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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 ALLEGHENY)
ENERGY SUPPLY COMPANY, L.L.C.,)
FOR A CERTIFICATE OF)
ENVIRONMENTAL COMPATIBILITY)
FOR CONSTRUCTION OF A 1,080)
MW (NOMINAL) GENERATING)
FACILITY IN SECTION 35,)
TOWNSHIP 3 NORTH, RANGE 11)
WEST IN LA PAZ COUNTY,)
ARIZONA AND AN ASSOCIATED)
TRANSMISSION LINE AND)
SWITCHYARDS BETWEEN AND IN)
SECTION 35, TOWNSHIP 3 NORTH,)
RANGE 11 WEST ALSO IN LA PAZ)
COUNTY, ARIZONA)

Docket No. L-00000AA-01-0116

Case No. 116

**AZURE'S RESPONSE TO
CHAIRWOMAN WOODALL'S
SEPTEMBER 5, 2001 PROCEDURAL
ORDER**

Arizona Corporation Commission

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I. Introduction

AZURE submits the following proposed terms and conditions for a Certificate of Environmental Compatibility ("CEC") for the La Paz Generating Facility, pursuant to Chairwoman Woodall's September 5, 2001 Procedural Order. AZURE's counsel met and conferred with counsel for Allegheny Energy Supply Company, L.L.C., ("Allegheny" or "applicant") on October 25, 2001, but the parties were unable to reach agreement on these proposals. AZURE therefore submits its proposed terms and conditions to the Arizona Power Plant and Transmission Line Siting Committee ("Committee") separately. AZURE requests that the Committee adopt these proposed terms and conditions in addition to any non-conflicting terms and conditions proposed by other parties, including the applicant and Arizona Corporation Commission ("Commission") staff. To the extent another party

1 proposes terms and conditions that conflict with those presented herein, AZURE respectfully
2 requests that the Committee adopt the AZURE proposed terms and conditions.

3 On a preliminary note, AZURE wishes to underscore that there is insufficient
4 evidence before the Committee to support any finding of need for the La Paz Generating
5 Facility within Arizona. On the contrary, the evidence establishes that the applicant has
6 overstated Arizona's projected demand for electricity and understated projected supply.
7 Under these circumstances, it is far more probable that the output from this project will be
8 sold out-of-state (most likely in California) rather than used to serve the needs of Arizona
9 residents. Thus, in the absence of demonstrated in-state need, AZURE believes the
10 Committee should not only require, but demand, full mitigation or avoidance of any and all
11 foreseeable significant environmental impacts. There is simply no justification for
12 Arizonans to suffer all the environmental consequences of this project while the applicant
13 and out-of-state consumers realize the majority of the benefits.

14 To this end, AZURE also believes the Committee should strive to eliminate any
15 regulatory "differential" that may currently exist between California and Arizona vis-à-vis
16 the terms and conditions under which power plants are licensed. Needless to say, if this or
17 any applicant seeking to build a merchant plant to serve the western grid perceives Arizona's
18 permitting authorities to be more lax than in other states, the outcome of the perverse
19 incentives that will unavoidably ensue could prove disastrous for this state's environment
20 and natural resources. AZURE notes that this particular project's location, just 65 miles east
21 of the California border, makes it extremely well suited to serve the California market. For
22 this reason, the Committee should ensure that any mitigation requirements or conditions that
23 would be imposed on the project if it were built in California are imposed here with equal
24 force.
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26

1 The proposed terms and conditions are organized according to environmental impact
2 or resource category, followed by a narrative explanation of why they should be adopted by
3 the Committee.

4 **II. Proposed Terms and Conditions**

5 Water Supply

- 6 1. The applicant shall employ a full dry-cooling system to eliminate the need for
7 groundwater pumping and the permanent loss of up to 6,500 acre-feet per year of
8 scarce groundwater resources.

9 Biological Resources

- 10 2. The applicant shall employ a zero liquid discharge crystallizer *in lieu* of evaporation
11 ponds to avoid adverse impacts to wildlife.
- 12 3. The applicant shall incorporate mitigation measures to minimize the potential for
13 raptor collisions with project transmission lines, including but not limited to, the
14 installation of perch guards on power poles and towers; use of high reflection
15 transmission line coatings; and use protective insulation on exposed high-voltage
16 points of contact.

17 Air Quality

- 18 4. The applicant shall limit NOx emissions from each turbine to 2.0 ppm averaged over
19 1 hour, using selective catalytic reduction (“SCR”).¹
- 20 5. The applicant shall limit ammonia slip from each turbine to 2.0 ppm averaged over 1
21 hour.
- 22 6. The applicant shall limit CO emissions from each turbine to 2.0 ppm averaged over 3
23 hours, using an oxidation catalyst.

24 ¹ This condition will also serve to minimize potential impacts on foraging habitat for
25 the Sonoran desert tortoise resulting from project-related nutrient deposition onto nearby
26 soils and vegetation.

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7. The applicant shall limit VOC emissions from each turbine to 2.0 ppm averaged over 1 hour using an oxidation catalyst.
8. The applicant shall limit sulfuric acid mist emissions from all project-related combustion sources to less than 7 tons per year.
9. The applicant shall minimize emissions of hazardous air pollutants (“HAPs”) from the turbines during startup and shutdown by: (a) using steam from an auxiliary boiler or electric heating coils to preheat the SCR and oxidation catalyst during periods of startup; and (b) using a stack damper to keep the Heat Recovery Steam Generator hot during periods of shutdown.
10. The applicant shall limit NOx emissions from each auxiliary boiler to 5 ppm @ 3% O₂, using SCR with a 5 ppm ammonia slip.
11. The applicant shall limit CO emissions from each auxiliary boiler to 6 ppm, using an oxidation catalyst.
12. The applicant shall install a SCR system on each 1,000 kW backup generator.
13. The applicant shall use only low-sulfur fuels in each 1,000 kW backup generator to limit sulfur content to < 15 ppmvd.
14. The applicant shall employ best management practices (BMPs) for fugitive dust control. These BMPs shall include, but not be limited to, periodic watering of exposed soils; tarping of stockpiled earth; tarping of dump-trucks; limiting vehicle speeds on unpaved roads; paving high-traffic construction roadways; installing windbreaks in construction areas; etc.
15. The applicant shall install oxidizing soot filters on all diesel-fueled construction equipment.
16. The applicant shall use only low-sulfur diesel fuels in all diesel construction vehicles and equipment.

1 17. The applicant shall use only retrofitted or post-1998 engines to meet California Air
2 Resources Board emission standards on all heavy vehicles and equipment during
3 project construction.

4 18. The applicant shall employ a shuttle to transport commuting workers from nearby
5 town(s) to minimize daily vehicle trips.

6 Ammonia Risk

7 19. The applicant shall ensure that all drivers transporting ammonia to the project site
8 have been hired and trained in accordance with standards no less stringent than
9 California Department of Transportation standards governing the transport by truck of
10 acutely hazardous substances.

11 20. The applicant shall ensure that all trucks transporting ammonia to the project site are
12 inspected and maintained in accordance with standards no less stringent than
13 California Department of Transportation standards governing the transport by truck of
14 acutely hazardous substances.

15 21. The applicant shall ensure that ammonia is transported to the project site only during
16 weekend and holiday daylight hours.

17 22. The applicant shall ensure that only MC-331 trucks are used to transport ammonia to
18 the project site.

19 23. The applicant shall use only subsurface ammonia storage vessel(s) to store ammonia
20 at the project site.

21 24. The applicant shall use only double-walled storage vessel(s) to store ammonia at the
22 project site.

23 25. The applicant shall use only fully enclosed storage vessel(s) to store ammonia at the
24 project site.

25 Alternative to Proposed Terms Conditions 19-22: The applicant shall use an "Ammonia on
26 Demand" urea-based system to avoid the transport of ammonia to the site.

1 Transmission System Reliability

2 26. Prior to commencement of commercial operations, the applicant shall implement
3 measures to mitigate any project-related adverse impacts to the transmission system
4 identified in the system impact study performed by Southern California Edison and/or
5 any other relevant study or analysis.

6 27. Prior to commencement of commercial operations, the applicant shall implement any
7 transmission enhancements identified in state and regional transmission studies or
8 forums to ensure reliable power delivery from the project throughout the Western
9 States Coordinating Council (WSCC) grid.

10 Duration of Certification

11 28. The authorization to construct the Project will expire three (3) years from the date the
12 Certificate is approved by the Commission unless construction is completed to the
13 point that the plant is capable of operating at its rated capacity by that time. The
14 applicant may request an extension of up to one year based on a showing that the
15 applicant has diligently pursued construction and that any delay in completion is not
16 the fault or responsibility of the applicant.

17 **III. Explanation of Conditions**

18 Water Supply

19 1. Dry Cooling System

20 The evidence in the record establishes that the groundwater pumping to serve the
21 project's proposed wet-cooling system will have substantial adverse impacts on the
22 underlying aquifer, on the lands above it, and on the state's scarce groundwater resources in
23 general. Allegheny proposes to pump up to 6,500 acre-feet per year from the ground in order
24 to cool the project. This water will be permanently lost to evaporation. The pumping is
25 likely to exacerbate land subsidence, worsen groundwater quality, and negatively affect other
26 groundwater users in the basin.

1 All or nearly all of these impacts can be completely avoided if the applicant deploys a
2 dry-cooling system *in lieu* of the water-cooled system currently proposed. The evidence in
3 the record will show that dry-cooling systems are technically and economically feasible for
4 this project. In fact, several similar merchant power plants in the arid West, selling their
5 output into the same competitive market, are currently using or proposing to use dry-cooling
6 systems to avoid needless consumption of freshwater resources. One such project, the Signal
7 Peak Project, has been announced in Arizona by Reliant Energy. Another, the El Dorado
8 Project, is already in operation in Nevada, in the Mohave Desert close to the Arizona border.

9 Biological Resources

10 1. Zero-Liquid Discharge Crystallizer

11 The evidence will establish that the evaporation ponds proposed for the disposal of
12 cooling tower blowdown from the project will have significant adverse impacts on birds.
13 The ponds will most likely contain levels of selenium and other toxic contaminants that
14 exceed acceptable risk thresholds for avian exposure. At the same time, the ponds will likely
15 be highly attractive to birds and other wildlife in this arid environment. Bird or wildlife
16 exposure to the blowdown in the ponds could therefore result in significant bioaccumulation
17 of toxins in the food-chain.

18 Fencing, screening, netting, and other measures to discourage bird and wildlife access
19 to ponds are not effective to reduce the risk of exposure to a level of insignificance.
20 Accordingly, the applicant should be required to deploy a zero liquid discharge crystallizer
21 system to dispose of cooling tower blowdown waste without resort to evaporation ponds.
22 Such crystallizer systems are used routinely at similar merchant power plants throughout the
23 West, and the California Energy Commission has required their use for projects in
24 biologically sensitive areas.

25 2. Measures to Minimize Raptor Collisions
26

1 The evidence will also establish that the project's transmission lines could pose a
2 significant collision risk to raptors. Accordingly, the applicant should be required to install
3 mitigation measures to minimize this risk. Such measures used at similar facilities include
4 perch guards, high reflection lines, and line insulation. The applicant should develop and
5 implement these measures in cooperation with the appropriate federal and state fish and
6 wildlife agencies.

7 Air Quality

8 1. BACT For Turbine Emissions

9 The project's turbines and auxiliary boilers will emit substantial quantities of air
10 pollutants during project operation, as will construction vehicles and equipment during
11 project construction. The federal Clean Air Act requires that the applicant limit project
12 emissions of "criteria" pollutants, including NO_x, CO, and VOCs, to levels that reflect Best
13 Available Control Technology, or "BACT." BACT for a given pollutant is an emission limit
14 that represents the maximum degree of reduction achievable taking into account energy,
15 environmental, and economic impact and other costs.

16 Evidence shows that the applicant is not limiting project emissions of NO_x, CO, and
17 VOCs to levels that represent BACT. Similar plants using identical turbines in other states,
18 including California, have been permitted with significantly lower emission limits. Thus, if
19 this same project were proposed in California, it would almost certainly be required to limit
20 its pollutant emissions to levels lower than the applicant is proposing here. In the absence of
21 any evidence in the record to justify higher limits in Arizona than would be required in
22 California or other states, the applicant should be required to limit its emissions to the levels
23 identified in AZURE's proposed terms and conditions.

24 In addition, evidence shows that emissions of HAPs from the turbines during startup
25 and shutdown are likely to cause significant air quality impacts. These impacts can be
26 mitigated by ensuring that the SCR system and oxidation catalyst, which are effective only at

1 high temperatures, are pre-heated prior to startup and kept hot during shutdown.
2 Accordingly, the Committee should impose terms and conditions to ensure this occurs.

3 3. BACT For Auxiliary Boiler Emissions

4 Evidence similarly establishes that the emission limits proposed by the applicant for
5 the project's auxiliary boilers do not represent BACT. California's South Coast Air Quality
6 Management District ("SCAQMD") and other permitting agencies have determined that
7 BACT for such boilers is lower than proposed by the applicant. Again, there is no evidence
8 before the Committee to justify higher limits in Arizona than would be required in California
9 and elsewhere.

10 4. Construction Emissions Controls

11 Project construction will generate significant air quality impacts, both from pollutant
12 emissions from construction vehicle and equipment exhaust, and from fugitive dust
13 emissions. Recognizing the seriousness of such impacts, power plant licensing agencies in
14 other states, including the California Energy Commission, routinely require project
15 applicants to implement measures to mitigate such emissions. These include the use of
16 oxidizing soot filters and low-sulfur fuels to minimize pollutant emissions from construction
17 vehicle exhaust, as well as fugitive dust control measures to limit the release of airborne
18 particulate matter during ground disturbance activities. The applicant has not proposed to
19 implement any such measures for this project. If the same project were proposed in
20 California, an extensive list of mitigation measures for construction emissions would be
21 imposed. There is no reason why the same list of mitigation measures for construction
22 emissions not be imposed by the Committee in this proceeding.

23 Ammonia Risk

24 1. Transportation and Storage Standards

25 The transport, storage, and use of ammonia at the project site could pose a significant
26 risk to public health and safety. An accidental ammonia release, either from a truck or an

1 on-site storage vessel, could expose individuals to dangerous concentrations of this
2 potentially deadly chemical. Measures to reduce the likelihood of an accidental release, and
3 to minimize the impact of any release that may occur, should therefore be required.

4 Once ammonia reaches the project site, risks associated with accidental releases can
5 be minimized by using enclosed, sub-surface, double-walled storage tanks. The Committee
6 should require the applicant to incorporate such measures.

7 Transmission System Reliability

8 1. Mitigate Adverse System Impacts In Advance

9 The applicant should be required to submit the Southern California Edison facilities
10 impact study *prior* to licensing, not as a licensing condition, so that negative impacts can be
11 identified in advance and appropriate mitigation included as a licensing condition. In
12 California, the Blythe project has been licensed by the California Energy Commission at a
13 site which, like La Paz, is adjacent to the Palo Verde-Devers ("PV-D") 500 KV line.
14 However, Blythe is not interconnecting to PV-D, likely because of transmission access
15 problems. The Committee and Commission need to be aware of any such problems at La
16 Paz, and the applicant must be required to mitigate any project-related adverse impacts on
17 the transmission system identified in the Edison Study or any other relevant study or
18 analysis.

19 The applicant should also be required not only to participate in state and regional
20 transmission study forums, but to fund and implement any measures identified by such
21 forums as necessary to ensure reliable power delivery from the project to the WSCC grid.
22 The Commission's staff has already identified problems with proposed generation
23 interconnecting to the adjacent Palo Verde and Hassayampa switchyards in excess of the
24 ability of those switchyards to deliver generation loads in Phoenix and elsewhere. The La
25 Paz project, because it will be electrically interconnected to the Palo Verde switchyard via
26 the PV-D 500 KV line, will tend to create or exacerbate congestion at Palo Verde.

1 Duration of Certificate

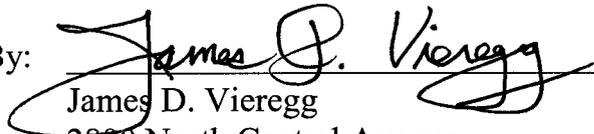
2 2. Three-Year Term

3 According to the applicant, the project will be constructed and ready to commence
4 commercial operation by 2004. The CEC should accordingly be conditioned to expire no
5 more than three years from the date of issuance. Any longer duration would allow the
6 applicant to "bank" the CEC, which in turn would exert a chilling effect on other potential
7 market entrants seeking to build projects to begin operation in the years after 2004. This
8 could foreclose the opportunity for Arizona to license new generation after 2004 that is
9 environmentally superior to the La Paz Project (e.g., through use of dry-cooling instead of
10 consumptive water use for cooling).

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RESPECTFULLY SUBMITTED this 1 day of November, 2001.

MORRISON & HECKER L.L.P.

By: 
James D. Vieregg
2800 North Central Avenue
Suite 1600
Phoenix, Arizona 85004-1047
Attorneys for AZURE

ORIGINAL filed this 1 day of
November, 2001, with:

Docket Clerk
Arizona Corporation Commision
1200 West Washington
Phoenix, AZ 85007

Copy hand-delivered and electronically
mailed this 1 day of November, 2001, to:

Ms. Laurie Anne Woodall, Esq.
Office of the Attorney General
1275 West Washington
Phoenix, AZ 85007

Copy hand-delivered this 1 day of
November, 2001, to:

Mr. Michael M. Grant, Esq.
Gallagher & Kennedy
2575 East Camelback Road
Phoenix, AZ 86016-8514

Mr. Todd C. Wiley, Esq,
Gallagher & Kennedy
2575 East Camelback Road
Phoenix, AZ 85016 - 8514

1 Mr. Jason D. Gellman, Esq.
2 Arizona Corporation Commission Legal Division
3 1200 West Washington
4 Phoenix, AZ 85007

5 Copy of the foregoing mailed this 1 day of
6 November, 2001, to:

7 Mr. Mark R. Wolfe, Esq.
8 Adams Broadwell Joseph & Cardozo
9 651 Gateway Boulevard, Suite 900
10 San Francisco, CA 94080

11 Mr. Marc D. Joseph, Esq.
12 Adams Broadwell Joseph & Cardozo
13 651 Gateway Boulevard, Suite 900
14 San Francisco, CA 94080

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