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Exhibit #: APS-1 Part 2 through APS-21

Part 2 of 2, for part 1 See Barcode 0000156018

Figure I-2

Baseline Ambient Sound Level Measurement

Ocotillo Modernization Project

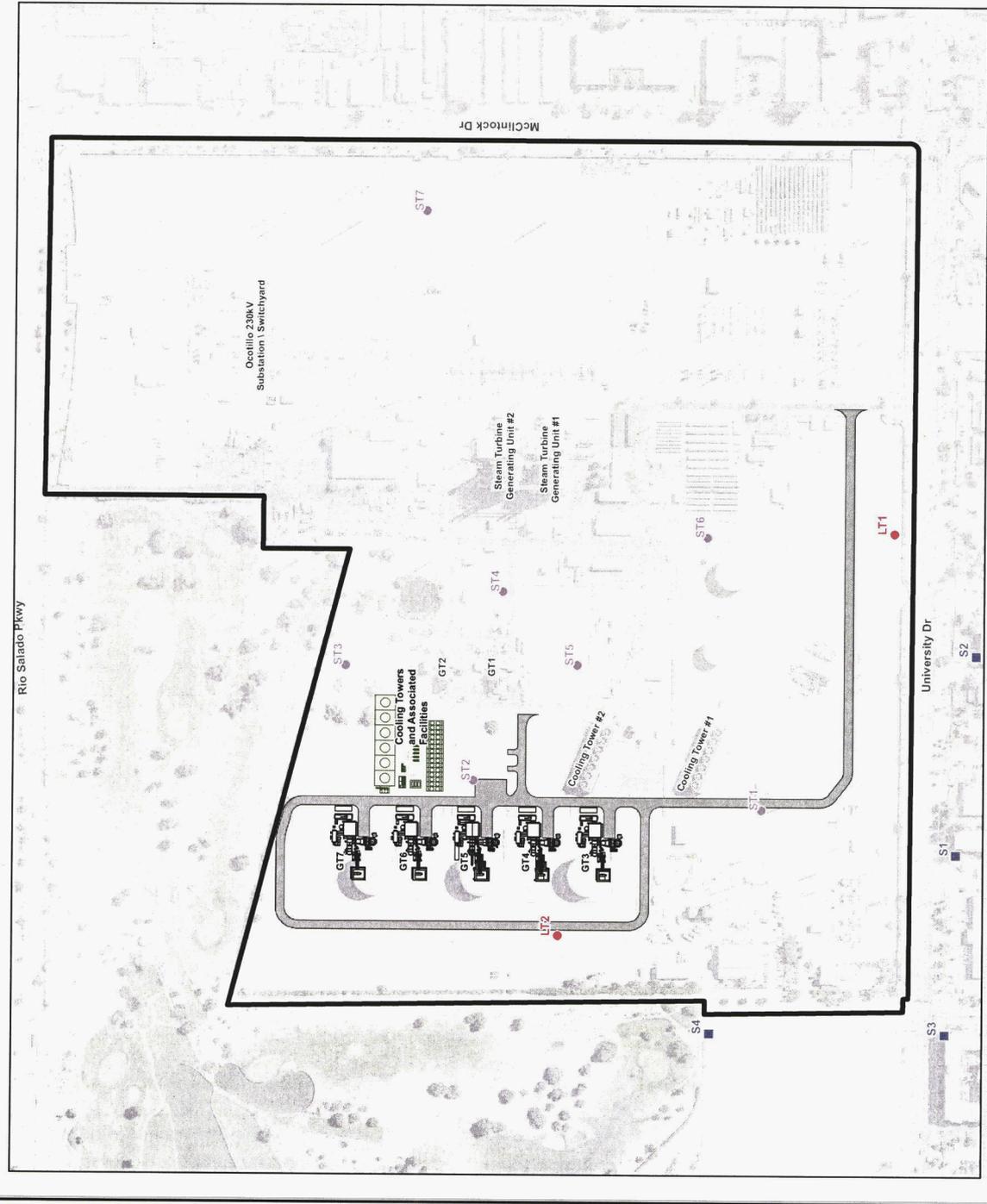
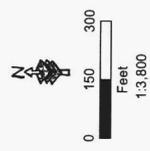
Legend

-  Existing Ocotillo Power Plant
 -  Nearest Noise Sensitive (S) Receiver
 -  Short-Term (ST) Baseline Sound Level Measurement Location
 -  Long-Term (LT) Baseline Sound Level Measurement Location
- Proposed Site Layout**
-  Proposed GT
 -  Cooling Towers and Associated Facilities
 -  Internal Access Road

GT = Gas Turbine Generator

- S1 Quality Inn
- S2 Gateway
- S3 Dorsey Place Condos
- S4 NW Corner of E. University Ave and S. Dorsey Lane

Source:
 Noise Measurement Locations: URS 2013
 Project Features: APS 2013 - 2014
 Base Map: ADOT 2014
 Imagery: FGD/MC 2012



Ambient Noise Estimates

Using 2012 roadway traffic volume data and parameters available from the Arizona Department of Transportation (ADOT) for the segment of East University Avenue between McClintock Drive and approximately 500 feet west of South Dorsey Lane, existing outdoor ambient sound was estimated for the four noise-sensitive receiver locations identified in Table I-1 with the Federal Highway Administration (FHWA) Traffic Noise Model (TNM, version 2.5). Results of these TNM predictions appear in Table I-2, and are based on the following model input parameters:

- Annual Average Daily Traffic (AADT) = 27,360 vehicles (14,798 eastbound, 12,562 westbound);
- Posted speed limit = 40 miles per hour (mph);
- Vehicle split = 94.3% automobiles, 3.5% medium trucks, 2.2% heavy trucks;
- K Factor = 10% (i.e., ten percent [10%] of AADT is considered a “peak hour” of traffic volume, as opposed to straight averaging of AADT over 24 hours).

Table I-2
Predicted Roadway Traffic Noise from E. University Avenue

Figure I-2 Location ID	Predicted dBA with K Factor (10% of AADT)	Predicted dBA with AADT/24 (average hourly)
S1	73.2	69.4
S2	71.8	68.1
S3	75.8	72.0
S4	60.4	56.6
LT1	66.7	62.9

The predicted traffic noise levels at S1, S2 and S3 are expected to be similar, given their similar perpendicular distances to East University Avenue. As S4 is farther away, the predicted traffic noise level is unsurprisingly much less than that of the other three positions. If these estimates shown in Table I-2 are accurate, measured ambient sound at these positions would be expected to be somewhat higher (depending primarily on distance) due to the added contribution of plant operations noise and indistinct background sound.

Ambient Noise Measurements

A series of SPL measurements was conducted from August 14 to August 16, 2013, at locations well within the Ocotillo Site and along the property line to quantify the existing ambient outdoor noise environment, with particular emphasis on assessing acoustical contribution from existing typical Power Plant operations. Shown in Figure I-2, seven (7) “short-term” (ST) measurement positions were located near facility operating systems, while two (2) “long-term” (LT) monitors were located along the southern and western boundaries of the Ocotillo Site.

The ST positions were selected for the purpose of measuring noise from the Power Plant systems where acoustical contribution from other sound sources would unlikely have significant or even measurable contribution. Hence, ST positions were within a few hundred feet of plant systems of interest, such as the pair of existing steam turbines, the GT pair, and the two (2) existing cooling towers. The selected distances tend to reflect, to the extent practical, guidance appearing in the American National Standards Institute (ANSI) B133.8 standard, which implies that sound measurement positions should be in the

acoustic far-field of system noise emission (i.e., where geometric divergence reliably exhibits 6 dB attenuation of sound pressure per doubling of distance).

The LT positions were located within the Ocotillo Site boundary but in the general path of sound emission from major Power Plant systems to some of the nearest noise-sensitive receiver locations. At these locations, which are more distant from Power Plant systems than the ST measurement positions, acoustical contribution from plant sound sources would be less while sound from non-Project sources (e.g., nearby roadway traffic noise) would exhibit more significance—or dominate the local sound environment.

The results of the LT and ST measurements are summarized in Table I-3. While the ST measurements were originally intended to last only through the duration of a set of APS-controlled operation scenarios, field conditions and instrument power source longevity provided an opportunity for all nine (9) SPL monitors to measure through the nighttime of August 15 and continue into the following morning of August 16.

SPL measurements were conducted using ANSI Type 1 or 2 Integrating Sound Level Meters (SLM) manufactured by Larson Davis. The Model 820, 720 and 712 SLMs had microphones fitted with factory-supplied windscreens to help reduce undue wind-induced noise (WIN) during SPL measurement and thus lessen the corresponding risk to obtaining usable measurement data. Instrument calibration, which has been factory-checked annually per industry guidelines, was field-checked before and after each measurement period with a Larson Davis CAL150B acoustic calibrator. SPL measurements were conducted, to the extent practical, in accordance with applicable portions of International Standardization Organization (ISO) standard 1996-2.

An additional ANSI Type 1 SLM (Larson Davis Model 824), with real-time one-third octave band analysis functionality, was also used to perform concurrent SPL measurements at multiple ST monitoring locations during the portions of the measurement survey occurring daytime hours on August 15 and the morning of August 16. Measurement data collected at one-third octave band center frequency (“OBCF”) resolution would be used to help determine predictive noise model parameters associated with the existing steam and GT units.

Weather conditions during the survey period were seasonally hot with generally clear skies and no observed precipitation. Using a Speedtech SM-28 handheld anemometer, measured air temperature varied from 82 degrees Fahrenheit (°F) at 6:14 a.m. on August 15 to 111°F at 2:15 p.m. later the same day, with relative humidity ranging from 40-50% in the morning to 25-30% in the early afternoon. Observed wind speeds were moderate, ranging from 3 to 6 miles per hour, and largely coming from the southeast direction.

**Table I-3
Sound Pressure Level (SPL) Measurement Summary (dBA)**

Monitoring Position	Start Date (mm/dd/yy) and Time (hh/mm)	End Date (mm/dd/yy) and Time (hh/mm)	L_{dn} ¹	L_{eq}	L_{max}	L_{min}	L_{10}	L_{50}	L_{90}
LT1	8/14/13 (11:05)	8/16/13 (10:20)	71	68 ²	91	53	68	63	55
LT2	8/14/13 (10:40)	8/16/13 (10:10)	65	63 ³	93	48	67	57	50
ST1	8/15/13 (06:17)	8/16/13 (10:18)	74	68 ⁴	81	66	71	68	66
ST2	8/15/13 (06:08)	8/16/13 (10:00)	69	69 ⁵	85	60	76	64	61
ST3	8/15/13 (06:25)	8/16/13 (10:08)	67	67	83	52	73	61	53
ST4	8/15/13 (06:03)	8/16/13 (10:04)	74	73	85	58	78	69	58
ST5	8/15/13 (06:07)	8/16/13 (10:35)	73	74	91	62	78	67	63
ST6	8/15/13 (06:11)	8/16/13 (10:31)	72	73	89	52	74	64	54
ST7	8/15/13 (06:20)	8/16/13 (09:50)	75	68	83	53	74	60	54

¹ Day-night level (L_{dn}) is calculated from hourly L_{eq} , over the duration from 8/15/13 07:00 through 8/16/13 07:00.

² L_{eq} is over the duration from 8/14/13 11:05 and 8/16/13 08:00.

³ L_{eq} is over the duration from 8/14/13 10:40 and 8/16/13 07:50.

⁴ L_{eq} is over the duration from 8/15/13 07:00 and 8/16/13 07:45.

⁵ L_{eq} is over the duration from 8/15/13 06:08 and 8/16/13 07:26.

Please refer to Attachment I-1 for photographs of the measurement locations, and Figure I-2 for a map of their positions superimposed upon an aerial view of the Ocotillo Site and its immediate geographic surroundings. Attachment I-2 displays plots of measured L_{eq} over time for each of the nine (9) SPL monitoring locations listed in Table I-3. Prominence-producing events or activities, such as steam and GT operating status, may appear as annotations on these plots. The following are brief descriptions of each monitoring location and key findings or observations with respect to acoustical contribution from Project and non-Project sources.

LT1 – The SLM microphone was affixed to the lower structure of a transmission tower near the southern Ocotillo Site property wall. The height of the microphone, shown in Photographs 1 and 2, was chosen so as to measure sound emission from the Power Plant sources that might have unblocked line-of-sight (LOS) with second-story residential dwelling units on the southern side of East University Avenue, such as noise-sensitive receiver position S2 from Table I-1. At this height, the microphone was expected to have more direct exposure (i.e., less noise reduction from the property line barrier wall) to roadway traffic noise from East University Avenue. Over the two-day monitoring period, Figure 8 (Attachment I-2) shows that daytime L_{eq} ranged from 63 to 65 dBA, while nighttime L_{eq} dipped to approximately 57-58 dBA. The daytime L_{eq} range appears to be fairly consistent with the non-K-factor “average” hourly dBA predicted East University Avenue traffic noise shown in Table I-2 for location LT1.

LT2 – The SLM microphone was affixed to the chain-link fence along the western boundary of the Ocotillo Site that abuts the paved (and empty) parking area of the Tempe/APS Joint Fire Training Center. While located west of the existing large storage tanks, the microphone position had direct LOS with the steam units and GT units. Over the two-day monitoring period, Figure 9 (Attachment I-2) shows that daytime L_{eq} generally ranged between 55 dBA and 65 dBA, while nighttime L_{eq} dipped to approximately 50 dBA. The low end of this daytime L_{eq} range appears to agree with the non-K-factor “average” hourly dBA predicted East University Avenue traffic noise shown in Table I-2 for receiver S4.

ST1 – This location was chosen to measure existing cooling tower noise, where the southern cooling tower structure obscures visibility (and hence, direct sound emission paths) of the existing GT units and the steam turbines. The relative “flatness” of the L_{eq} plot shown in Figure 1 (Attachment I-2) appears to confirm that the cooling tower systems are indeed operating through the night, particularly during early morning hours when road traffic noise would—based on reduction in traffic volumes—be significantly diminished as an acoustic contributor to the measured ambient SPL.

ST2, ST3, ST4 – These monitoring locations were selected for the purpose of measuring noise emission near the pair of existing GTs, and thus reduce the relative contribution of other sound sources to the measured ambient SPL, but reasonably distant enough from specific GT components so that it could be said the measurements were performed in the acoustic “far field” (i.e., where the aggregate sound from GT operating system components might be considered to propagate predictably via geometric divergence and relatively free from localized mode shapes or constructive/destructive interference).

ST5 – Similar to ST2, ST3, and ST4, this SPL monitoring position is near the existing GTs and is also in proximity to the western side of the pair of steam units.

ST6 – This SPL measurement position is near the southern large storage tank and approximately half the distance of LT1 to the steam units.

ST7 – This SPL measurement position is located to the east of the steam units and west of South McClintock Drive. Near a locked fenced gate in an opening of the property line wall, this position was expected to receive more exposure from road traffic noise. But being on the eastern side of the steam units, this position receives less exposure to noise from the existing GT units.

Common to all nine (9) SPL monitoring positions, measured daytime noise sources included both near and distant roadway traffic, Power Plant operating systems, and commercial (as well as some apparent military) aircraft overflights. Nighttime noise sources, while not directly observed during noise investigations, are assumed to similarly include near and distant roadway traffic, Power Plant operating systems, and (at most) a few hours of commercial aircraft overflights. Even when steam and GT units are not active, the plant cooling tower systems continue to operate (for water recirculation) and produce noise.

Topographical Conditions

The geography of the Ocotillo Site is relatively flat, with a few earthen berms or embankments situated around storage tanks on the site. Beyond the Ocotillo Site boundary, the surrounding community can also be characterized as generally flat on which can be found commercial development to the east, a municipal training facility to the southwest, a golf course to the north and northwest, and residential or mixed-use development to the south.

NOISE IMPACTS FROM PROPOSED PROJECT

Noise will be produced at the proposed Project site during construction and operation of the Project. Potential noise impacts from both activities will be assessed in this section. Federal, state, and local requirements and guidance that apply to the Project are summarized in the following paragraphs.

Applicable Laws, Regulations, Ordinances, or Standards

Federal

There are no federal laws, regulations, ordinances, or standards that directly affect this Project with respect to noise. However, there are guidelines at the federal level that direct the consideration of a broad range of noise issues. For instance, United States Environmental Protection Agency (“EPA”) has not promulgated standards or regulations for environmental noise generated by power plants; however, EPA has published a guideline that specifically addresses issues of community noise (EPA Levels Document, Report No. 556/9-74-004). This guideline, commonly referred to as the “levels document,” contains goals for noise levels affecting residential land use of $L_{dn} < 55$ dBA for exterior levels and $L_{dn} < 45$ dBA for interior levels. The Department of Housing and Urban Development (“HUD”) Noise Guidebook Chapter 2 Section 51.101(a)(8) also recommends that exterior areas of frequent human use follow the EPA guideline of 55 L_{dn} . However, the same Section 51.101(a)(8) indicates that a noise level of up to 65 dBA L_{dn} could be considered acceptable.

Federal Highway Administration (“FHWA”) guidance concurs with this apparent 10 to 20 dBA exterior-to-interior noise level difference by describing the following building noise reduction factors (for all building types) as follows: window open, 10 dBA; ordinary sash (closed), 20 dBA.

Occupational exposure to noise is regulated by Title 29, CFR, Part 1910.95 occupational noise exposure. Protection against the effects of noise exposure shall be provided when the sound levels exceed an average of 90 dBA for an 8-hour period. When employees are subjected to sound exceeding this limit, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within 90 dBA, personal protective equipment shall be provided and used to reduce sound levels within the limits. The employer shall administer a continuing, effective hearing conservation program whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 dBA (measured via slow response) or, equivalently, a dose of fifty percent (50%). For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with CFR 1910.95 Appendix A (noise exposure computation) without regard to any attenuation provided by the use of personal protective equipment.

State

The Arizona Corporation Commission (“ACC”) will review noise impacts per its rules. As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

“Describe the anticipated noise emission levels and any interference with communication signals which will emanate from the proposed facilities.”

Local

The Project and environs are within the City of Tempe, Arizona, which has noise ordinance language in its code but provides specific exemption per Section 20-4.(9) with regard to power generation facilities as follows:

“Power plant equipment during normal operation provided that no plant equipment may cause the noise level measured inside any sleeping or living room inside any residential dwelling unit to exceed forty-five (45) dB(A) between the hours of 10:00 p.m. and 7:00 a.m., nor fifty-five (55) dB(A) between the hours of 7:00 a.m. and 10:00 p.m.”

With respect to construction noise, Section 20-8 of the Tempe Code describes allowable activity periods and setback distances that are summarized as follows:

- From April 15 to October 15 inclusive, concrete may be poured, and concrete mixing trucks may be idled, each day between the hours of 5:00 a.m. and 7:00 p.m. or at such other times pursuant to written authorization. From October 16 to April 14 inclusive, concrete may be poured, and concrete mixing trucks may be idled, each day between the hours of 6:00 a.m. to 7:00 p.m. or at such times pursuant to written authorization.
- Construction and repair work in commercial and industrial zones not within five hundred (500) feet of a residential zone shall not begin prior to 5:00 a.m. and must stop by 7:00 p.m. or it may be conducted at such other times pursuant to written authorization.
- Weekends and holidays excluded. Notwithstanding the foregoing, construction or repair work shall not begin prior to 7:00 a.m. and must stop by 7:00 p.m. and concrete pouring should not begin prior to 6:00 a.m. and must stop by 7:00 p.m. on any Saturday, Sunday or holiday, unless such other times are allowed by written authorization.
- Construction and repair work may be conducted at different times and at higher noise levels than otherwise permitted herein if written authorization is obtained beforehand from the city manager or his authorized representative. In granting such authorization, the city manager or his authorized representative shall consider if construction noise in the vicinity of the proposed work site would be less objectionable at night than during the daytime because of different population levels or different neighboring activities; if obstruction and interference with traffic, particularly on streets of major importance, would be less objectionable at night than during the daytime; if the kind of work to be performed emits noises at such a low level as to not cause significant disturbance in the vicinity of the work site; if the neighborhood of the proposed work site is primarily residential in character wherein sleep could be disturbed; if great economic hardship would occur if the work was spread over a longer time; if the work will abate or prevent hazard to life or property; if the proposed early morning or night work is in the general public interest, and he shall prescribe such conditions, working times, types of construction equipment to be used and permissible noise emissions as he deems to be required in the public interest. No written authorization shall be required to perform emergency work as defined in § 20-2.

Outside of these allowable time periods, or if without prior written permission, the noise level created by construction activity may not exceed the applicable community noise standard by five (5) dBA at either the nearest property line or the affected area of the property. Section 20-6 details these community noise standards as follows:

- Residential (10:00 p.m. – 7:00 a.m.) 45 dBA; (7:00 a.m. – 10:00 p.m.) 55 dBA;
- Commercial (10:00 p.m. – 7:00 a.m.) 55 dBA; (7:00 a.m. – 10:00 p.m.) 65 dBA;
- Industrial (10:00 p.m. – 7:00 a.m.) 60 dBA; (7:00 a.m. – 10:00 p.m.) 70 dBA;
- If the measurement location is on a boundary between two (2) zoning districts, the lower noise standard shall apply.

- If ambient noise in a residentially-zoned location is measured to be 40 dBA or less between the hours of 10:00 p.m. and 7:00 a.m., then this ambient noise level will be community noise standard.
- If ambient noise level in any zoning district is measured and found at any time to be in excess of the community noise standards, then the actual ambient noise level will be the community noise standard.

Compliance with Laws, Regulations, Ordinances, or Standards

Construction Noise

Without prior written permission from the City of Tempe, the applicable requirements suggest that a threshold of 60 dBA L_{eq} (over a 15-minute duration) would apply during the daytime at the property line of a potentially affected noise-sensitive receiver.

Operations Noise

For future Project operation scenarios the following two criteria have been assumed as suggested noise impact indicators as follows:

- For spring, fall, and winter months when nearby residents may have windows and/or doors open and merely screened to allow natural ventilation and cooling, a level of 55 dBA L_{eq} during the nighttime immediately outside a bedroom or other occupied living space would be the expected threshold. This 10 dBA difference from the local interior noise limit with respect to power plant operations (i.e., 45 dBA at night) is consistent with the aforementioned FHWA expectation of 10 dBA of exterior-to-interior noise reduction for an occupied dwelling with open windows. Similarly, the noise criterion immediately outside a bedroom or occupied living space during daytime hours would be 65 dBA.
- For summer months when windows and doors would normally be expected to be closed (for purposes of effectively and efficiently running evaporative or refrigerant-based air-conditioning systems), and thus allow at least 20 dBA of net noise reduction (assuming modern construction techniques), the nighttime threshold immediately outside a bedroom or other occupied living space would be 65 dBA. During the day, this limit would 75 dBA.

For purposes of conservative noise impact analysis with respect to anticipated Project operation, the lowest of these suggested external noise thresholds, 55 dBA L_{eq} (over a 15-minute duration), will be utilized. However, the reader should recall the following:

- From the preceding section on existing ambient noise, roadway traffic noise alone is estimated to be several dBA over this threshold for three of the four identified nearest noise-sensitive receivers. Hence, measurement of Project operation noise compliance in an interior dwelling space under such conditions could be very difficult to discern, as ambient sound containing road traffic noise would likely mask Project noise to some degree.
- The 10 dBA exterior-to-interior noise reduction factor may be conservative. For example, guidance from the World Health Organization (“WHO”) states that a 15 dBA reduction may be assumed between an interior bedroom noise level and the outdoor noise level immediately outside.

- Noise-sensitive receiver S4 is currently not noise-sensitive, as there is no residential sleeping or living room there at the time of this writing. Thus, S4 would only be considered a noise-sensitive receiver if and when future construction would create such an inhabited dwelling on this currently vacant lot.

Project Noise Prediction

Construction Noise

Information from the available Project description indicates the anticipated Project construction schedule would take place over a period of approximately 26 months. During construction activities, a varying number of construction equipment and personnel will be in the area, resulting in varying levels of construction noise. A roster of expected construction equipment and corresponding monthly activity schedule was reviewed and appears summarized in Table I-3, showing estimated reference sound levels. Conventional construction activities at the Ocotillo Site would result in a short-term, temporary increase in the ambient noise level resulting from the operation of construction equipment and vehicles. The increase in noise level would be primarily experienced close to the noise source. The magnitude of the noise effects would depend on the type of construction activity, noise level generated by construction equipment, duration of the construction phase(s), and the distance between the noise source and receiver.

Potential noise impacts associated with the Project construction activities were assessed with spreadsheet-based noise calculations. User inputs include (1) distances between the modeled acoustic “centers” and the receivers, (2) quantities of equipment or events over a specific time period (e.g., equipment utilization per month), and (3) usage factor that is represented by a percentage to describe the average aggregate time in a typical work day that a piece of equipment is energized (i.e., engine running). As the exact location of mobile and stationary construction equipment is not yet known, the acoustic center-point (from which the aggregate of all noise-producing construction activities emits) is considered to be at the geographical center of each new LMS100 installation location, where, on average, most of the construction activity would likely be located when each of the five new GTs are installed. This is considered a reasonable approximation when one notes that the largest dimension of this construction zone (i.e., the footprint of a proposed LMS100 GT location) is generally small compared to the distances between it and the closest receivers.

Parameters specific to expected construction activities were input in the model to predict individual sound level contributions with the following terms and equation:

$$L_{eq} = \text{Source SPL} + 10 * \log_{10} (\text{Usage Factor}) + 10 * \log_{10} (\text{Quantity}) - 20 * \log_{10} (\text{Distance from Source} / \text{Reference Distance}) - A_{air} - A_{ground}$$

where A_{air} and A_{ground} are attenuation quantities based on calculation of air and ground absorption effects, respectively, per ISO 9613-2. The calculation then logarithmically sums these individual sound levels (equipment-related sources, as suggested in Table I-4) to arrive at aggregate L_{eq} values for a construction activity category with respect to a specific receiver point. The results of the aggregate calculations for each sensitive receiver (assuming the noise emanates from the southern-most new GT installation) are summarized in Table I-5.

**Table I-4
Summarized Estimated Construction Equipment Roster and Reference Sound Pressure Levels**

Construction Equipment Type	Vehicle or Equipment Engine Power (HP)	Individual Equipment SPL at 50' (dBA, max)	Equipment Quantity Range per Month	Acoustical Usage Factor (%)	RCNM User's Guide Table 1 Reference¹
Air Compressor, 300-400 CFM, electric	100	78	0-2	40	Air compressor
Concrete Saw, 5-7" wet cut	50	90	0-1	20	Concrete saw
Grout Pump, 4-5 cubic yard (CY), pneumatic	n/a	81	0-1	50	Pumps
Boring System, pilot tube, auger, hydraulic	n/a	84	n/a	20	Auger drill rig
Boring System, 30-36", auger, diesel	n/a	83	n/a	50	Boring jack power unit
Skidsteer, 36-45 HP	45	68	0-2	50	"Bobcat" ²
Wheel loader, 2.5-3.0 CY	130	79	0-2	40	Front loader
Excavator, 50-60K#	250	81	0-1	40	Excavator
Generator, 5-7KW, gasoline	20	73	2-10	50	Generator
Manlift, 60' RT, gasoline or diesel	85	75	0-3	20	Manlift
Manlift, 120' RT, gasoline or diesel	85	75	0-3	20	Manlift
Crane, 70-79 ton, hydraulic, RT	250	81	0-2	16	Crane
Crane, 225-250 ton, lat-boom, mech, crawler	420	81	0-2	16	Crane
Forklift, 6K# RT, tele-boom	100	81	0-4	16	Crane
Welder, 250-300 A, diesel	22	74	0-10	40	Welder/torch
Flatbed, 1-ton, 4X4	n/a	74	0-1	40	Flatbed truck
Flatbed, 1-ton, 4X4, liftgate	n/a	74	0-2	40	Flatbed truck
Pickup, ¾-ton, 2X4	n/a	75	0-7	40	Pickup truck
Pickup, ¾-ton, 2X4, crewcab	n/a	75	0-1	40	Pickup truck
Pickup, 1-ton, 4X4	n/a	75	0-1	40	Pickup truck
Automobile	n/a	75	0-1	40	Pickup truck
Polypipe fusion machine, 1-4"	22	85	0-1	50	All other equipment > 5HP
Polypipe fusion machine, 2-8"	22	85	0-1	50	All other equipment > 5HP

¹ Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) User's Guide (2006).

² "Grange Resources" Vipac report (2006).

**Table I-5
Predicted Construction Noise Levels (average hourly L_{eq}) at Nearest Noise-Sensitive Receivers**

Sensitive Receiver Identification (see Figure I-2)	Direction from Center of Proposed GT3 (southern-most new GT)	Distance from Center of Power Block (ft)	Predicted Range of Average Hourly SPL (dBA L_{eq})
S1	South	900	47-60
S2	Southeast	1,200	45-58
S3	South-Southeast	1,200	45-58
S4	Southwest	600	51-64

While these predicted construction noise levels may temporarily exceed the 60 dBA daytime threshold for some months of the Project construction schedule and its anticipated activity intensity, they would be permitted given prior written approval and/or during allowable construction process hours as described in the earlier section of this Exhibit.

Occupational Noise

Compliance with the Occupational Safety and Health Administration (“OSHA”) regulations will help ensure that construction personnel are adequately protected from potential noise hazards. The noise exposure level to protect hearing of workers is regulated at a time-weighted average of 90 dBA over an 8-hour work shift. The Project’s contractors are required to comply with all OSHA regulations. Therefore, occupational noise would not result in significant impacts.

Construction Traffic

The construction traffic would consist of workers’ transportation vehicles, delivery trucks, and heavy trucks. The specific information regarding construction traffic for the project is as yet undetermined; however, assuming such temporary increases in traffic volume would result in proportions of passenger cars and trucks that are similar to pre-Project ratios, the increase in traffic flows on E. University Avenue and connected roadways would likely result in a minor increase in traffic noise. To help put it in perspective, each *doubling* of traffic volume (composed of the same mix of vehicle types and speeds) would be expected to cause an increase in traffic-generated noise level of only 3 dBA.

Operational Noise

Prediction Methods

The Cadna/A[®] Noise Prediction Model (Version 4.4.145) was used to estimate sound levels at noise-sensitive receivers due to Project operation scenarios. Cadna/A[®] is a Windows[®] based software program that predicts and assesses noise levels near industrial noise sources based on ISO 9613-2 standard for noise propagation calculations. The model uses industry-accepted propagation algorithms and accepts PWL (in dB re: 1 pico Watt) provided by equipment manufacturers and other sources. The calculations account for classical sound wave divergence, plus attenuation factors resulting from air absorption, basic ground effects, and barrier/shielding. Given the Ocotillo Site and surrounding areas being generally flat, no intervening natural topographical barrier effects were considered; however, the following buildings and structures have been included in the prediction model (depending on studied scenario):

- Proposed control, warehouse and water treatment buildings;
- Proposed new cooling tower and air-cooled heat exchanger;
- Existing cooling towers;
- Existing steam and GT units;
- Proposed tanks adjacent to the proposed water treatment building;
- Gas compression enclosures; and
- Enclosures/casings/stacks associated with the proposed new LMS100 GT units.

Calculations were performed using un-weighted octave band sound power levels as inputs from each pre-defined noise source, as summarized in Table I-6. For noise sources lacking client-supplied sound data, sound levels were based on noted references and/or appropriate calculation methods and assumptions based on available Project description information at the time this Exhibit was prepared. For example, the PWL (at OBCF resolution) for some of the equipment categories in Table I-6 are based on sound levels of similar equipment presented in the predictive operation noise analysis for the proposed Pio Pico Energy Center project in southern California, which intends to utilize three LMS100 units and associated ancillary systems for power generation.

The PWL for the last five items in Table I-6, representing existing facility systems, are calculated from SPL measurement data collected during the August 15-16 field survey. The Cadna/A program can accept such SPL (along with the distance between the measurement location and the source of noise emission) and perform this conversion to PWL automatically.

Given the faster start-up times and newer technology associated with the proposed GE LMS100 GT units, as compared to the existing GT units, this analysis assumes the start-up noise of a new GT is quieter than the start-up noise of an existing GT and would be shorter in duration; hence, only existing GT start-up noise has been considered in this analysis.

For purposes of this analysis, “steady-state” assumes full-load operation of an identified power plant system or component.

Aside from the PWL of individual equipment as shown in Table I-6, additional model parameters to help determine the influence of air and ground absorption effects were input as follows:

- Air temperature = 10° C
- Relative humidity = 70%
- Windspeed = 0 mph
- Project site and vicinity ground absorption coefficient = 0.5

While temperature and relative humidity in the Project vicinity can range between different daily and seasonal extremes, the values shown above are conservative with respect to sound attenuation from air absorption. Audible sound, particularly of higher frequencies, travels farther when there is more moisture in the air. Hence, air absorption is relatively poor in a moist climate with high humidity but better in a dryer climate.

With respect to ground absorption, the coefficient values can range from zero (0), representing a hard or otherwise acoustically reflective surface such as smooth concrete or a body of water, to unity (1) which would represent a porous surface such as loose, tilled soils and vegetative ground cover. Due to the Ocotillo Site having a mixture of large expanses of loose gravel (high acoustical absorption), packed dirt and paved areas, an average coefficient value of 0.5 seems appropriate.

**Table I-6
Predictive Operational Noise Model Source Parameters**

Proposed Project Component (per unit, unless otherwise noted)	Sound Power Level (PWL, dB) per Component at Octave Band Center Frequency (OBCF, Hz)									A-Weighted (dBA)
	31.5	63	125	250	500	1000	2000	4000	8000	
Air compressor skid	91	98	96	96	93	92	91	90	86	98
Ammonia system	95	106	100	100	97	96	95	94	90	102
Auxiliary transformer	80	86	88	83	83	77	72	67	60	83
Building roof-mounted ventilation fan	95	95	91	87	84	82	80	76	76	88
New combustion turbine generator (GT) turbine and generator enclosure	124	115	116	103	102	98	101	100	92	108
New GT J3 bearing vent fan	89	95	91	94	93	92	91	86	77	97
New GT air inlet filter face	119	115	112	103	93	82	71	57	59	99
New GT inlet filter face ventilation air	89	90	93	89	90	95	99	93	85	102
New GT inlet filter house and ducting	126	122	113	96	81	68	74	74	72	100
New GT step-up transformer	96	102	104	99	99	93	88	83	76	99
Demineralized water pump	86	93	91	91	88	87	86	85	81	93
Gas compressor aftercooler	110	110	109	106	101	99	93	87	81	104
Gas compressor enclosure	117	108	107	106	90	79	73	63	61	99
New GT intercooler system and variable bypass valve (VBV) silencer diffuser pipes	109	101	102	100	101	92	88	87	72	100
New GT Selective Catalytic Reduction (SCR) structure	118	105	101	102	98	89	82	76	62	98
New GT SCR stack shell	126	113	109	110	106	94	90	83	66	106
New GT SCR Stack Exhaust exit with silencer	123	114	115	109	114	107	102	97	85	113
New GT auxiliary skid	102	104	107	87	101	94	95	84	78	102
New GT intercooler cooling system	97	105	107	106	105	104	99	90	62	107
New GT SCR system fans	n/a	102	102	98	95	94	86	82	82	98
Service water pump	86	93	91	91	88	87	86	85	81	93
Waste water pump	86	93	91	91	88	87	86	85	81	93
Water treatment building	100	103	97	91	77	68	61	55	54	85
New cooling tower (CLGTWR) structure	108	111	102	103	98	99	93	92	92	103
New CLGTWR fan	n/a	109	109	108	106	109	109	110	113	117
CLGTWR water pump	86	93	91	91	88	87	86	85	81	93
New Air-cooled Heat Exchanger (ACHE) (includes all 30 fans)	n/a	121	120	117	112	110	104	98	92	115
Existing steam unit (calculated from SPL measurement), "steady-state"	129	131	128	121	118	116	114	110	103	122
Existing steam unit (calculated from SPL measurement), "ramp-up"	132	133	130	125	126	128	131	126	111	135
Existing GT unit (calculated from SPL measurement), "steady-state"	126	127	121	111	104	101	103	99	92	111
Existing GT unit (calculated from SPL measurement), "ramp-up"	128	131	128	119	114	120	118	115	107	124
Existing cooling tower unit (calculated from SPL measurement), "steady-state"	121	121	117	112	111	110	107	105	103	115

Sources: California Energy Commission (2012); URS (2013); APS (2014); Kiewit (2013).

Modeled Scenarios

Table I-7 shows a set of scenarios representing different Project operating conditions as follows:

1. Current operations (Scenarios A, B) – the first scenario (A) assumes only both existing GT units are operating at "steady-state" and reliably delivering power at or near full capacity—the steam units are off-line. Conversely, Scenario B considers operation of just the steam pair, while the GT units remain inactive.

2. Current operations (Scenarios C, D, E, F, G) – the first of this scenario set (C) assumes both steam units and both GT units are operating at “steady-state” and reliably delivering power at or near full capacity. The next four look at individual cases where one of these four (4) existing power units may be in a “ramp-up” process and thus—as measured during the baseline SPL survey—create significantly more noise.
3. Expected 2018 operations (Scenarios H, I, J) – these scenarios involve all five (5) new LMS100 GT units added to operation of the existing pair of GT units. Both the new cooling tower and air-cooled heat exchanger are used as the cooling technology for the new GT units.
4. Expected 2018 operations (Scenario K) – this scenario assumes only the five (5) new GT units are operating (i.e., the existing GT units are off-line).

As indicated in Table I-7, scenarios A through G commonly (and conservatively) assume that both existing cooling towers are operating. For scenarios H through K on Table I-7, it is assumed the existing cooling towers and steam turbines have been decommissioned and dismantled (i.e., they are no longer sources, and their structures have also been removed as potential sound barriers in the model).

RESULTS

Predicted Project Operation Noise

The summarized results of preliminary predictive calculations for anticipated Project operation noise, using the listed noise-emitting sources shown in Table I-6, are presented by scenario in Table I-7.

**Table I-7
Preliminary Predicted Project Operation Noise per Scenario at Nearest Noise-sensitive Receivers**

Scenario ID	Equipment Operating Status per Scenario ("Y" = yes, "n/a" = not applicable, "stdy" = "steady-state", "ramp" = "ramp-up")												Predicted L _{eq} (dBA) at Noise-sensitive Receivers				
	Steam- south	Steam- north	GT1 (south)	GT2 (north)	GT3	GT4	GT5	GT6	GT7	ACHE	CLCTWR	Existing cooling towers	S1	S2	S3	S4	
A	n/a	n/a	stdy	stdy	n/a	yes	56.7	57.0	55.1	57.5							
B	stdy	stdy	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	60.3	61.2	57.9	60.0	
C	stdy	stdy	stdy	stdy	n/a	yes	60.4	61.4	58.0	60.0							
D	ramp	stdy	stdy	stdy	n/a	yes	68.3	70.4	65.7	67.7							
E	stdy	ramp	stdy	stdy	n/a	yes	66.8	67.4	61.7	63.4							
F	stdy	stdy	ramp	stdy	n/a	yes	60.7	63.4	58.4	60.5							
G	stdy	stdy	stdy	ramp	n/a	yes	60.6	61.7	58.3	60.2							
H	n/a	n/a	stdy	stdy	stdy	stdy	stdy	stdy	stdy	stdy	yes	yes	no	58.4	58.2	57.0	61.8
I	n/a	n/a	ramp	stdy	stdy	stdy	stdy	stdy	stdy	stdy	yes	yes	no	61.0	61.7	59.3	62.1
J	n/a	n/a	stdy	ramp	stdy	stdy	stdy	stdy	stdy	stdy	yes	yes	no	60.1	59.0	57.5	61.9
K	n/a	n/a	n/a	n/a	stdy	stdy	stdy	stdy	stdy	stdy	yes	yes	no	58.0	57.8	56.7	61.8

In summary, the predictive analysis results from Table I-7 illustrate that the proposed “steady-state” operation Scenarios (A, B, H, K) are not expected to comply with the suggested 55 dBA L_{eq} exterior nighttime noise impact criterion without some form of noise control or sound abatement. Recall that this

55 dBA L_{eq} criterion is based on the assumption of open residential receiver windows and doors, and is subject to the influence of seasonal environmental conditions and, ultimately, dwelling occupant choice.

During the daytime (7:00 a.m. to 10:00 p.m.), however, and at night when residential receiver windows and doors are closed, the prediction model expects all four of these “steady-state” scenarios to comply with the suggested exterior 65 dBA limit.

Occupational Noise

Based upon the predicted noise level data, the noise levels very near major noise-producing Power Plant operating systems would be similar in magnitude to those already occurring onsite and for which APS already requires the use of hearing protection for worker noise exposure. Continued usage of such hearing protection as part of the existing APS hearing protection program for its workers (and requirement for contractors working on site) is therefore expected and encouraged.

Power Transmission

Noise sources associated with power transmission include occasional breaker operation in the substation, corona noise, and very low magnetostriction hum from the conductors. Breaker noise is considered impulsive in nature, lasting a very short duration and may occur only a few times per year. Corona noise is characterized as having high frequency components, like a buzz, and low frequency tones that are best described as humming sounds. While corona noise usually worsens when the transmission line conductors are wet, such as during rainfall, these conditions often provide sources of their own that help mask the increase.

The Electric Power Research Institute (“EPRI”) has conducted noise studies and has published reference material on transmission line noise. Consistent with industry-accepted acoustic textbooks’ discussion of propagation of noise from a line source, EPRI states that noise produced by a conductor decreases at a rate of 3 dB per doubling of distance from the source. The EPRI Transmission Line Reference Book indicates that the audible noise from a typical 525-kilovolt (“kV”) line with two conductors per phase would likely be less than 40 dBA at a distance of 40 feet from the outside conductor at ground level. If only one conductor per phase is used, the noise level will be less.

Although the newly installed five (5) GT units would require new onsite Generation Interconnections, the anticipated low magnitude of corona noise emission as discussed above is—when compared to existing measured sound levels in the vicinity as presented in Table I-3—either less than or not expected to create a significant increase in ambient noise.

REFERENCES

- American Society of Mechanical Engineers (ASME). 1989. ANSI B133.8-1977 Gas Turbine Installation Sound Emissions (Reaffirmed 1989), New York.
- Arizona Corporation Commission. 2006. Rules of Practice and Procedure, R14-3-219. December 31.
- Berglund, B. et al. 1999. *Guidelines for Community Noise*, World Health Organization (WHO), Geneva.
- California Energy Commission. 2011. Application for Certification (AFC), Pio Pico Energy Center [11-AFC-01]. <http://www.energy.ca.gov/sitingcases/piopico/documents/applicant/afc/>, last accessed September 18, 2013.
- Electric Power Research Institute (EPRI). 1987. *Transmission Line Reference Book, 345 kV and Above*.
- Illinois Department of Transportation. 2014. <http://www.dot.il.gov/desenv/noise/part1.html>, last accessed July 1, 2014.
- ISO 1996-2:2007(E). 2007. *Acoustics – Description, measurement and assessment of environmental noise – Part 2: Determination of Environmental Noise Levels*, 2nd ed., 2007-03-15, International Organization of Standardization, Geneva.
- ISO 9613-2:1996(E). 1996. *Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation*, 1st ed., 1996-12-15, International Organization of Standardization, Geneva.
- Lucas, P. 2006. Technical Report: 60W-05-1649-TRP-185124-0-draft, Vipac Engineers & Scientists, West Adelaide, Australia.
- U.S. Department of Transportation. 2010. Federal Highway Administration (FHWA), Highway Traffic Noise: Analysis and Abatement Guidance. Washington, D.C.
- _____. 2006. FHWA Roadway Construction Noise Model (RCNM) User's Guide, Final Report. FHWA-HEP-05-054. Washington, D.C.
- U.S. Environmental Protection Agency. 1974. Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety. Report No. 550/9-74-004. Washington, D.C.
- _____. 1971. Noise from Construction Equipment and Operations, Building Equipment and Home Appliances. NTID300.1. (Prepared under contract 68-04-0047 by Bolt, Beranek & Newman, Boston, Massachusetts), Washington, D.C.
- U.S. Department of Housing and Urban Development. 1996. HUD Noise Guidelines 24 CFR 51 subpart B. March 26.

ATTACHMENT I-1 – PHOTOGRAPHS OF NOISE SURVEY POSITIONS

**ATTACHMENT I-1
PHOTOGRAPHS OF NOISE SURVEY POSITIONS**



Photograph 1

Date: 08/14/13

GPS: 0415120/
3698470

View Direction:
North

Comments:
SPL monitor
location **LT1** near
the southern Project
property line that
adjoins University
Avenue.

(Windscreened SLM
microphone encircled)



Photograph 2

Date: 08/14/13

GPS: 0415120/
3698470

View Direction:
South

Comments:
SPL monitor
location **LT1** near
the southern Project
property line that
adjoins University
Avenue.

(Windscreened SLM
microphone encircled)

**ATTACHMENT I-1
PHOTOGRAPHS OF NOISE SURVEY POSITIONS**



Photograph 3

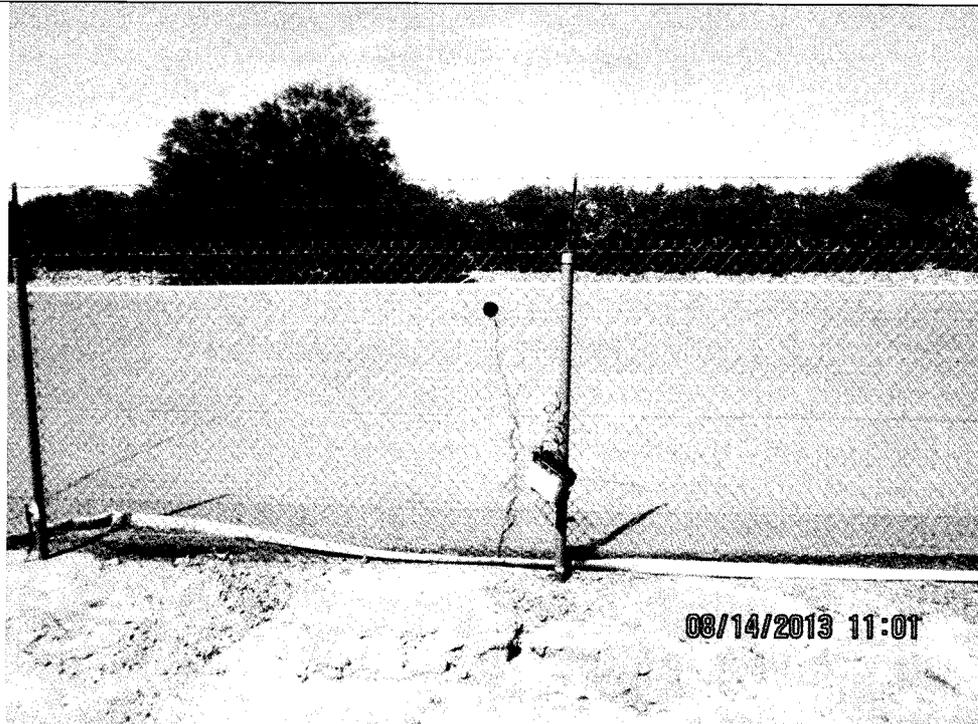
Date: 08/14/13

GPS: 0414749/
3698765

View Direction:
North

Comments:
SPL monitor
location **LT2** near
the western Project
property line that
adjoins the
Tempe/APS Joint
Fire Training
Center.

(Windscreened SLM
microphone encircled)



Photograph 4

Date: 08/14/13

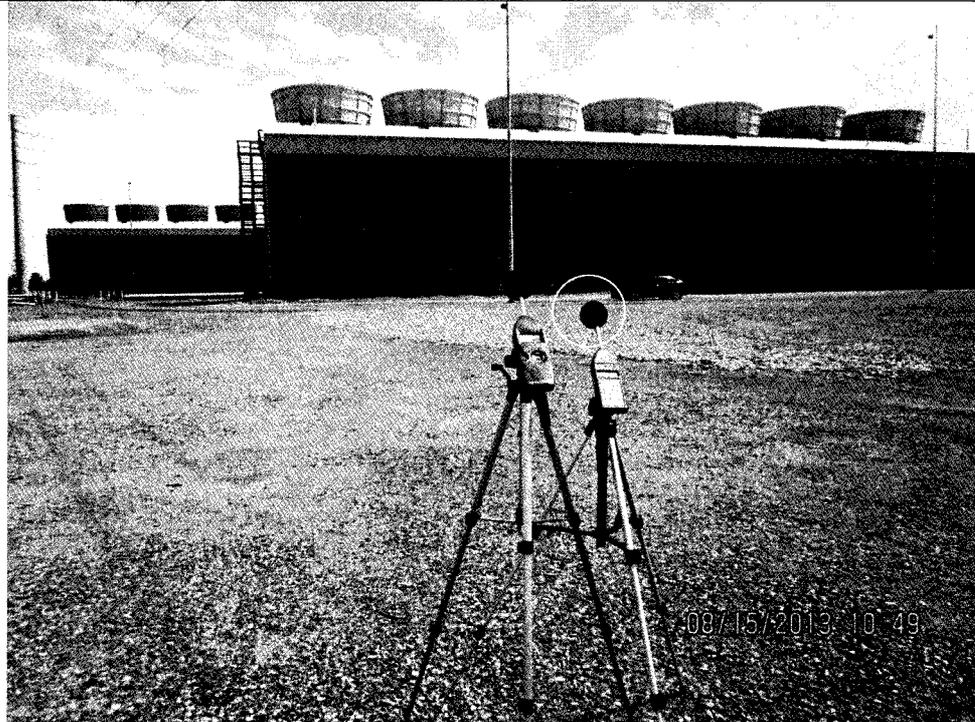
GPS: 0414749/
3698765

View Direction:
West

Comments:
SPL monitor
location **LT2** near
the western Project
property line that
adjoins the
Tempe/APS Joint
Fire Training
Center.

(Windscreened SLM
microphone encircled)

**ATTACHMENT I-1
PHOTOGRAPHS OF NOISE SURVEY POSITIONS**



Photograph 5

Date: 08/15/13
GPS: 0414862/
3698589

View Direction:
Northeast

Comments:
SPL monitor
location **ST1**, south
of the southern-most
existing cooling
tower.

(Windscreened SLM
microphone encircled.
Photograph taken with
concurrent octave-
band capable SLM on
left.)



Photograph 6

Date: 08/15/13
GPS: 0414862/
3698589

View Direction:
West

Comments:
SPL monitor
location **ST1**, south
of the southern-most
existing cooling
tower.

(Windscreened SLM
microphone encircled.
Photograph taken with
concurrent octave-
band capable SLM on
right.)

**ATTACHMENT I-1
PHOTOGRAPHS OF NOISE SURVEY POSITIONS**



Photograph 7

Date: 08/15/13

GPS: 0414901/
3698851

View Direction:
East

Comments:
SPL monitor
location **ST2**, west
of the existing gas
combustion turbines.

(Windscreened SLM
microphone encircled.
Photograph taken with
concurrent octave-
band capable SLM on
left.)



Photograph 8

Date: 08/15/13

GPS: 0414901/
3698851

View Direction:
South

Comments:
SPL monitor
location **ST2**, north
of the northern-most
existing cooling
tower.

(Windscreened SLM
microphone encircled.
Photograph taken with
concurrent octave-
band capable SLM on
left.)

**ATTACHMENT I-1
PHOTOGRAPHS OF NOISE SURVEY POSITIONS**



Photograph 9

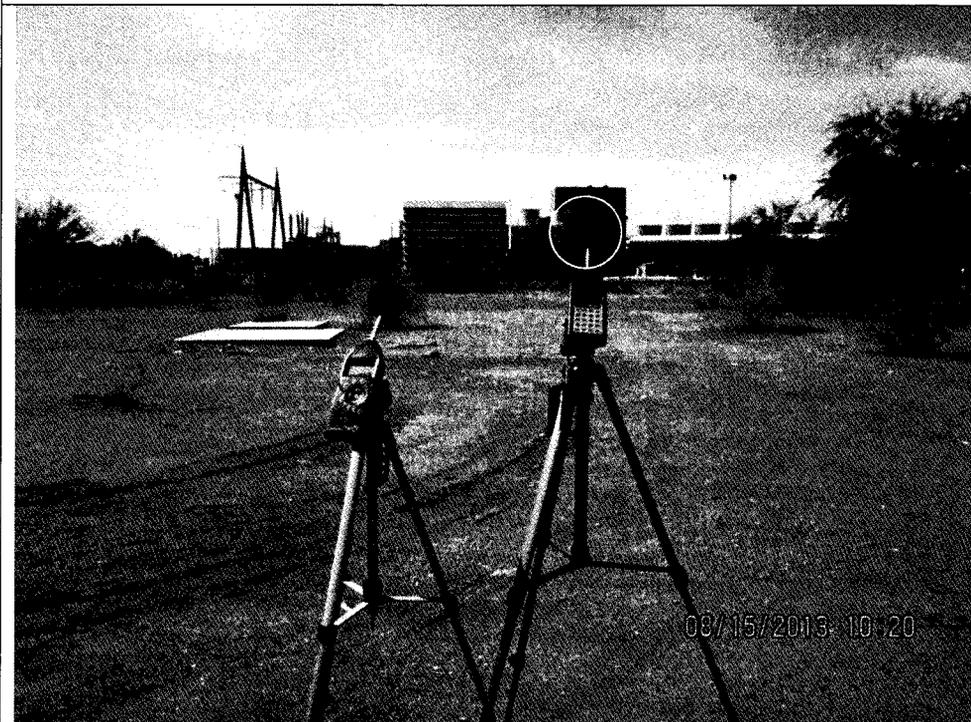
Date: 08/15/13

GPS: 0414997/
3698963

View Direction:
Southeast

Comments:
SPL monitor
location ST3, north
of the northern-most
existing gas
combustion turbine.

(Windscreened SLM
microphone encircled.
Photograph taken with
concurrent octave-
band capable SLM on
left.)



Photograph 10

Date: 08/15/13

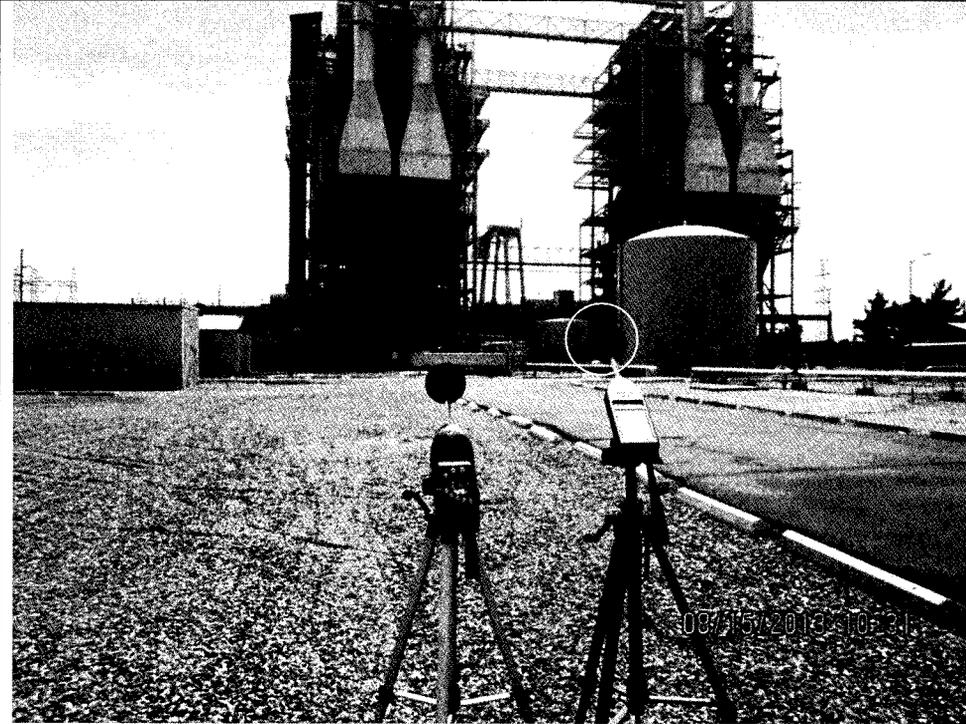
GPS: 0414997/
3698963

View Direction:
South

Comments:
SPL monitor
location ST3, north
of the northern-most
existing gas
combustion turbine.

(Windscreened SLM
microphone encircled.
Photograph taken with
concurrent octave-
band capable SLM on
left.)

**ATTACHMENT I-1
PHOTOGRAPHS OF NOISE SURVEY POSITIONS**



Photograph 11

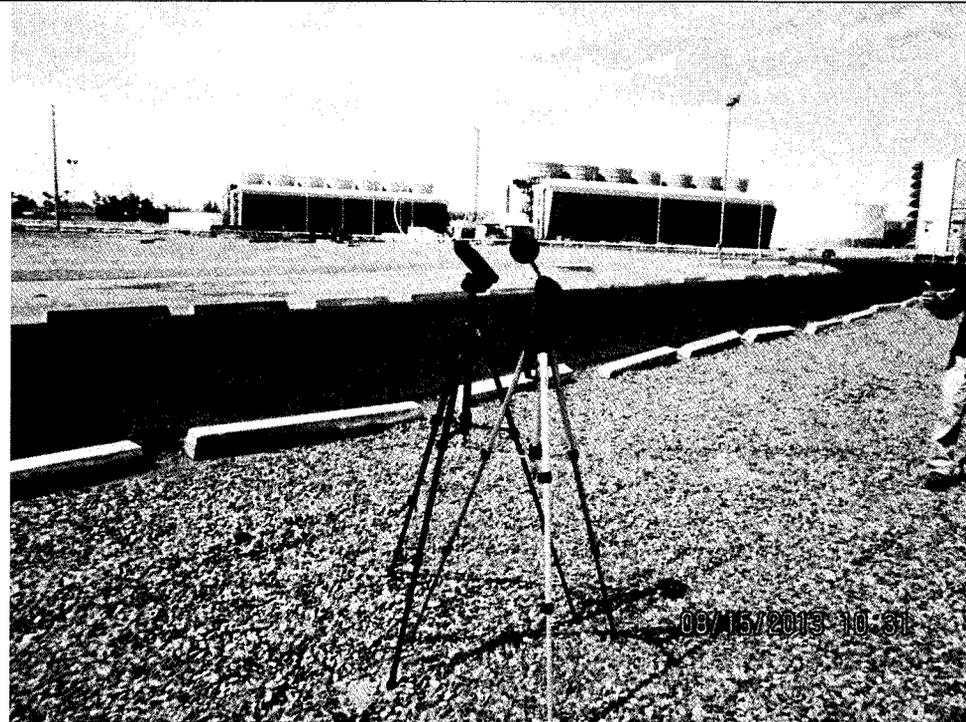
Date: 08/15/13

GPS: 0415073/
3698816

View Direction:
East

Comments:
SPL monitor
location ST4, east of
the existing gas
combustion turbines.

(Windscreened SLM
microphone encircled.
Photograph taken with
concurrent octave-
band capable SLM on
left.)



Photograph 12

Date: 08/15/13

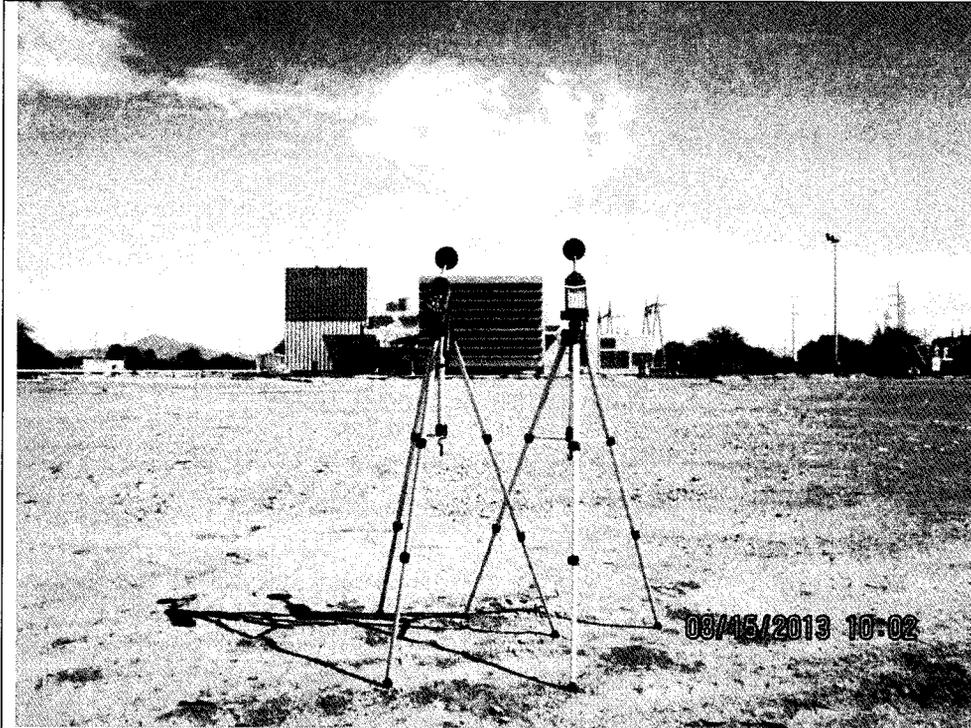
GPS: 0415073/
3698816

View Direction:
Southwest

Comments:
SPL monitor
location ST4, east of
the existing gas
combustion turbines.

(Windscreened SLM
microphone encircled.
Photograph taken with
concurrent octave-
band capable SLM on
right.)

**ATTACHMENT I-1
PHOTOGRAPHS OF NOISE SURVEY POSITIONS**



Photograph 13

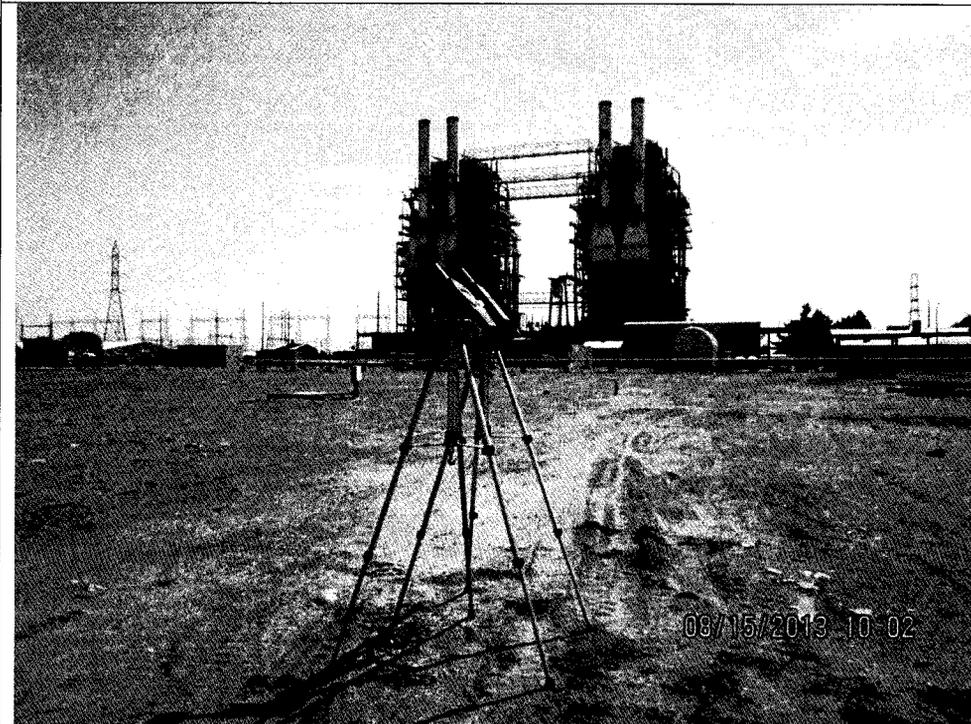
Date: 08/15/13

GPS: 0415999/
3698747

View Direction:
North

Comments:
SPL monitor
location **ST5**, south
of the southern-most
existing gas
combustion turbine.

(Windscreened SLM
microphone encircled.
Photograph taken with
concurrent octave-
band capable SLM on
left.)



Photograph 14

Date: 08/15/13

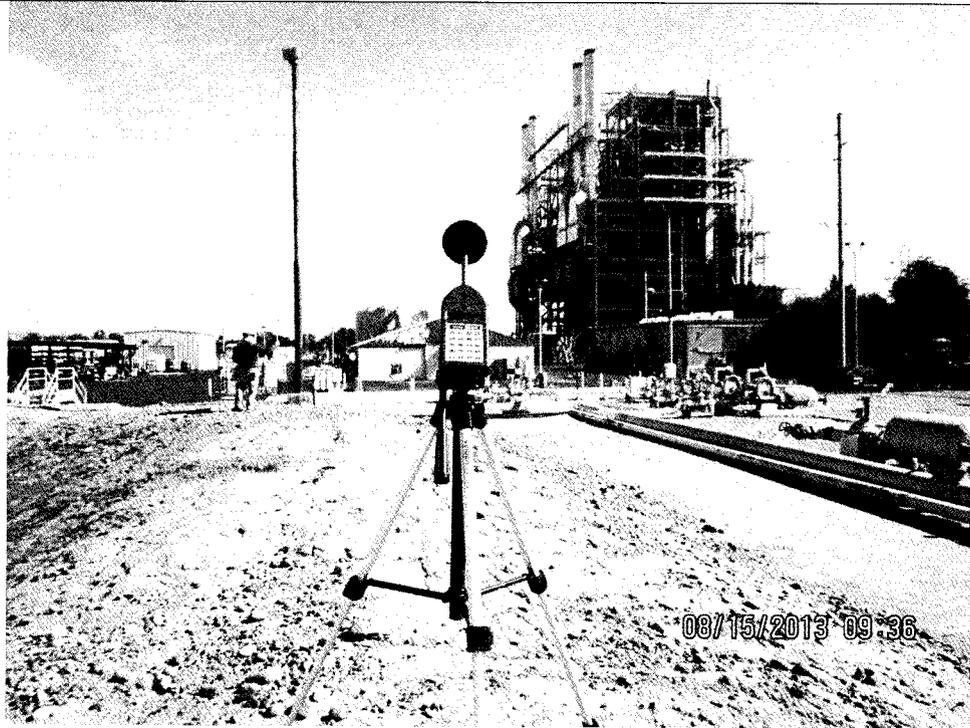
GPS: 0415999/
3698747

View Direction:
East

Comments:
SPL monitor
location **ST5**, south
of the southern-most
existing gas
combustion turbine.

(Photograph taken
with concurrent
octave-band capable
SLM on left.)

**ATTACHMENT I-1
PHOTOGRAPHS OF NOISE SURVEY POSITIONS**



Photograph 15

Date: 08/15/13

GPS: 0415113/
3698638

View Direction:
North

Comments:
SPL monitor
location ST6.



Photograph 16

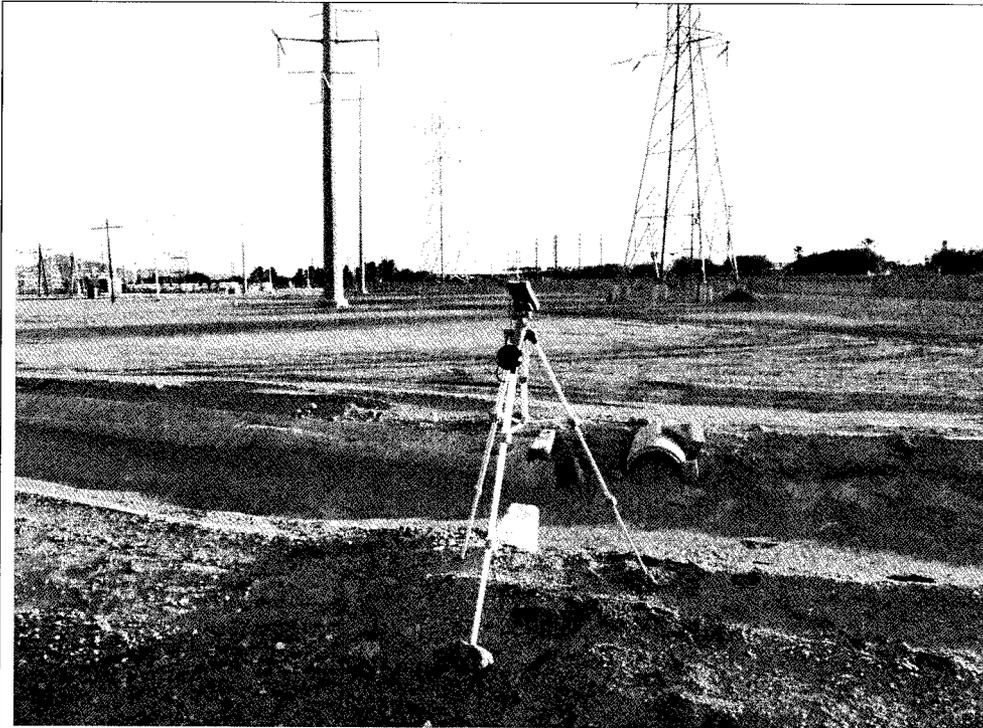
Date: 08/15/13

GPS: 0415113/
3698638

View Direction:
South

Comments:
SPL monitor
location ST6.

**ATTACHMENT I-1
PHOTOGRAPHS OF NOISE SURVEY POSITIONS**



Photograph 17

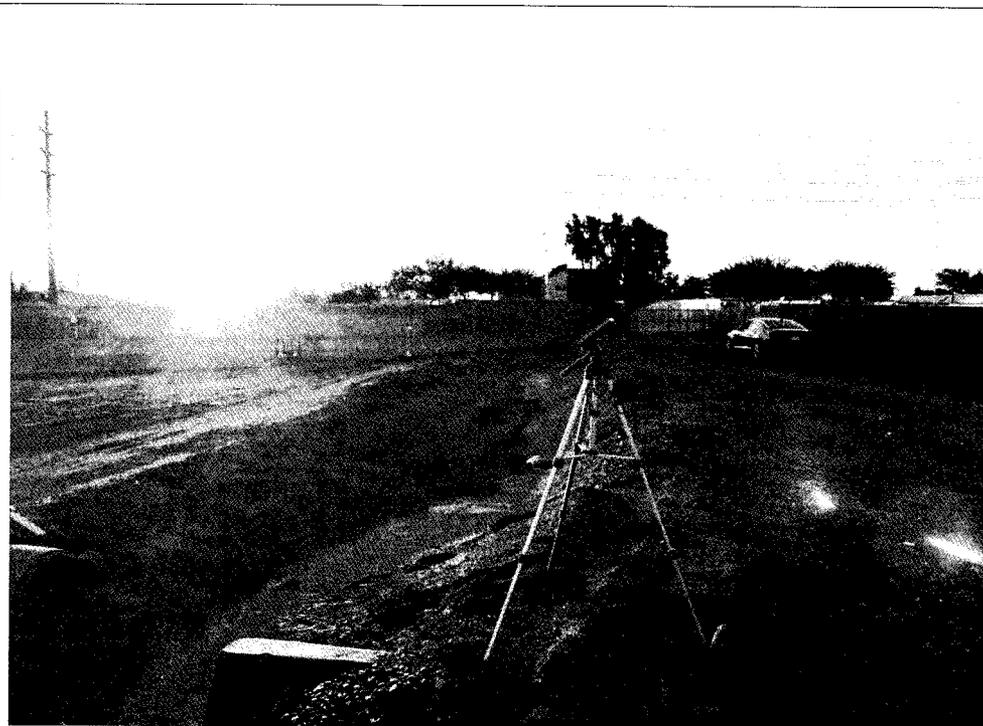
Date: 08/15/13

GPS: 0415414/
3698884

View Direction:
North

Comments:
SPL monitor
location **ST7**, east of
the existing steam-
powered turbines.

(Windscreened SLM
microphone encircled.)



Photograph 18

Date: 08/15/13

GPS: 0415414/
3698884

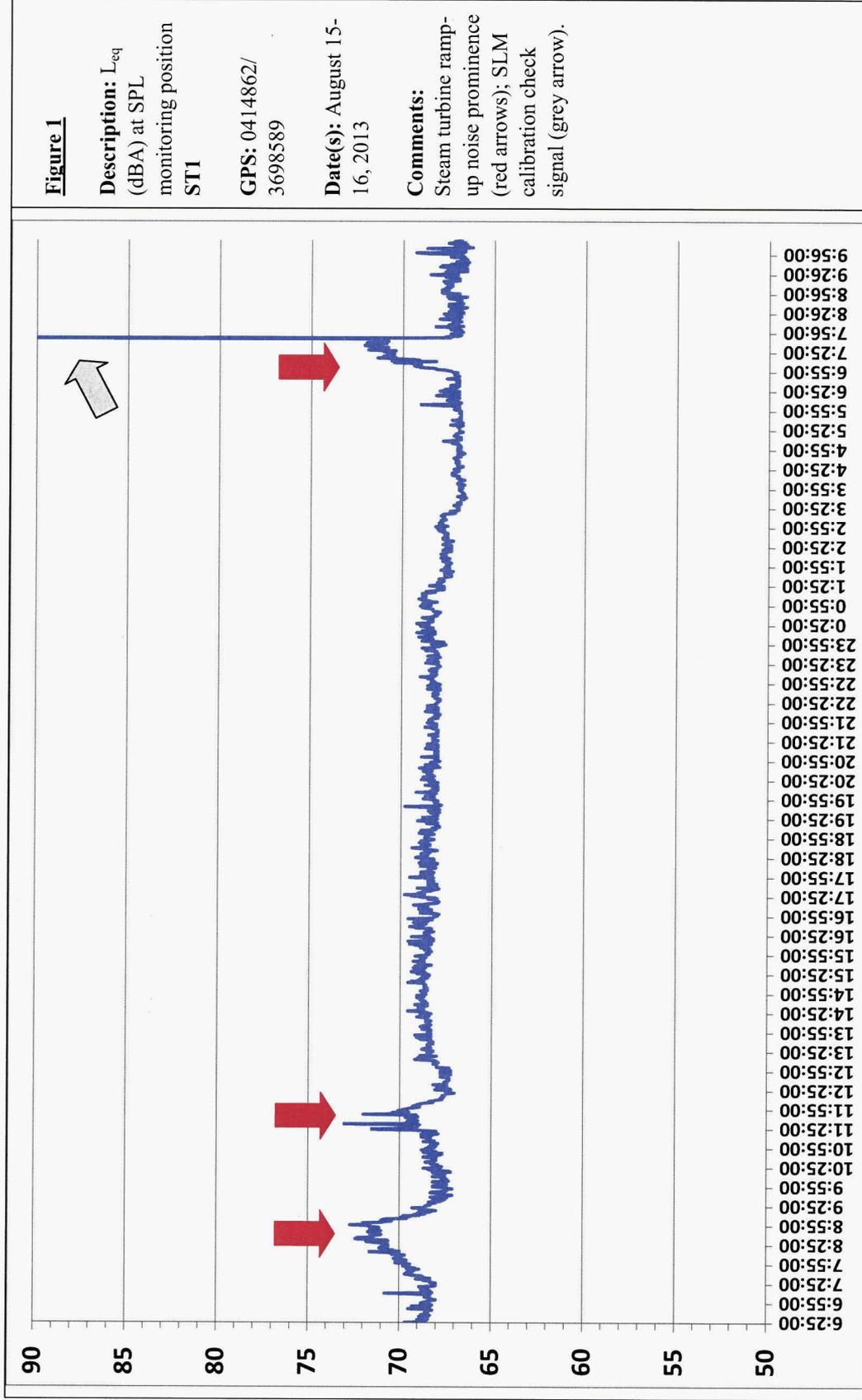
View Direction:
East

Comments:
SPL monitor
location **ST7**, east of
the existing steam-
powered turbines.

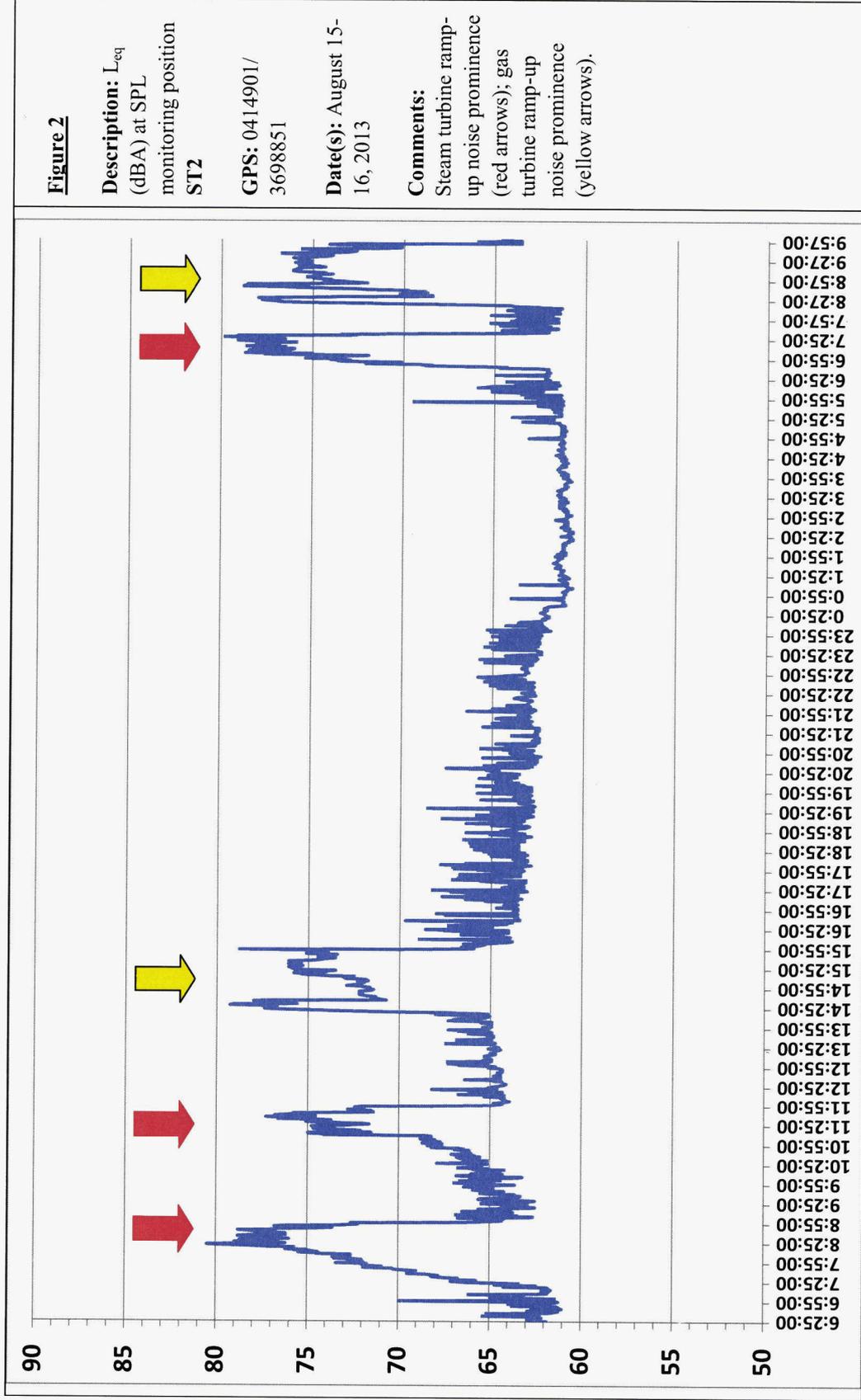
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ATTACHMENT I-2 – PLOTS OF L_{eq} AT SOUND MONITORING POSITIONS

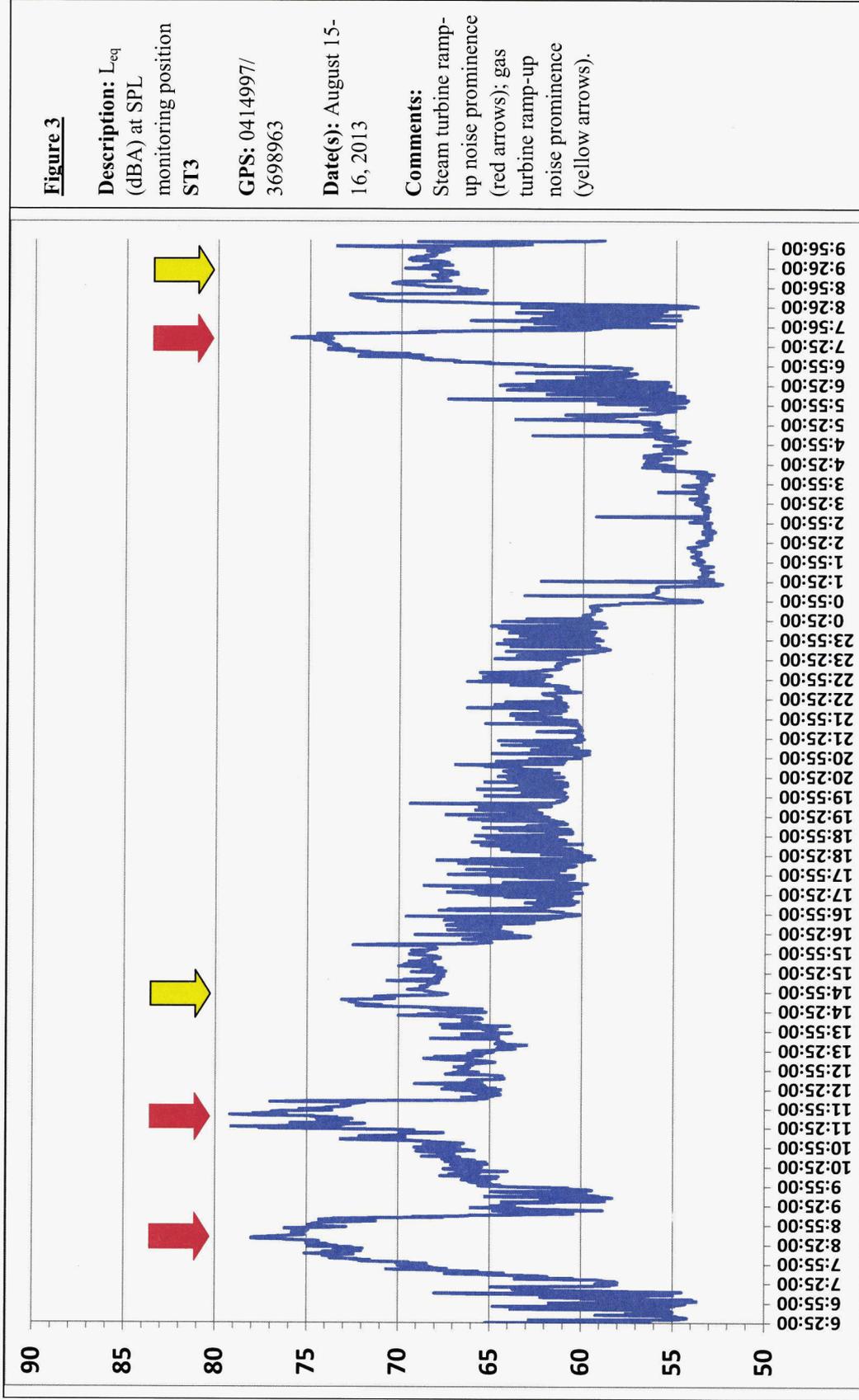
ATTACHMENT I-2
PLOTS OF L_{EQ} AT SOUND MONITORING POSITIONS



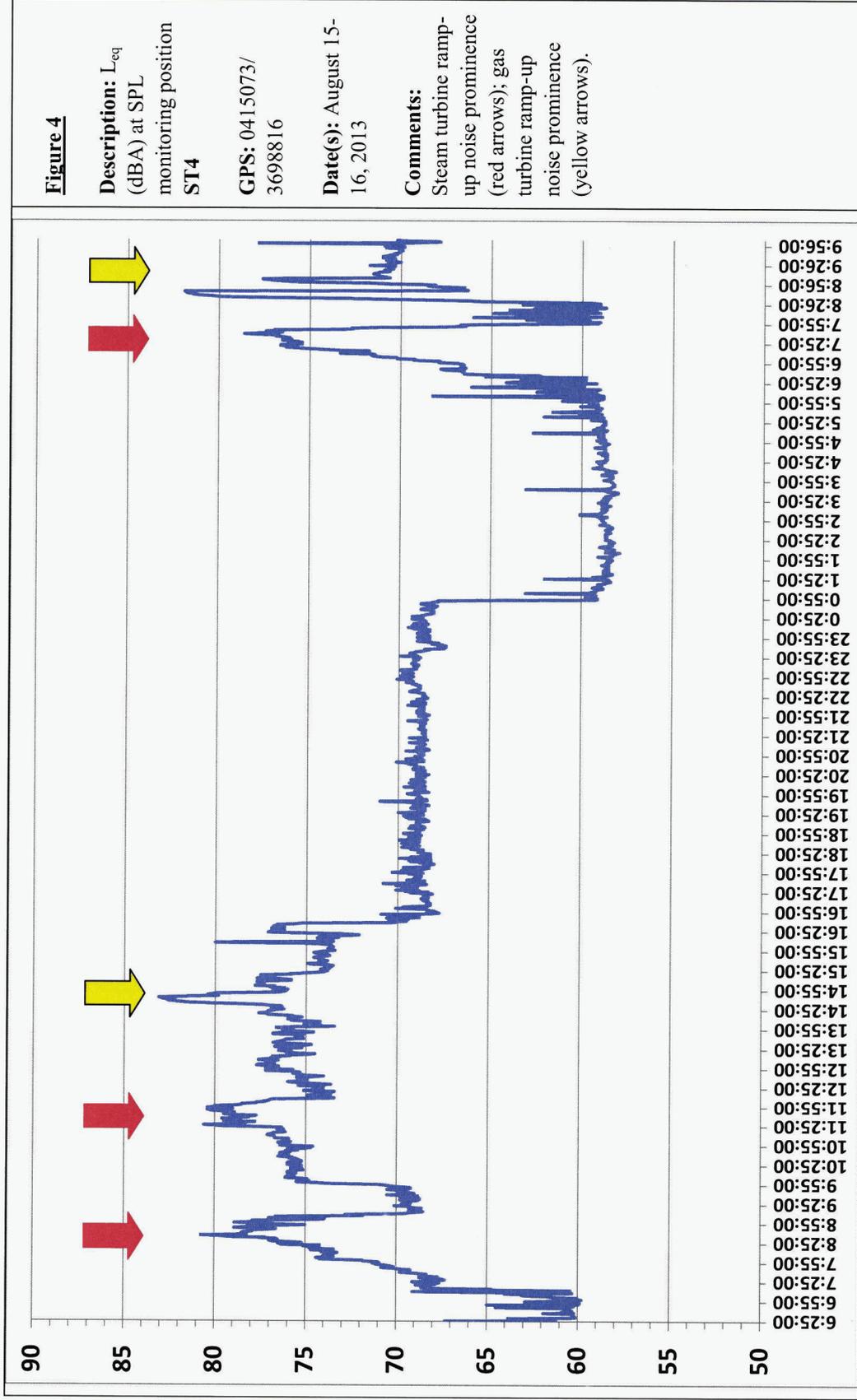
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PLOTS OF L_{EQ} AT SOUND MONITORING POSITIONS**



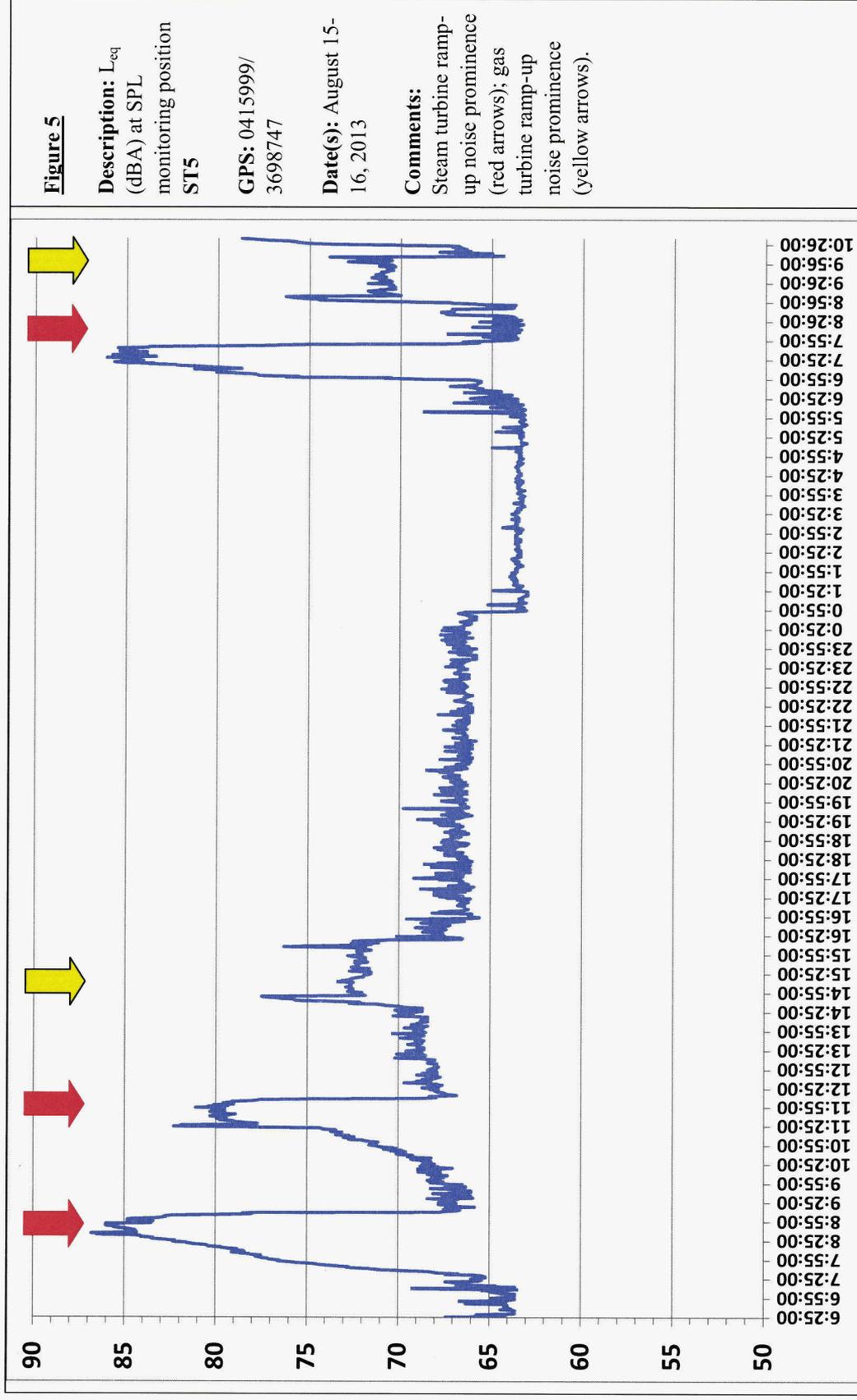
ATTACHMENT I-2 PLOTS OF L_{EQ} AT SOUND MONITORING POSITIONS



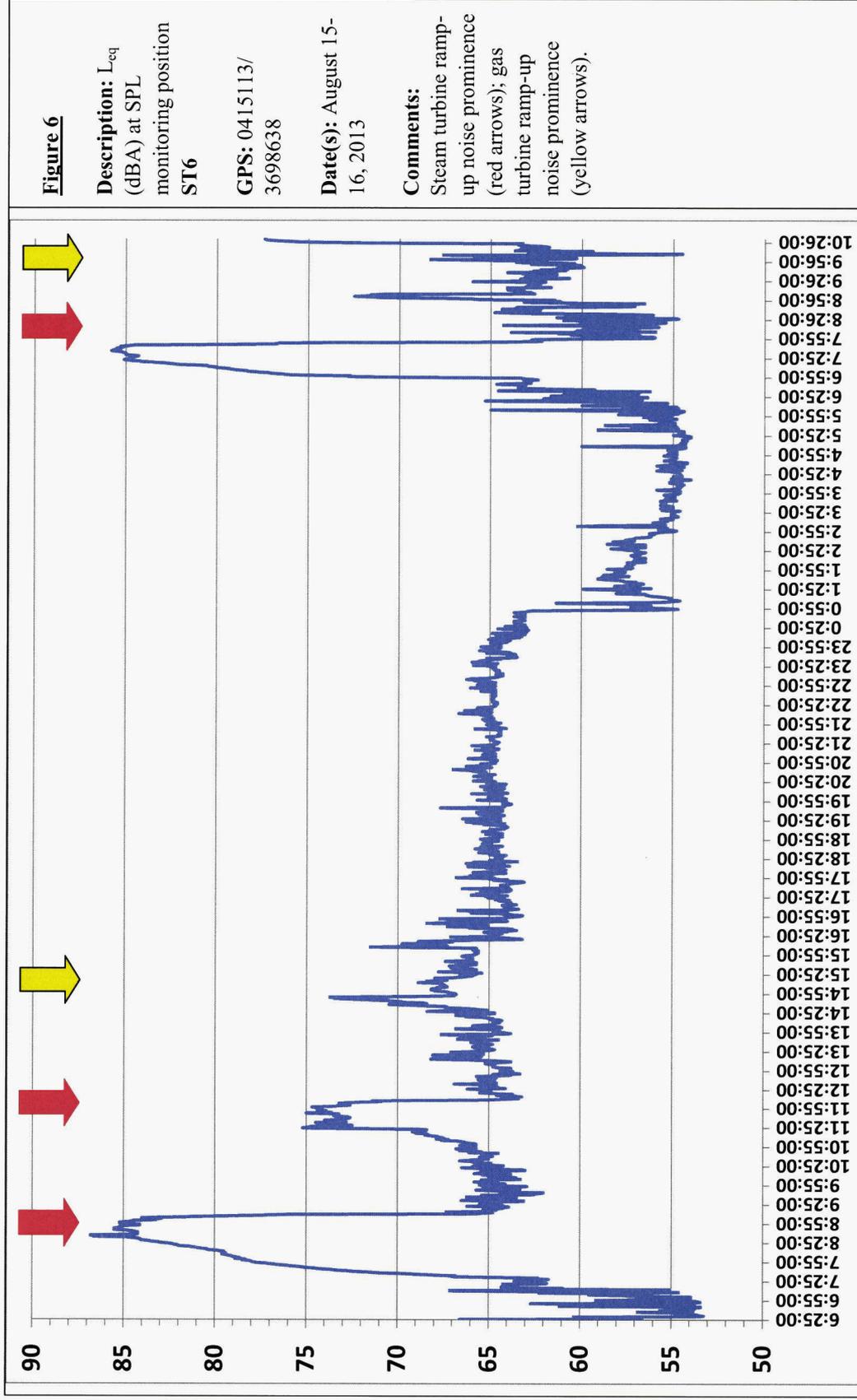
**ATTACHMENT I-2
PLOTS OF L_{EQ} AT SOUND MONITORING POSITIONS**



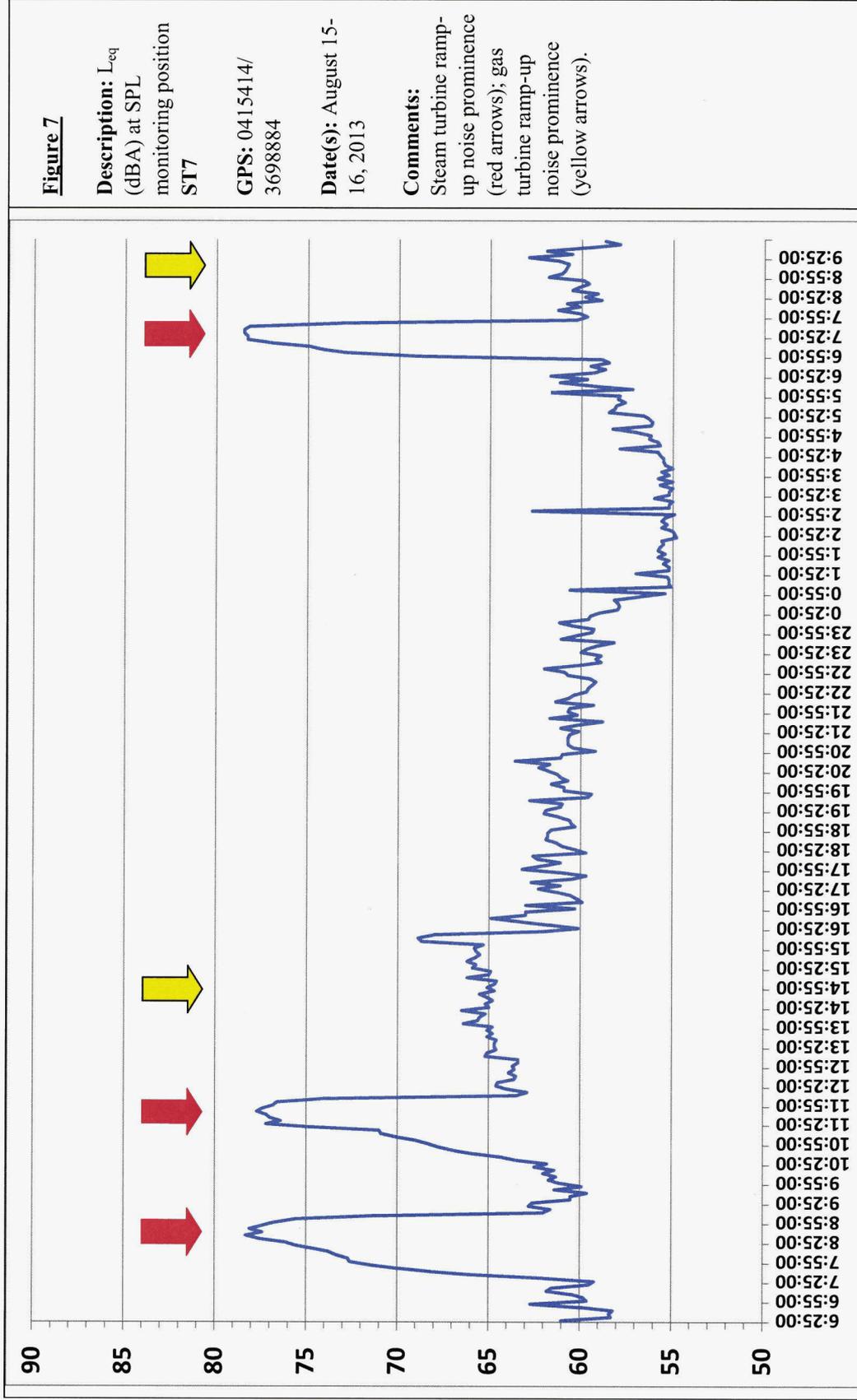
ATTACHMENT I-2
PLOTS OF L_{EQ} AT SOUND MONITORING POSITIONS



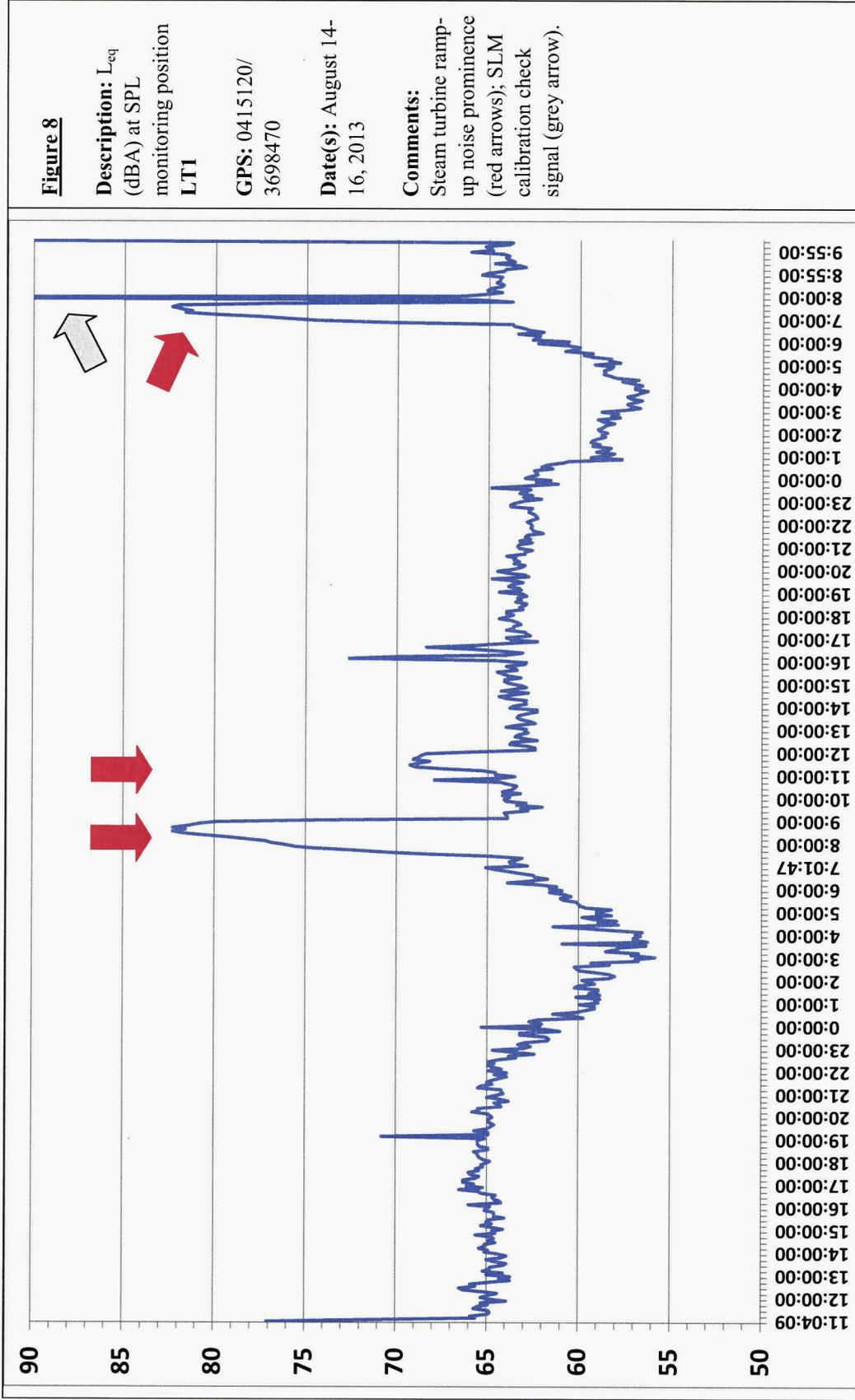
**ATTACHMENT I-2
PLOTS OF L_{EQ} AT SOUND MONITORING POSITIONS**



**ATTACHMENT I-2
PLOTS OF L_{EQ} AT SOUND MONITORING POSITIONS**



**ATTACHMENT I-2
PLOTS OF L_{EQ} AT SOUND MONITORING POSITIONS**



ATTACHMENT I-2
PLOTS OF L_{EQ} AT SOUND MONITORING POSITIONS

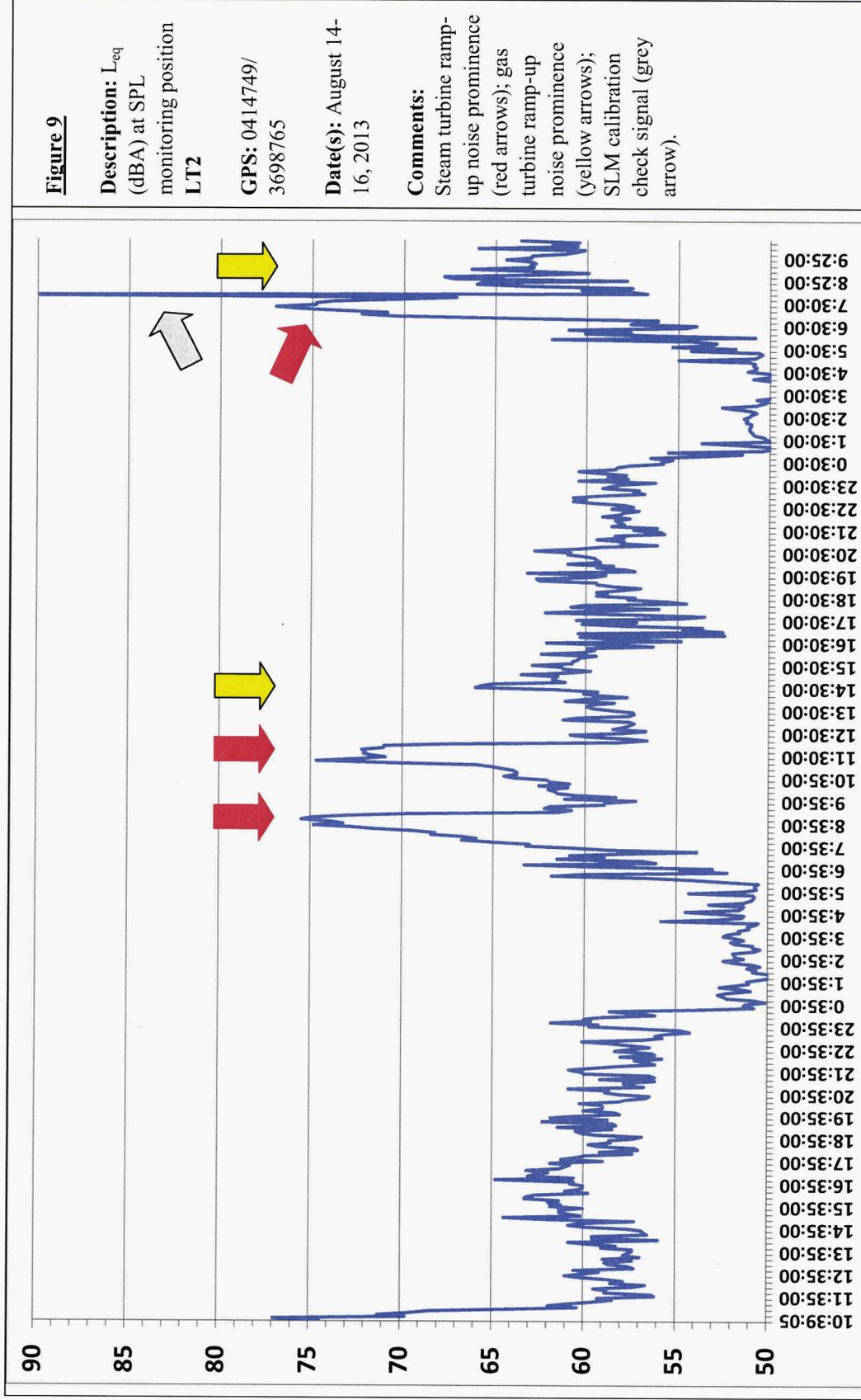


EXHIBIT J – SPECIAL FACTORS

Arizona Revised Statutes (“ARS”) §40-360 et seq. established the Power Plant and Transmission Line Siting Committee in 1971. ARS §40-360.06(A)(9) stipulates “any additional factors that require consideration under applicable federal and state laws pertaining to any such site” are among the factors the Siting Committee must consider in reviewing CEC applications. As stated in Arizona Corporation Commission Rules of Practice and Procedure R14-3-219,

“Describe any special factors not previously covered herein, which applicant believes to be relevant to an informed decision on its application.”

INTRODUCTION

APS has long-established relationships with the City of Tempe, Arizona State University, and community surrounding the Ocotillo Power Plant. As a result of those ongoing relationships, APS conducted, and will continue to conduct, agency and public outreach efforts as part of the Ocotillo Power Plant Modernization Project (“Project”). These outreach efforts included providing information about the Project to jurisdictional and agency representatives, community stakeholders, and the general public, and providing those entities and individuals opportunities to comment. This exhibit documents the public outreach completed for the Project, including the following:

- Stakeholder Briefings
- Agency Correspondence
- Direct Mail of Project Information
- Newspaper Notices
- Open House Meeting
- Project Website
- Social Media
- Newspaper Articles

STAKEHOLDER BRIEFINGS

The objective for the stakeholder briefings was to introduce the Project to public officials and interested stakeholders, solicit potential concerns or feedback, and to emphasize APS’s desire to maintain open dialogue regarding the Project.

The briefings included an overview of plans to modernize the Ocotillo Power Plant, including replacing the units placed in service in 1960 with five new turbines. Stakeholders were informed that natural gas will still be the source fuel and that the CEC Process is underway and public outreach will be a key component of the process. A description of the need for the Project, its location (including rendering of the current and proposed facilities), the Project schedule, opportunities for public involvement, and APS contact information were also provided. A copy of the briefing presentation is provided as Attachment J-1.

Briefings were conducted separately with entities that are listed below (see Table J-1, current through July 18, 2014). There were no significant concerns identified during the briefings and follow-on briefings were held with stakeholders as requested.

Table J-1. Stakeholder Briefings

AGENCY MEETINGS AND OFFICIAL BRIEFINGS			
Date	Agency/Entity	Contact/Represented By	APS Representative(s)
STATE			
01-29-14	Arizona Corporation Commission	Chairman Bob Stump	James Wilde, Stacy Aguayo, Pat Dinkel and Bob Smith
01-29-14	Arizona Corporation Commission	Commissioner Gary Pierce	James Wilde, Stacy Aguayo, Pat Dinkel and Bob Smith
01-29-14	Arizona Corporation Commission	Commissioner Brenda Burns	James Wilde, Stacy Aguayo, Pat Dinkel and Bob Smith
Phone 01-29-14	Arizona Corporation Commission	Commissioner Susan Bitter Smith	James Wilde, Stacy Aguayo, Pat Dinkel and Bob Smith
01-29-14	Arizona Corporation Commission	Commissioner Bob Burns	James Wilde, Stacy Aguayo, Pat Dinkel and Bob Smith
Phone 01-30-14	Line Siting Committee	John Foreman, Chairman	James Wilde, Stacy Aguayo, Linda Benally and Bob Smith
Phone 01-31-14	Arizona Corporation Commission	Commissioner Susan Bitter Smith	James Wilde, Stacy Aguayo, Pat Dinkel and Bob Smith
01-31-14	Arizona State University – Government Affairs	Morgan Olsen, Keith Walton and Angela Creed	Stephanie Whyte and Michelle Gettinger
02-03-14	Arizona Corporation Commission Staff	Steve Olea and Members of the Utilities Division Staff and Legal	James Wilde, Stacy Aguayo, Pat Dinkel, Greg Bernosky and Bob Smith
04-15-14	Residential Utility Consumer Office (RUCO)	Pat Quinn, Dan Pozefsky and Lon Huber	Barbara Lockwood, Greg Bernosky, James Wilde and Bob Smith
05-21-14	Arizona State University – Real Estate Office	John Creer, Assistant Vice President	Randy Clawson, along with Jennifer Frownfelter and Chelsa Weatherbee of URS.
06-24-14	Governor’s Office of Energy Policy	Leis Brug, Director Adam McNally, Sr. Policy Advisor Olivia Doherty, Sr. Policy Coordinator	Michael Vargas, Brent Gifford and Theresa Rakowsky
07-01-14	Arizona Corporation Commission	Commissioner Bob Burns	Barbara Lockwood and James Wilde
07-01-14	Arizona Corporation Commission	Commissioner Gary Pierce	Barbara Lockwood and James Wilde
07-02-14	Residential Utility Consumer Office (RUCO)	Pat Quinn, Lon Huber and Dan Pozefsky	Barbara Lockwood, James Wilde and Thomas Loquvam
07-17-14	Arizona Corporation Commission	Commissioner Brenda Burns	Barbara Lockwood and James Wilde
COUNTY			
02-07-14	Maricopa County Board of Supervisors	Denny Barney, District 1	Frank McCune and Meg Leal
02-07-14	Maricopa County Board of Supervisors	Steve Chucri, District 2	Frank McCune and Meg Leal
02-07-14	Maricopa County Board of Supervisors	Andy Kunasek, District 3	Frank McCune and Meg Leal
02-07-14	Maricopa County Board of Supervisors	Clint Hickman, District 4	Frank McCune and Meg Leal
02-07-14	Maricopa County Board of Supervisors	Mary Rose Wilcox, District 5	Frank McCune and Meg Leal

AGENCY MEETINGS AND OFFICIAL BRIEFINGS

Date	Agency/Entity	Contact/Represented By	APS Representative(s)
02-07-14	Maricopa County Air Quality Department	Richard Sumner, Henry Krautter and Scott Treece	Chas Spell and Anne Carlton
05-22-14	Maricopa County Air Quality Department	Richard Sumner, Henry Krautter and Scott Treece	Chas Spell and Anne Carlton URS representative Chelsa Weatherbee
06-19-14	Maricopa County Planning & Development Department	Ray Banker	URS representative Chelsa Weatherbee
06-24-14	Maricopa County Air Quality Department	Richard Sumner, Henry Krautter and Scott Treece	Chas Spell and Anne Carlton
LOCAL			
01-30-14	City of Tempe	Mayor Mark Mitchell	Mark Schiavoni, Stephanie Whyte and Jessica Pacheco
01-30-14	City of Tempe	Shana Ellis, Councilmember	Stephanie Whyte and Michelle Gettinger
01-31-14	City of Tempe	Kolby Granville, Councilmember	Stephanie Whyte and Michelle Gettinger
01-31-14	City of Tempe	Onnie Shekerjian, Councilmember	Stephanie Whyte and Michelle Gettinger
Email 01-31-14	Tempe Chamber Director	Mary Ann Miller	Stephanie Whyte and Michelle Gettinger
02-03-14	City of Tempe	Robin Arredondo- Savage, Councilmember	Stephanie Whyte and Michelle Gettinger
02-03-14	City of Tempe	Corey Wood, Councilmember	Stephanie Whyte and Michelle Gettinger
02-03-14	City of Tempe	Joel Navarro, Councilmember	Stephanie Whyte and Michelle Gettinger
02-03-14	City of Tempe	Andrew Ching, City Manager Jeff Kulaga, Asst. City Manager	Stephanie Whyte and Michelle Gettinger
02-03-14	City of Tempe Historical Society	Richard Bauer, President	Stephanie Whyte and Michelle Gettinger
02-11-14	City of Scottsdale	Mayor Jim Lane	Vern Braaksma and Jessica Pacheco
04-09-14	City of Tempe – City Manager’s Office	Andrew Ching ,City Manager Jeff Kulaga, Asst. City Manager	Brent Gifford, Michelle Gettinger, Randy Clawson and Josh Ahrens
04-23-14	City of Tempe – Department of Public Works; Department of Community Development	Don Bessler, David Nakagawara, Carla Sidi, Andy Goh, Julian Dressang and John Osgood	Brent Gifford, Randy Clawson and Josh Ahrens
05-08-14	City of Tempe	Nancy Ryan, Project Manager Coordinator	URS representatives Jennifer Frownfelter and Chelsa Weatherbee
05-27-14	City of Tempe – Department of Public Works; Department of Community Development	Steve Abrahamson, Don Bessler, Marilyn DeRosa, Andy Goh, Cathy Hollow, Lisa Loyd, David Nakagawara, John Osgood, Mark Weber and Tom Wilhite	Brent Gifford, Andrew Federico, Scott McLellan, Michelle Gettinger, Randy Clawson, Tom Livingston and Josh Ahrens
05-28-14	City of Tempe	Ryan Levesque	URS representative Chelsa Weatherbee
06-19-14	City of Mesa	Wahid Alam	URS representative Chelsa Weatherbee
07-09-14	City of Scottsdale	Ross Cromarty	URS representative Chelsa Weatherbee

AGENCY MEETINGS AND OFFICIAL BRIEFINGS			
Date	Agency/Entity	Contact/Represented By	APS Representative(s)
TRIBAL			
06-17-14	Salt River Pima-Maricopa Indian Community	Janice See	URS representative Chelsa Weatherbee
07-18-14	Four Southern O'odham Tribes – Cultural Resources Working Group	Representatives from Ak-Chin Indian Community, Gila River Indian Community, Tohono O'odham Nation, Salt River Pima-Maricopa Indian Community	Jon Shumaker
OTHER			
Phone 01-30-14	Salt River Project	Rob Taylor	Stacy Aguayo
Email 01-31-14	Huellmantel & Affiliates, LLC Developer / Property Owner	Charles Huellmantel	Stephanie Whyte and Michelle Gettinger
01-31-14	Arizona Competitive Power Alliance	Greg Patterson	Jeff Guldner and Pat Dinkel

AGENCY CORRESPONDENCE

Formal invitations were extended via letter and telephone to the open house. A Project newsletter was included with the letter along with additional specific follow-up and requests.

APS received several responses to the agency notification letters. These responses are summarized in Table J-2 below; all agency correspondence documentation is provided as Attachment J-2.

Table J-2. Agency Correspondence

Date of Response	Agency/Entity	Summary of Response
01-21-14	Arizona Department of Water Resources	Agrees with APS interpretation that combustion turbine units would not fall under the definition of large scale power plants, and would not be regulated under the Third Management Plan (regulating use of groundwater in an Active Management Area).
04-03-14	Arizona Game & Fish Department	Does not anticipate any significant adverse impacts to wildlife resources.
04-08-14	US Fish and Wildlife Service	Indicates that no endangered or threatened species or critical habitat will be affected by this Project; nor is the Project likely to jeopardize the continued existence of any proposed species or adversely modify any proposed critical habitat.
05-28-14	The Hopi Tribe	Requests opportunity to review any report of additional archaeological testing and treatment plans. Letter to APS references "We appreciate UDOT's continuing solicitation of our input" however the Hopi Tribe has confirmed that this was in error and should read "We appreciate APS continuing solicitation of our input."
06-04-14	Arizona State Historic Preservation Office	Concurs with adequacy of completed cultural resource studies, determination that the Ocotillo Power Plant is not eligible for the Arizona Register of Historic Places, and recommendations for further archeological testing.

Date of Response	Agency/Entity	Summary of Response
06-05-14	Gila River Indian Community	Defer to the Salt River Pima-Maricopa Indian Community as lead for consultations.
06-16-14	Yavapai Prescott Indian Tribe	Concurs with the adequacy of the cultural resource studies and supports proposal to conduct further archaeological testing in areas that were off-limits due to safety issues, as well as testing at depths greater than five feet in areas where that would be deemed appropriate.
06-23-14	Ft. McDowell Yavapai Nation	Verbal conversation indicating no significant concerns at this time and plan to provide feedback soon; no response letter received.
06-23-14	Pascua Yaqui	Verbal conversation indicating plans to discuss the project at a Tribal Council meeting and provide response; no response letter received.
06-24-14	Yavapai Apache Nation	Defer to other interested tribes via email conversation. Would like to be notified of any field visits.
07-11-14	Salt River Pima-Maricopa Indian Community	Will lead cultural resource consultations discovery consultation on behalf of the Four Southern Tribes of Arizona (that also include the Gila River Indian Community, the Ak-Chin Indian Community, and Tohono O'odham Nation). Agrees that completed cultural resource studies are adequate but additional archaeological data recovery is necessary. Requests to be notified when additional archaeological investigations begin.
07-11-14	Ak-Chin	No response letter; have deferred to Salt River Pima-Maricopa Indian Community as lead for consultations.
07-11-14	Tohono O'odham Nation	No response letter; have deferred to Salt River Pima-Maricopa Indian Community as lead for consultations.
07-14-14	Tempe Historic Preservation Office	Concurs with adequacy of completed cultural resource studies but maintains the Ocotillo Power Plant was historically important and its role in the development of Tempe circa 1958 to 1975 warrants more research. APS has agreed to provide funding to the Tempe Historic Preservation Office to support such research.

DIRECT MAIL OF PROJECT INFORMATION

In February 2014, APS sent a postcard to approximately 64,000 addresses within a 2-mile radius of the Ocotillo Power Plant. The postcard introduced the Project and provided the Project website address and an opportunity to sign-up for email updates.

In April 2014, APS sent a two-page newsletter to approximately 59,000 addresses within a 2-mile radius of the Ocotillo Power Plant. (The newsletter was sent to 5,000 fewer addresses than the postcard mailing as the mailing list was adjusted based on undeliverable postcards.) The newsletter included information about plant capacity, modernization features, need for the modernization, schedule and opportunities for public input. The newsletter also included an invitation to the open house and the Project website address.

A copy of the postcard and newsletter are provided in Attachment J-3.

NEWSPAPER NOTICES

The open house meeting was announced through newspaper notices published in the *Arizona Republic* Tempe/Ahwatukee zone, *ASU State Press*, *East Valley Tribune*, and *Prensa Hispana* reaching a total circulation of 290,342. A copy of all notices and affidavits of publication are provided in Attachment J-4.

OPEN HOUSE MEETING

On April 22, 2014, from 5:00 to 8:00 p.m., APS hosted a public open house at the ASU Karsten Golf Course Clubhouse located at 1125 East Rio Salado Parkway in Tempe. A team of nearly 20 APS employees and consultants staffed display boards and an interactive GIS station. A video was played continuously throughout the evening; it provided imagery showing the current and conceptual design features of the generation plant. During the open house, four written comments were received and added to the database of comments (see Attachment J-6). A copy of the meeting summary is provided in Attachment J-5 along with a copy of the fact sheet, comment form, and display boards made available at the meeting.

PROJECT WEBSITE

Project information and outreach materials were posted on the APS website azenergyfuture.com/ocotillo beginning in February 2014 (Attachment J-6). The website was periodically updated to ensure new materials were available. A total of 47 comments have been received through the website (through June 2014). No comments in opposition of the Project have been received; the majority provided support for modernization or mailing address updates, and some indicated interest in providing materials or services. A complete list of comments is provided in Attachment J-6.

SOCIAL MEDIA

Information about the Project, with links to the APS Project website, was promoted through Twitter and Facebook on February 17, 2014. Information about the open house was tweeted on April 21, 2014 and an advertisement for the open house was published on Facebook from April 16-21, 2014 (Attachment J-7). The Facebook advertisement reached 33,500 users in the Tempe area and resulted in more than 500 clicks to the Ocotillo web page.

NEWSPAPER ARTICLES

Newspaper articles were published in *The Arizona Republic* (February 15, 2014), *La Voz* (February 21, 2014), *East Valley Tribune* (February 25, 2014), *Ahwatukee Foothills News* (February 25, 2014) and *The State Press* (February 26, 2014) that provided information on the modernization of the plant. Copies of the articles are provided as Attachment J-8.

APPENDIX J-1 – STAKEHOLDER BRIEFING MATERIALS

Ocotillo Modernization Project

Reliability, Location, Technology

February 2014



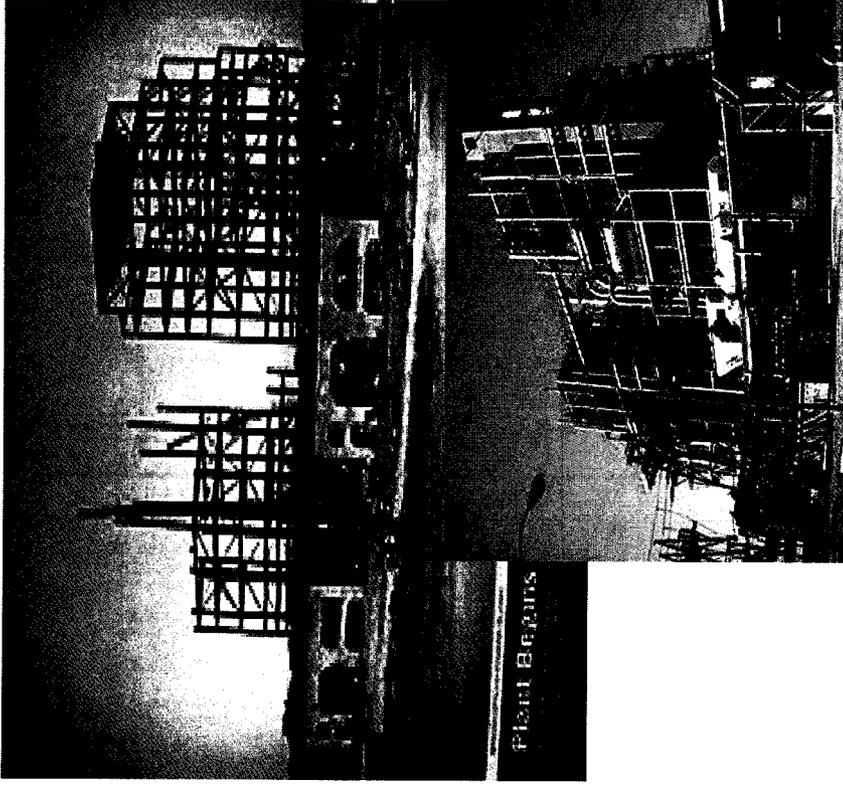
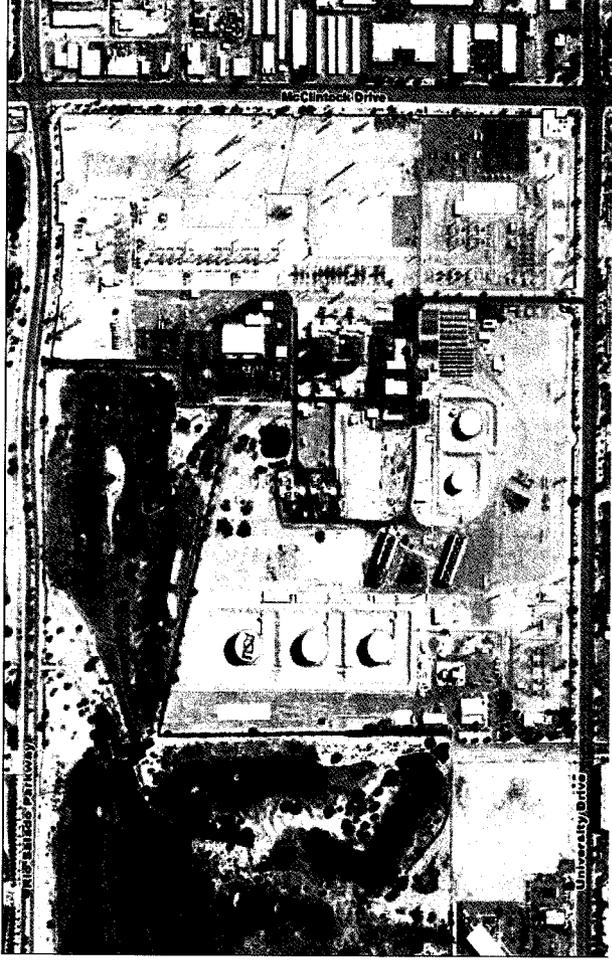
Purpose

- Overview and Importance of Ocotillo Power Plant
- Project to Modernize the Plant
- Relationship to Valley Electric Grid
- Evolving Customer Demand and Markets
- Timeline for Next Steps

Ocotillo Power Plant

NW Corner of University and McClintock

- 1960's era natural gas generating plant
- Played significant role in bringing power to growing Phoenix area
- Critical for grid reliability
- Since then, modern natural gas generating units have become much more responsive and efficient
- Today, the steam unit's role has evolved



- Ocotillo Site Output 330 MW
 - Two Westinghouse 110 MW steam units
 - Constructed 1960
 - Two Westinghouse 55 MW combustion turbines
 - Constructed 1972/73

Ocotillo Modernization Project

- Retire existing steam units (220 MW) constructed in 1960
- Replace aging steam units with modern combustion turbines
 - Install five General Electric LMS 100 combustion turbines – 102 MW each
 - Transmission and natural gas pipeline infrastructure optimized
 - Net site capacity increased by 290 MW to 620 MW total

• Maintain Valley reliability

- Generation close to load center
- Contingency and voltage support

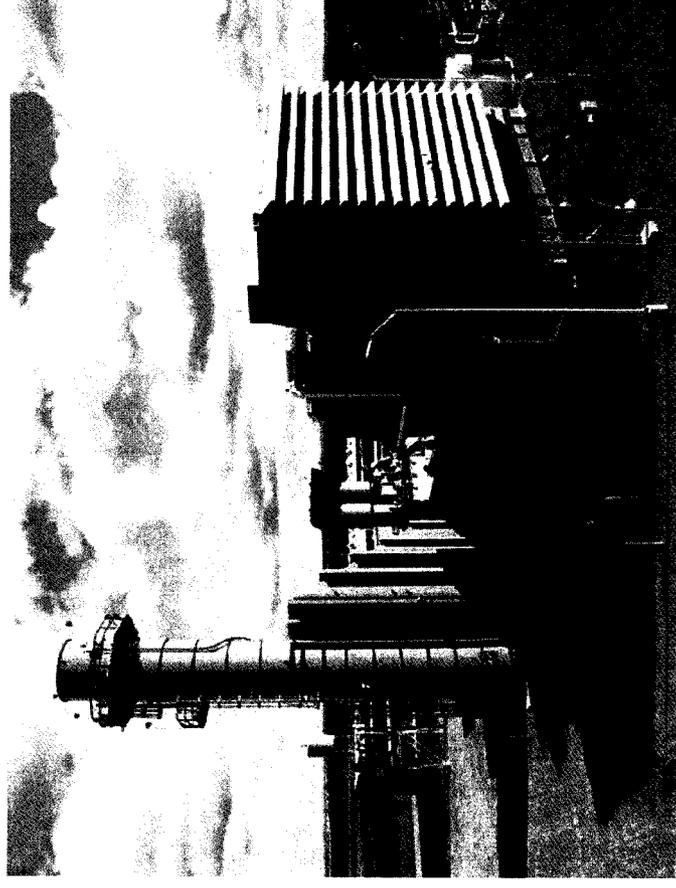
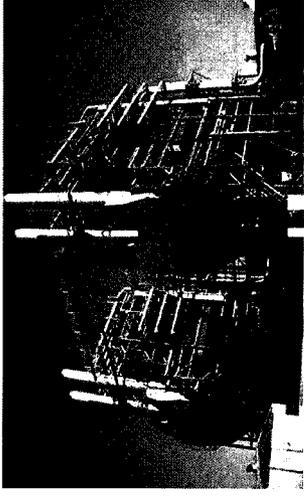
• Responsive unit operations

- Quick starting and ramping
- Renewable integration

• Environmental attributes

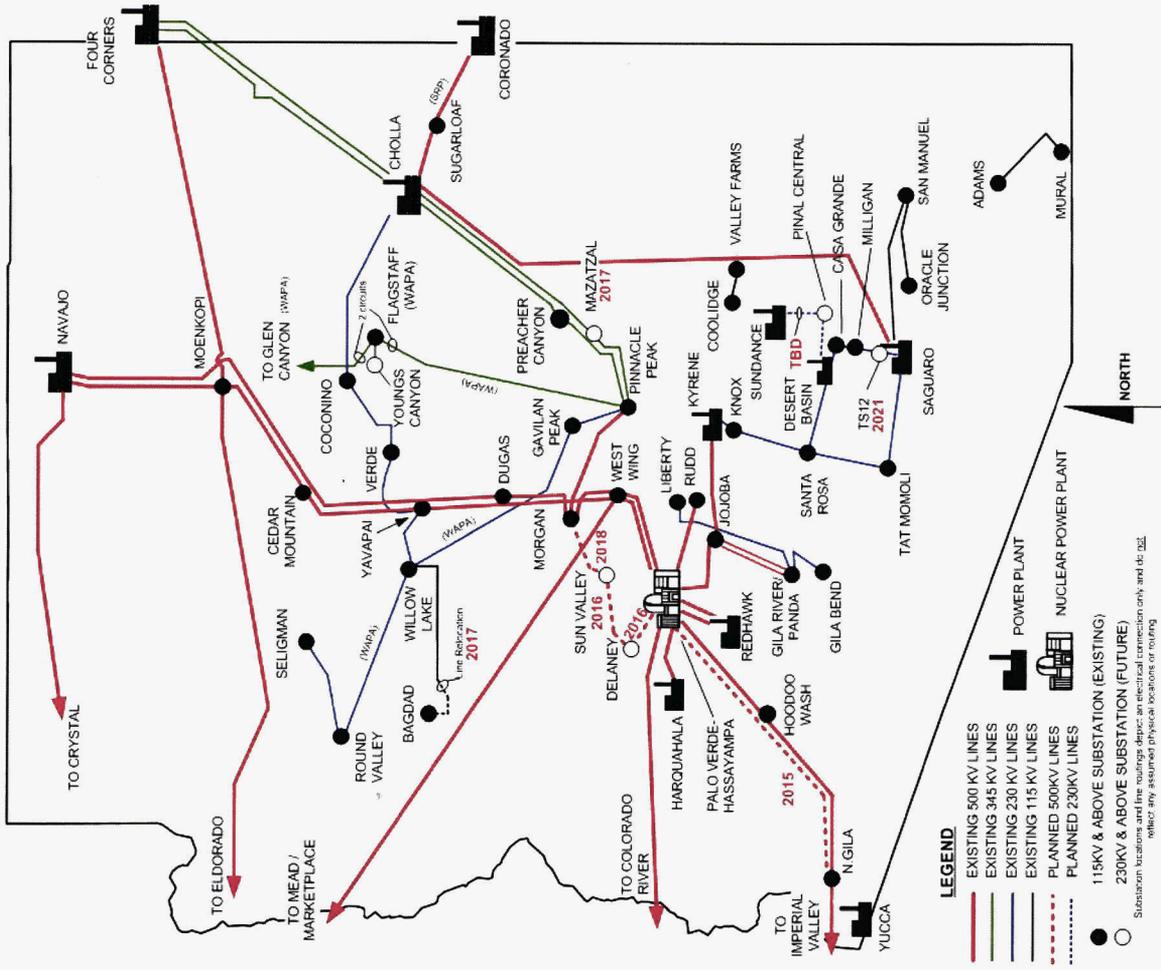
- Emissions and water consumption

• In-service planned for summer 2018



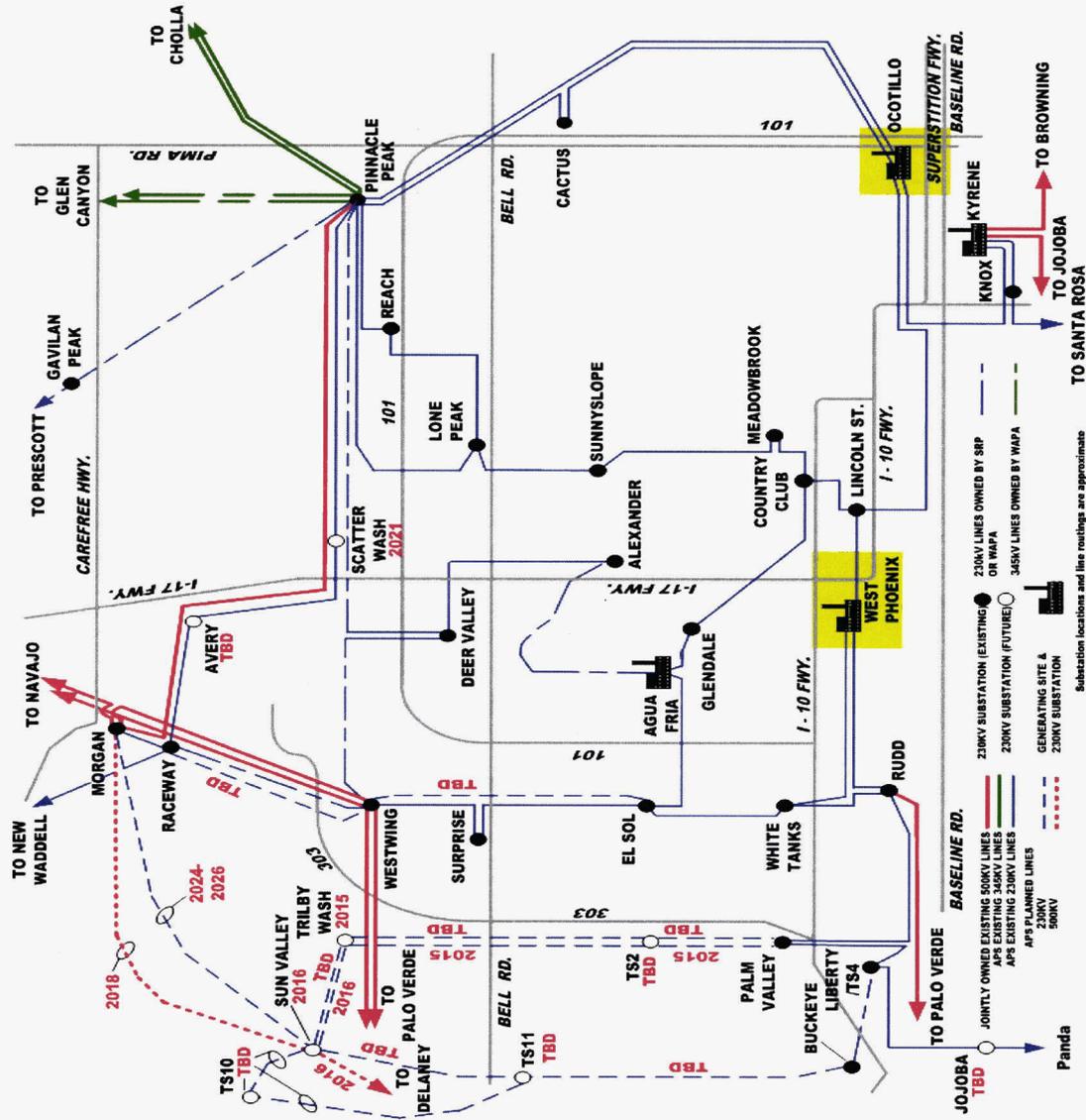
Generation and Transmission System Balance

- Electric generating resources help balance the flow of power around the state
- Grid built to balance sources of energy
 - Palo Verde and natural gas generators are located West of Valley while coal generators are located North and East
- Generation additions or retirements change this balance
- Generation close to customer demand center (metro-Phx) improves transmission import capabilities and maintains a balanced system

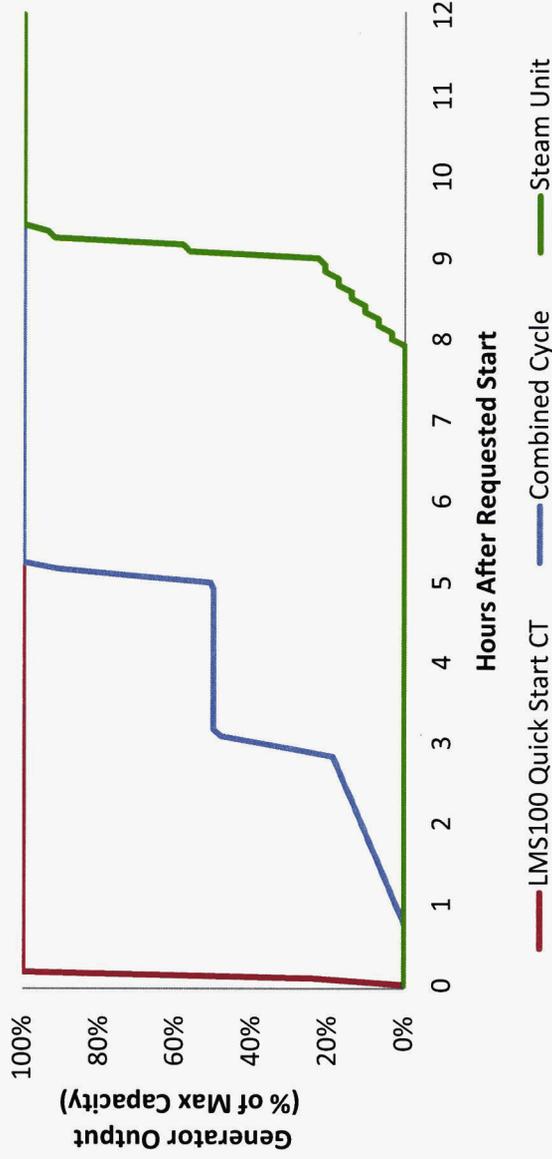
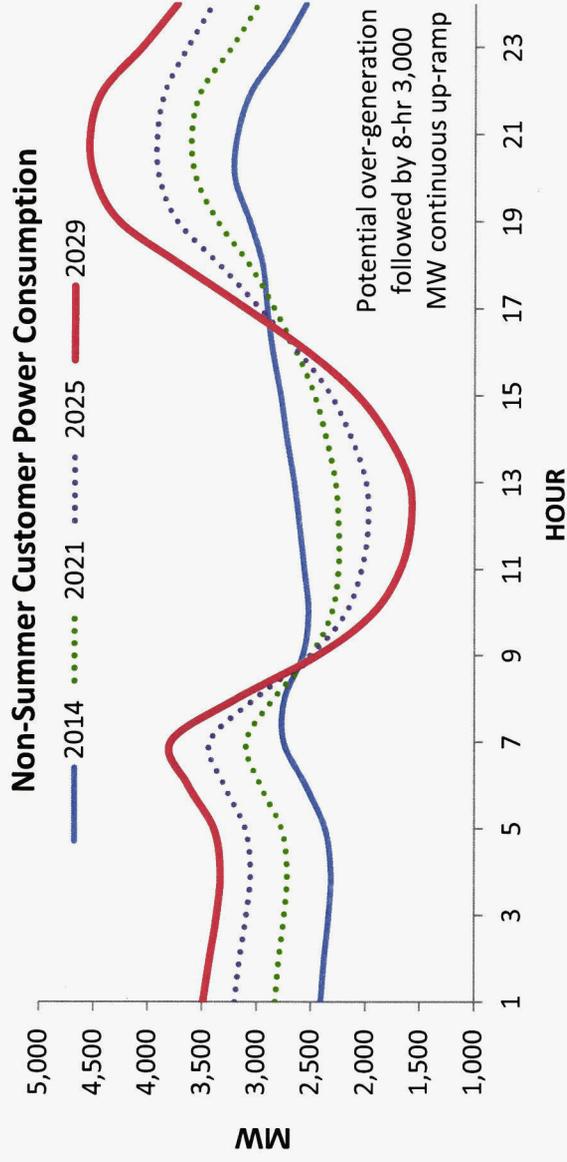


Benefits of Generation Inside a Load Pocket

- A load pocket is an area of demand that requires local resources to meet peak demand
- APS and SRP coordinate to serve combined Phoenix load pocket
- Advantages of local generation:
 - Provide voltage support for high demand and contingency conditions
 - Relieve transmission lines under contingency conditions
 - Grid benefits for A/C demands
 - Support future load growth in the load pocket



Evolving Customer Demand and Markets



- Growth of solar PV is dramatically changing customer energy consumption patterns
- Generators must be able to start and stop multiple times per day
- Fast starting and ramping capability is required in responding to variable output of renewable resources

Next Steps

- Stakeholder engagement (*begin February 2014*)
 - Community leader briefings
 - Public open house meetings
 - Mailings, website, and related media
- Initiate permitting activities (*begin March 2014*)
 - Local/site permits with City of Tempe and Maricopa County
- Prepare Certificate of Environmental Compatibility (CEC)
 - File application (*August 2014*)
 - ACC Siting Committee hearings (*expected October 2014*)

Ocotillo Project Summary

- Maintains system reliability in Valley through replacement of aging steam units
- Replacement units to meet needs for increased portfolio responsiveness
- Optimizes existing infrastructure
- Improves visual considerations through lower structures
- Environmental attributes
- Local jobs and increased tax base

APPENDIX J-2 – AGENCY CORRESPONDENCE



A subsidiary of Pinnacle West Capital Corporation

Robert Lotts
Water Resource Planning
Manager

Tel. 602-250-3905
Fax 602-250-4494
e-mail: Robert.lotts@aps.com

Mail Station 9424
PO Box 53999
Phoenix, Arizona 85072-3999

January 17, 2014

Mr. Jeff Tannler
Statewide AMA Director
Arizona Department of Water Resources
3550 N Central Ave
Phoenix, AZ 85004

RE: Third and Fourth Management Plan

Dear Mr. Tannler,

Arizona Public Service Company ("APS") would like to take this opportunity to follow up on our conversations over the last few months regarding proposed changes to the Arizona Department of Water Resources' ("ADWR") Fourth Management Plan ("4MP"). As you know, APS's review of ADWR's Third Management Plan ("TMP") has identified an interpretation that could be confusing in the conservation requirements for combustion turbines ("CTs") under TMP Chapter 6.5 "Large Scale Power Plants." TMP Chapter 6.5 addresses power generation through the Rankin Steam Cycle utilizing cooling towers for the dissipation of heat load from condensing steam. The requirement associated with this process is to achieve a minimum of 15 cycles of concentration ("COC") for power plants built after 1984. As it is currently written, APS's interpretation of the TMP is that CTs do not qualify as large scale power plants under Chapter 6.5. CTs operate differently from thermoelectric generating units. Rather than using steam to drive a turbine, CTs harness the nature of air to expand when it is heated. The expanding air pushes the turbine, which turn the electric generators. Because CTs require less cooling (having no steam to condense), the overall system requires much less water than traditional steam electric technologies and fit more with the requirements of Chapter 6.6 "Large Scale Cooling Facilities." TMP Chapter 6.6 imposes conservation requirements on large scale cooling facilities that require each fully operational cooling tower to achieve a COC level that results in blowdown water being discharged at an average annual minimum of either 120mg/l silica or 1,200 mg/l total hardness, whichever is reached first. APS feels CTs are better aligned with Chapter 6.6 rather than Chapter 6.5 and we believe this interpretation is less confusing and more appropriate for CT technologies.

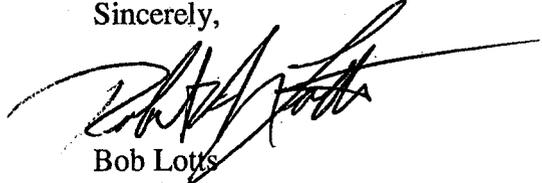
The proposed revisions to the 4MP APS has discussed with ADWR over the last few months (which were also reviewed by Salt River Project and Tucson Electric Power personnel), include language to clarify that the section in the 4MP titled "Large Scale Power Plants" does not regulate CTs and the requirement for CTs fall under the section in the 4MP titled "Large Scale Cooling Towers." APS's understanding is that ADWR has informally accepted this proposed language for the 4MP, however, we are concerned about the duration of the TMP and how CTs

will be regulated until the 4MP becomes effective. Due to the expected delay in implementing the 4MP over the next few years, APS is interested in learning how ADWR will address this issue for the remainder of the TMP.

In order to address this issue and to avoid any confusion with regulatory compliance with the TMP, APS respectfully requests that ADWR provide written concurrence regarding APS's conclusion that CTs are not currently regulated under Chapter 6.5 of the TMP and are regulated under Chapter 6.6 for the duration of the TMP. The proposed language APS has provided to ADWR will address this issue and clarify any confusion once the 4MP is finalized and becomes effective.

Thank you for allowing APS the opportunity to address, what we feel, is an important change to the Management Plans. Addressing this issue is an important step for the Active Management Areas to achieve their water management goals by implementing conservation requirements with a reasonable set of regulatory criteria which the power generating community can work with. Please let me know if you have any questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bob Lotts', with a long horizontal flourish extending to the right.

Bob Lotts
Manager
APS Water Resource Planning

cc: Sandra Fabritz-Whitney, Director, ADWR
Mike Lacey, Deputy Director, ADWR
Scott Miller, Water Resource Analyst, APS

JANICE K. BREWER
Governor



SANDY FABRITZ-WHITNEY
Director

ARIZONA DEPARTMENT of WATER RESOURCES
3550 North Central Avenue, Second Floor
Phoenix, Arizona 85012-2105
602.771.8500
azwater.gov

January 21, 2014

Mr. Bob Lotts, Manager
APS Water Resource Planning
PO Box 53999, Mail Station 9424
Phoenix, AZ 85072-3999

RE: Third and Fourth Management Plans

Dear Mr. Lotts:

Thank you for your letter of January 17, 2014 providing an explanation of the operational differences between steam electric power plants and combustion turbine (CT) units, along with the differences in cooling needs and correlated water use. The Third Management Plan (TMP) conservation requirements for large-scale power plants were written specifically for steam electric power plants. However, CT units have different cooling requirements than steam electric power plants because there is no steam to be condensed. The Department agrees with APS's assertion that CT units, because of the differences in cooling requirements, would not fall under the definition of large scale power plants, and would therefore not be regulated under the TMP.

We have reviewed the draft language that you suggested for inclusion in the Fourth Management Plans (4MPs) regarding the differences between steam electric power plants and CT units; this language will be incorporated into the plans, which will provide specific conservation requirements for steam electric power plants and for CT units.

Please let me know if you have any questions about this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Tannler", with a long, sweeping underline.

Jeff Tannler
Statewide AMA Director

cc: Tom Buschatzke
Mike Lacey



February 24, 2014

Ms. Ginger Ritter
Arizona Game and Fish Department
WMHB – Project Evaluation Program
5000 West Carefree Highway
Phoenix, AZ 85086-5000

Re: **Project Evaluation Request for the APS Ocotillo Generation Project**

Dear Ms. Ritter:

Arizona Public Service Company (APS) has retained URS Corporation to produce and file with the Arizona Corporation Commission an Application for a Certificate of Environmental Compatibility (CEC) for the Ocotillo Generation Project located in Tempe, Arizona. Enclosed for your review is a map of the project area and a completed Project Evaluation Request describing the elements of the project and surrounding environment. It is anticipated that the Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) hearing on the CEC will take place later this year.

URS, on behalf of APS, appreciates the Department's review of this project and any data, advice, or assistance that it provides. We respectfully request a written copy of your evaluation and response. Your reply can be directed to the care of Jennifer Frownfelter at the address listed below and on the attached request form.

If needed, I can be contacted by phone at (303) 740-2651 or by e-mail at robert.debaca@urs.com. I thank you in advance for your review of this submittal and the attached supporting documents.

Cordially,

Robert DeBaca, Ph.D.
Senior Biologist

URS CORPORATION
7720 NORTH 16TH STREET, SUITE 100
PHOENIX, AZ 85020

*Enclosures: Completed Project Evaluation Request
Map of the project area and surroundings*

cc: Brent Gifford

URS Corporation
7720 North 16th Street, Suite 100
Phoenix, AZ 85020
Tel: 602.371.1100
Fax: 602.371.1615

Project Evaluation Request Arizona Game and Fish Department

Notice: In order to obtain a review of your project, we require all of the information requested on this form to be provided. This review is free of charge. However, due to staff and budgetary constraints, we ask you to submit this form early in the process, as estimated turnaround time is 30 days (if you need this review in less than 30 days, please include a needed by date and we will try to accommodate your request). This request is a preliminary review and further project review should include draft documents and a letter formally requesting further environmental review.

Project Evaluation Objectives: *Habitat Evaluation* incorporates fish and wildlife resource needs or features in land and water development projects and land and water management planning efforts in Arizona. *Habitat Protection* ensures habitat protection through environmental compliance and regulation, and to monitor the implementation and effectiveness of mitigation commitments for various land and water development projects and management planning activities in Arizona.

Instructions: The following materials are required to process the request:

- **Completed form**
- **Map(s) delineating the project area (preferably a USGS quadrangle map)**
- **Relevant attachments (other supportive documents, photographs, etc.)**

Send to:
Arizona Game and Fish Department
Project Evaluation Program, WMHB
5000 W. Carefree Highway
Phoenix, Arizona 85086
Fax 6232367366

Applicant Requesting Project Evaluation

Date of Request:
February 24, 2014

Name
Robert DeBaca, Senior Biologist
c/o Jennifer Frownfelter

Organization
URS Corporation

Street Address
7720 N. 16th Street
Suite 100

City Phoenix	State AZ	Zip Code 85020
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E-Mail Address
robert.debaca@urs.com

Telephone Number 303.740.2651	Fax Number 303.694.3946
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Individual/Organization/Agency Proposing Project (if different from above)

Name
Brent Gifford

Organization
Arizona Public Service Company (APS)

Street Address
400 N. 5th Street

City Phoenix	State AZ	Zip Code 85004
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E-Mail Address
brent.gifford@aps.com

Telephone Number (602) 250-3579	Fax Number
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Location of Proposed Project *Remember to attach a topographic and/or plat map delineating the project area*

County(ies)

Maricopa, County

Township(s) 1 North	Range(s) 4 East	Section(s) SE ¼ section 14
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Proposed Project Information

Project Number or Site Name:
Ocotillo Generation Project

What is the proposed date you intend to begin work on the project?

Construction, if approved, would begin in 2016 and be completed in 2018. Decommissioning of the existing steam turbine units would occur in 2018.

Proposed Project Information (continued)

Please briefly describe the project and project activities.

APS plans to install five 102-MW natural-gas fired combustion turbines at the Ocotillo Power Plant in Tempe, and decommission the existing two aging steam turbines on the Ocotillo site. This adds 510 MW and eliminates the existing 220 MW, for a net gain of 290 MW. In addition, the project will use the site's existing transmission lines, switchyard, and gas pipeline, which eliminates the need for costly upgrades that would be required at other locations. Three oil storage tanks would be removed as part of this project from the western side of the current Ocotillo facility. The new turbines will be installed where these oil storage tanks now stand.

Water use per energy generated will be significantly reduced. The plant will use a hybrid cooling system that minimizes water use without sacrificing efficiency and increasing costs.

Air emissions per unit of energy generated would be no more than what is currently found at the plant.

Noise levels would be no more than what is currently found at the plant. The current plant has two large boilers and four 178-foot high stacks. The updated plant will have no boilers and five stacks which are estimated at 85-foot tall.

Briefly describe current land uses and habitat types in the project area.

The project area is fully industrialized. There is a small industrial discharge pond within the Ocotillo site that has scattered native shrubs surrounding it that could provide some habitat to highly adaptable native wildlife. There also appears to be some wetland vegetation (possibly cattails (*Typha* spp.) partially around the margins of the pond. With redevelopment of the project, this pond may dry-up in the future. The local region surrounding the project area is predominantly urban and industrial with limited natural areas. Natural land cover occurs at Papago Park, Hayden Butte Preserve, and along parts of the Salt River. The native plant communities are predominantly upper Sonoran desert scrub and lower Sonoran desert scrub.

List any water bodies such as rivers, intermittent streams, lakes, or wetlands within or near the project area. Xeric washes should also be described, along with any anticipated impacts as a result of the project.

Water bodies associated with the project include the aforementioned industrial pond within the Ocotillo site. Artificial urban lakes occur at Karsten Golf Course, Rio Salado Golf Course, and Rolling Hills Golf Course. The Salt River occurs immediately north of the project area, and runs approximately east to west. It is impounded near the project area, forming Tempe Town Lake. The Salt River is an ephemeral streambed above and below Tempe Town Lake. The confluence of Indian Bend Wash and Tempe Town Lake/the Salt River occurs on the far bank north of the project area. Indian Bend Wash is an urbanized channel that retains little of its native characteristics.

List any reports that have been prepared to describe the habitat that will be affected by the proposed project (e.g. habitat reconnaissance surveys, wetland delineation, etc.)

Project impacts to biological resources in the project area and its surrounding local region (i.e. a three-mile radius around the existing power plant) are being analyzed in Exhibit C and Exhibit D of the Certificate of Environmental Compatibility (CEC) report.

List any other resources or reviews that relate to the proposed project (correspondence, other phases of the project, other alternatives, etc.)

APS also is concurrently corresponding with the U.S. Fish and Wildlife Service, although there are no anticipated impacts to federally listed species.

List any permits, licenses, or regulatory approvals you have or plan on applying for, or have already received as part of this project.

Application for a Certificate of Environmental Compatibility (CEC) will be prepared for the Arizona Corporation Commission; APS plans to file the application for the CEC in 2014. Additional permits for construction will be obtained to meet further local and state regulations.

Return as hard copy to:

AZ Game & Fish Dept.
Project Evaluation Program Habitat Branch
5000 W. Carefree Hwy.
Phoenix, AZ 85086

Return as soft copy:

via email to pep@azgfd.gov
or fax to 6232367366
or upload a file at <http://www.azgfd.gov/hgis>



THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT

5000 W. CAREFREE HIGHWAY
PHOENIX, AZ 85086-5000
(602) 942-3000 • WWW.AZGFD.GOV

GOVERNOR

JANICE K. BREWER

COMMISSIONERS

CHAIRMAN, J.W. HARRIS, TUCSON
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JAMES R. AMMONS, YUMA

DIRECTOR

LARRY D. VOYLES

DEPUTY DIRECTOR

TY E. GRAY



April 3, 2014

Ms. Jennifer Frownfelter
URS Corporation
7720 North 16th Street, Suite 100
Phoenix, AZ 85020

Re: Review of the APS Ocotillo Generation Project.

Dear Ms. Frownfelter:

The Arizona Game and Fish Department (Department) has received your letter, dated February 24, 2014 regarding the installation of the natural-gas fired combustion turbines in Tempe, AZ. We have reviewed the information packet provided to us in your letter. As the proposed project is located in a previously disturbed area, with the present habitat providing relatively low value to wildlife, the Department does not anticipate any significant adverse impacts to wildlife resources would occur as a result of this project.

Thank you for the opportunity to review this project. The receipt you received from the On-Line Environmental Review Tool should provide general recommendations and additional contact information. If you have any questions regarding this letter, please contact me at (623) 236-7615.

Sincerely,

Cheri A. Bouchér
Project Evaluation Program Specialist, Habitat Branch
Arizona Game and Fish Department

cc: Laura Canaca, Project Evaluation Program Supervisor
Kelly Wolff-Krauter, Habitat Program Manager, Region VI

AGFD# M14-03044613



February 24, 2014

Mr. Steve Spangle
Field Supervisor
U.S. Fish and Wildlife Service
Arizona Ecological Services
2321 West Royal Palm Road, Suite 103
Phoenix, AZ 85021

Re: Endangered Species Act Review for the APS Ocotillo Generation Project

Dear Mr. Spangle:

Arizona Public Service Company (APS) has retained URS Corporation to produce and file with the Arizona Corporation Commission an Application for a Certificate of Environmental Compatibility (CEC) for the Ocotillo Generation Project located in Tempe, Arizona (SE ¼ section 14, T1N, R4E). The elements of the project and the surrounding environment are described further in this letter. It is anticipated that the Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) hearing on the CEC will take place later this year.

APS plans to install five 102-megawatt (MW) natural-gas fired combustion turbines at the Ocotillo Power Plant in Tempe, and decommission the existing two aging steam turbines currently at the power plant. This adds 510 MW and eliminates the existing 220 MW, for a net gain of 290 MW. In addition, the project would use the site's existing transmission lines, switchyard, and gas pipeline, which eliminates the need for costly upgrades that would be required if the capacity were developed at a different location. Obsolete fuel tanks (two) and oil storage tanks (three) located on the southern and western portions of the Ocotillo site would be removed as part of this project.

The project area is fully industrialized. There is a small industrial discharge pond within the Ocotillo Generation Plant that has scattered native shrubs surrounding it that could provide some habitat to highly adaptable native wildlife. There also appears to be some wetland vegetation (possibly cattails (*Typha* spp.) partially around the margins of the pond. With redevelopment of the project, this pond may dry-up in the future. The local region surrounding the project area is predominantly urban and industrial with limited natural areas. Natural land cover occurs at Papago Park, Hayden Butte Preserve, and along parts of the Salt River. The native plant communities in the aforementioned natural areas are predominantly upper Sonoran desert scrub and lower Sonoran desert scrub.

Water bodies associated with the project include the aforesaid industrial pond within the Ocotillo site. Additionally, artificial urban lakes occur at Karsten Golf Course, Rio Salado Golf Course, and Rolling Hills Golf Course. The Salt River is about one-half mile north of the project area, and runs approximately east to west. It is impounded near the project area, forming Tempe Town Lake. The Salt River is an ephemeral or intermittent streambed above and below Tempe Town Lake. The confluence of Indian Bend Wash and Tempe Town Lake occurs on the far bank north of the project area. Indian Bend Wash is an urbanized channel that retains little of its native characteristics.

URS Corporation
7720 North 16th Street, Suite 100
Phoenix, AZ 85020
Tel: 602.371.1100
Fax: 602.371.1615

URS biologists carefully reviewed the U.S. Fish and Wildlife Ecological Services website on 15 December 2013, for federally listed, proposed, and candidate species as well as proposed and designated critical habitat that could be present in Maricopa County. According to the species list for Maricopa County, dated 30 October 2013, there are 12 species that are listed, one species that is proposed as threatened, and another four that are categorized as candidate species. These include the following species:

- acuña cactus (*Echinomastus erectocentrus* var. *acunensis*) – endangered
- Arizona cliffrose (*Purshia subintegra*) – endangered
- California least tern (*Sterna antillarum browni*) – endangered
- desert pupfish (*Cyprinodon macularius*) – endangered
- Gila topminnow (*Poeciliopsis occidentalis occidentalis*) – endangered
- lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*) – endangered
- Mexican spotted-owl (*Strix occidentalis lucida*) – threatened
- razorback sucker (*Xyrauchen texanus*) – endangered
- Sonoran pronghorn (*Antilocapra americana sonoriensis*) – endangered
- southwestern willow flycatcher (*Empidonax traillii extimus*) – endangered
- woundfin (*Plagopterus argentissimus*) – endangered
- yellow-billed cuckoo (*Coccyzus americanus*) – proposed threatened
- Yuma clapper rail (*Rallus longirostris yumanensis*) – endangered
- roundtail chub (*Gila robusta*) – candidate
- Sonoran desert tortoise (*Gopherus morafkai*) – candidate
- Sprague's pipit (*Anthus spragueii*) – candidate
- Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*) – candidate

In December 2013, URS biologists evaluated potential impacts to the aforementioned list of species during preparation of Exhibit C of the CEC. URS concluded that the action area was either outside the geographic or elevational range or lacked suitable habitat for these species. There was no designated critical habitat in the action area. For these reasons, URS concluded that the Ocotillo Generation Project would have "no effect" on listed, proposed, or candidate species or proposed or designated critical habitat.

URS also reviewed local bird survey results and observed that both the bald eagle (*Haliaeetus leucocephalus*) and the American peregrine falcon (*Falco peregrinus anatum*) utilize habitats at Tempe Town Lake during the non-breeding season. The closest potential perch sites are approximately 1,200 meters northeast of proposed construction and demolition locations at the Ocotillo Generation Plant. No impact to these two species is anticipated from construction or operation of the Project.

URS respectfully requests the Service's verification of these impact findings and appreciates any further comments the Service may have. Your written response and comments can be directed to me in care of Jennifer Frownfelter at the address below. Meanwhile, if you have any questions or require additional information, please contact me by phone at 303-740-2651 or by e-mail (robert.debaca@urs.com) at your earliest convenience.

Cordially,

Robert DeBaca, Ph.D.
Senior Biologist

URS CORPORATION
7720 NORTH 16TH STREET, SUITE 100
PHOENIX, AZ 85020

Enclosures: Map of the project area and surroundings

cc: Brent Gifford



United States Department of the Interior

U.S. Fish and Wildlife Service

Arizona Ecological Services Office

2321 West Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

Telephone: (602) 242-0210 Fax: (602) 242-2513



In reply refer to:

AESO/SE

02EAAZ00-2014-TA-0155

02EAAZ00-2014-CPA-0022

April 8, 2014

Robert DeBaca, Ph.D.
U.R.S. Corporation
7720 North 16th Street, Suite 100
Phoenix, Arizona 85020

Dear Dr. DeBaca:

Thank you for your correspondence of February 24, 2014, received in our office March 4. This letter documents our recommendations regarding the Arizona Public Service (APS) Ocotillo Generation Project (Project), in compliance with section 7 of the Endangered Species Act of 1973 (ESA) as amended (16 U.S.C. 1531 *et seq.*), the Migratory Bird Treaty Act of 1918 (MBTA) (16 U.S.C. 703 *et seq.*), and the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668 *et seq.*). Based on the information that you have provided, we believe that no endangered or threatened species or critical habitat will be affected by this project; nor is this project likely to jeopardize the continued existence of any proposed species or adversely modify any proposed critical habitat. No further ESA review is required for this project at this time. Should project plans change or if additional information on the distribution of listed or proposed species becomes available, this determination may need to be reconsidered.

To clarify information in your February 24, 2014 letter, the Salt River above the eastern dam at Tempe Town Lake supports aquatic and riparian habitat, including fish habitat and foraging habitat for bald eagles (*Haliaeetus leucocephalus*) nesting in the area and waterfowl habitat and potential foraging habitat for American peregrine falcon (*Falco peregrinus anatum*). We note that the proposed Project is in an area of high human activity and that the existing facilities to be removed are at least 0.5 mile from the Salt River channel, minimizing potential disturbance effects to bald eagle or peregrine falcons. We recommend that the project proponent be aware of compliance with the BGEPA and MBTA when planning and implementing the Project. There is a possibility that bald eagles could occur in the Project area. As a result, we recommend that the design and construction of the Project minimize the potential for attracting either perching or nesting bald eagles. Our point of contact for technical assistance on this subject, if desired, is Greg Beatty at 602-242-0210.

In keeping with our trust responsibility to American Indian Tribes, and pursuant to Secretarial Order 3206, we encourage you to invite any Tribe affected by the proposed action and the Bureau of Indian Affairs (BIA) to participate in review of the proposed action and, by copy of

this letter, are notifying potentially affected tribes and the BIA. We encourage you to coordinate review of this project with the Arizona Game and Fish Department.

Should you require further assistance or if you have any questions, please contact Bill Werner (x217) or Brenda Smith (928-556-2157). Thank you for your continued efforts to conserve endangered species.

Sincerely,



Steven L. Spangle
Field Supervisor

cc: (electronic copy)
Director, Hopi Cultural Preservation Office, Kykotsmovi, AZ
Assistant Attorney General, Pascua Yaqui Tribe, Tucson, AZ
Director, Cultural Resources Department, Salt River Pima-Maricopa Indian Community,
Scottsdale, AZ
Director, San Carlos Tribal Historic Preservation Office, San Carlos, AZ
Director, Cultural Resources, White Mountain Apache Tribe, Whiteriver, AZ
Tribal Archaeologist, Yavapai-Apache Nation, Camp Verde, AZ
Director, Cultural Research Program, Yavapai-Prescott Indian Tribe, Prescott, AZ
Branch Chief, Environmental Quality Services, Western Regional Office, Bureau of
Indian Affairs, Phoenix, AZ
Fish and Wildlife Biologists, Fish and Wildlife Service, Phoenix, AZ
(Greg Beatty, Lesley Fitzpatrick)
Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Region VI, Arizona Game and Fish Department, Mesa, AZ

Rec'd 6/18/14

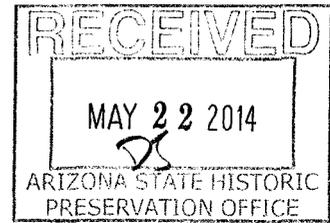
~~1074~~ 2013-1074 (119871)



P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

State Historic Preservation Office
Arizona State Parks
1300 W. Washington Street
Phoenix AZ 85007



David
Dear Dr. Jacobs:

As you are aware, Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

Under ARS 40-360-06, "Factors to be considered in issuing a certificate of environmental compatibility," #5 calls out that "Existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the proposed site" are factors to be considered by the Siting Committee in determining whether or not to recommend issuance of a CEC.

Pursuant to the ACC Rules of Practice and Procedure R14-3-219 (#6), the application for a CEC shall "Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion." Furthermore, under R14-3 "Exhibits to Application," Exhibit E shall "Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon."

APS is submitting the following information for your review and comment as part of this process to support the ACC's compliance with the Arizona State Historic Preservation Act (ARS 41-861 et seq.), which requires state agencies to consider the impacts of their programs on historic properties listed on, or eligible for, the Arizona Register of Historic Places.

Ocotillo Power Plant is located on private land, at 1500 E. University Blvd. in Tempe, Arizona. The site is within T1N, R4E, the SE1/4 of S14, G&SRB&M. While the entire APS-owned property consists of approximately 126 acres, it is estimated that only about 15.8 acres would be affected by the new construction, mostly on the western portion of the APS parcel. The majority of this area is currently occupied by three large fuel storage tanks, which would be demolished and removed. Another 10.4 acres

would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

Discussions with APS management regarding a possible re-purposing of this property resulted in my recommendation that APS should perform the maximum level of due diligence should any possible future project require some level of state and/or Federal cultural resource compliance. It was felt that not only was this a prudent course of action, it was also the right thing to do and would be consistent with one of APS's core corporate values, that of environmental stewardship.

Because virtually the entire ground surface at Ocotillo is disturbed and/or obscured, it was determined that a standard archaeological survey would have little value in trying to identify cultural resources. During June-July 2013, APS conducted geotechnical investigations on the property for the purpose of characterizing subsurface sediments. Due to the ground-disturbing nature of geotechnical boring, and also due to a desire to begin to understand the potential for subsurface cultural resources on the property, my office, in informal consultation with your office, determined that it would be appropriate to engage a professional archaeological consulting firm to monitor the boreholes for cultural resources and to take a cursory look at any possible exposures (such as the berms surrounding the existing fuel tanks) for the presence/absence of cultural resources.

APS hired URS Corporation to do the work. The resulting report, "*Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona*" (Rogan and Kirvan 2013) is enclosed for your review and comment. The report confirmed that "the Hohokam intensively occupied the area in the vicinity of the power plant parcel for several centuries." It also noted that the prehistoric village was located on the Mesa terrace adjacent to the Salt River, while the power plant facility is located on the lower Lehi terrace. Previous investigations of the Lehi terrace have thus far identified evidence of prehistoric farming and related field houses on that lower terrace. Additionally, the borehole monitoring project identified a few hundred Hohokam artifacts from a highly disturbed context at the western end of the power plant parcel. The results of the geotechnical monitoring project were indeterminate with regard to the presence/absence of significant cultural resources.

After meeting with your office to discuss the results of the geotechnical monitoring project in September 2013, we both agreed with Dr. Gene Rogge (with our archaeological contractor URS), that further archaeological testing was warranted. URS developed a phased backhoe archaeological testing program for the purpose of determining whether or not there might be preserved subsurface cultural resources in the Ocotillo parcel.

The Ocotillo Power Plant was constructed in 1958-1960, making it of historic age. To address the question of whether or not the power plant itself might be eligible for the Arizona Register of Historic Places, in October 2013, URS was tasked with completing an Arizona Historic Property Inventory Form, a copy of which is enclosed for your review and comment. URS has recommended that the existing Ocotillo facility was not eligible for the Arizona Register due to a lack of significance under any of the criteria A-D.

The next phase of archaeological testing work began in November 2013. The results of this phase of testing are reported in "Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014), a copy of which is enclosed for your review and comment. The project was significantly constrained by safety concerns due to the presence of subsurface infrastructure throughout the area. Nevertheless, some 424 meters (1,390 feet) of backhoe trench were put in to a depth of five feet, with an additional 50' trench excavated to seven feet in depth. A single feature, a prehistoric irrigation canal was identified with associated artifacts, and further examination was made of a scattering of artifacts from disturbed context located along the berms surrounding the existing fuel tanks.

URS has recommended that the buried canal and the scatter of artifacts in disturbed context be designated as site AZ U:9:3:11 (ASM), and has recommended this site to be eligible to the Arizona Register of Historic Places under Criterion D for its information potential.

URS has also recommended that further archaeological testing be carried out, focusing on areas that might be disturbed during construction, and that deeper testing also be done when it is safe and prudent to do so. They also recommend archaeological monitoring during construction where deemed prudent, unless further testing on the site indicate there is little possibility for the discovery of human remains within the construction footprint.

APS believes that aside from the prehistoric canal feature and associated artifacts, specific definition of the proposed boundary of site AZ U:9:3:11 (ASM) is premature as the artifacts found away from the canal area are generally found on secondarily deposited berms consisting of fill and are therefore not *in situ*. Indeed, URS notes that "the site boundaries are somewhat arbitrary." Further testing in the area to a depth of five feet failed to identify other prehistoric features or significant archaeological deposits.

That said, APS does agree with URS that further testing is necessary because the original testing project was constrained by safety concerns, and there is still some potential for archaeological deposits in areas that were off-limits due to safety issues, as well as at depths greater than five feet. APS intends to continue its identification efforts, and should any significant cultural resources/historic properties be identified during further testing, either the project would be redesigned to avoid impacts to those resources, or, a data recovery project would be designed in consultation with your office and utilizing a professional cultural resource contractor to mitigate any adverse effects to any historic properties that may be encountered. If it cannot be avoided during construction, further work in the area of the canal will also be done to determine the extent of the canal and whether or not there is potential for the existence of a network of prehistoric field ditches.

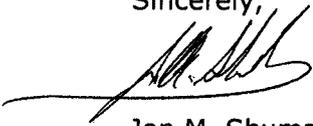
APS is concurrently consulting with the Tempe City Historic Preservation Office, the Salt River Pima-Maricopa Indian Community, the Gila River Indian Community, the Ak-Chin Indian Community, the Tohono O'odham Nation, the Hopi Tribe, the Ft. McDowell Yavapai Nation, the Yavapai Apache Nation, the Yavapai-Prescott Indian Tribe, and the Pascua Yaqui Tribe, and will keep your office informed of the results of those consultations, and any concerns or comments they may have regarding this project.

APS very much appreciates the opportunity to work with your office and is grateful for the discussions and advice offered prior to this even being an actual project. We ask that you please review the contents of this letter as well as the four enclosures and the

recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date, as well as the recommendations in this letter and the enclosed documents including the eligibility recommendation for the original plant facility. We solicit any comments and feedback you may have, and shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

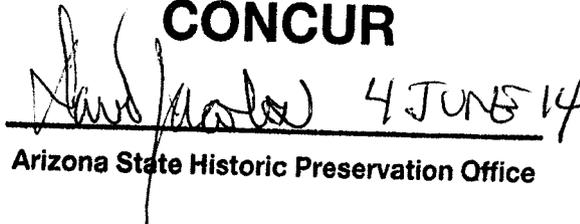
Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
Natural Resources Department
Arizona Public Service Company
P.O. Box 53933, M.S. 3372 s
Phoenix AZ 85072-3933
602-371-5298 Office
602-677-1747 Cell
602-371-5241 Fax**

CONCUR



Arizona State Historic Preservation Office

Enclosures:

Ocotillo Power Plant Modernization Fact Sheet

"Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogan and Kirvan 2013)

Arizona Historic Property Inventory Form Inventory # OPP-1

"Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014)



P.O. Box 53933
Phoenix, AZ 85072

July 14, 2014

Mr. Joseph Nucci
Tempe Historic Preservation Officer
P.O. Box 5002
Tempe AZ 85280

Joe

Dear Mr. Nucci:

As you are aware, Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is continuing to consult with the City of Tempe Historic Preservation Office (HPO) because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03, which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) that is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq.

Under ARS 40-360-06, "Factors to be considered in issuing a certificate of environmental compatibility," #5 calls out that "Existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the proposed site" are factors to be considered by the Siting Committee in determining whether or not to recommend issuance of a CEC.

Pursuant to the ACC Rules of Practice and Procedure R14-3-219 (#6), the application for a CEC shall "Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion." Furthermore, under R14-3 "Exhibits to Application," Exhibit E shall "Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon."

APS acknowledges receipt of, and very much appreciates, your recent feedback and comments regarding the Ocotillo Power Plant facility both via phone call and your email of June 26, 2014. APS understands that the Tempe HPO concurs with the adequacy of the cultural resource work carried out to date, and the conclusions and recommendations laid out in the URS Cultural Resource Report 2014-4(AZ) with regard to prehistoric cultural resources at the site. APS also understands that Tempe HPO takes exception with URS's finding that the power plant facility itself is not historically significant.

APS understands and acknowledges that the Tempe HPO believes the power plant facility to be "a landmark symbolic of the ne plus ultra period of community development in Tempe, and one demonstrative of events that have made a significant

contribution to the broad patterns of Arizona history." Furthermore, the Tempe HPO believes that this mid-century interval represents the period of development "that arguably most profoundly shaped the feel and fabric of the built environment in Tempe, and it is a period that to date remains relatively undocumented."

Additionally, the Tempe HPO states that "APS has yet to address and document the significance of its role in facilitating the mid-century period of development in the Valley," and that "without this recognition and documentation, demolition of this iconographic facility would have an adverse effect on Tempe's ability to interpret this most significant period of Tempe's history."

To address this concern, your office has requested that APS consider mitigating this effect by developing a context related to "Infrastructure for Community Development in Tempe, 1958 to 1975." Tempe HPO believes that this would provide a lasting value to the East Valley preservation community as it begins in earnest to evaluate this most formative period of your community's history.

APS has carefully reviewed and considered Tempe HPO's comments. You clearly indicated in a recent phone call that Tempe HPO's goal here is **not** to preserve the power plant, but simply to ensure that an effort is made to adequately document the plant's role in Tempe history, set within in this mid-century context (~1958 to 1975). You indicated that the development of such a document would adequately mitigate any potential adverse effect of the demolition of plant facilities.

APS has long been a supporter of historic preservation in Arizona, and believes this to be a fair and reasonable request. As such, APS proposes to offer the City of Tempe HPO a grant in the amount of \$15,000 for the specific purpose of hiring a qualified historian to develop and write a short history of the Ocotillo Power Plant set within the context of "Infrastructure for Community Development in Tempe, 1958 to 1975." APS believes the City of Tempe HPO is better situated to directly manage such a project and that a grant to Tempe HPO would ensure that the project meets Tempe HPO's needs and requirements.

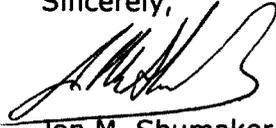
APS is concurrently consulting with the Arizona State Historic Preservation Office (SHPO) and potentially interested tribes, and will keep your office informed of who specifically is consulted with, the results of those consultations, and any concerns or comments the other parties may have regarding this project.

As always, APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter and the recommendations contained therein. If the Tempe HPO finds that the proposed grant would adequately mitigate all of Tempe HPO's concerns and issues regarding the project, APS requests that you please sign, date, and return a copy of this letter to my office at your soonest convenience.

We continue to solicit any other comments and feedback you may have regarding this project, and shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
Natural Resources Department
Arizona Public Service Company
P.O. Box 53933, M.S. 3372 s
Phoenix AZ 85072-3933
602-371-5298 Office
602-677-1747 Cell
602-371-5241 Fax**

By 

Joseph Nucci

2014.07.14

15:24:41 -07'00'

SIGNATURE FOR TEMPE HPO CONCURRENCE

DATE

PRINTED NAME and TITLE



P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Mr. Joseph Nucci
Tempe Historic Preservation Officer
P.O. Box 5002
Tempe AZ 85280

Joe

Dear ~~Mr. Nucci~~:

As you may be aware, Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

Under ARS 40-360-06, "Factors to be considered in issuing a certificate of environmental compatibility," #5 calls out that "Existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the proposed site" are factors to be considered by the Siting Committee in determining whether or not to recommend issuance of a CEC.

Pursuant to the ACC Rules of Practice and Procedure R14-3-219 (#6), the application for a CEC shall "Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion." Furthermore, under R14-3 "Exhibits to Application," Exhibit E shall "Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon."

APS submits the following information for your review and comment as part of this process to support the ACC's compliance with the Arizona State Historic Preservation Act (ARS 41-861 et seq.), which requires state agencies to consider the impacts of their programs on historic properties listed on, or eligible for, the Arizona Register of Historic Places.

Ocotillo Power Plant is located on private land, at 1500 E. University Blvd. in Tempe, Arizona. The site is within T1N, R4E, the SE1/4 of S14, G&SRB&M. While the entire APS-owned property consists of approximately 126 acres, it is estimated that only about 15.8 acres would be affected by the new construction, mostly on the western portion of the APS parcel. The majority of this area is currently occupied by three large fuel storage tanks, which would be demolished and removed. Another 10.4 acres

would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

Discussions with APS management regarding a possible re-purposing of this property resulted in my recommendation that APS should perform the maximum level of due diligence should any possible future project require some level of state and/or Federal cultural resource compliance. It was felt that not only was this a prudent course of action, it was also the right thing to do and would be consistent with one of APS's core corporate values, that of environmental stewardship.

Because virtually the entire ground surface at Ocotillo is disturbed and/or obscured, it was determined that a standard archaeological survey would have little value in trying to identify cultural resources. During June-July 2013, APS conducted geotechnical investigations on the property for the purpose of characterizing subsurface sediments. Due to the ground-disturbing nature of geotechnical boring, and also due to a desire to begin to understand the potential for subsurface cultural resources on the property, my office, in informal consultation with the Arizona State Historic Preservation Office (SHPO), determined that it would be appropriate to engage a professional archaeological consulting firm to monitor the boreholes for cultural resources and to take a cursory look at any possible exposures (such as the berms surrounding the existing fuel tanks) for the presence/absence of cultural resources.

APS hired URS Corporation to do the work. The resulting report, "*Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona*" (Rogan and Kirvan 2013) is enclosed for your review and comment. The report confirmed that "the Hohokam intensively occupied the area in the vicinity of the power plant parcel for several centuries." It also noted that the prehistoric village was located on the Mesa terrace adjacent to the Salt River, while the power plant facility is located on the lower Lehi terrace. Previous investigations of the Lehi terrace have thus far identified evidence of prehistoric farming and related field houses on that lower terrace. Additionally, the borehole monitoring project identified a few hundred Hohokam artifacts from a highly disturbed context at the western end of the power plant parcel. The results of the geotechnical monitoring project were indeterminate with regard to the presence/absence of significant cultural resources.

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The next phase of archaeological testing work began in November 2013. The results of this phase of testing are reported in "Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014), a copy of which is enclosed for your review and comment. The project was significantly constrained by safety concerns due to the presence of subsurface infrastructure throughout the area. Nevertheless, some 424 meters (1,390 feet) of backhoe trench were put in to a depth of five feet, with an additional 50' trench excavated to seven feet in depth. A single feature, a prehistoric irrigation canal was identified with associated artifacts, and further examination was made of a scattering of artifacts from disturbed context located along the berms surrounding the existing fuel tanks.

URS has recommended that the buried canal and the scatter of artifacts in disturbed context be designated as site AZ U:9:3:11 (ASM), and has recommended this site to be eligible to the Arizona Register of Historic Places under Criterion D for its information potential.

URS has also recommended that further archaeological testing be carried out, focusing on areas that might be disturbed during construction, and that deeper testing also be done when it is safe and prudent to do so. They also recommend archaeological monitoring during construction where deemed prudent, unless further testing on the site indicate there is little possibility for the discovery of human remains within the construction footprint.

APS believes that aside from the prehistoric canal feature and associated artifacts, specific definition of the proposed boundary of site AZ U:9:3:11 (ASM) is premature as the artifacts found away from the canal area are generally found on secondarily deposited berms consisting of fill and are therefore not *in situ*. Indeed, URS notes that "the site boundaries are somewhat arbitrary." Further testing in the area to a depth of five feet failed to identify other prehistoric features or significant archaeological deposits.

That said, APS does agree with URS that further testing is necessary because the original testing project was constrained by safety concerns, and there is still some potential for archaeological deposits in areas that were off-limits due to safety issues, as well as at depths greater than five feet. APS intends to continue its identification efforts, and should any significant cultural resources/historic properties be identified during further testing, either the project would be redesigned to avoid impacts to those resources, or, a data recovery project would be designed in consultation with the SHPO and utilizing a professional cultural resource contractor to mitigate any adverse effects to any historic properties that may be encountered. If it cannot be avoided during construction, further work in the area of the canal will also be done to determine the extent of the canal and whether or not there is potential for the existence of a network of prehistoric field ditches.

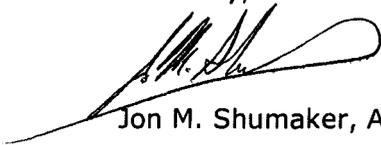
APS is concurrently consulting with the SHPO and potentially interested tribes, and will keep your office informed of who specifically is consulted with, the results of those consultations, and any concerns or comments the other parties may have regarding this project.

APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter as well as the four enclosures and the recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date as well as the recommendations in this letter and the enclosed documents, including the eligibility recommendation for the original plant

facility. We solicit any comments and feedback you may have, and shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
Natural Resources Department
Arizona Public Service Company
P.O. Box 53933, M.S. 3372 s
Phoenix AZ 85072-3933
602-371-5298 Office
602-677-1747 Cell
602-371-5241 Fax**

Enclosures:

Ocotillo Power Plant Modernization Fact Sheet

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P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Mr. Louis J. Manuel, Jr., Chairman
Ak-Chin Indian Community
42507 W. Peters & Nall Rd.
Maricopa AZ 85138-3940

Dear Chairman Manuel:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

Under ARS 40-360-06, "Factors to be considered in issuing a certificate of environmental compatibility," #5 calls out that "Existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the proposed site" are factors to be considered by the Siting Committee in determining whether or not to recommend issuance of a CEC.

Pursuant to the ACC Rules of Practice and Procedure R14-3-219 (#6), the application for a CEC shall "Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion." Furthermore, under R14-3 "Exhibits to Application," Exhibit E shall "Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon."

APS submits the following information for your review and comment as part of this process to support the ACC's compliance with the Arizona State Historic Preservation Act (ARS 41-861 et seq.), which requires state agencies to consider the impacts of their programs on historic properties listed on, or eligible for, the Arizona Register of Historic Places.

Ocotillo Power Plant is located on private land, at 1500 E. University Blvd. in Tempe, Arizona. The site is within T1N, R4E, the SE1/4 of S14, G&SRB&M. While the entire APS-owned property consists of approximately 126 acres, it is estimated that only about 15.8 acres would be affected by the new construction, mostly on the western portion of the APS parcel. The majority of this area is currently occupied by three large fuel storage tanks, which would be demolished and removed. Another 10.4 acres

would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

Discussions with APS management regarding a possible re-purposing of this property resulted in my recommendation that APS should perform the maximum level of due diligence should any possible future project require some level of state and/or Federal cultural resource compliance. It was felt that not only was this a prudent course of action, it was also the right thing to do and would be consistent with one of APS's core corporate values, that of environmental stewardship.

Because virtually the entire ground surface at Ocotillo is disturbed and/or obscured, it was determined that a standard archaeological survey would have little value in trying to identify cultural resources. During June-July 2013, APS conducted geotechnical investigations on the property for the purpose of characterizing subsurface sediments. Due to the ground-disturbing nature of geotechnical boring, and also due to a desire to begin to understand the potential for subsurface cultural resources on the property, my office, in informal consultation with the Arizona State Historic Preservation Office (SHPO), determined that it would be appropriate to engage a professional archaeological consulting firm to monitor the boreholes for cultural resources and to take a cursory look at any possible exposures (such as the berms surrounding the existing fuel tanks) for the presence/absence of cultural resources.

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The next phase of archaeological testing work began in November 2013. The results of this phase of testing are reported in "Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014), a copy of which is enclosed for your review and comment. The project was significantly constrained by safety concerns due to the presence of subsurface infrastructure throughout the area. Nevertheless, some 424 meters (1,390 feet) of backhoe trench were put in to a depth of five feet, with an additional 50' trench excavated to seven feet in depth. A single feature, a prehistoric irrigation canal was identified with associated artifacts, and further examination was made of a scattering of artifacts from disturbed context located along the berms surrounding the existing fuel tanks.

URS has recommended that the buried canal and the scatter of artifacts in disturbed context be designated as site AZ U:9:3:11 (ASM), and has recommended this site to be eligible to the Arizona Register of Historic Places under Criterion D for its information potential.

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That said, APS does agree with URS that further testing is necessary because the original testing project was constrained by safety concerns, and there is still some potential for archaeological deposits in areas that were off-limits due to safety issues, as well as at depths greater than five feet. APS intends to continue its identification efforts, and should any significant cultural resources/historic properties be identified during further testing, either the project would be redesigned to avoid impacts to those resources, or, a data recovery project would be designed in consultation with the SHPO and utilizing a professional cultural resource contractor to mitigate any adverse effects to any historic properties that may be encountered. If it cannot be avoided during construction, further work in the area of the canal will also be done to determine the extent of the canal and whether or not there is potential for the existence of a network of prehistoric field ditches.

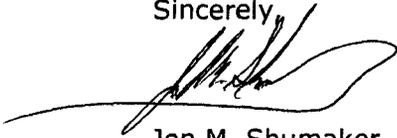
APS is concurrently consulting with the SHPO, the City of Tempe Historic Preservation Office and potentially interested Native American tribes, and will keep your office informed of who specifically is consulted with, the results of those consultations, and any concerns or comments the other parties may have regarding this project.

APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter as well as the four enclosures and the recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date as well as the recommendations in this letter and the enclosed documents. We solicit any comments and feedback you may have, and

shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
Natural Resources Department
Arizona Public Service Company
P.O. Box 53933, M.S. 3372 s
Phoenix AZ 85072-3933
602-371-5298 Office
602-677-1747 Cell
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Cc: Caroline Antone, Cultural Resources Manager

Enclosures:

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P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Mr. Ruben Balderas, President
Ft. McDowell Yavapai Nation
P.O. Box 17779
Fountain Hills AZ 85269

Dear President Balderas:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

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would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

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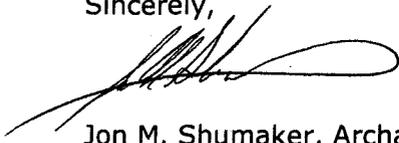
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If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

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Jon M. Shumaker, Archaeologist

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Cc: Karen Ray, Cultural Coordinator

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P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Mr. Gregory Mendoza, Governor
Gila River Indian Community
P.O. Box 97
Sacaton AZ 85147

Dear Governor Mendoza:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

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The next phase of archaeological testing work began in November 2013. The results of this phase of testing are reported in "Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014), a copy of which is enclosed for your review and comment. The project was significantly constrained by safety concerns due to the presence of subsurface infrastructure throughout the area. Nevertheless, some 424 meters (1,390 feet) of backhoe trench were put in to a depth of five feet, with an additional 50' trench excavated to seven feet in depth. A single feature, a prehistoric irrigation canal was identified with associated artifacts, and further examination was made of a scattering of artifacts from disturbed context located along the berms surrounding the existing fuel tanks.

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URS has also recommended that further archaeological testing be carried out, focusing on areas that might be disturbed during construction, and that deeper testing also be done when it is safe and prudent to do so. They also recommend archaeological monitoring during construction where deemed prudent, unless further testing on the site indicate there is little possibility for the discovery of human remains within the construction footprint.

APS believes that aside from the prehistoric canal feature and associated artifacts, specific definition of the proposed boundary of site AZ U:9:3:11 (ASM) is premature as the artifacts found away from the canal area are generally found on secondarily deposited berms consisting of fill and are therefore not *in situ*. Indeed, URS notes that "the site boundaries are somewhat arbitrary." Further testing in the area to a depth of five feet failed to identify other prehistoric features or significant archaeological deposits.

That said, APS does agree with URS that further testing is necessary because the original testing project was constrained by safety concerns, and there is still some potential for archaeological deposits in areas that were off-limits due to safety issues, as well as at depths greater than five feet. APS intends to continue its identification efforts, and should any significant cultural resources/historic properties be identified during further testing, either the project would be redesigned to avoid impacts to those resources, or, a data recovery project would be designed in consultation with the SHPO and utilizing a professional cultural resource contractor to mitigate any adverse effects to any historic properties that may be encountered. If it cannot be avoided during construction, further work in the area of the canal will also be done to determine the extent of the canal and whether or not there is potential for the existence of a network of prehistoric field ditches.

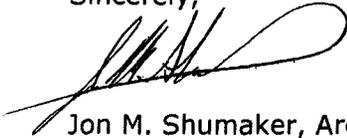
APS is concurrently consulting with the SHPO, the City of Tempe Historic Preservation Office and potentially interested Native American tribes, and will keep your office informed of who specifically is consulted with, the results of those consultations, and any concerns or comments the other parties may have regarding this project.

APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter as well as the four enclosures and the recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date as well as the recommendations in this letter and the enclosed documents. We solicit any comments and feedback you may have, and

shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
Natural Resources Department
Arizona Public Service Company
P.O. Box 53933, M.S. 3372 s
Phoenix AZ 85072-3933
602-371-5298 Office
602-677-1747 Cell
602-371-5241 Fax**

Cc: Barnaby V. Lewis, Tribal Historic Preservation Officer

Enclosures:

Ocotillo Power Plant Modernization Fact Sheet

"Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogan and Kirvan 2013)

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GILA RIVER INDIAN COMMUNITY

POST OFFICE BOX 2140, SACATON, AZ 85147

TRIBAL HISTORIC PRESERVATION OFFICE

(520) 562-7162

Fax: (520) 562-5083

June 5, 2014

Jon M. Shumaker, Archaeologist
Natural Resources Department
Arizona Public Service Company
P.O. Box 53033, Mail Station 3372
Phoenix, Arizona 85072-3933

RE: Demolition and Removal of the Ocotillo Power Plant, 1500 E. University Boulevard,
Tempe, Arizona

Dear Mr. Shumaker,

The Gila River Indian Community Tribal Historic Preservation Office (GRIC-THPO) has received your consultations documents dated May 20, 2014. The Arizona Public Service Company (APS) proposes to demolish the Ocotillo Power Plant located at 1500 E. University Boulevard, Tempe, Arizona and to construct in the same location, five new natural gas-powered generating units and associated facilities. The power plant covers an area 126 acres in size. The western part of the plant area, 15.8 acres in size, will be directly affected by the undertaking. There are three large fuel storage tanks which will be demolished and removed. An additional 10.4 acres of the area will be used for temporary construction offices, material laydown area, and parking. The Ocotillo Power Plant is located on private land and funding for this undertaking is also from a private source. The majority of the 126 acre plant area has been heavily disturbed and obscured by pavement, gravel and existing facilities. Due to the heavy disturbance of the surface area, APS determined that an archaeological survey of the Ocotillo Power Plant area for would be ineffectual. The APS recommended that archaeological consultants from URS conduct archaeological monitoring of borehole placement during geotechnical explorations conducted in September 2013. Prehistoric artifacts were identified and recovered during the monitoring, but presence or absence of significant buried resources remained undetermined.

As a result of archaeological monitoring, URS conducted phased testing of the project area in November 2013. Backhoe trenching, although restricted due to buried power plant infrastructure, revealed the presence of a prehistoric canal and prehistoric artifacts. The site was designated AZ U:9:3:11(ASM) and considered eligible to the Arizona Register of Historic Places. The extent of the site and establishment of a site boundary have not been defined. Additional archaeological excavation is required to definitively identify a site boundary. The URS has recommended, and the APS has agreed, that additional archaeological data recovery efforts be conducted.

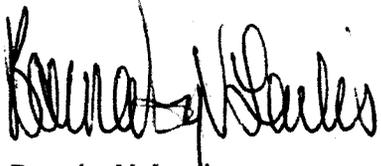
The URS has also completed a State of Arizona Historic Property Inventory Form for the Ocotillo Power Plant. The power plant was initially under construction from 1958 to 1960. The Ocotillo Power Plant is not considered eligible for listing on the Arizona Register of Historic Places. The APS is seeking concurrence with the adequacy of the cultural resource investigations, the cultural

resources reports, the cultural resource management recommendations, and determinations of site register eligibility. The APS has not made a finding of effect for this undertaking.

The GRIC-THPO concurs with the adequacy of the archaeological work conducted at the Ocotillo Power Plant. We appreciate that the APS is consulting with Tribes for this undertaking occurring on private lands. The GRIC concurs that the Ocotillo Power Plant is not a Arizona Register of Historic Places property, and agrees that additional archaeological data recovery work is necessary prior to ground disturbing activities at the plant. The archaeological monitoring report and the archaeological testing report are adequate, acceptable cultural resource management documents. We trust that the APS will notify our office in the event that there is the discovery of human remains. The proposed project area is within the ancestral lands of the Four Southern Tribes (Gila River Indian Community; Salt River Pima-Maricopa Indian Community; Ak-Chin Indian Community and the Tohono O'Odham Nation). The GRIC-THPO defers to the Salt River Pima-Maricopa Indian Community as lead in the consultation process.

Thank you for consulting with the GRIC-THPO on this project. If you have any questions please do not hesitate to contact me or the Archaeological Compliance Specialist Larry Benallie, Jr. at 520-562-7162.

Respectfully,



Barnaby V. Lewis
Tribal Historic Preservation Officer
Gila River Indian Community



P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Mr. Herman G. Honanie, Chairman
Hopi Tribe
P.O. Box 123
Kykotsmovi AZ 86039

Dear Chairman Honanie:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

Under ARS 40-360-06, "Factors to be considered in issuing a certificate of environmental compatibility," #5 calls out that "Existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the proposed site" are factors to be considered by the Siting Committee in determining whether or not to recommend issuance of a CEC.

Pursuant to the ACC Rules of Practice and Procedure R14-3-219 (#6), the application for a CEC shall "Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion." Furthermore, under R14-3 "Exhibits to Application," Exhibit E shall "Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon."

APS submits the following information for your review and comment as part of this process to support the ACC's compliance with the Arizona State Historic Preservation Act (ARS 41-861 et seq.), which requires state agencies to consider the impacts of their programs on historic properties listed on, or eligible for, the Arizona Register of Historic Places.

Ocotillo Power Plant is located on private land, at 1500 E. University Blvd. in Tempe, Arizona. The site is within T1N, R4E, the SE1/4 of S14, G&SRB&M. While the entire APS-owned property consists of approximately 126 acres, it is estimated that only about 15.8 acres would be affected by the new construction, mostly on the western portion of the APS parcel. The majority of this area is currently occupied by three large fuel storage tanks, which would be demolished and removed. Another 10.4 acres

would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

Discussions with APS management regarding a possible re-purposing of this property resulted in my recommendation that APS should perform the maximum level of due diligence should any possible future project require some level of state and/or Federal cultural resource compliance. It was felt that not only was this a prudent course of action, it was also the right thing to do and would be consistent with one of APS's core corporate values, that of environmental stewardship.

Because virtually the entire ground surface at Ocotillo is disturbed and/or obscured, it was determined that a standard archaeological survey would have little value in trying to identify cultural resources. During June-July 2013, APS conducted geotechnical investigations on the property for the purpose of characterizing subsurface sediments. Due to the ground-disturbing nature of geotechnical boring, and also due to a desire to begin to understand the potential for subsurface cultural resources on the property, my office, in informal consultation with the Arizona State Historic Preservation Office (SHPO), determined that it would be appropriate to engage a professional archaeological consulting firm to monitor the boreholes for cultural resources and to take a cursory look at any possible exposures (such as the berms surrounding the existing fuel tanks) for the presence/absence of cultural resources.

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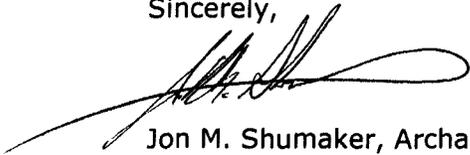
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APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter as well as the four enclosures and the recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date as well as the recommendations in this letter and the enclosed documents. We solicit any comments and feedback you may have, and

shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
Natural Resources Department
Arizona Public Service Company
P.O. Box 53933, M.S. 3372 s
Phoenix AZ 85072-3933
602-371-5298 Office
602-677-1747 Cell
602-371-5241 Fax**

Cc: Leigh Kuwanwisiwma, Director, Hopi Cultural Preservation Office

Enclosures:

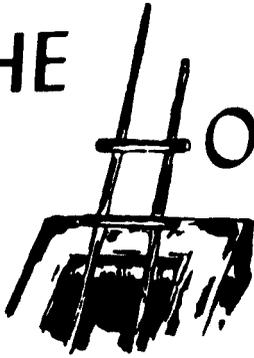
Ocotillo Power Plant Modernization Fact Sheet

"Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogan and Kirvan 2013)

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THE HOPI TRIBE



Herman G. Honanie
CHAIRMAN
Alfred Lomahquahu Jr.
VICE-CHAIRMAN

May 28, 2014

Jon M. Shumaker, Archaeologist
Arizona Public Service Company, Natural Resources Department
P.O. Box 53933, M.S. 3372 s
Phoenix, Arizona 85072-3933

Re: Ocotillo Power Plant, Tempe

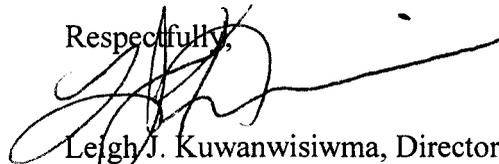
Dear Mr. Shumaker,

This letter is in response to your correspondence dated May 20, 2014, with enclosed cultural resource records review and testing reports regarding Arizona Public Service Company planning the demolition and removal of portions of the exiting Ocotillo Power Plant in Tempe and construction of five new natural gas generating units. The Hopi Tribe claims cultural affiliation to earlier identifiable cultural groups in Arizona, including the Hohokam cultural group in southern Arizona. The Hopi Cultural Preservation Office supports the identification and avoidance of our ancestral sites, and we consider the prehistoric archaeological sites of our ancestors to be Traditional Cultural Properties. Therefore, we appreciate UDOT's continuing solicitation of our input and your efforts to address our concerns.

The Hopi Cultural Preservation Office requests consultation on any proposal with the potential to adversely affect prehistoric cultural resources in Arizona. We have reviewed the enclosed reports and undertand a buried canal and scatter of disturbed artifacts, site AZ U:9:3:11 (ASM), was identified and additional testing is recommended. Please provide us with a copy of any additional testing report and any proposed treatment plans for review and comment

If you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office at 928-734-3619 or tmorgart@hopi.nsn.us. Thank you for your consideration.

Respectfully,



Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Arizona State Historic Preservation Office



P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Diane Enos, President
Salt River Pima-Maricopa Indian Community
10005 East Osborn Rd.
Scottsdale AZ 85256

Dear President Enos:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

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would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

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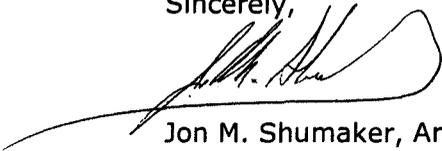
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APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter as well as the five enclosures and the recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date as well as the recommendations in this letter and the enclosed documents. We solicit any comments and feedback you may have, and

shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
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Cc: Angela Garcia-Lewis, Cultural Preservation Compliance Supervisor

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"Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014)



Salt River
PIMA-MARICOPA INDIAN COMMUNITY

10005 EAST OSBORN ROAD/SCOTTSDALE, ARIZONA 85256/ PHONE (480) 362-6337

Cultural Preservation Program

July 11, 2014

Jon M. Shumaker, Archaeologist
Arizona Public Service Company, Natural Resources Department
P.O. Box 53033, Mail Station 3372
Phoenix, Arizona 85072-3933

RE: Demolition & Removal of the Ocotillo Power Plant in Tempe, Arizona

Dear Mr. Shumaker,

The Salt River Pima-Maricopa Indian Community is a federally recognized tribe located near Scottsdale, Arizona. The SRP-MIC is in receipt of a request to consult on the proposed Arizona Public Service Company (APS) project to demolish the existing 126 acre Ocotillo Power Plant (1500 E. University Boulevard, Tempe, Arizona) and construction of five new natural gas-powered generating units and associated facilities in the same location, directly impacting 15.8 acres of the west portion of the site. This privately funded project is located on private land jurisdiction within the federally adjudicated aboriginal lands of the Four Southern Tribes of Arizona (the SRP-MIC, the Gila River Indian Community, the Ak-Chin Indian Community, and the Tohono O'Odham Nation). As such the SRP-MIC will take the lead on handling further consultation on this project on behalf of the other Four Southern Tribes of Arizona.

At present there are three fuel storage tanks to be demolished and removed. An additional 10.4 acres of the area will be used for temporary construction offices, material laydown area, and parking. URS Corporation conducted archaeological monitoring of borehole placement during geotechnical explorations (in September 2013) where prehistoric archaeological materials were encountered but was unable to determine the presence or absence of significant buried resources. Based on those results, URS Corporation conducted phased testing of the project area in November 2013 that yielded an Arizona Register eligible prehistoric canal site AZ U:9:3: 11([ASM]), although URS recommended further investigation to determine extent and to establish site boundaries.

Although APS has not made a finding of effect for this project, the SRPMIC concurs with the URS Corporation and APS recommendations that the cultural resource investigations were adequate and additional archaeological data recovery is necessary. The SRP-MIC review indicates that archaeological monitoring report and the archaeological testing report are adequate and acceptable cultural resource management documents. The SRP-MIC will take the lead in any cultural resource discovery consultation. As such please notify the SRPMIC Cultural Preservation Program at 480-362-3625 when work commences. The SRP-MIC will be the lead tribe in reference to all applicable cultural resource laws. Please include Shane Anton, CPP Manager (480-362-6331/ Shane.Anton@srpmic-nsn.gov) Angela D. Garcia-Lewis, Cultural Compliance Supervisor (480-362-6337 Angela.Garcia-Lewis@srpmic-nsn.gov) and Matthew Garza, NAGPRA Coordinator (480-362-6627/ Matthew.Garza@srpmic-nsn.gov) in future communications regarding this project. The SRP-MIC CPP prefers both phone and email notification. Feel free to call me or email for additional clarification in regard to this or any cultural resource issue. Thank you for your time and effort in this matter.

Sincerely,

Angela D. Garcia-Lewis,
SRP-MIC Cultural Preservation Compliance Supervisor



P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Mr. Ernest Jones, Sr., President
Yavapai-Prescott Indian Tribe
530 E. Merritt St.
Prescott AZ 86301

Dear President Jones:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

Under ARS 40-360-06, "Factors to be considered in issuing a certificate of environmental compatibility," #5 calls out that "Existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the proposed site" are factors to be considered by the Siting Committee in determining whether or not to recommend issuance of a CEC.

Pursuant to the ACC Rules of Practice and Procedure R14-3-219 (#6), the application for a CEC shall "Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion." Furthermore, under R14-3 "Exhibits to Application," Exhibit E shall "Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon."

APS submits the following information for your review and comment as part of this process to support the ACC's compliance with the Arizona State Historic Preservation Act (ARS 41-861 et seq.), which requires state agencies to consider the impacts of their programs on historic properties listed on, or eligible for, the Arizona Register of Historic Places.

Ocotillo Power Plant is located on private land, at 1500 E. University Blvd. in Tempe, Arizona. The site is within T1N, R4E, the SE1/4 of S14, G&SRB&M. While the entire APS-owned property consists of approximately 126 acres, it is estimated that only about 15.8 acres would be affected by the new construction, mostly on the western portion of the APS parcel. The majority of this area is currently occupied by three large fuel storage tanks, which would be demolished and removed. Another 10.4 acres

would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

Discussions with APS management regarding a possible re-purposing of this property resulted in my recommendation that APS should perform the maximum level of due diligence should any possible future project require some level of state and/or Federal cultural resource compliance. It was felt that not only was this a prudent course of action, it was also the right thing to do and would be consistent with one of APS's core corporate values, that of environmental stewardship.

Because virtually the entire ground surface at Ocotillo is disturbed and/or obscured, it was determined that a standard archaeological survey would have little value in trying to identify cultural resources. During June-July 2013, APS conducted geotechnical investigations on the property for the purpose of characterizing subsurface sediments. Due to the ground-disturbing nature of geotechnical boring, and also due to a desire to begin to understand the potential for subsurface cultural resources on the property, my office, in informal consultation with the Arizona State Historic Preservation Office (SHPO), determined that it would be appropriate to engage a professional archaeological consulting firm to monitor the boreholes for cultural resources and to take a cursory look at any possible exposures (such as the berms surrounding the existing fuel tanks) for the presence/absence of cultural resources.

APS hired URS Corporation to do the work. The resulting report, "*Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona*" (Rogan and Kirvan 2013) is enclosed for your review and comment. The report confirmed that "the Hohokam intensively occupied the area in the vicinity of the power plant parcel for several centuries." It also noted that the prehistoric village was located on the Mesa terrace adjacent to the Salt River, while the power plant facility is located on the lower Lehi terrace. Previous investigations of the Lehi terrace have thus far identified evidence of prehistoric farming and related field houses on that lower terrace. Additionally, the borehole monitoring project identified a few hundred Hohokam artifacts from a highly disturbed context at the western end of the power plant parcel. The results of the geotechnical monitoring project were indeterminate with regard to the presence/absence of significant cultural resources.

After meeting with the SHPO to discuss the results of the geotechnical monitoring project in September 2013, we both agreed with Dr. Gene Rogge (with the archaeological contractor URS), that further archaeological testing was warranted. URS developed a phased backhoe archaeological testing program for the purpose of determining whether or not there might be preserved subsurface cultural resources in the Ocotillo parcel.

The Ocotillo Power Plant was constructed in 1958-1960, making it of historic age. To address the question of whether or not the power plant itself might be eligible for the Arizona Register of Historic Places, in October 2013, URS was tasked with completing an Arizona Historic Property Inventory Form, a copy of which is enclosed for your review and comment. URS has recommended that the existing Ocotillo facility was not eligible for the Arizona Register due to a lack of significance under any of the criteria A-D.

The next phase of archaeological testing work began in November 2013. The results of this phase of testing are reported in "Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014), a copy of which is enclosed for your review and comment. The project was significantly constrained by safety concerns due to the presence of subsurface infrastructure throughout the area. Nevertheless, some 424 meters (1,390 feet) of backhoe trench were put in to a depth of five feet, with an additional 50' trench excavated to seven feet in depth. A single feature, a prehistoric irrigation canal was identified with associated artifacts, and further examination was made of a scattering of artifacts from disturbed context located along the berms surrounding the existing fuel tanks.

URS has recommended that the buried canal and the scatter of artifacts in disturbed context be designated as site AZ U:9:3:11 (ASM), and has recommended this site to be eligible to the Arizona Register of Historic Places under Criterion D for its information potential.

URS has also recommended that further archaeological testing be carried out, focusing on areas that might be disturbed during construction, and that deeper testing also be done when it is safe and prudent to do so. They also recommend archaeological monitoring during construction where deemed prudent, unless further testing on the site indicate there is little possibility for the discovery of human remains within the construction footprint.

APS believes that aside from the prehistoric canal feature and associated artifacts, specific definition of the proposed boundary of site AZ U:9:3:11 (ASM) is premature as the artifacts found away from the canal area are generally found on secondarily deposited berms consisting of fill and are therefore not *in situ*. Indeed, URS notes that "the site boundaries are somewhat arbitrary." Further testing in the area to a depth of five feet failed to identify other prehistoric features or significant archaeological deposits.

That said, APS does agree with URS that further testing is necessary because the original testing project was constrained by safety concerns, and there is still some potential for archaeological deposits in areas that were off-limits due to safety issues, as well as at depths greater than five feet. APS intends to continue its identification efforts, and should any significant cultural resources/historic properties be identified during further testing, either the project would be redesigned to avoid impacts to those resources, or, a data recovery project would be designed in consultation with the SHPO and utilizing a professional cultural resource contractor to mitigate any adverse effects to any historic properties that may be encountered. If it cannot be avoided during construction, further work in the area of the canal will also be done to determine the extent of the canal and whether or not there is potential for the existence of a network of prehistoric field ditches.

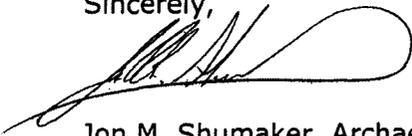
APS is concurrently consulting with the SHPO, the City of Tempe Historic Preservation Office and potentially interested Native American tribes, and will keep your office informed of who specifically is consulted with, the results of those consultations, and any concerns or comments the other parties may have regarding this project.

APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter as well as the five enclosures and the recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date as well as the recommendations in this letter and the enclosed documents. We solicit any comments and feedback you may have, and

shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
Natural Resources Department
Arizona Public Service Company
P.O. Box 53933, M.S. 3372 s
Phoenix AZ 85072-3933
602-371-5298 Office
602-677-1747 Cell
602-371-5241 Fax**

Cc: Gregory Glassco, Cultural Research Department

Enclosures:

Ocotillo Power Plant Modernization Fact Sheet

"Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogan and Kirvan 2013)

Arizona Historic Property Inventory Form Inventory # OPP-1

"Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014)



PRESCOTT ♦ INDIAN ♦ TRIBE

June 16, 2014

Mr. Jon M. Shumaker
Archaeologist, Natural Resources Department
Arizona Public Services
P.O. Box 53933 M.S. 3372 s
Phoenix, AZ 85072-3933

Dear Mr. Shumaker:

Thank you for your letter dated May 20, 2014 and the two reports, entitled *Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona* (URS Cultural Report 2013-27 AZ) and *Archaeological Testing at the APS Ocotillo Power Plant, Tempe, Arizona, Maricopa County, Arizona* (URS Cultural Resources Report 2014-4 AZ). Aboriginal Yavapai territory extended close to the Ocotillo Power Plant in Tempe, and we therefore appreciate you consulting with us and soliciting our opinions and concerns.

The cultural resource records review report and the archaeological testing reports prepared by URS Corporation look adequate to us. We appreciate the diligence of APS and URS to conduct archaeological testing in a precarious and potentially dangerous environment containing subsurface infrastructure from the existing Ocotillo Power Plant. We concur with the adequacy of the cultural resource work done to date.

The Yavapai-Prescott Indian Tribe supports the proposal to conduct further archaeological testing in areas that were off-limits due to safety issues, as well as testing at depths greater than five feet in areas where that would be deemed appropriate.

Please keep us informed on this project.

Sincerely,

Linda Ogo
Director,
Cultural Research Department



P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Mr. Peter Yucupicio, Chairman
Pascua Yaqui Tribe of Arizona
7474 S. Camino de Oeste
Tucson AZ 85746

Dear Chairman Yucupicio:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

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would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

Discussions with APS management regarding a possible re-purposing of this property resulted in my recommendation that APS should perform the maximum level of due diligence should any possible future project require some level of state and/or Federal cultural resource compliance. It was felt that not only was this a prudent course of action, it was also the right thing to do and would be consistent with one of APS's core corporate values, that of environmental stewardship.

Because virtually the entire ground surface at Ocotillo is disturbed and/or obscured, it was determined that a standard archaeological survey would have little value in trying to identify cultural resources. During June-July 2013, APS conducted geotechnical investigations on the property for the purpose of characterizing subsurface sediments. Due to the ground-disturbing nature of geotechnical boring, and also due to a desire to begin to understand the potential for subsurface cultural resources on the property, my office, in informal consultation with the Arizona State Historic Preservation Office (SHPO), determined that it would be appropriate to engage a professional archaeological consulting firm to monitor the boreholes for cultural resources and to take a cursory look at any possible exposures (such as the berms surrounding the existing fuel tanks) for the presence/absence of cultural resources.

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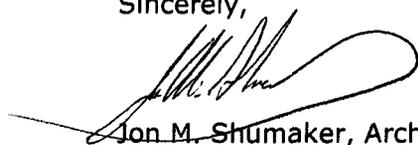
APS is concurrently consulting with the SHPO, the City of Tempe Historic Preservation Office and potentially interested Native American tribes, and will keep your office informed of who specifically is consulted with, the results of those consultations, and any concerns or comments the other parties may have regarding this project.

APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter as well as the four enclosures and the recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date as well as the recommendations in this letter and the enclosed documents. We solicit any comments and feedback you may have, and

shall continue coordinating closely with your office should the new power plant project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
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Cc: Rolando Flores, Assistant Tribal Attorney General

Enclosures:

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P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Mr. Ned Norris, Jr., Chairman
Tohono O'odham Nation
P.O. Box 837
Sells AZ 85634

Dear Chairman Norris:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

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would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

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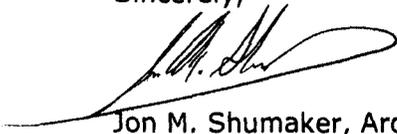
APS is concurrently consulting with the SHPO, the City of Tempe Historic Preservation Office and potentially interested Native American tribes, and will keep your office informed of who specifically is consulted with, the results of those consultations, and any concerns or comments the other parties may have regarding this project.

APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter as well as the four enclosures and the recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date as well as the recommendations in this letter and the enclosed documents. We solicit any comments and feedback you may have, and

shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
Natural Resources Department
Arizona Public Service Company
P.O. Box 53933, M.S. 3372 s
Phoenix AZ 85072-3933
602-371-5298 Office
602-677-1747 Cell
602-371-5241 Fax**

Cc: Peter Steere, Tribal Historic Preservation Officer

Enclosures:

Ocotillo Power Plant Modernization Fact Sheet

"Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogan and Kirvan 2013)

Arizona Historic Property Inventory Form Inventory # OPP-1

"Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014)



P.O. Box 53933
Phoenix, AZ 85072

May 20, 2014

Mr. Thomas Beauty, Chairman
Yavapai-Apache Nation
2400 W. Datsi St.
Camp Verde AZ 86322

Dear Chairman Beauty:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC's) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

Under ARS 40-360-06, "Factors to be considered in issuing a certificate of environmental compatibility," #5 calls out that "Existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the proposed site" are factors to be considered by the Siting Committee in determining whether or not to recommend issuance of a CEC.

Pursuant to the ACC Rules of Practice and Procedure R14-3-219 (#6), the application for a CEC shall "Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion." Furthermore, under R14-3 "Exhibits to Application," Exhibit E shall "Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon."

APS submits the following information for your review and comment as part of this process to support the ACC's compliance with the Arizona State Historic Preservation Act (ARS 41-861 et seq.), which requires state agencies to consider the impacts of their programs on historic properties listed on, or eligible for, the Arizona Register of Historic Places.

Ocotillo Power Plant is located on private land, at 1500 E. University Blvd. in Tempe, Arizona. The site is within T1N, R4E, the SE1/4 of S14, G&SRB&M. While the entire APS-owned property consists of approximately 126 acres, it is estimated that only about 15.8 acres would be affected by the new construction, mostly on the western portion of the APS parcel. The majority of this area is currently occupied by three large fuel storage tanks, which would be demolished and removed. Another 10.4 acres

would be used for temporary construction offices, material laydown areas, and parking. The majority of the surface area of the 126 acre APS-owned property is disturbed and/or obscured by gravel, pavement, and existing facilities. Funding for the proposed project is private.

Discussions with APS management regarding a possible re-purposing of this property resulted in my recommendation that APS should perform the maximum level of due diligence should any possible future project require some level of state and/or Federal cultural resource compliance. It was felt that not only was this a prudent course of action, it was also the right thing to do and would be consistent with one of APS's core corporate values, that of environmental stewardship.

Because virtually the entire ground surface at Ocotillo is disturbed and/or obscured, it was determined that a standard archaeological survey would have little value in trying to identify cultural resources. During June-July 2013, APS conducted geotechnical investigations on the property for the purpose of characterizing subsurface sediments. Due to the ground-disturbing nature of geotechnical boring, and also due to a desire to begin to understand the potential for subsurface cultural resources on the property, my office, in informal consultation with the Arizona State Historic Preservation Office (SHPO), determined that it would be appropriate to engage a professional archaeological consulting firm to monitor the boreholes for cultural resources and to take a cursory look at any possible exposures (such as the berms surrounding the existing fuel tanks) for the presence/absence of cultural resources.

APS hired URS Corporation to do the work. The resulting report, "*Cultural Resource Records Review and Archaeological Monitoring of Geotechnical Investigations at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona*" (Rogan and Kirvan 2013) is enclosed for your review and comment. The report confirmed that "the Hohokam intensively occupied the area in the vicinity of the power plant parcel for several centuries." It also noted that the prehistoric village was located on the Mesa terrace adjacent to the Salt River, while the power plant facility is located on the lower Lehi terrace. Previous investigations of the Lehi terrace have thus far identified evidence of prehistoric farming and related field houses on that lower terrace. Additionally, the borehole monitoring project identified a few hundred Hohokam artifacts from a highly disturbed context at the western end of the power plant parcel. The results of the geotechnical monitoring project were indeterminate with regard to the presence/absence of significant cultural resources.

After meeting with the SHPO to discuss the results of the geotechnical monitoring project in September 2013, we both agreed with Dr. Gene Rogge (with the archaeological contractor URS), that further archaeological testing was warranted. URS developed a phased backhoe archaeological testing program for the purpose of determining whether or not there might be preserved subsurface cultural resources in the Ocotillo parcel.

The Ocotillo Power Plant was constructed in 1958-1960, making it of historic age. To address the question of whether or not the power plant itself might be eligible for the Arizona Register of Historic Places, in October 2013, URS was tasked with completing an Arizona Historic Property Inventory Form, a copy of which is enclosed for your review and comment. URS has recommended that the existing Ocotillo facility was not eligible for the Arizona Register due to a lack of significance under any of the criteria A-D.

The next phase of archaeological testing work began in November 2013. The results of this phase of testing are reported in "Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014), a copy of which is enclosed for your review and comment. The project was significantly constrained by safety concerns due to the presence of subsurface infrastructure throughout the area. Nevertheless, some 424 meters (1,390 feet) of backhoe trench were put in to a depth of five feet, with an additional 50' trench excavated to seven feet in depth. A single feature, a prehistoric irrigation canal was identified with associated artifacts, and further examination was made of a scattering of artifacts from disturbed context located along the berms surrounding the existing fuel tanks.

URS has recommended that the buried canal and the scatter of artifacts in disturbed context be designated as site AZ U:9:3:11 (ASM), and has recommended this site to be eligible to the Arizona Register of Historic Places under Criterion D for its information potential.

URS has also recommended that further archaeological testing be carried out, focusing on areas that might be disturbed during construction, and that deeper testing also be done when it is safe and prudent to do so. They also recommend archaeological monitoring during construction where deemed prudent, unless further testing on the site indicate there is little possibility for the discovery of human remains within the construction footprint.

APS believes that aside from the prehistoric canal feature and associated artifacts, specific definition of the proposed boundary of site AZ U:9:3:11 (ASM) is premature as the artifacts found away from the canal area are generally found on secondarily deposited berms consisting of fill and are therefore not *in situ*. Indeed, URS notes that "the site boundaries are somewhat arbitrary." Further testing in the area to a depth of five feet failed to identify other prehistoric features or significant archaeological deposits.

That said, APS does agree with URS that further testing is necessary because the original testing project was constrained by safety concerns, and there is still some potential for archaeological deposits in areas that were off-limits due to safety issues, as well as at depths greater than five feet. APS intends to continue its identification efforts, and should any significant cultural resources/historic properties be identified during further testing, either the project would be redesigned to avoid impacts to those resources, or, a data recovery project would be designed in consultation with the SHPO and utilizing a professional cultural resource contractor to mitigate any adverse effects to any historic properties that may be encountered. If it cannot be avoided during construction, further work in the area of the canal will also be done to determine the extent of the canal and whether or not there is potential for the existence of a network of prehistoric field ditches.

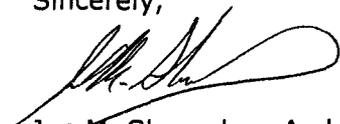
APS is concurrently consulting with the SHPO, the City of Tempe Historic Preservation Office and potentially interested Native American tribes, and will keep your office informed of who specifically is consulted with, the results of those consultations, and any concerns or comments the other parties may have regarding this project.

APS very much appreciates the opportunity to work with your office. We ask that you please review the contents of this letter as well as the five enclosures and the recommendations contained therein. We request your concurrence with the adequacy of the cultural resource work to date as well as the recommendations in this letter and the enclosed documents. We solicit any comments and feedback you may have, and

shall continue coordinating closely with your office should the new power facility project be approved.

If you have any questions, comments, or issues, please feel free to contact me by email at jon.shumaker@aps.com or at the phone and address listed below. Thanks!

Sincerely,



Jon M. Shumaker, Archaeologist

**Archaeological Services
Natural Resources Department
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602-371-5298 Office
602-677-1747 Cell
602-371-5241 Fax**

Cc: Christopher Coder, Tribal Archaeologist

Enclosures:

Ocotillo Power Plant Modernization Fact Sheet

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Arizona Historic Property Inventory Form Inventory # OPP-1

"Archaeological Testing at the Ocotillo Power Plant, Tempe, Maricopa County, Arizona" (Rogge, Kirvan, and Phillips 2014)

APPENDIX J-3 – DIRECT MAIL OF PROJECT INFORMATION

Investing in Arizona's Energy Future



Dear Neighbor,

APS is making investments today that allow us to produce energy in cleaner, more efficient ways tomorrow.

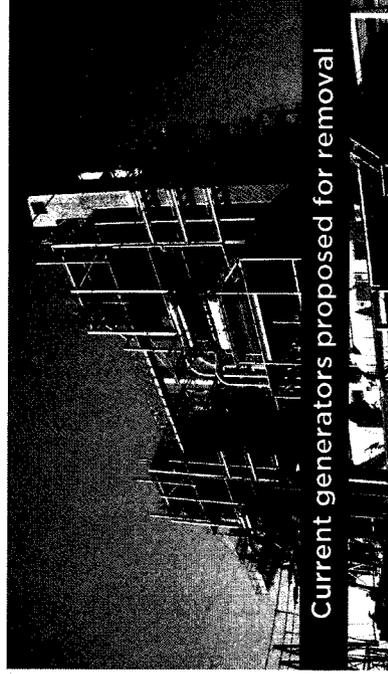
One such investment is modernizing the Ocotillo Power Plant, located at University and McClintock in Tempe, Arizona. APS intends to replace two old generators with five modern, more efficient units that will not increase the plant's footprint. They still will be powered by natural gas.

The new units will stand about half as tall as the old ones, reduce emission rates and maintain reliable service for our customers.

We will provide periodic updates and opportunities for public input as project permitting moves forward. We invite you to learn more about the project at azenergyfuture.com/ocotillo. Comments can be submitted through the website or emailed to OcotilloGenProj@aps.com.



To receive future updates by email or to opt out of future mailings, please visit azenergyfuture.com/ocotillo.



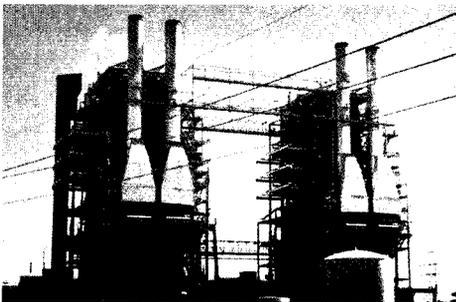


c/o URS Corporation
7720 N. 16th Street, Suite 100
Phoenix, AZ 85020

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PAID
PHOENIX, AZ
PERMIT No. 90

APRIL 2014

Renewing Ocotillo Power Plant for Arizona's Energy Future



Current 1960s-era generators
planned for removal



Proposed Ocotillo Project rendering
looking west

The Ocotillo Power Plant in Tempe has served Valley customers reliably for more than a half-century. APS plans to invest in the aging plant today so we can produce energy in cleaner, more efficient ways for decades to come.

The proposed plan to modernize Ocotillo, located at University and McClintock, includes replacing two old generators built in 1960 with five modern, more efficient units on the existing plant site. Five large oil storage tanks also would be removed.

The natural gas-fired combustion turbines we plan to install will create numerous visual, environmental and economic benefits. They will:

- stand about half as tall as the old generators
- reduce water-use rates and air emission rates
- improve overall noise conditions at the plant
- provide more than 100 jobs during construction
- increase property-tax revenue from \$600,000 to an estimated \$8 million for city, county and state agencies by the fifth year of operation

The new units also will be much more responsive to customer demand. They can start up and begin delivering electricity in less than six minutes, while the old generators take up to six hours to start.

We plan to invest up to \$700 million in the project, which would nearly double Ocotillo's generating capacity from 330 to 620 megawatts. The increased capacity would enable us to reliably incorporate more sources of clean, renewable energy on the electric grid for customers.

TIMELINE

- Applications for regulatory approval and necessary permits filed beginning in spring 2014
- Construction would begin in 2016 and be completed by summer 2018
- Decommissioning and removal of the old generators would begin in fall 2018

WE WANT TO HEAR FROM YOU

We value input from our customers, neighbors and other interested parties as part of the project. The public is invited to an open house on Tuesday, April 22 from 5-8 p.m. at the ASU Karsten Golf Course Clubhouse to review information about the project, ask questions and contribute comments.

You can learn more about the project, sign up for email updates and provide remarks by visiting the project website at azenergyfuture.com/ocotillo. You can also email comments to OcotilloGenProj@aps.com.



c/o URS Corporation
7720 N. 16th Street, Suite 100
Phoenix, AZ 85020

Presorted
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US Postage Paid
Phoenix, AZ
Permit No. 90

OCOTILLO MODERNIZATION PROJECT



APRIL 2014

Renewing Ocotillo Power Plant for Arizona's Energy Future

Public Information
Open House Meeting

5-8 p.m.
Tuesday, April 22, 2014
ASU Karsten Golf Course Clubhouse
1125 East Rio Salado Parkway
Tempe, AZ 85281



Please visit our project website at azenergyfuture.com/ocotillo

APPENDIX J-4 – DISPLAY ADVERTISEMENT

**AROUND OUR SCHOOLS:
TEMPE ELEMENTARY**

Submitted by *Tempe Elementary School District, www.tempe.k12.az.gov*

District news

» AIMS testing is this week. Please make sure your child is well rested and has eaten a nutritional breakfast.

Aguilar Elementary

» Come join us for our last hoorah Thursday, April 17, at Peter Piper Pizza at McClintock Drive and Baseline Road.

» Thanks to community member Albertsons and store Manager Stan Zoller for donating to our school.

» Show your school spirit and purchase a Wildcat Tumbler for \$5 in the office.

Carminat Elementary

» Fifth-graders will study volcanoes April 14-17. They will make salt dough replicas and erupt them on Thursday afternoon.

Curry Elementary

» Field day is April 24.

Getz School

» On Tuesday, April 15, PTO will have a fundraiser from 5-8 p.m. at Rita's Italian Ice at Elliot Road and McClintock Drive.

Hudson Elementary

» Congratulations to three fifth-graders that met their personal accelerated reader goals. Billie Briner and Miguel Quijada have each read more than 2 million words and Steven Whitman has read

more than 1 million. They all had to pass comprehension quizzes about the books.

Nevitt Elementary

» The Nevitt 40th Anniversary Celebration is 10 a.m.-noon Saturday, April 26. Events include school tours, choir performances and a dedication ceremony. Nevitt is at 4525 E. St. Anne Ave. Current and former students, parents, and educators are encouraged to attend.

Wood Elementary

» On April 4, the student body along with the Wood staff presented a pep rally preparing students for their AIMS testing.

Connolly Middle School

» Many sixth-grade students maintained a perfect 4.0 GPA for the first three quarters of this year. Congratulations go out to Naat'ani Castillo, Caito Dengi, Connie Davenport, Micah Fuse, Hannah Jones, Garrett Kirwan, Samuel Leary, Ian Mitchell, Leah Nelson, Luke Phillips, Theodore Strich, Isabella Torres, Isabel Warriner, and Maren Wenger.

Gilliland Middle School

» Congratulations to outstanding students of the month: Martin Burquez, Joelisa Silvas-Duran, Roberto Nitura, Marissa Brantley, Jareth Guillen-Cruz, Stone Tonga'uia, Christopher Wesley, Anthony Aguilar, Juan Hernandez-Lagunas, and Paulina Barreras.

Tempe Academy of International Studies

» Field Day is Thursday, April 17.

» Variety Show will take place at 2 and 6:30 p.m. Tuesday, May 13.

A PUBLIC INVITATION FROM APS



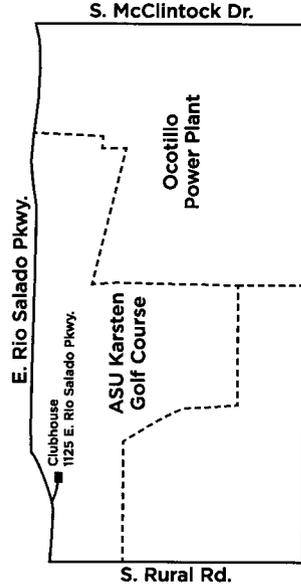
**APS Ocotillo Modernization Project
Public Information Open House**

**Tuesday, April 22, 2014
5:00 - 8:00 p.m.
ASU Karsten Golf Course Clubhouse
1125 East Rio Salado Parkway
Tempe, AZ 85281**

Arizona Public Service Company (APS) plans to modernize our Ocotillo Power Plant, located at University and McClintock in Tempe. We intend to invest up to \$700 million in the aging plant today so we can produce energy in cleaner, more efficient ways for decades to come.

The proposed plan includes replacing two old generators built in 1960 with five modern, more efficient units on the existing plant site. Five large oil storage tanks also would be removed. The new units will stand about half as tall as the old generators, reduce water-use rates and air emission rates, and improve overall noise conditions at the plant. The project would provide more than 100 jobs during construction.

Your opinion is very important to us. Please attend this open house to learn more about the project, ask questions and contribute your comments.



For more information, please visit our project website at aps.com/ocotillo.

ABM FLAP

Continued from Page 4

Robinson denies Whitcomb's allegation and said that Whitcomb informed him that she was recording their conversation in March.

"The real question is why doesn't Ms. Whitcomb simply provide the tape of our conversation to the public so this entire matter can be put to rest?" Robinson said. "Furthermore, if Ms. Whitcomb was so disturbed, why didn't she ask me to stop speaking, ask others in the room to stop me or simply walk out of the room or call the police? Wouldn't one of these be the reasonable thing to do unless, of course, you have other motives,

one being to ensure I fail as president of ABM?" Whitcomb on April 7 denied recording the conversation.

At the April 2 annual meeting, longtime ABM attorney Dean Formanek affirmed that deed restrictions mandate use of the Ahwatukee Lakes property for golf-course-related businesses, such as a clubhouse, restaurant and pro shop. A material change requires approval of greater than 51 percent of the 5,073 property owners represented by ABM, Formanek said.

Formanek emphasized that ABM has no enforcement requirements and recommends not spending money on fighting the developer based on ABM's lack of jurisdiction.

STATE OF ARIZONA
COUNTY OF MARICOPA ss.

Pramila Kadvekar , being first duly sworn,
upon oath deposes and says:

That she is the agent of Phoenix Newspapers Inc., publishers of

***The Arizona Republic
Arizona Business Gazette***

a newspaper of general circulation in the County of Maricopa, State
of Arizona, published at Phoenix, Arizona, and that the copy hereto
attached is a true copy of the advertisement published in the said paper

for a period of 1 { day } as follows:

APS advertisement appeared in the Arizona Republic
on April 9, 2014
1/2 page vertical black and white
Zone 10
ad#8197362
Cost - \$141.36

5/9/2014

Pramila

Agent

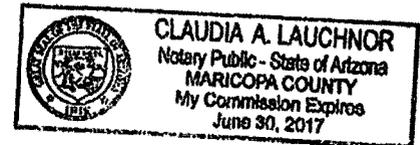
Subscribed and sworn to before me this 9th day of May

A. D. 2014

My Commission Expires

Claudia A. Lauchnor

Notary Public



Source of back pain vital to diagnosis

Question: My husband is prone to "throwing out" his back, and this is becoming increasingly more frequent. What exactly does that mean and when do we know it's time to see a doctor?



DR. AMON FERRY
SPORTS
MEDICINE

Answer: Most of us have at some point or another "thrown out" our back. If your husband is prone to do this often, he might want to see a doctor sooner than later. The spine is composed of bones (vertebral bodies) and cushions in between (intervertebral disk). The posterior portion of the vertebral body creates a canal that runs from the skull all the way to the tail bone and protects the spinal cord and exiting nerves. There are small openings along the side of the spine to allow the nerves to exit the canal and travel to the rest of the body.

Back injuries are common. Ten to 15 percent of sports injuries involve the spine. Athletes who participate in such

sports as gymnastics, rowing and football are at increased risk for back injuries. When someone has a back injury, we always try to determine the location of the pain generator. Pain that is confined to the low back often does not significantly affect the exiting nerve roots and is most commonly related to a muscle spasm. After a traumatic injury, lower-back pain can also arise from fracture of the vertebral body. Sharp, shooting, electrical pain that travels down the back of the leg into the foot is often termed "sciatica" and may result from a pinched nerve as it exits through the openings in the spinal canal.

Central to making the diagnosis is identifying the pain generator. The first step is a good physical exam by your doctor. Next, usually X-rays are obtained to see if any bones are out of alignment or if there is a fracture contributing to the symptoms. An MRI can give more detail about the soft tissue.

Dr. Amon Ferry practices with Valley Orthopedics. Reach him at 623-882-1292 or DrFerry@ValleyOrthoAz.com.

A PUBLIC INVITATION FROM APS



APS Ocotillo Modernization Project Public Information Open House

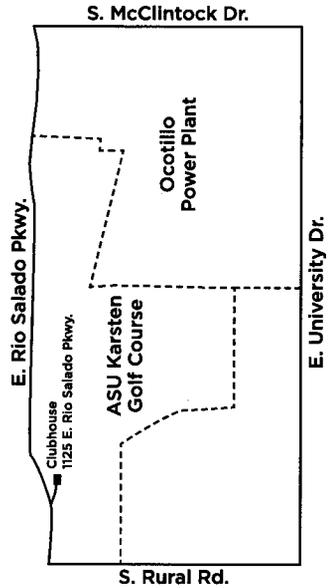
Tuesday, April 22, 2014
5:00 – 8:00 p.m.

ASU Karsten Golf Course Clubhouse
1125 East Rio Salado Parkway
Tempe, AZ 85281

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Your opinion is very important to us. Please attend this open house to learn more about the project, ask questions and contribute your comments.



For more information, please visit our project website at aps.com/ocotillo.

83% Off Laser Hair Removal at Laser By Christine



Visit DealChicken.com to view the deal details and to purchase this featured deal.



Download the app.

DealChicken.com

STATE OF ARIZONA
COUNTY OF MARICOPA

ss.

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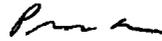
**The Arizona Republic
Arizona Business Gazette**

a newspaper of general circulation in the County of Maricopa, State
of Arizona, published at Phoenix, Arizona, and that the copy hereto
attached is a true copy of the advertisement published in the said paper

for a period of 1 { day } as follows:

APS advertisement appeared in the Arizona Republic
on April 18, 2014
1/2 page vertical black and white
Zone 10
ad#8199144
Cost - \$141.36

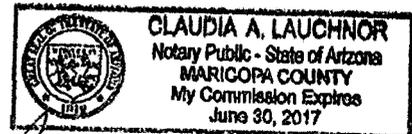
5/9/2014



Agent

Subscribed and sworn to before me this 9th day of May

A. D. 2014



My Commission Expires



Notary Public

A PUBLIC INVITATION FROM APS



APS Ocotillo Modernization Project Public Information Open House

Tuesday, April 22, 2014

5:00 – 8:00 p.m.

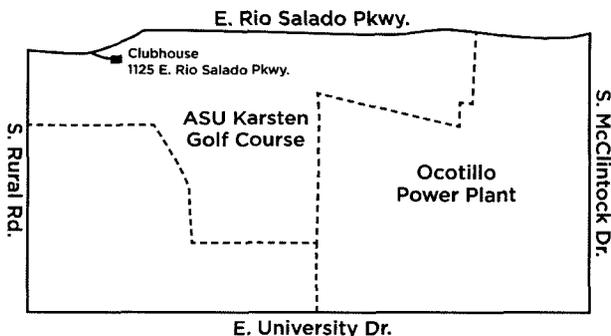
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Your opinion is very important to us. Please attend this open house to learn more about the project, ask questions and contribute your comments.



For more information, please visit our project website at aps.com/ocotillo.

[MARK YOUR] calendar



For more of what's happening in the East Valley, visit us at GetOutAZ.com. While you're there, submit your events to our online calendar for free.



[Tribune file]

Mesa Arizona Easter Pageant: 'Jesus the Christ'

This annual production, put on by the Church of Jesus Christ of Latter Day Saints, is an East Valley tradition. Including a cast of hundreds, the 65-minute production, representing 32 scenes from the Old and New Testaments, draws around 75,000 spectators during its two-week run. The show is free of charge and is open to the public.

DETAILS >> 8 p.m. Thursday and Friday, April 10-11, and 8 p.m. Tuesday through Saturday, April 15-19; a Spanish performance will be held at 8 p.m. Saturday, April 12. Mesa Arizona Temple Visitors' Center, 525 E. Main St. Free. EasterPageant.org.

"Oliver!"

Copperstar Repertory stages Lionel Bart's musical rendition of Dickens' rag-to-riches classic, including the popular songs "I'd Do Anything," "Consider Yourself" and "Food, Glorious Food."

DETAILS >> 7:30 p.m. Thursday and Friday, April 10-11, 2 p.m. and 7:30 p.m. Saturday, April 12. Mesa Arts Center, 1 E. Main St. \$24 for adults, \$22 for students and seniors, \$18 for children 12 and younger; not recommended for children 6 and younger. (480) 644-6500 or MesaArtsCenter.com.

Rob Thomas

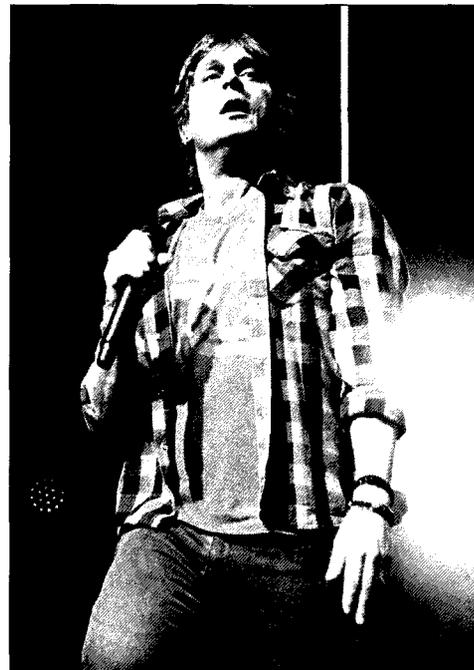
The lead singer from Matchbox Twenty performs in the Ballroom at Talking Stick Resort.

DETAILS >> 8 p.m. Thursday, April 10. Talking Stick Resort, 9800 E. Indian Bend Road, Scottsdale. \$38.39-\$200.41. (480) 850-7734 or TalkingStickResort.com.

East Valley Home and Garden Show

This annual event at San Tan Village doles out tips on home improvement, including everything from kitchen revamps to solar power sourcing. You'll also see radio personalities – including KFYI's Jan D'Atri – broadcast live, while sampling free tastings or watching various chef demos.

DETAILS >> 11 a.m. to 5 p.m. Friday, Saturday and Sunday, April 11-13. San Tan Village, 2218 E. Williams Field Road, Gilbert. Free. (800) 787-2248 or EastValleyHomeandGardenShow.com.



Rob Thomas [The Associated Press]

Hollywood Costume Party

See Phoenix Art Museum's largest and glitziest soiree jammed with local culture makers, costume designers and industry insiders. Guests are invited to don a costume imitating their favorite film star or movie character and spend the evening

dancing, posing for paparazzi on the red carpet, and enjoying themed cocktails and light bites.

DETAILS >> 7 p.m. Friday, April 11. Phoenix Art Museum, 1625 N. Central Ave. \$25; includes admission, free parking, entry to the Hollywood Costume exhibition, food and costume contest registration. (602) 257-1880 or PhxArt.org.

AFFIDAVIT OF DISTRIBUTION

STATE OF Arizona)

COUNTY OF Maricopa)

CITY OF Mesa)

I, Terry Davenport, being duly sworn on oath now and during all times herein stated, have been the publisher and designated agent of the publication known as,

East Valley Tribune ("Publication")

And have full knowledge of the facts herein stated as follows:

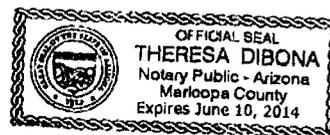
The ad for APS ("Ad/Advertiser") was distributed to the Publication's full circulation on the 10 day of April, 2014.

By: Terry Davenport

Subscribed and sworn to before me
this 8 day of May, 2014.

Theresa D. Bona
Notary Public

Notary Seal:



ABOUT US

East Valley Tribune

The East Valley Tribune is published every Thursday and Sunday and distributed free of charge to homes and in single-copy locations throughout the East Valley. To find out where you can pick up a free copy of the Tribune, please visit www.EastValleyTribune.com.

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TODAY'S TALKERS

Gilbert woman convicted in hammer beating speaks to jury

An Arizona woman convicted of bludgeoning her husband to death with a hammer made a tearful plea for mercy Thursday, telling the jury deciding her fate that she is sorry for her actions and wishes she could go back and undo the pain she caused.

Marissa Devault, 36, broke down in tears and repeatedly lost her composure as she spoke to the jury in the penalty phase of her trial. The same jury that convicted her of first-degree murder is deciding whether she should get the death penalty or a life sentence.

"I don't know if I can be useful to anybody in this world or in any way ... but I would like the opportunity to try," she said.

Devault was found guilty last week in the killing of Dale Harrell, who suffered multiple skull fractures in the Jan. 2009 attack in the couple's home in Gilbert.

The penalty phase began this week and featured emotional testimony from Devault's daughters a day earlier.

Devault clasped a tissue, removed her glasses, took deep breaths and fought back tears for more than 10 minutes. She expressed regret for inflicting pain on her daughters, saying "this goes into generations that don't even exist yet."

Prosecutors say she killed her husband in a failed bid to collect on a life insurance policy to repay more than \$300,000 in loans from her boyfriend, a man 20 years her senior she met on a sugar-daddy website.

Devault said she killed Harrell in self-defense and told investigators he had physically and sexually abused her in the past. She would become the third woman on Arizona's death row if the jury opts for the death penalty.

TEMPE

Former NFL star Darren Sharper denied bail

Even though he's being held in California, retired NFL star Darren Sharper was denied bail Thursday by a judge in Phoenix, a spokesman for the Maricopa County Attorney's office said. Sharper, a five-time Pro

Bowl player, faces five counts of drugging and raping three women in Scottsdale in November.

Sharper has been in jail in Los Angeles since February 27 facing similar charges.

Thursday's ruling in Arizona makes it more likely that Sharper will be denied bail in the California case as well.

Sharper, 38, was being held on \$1 million bail connected with charges of drugging and raping two women in the Los Angeles area, but Judge Renee Korn removed the bail and ordered him to remain in jail in March when an Arizona grand jury indicted him.

MESA

PD: Operation Bonded Ammo recovered stolen goods at Eazy Pick N Pawn

Mesa police say they've completed an operation resulting in numerous arrests and the recovery of hundreds of guns as well as thousands of stolen items at Eazy Pick N Pawn near Main Street and Alma School Road in Mesa.

Police said the operation targeted a pawn shop that allegedly trafficked nearly exclusively in stolen property.

Officers recovered approximately 300 guns and other items including TV's, gaming consoles, printers, coffee makers, gold and cash.

The operation began after a stolen handgun was located inside a vehicle during a traffic stop, police said. The driver was identified as Aaron Ellertson, owner of Eazy Pick N Pawn.

Investigators determined that stolen property was being run through the pawn shop on a daily basis, police said.

The investigation came to a close when detectives served search warrants at the locations owned by Ellertson, police said. Authorities are now going through the stolen property to determine the proper owner, police said.

Police say 16 arrests were made in conjunction with the operation dubbed "Bonded Ammo."

• From staff, wire and ABC15.com reports

A PUBLIC INVITATION FROM APS



APS Ocotillo Modernization Project Public Information Open House

Tuesday, April 22, 2014

5:00 - 8:00 p.m.

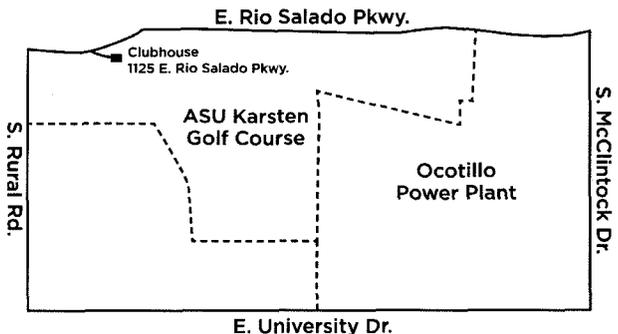
**ASU Karsten Golf Course Clubhouse
 1125 East Rio Salado Parkway
 Tempe, AZ 85281**

Arizona Public Service Company (APS) plans to modernize our Ocotillo Power Plant, located at University and McClintock in Tempe. We intend to invest up to \$700 million in the aging plant today so we can produce energy in cleaner, more efficient ways for decades to come.

The proposed plan includes replacing two old generators built in 1960 with five modern, more efficient units on the existing plant site. Five large oil storage tanks also would be removed.

The new units will stand about half as tall as the old generators, reduce water-use rates and air emission rates, and improve overall noise conditions at the plant. The project would provide more than 100 jobs during construction.

Your opinion is very important to us. Please attend this open house to learn more about the project, ask questions and contribute your comments.



For more information, please visit our project website at aps.com/ocotillo.

AFFIDAVIT OF DISTRIBUTION

STATE OF Arizona)

COUNTY OF Maricopa)

CITY OF Mesa)

I, Terry Davenport, being duly sworn on oath now and during all times herein stated, have been the publisher and designated agent of the publication known as,

East Valley Tribune ("Publication")

And have full knowledge of the facts herein stated as follows:

The ad for APS ("Ad/Advertiser") was distributed to the Publication's full circulation on the 20 day of April, 2014.

By: Terry Davenport

Subscribed and sworn to before me this 8 day of May, 2014.

Theresa Dibona

Notary Public

Notary Seal:



No pierden la fe

Los integrantes de la Vigilia de Promise Arizona se reúnen cada semana para orar por una reforma migratoria y solidarizarse con los que hacen ayuno en Washington.



Los integrantes de la Vigilia de Promise Arizona en su más reciente reunión para rezar el rosario.

MARITZA LIZETH PÉLIZ

Han estado al pie del cañón sin desfallecer. Han permanecido firmes a pesar de las críticas y los desaires. Se han escudado en la fe y han basado su lucha en su devoción. Ellos son los integrantes de la vigilia de Promise Arizona, que cuatro

años después de su fundación siguen orando para pedir un cambio.

Cada semana, un grupo de activistas y creyentes se reúnen en diferentes lugares del Valle para rezar el rosario y clamar la ayuda de Dios en las cuestiones políticas que los afectan a ellos y a sus familias. El más reciente se realizó en la casa de

Petra Falcón, la directora de Promise Arizona, quien dijo que esta reunión semanal les da paz y los ayuda a concentrarse mejor en la lucha.

Después de un ejercicio de oración en el que se recordaron las siete palabras de Jesús en su camino hacia la crucifixión, los integrantes de la vigilia rezaron el rosario con

muchísima fe, pidiendo la intersección divina a favor de una reforma migratoria y un alto a la separación de familias a través de las deportaciones. También le suplicaron a Dios que los mantenga fuertes en la fe para seguir luchando contra las injusticias y a favor de los derechos humanos, sin olvidar la piedad y el amor al prójimo.

Los ayudan a soñar

La coalición Developing Dreams ofreció un taller para que los jóvenes beneficiados del DACA puedan tener acceso a más oportunidades educativas y laborales.

MARITZA LIZETH PÉLIZ

Foto: José Muñoz

Varias organizaciones en pro de la educación y los derechos humanos se unieron para crear la coalición Developing Dreams (Desarrollando Sueños), a través de la cual se pretende ofrecer más ayuda e información para los jóvenes que quieren sobresalir en sus estudios.

Por ello, la semana pasada, en Phoenix realizaron una conferencia de desarrollo personal con enfoque en los estudiantes beneficiados con el programa de la Acción Diferida (DACA).

En el evento, especialistas les explicaron a los "soñadores" cómo redactar un currículo

y una carta de presentación para impactar al reclutador y vender sus servicios en el mundo empresarial. También hablaron sobre cómo encontrar las vías para financiar sus sueños, conseguir becas y recaudar fondos para poder costear la universidad.

Al mismo tiempo, enfatizaron la importancia de crear relaciones sólidas y conectarse con personas que podrían de alguna manera u otra abrirles las puertas en el sector laboral.

Sin embargo, también les explicaron los contratiempos de los conflictos que pueden surgir con una mala entrevista o por diferencias en el área de trabajo y cómo manejar esas situaciones.

Caminan contra la violencia



Algunos de los participantes en la caminata.

MARITZA LIZETH PÉLIZ

Foto: José Muñoz

José Guzmán le mataron a su hijo en un acto de violencia que casi destruye a su familia. El dolor de la pérdida no ha desaparecido, pero han podido transformar esa impotencia en una causa que ayuda a otros padres que como ellos

han tenido que enterrar a uno de los suyos, a través de la organización Padres y Parientes de Hijos Asesinados.

Desafortunadamente, la violencia arranca cientos de vidas cada año, muchas de ellas aquí en Arizona, donde cada día se escuchan noticias de tiroteos, asaltos y secuestros. Cada una de las víctimas fue alguien para alguien... fue padre, hi-

jo, esposo, amigo o pareja y su partida dejó un hueco imposible de llenar. Pero para evitar que más familias sufran lo que José Guzmán sintió cuando asesinaron a su hijo adolescente, este fin de semana se llevó a cabo una caminata contra la violencia y a favor de la paz en Phoenix.

El evento se realizó el pasado 13 de abril saliendo del Capitolio Estatal. Las familias se vistieron con las camisetas blancas en solidaridad con la paz y para resaltar la misión de la organización. Paso a paso recordaron los nombres de los que murieron a causa de la

delincuencia y metro a metro se comprometían más con la misión: fueron cinco kilómetros de recuerdos, cientos de huellas unidas por el mismo dolor.

Guzmán les pidió a los padres de las víctimas, a los residentes y a las autoridades a que se unan a más actividades que promuevan la paz, no solo con caminatas, sino con acciones diarias. También les pidió que visiten la página de Internet www.hijosasesinados.org donde podrán obtener más información de los recursos disponibles para ellos a través de la organización.



Estos son los estudiantes que respondieron a la convocatoria.



Los "soñadores" participaron activamente en las sesiones.

INVITACIÓN PÚBLICA DE APS



Proyecto de APS para modernizar la planta Ocotillo

Reunión informativa abierta al público

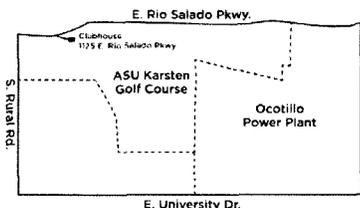
Martes, 22 de abril de 2014
5:00 - 8:00 p.m.
ASU Karsten Golf Course Clubhouse
1125 East Rio Salado Parkway
Tempe, AZ 85281

Arizona Public Service Company (APS) tiene planes de modernizar su Planta de Energía Ocotillo, localizada en las calles University y McClintock en Tempe. Se propone invertir hasta \$700 millones en la antigua planta de modo que esté en condiciones de generar energía de una manera más limpia y eficiente durante las futuras décadas.

La propuesta de modernización incluye el reemplazo de dos generadores construidos en 1960 por cinco unidades más modernas y eficientes instaladas en el mismo sitio. También se retirarán cinco enormes tanques de almacenaje de aceite.

Las nuevas unidades son la mitad de altas comparadas con los viejos generadores, consumen menos agua, contaminan menos el aire y operarán sin hacer tanto ruido. El proyecto creará más de 100 trabajos durante su construcción.

Su opinión es muy importante para nosotros. Por favor, venga a esta reunión pública, aprenda más sobre el proyecto, haga preguntas y contribuya con sus comentarios.



Si desea obtener más información, por favor visite el sitio www.aps.com

NOTICIAS SIEMPRE EN UNIVISION ARIZONA

	4PM
	5PM
	5:30PM

Sólo por



AFFIDAVIT OF PUBLICATION

STATE OF ARIZONA
COUNTY OF MARICOPA

Manny L. Garcia, being first duly sworn upon oath, deposes and says: That he is the owner and publisher of PRENSA HISPANA, a newspaper of general circulation in the County of Maricopa and the State of Arizona, published in Phoenix, Arizona, and that the copy hereto attached is a true copy of the advertisement as published weekly in PRENSA HISPANA on the following dates:

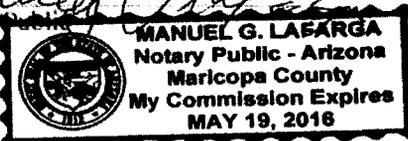
ARIZONA Public SERVICE (APS)
" Proyecto de APS para
modernizar la planta Ocotillo
MARTES, 27 de Abril de 2014
5:00 - 8:00 PM
ASU KRISTEN GOLF COURSE CLUBHOUSE
1125 EAST MID SALADO PARKWAY
TEMPE, AZ. 85281

INVOICE # 3182

Sworn before me this

17TH day of
APRIL A.D. 2014


Manny L. Garcia
Owner & Publisher


Notary Public

MANUEL G. LAFARGA
Notary Public - Arizona
Maricopa County
My Commission Expires
MAY 19, 2016

ASU gets new Sparkys



DIANA LUSTIG | THE STATE PRESS
A current Sparky mascot waits for the start of the Sparky tryouts in Wells Fargo Arena on April 9.

MEGANN PHILLIPS
@MEGANNPHILLIPS

The wood floor of Wells Fargo Arena, which was routinely used to accommodate Sun Devil basketball, volleyball, gymnastics and wrestling during winter months, had been neglected by the squeaking sneakers of competitive athletes since the arrival of spring—that is, until ASU athletics coordinators gave the arena a new purpose early last week.

With the end of the academic year quickly approaching, a special annual task —picking the University's next Sparky mascot — became necessary, and the Wells Fargo Arena provided the perfect atmosphere in which to do it.

From 5 to 6 p.m. April 8 and 9, Wells Fargo Arena welcomed 10 students who competed against each other to become ASU's mascot for the 2014-15 academic year. Three staff members from ASU's athletic department served as judges.

Josh Richard, the athletic department's revenue generation coordinator, enjoyed his job as a judge but kept Sparky's identity under wraps.

"We can't reveal the name of the man behind the mask," he said.

Sparky's true identity is one of ASU's best-kept secrets, because it is important to the University athletics department that Sparky's name remains untainted through the decades. However Richard revealed that five students, not one, are associated with Sparky at any given time.

Richard, who has been involved with choosing the "men behind the mask" for two years, said one student from each campus, plus an alternate, is chosen every year to fulfill Sparky's various obligations across ASU.

Two students who wore the costume in 2013-14 will return to wear it again in 2014-15, he said.

The two returning Sparkys attended tryouts alongside their less experienced competitors, but Richard said all of the aspiring

Sparkys were given ample opportunity to hone their skills.

Many had been mascots at their respective high schools, he said, and the tryouts in the Wells Fargo Arena embraced a more educational than competitive atmosphere.

The 10 competing students engaged in a push-up contest and showed off their most impressive pitchforks while in the arena, but the decision about who would be Sparky next year was ultimately made after they attended an ASU baseball game in costume.

While in the Sparky suit, students are expected to capture the attention of enormous audiences and inspire University pride, and this is exactly what each of the prospective Sparkys attempted to do at three baseball games vs. Cal from April 11 to April 13.

"We want Sparky to be personable, active and athletic," Richard said. "He should walk with confidence and swagger."

Conrad Bradburn, an athletics department manager who has judged previous Sparky tryouts, said school spirit was also a heavily weighted criterion.

"Important personality traits for Sparky are, first and foremost, a passion for ASU and pride in being a Sun Devil," he said. "Sparky is a big part of the game atmosphere, and he can really help energize the fans and create a home field advantage."

Eventually, the students who best portrayed all of these characteristics were selected.

Nursing freshman Michaela Denniston said she hopes future Sparkys will be able to maintain the same energy past Sparkys have brought to the table, and she said she looks forward to seeing them in action next year.

"This year, Sparky did an amazing job," she said. "I'm a big fan of Sparky, and I love how he keeps everyone going at all the games. He made each event he was at more exciting."

Contact the reporter at
megann.phillips@asu.edu

A PUBLIC INVITATION FROM APS



APS Ocotillo Modernization Project Public Information Open House

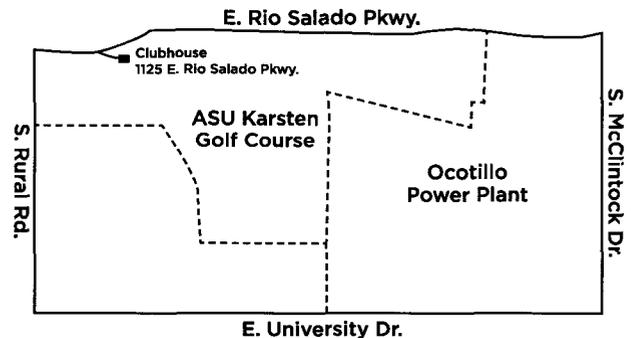
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The new units will stand about half as tall as the old generators, reduce water-use rates and air emission rates, and improve overall noise conditions at the plant. The project would provide more than 100 jobs during construction.

Your opinion is very important to us. Please attend this open house to learn more about the project, ask questions and contribute your comments.



For more information, please visit our project website at aps.com/ocotillo.

APPENDIX J-5 – OPEN HOUSE MEETING

OCOTILLO POWER PLANT MODERNIZATION PROJECT

OPEN HOUSE SUMMARY

4.22.14

The Ocotillo Modernization Project open house was held Tuesday, April 22, 2014 from 5-8 p.m. at the ASU Karsten Golf Course Clubhouse located at 1125 E. Rio Salado Parkway, Tempe, AZ 85281.

A team of nearly 20 APS employees and contractors supported the event as experts, support staff and security.

Open House

About 40 registered guests attended, including neighborhood residents and prospective vendors.

Four written comments were received, three of which were positive/supportive of the project. The other comment requested trees tall enough to screen the new units from the neighborhood.

The team was impressed with attendees' questions about all facets of the project. Of note, five people had questions about the fate of the Christmas lights that are hung from the steam units each year.

Outreach

The multi-media communications plan reached a total audience of nearly 390,000 leading up to the open house.

- Public notification advertising: Ads were placed in four newspapers, on six dates reaching a total circulation of 290,342.

<i>Newspaper</i>	<i>Dates Published</i>	<i>Total Circulation</i>
AZ Republic Tempe/Ahwatukee zone	April 9, April 18	38,568
ASU State Press	April 17	20,000
East Valley Tribune	April 10, April 20	166,774
Prensa Hispanic	April 17	65,000

- Project postcard: A postcard introducing the project was mailed to 64,000 addresses within a 2-mile radius of the Ocotillo Power Plant in March 2014.
- Project newsletter: The open house newsletter was mailed to 59,000 addresses within a 2-mile radius of the Ocotillo Power Plant on April 8, 2014; the discrepancy in addresses from the previous mailer takes into consideration undeliverable postcard addresses.
- Facebook – The open house was promoted to 33,549 users in Tempe from April 16-21, 2014 resulting in 512 clicks-thrus to the Ocotillo web page on azenergyfuture.com. Display boards from the open house are available on azenergyfuture.com.
- Twitter – An open house tweet was posted April 21, 2014 to 6,866 @apsFYI followers.

Summary

Overall, people seem to be interested in the project and satisfied with what they've seen of the plans so far. APS will continue to work to keep that momentum rolling through the permitting process.



APS is planning to modernize the Ocotillo Power Plant in Tempe.

The proposed project will create a cleaner-running, more efficient plant using advanced technology to retire 1960s-era units.

The project provides several benefits, including:

- Supporting service reliability in the Phoenix metro area
- Being better for the environment
- Creating construction jobs and additional tax revenue for the local economy

Key Project Details

- Install five 102-MW gas-fired combustion turbines
- Retire and remove two 110-MW gas-fired steam generators, built in 1960
- Maintain in service two 55-MW gas-fired combustion turbines
- Remove steam cooling towers used by current generators and oil storage tanks

Generation Benefits

- Upgrades Ocotillo's generation capabilities with advanced, high-efficiency technology
- Maintains reliability and key generation source in Phoenix load center
- Enhances responsiveness with quick-start generators
- Site allows for integration of renewable resources to APS generation portfolio
- Increases generation capacity from current 330 MW to 620 MW

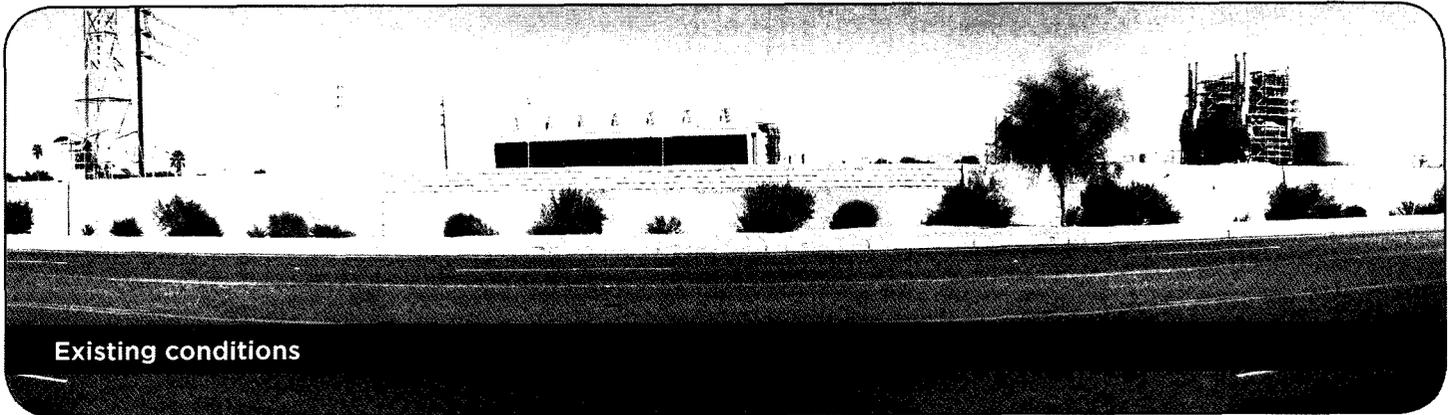
Environmental Benefits

- Decreases plant's water-use and emission rates
- Improves overall plant noise conditions
- Reduces size of power plant stacks to about half the size of existing facilities
- Upgrades generating capacity without increasing plant footprint

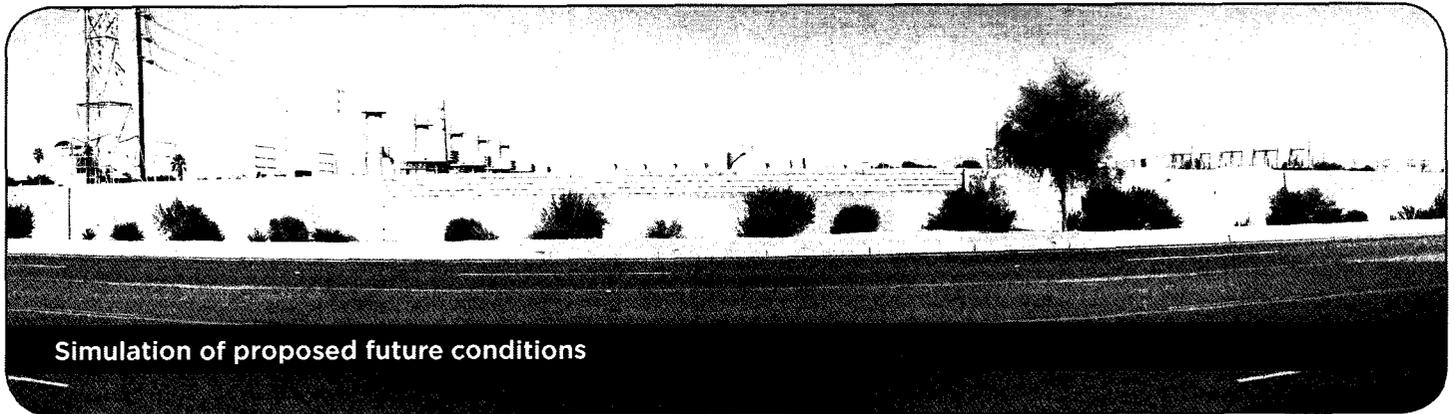
Economic Benefits

- Provides an average of 114 jobs during construction
- Generates an estimated \$3 million in total property taxes in first year of operation, increasing to \$8 million by fifth year

Ocotillo Generation Project



Existing conditions



Simulation of proposed future conditions

* View from University Drive looking north

Proposed Timeline

2014 »

- Begin stakeholder engagement (February)
- Initiate permit processes with City of Tempe and Maricopa County (March)
- File application for Certificate of Environmental Compatibility (August) with Arizona Corporation Commission

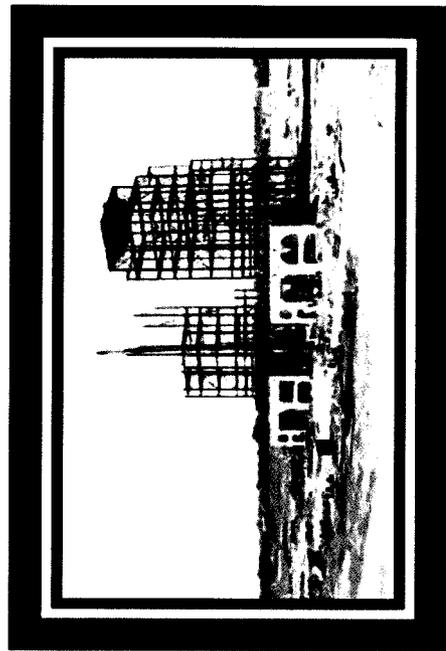
2016 »

- Remove oil storage tanks
- Begin construction of new generation units

2018 »

- Place new generation units into production
- Begin to dismantle and remove current steam generators and related infrastructure

Welcome to the Ocotillo Modernization Project Public Open House

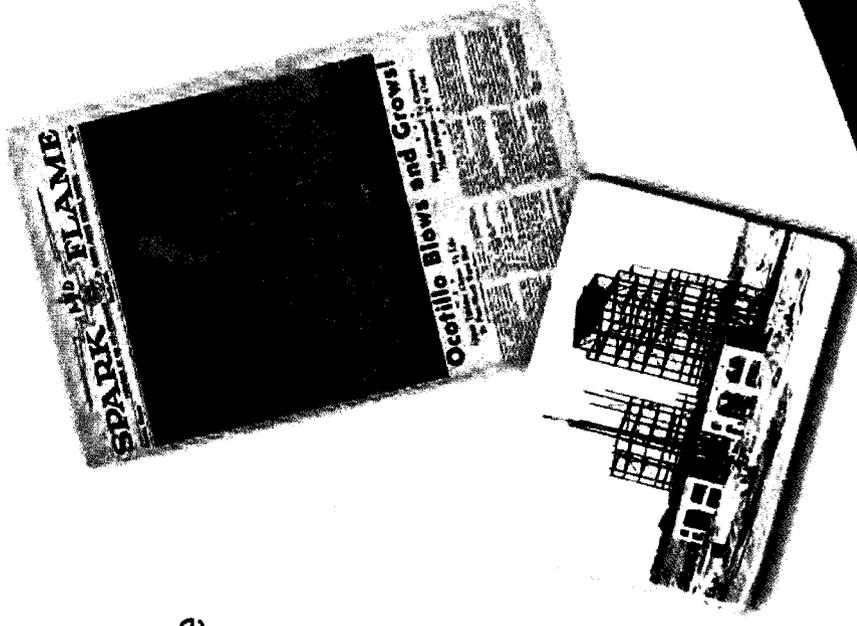


April 22, 2014

aps

Plant History

- Two 110-megawatt (MW) steam generators were constructed in the late 1950s
- Began operating in 1960
- Played significant role in bringing power to growing Phoenix area
- Two 55 MW gas turbines were added to the site in 1972 and 1973
- Both steam and gas turbine units use natural gas as fuel source
- Host for solar testing and research facilities for over 25 years



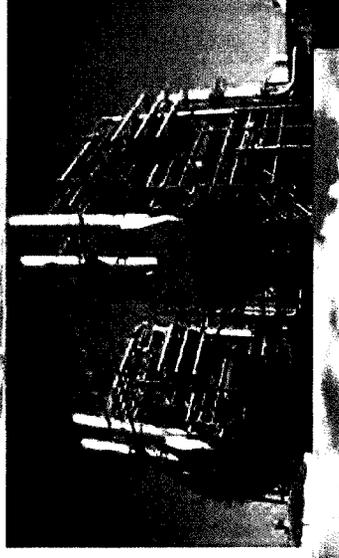
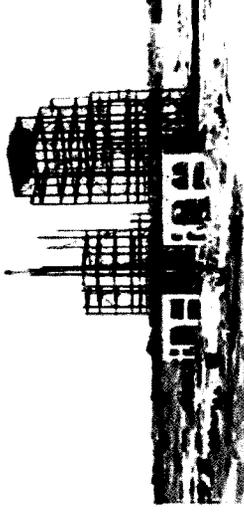
aps

Overview of the Future

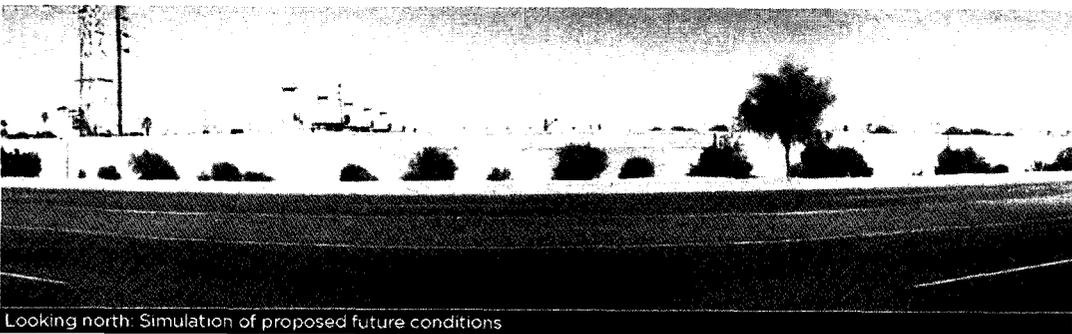
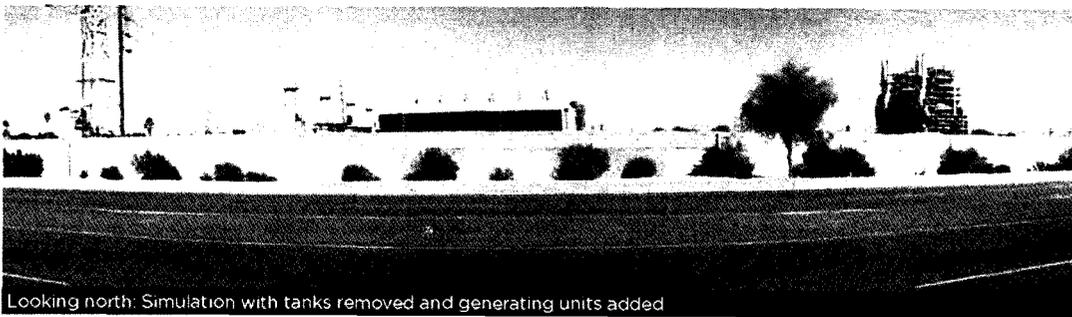
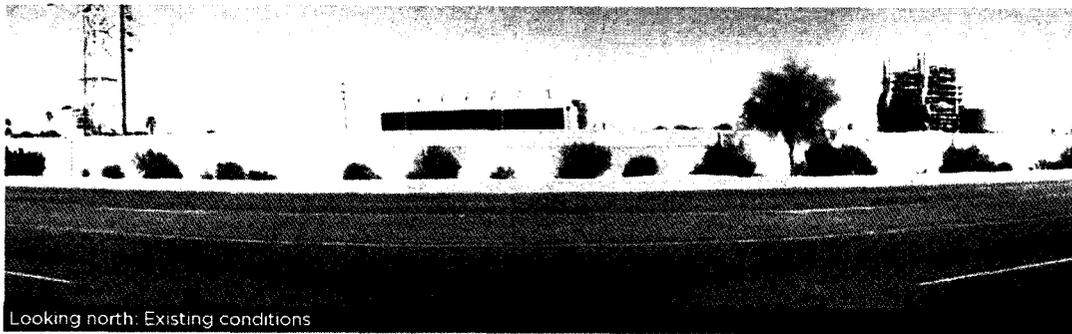


Project Purpose

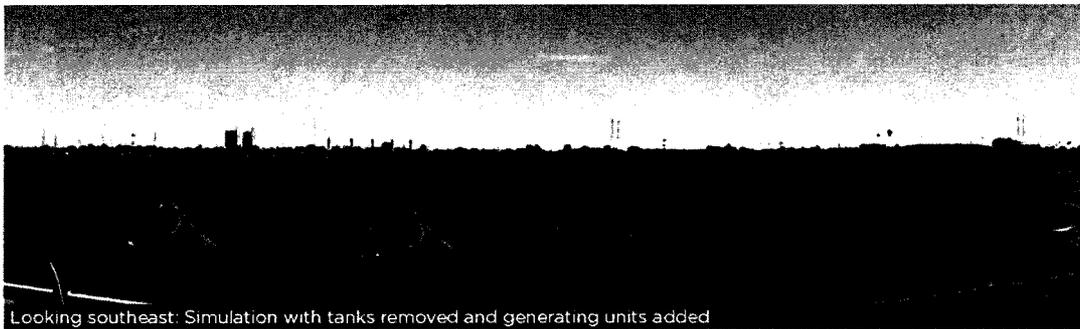
- Retire existing, aging steam units (220 MW)
- Replace steam units with modern technology
- Maintain metropolitan area reliability and flexibility to meet customer energy needs
- Increasing demand for power
- Responsive unit operations
 - Quick start-up and ramp-up time
 - Increase APS' ability to integrate growth in renewable energy sources



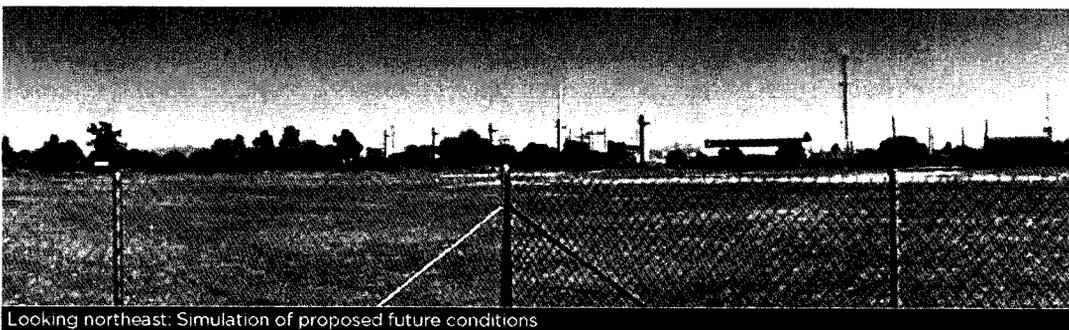
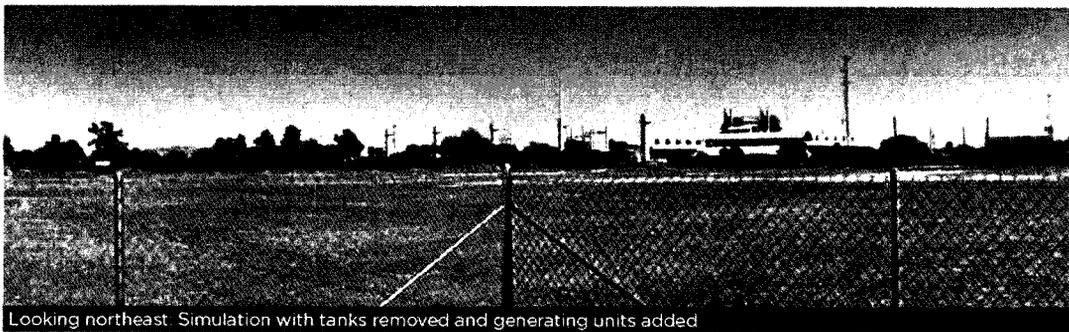
View from University Drive



View from Grigio Tempe Town Lake Apartments



View from ASU Center B Building Parking Lot

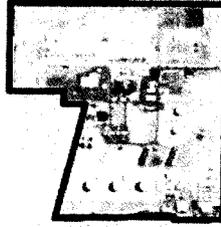


Project Location

Scottsdale Road

KARSTEN GOLF COURSE ★

Rio Salado Parkway



McClintock Drive

University Drive

Rural Road

Apache Boulevard



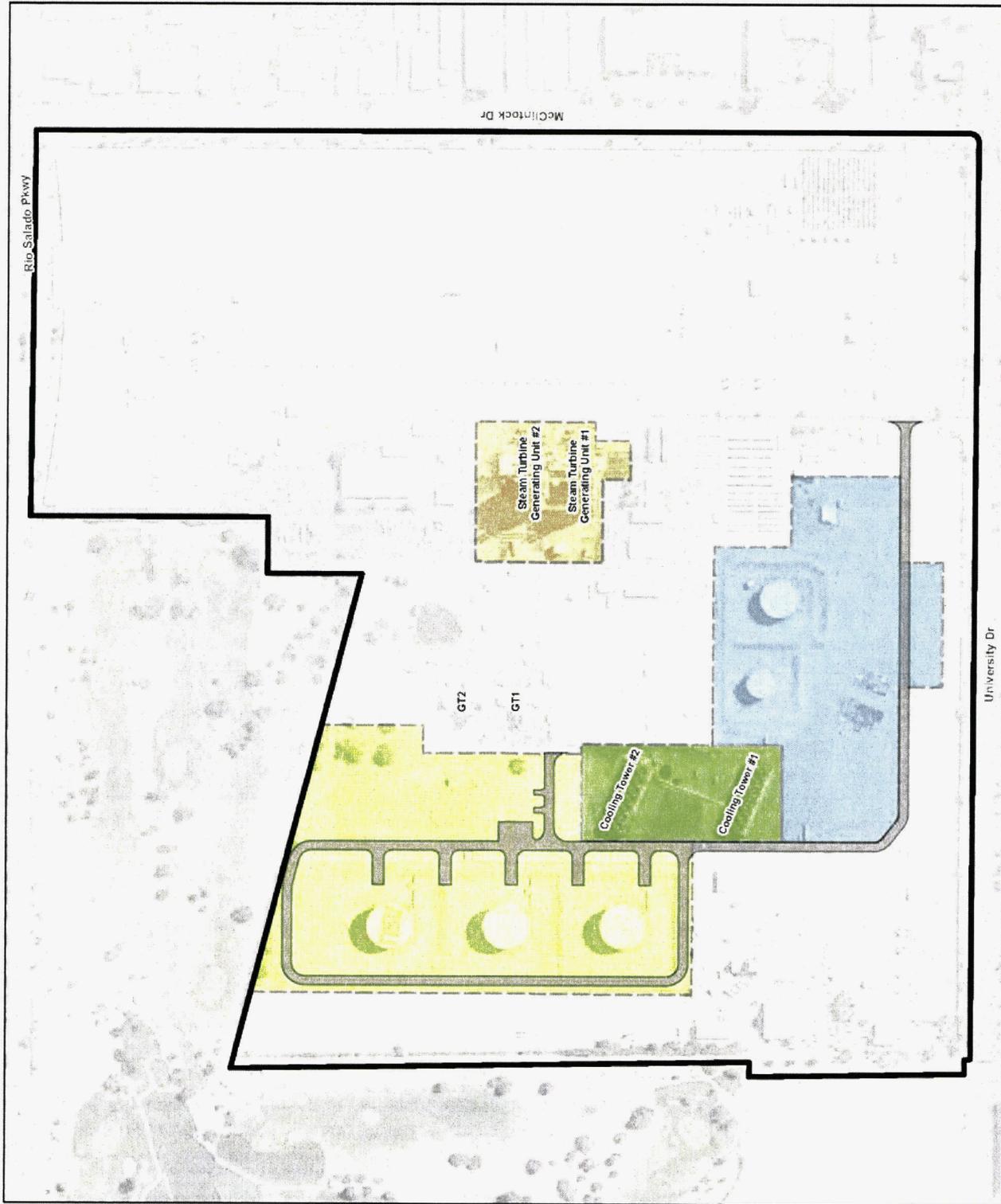
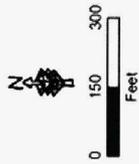
Primary Construction Areas

Ocotillo Modernization Project

Legend

-  Ocotillo Power Plant
- Primary Construction Areas**
-  Temporary Construction Offices, Laydown and Parking Areas
-  Main Construction Area for New Generating Units
-  Cooling Towers Removal Area
-  Steam Turbine Generating Unit Removal Area
-  Internal Access Road

GT = Gas Turbine Generator



Proposed Site Layout

Ocotillo Modernization Project

Legend

Ocotillo Power Plant

Proposed Site Layout

Proposed GT

Control Room, Administration, Warehouse, and Water Treatment

Cooling Towers and Associated Facilities

Oil Water Separator

Transmission Lines and Structures

Water Tanks

Other Plant Features

Fence

Primary Construction Areas

Temporary Construction Offices, Laydown and Parking Areas

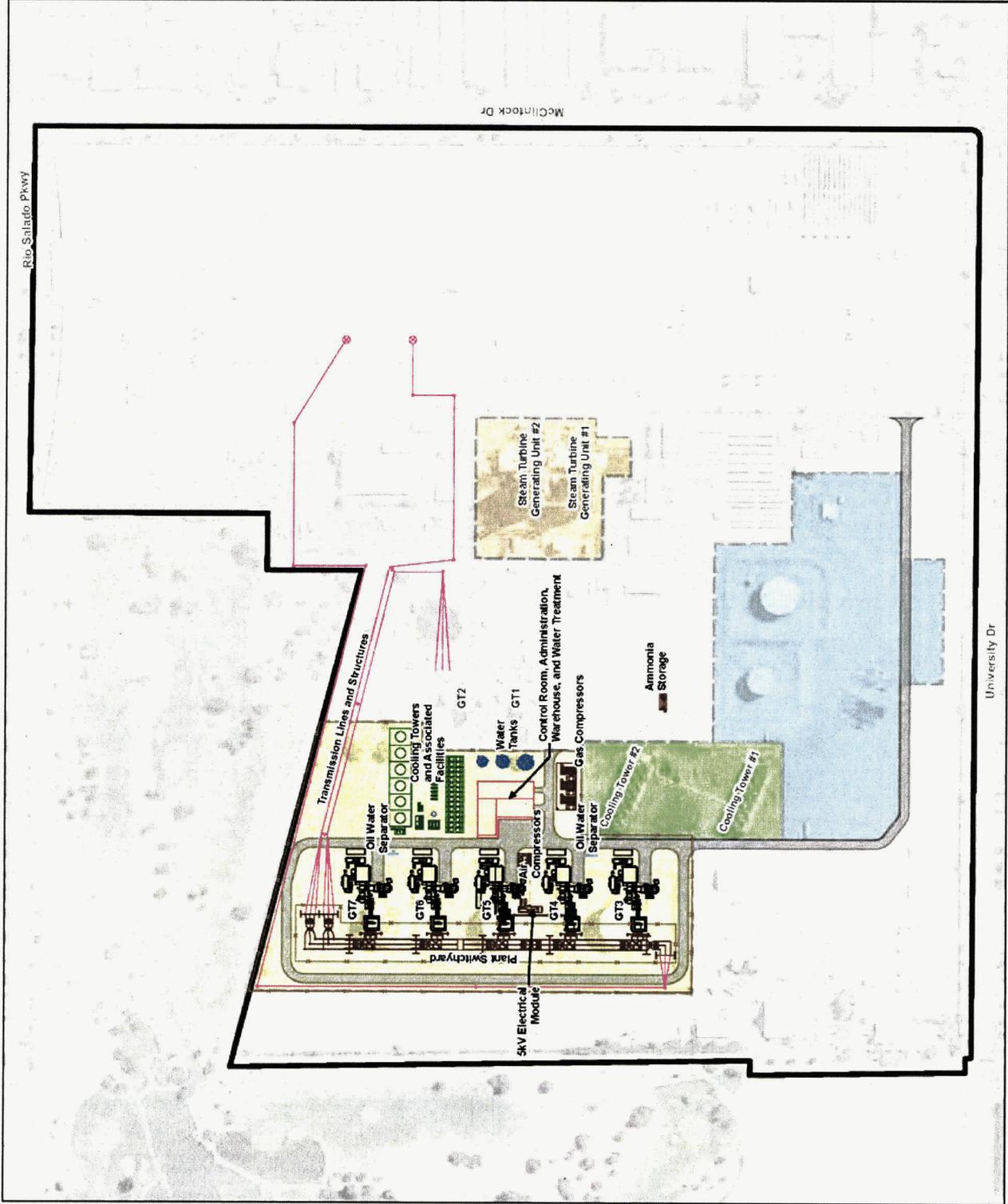
Main Construction Area for New Generating Units

Cooling Towers Removal

Steam Turbine Generating Unit Removal

Internal Access

GT = Gas Turbine Generator

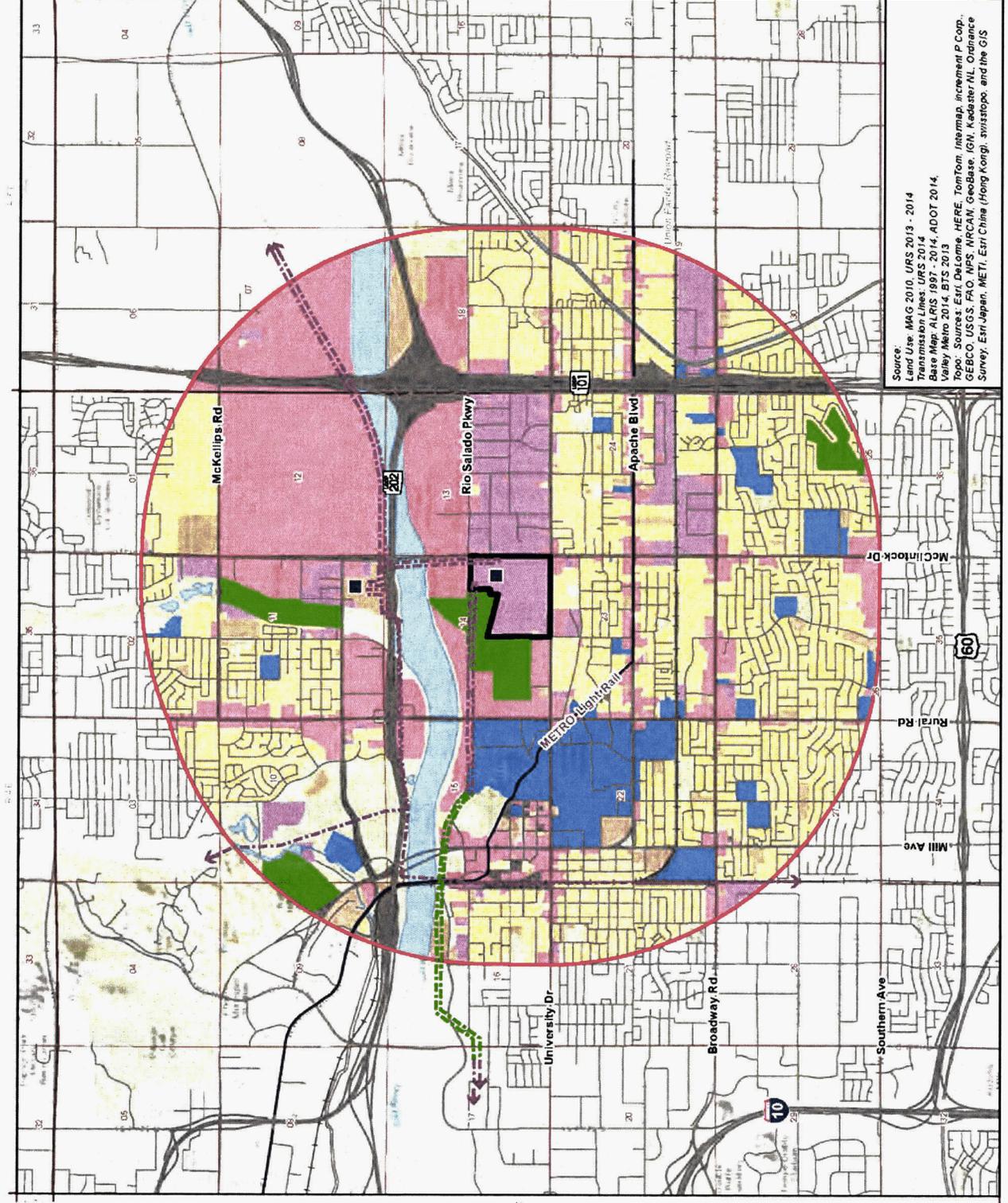
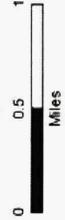


Future Land Use

Ocotillo Modernization Project

Legend

-  Ocotillo Power Plant
-  Project Study Area (2-mile Buffer)
-  Overhead Transmission Line
-  Underground Transmission Line
-  Existing Substation \ Switchyard
- Future Land Use**
-  Residential
-  Commercial / Mixed Use
-  Industrial
-  Educational
-  Public or Quasi-public / Military
-  Transportation
-  Golf Course
-  Open Space
-  Water
- General Features**
-  Road
-  Railroad
-  Township and Range Boundary
-  Section Boundary



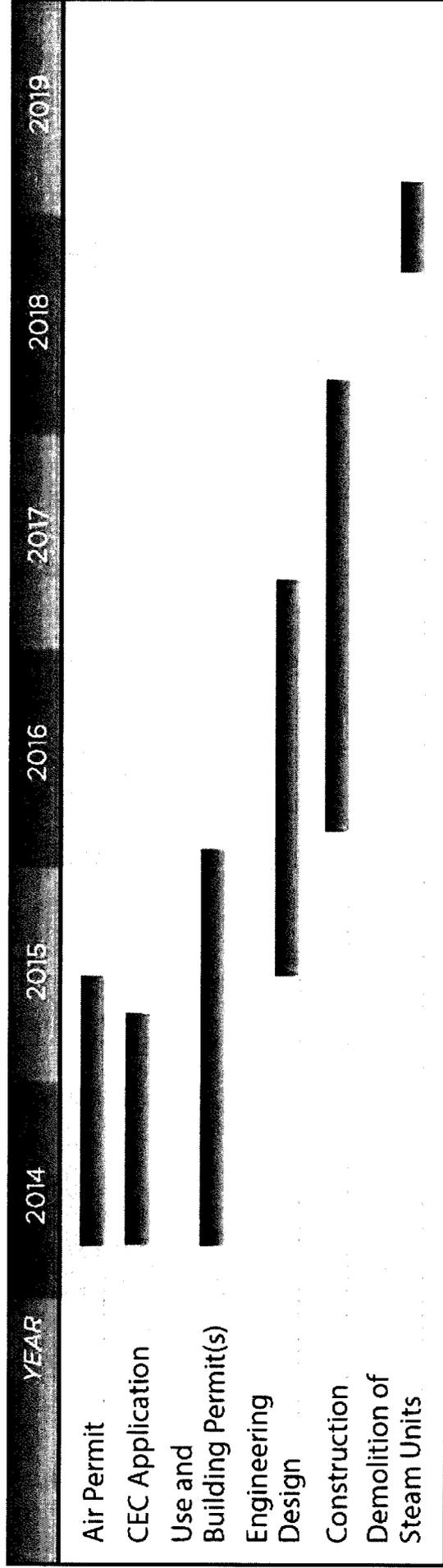
Source:
 Land Use: MAG 2010, URS 2013 - 2014
 Transmission Lines: URS 2014
 Base Map: ALRIS 1987 - 2014, ADOT 2014,
 Valley Metro 2014, BTS 2013
 Topo: Sources: Esri, DeLorme, HERE, TomTom, Intermap, increment P Corp.,
 GEBCO, USGS, FAO, NPS, MRCAN, GeoBase, IGN, Kadaster NL, Ordnance
 Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, and the GIS

Permitting Requirements

Permit	Agency	Application Date to be Filed
Air Permit	Maricopa County Air Quality Department	Spring 2014
Certificate of Environmental Compatibility (CEC)	Arizona Corporation Commission (ACC)	Summer 2014
Use Permit	City of Tempe	Summer-Fall 2014
Building Permit	City of Tempe	Fall 2015
Aquifer Protection Permit Revision	Arizona Department of Environmental Quality (ADEQ)	2015



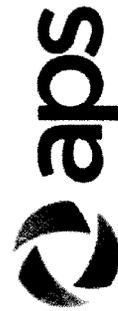
Schedule



Ocotillo Power Plant Capacity

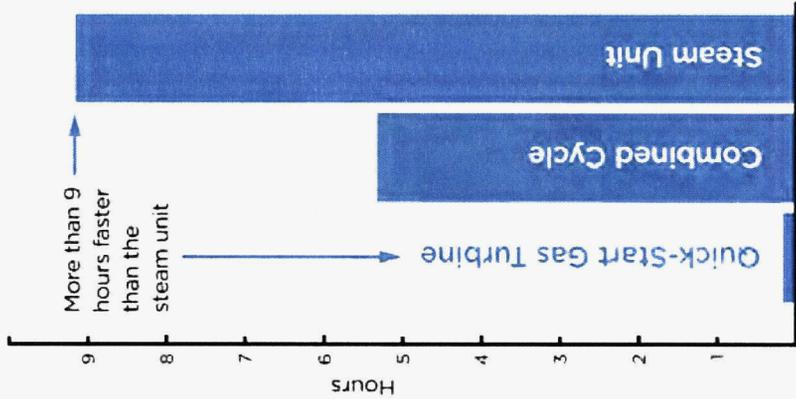
Type of Generating Unit	Year In Service		Existing Ocotillo Power Plant		Future Ocotillo Power Plant	
			Number of Generating Units	Power-Generating Capacity	Number of Generating Units	Power-Generating Capacity
110 MW Steam Generator (aging generation to be removed)	1960		2	220 MW	0	---
55 MW Gas Turbine Generator	1972, 1973		2	110 MW	2	110 MW
102 MW Gas Turbine Generator (new to be added)	2018*		0	---	5	510 MW
Total				330 MW		620 MW

* All Gas Turbine Generators are anticipated to be in service by this date

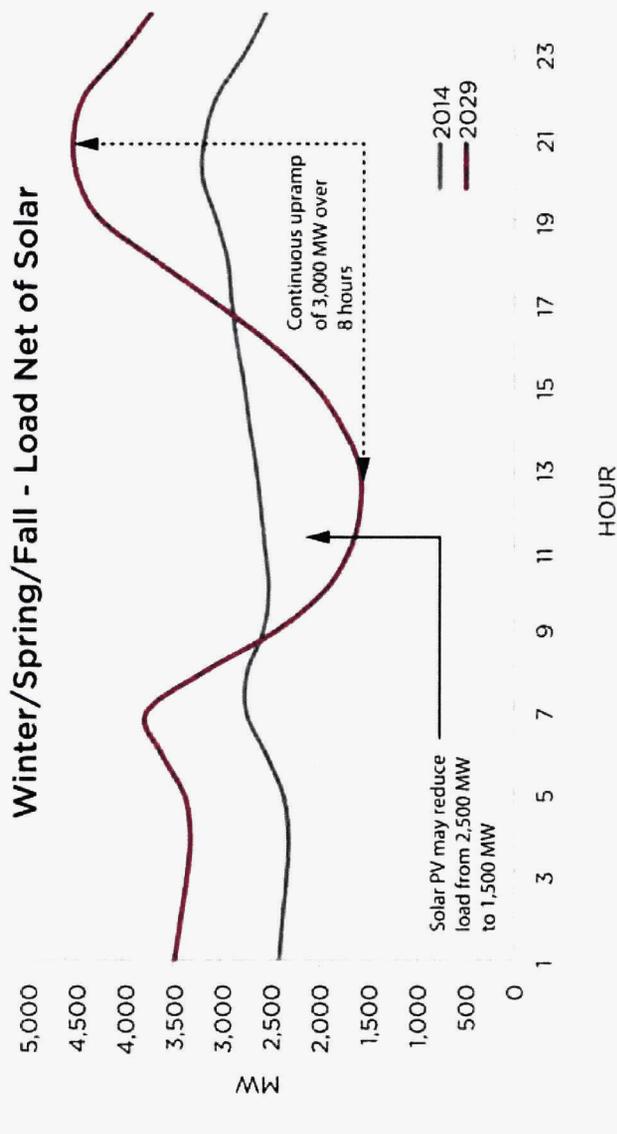


Evolving Customer Demand and Markets

Start-up Times – Hours from Cold-start to Maximum Output



Comparison of Start-up Times

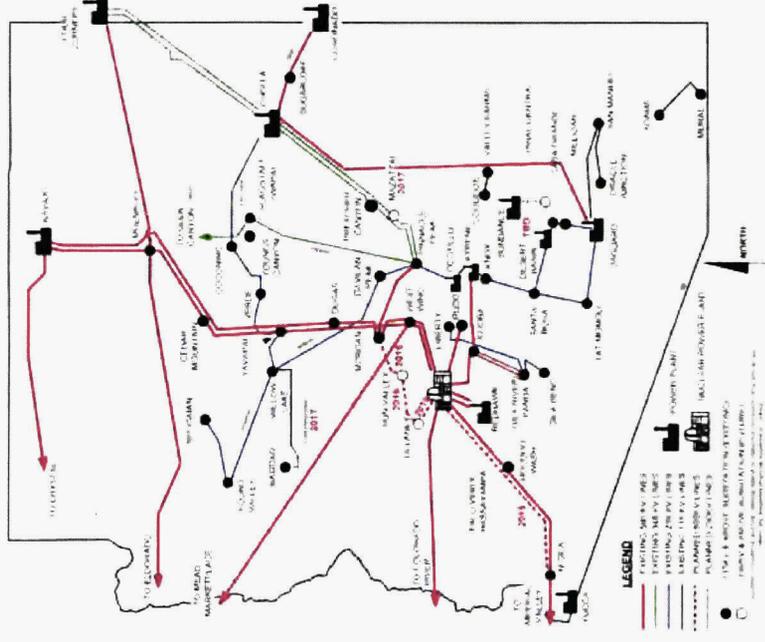


Winter/Spring/Fall - Load Net of Solar



Generation and Transmission System Balance

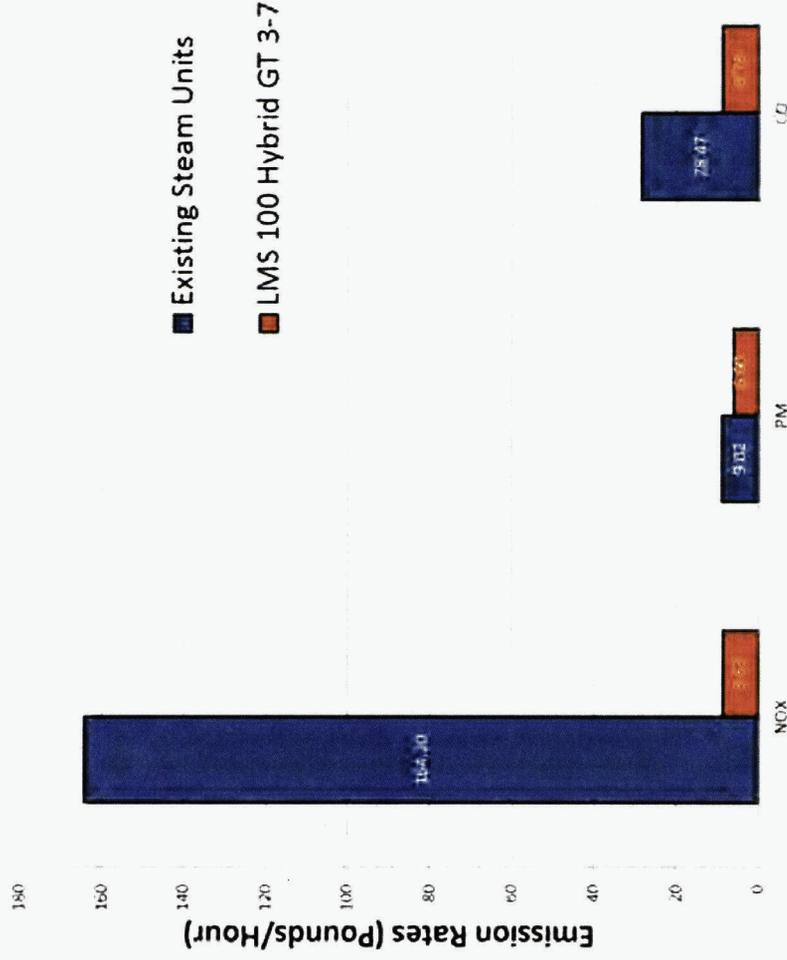
- Electric generating resources help balance the flow of power around the state
- Grid built to balance sources of energy
 - Palo Verde and natural gas generators are located West of Valley while coal generators are located North and East
- Generation additions or retirements change this balance
- Generation close to customer demand center (metro-Phx) improves transmission import capabilities and maintains a balanced system



Air Emissions

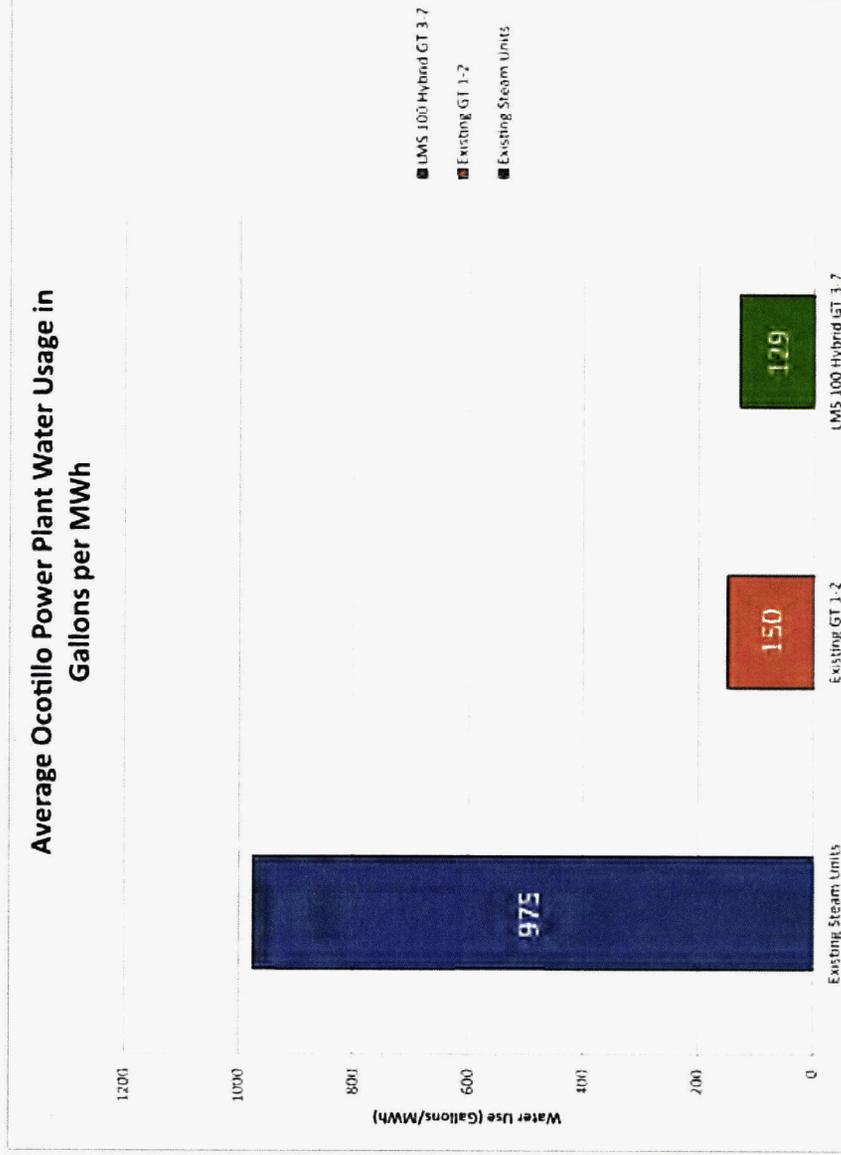
- Air permit revision submitted to Maricopa County in April
- Proposed new units are projected to have limited run time
- Proposed new units are the most efficient, commercially-available gas turbines on the market
- State-of-the-art emissions control technology

Ocotillo Power Plant Emission Rates in Pounds per Hour



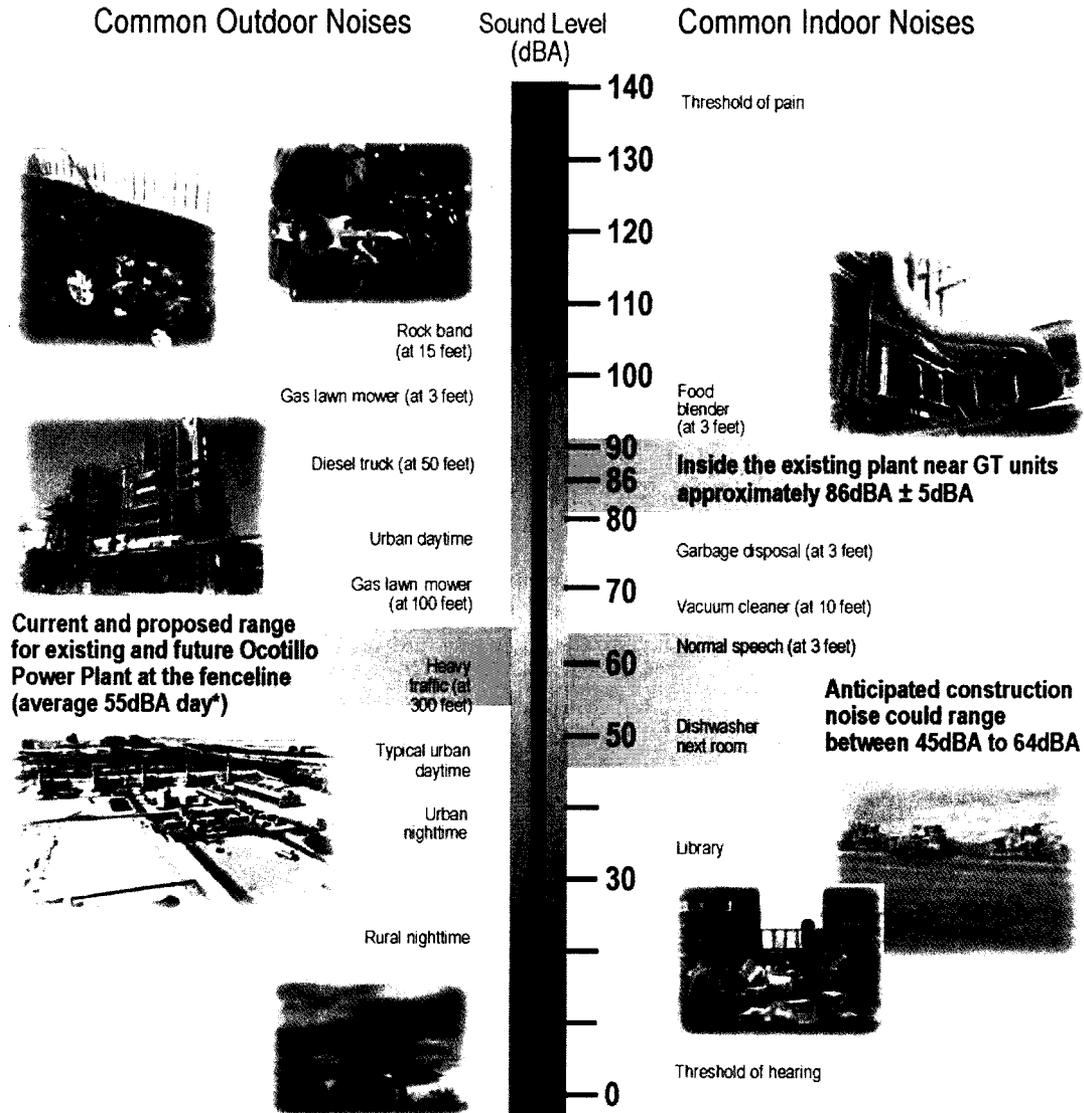
Water Usage

- Existing groundwater usage based on an average of historic data for a 20-year period
- Rate of water use (g/MWh) reduced approximately 80%



Data for the groundwater usage provided by APS for Ocotillo Power Plant

Common Indoor and Outdoor Noise Levels

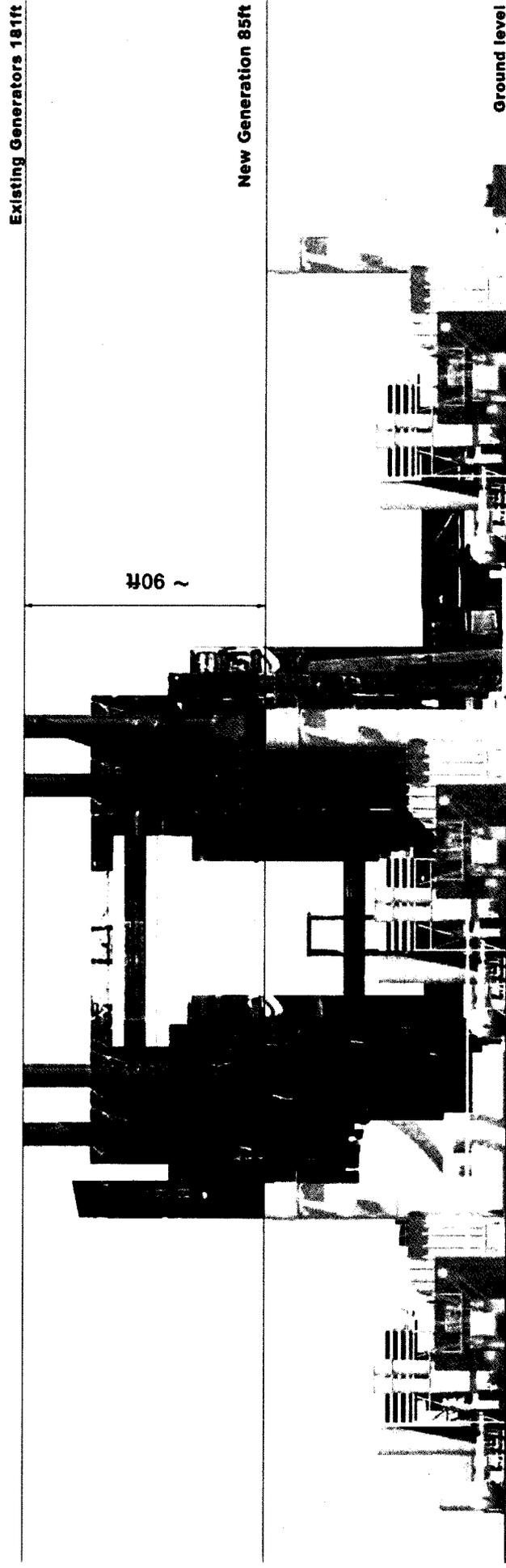


Note: Sound is perceived differently by every individual

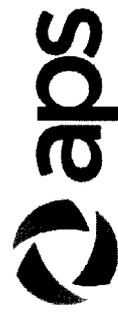
Project to comply with City of Tempe Noise Ordinance Section 20-4.(9) and current noise permit for Ocotillo Power Plant



Gas Turbine Generator Stack Height Comparison



Actual above-ground height of new stacks will be established during final stage of design.



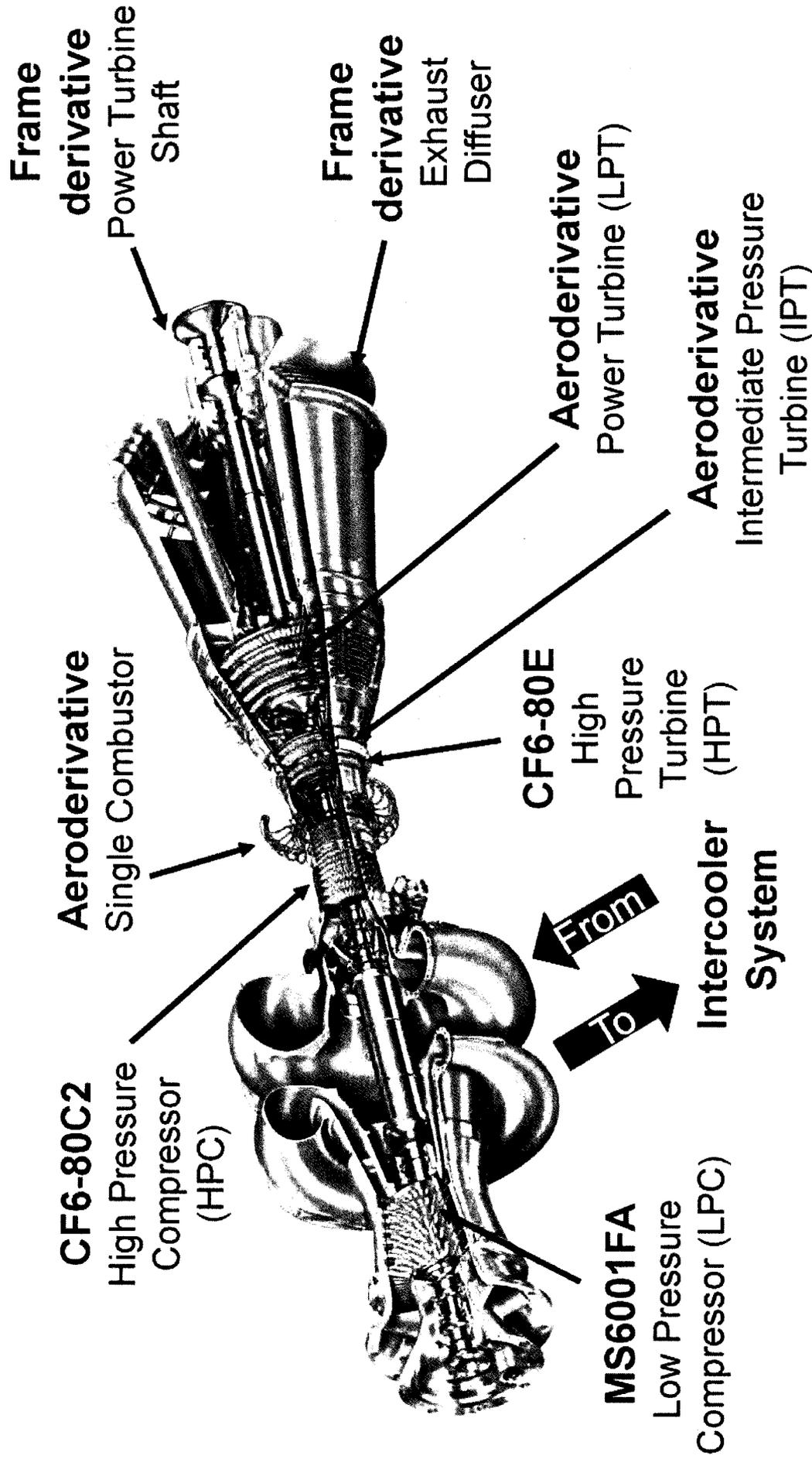
Benefits of the New Gas Turbines

- General Electric Model LMS100PA gas turbines
 - Lower emission rates
 - Improved fuel efficiency
 - Small and compact
 - Hybrid cooling system saves water



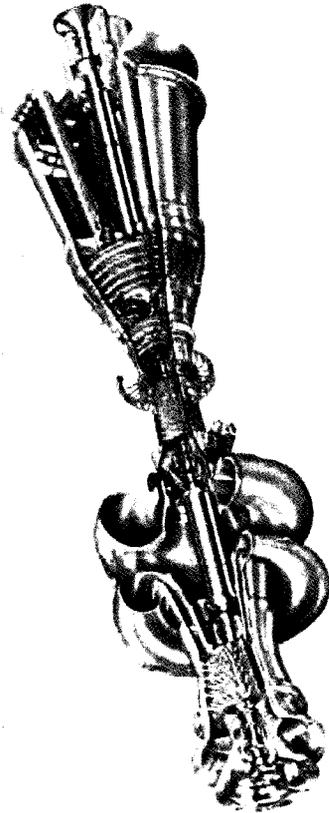
GE LMS 100 Proven Technologies

Integrated in a 3-shaft 100+ MW gas turbine package

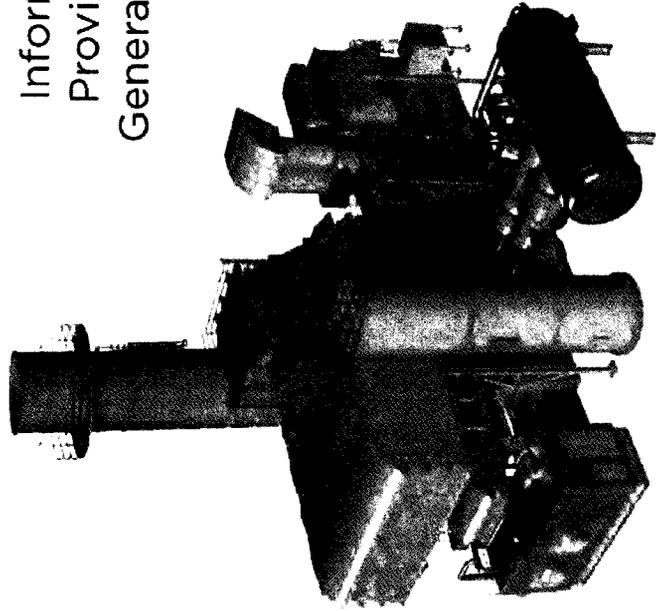


Information Provided by General Electric

GE LMS 100 Technical Data



Information
Provided by
General Electric



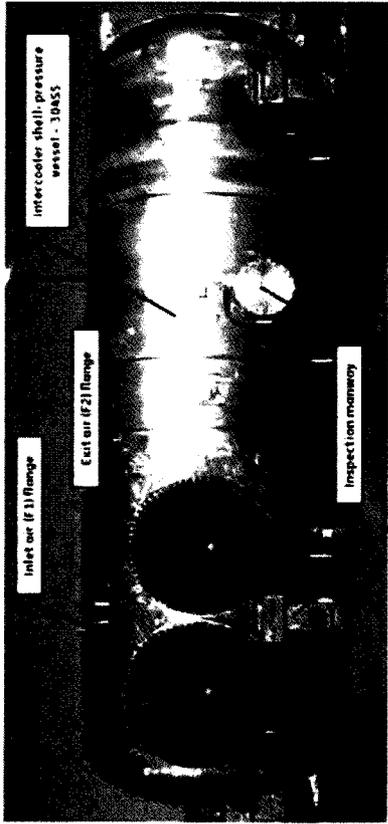
Description	60Hz
Turbine Speed (RPM)	3600
Output (MW)	104
Heat Rate (BTU/kWh)	8090
Efficiency	43%
Exhaust Flow (lbs/sec)	499
Exhaust Temp (F)	760
Compression Ratio	42
Water Injection (gpm)	51
Gas Pressure (@Pkg, psig)	850
Heat Rejection (MMBTU/hr)	110
Ramp Rate	50 MW/min (no maint. penalty)
Mature Reliability/Availability	99.2 / 97.1
Package Footprint	113 ft x 73 ft

Conditions (*With water injection): Performance at the generator terminals; 59F or 15C; 60% RH; No losses; Fuel spec. gas (LHV = 19,000 BTU/lb)
Heat rejection includes intercooler and lube oil cooling

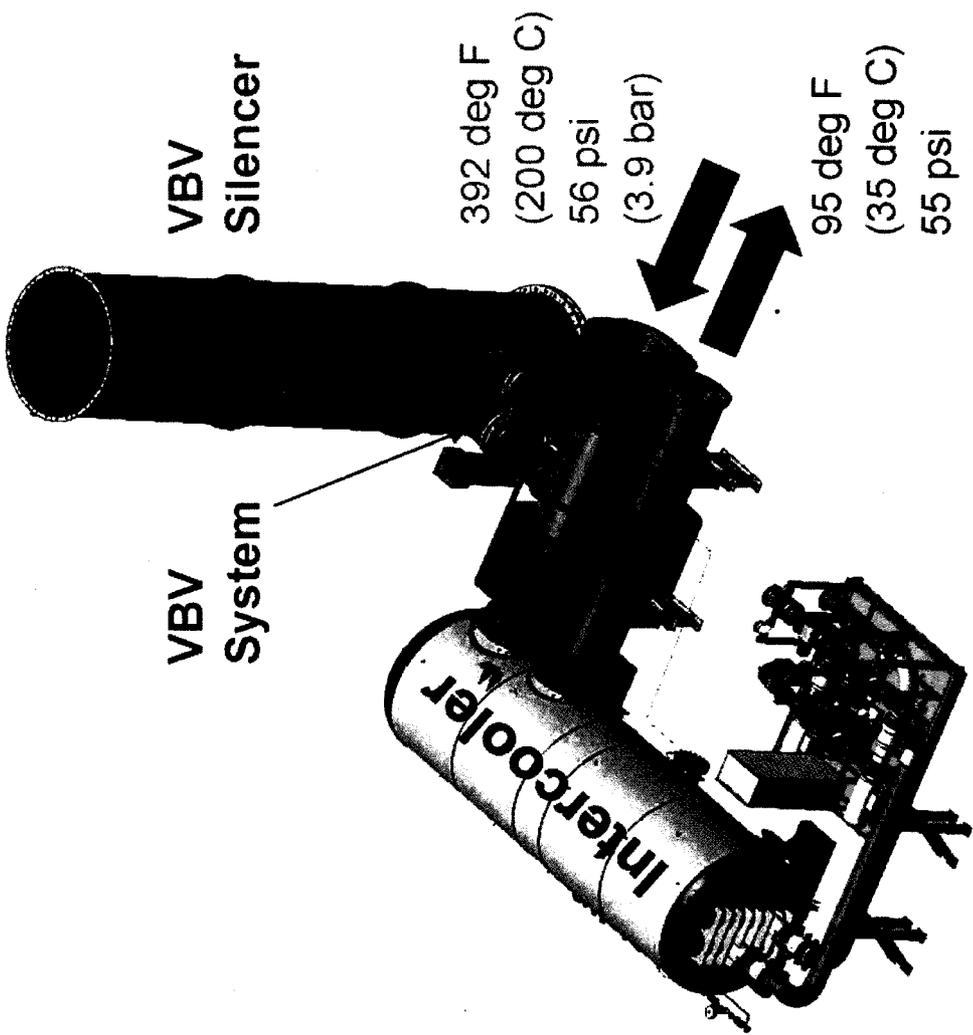
Intercooler Key to LMS 100 Performance

Enables high mass flow, high pressure ratio and hot-day power retention

Standard intercooler



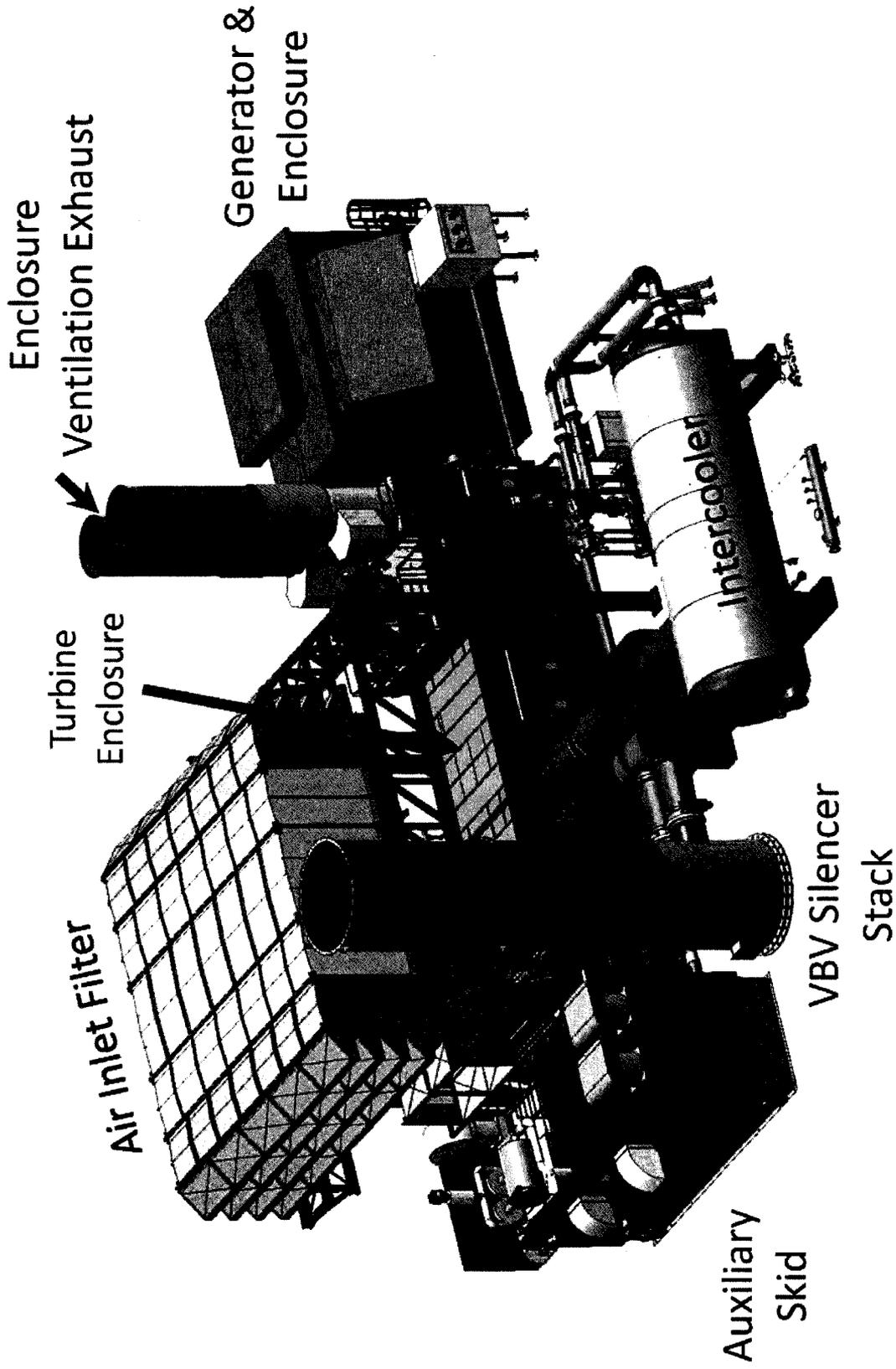
Meets ASME & PED requirements



Cooling Water Skid

Information Provided by General Electric

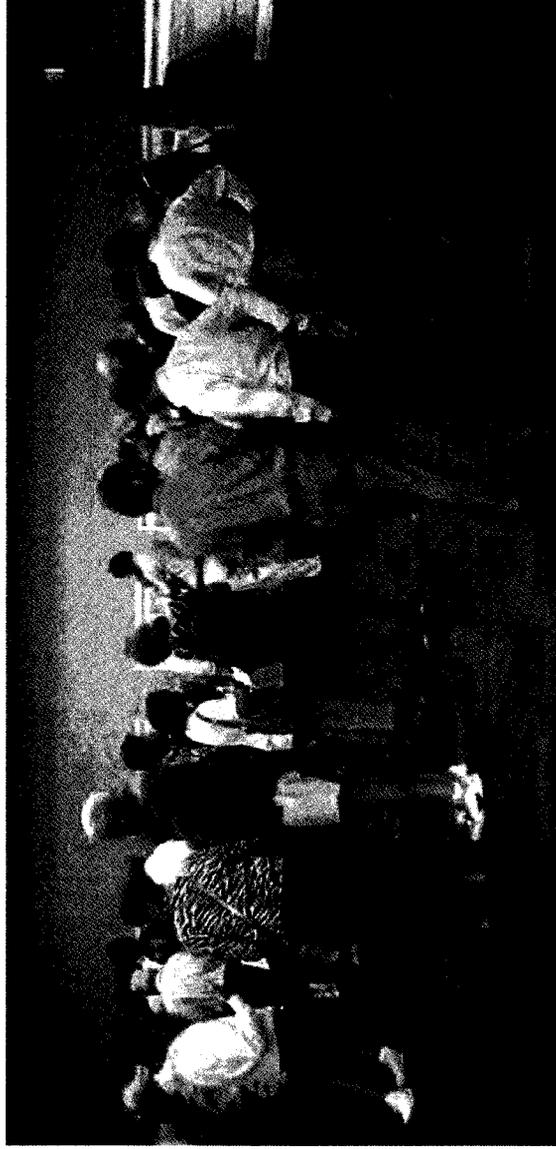
LMS 100 Key Components



Information Provided by General Electric

Public Involvement Opportunities

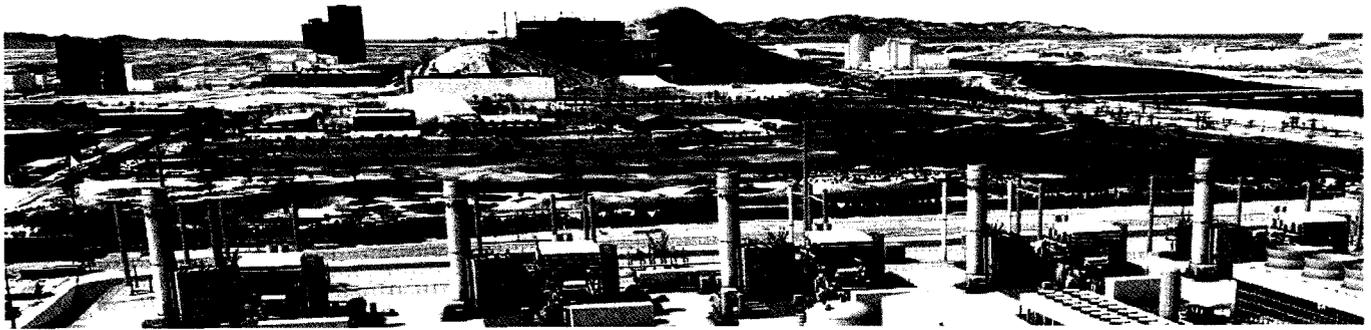
- Share your comments tonight
- Visit the Project Website azenergyfuture.com/ocotillo
- E-Mail the Project Team at OcotilloGenProj@aps.com



Scan with your
smartphone for quick
access to the website



APPENDIX J-6 – PROJECT WEBSITE



OCOTILLO MODERNIZATION



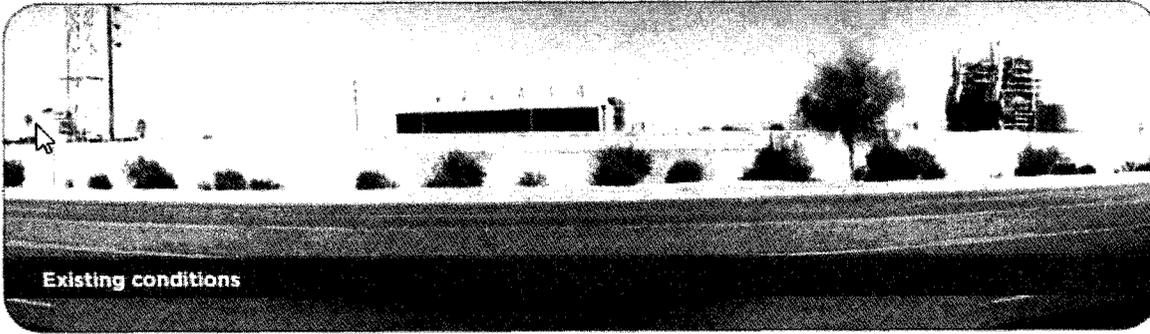
APS is planning to modernize the Ocotillo Power Plant in Tempe. The proposed project will create a cleaner-running, more efficient plant using advanced technology. APS intends to install five combustion turbines powered by natural gas. Two existing 1960s-era units will be removed.

The project is critical to the Phoenix metro area and provides several benefits. It supports service reliability, improves the plant's appearance, is better for the environment, creates construction jobs and adds additional tax revenue to the local economy.

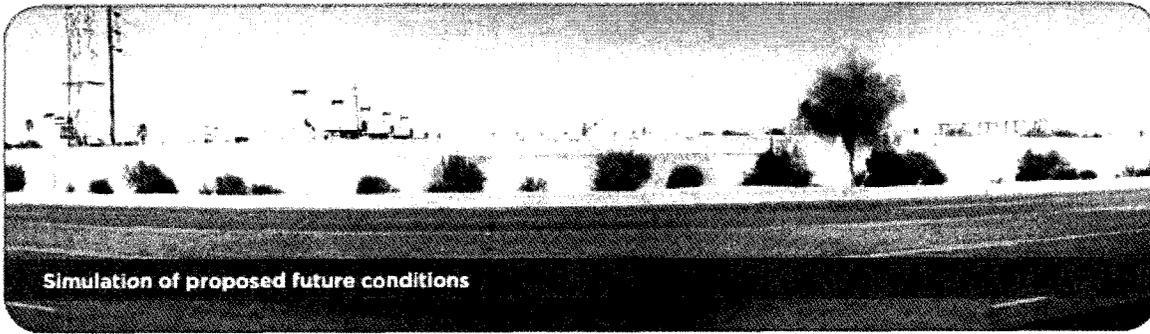
We welcome feedback from the public about the project. Please complete the form below to share your comments or be added to the mailing list.

You also can learn more about the project during an open house on Tuesday, April 22.

Ocotillo Modernization Snapshot



Existing conditions



Simulation of proposed future conditions

** View from University Drive looking north*

Get Involved

First Name:

Last

Company/Organization:

Email:

Address:

City: State:

Comment:

Note: Please do not include any personal information in the comment text because th

- Please add me to the electronic mailing list
- Please add me to the postal mailing list
- Please do not add me to the mailing list

FAQs

What is the project timeline?

APS plans to file applications for project permits this spring and summer. Construction on the new units, if approved, would begin in 2016 and be completed in 2018. Removal of the old units would begin in 2018.

Why upgrade the Ocotillo plant?

The Ocotillo plant is critical to maintain service reliability in the Phoenix metro area because of its location. We can also improve an existing plant without changing its overall footprint and replace generators that are increasingly costly to operate and maintain. Many replacement parts

are no longer available for the steam generators and must be custom-made to keep equipment running.

What will be the environmental benefits?

Replacing the obsolete steam generators with much newer, proven, cleaner technology will greatly improve the plant's efficiency. The new units will decrease the plant's water-use and emission rates. They will also improve the plant's overall noise conditions.

How tall will the new structures be?

The plant currently has four 178-foot stacks, while the upgraded plant is planned to have five stacks about half as tall. This would significantly reduce the plant's visibility from several locations.

What economic benefits will the project provide?

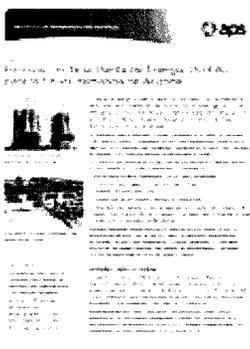
It will create local jobs – we expect the project to require an average of 114 jobs during construction. Total property taxes for the upgraded plant are expected to increase to about \$8 million by the fifth year of operation. APS currently pays about \$600,000 in total property taxes for Ocotillo.

How can I get involved in the project?

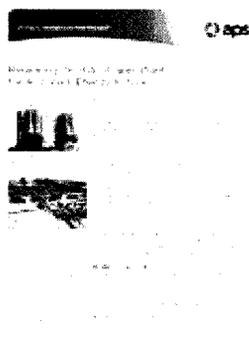
APS is committed to a transparent public process. The public can submit comments on the project through the form above. In addition, we will hold at least two public open houses to provide information and take comment.

[View more FAQs about the Ocotillo modernization project.](#)

Downloads



Ocotillo Boletín
Informativo - Abril 2014



Ocotillo Newsletter - April
2014



Ocotillo Project Site
Renderings

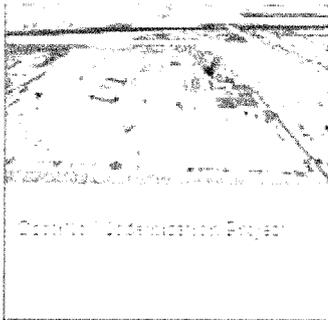


© 2004 American Public
The Ocotillo Project is a project of the American Public
The Ocotillo Project is a project of the American Public
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Ocotillo Project Fact Sheet

Videos



Blog

Ocotillo Public Information Open House

Ocotillo Open House Tuesday, April 22, 2014 5:00 - 8:00 p.m. ASU Karsten Golf Course Clubhouse 1125 East Rio Salado Parkway Tempe, AZ 85281 APS plans to modernize our

Ocotillo Power Plant, located at University and McClintock in Tempe. We intend to invest up to \$700 million in the aging plant today so we can ...

APRIL 08, 2014

[READ MORE](#)

Arizona Republic Highlights Benefits of Ocotillo Power Plant Modernization

On Saturday, the Arizona Republic covered APS's plan to modernize the Ocotillo Power Plant: The half-century-old natural-gas plant towering over Tempe east of Arizona State University will be demolished to make way for more powerful, compact and efficient generators, utility officials said. ...

FEBRUARY 17, 2014

[READ MORE](#)

Comment submissions received

Project Comments

Database ID	Date	Submission Text
8	02/15/2014	It is sad to see the old plant torn down as we were the operators that put in online many years ago. Time to make room for the new generation of power.
11	02/27/2014	Do you every have tours of the facility? I have a business across the street, and for 37 years have wondered what it looks like up close. Thank you, Bob Jones
12	02/27/2014	I am the General Manager for Gateway at Tempe apartments, directly across the street from this plant. Can you please keep me up to date on progress and timeline as I can see construction having a dramatic impact on my residents? Thank you.
13	02/27/2014	My landlord purchases power from SRP
17	02/27/2014	The plant looks great. Excited to see it built. One issue with the webpage though. The text is very difficult to read. It needs to be a bolder font type.
59	02/27/2014	I am a business owner currently in the middle of lease negotiations with 2 properties directly across from the Ocotillo Power Plant. I would like to know how this will affect the businesses in the area. A 2 year project could potentially have detrimental effects on a business located directly across the street during construction time in terms of noise, traffic, and other unforeseen issues etc.
19	02/28/2014	As an APS customer in another area, and as a resident of Tempe, I am appreciative of APS's efforts to modernize this plant.
60	03/03/2014	I have been waiting for this for 20 years. It is long overdue! If this project has to go thru a full blown public input and permit process I will attend it and I am fully prepared to speak in favor of project. If I am a political activist it is only because I have a fundamental understanding of the science and economics of energy generation and as well as it's efficient use, a retired Mechanical Engineer.
33	03/18/2014	Hi I am interested in this project both from the point of view of a resident of AZ as well as a business partner working with APS at the HQ level with APS Power Plants. Kindly include me in your electronic mailings.
35	04/10/2014	I live nearby and could hear the steam from the old generators in the early morning. Even though I am an SRP customer it is great that you are becoming more energy efficient. I don't understand why this is starting 2 years from now. You ask for rate hikes that get heard in less than a year why can't you start moving forward with this a lot sooner. Who can be opposed to saving water, getting rid of old blight and being more energy efficient?
38	04/11/2014	This sounds great.
39	04/14/2014	I'm all for renewing the Ocotillo power plant to protect our air quality

40	04/17/2014	I am definitely for the modernizing of Ocotillo. Good luck.
42	04/18/2014	That is good project. I like it.
58	04/18/2014	Tom: I was able to locate this site and am impressed with what you're going to do with Ocotillo. I hope you can maintain as many employees that are necessary. Also, I've just returned from a trip to New Mexico and you should see the looks I received with my 'Ocotillo Hat'people even in Springerville and Heber gave me some looks. Thank You for that hat!! Best Wishes to you and all the guys / gals working at one of the major, FINE facilities in the entire system!!
51	06/08/2014	Is there a space for people to learn more about the new technology that is proposed to be implemented in the new turbine systems? I am particularly interested in learning about the safety systems, such as ROSOVs and water monitors if they are to be included in the project. Thank you.

Mailing Information

Database ID	Date	Submission Text
15	02/27/2014	Please remove me from Postal Mailing list
20	02/28/2014	Please change the address above to our email address and take us off the postal mailing. Thanks
21	02/28/2014	Remove from mailing lists.
23	02/28/2014	I receive too many s-mails.
24	03/01/2014	Please send updates via email only. Thank you.
25	03/01/2014	We would like to opt out of any future mailings. Thank you.
26	03/03/2014	Please remove my address from mailing list. Thanks
27	03/04/2014	I am no longer living in the area
28	03/04/2014	We no longer live at this address.
29	03/04/2014	Hello! Please remove me from the "snail mail" list; I prefer to receive all future communication and updates exclusively via e-mail. Thank you!
30	03/05/2014	Please remove me from all future mailings. Thanks.
50	06/05/2014	Hello, I would like to opt-out of mailings from your firm. I am receiving mail addressed to: Daniel C/Kokins Janina B Hanecke, thank you

Vendors

Database ID	Date	Submission Text
10	02/27/2014	Dear Sirs, Please, I want to have more information about this Project because I can support with the supply of High Voltage Equipment. I would like to understand better how will be the Purchase process. Please, let me know when you will start the purchases and if the power transformers will be bought separately by APS. Thank you and regards.
14	02/27/2014	Looking to help with transformer needs. New/disposal/repair in field. Any Pipe concerns structural, water, gas, steam along with fittings & valves. Thank you for the opportunity to earn your business.
16	02/27/2014	Any project we can help you with let us know
18	02/28/2014	To whom it may concern: Copper State Bolt & Nut Co. is very interested to take any part possible in the future of APS Ocotillo as we look forward to continuing the long running relationship between APS and CSBN. We ask that we be included on any fastener, tooling, safety, solution requests. Thank you in advance for your time and consideration.
22	02/28/2014	Hello. Who will be doing the design work and when will the job be put out to bid?? Have a safe day. Thank you, Erik R.
31	03/06/2014	I would like information on the bidding of portable toilets hand wash stations and portable holding tanks for this project. Thank you

32	03/10/2014	We are industrial insulation and scaffold contractors with a location in Mesa. How can we be placed on the bid post or contractors list for this project?
34	03/24/2014	Eco 3d specializes in 3d laser scanning to capture the existing conditions. Experience in complex industrial environments. Have dimensions and a model where you can fabricate to.
36	04/11/2014	Hello I would like to get information on the bidding process and the dates bids are due. Thank you
37	04/11/2014	Hello I would like to get information on the bidding process and the dates bids are due. Thank you
41	04/17/2014	I'd like to be included on the sale of the 2 turbines you plan on removing. Do you have a company to liquidate these 2 units yet? Please let me know if I can assist. Take a look at our web site. www.sbmac.com for more information about our company.
43	04/23/2014	Boilermakers Local 627 is very interested in assisting with the construction and demolition at Ocotillo Power Plant. Last night informational meeting at Karson Golf Course was good. We will let contractors know so they can be in contact with Aps about this work. Thank You for answering our questions yesterday.
44	05/05/2014	Interest: Demo and construction timing and General Contractor for project. I am a Project Coordinator in Process Control and instrumentation.
45	05/17/2014	Would like to know more about the project and any EPC you might select.
46	05/19/2014	We are a one stop shop service from demo, ASME code welding services, rigging and transportation. Please visit us at www.contractorscargo.com
47	05/30/2014	Isolux Corsan is a contractor and wished to be kept informed about the project.
48	05/30/2014	Thank you.
49	06/05/2014	Fluor is very excited about this most exciting project and would like to be a part of the team that helps take Ocotillo to the next step. Fluor believes that it is well positioned to assist in this modernization project based on our extensive past experience in meeting current environmental regulations.
52	06/23/2014	We would like more information on the opportunity to bid this project. Please advise. Thank you.

APPENDIX J-7 – SOCIAL MEDIA



Arizona Public Service - APS shared a link.

February 17, 2016

APS plans to modernize the Tempe Ocotillo Power Plant--a familiar sight on the East Valley horizon. The project will support service reliability, improve the plant's appearance, provide environmental benefits, create construction jobs and increase local tax revenue.



Ocotillo Modernization - Arizona's Energy Future - APS

www.azenergyfuture.com

APS is planning to modernize the Ocotillo Power Plant in Tempe. The proposed project will create a cleaner-running, more efficient plant using advanced technology. APS intends to install five combustion turbines powered by natural gas. Two existing 1960s-era units will...

Like · Comment · Share

👍 34 💬 1

625 people saw this post

Boost Post ▼



APS @apsf Y1 Feb 17

APS plans modernization of Tempe Ocotillo power plant—improved views, environmental benefits bit.ly/1cQQof1 pic.twitter.com/Jyvpfq5EzPF



RETWEETS FAVORITE

6 1



12:40 PM 17 Feb 2014 Details

⊞ Collapse

Flag media

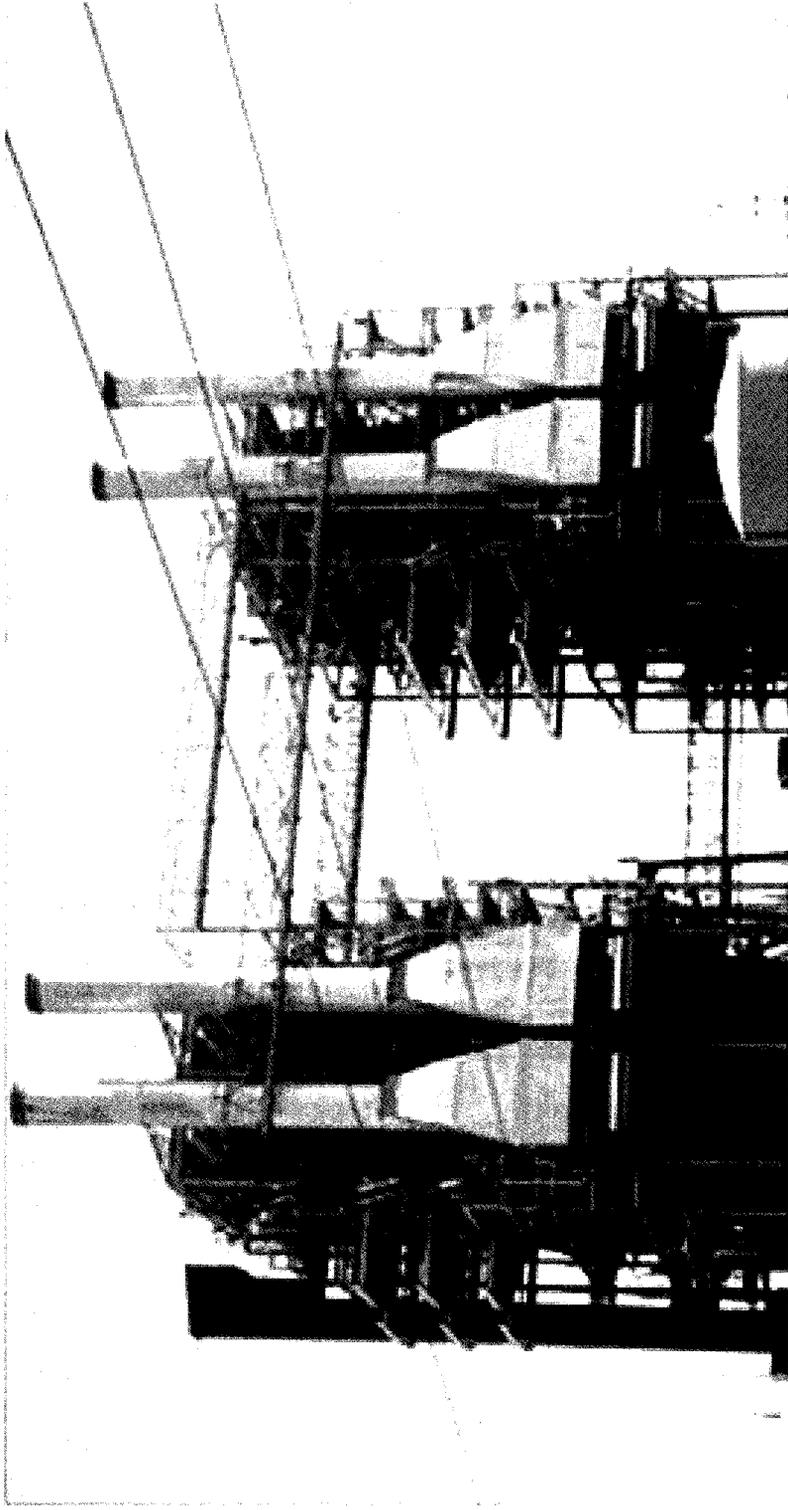
← Reply ⊞ Retweet ★ Favorite ... More



Arizona Public Service - APS

Sponsored Advertiser

Learn about plans for Ocotillo at open house Tue. 4/22 5-8pm at ASU Karsten Golf Course.



Ocotillo Modernization

APS plans to modernize the Ocotillo Power Plant in Tempe. The project will improve views, provide environmental benefits, enhance reliability, create...

[View all photos](#)

[Learn More](#)

Like Comment Share 40 8 2

APPENDIX J-8 – NEWSPAPER ARTICLES

APS natural-gas plant in Tempe to be demolished



By Ryan Randazzo and Dianna M. Nájuez The Republic | azcentral.com Fri Feb 14, 2014 11:41 PM

The half-century-old natural-gas plant towering over Tempe east of Arizona State University will be demolished to make way for more powerful, compact and efficient generators, utility officials said.

Arizona Public Service Co. plans to spend \$600 million to \$700 million dismantling the two steam generators at its Ocotillo Power Plant and replacing them with five shorter generators that use less water and fuel to make electricity. The company hopes to complete the project in 2018.

The two steam-driven generators provided nearly one-third of the electricity for APS during hours of peak demand when they opened in 1960. They now provide a fraction of the company's supply as the metro area has grown.

"We have sort of a love story with Ocotillo," said Pat Dinkel, APS vice president of resourcer7 management. "They served Arizona through a phenomenal growth period. These units were built before we built coal and nuclear and other units. This was the cornerstone of building Arizona for the last 50 years."

APS plans to begin seeking permits for the project next month, Dinkel said. In addition to OKs from the city and Maricopa County, the project will need approval from the Arizona Corporation Commission and Department of Environmental Quality.

The Ocotillo site, on the northwestern corner of University and McClintock drives, also houses a solar-power plant, switchyard and an area leased for solar testing, all of which will remain amid the upgrades.

The tall generators will be removed after the new ones come online in 2018. The old generators can burn oil or natural gas, although APS almost never uses oil anymore because of the emissions.

APS will maintain two smaller "simple-cycle" generators at Ocotillo that were built in the 1970s and add five larger ones. Simple-cycle gas plants burn natural gas and force hot air through a turbine to make electricity, somewhat akin to giant jet engines.

The new units use a fraction of the water required to make electricity with the steam generators, Dinkel said.

The new units not only will generate more electricity, which APS needs to replace expiring contracts to buy power from other utilities, but also will allow the company to respond faster to increases in power demand.

The two older units run about 10 percent of the year. They are troublesome because replacement parts are difficult to find, and the units take six hours or more to start up. That means APS must fire up the generators at 2 a.m. in the winter to meet peak electricity demand at 8 a.m. on cold mornings. They have to start before noon in the summer to meet peak demand at dusk.

The new units will be able start up in about 5 1/2 minutes and be at full power in 10 minutes.

That is important not only to respond when other power plants experience interruptions, but also to match the variable output of solar and other renewable-energy sources being placed on the grid.

APS officials said that they have examined other proposals to meet the company's increasing power demands and that

Salt River Project faced a similar situation in the early 2000s when it negotiated to expand the Santan Generating Station in Gilbert.

Nearby residents bitterly fought SRP's \$500 million plan to increase the capacity of the plant from 300 megawatts to more than 1,000. The Ocotillo expansion is smaller and, unlike Santan, will make the plant less visible once complete.

Both projects, however, involve weighing the benefits of building power plants near the people who use them or building them in rural areas with miles of transmission lines and substations to get the power to the city.

Building power plants in or near the metro area also avoids the electricity that is lost in long transmission lines.

Increasing power demand

APS generally relies on power plants outside metro Phoenix, but utility officials said the power grid is much more reliable with some generation inside the urban area that they own and can control without calling upon merchant power plants to purchase electricity when they need it most.

"We need some (generation) close to where people consume power," Dinkel said. "Ocotillo is the only generation we have on the east side of the Valley. We've studied this with the SRP system. We are joined at the hip with them."

APS is not seeing customer demand grow as fast as during the early 2000s, but it also must replace some contracts for power from other utilities that expire in coming years.

The Ocotillo addition will not be as visible as the current structure, but the newer generators won't be much quieter than the existing facility, Dinkel said. People nearby may hear them less because they will be to the west of the property, farther from the property boundary than the current generators, he said.

APS officials said they have talked with ASU and city officials and soon will begin notifying the public about their plans.

"The city of Tempe is excited about this, as they should be, with the increased construction jobs there," Dinkel said.

Tempe Councilman Kolby Granville, who was recently briefed on the project, said he will reserve final judgment on the new plant until he sees the completed plans. But he sees few drawbacks to the early proposal.

"My understanding is it's more power with less pollution and smaller stacks that look less ugly. I really don't see any downside," he said.

Though Gilbert residents fought SRP's Santan project, Granville believes the Tempe plant will be embraced because it is expected to be less of an eyesore.

"My hunch is this is going to go as smooth as these things can," he said. "The thing that they're removing looks like something out of a post-apocalyptic 'Mad Max' movie. And the thing that they are adding looks like a modern power plant."

Granville does not believe APS will garner any city incentives for the project.

The completed plant is expected to generate increased property taxes for the city and state because of higher valuation.

The Ocotillo plant pays about \$600,000 in property taxes annually, which will increase to \$8 million after five years, raising revenue for the city and state, according to APS.

But Granville said revenue is not the only factor the council considers when deciding whether to support projects that will drastically change the face of the city.

"You weigh impact on the surrounding community," he said. "You weigh impact to the city in the way of increased revenue and the quality of life. ... Those are all things that are not 12 months of construction jobs. Those are things that affect people for 30, 50 years into the future."

Community outreach will be a critical component to gaining the public's trust and support, he said.

Natural gas a key fuel

While APS is continuing to add solar power and other renewable energy to its supply, natural gas will remain an important power source, Dinkel said.

"We have a better balanced portfolio than most utilities with nuclear, gas, coal, renewables and energy efficiency," Dinkel said. "Balance comes at a price. You are never optimal for one resource at a moment. You manage your risk over time."

Tim James, a senior sustainability scientist at the ASU School of Sustainability and a professor at ASU's W.P. Carey School of Business, said that APS, SRP and other utilities are turning to natural gas because it is safe.

"It's just cheaper, basically," he said. "There is not much regulatory risk with natural gas."

The cost is important because any expense the utility experiences is passed on to customers through their electric bills.

James compared building gas plants to the controversy over the Navajo Generating Station, a coal-fired plant near Page, which is facing more than \$1 billion in upgrades to comply with U.S. Environmental Protection Agency anti-pollution requirements. Natural-gas plants are nowhere near as risky, James said.

"It just makes the most sense," he said.

Utilities can continue to add renewable power such as solar, but solar still has the major shortcoming of not being able to store electricity for use when the sun goes down, James said. Solar-thermal power plants such as the Solana Generating Station near Gila Bend, which produces power after dark by storing heat in molten salt, are too expensive to rely on for all of APS' energy, he said.

"Solana is a clever facility but more expensive than traditional methods of generation would be," he said.

He acknowledged that residents complained about the expansion of the Santan plant.

"But you don't hear anything about it now, do you?" he said. "There are tons of (gas plants) all over the Valley."

APS has another gas plant in the West Valley, and SRP has another in Tempe.

Dinkel said APS continues to monitor concerns over natural-gas production and the controversy over hydraulic fracturing, or fracking, the intentional breaking up of the rock around gas wells to produce more fuel.

"There is risk with every single technology," Dinkel said. "There is no purely, totally safe technology. Clean-coal technologies are not ready. We don't want to be building new coal. Nuclear is not ready. We are not ready to build new nuclear from a cost perspective and permitting. Solar is important to our portfolio but can't do everything. Gas has to be the filler right now."

Even if natural-gas prices have shown short-term volatility, projections are for the fuel to see stable prices in the long term, he said. APS also has a fuel-hedging program to limit the company's exposure to price fluctuations.

"There is no economic way of working around gas anytime soon," he said.

APS demolerá planta de gas en Tempe

por Ryan Randazzo y Dianna M. Náfiez

The Arizona Republic/www.azcentral.com

Con medio siglo de existencia, la planta de gas natural que se observa al costado este de la Universidad Estatal de Arizona, en Tempe, será demolida para dar paso a la construcción de los generadores más potentes, compactos y eficientes que existen, así lo declararon funcionarios de APS.

Arizona Public Service Co., conocida por sus siglas en inglés como APS, invertirá entre 600 y 700 millones de dólares para dismantlar dos generadores de vapor ubicados en su estación de Ocotillo, mismos que serán reemplazados con cinco generadores de menor tamaño que producirán electricidad utilizando menos agua y combustible. La compañía espera finalizar el proyecto en el año 2018.

Cuando APS abrió sus puertas en 1960, ambos generadores de vapor abastecían un tercio de la electricidad durante las horas de máxima demanda; en la actualidad, con el crecimiento del área metropolitana se proporciona sólo un cuarto de la solicitud.

Pat Dinkel, vicepresidente de gestión de recursos de APS, menciona el aprecio que su compañía tiene por Ocotillo es una especie de amor pues "fuimos testigos y somos parte de un extraordinario crecimiento en Arizona; levantamos las unidades que trabajaron con carbón y también con energía nuclear. Esta planta significa parte de la construcción del estado durante los últimos 50 años".

Durante el mes de marzo APS comenzará la licitación para obtener los respectivos permisos de construcción que se requieren por parte de la ciudad y el condado Maricopa, además de que necesitarán la aprobación de la Comisión de Corporaciones de Arizona y el Departamento de Medio Ambiente.

La planta Ocotillo, ubicada en la esquina noroeste de la Universidad Estatal de Arizona y la Avenida McClintock, cuenta con una planta de energía solar, patio de pruebas y una zona de maniobras, las cuales permanecen



La planta Ocotillo, ubicada en la esquina noroeste de la Universidad Estatal de Arizona y la Avenida McClintock, cuenta con una planta de energía solar, patio de pruebas y una zona de maniobras. TOM TINGLE/THE REPUBLIC

cerán hasta que las nuevas estén completamente finalizadas.

Los generadores de alto voltaje serán demolidos después de que los nuevos estén activos en el año 2018. Los actuales pueden quemar petróleo o gas natural, sin embargo APS casi nunca utiliza el aceite debido a las normas ambientales.

APS mantendrá dos generadores más pequeños construidos en 1970 y se sumarán cinco más grandes que queman gas natural y envían el aire caliente a través de una turbina para producir electricidad, algo parecido a los motores de los grandes jets.

Kinkel aseguró que las nuevas unidades utilizan sólo una

fracción del agua que se requiere para producir electricidad con los generadores de vapor actuales. Las nuevas unidades permitirán generar más electricidad y responder más rápido a los aumentos de la demanda de energía por parte de los usuarios y servicios públicos.

Las dos unidades más antiguas sólo producen 10% del total que se utiliza al año; en caso de reparación, las piezas de repuesto son difíciles de encontrar y las unidades toman seis horas o más en arrancar. Eso significa que APS debe encender los generadores a las 2a.m. durante el invierno para cubrir la demanda extrema de electricidad que se presenta a las 8a.m.

en las conocidas "mañanas frías", y en el verano tienen que comenzar antes del mediodía para satisfacer la demanda en la oscuridad.

Con las nuevas unidades, la energía será capaz de poner en marcha el proceso de abastecimiento en cinco minutos y estar lista (10 minutos) a plena potencia.

Esto es importante no sólo para responder cuando otras plantas de energía experimentan interrupciones, sino también para que coincida con las nuevas tecnologías de energía solar renovable y otras más que están por salir.

Funcionarios de APS dijeron que han examinado otras propuestas para hacer frente a la creciente demanda de energía, y decidieron que el aumento de la capacidad en Ocotillo es la mejor opción.

Demanda de energía

Por lo general APS ha construido sus plantas de energía afuera del área metropolitana de Phoenix, sin embargo los funcionarios encargados de los servicios públicos mencionan que la red de energía es mucho más confiable si un poco de la generación se realiza en la zona urbana y puede controlarse sin recurrir a las plantas de energía comercial en donde se compra la electricidad cuando más consumo se requiere.

"Necesitamos un poco de energía (generación) cercana al lugar donde la gente está consumiendo", asegura Dinkel. "Ocotillo es la única planta que tenemos en el lado este del valle; lo anterior lo hemos analizado en conjunto con SRP, y sin duda estamos unidos con ellos en alguna parte del proceso".

APS indica que no está viendo que la demanda del cliente crezca tan rápido como en el año 2000, sin embargo busca adelantarse y reemplazar algunos contratos para la generación de otros servicios públicos que están por vencer en los próximos años.

"La nueva construcción en Ocotillo no será tan visible como la estructura actual, y sin dejar de ser igual de ruidosos que los generadores actuales, los nuevos no molestarán a los resi-

dentos pues la estructura estará ubicada al oeste de la propiedad", indica Dinkel.

Los representantes de APS ya han hablado con funcionarios de la Universidad y de la ciudad, respectivamente, y pronto se iniciará una notificación pública para dar a conocer sus planes.

Dinkel indicó que la ciudad de Tempe ha manifestado su entusiasmo ya que con la construcción se generarán más empleos.

Sin embargo, para el Concejal Kolby Granville, de Tempe, el proyecto es de pronóstico reservado y decidió emitir sus comentarios hasta ver los planes finalizados pues tiene algunos inconvenientes con la propuesta inicial ya que brinda la idea de "más potencia y menos contaminación, algo así como baterías más pequeñas para que se vean menos feo".

Gas natural: combustible clave

En tanto APS continúa incorporando nuevas técnicas de energía solar y energía renovable, el suministro de gas natural continúa siendo una fuente importante, asegura Dinkel.

"Tenemos una cartera de recursos muy equilibrada con abasto de energía nuclear, gas, carbón, energías renovables y eficiencia. Balanceamos el precio y administramos nuestros riesgos a través del tiempo".

Tim James, destacado científico especialista en sustentabilidad y académico de la escuela de negocios de la Universidad Estatal de Arizona, menciona que "APS, SRP y otros servicios públicos están recurriendo al gas natural pues es más seguro y barato, básicamente. No hay mucho riesgo con el gas natural".

James comparó la controversia creada por la construcción de la planta generadora de gas "Navajo", una planta de carbón que se enfrenta a más de mil millones de dólares en mejoras para cumplir con las exigencias anticontaminación de la Agencia de Protección Ambiental de Estados Unidos. "Las plantas de gas natural son menos riesgosas y sencillamente tienen más sentido", dijo.

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APS to renovate Ocotillo plant in Tempe

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Photo courtesy of APS

Ocotillo power plant

APS will revamp its power plant in Tempe to create a more efficient facility. The project includes the removal of two turbines built in the 1960s.

two years, with a completion date set for 2018.

Once completed, APS estimates Ocotillo's megawatt capacity to increase from 330 to 620, which also increases the number of homes it can serve from 83,000 to 165,000. The company does expect the current noise level to remain the same.

Expectations also include an increase in property tax revenue for Tempe, Maricopa County and the state from \$600,000 to \$8 million by 2023.

APS Director of Resource Planning Jim Wilde said the need to replace the two older units, which will continue to run until the project's completion, stems from the age of the current models; he said it's becoming more difficult to maintain them because they are in the neighborhood of 50 years old. Plus, the current models aren't as efficient as the ones the company intends to replace them with. The new ones will use 85 percent less water than the current ones, and can start up within five minutes; the current models take six hours to get on the electric grid.

Wilde said the benefits extends beyond efficiency and encompass multiple sources of energy as well. He said the company already incorporates multiple forms of energy – he cited solar in particular – but the revamped Ocotillo plant can modernize APS' natural gas facilities.

"You don't want to put all of your eggs in one basket," he said.

For those living in that part of Tempe — near University Drive between McClintock Drive and Rural Road and one mile east of the Arizona State University campus — the completion of the

Posted: Tuesday, February 25, 2014 7:53 am | Updated: 8:05 am, Tue Feb 25, 2014.

By Eric Mungenast, Tribune

An upcoming update of a power plant in Tempe by APS is expected to provide benefits ranging from new construction jobs to an improvement in the neighborhood aesthetics.

The project will modernize the Ocotillo Power Plant by removing two power units built in the 1960s and replacing them with five modern units, as well as the removal of three oil storage tanks on the property.

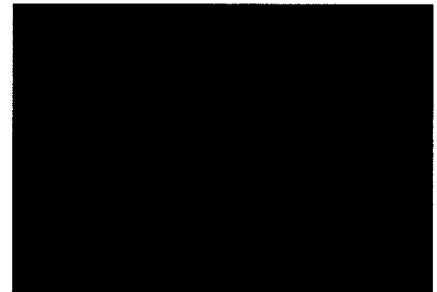
Information sent by APS states the project will cost \$700 million to complete and will require the addition of more than 100 construction positions. The project is expected to last for

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APS to renovate Ocotillo plant in Tempe

By Eric Mungenast, Tribune | Posted: Tuesday, February 25, 2014 7:53 am

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“You don't want to put all of your eggs in one basket,” he said.

For those living in that part of Tempe — near University Drive between McClintock Drive and Rural Road and one mile east of the Arizona State University campus — the completion of the renovation should result in a better connection to the power source, and, most notably, a more sight-friendly area. The latter stems from the size of the units, as the new models are significantly smaller than the ones in place.

“The new units are half as tall as the old units, so the site’s footprint will be much, much better from a visual aspect,” he said.

Visit <http://www.azenergyfuture.com/ocotillo/> for more information about the project.

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Arizona Public Service seeks to renovate Tempe plant

By David Hignutt (<http://www.statepress.com/author/david-hignutt/>)

February 26, 2014 at 7:54 pm

The Tempe skyline will be getting a bit of a facelift, all while improving the city's economy and environmental sustainability as well.

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Arizona Public Service has announced it will be renovating its Ocotillo Power Plant, located on University Drive in Tempe, near the ASU Karsten golf course.

APS is the largest energy provider in Arizona as well as the state's largest tax payer. It provides power to Flagstaff, Prescott and Yuma, as well of around two-thirds of the Valley, which it shares with the Salt River Project.

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The plan is to remove the larger two of four generating units at Ocotillo, and replace them with five smaller, more efficient, more powerful units. Three large storage tanks that have fallen into disuse since the plant's conversion from oil to natural gas in the 1980s.

APS spokesman Steven Gotfried said the new units are a huge improvement over the others.



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"The new unit are cheaper, more efficient in terms of fuel and water consumption, and they create a better visual," he said.

James Anderson, who teaches in the ASU School for Engineering of Matter, Transport and Energy, said the environmental changes coming with the renovation are good ones.

"In the long term, we need to get away from fossil fuels, including natural gas because of the climate forcing effects of carbon dioxide," he said. "In the shorter term, natural gas is a cleaner fuel that results in lower emission of carbon dioxide per unit energy compared to coal and fuel oil. But as long as there isn't enough solar, wind and other alternative energy sources then this type of natural gas power plant needs to exist and be renovated from time to time."

The initial investment in the new units will serve to help growth in the Valley, Gotfried said. The plant's generating capacity will go from 320 megawatts to 620, allowing the plant to power 165,000 homes compared to the current 83,000.

The five new units combined will use 15 percent less natural gas and 85 percent less water than the two old ones, will be half of the original 178-foot height and will also be quieter than the old plants, Gotfried says.

The renovation will also increase the amount of property tax they pay on the site, increasing it from \$600,000 to \$8 million by the fifth year of operation, Gotfried said.

Sustainability graduate student Tony Perez said he thinks that the plan is a good investment for the company.

"A lot of older systems need upgrades to be efficient, and it's a lot cheaper to retrofit the old plants than to invest the money elsewhere, like in renewables," he said.

Reach the reporter at dhignutt@asu.edu or follow him on Twitter @davidhignutt

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Proposed Site Layout

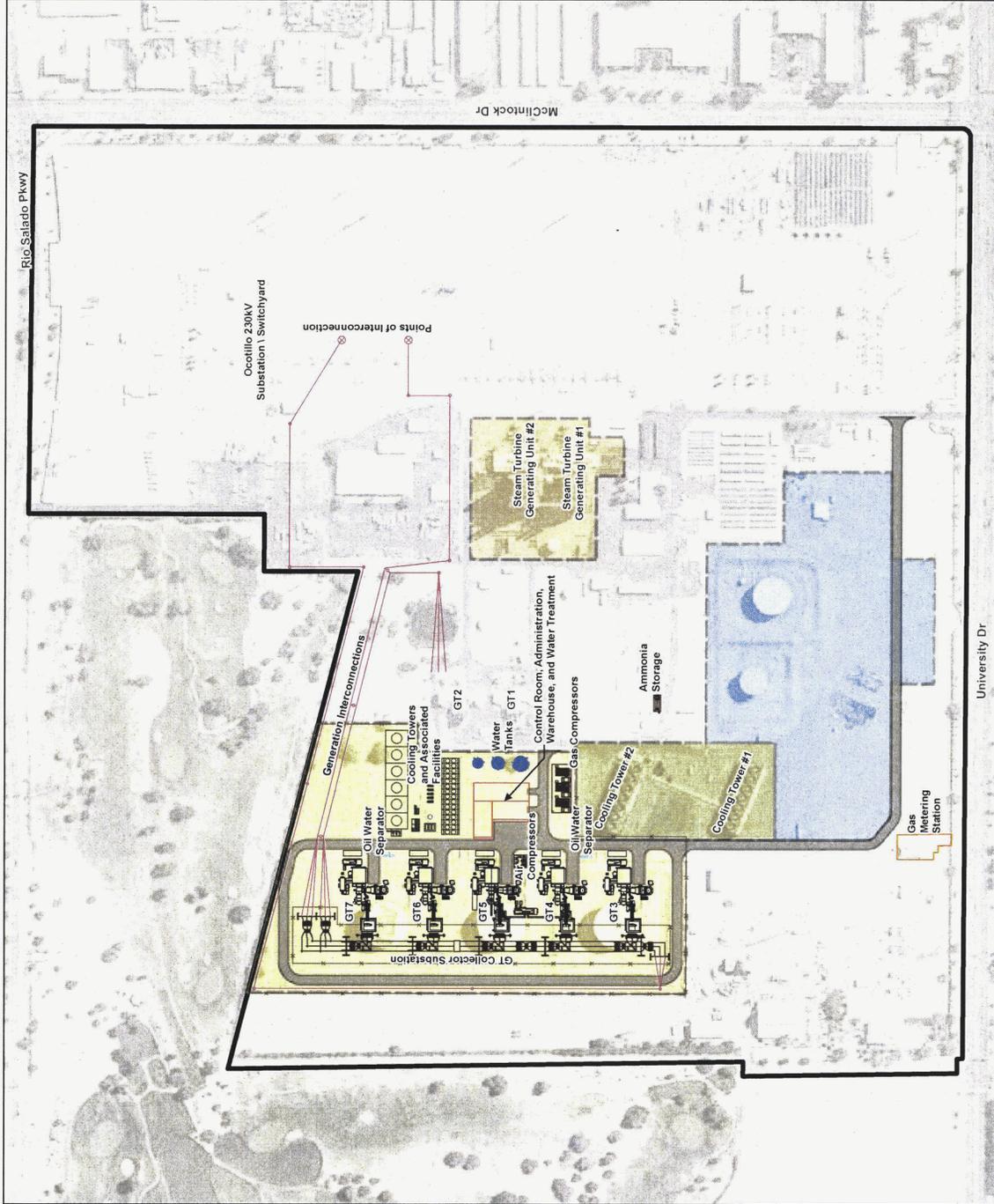
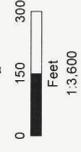
Ocotillo Modernization Project

Legend

- Existing Ocotillo Power Plant
 - Proposed Site Layout
 - Proposed GT
 - Control Room, Administration, Warehouse, and Water Treatment
 - Cooling Towers and Associated Facilities
 - Oil Water Separator
 - Generation Interconnections
 - Gas Metering Station
 - Water Tanks
 - Plant Features
 - Fence
- Primary Construction**
- Temporary Construction Offices, Laydown and Parking Areas
 - Main Construction Area for New Generating Units
 - Cooling Towers Removal Area
 - Steam Turbine Generating Unit Removal Area
 - Internal Access Road

GT = Gas Turbine Generator

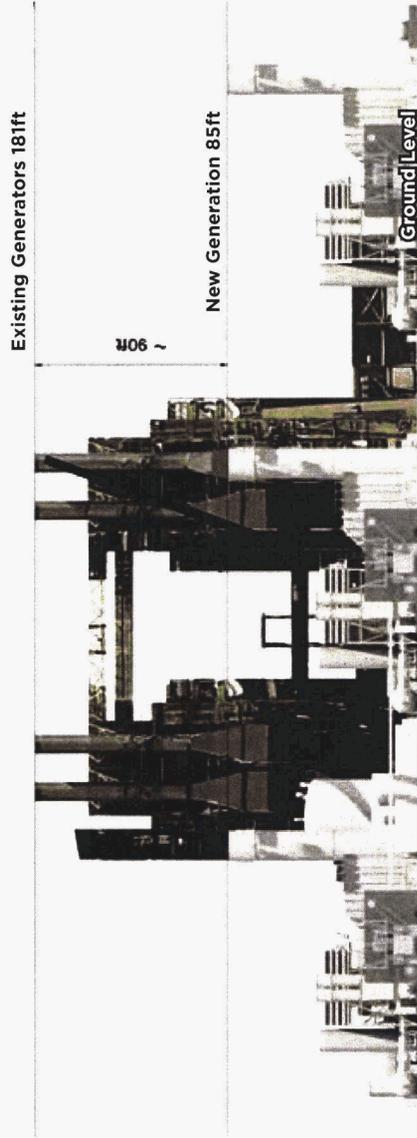
Source:
 Project Features: APS 2013 - 2014
 Base Map: ADOT 2014
 Imagery: FCDMC 2012



University Dr



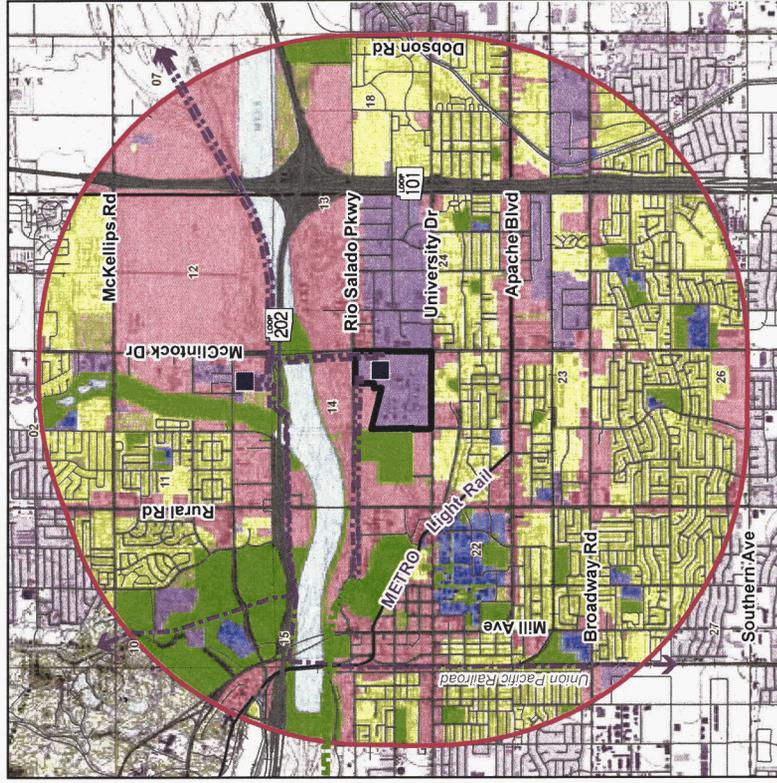
Gas Turbine Generator Stack Height Comparison



Actual above-ground height of new stacks will be established during final stage of design.

Figure presented at Open House held April 22, 2014 (CEC Application Attachment J-5).

Note: Only three of the five proposed GTs are shown.



Future Land Use



Brent Gifford

**Manager of Major Projects,
Generation Engineering**

Arizona Public Service

**Ocotillo Modernization Project
Docket No. L-00000D-14-0292-00169**



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Background

- Educational Background
 - MS, BS, Civil Engineering, Brigham Young University
 - Professional Engineer, licensed in AZ, CA, NM, NV
 - Certified Project Management Professional
- Professional Background
 - 28 years of experience in the electric utility service
 - 28 years with Arizona Public Service Company
 - 12 years: Civil/Structural Design Engineer in Generation Engineering
 - 16 years: Project Management for Major Fossil Capital Improvement Projects

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Experience

- Prior Siting Cases
 - Project Manager, West Phoenix Combined Cycle Units 4 and 5 690 MW (Case #92)
 - Project Manager, Redhawk Generation Facility 1,000 MW (Case #95)
- Project Director, Ocotillo Modernization Project

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Outline of Testimony

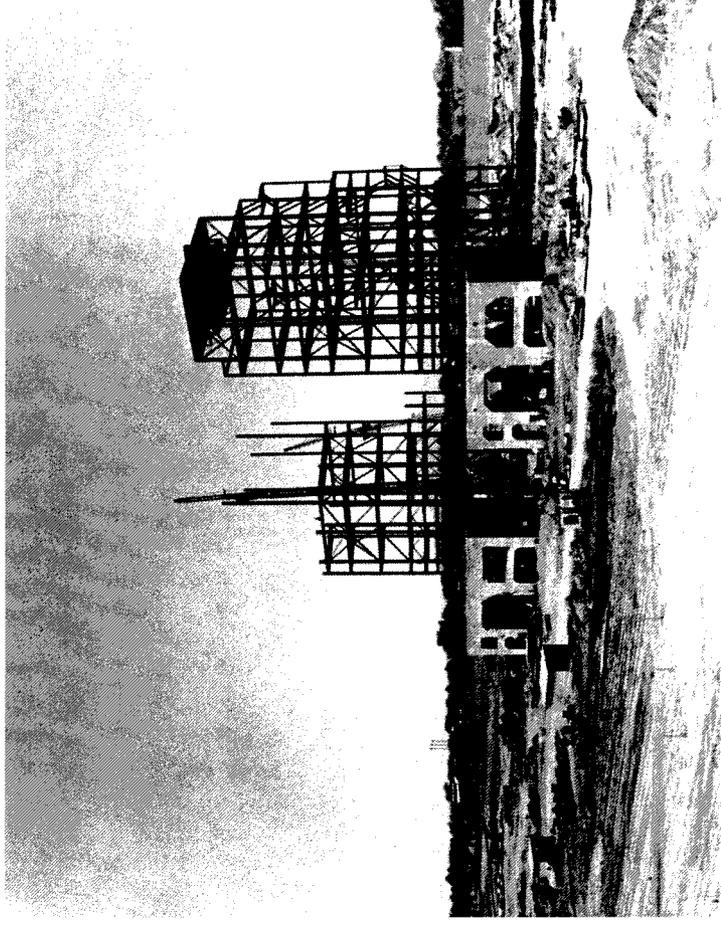
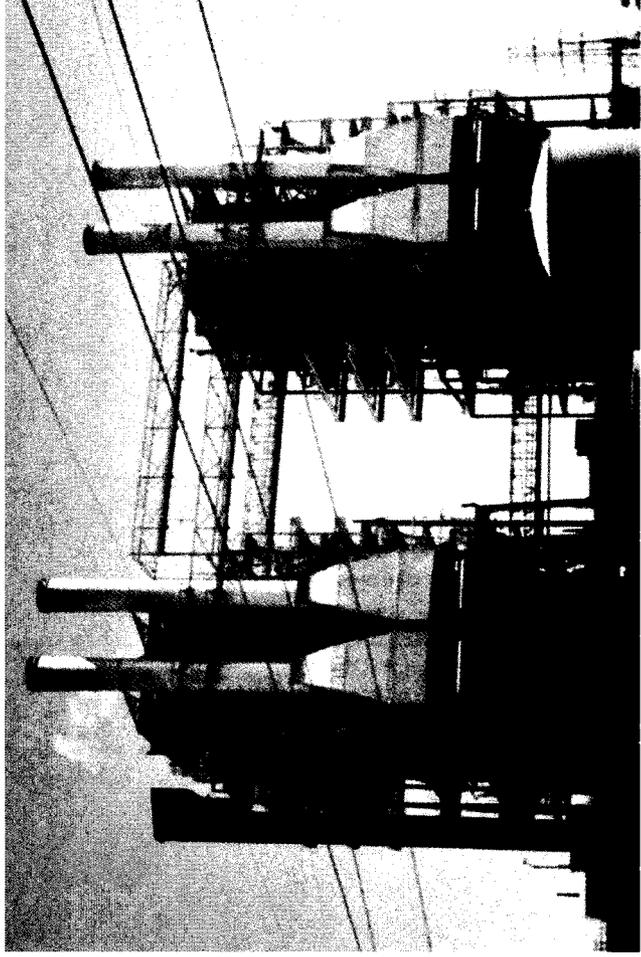
- Project Overview
- Project Need and Benefits
- Proposed Project Facilities
- Project Costs and Schedule
- Public Outreach

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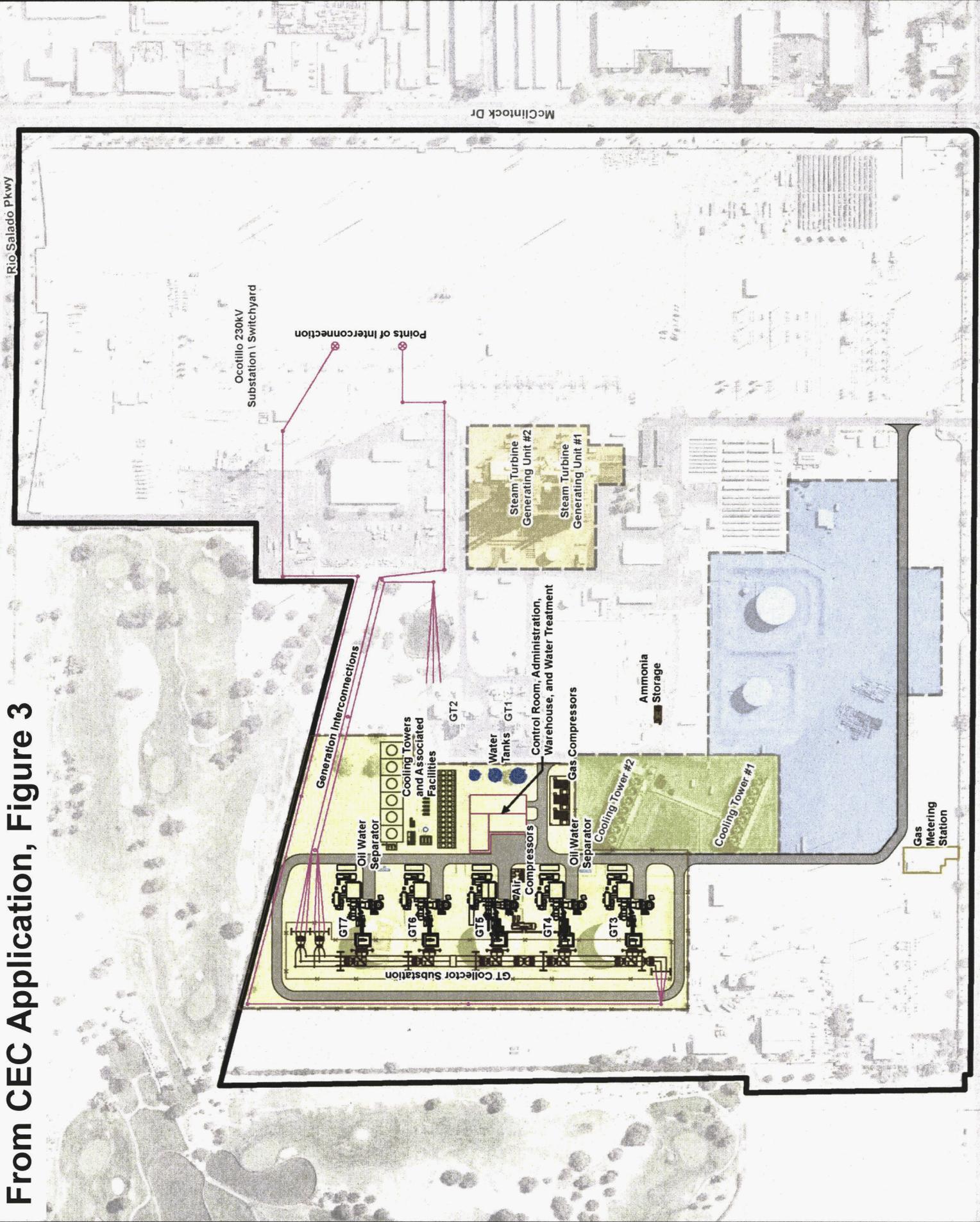
Project Overview

History of Ocotillo Power Plant

- 1500 East University Drive, Tempe
- 1960 steam generating plant
- Played significant role in bringing power to growing Phoenix area



From CEC Application, Figure 3

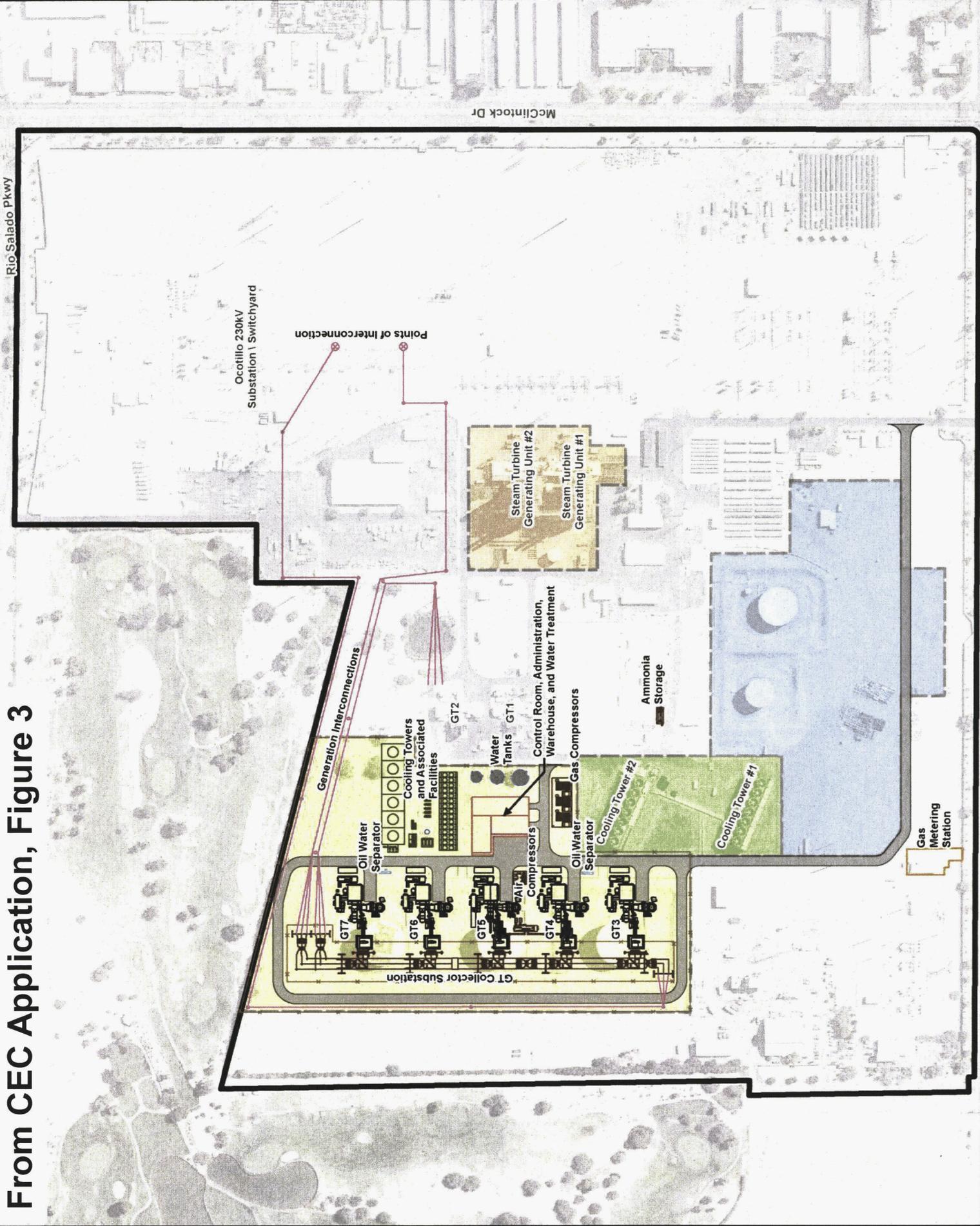


Project Overview

Current Plant Description

- Ocotillo Power Plant property – 126 acres
- Existing output 330 megawatts (MW)
 - Two (2) Westinghouse 110 MW steam generators
 - Two (2) Westinghouse 55 MW gas turbine (GT) generators
 - Primarily used in the summer during heavy loads
- Operates on natural gas from Kinder Morgan's El Paso Natural Gas pipeline system

From CEC Application, Figure 3

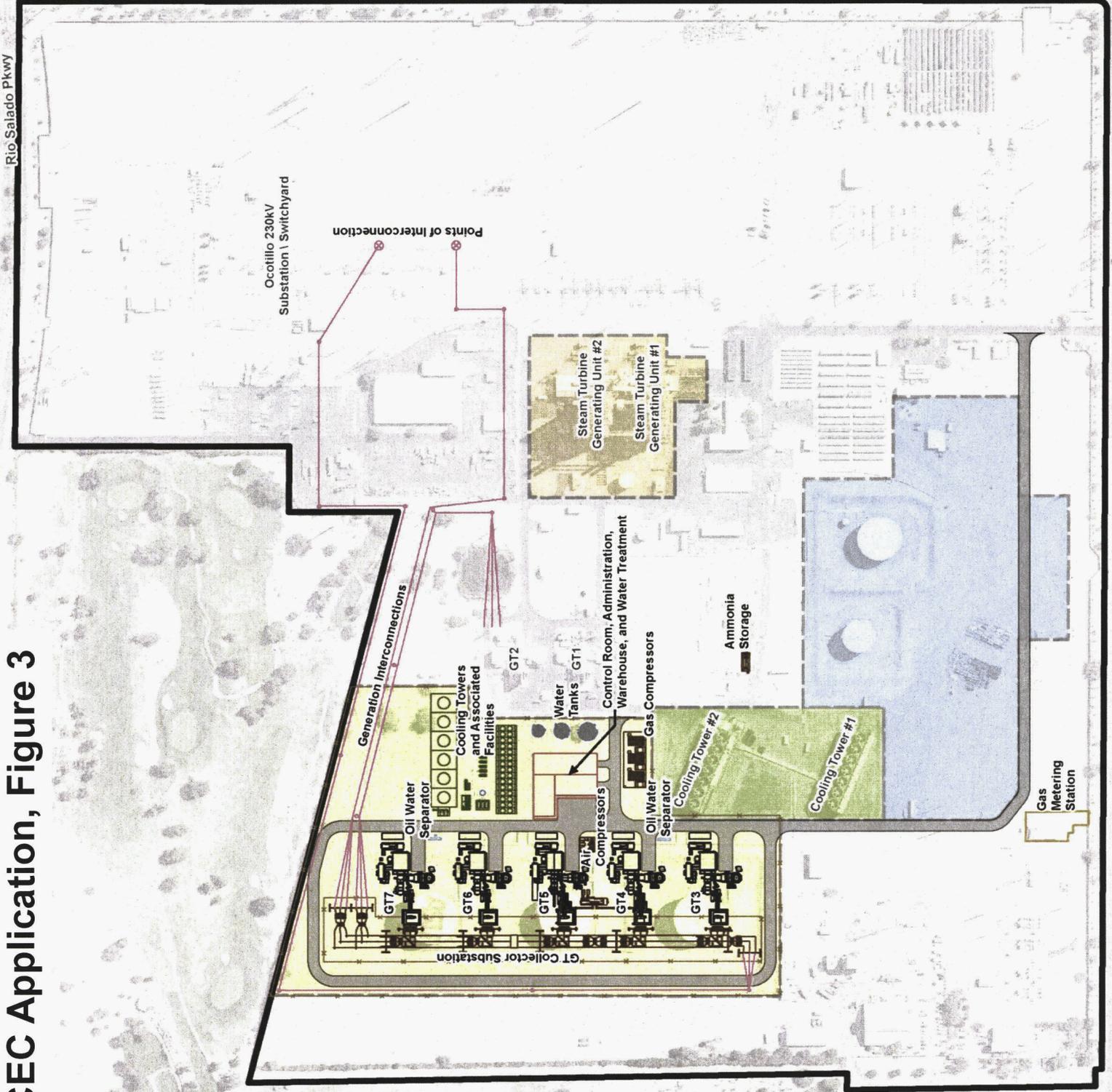


Project Overview

Ocotillo Modernization Project

- Addition of five (5) natural gas turbine generators
 - Each 102 MW (nominal), for a total of 510 MW
- Removal of two (2) existing steam generators
 - Each 110 MW for a total of 220 MW
- Two (2) existing GTs to remain
 - Each 55 MW for a total of 110 MW
- Net capacity increase of 290 MW

From CEC Application, Figure 3



Rio Salado Pkwy

McClintock Dr

Ocotillo 230KV
Substation 1 Switchyard

Points of Interconnection

Generation Interconnections

Cooling Towers
and Associated
Facilities

GT2

Water
Tanks

GT1

Control Room, Administration,
Warehouse, and Water Treatment

Gas Compressors

Ammonia
Storage

Oil Water
Separator

GT7

GT6

GT5

GT4

GT3

GT Collector Substation

Oil Water
Separator

Compressors

Gas Compressors

Cooling Tower #2

Cooling Tower #1

Gas
Metering
Station

University Dr

Project Need and Benefits

- **Obsolete Steam Units**
- **Existing Site and Infrastructure**
- **Generation Portfolio Diversity and Integration**
- **Transmission and Distribution System Reliability Benefits**
- **Environmental Benefits**

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Project Need and Benefits

Obsolete Steam Units

- Difficult and costly to maintain
- Impacts on reliability

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Project Need and Benefits

Existing Site and Infrastructure

- Utilizes existing APS property
- Utilizes existing infrastructure
 - Transmission
 - Natural gas
 - Water supply
 - Buildings
- Cost effectiveness
- Environmentally compatible
- Located within Phoenix metropolitan area

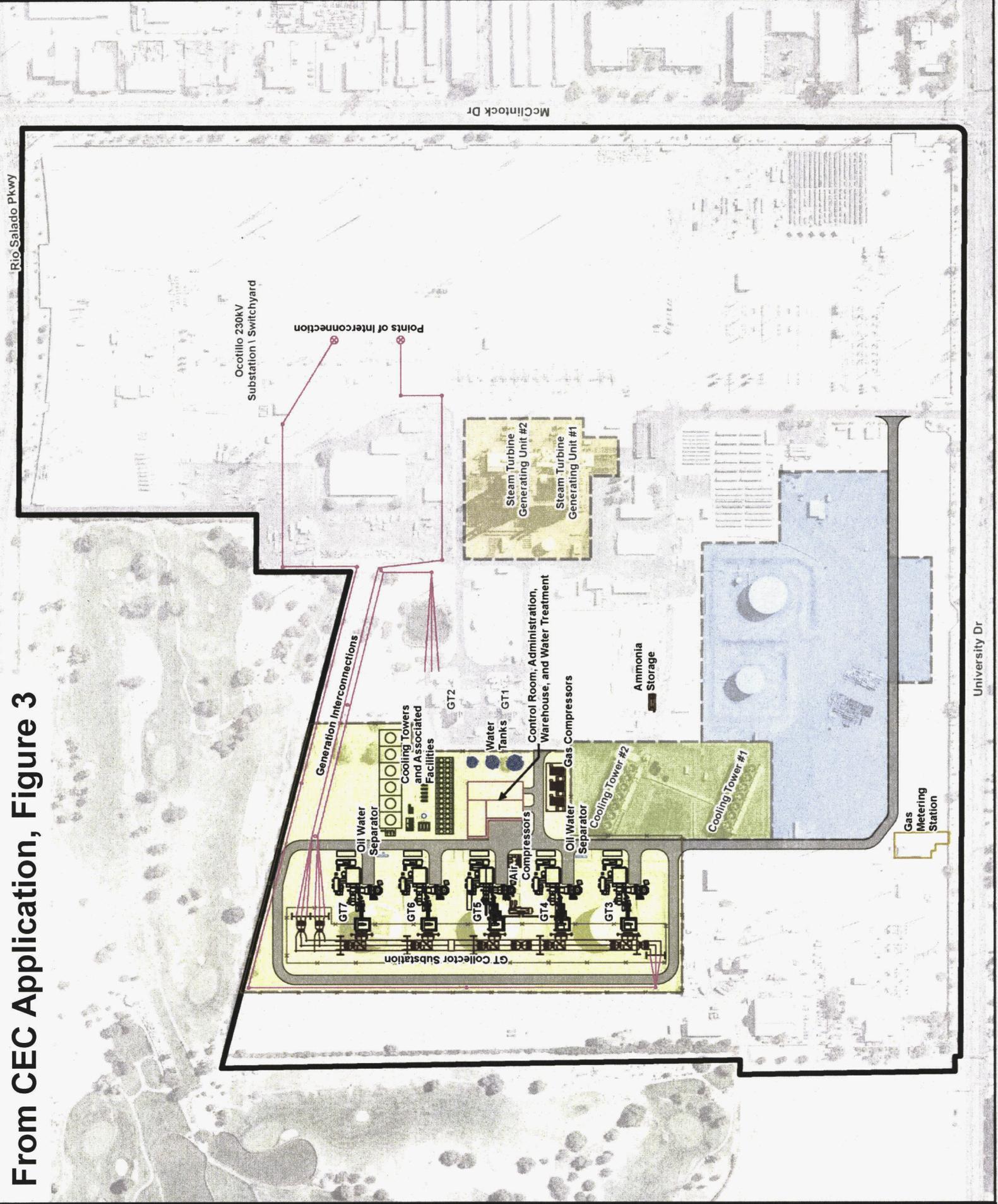
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Proposed Project Facilities

Turbine Technology

- General Electric LMS100 (GT technology)
 - Flexible operation
 - Highly efficient
 - Good start reliability and maintenance history
- Best available emission control technology
 - Post combustion controls of nitrogen oxides, carbon monoxide, and volatile organic compounds.
- Lower profile than existing steam generators
- Hybrid cooling system

From CEC Application, Figure 3

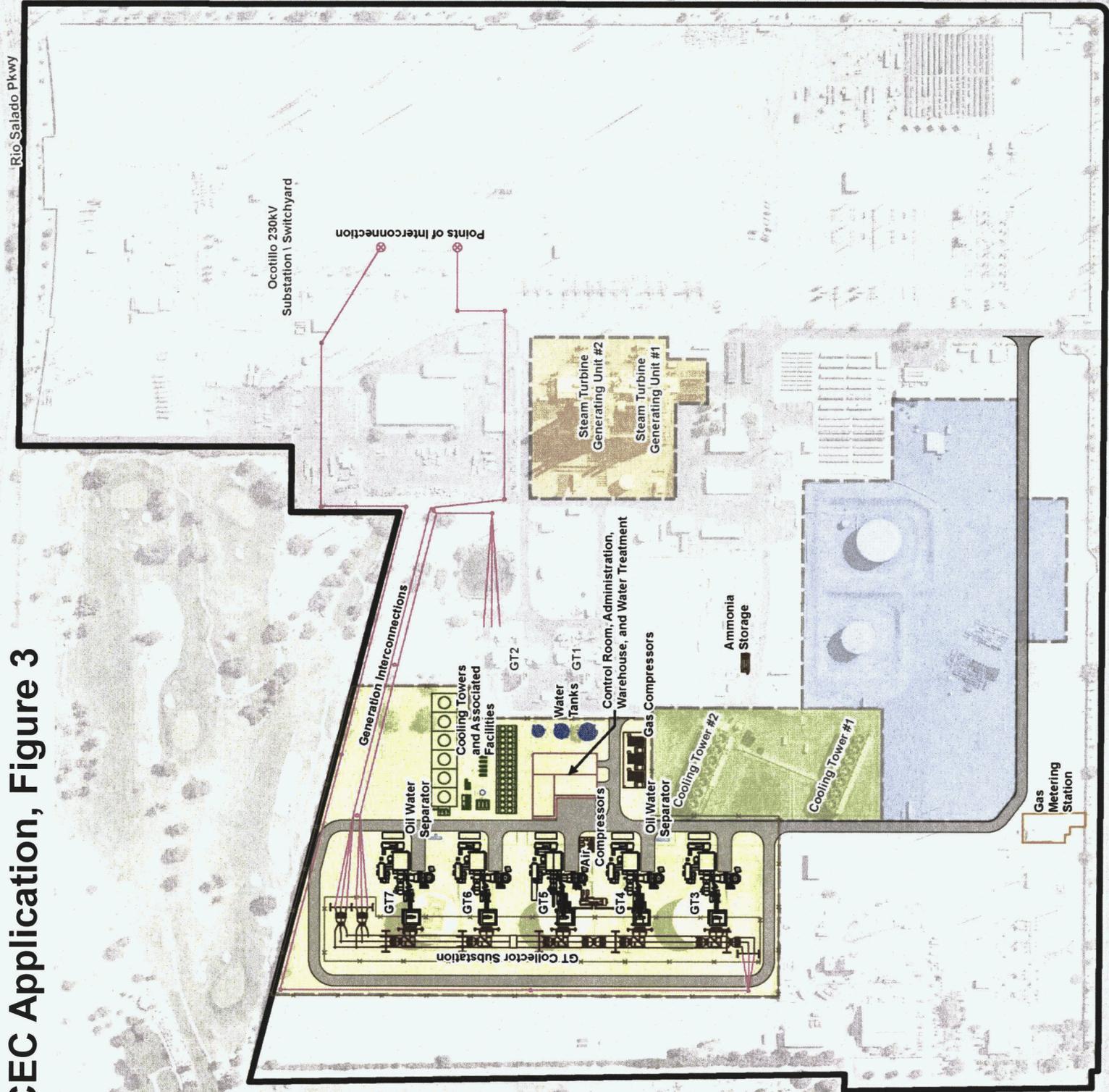


Proposed Project Facilities

Turbine Technology

Unit	Operational Flexibility	Fast Start <10 Min	Hours Maint. Cycle	Unit size	Output MW	Low Air Emissions
Wartsila 18V50	✓	✓	✓		18	
Siemens SGT-750	✓		✓		31	✓
Siemens SGT-800	✓	✓	✓		41	✓
GE LM6000PC	✓	✓	✓	✓	46	✓
P&W SP60FT8-3	✓	✓	✓	✓	57	✓
GE 7EA				✓	80	✓
GE LMS100PA	✓	✓	✓	✓	102	✓
M501DA				✓	113	✓
GE 7FA.05					200	✓
Siemens FP-10					231	✓
M501GAC-FAST					246	✓

From CEC Application, Figure 3

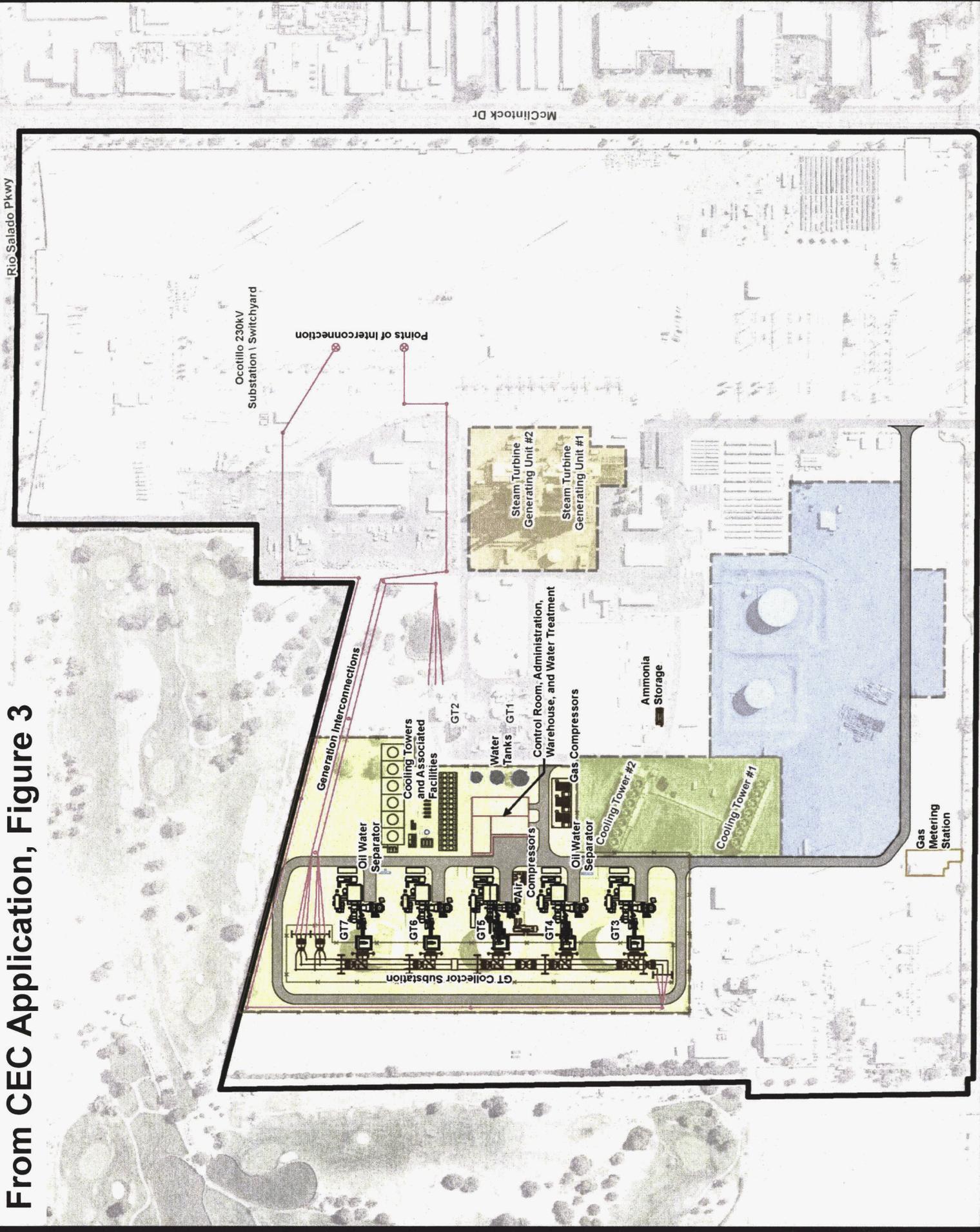


Proposed Project Facilities

Generation Interconnections

- Located entirely within the existing Ocotillo Power Plant site
- Two (2) 230kV generation interconnections, each on monopole structures

From CEC Application, Figure 3



Proposed Project Facilities

Generation Interconnections

- Located entirely within the existing Ocotillo Power Plant site
- Two (2) 230kV generation interconnections, each on monopole structures

Typical 230kV Tangent Pole with 69kV Underbuild

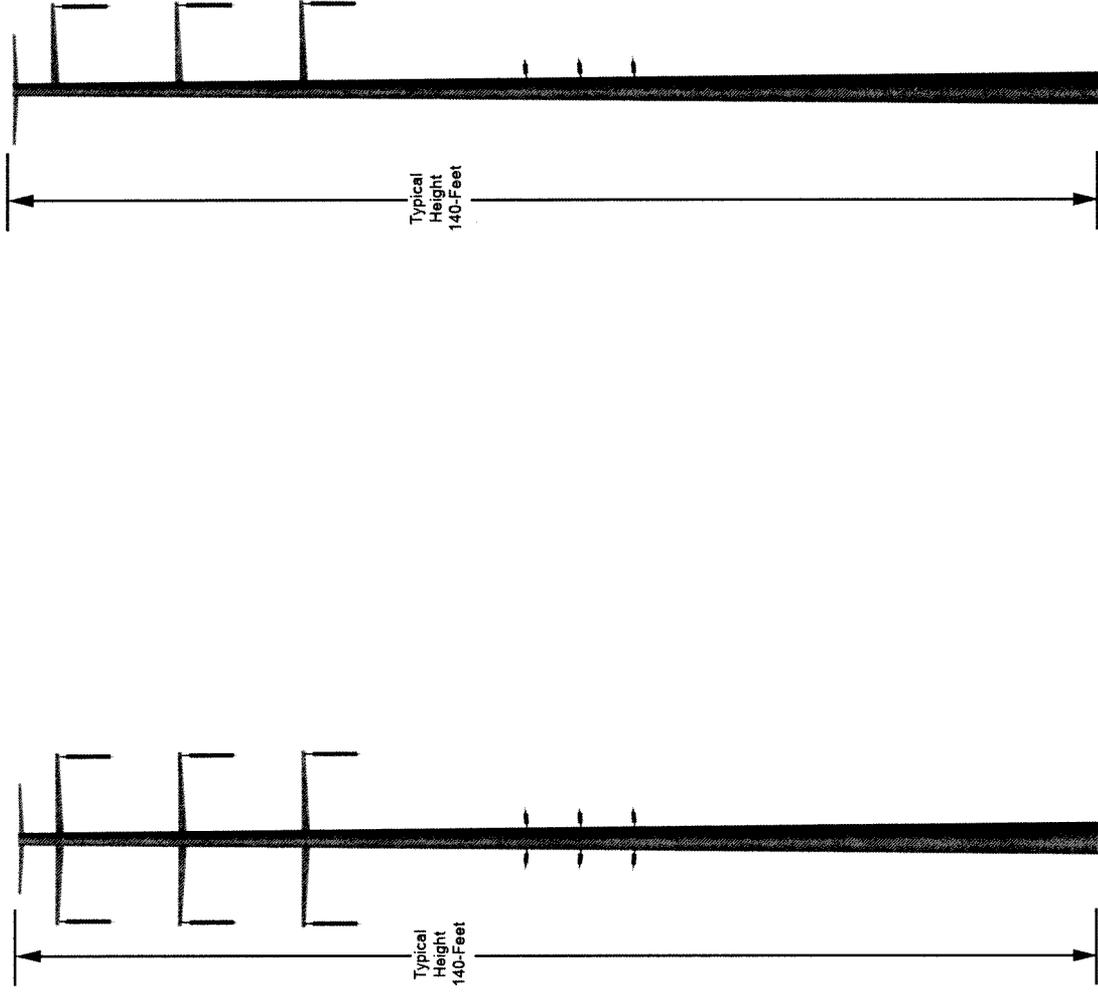


Figure G-5 Double-Circuit

Figure G-7 Single-Circuit

Project Costs and Schedule

- Capital Cost Estimate
 - \$600 million - \$700 million
- Schedule
 - Permitting and engineering completed 2015
 - Construction 2016-2018
 - Commercial operations commence fall 2017 – spring 2018
 - Begin removal of steam generators – fall 2018
- APS requests CEC term of 5 years

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Public Outreach Summary (Exhibit J)

- Stakeholder Briefings
- Agency and Tribal Correspondence
- Direct Mail of Project Information
- Newspaper Notices
- Open House Meeting
- Project Website
- Social Media
- Newspaper Articles

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Public Outreach Stakeholder Briefings

- State
 - Arizona Corporation Commission
 - Arizona State University
 - Residential Utility Consumer Office
 - Governor’s Office of Energy Policy
- County
 - Maricopa County Board of Supervisors
 - Maricopa County Air Quality Department
 - Maricopa County Planning Department

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Public Outreach Stakeholder Briefings

- **Tribal**
 - Four Southern Tribes Cultural Resource Working Group
 - Salt River-Pima Maricopa Indian Community
- **Local**
 - City of Tempe
 - City of Scottsdale
 - City of Mesa
- **Industry**
 - Salt River Project
 - Arizona Competitive Power Alliance

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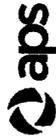
Public Outreach Agency Correspondence

- U.S. Fish and Wildlife Service
- Arizona Game and Fish Department
- Arizona Department of Water Resources
- State Historic Preservation Office
- Tempe Historic Preservation Office

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Public Outreach Tribal Correspondence

- Ak-Chin Indian Community
- Fort McDowell Yavapai Nation
- Gila River Indian Community
- Hopi Tribe
- Pascua Yaqui Tribe of Arizona
- Salt River Pima-Maricopa Indian Community
- Tohono O'odham Nation
- Yavapai-Apache Nation
- Yavapai-Prescott Indian Tribe



May 20, 2014

Diane Enos, President
Salt River Pima-Maricopa Indian Community
10005 East Osborn Rd.
Scottsdale AZ 85256

Dear President Enos:

Arizona Public Service Company (APS) is in the early planning stages of a proposed project that would consist of a) the demolition and removal of portions of the existing Ocotillo Power Plant and various associated facilities and, b) the construction of five new natural gas-fired generating units and associated facilities at that same location. APS is consulting with your office because siting of the new facility falls under Arizona Revised Statutes (ARS) 40-360.03 which requires APS to file an application for a Certificate of Environmental Compatibility (CEC) which is subject to review by the Arizona Corporation Commission's (ACC) Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) under ARS 40-360.01 et seq. A short information sheet about the proposed project is included for your review.

Under ARS 40-360-06, "Factors to be considered in issuing a certificate of environmental compatibility," #5 calls out that "Existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the proposed site" are factors to be considered by the Siting Committee in determining whether or not to recommend issuance of a CEC.

Pursuant to the ACC Rules of Practice and Procedure R14-3-219 (#6), the application for a CEC shall "Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion." Furthermore, under R14-3 "Exhibits to Application," Exhibit E shall "Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon."

APS submits the following information for your review and comment as part of this process to support the ACC's compliance with the Arizona State Historic Preservation Act (ARS 41-861 et seq.), which requires state agencies to consider the impacts of their programs on historic properties listed on, or eligible for, the Arizona Register of Historic Places.

Ocotillo Power Plant is located on private land, at 1500 E. University Blvd. in Tempe, Arizona. The site is within TIN, R4E, the SE1/4 of S14, G&SRB&M. While the entire APS-owned property consists of approximately 126 acres, it is estimated that only about 15.8 acres would be affected by the new construction, mostly on the western portion of the APS parcel. The majority of this area is currently occupied by three large fuel storage tanks, which would be demolished and removed. Another 10.4 acres

P.O. Box 53933
Phoenix, AZ 85072



Salt River
PIMA-MARICOPA INDIAN COMMUNITY
10005 EAST OSBORN ROAD / SUITE E, ARIZONA, 85246 PHONE (480) 367-9377
Cultural Preservation Program

July 11, 2014

Jon M. Shumaker, Archaeologist
Arizona Public Service Company, Natural Resources Department
P.O. Box 53033, Mail Station 3372
Phoenix, Arizona 85072-3933

RE: Demolition & Removal of the Ocotillo Power Plant in Tempe, Arizona

Dear Mr. Shumaker,

The Salt River Pima-Maricopa Indian Community is a federally recognized tribe located near Scottsdale, Arizona. The SRP-MIC Cultural Preservation Program (CPP) is a project to demolish the Ocotillo Power Plant and associated facilities and construct five new natural gas-fired generating units and associated facilities at that same location within the Salt River Indian Community. The SRP-MIC CPP will take the lead on hand

"... the SRPMIC concurs with the URS Corporation and the APS recommendations that the cultural resource investigations were adequate and additional archaeological data recovery is necessary."

At present the area will be used for archaeological and historic site investigations. Significant but not recommended for this project. The SRPMIC concurs with the URS Corporation and APS recommendations that the cultural resource investigations were adequate and additional archaeological data recovery is necessary. The SRP-MIC review indicates that archaeological monitoring report and the archaeological testing report are adequate and acceptable cultural resource management documents. The SRP-MIC will take the lead in any cultural resource discovery consultation. As such please notify the SRPMIC Cultural Preservation Program at 480-362-3625 when work commences. The SRP-MIC will be the lead tribe in reference to all applicable cultural resource laws. Please include Shane Anlon, CPP Manager (480-362-6331/ Shane.Anlon@srpmic-nsn.gov) and Angela D. Garca-Lewis, Cultural Compliance Supervisor (480-362-6337/ Angela.Garca-Lewis@srpmic-nsn.gov) and Matthew Garza, NACPRRA Coordinator (480-362-6627/ Matthew.Garza@srpmic-nsn.gov) in future communications regarding this project. The SRP-MIC CPP prefers both phone and email notification. Feel free to call me or email for additional clarification in regard to this or any cultural resource issue. Thank you for your time and effort in this matter.

Sincerely,

Angela D. Garca-Lewis,
SRP-MIC Cultural Preservation Compliance Supervisor



Public Outreach

Direct Mail of Project Information

- February 2014
 - Postcard to 64,000 addresses
 - Introduced Project and provided website address, opportunity for email updates
- April 2014
 - Two-page newsletter to 59,000 addresses
 - Project Description and Need
 - Opportunities for Public Input
 - Open House Information
- August 2014
 - One-page newsletter to 59,000 addresses
 - Filing of CEC Application
 - Hearing dates announced

Investing in Arizona's Energy Future



Dear Neighbor,

APS is making investments today that allow us to produce energy in cleaner, more efficient ways tomorrow.

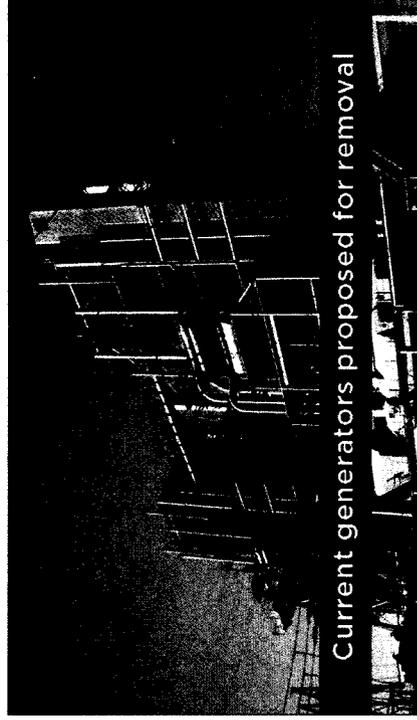
One such investment is modernizing the Ocotillo Power Plant, located at University and McClintock in Tempe, Arizona. APS intends to replace two old generators with five modern, more efficient units that will not increase the plant's footprint. They still will be powered by natural gas.

The new units will stand about half as tall as the old ones, reduce emission rates and maintain reliable service for our customers.

We will provide periodic updates and opportunities for public input as project permitting moves forward. We invite you to learn more about the project at azenergyfuture.com/ocotillo. Comments can be submitted through the website or emailed to OcotilloGenProj@aps.com.



To receive future updates by email or to opt out of future mailings, please visit azenergyfuture.com/ocotillo.



Current generators proposed for removal



Proposed project rendering looking west

Public Outreach Public Open House

- **Notification**
 - April newsletter
 - Newspaper advertisements in four publications
 - Project website
 - Social media
- **Held at ASU Karsten Golf Course clubhouse**
 - April 22, 2014 from 5-8 PM
- **Display boards**
- **Interactive GIS station**
- **Project video**
- **40 registered attendees**

AROUND OUR SCHOOLS:

TEMPLE ELEMENTARY
Submitted by Temple Elementary School District, www.templechs.district.org

District news

AMS is this week. Please make sure your child is well rested and has eaten a nutritional breakfast.

Agulir Elementary

Come join us for our last hoorah Thursday, April 17, at Peter Piper Pizza at McClintock Drive and Baseline Road to thank to community member Agulir for donating to our school. Agulir will be donating a Wildcat Tumbler for \$5 in the office.

Carmichael Elementary

Fifth graders will study volcanoes April 14-17. They will make ash dough replicas and erupt them on Thursday afternoon.

Curry Elementary

Field day is April 24

Gatz School

On Tuesday, April 15, PTU will have a fundraiser from 5-8 p.m. at Rika's Italian Ice at Elliot Road and McClintock Drive.

Hudson Elementary

Congratulations to three fifth graders that met their personal accelerated reader goals. Billie Briner and Miguel Quijada have each read more than 2 million words and Steven Whitman has read



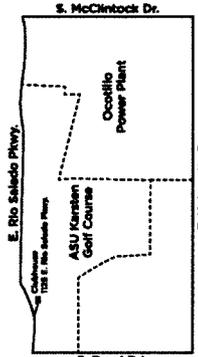
APS Ocotillo Modernization Project
Public Information Open House

Tuesday, April 22, 2014
5:00 - 8:00 p.m.
ASU Karsten Golf Course Clubhouse
1125 East Rio Salado Parkway
Tempe, AZ 85281

Arizona Public Service Company (APS) plans to modernize our Ocotillo Power Plant, located at University and McClintock in Tempe. We intend to invest up to \$700 million in the aging plant today so we can produce energy in cleaner, more efficient ways for decades to come.

The proposed plan includes replacing two old generators built in 1960 with five modern, more efficient units on the existing plant site. Five large oil storage tanks also would be removed. The new units will stand about half as tall as the old generators, reduce water-use rates and air emission rates, and improve overall noise conditions at the plant. The project would provide more than 100 jobs during construction.

Your opinion is very important to us. Please attend this open house to learn more about the project, ask questions and contribute your comments.



For more information, please visit our project website at aps.com/ocotillo.

more than 1 million. They all had to pass comprehension quizzes about the books.

New/RT Elementary

The Novitt, 4th Anniversary Celebration, is 10 a.m.-noon Saturday, April 26. Events include school tours, choir performances and a dedication ceremony. Novitt is at 4525 F, S. Anne Ave. Current and former students, parents, and educators are encouraged to attend.

Wood Elementary

On April 4, the student body along with the Wood staff presented a special assembly for students for their AIAKs testing.

Connelly Middle School

Many with friends, students made plans for the 4th GPA for the first three quarters of this year. Congratulations go out to Na'ani Castillo, Cain Deng, Camie Davenport, Micah Fuse, Hannah Jones, Garci Kirwan, Samuel Jolley, Ian Mitchell, Leah Nelson, Luke Peterson, and the entire team for their first, best, warrior, and March Venger.

Gilliland Middle School

Congratulations to outstanding students: Jaelia, Sylvia-Duran, Roberto, Nilara, Marissa Bramley, Jareth Guillen-Cruz, Stone Toga-ula, Christopher Wesley, Anthony Aguilar, Juan Hernandez-Laguas, and Paulina Barreras.

Tempe Academy

Congratulations to outstanding students of International Studies:
Field Day is Thursday, April 17.
Variety Show will take place at 2 and 6:30 p.m. Tuesday, May 13.

ABM FLAP

Continued from Page 4

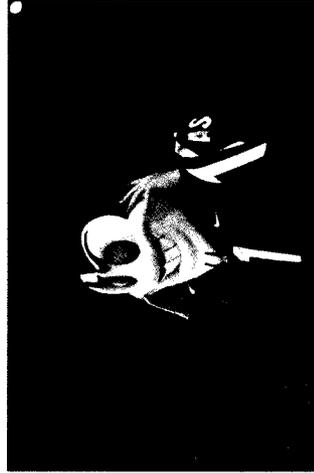
Robinson denies Whitcomb's allegation that she was recording their conversation in March.

"The real question is why doesn't Ms. Whitcomb simply provide the tape to the public?" Robinson said. "Robinson said, 'furthermore, if Ms. Whitcomb was so disturbed, why didn't she ask me to stop speaking, ask others in the room to stop speaking, walk out of the room, or be the police?' And I said, 'In the best of course, you have other motives,

one being to ensure I fail as president of ABM.' Whitcomb on April 7 denied recording the April 2 annual meeting, long-time ABM attorney Dean Fermanek affirmed that deed restrictions mandate use of the Ahwatulee Lakes property for golf-course-related businesses, such as a clubhouse, restaurant and pro shop. A majority of the property is owned by property owners represented by ABM. Fermanek emphasized that ABM has no enforcement requirements and recommends not spending money on litigation. The report based on ABM's lack of jurisdiction.



ASU gets new Sparkys



A former Sparky mascot wears on the back of the Sparky mascot in Wells Fargo Arena on April 2.

MEGANN PHILLIPS

The wood floor of Wells Fargo Arena, which was recently used to accommodate a Sun Devil basketball, volleyball, gymnastics and wrestling during winter months, had been neglected by the spruiking members of competitive athletes since the arrival of spring. That is, a new purpose each has been given the arena. With the end of the academic year quickly approaching, a special annual task - picking the University's next Sparky mascot - became necessary, and the Wells Fargo Arena provided the perfect atmosphere in which to do it.

Members from ASU's athletic department gathered each other to become ASU's mascot for the 2013-14 academic year. Three staff members from ASU's athletic department joined Richard, the athletic department's mascot manager who has judged previous Sparky mascots, to form a panel that will also be a judge but keep Sparky's identity under wraps.

"We can't reveal the name of the man behind the mask," he said. "Sparky's true identity is one of ASU's best kept secrets, because it is important to the University's identity. The name of the mascot remains unannounced through the students, not one, are associated with Sparky at any given time."

Naming freshman Michaela Demitron said she hopes future Sparkys will be able to represent the man behind the mask, and she is forward to seeing their action next year. "This year, Sparky did an amazing job," she said. "I'm a big fan of Sparky, and I love how he keeps everyone going at all the games. He made each event feel like it was more exciting."

Two returning Sparkys attended the contest alongside their new friend, Richard, but Richard had all of the aspiring



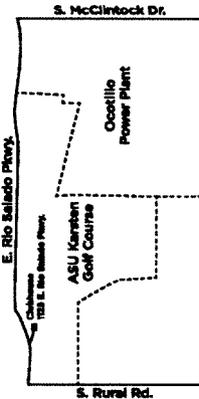
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The proposed plan includes replacing two old generators, built in 1960 with five modern, more efficient units on the existing plant site. Five large oil storage tanks also would be removed. The new units will stand about half as tall as the old generators, reduce water-use rates and air emission rates, and improve overall noise conditions at the plant. The project would provide more than 100 jobs during construction.

Your opinion is very important to us. Please attend this open house to learn more about the project, ask questions and contribute your comments.



For more information, please visit our project website at aps.com/ocotillo.

Public Outreach Project Website

- Launched February 2014
- Project information
 - Blog
 - Visual simulations
 - Video
 - Project mailings
 - Public open house notice and display boards
 - CEC Application and Notice of Hearing
- Included online comment submittal form



Ocotillo Modernization



APS is planning to modernize the Ocotillo Plant in Tempe. The proposed modernization includes cleaner-running, more efficient technology. APS intends to replace 1960s-era units with natural gas turbines powered by natural gas.

The project is critical to the state's energy future. It provides several benefits. It improves the plant's reliability, improves the plant's environmental footprint, and adds additional tax revenue to the state.

We welcome feedback from the public about the project. Please complete the form below to share your thoughts.

You also can learn more about the project during an open house on Tuesday, April 22, 2014.

Ocotillo Modernization Snapshot

Last

First Name:

Company/Organization:

Email:

Address:

City:

State:

Comment:

Note: Please do not include any personal information in the comment text because it will be made public.

Please add me to the electronic mailing list

Please add me to the postal mailing list

Please do not add me to the mailing list

APS is an Equal Opportunity Employer. Minorities and women are encouraged to apply.

FAQs

What is the project timeline?

APS plans to file applications for project permits this spring and summer. Construction on the new units, if approved, would begin in 2016 and be completed in 2018. Removal of the old units would begin in 2018.

Why upgrade the Ocotillo plant?

The Ocotillo plant is critical to maintain service reliability in the Phoenix metro area because of its location. We can also improve an existing plant without changing its overall footprint and replace generators that are increasingly costly to operate and maintain. Many replacement

are no longer available for the steam generators and must be custom-made to keep equipment running.

What will be the environmental benefits?

Replacing the obsolete steam generators with much newer, proven, cleaner technology will greatly improve the plant's efficiency. The new units will decrease the plant's water-use and emission rates. They will also improve the plant's overall noise conditions.

How tall will the new structures be?

The plant currently has four 178-foot stacks, while the upgraded plant is planned to have five stacks about half as tall. This would significantly reduce the plant's visibility from several locations.

What economic benefits will the project provide?

It will create local jobs - we expect the project to require an average of 114 jobs during construction. Total property taxes for the upgraded plant are expected to increase to about \$8 million by the fifth year of operation. APS currently pays about \$600,000 in total property taxes for Ocotillo.

How can I get involved in the project?

APS is committed to a transparent public process. The public can submit comments on the project through the form above. In addition, we will hold at least two public open houses to provide information and take comment.

View more FAQs about the Ocotillo modernization project.

Downloads



Ocotillo Modernization Project - April 2014

Ocotillo Modernization Project - April 2014

Ocotillo Modernization Project - April 2014

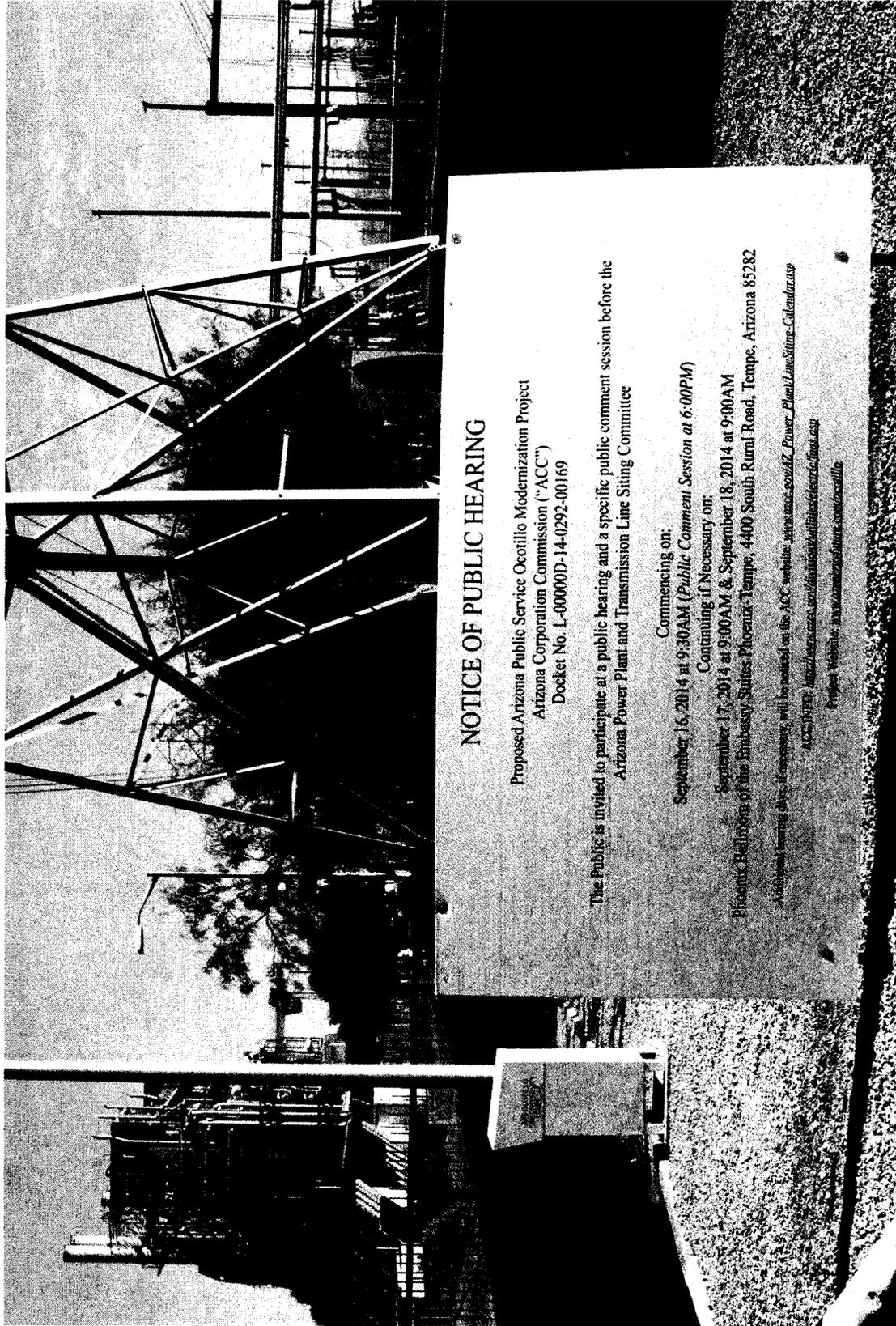
Public Outreach Newspaper Articles

- *The Arizona Republic*, Feb. 15, 2014
- *La Voz*, Feb. 21, 2014
- *East Valley Tribune*, Feb. 25, 2014
- *The State Press*, Feb. 26, 2014

Public Outreach Notification of Hearings

- Signs posted at Ocotillo Power Plant
- Notice of hearings published
 - *The Arizona Republic*
 - *East Valley Tribune*
 - *State Press*
- Included on project website
- Second (August 2014) newsletter mailing

Agency Coordination and Public Outreach Notification of Hearings

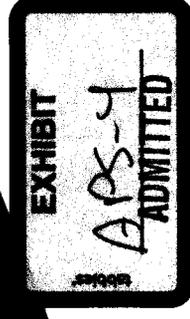


James Wilde

Director, Resource Planning

Arizona Public Service

**Ocotillo Modernization Project
Docket No. L-00000D-14-0292-00169**



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Background

- Educational Background
 - Master of Business Administration
 - Bachelor of Science Degree in Corporate Finance
- Professional Background
 - 24 years of energy industry experience
 - 11 years with Arizona Public Service Company
 - Director of Resource Planning (Current)
 - Director of Enterprise Risk Management
 - 7 years with Duke Energy Trading and Marketing
 - Merchant generation and commodities trading
 - 6 years with Salt River Project
 - System Operations

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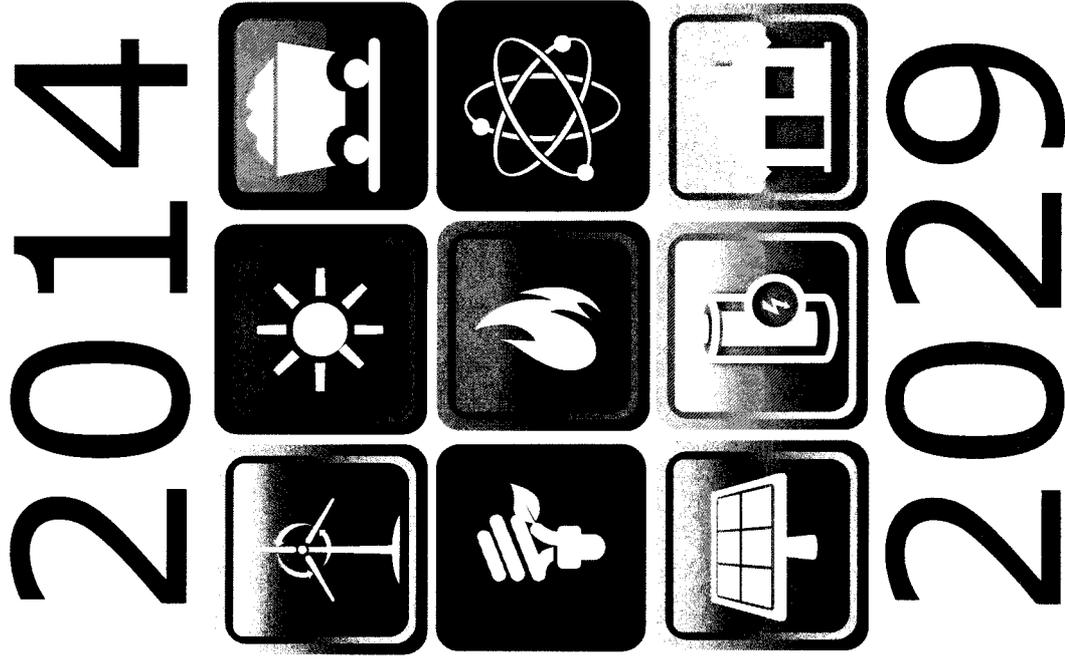
Outline of Testimony

- Context for Project Need – Integrated Resource Plan (IRP)
- APS resource portfolio needs peaking generation
- Fast-growing renewable generation is variable, requiring the addition of flexible generation resources to respond quickly
- Flexible generation allows APS and its customers to benefit from market opportunities
- Ocotillo Modernization Project serves these needs

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2014 IRP Overview

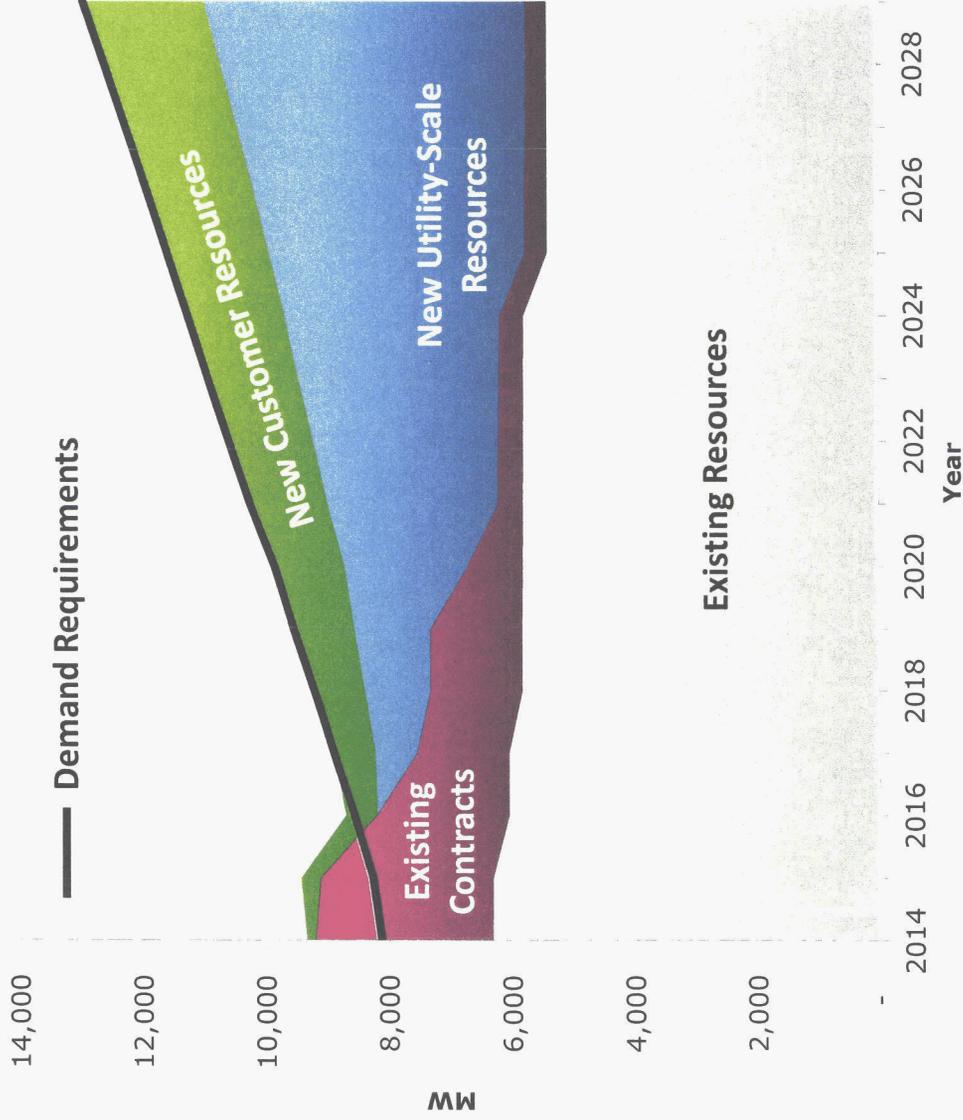
- **Natural gas generation will play increasingly important role**
 - Operational flexibility
 - Economics
- **Cleaner energy mix**
 - Customer resources such as rooftop solar and energy efficiency planned to be largest growth segments
- **Advanced technology will change the electricity grid**



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2014 IRP Overview

Supply-Demand Gap



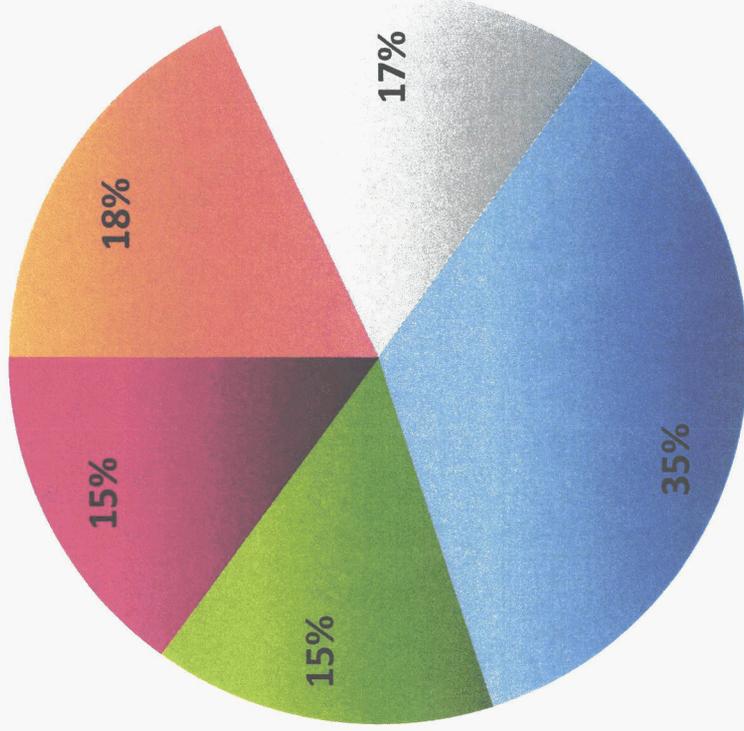
- Growth in customer energy requirements expected to resume
- Customer resources expected to triple over planning horizon
- Expiring purchase contracts means APS will need additional resources by 2017
- Additional resource needs anticipated to be met by increasingly diverse and efficient technologies

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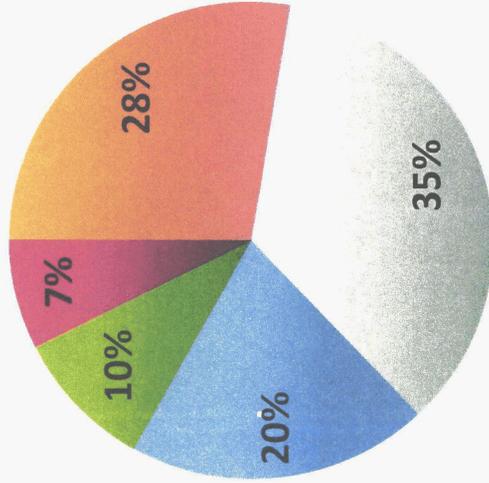
2014 IRP Overview

Diverse Energy Mix

2029



2014



■ Nuclear ■ Coal ■ Natural Gas ■ Renewable Energy ■ Energy Efficiency

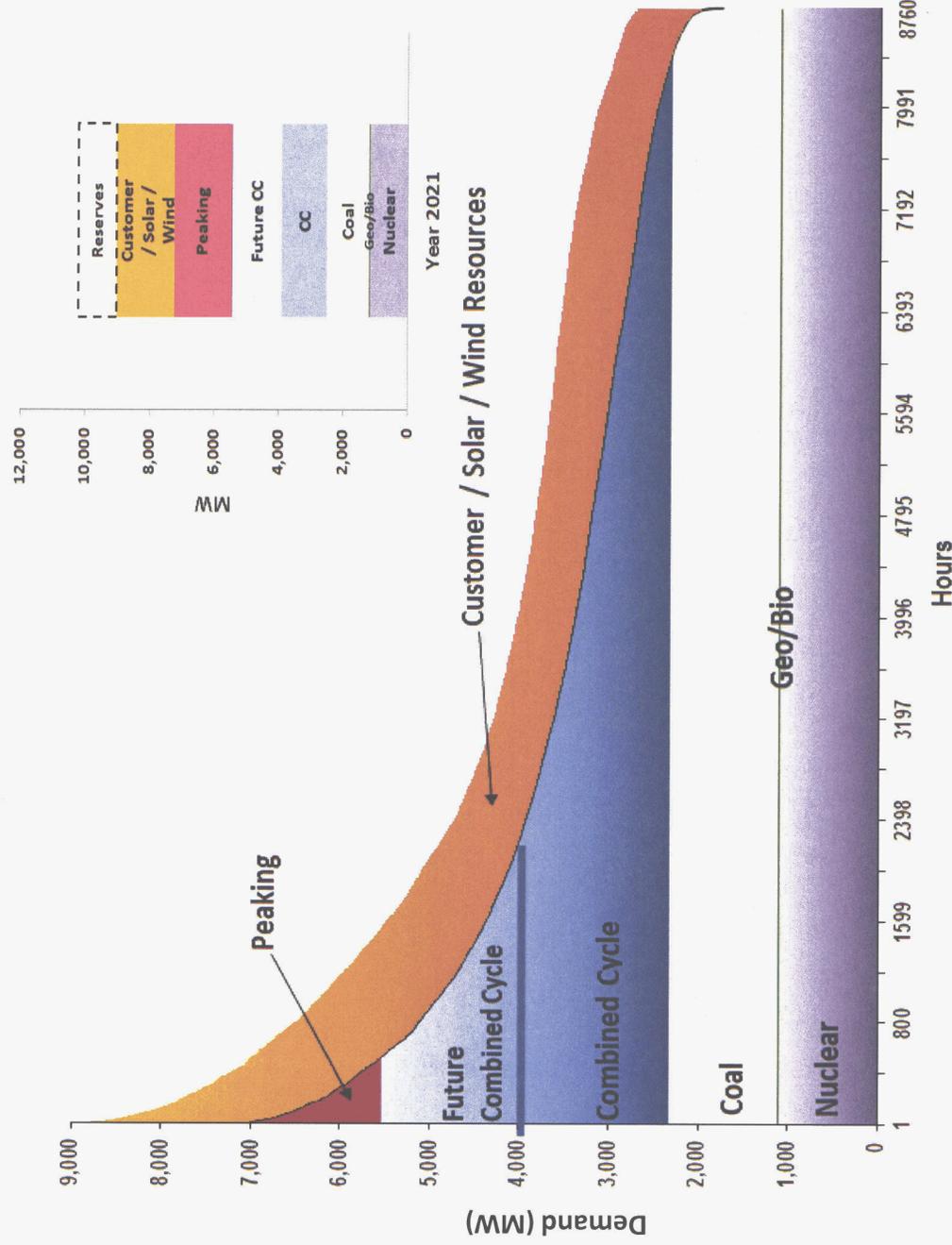
Source: APS 2014 Integrated Resource Plan

L-6 REVISED



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Resource Portfolio Need for Peaking Generation



- Flexible peaking capacity is needed to meet changing load patterns and customer demand
- CCs are essentially being forced to play limited role, idling much of the time, or shut down in non-summer months
- Capacity from Ocotillo Project represents roughly 20% of near term natural gas resource needs, and roughly 13% of total need

Note: APS Load Duration Curve Year 2021



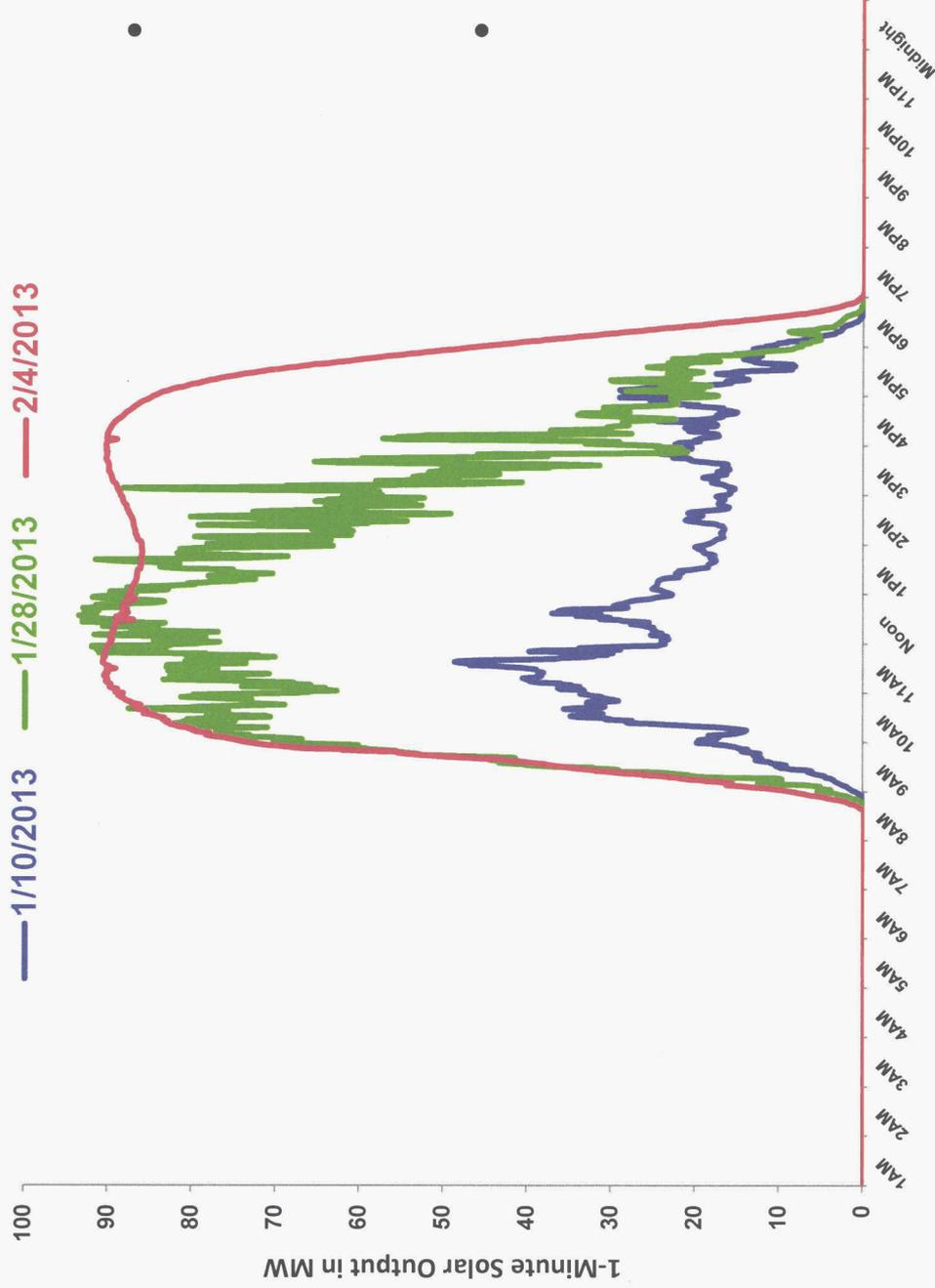
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Renewable Generation is Variable

Solar Production

Three Days of APS's Historical Solar Energy Production
January 2013

Rated Capacity of 110 MW Excluding Solana

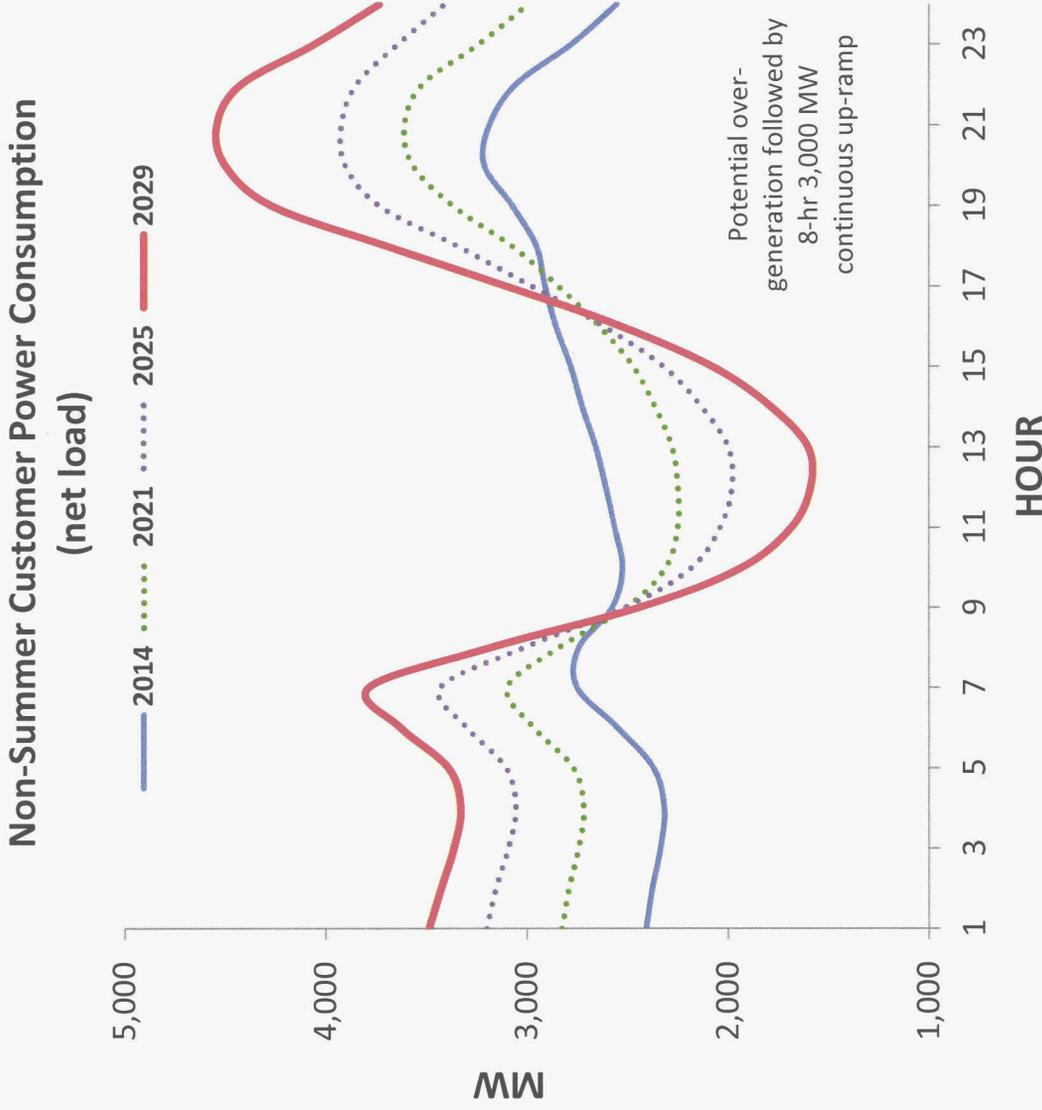


- Depending on cloud cover, solar production can vary greatly minute by minute
- Fast starting generation that can adjust output quickly is needed to respond to solar output variability
- Solar energy and flexible, responsive natural gas generation are complementary resources
 - Growth in renewable energy cannot take place without the ability to integrate it onto the grid

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Variability Requires Flexibility

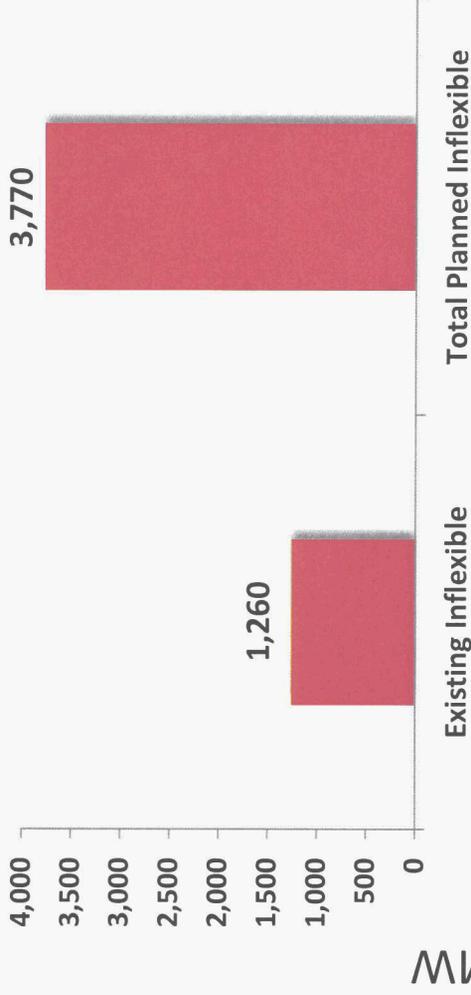
- At the peak of solar output (around noon), conventional resources will have to be significantly reduced to make room for self-dispatching solar
- Quick starting and fast ramping generation needed
 - Respond to solar variability, multiple starts per day and market purchase opportunities
- In 2025 on an average April day, renewables could represent up to 51% of customer demand



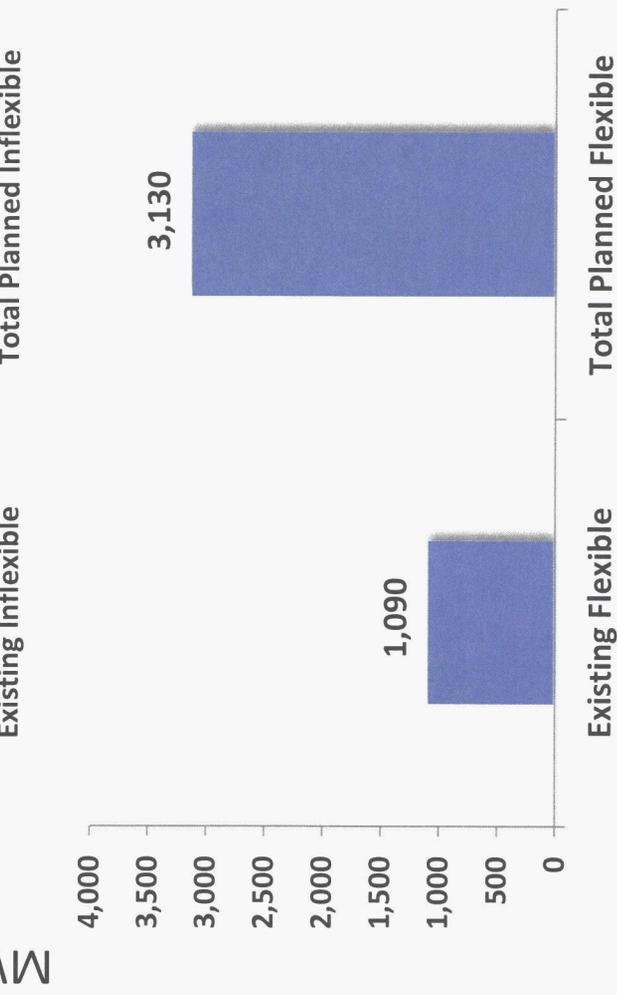
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Variability Requires Flexibility

Balancing Growth in Resources



- Inflexible resources cannot be dispatched by utilities
 - Projected to have the highest growth
- Flexible resources are complementary to inflexible resources for balancing each other

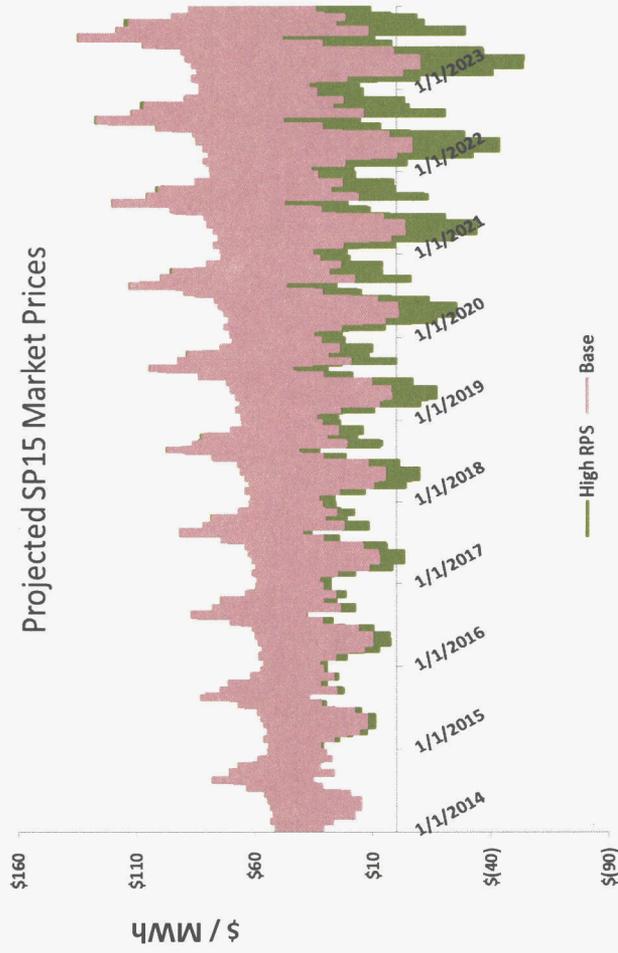
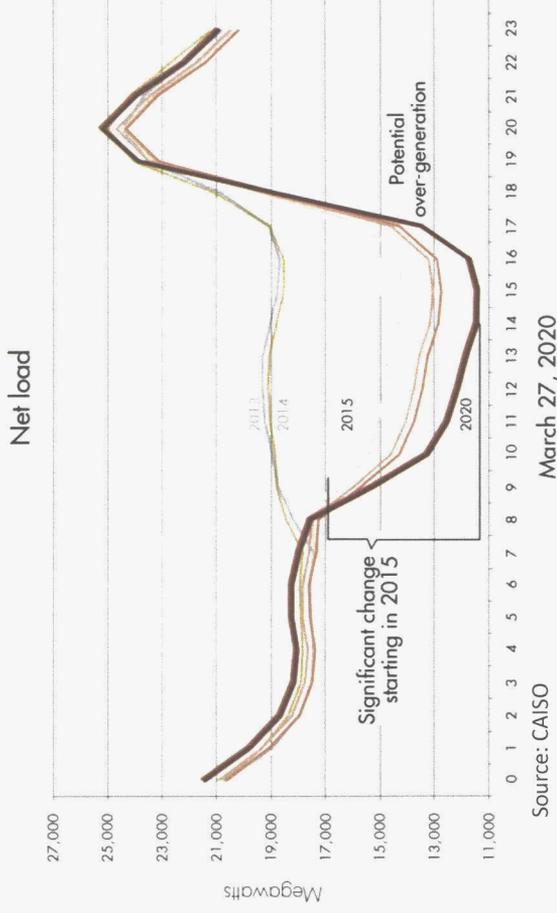


- Required to integrate variable renewable energy output into the utility system
- Flexible resources are able to start and adjust output quickly, and are capable of multiple starts per day
 - Ocotillo Project quick starting GTs

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Flexible Generation and Market Opportunities

- California Independent System Operator (CAISO) has identified concerns with upward and downward ramping and the need for flexible resources to respond quickly to these system changes



- Due to the potential for over-generation, utilities may have to sell surplus power at low to negative prices
- The Ocotillo Project provides the ability for customers to benefit from low or negative priced power

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Summary

- Integrated Resource Plan envisions growth being met with diverse set of resources including peaking generation
- Customer demand and markets are evolving as more variable resources such as solar are added to the grid
- Growth in variable resources must be balanced by growth in flexible generation
- Ocotillo Modernization Project part of overall need for flexible, responsive generation

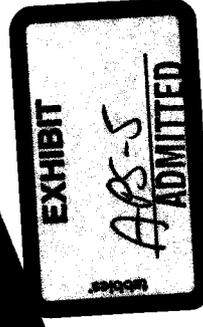
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Bob Smith

Director, Corporate Development

Arizona Public Service

**Ocotillo Modernization Project
Docket No. L-00000D-14-0292-00169**



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Background

- Educational Background
 - Master of Science, Electrical Engineering, New Mexico State University
 - Bachelor of Science, Pharmacy, University of Utah
- Professional Background
 - 28 years of experience in the electric utility service
 - 28 years with Arizona Public Service Company
 - Manager Power Operations
 - Manager Transmission Planning
 - Director Energy Delivery Asset Management and Planning
 - Licensed Professional Engineer in AZ

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Background

- Industry Leadership Experience
 - Past Chair WECC Compliance Monitoring and Operating Practices Committee
 - Past Chair WestConnect Steering Committee and Implementation Management Committee (FERC Order 1000)
- Prior Siting Cases
 - West Valley South 230kV (Case #122)
 - West Valley North 230kV (Case #127)
 - Morgan – Pinnacle Peak 500kV (Case #131)
 - Palo Verde – Delaney – Sun Valley 500kV (Case #128)
 - Hassayampa – North Gila #2 500kV (Case #135)
 - Devers to Palo Verde #2 500kV (Case #130)

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Outline of Testimony

- Transmission System Overview
- Local Generation
- Benefits of Ocotillo Project
 - Maximum Load Serving Capability
 - Contingency Response
 - Voltage Support
 - System Losses
 - Frequency Response
 - Black Start Capability

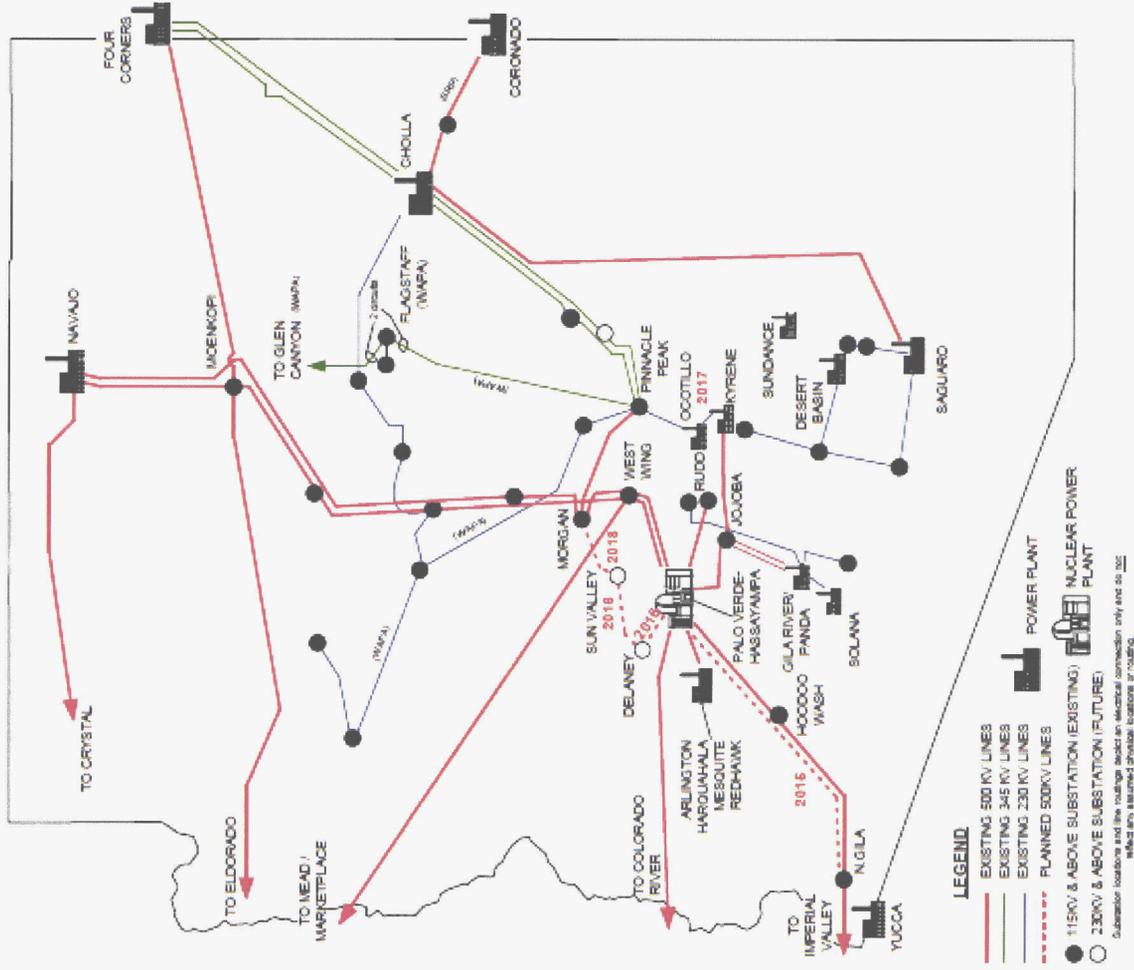
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Transmission System Overview

- Electric generating resources help balance the flow of power around the state
- Grid needs balanced sources of energy
 - Before 2000, Palo Verde located west of Valley while coal generators located north and east provided system balance
- Generation additions and retirements change this balance in the APS and SRP Phoenix area
 - 6000MW added near Palo Verde since 2000
 - Coal retirements reducing generation on the east
- Ocotillo Project helps system balance

APS System Overview

APS EHV & OUTER DIVISION 115/230 KV TRANSMISSION PLANS 2014 - 2023



Transmission System Overview

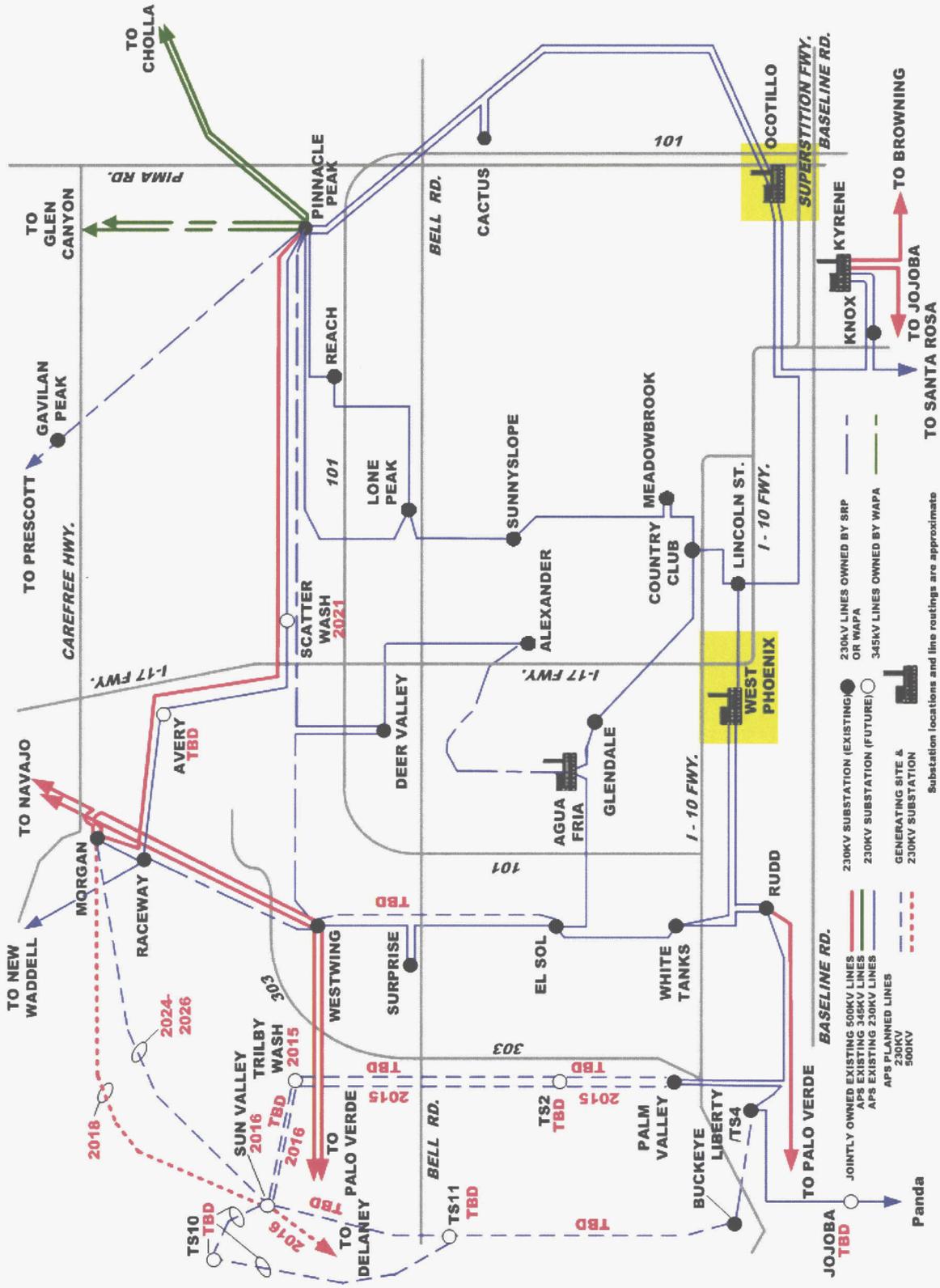
- Electric generating resources help balance the flow of power around the state
- Grid needs balanced sources of energy
 - Before 2000, Palo Verde located west of Valley while coal generators located north and east provided system balance
- Generation additions and retirements change this balance in the APS and SRP Phoenix area
 - 6000MW added near Palo Verde since 2000
 - Coal retirements reducing generation on the east
- Ocotillo Project helps system balance

Benefits of Ocotillo Project Maximum Load Serving Capability

- Maximum load that can be served with all local generation online at full output and the transmission imports at their limit
 - Phoenix Area MLSC must be greater than maximum Phoenix Area load plus Phoenix Area planning reserves
 - Phoenix MLSC limited by thermal loading on transmission lines after line outages
- Ocotillo critical to maintaining MLSC
 - For every 1 MW reduction at Ocotillo, MLSC reduced by 4 MW

Local Generation

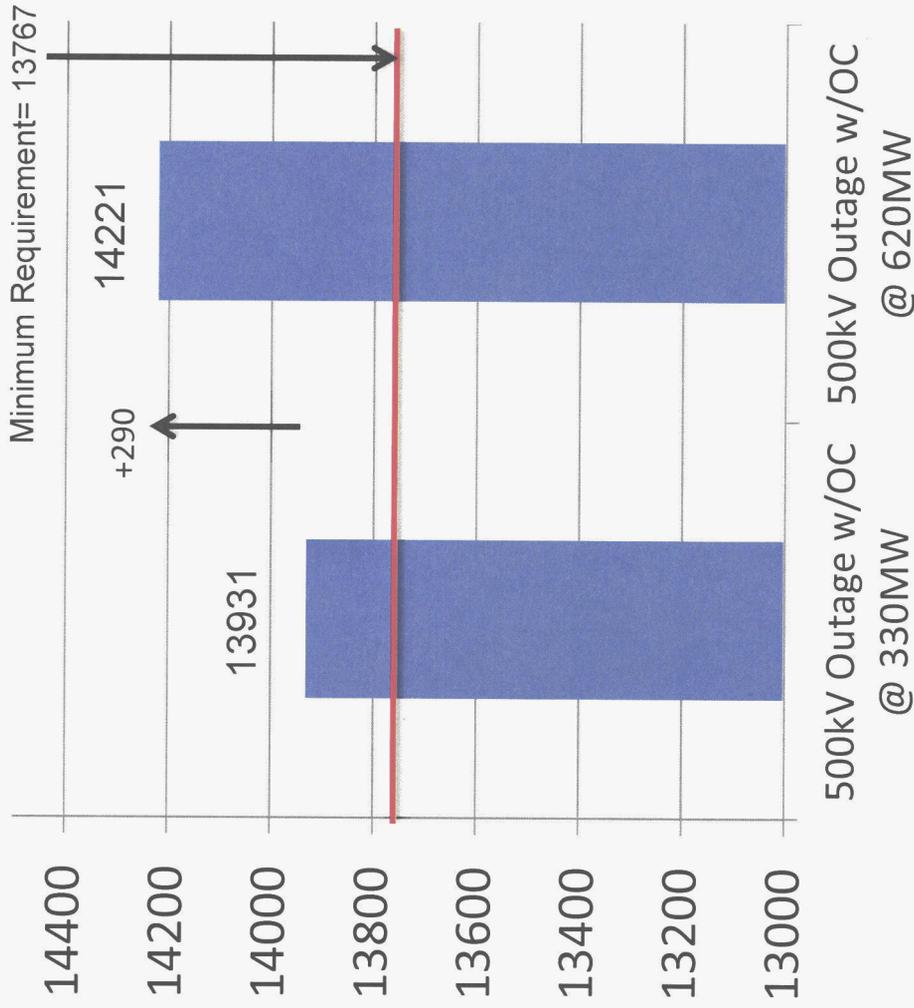
PHOENIX METROPOLITAN AREA TRANSMISSION PLANS 2014-2023



Benefits of Ocotillo Project

Contingency Response

MLSC (MW)



- Ocotillo Project aids in reducing the impact of key transmission line outages
- Under 500kV line outage with the most impact on MLSC, the Ocotillo Project increases MLSC by 290MW

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Benefits of Ocotillo Project

Voltage Support

- Voltage is necessary to move power from resources to loads
 - Analogous to water pressure needed to move water in pipes
- Impact of transmission outages on voltage
 - Transmission outages result in drop in voltage on system
- Voltage support from generators is a locational benefit
 - Benefit declines rapidly when voltage need is farther away from the generator

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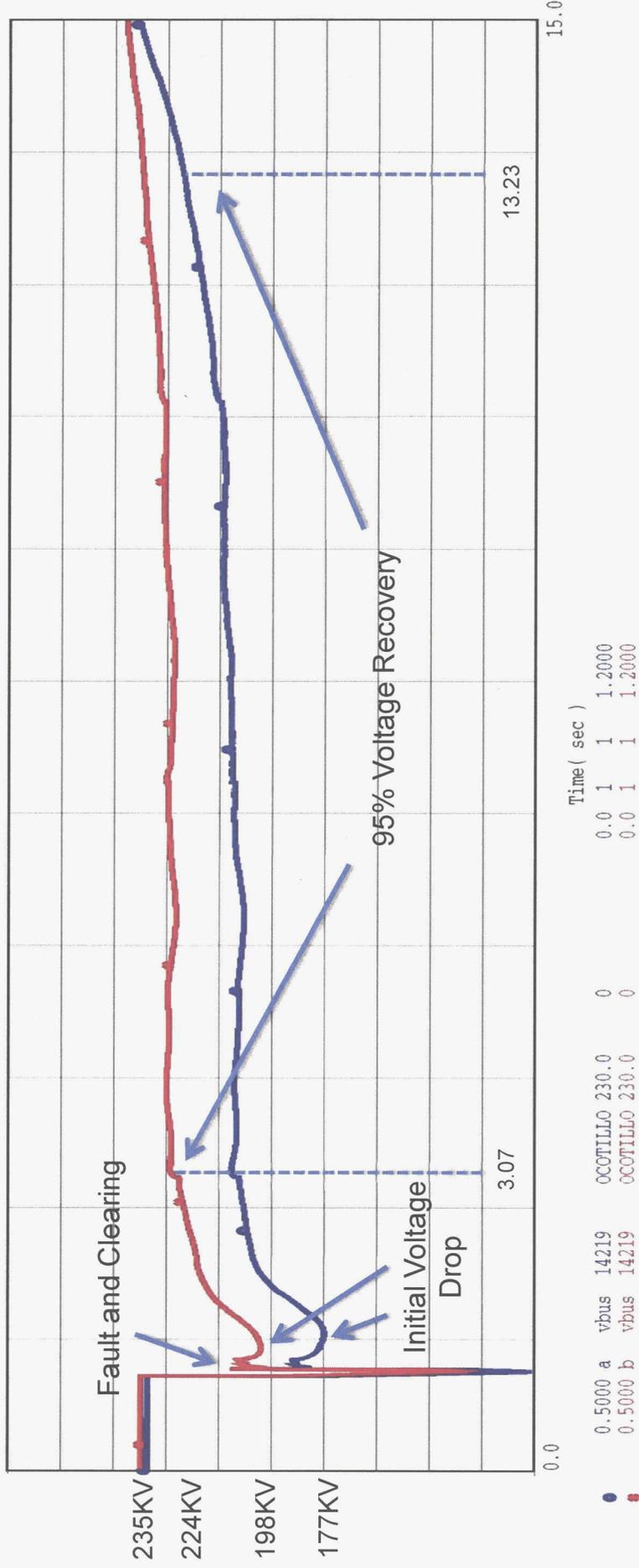
Benefits of Ocotillo Project

Voltage Support

- Local generation helps voltage recovery compared to remote generation
- Especially important to areas with heavy air conditioner load
- Ocotillo Project provides 33% improvement in initial voltage drop
- Ocotillo Project provides 77% improvement in time to recover 95% of pre-fault voltage
- Ocotillo Project provides 36% improvement in final voltage before operator action

Benefits of Ocotillo Project Voltage Support

Ocotillo 230 kV Voltage



Benefits of Ocotillo Project

System Losses

- Energy losses on a transmission line increase with loading and distance
- Assuming typical loading on 500kV lines (~1000MW) there is approximately 10 MW loss for every 100 miles
- Local generation, such as the Ocotillo Project, results in decreased system losses

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Benefits of Ocotillo Project

Frequency Response

- Frequency refers to the speed at which alternating current cycles
- In the U.S., normal system frequency is 60Hz
- Forced outage of generation creates imbalance between system loads and resources and frequency drops
- The frequency keeps dropping until a balance between the loads and resources is achieved
- The frequency must be maintained above 59.5Hz to prevent under-frequency load shedding

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Benefits of Ocotillo Project

Frequency Response

- Most generators provide frequency response by increasing power output when frequency drops below 60Hz
- A new NERC reliability standard requires that each system provide a certain amount of frequency response
- The Ocotillo Project will have fast ramp capabilities that will help APS meet the new standard

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Benefits of Ocotillo Project Black Start Capability

- Black Start Generator can start up with no onsite power
- Necessary to restore power system during area blackout
- Ocotillo Project will provide APS additional Black Start capability

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Summary

- Ocotillo Modernization Project brings a number of reliability benefits
- Phoenix Area local reliability benefits
 - System Balance
 - MLSC
 - Contingency Response
 - Voltage Support
 - Reduced Losses
- System reliability benefits
 - Frequency Response
 - Black Start Capability

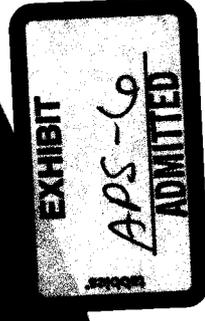
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Charles Spell

Director, Corporate Environmental

Arizona Public Service

**Ocotillo Modernization Project
Docket No. L-00000D-14-0292-00169**



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Background

- Educational Background
 - Bachelor of Science in Industrial Technologies
 - Master of Science in Environmental Science
 - Master of Business Administration
- Professional Background
 - 35 years in the electric utility industry
 - 29 years with the Arizona Public Service Company
 - Director of Corporate Environmental
 - Manager of Environmental Support
 - Air Quality Consultant

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Outline of Testimony

- Ocotillo Air Quality Permit Background
- Air Quality Permitting Process
- Major Elements of the Title V Permit Revision
- Air Quality Benefits

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Ocotillo Air Quality Permit Background

- Title V of the Federal Clean Air Act (CAA) requires large sources (> 100 tons/yr of any criteria pollutant) to obtain a permit (i.e., a Title V Permit) for the operation of the source
 - Federal EPA has delegated authority to Maricopa County to administer the Title V Air Quality Program
- The Title V Permit establishes legally enforceable terms and conditions to assure the source complies with all necessary requirements to limit and control air emissions
- The Title V Permit also serves as the air quality construction permit and contains the Title IV Acid Rain Permit

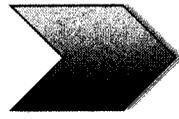
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Ocotillo Air Quality Permit Background

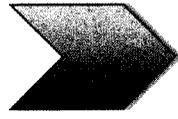
- Maricopa County issued the original Ocotillo Title V Permit in 2000
- Maricopa County Rule 210 requires Title V sources to obtain a permit revision for physical changes or changes in the method of operation; the installation of the LMS 100 units at Ocotillo requires a revision to the existing Title V Permit
- APS filed an application to amend the Ocotillo Title V Permit in April 2014

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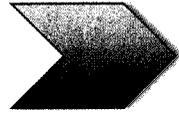
Air Quality Permitting Process



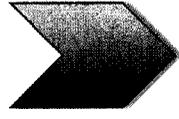
Source prepares application for Title V Permit revision and submits the application to Maricopa County



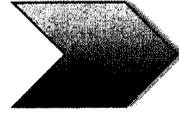
Maricopa County conducts completeness review of the application and drafts the permit language



Draft permit is released for a 30-day public comment period



Permit submitted to EPA Region IX for a 45-day review



Final Title V Permit is released by Maricopa County

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Major Elements of the Title V Permit Revision

- The permit application seeks to:
 - Replace the two existing 1960s-era steam electric generators with five new gas turbines (GT) that are equipped with state-of-the-art emission control technology
 - Cap the total annual air emissions from the site by voluntarily agreeing to limit fuel usage
 - Eliminate the Ocotillo Power Plant from being a major source of particulate matter (PM-10) emissions
 - Replace the existing cooling towers with a single hybrid cooling system

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Air Quality Benefits

Emission Control Technology

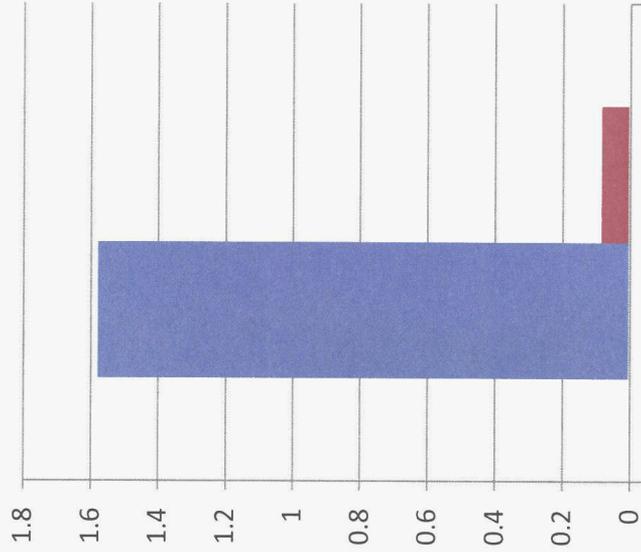
- The new units will employ Best Available Control Technology to reduce emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC)
 - Oxidation catalyst
 - Reduce CO emissions by approximately 90%
 - Reduce VOC emissions by approximate 30%
 - Selective catalytic reduction
 - Reduce NO_x emissions by approximately 90%

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Air Quality Benefits

■ Steam Units
■ LMS 100

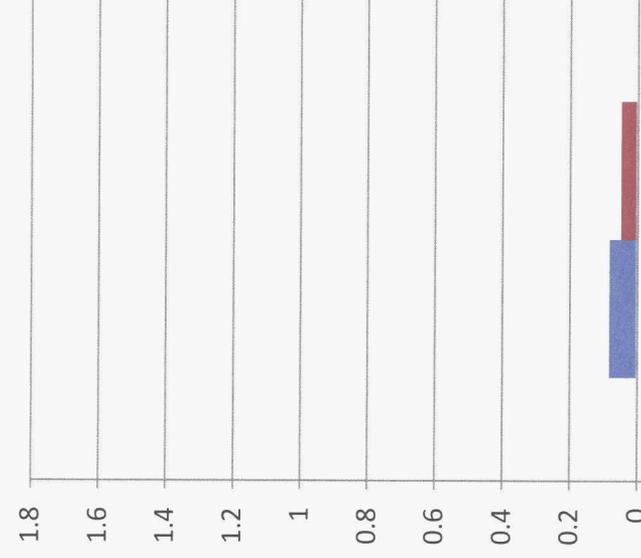
Comparison of Emission Rates (lb/MWh)



Nitrogen Oxides (NOx)



Carbon Monoxide (CO)



Particulate Matter (PM10)

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Air Quality Benefits

Emissions Netting

- APS is allowed to use the emissions that will be eliminated due to the decommissioning of the steam generators to offset the emissions from the new GTs
- Emissions netting must occur at the source
 - To obtain the benefits of using the emissions reduction from old, less efficient generation to build more efficient new generation, the new generation must be built at the site.
- Emissions netting must occur during the contemporaneous period
 - Any new units that are permitted outside of the contemporaneous period may be subject to additional regulatory requirements, additional costs for control equipment and operations, and uncertainties in the future air permitting process.

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Air Quality Benefits Emissions Netting

- The net emissions increase is determined by calculating the sum of the emissions increases and decreases associated with projects that occur during the contemporaneous period
- These emissions increases and decreases are then summed with the project emissions increase to determine the net emissions increase

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Air Quality Benefits Emissions Netting

- With respect to the Rules that allow emissions netting:
 - “The changes are intended to provide greater regulatory certainty, administrative flexibility, and permit streamlining, while ensuring the current level of environmental protection and benefit derived from the program and, in certain respects, resulting in greater environmental protection.”
- With respect to the Rules that allow emissions netting :
 - “allow sources more flexibility to respond to rapidly changing markets and to plan for future investments in pollution control and prevention technologies.”

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Air Quality Benefits

Emissions Netting

- Allows the construction of new units at an existing site to take advantage of the existing infrastructure
- Avoids the need to purchase hard to find and expensive emissions credits

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Summary

- APS has applied to revise the Ocotillo Title V Permit, which includes a cap on the site's total air emissions by voluntarily agreeing to limit fuel use
- The Ocotillo Project results in lower air emissions on a pounds per megawatt hour basis
- GTs employ Best Available Control Technology to reduce emissions

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Jennifer Frownfelter

**Vice President,
Environmental Planning**

URS Corporation

**Ocotillo Modernization Project
Docket No. L-00000D-14-0292-00169**



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Background

- Education
 - MEM, Environmental Management, Duke University
 - MPP, Public Policy, Duke University
 - BA, Biology and Environmental Studies, University of Colorado
- Professional
 - Senior Project Manager/Principal
 - 15 years of experience related to environmental planning, impact assessments, and facility siting

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Experience

- Prior Siting Cases
 - Superior to Silver King 115kV Relocation (Case #166)
 - Starwood Solar Permitting (Case #150)
 - Sun Valley to Morgan (TS-5 to TS-9) 500/230kV Transmission Line Project (Case #138)
 - West Valley South 230/69kV Power Line and Substation Project (Case #122)
- Current Case Role
 - Managed environmental studies for CEC application

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Outline of Testimony

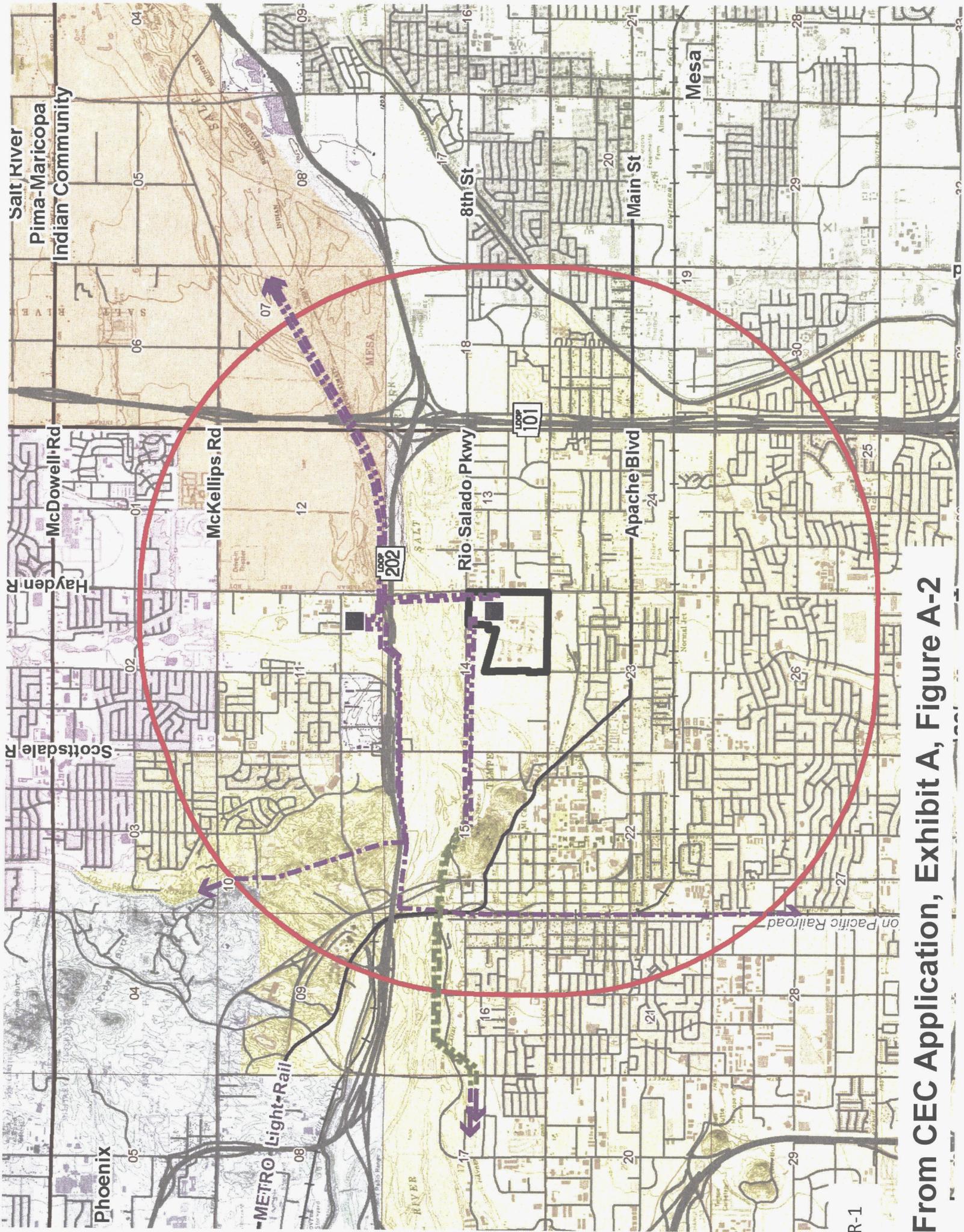
- **Land Use (Exhibits A, H)**
- **Water Resources (Exhibit B2)**
- **Biological Resources (Exhibits C, D)**
- **Visual and Cultural Resources (Exhibit E)**
- **Recreation (Exhibit F)**
- **Noise (Exhibit I)**

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Land Use

Existing and Future Land Use (Exhibit A)

- Within City of Tempe and adjacent to ASU
- City of Tempe and ASU plans include ongoing power plant operations
- Site designated as industrial land use
- No displacement of surrounding land uses
- Continued industrial land use is compatible with future mixed use development in the vicinity



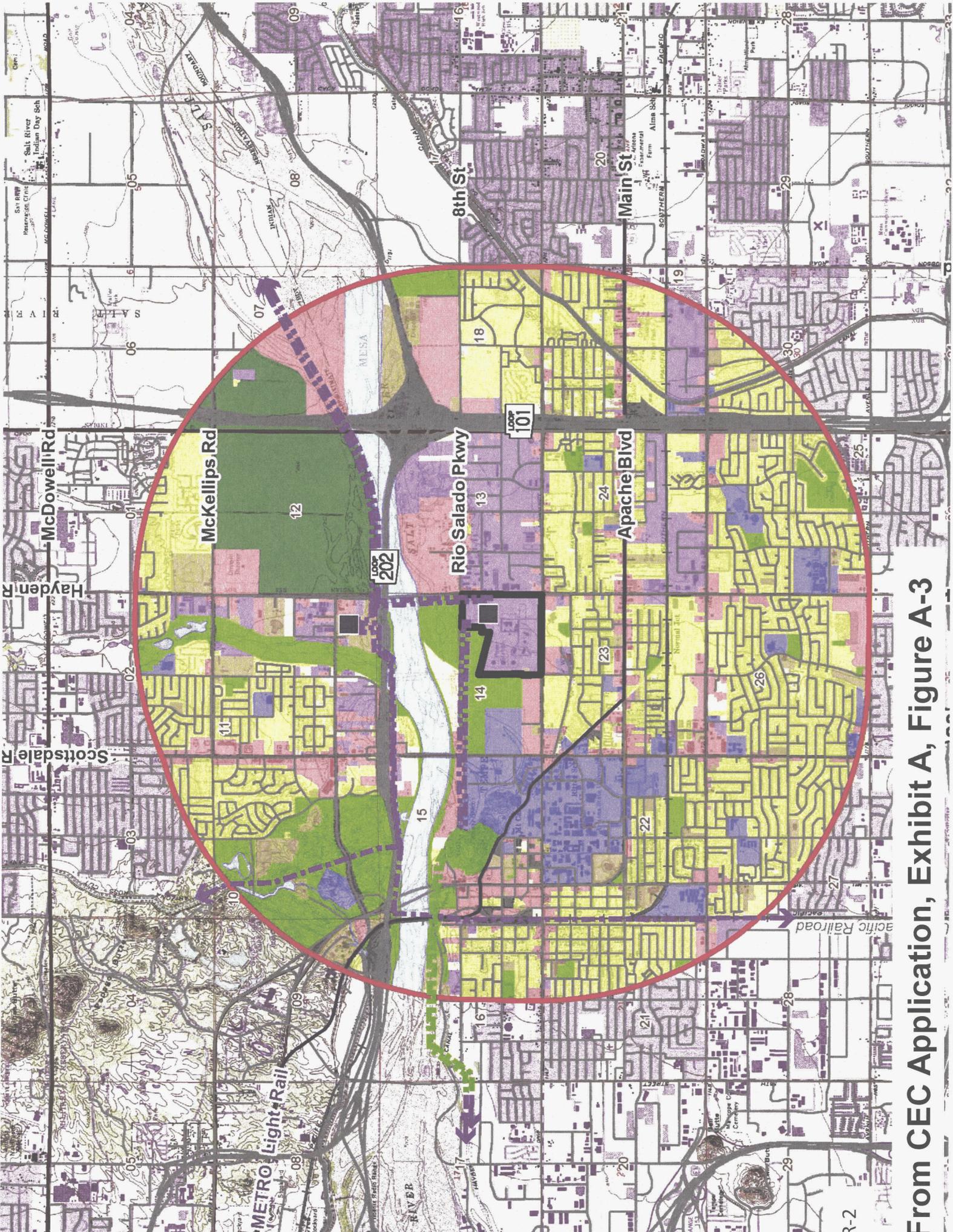
R-1

From CEC Application, Exhibit A, Figure A-2

Land Use

Existing and Future Land Use (Exhibit A)

- Within City of Tempe and adjacent to ASU
- City of Tempe and ASU plans include ongoing power plant operations
- Site designated as industrial land use
- No displacement of surrounding land uses
- Continued industrial land use is compatible with future mixed use development in the vicinity



From CEC Application, Exhibit A, Figure A-3

Land Use

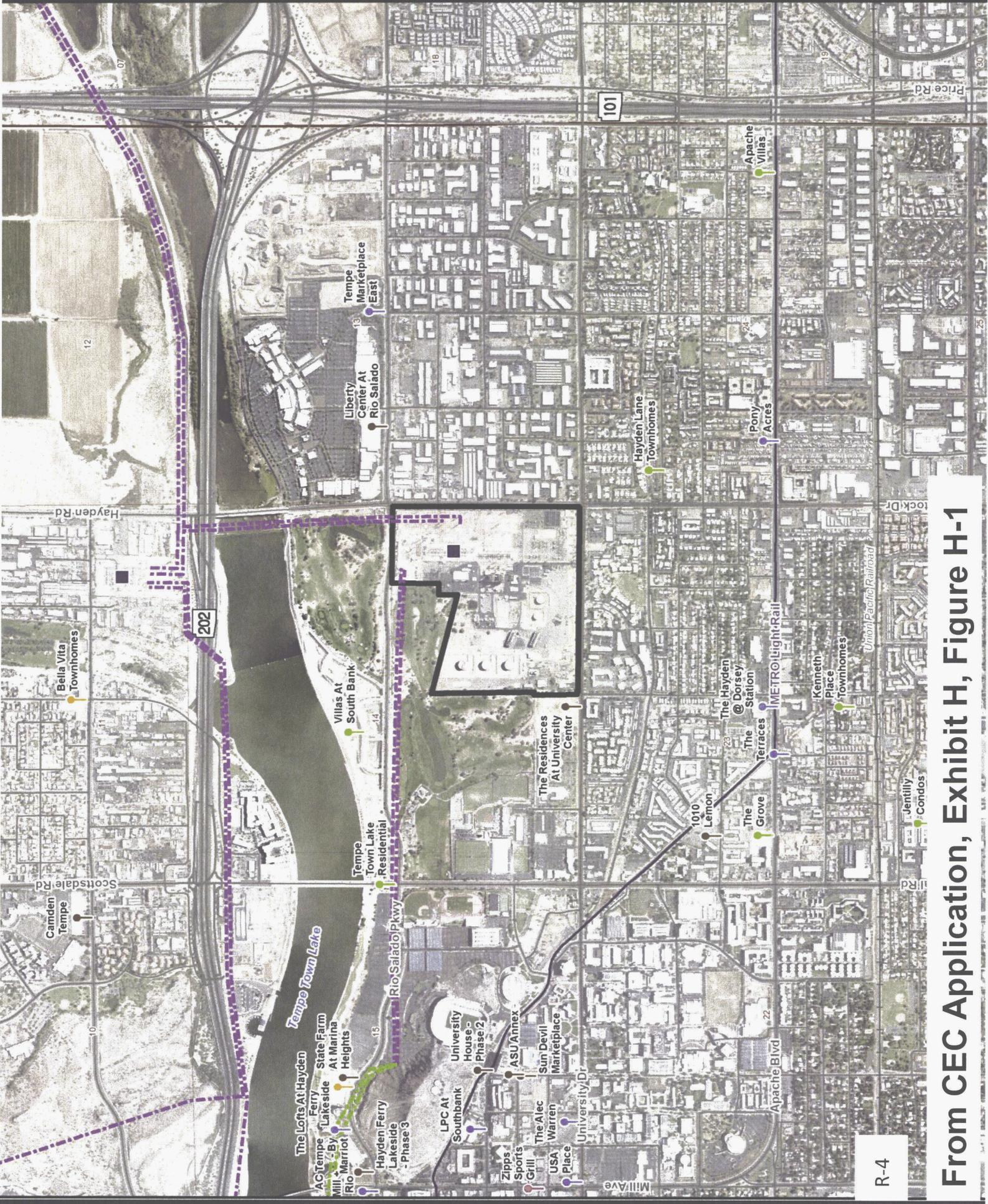
Existing and Future Land Use (Exhibit A)

- Within City of Tempe and adjacent to ASU
- City of Tempe and ASU plans include ongoing power plant operations
- Site designated as industrial land use
- No displacement of surrounding land uses
- Continued industrial land use is compatible with future mixed use development in the vicinity

Land Use

Existing Plans for Developments (Exhibit H)

- 30 new/planned developments within 1 mile
 - 13 final permits approved and/or under construction
 - 17 entitlements secure or in preliminary review
- Contact with property owners and developers
 - Newsletters
 - APS contacted developer of northwest corner of Dorsey Lane and University Drive
- Ocotillo Project compatible with development plans



R-4

From CEC Application, Exhibit H, Figure H-1

Water Resources

Water Use (Exhibit B2)

- Groundwater use
 - Active Management Area
 - Grandfathered rights
 - Aquifer capacity
- Current operations
 - Total water use 737 acre-feet/year (14-year average)
 - Water use rate of 1,007 gallons/MWh
- Proposed operations
 - Projected water use 638 acre-feet/year
 - Water use rate of 141 gallons/MWh

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Water Resources

Water Quality (Exhibit B2)

- **Current operations**
 - Cooling tower wastewater
 - Discharged to City of Tempe sewer
 - Discharged consistent with water quality requirements under City of Tempe permit
- **Proposed operations**
 - Hybrid cooling system wastewater
 - Discharge to City of Tempe sewer
 - Will meet water quality requirements for discharge to City of Tempe sewer

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Biological Resources (Exhibits C, D)

- Highly industrial area surrounded by urban development
- Construction on previously disturbed land
- No impacts on special status species or unique habitats; none occur within this site
- Limited impacts on wildlife or plant life



THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
 5000 W. CAREFREE HIGHWAY
 PHOENIX, AZ 85086-5000
 (602) 942-3000 • WWW.AZGFD.GOV



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 JAMES L. WINDLOW
 KURT R. DAVIS, PHOENIX
 EDWARD "PAT" MAZURK, FLAGSTAFF
 JAMES R. AMMON, YUMA
 DIRECTOR
 LARRY D. WOYLES
 DEPUTY DIRECTOR
 T. E. GARY

April 3, 2014

Ms. Jennifer Frownfelter
 URS Corporation
 7720 North 16th Street, Suite 100
 Phoenix, AZ 85020

Re: Review of the APS Ocotillo Generation Project.
 Dear Ms. Frownfelter:

The Arizona Game and Fish Department (Department) has received your letter, dated February 24, 2014 regarding the installation of the natural-gas fired combustion turbines in Tempe, AZ. We have reviewed the information packet provided to us in your letter. As the proposed project is located in a previously disturbed area, with the present habitat providing relatively low value to wildlife, the Department does not anticipate any significant adverse impacts to wildlife resources would occur as a result of this project.

Thank you for the opportunity to review this project. The receipt you received from the On-Line Environmental Review Tool should provide general recommendations and additional contact information. If you have any questions regarding this letter, please contact me at (623) 236-7615.

Sincerely,

Cheri A. Bouchér
 Project Evaluation Program Specialist, Habitat Branch
 Arizona Game and Fish Department

cc: Laura Canaca, Project Evaluation Program Supervisor
 Kelly Wolff-Krauter, Habitat Program Manager, Region VI

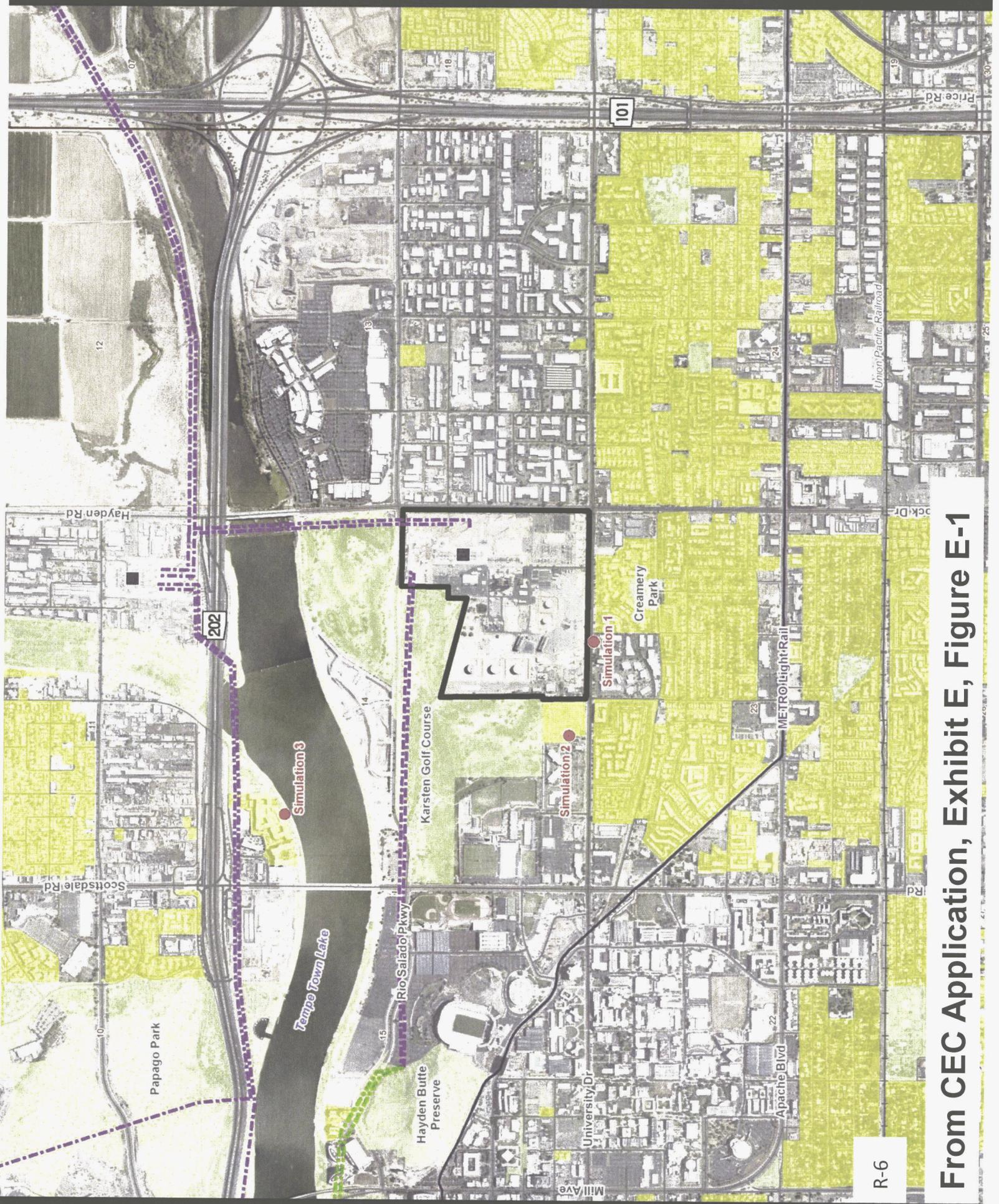
AGFDW M14-03044613

AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATIONS AGENCY

"... the Department does not anticipate any significant adverse impacts to wildlife resources would occur as a result of this project."

Visual Resources (Exhibit E)

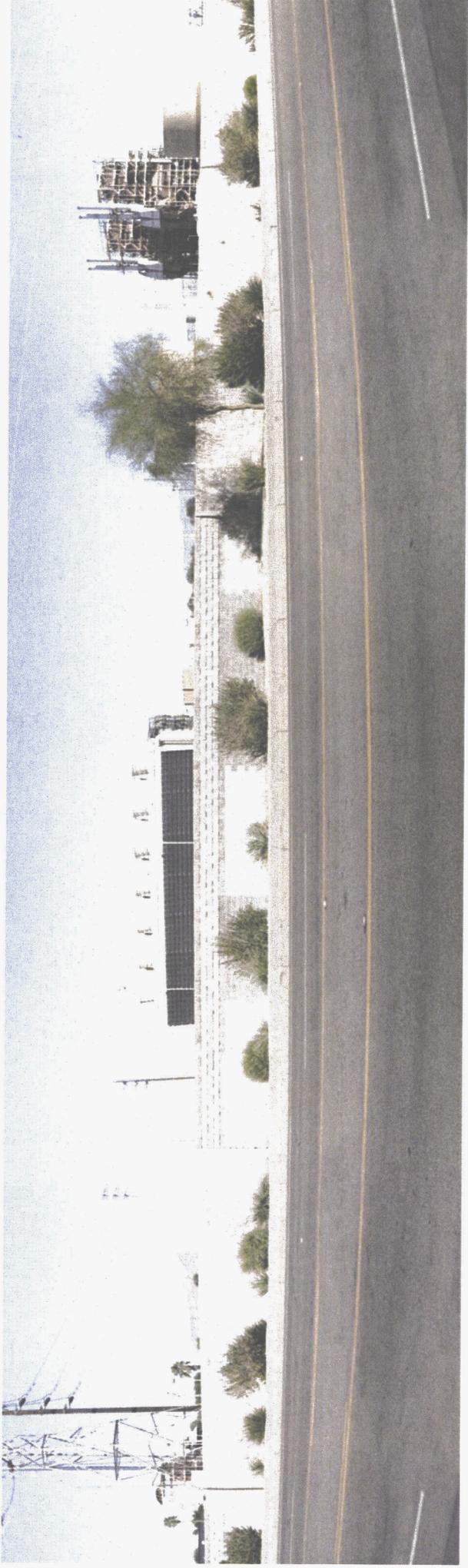
- Changes consistent with the existing industrial character of the site
- Changes would be visible to viewers, though compatible within the context of the existing setting
- Visual simulations



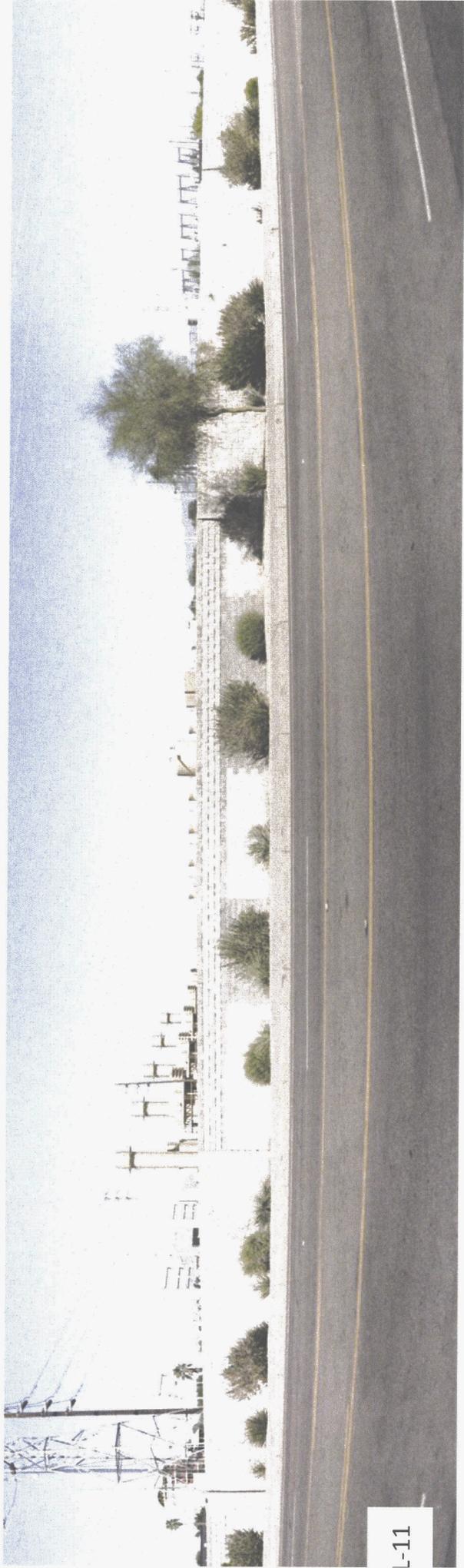
From CEC Application, Exhibit E, Figure E-1

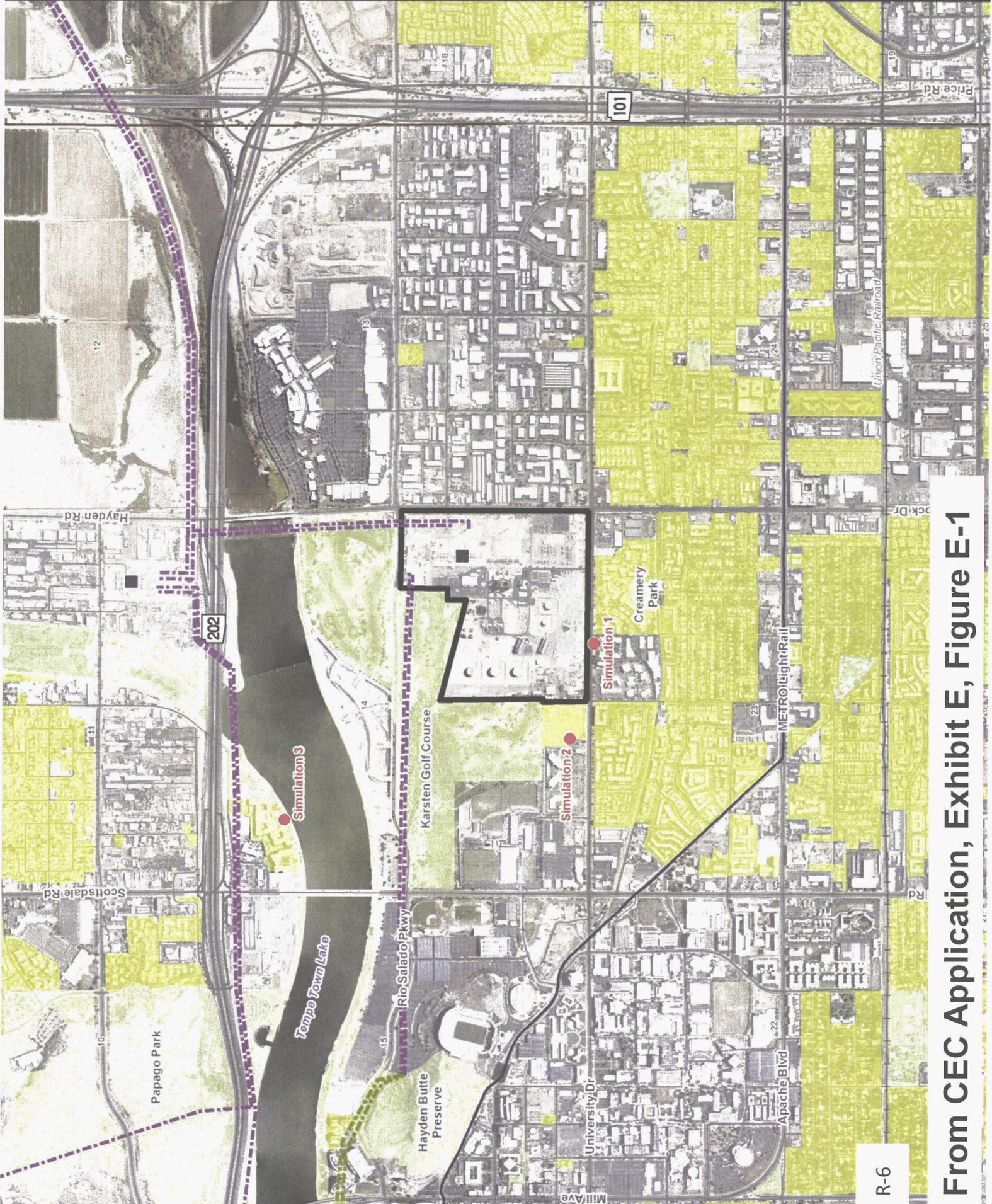
Views of Changing Conditions – University Dr.

- Existing view from University Drive



- Conceptual view from University Drive

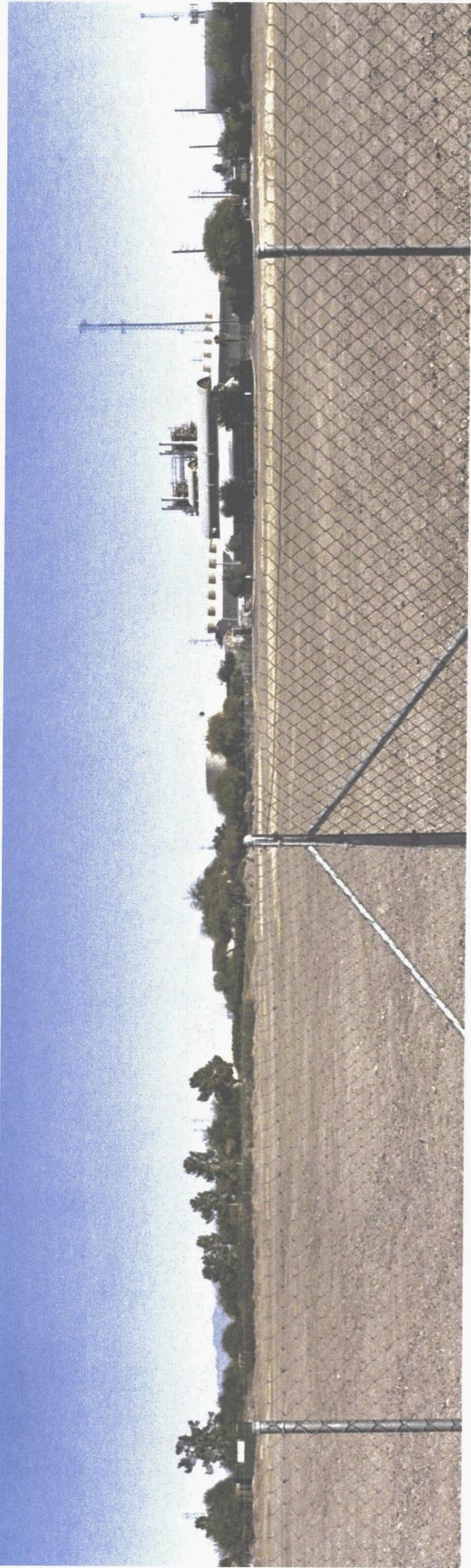




From CEC Application, Exhibit E, Figure E-1

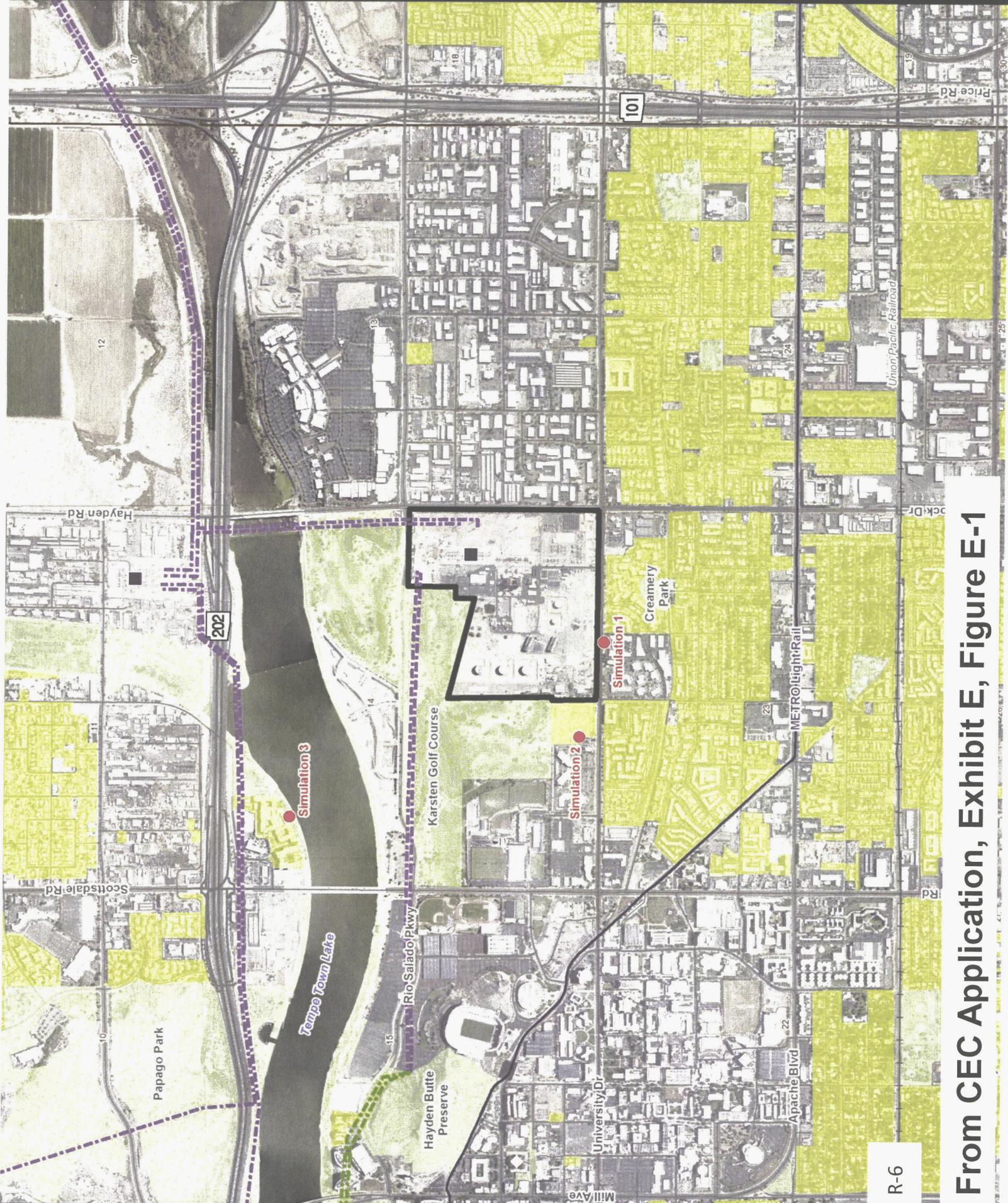
Views of Changing Conditions – ASU Center

- Existing view from ASU Center B Building Parking Lot looking northeast



- Conceptual view from ASU Center B Building Parking Lot looking northeast

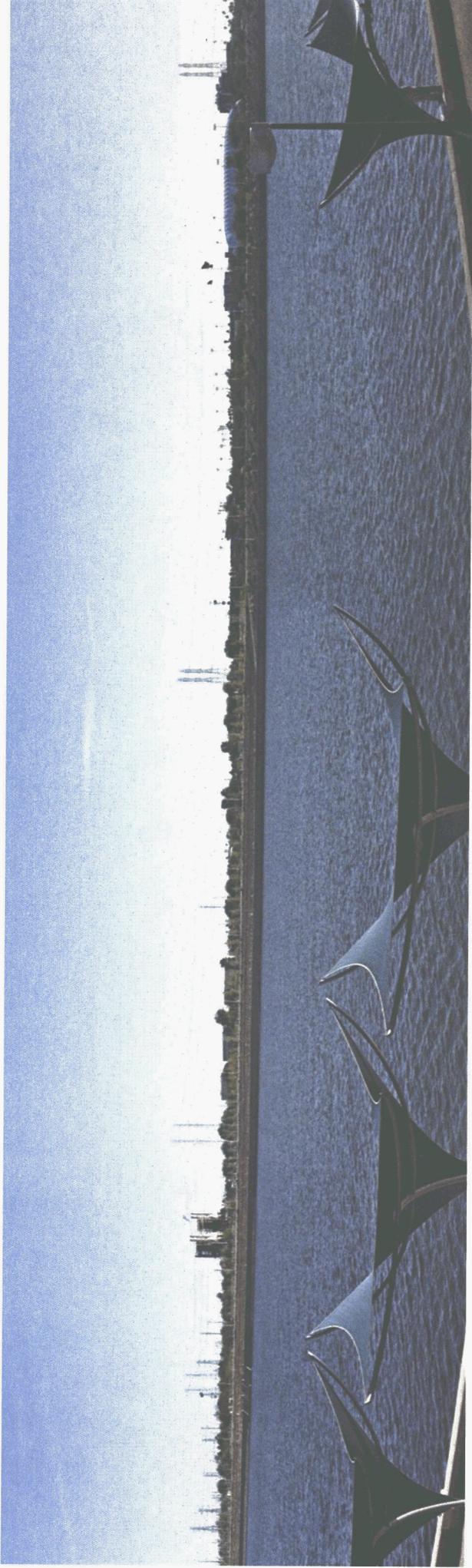




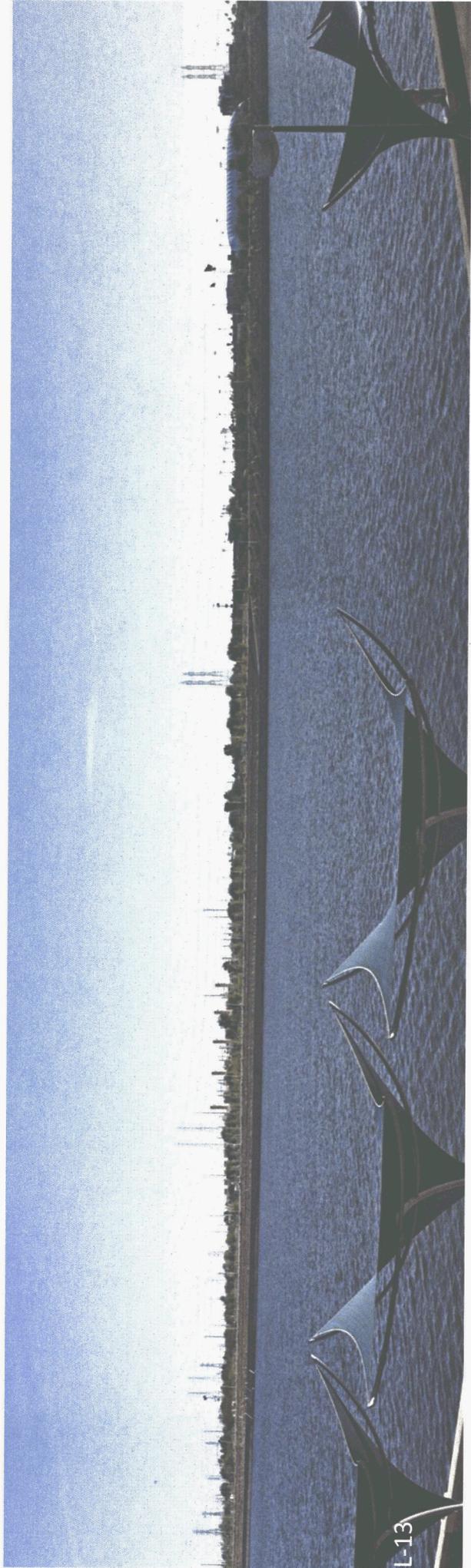
From CEC Application, Exhibit E, Figure E-1

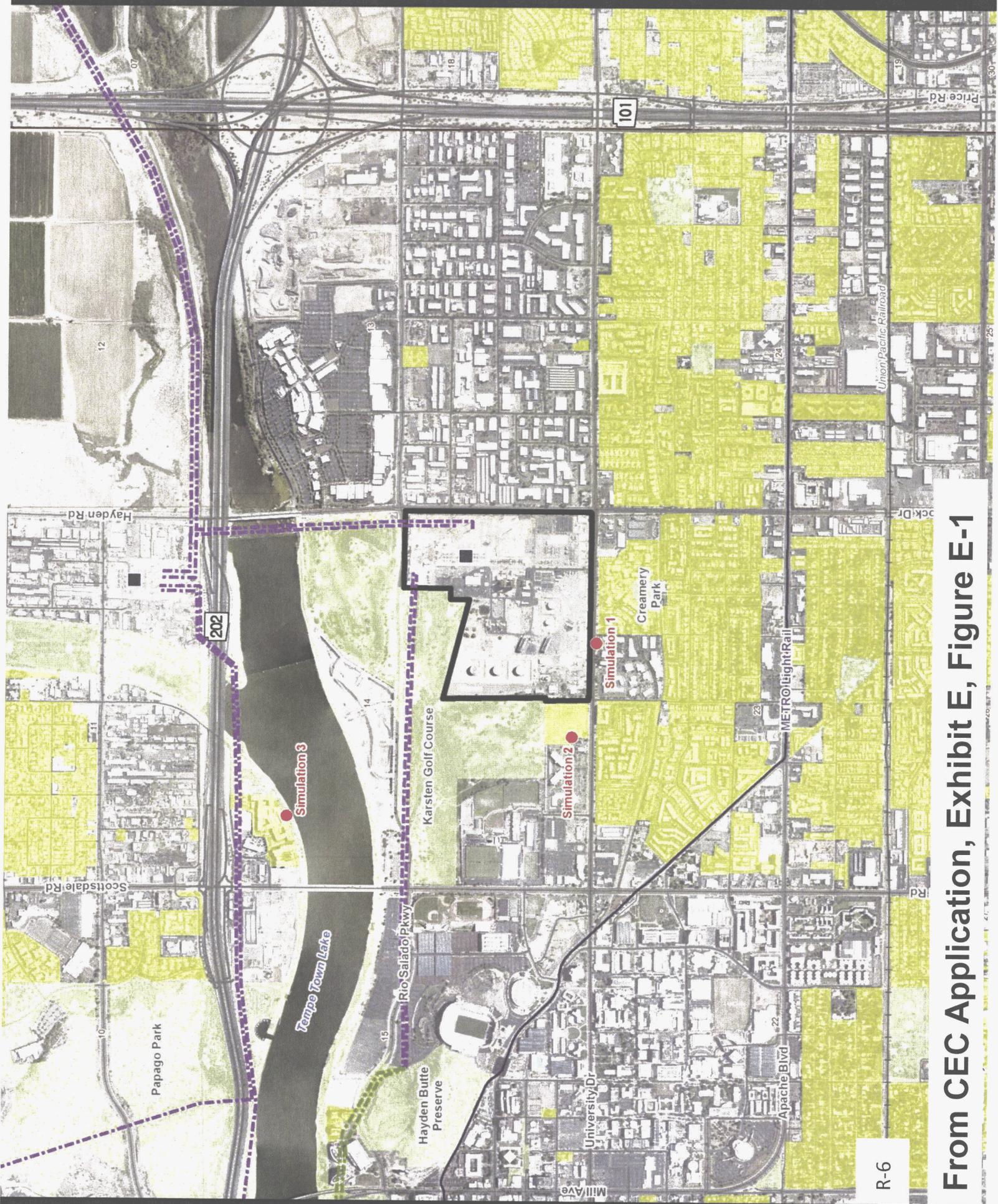
Views of Changing Conditions – Grigio Apts.

- Existing view from Grigio Tempe Town Lake Apartments looking southeast



- Conceptual view from Grigio Tempe Town Lake Apartments looking southeast



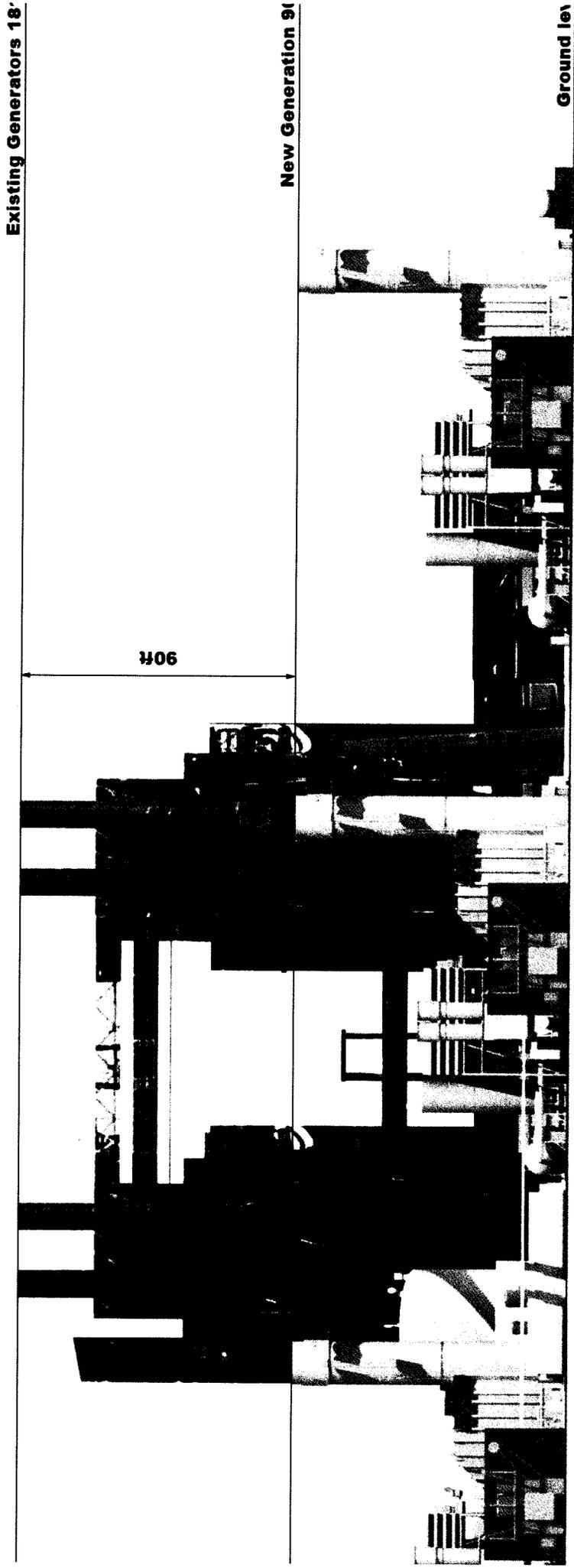


Visual Resources (Exhibit E)

- The lower profile of the GT units and removal of steam units will decrease overall visual dominance
- Minimal visual impacts, and no impacts on designated scenic areas

Visual Resources (Exhibit E)

Heights of Existing and Proposed Generating Units



Cultural Resources (Exhibit E)

- Ocotillo Power Plant is not eligible for the Arizona Register of Historic Places
- Nearby historic properties would not be adversely affected
- One buried archaeological feature (small prehistoric Hohokam canal) found onsite
 - Correspondence and coordination with SHPO and tribes
 - Mitigation: APS will sponsor additional archaeological testing and recovery and preservation of artifacts and information, in consultation with the SHPO and interested tribes

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Recreation (Exhibit F)

- No existing or planned recreation facilities onsite; the site is not accessible for public recreation purposes
- No displacement of existing or planned recreational uses

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Noise (Exhibit I)

- Modeled aggregate operation sound propagation for a variety of expected scenarios
 - Using measured “baseline” noise levels and other input data
 - Included combinations of new and existing GTs
- Operation noise levels expected to be similar to, or less than, noise from existing plant operations
- Noise levels would comply with the City of Tempe requirements under a variety of anticipated scenarios

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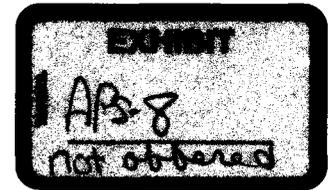
Summary

- Continues use of existing power plant site, consistent with land use plans
- Annual water use reduced
- No impact on sensitive biological resources
- Visual profile lowered, less visible
- Limited impacts on archaeological resources
- No impact on recreational uses
- Noise conditions similar
- Project is environmentally compatible based on factors in ARS 40-360.06

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**Ocotillo Modernization Project
L-00000D-14-0292-00169**

**Physical Power Plant Tour Protocol
1500 E. University Drive
Tempe, AZ 85281**



- Tour attendees will assemble at 7:45 am on Wednesday, September 17, 2014 in the Ocotillo Power Plant's Administration Building, located approximately 800 feet north of the plant's main entrance at 1500 E. University Drive. Security will issue a visitors badge at the entrance gate.
- Visitor parking can be found immediately south of the Administration Building.
- APS attendees must sign the visitor log at the front desk upon entering and before exiting the Administration Building following the tour.
- A safety briefing will be conducted and participants will issued an acknowledgement form for signature; those who do not complete a full safety briefing and the Visitor Safety Form will not be allowed to join the tour.
- The physical tour will begin immediately following the safety briefing, at approximately 8:15 am, and is expected to take up to 2 hours.
- The tour will be conducted on foot and will include ascending and/or descending stairs.
- Attendees are expected to follow a "look-but-don't-touch" guideline. If an Attendee would like to conduct more than a visual inspection on any item or component during the tour, such request must be made of, and approved by, APS staff.

- Safety and Personal Protective Equipment (PPE):
 - Safety equipment provided by APS will include hard hats, safety glasses, and ear protection.
 - **Participants must wear natural fiber, long-sleeved shirts and long pants. No backless, toe-less, flip flops or CROCS or shoes with cut-outs will be allowed. A sturdy leather shoe is recommended.**
 - Only those with appropriate PPE will be allowed to attend the tour.
 - Bottled water will be provided to tour participants.

Physical Tour Stop/Point Descriptions

7:45 AM, Stop 1 – Administration Building: A safety briefing will be conducted by APS staff and PPE will be issued to all attendees.

8:15 AM, Stop 2 – Existing Steam Turbine Generating Units #1 and #2: Attendees will visit the third level of the existing Steam Turbine Generating Units.

- View to the west: Tanks along western boundary (to be removed); cooling towers (to be removed); existing 55 MW GT units (to remain); pond (eliminated due to drainage changes onsite); neighbors including Tempe Fire Training Center, ASU Karsten Golf Course, new multi-family residential construction at corner of University Drive and Dorsey Lane.
- View to the east: Ocotillo 230kV Substation / Switchyard and points of interconnection; other substations (to remain).

An option will be provided to for attendees to visit the fifth level of the Steam Turbine Generating Units. The fifth level is approximately 110 feet high with grated walkways (NOTE: No questions or discussion will occur on the fifth level due to constrained space for participants and the court reporter).

9:15 AM, Stop 3 – Existing Gas Turbine Generators #1 and #2: Attendees will view the existing 55 MW GT units; immediately west is a relatively open area where the new cooling towers and associated facilities will be located.

9:30 AM, Stop 4 – Proposed Construction Area for Gas Turbine (GT) Generators: Attendees will view the proposed location of five GT Generators; abandoned fuel oil tanks (to be removed). Nearest neighbors to Ocotillo Power Plant, including Tempe Fire Training Center, ASU Karsten Golf Course, and the new multi-family residential construction also are visible or partially visible from this location.

9:45 AM, Stop 5 – Existing Cooling Towers and Proposed Ammonia Storage: Attendees will view the cooling towers (to be removed), abandoned tanks (to be removed), and the proposed location for ammonia storage.

10:00 AM, Stop 6 – Return to Administration Building: Any additional questions will be answered; tour concludes, PPE returned.

Ocotillo Power Plant Tour

Ocotillo Modernization Project

Legend

- Stop 1** – Administration Building
- Stop 2** – Existing Steam Turbine Generating Units #1 and #2
- Stop 3** – Existing Gas Turbine Generators #1 and #2
- Stop 4** – Proposed Construction Area for Gas Turbine (GT) Generators
- Stop 5** – Existing Cooling Towers and Proposed Ammonia Storage
- Stop 6** – Administration Building

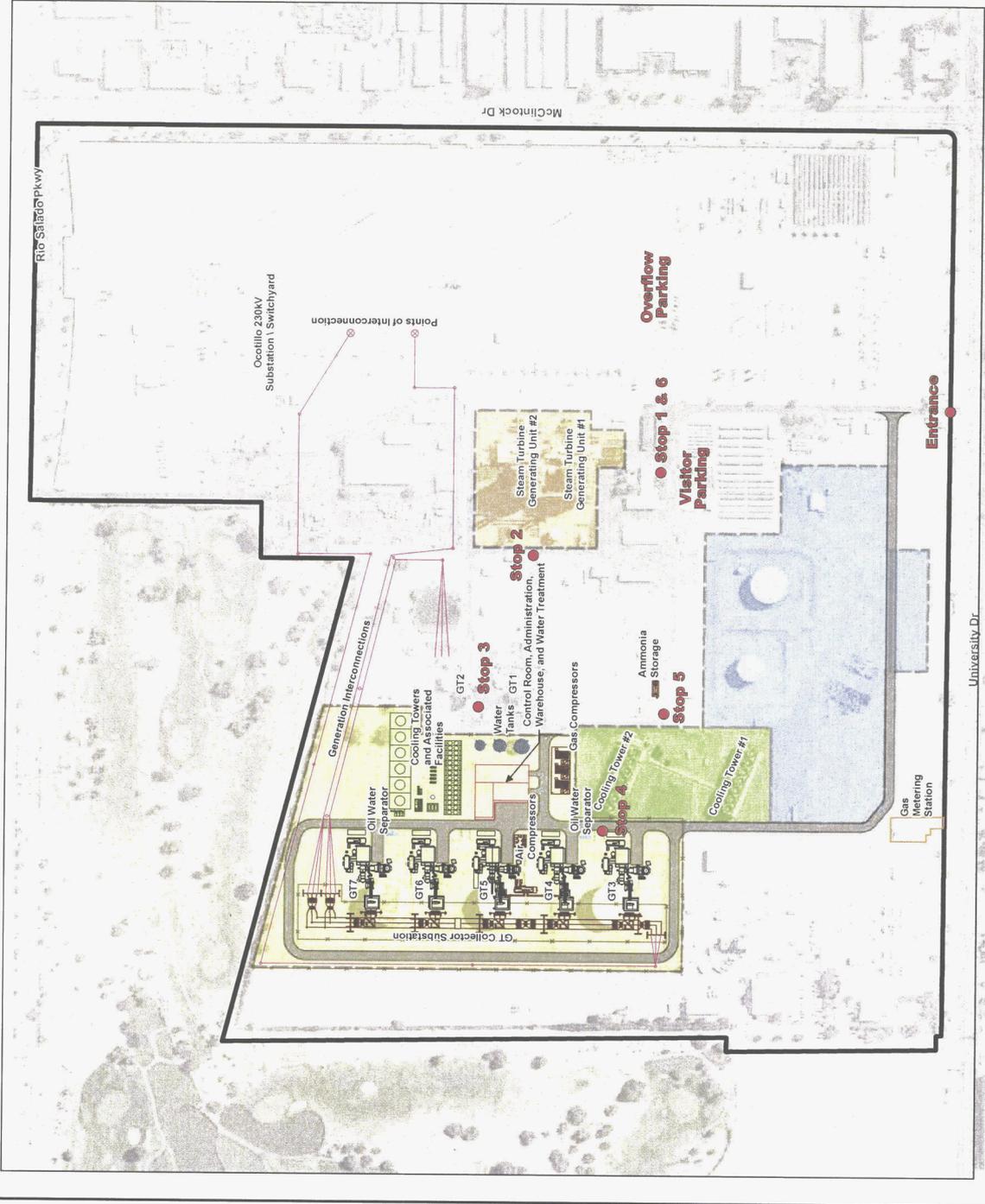
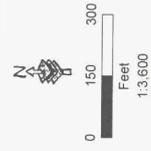
 Existing Ocotillo Power Plant

Proposed Site Layout

-  Proposed GT
-  Control Room, Administration, Warehouse, and Water Treatment
-  Cooling Towers and Associated Facilities
-  Oil Water Separator
-  Generation Interconnections
-  Gas Metering Station
-  Water Tanks
-  Plant Features
-  Fence
-  Primary Construction
-  Temporary Construction Offices, Laydown and Parking Areas
-  Main Construction Area for New Generating Units
-  Cooling Towers Removal Area
-  Steam Turbine Generating Unit Removal Area
-  Internal Access Road

GT = Gas Turbine Generator

Source
Project Features: APS 2013 - 2014
Base Map: ADOIT 2014
Insert: ECOMC 2012



1 **BEFORE THE ARIZONA POWER PLANT**
2 **AND TRANSMISSION LINE SITING COMMITTEE**

3
4 IN THE MATTER OF THE APPLICATION
5 OF ARIZONA PUBLIC SERVICE
6 COMPANY, IN CONFORMANCE WITH
7 THE REQUIREMENTS OF ARIZONA
8 REVISED STATUTES 40-360 ET SEQ., FOR
9 A CERTIFICATE OF ENVIRONMENTAL
10 COMPATIBILITY AUTHORIZING THE
11 OCOTILLO MODERNIZATION PROJECT,
12 WHICH INCLUDES THE INSTALLATION
13 OF FIVE 102 MW GAS TURBINES AND
14 THE CONSTRUCTION OF TWO 230-
KILOVOLT GENERATION
INTERCONNECTIONS AND OTHER
ANCILLARY FACILITIES, ALL LOCATED
WITHIN THE BOUNDS OF THE EXISTING
OCOTILLO POWER PLANT SITUATED ON
PROPERTY OWNED BY ARIZONA PUBLIC
SERVICE COMPANY AND LOCATED AT
1500 EAST UNIVERSITY DRIVE, TEMPE,
ARIZONA, IN MARICOPA COUNTY.

DOCKET NO. L-00000D-14-0292-00169

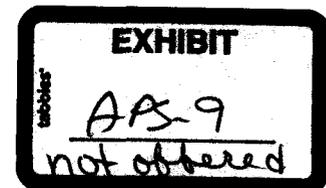
Case No. 169

**NOTICE OF FILING
PROPOSED CERTIFICATE OF
ENVIRONMENTAL
COMPATIBILITY**

15 **CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY**

16 Pursuant to notice given as provided by law, the Arizona Power Plant and
17 Transmission Line Siting Committee (the "Committee") held public hearings on
18 September 16, 17 and 18, 2014, in Tempe, Arizona, in conformance with the
19 requirements of Arizona Revised Statutes ("A.R.S.") §§ 40-360, *et seq.*, for the purpose
20 of receiving evidence and deliberating on the Application of Arizona Public Service
21 Company ("Applicant") for a Certificate of Environmental Compatibility ("Certificate")
22 in the above-captioned case (the "Project").

23 The following members and designees of members of the Committee were
24 present at one or more of the hearings for the evidentiary presentations and/or for the
25 deliberations:



1	John Foreman	Chairman, Designee for Arizona Attorney General Tom Horne
2		
3	Steve Olea	Designee of the Chairman, Arizona Corporation Commission
4		
5	Trevor Baggione	Designee for Director, Arizona Department of Environmental Quality
6		
7	Jack Haenichen	Designee for Director, Arizona Governor's Energy Policy Office
8		
9	Michael J. Lacey	Designee for Director, Arizona Department of Water Resources
10		
11	Patricia A. Noland	Appointed Member
12		
13	David Richens	Appointed Member
14		
15	Sylvia Allen	Appointed Member
16		
17	Paul Walker	Appointed Member
18		
19	Jeff McGuire	Appointed Member
20		
21	David L. Eberhart	Appointed Member

20 Applicant was represented by Thomas H. Campbell of Lewis Roca Rothgerber
21 LLC and Melissa M. Krueger and Linda J. Benally of Arizona Public Service Company.
22 The following requested to intervene as a party pursuant to A.R.S. § 40-360.05:
23 Residential Utility Consumer Office (“RUCO”), and Gila River Power, LLP.

24 At the conclusion of the hearing, the Committee, after considering the
25 Application, the appearances of Applicant and all intervenors, the evidence, testimony
26 and exhibits presented by Applicant and all intervenors, the comments made by persons
27 making limited appearances and the comments of the public, and being advised of the
28 legal requirements of A.R.S. §§ 40-360 to 40-360.13, upon motion duly made and

1 seconded, voted _____ to _____ in favor of granting Applicant this Certificate (Case
2 No. 169) for construction of the Project.

3 The Project consists of the installation of additional generation comprised of five
4 net 102 MW gas turbines (nominal), including two 230-kilovolt generation
5 interconnections and other ancillary facilities. The Project will be located entirely
6 within the bounds of the existing Ocotillo Power Plant, which is owned and operated by
7 Applicant and located at 1500 East University Drive, Tempe, Arizona, in Maricopa
8 County. A general location map of the Project is set forth in Exhibit A, attached hereto.

9 **CONDITIONS**

10 This Certificate is granted upon the following conditions:

11 1. This authorization to construct the Project shall expire five (5) years from
12 the date this Certificate is approved by the Arizona Corporation Commission
13 (“Commission”). However, prior to expiration, Applicant may request that the
14 Commission extend this time limitation. **[Case No. 166]**

15 2. Applicant shall comply with all existing applicable air and water pollution
16 control standards and regulations, and with all existing applicable statutes, ordinances,
17 master plans, and regulations of the United States, the State of Arizona, the County of
18 Maricopa, the City of Tempe, and any other governmental entities having jurisdiction,
19 and their agencies or subdivisions, including but not limited to the following:

20 2.1 All applicable land use regulations;

21 2.2 All applicable zoning stipulations and conditions, including but not
22 limited to landscaping and dust control requirements;

23 2.3 All applicable water use, discharge and/or disposal requirements of
24 the Arizona Department of Water Resources (“ADWR”) and the
25 Arizona Department of Environmental Quality (“ADEQ”);

26 2.4 All applicable noise control standards; and
27
28

1 2.5 All applicable regulations governing storage and handling of
2 hazardous chemicals and petroleum products. **[Case No. 163,**
3 **modified]**

4 3. Applicant shall obtain all approvals and permits required by the United
5 States, the State of Arizona, the County of Maricopa, and any other governmental
6 entities having jurisdiction necessary to construct the Project. **[Case No. 163, modified]**

7 4. Any transfer or assignment of this Certificate shall require the assignee or
8 successor to assume all responsibilities of the Applicant listed in this Certificate and its
9 conditions in writing as required by A.R.S. § 40-360.08(A) and R14-3-213(F) of the
10 Arizona Administrative Code. **[Case No. 167]**

11 5. If human remains and/or funerary objects are encountered on private land
12 during the course of any ground-disturbing activities related to the construction of the
13 Project, Applicant shall cease work on the affected area of the Project and notify the
14 Director of the Arizona State Museum as required by A.R.S. § 41-865. **[Case No. 167,**
15 **modified]**

16 6. Applicant, after consultation with the State Historical Preservation Office
17 and applicable Native American Tribes, will arrange for a qualified archaeologist to
18 implement further pre-construction archeological testing and to monitor all ground
19 clearing and disturbing construction activities that may affect historical or cultural sites
20 that are listed, or eligible for listing, on the Arizona Register of Historic Places. In the
21 event a listed or listing-eligible site is discovered, the Applicant will ensure that
22 approved mitigation measures are implemented according to a treatment plan developed
23 in consultation with the State Historic Preservation Office. Applicant shall share results
24 of any archaeological work and findings with the appropriate Native American tribes.
25 **[Case No. 164, modified]**

26 ...
27 ...
28 ...

1 7. Applicant shall comply with the notice and salvage requirements of the
2 Arizona Native Plant Law (A.R.S. §§ 3-901, *et seq.*) and shall, to the extent feasible,
3 minimize the destruction of protected native plants during construction of the Project.

4 **[Case No. 167]**

5 8. In the event that the Project requires an extension of the term of this
6 Certificate prior to completion of construction, the Applicant shall use reasonable means
7 to notify all landowners and residents within a half-mile radius of the Project, all persons
8 who made public comment at this proceeding who provided a mailing address, and all
9 parties to this proceeding of the request and the date, time and place of the hearing
10 during which the Commission will consider the request for extension. **[Case No. 167,**

11 **modified]**

12 9. Applicant shall make every reasonable effort to identify and correct, on a
13 case-specific basis, all complaints of interference with radio or television signals from
14 operation of the gas turbines and related facilities addressed in this Certificate.
15 Applicant shall maintain written records for a period of five (5) years of all complaints
16 of radio or television interference attributable to operation, together with the corrective
17 action taken in response to each complaint. All complaints shall be recorded to include
18 notations on the corrective action taken. Complaints not leading to a specific action or
19 for which there was no resolution shall be noted and explained. Upon request, the
20 written records shall be provided to Staff of the Commission. **[Case No. 167, modified]**

21 10. Applicant, or its assignee(s), shall design the Project to incorporate
22 reasonable measures to minimize impacts to raptors. **[Case No. 165]**

23 11. Applicant or its assignee(s), shall use non-specular conductors and non-
24 reflective surfaces for the Project's transmission line structures. **[Case No. 167]**

25 12. Applicant shall provide copies of this Certificate to all affected
26 governmental entities such as the City of Tempe, the City of Phoenix, the City of Mesa,
27 the City of Scottsdale, Arizona State University, the Salt River Pima-Maricopa Indian
28 Community, and Maricopa County. Additionally, Applicant shall also provide copies of

1 this Certificate to the Arizona State Historic Preservation Office, and the Arizona Game
2 and Fish Department. **[Case No. 167, modified]**

3 13. Before construction commences on the Project, Applicant shall provide
4 known homebuilders and developers who are building upon or developing land within a
5 half-mile of the Project with a written description of the Project. The written description
6 shall identify the location of the Project and contain a pictorial depiction of the Project.
7 Applicant shall also encourage the developers and homebuilders to include this
8 information in their disclosure statements. **[Case No. 167, modified]**

9 14. Applicant will follow the most current Western Electricity Coordinating
10 Council/North American Electric Reliability Corporation planning standards, as
11 approved by the Federal Energy Regulatory Commission, and National Electrical Safety
12 Code construction standards. **[Case No. 167]**

13 15. Applicant shall operate the Project so that during normal operations, the
14 Project shall not exceed the applicable City of Tempe noise standards. Additionally,
15 installation and operation of the Project shall comply with OSHA worker safety noise
16 standards. **[Case No. 105, modified]**

17 16. Applicant shall submit a compliance-certification letter annually,
18 identifying progress made with respect to each condition contained in the Certificate,
19 including which conditions have been met. Each letter shall be submitted to the Arizona
20 Corporation Commission Docket Control commencing on December 1, 2015. Attached
21 to each certification letter shall be documentation explaining how compliance with each
22 condition was achieved. Copies of each letter, along with the corresponding
23 documentation, shall be submitted to the Arizona Attorney General and the Governor's
24 Office of Energy Policy. The requirement for the compliance certification letter shall
25 expire on the date the Project is placed into operation. **[Case No. 167, modified]**

26 **FINDINGS OF FACT AND CONCLUSIONS OF LAW**

27 This Certificate incorporates the following findings of fact and conclusions of
28 law:

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1. The Project aids the state in meeting the need for an adequate, economical and reliable supply of electric power.
2. The conditions placed on the Project in the Certificate by the Committee effectively minimize the impact of the Project on the environment and ecology of the state.
3. The Project is in the public interest because the Project's contribution to meeting the need for an adequate, economical and reliable supply of electric power outweighs the minimized impact of the Project on the environment and the ecology of the state.

DATED this _____ day of _____, 2014.

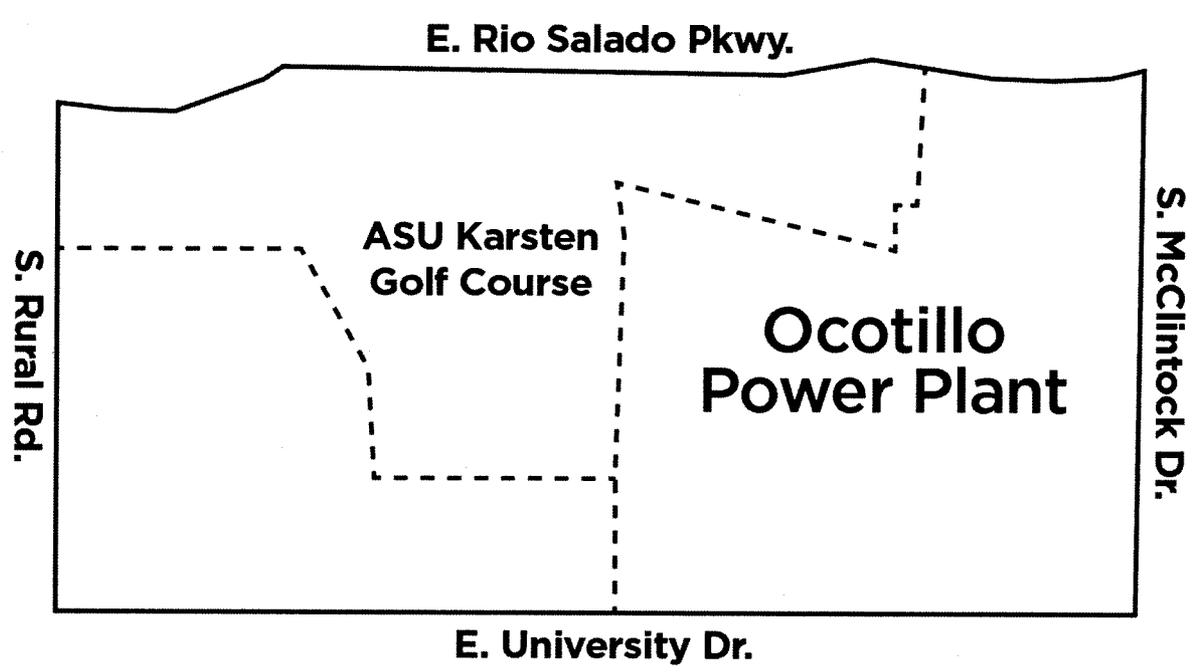
THE ARIZONA POWER PLANT AND
TRANSMISSION LINE SITING COMMITTEE

Hon. John Foreman, Chairman

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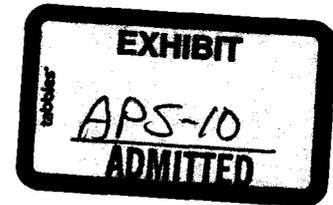
Exhibit A
to
Certificate of Environmental Compatibility
for
Ocotillo Modernization Project
Case No. 169

Project General Location Map



AUGUST 2014

Ocotillo Power Plant Planning for Arizona's Energy Future



These 1960s-era units will be replaced by modern units that stand half as tall.

APS is committed to a highly transparent public process for the Ocotillo Modernization Project, our proposed plan to replace two dated generators with five modern, lower-profile units on the existing plant site. A critical step in this process is filing a Certificate of Environmental Compatibility (CEC) application with the Arizona Corporation Commission (ACC), which was submitted July 31.

As part of the CEC application, APS evaluates environmental factors such as water use, existing and future land uses at the plant site, cultural/archaeological sites and biological resources, plus any other potential environmental impacts from the project. We also document our outreach to neighbors, governing agencies, stakeholders and the general public about the project and record public comment.

The Arizona Power Plant and Transmission Line Siting Committee has scheduled a public hearing to consider the CEC application from Sept. 16-18. The committee will make a recommendation to the ACC, which will issue the ultimate decision on APS's application.

For more information about the committee's public hearing and to find links to the CEC application, please visit azenergyfuture.com/ocotillo or www.azcc.gov/az_power_plant.

PROJECT BENEFITS FOR NEIGHBORHOOD

- Reduces water use and emission rates compared to old units
- Improves overall plant noise conditions
- Replaces 1960s-era units with new, quick-start technology
- Increases property-tax revenue for local economy
- Enables and supports more renewable energy

Thank you for your interest

We appreciate your comments and questions about the Ocotillo Modernization Project. A number of people also attended our open house at ASU Karsten Golf Course in April.

APS continues to work closely with the City of Tempe, ASU and other agencies on this project, such as identifying opportunities for landscape improvements around the plant site. You can find project updates on azenergyfuture.com/ocotillo, which also includes a form to submit your comments and questions. You can also email us at OcotilloGenProj@aps.com.



Mail Station 8508
P.O. Box 53999
Phoenix, AZ 85072

Presorted
Standard
US Postage Paid
Phoenix, AZ
Permit No. 90

OCOTILLO MODERNIZATION PROJECT

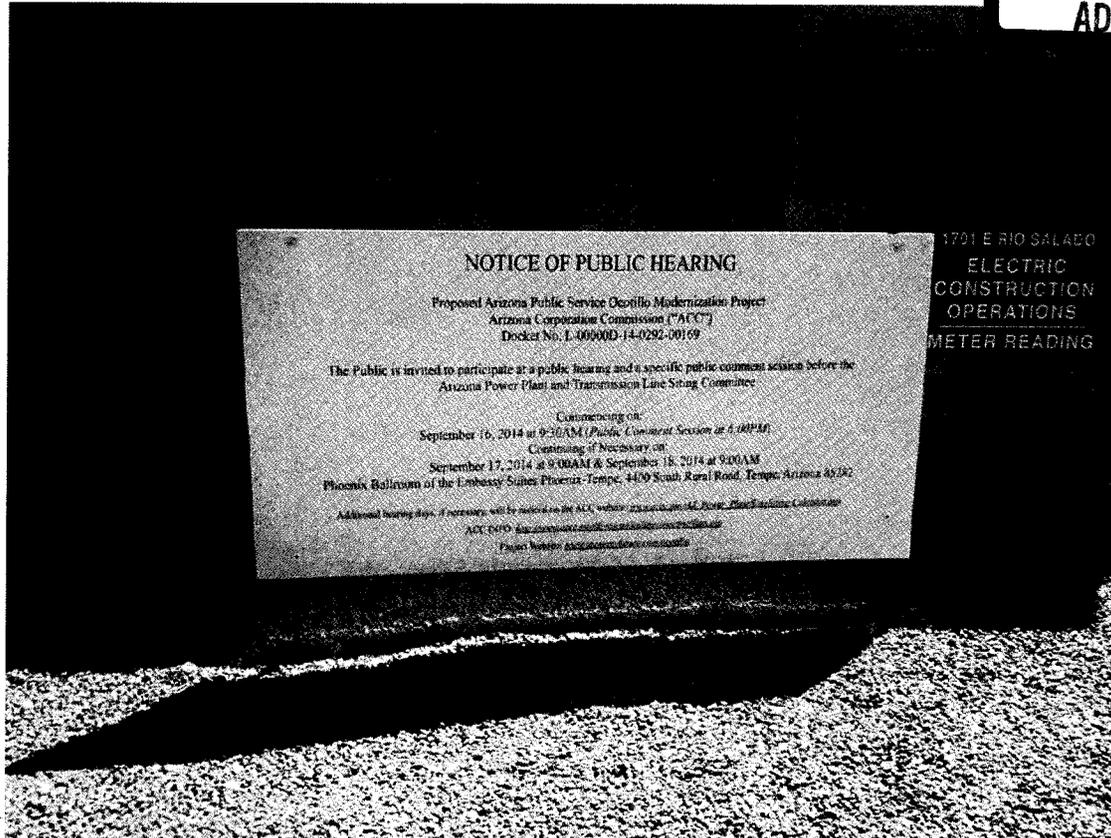


AUGUST 2014

Ocotillo Power Plant Planning for Arizona's Energy Future

Notice of Public Hearing - Sign 1

EXHIBIT
tabbles®
APS-11
ADMITTED



NOTICE OF PUBLIC HEARING

Proposed Arizona Public Service Ocotillo Modernization Project
Arizona Corporation Commission ("ACC")
Docket No. L-00000D-14-0292-00169

The Public is invited to participate at a public hearing and a specific public comment session before the Arizona Power Plant and Transmission Line Siting Committee

Commencing on:

September 16, 2014 at 9:30 AM (Public Comment Session at 4:00 PM)

Continuing if Necessary on:

September 17, 2014 at 9:00 AM & September 18, 2014 at 9:00 AM

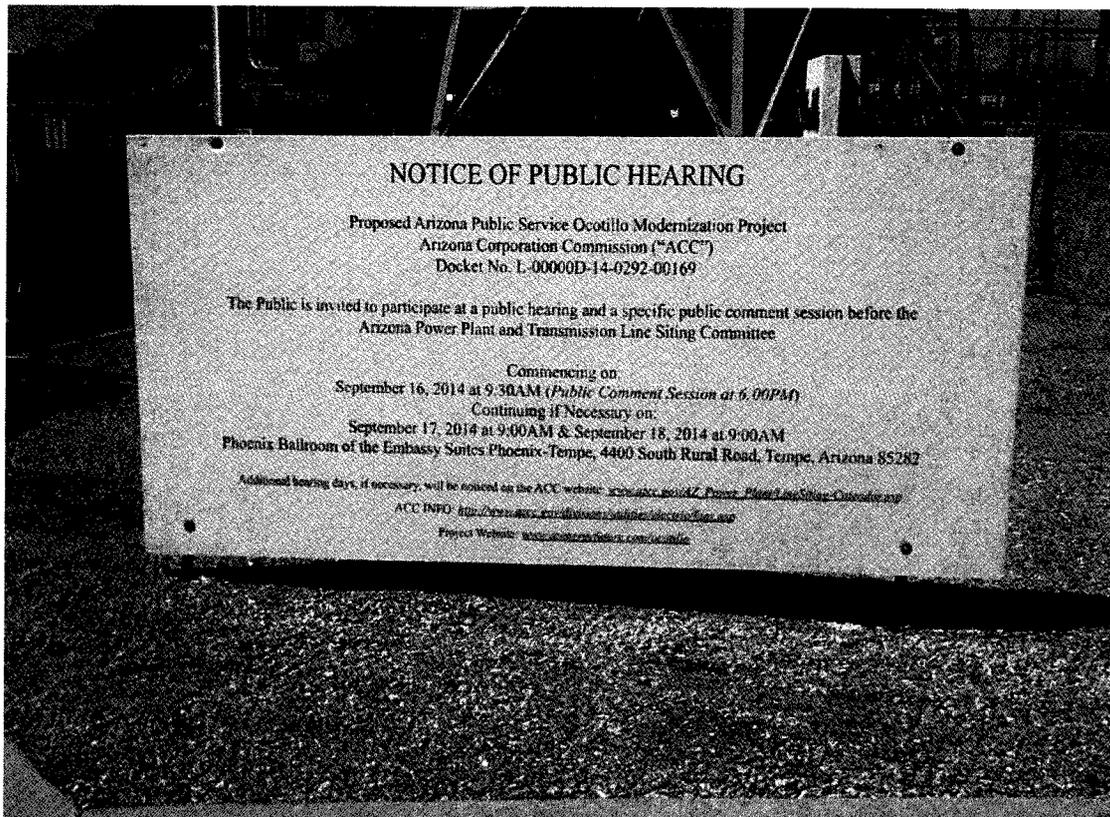
Phoenix Ballroom of the Embassy Suites Phoenix-Tempe, 4400 South Rural Road, Tempe, Arizona 85287

Additional hearing days, if necessary, will be noticed on the ACC website: www.azcc.gov/AZ_Power_Plant_and_Transmission_Line_Siting_Committee.asp

ACC INFO: <http://www.azcc.gov/Default.aspx?tabid=10>

Project Website: www.azps.com/ocotillo

Notice of Public Hearing - Sign 2



NOTICE OF PUBLIC HEARING

Proposed Arizona Public Service Ocotillo Modernization Project
Arizona Corporation Commission ("ACC")
Docket No. L-00000D-14-0292-00169

The Public is invited to participate at a public hearing and a specific public comment session before the Arizona Power Plant and Transmission Line Siting Committee

Commencing on:

September 16, 2014 at 9:30 AM (Public Comment Session at 6:00 PM)

Continuing if Necessary on:

September 17, 2014 at 9:00 AM & September 18, 2014 at 9:00 AM

Phoenix Ballroom of the Embassy Suites Phoenix-Tempe, 4400 South Rural Road, Tempe, Arizona 85287

Additional hearing days, if necessary, will be noticed on the ACC website: www.azcc.gov/AZ_Power_Plant_and_Transmission_Line_Siting_Committee.asp

ACC INFO: <http://www.azcc.gov/Default.aspx?tabid=10>

Project Website: www.azps.com/ocotillo

Notice of Public Hearing Sign Locations



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**BEFORE THE ARIZONA POWER PLANT
AND TRANSMISSION LINE SITING COMMITTEE**

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IN THE MATTER OF THE APPLICATION OF
ARIZONA PUBLIC SERVICE COMPANY, IN
CONFORMANCE WITH THE
REQUIREMENTS OF ARIZONA REVISED
STATUTES 40-360 ET SEQ., FOR A
CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AUTHORIZING THE
OCOTILLO MODERNIZATION PROJECT,
WHICH INCLUDES THE INSTALLATION OF
FIVE 102 MW GAS TURBINES AND THE
CONSTRUCTION OF TWO 230-KILOVOLT
GENERATION INTERCONNECTIONS AND
OTHER ANCILLARY FACILITIES, ALL
LOCATED WITHIN THE BOUNDS OF THE
EXISTING OCOTILLO POWER PLANT
SITUATED ON PROPERTY OWNED BY
ARIZONA PUBLIC SERVICE COMPANY
AND LOCATED AT 1500 EAST UNIVERSITY
DRIVE, TEMPE, ARIZONA, IN MARICOPA
COUNTY.

2014 AUG 20 P 4:03

DOCKET NO. L-00000D-14-0292-

COMMISSION 00169

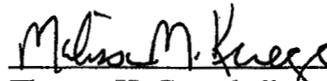
Case No. 169

**NOTICE OF FILING AFFIDAVITS
OF PUBLICATION RE: NOTICE
OF HEARING**

Arizona Public Service Company submits the attached Affidavits of Publication regarding the Notice of Hearing in the above-captioned matter. The Notice of Hearing was published in the Tempe/Ahwatukee Republic and the East Valley Tribune.

RESPECTFULLY SUBMITTED this 20th day of August, 2014.

LEWIS ROCA ROTHGERBER, LLP



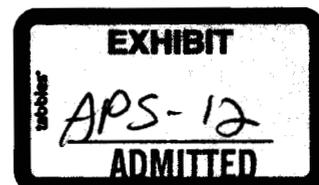
for Thomas H. Campbell

201 East Washington Street, Suite 1200

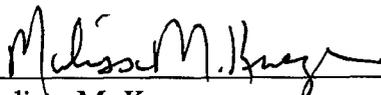
Phoenix, Arizona 85004

Attorney for APS

ARIZONA PUBLIC SERVICE COMPANY



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Melissa M. Krueger
Linda J. Benally
Pinnacle West Capital Corporation
Law Department
400 North 5th Street, MS 8695
Phoenix, Arizona 85004
Attorneys for APS

ORIGINAL and twenty-five (25) copies
of the foregoing filed this 20th day of
August, 2014, with:

The Arizona Corporation Commission
Hearing Division – Docket Control
1200 West Washington Street
Phoenix, Arizona 85007

COPY of the foregoing delivered/mailed
this 20th day of August, 2014, to:

John Foreman
Arizona Power Plant and Transmission Line
Siting Committee
Office of the Arizona Attorney General
PAD/CPA
1275 West Washington Street
Phoenix, Arizona 85007

Lyn Farmer
Administrative Law Judge
Arizona Corporation Commission
1200 W. Washington
Phoenix, Arizona 85007

1 Janice Alward
2 Legal Division
3 Arizona Corporation Commission
4 1200 W. Washington
5 Phoenix, Arizona 85007

6 Steve Olea
7 Utilities Division
8 Arizona Corporation Commission
9 1200 W. Washington
10 Phoenix, Arizona 85007

11 COASH & COASH
12 1802 North 7th Street
13 Phoenix, Arizona 85006

14 Daniel Pozefsky
15 Residential Utility Consumer Office
16 1110 West Washington, Suite 220
17 Phoenix, Arizona 85007

18 Patrick J. Black
19 Fennemore Craig, P.C.
20 2394 E. Camelback Road, Suite 600
21 Phoenix, Arizona 85016

22 Rebecca Turner
23 100 S. Ashley Drive, Suite 1400
24 Tampa, Florida 33602

25 
26
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STATE OF ARIZONA
COUNTY OF MARICOPA

ss.

Casandra Streety, being first duly sworn,
upon oath deposes and says:

That she is the agent of Phoenix Newspapers Inc., publishers of

The Arizona Republic
Arizona Business Gazette

a newspaper of general circulation in the County of Maricopa, State of Arizona, published at Phoenix, Arizona, and that the copy hereto attached is a true copy of the advertisement published in the said paper

for a period of 1 { day } as follows:

Ad was in the Arizona Republic on August 8, 2014, ad ran with a full page in Zone 10. On ad #8258484.

8/11/2014

Casandra Streety
Agent

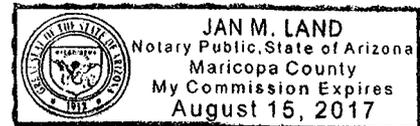
Subscribed and sworn to before me this 11th day of September,

A. D. 2014

My Commission Expires

Aug 15 2017

Jan M Land
Notary Public



PAID ADVERTISEMENT

**BEFORE THE ARIZONA POWER PLANT
AND TRANSMISSION LINE SITING COMMITTEE**

PAID ADVERTISEMENT

PAID ADVERTISEMENT

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY, IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES 40-360 ET SEQ., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE OCOTILLO MODERNIZATION PROJECT, WHICH INCLUDES THE INSTALLATION OF FIVE 102 MW GAS TURBINES AND THE CONSTRUCTION OF TWO 230-KILOVOLT GENERATION INTERCONNECTIONS AND OTHER ANCILLARY FACILITIES, ALL LOCATED WITHIN THE BOUNDS OF THE EXISTING OCOTILLO POWER PLANT SITUATED ON PROPERTY OWNED BY ARIZONA PUBLIC SERVICE COMPANY AND LOCATED AT 1500 EAST UNIVERSITY DRIVE, TEMPE, ARIZONA, IN MARICOPA COUNTY.

DOCKET NO. L-00000D-14-0292-00169
Case No. 169

NOTICE OF HEARING

A PUBLIC HEARING WILL BE HELD before the Arizona Power Plant and Transmission Line Siting Committee ("Committee") regarding the Application of Arizona Public Service Company ("Applicant" or "APS") for a Certificate of Environmental Compatibility ("CEC") authorizing the installation of five 102 MW gas turbines (nominal), including two 230-kilovolt generation interconnections and other ancillary facilities (collectively, the "Ocotillo Modernization Project"). All installations and other modifications associated with the Ocotillo Modernization Project will occur within the bounds of the existing Ocotillo Power Plant, which is owned and operated by APS and located at 1500 East University Drive, Tempe, Arizona, in Maricopa County.

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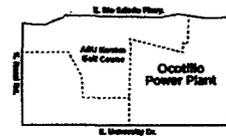
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/s/ John Foreman, CHAIRMAN
ARIZONA POWER PLANT AND
TRANSMISSION LINE SITING COMMITTEE
Office of the Arizona Attorney General

AL-00000000-07

AFFIDAVIT OF DISTRIBUTION

STATE OF Arizona)

COUNTY OF Maricopa)

CITY OF Phoenix)

I, Terry Davenport being duly sworn on oath now and during all times herein stated, have been the publisher and designated agent of the publication known as,

East Valley Tribune ("Publication")

And have full knowledge of the facts herein stated as follows:

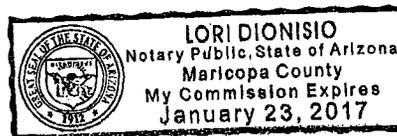
The ad for APS ("Ad/Advertiser") was distributed to the Publication's full circulation on the 10th day of August, 2014.

By: Terry Davenport

Subscribed and sworn to before me
this 11th day of August, 2014.

Lori Dionisio
Notary Public

Notary Seal:



**BEFORE THE ARIZONA POWER PLANT
AND TRANSMISSION LINE SITING COMMITTEE**

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY, IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES 40-360 ET SEQ., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE OCOTILLO MODERNIZATION PROJECT, WHICH INCLUDES THE INSTALLATION OF FIVE 102 MW GAS TURBINES AND THE CONSTRUCTION OF TWO 230-KILOVOLT GENERATION INTERCONNECTIONS AND OTHER ANCILLARY FACILITIES, ALL LOCATED WITHIN THE BOUNDS OF THE EXISTING OCOTILLO POWER PLANT SITUATED ON PROPERTY OWNED BY ARIZONA PUBLIC SERVICE COMPANY AND LOCATED AT 1500 EAST UNIVERSITY DRIVE, TEMPE, ARIZONA, IN MARICOPA COUNTY.

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L-00000D-14-0292-00169
Case No. 169

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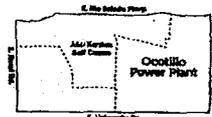
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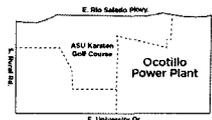
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EDUCATION

BASIS Chandler ranks among best in world in international test

By Eric Smith
TRIBUNE

A Chandler charter school has been recognized as being among the best in the world.

BASIS Chandler was one of the four BASIS charter schools selected for the Organisation for Economic Co-operation and Development (OECD) Test for Schools. The school didn't merely take the test but excelled in it, scoring above Shanghai, the world's highest-scoring school system, in the areas of reading, math and science. The test was administered in the spring.

The purpose of the test is to allow schools to see where they rank in comparison to

other schools internationally. The OECD Test for Schools is based on the Programme for International Student Assessment (PISA) test.

"The OECD's PISA program has been regularly evaluating the quality, equity and efficiency of school systems in over 70 countries, which make up nine-tenths of the world economy," said Tue Halgreen, the project manager for the OECD Test for Schools, in an email. "This assessment reveals wide differences in the educational outcomes of countries and helps us discover what policies work in different education systems."

The test, Halgreen said, expands schools' ability to com-

pare themselves by taking a more worldwide view.

"In an increasingly globalized world, it is important for students, parents and local educators to set goals for academic success that goes beyond the national perspective and compares with the best schools in the world," Halgreen said.

The OECD Test for Schools is taken by 15-year-old students and not only measures their knowledge of a school's curriculum but also how they apply that knowledge to a particular real-world problem. This is where the head of BASIS Chandler, Stephanie Terrell, believes her schools STEM-style curriculum gives her students a leg up.

She said that in addition to the STEM (science, technology, engineering and mathematics) education, the curriculum focuses on critical thinking and problem-solving to make students competitive.

Snowbirds

» From page 6
house. According to a study from Arizona State University, 84,000 winter residents lived in Phoenix-area mobile home parks in 2003.

While snowbirds primarily choose to live in more affordable communities during their stay, a large number of those winter travelers that do migrate to Ahwatukee often choose to become a permanent citizen in the community, effectively becoming "staybirds."

• Kaitlyn Thompson is a junior at the Walter Cronkite School of Journalism and Mass Communication at Arizona State University. She is interning this semester for the AFN.

Espinoza

» From page 6
Chris Busch in a statement. "While her time on the governing board was not nearly long enough, the love she had for children and employees will be felt for many years to come. Kathy lived her life inspiring others to believe in children and to help them achieve their full potential. She will be truly missed."

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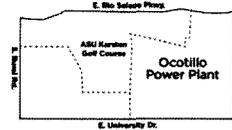
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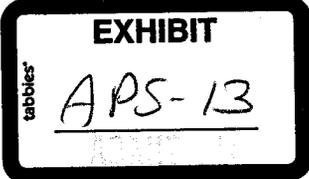
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Students remember tragedy, strive for interfaith unity at the Day of SEVA

Students remember the Sikh temple shooting tragedy in Wisconsin by engaging in service and having interfaith dialogues to promote unity.

News

Extreme temperatures pose danger for students
Undergraduate Student Government implements One University Meeting
ASU alumna catalogs astronomical amount of star data
Demonstrators protest shooting of mentally ill woman
Students remember tragedy, strive for interfaith unity

Sports

ASU football 2014 season preview: Defensive line linebackers
ASU football aims to play faster
ASU football 2014 season preview: Offensive line
ASU football uses night practice as prototype for gameday
Final ASU volleyball preseason scrimmage reveals room to improve

Top Stories

ASU football offensive lineman Chip Sarafin comes out as gay
ASU student governments break own bylaws while passing \$500-per-year athletic fee bill
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'Sin City: A Game To Kill For' can't top predecessor
Emmy Award night: Promise and peril on the small screen
'America's Got Talent' finalist entertains at Phoenix club
Stand Up Live
A few questions regarding Iggy Azalea's 'Fancy'

Magazine

Best place to grab coffee: Liberty Market
Learning the inner workings of pop culture
Join the talk! Nominate top places for Best Of ASU issue
Local musician Luna Aura aims to take Valley by storm
Unheard voices of Phoenix's homeless youth

Opinion

There's more to live than "likes"
In a world that revolves around social media, it seems that people pretend to care more than they actually do. [see more](#)
Why 'ASU' and 'OK' should no longer be present on your profile
Your social media outlets could be saying more about your intelligence than you realize. [see more](#)

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Police Beat

Tempe Police: Man jacks motorcycles, causes \$3,000 in damage
The man later told police he jacked the bikes because he was trying to sleep. [see more](#)
Tempe Police: Man with fraudulent ID drives under the influence
Police found the man sleeping in a church parking lot after he was arrested on alcohol. [see more](#)
Tempe Police: Man tries passes in swimming

State Press Blogs



Review: Chris Fiker's "Built On Glass"
The built-bearded Casanova is acknowledged for this suit's sensual lyrics that address women, but he displays an earnest vulnerability in "Built On Glass" that ventures outside the bedroom. [see more](#)

National Library Week remembers life-changing moments
"What's the point of thinking about how it's going to end when it's just the beginning?" — Judy Blume, "Summer Sisters" As we near the end of the semester, it's easy to forget that there's still a plethora of knowledge to uncover in the midst of finals and classes ending. Sometimes it can feel like [...]

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PROOF OF DELIVERY

TO: Tempe Public Library
DATE: August 1, 2014
SUBJECT: Ocotillo Modernization Project CEC Application

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- For:** Review and Approval
 Signature
 Appropriate Action
 As Requested
 For Your Information
-

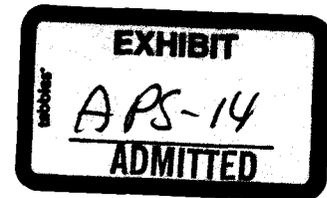
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Tempe Library Representative

8-1-14

Date



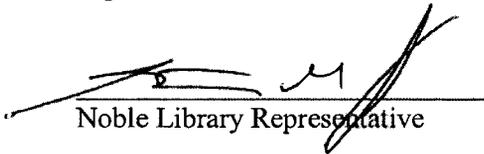
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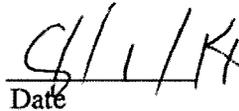
TO: Arizona State University – Noble Library
DATE: August 1, 2014
SUBJECT: Ocotillo Modernization Project CEC Application

Thank you for hosting the Ocotillo Modernization Project CEC Application in your library.

- For:** Review and Approval
 Signature
 Appropriate Action
 As Requested
 For Your Information
-

Signature:


Noble Library Representative


Date



7720 North 16th Street, Suite 100
Phoenix, Arizona 85020
Telephone: (602) 371-1100
Fax: (602) 371-1615

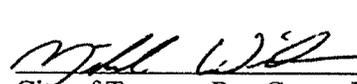
PROOF OF DELIVERY

TO: City of Tempe – Kiwanis Recreation Center
DATE: August 1, 2014
SUBJECT: Ocotillo Modernization Project CEC Application

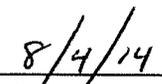
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- For:** Review and Approval
 Signature
 Appropriate Action
 As Requested
 For Your Information
-

Signature:



City of Tempe - Rec Center Representative



Date



City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
480-350-8225

August 1, 2014

The Honorable Susan Bitter Smith
Arizona Corporation Commission
Commissioners Wing
1200 West Washington
Phoenix, AZ 85007-2996

Dear Commissioner Bitter Smith,

Mark W. Mitchell
Mayor

Onnie Shekerjian
Vice-Mayor

Robin Arredondo-Savage
Councilmember

Shana Ellis
Councilmember

Kolby Granville
Councilmember

Joel Navarro
Councilmember

Corey D. Woods
Councilmember

I support the modernization project of the Ocotillo Power Plant. This project will update an important energy resource for our residents, reduce the plant's visual impact on the community and contribute to our city's economy.

Ocotillo has powered the growth of Tempe and Arizona since its opening in 1960. Updating it with modern technology will support economic development in Tempe and serve significant projects such as Marina Heights, the new State Farm regional headquarters now under construction, and ASU's planned Stadium District.

The project to expand and modernize the plant will also benefit our local community. APS has indicated that 100 jobs will be added during construction, and property tax revenue will increase from the approximately \$60,000 it is today to \$850,000 by the fifth year of operation with the new units. This additional revenue is expected to translate into increased services for our residents.

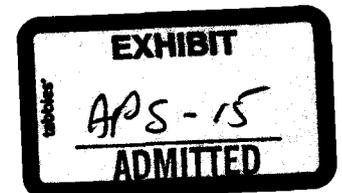
APS also stated that replacing the outdated generators will make the plant more efficient, and the new planned units will stand half as tall as the current generators. The smaller units will reduce the plant's visibility significantly and be a welcome change to residents in the area.

The City of Tempe prides itself on being an environmentally responsible, fiscally sound community, and the Ocotillo Modernization Project has the potential to help us achieve both goals and be an asset to our city for many years to come.

Sincerely,

A handwritten signature in black ink that reads 'Mark W. Mitchell'.

Mark W. Mitchell, Mayor
City of Tempe





City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
480-350-8225

August 1, 2014

The Honorable Bob Burns
Arizona Corporation Commission
Commissioners Wing
1200 West Washington
Phoenix, AZ 85007-2996

Dear Commissioner Burns,

Mark W. Mitchell
Mayor

Onnie Shekerjian
Vice-Mayor

Robin Arredondo-Savage
Councilmember

Shana Ellis
Councilmember

Kolby Granville
Councilmember

Joel Navarro
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Mark W. Mitchell, Mayor
City of Tempe



City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
480-350-8225

August 1, 2014

The Honorable Brenda Burns
Arizona Corporation Commission
Commissioners Wing
1200 West Washington
Phoenix, AZ 85007-2996

Dear Commissioner Burns,

Mark W. Mitchell
Mayor

Onnie Shekerjian
Vice-Mayor

Robin Arredondo-Savage
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Mark W. Mitchell, Mayor
City of Tempe



City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
480-350-8225

August 1, 2014

The Honorable Gary Pierce
Arizona Corporation Commission
Commissioners Wing
1200 West Washington
Phoenix, AZ 85007-2996

Dear Commissioner Pierce,

Mark W. Mitchell
Mayor

Onnie Shekerjian
Vice-Mayor

Robin Arredondo-Savage
Councilmember

Shana Ellis
Councilmember

Kolby Granville
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Mark W. Mitchell, Mayor
City of Tempe



City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
480-350-8225

August 1, 2014

The Honorable Bob Stump
Arizona Corporation Commission
Commissioners Wing
1200 West Washington
Phoenix, AZ 85007-2996

Dear Chairman Stump,

Mark W. Mitchell
Mayor

Onnie Shekerjian
Vice-Mayor

Robin Arredondo-Savage
Councilmember

Shana Ellis
Councilmember

Kolby Granville
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Joel Navarro
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Mark W. Mitchell, Mayor
City of Tempe



Your Success is Our Business

August 5, 2014

Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007-2996

Dear Chairman Stump and Commissioners:

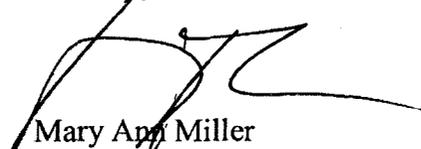
I am writing on behalf of the Tempe Chamber of Commerce and our nearly 1,000 members to express full support for the Ocotillo Modernization Project proposed by APS.

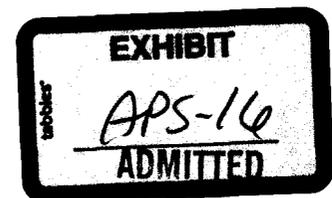
The project will help APS meet the growing energy needs of our city and surrounding Valley communities and enable more renewable energy to power the city's homes and businesses. We believe updating Ocotillo with state-of-the-art technology will also produce economic and environmental benefits that will enhance the quality of life in Tempe for years to come.

APS has long been a valued economic and community partner in Tempe, and its planned \$600 million investment in Ocotillo will continue to enhance that relationship. The project will create job opportunities, dramatically increase property tax revenues and is expected to generate additional spending that will benefit Tempe's businesses and residents.

I respectfully ask the Arizona Corporation Commission to support the Ocotillo Modernization Project and enhance our state's energy future.

Sincerely,


Mary Ann Miller
President/CEO



www.tempechamber.org

ASU
ARIZONA STATE UNIVERSITY

September 10, 2014

Chairman Bob Stump
Arizona Corporation Commission
Commissioners Wing
1200 W. Washington - 2nd Floor
Phoenix, Arizona 85007

Dear Chairman Stump and Commissioners:

On behalf of Arizona State University, I am writing in support of the proposed Ocotillo Power Plant modernization proposed by Arizona Public Service (APS), which is adjacent to the University's main campus. ASU is pleased with the prospect of a renewed plant that will generate cleaner energy for our area, as well as create additional environmental and economic benefits.

The existing steam generators at Ocotillo have powered the growth of ASU and Tempe through the decades, but the University's long-term vision for the area has changed dramatically. ASU is planning a unique, mixed-use development bordering the plant to the north and west that will demonstrate the future of creative urban design and sustainable development, with multi-family residential, office and retail space, plus world-class athletic facilities. We are currently discussing modifications to existing setback and use deed restrictions with APS that will further enhance the positive impacts of this development.

We anticipate the Ocotillo project will benefit the development by replacing the existing generators with lower-profile units, which will significantly reduce the plant's visibility in the area, making it more aesthetically pleasing. Adding more modern, reliable technology also will support growth along Tempe Town Lake and in our master-planned development.

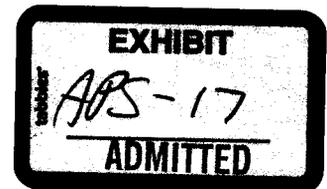
We have had tremendous success in collaborating with APS on energy initiatives, such as the highly visible Power Parasol solar projects on the Tempe Campus. This project is a significant step toward generating cleaner, more efficient energy for our campus and surrounding communities, which supports the University's goal of carbon neutrality.

Modernization of the Ocotillo power plant will benefit the University, our neighbors and Arizona in creating a sustainable energy future.

Sincerely,



Morgan R. Olsen
Executive Vice President, Treasurer and Chief Financial Officer



OFFICE OF THE EXECUTIVE VICE PRESIDENT, TREASURER AND CHIEF FINANCIAL OFFICER
Business and Finance

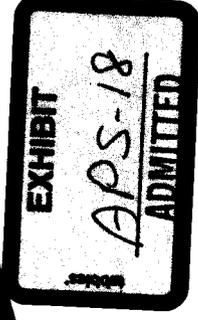
PO Box 877505, Tempe, AZ 85287-7505
(480) 727-9920 Fax: (480) 727-9922

2014 Integrated Resource Plan

Arizona Corporation Commission Workshop

September 11, 2014

Jim Wilde
Director, Resource Planning

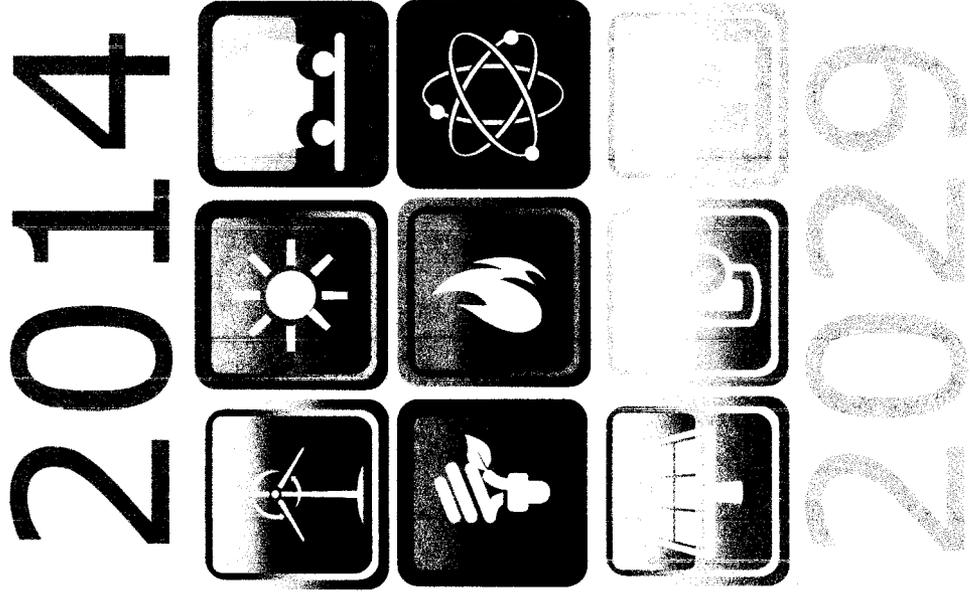


2014 IRP Supplement

- Modify chosen portfolio from the Selected Portfolio (April 2014 Selected Portfolio) to the Coal Reduction Portfolio (September 2014 Selected Portfolio)
- Currently in talks with EPA, ADEQ and PacifiCorp to craft a resolution for Cholla:
 - Retire Unit 2 in 2016
 - Retire Units 1 and 3 in mid-2020's (at end of coal contract) or convert to natural gas
- Modification based on economics of required environmental upgrades to comply with MATS and Regional Haze
 - Similar to Four Corners 1-2-3, environmental upgrades cannot be supported given lack of economies of scale
- Portfolio modification will produce cost savings to customers and reduce environmental impacts
- IRP Supplement will be filed with the ACC

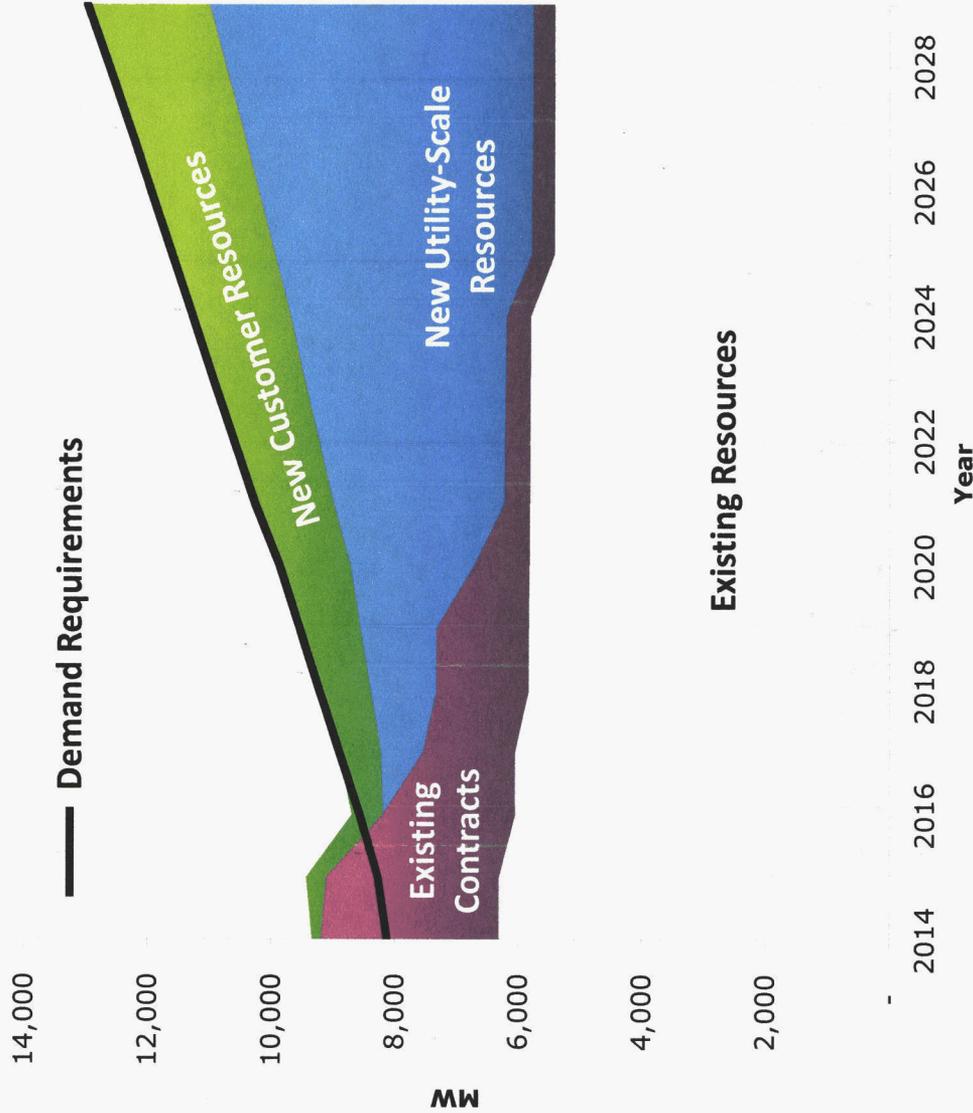
2014 IRP Summary

- **Natural gas generation will play increasingly important role**
 - Economics
 - Operational flexibility
- **Cleaner energy mix**
 - Customer resources such as roof-top solar and energy efficiency projected to triple
 - Environmental regulations
- **Advanced technology will change the electricity grid**
 - Integration of renewable energy
 - Communication and automation



Supply-Demand Gap

- Growth in customer energy requirements expected to resume
- Customer resources expected to triple over planning horizon
- Expiring purchase contracts means APS will need additional resources by 2017
- Additional resource needs anticipated to be met by increasingly diverse and efficient technologies



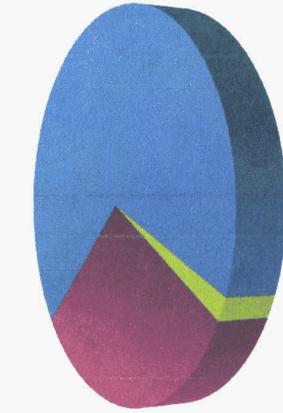
Expected Future Resources

Sept 2014 Selected Portfolio



2014-2029 (Forecast)

Future Additional Resources 7,267 MW Expected at Peak

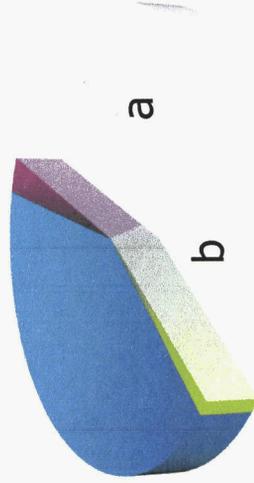


2014

8,124 MW

peak requirement

100% met with existing resources



2029

12,982 MW

peak requirement

45% met with existing resources

a. New Utility-Scale Resources
 Natural Gas
 4,817 MW

Renewable Energy
 467 MW (1,018 MW nameplate capacity)

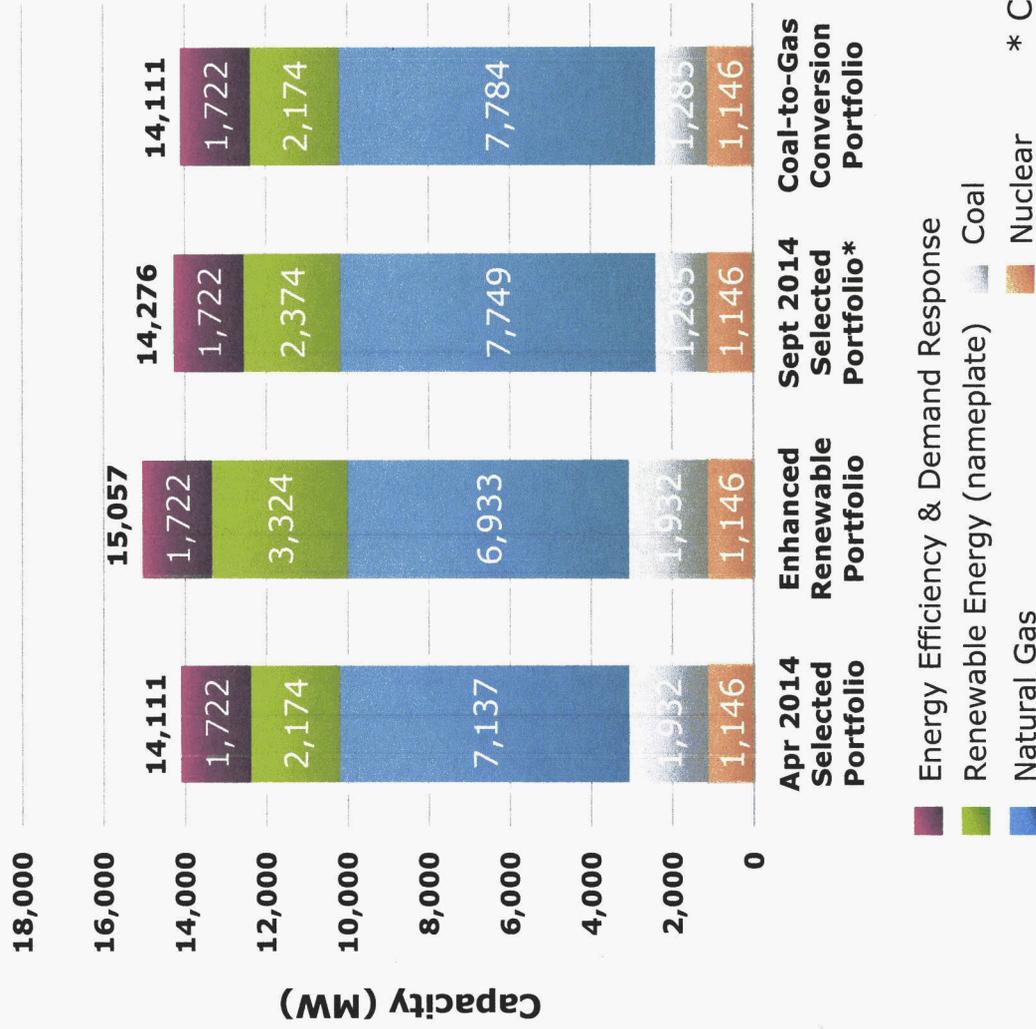
b. New Customer Resources
 Energy Efficiency
 1,447 MW

Distributed Energy
 261 MW (722 MW nameplate capacity)

Demand Response
 275 MW

Portfolios Considered

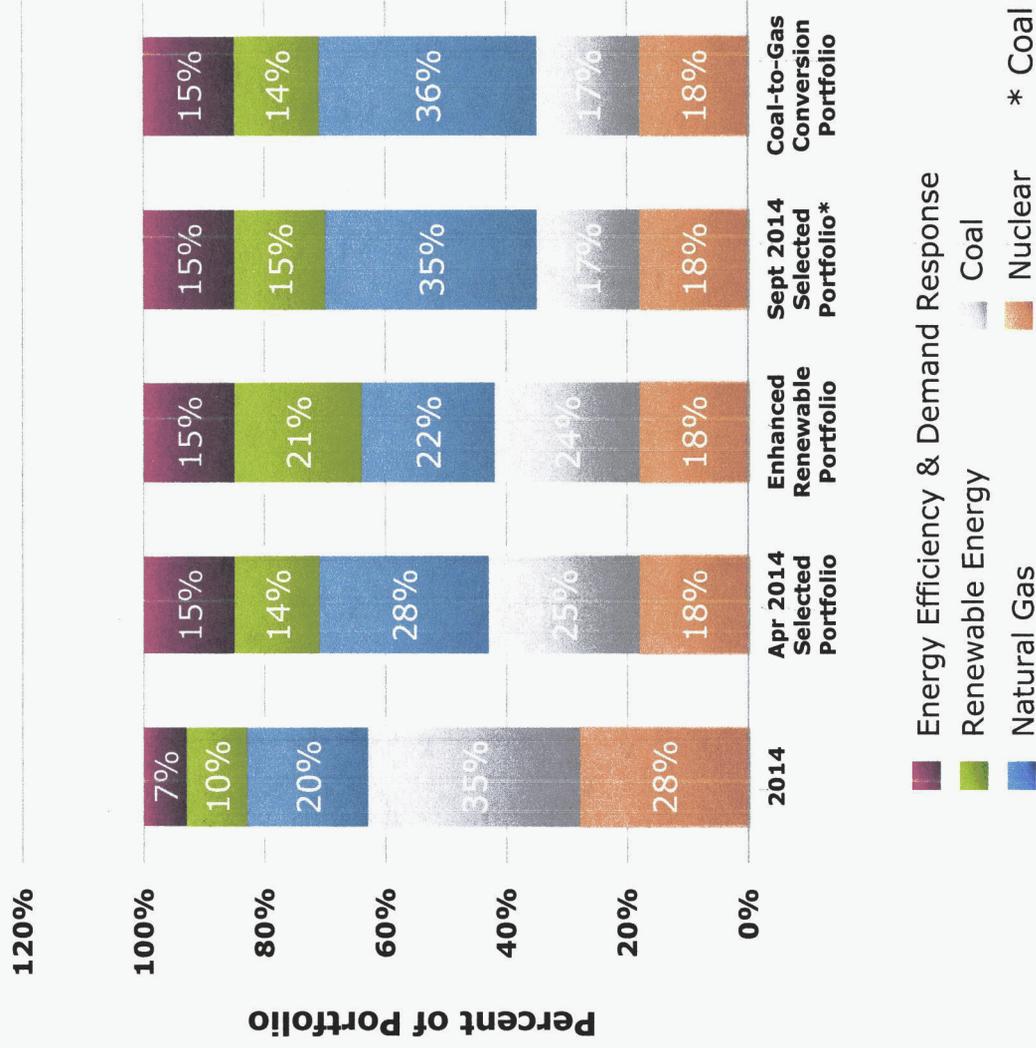
2029 Capacity Comparison



- Sept 2014 Selected Portfolio is being chosen because it provides better combination of:
 - Overall cost
 - Operational flexibility to support grid reliability and renewable energy integration
- Provides for discussion of uncertainties in upcoming coal fleet decisions

Energy Mix

2014 vs 2029 Comparison

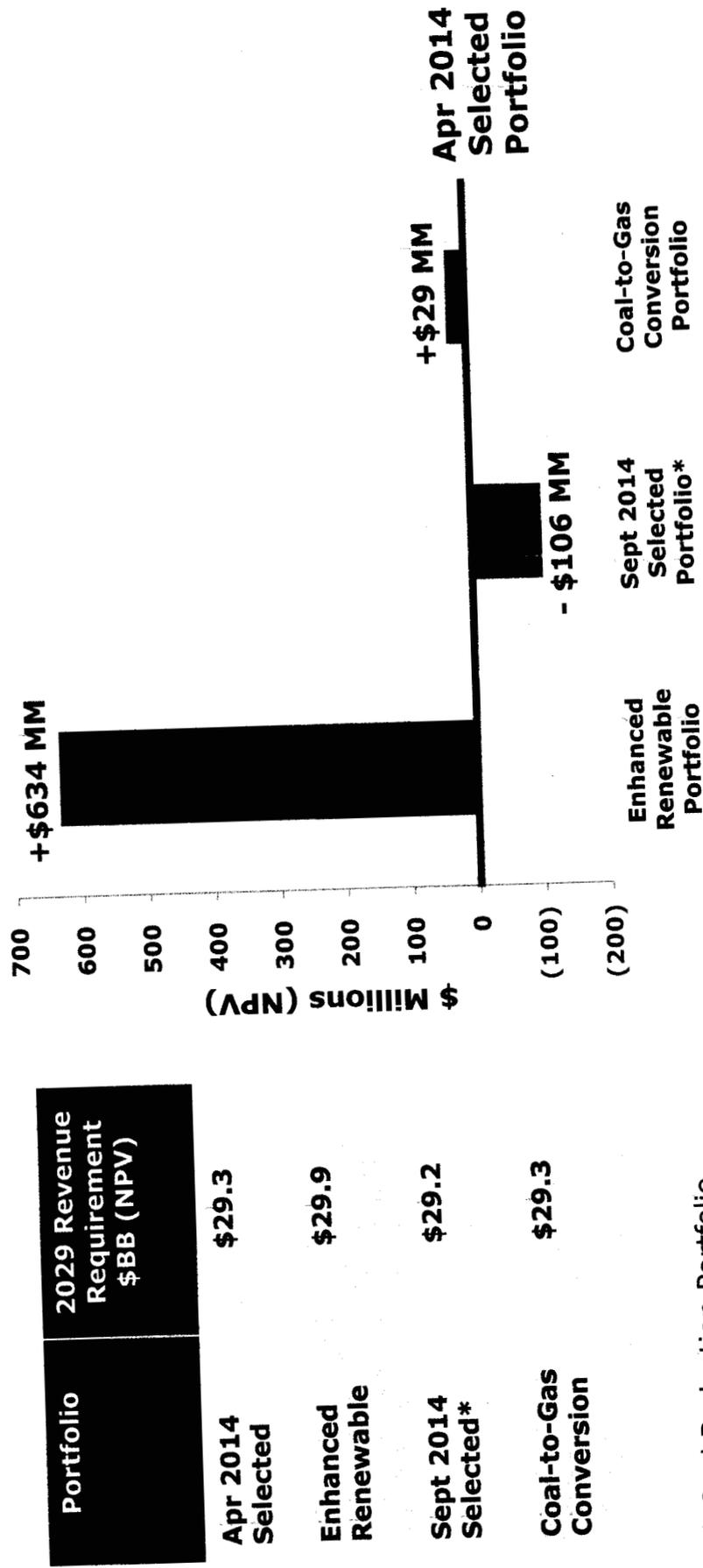


- Of the four portfolios considered, all have a diverse resource mix
- Renewables and coal primary resources being flexed in portfolio analysis
- Natural gas resources used to balance out remaining needs by providing summer capacity and operational flexibility

Comparative Revenue Requirements

Differences from Apr 2014 Selected Portfolio in 2029

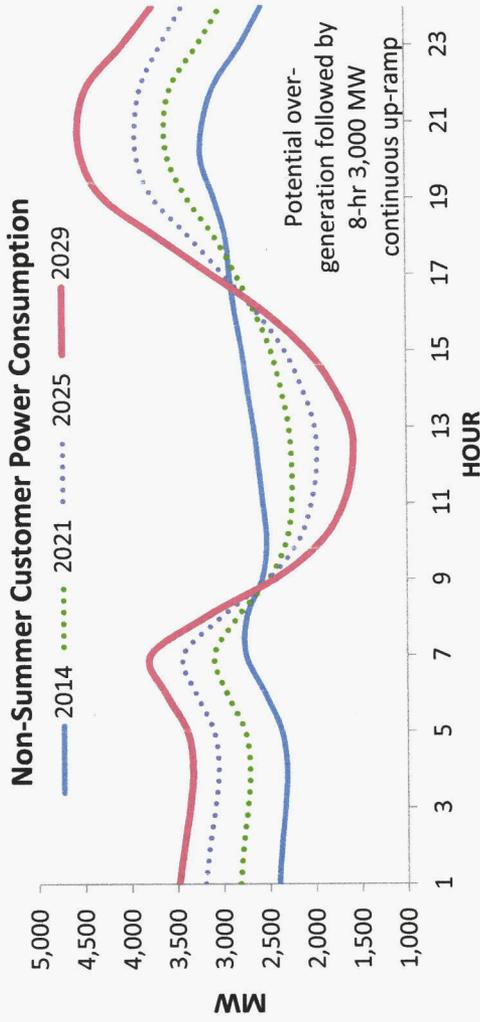
Revenue Requirement Differences



* Coal Reduction Portfolio

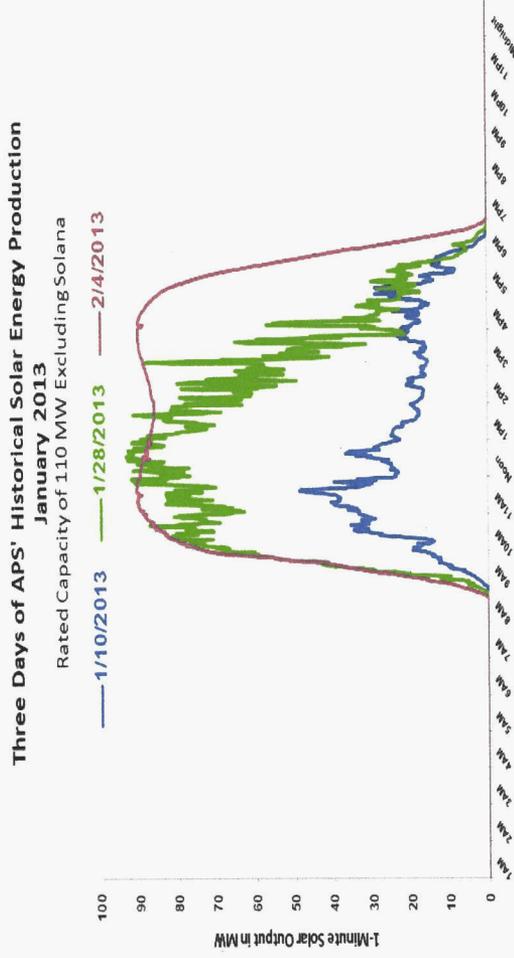


Evolving Customer Demand



- Growth of solar PV changes customer energy consumption patterns

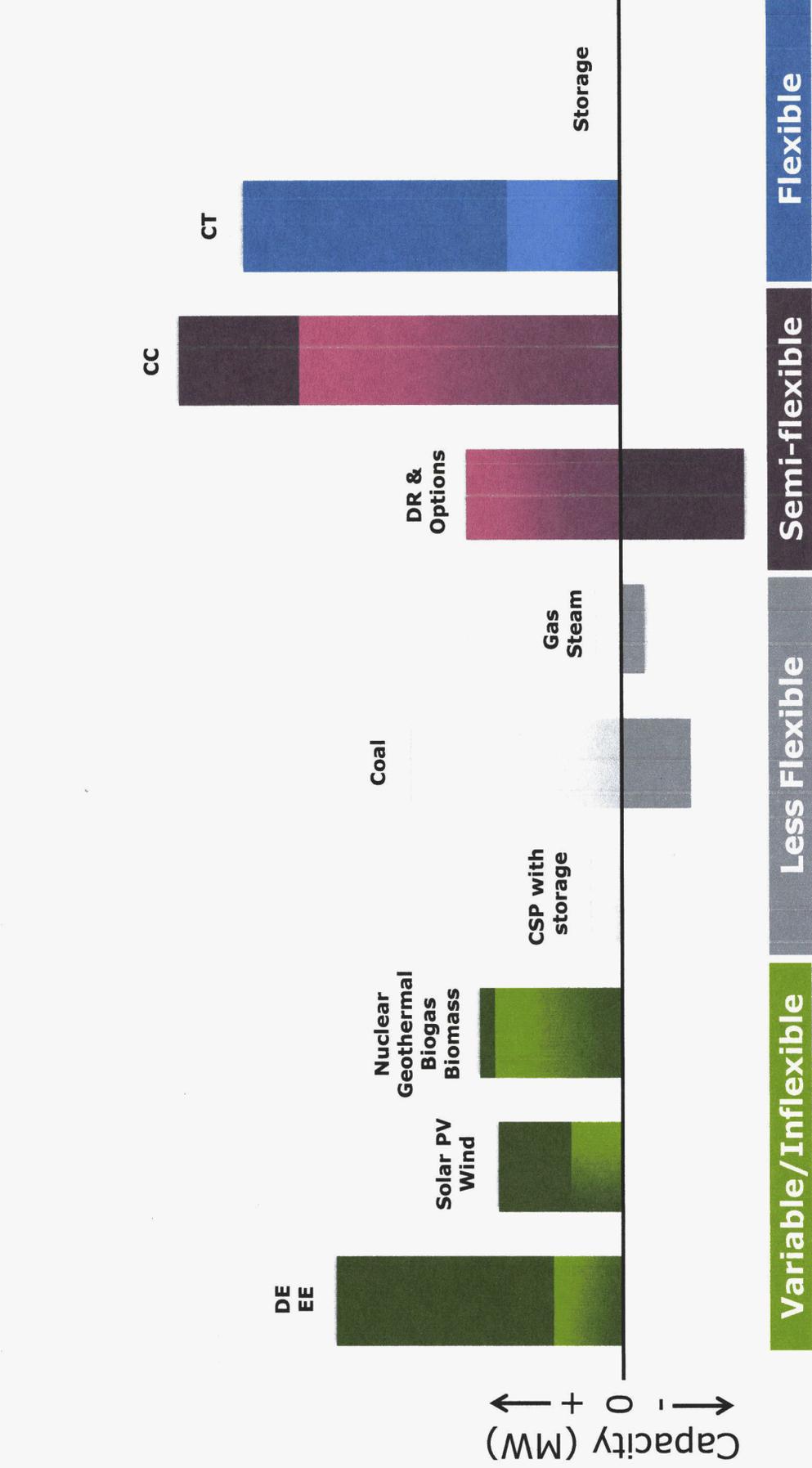
- Generators must be able to start and stop multiple times per day



- Fast starting and ramping capability is required in responding to intermittent output of renewable resources

Variability Requires Flexibility

Balancing Growth at Both Ends of Flexibility Spectrum



Future Technology Drivers

Transition Towards Integrating Evolving Energy Resource Portfolio

- **System Drivers**
 - Increasing amounts of intermittent generation
 - Need for peaking resources and summer time capacity
 - Cost of compliance with environmental regulations
 - Stable natural gas prices
- **Potential Benefits**
 - Increased resource diversity
 - Flexible gas generation meets peak needs and enables renewable energy integration
 - Reduced environmental impacts
- **Potential Risks**
 - Cost of resource diversity for newer technologies
 - Technology maturity and uncertain reliability
 - Maintaining balance between variable/inflexible resources and flexible resources

Sample of Potential Future Energy Storage Options

- **Battery Storage**
 - Uses off-peak/dump energy from grid to charge battery
 - Discharges energy when needed
- **Flywheel/Rotary Uninterruptible Power Supplies (UPS)**
 - Very short-term energy and voltage stabilization
- **Pumped Hydro**
 - During periods of high demand, power is generated by releasing water from an upper reservoir through turbines in the same manner as a conventional hydropower station
 - During periods of low demand, the upper reservoir is recharged by using lower-cost electricity from the grid to pump water from a lower reservoir back to the upper reservoir
- **Compressed Air Energy Storage (CAES)**
 - CAES potential in helping provide back up for solar and wind generation
 - Geologic and permitting concerns

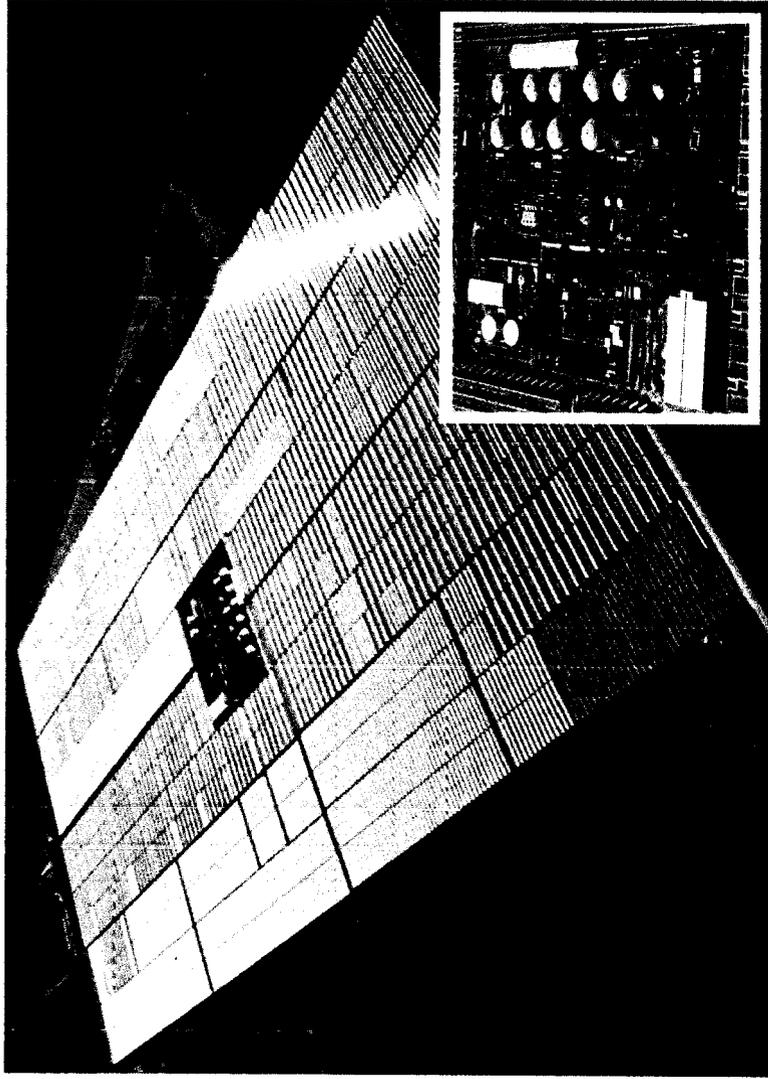
Solana - Energy Storage Today

Developer - Abengoa

Location - 10 miles west of Gila Bend, AZ

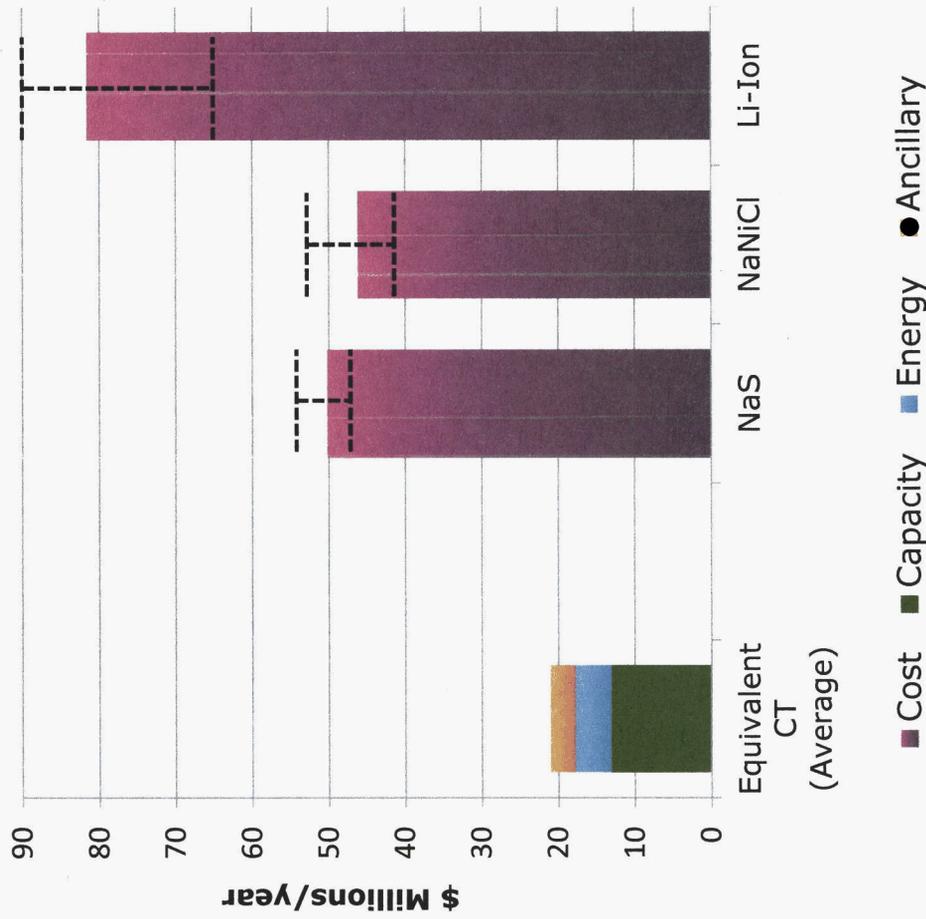
Capacity/Generation - 250 MW, annual energy approximately 900,000 MWhs

In-Service - October, 2013



- Thermal energy storage
 - Six hours at full capacity
 - Increased hours of storage at lower capacity levels
- 100% solar power availability at time of peak
 - Solar PV has reduced levels of capacity at time of peak
- Operational flexibility
 - Start before sunrise and run for morning peak by holding energy in storage from previous day
 - Continue to run for evening peak (after sunset)

Battery Storage vs Equivalent CT Costs



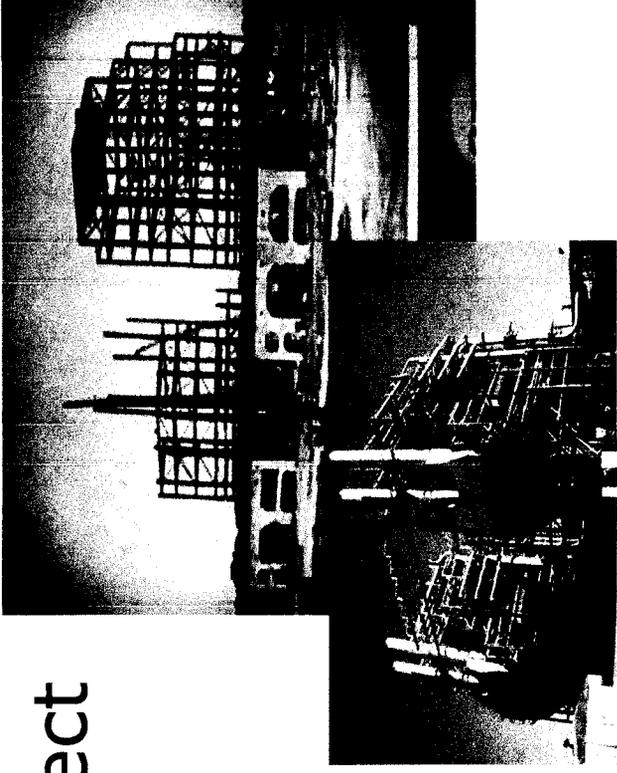
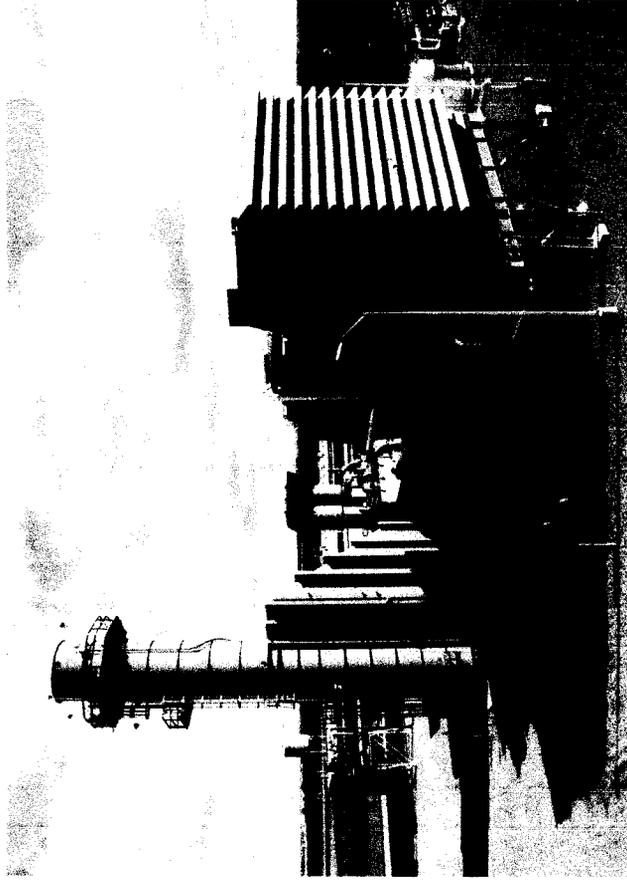
- Primary technologies
 - Sodium Sulfur (NaS)
 - 15 year battery life, 6 hour capability
 - Sodium Nickel Chloride (NaNiCl)
 - 15 year battery life, 5 hour capability
 - Lithium Ion (Li-Ion)
 - 15 year battery life, 5 hour capability
- Not a viable capacity solution at this time
 - High costs relative to other options
 - Value will increase as reliability is proven and costs come down
 - Limited number of utility scale sites
- Will be evaluated in future IRPs
 - Significant resource needs for 2019 and beyond
 - Near term opportunities for pilot projects

Source: DOE/EPRI 2013 Electricity Storage Handbook



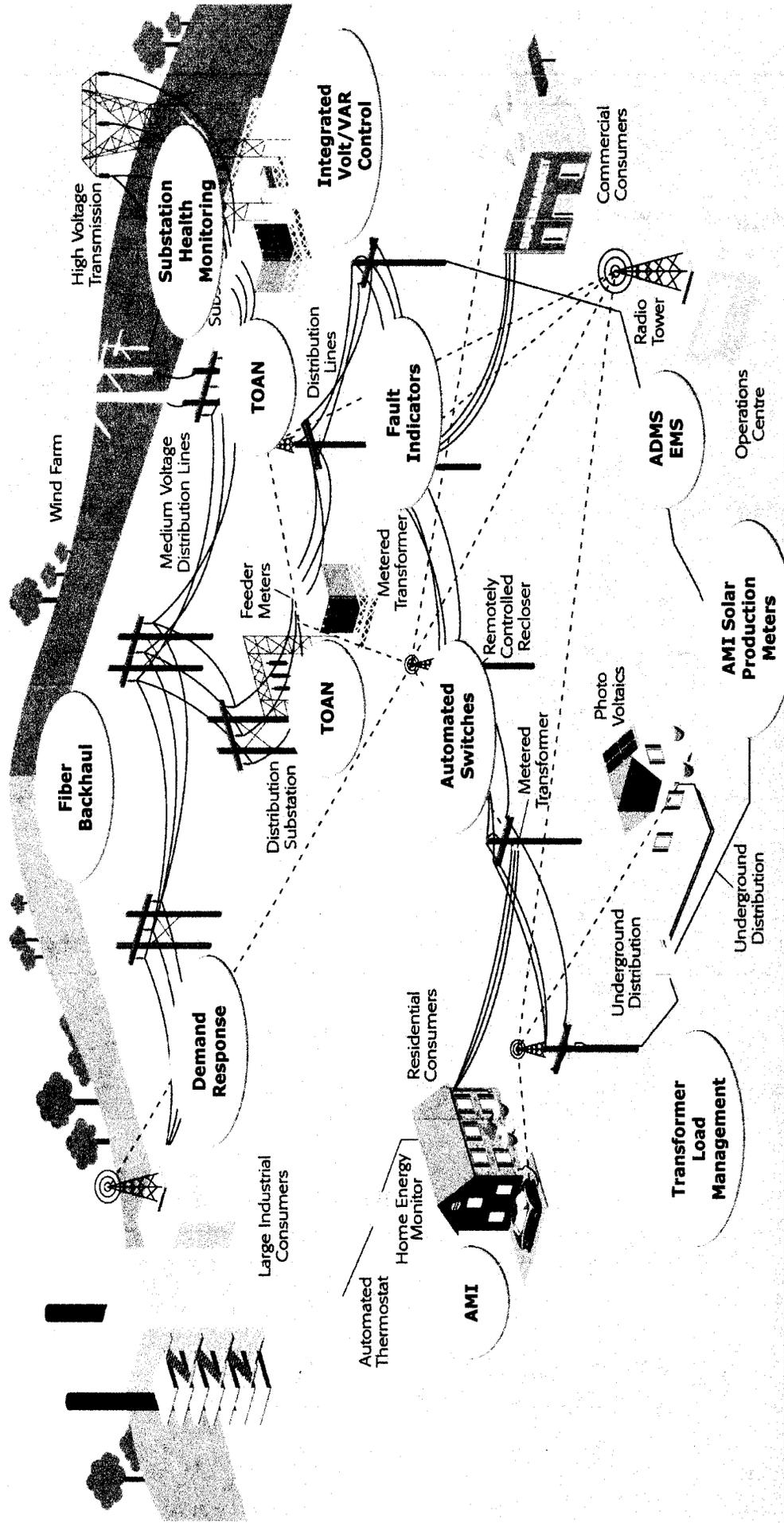
Ocotillo Modernization Project

- Retire aging, large steam units constructed in 1960
- Replace steam units with modern technology



- Maintain Valley reliability
- Responsive unit operations
- Environmental attributes
- In-service planned for summer 2018

Proliferation of Distributed Generation Demands A More Advanced Grid





www.aps.com/resources

www.azenergyfuture.com

APPENDIX

Incremental Near-Term Natural Gas Resource Needs

- Of the 3,800 MW needed by 2021, the 2014 IRP calls for 2,400 MW to come from natural gas resources
 - Capacity from Ocotillo Project represents roughly 20% of near term natural gas resource needs, and roughly 13% of total need
 - Significant reliance on markets



2013 Q3 Conventional Generation Technologies Assumptions (2017 Installation)

PLANT	Location	Annual Capacity MW	Summer Capacity MW	Winter Capacity MW	Capital Costs \$ Million	Capital Costs \$/KW	Fixed O&M \$/KW-Yr	Var O&M \$/MWh	Heat Rate BTU/KWh	Lead Time Years	Capacity Factor %	CO ₂ Emission lbs/MWh	Water Consumption gal/MWh
Coal													
Cholla 3.450MW Hybrid	Cholla	477	472	481	1,449	3,039	16.44	5.14	9,008	9	75%	1,847	491
Cholla 6.450MW Hybrid	Cholla	477	472	481	1,219	2,558	13.67	5.14	9,008	5	75%	1,847	491
Cholla 38.6 900MW Hybrid	Cholla	953	944	962	2,668	2,799	16.44	5.14	9,008	9	75%	1,847	491
Cholla 3.750MW Hybrid	Cholla	776	771	779	2,213	2,852	12.22	5.13	8,905	9	75%	1,826	491
Cholla 5.450MW IGCC	Cholla	490	459	518	2,291	4,676	21.30	3.47	9,136	9	75%	1,964	491
Gas Greenfield													
One 7FA, Chilled Inlet	Maricopa	203	200	209	163.1	817	4.04	5.44	10,073	3	10%	1,229	46
Two 7FA, Chilled Inlet	Maricopa	406	399	418	280.1	701	4.04	5.44	10,073	3	10%	1,229	46
Four 7FA, Chilled Inlet	Maricopa	327	319	342	314.3	985	4.14	3.47	11,911	3	10%	1,453	70
Six LM6000PC Sprint, Chilled Inlet	Maricopa	283	277	295	339.0	1,224	7.51	5.42	9,723	3	10%	1,186	111
Six LM6000PF Sprint DLN, Chilled Inlet	Maricopa	269	266	274	346.1	1,299	7.51	5.42	9,373	3	10%	1,144	85
3X0 LMS100PA Chilled Inlet, Wet Cooled	Maricopa	310	307	313	339.5	1,106	5.46	5.10	9,125	3	10%	1,113	207
3X0 LMS100PA Chilled Inlet, Hybrid Cooled	Maricopa	310	307	313	341.3	1,113	5.46	5.10	9,138	3	10%	1,115	141
3X0 LMS100PA Chilled Inlet, Dry Cooled	Maricopa	289	259	312	345.7	1,337	5.46	5.10	9,566	3	10%	1,167	84
One 2X1 OC 7FA, Chilled Inlet, DB on, CT Wash	Maricopa	694	681	719	620.2	910	5.12	4.54	7,216	4	75%	880	395
2x1 OC 7FA, Chilled Inlet, DB On, ACC	Maricopa	684	665	716	677.3	1,019	5.24	4.26	7,396	4	75%	902	302
Fuel Cells	Maricopa	0.5	0.5	0.5	5.0	10,000	TBD	TBD	5,688	2	98%	694	0
Gas Brownfield													
One Redhawk 7FA, Chilled Inlet	Redhawk	203	200	209	154.6	774	4.04	5.44	10,073	3	10%	1,229	46
Two Redhawk 7FA, Chilled Inlet	Redhawk	406	399	418	270.6	678	4.04	5.44	10,073	3	10%	1,229	46
Two Redhawk 7FA, Chilled Inlet	Redhawk	164	159	171	171.0	1,072	4.14	3.47	11,911	3	10%	1,453	70
Two Sundance LM6000PC Sprint, Chilled Inlet	Sundance	94	92	98	137.8	1,493	7.51	5.42	9,723	3	10%	1,186	111
Two Sundance LM6000PF Sprint DLN, Chilled Inlet	Sundance	90	89	91	140.4	1,580	7.51	5.42	9,373	3	10%	1,144	85
Two Yucca LM6000PC Sprint, Chilled Inlet	Yucca	94	92	98	139.3	1,509	7.51	5.42	9,723	3	10%	1,186	111
Two Yucca LM6000PF Sprint DLN, Chilled Inlet	Yucca	90	89	91	142.0	1,598	7.51	5.42	9,373	3	10%	1,144	85
3X0 Scottie LMS100PA Chilled Inlet, Hybrid Cooled	Maricopa	517	511	522	528.3	1,034	5.46	5.10	9,138	3	10%	1,115	141
Six Unit Wärtsilä 18V50	Maricopa	110	110	110	154.9	1,407	16.85	5.81	8,365	3	10%	1,021	0
Energy Storage													
CAES, Compressed Air Energy St. Storage Pumped Hydro	Maricopa	100	100	100	277.8	2,778	17.33	5.00	4,229	3	10%	1,148	296
Battery Energy Storage System-Lithium	Maricopa	900	900	900	2340.0	2,600	12.30	0.31	81%*	10	10%	1,051	256
Flow Battery (Zinc Bromine)	Maricopa	30	30	30	153.9	5,130	25.65	3.01	90%*	1	10%	851	336
Fly Wheels	Maricopa	20	20	20	55.0	2,750	TBD	TBD	70%*	2	10%	1,289	296
	Maricopa	20	20	20	166.0	8,300	TBD	TBD	75%*	2	10%	1,203	276
Nuclear													
Nuclear AP 1000 Hybrid	Palo Verde	400	400	400	1812.5	4846	52.01	0.34	10,386	10	90%	0	552
Small Modular Reactor	Palo Verde	200	200	200	1106.0	5,530	TBD	TBD	10,452	10	90%	0	552

* Efficiency

1 Costs are in year-2013 dollars.

2 Capital costs are overnight construction costs. \$/KW is based on summer capacity rating

3 Capital cost for IGCC does not include CO₂ capture

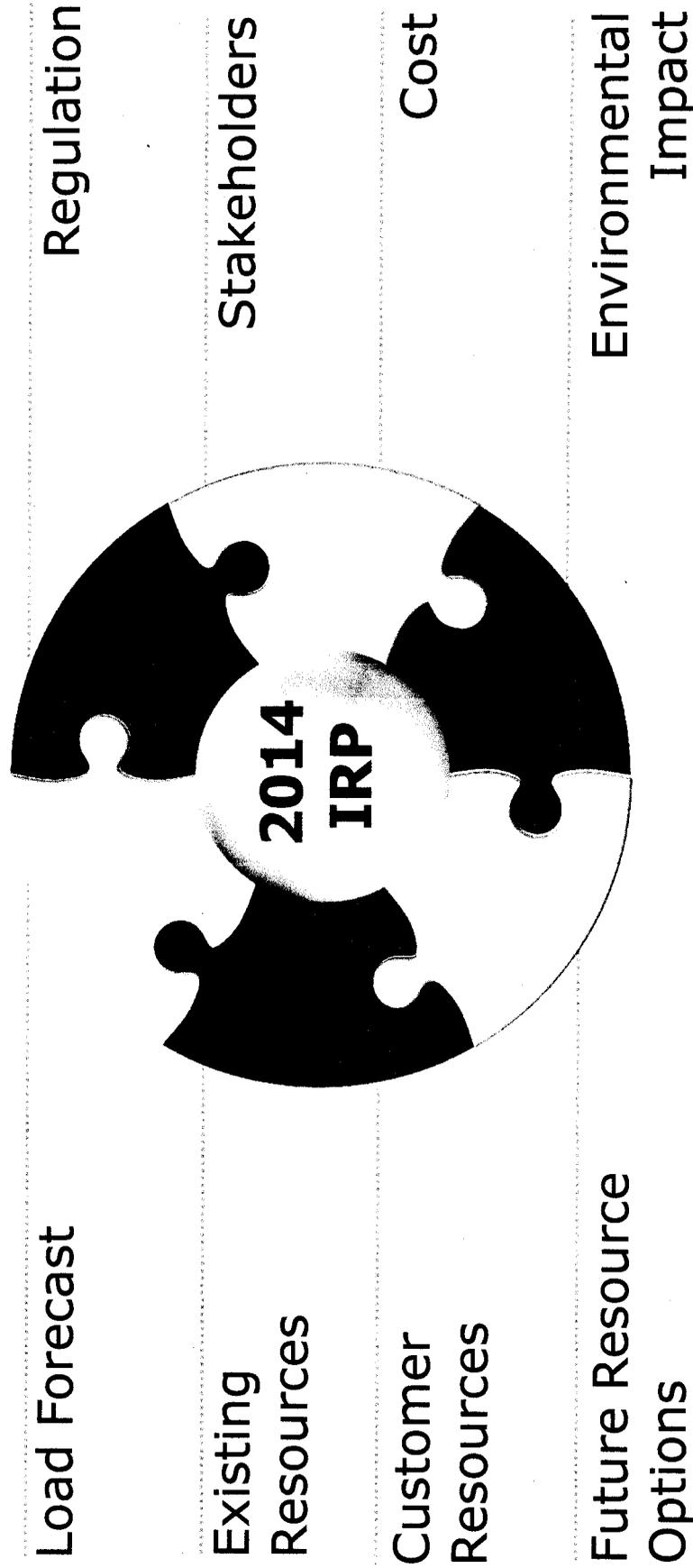
4 Lead time for Cholla 6 is contingent on Cholla 5 already built

5 ACC- Air Cooled Condenser

Potential Future Resource Technologies

- **Nuclear (SMR)**
 - Small modular reactors (SMR) will be nuclear technology of choice after 2025 (EIA)
 - Typically smaller than 300 MW
 - Built off-site in a modular arrangement, shipped to plant, and set up on plant foundation
- **Coal**
 - Ultra-supercritical steam turbines (USC) are an early commercial technology
 - Integrated gasification combined cycle (IGCC) integrate coal gasification with combined-cycle technology
- **Solar Tower Systems**
 - Field array of mirrors reflect sunlight onto a central receiver located at top of tower
 - Could be competitive with parabolic trough with thermal energy storage, if proven reliable & cost-effective
- **Fuel Cells**
 - Types include alkali (AFC), phosphoric acid (PAFC), molten carbonate (MCFC), proton exchange membrane (PEM), solid oxide fuel cell (SOFC), and direct carbon (DCFC)
 - Unsuitable for distributed generation or smart-grid applications until reliability improves, costs are reduced, and cell-stack life is extended
- **Natural Gas (CC & CT)**
 - Clean burning
 - Efficient
 - Simple cycle combustion turbines (CT) have quick start & fast ramping capability
- **Customer-Side Resources**
 - Energy Efficiency (EE)
 - Distributed Generation (DG)

Planning Considerations



Reliability and Safety

1
2
3 **BEFORE THE ARIZONA POWER PLANT**
4 **AND TRANSMISSION LINE SITING COMMITTEE**

3 IN THE MATTER OF THE APPLICATION
4 OF ARIZONA PUBLIC SERVICE
5 COMPANY, IN CONFORMANCE WITH
6 THE REQUIREMENTS OF ARIZONA
7 REVISED STATUTES 40-360 ET SEQ., FOR
8 A CERTIFICATE OF ENVIRONMENTAL
9 COMPATIBILITY AUTHORIZING THE
10 OCOTILLO MODERNIZATION PROJECT,
11 WHICH INCLUDES THE INSTALLATION
12 OF FIVE 102 MW GAS TURBINES AND
13 THE CONSTRUCTION OF TWO 230-
14 KILOVOLT GENERATION
15 INTERCONNECTIONS AND OTHER
16 ANCILLARY FACILITIES, ALL LOCATED
17 WITHIN THE BOUNDS OF THE EXISTING
18 OCOTILLO POWER PLANT SITUATED
19 ON PROPERTY OWNED BY ARIZONA
20 PUBLIC SERVICE COMPANY AND
21 LOCATED AT 1500 EAST UNIVERSITY
22 DRIVE, TEMPE, ARIZONA, IN MARICOPA
23 COUNTY.

DOCKET NO. L-00000D-14-0292-00169

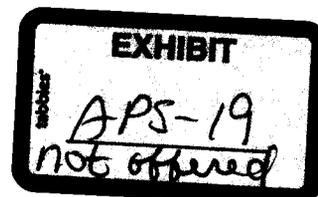
Case No. 169

PROTECTIVE AGREEMENT

14
15 The Residential Utility Consumer's Office ("RUCO") has requested access to certain
16 documents, data, studies, and other materials, some of which Arizona Public Service
17 Company or its affiliates ("APS" or "Company") considers to be of a proprietary,
18 confidential or legally-protected nature ("Confidential Information").

19 In order to facilitate the exchange of Confidential Information between APS and
20 RUCO, including any independent contracting consultants retained by RUCO in this matter,
21 (collectively referred to as the "Parties"), the Parties agree to the terms of this Protective
22 Agreement ("Agreement") as follows:

23 § 1. **Confidential Information.** Any document, data, information, study, or any
24 other written, printed, transcribed, audio-taped or video-taped material furnished in this
25 matter that RUCO or APS or its affiliates claim to be confidential, proprietary, or of an
26 otherwise legally protected nature, as well as any copies, notes, materials, extracts, or
27 summaries in any form whatsoever, mechanical, electronic, or otherwise, derived or prepared
28 from said document, data, information, study or other item, shall be designated and referred



1 to herein as "Confidential Information." All Confidential Information provided under the
2 terms of this Agreement shall be marked by the Party producing such information (the
3 "Producing Party") with a written designation indicating its confidential nature. Where a
4 Producing Party claims that only a part of a document or other informational submittal
5 contains Confidential Information, that Party shall designate and mark only the confidential
6 portion of the document or other informational submittal as "Confidential Information."

7 To the extent either Party discloses Confidential Information verbally, such
8 Confidential Information shall be memorialized in writing by the Producing Party within five
9 (5) business days of its verbal disclosure, and the writing shall be marked with the
10 appropriate designation. Any such Confidential Information disclosed verbally shall be
11 safeguarded as confidential under the terms of this Agreement by the Party who receives
12 such information (the "Receiving Party") during the five (5) business day period during
13 which the written memorial may be provided.

14 Parties agree that they shall designate as Confidential Information only such
15 information that they believe in good faith to be legally protected. Access to and review of
16 Confidential Information shall be strictly controlled by the terms of this Agreement.

17 The Confidential Information produced pursuant to this Agreement may include
18 information designated by APS as "Competitively-Sensitive Confidential Information."
19 "Competitively-Sensitive Competitive Confidential Information" is Confidential Information
20 that may, if disclosed, allow others the opportunity to gain an advantage in the competitive
21 power market. APS does not share information designated as "Competitively-Sensitive
22 Confidential Information" with all parties to this docket. Although APS will allow RUCO to
23 review such information as Confidential Information subject to the terms of this Agreement,
24 RUCO shall not, under any circumstances or at any time, provide information designated as
25 "Competitively-Sensitive Confidential Information" to any other party to this matter.

26 § 2. **Non-Disclosure.** Except as set forth in Paragraph 3 or with prior written
27 consent of the Producing Party, Confidential Information shall not be disclosed to or
28 reviewed by any person other than (1) any employees, contractors, or other agents of the

1 Receiving Party who have executed a non-disclosure agreement in the form attached hereto
2 as Exhibit A and have certified by their signatures thereto that they have read this Agreement
3 and have consented to be bound by its terms; and (2) attorneys, outside experts, consultants,
4 or advisors of the Receiving Party who (a) have been retained or employed to assist in the
5 Receiving Party's participation in the above-captioned docket, and (b) have executed a non-
6 disclosure agreement in the form attached hereto and incorporated herein as Exhibit A and
7 have certified by their signatures thereto that they have read this Agreement and have
8 consented to be bound by its terms.

9 This Agreement shall not prevent the Receiving Party from using Confidential
10 Information provided by the Producing Party in reports or documents that aggregate all
11 information gathered from all parties to this docket, provided that the Producing Party's
12 individual Confidential Information is indiscernible from the aggregate report. In addition,
13 where the Producing Party designates information as confidential solely because it is
14 customer-specific information or discloses specific prices, this Agreement shall not prohibit
15 the Receiving Party from the public disclosure of such information in an aggregated form,
16 provided that no specific customer information or individual price can be ascertained.

17 **§ 3. Non-Signatories Entitled to Review.** Confidential Information provided
18 pursuant to the terms of this Agreement may be provided to the paralegals and employees of
19 any signatory to this Agreement only to the extent such disclosure is necessary to the
20 disposition of this docket. Such disclosure may be made only if the non-signatory employee
21 receiving the Confidential Information is provided with a copy of this Agreement and agrees
22 to be bound by its terms. All signatories to this Agreement will be held responsible for
23 ensuring that any non-signatory subject to this Paragraph complies with the terms of this
24 Agreement.

25 **§ 4. Use of Confidential Information.** No person who is afforded access to any
26 Confidential Information under the terms of this Agreement shall use such information for
27 any purpose other than for preparing and presenting the Receiving Party's position in the
28 above-captioned docket, including preparation for and the conduct of any administrative

1 proceeding. All persons entitled to review or afforded access to Confidential Information
2 shall keep it secure as trade secret, confidential, proprietary, or legally protected information
3 in accordance with the purposes and intent of this Agreement, and no such person shall use
4 any Confidential Information in a manner that may result in or require disclosure of such
5 information to any persons not permitted access to such information under the terms of this
6 Agreement.

7 **§ 5. Measures Taken to Prevent Unauthorized Disclosure.** Any person who
8 receives Confidential Information in accordance with the terms of this Agreement shall
9 maintain such information in a manner reasonably calculated to prevent its unauthorized
10 disclosure or access.

11 **§ 6. Performance Under Agreement Does Not Result in Waiver.** Execution of
12 this Agreement by the Parties and the performance of their obligations hereunder shall not
13 result in waiver of any claim, issue, or dispute concerning the proprietary, confidential, or
14 legally protected nature of the Confidential Information provided. In addition, nothing in
15 this Agreement is intended to require the production of any Confidential Information by any
16 Party. By releasing Confidential Information pursuant to this Agreement, the Parties
17 respectively retain in all respects every privilege and claim to confidentiality each heretofore
18 has had and hereafter may have with respect to all such Confidential Information. The
19 limited provision of Confidential Information by the Providing Party under the terms of this
20 Agreement shall not constitute public disclosure of it.

21 **§ 7. Use of Confidential Information in Pleadings.** Where references to
22 Confidential Information are required in any pleading, brief, argument or motion, such
23 references shall be made by citation of title or exhibit number or some other description that
24 avoids disclosure of the substantive Confidential Information contained therein. Any use of
25 or substantive references to Confidential Information shall be placed in a separate section of
26 the pleading, brief or motion and submitted to the Chairman of the Arizona Power Plant and
27 Transmission Line Siting Committee ("Chairman"), Administrative Law Judge ("ALJ") or
28 the Arizona Corporation Commission ("Commission") under seal. Any information filed,

1 submitted or designated as under seal as provided herein shall not be subject to public release
2 or inspection (other than inspection by a person authorized by the terms of this Agreement,
3 or by the assigned Chairman, ALJ or Commission and the Commissioners or their aides),
4 except by order of the Commission. All of the restrictions contained in this Agreement apply
5 to materials prepared and distributed under this Paragraph.

6 **§ 8. Disclosure of Information to the Public.** The Confidential Information
7 provided pursuant to this Agreement shall not be disclosed to any person not authorized to
8 review it under the terms of this Agreement or made part of the public record in the above-
9 captioned docket, or in any other administrative or legal proceeding, unless the Receiving
10 Party provides the Producing Party with five (5) business days written notice that it
11 challenges the Producing Party's designation of the information as legally protected and
12 intends that certain specifically identified information shall be subject to wider dissemination
13 or public disclosure. Upon the expiration of five (5) business days from the date such
14 written notice is received by the Producing Party, any Confidential Information specifically
15 identified in the notice as subject to public disclosure may become part of the public record
16 in this docket, unless the Producing Party initiates a protective proceeding under the terms of
17 Paragraph 9 to this Agreement.

18 **§ 9. Protective Proceedings to Prevent Disclosure to the Public.** In the event
19 that the Producing Party seeks to prevent disclosure of Confidential Information pursuant to
20 Paragraph 8 above, the Producing Party shall file, within five (5) business days of receiving
21 written notice of the Receiving Party's intent to disclose such information, a motion
22 presenting the specific grounds upon which it claims that the information should not be
23 disclosed or should not be made a part of the public record. The Receiving Party shall have
24 an opportunity to respond to the motion. The motion may be ruled upon by either the
25 Chairman, Commission or an assigned ALJ. The Producing Party may provide to the
26 Chairman, Commission or the ALJ the Confidential Information referenced in the motion
27 without waiver of its position that the information should be kept confidential under the
28 terms of this Agreement. Any Confidential Information so provided shall be filed and kept

1 under seal for the purpose of permitting inspection by the Chairman, the Commission or the
2 ALJ before ruling on the motion.

3 Notwithstanding any determination by the Chairman, ALJ or the Commission that any
4 Confidential Information provided pursuant to this Agreement should be made a part of the
5 public record or otherwise disclosed, such disclosure shall not occur for a period of five (5)
6 business days after such determination so that the Providing Party may seek judicial relief
7 from the Chairman's, ALJ's or the Commission's decision. Upon expiration of the five (5)
8 day period, the Chairman, ALJ or the Commission may release the information to the public
9 unless the Providing Party has received a stay or determination from a court of competent
10 jurisdiction that the Confidential Information should not be disclosed.

11 **§ 10. Disclosure to Third-Parties.** In the event the Receiving Party wishes to
12 provide the Producing Party's Confidential Information to a person who is not included
13 within the scope of Paragraphs 2 or 3 herein (a "Third Party"), the Receiving Party shall
14 make such request of the Producing Party in writing. If the Producing Party consents in
15 writing to providing such Third Party with Confidential Information under the terms of this
16 Agreement, the Third Party shall have access to such information only upon the Third
17 Party's execution of Exhibit A to this Agreement. If the Producing Party does not consent to
18 providing its Confidential Information to the Third Party, the Parties shall submit their
19 dispute to the Chairman, assigned ALJ (or to the Commission's Chief ALJ, if no ALJ has
20 been assigned to this docket) or the Commission for resolution in accordance with the
21 procedure set forth in Paragraph 9.

22 **§ 11. Return of Confidential Information.** Confidential Information shall remain
23 available to the persons who have received such information under the terms of this
24 Agreement until all Commission proceedings relating to the above-referenced docket are
25 concluded and are no longer subject to judicial review. Within 30 days after such time has
26 passed, the Producing Party may submit a written request for the return of all Confidential
27 Information, including copies thereof and notes pertaining thereto made by any person who
28 received such information under the terms of this Agreement, and the Receiving Party shall

1 cause all persons to have received such information under the terms of this Agreement to
2 return it to the Producing Party within 15 days of such request. If such request is not
3 received within the stated 30 days, the Receiving Party shall, within another 30 days, cause
4 all Confidential Information in the possession of any person to have received such
5 information under the terms of this Agreement, including copies thereof and any notes
6 pertaining thereto, to be destroyed or returned to the Producing Party, and shall certify in
7 writing to the Producing Party that this has been accomplished. To whatever extent
8 Confidential Information is not returned or destroyed as provided herein, such information
9 shall remain subject to the provisions of this Agreement.

10 **§ 12. Non-Termination.** The provisions of this Agreement shall not terminate at the
11 conclusion of the proceedings conducted in the above-referenced docket. Even if no longer
12 engaged in such proceedings, every person who has executed Exhibit A or who is otherwise
13 subject to this Agreement shall continue to be bound by its terms unless released therefrom
14 by the Company in writing.

15 **§ 13. Objections to Admissibility.** This Agreement is intended to restrict and
16 control the production, use, and dissemination of Confidential Information that may be
17 provided by either Party to this Agreement. The production of any document, information,
18 data, study or other materials pursuant to this Agreement shall not limit the right of any Party
19 to object to its relevance or admissibility in proceedings before the Commission or any
20 judicial body.

21 **§ 14. Designated Contacts.**

22 A. RUCO's designated contacts for written notice pertaining to this Agreement
23 are:

24 Daniel W. Pozefsky
25 Chief Counsel
26 Residential Utility Consumer Office
27 1110 West Washington Street
28 Suite 220
 Phoenix, Arizona 85007
 dpozefsky@azruco.gov

 Robert B. Mease
 Chief Accounting and Rates
 Residential Utility Consumer Office
 1110 West Washington Street
 Suite 220
 Phoenix, Arizona 85007
 rmease@azruco.gov

1 B. APS's designated contacts for written notice pertaining to this Agreement are:

2 Linda J. Benally
3 Attorney
4 Pinnacle West Capital Corporation
5 Law Department
6 400 North 5th Street, MS 8695
7 Phoenix, Arizona 85004
8 Linda.Benally@pinnaclewest.com

Melissa Krueger
Senior Regulatory Attorney
Pinnacle West Capital Corporation
Law Department
400 North 5th Street, MS 8695
Phoenix, Arizona 85004
Melissa.Krueger@pinnaclewest.com

7 Gregory Bernosky
8 Manager, Regulatory Policy, Consumer Advocates
9 Arizona Public Service Company
10 400 North 5th Street, MS 9708
11 Phoenix, Arizona 85004
12 Gregory.Bernosky@asp.com

11 § 15. **Breach of Agreement.** APS, in any legal action or complaint it files in any
12 court alleging breach of this Agreement shall, at the written request of the Commission,
13 name the Commission as a defendant therein.

14 § 16. **Remedies.** The Parties acknowledge and agree that an exclusive remedy of
15 money damages would not be a sufficient remedy for any breach of this Agreement, and that
16 in addition to all other remedies to which the Producing Party may be entitled, each such
17 Producing Party may be entitled to: (a) apply to the Chairman, ALJ or the Commission, as
18 appropriate, for sanctions against the other Party and its legal counsel; and (b) specific
19 performance and/or injunctive or other relief as a remedy. Any equitable relief sought or
20 secured hereunder shall not bar recovery of other remedies available at law or in equity,
21 including money damages.
22

23 ...

26 ...

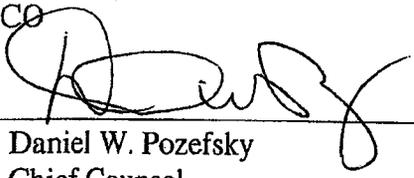
28

DATED this 27th day of August, 2014.

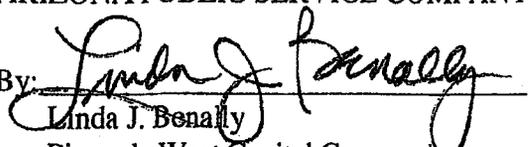
RUCO

ARIZONA PUBLIC SERVICE COMPANY

By:



By:



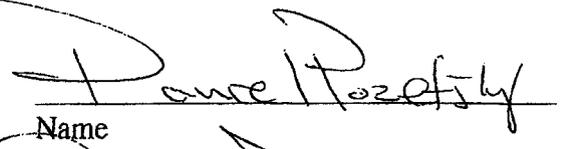
Daniel W. Pozefsky
Chief Counsel
Residential Utility Consumer Office
1110 West Washington Street, Suite 220
Phoenix, Arizona 85007
602-364-4835

Linda J. Benally
Pinnacle West Capital Corporation
Law Department
400 North 5th Street, MS 8695
Phoenix, Arizona 85004
602-250-3630

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1 EXHIBIT "A"

2 I have read the Protective Agreement dated August 27, 2014, executed by
3 authorized representatives of Arizona Public Service Company and RUCO *In the Matter of*
4 *the Application of Arizona Public Service Company, in Conformance with the*
5 *Requirements of Arizona Revised Statutes 40-360 et seq., for a Certificate of*
6 *Environmental Compatibility Authorizing the Ocotillo Modernization Project, which*
7 *Includes the Installation of Five 102 MW Gas Turbines and the Construction of Two 230-*
8 *Kilovolt Generation Interconnections and Other Ancillary Facilities, All Located Within*
9 *the Bounds of the Existing Ocotillo Power Plant Situated on Property Owned by Arizona*
10 *Public Service Company and Located at 1500 East University Drive, Tempe, Arizona, in*
11 *Maricopa County, Docket No. L-00000D-14-0292-00169 and agree to be bound by the*
12 terms and conditions of such Agreement.

13 
14 Name

15 
16 Signature

17
18 RUCO
19 Employer or Firm

20
21 1110 W. Washington, Suite 200
22 Business Address

23 Chief Counsel
24 Position or relationship with RUCO

25
26 8-28-14
27 Date

28

1 **EXHIBIT "A"**

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11 *Maricopa County, Docket No. L-00000D-14-0292-00169 and agree to be bound by the*
12 terms and conditions of such Agreement.

13 Lon Huber

14 Name

15 [Signature]

16 Signature

17 RUCO

18 Employer or Firm

19 1110 W Washington St apt 202

20 Business Address

21 special projects Advisor

22 Position or relationship with RUCO

23 8-29-14

24 Date

1 EXHIBIT "A"

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9 *the Bounds of the Existing Ocotillo Power Plant Situated on Property Owned by Arizona*
10 *Public Service Company and Located at 1500 East University Drive, Tempe, Arizona, in*
11 *Maricopa County, Docket No. L-00000D-14-0292-00169 and agree to be bound by the*
12 terms and conditions of such Agreement.

13
14 Riley Rhorer
Name

15
16 Riley Rhorer
Signature

17
18 K.R. Saline & Associates, PLC.
Employer or Firm

19
20
21 160 N. Pasadena, Suite 101, Mesa, AZ
Business Address

22
23 Consultant
Position or relationship with RUCO

24
25
26 8/28/2014
Date

1 **EXHIBIT "A"**

2 I have read the Protective Agreement dated August 22, 2014, executed by
3 authorized representatives of Arizona Public Service Company and RUCO *In the Matter of*
4 *the Application of Arizona Public Service Company, in Conformance with the*
5 *Requirements of Arizona Revised Statutes 40-360 et seq., for a Certificate of*
6 *Environmental Compatibility Authorizing the Ocotillo Modernization Project, which*
7 *Includes the Installation of Five 102 MW Gas Turbines and the Construction of Two 230-*
8 *Kilovolt Generation Interconnections and Other Ancillary Facilities, All Located Within*
9 *the Bounds of the Existing Ocotillo Power Plant Situated on Property Owned by Arizona*
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12 terms and conditions of such Agreement.

13 Christopher M. Fecke-Stoldt
14 Name

15
16 
17 Signature

18 K.R. Salame & Associates, PLC
19 Employer or Firm

20
21 160 N. Pasadena, Suite 101
22 Business Address
Mesa, AZ 85201

23 Consultant
24 Position or relationship with RUCO

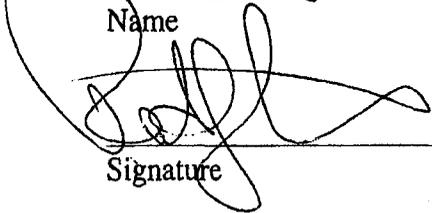
25
26 August 28, 2014
27 Date

28

1 **EXHIBIT "A"**

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12 terms and conditions of such Agreement.

13 PATRICK J. QUINN
14 Name

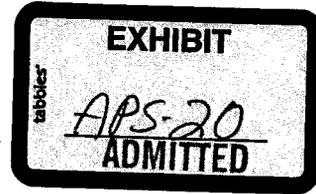
15 
16 Signature

17
18 State of AZ RUCO
19 Employer or Firm

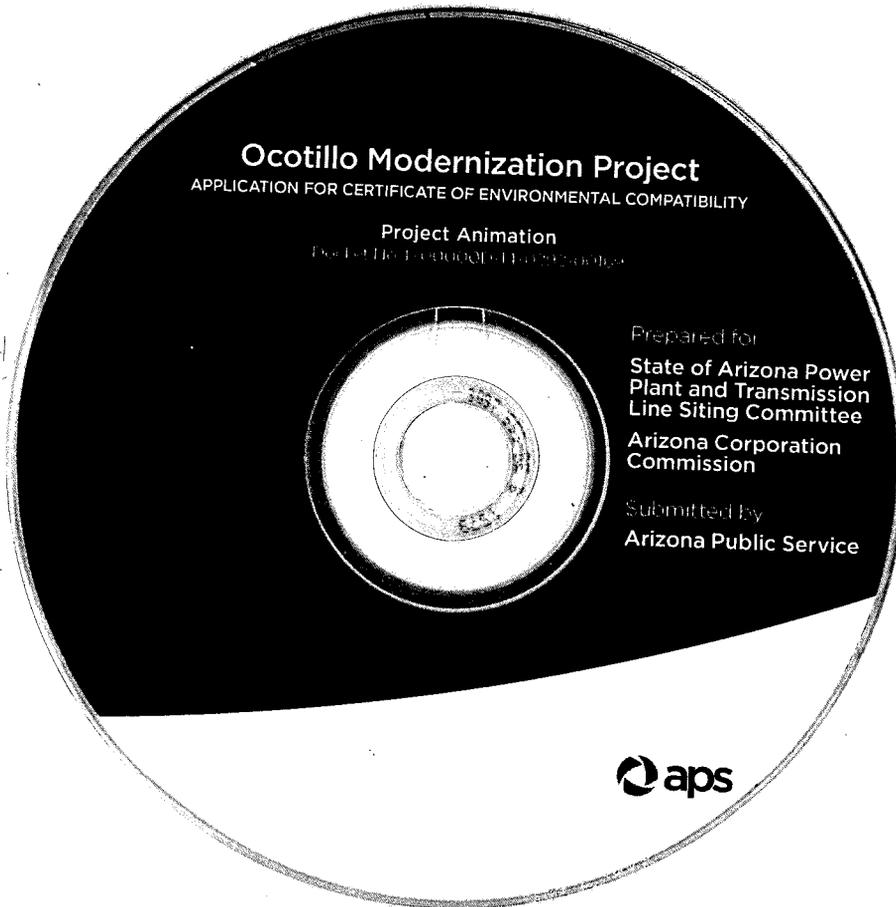
20
21 1110 W WASHINGTON suite 220
22 Business Address 85007

23
24 DIRECTOR
25 Position or relationship with RUCO

26 8/2/2014
27 Date



Project Animation



APS-
Exhibit 20

Resource Comparison

	COAL	NATURAL GAS CC	NATURAL GAS CT	NUCLEAR	UTILITY SCALE SOLAR PV	GEO-THERMAL	BIOGAS	WIND	ENERGY EFFICIENCY
Availability	Abundant, reliable, non-renewable	Abundant, reliable, non-renewable	Abundant, reliable, non-renewable	Reliable, non-renewable	Renewable but only available during daytime hours, requires backup from other sources	Few known sources in Arizona, renewable	Limited availability in Arizona, renewable	Renewable, only available when wind blows, requires backup from other sources	Future availability and cost levels uncertain Requires customer investment
Flexibility	Less flexible	Semi-flexible	Flexible	Inflexible	Variable / Inflexible	Inflexible	Inflexible	Variable / Inflexible	Inflexible
Dispatchability	yes	yes	yes	yes	no	no	no	no	no
Environment	Produces greenhouse gases and emissions	Emissions less than coal but still produces greenhouse gases	Emissions less than coal but still produces greenhouse gases	No air emissions; long term storage solutions needed; uses a large amount of water	No air emissions; low water use	Low emissions; high water use; environmental impact depends on quality of water that comes out of the earth	Low emissions; possible impact on habitat	No air emissions; some concerns about impact on habitat and property values; no water use	Can reduce energy needed from sources that produce emissions and use water
Capacity Factor/ Load Factor	75%-90%	75%	10%-30%	90%	30%-34%	96%	88%	23%-33%	10%-100% ¹
Book Life (Years)	32	32	32	32	25	30	20	20	1 to 15
Installed Costs ² (\$/kW) 2017\$	\$3,650-\$6,400	\$1,250	\$800-\$1,550	\$6,250	\$2,100-\$2,500	\$5,850	\$2,900	\$2,550-\$2,650	N/A
Life Cycle Levelized Delivered Costs ³ (\$/MWh) 2017 In-Service Date	\$114-\$169	\$91	\$132 - \$298	\$127	\$126-\$140	\$142	\$106	\$184-\$191	\$12-\$162 (Avg. \$61)

¹Energy Efficiency load factors are based on coincident peak demand reduction.

²Installed Costs include AFUDC. The capital costs on pages 286-288 in the APS 2014 IRP report are overnight construction costs in 2013 dollars and do not include AFUDC.

³Life Cycle Levelized Delivered Costs include capital, O&M, fuel, emissions (SO₂ & CO₂), transmission & losses, imputed debt, integration costs, and capacity backup costs.

