



COMMUNITY DEVELOPMENT DEPARTMENT

Planning, Zoning and Building Safety

1415 Melody Lane, Bisbee, Arizona 85603

(520) 432-9240

Fax 432-9278

Carlos De La Torre, P.E., Director

MEMORANDUM

TO: Cochise County Planning and Zoning Commission
FROM: Beverly Wilson, Interim Planning Manager
For: Michael Turisk, Interim Planning Director
SUBJECT: Docket SU-11- 13 (Rainbow Solar Facility)
DATE: December 5, 2011 for the December 14, 2011 Meeting

REQUEST FOR A SPECIAL USE

Docket SU-11-13 (Rainbow Solar Facility): The Applicant, Rainbow Solar Energy, LLC. seeks a Special Use authorization from the Planning and Zoning Commission to install a 20 mega-watt (MW) Solar Energy Power Plant using photovoltaic (PV) technology. The Cochise County Zoning Regulations permit a Solar Energy Power Plant in an RU-4 Zoning District per Section 607.50, with a Special Use authorization.

The subject property (Parcel No. 407-01-005) is located approximately ½ mile West of North Brooks Road, approximately 1-1/4 mile North of Highway 80, West of Douglas, AZ. David Bohn of Kinetix Engineering and Consulting and Consulting represents the Applicant, Rainbow Solar Energy, LLC.

I. DESCRIPTION OF SUBJECT PARCEL AND SURROUNDING USES

Size: 320.79 Acres of a 794 acre parcel
Zoning: RU-4 (Rural, minimum lot size of four acres)
Growth Area: Category D (Rural Growth Area)
Plan Designation: Rural
Area Plan: None
Existing Uses: Agricultural grazing lands
Proposed Use: Solar Energy Power Plant

Surrounding Zoning

Relation to Subject Parcel	Zoning District	Use of Property
North	RU-4	Undeveloped Land
South	RU-4	Abandoned air strip (Cochise College is located to the Southwest)
East	RU-4	Undeveloped Land with a ranch home

West	RU-4	Undeveloped Land
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II. PARCEL HISTORY

There is no history of any permit or violation for the subject property.

III. SPECIAL USE REQUEST AND BACKGROUND

The Applicant, Rainbow Solar Energy, LLC, is represented by David Bohn of Kinetix Engineering. They are proposing to construct and operate a solar power electric generating facility using PV technology combined with electronic Direct Current (DC) to Alternate Current (AC) power conditioning equipment (inverters) to produce three-phase, 60 Hz, utility-grade electric power directly from the sunlight. A site plan was submitted, showing the grid type layout that this facility will require. Each grid is composed of a series of solar panels connected to an inverter. The inverter is then connected to an underground electric line which conducts the electricity which is then collected and sent via overhead power lines to a new proposed substation, located approximately 3/4 of a mile west of this site along the southern property boundary. The proposed substation must be approved by Arizona Power Service which will also approve the Inter-connect Agreement, required by the Zoning Regulations prior to commercial permitting. The Applicant has indicated that they are about half-way through the process of obtaining the necessary permissions and documents required from Arizona Public Service.

The Arizona Corporation Commission set a goal to develop these types of alternative energy power plants to provide 15% of Arizona’s energy needs by the year 2025. The criteria for these large-scale solar power plants includes large contiguous areas of flat or nearly flat land, compatible zoning; an absence of sensitive resources such as high quality habitat for sensitive or protected species or other wildlife; and a close proximity to existing electrical substations and transmission infrastructure. The subject parcel meets these criteria and lies in a rural area of southeastern Cochise County.



The Applicant notes that this PV project will provide electric power to the grid during daylight hours, from shortly after sunrise until shortly before sunset. Solar power generation peaks later in the morning, but a small amount of power is generated even during overcast conditions. The facilities ability to generate power is also dependent upon the ambient air temperature. The efficiency of the solar modules is reduced somewhat by higher temperatures, while conversely, the lower ambient temperatures produce higher efficiencies and, therefore higher power output.

The Applicant estimates that construction of the solar power plant will involve up to 50 workers, and may begin mid-2012. While the project is anticipated to be completed within one year, an 'Interconnect Agreement' with Arizona Public Service may take longer. Per the Cochise County Zoning Regulations, this agreement must be obtained prior to issuance of a Commercial Permit. Construction will include building access roads, transmission lines, and a common service area which will consist of the plant switchyard, an operations and maintenance building, and onsite parking. During the construction period, a water truck will regularly spray to minimize dust.

After the initial construction is completed, the Applicant anticipates offsite employees will maintain the site and perform routine cleaning. The Applicant has confirmed their intent to construct a 'dry site'. Any water needed for cleaning and maintenance of the PV units will be brought on-site by contractors, hired to perform this type of maintenance. At this time, there are no plans to re-activate the existing well, drill a new well, or to install a septic system.

IV. ANALYSIS OF IMPACTS

Compliance with Special Use Factors (§1716.02)

Section 1716.02 of the Zoning Regulations provides a list of eleven (11) criteria used to evaluate Special Use applications. These criteria are considered factors in the decision whether or not to approve a Special Use Permit, and to determine what conditions may be needed. This request complies with seven factors, with the remaining four factors not applicable to this project.

A. Compliance with Duly Adopted Plans: Not Applicable.

This does not apply, as there are no area-specific Comprehensive Plan policies or transportation policies applicable to the area encompassing the subject parcel.

B. Compliance with the Zoning District Purpose Section: Complies.

The proposed use complies with the following purpose statement in Article 6 (RU, Rural) of the Zoning Regulations:

§601.02: To encourage those types of non-residential and non-agricultural activities which serve local needs or provide a service and are compatible with rural living.

The parcel is located approximately 1-1/4 miles north of Highway 80, 1/2 mile west of North Brooks Road on land that was farmed but is now grazed. There will be a new access road installed to the actual site. After the initial construction is completed, the site will not be viewable from passing vehicles, but will be near the approach and takeoff from the Cochise County Community College runways. While Kevin Butler of the College has indicated general support for this project, he has discussed his concerns for the Student Pilots with the Applicant. Rainbow Solar has indicated that a new site plan reconfiguring the solar panel/inverter grids will be submitted during the commercial permitting process. This new site plan will address the

concerns of the College and address, where possible, the concerns expressed by a neighbor in her protest letter (See Section V, below). The site will not produce sounds, lighting, noise, or odors once construction is complete.

C. Development along Major Streets: Not Applicable.

This remote site does not have access from any major streets.



This photo shows the undisturbed nature of the site.

D. Traffic Circulation Factors: Complies.

Section 1716.02 indicates that consideration must be made as to whether a Special Use results in the use of any residential street for non-residential through traffic. This request will not result in such an impact; therefore no off-site improvements are necessary.

E. Adequate Services and Infrastructure: Complies.

Water and Septic:

The site does not have a working well or septic system, and neither are proposed for this Special Use request at this time. Any water needed for routine maintenance will be brought in from off-site.

Access and Circulation: An access easement will be obtained along the northern boundary of parcel #407-61-002, from the same owner of the subject parcel. This private easement will create a legal means of access for the proposed solar power plant and will be required (See condition #4). Rainbow Solar Facility will improve the existing apron from North Brooks Road to meet the commercial driveway standards and plans to install 2” of gravel on the access road and around the planned maintenance building.

F. Significant Site Development Standards: Does Not Comply (See Conditions 4 and 5.)

Setbacks: Complies

The minimum setback for all Special Use Permits is twice the minimum setback allowed for permitted and accessory uses. If approved, the setbacks required for the Solar Energy Power Plant structures and components will be 40-feet. The submitted site plans for this proposed

project indicate that minimum setbacks would be 50-feet from property lines, so this site development standard would be met.

Site Coverage: Complies (with Waiver)

Maximum site coverage in the Rural zoning districts is 25%; however, the nature of a solar power plant requires a significantly larger site coverage. Staff is requesting that the Commission waive this development standard for this proposed use.

Landscaping: Not Applicable

The subject parcel is located within a Category D Growth Areas, thus are not subject to landscaping requirements, per Section 1806.02A.

Outdoor Storage: Not Applicable

There is no outdoor storage planned for this project.

Screening: Not Applicable

Screening is not required in Category D Growth Areas.

Parking: Complies

Per Section 1804.04 of the Zoning Regulations, the Applicant is required to construct at least one 9'x19' unimproved parking space for an unmanned facility.

Signs: Complies

There are no signs planned for this facility.

Floodplain: Complies.

The Applicant has submitted a grading and drainage plan showing the natural sheet flow across the parcel. A drainage report may be required by the Cochise County during the Commercial Permit review phase.

Additional requirements are addressed in Section 1823.07 and 1824 of the Zoning Regulations. These include submittal of all electrical plans, copies of the inter-connect agreements with the power company, and proof of construction by a licensed contractor. Other requirements that must be met will include submission of foundation plans and a permit from the State Office of Manufactured Housing for use of the mobile office. These requirements will be required prior to issuance of any building permits, and verified through the permitting process.

G. Public Input: Complies.

The Applicant sent correspondence to neighboring parcel owners within 1,500 feet of the property (see Attachment D.) The Applicant received one phone call inquiring as to the nature of this request. The unidentified caller did not express either support or offer protest to this proposal. The Department also mailed notice to owners within one mile of the site, and has received three responses to this Special Use request. Two of the letters are in support of this project, while one letter is protesting this project.

H. Hazardous Materials: Not Applicable.

The applicant has indicated on the Hazardous Materials Questionnaire included in the Special Use application that hazardous materials will not be stored on site.

I. Off-site Impacts: Complies.

The Applicant notes that post construction, there will be no noise generated from this site other than vehicles to transport the offsite employees for routine maintenance. There are no lights planned, and no odors will be produced. The access road will be graveled, and native grasses will be allowed to revegetate the site.

J. Water Conservation: Not Applicable.

The Applicant has indicated that no water will be used for this project, and it will remain a 'dry' site. Any water needed to perform routine cleaning of the PV panels will be transported from off-site.

K. Site Plan or Concept Plan: Complies (See Condition #2)

A scaled site plan submitted along with the Special Use application will meet the requirements set forth §1705.07 of the Zoning Regulations. However, as noted above, a revised site plan will be required prior to issuance of a Commercial Permit.

V. PUBLIC COMMENT

As previously stated, the Applicant received one inquiry from an unidentified neighbor. The Department received a letter of support from Mr. Kevin Butler, representing the Cochise County Community College District. Rainbow's End Ranch, LLC, has also submitted a letter in support of the project. The comments received show support for the renewable energy technologies, generation of clean energy, the environment, and future job potentials.

A neighbor whose property borders the project site along the east side, Mrs. Madeline Riggs has submitted a letter of protest expressing her concerns about the impacts of dust and noise during construction, stormwater management issues, and a potential for property value decrease. As state above, dust control will be mitigated through the use of water trucks during construction, a two-inch gravel surface on the access road and around the maintenance building, and native grasses will be allowed to revegetate the site post construction.

VI. SUMMARY AND CONCLUSION

Rainbow Solar Energy, LLC has requested a Special Use Permit for the construction and operation of a Solar Energy Power Plant in the southeast portion of Cochise County. The 321-acre Rainbow Solar Energy Facility would be located west of North Brooks Road, north of Highway 80 and west of Douglas, AZ. The facility will be built on privately owned lands and would have a power generating capacity at build out of approximately 20 megawatts (MW) of power. The proposed project would utilize grids of non-reflecting passive photovoltaic panels with inverters to capture solar energy. Transmission lines would carry generated current to an Arizona Public Service sub-station, which will be built $\frac{3}{4}$ of a mile west of this site, along the south parcel boundary. If approved, construction of the Solar Energy Power Plant, from building an access road to commercial operation, is expected to take place from 2012 to and through

2015. While nearby Cochise Community College and the Rainbow's End Ranch have expressed their support for this project, concern has been expressed by the only neighboring resident.

Factors in Favor of Allowing the Special Use:

1. These utility-scale projects would offer a clean and renewable source of energy that would enable Cochise County to participate in achieving the ACC mandate for 15% renewable energy production by 2025;
2. Cochise County enjoys abundant solar resources and offers large tracts of suitable land for this type of development;
3. The project can meet the Solar Energy Power Plant site development standards for the Rural Zoning Districts;
4. The site is ideal from an industry perspective in that they are large, very rural and flat and offer unobstructed solar resources;
5. Post construction traffic would be minimal;
6. The project would offer employment opportunities; and
7. To date, the Department has received one (1) letter of support for the project.

Factors Against Approval of the Special Use:

1. At this time, the Applicant does not have the inter-connect agreement or the power purchase agreements in place;
2. One (1) letter of protest was received for this project.

VII. RECOMMENDATIONS

Based on the factors in favor of approval, Staff recommends **conditional approval**, subject to the following conditions:

1. Within thirty (30) days of approval of the Special Use, the Applicant shall provide the County a signed Acceptance of Conditions form and a Waiver of Claims form arising from ARS Section 12-1134. The Applicant shall apply for a building/use permit for the project within one (1) year of approval, such application to include a completed joint permit application and a revised site plan in conformance with all site development standards. A permit must be issued within three (3) years of the Special Use approval, otherwise the Special Use may be deemed void upon 30-day notification to the Applicant; and
2. It is the Applicant's responsibility to obtain any additional permits, or meet any additional conditions, that may be applicable to the proposed use pursuant to other federal, state, or local laws or regulations; and
3. Any changes to the approved Special Use shall be subject to review by the Planning Department and may require additional modification and approval by the Planning and Zoning Commission.

4. Prior to permit issuance, a legal means of access for the proposed solar power facility must be obtained.

The Commission also approved the following Site Development Standard Modification:

1. Section 604.04 which requires a maximum 25% site coverage; the Modification will waive the maximum site coverage requirements for this project.

Sample Motion: *"Mr. Chairman, I recommend approval of Docket SU-11-13, with the conditions of approval and modifications to Site Development Standards as recommended by Staff; with the factors in favor of approval constituting findings of fact."*

VIII. ATTACHMENTS

- A. Special Use Application
- B. Location Map
- C. Site Plan
- D. Citizen Review and Public Comment