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BEFORE THE ARIZONA CORPORATION COMMISSION

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**COMMISSIONERS**

Mike Gleason, Chairman  
William A. Mundell  
Jeff Hatch-Miller  
Kristin K. Mayes  
Gary Pierce

Arizona Corporation Commission

**DOCKETED**

DEC 11 2008

DOCKETED BY

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**IN THE MATTER OF THE APPLICATION OF ARIZONA SOLAR ONE, LLC IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES §§ 40-360.03 AND 40-360.06, et seq. FOR A CERTIFICATE OF ENVIRONMENTAL COMPATABILITY AUTHORIZING CONSTRUCTION OF THE SOLANA GENERATING STATION, LOCATED IN SECTION 9, TOWNSHIP 6 SOUTH, RANGE 7 WEST, MARICOPA COUNTY ARIZONA.**

DOCKET NO. L-00000GG-08-0407-00139

CASE NO. 139

**IN THE MATTER OF THE APPLICATION OF ARIZONA SOLAR ONE, LLC IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES §§ 40-360, et seq., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE CONSTRUCTION OF THE SOLANA GEN-TIE, WHICH ORIGINATES AT THE SOLANA GENERATING STATION, LOCATED IN MARICOPA COUNTY, AND TERMINATES AT THE PANDA 230 kV SUBSTATION, LOCATED IN GILA BEND, ARIZONA.**

DOCKET NO. L-00000GG-08-0408-00140

CASE NO. 140

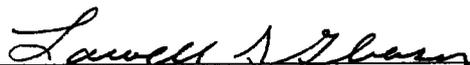
**DECISION NO. 70638**  
**for GENERATING STATION, Case No. 139**

The Arizona Corporation Commission ("Commission") has conducted its review, pursuant to A.R.S. § 40-360.07. The Commission finds and concludes that the Certificate of Environmental Compatibility ("CEC") issued by the Arizona Power Plant and Transmission Line Siting Committee ("Committee") is hereby granted by this Order.

The Commission further finds and concludes that: (1) the Project is in the public interest because it aids the state in meeting the need for an adequate, economical and reliable supply of electric power; (2) in balancing the need for the Project with its effect on the environment and ecology of the state, the conditions placed on the CEC by the Committee effectively minimize its

1 impact on the environment and ecology of the state; (3) the conditions placed on the CEC by the  
2 Committee resolve matters concerning the need for the Project and its impact on the environment  
3 and ecology of the state raised during the course of proceedings, and as such, serve as the findings on  
4 the matters raised; and (4) in light of these conditions, the balancing in the broad public interest  
5 results in favor of granting the CEC.

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7 **THE CEC ISSUED BY THE SITING COMMITTEE IS**  
8 **INCORPORATED HEREIN AND IS APPROVED BY ORDER OF THE**  
9 **ARIZONA CORPORATION COMMISSION**

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12 CHAIRMAN

  
12 COMMISSIONER

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15 COMMISSIONER

  
15 COMMISSIONER

  
15 COMMISSIONER

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17 IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive  
18 Director of the Arizona Corporation Commission, have  
19 hereunto, set my hand and caused the official seal of this  
20 Commission to be affixed at the Capital, in the City of Phoenix,  
21 this 11<sup>th</sup> day of December, 2008.

22   
23 BRIAN C. McNEIL  
24 EXECUTIVE DIRECTOR

25 DISSENT: \_\_\_\_\_

26 DISSENT: \_\_\_\_\_  
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1 **BEFORE THE ARIZONA POWER PLANT AND**  
2 **TRANSMISSION LINE SITING COMMITTEE**

3 IN THE MATTER OF THE APPLICATION )  
4 OF ARIZONA SOLAR ONE, LLC., IN ) Docket No. L-00000GG-08-0407-00139  
5 CONFORMANCE WITH THE )  
6 REQUIREMENTS OF ARIZONA REVISED )  
7 STATUTES §§ 40-360, *et seq.*, FOR A ) Case No. 139  
8 CERTIFICATE OF ENVIRONMENTAL )  
9 COMPATIBILITY AUTHORIZING THE )  
10 CONSTRUCTION OF THE SOLANA ) Decision No. **70638**  
11 GENERATING STATION, LOCATED IN )  
12 SECTION 9, TOWNSHIP 6 SOUTH, RANGE )  
13 7 WEST, MARICOPA COUNTY, ARIZONA. )  
14 \_\_\_\_\_ )

11 **CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY**

12 Pursuant to notice given as provided by law, the Arizona Power Plant and Transmission  
13 Line Siting Committee (the "Committee") held public hearings on September 22 and 23, 2008 and  
14 October 14, 2008, in conformance with the requirements of Arizona Revised Statutes ("A.R.S.")  
15 §§ 40-360, *et seq.*, for the purpose of receiving evidence and deliberating on the Application of  
16 Arizona Solar One, LLC. ("Applicant") for a Certificate of Environmental Compatibility  
17 ("Certificate") in the above-captioned case (the "Project").

18 The following members and designees of members of the Committee were present at one  
19 or more of the hearings for the evidentiary presentations and/or for the deliberations:

20 John Foreman	Chairman, Designee for Arizona Attorney General 21 Terry Goddard
22 Paul Rasmussen	Designee for Director, Arizona Department of 23 Environmental Quality
24 Gregg Houtz	Designee for Director, Arizona Department of Water Resources
25 Jack Haenichen	Designee for Director, Energy Office, Arizona Department 26 of Commerce, attended September 22 and 23, 2008

1	Jim Arwood	Director, Energy Office, Arizona Department of Commerce, attended October 14, 2008
2		
3	David Eberhart	Designee for Chairman, Arizona Corporation Commission
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5	Michael Biesemeyer	Appointed Member, attended September 22 and 23, 2008
6	Jeff McGuire	Appointed Member
7	Patricia Noland	Appointed Member
8	Michael Palmer	Appointed Member
9	Michael Whalen	Appointed Member
10	Barry Wong	Appointed Member

11 Applicant was represented by Thomas H. Campbell and Albert H. Acken of Lewis and  
12 Roca LLP. Arizona Corporation Commission ("ACC" or "Commission") Staff, represented by  
13 Charles H. Hains and Robin R. Mitchell, the Sierra Club-Grand Canyon Chapter, represented by  
14 Timothy M. Hogan, and the Paloma Irrigation and Drainage District ("PIDD"), represented by Jay  
15 Moyes and Jeffrey Zimmerman, were granted intervention pursuant to A.R.S. § 40-360.05.

16 At the conclusion of the hearings, the Committee, having received the Application, the  
17 appearances of the parties, the evidence, testimony, and exhibits presented at the hearings, and  
18 being advised of the legal requirements of A.R.S. §§ 40-360 to 40-360.13, upon motion duly  
19 made and seconded, voted 10 to 0 to grant Applicant this Certificate of Environmental  
20 Compatibility (Line Siting Case No. 139) for the Project.

21 The Project as approved consists of a 280 Megawatt ("MW") gross output (250 MW  
22 nominal output) concentrating solar power ("CSP") electric generating plant located on an  
23 approximately 3000-acre site west of the Town of Gila Bend, in Maricopa County, Arizona. A  
24 general location map of the Project is set forth in **Exhibit A**.



1 Project site for which the extension is sought. Such landowners and residents shall be  
2 notified of the time and place of the proceeding in which the Commission shall  
3 consider such request for extension.

- 4 5. Applicant, or its assignee(s) and/or its customer, will work in good faith to develop and  
5 implement an educational program to teach students about the science of solar electric  
6 technology.
- 7 6. The Applicant, or its assignee(s), will provide to the Commission Staff copies of the  
8 Project's executed interconnection agreement with APS, and the technical operating  
9 studies that will be performed prior to actual physical interconnection of the Project to  
10 the APS transmission system.
- 11 7. Applicant, or its assignee(s), or its affiliate company, or its customer will become a  
12 member of the Western Electricity Coordinating Council ("WECC") (or its successor),  
13 and will file with the Commission Docket Control a copy of its executed WECC  
14 Membership Agreement.
- 15 8. Applicant, or its assignee(s) and/or its affiliate company and/or its customer, will  
16 participate in good faith in Commission-sponsored workshops and assessments of the  
17 solar renewable infrastructure and market.
- 18 9. Applicant, or its assignee(s), may utilize groundwater for electrical generation and  
19 related uses associated with construction and commercial operation of the Project.  
20 Prior to the commencement of commercial operation, Applicant, or its assignee(s) will  
21 file with Commission Docket Control a letter confirming that Applicant, or its  
22 assignee(s) has secured both an adequate supply of water to produce 280 MW using  
23 CSP parabolic trough technology with thermal storage, and a legal right to use the  
24 water needed for the purpose of construction and commercial operation of the Project.
- 25 10. To the extent applicable, Applicant or its assignee(s), will comply with the notice and  
26 salvage requirements of the Arizona Native Plant Law (A.R.S. §§ 3-901, *et seq.*) and

1 will, to the extent feasible, minimize the destruction of native plants during Project  
2 construction.

3 11. During the construction and maintenance of the Project, to the extent applicable, the  
4 Applicant, or its assignee(s), will use existing roads for access, and to the extent  
5 applicable, taking into the account that the Project Site lies within a cultivated  
6 agricultural area, minimize impacts to wildlife and vegetation on the Project Site.

7 12. Pursuant to A.R.S. § 41-844, if any archaeological, paleontological or historical site or  
8 object that is at least fifty years old is discovered on state, county or municipal land  
9 during Project-related activities, the person in charge shall promptly report the  
10 discovery to the Director of the Arizona State Museum, and in consultation with the  
11 Director, shall immediately take all reasonable steps to secure and maintain the  
12 preservation of the discovery. If human remains and/or funerary objects are  
13 encountered on private land during the course of any ground-disturbing activities  
14 relating to the development of the subject property, Applicant shall cease work on the  
15 affected area of the Project and notify the Director of the Arizona State Museum  
16 pursuant to A.R.S. § 41-865.

17 13. Within 120 days of the Commission decision granting this Certificate, Applicant, or its  
18 assignee(s), will erect and maintain at the site a sign of not less than 4 feet by 8 feet  
19 dimensions, advising:

- 20 (a) That the site has been approved for the construction of a 280 MW generating  
21 facility;
- 22 (b) The expected date of completion of the Project;
- 23 (c) A phone number for public information regarding the Project;
- 24 (d) The name of the Project;
- 25 (e) The name of the Applicant, or its assignee(s); and
- 26 (f) The website of the Applicant, or its assignee(s).

- 1 14. In connection with the construction of the Project, Applicant, or its assignee(s), shall  
2 use commercially reasonable efforts, where feasible, to give due consideration to use  
3 of qualified Arizona contractors.
- 4 15. The Applicant, or its assignee(s), shall provide copies of this Certificate to the  
5 Maricopa County Planning and Development Department, the Arizona State Land  
6 Department, the State Historic Preservation Office, and the Arizona Game and Fish  
7 Department.
- 8 16. Within 120 days after the approval of this Certificate by the Commission, Applicant, or  
9 its assignee(s), will provide known homebuilders and developers within one mile of  
10 the Project (i) a copy of this Certificate, (ii) a map showing the location of the Project,  
11 (iii) a pictorial depiction of the type of power plant being constructed, and (iv) a  
12 written request that the developers and homebuilders include this information in the  
13 developers' and homebuilders' homeowners' disclosure statements.
- 14 17. The Applicant, or its assignee(s), shall file with Commission Docket Control,  
15 confirmation of the completion of system upgrades required under the interconnection  
16 agreement at least thirty days before commercial operation of the plant and associated  
17 transmission lines.
- 18 18. The Applicant will comply with all applicable Western Electricity Coordinating  
19 Council/North American Electric Reliability Corporation standards, without the  
20 implementation of an automated Remedial Action Scheme to mitigate N-1  
21 contingencies other than the loss of the Gen-Tie line.
- 22 19. The Applicant, or its assignee(s), shall file with Commission Docket Control the final  
23 APS System Impact Study, to include the Short Circuit Study, within 10 days of  
24 receipt by the Applicant or its assignee(s).  
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1 20. The Applicant, or its assignee(s), shall submit a self-certification letter annually,  
2 identifying progress made with respect to each condition contained in the Certificate,  
3 including which conditions have been met. Each letter shall be submitted to the  
4 Commission Docket Control on December 1, beginning in 2009. Attached to each  
5 certification letter shall be documentation explaining how compliance with each  
6 condition was achieved. Copies of each letter along with the corresponding  
7 documentation shall be submitted to the Arizona Attorney General and Department of  
8 Commerce Energy Office. The requirement for the self-certification shall expire on  
9 the date the Project is placed into operation.

10 21. The Applicant or its assignees shall submit by March 31, on an annual basis, a report  
11 to the Commission Docket Control and the Arizona Department of Water Resources  
12 that identifies the amount of water used for this Project in the previous calendar year.

#### 13 **FINDINGS OF FACT AND CONCLUSIONS OF LAW**

14 This Certificate incorporates the following findings of fact and conclusions of law:  
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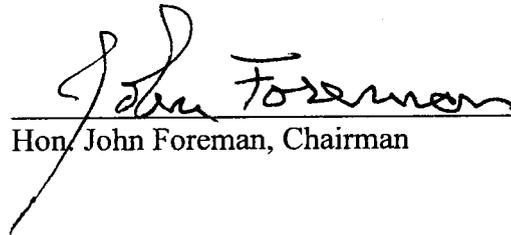
- 16 1. The Solana generating facility will use CSP technology.
- 17 2. CSP technology uses solar thermal energy as a fuel source to produce power with a  
18 conventional steam power plant.
- 19 3. The major components of the Solana project will be a solar field, a power block, a  
20 thermal energy storage system and a heat transfer fluid system.
- 21 4. The solar field will consist of approximately 2,700 to 3,000 parabolic trough collectors  
22 containing approximately 900,000 mirrors.
- 23 5. The power block will contain two 140 MW steam turbines.  
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- 1 6. The thermal energy storage system will use molten salt storage that will allow solar  
2 power to be dispatched in accordance with peak electricity demand profiles, and during  
3 cloudy or post-sunset periods.
- 4 7. The heat transfer fluid system moves the thermal energy collected in the solar field to  
5 the power block and the thermal energy storage system.
- 6 8. Solana will be a water cooled plant that will use approximately 3,000 acre feet per year  
7 within PIDD, which is substantially less than the approximately 27,500 acre feet per  
8 year that has been historically delivered by PIDD and used on this site for agriculture.
- 9 9. Utility-scale parabolic trough technology has successfully performed since 1984 when  
10 the first of nine trough plants were built in California's Mohave Desert.
- 11 10. The addition of Solana's clean energy production will offset the need for fossil-fueled  
12 generation that would otherwise produce approximately 475,000 tons per year of  
13 greenhouse gas emissions.
- 14 11. The Project is in the public interest because it aids the state in meeting the need for an  
15 adequate, economical and reliable supply of electric power.
- 16 12. In balancing the need for the Project with its effect on the environment and ecology of  
17 the state, the conditions placed on the Certificate by the Committee effectively  
18 minimize its impact on the environment and ecology of the state.
- 19 13. The conditions placed on the Certificate by the Committee resolve matters concerning  
20 the need for the Project and its impact on the environment and ecology of the state  
21 raised during the course of proceedings, and as such, serve as the findings on the  
22 matters raised.  
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14. In light of these conditions, the balancing in the broad public interest results in favor of granting the Certificate.

THE ARIZONA POWER PLANT AND  
TRANSMISSION LINE SITING COMMITTEE

  
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Hon. John Foreman, Chairman

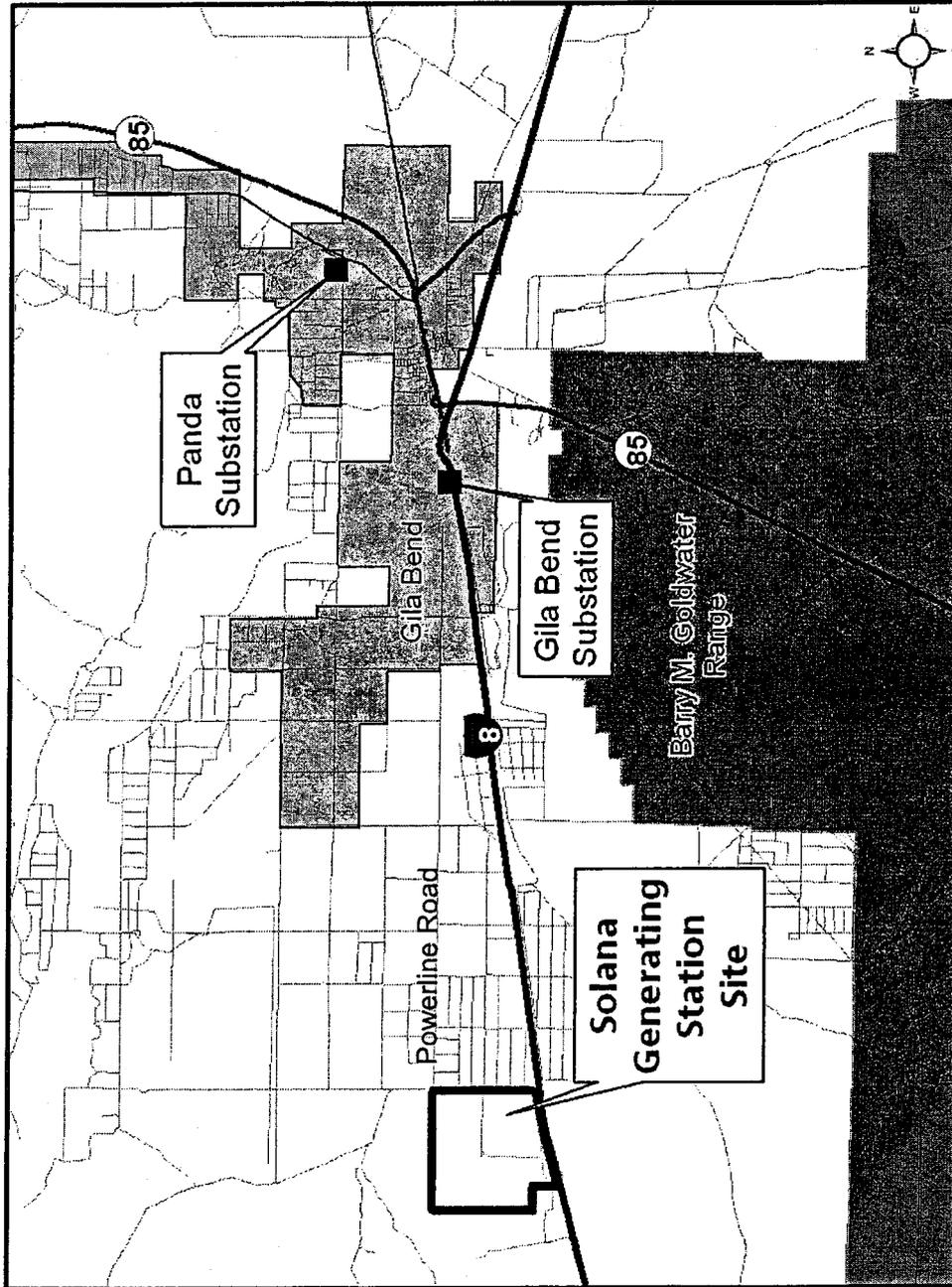


Figure 1. Solana Location Map