetical sources in multiple geographic areas for purposes of illustrating the development and use of MERPs, based on a screening threshold for 8-hour ozone of 1 ppb. The EPA included the MERPs for multiple geographic areas in its guidance, and also indicated that permit applicants and permitting authorities have the discretion to perform their own regional photochemical modeling and develop their own MERP values.

As noted in Attachment B (Air Impact Analysis) to Appendix C of the Proposed TSD, we relied upon the illustrative MERPs contained in the draft EPA guidance to evaluate project impacts, and did not perform photochemical modeling to develop an additional set of MERP values. The Proposed TSD indicates that the lowest VOC MERP for 8-hour ozone in the western United States is 1,049 tpy. The VOC PTE of the RICE project is 215 tpy, which is well below this value. The commenter notes that the MERPs listed in the draft EPA guidance do not account for certain local conditions present in Tucson and near the Sundt Generating Station site, specifically vehicle traffic from I-10, and the higher proportion of non-native trees. We acknowledge that the local conditions noted by the commenter are not reflected in the development of the 1,049 tpy VOC MERP, but note that the effect of such local considerations would be reflected in background ozone concentrations as measured by ambient monitors. In addition, we note that the draft EPA guidance included a source model simulation for VOC emissions for Gila County, AZ, which is located in south central Arizona, and exhibits arid conditions that provide a more direct comparison to Pima County. This source model simulation indicates that an increase of 500 tpy VOC from a hypothetical source corresponds to a 0.02 parts per billion increase in ambient ozone.³⁸ The VOC PTE of the RICE project is 215 tpy, which is less than the 500 tpy source model simulation. As a result, we consider the MERPs contained in the draft EPA guidance to provide a sufficiently

³⁷ Wayland, Richard, "Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier I Demonstration Tool for Ozone and PM_{2.5} under the PSD Permitting Program", December 2, 2016. Available online at https://www3.epa.gov/ttn/scram/guidance/guide/EPA454_R_16_006.pdf.

³⁸ Ibid, Table A-1

conservative demonstration that the RICE project will not cause or contribute to a violation of the ozone NAAQS, and have not updated the final TSD to include additional photochemical modeling.

V. Comment:

TEP's statement (in the Permit Application Section 4.11- Modeling of Ozone Precursors), that "... if the project emissions are expected to have an impact below the ozone SIL, then its emissions are not expected to cause or contribute to an ozone NAAQS violation" is not supported and is not credible after the year 2017, during which DEQ called ozone alerts for 12 days, and in which NAAQS limits were exceeded at every monitoring station in the County during that year. TEP also stated that "The only ozone nonattainment area in Arizona is located in Maricopa County" is inaccurate, as Pinal County, which is closer to Tucson than Maricopa County, also contains nonattainment areas.

Response:

We disagree with the commenter's assertion that calendar year 2017 ozone monitoring results affects the credibility of the modeling analysis contained in the Proposed TSD. While ambient monitoring stations in Pima County have recorded exceedances of the ozone standard, a violation of the ozone standard is determined based upon the form of the standard. For both the primary and secondary ozone NAAQS, the form of the standard is the annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years. At this time, this represents 0.069 ppm (69 ppb) for Pima County. As a result, despite these monitored exceedances, Pima County has not violated the ozone standard, and still remains attainment for ozone. As an attainment area, major NSR permitting actions such as the RICE project are subject to PSD, rather than nonattainment NSR, regulations. As described in the response to Comment V above, the Air Quality Analysis for ozone was performed in accordance with EPA guidance for PSD permitting. In addition, we note that while the permit application may have only indicated Maricopa County as an ozone nonattainment area, the proposed TSD properly noted both Maricopa and Pinal County in the Air Quality Analysis for ozone.

W. Comment:

In selecting Background Design Values for TEP Project site, Applicant selected 2013-2015 ambient background design values. Applicant indicated that Design Values for the 2014-2016 period had yet to be posted on EPA's web site. 40 USC 52.21(m)(iv) mandates that monitoring data shall represent at least the year preceding receipt of the application. Data selected does not meet that criterion. This code provision authorizes the Administrator to determine appropriate data. The application should be amended for compliance with 40 USC 52.21(m)(iv).

Response:

We disagree with this comment. As noted by the commenter, the permit application indicated that 2013-15 ambient background design values were used because 2014-16 values were not available at the time of the original permit application. However, as indicated in Table 3-2 of the Air Quality Analysis contained in the Proposed TSD, we relied upon 2014-16 background concentrations in performing this analysis.³⁹

X. Comment:

President Trump's decision to delay the federal government's determination of whether local areas are meeting the ozone standard of .070 ppm makes Pima County residents unnecessarily vulnerable to health threats and environmental harm resulting from unchecked ozone pollution. County and Federal Air Quality public servants owe Pima County the protection the Agency was created in order to oversee. In the current condition of the inability to know whether our County or parts of it should be declared in nonattainment of ozone standards, the federal, state and county authorities should use the precautionary principle until authorities at the federal level once again comply with their mandates.

Response:

The 2015 ozone NAAQS designation for Pima County is beyond the scope of the proposed permitting action

³⁹ <https://www.epa.gov/air-trends/air-quality-design-values>

open for public comment. However, we note that on June 4, 2018, EPA published a final rule establishing ozone NAAQS designations for multiple areas in the United States, including Pima County.⁴⁰ As seen in this final notice, Pima County was designated as attainment/unclassifiable for the 2015 primary and secondary ozone NAAQS.

Y. Comment:

The environmental justice argument lacks credible analysis. Did DEQ follow the guidance, find an increase in ambient O3 and just not share its level of significance or anticipated outcomes? Why does the assessment fail to report these? DEQ continues: “Pima County has determined from the modeling results for the Project that the Project would not cause or contribute to a violation of the applicable health based NAAQS for any of the pollutants regulated under the PSD permit. Furthermore, VOC emissions from the proposed Project will have an insignificant impact on ambient O3 concentrations.” That there will be no adverse health impacts – at least on more sensitive populations – is simply not credible. That those impacts will not hit harder the communities in the vicinity of the plant is implausible. A statement of the relative impacts on frontline communities contrasted with more protected communities would have added a degree of credibility to the report.

Response:

Regarding the ambient impact of VOC emissions from the proposed project, we wish to clarify that the modeling results referenced by the commenter consist of the dispersion modeling performed for CO, PM₁₀, and PM_{2.5}. As described in our response to Comment III.U, site-specific photochemical modeling for ozone was not performed for the RICE project. Rather, we relied upon the Modeled Emission Rates for Precursors (MERPs), which represent a demonstration tool established in EPA guidance for the purpose of evaluating ozone impacts in PSD permitting. In the case of each of these pollutants, we relied upon either dispersion modeling (in the case of CO, PM₁₀, and PM_{2.5}) or the use of the MERPs (in the case of VOC) to determine that emissions from the RICE project would not cause or contribute to a NAAQS violation. This approach is consistent with EPA practice in the context of an environmental justice analysis, in which “compliance with the NAAQS is an indicator that Agency action will not result in disproportionately high and adverse human health or environmental effects on minority and low-income populations residing near a proposed facility.”⁴¹

IV. Comments Opposing/Supporting the Project

A. Comments Opposing the Project

1. #1-10 – Rudolf Lambrechtse

B. Comments Supporting the Project

1. #2-1 – Dr Richard Powell
2. #2-3 – Grace Gegenheimer
3. #2-3 – Bill Kelley

V. Public Comment Process

A summary of the public notification process can be found in Appendix A of this document along with public notices, press releases, social media posts by PDEQ, and mailing done to the community.

⁴⁰ 83 FR 25776, available online at <https://www.govinfo.gov/content/pkg/FR-2018-06-04/pdf/2018-11838.pdf>

⁴¹ *Pio Pico Energy Center*, PSD Appeal Nos. 12-04 through 12-06, 16 E.A.D. at 67 (EAB August 2, 2013)

Appendix A

Summary of Public Notification Process



Outreach for Tucson Electric Power PSD Permit

Objective: Inform community about proposed modification to TEP air quality permit and associated public meetings and public comment period

Key PDEQ Staff

Ursula Nelson - Director
Richard Grimaldi - Deputy Director
Rupesh Patel - Environmental Quality Manager
Scott Porter - Environmental Quality Manager
Dustin Fitzpatrick - Compliance Manager
Mellanie Fuller - Environmental Permitting Manager
Beth Gorman - Senior Program Manager, Public Outreach & Community Education
Karen Wilhelmsen - Program Manager, Community Outreach & Education
Kimberly Baeza - Environmental Compliance Specialist (English/Spanish translator at Open House)
Nora Atondo - RCRA Compliance Inspector (English/Spanish translator at Public Hearing #1)
Marie Light – Stormwater Program Manager (English/Spanish translator at Public Hearing #2))

Key Stakeholders

TEP Area Residents and Businesses
Tucson Area Community
National Park Service
U.S. Environmental Protection Agency
Sierra Club

Legally Required Public Notifications

PDEQ Receipt of Complete Application from TEP to Make Major Modification of Existing Major Source

- October 2, 2017: Single day notice public notice, AZ Daily Star

Draft Prevention of Significant Deterioration Air Quality Permit

- AZ Daily Star Public Notice
 - February 9, 2018: First notice
 - February 16, 2018: Second notice
- Tucson Newspaper (TNI) Daily Territorial Public Notice
 - February 9, 2018: First notice
 - February 16, 2018: Second notice

Extended Comment Period

- AZ Daily Star Public Notice
 - February 26, 2018: First notice
 - March 5, 2018: Second notice

Other Public Notifications

News Releases:

- January 25, 2018: PDEQ Holds Public Meetings to Obtain Comments on Tucson Electric Power Air Quality Permit, Public Comment Period is February 9-March 12, 2018
- February 8, 2018: PDEQ Holds Public Meetings to Obtain Comments on Tucson Electric Power Permit
- February 26, 2018: PDEQ Holds Public Hearings to Obtain Comments on Tucson Electric Power Permit
- March 15, 2018: PDEQ Holds Final Public Hearing to Obtain Comments on Tucson Electric Power Permit

- All four news releases were emailed to 144 English and Spanish audience media sources and elected officials.
- January 25 and March 15 news releases were emailed to 751 air quality advisory/information recipients and Pima County DEQ staff of 40 individuals.
- News release and Open House and Public Hearing invitation with map were sent to six neighborhood association representatives for distribution to their residents. Contact information was provided by Supervisor Valadez' staff for: Elvira, Mortimore, Pueblo Gardens, South Park, Western Hills II, and Sunnyside neighborhood associations.
- February 8 news release and invitation to Open House and Public Hearing with map were sent to:

U.S. EPA
City of Tucson
City of South Tucson
Town of Marana
Town of Oro Valley
Green Valley Coordinating Council
Pasqua Yaqui Nation
Pinal County
Santa Cruz County
National Park Service

National Forest Service
Air National Guard
Tucson Electric Power
Sierra Club
U.S. Fish and Wildlife
San Xavier District Tohono O'Odham Nation
Vail Chamber of Commerce
Pima Association of Governments
Davis-Monthan Air Force Base

- Email with news release was sent to Beki Quintero, member of the Sunnyside Unified School District Board for distribution to SUSD contacts.

Known Media Coverage

Interviews:

- January 29, 2018: KVOI AM 1030 The Voice
- January 30, 2018: Tucson News Now
- February 13, 2018: AZPM radio
- March 22, 2018: KVOI AM 1030

Articles/Stories Printed or Posted:

- January 28, 2018: Arizona Daily Star – Gas fired engines that TEP wants to build...
- January 29, 2018: KVOI AM 1030 The Voice – interview aired
- January 30, 2018: Tucson News Now KOLD-Fox 11 – PDEQ TEP Permit...
- February 9, 2018: Pima County FYI Weekly Newsletter (4,200 subscribers) – PDEQ to hold meetings...
- February 12, 2018: City of Tucson NewsNet Daily Digest (50,000 subscribers) – Meetings scheduled...
- February 13, 2018: News.AZPM.org – County asking for public feedback on TEP plan...
- February 27, 2018: Arizona Daily Star – TEP seeks new air permit for Sundt plant

- February 27, 2018: Green Valley News article – Open house on air quality permit
- February 28, 2018: Arizona Daily Star – Oscar Medina, Speak out against TEP natural gas engine plan
- March 1, 2018: Arizona Daily Star – Larry Lucero, New TEP generators cut emissions, allow solar, wind...
- March 1, 2018: Arizona Daily Star – Larry Lucero, Modern natural gas generators support TEP's plans ...
- March 5, 2018: Sierra Club Canyon Echoes Newsletter – Tucson Speaks Out Against More Pollution!
- March 19, 2018: Arizona Business Daily Reports – Pima County gathers public input on proposed power...
- March 22, 2018: KVOI AM 1030 – interview aired
- March 26, 2018: Tucson NewsNet Daily Digest – Final Meeting Scheduled for Public Comment on...
- April 5, 2018: Arizona Business Daily Reports – Pima County holds final hearing on Tucson Electric...

Website Posts

Pima County DEQ website, www.pima.gov/deq:

- Stationary Source Permitting pages, TEP Application for PSD Authorization: provides documentation regularly updated and available to the public
- Announcements posted: January 24, January 25, February 8, February 26, and March 15

Pima County Main website, www.pima.gov:

- Announcements posted: January 25, February 8, February 26, and March 15, 2018

Social Media Posts

PDEQ Twitter (500+ subscribers)

- February 5, 2018: *@PimaDEQ is holding an Open House (Feb. 15) and Public Hearing (Mar. 1)...*
- February 15, 2018: *@PimaDEQ is holding an Open House tonight to obtain public comments...*
- March 15, 2018: *@PimaDEQ holding final Public Hearing for proposed Tucson Electric Power Air...*
- March 28, 2018: *@PimaDEQ is holding a 2nd public hearing on the draft Tucson Electric Power Air...*

Pima County Facebook (50,000 subscribers)

- February 8, 2018: *The Pima County Department of Environmental Quality is holding an Open House...*

Promotional/Informational Mailer and Flyers

- Postcard mailer: Bilingual (English and Spanish) invitation to Open House and Public Hearing, mailed to 9,551 residents and businesses located near the TEP facility – February 5, 2018
- Flyer created from postcard mailer and distributed to:
 - All 26 public library locations – February 8, 2018
 - Quincie Douglas and El Pueblo Community Centers, and Mulcahy Branch YMCA located near TEP facility – February 9, 2018
- Open House Welcome Letter: Bilingual description of resources at event, public comment period, options for making public comments, and contact information – February 15, 2018
- Comment Sheet: Bilingual instruction on making public comments and form to submit comments – available throughout comment period
- Air Quality Permits Purpose and Process: Bilingual description of the purpose of air quality regulations, purpose of air quality permits, public comment period, and appealing a permit decision – available throughout public comment period

- Government Agency Roles in Air Quality Protection: Bilingual description of Federal Clean Air Act overview, and air quality related roles and responsibilities – available throughout public comment period

Public Meetings

Spanish language interpreter for oral translation was available at all public meeting locations.

- February 15, 2018: Open House, Abrams Public Health Center, 3950 S. Country Club Road
- March 1, 2018: Public Hearing I, Abrams Public Health Center, 3950 S. Country Club Road
- March 28, 2018: Public Hearing II, Pima County Public Works Building, 201 N. Stone Avenue

Public Notices

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TEP is proposing to modernize the generating station by replacing two 1950's era steam units with ten natural gas fired combustion engines, each having a generating capacity of nearly 19 MW. The project expects to trigger a significant net increase in Carbon Monoxide, Particulate Matter (fine particles PM_{2.5} and coarse particles PM₁₀) and Volatile organic Compounds subject to the Prevention of Significant Deterioration (PSD) permitting.

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Publish October 2, 2017
Arizona Daily Star

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ARIZONA DAILY STAR

Tucson, Arizona

STATE OF ARIZONA)
COUNTY OF PIMA)

Debbie Freedle, being first duly sworn deposes and says: that she is the Advertising Representative of TNI PARTNERS, a General Partnership organized and existing under the laws of the State of Arizona, and that it prints and publishes the Arizona Daily Star, a daily newspaper printed and published in the City of Tucson, Pima County, State of Arizona, and having a general circulation in said City, County, State and elsewhere, and that the attached ad was printed and

Legal Notice

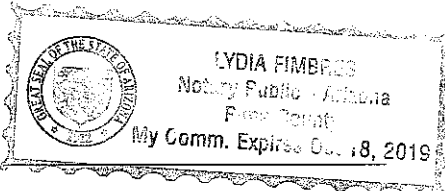
published correctly in the entire issue of the said Arizona Daily Star on each of the following dates, to-wit:

FEBRUARY 9, 2018

Debbie Freedle (handwritten signature)

Subscribed and sworn to before me this 19th day of February 2018

Lydia Fimbres (handwritten signature)
Notary Public



My commission expires

AD NO. 8766970

PUBLIC NOTICE

FIRST NOTICE

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PUBLISH: The Daily Territorial
Feb. 9, 2018

PUBLIC NOTICE

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ARIZONA DAILY STAR

Tucson, Arizona

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Legal Notice

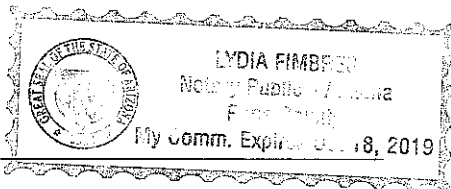
published correctly in the entire issue of the said Arizona Daily Star on each of the following dates, to-wit:

FEBRUARY 16, 2018

Debbie Freedle (handwritten signature)

Subscribed and sworn to before me this 19th day of February 2018

Lydia Fimber (handwritten signature)
Notary Public



My commission expires

AD NO. 8767209

PUBLIC NOTICE

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Publish February 16, 2018
Arizona Daily Star

PUBLIC NOTICE
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All written comments shall state the name and mailing address of the person, shall be signed by the person, his agent or his attorney and shall clearly set forth the reasons why the permit should or should not be issued. Grounds for comment are limited to whether the proposed permit meets the criteria for issuance prescribed in the Arizona Revised Statutes Section § 49-481 and Title 17 of the Pima County Code. Only persons who submit written comments during the official public comment period may appeal a permit decision. Comments and requests may be mailed to: PDEQ, Air Program Manager, Rupesh Patel, 33 N. Stone Avenue, Suite 700, Tucson, Arizona 85701 or via e-mail at air.permits@pima.gov. PDEQ does not discriminate on the basis of race, color, national origin, sex, disability, religion, or age in its programs or activities in accordance with applicable laws and regulations. Further, any person who is in need of special services (e.g., written material in large type, signer for the hearing impaired, or for free assistance in Spanish), please contact PDEQ's Environmental Justice Program Manager, Beth Gorman, 33 N. Stone Avenue, Suite 700, Tucson, Arizona, 85701, Phone (520) 724-7446, email beth.gorman@pima.gov.

El Departamento del Condado de Pima de Calidad Ambiental no discrimina en base de la raza, el color, el origen nacional, el sexo, la religión, discapacidad, o la edad en sus programas o actividades de acuerdo a las leyes y regulaciones aplicables. Además, cualquier persona que esté necesitando los servicios especiales (p.ej., material escrito en letra grande, intérpretes de lenguaje con señas, o para obtener asistencia gratuita en español), por favor contacte a la encargada del Programa de Justicia Ambiental del Departamento de Calidad Ambiental del Condado de Pima, Beth Gorman, 33 N. Stone Avenue, Oficina 700, Tucson, Arizona, 85701, teléfono (520) 724-7446, email (correo electrónico) beth.gorman@pima.gov.
PUBLISH: The Daily Territorial
Feb. 16, 2018

PUBLIC NOTICE
FIRST NOTICE
EXTENDED COMMENT PERIOD

The Pima County Department of Environmental (PDEQ) is extending the public comment period and adding an additional public hearing for the proposed revision to the existing Air Quality Permit No. 1052 to Tucson Electric Power (TEP) Irvington/H.Wilson Sundt Generating Station (IGS) located at 3950 E. Irvington Rd. TEP is proposing to modernize the station by replacing two 1950's era steam units (i.e., Units 1 and 2) with ten natural gas fired combustion engines. TEP plans to expand renewable energy resources to 30 percent by 2030. The new engines are able to ramp up more quickly to meet community needs and balance the variability associated with solar and wind energy generation.

The project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM_{2.5} and coarse particles PM₁₀) and volatile organic compounds. Pima County has completed an extensive review of the permit application, examined the air quality impact analysis of the project and considered environmental justice to protect the health and environment of minority, low-income, tribal and indigenous populations. PDEQ has also worked with the U.S. Environmental Protection Agency and the National Park Service to create a permit that will protect public health and meet air quality regulations while allowing TEP to update the facility to meet future customer needs. A chronological list of the documentation related to this complex process from the projects inception to the proposed permit revision is available to view on the PDEQ webpage.

PDEQ will hold a second formal Public Hearing on March 28, 2018 from 5:30-6:30 p.m. at the Pima County Public Works Building at 201 N Stone basement Conference Room C. This is in addition to the currently scheduled formal Public Hearing to be held on March 1, 2018, from 5:30-6:30 p.m. at the Abrams Public Health Center, 3950 S. Country Club Road, Tucson, in Conference Room 1108. The purpose of these meetings is to obtain public comments on the proposed RICE project. The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, began on February 9, 2018 and has been extended from March 12 to March 29, 2018.

All written comments shall state the name and mailing address of the person, shall be signed by the person, his agent or his attorney and shall clearly set forth the reasons why the permit should or should not be issued. Grounds for comment are limited to whether the proposed permit meets the criteria for issuance prescribed in the Arizona Revised Statutes Section § 49-481 and Title 17 of the Pima County Code. Only persons who submit written comments during the official public comment period may appeal a permit decision. Comments and requests may be mailed to: PDEQ, Air Program Manager, Rupesh Patel, 33

N. Stone Avenue, Suite 700, Tucson, Arizona 85701 or via e-mail at air.permits@pima.gov. PDEQ does not discriminate on the basis of race, color, national origin, sex, disability, religion, or age in its programs or activities in accordance with applicable laws and regulations. Further, any person who is in need of special services (e.g., written material in large type, signer for the hearing impaired, or for free assistance in Spanish), please contact PDEQ's Environmental Justice Program Manager, Beth Gorman, 33 N. Stone Avenue, Suite 700, Tucson, Arizona, 85701, Phone (520) 724-7446, email beth.gorman@pima.gov.

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please contact PDEQ's Environmental Justice Program Manager, Beth Gorman, 33 N. Stone Avenue, Suite 700, Tucson, Arizona, 85701, Phone (520) 724-7446, email beth.gorman@pima.gov.

Publish February 26, 2018
Arizona Daily Star

PUBLIC NOTICE
SECOND NOTICE
EXTENDED COMMENT PERIOD

The Pima County Department of Environmental (PDEQ) is extending the public comment period and adding an additional public hearing for the proposed revision to the existing Air Quality Permit No. 1052 to Tucson Electric Power (TEP) Irvington/H.Wilson Sundt Generating Station (IGS) located at 3950 E. Irvington Rd. TEP is proposing to modernize the station by replacing two 1950's era steam units (i.e., Units 1 and 2) with ten natural gas fired combustion engines. TEP plans to expand renewable energy resources to 30 percent by 2030. The new engines are able to ramp up more quickly to meet community needs and balance the variability associated with solar and wind energy generation.

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PDEQ will hold a second formal Public Hearing on March 28, 2018 from 5:30-6:30 p.m. at the Pima County Public Works Building at 201 N Stone basement Conference Room C. This is in addition to the currently scheduled formal Public Hearing to be held on March 1, 2018, from 5:30-6:30 p.m. at the Abrams Public Health Center, 3950 S. Country Club Road, Tucson, in Conference Room 1108. The purpose of these meetings is to obtain public comments on the proposed RICE project. The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, began on February 9, 2018 and has been extended from March 12 to March 29, 2018.

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PDEQ will hold a second formal Public Hearing on March 28, 2018 from 5:30-6:30 p.m. at the Pima County Public Works Building at 201 N Stone

basement Conference Room C. This is in addition to the currently scheduled formal Public Hearing to be held on March 1, 2018, from 5:30-6:30 p.m. at the Abrams Public Health Center, 3950 S. Country Club Road, Tucson, in Conference Room 1108. The purpose of these meetings is to obtain public comments on the proposed RICE project. The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, began on February 9, 2018 and has been extended from March 12 to March 29, 2018.

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Publish March 5, 2018
Arizona Daily Star

Media Releases



MEDIA RELEASE

Contact: Beth Gorman
(520) 724-7446; (520) 603-0358 (c)

FOR IMMEDIATE RELEASE

PDEQ Holds Public Meetings to Obtain Comments on Tucson Electric Power Air Quality Permit
Public Comment Period is February 9-March 12, 2018

Pima County, Ariz. (January 25, 2018) - The Pima County Department of Environmental Quality (PDEQ) is holding an Open House on February 15, 2018 from 5:00-6:30 p.m. and a formal Public Hearing on March 1, 2018, from 5:30-6:30 p.m. Both meetings will be held at the Abrams Public Health Center, 3950 S. Country Club Road, Tucson, in Conference Room 1108. The purpose of these meetings is to obtain public comments on a proposed major modification to the existing Air Quality Permit #1052 for Tucson Electric Power (TEP) Irvington/H.Wilson Sundt Generating Station located at 3950 Irvington Road. The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, begins on February 9, 2018 and runs through March 12, 2018.

TEP is proposing to modernize the power generating station by replacing two 1950's era steam units with ten natural gas fired combustion engines that will have a generating capacity of nearly 19 MW each. The project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10) and volatile organic compounds. This increase in emissions makes the permit modification subject to the Prevention of Significant Deterioration (PSD) permitting requirements. According to information provided to PDEQ by TEP, they plan to expand renewable energy resources to 30 percent by 2030. The new engines are able to ramp up more quickly to meet peak load needs for the community and help balance the variability associated with solar and wind energy generation. If the proposed changes go into effect, there will be a reduction in the potential to emit nitrogen oxide emissions from over 4,000 tons per year to a maximum of 179 tons per year.

PDEQ has worked with TEP, the U.S. Environmental Protection Agency, the National Park Service and consultants to create a permit that will protect public health and meet regulations while allowing TEP to update its facility to increase electricity generated for future customer needs and manage the fluctuations from energy generated by renewable resources. All documents pertaining to the proposed permit can be found on [PDEQ's website](#).

For additional information about the permit modification, call PDEQ at (520) 724-7400. Submit a comment regarding the draft permit by March 12, 2018, by email: Rupesh.Patel@pima.gov, mail or drop off to: PDEQ, Air Permits, 33. N. Stone Ave., Suite 700 • Tucson, AZ 85701.

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MEDIA RELEASE

Contact: Beth Gorman
(520) 724-7446; (520) 603-0358 (c)

FOR IMMEDIATE RELEASE

PDEQ Holds Public Meetings to Obtain Comments on Tucson Electric Power Permit

Pima County, Ariz. (February 8, 2018) - The Pima County Department of Environmental Quality (PDEQ) is holding an Open House on February 15, 2018 from 5:00-6:30 p.m. and a formal Public Hearing on March 1, 2018, from 5:30-6:30 p.m. Both meetings will be held at the Abrams Public Health Center, 3950 S. Country Club Road, Tucson, in Conference Room 1108. The purpose of these meetings is to obtain public comments on a proposed major modification to the existing Air Quality Permit #1052 for Tucson Electric Power (TEP) Irvington/H.Wilson Sundt Generating Station located at 3950 Irvington Road. The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, begins on February 9, 2018 and runs through March 12, 2018.

TEP is proposing to modernize the power generating station by replacing two 1950's era steam units with ten natural gas fired combustion engines that will have a generating capacity of nearly 19 MW each. The project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10), nitrogen oxides and volatile organic compounds over time. This increase in emissions makes the permit modification subject to the Prevention of Significant Deterioration (PSD) permitting requirements. According to information provided to PDEQ by TEP, they plan to expand renewable energy resources to 30 percent by 2030. The new engines are able to ramp up more quickly to meet peak load needs for the community and help balance the variability associated with solar and wind energy generation.

PDEQ has worked with TEP, the U.S. Environmental Protection Agency, the National Park Service and consultants to create a permit that will meet regulations and protect public health while allowing TEP to update its facility to increase electricity generated for future customer needs and manage the fluctuations from energy generated by renewable resources. All documents pertaining to the proposed permit can be found on [PDEQ's website](#).

For additional information about the permit modification, call PDEQ at (520) 724-7400. Submit a comment regarding the draft permit by March 12, 2018, by email: Rupesh.Patel@pima.gov, mail or drop off to: PDEQ, Air Permits, 33. N. Stone Ave., Suite 700 • Tucson, AZ 85701.

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PIMA COUNTY
ENVIRONMENTAL QUALITY

MEDIA RELEASE

Contact: Beth Gorman
(520) 724-7446; (520) 603-0358 (c)

FOR IMMEDIATE RELEASE

PDEQ Holds Public Hearings to Obtain Comments on Tucson Electric Power Permit

Pima County, Ariz. (February 26, 2018) - The Pima County Department of Environmental Quality (PDEQ) is holding two formal Public Hearings regarding the proposed Tucson Electric Power Air Quality Permit (TEP). The first hearing will be on March 1, 2018, from 5:30-6:30 p.m. at the Abrams Public Health Center, 3950 S. Country Club Road, Tucson, in Conference Room 1108. The second hearing will be held on March 28, 2018, from 5:30 – 6:30 p.m. at a downtown location in the Pima County Public Works Building at 201 N. Stone Avenue, in the Basement Conference Room C.

The purpose of these formal hearings is to obtain public comments on a proposed major modification to the existing Air Quality Permit #1052 for TEP Irvington/H.Wilson Sundt Generating Station located at 3950 Irvington Road. The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, began on February 9, 2018 and continues through March 29, 2018.

TEP is proposing to modernize the power generating station by replacing two 1950's era steam units with ten natural gas fired combustion engines that will have a generating capacity of nearly 19 MW each. The project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10), nitrogen oxides and volatile organic compounds over time. This increase in emissions makes the permit modification subject to the Prevention of Significant Deterioration (PSD) permitting requirements. According to information provided to PDEQ by TEP, they plan to expand renewable energy resources to 30 percent by 2030. The new engines are able to ramp up more quickly to meet peak load needs for the community and help balance the variability associated with solar and wind energy generation.

PDEQ has worked with TEP, the U.S. Environmental Protection Agency, the National Park Service and consultants to create a permit that will meet regulations and protect public health while allowing TEP to update its facility to increase electricity generated for future customer needs and manage the fluctuations from energy generated by renewable resources. All documents pertaining to the proposed permit can be found on [PDEQ's website](#).

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PIMA COUNTY
ENVIRONMENTAL QUALITY

MEDIA RELEASE

Contact: Beth Gorman
(520) 724-7446; (520) 603-0358 (c)

FOR IMMEDIATE RELEASE

PDEQ Holds Final Public Hearing to Obtain Comments on Tucson Electric Power Permit

Pima County, Ariz. (March 15, 2018) - The Pima County Department of Environmental Quality (PDEQ) is holding a second formal Public Hearing regarding the proposed Tucson Electric Power Air Quality Permit (TEP). This hearing will be on Wednesday, March 28, 2018, from 5:30 – 6:30 p.m. at the Pima County Public Works Building at 201 N. Stone Avenue, in the Basement Conference Room C. Parking is available along nearby streets. Metered parking is free after 5:00 p.m. Parking is also available in the Main Library Parking Garage off Alameda and the first hour is free. Multiple Sun Tran routes service the area, as well as the Sun Link streetcar.

The purpose of this formal hearing is to obtain public comments on a proposed major modification to the existing Air Quality Permit #1052 for TEP Irvington/H.Wilson Sundt Generating Station located at 3950 Irvington Road. The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, began on February 9, 2018 and continues through March 29, 2018.

TEP is proposing to modernize the power generating station by replacing two 1950's era steam units with ten natural gas fired combustion engines that will have a generating capacity of nearly 19 MW each. The project has the potential to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10), nitrogen oxides and volatile organic compounds over time. This potential increase in emissions makes the permit modification subject to the Prevention of Significant Deterioration (PSD) permitting requirements. According to information provided to PDEQ by TEP, they plan to expand renewable energy resources to 30 percent by 2030. The new engines are able to ramp up more quickly to meet peak load needs for the community and help balance the variability associated with solar and wind energy generation.

PDEQ has worked with TEP, the U.S. Environmental Protection Agency, the National Park Service and consultants to create a permit that will meet regulations and protect public health while allowing TEP to update its facility to increase electricity generated for future customer needs and manage the fluctuations from energy generated by renewable resources. All documents pertaining to the proposed permit can be found on [PDEQ's website](#).

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Articles/Stories Printed or Posted

Karen Wilhelmsen

From: Ursula Nelson
Sent: Wednesday, February 28, 2018 1:33 PM
To: Rupesh Patel; Mellanie Fuller; Beth Gorman
Subject: FW: Arizona Daily Star eEdition Article

You've probably all see this.

From: e-Edition [mailto:noreply@newsmemory.com]
Sent: Wednesday, February 28, 2018 12:15 PM
To: Ursula Nelson <Ursula.Nelson@pima.gov>; Richard Grimaldi <Richard.Grimaldi@pima.gov>
Subject: Arizona Daily Star eEdition Article

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Dave.Eaker@pima.gov sent you this article.

Comment:

Wednesday, January 28, 2018

Gas-fired engines that TEP wants to build would be bad for our health

Gas-fired engines that TEP wants to build would be bad for our health

By Oscar Medina

SPECIAL TO THE ARIZONA DAILY STAR

For decades, the H. Wilson Sundt Generating Station has polluted our Tucson neighborhoods. Tucson Electric Power (TEP) is now planning to build ten 20 megawatt gas-fired power plants, also known as reciprocating internal combustion engines (RICE) in our community rather than investing in clean, renewable energy.

Th Sundt plant has a long history of air pollution and once burned coal and, unfortunately, this proposal to put so many polluting engines in our community will further perpetuate a history of pollution and it needs to be stopped, especially when nonpolluting options are available.

! As a teacher and father, I believe we owe it to our children to invest in a clean, healthy, green economy and to say no to more of the pollution of the past.

It's time to stop investing in the unstable fossil fuel industry that's polluting our air and water, damaging our climate, and holding back the growing clean-energy economy that will create opportunities that will last for generations.

TEP's continued focus on gas generation is surprising for a few reasons- one being that it is well-documented that Arizona is not a gas-producing state, which means every penny we spend on gas goes to other states, rather than growing Arizona's economy.

While we are not rich in gas, we do have more sun than most states, and we should be leading on solar power.

As of 2017, the clean-energy and energy-efficiency industries employ nearly five times as many Arizonans as fossil fuels. And that's despite the fact that only about 5 percent of our energy comes from clean, renewable resources today. The potential is huge, and we should be jumping into clean energy rather than tying ourselves to more fossil fuels that send our money to other states and harm our health.

Our community has long suffered from air pollution and rather than investing in local, clean energy,

the utility is trying to sell our community a bill of goods that reciprocating internal combustion engines will improve our neighborhoods' air quality.

The air pollution from burning gas, including those that contribute to smog, are bad for our health and environment.

On Thursday, the Pima County Department of Environmental Quality will hold a public meeting to discuss the proposed changes at the Sundt Generating Station and how these changes will impact our air quality.

The county has indicated that 'the project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10), nitrogen oxides, and volatile organic compounds over time.' For decades, the Tucson community suffered from the toxic pollution spewing out of the Sundt Generating Station, and now is the time for change.

We need to tell the Pima County Department of Environmental Quality that the pollution from these proposed gas investments is unacceptable and that we want nonpolluting clean energy instead.

!

TEP has an opportunity to be a leader in clean energy and create new opportunities here in our community. They owe it to us and they owe it to our children.

I hope you can join me and other neighbors on Thursday evening from 5:30-6:30 p.m. at the Abrams Public Health Center (3950 S. Country Club Road, Room 1108) to tell the Pima County Department of Environmental Quality and TEP that we are saying no to the legacy of air pollution in our community.

Oscar Medina is a father and community organizer with Sierra Club and Tierra y Libertad. Contact Oscar at oscarmedinagomez@gmail.com



Oscar Medina

Karen Wilhelmsen

From: Google Alerts <googlealerts-noreply@google.com>
Sent: Tuesday, January 30, 2018 2:40 AM
To: Beth Gorman
Subject: Google Alert - Pima County Department of Environmental Quality

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Google Alerts

Pima County Department of Environmental Quality

As-it-happens update · January 30, 2018

NEWS

[PDEQ seeking public comments on TEP air quality permit](#)

Tucson News Now

TUCSON, AZ (Tucson News Now) -. The **Pima County Department of Environmental Quality (PDEQ)** will be holding an Open House on Feb. 15, 2018 from 5 p.m. to 6:30 p.m. and a formal Public Hearing on March 1, 2018, from 5:30 p.m. to 6:30 p.m. Both meetings will be held at the Abrams Public Health ...



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The purpose of these meetings is to obtain public comments on a proposed major modification to the existing Air Quality Permit #1052 for Tucson Electric Power (TEP) Irvington/H.Wilson Sundt Generating Station located at 3950 Irvington Road.

The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, begins on Feb. 9, 2018 and runs through March 12, 2018.

TEP is proposing to modernize the power generating station by replacing two 1950's era steam units with ten natural gas fired combustion engines that will have a generating capacity of nearly 19 MW each. The project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10) and volatile organic compounds. This increase in emissions makes the permit modification subject to the Prevention of Significant Deterioration (PSD) permitting requirements. According to information provided to PDEQ by TEP, they plan to expand renewable energy resources to 30 percent by 2030. The new engines are able to ramp up more quickly to meet peak load needs for the community and help balance the variability associated with solar and wind energy generation. If the proposed changes go into effect, there will be a reduction in the potential to emit nitrogen oxide emissions from over 4,000 tons per year to a maximum of 179 tons per year.

PDEQ has worked with TEP, the U.S. Environmental Protection Agency, the National Park Service and consultants to create a permit that will protect public health and meet regulations while allowing TEP to update its facility to increase electricity generated for future customer needs and manage the fluctuations from energy generated by renewable resources. All documents pertaining to the proposed permit can be found on [PDEQ's website](#).

For additional information about the permit modification, call PDEQ at (520) 724-7400.

Submit a comment regarding the draft permit by March 12, 2018, via email: Rupesh.Patel@pima.gov, or mail or drop off comments to: PDEQ, Air Permits, 33. N. Stone Ave., Suite 700 • Tucson, AZ 85701.

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PDEQ seeking public comments on TEP air quality permit

*Published: Monday, January 29th 2018, 5:16 pm MST
Updated: Monday, January 29th 2018, 5:16 pm MST*



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Wondering if you need to take the lids off when you recycle those plastic bottles? How to cut back on your driving? Or if aluminum is "greener" than plastic? Ask the Green Geek.

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Love your heart this Valentine's Day

The Pima County Health Department is joining forces for the annual Love Your Heart/Ama tu Corazón event on Feb. 14 to provide free blood pressure screenings. Those screenings are an important part of maintaining a healthy heart.

[Read more.](#)



Watch for repairs near Valencia and 12th Ave.

The Pima County Regional Wastewater Reclamation Department will conduct repairs to the sanitary sewer on Santa Clara Avenue between Santa Maria Street and Hatfield Street near Valencia Road and 12th Avenue through Feb. 14.

[Read more.](#)

PIMA COUNTY
FYI

**Weekly
Newsletter**

Feb. 2, 2018 - Vol. 3, No. 5

Wastewater's Living River Project earns national accolades



The National Association of Clean Water Agencies has awarded the Pima County Living River Project Steering Committee and its partners with the prestigious 2018 National Environmental Achievement Award for Public Information and Education for the Living River annual report series.

[Read more.](#)

Selected Pima Animal Care pets just \$14 this Valentine's Day

This Valentine's Day, Pima Animal Care Center invites you to find love in one of its shelter pets. Between noon and 7 p.m. on Feb. 14, PACC will offer reduced \$14 adoption fees on select pets - look for the decorated kennels! As always, adopted pets will go home spayed or neutered, with up-to-date vaccinations, microchipped, and with a free vet visit, too. Adopters will also receive a gift for their new pet.

[Read more.](#)

Find Your Furry Valentine!



Jail alternatives can benefit all

Natural foes find common ground in the attempt by Pima County's Safety + Justice



Department will conduct repairs to the sanitary sewer on Santa Clara Avenue between Santa Maria Street and Hatfield Street near Valencia Road and 12th Avenue through Feb. 14.

[Read more.](#)



PDEQ to hold meetings on proposed TEP power plant upgrades

The Pima County Department of Environmental Quality is holding an Open House Feb. 15 and a formal Public Hearing March 1 to obtain public comments on a proposed major modification to the existing Air Quality Permit #1052 for Tucson Electric Power Irvington/H. Wilson Sundt Generating Station.

[Read more.](#)



Next Week in Pima County Calendar of Events: Feb. 9-16

Pima County's Calendar features events ranging from the start of horse racing at Rillito Downs Feb. 10 to a lecture on "wild things" Feb. 16 at Brandi Fenton Park to opportunities at sites around Pima County to get free tax-preparation help.

[Read more.](#)



Got a story idea?
[Submit it here!](#)

Jail alternatives can benefit all

Natural foes find common ground in the attempt by Pima County's Safety + Justice Challenge to rethink jails. A top prosecutor and defense attorney discuss the benefits of finding alternatives for people dealing with addiction and mental illness in their guest column in the Arizona Daily Star.

[Read more.](#)



Find dozens of resources at your library for Black History Month

The Pima County Public Library has lined up numerous events and exhibits throughout February in honor of Black History Month. Patrons will find children's books by black authors about black children, the history of Tucson's black community and much more.

[Read more.](#)



Youth explore justice careers

Nearly 100 young people turned out at the Tucson Police Department Feb. 7, but they weren't in trouble. The youth were part of a Youth Career Expo focused on justice careers, organized by the Pima County Workforce Investment Board's Youth Council.

[Read more.](#)



PDEQ to hold meetings on proposed TEP power plant upgrades

Feb 08, 2018 | [Read More News](#)

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Karen Wilhelmsen

From: NewsNet <newsnet@tucsonaz.gov>
Sent: Monday, February 12, 2018 2:23 PM
To: Beth Gorman
Subject: NewsNet Daily Digest: Feb. 12, 2018

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Tucson NewsNet Daily Digest - A service of the City of Tucson Feb. 12, 2018 Web version:
<http://government.tucsonaz.gov/newsnet/latest>

CHICAGO NEWSPAPER TOUTS TUCSON'S FOOD SCENE - The Chicago Tribune recently profiled what Tucson has to offer in the way of food. Since our city was named a UNESCO World City of Gastronomy a couple of years ago, many media outlets have sent reporters to town to sample some of the food offerings. The Tribune article focuses on some of Tucson's heavyweights in the food industry, such as Barrio Bread, Downtown Kitchen + Cocktails, Carriage House, Rincon Market, and much more. The story traces Tucson's food roots back to Mission Garden near "A" Mountain, a food cultivation site for more than 4,000 years. "History may be the foundation of Tucson's City of Gastronomy, but its resident culinary artists champion innovation in appetite-whetting ways," the article said. "Tucson is the heart of agriculture in the U.S.," said Jonathan Mabry, lead author of the UNESCO application and president of the nonprofit Tucson City of Gastronomy. "What's interesting is that crops that were cultivated more than 4,000 years ago and wild desert foods that have been foraged for many more millennia back in time are all still part of our contemporary cuisine." Read the Chicago Tribune article: <http://trib.in/2EkI9AM>

PRELIMINARY WORK UNDERWAY ON WILMOT ROAD REPAVING PROJECT – Crews under contract with the City of Tucson are performing electrical conduit work on Wilmot Road and Fairmount Street (between Speedway Boulevard and Pima Street) in preparation for a repaving project on Wilmot, from Pima Street to Golf Links Road. Work will take place Monday through Thursday, 7 a.m.-5 p.m., into early March. At least one lane of travel will be open in each direction, and business and residential access will be maintained at all times. Once the electrical portion is complete, the lowering of manhole and water valve covers will begin, followed by milling (removing asphalt) and repaving. The project is part of the voter-approved, \$100 million, five-year Road Recovery street bond program. Read news release: <http://bit.ly/2EBjqR> Road Recovery: <http://1.usa.gov/1xdFvK> Tucson Department of Transportation: <http://1.usa.gov/1c6BGDE>

MEETINGS SCHEDULED FOR PUBLIC COMMENT ON TUCSON ELECTRIC POWER AIR QUALITY PERMIT – The Pima County Department of Environmental Quality (PDEQ) will hold an open house this Thursday, Feb. 15, 5-6:30 p.m., to obtain public comments on a proposed major modification to the existing Air Quality Permit #1052 for Tucson Electric Power (TEP) Irvington/H.Wilson Sundt Generating Station, 3950 E. Irvington Road. PDEQ also has scheduled a formal public hearing on Thursday, Mar. 1, 5:30-6:30 p.m. Both meetings will be held at the Abrams Public Health Center, 3950 S. Country Club Road, Room 1108. TEP is proposing to modernize the power generating station by replacing two 1950s-era steam units with 10 natural gas-fired combustion engines that will have a generating capacity of nearly 19 megawatts each. The new engines are able to ramp up more quickly to meet peak load needs for the community and help balance the variability associated with solar and wind energy generation. The official public comment period is underway and ends March 12. Read the news release: <http://bit.ly/2BVg0io>

PDEQ: <http://bit.ly/2njoSVM>

PLANTING TREES FOR COOL SCHOOLS – Sunnyside High School students, Sunnyside Unified School District Superintendent Steve Holmes, Tucson Mayor Jonathan Rothschild, District 2 Pima County Supervisor Ramón Valadez, and Trees for Tucson, the urban forestry program of Tucson Clean & Beautiful, will plant 26 15-gallon shade trees at Sunnyside High School. The celebration and planting begins at 10:30 a.m. tomorrow, Feb. 13, at Sunnyside High School Learning Resource Center, 1725 E. Bilby Road. The ceremony will recognize Kinder Morgan’s fourth year of support for sustainable, green schoolyards. The company partnered to provide more than 1,500 new, drought-tolerant shade trees for schools, enabling Trees for Tucson and more than 9,000 students to plant trees.

Trees for Tucson: <http://bit.ly/2EYWH6a> Tucson Clean & Beautiful: <http://bit.ly/1G8Fepi>

TUCSON WATER HIRING WATER SYSTEM OPERATOR – The Tucson Water Department is seeking a water system operator to work in its Water Quality and Operations Division. Job responsibilities include operating, monitoring, and controlling water treatment facilities, distribution systems, and related equipment. A system operator also makes repairs and decisions related to the central control operations of the potable water and reclaimed water systems that serve more than 722,000 customers. The successful applicant will have Arizona Department of Environmental Quality (ADEQ) Grade 2 certifications in Water/Wastewater Treatment and Water Distribution. ADEQ Grade 3 certifications will be required within 12 months of hire. Applications must be received by Feb. 28.

Read the job description: <http://bit.ly/2H919QF> City of Tucson jobs: <http://bit.ly/2wTiVow> Tucson Water: <http://1.usa.gov/1uo8uPh>

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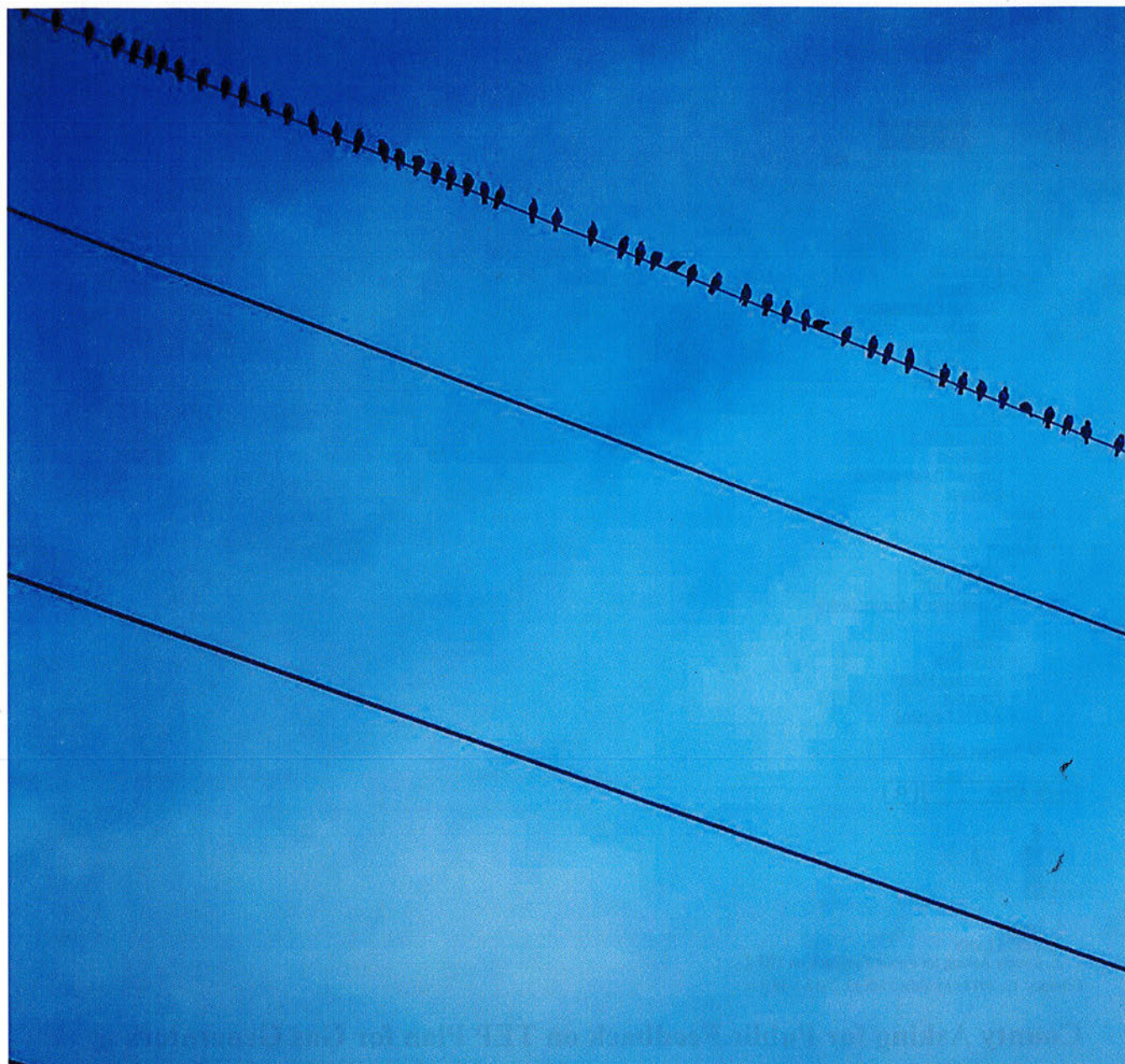
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A plane flies overhead as birds perch on a power line. (PHOTO: via Pixabay)

Pima County is asking the public to comment on Tucson Electric Power's plan to replace two 1950s-era steam-unit generators with 10 new natural gas units, which would fill the gaps left by renewable-energy production.

Joseph Barrios, a spokesperson for TEP, said the change is part of a long-term effort to expand renewable energy resources and reduce the utility's reliance on coal.

The Pima County Department of Environmental Quality is holding an open house for public comment. TEP's application for the project requires outlining certain estimates for the emissions the new generators would create.

Ursula Nelson, director of the Department of Environmental Quality, said the project expects to cause an increase in carbon monoxide, particulate matter, nitrogen oxides and volatile organic compounds over time.

"There is a period of time where they can have an overlap with the existing operations, so their existing boilers, and the new engines. During that time period we could see some increase in air-quality emissions," Ursula Nelson said.

Barrios said each of the 10 units will be equipped with state-of-the-art emission control technology.

"These units are highly flexible, allowing us to vary the output as needed," Barrios said. "So, we do expect an overall better emissions profile for the plant."

He says this is part of TEP's plan to expand renewable energy resources to 30 percent by year 2030.

Pima County is holding an open house on Feb. 15 and a formal public hearing on March 1.

Representatives from TEP and the Department of Environmental Quality will be present to answer any questions or concerns.

Follow Brandon Mejia on [Twitter](#) or contact him via email at BMejia@azpm.org.

http://www.gvnews.com/news/open-house-on-air-quality-permit/article_37240102-1bec-11e8-8354-07cef2504729.html

Open house on air quality permit

Feb 27, 2018 Updated 2 min ago

A public hearing on a proposed modification to the air quality permit governing TEP's Irvington Road generating station is set for March 1.

Hosted by Pima County Department of Environmental Quality, the hearing will take place from 5:30 to 6:30 p.m. at Abrams Public Health Center, 3950 S. Country Club Road, Tucson.

Attendees may submit comments there and through March 12 via Rupesh.Patel@pima.gov, or to PDEQ, Air Permits, 33. N. Stone Ave., Suite 700, Tucson, AZ 85701.

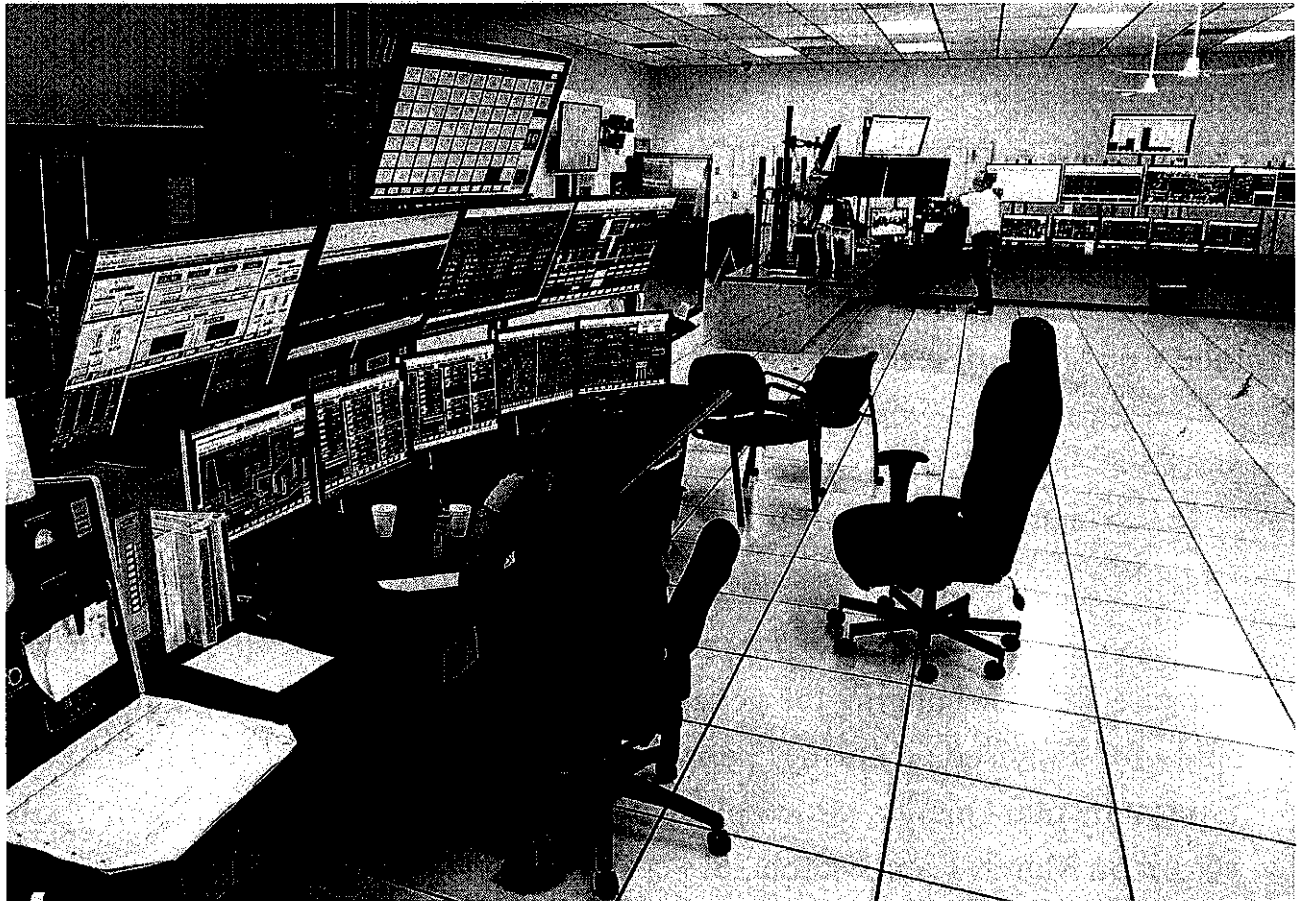
The proposed major modification to Tucson Electric Power's permit #1052 for the Irvington/H.Wilson Sundt Generating Station at 3950 E. Irvington Road would modernize the operation by replacing two 1950s-era steam units with 10 natural gas-fired combustion engines for a generating capacity of 19 megawatts each. The project expects to cause increased emissions of carbon monoxide, dust, nitrogen oxides and volatile organic compounds over time.

All permit-related documents can be viewed at webcms.pima.gov (click on "Environment," then "Air Program," and scroll to TEP Application).

http://tucson.com/business/tucson-electric-seeks-new-air-permit-for-sundt-plant-changes/article_a8458025-d533-595f-8b8e-1ae56b2c1523.html

Tucson Electric seeks new air permit for Sundt plant changes

By David Wichner Arizona Daily Star Feb 27, 2018 Updated 13 min ago



TEP workers at the Sundt generating station on east Irvington Road constantly monitor consumption and generation.

Mike Christy / Arizona Daily Star/

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Tucson Electric Power Co. is seeking a revised air-quality permit from Pima County because of planned changes to generating equipment at the H. Wilson Sundt Generating Station on Tucson's south side.

TEP plans to remove two large steam generators at the Sundt plant and replace them with 10 natural-gas reciprocating internal combustion engines that will be used mainly to provide quick power during demand peaks, especially to offset intermittent power losses from renewable-energy sources like solar farms.

In late January, TEP received a certificate of environmental compatibility from the Arizona Power Plant and Transmission Line Siting Committee for the new engines and related transmission-line upgrades on the Sundt campus on West Irvington Road.

Because TEP is changing the generating sources at the Sundt plant, it had to apply for a revised air-quality permit from the Pima County Department of Environmental Quality, which plans public comment hearings on the proposed permit on March 1 and March 28.

The new engine plant is expected to cause an increase in emissions such as carbon monoxide, particulates, nitrogen oxides and volatile organic compounds over time, PDEQ says.

But a TEP spokesman said the utility expects a reduction in emissions because the engines will run only when needed.

TEP has said that engines will reduce Tucson-area emissions of nitrogen oxides, which contribute to ground-level ozone, by about 60 percent or about 350 tons per year, while using minimal water for cooling.

“We’re not going to use the new engines the same way we’re using the current generators,” TEP spokesman Joe Barrios said. “Overall, emissions should be better, they should be lower, because we’re not going to be running them all the time.”

As part of its proposal, TEP said each engine unit will be equipped with an oxidation catalyst system to control emissions of volatile organic compounds, carbon monoxide and organic hazardous air pollutants, and a selective catalytic reduction system to control emissions of nitrogen oxides.

TEP also has agreed to an annual limit on nitrogen oxides from the new engine plant, which TEP hopes to begin installing late this year.

After issuing a bid request in July, TEP selected Ashton Construction and power-plant developer Sargent & Lundy for engineering, procurement and construction of the new engine plant.

The engines will be provided by Wartsila, a Norway-based maker of power plant and marine propulsion systems.

PDEQ says it has worked with agencies including the U.S. Environmental Protection Agency and the National Park Service and consultants to draft a permit for the Sundt engine project.

In a letter to PDEQ in September, the U.S. Fish and Wildlife Service found that the new generating engines will not affect any species or critical habitats listed under the Endangered Species Act.

But the National Park Service, which is concerned with haze affecting parks, asked TEP to provide additional modeling of the engine plant's expected visible exhaust plume.

TEP, which stopped burning coal at the Sundt plant in 2015, says it plans to get 30 percent of its energy from renewable sources by 2030.

The utility says the new gas engines are able to ramp up more quickly to meet peak load needs and help balance the variability associated with solar and wind energy generation, such as when clouds cause photovoltaic panel production to drop.

Contact senior reporter David Wichner at dwichner@tucson.com or 573-4181. On Twitter: @dwichner. On Facebook: [Facebook.com/DailyStarBiz](https://www.facebook.com/DailyStarBiz)

If you go

- What: Pima County Department of Environmental Quality public hearings on the proposed Tucson Electric Power air-quality permit for the H. Wilson Sundt (Irvington) Generating Station
- When and where: Thursday, March 1 from 5:30 to 6:30 p.m. at the Abrams Public Health Center, 3950 S. Country Club Road, conference room 1108; also on Wednesday, March 28

from 5:30 to 6:30 p.m. at the Pima County Public Works Building, 201 N. Stone Ave., in basement conference room C.

- To view the permit proposal and related filings, go to the PDEQ website at: tucne.ws/airquality

MORE INFORMATION



TEP's Sundt plant goes 'back to the future' with piston-engine technology

- TuSimple expands as it readies self-driving truck technology
- Tucson Tech: Vector inks deal for five orbital launches
- Tucson-based Critical Path Institute emerging as top drug-research organization
- Tucson Tech: Storage, new grid technologies key to boosting solar
- Tucson Electric Power mulling ways to rebate income-tax savings to customers
- Tech Council looks to boost high school career and technical education funding
- Pedestrian struck by car in midtown Tucson

David Wichner

Senior reporter covering business and technology for the Arizona Daily Star/Tucson.com

BUSINESS

TUESDAY, FEBRUARY 27, 2018 | PAGE A12

Editor: Hipolito R. Corella | 520-573-4101 | business@tucson.com

TEP seeks new air permit for Sundt plant

By David Wichner
ARIZONA DAILY STAR

Tucson Electric Power Co. is seeking a revised air-quality permit from Pima County because of planned changes to generating equipment at the H. Wilson Sundt Generating Station on Tucson's south side.

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See TEP, A13

TUCSON REAL ESTATE

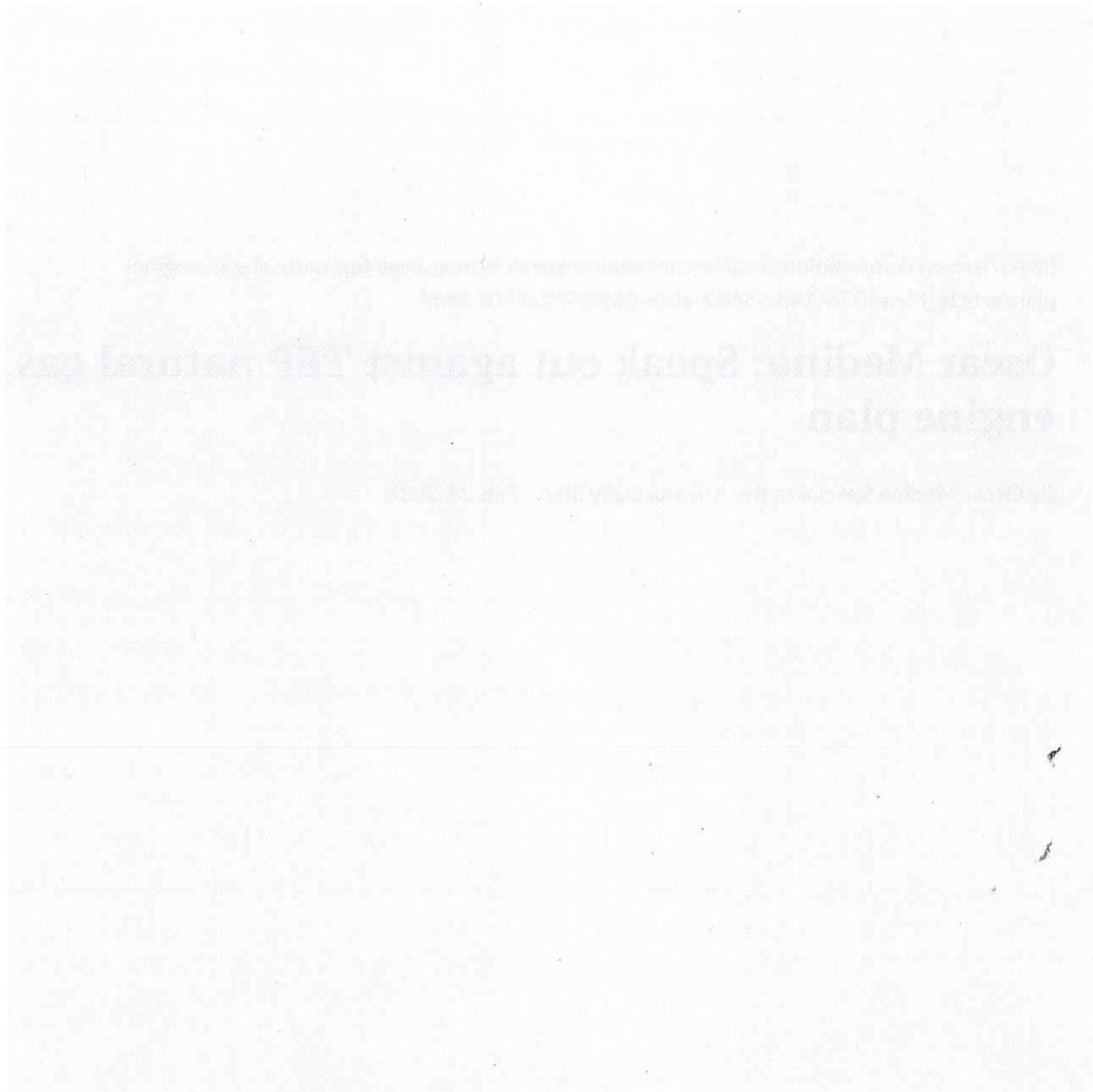


4 things to listen for as Powell, new Fed chair, meets Congress

http://tucson.com/opinion/local/oscar-medina-speak-out-against-tep-natural-gas-engine-plan/article_f3ea4076-14dc-5682-abf8-8598592a2902.html

Oscar Medina: Speak out against TEP natural gas engine plan

By Oscar Medina Special to the Arizona Daily Star Feb 28, 2018



Oscar Medina is a father and community organizer with Sierra Club and Tierra y Libertad. Contact Oscar at oscarmedinagomez@gmail.com

For decades, the H. Wilson Sundt Generating Station has polluted our Tucson neighborhoods. Tucson Electric Power (TEP) is now planning to build ten 20 megawatt gas-fired power plants, also known as reciprocating internal combustion engines (RICE) in our community rather than investing in clean, renewable energy.

The Sundt plant has a long history of air pollution and once burned coal and, unfortunately, this proposal to put so many polluting engines in our community will further perpetuate a history of pollution and it needs to be stopped, especially when nonpolluting options are available.

As a teacher and father, I believe we owe it to our children to invest in a clean, healthy, green economy and to say no to more of the pollution of the past.

It's time to stop investing in the unstable fossil fuel industry that's polluting our air and water, damaging our climate, and holding back the growing clean-energy economy that will create opportunities that will last for generations.

TEP's continued focus on gas generation is surprising for a few reasons — one being that it is well-documented that Arizona is not a gas-producing state, which means every penny we spend on gas goes to other states, rather than growing Arizona's economy.

While we are not rich in gas, we do have more sun than most states, and we should be leading on solar power.

As of 2017, the clean-energy and energy-efficiency industries employ nearly five times as many Arizonans as fossil fuels. And that's despite the fact that only about 5 percent of our energy comes from clean, renewable resources

today. The potential is huge, and we should be jumping into clean energy rather than tying ourselves to more fossil fuels that send our money to other states and harm our health.

Our community has long suffered from air pollution and rather than investing in local, clean energy, the utility is trying to sell our community a bill of goods that reciprocating internal combustion engines will improve our neighborhoods' air quality.

The air pollution from burning gas, including those that contribute to smog, are bad for our health and environment.

On Thursday, the Pima County Department of Environmental Quality will hold a public meeting to discuss the proposed changes at the Sundt Generating Station and how these changes will impact our air quality.

The county has indicated that “the project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10), nitrogen oxides, and volatile organic compounds over time.” For decades, the Tucson community suffered from the toxic pollution spewing out of the Sundt Generating Station, and now is the time for change.

We need to tell the Pima County Department of Environmental Quality that the pollution from these proposed gas investments is unacceptable and that we want nonpolluting clean energy instead.

TEP has an opportunity to be a leader in clean energy and create new opportunities here in our community. They owe it to us and they owe it to our children.

I hope you can join me and other neighbors on Thursday evening from 5:30-6:30 p.m. at the Abrams Public Health Center (3950 S. Country Club Road, Room 1108) to tell the Pima County Department of Environmental Quality and TEP that we are saying no to the legacy of air pollution in our community.

Oscar Medina is a father and community organizer with Sierra Club and Tierra y Libertad. Contact Oscar at oscarmedinagomez@gmail.com

New TEP generators cut emissions, allow solar, wind resources to grow

By Larry Lucero

SPECIAL TO THE ARIZONA DAILY STAR

Tucson Electric Power is working to expand its use of solar, wind and other clean energy resources without compromising our commitment to safe, reliable and affordable service.

We're building a smarter, more robust energy grid to support our increased reliance on renewable energy. In addition to emerging energy storage options, we need efficient, responsive natural-gas-fired generators that can supplement the intermittent output of solar arrays and wind turbines. That's why we're planning to replace older steam generators at our H. Wilson Sundt Generating Station in Tucson with new reciprocating internal combustion engine (RICE) generators. These efficient natural-gas-fired engines will provide us with the clean, responsive resource we need to overcome challenges associated with our increasing use of solar energy.

We've worked hard to keep area residents informed about this important project through mailings, website updates and public meetings. But a guest column that appeared in the Star on Wednesday threatens to compromise these efforts through misstatements, misunderstandings and baseless accusations.

Rather than damaging public health, as the column claims, our project would help protect it. The RICE units will run more efficiently than the older units they'll replace, using less water and allowing lower overall emissions at the plant. Sundt's nitrogen oxide emissions will be 60 percent lower after the project is complete, improving local air quality and contributing to the health of the surrounding community. Our RICE generators should not be considered as an alternative to renewable energy, as the column asserts. In fact, they are needed to support our increased use of solar and wind resources that do not perform like traditional power plants.

Solar power systems provide intermittent output that can disappear behind passing clouds and fades away

later in the day - right around the time our customers start using more energy. Older generating units were not designed to increase or decrease their output quickly enough to compensate for these changes.

The RICE units, by contrast, will allow TEP to quickly ramp up and roll back generation to supplement the output of our growing renewable-energy portfolio. They're a critical part of our plan to provide 30 percent of our power from renewable resources by 2030 - doubling our state's 2025 goal.

Nearly 13 percent of our community's power came from renewable resources last year, far more than the 5 percent figure included in Wednesday's column. While we understand the desire for even quicker adoption of renewable resources, TEP and other utilities must contend with the limits of existing technology and a need to maintain affordable, reliable service at all times.

Our energy grid operates in real time; virtually all of the power we use is being generated at that same moment. That means we can't rely on renewable energy alone to satisfy our 24/7 energy needs. While energy storage systems offer great promise, TEP and other utilities will need fossil-fueled resources for the foreseeable future to maintain reliable service.

The modern natural-gas-fired RICE units we're adding to our Sundt Generating Station will help TEP provide a healthy energy mix that supports our community's long-term growth. I invite you to learn more about the project by visiting tep.com/projects and reviewing information about our 'Irvington Campus Modernization.'

Larry Lucero is senior director of government and external affairs for Tucson Electric Power.



Larry Lucero

http://tucson.com/opinion/local/larry-lucero-modern-natural-gas-generators-support-tep-s-plans/article_513e0357-f761-5529-888f-c4a6a7a4705d.html

Larry Lucero: Modern natural gas generators support TEP's plans for greater use of solar, wind energy

By Larry Lucero Special to the Arizona Daily Star Mar 1, 2018

Larry Lucero

HANDOUT

Tucson Electric Power is working to expand its use of solar, wind and other clean energy resources without compromising our commitment to safe, reliable and affordable service.

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Larry Lucero is senior director of government and external affairs for Tucson Electric Power.

From: [Sandy Bahr, Sierra Club Grand Canyon Chapter](#)
To: [Beth Gorman](#)
Subject: [BULK] Canyon Echoes - Support Clean Energy!
Date: Monday, March 5, 2018 12:23:20 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.



*"The Possible's slow fuse is lit
By the Imagination." ~Emily Dickinson*

In this issue:

- [Support Clean Energy for Arizona Utilities](#)
- [Meet the Monument -- Ironwood Forest, that is](#)
- [Join Us for a screening of *Before the Flood*](#)
- [Tucson Speaks Out Against More Pollution!](#)
- [Please Support Our Work!](#)

Dry Lake Wind Farm_KentKnudson



Support Clean Energy for Arizona Utilities

Every 2-3 years, Arizona utilities are required to submit "integrated resource plans" to the Arizona Corporation Commission (ACC), the elected body that sets electricity rates for Arizona Public Service (APS) and Tucson Electric Power (TEP). In its resource plan, each utility projects the needs of the electricity system over 15 years and proposes energy investments to meet those needs.

Credit: Kent Knudson

Both APS and TEP have submitted resource plans that fail to value a clean energy future. Their plans are inadequate and rely heavily on natural gas generation. The ACC is scheduled to address these plans at its March 13-14 open meetings. Please add your name to this letter and ask the ACC to insist that APS and TEP properly value energy efficiency and renewable energy in their resource plans. We will deliver the petition to the ACC to be entered into the official record/docket prior to the meetings. If you are interested in attending the meetings, please contact Sandy Bahr below for details.

[Tell Arizona utilities and the Arizona Corporation that we want a clean energy future!](#)

For more information contact Sandy Bahr at (602) 253-8633 or sandy.bahr@sierraclub.org.

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Meet the Monument -- Ironwood Forest, that is

28764617023_ee101c3080_z

This event is open to the public and there is no charge for admission. It will be held on the north side of iconic Ragged Top, approximately 20 miles west of Marana. Meet the Monument is a great learning opportunity and features presentations and walkabouts by local naturalists specializing in the various facets of this land.

More information visit the [Friends of Ironwood Forest website here](#).

Credit: Bob Wick, BLM

For more information email info@ironwoodforest.org.

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BeforeTh

Join us for a Screening of *Before the Flood*

**Before the Flood Film Screening
Wednesday, March 21**

6:30 P.M., discussion to follow
Franciscan Renewal Center Auditorium
5802 E Lincoln Dr., Scottsdale ([map](#))

Sierra Club and the Care for Creation Ministry Team at the Franciscan Renewal Center present a no-cost screening of *Before the Flood* at Franciscan Renewal Center Auditorium. *Before the Flood* is a National Geographic film featuring Leonardo DiCaprio as he travels to five different continents to witness and discuss climate change with local activists, scientists, and more.

For more information and to RSVP, contact Sandy Bahr at (602) 253-8633 or sandy.bahr@sierraclub.org.

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Tucson Speaks Out Against More Pollution!

On March 1st, Pima County Department of Environmental Quality held a public hearing on the air quality permit for a proposal by Tucson Electric Power to install 10 reciprocating internal combustion engines (RICE) at its Sundt plant in Tucson. More than 40 people, 20 of whom spoke, attended the hearing to let the county know they want clean energy and clean air, plus energy generation that does not harm the climate.

For decades, neighborhoods in Tucson have suffered from pollution from the Sundt plant, including from coal and natural gas. Rather than bring more pollution

Oscar at Sundt Hearing

to this community, TEP should invest in Arizona's abundance of low cost renewable energy, which coupled with storage could meet its needs in this area. It's time to stop investing in the unstable fossil fuel industry that's polluting air and water, damaging our climate, and holding back the growing clean energy economy that will create opportunities that will last for generations.

Credit: Sandy Bahr

Read more about the proposal in this [opinion piece submitted by Oscar Medina](#), a teacher, a parent, and a Sierra Club executive committee member.

Mark your calendar for the next hearing on this air quality permit. It will be held on March 28th from 5:30pm-6:30p, at the Pima County Public Works Building at 201 N Stone in the basement Conference Room C.

To learn more, contact Sandy Bahr at (602) 253-8633 or sandy.bahr@sierraclub.org.

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Please Support Our Work!

Our work depends on the support of people like you. Watch for our March Appeal in your inbox or your mailbox. Please consider making a donation to further our efforts to protect Arizona's wild lands, wildlife, people, and places. Thank you so much!

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SC on FB



This email was sent to: beth.gorman@pima.gov

This email was sent by the [Sierra Club Grand Canyon Chapter](#)
514 W Roosevelt St Phoenix, AZ 85003


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Pima County gathers public input on proposed power plant upgrades

by Arizona Business Daily Reports (/author/arizona-business-daily-reports) | Mar 19, 2018 (/stories/2018/mar)



 The project would involve removing two steam units and adding 10 natural gas combustion engines. | File photo

The Pima County Department of Environmental Quality (PDEQ) recently held an open house (<http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=392040>) and a formal public hearing to gauge public opinion on a proposed modification to Air Quality Permit No. 1052 for the Tucson Electric Power (TEP) Irvington/Wilson Sundt Generating Station.

PDEQ also allowed a public comment period from Feb. 9 to March 12 for people to submit their input.

The project would involve removing two steam units and adding 10 natural gas combustion engines. This process would see an increase in various air pollutants, thus the need for the permit modification. TEP plans to increase its renewable energy use to 30 percent by 2030.

PDEQ has collaborated with TEP, the U.S. Environmental Protection Agency, the National Park Service, and other consultants so that the permit balances TEP's desire to update its station and public health. The permit modification would also make the project subject to the Prevention of Significant Deterioration permitting requirements.

For additional information about the permit modification, visit the PDEQ website or call 520-724-7400.

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MORE NEWS

Karen Wilhelmsen

From: NewsNet <newsnet@tucsonaz.gov>
Sent: Monday, March 26, 2018 3:32 PM
To: Beth Gorman
Subject: NewsNet Daily Digest: March 26, 2018

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Tucson NewsNet Daily Digest - A service of the City of Tucson March 26, 2018 Web version:
<http://government.tucsonaz.gov/newsnet/latest>

TUCSON WATER HOSTING PUBLIC MEETINGS ON PROPOSED RATES AND FEES – Tucson Water will host three public meetings on its Proposed Rates and Fees for Fiscal Years 2019-2022 and its Fiscal Years 2018-2023 Financial Plan. The first meeting is this Thursday, March 29, at 5:30 p.m. at the El Pueblo Activity Center, 101 W. Irvington Road. A brief presentation will cover what the utility is doing to stay financially stable, the cost to deliver safe drinking water to customers, and how the rate proposal will affect utility services statements. Assistance for Spanish speakers will be available. For more information, visit the links below. Anyone with questions or comments on proposed rates and fees is encouraged to call (520) 791-4331 or email Tucson Water's Public Information and Conservation Office (PICO) at pico@tucsonaz.gov.

Proposed Rates and Fees: <http://bit.ly/2ui3h6o> Tucson Water: <http://1.usa.gov/1kA18Hj>

WATER LINE WORK ON COLUMBUS BOULEVARD NORTH OF PIMA STREET – Tucson Water and its contractor are performing rehabilitation work on a 54" Prestressed Concrete Cylinder Pipeline that runs under Columbus Boulevard. The road remains open for two-way traffic, but southbound traffic will be directed briefly into the center turn lane at Lester Street. The speed limit is 15 mph in the area due to a neighboring elementary school. Eastbound and westbound traffic on Pima will not face any detours. The work is scheduled to be completed by April 25. Water service continues during the period.

Tucson Water news release and map: <http://bit.ly/2DWCHzj> Tucson Water: <http://1.usa.gov/1kA18Hj>

FINAL MEETING SCHEDULED FOR PUBLIC COMMENT ON TUCSON ELECTRIC POWER AIR QUALITY PERMIT – The Pima County Department of Environmental Quality (PDEQ) will hold its second and final public hearing this week to obtain public comments on a proposed major modification to the existing Air Quality Permit #1052 for Tucson Electric Power (TEP) Irvington/H. Wilson Sundt Generating Station, 3950 E. Irvington Road. PDEQ scheduled the hearing for this Wednesday, March 28, 5:30-6:30 p.m., at the Pima County Public Works Building, 201 N. Stone Ave., in the Basement Conference Room C. TEP is proposing to modernize the power generating station by replacing two 1950s-era steam units with 10 natural gas-fired combustion engines that will have a generating capacity of nearly 19 megawatts each. The new engines are able to ramp up more quickly to meet peak load needs for the community and help balance the variability associated with solar and wind energy generation.

Read the news release: <http://bit.ly/2G9hQyH>

PDEQ: <http://bit.ly/2njoSVM>

CITY RECRUITING INFORMATION TECHNOLOGY MANAGER – The City of Tucson is seeking an Information Technology (IT) manager to lead its IT Asset Management Team. The team provides completed life cycle management of IT assets, from purchase to disposal, for both hardware and software. The ideal candidate should have a working knowledge of IT

technologies, including desktops, systems storage, networks, and telephony. The City of Tucson has approximately 4,600 desktops and more than 9,000 software products from nearly 700 unique publishers. The IT manager will report directly to the IT deputy director. Applications must be received by April 22. Board interviews via phone will be scheduled for applicants who meet minimum qualifications.

Read the job description: <http://bit.ly/2G8C3Ev>

PLENTY OF PARKING ALONG STREETCAR ROUTE - There are plenty of places to park along the nearly 4-mile Sun Link streetcar route. Parking is available at more than 11,000 spaces along the University of Arizona, 4th Avenue, Downtown Tucson, and the Mercado District. Street parking is free on the weekends.

Park Tucson: <http://1.usa.gov/1DyIYdZ>

Sun Link: <http://bit.ly/1YLz2IN>

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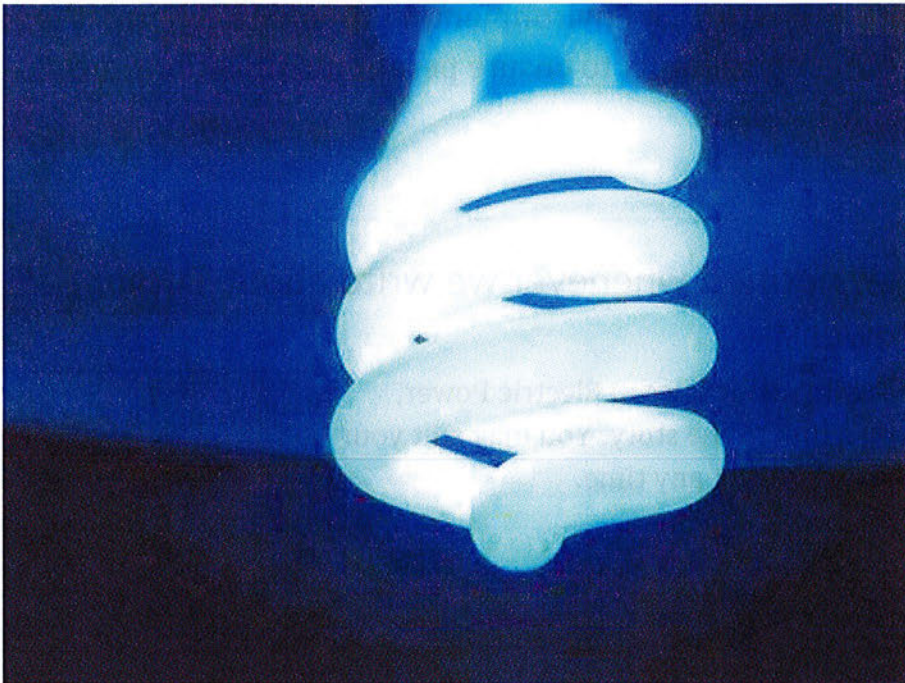
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Pima County holds final hearing on Tucson Electric Power project

by Arizona Business Daily Reports (/author/arizona-business-daily-reports) | Apr 5, 2018 (/stories/2018/apr)



 TEP plans to expand its renewable energy by 30 percent by 2030. | File photo

The Pima County Department of Environmental Quality (PDEQ) recently hosted its final (<http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=417771>) hearing for the community after soliciting feedback from the public on its proposed Tucson Electric Power (TEP) Air Quality Permit.

The TEP's proposal includes modernizing its power-generating station with the replacement of two steam units, which the TEP says are designed from the 1950s, with 10 natural gas fired combustion engines. According to the TEP, the new engines will each be capable of generating almost 19 megawatts of power.

According to the PDEQ, the replacement could result in an increase of carbon monoxide, particulate matter, nitrogen oxides and volatile organic compounds emissions over a certain period. The potential for the emissions is the reason for the need to modify the Prevention of Significant Deterioration permitting.

The PDEQ says that TEP plans to expand its renewable energy by 30 percent by 2030 and that the proposed engines would help to meet peak loads as well as balance its varying solar and wind energy generation.

PDEQ has been working with TEP, the U.S. Environmental Protection Agency, the National Park Service and other consultants to ensure permit modifications meet regulations and protect public health.

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TEP Application for PSD Authorization

Tucson Electric Power Company (TEP) operates its Irvington Generating Station (IGS) under Class I Air Quality Operating Permit No. 1052 issued by the Pima County Department of Environmental Quality (PDEQ). IGS consists mainly of four steam boiler generating units, specifically, Unit 1, Unit 2, Unit 3 and Unit 4. TEP is proposing to modernize the station by replacing two 1950's era steam units (i.e., Units 1 and 2) with ten high-efficiency, fast-responding, state-of-the-art reciprocating internal combustion engines (RICE), each having a generating capacity of nearly 19 MW. The RICE project expects to trigger a major modification for CO, PM_{2.5}/PM₁₀ and VOCs subject to the Prevention of Significant Deterioration (PSD) permitting. As such, air quality dispersion modeling analysis is required to demonstrate that new emissions from the major modification, will not cause or contribute to a violation of any National Ambient Air Quality Standards (NAAQS).



This page will contain a chronological list of the documentation related to this complex process from the projects inception to its conclusion. PDEQ is utilizing this repository webpage to provide easy access to the documents for the public comment period and to facilitate an open dialogue and the sharing of information with all interested parties.

WEBPAGE UPDATED ON A REGULAR BASIS AS DOCUMENTS BECOME AVAILABLE

Current Permit Application Documentation

Date

Received Document Title

- 06/23/2017 [Dispersion Modeling Protocol](#)
- 08/1/2017 [Permit Application](#)
- 08/1/2017 [Emission Calculations \(Permit Application Appendix B\)](#)
- 08/1/2017 [Impact Analysis \(Permit Application Appendix C\)](#)
- 08/11/2017 [Endangered Species Act Analysis](#)
- 08/23/2017 [Administrative Completeness Checklist](#)
- 08/28/2017 [Cultural Resources Inventory and Historic Building Assessment \(TEP Irvington Campus\)](#)
- 08/31/2017 [Pima County Office of Sustainability and Conservation Assessment Response](#)
- 09/1/2017 [Conditional Approval of Modeling Protocol](#)
- 09/8/2017 [Technical Review Letter Final to TEP](#)
- 09/12/2017 [Cultural Resources Assessment](#)
- 09/12/2017 [City of Tucson Historic Preservation Office Assessment Response](#)
- 09/18/2017 [U.S Fish and Wildlife Section 7 Analysis Response](#)
- 09/19/2017 [TEP Response to PDEQ Tech Review](#)
- 09/21/2017 [Vendor Emissions Specifications](#)
- 09/26/2017 [Technical Review Letter #2](#)
- 09/27/2017 [TEP IGS Modeling Addendum](#)
- 09/28/2017 [SCR System Specification](#)
- 09/29/2017 [TEP Response to Technical Review Letter #2](#)
- [Attachment - 47X](#)
- [Attachment - 49P](#)
- [Attachment - Plains-End](#)
- 09/29/2017 [TEP IGS Modeling Addendum](#)
- [Addendum Supplement](#)
- 10/9/2017 [Technical Review Letter #3](#)
- 10/9/2017 [TEP Response to Technical Review Letter #3](#)

- 10/12/2017 [NPS Response to Modeling Protocol](#)
- 10/19/2017 [Selective Catalytic Reduction Injection Specification](#)
- 10/19/2017 [USEPA Approval of Modeling Procedures](#)
- 12/19/2017 [Sundt RICE Project Revised Application](#)
- 12/22/2017 [TEP IGS Modeling Protocol](#)
- [TEP IGS Modeling Report](#)
- 02/01/2018 [Public Comment Period](#)
- 02/08/2018 [NSP Review and Response to Visibility Model and Permit](#)
- 02/09/2018 [Environmental Justice Analysis for IGS](#)
- [Proposed Permit](#)
- [Proposed TSD](#)
- 02/23/2018 [TEP Voluntary Proposed NOx Limit](#)
- 02/26/2018 [Extended Public Comment Period and Additional Public Hearing](#)
- 03/07/2018 [Response to Comments Timeline Clarification](#)
- 07/02/2018 [Estimated Flue Gas Emission Rates & Expected Emissions During Start-Up Rev 1](#)
- 07/05/2018 [Estimated Flue Gas Emission Rates & Expected Emissions During Start-Up Rev 2](#)



PUBLIC NOTICE

The Pima County Department of Environmental Quality (PDEQ) proposes to revise the existing Air Quality Permit No. 1052 to Tucson Electric Power (TEP) Irvington/H.Wilson Sundt Generating Station (IGS) located at 3950 E. Irvington Rd. TEP is proposing to modernize the station by replacing two 1950's era steam units (i.e., Units 1 and 2) with ten natural gas fired combustion engines. TEP plans to expand renewable energy resources to 30 percent by 2030. The new engines are able to ramp up more quickly to meet community needs and balance the variability associated with solar and wind energy generation.

The project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10) and volatile organic compounds. Pima County has completed an extensive review of the permit application, examined the air quality impact analysis of the project and considered environmental justice to protect the health and environment of minority, low-income, tribal and indigenous populations. PDEQ has also worked with the U.S. Environmental Protection Agency and the National Park Service to create a permit that will protect public health and meet air quality regulations while allowing TEP to update the facility to meet future customer needs. A chronological list of the documentation related to this complex process from the projects inception to the proposed permit revision is available to view on the PDEQ webpage.

PDEQ is holding an Open House on February 15, 2018 from 5:00-6:30 p.m. and a formal Public Hearing on March 1, 2018, from 5:30-6:30 p.m. Both meetings will be held at the Abrams Public Health Center, 3950 S. Country Club Road, Tucson, in Conference Room 1108. The purpose of these meetings is to obtain public comments on the proposed RICE project. The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, begins on February 9, 2018 and runs through March 12, 2018.

All written comments shall state the name and mailing address of the person, shall be signed by the person, his agent or his attorney and shall clearly set forth the reasons why the permit should or should not be issued. Grounds for comment are limited to whether the proposed permit meets the criteria for issuance prescribed in the Arizona Revised Statutes Section § 49-481 and Title 17 of the Pima County Code. Only persons who submit written comments during the official public comment period may appeal a permit decision. Comments and requests may be mailed to: PDEQ, Air Program Manager, Rupesh Patel, 33 N. Stone Avenue, Suite 700, Tucson, Arizona 85701 or via e-mail at air.permits@pima.gov. PDEQ does not discriminate on the basis of race, color, national origin, sex, disability, religion, or age in its programs or activities in accordance with applicable laws and regulations. Further, any person who is in need of special services (e.g., written material in large type, signer for the hearing impaired, or for free assistance in Spanish), please contact PDEQ's Environmental Justice Program Manager, Beth Gorman, 33 N. Stone Avenue, Suite 700, Tucson, Arizona, 85701, Phone (520) 724-7446, email beth.gorman@pima.gov.



Pima County » [Government](#) » Environmental Quality

+A -A

Environmental Quality



Pima County Department of Environmental Quality (PDEQ), formed in 1989, serves Pima County by protecting public health and the environment. PDEQ operates programs to monitor air and water quality, hazardous waste, solid waste, and assist in waste minimization and pollution prevention. PDEQ also provides public outreach, education, and citizens' assistance; processes environmental permits; and responds to public complaints and inquiries with investigations and enforcement.

Our Mission

Preserve and protect the environment of Pima County for the long-term benefit of residents' health, welfare, safety, and quality of life. Identify and respond to environmental issues by providing public services including monitoring, enforcement, information, education, and solid waste management.

Featured News

- [February 08, 2018 - PDEQ to hold meetings on proposed TEP power plant upgrades](#)
- [January 25, 2018 - PDEQ Holds Public Meetings to Obtain Comments on Tucson Electric Power Air Quality Permit](#)
- [January 23, 2018 - 'Activate Your Commute' event planned for Jan. 30](#)
- [January 02, 2018 - Air quality advisory issued](#)

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Department of Environmental Quality

33 N. Stone Ave., Suite 700
Tucson, AZ 85701

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PIMA COUNTY



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News Releases

- PDEQ to hold meetings on proposed TEP power plant upgrades
- County's Living River Project earns national accolades
- Watch for repairs near Valencia Road and 12th Ave.
- PACC and two local animal shelters partner to rescue 25 dogs
- Pima County Releases 2016/2017 Sustainability

Featured News



Apply by March 9 for Pima County Summer Youth Programs
 Program is geared to youth age 14-21 who want to work this summer or catch up on school credits.



PACC surprises dog rescuer with foster opportunity
 Despite many adoption requests, Hercules will be fostered by the girl who saved him.

Quick Links

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PIMA COUNTY



Public Service
Volunteers at the native plant nursery help grow native plants and cacti for public projects. Learn more about other volunteer opportunities [here](#).

TOP NEWS

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News Releases

- PDEQ to hold meetings on proposed TEP power plant upgrades
- County's Living River Project earns national accolades
- Watch for repairs near Valencia Road and 12th Ave.
- PACC and two local animal shelters partner to rescue 25 dogs
- Pima County Releases 2016/2017 Sustainability

Featured News



Apply by March 9 for Pima County Summer Youth Programs
Program is geared to youth age 14-21 who want to work this summer or catch up on school credits.



PACC surprises dog rescuer with foster opportunity
Despite many adoption requests, Hercules will be fostered by the girl who saved him.

Quick Links

- Board of Supervisors
- Board Agendas
- County Administrator
- Transparency
- Proposed Taxes and Fees
- Public Records Request
- County Budget
- Volunteer
- Subscribe to Newsletter



Explore Pima County
It's perfect weather to enjoy The Loop's more than 120 miles of shared-use paths. For the latest information and upcoming events, visit [The Loop webpage](#).


TOP NEWS | ENGAGE | LIVE | WORK | PLAY

News Releases


- PDEQ Extending Public Comment Period and Adding Public Hearing for TEP Power Plant
- Students will earn their High School Equivalency Diplomas at March 2 Las Artes ceremony
- Improvement work underway along 29th Street
- Supervisors honor Small Business Award winners
- Warrant resolution event planned for March 3

[Read More News](#)

Featured News



National Forest internships another step in connecting youth to STEM-related careers
Pima County One-Stop administers program



PACC chosen for life-saving Cat Pawsitive Pro Program
The Jackson Galaxy Program's training will help PACC increase cat adoptions.



[Read More News](#)

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- Volunteer
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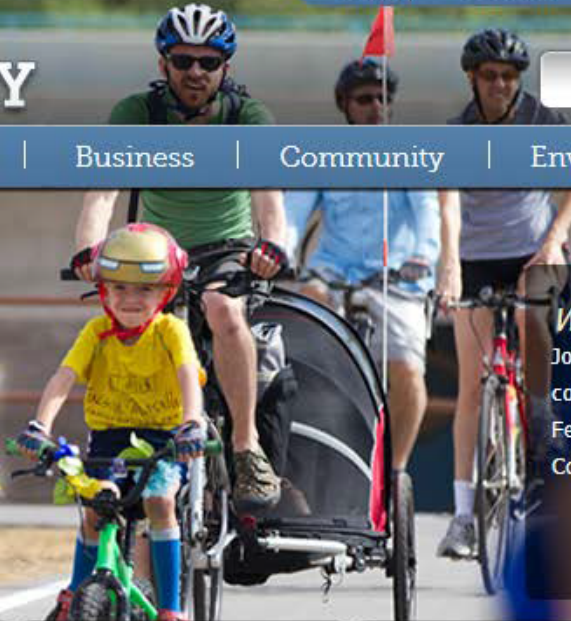
PIMA COUNTY

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Recreation | Health | Development | Business | Community | Environment | Government



What's Happening?

Join us March 17 as we celebrate the completion of The Loop at Brandi Fenton Memorial Park and Kino Sports Complex. See event [details here](#).



TOP NEWS

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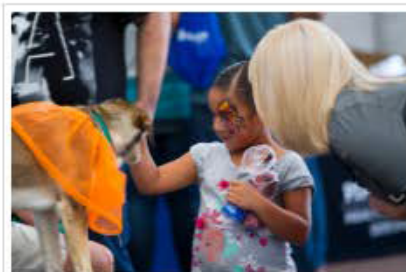
News Releases

- Development Services announces hiring of Deputy Directors
- PDEQ to hold final hearing for TEP power permit
- Crack-sealing treatments planned for Picture Rocks
- HURF Bonds topic of Transportation Advisory Committee meeting
- PDEQ Extending Public Comment Period and Adding Public Hearing for TEP Power Plant

Featured News



The Loop is for everyone, so join us for March 17 celebration
The Loop Completion Celebration is garnering attention across the Web.



Play with PACC at The Loop Completion Celebration
Free microchipping, pet adoptions, a pet costume contest and more.

Quick Links

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- Volunteer
- Subscribe to Newsletter

Social Media Posts

Social Media for Tucson Electric Power Proposed PSD Permit



Pima County DEQ @PimaDEQ · Feb 5

@PimaDEQ is holding an Open House (Feb. 15) and Public Hearing (Mar. 1) for the air quality permit modifications for #TucsonElectricPower. Both meetings will be at Abrams Public Health Center. More details @ bit.ly/2Elw2uj or call (520) 724-7446.



Pima County DEQ @PimaDEQ · Feb 15

@PimaDEQ is holding an Open House tonight to obtain public comments on the proposed Tucson Electric Power Air Quality Permit. The Open House is at the Abrams Public Health Center at 3950 S. Country Club Rd., near Ajo Rd., from 5:00 - 6:30 p.m. More info at bit.ly/2stC9QK





Pima County DEQ @PimaDEQ · Mar 15



@PimaDEQ holding final Public Hearing for proposed Tucson Electric Power Air Quality Permit modifications on March 28 from 5:30-6:30 p.m. at the Pima County Public Works Building at 201 N. Stone Ave. in Basement Conference Room C. Lots of info available at bit.ly/2GvQakl



Pima County DEQ @PimaDEQ · Mar 28



@PimaDEQ is holding a 2nd public hearing on the draft Tucson Electric Power Air Quality Permit tonight in the Pima County Public Works Building Basement Conference Room, 201 N. Stone Avenue, Tucson from 5:30-6:30 p.m. More info on hearing & permit @ bit.ly/2lcfiYW



Post Details



Pima County

Published by Hootsuite [?] · February 8 · 🌐



The Pima County Department of Environmental Quality (PDEQ) is holding an Open House on Feb. 15 and a Public Hearing on March 1 on a TEP modernization proposal of a 1950s era power generating station. Read more here <http://ow.ly/wWlg30ii8ug>



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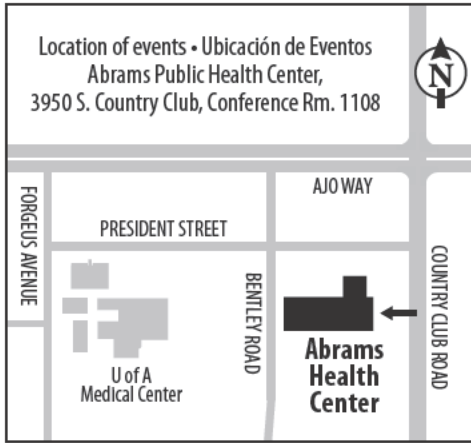
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Public Comment Period • Open House • Public Hearing
Air Quality Permit modification for the Tucson Electric Power
Irvington/H.Wilson Sundt Generating Station

Periodo de Comentarios Públicos • Reunión de Aviso • Audiencia Pública
Modificación al Permiso de Calidad Ambiental de la Estación Generadora
Irvington/H. Wilson Sundt de Tucson Electric Power

**Abrams Public Health Center,
3950 S. Country Club Road, Conference Room 1108**

Pima County Department of Environmental Quality (PDEQ) invites public input regarding a proposed major modification to the existing Air Quality Permit for the Tucson Electric Power (TEP) Irvington/H.Wilson Sundt Generating Station located at 3950 E. Irvington Rd.

Public Comment Period: February 9 - March 12, 2018.

Provide comments regarding proposed modified permit at the Open House, Public Hearing, or directly to PDEQ during this timeframe.

Open House: February 15, 2018 • 5 to 6:30 p.m.

Talk with PDEQ and TEP staff to learn about the air permit modifications, regulatory compliance, and enforcement.

Public Hearing: March 1, 2018 • 5:30 to 6:30 p.m.

Provide comments regarding proposed air permit modifications.

For more info about the permit modifications, visit www.pima.gov/deq/air or contact: Rupesh.Patel@pima.gov

PDEQ, Air Permits, 33 N. Stone Ave., Ste 700 • Tucson, AZ 85701 • (520) 724-7400

El Departamento de Calidad Ambiental del Condado Pima (PDEQ) solicita comentarios públicos acerca de una modificación al Permiso de Calidad Ambiental actual de la Estación Generadora Irvington/H.Wilson Sundt de Tucson Electric Power (TEP) ubicada en 4120 E. Irvington Rd.

Periodo de Comentarios Públicos: 15 de febrero - 12 de marzo del 2018.

En este periodo, usted tendrá la oportunidad de proveer sus comentarios acerca de la propuesta para modificar el permiso durante una Reunión de Aviso, una Audiencia Pública, o directamente a PDEQ.

Reunión de Aviso: 15 de febrero del 2018 • 5 a 6:30 p.m.

Hable con el personal de PDEQ y TEP para aprender más acerca de las modificaciones al permiso ambiental.

Audiencia Pública: 1 de marzo del 2018 • 5:30 a 6:30 p.m.

Haga sus comentarios acerca de las propuestas modificaciones al permiso ambiental. Para más información acerca de las modificaciones al permiso, visite www.pima.gov/deq o comuníquese con: Rupesh.Patel@pima.gov

PDEQ, Air Permits, 33 N. Stone Ave., Ste 700 • Tucson, AZ 85701 • (520) 724-7400

Pima County Department of
Environmental Quality

33 N. Stone Ave., Suite 700
Tucson, AZ 85701

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PIMA COUNTY

ENVIRONMENTAL QUALITY

Public Comment Period

Open House & Public Hearing

Air Quality Permit modification

for the Tucson Electric Power

Irvington/H.Wilson Sundt Generating Station

Periodo de Comentarios Públicos

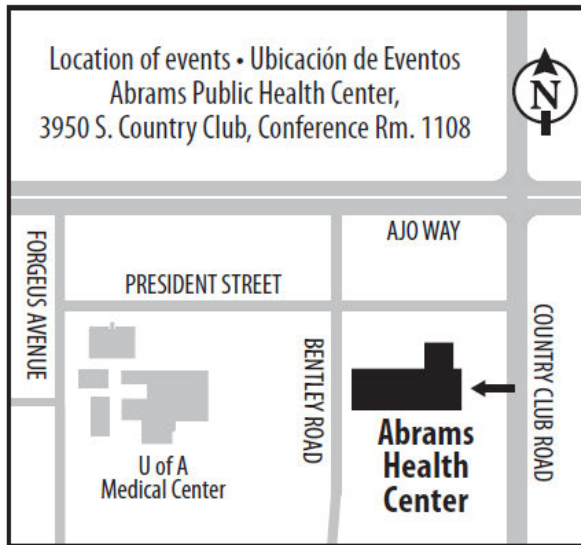
Reunión de Aviso y Audiencia Pública

Modificación al Permiso de Calidad Ambiental de la

Estación Generadora Irvington/H. Wilson Sundt de

Tucson Electric Power

You and your neighbors are invited!



Public Comment Period • Open House • Public Hearing
Air Quality Permit modification for the Tucson Electric Power
Irvington/H.Wilson Sundt Generating Station

Periodo de Comentarios Públicos • Reunión de Aviso • Audiencia Pública
Modificación al Permiso de Calidad Ambiental de la Estación Generadora
Irvington/H. Wilson Sundt de Tucson Electric Power

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Public Comment Period: February 9 - March 12, 2018.

Provide comments regarding proposed modified permit at the Open House, Public Hearing, or directly to PDEQ during this timeframe.

Open House: February 15, 2018 • 5 to 6:30 p.m.

Talk with PDEQ and TEP staff to learn about the air permit modifications, regulatory compliance, and enforcement.

Public Hearing: March 1, 2018 • 5:30 to 6:30 p.m.

Provide comments regarding proposed air permit modifications.

For more info about the permit modifications, visit www.pima.gov/deq/air or contact: Rupesh.Patel@pima.gov

PDEQ, Air Permits, 33 N. Stone Ave., Ste 700 • Tucson, AZ 85701 • (520) 724-7400

El Departamento de Calidad Ambiental del Condado Pima (PDEQ) solicita comentarios públicos acerca de una modificación al Permiso de Calidad Ambiental actual de la Estación Generadora Irvington/H.Wilson Sundt de Tucson Electric Power (TEP) ubicada en 4120 E. Irvington Rd.

Periodo de Comentarios Públicos: 15 de febrero - 12 de marzo del 2018.

En este periodo, usted tendrá la oportunidad de proveer sus comentarios acerca de la propuesta para modificar el permiso durante una Reunión de Aviso, una Audiencia Pública, o directamente a PDEQ.

Reunión de Aviso: 15 de febrero del 2018 • 5 a 6:30 p.m.

Hable con el personal de PDEQ y TEP para aprender más acerca de las modificaciones al permiso ambiental.

Audiencia Pública: 1 de marzo del 2018 • 5:30 a 6:30 p.m.

Haga sus comentarios acerca de las propuestas modificaciones al permiso ambiental. Para más información acerca de las modificaciones al permiso, visite www.pima.gov/deq o comuníquese con: Rupesh.Patel@pima.gov

PDEQ, Air Permits, 33 N. Stone Ave., Ste 700 • Tucson, AZ 85701 • (520) 724-7400

Air Quality Permit Modification for the Tucson Electric Power Generating Station Open House • February 15, 2018

Welcome to the Pima County Department of Environmental Quality (PDEQ) Open House for the proposed major modification to the Tucson Electric Power (TEP) Air Quality Permit.

QUESTIONS?

PDEQ and TEP staff are available at this Open House to provide information and answer questions you may have on a one-on-one basis. Tables include information regarding:

- PDEQ: general permitting process and proposed permit modification for TEP's facility
- PDEQ: Compliance and Enforcement Program
- TEP: proposed air permit modification concept and request

COMMENTS?

The public comment period for the Tucson Electric Power air quality permit began on February 9, 2018 and will end on March 12, 2018. If you would like to provide us with comments pertaining to the issuance of the Tucson Electric Power proposed air quality permit modification, please choose the most convenient way from the list below:

- Fill out a comment card and place it in the collection box at this Open House event;
- Mail your written comment to:

Rupesh Patel
Pima County Department of Environmental Quality
33 N. Stone Ave., Suite 700
Tucson, AZ 85701-1429

- Email your comment to Rupesh.Patel@pima.gov; or
- Provide verbal comment at the Public Hearing on March 1, 2018, 5:30 p.m. to 6:30 p.m. at the Abrams Public Health Center, 3950 S. Country Club Road, Meeting Room 1108.

All comments must be received before 5:00 p.m. on Monday, March 12, 2018.

If you have any questions, feel free to call PDEQ at (520) 724-7341. In addition, all documents pertaining to the Tucson Electric Power Proposed Air Quality Permit Modification are available on the PDEQ website at www.pima.gov/deq/air.

Thank you for taking the time to attend our Open House.

Modificación al Permiso de Calidad Ambiental para la Estación Generadora de Tucson Electric Power Audiencia Pública •15 de febrero del 2018

Bienvenido a la Audiencia Pública del Departamento de Calidad Ambiental del Condado Pima (PDEQ) para la propuesta de modificación al permiso de calidad ambiental de Tucson Electric Power (TEP).

¿PREGUNTAS?

Empleados de PDEQ y TEP estarán disponibles durante esta junta para proporcionar información y contestar preguntas individualmente. Además, habrá información acerca de:

- PDEQ: el proceso de permisos generales y la propuesta modificación a la instalación de TEP
- PDEQ: Programa de Cumplimiento y Aplicación
- TEP: concepto y petición acerca de la modificación al permiso de aire

¿COMENTARIOS?

El período de comentarios públicos para el permiso de calidad ambiental de Tucson Electric Power inició el 9 de febrero del 2018 y terminará el 12 de marzo del 2018. Si usted quiere dar sus comentarios acerca de la modificación propuestas al permiso de calidad ambiental de Tucson Electric Power, por favor seleccione la manera más conveniente de la siguiente lista:

- Llene una tarjeta de comentarios y póngala en la caja de recolección durante esta junta;
- Envíe sus comentarios por escrito a:

Rupesh Patel
Departamento de Calidad Ambiental del Condado Pima
33 N. Stone Ave., Suite 700
Tucson, AZ 85701-1429

- Envíe sus comentarios a rupesh.patel@pima.gov; o
- Haga sus comentario durante la Asamblea Pública el 1 de marzo del 2018, 5:30 a 6:30 p.m. en el Centro de Salud Público, 3950 S. Country Club Road, Sala de Juntas 1108.

Todos los comentarios deben ser recibidos antes de las 5 p.m. del lunes, 12 de marzo del 2018.

Si tiene preguntas, favor de llamar a PDEQ al (520) 724-7341. Adicionalmente, puede ver todos los documentos sobre la propuesta modificación al permiso de calidad ambiental de Tucson Electric Power en la página de internet de PDEQ en www.pima.gov/deq/air.

Gracias por tomarse el tiempo de atender nuestra Audiencia Pública.



33 NORTH STONE AVENUE, SUITE 700
TUCSON, AZ 85701
(520) 724-7341
Rupesh.Patel@pima.gov
www.pima.gov/deq

COMMENT SHEET

Proposed Air Quality Permit Modification for Tucson Electric Power Generating Station Public Comment Period: February 9–March 29, 2018

Note: Any interested person may submit comments on a proposed permit during the public comment period. PDEQ will consider all comments received during the comment period in its final decision making process, and they will be included in the administrative record and available to the public. In addition, anyone who submitted a comment during the public comment period has the legal right to appeal the permit decision. To be notified of actions related to the Tucson Electric Power Air Permit Modification or to appeal the permit decision, your name and address must be provided as required under state law.

PLEASE PRINT CLEARLY:

Date: _____ Name: _____

E-mail: _____ Phone: _____

Mailing Address: _____

COMMENTS:



33 NORTH STONE AVENUE, SUITE 700
TUCSON, AZ 85701
(520) 724-7341
Rupesh.Patel@pima.gov
www.pima.gov/deq

TARJETA DE COMENTARIOS

**Propuesta de Modificación al Permiso de Calidad Ambiental
para la Estación Generadora de Tucson Electric Power
Período de Comentario Público: 9 de febrero–29 de marzo del
2018**

Nota: Cualquier persona interesada puede proporcionar sus comentarios sobre un permiso pendiente durante el periodo de comentario público. PDEQ considerará todos los comentarios recibidos durante este periodo en su proceso de decisión final. Estos serán incluidos en el record administrativo y estarán disponibles al público. Adicionalmente, cualquier persona que contribuyó un comentario durante el periodo de comentarios públicos tiene el derecho legal de apelar la decisión que se tomó sobre el permiso. Para recibir avisos de acción relacionados a la Propuesta de Modificación al Permiso de Calidad Ambiental para la Estación Generadora de Tucson Electric Power o apelar la decisión del permiso, por ley estatal, debe proporcionar su nombre y domicilio.

FAVOR DE IMPRIMIR CLARAMENTE:

Fecha: _____ Nombre: _____

Correo electrónico: _____ Teléfono: _____

Domicilio: _____

COMENTARIOS:

AIR QUALITY PERMITS PURPOSE AND PROCESS

PURPOSE OF AIR QUALITY REGULATIONS

Air Quality Regulations provide assurance to the public that businesses engaged in air polluting activities are regulated and controlled as required by federal, state and local laws and regulations to protect public health and safety and the environment.

PURPOSE OF AIR QUALITY PERMITS

The Air Quality Permit specifies requirements and standards under which the Permittee must operate. It also ensures that the Pima County Department of Environmental Quality (PDEQ) has reviewed and approved the operations at each source and that the permit places appropriate controls on those operations. This allows PDEQ to conduct compliance inspections and ensure the Permittee is operating in accordance with permit conditions. PDEQ currently regulates approximately 285 facilities through the air quality permitting process.

One of the major initiatives Congress added to the Clean Air Act in 1990 is an air quality permit program for larger industrial and commercial sources that release pollutants into the air. Air quality permits include information on the equipment and processes being used, which pollutants are being released, how much may be released, and what steps the facility owner or operator is required to take to limit pollution.

Air quality permits are useful for the business, as well as the regulatory agency, since information about all of a source's air pollution control requirements are in one document. Air quality permits issued by PDEQ are available to the public on our website. Check www.pima.gov/deq for more information on access to those documents.

PUBLIC COMMENT PERIOD

Any interested person may submit written comments on a proposed permit during the public comment period. PDEQ will consider and respond to all submitted comments in its final decision making process. All written comments received during the comment period will be included in the administrative record and will be available to the public. In addition, anyone who submitted a comment during the public comment period has the legal right to appeal the permit decision.

APPEALING A PERMIT DECISION

Within thirty days after the PDEQ control officer gives notice of approval, denial or revocation of a permit, the applicant or any person who submitted comments during the *official public comment period* may request an appeal. A hearing board, appointed by the Pima County Board of Supervisors, will listen to the appeal and make a decision constituting the final permit action.

PROPÓSITO DE PERMISOS Y PROCESOS DE CALIDAD DEL AIRE

PROPÓSITO DE LAS REGULACIONES DE CALIDAD DE AIRE

Las regulaciones de calidad de aire proveen al público la certeza de que los negocios que contribuyen a la contaminación ambiental están regulados y controlados por leyes federales, estatales y locales para proteger la salud pública y el medio ambiente.

PROPÓSITO DE LOS PERMISOS DE CALIDAD AMBIENTAL

El permiso de calidad ambiental especifica los requisitos y los estándares bajo el cual la persona con el permiso debe operar. También asegura que el Departamento de Calidad Ambiental del Condado Pima (PDEQ) ha revisado y aprobado las operaciones en cada fuente y que el permiso tiene control sobre esa operación. Esto permite que PDEQ lleve a cabo inspecciones de cumplimiento y asegura que la persona con el permiso opera bajo las condiciones del mismo. PDEQ actualmente controla aproximadamente 285 instalaciones a través del proceso de permiso de calidad ambiental.

Una de las iniciativas principales que el Congreso agregó a la Ley de Calidad del Aire en 1990 fue un permiso de calidad ambiental para industrias y fuentes de comercio grandes que emiten polución al aire. Los permisos de calidad ambiental incluyen información acerca del equipo y el proceso que se usa, el tipo de contaminación que se emite, la cantidad que se puede emitir, y los pasos que debe seguir el dueño de la instalación o el operador para limitar la contaminación.

Los permisos de calidad ambiental son convenientes para negocios, así como la agencia reguladora, ya que la información sobre todos los requisitos de control de contaminación del aire de una fuente se encuentra en un documento. Los permisos de calidad ambiental otorgados por PDEQ están disponibles al público en línea. Visite www.pima.gov/deq para más información acerca de cómo acceder esos documentos.

PERIODO DE COMENTARIO PÚBLICO

Cualquier persona interesada puede enviar sus comentarios por escrito sobre los permisos propuestos durante el período de comentario público. Antes de tomar una decisión final, PDEQ considerará y responderá a todos los comentarios enviados. Todos los comentarios recibidos por escrito serán incluidos en el record administrativo y estarán disponibles al público. Adicionalmente, toda persona que envíe un comentario durante el período de comentario público tiene el derecho legal de apelar la decisión del permiso.

APELAR UNA DECISIÓN DE PERMISO

Cualquier persona que envíe un comentario durante el período de comentario público tendrá el derecho de apelar la decisión treinta días después que el oficial de PDEQ de el aviso de aprobación, negación, o revocación del permiso. Una audiencia, determinada por la Junta de Supervisores del Condado Pima, escuchará la apelación y hará una decisión que decidirá la acción final del permiso.

GOVERNMENT AGENCY ROLES IN AIR QUALITY PROTECTION

FEDERAL CLEAN AIR ACT OVERVIEW

- The Clean Air Act (CAA) is a comprehensive federal law, first enacted by Congress in 1970, to protect air quality nationwide.
- In 1970 Congress also established the Environmental Protection Agency (EPA) and tasked it with responsibility for implementing and enforcing CAA provisions and programs.
- In 1990 Congress revised and expanded the reach of the federal law and provided EPA more authority to enforce regulations aimed at reducing air pollution.

AIR QUALITY RELATED ROLES AND RESPONSIBILITIES

United States Environmental Protection Agency • www.epa.gov

- EPA sets federal limits on certain air pollutants to ensure basic health and environmental protection for residents of all 50 states.
- EPA has the authority to limit emissions of air pollutants coming from pollution sources and must approve state, tribal, and local government agency plans for reducing air pollution. Clean air plans not meeting EPA requirements can be sanctioned and, if necessary EPA will enforce the CAA in that jurisdiction.
- EPA assists state, tribal, and local government agencies by providing research, expert studies, engineering designs, and funding to support clean air progress.

State Government • www.azdeq.gov

- The Arizona Department of Environmental Quality's responsibilities can include collecting air quality data; preparing air pollution forecasts; evaluating pollution sources and impacts on public health and welfare; investigating complaints in their jurisdiction; issuing air quality permits for certain major pollution sources; and operating the vehicle emissions inspections programs.
- When air pollution emissions violate EPA's regulatory health standards, ADEQ works with local metropolitan planning agencies to develop State Implementation Plans that will be used to clean up areas with poor air quality. The states must involve the public and affected industries.

County Government • www.pima.gov/deq

- The Pima County Department of Environmental Quality (PDEQ) enforces the CAA through a delegation agreement with EPA. In addition, the Arizona Legislature has provided independent statutory authority for air quality enforcement at the county level.
- PDEQ collects air quality data in Pima County at 17 monitoring sites; issues permits for sources that produce emissions; investigates complaints, ensures regulatory compliance; provides outreach and education; and works with sources to develop solutions for pollution problems.

Tribal Nations • www.tonation-nsn.gov • www.pascuayaqui-nsn.gov

- The 1990 CAA amendments recognized the authority of Indian Tribes to implement air pollution control programs within their jurisdiction.
- EPA's Tribal Authority Rule gives Tribes the ability to develop air quality management programs, write rules to reduce air pollution, and implement and enforce their rules in Indian Country. Tribes may develop and implement only those parts of the CAA that are appropriate for their lands.

LA FUNCIÓN DEL GOBIERNO EN LA PROTECCIÓN DE LA CALIDAD DE AIRE

RESUMEN DE LA LEY FEDERAL DE CALIDAD DE AIRE

- La Ley de Calidad del Aire es una ley federal completa, lanzada por el Congreso en 1970, para proteger la calidad ambiental a nivel nacional.
- En 1970, el Congreso también estableció la Agencia de Protección Ambiental de Estados Unidos, conocida como EPA por sus siglas en inglés, para darle la responsabilidad de realizar y hacer cumplir las provisiones de la Ley de Calidad de Aire y sus programas.
- En 1990, el Congreso revisó y aumentó el alcance de la ley federal y le otorgó más autoridad a la EPA para hacer cumplir los reglamentos dirigidos a reducir la contaminación.

LAS FUNCIONES Y RESPONSABILIDADES RELACIONADAS A LA CALIDAD AMBIENTAL

La Agencia de Protección Ambiental de Estados Unidos • www.epa.gov

- EPA establece los límites federales de ciertos contaminantes ambientales para asegurar la salud y la protección ambiental a residentes de los 50 estados.
- EPA tiene la autoridad de poner límite a las emisiones de fuentes que producen los contaminantes y de igual manera aprobar los programas estatales, de tribus, y agencias de gobierno locales para reducir la contaminación. Los programas de calidad ambiental que no satisfacen los requisitos de la EPA pueden ser sancionados y, si fuera necesario, EPA puede hacer cumplir la Ley de Calidad del Aire en esa jurisdicción.
- EPA asiste a las agencias de estado, tribus, y gobiernos locales con investigaciones, estudios expertos, diseños de ingeniería, y el financiamiento para apoyar el progreso de aire limpio.

Gobierno Estatal • www.azdeq.gov

- Las responsabilidades del Departamento de Calidad Ambiental del Estado de Arizona (ADEQ) incluye proporcionar datos sobre la calidad ambiental; preparar pronósticos de contaminantes ambientales; evaluar las fuentes de contaminación y los impactos en la salud pública y el bienestar de la comunidad; investigar quejas dentro de su jurisdicción; otorgar permisos de calidad ambiental para ciertas fuentes de contaminación; y operar los programas de emisión de vehículos.
- Cuando las emisiones de contaminación de aire no cumplen con los estándares de salud reglamentarios de la EPA, ADEQ trabaja con agencias metropolitanas locales para desarrollar Planes de Implementación Estatal y usarlos para limpiar las áreas con calidad ambiental inadecuada. Los estados deben involucrar al público y las industrias afectadas.

Gobierno Municipal • www.pima.gov/deq

- El Departamento de Calidad Ambiental del Condado Pima (PDEQ) aplica la Ley de Calidad del Aire a través de un acuerdo de delegación con la EPA. Adicionalmente, la Legislatura de Arizona a otorgado al Condado la autoridad legal independiente para controlar la calidad ambiental.
- PDEQ recoge datos sobre la calidad ambiental en 17 sitios de monitoreo en el Condado Pima; otorga permisos a las fuentes que producen emisiones; investiga quejas y asegura cumplimiento de reglas; provee educación al público; y trabaja con las fuentes de emisión para desarrollar soluciones a problemas de contaminación.

Naciones Tribales • www.tonation-nsn.gov • www.pascuayaqui-nsn.gov

- Las modificaciones de 1990 a la Ley de Calidad de Aire reconoció la autoridad de las Tribus Indígenas para realizar sus propios programas de control de contaminación dentro de su jurisdicción.
- La Regla de Autoridad Tribal de la EPA otorga el derecho a las Tribus para desarrollar sus propios programas para manejar la calidad ambiental, escribir reglas para reducir la contaminación, y llevar a cabo y enforzar sus reglas en la Nación. Las tribus pueden desarrollar y realizar solo aquellas partes de la Ley que son apropiadas para su terreno.

Appendix B

Public Hearing #1 Documents

**PUBLIC HEARING
REGARDING
THE PROPOSED AIR QUALITY PERMIT REVISION
FOR
TUCSON ELECTRIC POWER IRVINGTON GENERATING
STATION**

MARCH 1, 2018

Hearing Officer:

Good Evening and thank you for taking the time to attend this hearing. Today is Thursday, March 1st, 2018. The time is approximately ____ pm . The location is Abrams Public Health Center in Tucson, Arizona. I'm the Hearing Officer representing Pima County Department of Environmental Quality or PDEQ and I will be presiding at this hearing. My name is Rupesh Patel. I'm the PDEQ Air Program Manager. Other PDEQ representatives here tonight are: PDEQ Communications Senior Program Manager Beth Gorman and PDEQ Communications Program Coordinator Karen Wilhelmsen.

At this moment, we are conducting a formal public hearing. As an air quality control district, PDEQ has jurisdiction over facilities requiring air quality permits in Pima County. The purpose of this hearing is to allow residents the opportunity to enter into the record, oral or written comments regarding the proposed revision of the air quality permit for Tucson Electric Power Irvington/H.Wilson Sundt Generating Station. The facility is located at 3950 East Irvington Rd here in Tucson and will hereby be referred to as TEP.

By law, a public hearing must meet certain requirements. They are:

- 1) A minimum 30-day advance public notice must be given in two newspapers of general circulation. The official comment period for this TEP air quality permit revision began on February 9, 2018 and has been extended from March 12, 2018 to March 29, 2018. Notice was given on Friday, February 9th, 2018 and Friday, February 16th in the Arizona Daily Star and The Daily Territorial.

- 2) The public must be given an opportunity to speak or to give written comments during the hearing. Tonight the public has the option for doing so.
- 3) A hearing must be conducted “on the record” which means that it is recorded in some way. Tonight’s meeting is being recorded.

This hearing is considered a “formal public hearing” under state law. A formal public hearing is different than a public meeting. In a public meeting there is an opportunity for questions and answers between the general public and the department. That opportunity, an Open House, was held on February 15th, 2018 from 5:00pm to 6:30 pm in this very room the Abrams Public Health Center.

As for tonight, this is a formal public hearing, the representatives of the department will not be formally answering any permit related questions. In other words, neither I nor anyone from the department will be answering any questions at this podium tonight. I can only repeat or clarify what I read to you.

After the end of the 49-day public comment period, PDEQ will prepare a written response to all questions and comments entered into the record regarding the proposed permit revision.

If you have questions about the permit revision, please include them in your comments. All comments and questions about the revision should only address the permit and air quality regulations.

The agenda for tonight’s hearing is as follows: First, I will give a brief description about the Tucson Electric Power facility and the proposed revision of the air quality permit. I will then begin to call speakers, in the order they signed in, to begin taking public comment. As this is a very structured proceeding, please follow these instructions for making public comment. If you wish to comment, you must fill out a speaker slip and if you have not already done so, please hand your completed comment card to Karen Wilhelmsen. This procedure will allow everyone an opportunity to be

heard and allow us to later match the name on the official record with the speaker on the recording. I will call individuals in the order that speaker cards were received. Please say and spell your name before you give us your comment to help ensure that we transcribe it correctly in the record. I ask that comments be no more than 5 minutes long so everyone who wishes to make a comment is given the opportunity to do so. In lieu of speaking, you may also submit written comments this evening. Written comments can also be submitted to Karen Wilhelmsen. If you wish to do so, you may make both oral and written comments tonight.

Once again, the purpose of this hearing is to receive comment from the public on the proposed permit revision for TEP. By law, all the comments made here or in writing are considered by PDEQ prior to making a final decision regarding the proposed air quality permit revision. The department has a duty to evaluate and respond in writing to all written and verbal comments that are received. This document is known as a Response to Comments Summary. It will be available at the time the department makes a final decision regarding the permit revision. If you wish to be notified of the final decision made by the department, please be sure to indicate that on the comment card or the sign in sheet.

I will now give a brief summary of the TEP facility and the proposed revision of the air quality permit. For more detailed description of the facility and the permit, we have hard copies of the proposed permit in the back. We also have the permit application and all of the supporting documents on our PDEQ website.

The Tucson Electric Power Company owns and operates the Irvington Generating Station, also known as the H. Wilson Sundt Generating Station, pursuant to Class I Air Quality Permit No. 1052 issued by the Pima County Department of Environmental Quality. The facility currently comprises six electric generating units with a combined, net generating capacity of 470 megawatts. TEP requests a revision to the Class I permit, an authorization pursuant to the preconstruction Prevention of Significant Deterioration ("PSD") permitting regulations. TEP seeks to expand the Irvington Generating Station, and obtain an approval of construction of new affected sources under federal National Emissions Standards for Hazardous Air Pollutants ("NESHAP"). As part of the proposed expansion project, TEP proposes to install up to ten natural gas-fired, reciprocating

internal combustion engines ("RICE"), each with a net generating capacity of 19 MW. In conjunction with the RICE project, TEP will permanently cease operation of existing steam generating Units 1 and 2, leaving the facility with a net generating capacity of 498 MW.

The proposed RICE project constitutes a major modification for certain pollutants under the preconstruction PSD permitting regulations and requires a significant revision under the Title V / Class I operating permit regulations. In other words, there is a potential for an increase in the amount of air pollution emitted by the facility and that is why the permit needs to be modified.

TEP currently plans to commence construction of the RICE project within 18 months following receipt of the permit approval. TEP currently plans to complete construction and begin operation of the first five engines by 2020. TEP expects to complete construction and begin operation of the remaining five engines by no later than 2022.

This marks the end of the TEP facility and permit summary. We will now begin taking formal comment. I would again like to remind people that if you wish to speak, please complete one of the speaker forms and hand them to Karen. I'll begin calling up speakers to take public comment shortly. To ease transcribing the hearing later, please speak clearly and into the microphone.

Please begin by giving your name and spelling it so it can be entered into the record correctly. And please limit your comment to no more than five minutes so everyone has a chance to be heard. [A timer will ring when four minutes have passed, to let you know you have one minute to finish your comment.]

And we will now proceed to the public comments:

Our first speaker is

The next speaker is

Are there any other comments?

We still have some time before 6:30, so we'll go off record and give time to others that may be on their way and want to give comment. If no additional comment cards are received before 6:30, we will come back on the record and end the hearing. Thank you.

The time is now 6:29 on Thursday March 1st 2018. We are back on the record to proceed with the TEP permit revision public hearing. Before closing, I would like to give a final opportunity for anyone who would like to make a comment. Seeing that no one is coming forward, there are no further commenters. I would like to remind people that the department's response to comments will be developed in the next two weeks. If you would like to see this document or if you would like it sent to you, please indicate that on the sign in sheet in the back. Make sure your name and email or mailing address are clearly printed on the comment card. At this point, I will now close the hearing. Your interest is appreciated and PDEQ thanks you for attending.

The hearing is closed. Today's date is Thursday, March 1st. The time is 6:30pm. Thank you.

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And we will now proceed to the public comments:

Our first speaker is Oscar Medina – Speaker 1

Good afternoon, Oscar Medina.

Thank you.

I am a father and educator and a member of the Sierra Club and a community organizer with Tierra Y Libertad Organization. I am here today to express my concern and opposition to TEP's proposal for the 10 year reciprocating internal combustion engine, natural gas units that will be placed at the Sundt Plant location. I live less than 2 miles away from the TEP Sundt Plant location. I have three children, one who attends the Tucson Gymnastic Center located near the intersection of Irvington and Alvernon Way. We drive by the plant at least three times a week and the facility does not appear to look the healthiest nor the welcoming. My daughter's school is located just 1 mile from the intersection of Drexel and Alvernon Way. This is only a few 100 feet of the location of the proposed RICE unit. I attended the neighborhood meeting that was hosted by TEP and gave my testimony in opposition to their application at the Arizona Corporation Commission hearing. TEP is framing this project as a campus modernization project. This is deceiving to our community. This expansion project is not about people, it is not about the environment. This is about cutting cost and putting profit into the pockets of the TEP investors. At the Open House meeting on February 15, 2018 that took place in this room, I learnt that in the past TEP has not always complied with their air quality regulations and their air monitoring reports demonstrated excessive carbon monoxide emission. This demonstrates that TEP is not afraid to break the rules again and pollute our neighborhoods. The Open Houses that were held before this hearing were not only missing people from the surrounding neighborhood, but they were missing pictures of the children suffering from respiratory illnesses in the south side of Tucson. The Open House meeting was missing the pictures of the effects that emissions of carbon monoxide have on people's health. Let's put the bar graphs and data to the side for a minute and let's paint a clear picture. Our children can see right through TEP's dirty data. This is another example of the ongoing environmental injustice that still is occurring in 2018. Where are the reparations that go back, where is the use of polluting that happened on the Navajo Reservation. The brothers and sisters that were contaminated by the San Juan and Navajo Generating Station. That is a dark history that TEP refuses not to remember. TEP's plan and their time frame to expand the renewable energy resources to 30% by 2030 has expired for our neighborhoods. The stakes are too high. TEP is polluting practices are not welcome in our backyards. Remember that we are the people that breathe this dirty air. Let's keep it clean and simple. Let's divest from coal and gas keep it renewable and let the future be wind and solar energy. Thank you.

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The next speaker is Cathy Della Penta – Speaker 2

Good Evening, Cathy Della Penta. I can see that transitioning away from coal as an energy source is and will be difficult, but what TEP is proposing for the Sundt Generating Station seems out of proportion. Ten, twenty megawatt RICE we already know what that means. Using natural harbor freight gas engines. The Sundt plant is going from coal to gas both 19th and 20th century energy sources. Coal and gas are finite sources by comparison solar is renewable. The county has indicated that “the project expects to cause an increase in emissions of carbon monoxide, particulate matter, fine particulates PM_{2.5} and coarse particulates PM₁₀, nitrogen oxides and volatile organic compounds over time”. I had a question for you and I listened to your presentation so you answer the question, but I will say it, then answer it. So question is if you modify the air permit, will it relax the standard and obviously for what you have said it would have to be relaxed and I see that is not a good thing. We are trading one toxin for another and we are going sideways, not forward. So I have another question. Has there been an independent study comparing and contrasting the cost of the large installation including the cost of gas and its transport? The cost of the RICE engines and their installation, their maintenance and the life of the engines versus the overall cost of using a combination of energy efficiency, solar and backup batteries, their maintenance and the life of the system. And finally, the size of the proposed system is unacceptable. Thank you for listening. Do you want a copy of this?

No, we are having it recorded.

Our next speaker is Robert Bulechek – Speaker 3.

I am an energy efficiency consultant and a TEP customer. Continuing to invest capital resources in fossil fuel generation is simply an imprudent investment. Here we have an opportunity to take that capital and invest it in storage to man management, efficiency projects that would benefit the community and improve the overall air quality, instead of doing that TEP wants to rebuild a project but using more polluting infrastructure. I think that is a nearly imprudent investment and Pima County should deny their request. We can achieve the ramping needs that TEP has with newer technologies, cheaper resources and do it to the net benefit of the community. Let’s take that capital resources and spend it to improve the community not in a way that impacts climate, health and air quality. Thank you.

Our next speaker is Jessica Cary-Alvarez – Speaker 4:

Hi, my name is Jessica Cary-Alvarez. This is the first time I have ever done this. I am bit of a rookie at it so you have to bear with me, but I learned about it just today, thank you for his post on Facebook and I was absolutely horrified. This is Tucson, Arizona. We are a large city. We have so much sun and so much wind, it is unconscionable to be doing something like this. I do not understand it, but this is the wrong direction. We can talk about Tucson and Tucson’s air quality and what it does to our birds and our children and all of us or we can take a global event.

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We have a responsibility here just because our current administration has pulled aside of the Paris climate agreement. There are cities and states all across United States that are stepping up and are a being apart of the solution and I think that I would much rather be proud of Tucson that we are doing something to help to guarantee that our planet stays livable in the future because if you are pretending anything different, that is just ridiculous. It is just ridiculous. Look at what is going to hit the east coast today, tomorrow. They are going to get slammed again. Look at the hurricanes we had come through. These are not just strange abnormalities. You can say, oh over 20 years ago, there was a storm like that, but look at how many are happening in two years time. We have breaking records like crazy. Look at how much of the ice melted in the Bering Sea in February. In an eight-day time spent more than ever before they have had temperatures up there 20 degrees higher than what they have ever had in February. The jet stream is distorted. It is no longer staying in place. We are going to continue seeing this horrible weather and the changes in the ocean temperature, it is all linked to the CO₂ emissions and you cannot pretend otherwise. And if you are pretending otherwise, that is just wrong and it is evil because we do not just own this planet. There are others and there are children and I have friends who have children and I have a friend who is pregnant and I look at her and I think what are we doing, why are you still having babies when we do not even know what kind of weather we are going to have. And furthermore, we need to take care of Tucson and we need to make sure we get good renewable energy sources because of the fact that we are not on the coastal areas and we have no idea how many people are going to be moving here in the years to come. We just have no idea what the influx is going to be and that is a reality, it is a reality. We have to stop pretending, otherwise. Because we can do better, would not you rather be one of the cities that goes up on the list of hay, Tucson is doing this to try to help beat the climate change and try to help save our country and try to help save our planet, try to help save our ocean. Would not you rather be on that list? We are on the cutting edge. We are moving forward, we are doing something great. Instead of no, we are going to just go ahead and use more fossil fuels that aren't even coming from Arizona and are putting money in somebody else's pocket. There is no excuse for it. There is no excuse for the fact that we have such small amount of solar energy coming into the plant like TEP. There is no excuse for it and I hold them accountable, I hold you guys accountable. Every single person that makes a decision that hurts us is accountable and it is not right. I do not know how many people in your department are going to be a part of this decision, but it is not right that all of our lives fall into those little few hands. Thank you for at least having a public hearing where we can come and speak. Thank you for posting on Facebook, so I learned about it because I am sorry I do not get the Arizona Daily Star delivered and what is the other one, the Daily Territorial, is that one of the ones that I will find in a small stack in the lobby of a hotel. No, I wouldn't even find at there, so where ever I even find that? Why did not you put this out on KGUN 9, KOLD or something where the public knew where there will be more people? Because this is our town, too, and we have a right to know what you are doing and I cannot believe that I was just blind-sided by this today. That is not okay, you do not stand in a corner, whisper quietly, we are going to go ahead and do this and then say we are going to have public hearing on it and expect to get proper input and expect the scale to be properly weighted with our opinions. That is not how this should go at all. This is wrong. This is our city too. We all go to work. We support this city, our hard labor supports this city and we have no idea how much our population is going to grow in the next 20, 30, 40 years because if you think people

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are not going to move here to get away from those bad areas, you are crazy. Thank you.

Thank you for your comment.

Our next speaker is Susan Willis – Speaker 5.

Hello, my name is Susan Willis and I live in Tucson and I am a TEP rate payer. I am strongly opposed to TEP's proposed edition of five natural gas burning RICES to their power plant. Natural gas, AKA methane, is a fossil fuel. Its combustion releases CO₂ into the atmosphere contributing to the green house effect which is warming earth's atmosphere to dangerous levels, while its combustion contributes about 60% as much CO₂ as coal, its extraction primarily through fracking releases vast amount of free methane, a much more powerful may be as much as 80% more powerful greenhouse gas, than CO₂. This indeed contributes to the global atmosphere and we must avoid rationalizing this as an insignificant contribution. I heard news today of a more alarming acceleration of polar sea ice melt during this non-sun seasonal period. This points to the effect of atmospheric heat alone without the affect of the sun. This atmospheric heat due to the increasing green house has an outsize effect on slowing the polar vortex which was resulting in a distortion of the jet stream, thereby allowing more heat to be pulled into the polar region and thus more melting. A positive feedback loop that does not board well for the future. In essence, scientists are seeing things spin out of control far faster than they ever predicted. CO₂ itself has reached dangerous atmospheric levels that should included as a major pollutant in energy production in addition to the other harmful pollutants that this project would release. The CO₂ and methane releases are also game changers for life on this planet. This project is retrograde and destructive of life and must, therefore, not be permitted. Thank you.

Our next speaker is Mark Day – Speaker 6.

My name is W. Mark Day. Thank you very much. I am here to speak against changing the air permit for Tucson Electric. Two very simple reasons, one is if they are going to improve the process of delivering power in this city they should not be increasing pollutants, that should not be an option. The other end and the location of course makes it much worsen if it was somewhere else where they were not lot of people who would be subject to that pollution. The other reason is I saw nothing in the materials to indicate that Tucson Electric is considering or has considered battery or other backup. I understand I need to have very rapid response to fluctuations in Sundt generating of my references, they have to makeup the difference and that is the point of this project. I think it would be far better if they were using batteries or other non-mechanical means to generate that power. It would be much quicker and it might cost a bit more, but if the folks in Canada that owned Tucson Electric do not get quite as much money, I do not think that matters. I am willing to pay a little bit more for a better system than they are proposing. I find it very disappointing that they are not following, it is obvious that batteries are getting much more cost efficient and I do not

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see any reason why this should not be considering that very strongly and I think this air permit is just the reason why they can avoid that and run with the obviously cheaper option. Now that it is not that they have not done anything good, but this does not seem to be an acceptable way to go considering it is middle of Tucson, they are going to be generating more pollutants, I just find that very unacceptable and I think even if batteries are higher cost option that should be on the table and it is not and I do not understand that. It just does not seem any realm of acceptability to me. Thank you very much.

Hearing Officer: Thank you Mr. Day.

Our next speaker is Sandy Bahr – 7.

Good evening, my name is Sandy Bahr and I am the Chapter Director for Sierra Club in Arizona. I do live in Phoenix where I have to say I have a lot of experience with pollution and it is unfortunate, but so do the communities around the Sundt plant. Sierra Club has a lot of members and supporters in Tucson in the surrounding areas and for far too long they have suffered from the pollution from this plant with coal and natural gas and now a proposal for more natural gas. It is past time for to end, especially when there are low cost, nonpolluting options available. This proposal will cause a net increase in pollution, I mean others have stated that, that should not be acceptable. A net increase in particulate matter, carbon monoxide, volatile organic compounds, and, of course, greenhouse gases. None of these is good for our communities, for our health or for the planet and in addition to all of those it will emit hazardous air pollutants and there is a whole list of them and I would not read them out because I cannot even pronounce them all, benzene, fluorine, naphthalene, toluene, among others. These are known to harm our health, some are known carcinogens. I also have to say that I was disappointed to see that the environmental justice analysis indicated that there was not a desperate impact. I do not know how you can say that the impact area has an 85% minority population and with 63% of the residents having low income and not conclude that there is a desperate impact and not conclude that this is serious environmental injustice, environmental racism. I urge you to take a closer look at that. I had one other slightly more technical comment and that is there are more stringent NOx limits in other permits. And I understand that they are avoiding, or trying to avoid, best available control technology because they are netting out, but they are overlapping with the old units. And I am not a lawyer, but my understanding is that you are not allowed to do that. If you are overlapping you cannot net out of the best available control technologies. We think that, that has triggered and that you also need to take a good, hard look at that as well. We will be submitting detailed written comments, but I just wanted to come this evening and express these concerns for many of our members and supporters who are affected by the pollution from this plant. Thank you.

Our next speaker is Stuart Moody – Speaker 8.

Hello, I am Stuart Moody. I am a member of Sustainable Tucson and also of the Sierra Club. I would first like to thank you for listening so well this evening. I know that in your position you

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get a lot of things sent your way and I know there is certain vulnerability and you have to have big hearts to listen. I appreciate that. I salute TEPs goal of a 30% renewable energy by 2030. Given the rate of climate disruption that we need to aim much, much higher. Quick reminder globally 2014 through 2016 were the three hottest years on record, here locally 2017 was the hottest year yet. You probably noticed that we had 20 or 25 days over 70 or 75 degrees temperature in January way out of whack. The implications of this are several, rising temperatures in our County will cause rising use of energy for cooling. This will cause increased strain on the electric grid. This needs more air pollution as Sandy and others have mentioned due to increase smog formation and more energy use. It is not a formula for success. Given the high cost of climate disruption to public health, integrity of our public infrastructure, agriculture production, and instability of populations. Carbon reduction and carbon sequestration are the immediate and personal requirements that every significant individual alive today and every significant corporation and we cannot accept anything less than that. We all have our hands on the wheel of change and we need to change now before it is too late. The cost of energy from fossil fuel are well known. We have heard about them from other good speakers. Natural gas is cleaner than coal, but it is just not clean enough. The devastating results of extraction by hydraulic fracking. The hazards to health posed by our two neighborhoods by the gas power plants as Oscar mentioned and the devastating influence to sustain carbon emissions. All of these make the proposal for the RICE generation just not suitable for this time, not suitable for this place. Fortunately, we have viable and cost effective alternatives available, in hand. As you know, the mission of the Department of Environmental Quality is to preserve and protect the environment of our county for the long-term benefit of health, welfare, safety, and quality of life for all the residents of Pima County and I know you take this seriously. I know particularly Beth (Gorman) does because I have seen some of your mailings that get to our neighborhood association. In light of the extensive environmental cause associated with the RICE proposal and the cleaner safer alternatives available, I believe the only mission proper decision would be to deny their application and ask them to come back with something better. Thank you so much.

Thank you Mr. Moody.

Our next speaker is Steven Wind – Speaker 9.

Good evening. I am Steven Wind, like what blows away the pollution, hopefully. So I am like this lady here, I kind of just heard about in the news and I could not believe it really that what I was hearing. So that is why I am here tonight, not as any member of any organization representing any particular group. By profession I am a program evaluator and a researcher -- deal a lot with data and so I started to think about the decision that is being made here and I am wondering about what the calculus is of that decision because I do not see it just being one involving money and we have heard kind of similar things from other people. There are moral aspects to it. There are economic aspects to it and there are public health aspects to it, so I would like to know how the decision is made including all of those or whether it is just an economic decision, it is going to cause them too much to do it the right way so we are going to allow this, but I think if we look at it really what

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is happening by allowing them not to do it the right way which might cause more is that they are externalizing the real cost of it to public health. So it is the people who have to bring their families into emergency rooms, medication, doctors and we see this in many situations in the world and I do not think we want to see that here and I think we need to really look at the calculus of the decision correctly. So, I am totally against the revision to the permit and I say let TEP do it right and we have to figure out is it a matter of profit. They have to make a certain amount of profits, then that is another aspect that needs consideration, but I think really there is no guarantee of profits in anything, so to do it the right way is what needs to happen of all the reasons we have heard here tonight. Thank you.

At this moment, we will be taking a short break. We believe our recording equipment needs attention, some of the batteries are need to being charged so just a short while break and we will come back on record. Thank you.

Hearing Officer: The time is 06:13 and we will come back on record.

The next speaker is Rudolf Lambrechtse – Speaker 1

My name is Rudolf Lambrechtse. So I am a retired school teacher and I moved down here from the Phoenix area for number of reasons, one quality of life and I just finished an 80 mile hike today which is part of the quality of life, why I live here. I have participated in numerous hearings, mostly dealing with wilderness. This is the first time we have to clear black and white issue. Even the gray is wrong. So there is no choice, but to deny this and you have heard all the other arguments about how they create a better proposal that fits in with our quality of life, benefit not just the portion of the community, but globally as well as locally. Thank you.

The next speaker is Duane Ediger – Speaker 2.

Hi. My name is Duane Ediger. I am a Tucson resident. I am a producer of energy for TEP, a net producer. I have solar on my house and I export to my neighbors about the same amount of energy that I use in my house and I import about 1% of the energy that I use in my house from TEP and I am able to do that because in addition to the solar I have a Tesla power wall battery on my house which cost a little over \$7,000 installed to have put there and I did this even though I am under net metering and there is 0 financial benefit that I get out of having done that, but I get a lot of sense of taking responsibility for where we are right now because I understand that solar by itself in a place where we do not also have wind resource like some places do as much needs the battery storage in order to fulfill the needs that will be necessary if we are to adequately address climate change. I read in your just recent report from last week, this says that this process is going to be

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extended little bit through the month of March that the reasons that you can consider regarding this decision are strictly in relation to County and Federal statutes, which I have looked up over the last few nights. Even though I have to get up early to install solar with the company here locally. So, I have tried to do that and I hope that I probably would not stake things. I will try to get the numbers right, I do not always know if it is a chapter or section or paragraph or a part or whatever, but I am going to refer to some of these things and I hope that you will follow up these up because I understand that you are in a situation of wanting to hear things and respond ethically, but being confined somewhat to respond within the legal confines of which has been allowed to do so. I hope that my interpretations are close enough that you can at least follow these things up and in addition to your legal sense also lets take your Chapter 17 of the Pima County Code, it says it is further declared policy that all contaminants emitted from each source originating in Pima County shall be prevented or reduced irrespective of the proportionate each source contributes to the total air pollution, so that is from one of the sections that you said is permissible today. Our carbon budget, if you are to as a planet keep it below 1.5 degrees Celsius rise, we can continue as we are today for do you know how many years before we have to completely stop carbon emissions, six years. If we think we can get by with 2-degree rise and things would not get out of hand, we have may be 24 years at current rates. The life of a plant like this to be financially viable typically has to operate longer than that. Tucson, Arizona should be leading. We know that even if we were somehow to fulfill that goal in Tucson, there are many other places without the solar resource and without the wind resource and without perhaps financial resources like India and China that they are going to lag behind. We need to lead, we cannot just wait, say well we will make it in six years or make it in 24 years when we know that others have been struggling. So that is some of the laws of thermodynamics that I hope you will also pay attention to.

Alright back to some of the things in the application, TEP has said that they are not responsible for new source above standard that have to do with climate change because each of these ten units is below a certain threshold of megawatts. However, the collection is over, so I hope that they are not trying to squeak around a law by having ten small units, each one fulfill some mandate. Because I understand also that the EPA has said that if you are in an area where there is a certain amount of emissions such as these ten plants together, than you do have to apply those climate change standards. So I hope that you will at least look that up and find out what is the final matter on that. I want to finish up with just a little bit of brief finances and I know this is not may be what concerns you, but I want you to know. If there is an alternative way to do what they are proposing do with this RICE generators that does not have the same emissions, they should have more to say in their application than simply we have explained in these little grafts with these little lines about one year of solar why we need the RICE and why batteries cannot do it, but there is actual more verbal explanation of how the batteries cannot do it and in fact in Australia where they have 100 megawatt battery storage, it has already served some of the purposes that this plant is proposed to do at a cost of \$50,000,000, TEP has said that this plant is somewhere up above 200,000,000. A \$50,000,000 electric battery plant likely one that was installed in Australia in a matter of three months would provide 50 megawatts, may be 60 to 65 megawatt hours of power energy. I do not know if they are talking about in the four-hour peak, if they wanted to get four-hour peak they can do that with 350,000,000 and 200,000,000 in such a battery plant. If they need more than that a little more, but they are not paying for fuel, so the cost of the fuel with this gas plant is higher than

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the solar. You might have to pay a little more upfront, but you do not have those fuel cost added in. I do not know, I did not find any law that says it has to be financially the best decision and I understand that they are also things that can gas can do that solar and batteries could not do under extreme circumstances for five to six cloudy days in a row when you have to have those peaks met. I hope that we can make the sacrifices to where there is slightly less service, the battery plus solar would be worth it if we are not going to totally let the climate get out of our control. Thank you

Hearing Officer: Thank you for your comment.

The next speaker is Brian Flagg – Speaker 3

Hi. Its Brian with an I and Flagg with two g's. So who do you believe, you know there are two sides saying different things. So do you believe the Sierra Club and the young brother with all the kids that was here or do you believe TEP? My feeling is that TEP has a serious lack of credibility because they have made it harder and harder and harder for people to have solar and this time of like extreme climate change happening they have blocked people having solar, they have made it harder and harder and so that does not speak well for them. It does not make them credible. And the other thing that does not make them credible is they are supposed to be regulated by this thing called the Corporation Commission, which is voted on state-wide and it does not take much research to figure out that dark money, like was involved in electing a Corporation Commission that is totally pro-companies like the APS in Phoenix and TEP here. So who is credible and who is going to suffer from this? Those are my questions and the one other thing is say that it as bad as everybody says it is and that there is any kind of fear that the neighborhoods have of that they are going to get poisoned, that type of thing. Well, that is true TEP should build these things up in the foothills or maybe Oro Valley, Marana and it is part of this whole thing in the country called environmental racism, you could Google it and find out all about it, but because of environmental racism stuff like this that gets the pollution, lower income, minority neighborhoods and it is not right and so I guess you are going to do a report DEQ to the supervisors and then they give an up or down on a permit. We will tell them that all kinds of people are going to come out, just like what happened when Monsanto tried to put that plant way up there in Marana or that the place is going to be filled like it was a week ago when Ramon Valdez voted to against the south side to give money so that the sheriffs can work with a border patrol way more easily. Like that is going to happen again with this, I have full faith that people are going to come out of the wood work and make their life miserable if they go along with TEP instead of honoring the whole idea of environmental racism, so good luck. Thank you.

Thank you for your comment.

The next speaker is Mansur Johnson – Speaker 4.

Hello, my name is Mansur Johnson and I am a retired stagehand. My son used to work for Solar City, but because of the actions of TEP and the Corporation Commission he is now living and working in Massachusetts because Arizona is not favorable to solar energy, I am sorry to say. I

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asked a friend of mine does your decision affect the success or failure of the project, he did not know and I do not know at this movement, but I have six points I want to mention. This friend that is my consultant who thinks that TEP just wants to make money by selling this excess power from this plant to Phoenix at 30 to 40 cents per kilowatt hour, but TEP at the present time has an overcapacity according to our own Grid Manager at the Western Electric Coordinating Council. They have an excess capacity already. Such a plant as I propose is efficient in a small size, but not at the large size that they propose. This means that they will use more water than coal plants or larger gas plants that are typically built today. For example, if a unit produces 100 kilowatt hours of gross electricity it will convert 65 kilowatt hours in the heat and 35 kilowatt hours in the power, that means that this huge amount of heat will require a massive amount of water to dissipate and I hope you folks take the same point of view as the County as regarding the row is not mine. They said they are going to pollute the water, they are going to destroy the environment and they voted against it. I hope your recommendation is to vote against this. In conclusion, let me just quote from an environmental protection agency fax sheet on this kind of gas unit it says “reciprocating internal combustion engines are very low in thermal efficiency as size goes up over 1 megawatt kilowatt hour electric. They are proposing a 10 megawatt plan.” These plans at the size proposed look to be in the range of 30 to 35%, this is EPA. The large amount of heat from these units will use unreasonably high amount of water to cool them that would be around 0.8 gallons per kilowatt hour compared with a coal plant at 0.5 gallons per kilowatt hour and this also compares to the solar photovoltaic less than 0.01 gallons per kilowatt hour. Please vote against this.

Thank you, Mr. Johnson.

Our next comment is Jana Segal – Speaker 5.

I am Jana Segal and I am going to talk from the heart because I guess a lot of us here do not know a lot about the science and could convince you of those facts, anyway, but I guess we are here with the hopes that you will really listen to us because nobody is listening to us. I have gone to Corporation Commission meetings and there has been compelling evidence about climate change, about the impact and they just aren't hearing us. This is the law that you have to follow the requirements of local or state laws, but what are the laws protecting the citizens from this. It is getting harder every year. I have a garden and so I see how the things aren't growing. I can see how the weather has changed from the 20 years I have been here. I am concerned that I have been paying a mortgage for 25 years and I will not have a house to leave for my kids because they will not be able to live here. It will be too hot and you will not be able to sell your house either so all those years of paying my mortgage will be for nothing. On top of that, who is keeping the people from the corporation commission accountable, dark money has paid for like more than half of them and so they are not going to listen to us because they are paid off by the gas companies. So I just have this dream because I want to stay in Tucson and I want to make Tucson sustainable. I dedicate my life to fighting for Tucson, for fighting for our water -- to have clean water, to have clean air. I have a vision of Tucson that this could be a wonderful place for tourists to come. That is one of the biggest industries in Arizona is tourism, but my friend she rides the tourists around they come here and they have stopped coming because they are complaining because the view from the

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foothills is full of smog and why don't we make this a great place to live, why don't we make this a place that people want to come to visit. It has been made clear that there is more jobs with solar. It is healthier. When is somebody going to listen to us? That is all what I have to say.

Thank you for your comment.

Our next speaker is Rebecca Hale – Speaker 6.

No response from the audience.

I would like to call Michael Kemp – Speaker 7.

Good evening. First of all Micheal Kemp. I would like to thank you first of all for having this gathering. We appreciate the chance to speak with you and let our concerns be heard hopefully they will be. You have heard lots of facts and figures tonight. I am not going to throw more facts and figures at you. This is more of an emotional plea. A letter was just submitted. It was signed by 15,000 scientist from around the world and they told us it might be too late. We might not be able to turn this around. Now I am assuming you all have children and grandchildren, we all do. Our children and our grandchildren are not going to forgive us for not doing something about this. This has been going on for decades just to continue to build up cooperate influence, tearing away our environment at our communities and at very social structure. Nobody has done anything about it. We are at a point now where if we do not do something about it, you do not do something about it, nothing is going to get done and our children and grandchildren will suffer the consequences. We all will be gone. It is not going to matter to us, but they are going to have to live through this nightmare. Federal government is not going to support us. The people in power right now have checked out. They have got at the environmental protection agency, there is nothing left for it to do except rot, that means it is up to State and local governments to take care of the people that is where you come in. You have an important decision to make. You can help us all. You can help preserve this community that we live in. We have to stop the profiteering of the fossil fuel industry, plain and simple. It is there to make money. They know that renewals are the way to go. I would be willing to bet, they are already investing in them, but they are holding out. They know there is a little bit more money to be squeezed out of the fracking wells. There is a little bit more cash laying at the bottom of the ocean, to get every bit of it before they finally say, okay now we got sun. I drove here from the east side of the city this evening and I was blinded coming down the road by this enormous thermonuclear reactor that hovers above our planet. It produces more energy in one day than we can use in a year, so what are we doing, seriously. We are playing this ridiculous game of cat and mouse with corporate interest, political interest, we are all going to suffer and the people who are going to suffer the most, thank you for the people who already mentioned the impact this is going to have one marginalized communities, the poor, sick, elderly, people who cannot get away from rising sea levels. There are islands in the specific that are starting to go under water already. This body sitting right here has an important opportunity tonight. That is an opportunity to lead, we have elected leaders; they are not leading. We cannot count on them. We are counting on you to provide the leadership that it is going to take to rescue our society, our entire world from what is coming if we do not take action. Thank you.

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Our next speaker is Grace Leal – Speaker 8.

Hello, my name is Grace Leal. I just found out about this yesterday afternoon. Sorry I have not done any personal research, but I would like to support everything people here have said. You know everybody watches the news and on the weather stations they usually tell us the weather reports what is going to be happening and I noticed all the summer there were softening the news about the extreme heat that we are suffering through and you think the chamber of commerce had paid for those TV stations so they would soften the news. I got little nugget of information you might have already heard earlier last week that be prepared this summer we may suffer 125-degree heat at least a few days out of the summer. Pretty soon we would be start building underground. Generally, I just want to say that obviously we are about eliminating or reducing pollution you know because the state of the globe demands it. We cannot wait any longer. Solar energy is the wave of the future and we have to get with progress. In fact we have to be a leader. We live in the land of the sun, not only can we provide solar to every household, but we can provide solar to outline communities or other states for a profit. Personal solar installs are costly, but if TEP would contract with vendors to provide for each household they can charge each customer monthly at a wholesale or at lower cost which would make it much more attractive to home owners. Davis Monthan Air Force Base already has solar power and many other organizations or companies have leased government land in Arizona and installed solar panels. I used to work for the State Land Department and they would love to lease out to energy companies. They need the money to support the public school system. Arizona is a land of the sun as well as the southeast quarter of California and west New Mexico. There is no reason we all shouldn't be on our way to solar energy. In fact, we should have been the solar standard for the nation by now. Thank you.

Our next speaker is Molly McKasson – Speaker 9.

Hello, it is Molly McKasson. I want to thank you all for being committed to public health, for being committed to clean air, clean water, clean environment, decent place to live. It is interesting that this building that we are in right now, it is the Abram Centers named after one of two sons, largest advocates, most wonderful man, Herb Abrams, who years ago fought for clean air, clean water, and a decent place for people to live. So it is not by accident that we are here today. Herb drove us here. It is very special to me because he was a good friend and he was a friend to many people. When I was on the council 30:07 in the 1990's, the south side of town, especially around the Irvington Generating Station, had incredible spike of childhood asthma and you probably are aware of that. It is documented, I am sure at the Pediatric Asthma Center or it is for children with lung diseases at UMC, so I just remember, you know, the information coming in and being shocked to hear from teachers and principal down at the school. I think in Littleton, in that area down there that they had severe problems, kids going to the emergency room frequently. TEP was concerned and there was talk about fixing, making it better and I guess there was some adjustment to the generating stations. It has been a lot of years so I forgotten this was in the 1990's. TEP also made promises and commitments to solar and to working on other sustainable energy sources. They just have not delivered. They have not come through and you know I am not here to attack to Tucson Electric Power. I am here to hope that you would defend people who are getting sick from the quality of air that comes out and the people have to breathe when you put these kinds of generating

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stations like the RICE Facilities near any neighborhood at all. The City of Tucson and Pima County have spent millions of dollars trying to clean up the air in this community. You all are very well aware of that. Hired all kinds of people to work on this issue. Considered banning fire places and to get to this point today where we have health issue with the quality of air that will come out of these, but we know it will be a problem where we have health issues already on the south side. All we have to do is look at the information, it is there and that is just fact, but the human toll is why I am here tonight. I just heard about this two days ago as well. Thanks to Sierra Club for having it editorial in the newspaper. This is not just an environmental issue nor just an issue about climate change though I agree with everything that has been said. So little is being done, but the major reason I am here is because of the health. This is going to damage the health of mostly minority and as someone mentioned marginalized children and elderly, but in particular children you could talk about all the cost that will put upon Pima County because of this, Pima County's Health System, but we have a chance to prevent that. We have a chance to do something different and I hope that your recommendation will be for public health in this community to get better and not worse. I appreciate very much the responsibility that you all have and I appreciate that you can make a difference here. Your decision can make a difference. This is a public health issue. These should not go in. Climate change is real, all those issues are real. I have solar on my house. I am a proponent of that, but I am really here tonight because this is going to damage our community's health. A community that has spent millions to try to improve air quality would suffer from this proposal. So thank you very much for hearing all of us.

Our next speaker is Megan Bartel – Speaker 10.

Megan Bartel. I would really rather not be here tonight and I am sure you probably would really rather not be here either. I would rather not be here tonight because I have two kids at home who are having dinner with their dad. They are two and five, sorry. When I read about climate change I am terrified, not just for my kids, but for me. This is not something that is just going to happen to our children. This is something that is going to happen to us so if can do anything. I want better for my kids. I am sure you guys have kids and grandkids and you want better for them too and I reject the permits that this is the best we can do. We have the technology. I think we just need to open our minds and our hearts to the possibility that there is another way to do this. We have other ways to do this. We just have to start thinking differently. I think that this is happening because this is how we have always solved this problem. We need more power. We get coal. We get gas. We have better options. We have better solutions. We can save our kids from what we all know is coming. So I just hope that you all will help us all to start thinking differently and doing better. Thank you.

Our next speaker is Daniel Stormont – Speaker 11.

Daniel Stormont and I am with Sustainable Tucson and I am also a Sierra Club member. I am also an engineer and so I really appreciate the opportunity to talk with you about this permit. I tried to read through the EPA requirements for class I permits and the state requirements and the County requirements and to be honest I mean I got kind of lost in all the various requirements, but one thing that did seem pretty obvious to me is that it has to be a very exceptional case for allowance

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of a variance of a permit to where you are going to issue a permit that is going to allow greater pollution than what the existing permit allows and in this case I was really surprised because it was the first time I had looked at the technical support document was sitting up on the table there as we came in and looking at that table on page 7, it was amazing to me that for these RICE Units every single one of them is either exceeding individually the amount of pollutants is being put out by the existing steam generating plants or in conjunction they are putting out more so. There are some things like Volta Organics that there each individual unit any time it is fired up, it is putting up more pollution than both of those steam units are doing together and it amazes me, I do not understand how that can even be allowed. It seems that there is no way to allow a variance of that magnitude that is going to allow these units to be installed when in every measurable category they exceed what the current plant is putting out. It is just mind boggling to me, so I really would hope you would deny this permit variance. It just does not seem to make any sense. I know that you have a tough job with DEQ. I do really appreciate as other people have said I really appreciate the job you do. I actually do work with members of both PDQ and AZDQ in my job. So I know that you really are dedicated to protecting our environment and I hope in this case that you all act and protect us from this variance. It just frankly should not be allowed. Thank you.

Hearing Officer: Is Rebecca Hale in the room? No response from the audience. I would like to send the open floor to anyone else who would like make a comment here tonight.

Time is 6:52 and before closing I would like to give final opportunity for anyone who would like to make a comment. I would like to remind people that the department's response to comments will be developed in the next two weeks. If you would like to see this document or you would like it to be sent to you, please indicate this on your sign-in sheet in the back of the room. Please make sure your name and e-mail or mailing address is clearly printed on the comment card. At this point, I will now close the hearing and your interest is very much appreciated and PDEQ thanks each and every one of you for attending here tonight.

The hearing is now closed. Today's date is Thursday, March 1, 2018. The time is 6:53 pm. Thank you.

Hello, just to address the question the lady has just presented. There will be an additional public hearing conducted at the Conference Room in Downtown, Pima County Public Works Building at 201 North Stone Avenue, in the basement conference room C and this will take place on March 28, 2018 from 5:30 pm to 6:30 pm. Thank you.

COMMENT SHEETS RECEIVED AT THE MARCH 1, 2018 PUBLIC HEARING

First Name	Last Name
Kenneth	Bierman
Kathy	Della Penta
Robert H.	Gallivan
Mansur	Johnson
Molly	McKasson
Oscar	Medina
Daniel P.	Stormont
Carlene M.	Valencia



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TUCSON, AZ 85701
(520) 724-7341
Rupesh.Patel@pima.gov
www.pima.gov/deq

COMMENT SHEET

Proposed Air Quality Permit Modification for Tucson Electric Power Generating Station
Public Comment Period: February 9–March 29, 2018

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PLEASE PRINT CLEARLY:

Date: 3/1/18 Name: Kenneth Bierman
E-mail: KBierman1@gmail.com Phone: 520-882-2708
Mailing Address: 2926 N. Mountain Creek Way
Tucson AZ 85745

COMMENTS:

I strongly oppose any actions by TEP that
increases air pollution. I strongly support renewable
energy (ie solar). I would rather TEP invest money
in renewables. If TEP proposed this development in
the foothills it would never be approved. This is
an environmental justice issue.



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PLEASE PRINT CLEARLY:

Date: 3-1-18 Name: Robert H. Gallivan
E-mail: 18imagicbus@gmail.com Phone: 520-622-7806
Mailing Address: 222 E Helen St Tucson 85705

COMMENTS:

I am against the above proposal because I
believe there are more sustainable battery solutions,



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PLEASE PRINT CLEARLY:

Date: 3/1/18 Name: Mansur Johnson
E-mail: Mansur Johnson @ hotmail.com Phone: 520 742 4450
Mailing Address: 6056 N. Oracle Jctn Sta Rd
Tucson AZ

COMMENTS:

No to TEP's proposal.

COMMENT SHEET

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PLEASE PRINT CLEARLY:

Date: 3-1-18 Name: Molly McKesson
E-mail: memckesson@gmail.com Phone: 520-271-8978
Mailing Address: 2888 E. 4th St. Tucson, AZ 85716

COMMENTS:

When I was on the Tucson City Council in the 1990s, there were health issues — especially for children — in the neighborhoods around the Sundt generating plants. Most of these people getting sick were poor and minority. These RICE facilities will increase the asthma and other lung diseases that have plagued this area for so many years. While TEP has been talking about solar as an option for years, we have seen very little movement in this sustainable direction. Their own lack of commitment to a cleaner, healthier Tucson and planet, appears to be part of their justification for these 10 new natural gas generators. Local jurisdictions have spent millions trying to clean up Tucson's air for years. Approving these RICE facilities is damaging to all this work & damaging to our tourist economy.

I am a net producer of energy for TEP (not top solar)

They will lock us into dire effects of climate change for years to come.

⊗ UMC houses a pediatric asthma center, and they can vouch for the higher volume of sickness on the SE side of Tucson.



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PLEASE PRINT CLEARLY:

Date: _____ Name: Oscar Medina
E-mail: _____ Phone: 520.903.8005
Mailing Address: oscarmedina.gonzalez@gmail.com
5989 S. Placita Picacho EL Diablo Tucson, AZ 85706

COMMENTS:

Invest in solar energy. Solar
energy is renewable. Your new
power plants are natural gas. This is
still polluting our community. STOP
your pollution.

I concede that transitioning away from coal as an energy source is and will be difficult, but what TEP is proposing for the Sundt Generating Station seems out of proportion.

-10 twenty megawatt RICE [Reciprocating Internal Combustion Engines] using natural/fracked gas

-The Sundt Plant is going from coal to gas, both 19th and 20th century energy sources.

-Coal and gas are finite sources; by comparison, solar is renewable

-The county has indicated that "the project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10), nitrogen oxides, and volatile organic compounds over time."

insert (X)

-- We are trading one toxin for another. We are going sideways, not forward

-Has there been an Independent Study comparing and contrasting the cost of this large installation, including: the cost of the gas and its transport, the cost of the RICE engines and their installation, their maintenance, & the life of the engines?

versus

the overall cost of using a combination of: energy efficiency, solar and back up batteries, their maintenance and the life of the system?

(X) ~~insert~~ if you modify the air permit, will it relax the standard?

-The size of the proposed system is unacceptable.

Not good.

2. finally

Thank you for listening.

Cathy Della Penta
10601 E Marchetti Loop
Tucson, Az 85747

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PLEASE PRINT CLEARLY:

Date: March 1, 2018 Name: Daniel P Stormont
E-mail: daniel.stormont@gmail.com Phone: 435-553-9401
Mailing Address: 4743 E Mabel St, Tucson AZ 85712

COMMENTS:

I am very concerned about the relaxation of air quality standards required to approve the installation of 10 RICE generators at the Suddt Generating Station. According to the Potential to Emit Summary on page 7 of the February 2018 Draft Technical Support Document, the proposed RICE units will each individually exceed the emissions of CO₂, NO_x, and total HAPs of the individual steam generators they are replacing. In total, if all of the RICE units are running (a not inconceivable scenario), they will exceed PM₁₀ and PM_{2.5} emissions of the units they are replacing. This is unacceptable! No variance should be allowed for TEP to increase the emissions of pollutants at this or any other generating station.



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PLEASE PRINT CLEARLY:

Date: 03/01/18 Name: Carlene M. Valencia
E-mail: carlenemvalencia@yahoo.com Phone: 520-323-6602
Mailing Address: 704 N. Catalina Ave., Tucson, Az. 85711

COMMENTS:

It's a disgrace that TEP even considers anything other than an extension of Solar Energy with batteries to accommodate for down time. As a 4th generation Tucsonian, I have grave concerns. Are we being held hostage by the "Dark Money" in this Republican State! Do we all have to suffer do our children & grandchildren have to face "global warming" alone? This is our responsibility; yours & mine! - your choice affects 100s of thousands perhaps more in this beautiful City & State.

I urge you NOT TO APPROVE This Variance,

Thank You

TEP Air Permit Major Modification Request Public Hearing
Thursday, March 1, 2018

Sign Up to Speak at this Public Hearing

Attendees will be called to speak in numerical order

Name: (PLEASE PRINT CLEARLY)

✓	1	OSCAR Medina
✓	2	CATHY Della Penta
✓	3	Robert Bulechek
✓	4	Jessica Cory-Alvarez
✓	5	Susan Willis
✓	6	Mark Day
✓	7	Dandy Bahr
✓	8	Struett Moody
✓	9	Steven Wind
✓	10	Rudolf Simbrechse
✓	11	Duane Ediger
✓	12	Brian Flagg
✓	13	Mansur Johnson
✓	14	Jana Segal
✓	15	Rebecca HALE
✓	16	MICHAEL Kemp
✓	17	Coree Lee
✓	18	Molly McKasson
✓	19	Megan Bartel
✓	20	Daniel Stormont
	21	
	22	
	23	

**TEP Air Permit Major Modification Request Public Hearing
Thursday, March 1, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
Megan Bartel	Address 2548 W. Calle Morado / 85745
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail megbartel@gmail.com
Rebecca Hale	Address 3915 E. Calle Cayo / 85718
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail rehale111@yahoo.com
Michelle Muller	Address 6488 N. Greenbriar Dr. 85718
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail michellemuller2002@gmail.com
Duane Ediger	Address 511 N Cuesta Ave. 85745
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail duaneediger@gmail.com
Mansur Johnson	Address 6056 N. Oracle Trace
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail mansurjohnson@hotmail.com
Melinda Perry	Address 38 W. WILLIAM CARZ Y. ST. CORONA de TUCSON AZ
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail melinda582@hotmail.com
Grace Lee	Address 2234 E. Mabel ST T8N 85719
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail gracelee1@gmail.com
Deborah Perry	Address 2631 E Avenida de Posada 85718
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail debperry8@gmail.com

AZ
85640

**TEP Air Permit Major Modification Request Public Hearing
Thursday, March 1, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
LARRY LUCERO TEP	Address 354 N. 88 E. BROADWAY
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail L LUCERO@TEP.COM
Meg Weesner	Address 9352 E Trail Ridge Pl Tucson
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail mweesner@att.net
Robert Bulechek	Address 2753 N Treat Ave Tucson 85716
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail RBulechek@Energy-Man.com
Susan Willis	Address 3275 E. Pima St #2 Tucson 85716
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail skmcwillis@gmail.com
Jan Gordley	Address 8840 E. Bellevue, Tucson 85715
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail jan@gordleygroup.com
Jana Segal	Address 4743 E. Mabel St
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail JanaSegal@aol.com
Dan Stormont Sustainable Tucson	Address 4743 E Mabel St, Tucson AZ 85712
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail daniel.stormont@gmail.com
Susanne Coth	Address 1 E BROADWAY BLVD TUCSON 85701
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail scotty@pagregion.com

**TEP Air Permit Major Modification Request Public Hearing
Thursday, March 1, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
Lisa Beckham	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	E-Mail
Chuck Komadina	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
John Cannon	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
OSCAR Medina	Address 5989 S. Placita Picocho El Diablo
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail TUCSON, AZ 85706 oscar.medina.gomez@gmail.com
CONRAD SPENERT	Address P O Box 2166 Benson AZ
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
Kenneth Bierman	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
Michael Seronde	Address
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail mseronde@gmail.com
CATHY DellaPenta	Address c.della@cox.net
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail

**TEP Air Permit Major Modification Request Public Hearing
Thursday, March 1, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
Christine Taylor	Address 4201 E Seneca St 85712
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail christinetaylor@susd12.org
Robert H. Gulotta	Address 222 E Helen St
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail 78magilbus@gmail.com
Carlene Valencia	Address 704 N. Catalina Ave., Tucson, 85711
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail carlenevalencia@yahoo.com
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail

**TEP Air Permit Major Modification Request Public Hearing
Thursday, March 1, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
Crystal Cannon	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
Susan Whites	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
Quintin Ortiz	Address
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail augustomartina@a.com
Martha Ortiz	Address 2302 E. 97th St., Tucson, AZ 85719
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
Zig Fang	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
Jessica Carey-Alvarez	Address 38 W. William Carey St. Coronado Tucson 85741
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail tusoncarey@msn.com
W. Mark Day	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail chilerico@gmail.com
Stuart Moody	Address 627 N Plumer 85719
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail StuartFieldmoody@hotmail.com

**TEP Air Permit Major Modification Request Public Hearing
Thursday, March 1, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
Steven Ward	Address 2774 W. Calle Marido 85745
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail swindaz@gmail.com
Joseph Barros	Address 88 E. Brady Blvd.
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
Beki Quintero	Address 247 W Calle Francota
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
Molly McKasson Murga	Address 2888 E. 4 th St Tucson, AZ
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail memckasson@gmail.com
CHUONG TRAN	Address tbonc81@gmail.com
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail

Appendix C

Public Hearing #2 Documents

COMMENT SHEETS RECEIVED AT THE MARCH 28, 2018 PUBLIC HEARING

First Name	Last Name
Kenneth	Bierman
Merrill	Collett
Paul	Jehle
Grace	Leae
Rob	McLane
Bruce	Plenk
Ivy	Schwartz
Patsy E.	Stewart
Barbara H.	Warren
Victoria	Woodard



33 NORTH STONE AVENUE, SUITE 700
TUCSON, AZ 85701
(520) 724-7341
Rupesh.Patel@pima.gov
www.pima.gov/deq

COMMENT SHEET

Proposed Air Quality Permit Modification for Tucson Electric Power Generating Station Public Comment Period: February 9–March 29, 2018

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PLEASE PRINT CLEARLY:

Date: 3/28/18 Name: Kenneth Bierman
E-mail: K Bierman 1@gmail.com Phone: 520 882-2708
Mailing Address: 2926 N. Mountain Creek Way Tucson 85705

COMMENTS:

If the permit is issued I hope it contains limits on how much the gas engines are used (only for peak demand) with financial penalties if the limits are exceeded. This will limit the amount of toxic fumes released.

I view this as an environmental justice issue. TEP would never have dared to request this permit if the power plant was in the poor hills!



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Rupesh.Patel@pima.gov
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PLEASE PRINT CLEARLY:

Date: 3/28/18 Name: Merrill Collett
E-mail: merrillcollett@gmail.com Phone: (520) 269-2362
Mailing Address: 1470 S. Palo Verde Ave J207
Tucson, AZ 85713

COMMENTS:

I am confident that a forward-thinking
city like Tucson does not want a
backward, dirty energy producing
technology when clean, efficient,
climate-saving technology like
solar is so easily available.
DENY THE PERMIT!



Say NO to More Pollution in Our Neighborhoods!

For decades, neighborhoods in Tucson have suffered from pollution from the Sundt plant, including from coal and natural gas. Tucson Electric Power (TEP) is now planning to replace the current natural gas plant with 10 20MW gas-fired power plants, also known as reciprocating internal combustion engines (RICE). TEP is failing to invest in Arizona's abundance of low cost

renewable energy potential. It's time to stop investing in the unstable fossil fuel industry that's polluting our air and water, damaging our climate, and holding back the growing clean energy economy that will create opportunities that will last for generations.

- The Reciprocating Internal Combustion Engine (RICE) Generation Project involves new gas-fired, RICE generation to replace the aging gas-fired steam generation units at the H. Wilson Sundt Generating Station on East Irvington Road.
- The RICE Generation Project would be composed of 10 gas-powered units capable of producing about 20 Megawatts (MW) each, for a build-out total of 200 MW.
- The planned construction start date is April 2, 2018. The first five units would begin operation in the summer of 2019 and the remaining five would be online in early 2020.

Tell the Pima County Department of Environmental Quality the following:

- The pollution from these proposed gas investments is unacceptable and we want non-polluting clean energy instead.
- TEP should not be allowed to continue polluting our community and keeping us from benefitting from the clean air, low electricity costs, and job creation that new solar power and battery storage investments will create
- It's time to stop investing in the unstable fossil fuel industry that's polluting our air and water, damaging our climate, and holding back the growing clean energy economy that will create opportunities that will last for generations.
- This proposal will cause a net increase in pollution, including particulate matter, carbon monoxide, volatile organic compounds, and greenhouse gases such as carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride. None of this is good for our community.
- In addition to these pollutants, which harm our health and our climate, the plant will also be a major emitter of Hazardous Air Pollutants. Pollutants include Benzene, Fluorene, Naphthalene, and Toluene, among others that are known to harm our health.
- There are significant environmental justice issues with this plant as the impact area has an 85% minority population and a 63% of the residents are low-income.



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Rupesh.Patel@pima.gov
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COMMENT SHEET

**Proposed Air Quality Permit Modification for Tucson Electric Power Generating Station
Public Comment Period: February 9–March 29, 2018**

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PLEASE PRINT CLEARLY:

Date: 28 MAR 2018 Name: PAUL JEHLLE
E-mail: PAULJEHLLE01@MSN.COM (all lower case) Phone: 520 286 7284
Mailing Address: PO BOX 87456, TUCSON, AZ 85754

COMMENTS:

I don't want more emissions from the
natural gas generators unless it is only a temporary.
— Only as a stop gap until solar generation is
implemented. Maybe authorize only 1/2 (half)
of the generators might be a compromise.

TUCSON IS ALREADY AIR POLLUTED ENOUGH — THIS
HURTS TUCSON'S ALLURE AND IT'S HEALTH BENEFITS
TO ALL IT'S CITIZENS.

I THINK THE BEST COURSE OF ACTION IS TO
ENCOURAGE ROOF TOP SOLAR — FOR PRIVATE HOMES,
BIG BOX STORE ROOFS, PARKING LOT STRUCTURES THAT
ALSO PROVIDE MUCH NEEDED SHADE IN SUN DRENCHED
TUCSON.

Thank you, Paul Jehlle



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PLEASE PRINT CLEARLY:

Date: 3-28-2018 Name: Grace Lee
E-mail: gracelee1@gmail.com Phone: (520) 250-8019
Mailing Address: 2234 E. Nabel St / Tucson 85719

COMMENTS:

Obviously I am for eliminating or reducing pollution. The state of the planet demands it. We cannot wait any longer. Solar energy is the present. Get with the progress. In fact, be a leader. We live in the land of the sun. Not only can we provide solar energy to every household within the city limits, but solar is possible for all outlying communities, and to other states for profit.

Personal solar installations can be costly, but if TEP would contract with vendors to provide solar to each household, they can charge each consumer monthly, at a lower wholesale cost, more affordable to each homeowner, and TEP could make up their costs⁺ quickly en masse.

Arizona is the land of the sun, as well as the SE corridor of California and West New Mexico. There's no reason we all shouldn't be on our way to solar energy by now. In fact, we should have been the solar standard for the nation.

DMAFB already has solar power. Many other organizations and companies have leased government land to install solar panels. I used to work for →

TARJETA DE COMENTARIOS

**Propuesta de Modificación al Permiso de Calidad Ambiental
para la Estación Generadora de Tucson Electric Power
Período de Comentario Público: 9 de febrero–29 de marzo del
2018**

Nota: Cualquier persona interesada puede proporcionar sus comentarios sobre un permiso pendiente durante el periodo de comentario público. PDEQ considerará todos los comentarios recibidos durante este periodo en su proceso de decisión final. Estos serán incluidos en el record administrativo y estarán disponibles al público. Adicionalmente, cualquier persona que contribuyó un comentario durante el periodo de comentarios públicos tiene el derecho legal de apelar la decisión que se tomó sobre el permiso. Para recibir avisos de acción relacionados a la Propuesta de Modificación al Permiso de Calidad Ambiental para la Estación Generadora de Tucson Electric Power o apelar la decisión del permiso, por ley estatal, debe proporcionar su nombre y domicilio.

FAVOR DE IMPRIMIR CLARAMENTE:

Fecha: _____ Nombre: _____

Correo electrónico: _____ Teléfono: _____

Domicilio: _____

COMENTARIOS:

The State Land Dept. They would love to lease out to energy companies. They want the money for public schools.

The health of homeowners living around the current TEP plant has been impacted over decades. Newborn deformities, cancer clusters are well known and alarming. The only outfit not affected is TEP. This lack of interest in the health of its consumers is unbelievable. Enough with taking advantage of its consumer families. Be responsible, be aware. Beside an environmental impact studies, inform yourselves of the health issues of the consumer families living near the TEP plant, before this is disclosed nationally thru social media and the press.

COMMENT SHEET

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PLEASE PRINT CLEARLY:

Date: 3/28/18 Name: Rob McLane
E-mail: rob.mclane@gmail.com Phone: _____
Mailing Address: 1724 E Miles St

COMMENTS:

There is often reference to "protecting the ratepayers" when decisions are being made about energy policy. Usually this translates to "keep energy cheap" as the justification for decisions to continue using fossil fuels. I would argue that this kind of approach to energy is neither good for ratepayers, nor will it continue to keep energy cheap. The costs of burning fossil fuels are rising in our society. These costs are health, environment, and social costs felt first and most dramatically by poor citizens and marginalized groups. The only benefit of allowing our utilities to continue relying on fossil fuels is the enrichment of the utilities own stockholders and investors. It is up to our governmental and regulatory agencies to truly look out for residents in all parts of the city by preventing new sources of fossil fuel power generation in place of existing and proven technologies. Asking citizens to wait ~~then~~ for better technology pushes off responsibility for the climate crisis we are facing, and asks poor and marginalized people and the environment to pay for our privileged hesitancy.

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PLEASE PRINT CLEARLY:

Date: 3/28/18 Name: Bruce Plenk
E-mail: bplenk@igc.org Phone: 520 795-8611
Mailing Address: 2958 N St Augustine Pl, Tucson AZ 85712

COMMENTS:

To PCDEQ:

Please reject TEP's proposal for 10x19 MW RICE engines at their Irrigation location in Tucson. Now that it is clear that wind & solar plus storage are cheaper than gas, there is no economic advantage to the RICE engines. There is a huge long term cost.

Perhaps more importantly, these jet engines will release substantial amounts of air pollution, especially VOC's, NOx, ozone, and other greenhouse gases. This is an unnecessary danger to those living nearby and clearly affects their health in an adverse way, and all Tucsonans as well.

Natural gas was seen as a bridge fuel in the 1980's before solar & wind were "ready." They are now ready! We need to stop using natural gas and invest in renewables and storage. Every dollar invested in gas facilities is a dollar NOT invested in storage + solar + wind. Let's have smarter investment.

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PLEASE PRINT CLEARLY:

Date: 3/28/18 Name: Ivy Schwartz
E-mail: FSchwartz3211@cox.net Phone: 520-237-6530
Mailing Address: 3211 W. Westwood Pl Tucson AZ 85745

COMMENTS:

I am totally against this permit. We should be using taxpayer dollars to fund sustainable energy, not fossil fuels or nuclear. Natural gas is not renewable - it pollutes the environment, increases greenhouse gases, causes respiratory diseases, and worsens climate change.

CNG is a 20th century solution. This is how the 21st century + climate change is worsening every year.

Roof top, distributive solar with battery storage is what we need in our sunny, dry climate.

The longer we take to change our 'dirty' fuel ways, the more expensive our electricity will be when the inevitable changes finally occur.

Thank you

I Schwartz MD MPH

COMMENT SHEET

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PLEASE PRINT CLEARLY:

Date: 3/28/2018 Name: Patsy E. Stewart
E-mail: P.S. Patsystewart@gmail.com Phone: 828-337-7818
Mailing Address: 5641 N. Mina Vista, Tucson, AZ 85718

COMMENTS:

Science tells us that 350ppm CO₂ equivalent is the upper limit for Earth and her population to live in a similar way as historical. Now we are above 402ppm and climbing; we are witnessing the effects of our polluting our atmosphere. There being felt as: higher temperatures, more drought, more forest fires, more extreme weather including more severe weather, stronger hurricanes, tornadoes, sea level rise, floods, rising ocean levels. There is no excuse to use any outdated fuel or technology facing the moral imperative to save our planet for future generations!

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PLEASE PRINT CLEARLY:

Date: 3/28/2018 Name: BARBARA H. WARREN
E-mail: BWARRE61@GMAIL.COM Phone: 520-325-3953
Mailing Address: 3653 N. PRINCE VILLAGE PLACE
TUCSON, ARIZONA 85719

COMMENTS:

Natural gas pipelines leak methane - a super potent greenhouse gas. Fracked gas is replete with toxic pollutants to our water tables that cause cancer, birth defects, heart and lung disease.

Burning fossil fuels like gas contributes to advancing climate change.

TEP must get on board with clean, safe, renewable energy NOW.

The public wants clean energy - 100% and 100% clean energy. This is our immediate future if we are to survive on this planet.

DATE: March 28, 2018

TO: Pima County Department of Environmental Quality

RE: Tucson Electric Power's proposal to build a new natural gas-fired power plant

Dear DEQ:

I moved to Tucson ten years ago for my health. I have a medical condition called "Multiple Chemical Sensitivity." This condition is recognized by the Social Security Administration, and people can qualify for Social Security Disability if the condition is debilitating enough. However, with good air quality, many people with the condition can work and be productive citizens.

It is difficult for someone with Multiple Chemical Sensitivity to find a place to live with good air quality. Tucson's air quality is pretty good, as cities go, so more than 10,000 people with Multiple Chemical Sensitivity live in and around the city. For us, the prospect of a new, polluting industry is especially threatening, so we oppose construction of the proposed new plant.

TEP already has a natural gas-fired power plant that it can use to supplement solar-generated electricity at times of peak use. Therefore, TEP's proposal to build a larger, more polluting natural gas plant should be denied. TEP should energy storage, including battery storage, and power management techniques to meet peak load demands.

There are important environmental considerations beyond air quality at stake in TEP's proposal. The technology in the proposed new plant would use more water than TEP's existing natural gas-fired power plant uses. Tucson should never waste water. Our water situation is very tenuous. We live in a desert. We do not have enough groundwater to support the number of people who live here. We are dependent on CAP water from the Colorado River. Arizona has junior water rights to California, which means if during a drought there is not enough CAP water for both Arizona and California, California will get its share first, and Arizona will get the remainder, if any. We are currently experiencing a drought. Droughts are not uncommon. Finally, we live in a time of rapid global warming. Global warming is heating up the Southwest, which will mean an ever-increasing demand for water here and diminished snowpack in the Rocky Mountains, whence our CAP water comes.

For the reasons just stated, TEP should not be allowed to build a new plant that will use more water than its existing plant.

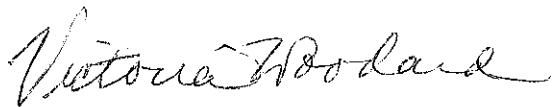
Additionally, the fuel that TEP proposes to use in its new plant contributes to global warming. Any Department of Environmental Quality, especially one in a "hot zone" like Tucson, should do everything in its power to reduce carbon emissions within its jurisdiction. While TEP's natural gas power plant emits less carbon than its predecessor,

the coal-fired plant (and I applaud TEP for switching from coal to natural gas), the burning of natural gas still emits carbon.

Worse, natural gas is methane. The methane in any natural gas that might leak, unburned, from TEP's new power plant, or from the pipelines that bring the gas here, or during production of natural gas, would have 28 to 36 times as much global warming potential as carbon dioxide. This methane "wild card" (including methane released from melting permafrost) is driving global warming at a faster rate than expected. Therefore, we should avoid using methane whenever an alternative is available. We should definitely NOT allow TEP to build a new methane-fueled natural gas plant with a life expectancy of 30 years. Instead, DEQ should require TEP to phase out its existing methane-fueled power plant.

Thank you for considering my comments. Please put me on your mailing list to be notified of your decision on TEP's proposal.

Sincerely,

A handwritten signature in cursive script that reads "Victoria Woodard".

Victoria Woodard
902 E. Halcyon Road
Tucson, AZ 85719
(520) 323-0555
tori_woodard@yahoo.com

**PUBLIC HEARING
REGARDING
THE PROPOSED AIR QUALITY PERMIT REVISION
FOR TUCSON ELECTRIC POWER
IRVINGTON GENERATING STATION
MARCH 28, 2018**

Hearing Officer:

Good evening and thank you for taking the time to attend this hearing. Today is Wednesday, March 28, 2018. The time is approximately 5:33 p.m. and the location is the Pima County Public Works Building, Lower Level Conference Room C, Tucson, Arizona. I am the hearing officer representing Pima County Department of Environmental Quality (PDEQ). I will be presiding at this hearing. I am the Air Program Manager for PDEQ. Other PDEQ representatives here tonight are PDEQ Director, Ursula Nelson; PDEQ Deputy Director, Richard Grimaldi; PDEQ Environmental Planning Manager, Mellanie Fuller; PDEQ Communications Program Manager, Karen Wilhelmsen; PDEQ Program Manager, Marie Light; PDEQ Communications Outreach Coordinator, Skye Siegel; Geosyntec Air Quality Consultants, Kate Graf and Brian McNamara; and EPA Region 9 Environmental Engineer, Lisa Beckham.

At this moment, we are conducting a formal public hearing. At this Air Quality Control District, PDEQ has jurisdiction over facilities requiring the Air Quality Permit in Pima County. The purpose of this hearing is to allow residents the opportunity to enter into record, oral or written comments regarding the proposed revision of the air quality permit. The facility Tucson Electric Power, Irvington H. Wilson Sundt Generating Station is located at 3950 East Irvington Road, here in Tucson and will hereby be referred to as TEP. By law, a public hearing must contain certain requirements. These are: a minimum 30-day advance public notice must be given in two newspapers of general circulation, the official common period for these TEP Air Quality Permit revision began on February 9, 2018 and has been extended from March 12, 2018 to March 29, 2018. Notice was given on Friday, February 9, 2018 and Friday, February 16, 2018 in the Arizona Daily Star and the Daily Territorial. The public must be given an opportunity to speak or give written comments during the hearing. Tonight the public has an option to do so and the comments may be received by PDEQ until 5 p.m. on Thursday March 29, 2018. A hearing must be conducted

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on record which means that it is recorded in some way. Tonight's meeting is being recorded. This hearing is considered a formal public hearing on the state law. A formal public hearing is different from the public meeting. In a public meeting there is an opportunity for questions and answers between the general public and the department. That opportunity and open house was held on February 15, 2018 from 5:00 p.m. to 6:30 p.m. at the Abrams Public Health Center. As for tonight, this is a formal public hearing. The representatives of the department will not be formally answering any permit related questions. In other words neither I nor anyone from the department will be answering any questions at this podium tonight. I can only repeat or clarify what I read to you. At the end of the 49-day public comment period, PDEQ will prepare written response to all questions and comments entered into record regarding the proposed permit revision. If you have any questions about the permit revision, please include them in your comments. All comments and questions about the revision should only address the permit and the Air Quality Regulations. The agenda for tonight's hearing is as follows: first, I will give a brief description about the Tucson Electric Power Facility and the proposed vision of the Air Quality Permit. I will then begin to call speakers in the order they signed in to begin taking public comment. This is a very structured proceeding. Follow these instructions for making public comment. If you wish to comment, you must write your name clearly on the yellow sign-up sheet on PDEQ's welcome table near the room entrance. This is not the sign-in sheet that shows that you have attended the event. This list is specifically to sign-up and verbalize your comments at this hearing. You will receive a number in order in which you signed up to speak and I will call the numbers in numerical order. You may approach the microphone when your number is called and provide oral comment. This procedure will allow everyone an opportunity to be heard. Please say and spell your name before you provide us your comment to help ensure that we transcribe it correctly in the record. I ask that comments be no more than four minutes so that everyone who wishes to make a comment has been given the opportunity to do so. After three-minute mark, staff will hold up a sign warning that you only have one minute remaining. In lieu of speaking, you may also submit written comments at this evening. Written comments can be submitted in the comment box located near the room entrance. If you wish to do so, you make both oral or written comments tonight. Once again, the purpose of this hearing is to receive comment from the public on the proposed permit revision for TEP. By law, all the comments made here or inviting are considered by PDEQ before our final decision is being

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made. The department has a duty to evaluate and respond in writing to all written and verbal comments that received. This document is known as the response to comments summary. It will be available at the time the department makes a final decision regarding the permit revision. If you wish to be notified about the final permit decision made by the department, please be sure to indicate that on the signing sheet. I will now give a brief summary of the TEP Facility and the proposed revision of the Air Quality Permit. For more detailed description of the facility and the permit we have hard copies of the proposed permit here tonight. We also have the permit application and all the supporting documents on our PDEQ web page pima.gov/deq. The Tucson Electric Power company owns and operates the Irvington Generating Station also known as the H. Sundt Wilson Generating Station, pursuant to Class I Air Quality Permit No. 1052 issued by Pima County Department Environmental Quality. The facility currently comprises of six electric generating units which have a combined net generating capacity of 417 megawatts. TEP requests subdivision to the Class I permit and authorization person to the preconstruction prevention of significant deterioration PSD permitting regulations. TEP seeks to expand the Irvington Generating Station and obtain an approval to construct of new effective sources under the National Emission Standards for Hazardous Air Pollutants (NESHAP). As part of the proposed expansion project, TEP proposes to install up to 10 natural gas-fired, reciprocating internal combustion engines ("RICE"), each with a net generating capacity of 19 megawatts. In conjunction with the RICE project, TEP will permanently cease operation of the existing steam generating Units 1 and 2, leaving the facility with a net generating capacity of 498 megawatts. The proposed RICE project constitutes a major modification for certain pollutants under the preconstruction PSD permitting regulations and requires a significant revision under the Title V Class I operating permit regulations. In other words, there is a potential for an increase in the amount of air pollution emitted by the facility and that is why the permit needs to be modified.

TEP currently plans to commence construction of the RICE project within 18 months following the receipt of the permit approval. TEP currently plans to complete construction and begin operation of the first five engines by the year 2020. TEP expects to complete construction and begin operation of the remaining five engines by no later than year 2022.

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This marks the end of the TEP facility and permit summary. We will now begin taking formal comment. I would like to once again remind people that if you wish to speak, please clearly write your name on the sign-up sheet near the room entrance. I will be calling up speakers to take public comment shortly. To ease transcribing the hearing later, please speak clearly into the microphone. Please begin by giving your name and spelling it so it can be entered into the record correctly and please limit your comment to no more than five minutes so everyone has a chance to be heard. Once my colleague, Brian McNamara, will be lifting up a sign of one minute just to ensure that you have an idea with the time remaining for your comment. We will now proceed with public comments. May we have speaker no. 1, please.

Our first speaker is Dr. Richard Powell – Speaker 1

I am Dr. Richard Powell. I am retired vice president for Research at the University of Arizona. I am currently working at the UA Tech Park on the solar zone, which is the largest project in the country for testing and demonstrating solar generation technology. We, all of us working at the solar zone are strong advocates of getting as much solar energy on the grid as quickly as possible, but one of the things we found with all of the technologies that we are testing is they all have a significant amount of intermittency and power delivery company like TEP can afford to put a lot of intermittent power generation on the grid without compromising its delivery capability. So we have to mitigate this intermittency somehow if we want to reach our goal of a lot of solar on the grid. As far as I know, there are two technologies currently available to do this. The first is energy storage and the current available technology for energy storage, lithium iron batteries, have problems in the low efficiency, high cost, limited life-time, and toxic waste when they have to be disposed. We just started a new project in the solar zone to study and develop new types of storage technologies which we hope in the future will take care of some of these problems with the current battery storage, but it will take some years before that occurs. The second type of technology to mitigate the intermittency is having a fast reserved source of power that can come online and go back offline to match the intermittency of the solar. The reciprocal internal combustion engines will do this. The current gas and steam turbines are too slow to do this, but we really urge that the

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permit for putting these RICE systems online gets approved so that we can have a lot more solar energy online. Thanks for your time.

The next speaker is Meg Weesner – Speaker 2

I am Meg Weesner. I currently service as the chair of the Rincon Group of the Sierra Club. We represent about 5,000 members, actually more than 5,000 members throughout Southern Arizona, most of them here in Tucson in Pima County. We are opposing this change that would allow higher levels of admissions at the TEP Generating Station on Irvington Road. Go back to the original clean air act and its purpose dates from the early 1970s, there have been amendment since then, that at charge the EPA with protecting public health that was the primary responsibility through the federalism principles that responsibility has been delegated to the Arizona DEQ and with their consent and the Arizona Legislature, it is further delegated to Pima County DEQ. So, I surmise from that, that your top priority is protecting health of the people particularly those who live around the station and allowing more emissions does not comply with that mission. More recently, the EPA took on the authority of controlling CO2 emissions to help protect against climate change and the courts have affirmed that they have the authority to do that here again. The propose change increases emissions of CO2. It allows more emissions and more heat and again is contradictory to the mission of the EPA delegated in the Clean Air Act Amendments. So, I think we need to move forward into the 21st century, not back into the 19th century and increased use of fossil fuels. We should be using distributed renewable energy and battery back-up systems instead. Thank you for your attention and consideration.

Hearing Officer: Thank you.

The next speaker is Grace Gegenheimer – Speaker 3

Good Evening. My name is Grace Gegenheimer and I am with the Tucson Metro Chamber. I am here tonight to support the purposed permit modification to the Tucson Electric Power air quality permit. TEP and the Pima County Department of Environmental quality have gone above and beyond during this process to work with all invested parties as well as to ensure all regulations and

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requirements have been met which will allow for an updated facility while taking into account public health concerns and future risks. It is also worth noting that TEP's transition to more fuel, efficient generators will wait to significantly less water consumption. Water consumption from energy production will be reduced from 60 million gallons of water to a mere 10,000 gallons of water on an annual basis and a city like Tucson where water is precious, this is significant. The current decades of steam units are not performing well enough to keep up with current demands, which ultimately creates inefficiencies with regards to TEP's ability to provide service. The new engines will easily surpass the old system and be able to better serve the needs of a growing region. This along with TEPs plan to expand renewable energy resources to 30% by the year 2030 are crucial steps needed to serve Tucson in the larger metro area. Thank you for your consideration.

Hearing Officer: Thank you.

The next speaker is Mike Carran – Speaker 4

My name is Mike Carran. I am concerned about the health effects of adding more and more carbon into the atmosphere. We already have extremely high rates of asthma. It seems to me that we need to move closer and closer to a distributed set of power through rooftop solar and do what we can to lessen the amount of fossil fuels that we are burning. Thank you for your attention.

Hearing Officer: Thank you.

The next speaker is Duane Ediger – Speaker 5

Good evening. My name is Duane Ediger. I would like to start just by thanking you for extending this public comment period. It is a very challenging thing to look through all of the laws that are involved in this decision and I hope that my doing that will be of assistance in your decision. I want to start with the ozone problem in Tucson. We are right at the edge of nonattainment with Clean Air Act standards for ozone which is 70 parts per billion and this fact has not been taken into account by the applicant. Precursors to ozone, VOCs and nitrous oxides, those emissions are going to increase and that is a part of the application to my understanding and the fact that we are

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at the edge of nonattainment for ozone has not been given due to consideration, hope you will change that. According to 42 USC, 74, 75 A3 we have to be sure that the emissions from construction or operation of such facility will not cause or contribute to air pollution in excess of among other things and allowable concentration and right at that edge of concentration even though the plant will not directly emit ozone, its emissions will become ozone in short order. I am going to take your attention to Appendix C of the application, Section 4.9, and there it is the TEP explains their model emission rates for precursors. Those models are ineffective. The recommendations of EPA for the application of these modelling has a strong recommendation to take local considerations into account and not just place it on the models. It is especially important in Tucson for a couple of reasons, one is the location of this plant, right next to I-10 where other emissions from automobiles are added to and aggravate the effects of the emissions from the plant. Another, is that biogenic ozone formation is a unique problem in Tucson compared to other urban areas and that is not taken in account for the models. The reason for that is that the trees that we grow here are not native to the area and they have a different emissions profile and that has not been taken into account by TEP. Parks, we have Saguaro National Park and other national parks, Saguaro Wilderness in fairly close distance. These are Class I status parks. The EPA itself and the Parks Association have taken to task the local need to meet clean air needs of these parks, 42 USC, 74, 75 D2B and D2C1 are the applicable standards. TEP's environmental justice argument. Their environmental justice analysis which is included in their application package makes a very clear analysis that the population characteristics in the immediate zone of the plant are very disadvantaged compared to, I will not go into the statistics there, but compared to other parts of Tucson and yet they claim that by the models there will be no effect on the health of these already struck communities by water contamination by the addition of the air pollution highly concentrated in that zone. We ask you to take a closer look at that. Finally, Clause 743 of the application claims that the definition of rise in legal standards does not fit electric generating units and on that basis they escape any accountability for greenhouse gas emissions. I do not know what the official classification of these RICE generators is, but greenhouse gas emissions is a big part of what they do and the heat they generate will affect. The nitrous oxide conversion to ozone and aggravate that whole situation, so please take that onto counter. Thank you very much.

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Hearing Officer: Thank you.

The next speaker is Russell Lowes – Speaker 6

Hello, my name is Russell Lowes. I am the energy chair for the Sierra Club Rincon Group locally. We know that lower income Americans get worst treatment environmentally. We know that Hispanic and black citizens are exposed to more contamination than Caucasian Americans. The Sundt Irvington gas plant goes along with the social, justices travesty in America, and Tucson Electric Power is up at fault in this case. A new study in the American Journal of Public Health made this environmental injustice very clear and this new report the disparities and distribution of particular matter emissions sources by race and property status. The authors' state, "those in poverty had 1.35 times higher burden than to the overall population". The report goes on the say blacks specifically had 1.54 times the higher burden than the overall population. We know that the area around the plant on Irvington has a higher percentage of poor residents and a higher percentage of people of color. It is a shame that Tucson Electric Power voiced this health burden on the population around the Irvington Power Plant. They could build cleaner, cheaper, power sources like solar affordable tax; they could encourage customers to use energy more efficiently reducing the need for power production. That they want to build more gas capacity than solar in their proposed integrated resource plan is impressively racist, classist and counterproductive to a healthy society. In regard to 42 USC, 7475, another outrageous aspect of the proposal to build these RICE gas generators is this; the thermal efficiency of this type of plant is terrible. The EPA Environmental Protection Agency shows that as these units climb in size measured megawatts of electrical output. Their thermal efficiency goes down. I have the documentation for that if you like. My multiple EPA web pages and websites in industry refer to RICE Generators as CHP generators. CHP means combined heat and power so you get energy from the plant from electricity and from heat. Without the CAHP component, that is when this technology generates only electricity is handicapped with a very low thermal output. All of the heat, the H and CHP will be wasted at a plant site like the one here in Tucson. The EPA sites indicate that the 10, 19 megawatt units of the Irvington site would get in the low 30's for thermal efficiency for about 32%. This is slightly lower than the efficiency of the outdated 1980's nuclear reactors like at the Palo Verde Nuclear Generating Station operated by Arizona Public Service. Hence, the water use will be very high due

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to subcritical temperatures within the generators and due to the low thermal efficiency. It is apparent that the water use will be about 0.8 gallons per kilowatt-hour from these water hogs. This compares to coal at the four corners region at 0.5 gallons and less than 0.3 gallons for state of the art gas plants with up to 60% thermal efficiency. This also compares to bigger TEP gas plants. They get about 40% thermal efficiency and about 0.5 g/kWh. So this will be far worse. It will be 0.8 versus 0.5. What this means simply is that because of the poor thermal efficiency, TEP would have to use about double the gas to produce the same electrical output of a more modern gas plant. This would produce about double the pollution, both thermal heat and particular waste more than a modern plant and I have run out of time here.

Hearing Officer: Thank you.

The next speaker is Oscar Medina – Speaker 7

Good afternoon. Oscar Medina. I am a member of Grassroots Organization called Tierra y Libertad, which resides on the south side of Tucson and I am a member of the Sierra Club on the executive committee for the Grand Canyon Chapter. Both of the organizations that I represent have a lot of respect for the air, the land, and the water. It is unfortunate that TEP does not see it that way. It is time for Tucson Electric Power to stop their dirty fossil fuel projects that pollute our community and threaten the health and safety of our families. We had such a strong turnout at each of these public hearings because our neighbors want clean air, our children want clean air. Let's take advantage of what is here, let's take advantage of the sun and the wind. These new gas units that TEP wants to build would cloud our air with carbon monoxide, volatile organic compounds and a range of greenhouse gases. TEP can meet its responsibility to Tucson by providing us with affordable and reliable energy that keeps our air and our water clean and safe for future generations. Thank you.

Hearing Officer: Thank you.

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The next speaker is Reverend Carol Rose – Speaker 8

My name is Reverend Carol Rose. I am honored to be here with these people. I am pleased that you are the servants of this county and I ask you to do your job to protect the air in this space. You have a legal out that will allow you not to approve this plant. The NOX, the VOCs will put us over the ozone level that is permissible, particularly doing that in an area that is vulnerable already attacked by multiple systemic oppressions as has already been said. So, because of systemic racism, environmental racism and because of health issues around air quality, you can say no to this plant and I ask you to do that. TEP does have other options. There are large battery storage options available that are used in Australia, that are used in other areas and those can store the power from the sun which is abundant in this area. That is what I want to say. Thank you.

Hearing Officer: Thank you.

The next speaker is Patsy Stuart – Speaker 9

Hi, my name is Patsy Stuart and I feel totally inadequate right now. I have been affiliated with the organization 350 which reemphasizes that scientist tell us that 350 parts of carbon dioxide or its equivalent is the maximum sustainable for the kind of planet that I was born on, and as you surely know, we are now over 400 parts per million. When I see the world that my grandchildren are inheriting it makes me very, very sad. So I am concerned about our environment on the other hand there are people that I respect that have a lot more education that say perhaps what TEP is actually looking for exactly what is economical and what is needed and it is your job to decide. If there are any other ways that they could provide the electricity that we need as a population and yet avoid the old technology of burning fossil fuel and look to the new generation of clean energy. We are so fortunate to have as much sun as we do here in Tucson and in Arizona in general. Morocco is on the same latitude and they are exporting their sunshine and their wind to Europe. It is unfortunate that we are importing fossil fuel to provide our energy when we have such abundant solar energy and wind, so I am a little confused as you may be also that I know that we all want the best for our planet and the generations that come after us so that they can live on a planet without the kind of horrific weather events that we are being experiencing, the droughts, the wildfires, the floods, the tremendous snow falls at one place and the lack of snow, the rising

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sea levels and sometimes we just have to get really hard ass and say this is the line you got to do better and I do not know what the right answer is, but I am glad it is not my job to decide. Thank you.

Hearing Officer: Thank you

The next speaker is Bill Kelley – Speaker 10

Good evening, Bill Kelley. I am here as a supporter of the proposed modification to their existing AQP No. 1052. I work for Diamond Ventures for Land Development Company. We have partnered with TEP with over a 100 megawatts of solar projects in our community. They are a leader in providing solar energy. They are going to meet a 30% requirement that they have mandate upon themselves by 2030 and its double the statutory requirement of 15%. Solar is great, but it has its down times and we need to be prepared in those down times. The system that they are designed will have the ability on demand to provide power. It is critical to our community, for our employers, for our life safety people, for hospitals. It is essential that we get this done and through. It also helps with recruitment of companies to our community like the Raytheons, like Comcast, like Homegoods that recently have been here. They employ our children and thank God for them being here. TEP has planted, has provided over 100,000 trees that shade our homes to provide further reflection of sun against homes that reduce heat gain in our community. We work closely with TEP. They are a great corporate citizen, a community leader and we very much support this proposed AQP 1052. Thank you.

Hearing Officer: Thank you.

The next speaker is Patrick Diehl – Speaker 11

Hi, my name is Patrick Diehl. I am here for Democratic Socialists of America and also group called Cokes of Campus opposing one of the chief climate denying groups, financing that kind of nonsense out there in this country. So, I would like to say that this morning I received a 40-page report from Environmental America laying out the case in detail that in fact the storage technology has efficiently matured to provide a viable alternative for TEP for instance to building more

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capacity. This is indirect contradiction to the statement by the first speaker today. I know that this is a controversial matter still, but I think that the DEQ needs to consider that there is definitely a good case to be made that TEP could handle the need for peak demand through storage of energy rather than building this considerable highly polluting additional capacity. I also want to say that given the existence in my opinion at least of an alternative to building this RICE 190-megawatt plant. The suspicion arises that TEP may be interested in selling power to other power using districts during peak demand periods at a very high price, understand something like 10 times a normal wholesale price and in addition, it is well known that TEP and stockholders are rewarded for investing heavily in capital projects that the Arizona Corporation Commission will raise rates and create a rate of return which affectively incentivizes TEP for investing in big projects like this one. So, it is my opinion that through battery storage and other forms of energy storage through conservation measures which TEP should be promoting much more aggressively through energy management it will quite unnecessary for this project to be built and I also resent that quite possibly the power will go elsewhere to other parts of the country and the pollution stays here specifically on the south side, but in the base in general. This to me is treating Tucson like a third world city. Thank you.

Hearing Officer: Thank you

The next speaker is Megan McAndrew – Speaker 12

Good evening, my name is Megan McAndrew. I am a teacher, musician, and resident of Tucson. I am going to try to say this as simply as I know how. If Stratospheric Aerosol Geoengineering is limiting the production of solar power in Tucson, I feel that this fact should be made publically known. If atmospheric manipulation of any and all kinds and/or the policies behind atmospheric manipulation are limiting the implementation of renewable energy resources, this fact should be widely advertised and made known to the general public so that we can have a more informed approach to evaluating energy policies. I do not support significantly harming our planet in the name of certain types of jobs. Thank you.

Hearing Officer: Thank you.

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The next speaker is Constance Aglione – Speaker 13

Hello, my name is Constance Aglione. Thank you for the opportunity to make comment. I am a retired nurse and social worker, so I am particularly interested in addressing the environmental justice aspect of the new plant. In their proposal, TEP leave many unanswered questions I believe in this area. Their proposal does note that Executive Order 12898 states that every federal agency shall make achieving environmental justice part of its mission. Their proposal also does note that there is a stark socioeconomic divide between the population in its 38 square mile impact area compared to those who live outside of the shadow of the plant. They mentioned all this. We also know that the proposal will be causing a net increase in pollution including particulate matter, carbon monoxide, volatile organic compounds, nitrous oxide and Sulphur hexafluoride. None of this is good for the community. There is an analysis in TEP's proposal, but they really do not address the health effects for the local community. My question is why are we going to saddle the population in the area that is proposed for this rebuilt for many, many years to come. When we are at a pivotal moment in technology when clean energy and battery storage developments are quickly becoming affordable realities. You do not have to look very hard every month now to hear news about California going to the solar and battery storage. There was a lot of news about what is happening in Australia. Bloomberg news had a recent article. All these things are happening. When this was first proposed, I do not think this news was out there, so I am not even blaming TEP for going forward with this, but I think a step back has to be taken to say we are at a different point in time now and there is too much at stake for us to keep what will soon be an antiquated facility. I think to bring it home all of us can just think back 10 or 12 years when we were buying our TVs or computers and our phones and we are waiting here because it is going to change, it is going to change and you know it did. Think back to what you had that short time ago. So, I think a parallel can be drawn with this. I think we need to look to the future and not to the past. Thank you very much.

Hearing Officer: Thank you.

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The next speaker is Robert Bulechek – Speaker 14

I am Robert Bulechek. I am a member of Tucson's Commission on Climate, Energy, and Sustainability. New investment in fossil fuels air polluting generation is not in the interest of the residents of Pima County. Recent projects completed in Australia and elsewhere are showing that the combination of renewals, storage, and demand management are already less expensive and faster responding than the proposed RICE units. Capital investment in new air polluting generation is an prudent investment and an prudent public policy. Natural gas price volatility is a risk to TEP rate fares, health care cost related to the air pollution down into the plant are fact for local residents. I ask you to make the evidence based rationale decision to reject TEP's air pollution permit. Better solutions in the form of renewals storage and demand management are already demonstrating their advantages. Let's take a step into a cleaner future and not a step back into the polluting past. Thank you.

Hearing Officer: Thank you.

The next speaker is Elena Ortiz – Speaker 15

Good evening. My name is Elena Ortiz. I am a native Tucsonan. I grew up on the south west side and I currently work for a local nonprofit and we spend our time planting green spaces and building gardens and growing food with folks in predominantly low-income neighborhoods. Last summer, hope you all recall, we had a record high poor air quality numbers that were exacerbated by high temperatures and poor alternative public transportation. As a local Tucsonan, I am really worried that this will only continue if we do not do something about it now. Tucson should be a leader in solar and that is not currently, what we are doing. I want to see Tucson and our largest power provider TEP investing in sustainable renewable energies that keep our air clean and create green quality jobs. Investing in its gas-fired plant is foolish, shortsighted and we will just increase the impacts of climate change. Investing in this gas fired plant in a predominantly low income, Latino neighborhood is a form of environmental racism and I think everyone who came before me and spoke that out very clearly. I would urge you to reject this permit request and really encourage and pressure TEP to invest in greener options. Thank you.

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Hearing Officer: Thank you.

The next speaker is Rob McLane – Speaker 16

Hello, my name is Rob McLane. I work in solar. It is a great job. It does not pay anything like working for TEP, but I am outside all day and I learn a lot and these are the kind of jobs we can have in Tucson. They can be stable. They can be long-term careers and that is what we can have if we take the forward looking approach of encouraging and using and being on the vein guard of renewable energy and reject the filling past approach of fossil fuel energy and the idea that we need to attract large corporations to our city in order to have jobs, I think this is a fallacy. We can create our own jobs. We have lots of people in our communities with lots of skills and if we take, the forward-looking approach we can have our own jobs without asking large corporations to come here and pollute the water like has happened in the past and we do not need that for the future. So, I asked you to consider everything that has been said before about environmental racism and the possibility for different way of creating jobs in our communities. Thank you.

Hearing Officer: Thank you.

The next speaker is Bob Cook – Speaker 17

I am Bob Cook, Pasteur of the Tucson Pima Metropolitan Energy Commission. The issue before us today is whether Pima County is representing all the residents and taxpayers of our region will honor its commitment to the Paris Climate Accord and reject TEP's request to operate CO2 emitting gas, natural gas burning engines to produce electricity. Natural gas does produce less CO2 than coal when combusted, but natural gas is mostly methane and the method used in producing this energy source is the problem. Recently, NASA scientist confirmed that the oil and gas industry is responsible for the largest share of the worlds rising methane emissions, which are a major factor in climate change. Methane is a major greenhouse gas capable of trapping 86 times as much heat as the same amount of CO2 in the first 20 years that hits the earth atmosphere. So relatively tiny amounts in the air can pack up massive climate changing punch. That is why methane is a global warming amplifier. The sharp increase in methane emissions correlates closely with US fracking boom leaking and inventing of unburn gas makes natural gas even worst for the climate than coal.

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Researchers of the Tindal Centre for climate change research find that there is categorically no role for bringing additional fossil fuel reserves including gas into production. They explain that we have simply doddled too long and if we were to have any possible chance of staying below 2 degrees, carbon dioxide emissions need to be driven to near 0 levels by mid-century. Particularly for the industrialized countries which have historically generated the most cumulative carbon pollution. Twenty years ago, the thinking was different. America's leading renewable energy scientist, Gary Lovins, advocated transitioning from coal to renewables by strategically employing natural gas as a bridge energy source, but that was during the time of conventional natural gas production, not the fracking technology used today. The evidence now is overwhelming that natural gas has no net climate benefit in any time scale that matters to humanity. In fact, it is shocking news study conclusive just the methane emission escaping from New Mexico's Gas and Oil Industry are equivalent to the climate impact of approximately 12 coal-fired power plants. By delaying deployment of renewable energy technologies, we may actually exacerbate the climate change problem in the long term including catastrophic levels of warming. Let the public record show that citizens of Pima County in 2018 have had enough of the horrible energy and climate policies in this country, the state, and in this County. We demand science-based energy policies not short-term driven decisions, which benefit utility investors. Private investors which are guaranteed 10% return on their capital. Let's not become a climate unfriendly P.C. Folks, we are flirting with an unfolding catastrophic future and ultimately extinction. The last thing I want to say is I want to respond to the first speaker. Northern Europeans are not stupid. They have solved the intermittency problem with their massive investments in wind and solar with pump storage using gravity. They use gravity and water and it works very fine. There are internal combustion engines that produce no greenhouse gas emissions. They combust hydrogen. There are options, but we must use science to make decisions. Thank you.

Hearing Officer: Thank you.

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The next speaker is Jessica Cary-Alvarez – Speaker 18

My name is Jessica Cary-Alvarez. I spoke a couple of weeks ago when you guys had the first meeting, not the first meeting, but the first public input meeting. I missed the very first one so I did not get to ask a lot of questions unfortunately which I would have a lot and last time when I spoke I did not have lot of, my tee's crossed, my eyes dotted and stuff like that. This was just mostly passion which I have a lot of. I have a lot of passion about this topic. I have done a lot of research in the last couple of weeks. I have done a lot of research and you know when I was a little girl growing up if somebody had asked me what do you want to do in the future. What do you want to do? Never, ever would watching the sixth mass extinction of our planet be on my list. Never. I have a yard full of birds. Every day I get up, I got to feed my birds. The lesser long nosed bats, they come through my yard every year, twice a year, every morning even my days off, I am up by 4 o'clock in the morning, put my hummingbirds feeders back out for my hummingbirds because I got so many of them. Every single one that shows up in my yard is a miracle. They have traveled so far. They have gone through so much. They deserve a chance. All of our birds deserve a chance. Our cats deserve a chance. Our planet is in horrible shape and it is our fault. We have nobody to blame but ourselves and we can do better. We can do better. The methane emissions that he was talking about, that is a huge part of it. The scientists are saying if we can get the methane and the black carbon under control, if we can get them under control now that will buy us a window of time to try to keep the CO2 from wiping us out. So, we have got to look at the methane. You have got to look at the trial of where this gas is going to come from. I understand that the TEP reached out and they did their study with EPA. I am sorry; I have zero faith in Americas' EPA anymore. Scott prove it, Donald Trump, no, they do not have our backs and I am only hoping that you have our backs. You are one of the groups that we can still trust that you are watching out for us. Because you know what, I am one of the people at the bottom. I am blue collar. I do not have a lot of money. Climate change comes in, it starts mucking things up in Tucson and don't worry it is going to get here, too. It is not just going to be hitting the people on the eastern coast and stuff; we are going to feel it. We are going to feel it hard. I am very worried about monsoon season and the heat of summer and wildfire season. I would not be able to just speak up and go. I would not be able to just go buy a new home. I would not able to make modifications to my home. I would not have those kind of financial options. I work in a place right by the wash. I

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stand there some days and I look at it and I think if the wash floods, will I still have a job. I will be like those people in Houston and I would not have a job. We have to look at the effects of what we doing. We have to look at moving forward. Therefore, if they spend a fortune on these new RICE engines, then they are not putting that fortune towards other thing and as far as TEP is saying that, they cannot figure out the storage to make sure that we do not have intermittent flow. You know if they had not stomped on the buyback of the solar power from the citizens. If they had not stomped that down so severely and if they had further help to develop solar panels on roofs and us being able to sell the solar back to them, they would not have to store so much because we will be storing that in our homes and they did not look at that or maybe they did and it did not put enough money in the right people's pockets. Please think about us when you make these decisions, please.

Hearing Officer: Thank you.

The next speaker is Merrill Collett – Speaker 19

Good evening. My name is Merrill Collett. I am a resident of Tucson and I am speaking in against this permit. Other speakers have done a great job of addressing the environmental and health and social justice damage done by this proposal. I would just like to underscore how backward this project is. We know that fossil fuels do us and have done us a lot of damage. This plan is a fossil in itself. This will be hanging us with the past and I want to stress this by bringing in some news that may be news to everyone, almost everyone here today and I reading this out of the New York Times. This comes with the new budget that was just passed by Congress and signed by the President grudgingly because some of it includes some remarkable support for renewable energy research and development, buried into this bill is big money for the office of energy efficiency and renewable energy that has helped to reduce the cost of solar power. They got a 14% bump. The advanced research projects agency/energy which funds long/shot technologies like LG Biofuels got a 16% increase. So, I want to quote down here why this is so remarkable. Tarak Shah, a former chief of staff to the Under Secretary for Science and Energy pointed out that the Paris Climate conference in 2015; President Barack Obama said a goal of doubling federal investment in clean energy research. At that time, it seemed impossible, but during the Trump era of all things, Congress has essentially put the country 1/5th of the world there. So, Mr. Shah says this is

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“absolutely huge for energy innovation.” Now, which side of history does Tucson want to be on here. Let’s align ourselves with the future in which we can see across this basin, breathe in it, and live in it and on that point to conclude coincidentally there was another nice piece in the Times Today on the front page saying what a great place Tucson is to be in. Let’s keep it that way. Deny this permit.

The next speaker is Diego Martinez-Lugo – Speaker 20

Diego Martinez-Lugo. I do not think I need to repeat what has been passionately said and what you all already know. The burning of natural gas contributes to climate change, poses a threat of respiratory diseases like asthma and pollutes local communities. This has been stated Arizona is the highest potential for solar in the country and TEP should be investing in clean renewable energy instead. What has been touched on, but will need to be stressed is that the impact area has an 85% minority population and 63% low-income population. The south side is predominantly Latino and working class and has been historically marginalized. This plant will continue that oppression. This plant will poison. It will poison the Southside of Tucson and is blatant example of environmental injustice and environmental racism. Would TEP board members want these methane producing power plants in their own backyards, we all know the answer to that. They do not live in the south side. They are putting these plants in brown and black communities. Members of DEQ, you said you have a duty to evaluate and respond to our public comments. The technical, economic and climate arguments against this plant are painfully clear. You all understand this. The issue is a moral question. Time and time again, community member show up to the commenting periods like this and repeatedly we get ignored. All community members have asked you to reject this plan. Only two have supported. Corporate interest that approve of warfare and death like companies like Raytheon. The question is will you listen to the community members that will be effect by the plant or will you sell out to corporate interest who have won only one consideration, their bottom line. Thank you.

Hearing Officer: Thank you.

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The next speaker is Victoria Woodard – Speaker 21

Good evening. My name is Victoria Woodard. I want to thank you for hanging in here with us with all these comments. I moved to Tucson 10 years ago for my health. I have a medical condition called multiple chemical sensitivity. This condition is recognized by the social security administration and people can qualify for social security disability if the condition is debilitating enough. However, with good air quality many people with the condition can work and be productive citizens. It is hard for someone with multiple chemical sensitivity to find a place to live with good air quality. Tucson's air quality is pretty good as cities go. So more than 10,000 people with multiple chemical sensitivity live in and around the city. For us the prospect of a new polluting industry is especially threatening. So, we oppose construction of the proposed new plant. So, I am going to hand in my written comments. I am not going to go into the things that people have already said about the environment mostly. I would like to talk a little bit more about the water issue. I know you are interested in air, but we all live in a desert, so I understand there is a controversy about whether it is going to use more of water or less water, I think it is going to use more, but in any event Tucson should never waste water, I asked you to check into that and see how much water will this plant use. We do not have enough groundwater to support the number of people who live here. We are dependent on CAP water from the Colorado River. Arizona has junior water rights to California, which means if during a drought there is not enough CAP water for both Arizona and California. California will get its share first and Arizona will get the remainder, if any. We are currently experiencing a drought. Droughts are not uncommon. Finally, we live in a time of global warming. Global warming is heating up the southwest, which will mean an ever-increasing demand for water here and diminish snow pack in the rocky mountains where our CAP water comes from. So the other thing that I think people did not say quite loud enough is that we should definitely not allow TEP to build a new methane fueled natural gas plant with a life expectancy of 30 years or whatever they think however long they think it is going to last, usually last 30 years. That is too long. By then the technology will certainly have surpassed it, so I ask you to deny their request for permit. Thank you.

Hearing Officer: Thank you.

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The next speaker is Sal Amador – Speaker 22

Hello, my name is Sal Amador. I also work in the solar industry, but primarily I come to speak to you today as a member of Chukson Water Protectors, which is an indigenous environmental protection organization that focuses on the Tucson Watershed and the health and vibrancy of this community. I think that the reality if you look at the room as you have already heard facts and figures galore. So, I am going to dive into that, but I am going to talk about quality of life. Tucson is a wonderful place to live. The reason is it is a wonderful place to live is, not because of giant corporations and you know business friendly environment. All these things that people try to put out there to say that this is what produces quality of life, this is what produces wealth, this is what produces a vibrant community. The truth is that its culture, the Tohono O'odham people live here 4,000 years and they will give me wrong, there is no perfection, you know so I am not going to romanticize me as an indigenous person. I am not going to romanticize that. The reality is they had to learn how to live in balance with the land and that is our responsibility and that is you all's responsibility. You are here to protect this land and this people. I understand that you are constrained, that you are dealing with interest beyond your own in terms of the government, in terms of corporate interest, in terms of like, money and power, so I understand that you all are not powerful, but the reality is I do not have to say much, the room has spoken. And, working in this industry, working where we work out we see it every day. The reality of the pace of innovation that is happening is wonderful. In terms of battery storage, in terms of methods beyond batteries, in terms of like that there is no excuse. TEP has been operating over there on Alvernon or so for a long time. I almost bought a house over there years ago, but I did not because of the same that the time they are producing coal or they are burning coal and when you bring coal you get mercury and then on and on and on. I do not understand why them, as this corporation that actually wants to be around and wants to be viable in the future, why they would take a step backwards. I do not understand why they as this company that tries to promote sustainability and shows themselves in that light actively goes after the solar industry and actively tries to promote technologies they know are not sustainable and I am not talking about environmentally sustainable, but financially sustainable. So, it must be a short-term power and control thing, profit I am assuming. I am not sure, but I hope that you all set all that aside. Hope that you all stick to where your focus is. The reality is the environment and think about what you have heard in terms of the environment. As

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you have heard in terms of the way that like electrical power generation is possible within our environment and the fact that we have the sun, the fact that we have the technology. So, please step forward into the future, help us out as a community. Trichloroethane was particularly problematic and at that time the aviation industry would have told you, oh no, no we are here to promote jobs and bring wealth this community and bla, bla, bla, but that was not the reality and really they knew it. So I will leave at that, say please protect the air, please protect the water by extension, protecting the people, protecting the culture, protecting the beautiful vibrant Tucson region that is why people come here, that is why business has come here -- is that because it is beautiful here and because it is multicultural here. Thank you.

Thank you.

The next speaker is Bob Freitas – Speaker 23

Good evening, my name is Bob Freitas. I am a Tucson resident and also, full transparency, I have a small solar energy and LED lighting company. I am speaking strongly for preferred alternative for solar plus storage. You have heard a number of speakers talk about storage. There are three primary viable storage technologies right now: lithium batteries, flow batteries, as well pump storage and number of speakers have addressed those. TEP has an opportunity, with university of Arizona at the solar zone in the Tech Park, to promote this on a large scale. Already, there is a megawatt hour scale storage unit operating very successfully there. I respect greatly Dr. Powell; also, the solar zone is not an end point. It is a starting point. TEP needs to move forward, needs to be a leader in this area. Also in looking at the cost curves, the folks during the economic analysis at TEP really need to take a look at where do those cross curves cross. Having gas speaking power plants where a 30-year life span built now may not be the best financial alternative and we know that they are not a preferred alternative for clean air. Gas plants while they are much cleaner than coal by about half still pollute with priority pollutants as well as greenhouse gases. We need to pay attention to this. We asked the TEP also pay attention and pay attention with the bottom line. This is not the future. We are asking for future and forward looking stance from our utility. Ironically, the Arizona corporation commission has just issued an order for the integrated resource plants that all the utilities must submit. He resubmitted emphasizing storage and renewable energy to a much greater degree than they currently are. APS looks like it is opposing it. TEP generally follows in

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APS this wake. We asked the TEP take a leadership position now. The Arizona Corporation Commission has given an opportunity. He has opened a window with the request for new integrated resource planning. This is an opportunity. Please take it. Thank you very much.

Hearing Officer: Thank you.

The next speaker is Michael Cease – Speaker 24

My name is Michael Cease. I am a licensed professional engineer. I also serve as the chairperson of the Green Party of Pima County. I wanted to share with you a little bit about my professional background. I have the privilege to work at what was then the Solar Energy Research Institute in Colorado back in the late 1970s and early 1980s dating myself by this that organization is still around, it is known as NREL, National Renewable Energy Laboratory. One of the projects that I was assigned to work on was renewable energy storage for intermittent sources of energy such as solar and wind. Renewable energy storage technologies were available decades ago. There is no excuse for TEP to be investing in fossil fuel. The fossil fuel industry has brought us pollution, disease, global climate change as other speakers have noted eloquently. The era of fossil fuel is over, solar energy now. Thank you for your consideration.

Hearing Officer: Thank you.

The next speaker is Carmen Castillo Robles – Speaker 25

Hello, my name is Carmen Castillo Robles. I would like to first read on behalf of Linda Robles with the Environmental Justice Taskforce. She is our leader and this statement is basically written by her. The Environmental Justice Task Force, EJTF, charges environmental racism and calls on the Pima County Department of environmental quality to reject the air permit for the TEP sun plant. The Southside is still reeling from decades of exposure to TCE 1, 4-dioxane and other chemicals and the burden of so much environmental illness caused by the TCE water contamination. We have an epidemic of cancer, lupus, birth defects and the city and the county are not recognizing or doing anything about it. This is an outrage. We cannot accept any more pollution. There are plenty of clean energy options available. Ya basta, enough is enough.

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Environmental racism is a placement of environmental hazards by corporations and areas where high numbers of minorities and low-income populations because they are considered to have less political power to resist being dumped on. The TEP Sundt plant is located in Tucson south side, which is predominantly Hispanic and low income. Speaking from myself, I am a lifelong resident of the south side. It has taken me the loss of many close family and friends, close relatives and my own illness, which I do not wanted to delve into, but it is I believe environment caused. It caused me to go on social security disability at 40 and 50 years, all down. I am tired of seeing the suffering and my family friends and neighbors with debilitating disease, cancers. My own father suffers from severe C.O.P.D. Jose Carlos Castillo, he was good family hard working class community. We are tired of dealing with this pollution of our water. Clean water and clean air is life. Without the clean, there is no life. Our lives matter as much as everybody. So on top of what everyone else said and as far as how it is going to affect the community, not just the south side, but Tucson. Please consider denying, declining this permit, stop the pollution. There are other options, solar energy. That's it, thank you.

Hearing Officer: Thank you.

The next speaker is Laurie Jurs – Speaker 26

My name is Laurie Jurs. I am speaking to the flawed modeling to be found in this permit application. You can find the background in section 4.9, pages 4 to 16 of Appendix C, Impact Analysis. It offers an explanation of why the modeled emission rates for precursors MERP were applied only to volatile organic compounds and not to nitrous oxides. This is possible because Tucson is still officially in Ozone attainment or certain marginal or certain boundary area that allows pollution to keep getting worse. On top of that, geographical divisions that were averaged for that as supplied by EPA for central eastern and western United States do not necessarily apply for the greatly aggravating and changing conditions here in our Sonoran desert. We are probably in a mega-drought, hotter and drier than ever and I think that should be taken into consideration as you evaluate science based and evidence based models. At least two other local conditions that aggravate ozone creation are not reflected by the MERP modeling applied used by the applicant. The location of the generation station is one of them right by north of I-10 which has a huge amount

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of vehicle traffic forming ozone pollution through VOC and nitrous oxide emissions. This should be taken into consideration in the morning and evening rush hours. Tucson also has a higher proportion of non-native trees that needs to be taken into consideration as well then more than most urban settings and many of them contribute more than we realized until now based on current science to biogenic ozone formation. So please take a hard another look at this. I have a master's in public health myself and a deep commitment to science-based and evidence-based modeling and modeling in general. I have always stick up for that and I think you should take another hard look at it. From what I have seen today and what I understand about this flawed modeling, I am opposed to the modified permit and I hope you will be too.

Hearing Officer: Thank you.

The next speaker is Edwardo Quintana – Speaker 27

Hello, my name is Edwardo Quintana. I am with the Environmental Justice Task Force. I was one of the founders of Tucsonans for a clean environment. That is a group of neighbors and working people in the South Tucson that organized to fight the TC pollution back in 1985. In the mid 1980's, Tucson was the largest city in the country that relied completely on groundwater for its drinking water, woke up to find out that not only was the aquaphor contaminated, but the people were dying and getting sick of lupus, and then cancer and having lots of birth defects because of the contamination from the military industrial facilities at the airport and the regulators failed this. The pollution had been going on since the late 40's throughout the 50's, throughout the 60's, throughout the 70's into the mid 80's, these industrial facilities have been dumping their toxic chemicals in the desert where they percolated down into the aquaphor. They are still percolating down into the aquaphor. There has been millions of dollars that have been spent on clean-up of the groundwater, but very little attention has been put on the horrible suffering of the people that have to deal with cancers and birth defects in their lives every day. Now you have a chance to change the paradigm. Regulators failed this, they listened to the developer, they listen to the realtors who were focused on private profit instead of public good. You have a chance to change the picture. You have a chance to protect the population. Thank you.

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Thank you.

The next speaker is Coral Bowman – Speaker 28

My name is Coral Bowman. I first visited Tucson in 1985, fell in love, moved here in 2001 after visiting many times. I came here with adult onset asthma; I still have that. I get a daily email from ADEQ and for those if none of you have asthma or lung disease, you have to check it every day because once it hits the model arranged for particulates ozone, which is only 50 parts, you need to close your windows. You need to not exercise outside, which means for a lot of the beautiful times of the year here I cannot go outside. I was a teacher in many of the schools in TUSD. I am very familiar with many children, unable to go out at recess, coughing all day. I live just north of the base. I would like to live into Tucson. I do not want to live in Marana or valley, but I am very concerned about the station and what will happen. Because it may mean, although I thought Tucson would be my final resting place, I may not be able to do that just because of the pollution. I lived in Australia in 1970's and I am very disturbed here, in one sense how far ahead they are when I lived there, they were considered 20 or 30 years behind the United States. And, to see places like Europe and Germany, Australia, you know even China, working with their issues and anyhow we have not moved ahead. So I really encourage you to like you know, in Obama's words have an audacity of hope, make a leap ahead, do not take this baby step of approving, transitioned from coal and natural gas. So I just wish that you would have the courage, the ability to have the courage to go ahead and just say no and what can unfold is that we will do something else and Tucson a few years ago was looking for a slogan and so I say for Tucson, Pima County, what about national leader in clean energy. What about we drop people here because of our clean energy not playing catch-up or trying to court companies who will not support that mission, so please if you can have that courage inside yourself to say no now and work with TEP. We are all grateful for the power, but we need a different plan. Thank you.

Thank you.

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The next speaker is Barbara Coon – Speaker 29

Good evening. My name is Barbara Coon. I am a retired biology teacher. I taught here in Tucson and a couple of years in Africa as well. I would like to throw something into the mix that may have escaped people's notice. It is an event that occurred in our friendly neighbor to the North Phoenix. It was reported in the local paper, March 8, 2018. The headline, utility votes to pursue deal to end lawsuit with solar city, so in Arizona based utilities company that is the Salt River Project could settle its three year old lawsuit with an Arizona solar energy equipment supplier by buying massive batteries from the company and giving incentives to customers who want to put batteries on their homes, which is one step further than roof top solar. The deal could make it cost-effective for customers and Saw River projects electric utility area to install solar. January of this year, I was in a bus load of Tucsonan's who went up to testify, fruitlessly it turned out, to the Arizona Corporation Commission to allow a better buy back deal for roof top solar customers. We were astonished to see no solar roof tops insulations in Phoenix on the route of our bus when we went out to eat lunch, no solar, what is this. That is because SRP did not allow a favorable or even a fair buy-back of the power generated on the rooftop so nobody was going to invest in it. It took the threat of a Supreme Court hearing. On the suit between Salt River Project and Solar City. He took that threat to turn back the mighty SRP and make them not only stop in their tracks, but reverse their course and as it says here could make it cost effective for customers in SRPs utility to install solar. Therefore, that happened up north, under the threat of a lawsuit. We can do better than that. We do not need to waste lot of money on lawsuits and defenses and blab blab...Do the right thing the first time and it would not go to court. Thank you.

The next speaker is Jana Segal – Speaker 30

I am Jana Segal and I am a member of Sustainable Tucson and we are here today because we are supposed to be responding to how TEP's permit follows the rules of the Pima Code, but there is a huge problem with that and that is why that so many people probably have not responded to it. It is really hard because the code does not even reflect the current scientific knowledge that most of the people in this room have. That there should be limits on carbon dioxide. So I am asking that PEDQ delay this decision until their code actually be reflects, current scientific standards and

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knowledge. To reiterate the ozone level, it is just on the border of being classified as a non-attainment area. Nitrogen oxide from the RICE engines would put it over the top, but there has not been a new evaluation since the beginning of the Trump administration. I think that this should be delayed until there has been an evaluation made on that. Carbon dioxide is not a part of the Pima Code and it is the PDEQ's job to protect the environment including air quality. How can that be done without that standard? The decision about this permit should be delayed into regulations include carbon standards. Thank you.


Hearing Officer: Thank you. I believe number 30 was the last speaker. Do we have any other people that wish to address any comments here tonight.

The time is 07:04 p.m.. Before closing, I would like to give a final opportunity for anyone to make comment and I see no one has come forward. We will now close the hearing. PDEQ would like to thank you for those who attending and those who have provided comment and the hearing is now closed.

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Please Sign In

PLEASE PRINT CLEARLY

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PATRICK S. DIEHL	Address 902 E. HALCYON ROAD, Tucson 85719
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail patrickdiehl1@yahoo.com
Barbara Warren PSR-A2	Address BWARREPS1@GMAIL.COM
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
Laurie Jurs	Address 3550W. Calle Uno, Green Valley, AZ 85622
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail planetjurs@mac.com
Marcos Esparza	Address 115 N Euclid Ave. Apt B, 85719
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail marcos.esparza19@gmail.com

**TEP Air Permit Major Modification Request Public Hearing
Wednesday, March 28, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
	Address <i>1422 N. Painted Hills Rd</i>
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail <i>WETFINNER@FRONTIER.NET.NET</i>
	Address
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail <i>repowell@u.arizona.edu</i>
<i>Meg Weesner</i>	Address <i>9352 E Trail Ridge Pl Tucson</i>
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail <i>mweesner@att.net</i>
<i>Ken Bierman</i>	Address <i>2926 N. Mountain Creek Way Tucson 85705</i>
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail <i>KBierman1@gmail.com</i>
<i>DON KUNZLER</i>	Address
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail <i>DKUNZLER1@COMCAST.NET</i>
<i>Alaina Pierce</i>	Address
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail <i>alaina.pierce@gmail.com</i>
<i>Elena Ortiz</i>	Address <i>414 S. 3rd Ave #7, Tucson, AZ 85701</i>
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail <i>emortiz9@gmail.com</i>
<i>Charles Komadina</i>	Address <i>TEP</i>
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail

TEP Air Permit Major Modification Request Public Hearing
Wednesday, March 28, 2018

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
Daniel P Stormont	Address 4743 E Mabel St, Tucson AZ 85712
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail daniel.stormont@gmail.com
Catherine Williams	Address 2249 E. 2nd St, Tucson AZ 85719
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail dairyqueen@uwalumni.com
RICHARD MEYER	Address 3785 N CAMINO DE OESTE
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail DRMEYERAZ@HOTMAIL.COM
Rudolf LambrechtSP	Address 3055 N Sparkman Blvd 85716
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail rudolf2002@yahoo.com
Sandy Bahr	Address 2046 N 10th St Phoenix 85006
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail sandybahr@sicorsclub.org
LEIF ABRELL	Address 3136 E WAVERLY ST, TUS 85716
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail LAGARTICA@hotmail.com
Duane Ediger	Address 511 N Cuesta Ave
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail duaneediger@gmail.com
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail

**TEP Air Permit Major Modification Request Public Hearing
Wednesday, March 28, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
Jeffrey Eighmy	Address 62820 E. Harmony Dr
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail eighmyjeff@gmail.com
Constance Aglione	Address 1002 W. Placita Agradable, Green Valley AZ 85614
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail caglione@gmail.com
Ivy Schwartz	Address 3211 W. Westwood Pl Tucson AZ 85745
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail Ischwartz3211@cox.net
Rob McLane	Address 1724 E Miles St
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail rob.mclane@gmail.com
Victoria Woodard	Address 902 E. Halcyon Rd., Tucson AZ 85719
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail tori-woodard@yahoo.com
CORAL BOWMAN	Address 5941 E. 17th St. Tucson 85711
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail cbowmanaz@hotmail.com
Andrea Quirós	Address 9060 S. Comanche
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail alfana2@yahoo.com
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail

**TEP Air Permit Major Modification Request Public Hearing
Wednesday, March 28, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
Andrew Bennett	Address 2707 E Adams St 85716
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail andybeant@gmail.com
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
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	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail

**TEP Air Permit Major Modification Request Public Hearing
Wednesday, March 28, 2018**

Please Sign In

PLEASE PRINT CLEARLY

Name/Business	Contact Information
Bill Kelley	Address 2200 E River Road #115 85718
Contact me with permit decision: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail
	Address
Contact me with permit decision: <input type="checkbox"/> Yes <input type="checkbox"/> No	E-Mail

Appendix D

Public Comments Received Documents

COMMENTS RECEIVED DURING PUBLIC NOTICE PERIOD

Date Received	First Name	Last Name
January 26, 2018	Janet E.	Horton
January 26, 2018	Nathan	Sady
February 12, 2018	Oscar	Medina
February 28, 2018	Terry	McDaniel
March 2, 2018	Stuart	Moody
March 3, 2018	Meredith	Skeath
March 5, 2018	Susan	Willis
March 12, 2018	Betty	Hartzler
March 15, 2018	Anne	Gooden
March 16, 2018	Jackie	Kain
March 16, 2018	Kathryn	Pensing
March 15, 2018	-	tasavage@hushmail.com
March 16, 2018	Tina	Schlabach
March 26, 2018	Susan	Waites
March 28, 2018	Gabby	Martin
March 29, 2018	Alex	Kosmider
March 29, 2018	Brian	Park
March 29, 2018	Joanie	Sawyer
March 29, 2018	Karen	MacDonald
March 29, 2018	Rachel	Deierling
March 29, 2018	Rob	Kulakofsky
March 29, 2018	Robert	Cook
March 29, 2018	Russell	Lowes
March 29, 2018	Steve	Franks
March 29, 2018	Stuart	Moody
March 29, 2018	Susan	Willis
March 30, 2018	Daniel P.	Stormont
March 30, 2018	Jana K.	Segal

From: [Janet Horton](#)
To: [Rupesh Patel](#)
Subject: Re: PDEQ/TEP proposal
Date: Friday, January 26, 2018 12:30:51 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Thank you Rupesh. I do appreciate your response and the work that PDEQ does. I guess I am a bit nervous that our government is trying to eliminate standards and deregulate all industries. That puts me and the rest of the planet at risk. Are there any Arizona state standards in place in case the federal government abandons the people?

Janet

On Jan 26, 2018, at 9:35 AM, Rupesh Patel <Rupesh.Patel@pima.gov> wrote:

Good morning Janet,

The proposed permit establishes federally regulated emission standards to which the source will demonstrate compliance by installing best available control measures. The increase in emissions of the pollutants have been assessed to ensure they do not adversely impact the National Ambient Air Quality Standards (NAAQS). See Impact Analysis (Permit Application Appendix C) [PDEQ web page](#) . Specifically Table 3-1.

The lower Nitrogen Oxide (NOx) level is specifically referring to the potential for the source to emit. Over the previous years we have seen a significant change in the potential emissions at the TEP Irvington Generating Facility, specifically with the elimination of the use of coal to fuel the steam generating boilers. This change in fuel has significantly lowered the sources potential to emit particulate pollutants. There will be however a potential increase in actual NOx emissions that is less than the significance level (40 TPY). Historically actual NOx emissions (for 2013 and 2014 operating years) emitted from the boilers Units 1 and 2 were less than what is proposed. So the source (TEP) has taken a federally enforceable emissions cap to limit the NOx emissions. This emissions cap is enforceable through emissions testing and extensive record keeping which is evaluated semi-annually.

PDEQ understands the concerns expressed regarding the adverse effect of pollutants on your health. We have used all the tools available to fully assess the impact of this proposed project. Within the guidelines of the Clean Air Act, State and local regulations, PDEQ is confident the proposed permit has adequate measures for both minimizing all particulate emissions at the facility, and ensuring that the emission limits established in the proposed permit are not exceeded.

Thank you for your comment.

V/R

Rupesh Patel
Air Program Manager
Pima County Department of Environmental Quality
33 N. Stone Ave, 7th Floor
Tucson, Arizona 85701
Tel: (520) 724-7341
[PDEQ Air Permit Webpage](#)

-----Original Message-----

From: Janet E Horton [<mailto:janetwriter@me.com>]

Sent: Friday, January 26, 2018 7:49 AM

To: Rupesh Patel <Rupesh.Patel@pima.gov>

Subject: Q: PDEQ/TEP proposal

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Your letter reads:

“The project expects to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10) and volatile organic compounds.”

How much of an increase? With what affect on my emphysema? Is lower nitrogen oxide good or bad? I am 68. In 2030, I will be 80.

Peace.

Remember only the good.

Remain alive in kindness and compassion.

From: [Nathan Sady](#)
To: [Rupesh Patel](#)
Subject: assumptions
Date: Friday, January 26, 2018 11:41:32 AM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Hi -

I can see how this is a great modification, though I haven't done the reading. I assume the update to facilities will be absorbed by increasing TEP bills by their customers or a tax initiative.

In either case it would be interesting to know what was planned for renewable energy sources, as there were proposals for a national program before the electoral college allowed a candidate to win..... making environmental rollbacks turn a blind eye to much needed affiliations to improve the provision of solar panels with destructive policies and little more than meager allotments other than for utility stocks continually on the rise. These are sold through tax incentives (that excludes a good deal of roof top area ripe for harvesting sunlight), and to protect the customers from further rate increases. For many people looking to improve the environment and reap the rewards of a less devastating utility bill, a modern power grid will remain nothing more than a concept.

We never saw these programs get any traction as recognition for the needs of committing to renewable energy is out of grasp for lower and middle income households. Environmental sensibilities and awareness of the last five decades has gone to wreck and ruin.

I'd hope the need for power at a lower cost to the environment could, at this time, address the policy of keeping the population from using the light of day to benefit everyone beyond the limited scope of model, small scale attempts. At least the continued study of reducing our carbon footprint has proven the viability of such programs had more support in the field of harnessing the sun's energy gone farther than the cynicism displayed by the current leadership.

Sorry if off topic. I don't have the details from moving beyond intent to realizing a plan to implement passing the barriers to programs, independent of out dated modalities. The effect, I believe, would have gone far in raising the confidence of a population adrift to the whims and onerous of people wielding power over common sense....so to speak.

Thank You,
Nathan Sady

From: [Oscar Medina](#)
To: [Rupesh Patel](#)
Subject: TEP Permit Medication
Date: Monday, February 12, 2018 3:26:36 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Hello Rupesh,

I am writing to express my concern about the air permit modification that TEP is requesting for the H. Wilson Sundt station. I received the notice in the mail last week and would like to get more information on petitioning against the permit.

Thank you,

Oscar Medina

5989 S. Placita Picacho El Diablo

Tucson, AZ 85706

From: [Mark Rogers](#)
To: [Rupesh Patel](#)
Subject: FW: Please reject TEP's Sundt plan
Date: Friday, March 2, 2018 4:24:26 PM

Again FYI.

Mark Rogers
Air Compliance Inspector
724-7320
33 N. Stone Ave. Suite 700
Tucson, AZ 85701

From: Terry McDaniel [mailto:mcterry@volcano.net]
Sent: Wednesday, February 28, 2018 9:41 AM
To: Air Permits <Air.Permits@pima.gov>
Subject: Please reject TEP's Sundt plan

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

To the PDEQ and Mr. Rupesh Patel:

In this era of overwhelming evidence of the damage of fossil fuel combustion to our planet and plummeting costs of renewable energy, it is unfathomable that Tucson Electric Power would opt to build ten new 20 megawatt gas-fired power plants. This is completely irresponsible environmentally, financially, and morally. As a Pima County taxpayer and TEP customer, I want to register my outrage and protest.

If in any way, TEP is being influenced by the EPA as presently constituted under the Trump administration, this is doubly ludicrous. The U.S. has become in the past thirteen months an international outcast in choosing disastrous environmental policy directions which threaten the future of humanity on this planet.

For a southern Arizona community to turn its back on responsible utilization of our abundant solar energy resource in the name of short term profitability of a local utility would bring lasting shame to Pima County.

I implore the PDEQ to take a strong, responsible position on this matter by rejecting TEP's proposal for the Sundt Generating Station. In this way, Pima County can send a clear message to Phoenix, Washington, and the world that our region wants to be a leader in environmental sustainability.

Sincerely,
Terry McDaniel 3753 N. Camino Leamaria, Tucson, AZ 85716 209-304-0685

From: notification@pima.gov
To: [Rupesh Patel](#)
Subject: Environmental Quality Feedback Form 2018-03-02 11:57 AM Submission Notification
Date: Friday, March 2, 2018 11:57:59 AM

Environmental Quality Feedback Form 2018-03-02 11:57 AM was submitted by Guest on 3/2/2018 11:57:59 AM (GMT-07:00) US/Arizona

Name	Value
First Name	Stuart
Last Name	Moody
Email	stuartfieldmoody@hotmail.com
Address	627 N. Plumer Ave.
City	Tucson
State	AZ
Message Subject	RICE proposal - following up
Comment	Dear Rupesh: Thank you again for your clear and even-minded presiding over last evening's hearing on the air permit waiver requested by TEP. After greeting you at the end, I spoke briefly also with Beth and Ursula. Both suggested that it may be hard to find sufficient grounds to deny the permit, based on the federal rules that are now in place. If there were any way that citizen-advocates could help with a close look at this issue, what might that be? As you heard last evening, both Duane Ediger and Dan Stormont have a willingness to look at this one closely. I have not met Duane before, but know Dan through Sustainable Tucson and have confidence in his ability to read things carefully and fairly. Warmly, Stuart Moody
Response requested	Yes
Referred_Page	

Thank you, Pima County, Arizona

From: [Meredith Skeath](#)
To: [Air Permits](#)
Subject: comment on TEP proposed gas-fired power plants
Date: Saturday, March 3, 2018 11:48:47 AM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

To Whom It May Concern,

I am a resident of Pima County and oppose the building of TEP gas-fired power plants.

They will increase air pollution in our environment. Our city and county depend on low pollution

for our health and tourism. Many residents moved here enjoy our relatively unpolluted

air that promotes respiratory and general health.

Gas-fired power plants are a step back in environmental quality . We want solar and wind to be promoted

as dominant sources of power, not gas-fired power plants.

Sincerely,

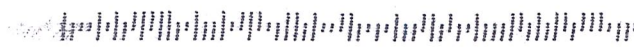
Mrs. Meredith Skeath
2130 East Helen St.
Tucson, AZ 85719

W Ms. Susan K. Willis
3275 E Pima St # 2
Tucson, AZ 85716-3243



Mr. Rupesh Patel
Pima County DEQ
33 N Stone Ave, Ste 700
Tucson, AZ 85701

RECEIVED BY
PIMA COUNTY
MAR 5 2018
DEPARTMENT OF
ENVIRONMENTAL QUALITY





RECEIVED BY
PIMA COUNTY
MAR 5 2018
DEPARTMENT OF
ENVIRONMENTAL QUALITY

33 NORTH STONE AVENUE, SUITE 700
TUCSON, AZ 85701
(520) 724-7341
Rupesh.Patel@pima.gov
www.pima.gov/deq

COMMENT SHEET

Proposed Air Quality Permit Modification for Tucson Electric Power Generating Station Public Comment Period: February 9–March 29, 2018

Note: Any interested person may submit comments on a proposed permit during the public comment period. PDEQ will consider all comments received during the comment period in its final decision making process, and they will be included in the administrative record and available to the public. In addition, anyone who submitted a comment during the public comment period has the legal right to appeal the permit decision. To be notified of actions related to the Tucson Electric Power Air Permit Modification or to appeal the permit decision, your name and address must be provided as required under state law.

PLEASE PRINT CLEARLY:

Date: 03/01/2018 Name: Susan Willis
E-mail: ~~skwillis~~ skmcwillis@gmail.com Phone: 520-981-3205
Mailing Address: 3275 E. Pima St. #2 Tucson, AZ 85716

COMMENTS:

I'm strongly opposed to TEP's proposed addition of ¹⁰ ~~five~~ natural-gas-burning RICEs to their power plan.

Natural gas (aka, methane) is a fossil fuel. Its combustion releases CO₂ into the atmosphere, contributing to the greenhouse effect, which is warming Earth's atmosphere to dangerous levels. While its combustion contributes about 60% as much CO₂ as coal, its extraction, primarily through fracking, releases vast amounts of free methane—a much more powerful (maybe as much as 80% more powerful) greenhouse gas than CO₂. This indeed contributes to the global atmosphere. And we must avoid rationalizing this as an insignificant contribution.

I heard news today of a more-alarming acceleration of polar sea ice during this **non-sun seasonal period**. This points to the effect of atmospheric heat alone—without the effect of the sun. The atmospheric heat due to the increasing greenhouse has an outsize effect on slowing the polar vortex, which is resulting in a distortion of the jet stream, thereby allowing more heat to be pulled into the polar region, and thus, more melting—a positive feedback loop that does not bode well for the future. In essence, scientists are seeing things spin out of control far faster than they ever predicted.

CO₂ itself has reached dangerous atmospheric levels that should include it as a major pollutant in energy production. In addition to the other harmful pollutants that this project would release, the CO₂ and Methane releases are also game-changers for life on this planet.

This project is retrograde and destructive of life, and must therefore not be permitted.

From: [Hartzler2](#)
To: [Air Permits](#)
Subject: gas generating units
Date: Monday, March 12, 2018 9:48:08 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Please know that I do not approve of authorizing TEP to build the gas generating units when solar with battery storage is much better for our environment.

Thank you.
Betty Hartzler
7890 N Blue Brick Dr
Tucson, AZ 85743
bettyhartzler@gmail.com

From: -
To: [Rupesh Patel](#)
Subject: TEP request to modify Irvington generating station
Date: Thursday, March 15, 2018 12:45:36 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Dear Rupesh Patel.

I am opposed to proposed changes to the Air Permit # 1052 for the Irvington generating station. Increasing air pollution is not an option. We should be moving in the opposite direction and upgrading to cleaner technology, not dirtier. As a long-time Tucson resident one of the things I value most is that our air has traditionally been fairly clean. I see that deteriorating as Tucson continues to grow and I think we should take all possible steps to protect our air.

I am also a lifelong asthmatic and would personally suffer harm from worsening air quality. Please do not agree to the proposed changes.

Sincerely,
Anne Gooden
230 S. El Volador
Tucson, AZ, 85711

From: [Beth Gorman](#)
To: [Rupesh Patel](#); [Ursula Nelson](#); [Richard Grimaldi](#)
Cc: [Karen Wilhelmsen](#)
Subject: Fwd: TEP Air Quality Permit Modification Public Hearing
Date: Friday, March 16, 2018 4:38:03 PM

FYI. Not sure if this is a comment or not. Shall we work on a response, Rupesh?

Beth Gorman
Pima County Department of Environmental Quality
(520)724-7446

Begin forwarded message:

From: Jackie Kain <jacquelinekain@gmail.com>
Date: March 16, 2018 at 4:26:54 PM MST
To: Beth Gorman <Beth.Gorman@pima.gov>
Subject: Re: TEP Air Quality Permit Modification Public Hearing

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Hi Beth,

"TEP is proposing to modernize the power generating station by replacing two 1950's era steam units with ten natural gas fired combustion engines that will have a generating capacity of nearly 19 MW each. *The project has the potential to cause an increase in emissions* of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10), nitrogen oxides and volatile organic compounds over time. *This potential increase in emissions makes the permit modification subject to the Prevention of Significant Deterioration (PSD) permitting requirements.*"

The next paragraph says DPEQ has been working with TEP, the EPA and NPS to meet regulations and protect our health. Are these regulations (existing?) strong enough to truly protect our breathing?

Is there a likelihood that TEP would knowingly go ahead and potentially increase emissions that would further damage Tucson's air quality? Any increase in particulate matter is frightening. How do we ensure that TEP modernizes and simultaneously does what is necessary to help improve Tucson's air quality?

Is the work that DPEQ has been doing sufficient?

Jackie

Jackie Kain

310 - 650 - 9423
jackiekain.com

On Thu, Mar 15, 2018 at 11:57 AM, Beth Gorman <Beth.Gorman@pima.gov> wrote:

Good Morning,

You are receiving this email because you requested to receive air quality information from the Pima County Department of Environmental Quality.

Below and attached is information regarding the upcoming Pima County Department of Environmental Quality Public Hearing for proposed modifications to the Tucson Electric Power Air Quality Permit. Please let me know if you have questions or would like additional information.

Thank you.

Beth Gorman

Pima County DEQ

[\(520\) 724-7446](tel:(520)724-7446)

Media Release

Contact: Beth Gorman

[\(520\) 724-7446](tel:(520)724-7446); [\(520\) 603-0358](tel:(520)603-0358) (c)

PDEQ Holds Final Public Hearing to Obtain Comments on Tucson Electric Power Permit

Pima County, Ariz. (March 15, 2018) - The Pima County Department of Environmental Quality (PDEQ) is holding a second formal Public Hearing regarding the proposed Tucson Electric Power Air Quality Permit (TEP). This

hearing will be on Wednesday, March 28, 2018, from 5:30 – 6:30 p.m. at the Pima County Public Works Building at 201 N. Stone Avenue, in the Basement Conference Room C. Parking is available along nearby streets. Metered parking is free after 5:00 p.m. Parking is also available in the Main Library Parking Garage off Alameda and the first hour is free. Multiple Sun Tran routes service the area, as well as the Sun Link streetcar.

The purpose of this formal hearing is to obtain public comments on a proposed major modification to the existing Air Quality Permit #1052 for TEP Irvington/H. Wilson Sundt Generating Station located at 3950 Irvington Road. The official Public Comment Period, during which anyone can submit written comments to the PDEQ regarding this project, began on February 9, 2018 and continues through March 29, 2018.

TEP is proposing to modernize the power generating station by replacing two 1950's era steam units with ten natural gas fired combustion engines that will have a generating capacity of nearly 19 MW each. The project has the potential to cause an increase in emissions of carbon monoxide, particulate matter (fine particles PM2.5 and coarse particles PM10), nitrogen oxides and volatile organic compounds over time. This potential increase in emissions makes the permit modification subject to the Prevention of Significant Deterioration (PSD) permitting requirements. According to information provided to PDEQ by TEP, they plan to expand renewable energy resources to 30 percent by 2030. The new engines are able to ramp up more quickly to meet peak load needs for the community and help balance the variability associated with solar and wind energy generation.

PDEQ has worked with TEP, the U.S. Environmental Protection Agency, the National Park Service and consultants to create a permit that will meet regulations and protect public health while allowing TEP to update its facility to increase electricity generated for future customer needs and manage the fluctuations from energy generated by renewable resources. All documents pertaining to the proposed permit can be found on [PDEQ's website](#).

For additional information about the permit modification, call PDEQ at [\(520\) 724-7400](tel:5207247400). Submit a comment regarding the draft permit by March 29, 2018, by email: Rupesh.Patel@pima.gov, mail or drop off to: PDEQ, Air Permits, 33. N. Stone Ave., Suite 700 • Tucson, AZ 85701.

###

Pima County Department of Environmental Quality (PDEQ) serves Pima County residents by protecting public health and the environment. PDEQ monitors air and water quality; provides hazardous and solid waste programs that ensures waste minimization and pollution prevention;

assesses environmental compliance; processes environmental permits and plans; responds to public complaints and inquiries with investigations and enforcement; and reaches the community via public outreach, education, and citizens' assistance. Visit us at http://webcms.pima.gov/government/environmental_quality/. Follow us on Twitter at <https://twitter.com/PimaDEQ>

From: [Roxanne J. Linsley](#)
To: [Rupesh Patel](#)
Cc: [Amanda E. Stone](#); [Beth Gorman](#)
Subject: FW: Sundt Generating Station
Date: Friday, March 16, 2018 12:30:31 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Hi Rupesh,

We received the comments about Sundt Generating Station below and are forwarding to you for your use. We will inform Ms. Pensinger that we have forwarded her comments to you.

Thank you,

Roxanne Linsley
Community Liaison – Cochise, Pima, and Pinal counties
and Legislative Analyst
Arizona Department of Environmental Quality (ADEQ)
Southern Regional Office
400 W. Congress St., Ste. 433, Tucson, AZ 85701
Direct Line: (520) 628-6716; Toll-free: 1-888-271-9302; Fax (520) 628-6745
rjl@azdeq.gov

Begin forwarded message:

From: KATHRYN PENSINGER <kpensinger@msn.com>
Date: March 15, 2018 at 4:25:13 PM MST
To: "stone.amanda@azdeq.gov" <stone.amanda@azdeq.gov>, "cabrera.miseal@azdeq.gov" <cabrera.miseal@azdeq.gov>
Subject: Sundt Generating Station

I will be out of town and unable to attend the public discussion in Tucson about the Sundt Station on March 28. I therefore am providing you with my public input via this e-mail. I am opposed to the five new gas powered generators that this plant will deploy because of the negative environmental impact that will result. High CO2 emissions means high rates of respiratory disorders. It is that simple. I am aware that TEP claims it needs the generators to supplement solar energy when the sun is not shining. But I am also aware that one of the 5 generators is scheduled to run 24/7. At the very least, this should not happen. Clean, renewable energy sources should instead be developed. I also am opposed to the use of the generators to supplement solar energy because I am well aware that batteries can be used instead of gas. Depleted batteries from electric cars can be purchased for this purpose very economically. I also do not buy the claim that low income persons would be devastated by costs allegedly associated with renewable energy, for a couple of reasons. First, renewable energy can be

comparable in cost to fossil fuel energy. Second, if its cost more, the ACC has, can, and should adjust rates to keep rates for small users of electricity very low.

Thank-you for your consideration of my input, which I know is the opinion of many who will not take the time to write you. Kathy Pensinger

From: tasavage@hushmail.com
To: [Rupesh Patel](#)
Subject: TEP Air quality permit application.
Date: Thursday, March 15, 2018 5:58:09 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Sir,

The air quality in the Tucson valley is jeopardized by this request. Can there be any response other than a resounding NO?

From: [Tina](#)
To: [Air Permits](#)
Subject: please say NO to TEP's request for more gas-powered plants!
Date: Friday, March 16, 2018 11:28:27 AM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Tucson Electric Power (TEP) has requested an increase in its emissions limits within the City of Tucson in order to add 200 megawatts of gas-fired power generation at the Sundt plant just off of I-10 on Irvington. TEP's application requires environmental and regulatory clearances from the Arizona Corporation Commission, the City of Tucson and Pima County.

TEP's request to the AZ Corporation Committee provides inadequate information and justification for building a natural gas plant instead of utilizing the Solar+Battery Storage technology that is being deployed in California to address similar needs of utilities there.

As a TEP customer in Tucson, and as pastor of Shalom Mennonite Fellowship, a church in east-side Tucson who cares deeply about lowering greenhouse gas emissions here in our community, PLEASE say no to TEP'S request to increase its emissions limit.

Respectfully,

Tina Schlabach
Co-pastor, Shalom Mennonite Fellowship
tina@shalommennonite.org

“the very nature of God is to seek out the deepest possible communion and friendship with every last creature on this earth.” - Catherine LaCugna

From: [Susan Waites](#)
To: [Rupesh Patel](#); [Susan Waites](#)
Subject: Proposed Modification of AirQuality Permit #1052
Date: Monday, March 26, 2018 11:22:48 AM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Dear Mr. Rupesh and other members of the PimaCounty Environmental Quality Department:

I am Susan Waites, a TEP rate payer and a rooftop solar energy producer. I oppose granting TEP's request for a modification of Air Quality Permit #1052. I am concerned that the 10 new gas fired RICE power plants at the Sundt Generating station will create more pollution.

One of my values is being a good neighbor and trying to live by the do unto others rule. Most of us agree on that. We wouldn't think of dumping our garbage onto our neighbor's yard, or siphoning our untreated waste water into their drinking supply. So why do we think it is acceptable to foul the air our neighbors breathe with harmful pollutants? While I am grateful for having a reliable grid, it doesn't need to come at the expense of the health of people in the neighborhoods near the Sundt plant. It is especially unacceptable given there are renewable energy options that don't pollute.

I am a retired teacher and know that kids in particular suffer the impacts when they breathe carbon monoxide, nitrogen oxide, and particulates. They suffer respiratory ailments that cause them to miss school. Try breathing through a straw for an hour to appreciate what a kid feels like during an asthma attack.

It sounds like the modification is a done deal since work is supposed to begin in early April. I hope that is not the case. Please reject the permit modification and have TEP go back to the drawing board. Insist on a plan that uses non polluting renewable energy which is good for health, jobs, and the environment. TEP should develop a plan that shows they want to be a good neighbor.

From: [Gabby Martin](#)
To: [Air Permits](#)
Subject: TEP's gas-fired power generation proposal
Date: Wednesday, March 28, 2018 12:47:39 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Mr. Rupesh Patel,

My name is Gabby Martin, and I am a student at the University of Arizona. I have lived in Tucson for 4 years now; I consider it a home and a place of great value.

I am writing to urge you to reject TEP's request to install 200 megawatts of gas-fired electricity generation and show your support for clean energy in Tucson. As the Air Program Manager for Environmental Quality, I would expect clean air and clean energy to be something you care about deeply. I know my peers and I certainly consider it an issue of great importance. There are a couple reasons I believe TEP's request is detrimental to the quality of our environment here in Tucson.

First, TEP's request simply does not align with Clean Air standards. We already know that the effect of VOCs and NOx on Tucson are serious and unusual. More so, TEP's modeling of the ozone is extremely flawed. The model underestimates ozone formation dynamics in Tucson's unique, arid, desert environment. Their modeling is not the only misleading contribution from TEP; their environmental justice argument is deeply flawed and ignores frontline communities on the south side of Tucson. Finally, I think it should be obvious that my generation, and the global community as a whole, is moving *away* from dirty energy. We don't want unworthy fossil fuel power in Tucson anymore. We don't want more air problems. We want support for solar and battery storage so Tucson can be a leading city in clean energy.

Set an example and listen to the public! Be a voice of reason and change for your younger generations.

Thank you.

Best,
Gabby Martin

From: [Alex Kosmider](#)
To: [Air Permits](#)
Subject: RICE generator permit concerns
Date: Thursday, March 29, 2018 11:19:13 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Dear Mr. Rupesh Patel,

I am writing concerning the PSD Permit #1052 air pollution analysis performed in the application for the RICE gas-powered generators that are being proposed. NOx gas emission data are conspicuously absent from the triggering by the PSD. As mentioned in the AZDEQ Environmental Justice Analysis, Page 3, the NOx is calculated by subtracting the emissions from RICE units 1 and 2 after their retirement (which, why would one invest in such equipment only to retire it shortly after?) from the emissions of all 10 RICE units. I have read the explanation of why this kind of calculation is acceptable, but frankly the amount of effort put into explaining why we can compute the projected NOx emissions in this way suggests that, without this seemingly warped way of determining NOx emission values, the calculations would not hover just below the level of official significance.

The value for “significant” impact of NOx is 40 tpy, and the calculated value of 39.4 tpy is therefore considered “insignificant”. However, it seems odd to me that a value that is 98.5% of the way to being “significant” suddenly becomes “insignificant” when it is below that level.

According to [42 U.S.C. §7475. \(a\)\(3\)](#) “No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless the owner or operator of such facility

demonstrates... that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year, (B) national ambient air quality standard in any air quality control region, or (C) any other applicable emission standard or standard of performance under this chapter.”

The most common standard that EPA guidance applies to determine whether a facility will or will not “cause, or contribute to air pollution in excess...” is whether the causative emission(s) are “significant” or not. Draft guidance indicates an even lower burden of proof – namely, that the effect is more than de minimis, or above what would be negligible. On this basis, VOCs definitely can be considered as predictably contributing to ozone level violations such as those seen many times in 2017. Given the attainment-or-nonattainment threshold that ozone levels occupy throughout Tucson, marginally “insignificant” NO_x levels should also be considered in DEQ’s analysis of this clause.

I urge you to reconsider the status of NO_x as not being eligible for Compliance Assurance Monitoring due to its closeness to the limit of significance.

Thank you for your time and consideration,

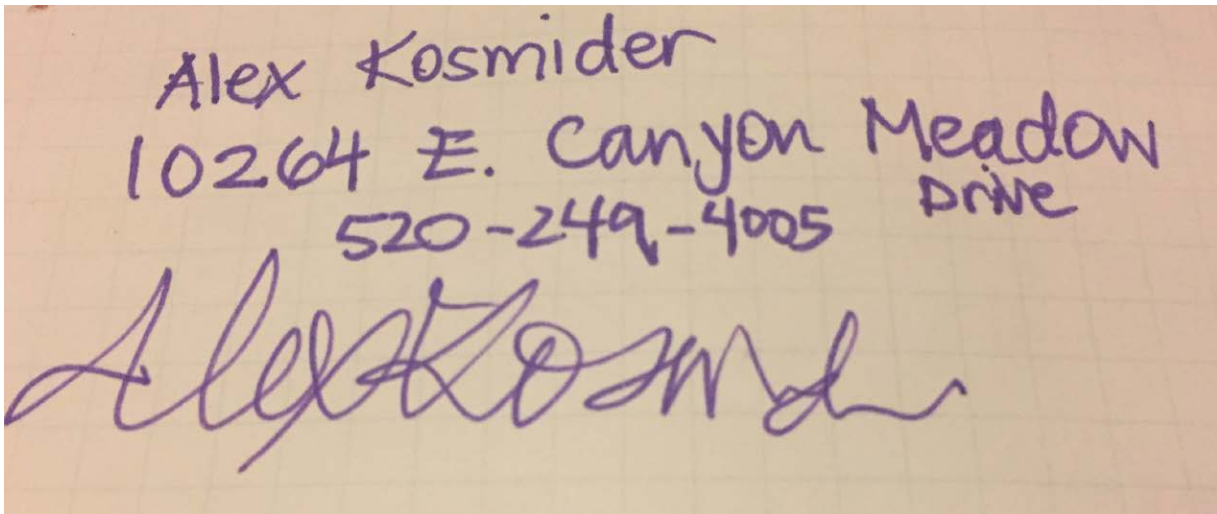
Alex Kosmider

From: [Alex Kosmider](#)
To: [Air Permits](#)
Subject: Re: RICE generator permit concerns
Date: Thursday, March 29, 2018 11:26:56 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Apparently I must properly confirm my identity:

Sincerely,
Alex Kosmider
10264 E Canyon Meadow Drive
520-249-4005



On Thu, Mar 29, 2018 at 11:18 PM Alex Kosmider <alexkosmider@gmail.com> wrote:

Dear Mr. Rupesh Patel,

I am writing concerning the PSD Permit #1052 air pollution analysis performed in the application for the RICE gas-powered generators that are being proposed. NOx gas emission data are conspicuously absent from the triggering by the PSD. As mentioned in the AZDEQ Environmental Justice Analysis, Page 3, the NOx is calculated by subtracting the emissions from RICE units 1 and 2 after their retirement (which, why would one invest in such equipment only to retire it shortly after?) from the emissions of all 10 RICE units. I have read the

explanation of why this kind of calculation is acceptable, but frankly the amount of effort put into explaining why we can compute the projected NO_x emissions in this way suggests that, without this seemingly warped way of determining NO_x emission values, the calculations would not hover just below the level of official significance.

The value for “significant” impact of NO_x is 40 tpy, and the calculated value of 39.4 tpy is therefore considered “insignificant”. However, it seems odd to me that a value that is 98.5% of the way to being “significant” suddenly becomes “insignificant” when it is below that level.

According to [42 U.S.C. §7475. \(a\)\(3\)](#) “No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless the owner or operator of such facility demonstrates... that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year, (B) national ambient air quality standard in any air quality control region, or (C) any other applicable emission standard or standard of performance under this chapter.”

The most common standard that EPA guidance applies to determine whether a facility will or will not “cause, or contribute to air pollution in excess...” is whether the causative emission(s) are “significant” or not. Draft guidance indicates an even lower burden of proof – namely, that the effect is more than de minimis, or above what would be negligible. On this basis, VOCs definitely

can be considered as predictably contributing to ozone level violations such as those seen many times in 2017. Given the attainment-or-nonattainment threshold that ozone levels occupy throughout Tucson, marginally “insignificant” NOx levels should also be considered in DEQ’s analysis of this clause.

I urge you to reconsider the status of NOx as not being eligible for Compliance Assurance Monitoring due to its closeness to the limit of significance.

Thank you for your time and consideration,

Alex Kosmider

From: [Brian Park](#)
To: [Air Permits](#)
Subject: Please Say No to TEP's Request of 200 Megawatts of Gas-fired Electricity
Date: Thursday, March 29, 2018 12:45:24 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Good afternoon Rupesh Patel,

My name is Brian Park and I am a Tucson resident. I am writing you to respectfully ask that you, and Pima County in general, please deny TEP's request to install 200 megawatts of gas-fired electricity generation. As a concerned citizen of Pima County I do not think this is acceptable for numerous reasons, which are listed below:

1. The greater Tucson area already has issues with ozone. We do not need increased problems with VOCs and NOx emissions. This would only exacerbate an already existing problem.
2. I think TEP's modeling is inadequate. Taking into account our unique desert environment, the utility is greatly underestimating the problem's we have with ozone here.
3. In Tucson, we are lucky to have one amazing national park on either side of our town. Saguaro National Park (both the east and west) is a special place. I have spent a lot of time at both districts and can attest that the air quality can be terrible. In addition, other recreation areas around town (Tucson Mountain Park, Coronado National Forest, etc.) can also have awful air quality on certain days. It would be wonderful if these premier areas also had wonderful air quality to match.
4. The south side of Tucson will be especially hit hard by this exemption. This is an area that historically has already been dealt with worse air quality than other neighborhoods in town. In my opinion, TEP is greenwashing this aspect of the issue. Pima County should be representing the interests of residents on the south side, not a utility which is owned by a Canadian company.
5. Solar power, plus battery storage, is a realistic and affordable alternative to gas power and continued emissions. Climate change is happening, whether or not Pima County wants to turn a blind eye to it or not. I strongly believe that solar plus storage is the future and our region could lead the way. Instead of increasing emissions, and contributing to already poor quality, why not support clean energy? What is Pima County afraid of? Please embrace the future, instead of being stuck in the past.

Thank you Rupesh. I hope that you and Pima County make the right decision. Thank you for your time. Sincerely,

Brian Park

From: [Joanie Sawyer](#)
To: [Air Permits](#)
Subject: Comment TEP Revision for Air Quality Permit No. 1052
Date: Thursday, March 29, 2018 11:18:16 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Rupesh Patel, Air Program Manager, PDEQ

Dear Rupesh Patel,

I appreciate the opportunity to comment on TEP's proposal to revise their Air Quality Permit.

I object to the Air Permit revision.

Pima County Code Title 17, Section 17.16.590 (A)(1) & (2) requires Best Available Control Technology (BACT). However, the RICE generators TEP is proposing to replace their old-fashioned, inefficient, polluting generators are quite inefficient and produce even more emissions than the existing generators! This is a violation of Section 17.16.590 (A)(1) & (2). PDEQ should demand BACT on any permit revision for TEP's Sundt Generating Station.

Installation of BACT generators would reduce VOC, NOx and particulate emissions instead of increasing them. Therefore, TEP's request is a clear violation of Section 17.16.590 (A)(1) & (2).

Tucson is ringed by mountains and during the heat of the summer, ozone formation is the norm. Interstate-10 is right next to the Sundt plant and creates a local hot spot for ozone formation. The increase of VOCs and NOx as a result of TEP's proposal will increase Ozone pollution locally and regionally. Therefore, TEP's proposal is a violation of Pima County Code Title 17, Section 17.16.590 (A)(5b).

I have asthma and must stay indoors when Tucson has ozone alerts. It is

unfair that I and so many others have to suffer when there are remedies available. The first remedy is not to let point source polluters increase their emissions. TEP's proposal will make our ground level ozone problem worse, especially in the surrounding neighborhoods.

TEP does make a reference to the decades of pollution that neighborhoods surrounding the Sundt Plant have suffered. However, they make no effort to really address this environmental justice issue. The increase in pollution this proposal would create is a clear violation of Federal Environmental Justice standards. TEP must install BACT generators, or better yet, renewable generation, instead of assaulting its neighbors with even more pollution because they are too cheap to go with BACT instead of old fashioned polluting RICE generators.

Higher particulate emissions in TEP's proposal violates Pima County Code Title 17, Section 17.16.590 (F)(1). Saguaro National Park and our local National Monuments already have visibility problems. TEP's proposal will increase particulate emissions and make this even worse.

Just say no to TEP's proposal to revise Air Quality Permit No. 1052. Make them obey the spirit and letter of the law and go with a cleaner source of generation, preferably renewable.

Respectfully,

Joanie Sawyer

[1520 S. Desert Crest Dr.](#)

[Tucson AZ 85713](#)

From: [Karen MacDonald](#)
To: [Air Permits](#)
Subject: Comment on TEP's application for Irvington plant
Date: Thursday, March 29, 2018 7:45:48 AM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Mr. Patel, thank you and your colleagues for hosting the public hearing last night regarding TEP's request for revisions to their Air Quality Permit 1052. Their request is to replace two steam-generating engines with ten natural-gas fired engines to increase efficiency and to increase the plant's total energy output to 190 megawatts. I applaud TEP's goal to expand renewable energy resources to 30 percent by 2030.

At the same time, I have serious concerns about their plans to use natural gas, another fossil fuel. While natural gas burns significantly cleaner than coal and oil, its extraction and transportation pose serious health and pollution issues. Hydraulic fracturing (fracking) involves the use of large amounts of water and chemicals. This threatens water table levels, and the chemicals used threaten the health of drinking water supplies. The storage of contaminated fracking water also carries the strong potential for leaking and pollution.

In addition, I have several questions regarding the use of natural gas: Where would the gas be sourced? How far would it have to be piped and through what lands? How would importing natural gas impact our fees? How would fluctuating natural gas prices impact our fees?

The pollution concerns of this proposed project are significant. Natural gas extraction and transportation causes the emission of methane, a much more potent green house gas than even carbon dioxide. Locally, TEP's project expects to increase the emission of carbon dioxide, particulate matter, and volatile organic compounds. In this beautiful desert basin, we can't bear more such pollution. Already we live with ozone alerts, limiting many peoples' activity to the indoors. Youngsters, older people, and people with respiratory conditions are most susceptible. And those who live near the plant, who are predominately people of color and lower economic means, who already live with the harm of water and air pollution, will bear the brunt of more such pollution. That's morally unsustainable.

One of the treasures with which we are blessed in this beautiful land are our national and state parks. These parks preserve the astounding diversity of life of which we are a part, honoring all the beings that live here and protecting them for our human enjoyment and fulfillment. Adding more pollution to the air would only diminish these treasures, thereby diminishing not only the natural diversity but also our human spirits.

We get to live in this gorgeous area with abundant sunshine and wind. We should focus on taking advantage of these gifts, moving quickly and intentionally to truly sustainable energy production. Solar production and storage technology is improving exponentially and is even now being proven usable on large--and individual--scales. Let's move into that sustainable future, caring for the air we breathe and water we drink and opening jobs in this burgeoning industry.

I am among many individuals and households in this community and around the country who are consciously making changes in the way we live so as to honor this sacred Earth: using compact fluorescent or LED bulbs, setting our thermostats to 68 in winter and 78 in summer, walking or riding bikes whenever possible, line-drying our laundry, eating plant-based diets, consuming less "stuff," and more. Our corporate neighbors need to also step into a less impactful way of living. We humans have an ever-shorter amount of time to make the necessary changes in the way we live with Earth. We don't have the time to fiddle around with natural gas. Now's the time for solar and other truly sustainable activities.

Thank you for your serious consideration of these and all of the comments you've heard.

Peace,

Rev. Karen MacDonald

5601 E. Rosewood St. Tucson 85711

From: [Rachel](#)
To: [Air Permits](#)
Subject: Comment on Air Quality Permit #1052
Date: Thursday, March 29, 2018 3:55:45 PM
Attachments: [sig.png](#)

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

PDEQ

Air Program Manager Rupesh Patel,
33 N Stone, Suite 700
Tucson, AZ 85701

Mr. Patel,

As a Tucson resident, I'm writing to ask that the Pima County Department of Environmental Quality deny TEP's Air Quality Permit Number 1052.

The installation of outdated gas-burning engines at Tucson Electric Power's Sundt/Irvington plant will have a negative impact on the health of residents who live near the plant. The engines also have low thermal efficiency and require a disproportionately high water use relative to other, more modern power sources. The gas-burning engines will also contribute to climate change, which threatens the environment and economy of southern Arizona. Cleaner and more efficient alternatives exist in the form of solar photovoltaics and battery storage.

Sincerely,

Rachel Deierling



3140 E Kleindale Rd
Tucson, AZ 85716

From: [Rob K](#)
To: [Air Permits](#)
Subject: Proposed Revision for Air Quality Permit No. 1052
Date: Thursday, March 29, 2018 10:06:53 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Rupesh Patel, Air Program Manager, PDEQ

Dear Rupesh Patel,

Thank you for the opportunity to comment on TEP's proposed revision to their Air Quality Permit No. 1052.

I am opposed to granting the Air Permit revision for several reasons.

First and foremost, TEP is proposing to replace their old-fashioned, inefficient, polluting generators with new, but still inefficient and even *more* polluting generators that will create higher emissions than the existing generators. This does not comply with Pima County Code Title 17, Section 17.16.590 (A)(1) & (2) which requires Best Available Control Technology (BACT). The RICE generators TEP proposes to use may be more modern than the existing generators, but are still a move backward into the last century and far cry from BACT. Higher emissions of VOCs, NOx and particulates would not be created from BACT. Therefore, TEP's request is not acceptable because it violates Section 17.16.590 (A)(1) & (2).

Furthermore, the measurement of ozone precursors unacceptably underestimates the unique weather conditions, climate and geography of the Tucson Basin. Increased VOCs and NOx will increase Ozone pollution and could bring our region into a non-attainment area. Therefore, I submit that the proposal by TEP is a violation of Pima County Code Title 17, Section 17.16.590 (A)(5b).

We already experience ozone alerts and people with respiratory conditions are warned to stay inside. With TEP's proposal, we will have more days of

high ozone, more asthma attacks, more hospitalizations, and more loss of human potential and economic productivity.

Although TEP makes a passing reference to the Environmental Justice issues that have plagued the neighborhoods surrounding the Sundt Plant, increasing the pollutant load for these neighborhoods is a violation of Environmental Justice standards, especially when TEP is proposing to go for less expensive, old fashioned RICE generators instead of BACT.

TEP's proposal also violates the spirit of Pima County Code Title 17, Section 17.16.590 (F)(1). The higher particulate emissions will have a deleterious effect on the already existing problem of poor visibility for our National Parks and Monuments. On a side note, clarity of our night skies throughout the region and not just in our Parks will also be a victim of TEP's proposal.

Please reject TEP's proposed Revision for Air Quality Permit No. 1052.

Respectfully,
Rob Kulakofsky
1520 S. Desert Crest Dr.
Tucson AZ 85713



RECEIVED BY
PIMA COUNTY
MAR 29 2018
DEPARTMENT OF
ENVIRONMENTAL QUALITY

33 NORTH STONE AVENUE, SUITE 700
TUCSON, AZ 85701
(520) 724-7341
Rupesh.Patel@pima.gov
www.pima.gov/deq

COMMENT SHEET

Proposed Air Quality Permit Modification for Tucson Electric Power Generating Station Public Comment Period: February 9–March 29, 2018

Note: Any interested person may submit comments on a proposed permit during the public comment period. PDEQ will consider all comments received during the comment period in its final decision making process, and they will be included in the administrative record and available to the public. In addition, anyone who submitted a comment during the public comment period has the legal right to appeal the permit decision. To be notified of actions related to the Tucson Electric Power Air Permit Modification or to appeal the permit decision, your name and address must be provided as required under state law.

PLEASE PRINT CLEARLY:

Date: 3-29-18 Name: Robert Cook
E-mail: unispan@dakotacom.net Phone: 520-323-0242
Mailing Address: 2101 N. Tucson Blvd
Tucson, AZ 85716

COMMENTS:

See attached prepared
comments

TO: Pima County

RE: Proposed Air Quality Permit Modification for Tucson Electric Power Generating Station

Comments

The issue before us today is whether Pima County, representing all the residents and taxpayers of our region, will honor its commitment to the Paris Climate Accord and reject TEP's request to operate carbon dioxide-emitting (CO₂) natural gas burning engines to produce electricity.

Natural gas does produce less CO₂ than coal when combusted but natural gas is mostly methane and the method used to produce this fuel is the problem. Recently, NASA scientists confirmed that the oil and gas industry is responsible for the largest share of the world's rising methane emissions, which are a major factor in climate change.

Methane (CH₄) is a major greenhouse gas, capable of trapping 86 times as much heat as the same amount of carbon dioxide in the first 20 years after it is loaded into the Earth's atmosphere. So relatively tiny amounts of methane in the air can pack a massive climate-changing punch. That is why methane is a global warming "amplifier." The sharp increase in methane emissions correlates closely with the U.S. fracking boom. Leaking and venting of unburned gas makes natural gas even worse for the climate than coal.

Researchers at the Tyndall Centre for Climate Change Research find that "there is categorically no role for bringing additional fossil fuel reserves, including gas, into production." We have simply dawdled too long. And if we are to have any plausible chance of staying below 2°C and avoiding catastrophic levels of warming, CO₂ emissions need to be driven to near zero levels before mid-century, particularly for the industrialized countries which have historically generated the most cumulative carbon pollution.

Twenty years ago the thinking was different. America's leading renewable energy scientist Amory Lovins advocated transitioning from coal to renewables by strategically employing natural gas as a bridge energy source. But that was during the time of conventional natural gas production. Not the fracking technology used today.

The evidence is now overwhelming that natural gas has no net climate benefit in any timescale that is relevant to our Paris climate commitments. A disturbing new study concludes that just the methane emissions escaping from New Mexico's gas and oil industry are "equivalent to the climate impact of approximately 12 coal-fired power plants."

The choice to reject any additional investments in fossil fuel combustion over the many proven alternatives to produce, store, distribute, and ultimately manage renewable energy on a sustainable basis is one of the most important decisions we need to make now. Yes, managing the "intermittency" challenge inherent in renewable energy systems is a problem we have to solve. But TEP has shown that it has not fully explored the proven alternatives. The people of Northern Europe are not stupid. They have led the world in solar and wind investment and have solved their intermittency challenge by using pumped storage (gravity) to balance wind and solar power supply and demand. Yes, lithium batteries are expensive and batteries are getting cheaper but there are already other solutions.

So, let the public record show that the citizens of Pima County in 2018 have had enough of horrible energy and climate policies in this country, this state, and this county. We demand science-based energy policies not short-term driven decisions which primarily benefit utility investors – private investors which are guaranteed 10% return on this Canadian-based utility's capital. Let's not be a "climate unfriendly" Pima County.

Folks, we are flirting with an unfolding catastrophic future and ultimately extinction.

Robert Cook,
Past Chair, Tucson-Pima Metropolitan Energy Commission
March 29, 2018

From: [Russell Lowes](#)
To: [Air Permits](#)
Subject: Testimony due today, 3/29
Date: Thursday, March 29, 2018 9:26:24 AM
Attachments: [Pima Co Air Permit 1052 Testimony, R.Lowes03292018.pdf](#)

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

To: PDEQ

Air Program Manager Rupesh Patel,

[33 N Stone, Suite 700, Tucson, AZ 85701](#)

Hello,

Here is my testimony on the Air Quality Permit Number 1052, applied for by Tucson Electric Power Co. It is attached and signed, and is also printed below.

Thank you,

Russell Lowes

[3339 E Seneca Street](#)

[Tucson, AZ 85716](#)

Testimony before the Pima County Department of Environmental Quality

Air Quality Permit No. 1052 applied for by Tucson Electric Power Co.

By Russell Lowes, Energy Chair of the Sierra Club Rincon Group, 3/28/18

We know that lower income Americans get worse treatment environmentally. We also know that Hispanic and Black citizens are exposed to more contamination than Caucasian Americans. The Sundt/Irvington gas plant goes along with this social injustice travesty in America, and Tucson Electric Power is at fault.

A new study in the American Journal of Public Health made this environmental injustice very clear. In this new report, "Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status," the authors state, "those in poverty had 1.35 times higher burden than did the overall population." The report goes on to say that, "Blacks,

specifically, had 1.54 times higher burden than did the overall population.”¹ We know that the area around the plant on Irvington has a higher percentage of poorer residents and a higher percentage of people of color.

It is a shame that Tucson Electric Power foists this health burden on the population around the Irvington power plant. They could build cleaner, cheaper power sources, like the solar photovoltaic option. They could encourage customers to use energy more efficiently, reducing the need for power production. That they want to build more gas capacity than solar in their proposed Integrated Resource Plan is impressively racist, classist and counter-productive to a healthy society.

Per 42 U.S.C § 7475 on emissions, another outrageous aspect of the proposal to build these gas RICE units is this. The thermal efficiency of this type of gas plant is terrible. The Environmental Protection Agency shows that as these units climb in size, measured in megawatts of electrical output, their thermal efficiency goes down.² Multiple EPA webpages, and websites in industry, refer to RICE generators as CHP generators. CHP, or Combined Heat and Power, is what this type of generator is best at. Without the CHP component, that is, when this technology generates only electricity, it is handicapped with a very low thermal output. All the heat, the H of CHP, would be wasted, at a plant site like the one here in Tucson at Irvington.

The EPA sites indicate that the ten 19-megawatt units at the Irvington site would get in the low 30% for thermal efficiency, about 32%. This is slightly lower than the efficiency of the outdated 1980s nuclear reactors, like at the Palo Verde Nuclear Generating Station, operated by Arizona Public Service.

Hence, the water use would be very high, due to sub-critical temperatures within the generators, and due to the low thermal efficiency. It is apparent that the water use would be about 0.8 gallons per kilowatt-hour from these water-hogs. This compares to coal in the Four Corners region at 0.5 gallons, and less than 0.3 gallons per kWh for state-of-the-art gas plants with up to 60% thermal efficiency. This also compares to bigger TEP gas plants that get about 40% thermal efficiency and about 0.5 gallons/kWh. It compares with solar PV at far less than a tenth of the water use at these RICE units.

What this means, simply, is that because of the poor thermal efficiency, TEP would have to use about double the gas to produce the same electrical output of a more modern gas plant. This would produce about double the pollution, both thermal heat and particulate waste, than a more modern plant.

In case you have not guessed this yet, this technology is not a 21st Century or even a 20th Century technology. It goes back to the 19th Century.³ The publication, Power Engineering, makes this clear in an article they published on April 18, 2017.

Tucson Electric Power needs to get with the program here. They need to stop harming those with limited income, and those of non-Caucasian races with disparate impacts of pollution. This utility needs to get out of the realm of 19th Century energy generation and into the 21st Century of solar, wind, distributed generation, energy efficiency, battery and other storage technology, and energy management. This request for a permit should be denied by Pima County Department of Environmental Quality.

Signed, Russell Lowes _____

[3339 E Seneca Street](#)

[Tucson, AZ 85716](#)

1) Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status, [Ihab Mikati](#) BS, [Adam F. Benson](#) MSPH, [Thomas J. Luben](#) PhD, MSPH, [Jason D. Sacks](#) MPH, and [Jennifer Richmond-Bryant](#) PhD, 12/16/17, <http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2017.304297>

2) U.S. E.P.A., Catalog of CHP Technologies, Section 2, March 2015, https://www.epa.gov/sites/production/files/2015-07/documents/catalog_of_chp_technologies_section_2._technology_characterization_-_reciprocating_internal_combustion_engines.pdf

3) Power Engineering, Questions and Considerations for RICE Generation Facilities, 4/18/17, <https://www.power-eng.com/articles/print/volume-121/issue-4/features/questions-and-considerations-for-rice-generation-facilities.html>

Testimony before the Pima County Department of Environmental Quality,

Air Quality Permit No. 1052

By Russell Lowes, Energy Chair of the Sierra Club Rincon Group, 3/28/18

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Signed, Russell Lowes *Russell Lowes 3/28/18*

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1) Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status, Ihab Mikati BS, Adam F. Benson MSPH, Thomas J. Luben PhD, MSPH, Jason D. Sacks MPH, and Jennifer Richmond-Bryant PhD, 12/16/17, <http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2017.304297>

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From: [S. Franks](#)
To: [Air Permits](#)
Subject: Sundt Generation Station proposed air quality impacts
Date: Thursday, March 29, 2018 3:59:09 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Mr. Rupesh Patel, Air Program Manager
Pima County Department of Environmental Quality

I am writing in opposition to TEP's plan to install reciprocating gas engines in Tucson at the Sundt Generating Station.

My opposition is primarily for health reasons, as many members of my family and friends have asthma or other respiratory diseases which will be directly negatively affected by TEP's selfish and backwards plans to install old technology in the best solar generating region of the United States.

The ramifications of increasing emissions in an economically depressed part of town are also an affront to my latino neighbors' life, liberty and happiness. It's time we stopped treating that part of town as less important than the foothills.

As you can see below, there are many additional well-researched and scientifically-backed reasons to oppose this outdated project!

I respectfully ask you in the name of myself, my family, my friends, and my fellow citizens to deny this short-sighted project!

Respectfully,
Steve Franks
500 N. Bahamas Dr.
Tucson, AZ 85710

ADDITIONAL BACKGROUND:

Ozone precursors are choking Tucson
One relevant standard that presents an opportunity for TEP's permit application to be amended or rejected concerns emissions of nitrous oxides (NOx) and Volatile Organic Compounds (VOCs). Both are "precursors" to ozone. Ozone pollution levels in Pima County have been hovering just below or right at the "nonattainment" threshold specified by federal clean air standards. Tucson saw many more ozone alert days in 2017 than in any recent year. Although Pima County ozone levels may actually fit the definition of nonattainment status, a Presidential fiat has delayed official recognition of that fact (more below).

Actions that would threaten to push ozone levels even higher than they already are pose a direct threat to the health and well-being of residents and visitors to our beautiful city and the surrounding region, with its parks and outdoor attractions.

Afternoon ozone glut

Ozone formation from NO_x and VOCs is heightened during periods of bright sunshine, warmer temperatures and calm winds. TEP's proposed gas plant would elevate ozone levels, adding respiratory problems especially during peak electric usage in summer afternoons, when air conditioners cycle on. Just as sunshine is pushing ozone production to a peak, the gas would be burned.

Effects of VOCs and NO_x on Tucson are significant

è According to 42 U.S.C. §7475. (a)(3) "No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless the owner or operator of such facility demonstrates... that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year, (B) national ambient air quality standard in any air quality control region, or (C) any other applicable emission standard or standard of performance under this chapter."

The most common standard that EPA guidance applies to determine whether a facility will or will not "cause, or contribute to air pollution in excess..." is whether the causative emission(s) are "significant" or not. Draft guidance indicates an even lower burden of proof – namely, that the effect is more than de minimis, or above what would be negligible. On this basis, VOCs definitely can be considered as predictably contributing to ozone level violations such as those seen many times in 2017. Given the attainment-or-nonattainment threshold that ozone levels occupy throughout Tucson, marginally "insignificant" NO_x levels should also be considered in DEQ's analysis of this clause.

Modeling of ozone and its precursors is flawed

è Section 4.9 (page 4-16) of Appendix C (Impact Analysis) of TEP's permit application offers an explanation of why the "Modeled Emission Rates for Precursors (MERP)" were applied only to VOCs and not to NO_x. This is only possible because Tucson is still officially in ozone attainment (a legal category that allows pollution to keep getting worse). On top of that, the geographical divisions averaged for MERP analysis as supplied by EPA – for central, eastern and western U.S. –

appear not to provide for the greatly aggravating condition of Sonoran desert sun, heat and calm winds as ozone formation catalysts.

At least three local conditions that aggravate ozone creation are not reflected by the MERP modeling applied by the applicant.

1. The Sundt Generation Station is located just north of I-10. Vehicle traffic forms ozone pollution through VOC and NOx emissions. High vehicle traffic on I-10 at morning and evening rush hours coincides with the most vulnerable hours for ozone pollution from plant activities. (The plant is designed to meet peak energy usage times before morning ramp-up of solar production and after the afternoon drop-off).
2. Tucson has a higher proportion of non-native trees than most urban settings, and many of them contribute more than has recently been suspected to biogenic ozone formation.

Given this EPA Guidance on MERPs,

“We had initially planned to establish generally-applicable MERPs through a future rulemaking. However, after further consideration, we believe it is preferable for permit applicants and permitting authorities to consider site-specific conditions when deriving MERPs and to obtain experience with the development and application of locally and regionally appropriate values in the permitting process.”

TEP appears not to have given adequate attention to evidence from Parks management (see below), local geography, and even EPA itself (both in regard to Parks and MERPS guidance)

NOx at the door

TEP’s original application placed NOx emission limits just below the threshold for consideration as a significant precursor to ozone emissions.

NOx increase [total emissions] from RICE	179.0 tons per year (tpy).
NOX decrease from shutdown of Units 1-2	139.6
Net NOX increase	39.4

Significant level 40 Increase significant? No”

When DEQ expressed concern that the net NOx increase was very close to the 40 tons per year threshold that would make NOx emissions “significant” and thus relevant to consider as an ozone precursor, TEP voluntarily lowered the maximum annual NOx emissions limit to 170. This effectively reduced the annually permitted operating time of the ten generators. More on this after Parks.

Parks need clear skies

Parks receive special “Class 1” status under Clean Air Act provisions. The EPA three and a half years ago ordered TEP to cut emissions from Sundt Unit 4 in a regulatory effort to remove haze over Saguaro National Park and the Galiuro Wilderness. A year later, the National Parks and Conservation Association, backed by the National Park Service, which runs Saguaro, ranked Saguaro the 12th most polluted national park. “The Clean Air Act is working and air quality is improving, but more needs to be done, because air pollution impacts all our parks,” Saguaro Park then- Superintendent Darla Sidles was quoted as saying by Tucson.com. DEQ officials should determine whether the Sidles’ statement activates

42 U.S.C. §7475. (d)(2)(B) and/or (d)(2)(C)(i). “The Federal official charged with direct responsibility for management of such lands shall have an affirmative responsibility to protect the air quality related values (including visibility) of any such lands within a Class 1 area and to consider, in consultation with the Administrator, whether a proposed major emitting facility will have an adverse impact on such values.”

NOx pollution cap would make the gas plant a bad deal for ratepayers

In 3.1.3 of the permit application, TEP cites the hourly emission rate of NOx for each one of the ten RICE units as 59.1 lb/hr. This means that one RICE unit operating at half power during the whole year would emit:

$\frac{1}{2} * 59.1 \text{ lb/hr} * 8760 \text{ hr/yr} / 2000 \text{ lbs/ton} = 129.43 \text{ tons per year of NOx.}$

That means that a single one of the ten RICE units operating at half-power constantly (to meet TEP’s minimum generating requirement) would emit 76% of the plant’s annual NOx limit. Running just two of the ten RICE units (20% of plant capacity) an average of two hours per day would make the plant’s NOx pollution “significant” and, on those pesky sun-filled days, would start to put Tucsonans in the hospital.

TEP's request to install and maintain 200 megawatts of RICE generating capacity in order to produce an average power output of 13.1 megawatts (annual capacity factor 6.6%) may not be out of the mainstream for a peaker plant that would shut down overnight. But to have 76% of authorized annual plant output capacity (the minimum generating requirement) running as a constant baseload leaves a pollution budget that allows only a 1.65% capacity factor for the remaining 190 megawatts of power available all year for the actual function of meeting demand spikes.

Total pollution limit: 170 tons per year (tpy) of NOx

Baseload pollution: 129.43 tpy (1 RICE unit at 50% capacity)

Peaking pollution budget: 40.57 tpy

NOx emissions per hour at full capacity: 9.5 RICE units * 59.1 lb/hr = 561.5 lbs/hr

Annual time allowed for full-power peaking: 40.57 tons per year * 2000 lbs/ton / 561.5 lbs/hr = 144.5 hrs/yr = 6 days/yr

Peaking capacity factor: 6 days operating / 365 days per year = 1.65% capacity factor

Solar + storage can do it better

A 60 megawatt/200 megawatt-hour battery storage system paired with a 60 megawatt solar field could meet the vast majority of those energy demands without emissions. Several smaller solar + storage plants scattered around town could do the job even better. Some emergency fossil-fuel generation could bridge the occasional demand peaks that exceed available solar + storage capacity.

Making Nonattainment Great

Had President Trump not delayed the federal government's determination of whether local areas are meeting the ozone standard of .070 ppm, Pima County would likely be slated to become a nonattainment area, and a whole raft of additional requirements would have been placed on TEP's permit application, such as demonstrating the inadequacy of less-polluting power generation methods to meet solar intermittency and time-shift needs.

Ozone climbing with temperature

The ozone standard uses a three-year formula. Pima County's 3-year average as of June 2017 was 0.069 ppb, and the effect of the 2015 number (0.066) dropping out to be replaced with 2017-2018 data would likely have resulted in ozone nonattainment.

TEP's environmental justice argument leaves things to argue with

TEP's Environmental Justice Analysis duly notes the goal of Executive Order 12898, that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

TEP notes the stark socioeconomic divide between the population in its 38 square-mile Impact Area – a full 18% of our City's population – and the 82% of Tucsonans who live outside the plant's shadow. "Minority" (i.e. global majority) 85% (Tucson 56%); Low income 63% (Tucson 51%); Linguistically isolated: 15% (Tucson 6%); % w/o HS diploma 32% (Tucson 17%); Under age five 8% (Tucson 6%); Over age sixty-five 9% (Tucson 13%). Although asthma rates are not broken down to a small scale, TEP noted that between 2012 and 2014, CDC recorded a nationwide increase from 7.0% to 8.4% while Arizona's statewide number climbed from 8.9% to 9.6%.

TEP then writes, "PDEQ's environmental justice analysis focuses on the potential effects on minority and low-income and other populations from emissions." Soon after, it appears to reverse course by saying, "USEPA has provided draft guidance on the development of modeled emission rates for precursor emissions, such as emissions of NOX and VOC, that may result in an increase in ambient O3 relative to the 8-hour O3 NAAQS [U.S. National Ambient Air Quality Standards]." Does this mean that they followed the guidance, found an increase in ambient O3 and just didn't offer how much of an increase, or that they noted that EPA provides guidance, but they chose to ignore the guidance, and so failed to prepare a report on it? A preferable answer from another source is then presented without a trace of irony: "Pima County has determined from the modeling results for the Project that the Project would not cause or contribute to a violation of the applicable health based NAAQS for any of the pollutants regulated under the PSD permit. Furthermore, VOC emissions from the proposed Project will have an insignificant impact on ambient O3 concentrations."

The plant's location is just north of nearby populations who have been and continue to be exposed to water supply contamination. Environmental Justice demands that these Trichloroethylene and 1,4-dioxane-poisoned, young-dying Tucsonans and their surviving friends and family be spared the added blow of ozone hazards.

No electric generating unit, no climate change

TEP's clause 4.7.3 lists four things, including "electric generating

unit,” that this RICE plant apparently does not fit the definition of (would it be because they are ten units?) Therefore ten 35%-efficient (65% waste) fossil fuel-burning internal combustion engines cooled by 230,000,000 gallons of water a year and their operators are immune from any blame for contributing to climate change.

From: [Stuart Moody](#)
To: [Air Permits](#)
Subject: TEP's proposal for new gas-fired power generation in Tucson
Date: Thursday, March 29, 2018 11:37:14 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Date: March 29, 2018
To: Rupesh Patel, Air Program Manager
From: Stuart Moody
Re: Proposed revision to the existing Air Quality Permit No. 1052

Thank you again for holding public hearings on the proposal from TEP to construct ten gas-fired combustion engines at Irvington Road in Tucson. The purpose of these plants is to meet peak-period demands and solve the problem of intermittency of renewable energy sources as TEP works toward the goal of 30% renewable energy by 2030. This goal, however, while exceeding the state's mandated goal of 15%, is inadequate to address the immediate and persistent threat of climate change, driven by still-increasing greenhouse gas emissions, the resultant increase of carbon concentrations in the atmosphere and oceans, and rising temperatures worldwide. Meanwhile, these plants themselves will add to the carbon burden in our air and water.

Climate change, while not a matter of direct regulatory concern for this permit proposal, does have a bearing:

Title 42 of U.S. Code § 7475 (Pre-construction requirements) states that: "No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless (3) the owner or operator of such facility demonstrates, as required pursuant to section 7410(j) of this title, that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year, (B) national ambient air quality standard in any air quality control region, or (C) any other applicable emission standard or standard of performance under this chapter."

Six major air pollutants are relevant to the standards mentioned above. The Tucson area is close to non-attainment for one of those pollutants, ozone. Three others from the list -- CO, NOX, & VOC's are precursors to ozone, and are produced by gas-powered electricity generation.

As Paul McAleavey, Head of EEA [European Environment Agency] Air and Climate Change Programme, said in 2013: "Ozone formation increases during warm sunny weather depending on the level of 'precursor pollutants' present." Increased heat and more extended periods of hot weather have become commonplace in the Southwest, and are projected to become "the new normal" as long as atmospheric carbon increases.

Globally, 2014-16 were the hottest years on record. In Tucson, 2017 was the hottest year. Under these conditions, ozone formation is increasingly likely, putting us dangerously close to exceeding maximum allowable levels in our air. TEP's application does not adequately account for this prospect. Neighbors of the power plant have suffered health

detriments from emissions for years.

On June 22, 2017, the Arizona Daily Star reported that our region had exceeded federal standards for ground-level ozone five times in the calendar year already, with "the ozone season . . . not quite half-finished." These measures were taken at a county air monitor at Saguaro National Park - East. National parks are Class I areas, deserving special protection to preserve scenic values and the integrity of plants and animals within their boundaries. If the air quality at Saguaro National Park is suffering, imagine the quality of air next door to the Sundt power plant where thousands of Tucsonans live. To protect these families, and all who live in this basin, I urge you to deny the permit as it stands.

Thank you very much for your careful consideration of the many comments that you elicited and graciously received.

Stuart Moody, M.A.
Sustainable Tucson

From: [Susan Willis](#)
To: [Air Permits](#)
Subject: Comment on TEP's Permit Request to Add 10 RICE Engines
Date: Thursday, March 29, 2018 11:56:53 PM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

To: Mr. Rupesh Patel, Program Manager for Pima County DEQ

From: Susan Willis, 3275 E Pima St #2, Tucson, AZ 85716 | skmcwillis@gmail.com

Date: 29 March 2018

Dear Mr. Patel,

I am writing to express one of many concerns I have about TEP's proposed addition of 10 RICE engines to their power facility.

Emissions of nitrous oxides (NOx) and Volatile Organic Compounds (VOCs) are both "precursors" to ozone. Ozone pollution levels in Pima County have been hovering just below or right at the "nonattainment" threshold specified by federal clean air standards. Tucson saw many more ozone alert days in 2017 than in any recent year. (See: http://tucson.com/news/local/tucson-area-air-quality-the-worst-in-five-years/article_ec43b2b5-e02b-57f7-8ec3-c5ec7a90bea7.html.)

Actions that would threaten to push ozone levels even higher than they already are pose a direct threat to the health and well-being of residents and visitors to our beautiful city and the surrounding region, with its parks and outdoor attractions. As a retired School Nurse, I am also aware that ozone is one of the main components of polluted air contributing to increasing rates of asthma in vulnerable populations, such as children, subjected to that pollutant.

Moreover, ozone formation from NOx and VOCs is heightened during periods of bright sunshine, warmer temperatures, and calm winds. TEP's proposed gas plant would elevate ozone levels even further during peak sunshine, peak heat, and peak electric usage in summer afternoons, when air conditioners cycle on-- triggering the burning of gas in the RICE units. This will more likely than not push ozone levels well over federal clean air limits.

I hope you will give thoughtful consideration to these concerns and agree that TEP's proposed gas-fired engines must not be permitted.

Thank you.

From: [Dan Stormont](#)
To: [Air Permits](#)
Subject: Comment on TEP proposal
Date: Friday, March 30, 2018 12:00:32 AM

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

See attached

Comments on TEP proposal.pdf

March 29, 2018

Rupesh Patel
Air Program Manager
Pima Department of Environmental Quality
33 N. Stone Avenue, Suite 700
Tucson, Arizona 85701

Subject: Comments regarding the proposed revision to the existing Air Quality Permit No. 1052 for the Sundt Generating Station at the Tucson Electric Power (TEP) Irvington Campus

Dear Mr Patel,

I am writing to state my opposition to the approval of TEP's request for revision to Air Quality Permit no. 1052 to allow the installation of ten Reciprocating Internal Combustion Engine (RICE) generators at their Irvington campus, replacing the current Units 1 and 2.

There are a number of factors that concern me: the air quality observed at the Rose Elementary monitoring station, in close proximity and frequently downwind from the Irvington Campus was some of the worst in Tucson in 2016 for observed Ozone and $PM_{2.5}$. This does raise serious concerns about the social justice aspect of the air quality impacts on the largely minority and lower income residents in close proximity to the Irvington Campus.

There are also concerns about exceeding the National Ambient Air Quality Standard of 0.070 ppm for Ozone. The highest levels observed at the Rose Elementary station in 2016 were 0.066 ppm - and the new RICE units will increase the emissions of the ozone precursor, Nitrogen Oxide.

However, the most significant reason for denying this permit is the requirement to reduce regional haze in the two Class I areas in close proximity to the Irvington Campus: Saguaro East and Saguaro West, as required by the US EPA under Section 308 of the Federal Regional Haze Rule, implemented by the Arizona State Implementation Plan. Saguaro East already has the worst air quality of all the Class I areas in the state of Arizona - and was one of only two Class I areas projected to get worse over time in the SIP. The estimated time to reach Natural Conditions based on current Reasonable Progress Goals is an astounding 8,370 years! As noted in the PLUVUE modeling requested by the National Park Service, there will be visibility impacts in both Class I areas and, with a maximum Delta-E of 9.612, this will be a very obvious visibility impact. Obviously, this result is contrary to the objectives of the SIP.

Please reject this proposed revision.



Daniel P. Stormont
4743 E Mabel St
Tucson AZ 85712

From: [Janasegal](#)
To: [Air Permits](#)
Subject: Comments on TEP proposal
Date: Friday, March 30, 2018 12:03:25 AM
Attachments: [filename-1.pdf](#)

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

(See attached)

March 29, 2018

Rupesh Patel
Air Program Manager
Pima Department of Environmental Quality
33 N. Stone Avenue, Suite 700
Tucson, Arizona 85701

Subject: Comments regarding the proposed revision to the existing Air Quality Permit No. 1052 for the Sundt Generating Station at the Tucson Electric Power (TEP) Irvington Campus

Dear Mr Patel,

I am writing to state my opposition to the approval of TEP's request for revision to Air Quality Permit no. 1052 to allow the installation of ten Reciprocating Internal Combustion Engine (RICE) generators at their Irvington campus, replacing the current Units 1 and 2.

With TEP's history of environmental racism and the fact that they haven't considered the cumulative impact of more toxic pollutants from the gas-fired engines on a vulnerable minority population who is already suffering from health problems from the Sundt's coal-fired plant, I feel that this permit should be rejected.

TEP's Environmental Justice Analysis duly notes the goal of Executive Order 12898, that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

TEP notes the socioeconomic divide between the population in its 38 square-mile Impact Area – a full 18% of our City's population – and the 82% of Tucsonans who live outside the plant's shadow. "Minority" (i.e. global majority) 85% (Tucson 56%); Low income 63% (Tucson 51%); Linguistically isolated: 15% (Tucson 6%); % w/o HS diploma 32% (Tucson 17%); Under age five 8% (Tucson 6%); Over age sixty-five 9% (Tucson 13%).

While TEP registers that more half of Tucson's minorities live by the plant and that half of Tucson's low income residents reside there, it seems to avoid the fact that many of the health disorders that those minorities suffer from are the result of environmental racism that TEP demonstrated when they allowed the Sundt coal-fired plant to be built in their neighborhood in the first place.


And where is the mention of the rest of the health problems that these minorities suffer from including: cancer, lupus, heart valve defects, birth defects, arthritis, and central nervous system disorder?

TEP does note that between 2012 and 2014, CDC recorded a nationwide increase from 7.0% to 8.4% while Arizona's statewide number climbed from 8.9% to 9.6%. But a 2010 study by the Clean Air Task Force showed the burning of coal at Sundt causes approximately 68 asthma attacks, 6 heart attacks and 4 deaths every year. Built in 1967, the Sundt plant ranked 13th worst in the NAACP's environmental justice performance ranking.

<https://www.sierraclub.org/planet/2015/09/h-wilson-sundt-generating-station-stops-burning-coal>

It certainly doesn't appear that TEP took into account the special circumstances of how the pollutants from the new gas-fired engines would impact the vulnerable population that is already suffering from cancer, lupus, asthma, heart valve defects, birth defects, arthritis, and central nervous system disorders from decades of dioxane in their water and the pollution from Sundt's coal-fired plants.

Please, oppose their permit.

A handwritten signature in cursive script, appearing to read "Jana Segal".

Jana K Segal
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