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Agenda Date: 12/18/2019

Agenda Placement: 8B

## Airport Land Use Commission Board Agenda Letter

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**TO:** Airport Land Use Commission

**FROM:** Charlene Gallina for David Morrison - Director  
Planning, Building and Environmental Services

**REPORT BY:** John McDowell, SUPERVISING PLANNER - 299-1354

**SUBJECT:** Soscol Ferry Solar Project (File No. P19-00471-ALUC)

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### **RECOMMENDATION**

#### **KIMBAL GRIGGS GILES & THERESA BLODGETT-GILES - SOSCOL FERRY SOLAR PROJECT - AIRPORT LAND USE CONSISTENCY DETERMINATION #P19-00471-ALUC**

**Request:** Airport Land Use Compatibility Plan Consistency Determination for a County of Napa request to construct a commercial renewable energy facility on approximately 15 acres of an approximately 22.4-acre parcel located within the Napa Valley Business Park Specific Plan, that will consists of two arrays that will generate a total of approximately 2 megawatts (MW) of solar energy for interconnection to PG&E's preexisting electrical distribution system. The 22.4 acre property is located on the south side of Soscol Ferry Road approximately ¼ mile west of its intersection with State Routes 29, 12, 221 within Napa County Airport Compatibility Zones C and D (Assessor's Parcel Number 057-170-001).

**Staff Recommendation:** That the Commission find the project consistent with the Airport Land Use Compatibility Plan.

**Staff Contact:** John McDowell, (707) 299-1354, [john.mcdowell@countyofnapa.org](mailto:john.mcdowell@countyofnapa.org)

### **EXECUTIVE SUMMARY**

#### **Proposed Action:**

1. That the Airport Land Use Commission finds the Soscol Ferry Solar Project (# P19-00471) consistent with the Napa County Airport Land Use Compatibility Plan.

#### **Discussion:**

The proposed solar project is located within Napa County industrial area approximately 5,000 ft. north of the Napa County Airport with Compatibility Zones C and D. The project has no onsite employees, and therefore has no potential to conflict with compatibility policies addressing site density, noise or overflight annoyance. The solar panels are ground mounted and located well below navigable airspace. The project has been referred to the Airport Land Use Commission (ALUC) to consider potential for glare impacts to pilots. The project site is located under the final approach path for Runways 19/1 left and right (formerly 18/36). A glare analysis was prepared by a qualified engineer that concludes that solar panels will not result in glare impacts. Staff is recommending the ALUC find the project, as conditioned by the County, consistent with the Airport Land Use Compatibility Plan (ALUCP).

### **FISCAL & STRATEGIC PLAN IMPACT**

Is there a Fiscal Impact? No

County Strategic Plan pillar addressed:

### **ENVIRONMENTAL IMPACT**

The ALUC's Consistency Determination does not meet the definition of a "project" as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and, therefore, CEQA is not applicable. The ALUC is only making a finding of consistency with respect to airport compatibility regulations and is not responsible for approving or undertaking the project. The County of Napa is the Lead Agency responsible for carrying out the project under CEQA, and has prepared a Mitigated Negative Declaration (MND).

### **BACKGROUND AND DISCUSSION**

#### **Airport Land Use Compatibility Factors:**

**1. Location** – The project site is approximately one mile north of the Napa County Airport within Compatibility Zones C and D, which is an Extended Approach/Departure Zone: This zone is defined as the area where aircraft will be below 300 feet above ground level as determined by the type of approach. The low altitude of aircraft in these areas indicates moderate to high risk of accident potential. Properties in this zone will be affected by substantial noise. As such, persons on the project site will be exposed to noise from the regular aircraft overflight, however, the passive nature of the proposed project would not require on-site employees on a daily basis.

The project site is located under the approach path of main runway for the Napa County Airport, and is in a sensitive location for pilot/aircraft safety. Solar panels have some potential to result in glare which could be a hazard if glare occurs within the cockpit. ALUCP Policy 3.3.5 prohibits any uses which may produce hazards to aircraft in flight. To assist in the County and ALUC's review of the project, and glare analysis which is attached and incorporated herein, and titled Glare Impact Study of Soscol Ferry Solar Facility, Thomas Cleveland, PE. The study concludes that there is no potential for any glare at any time based on the modeling software used to conduct the analysis. The software was developed by the Federal Aviation Administration (FAA) and US Department of Energy's Sandia National Laboratories and is called Solar Glare Hazard Analysis Tool (SGHAT).

FAA approval is required for any solar project located on a federally-funding airport, and the SGHAT software must be used to evaluate the impact. In this case, FAA review and approval of the solar facility and the modeling is not

required because the FAA permitting process for solar facilities only applies on federally-funded airports. Therefore, it is the local agency's responsibility to evaluate the facility. FAA technical guidelines note that the SGHAT software has limitations (Solar Glare Hazard Analysis Tool (SGHAT) Technical Reference Manual, SAND2014-18360 O, Sandia National Laboratories, 2014), and FAA guidelines (Technical Guidance for Evaluating Selected Solar Technologies on Airports, FAA, Version 1.1 April 2018) that are applied to on-airport installations recommend that solar panels include the application of antireflective coatings and/or texturing to the panels to limit and/or diffuse glare. Neither has discernable effects on-system performance but could help minimize reflection. The project will be conditioned to utilize antireflective solar panel coating.

**2. Concentration of People & Land Use** – The ALUCP sets maximum (estimated) population densities for Compatibility Zones A through D. The project has no regular on site employees. The solar only requires occasional visits by staff for maintenance and upkeep, and thus complies with the density limits of the ALUCP.

**3. Structure Height** – ALUCP Policy 3.3.3 restricts building height to 35 ft. or as similarly provided by local ordinance. Solar panels for this project will be ground mounted and not exceed 8 ft. in height. The project is well within height limits and consistent with ALUCP requirements. Due to the project's location north of the main runway, the applicant is likely required to file a Notice of Construction with the Federal Aviation Administration (FAA) pursuant FAA Circular Part 77.9 concerning flight obstructions and hazard marking/lighting.

**4. Building Materials** – As noted above and in the attached glare analysis, the proposed solar panels are design to absorb light rather than reflect it. Although there is some potential for glare to be generated when light hits the panel at a 45 degree angle or greater, the coating and finish of the solar panel is designed to minimize reflective properties.

**5. Lighting and Glare** – Project lighting will be minimal and limited to security lighting that will be directed downward consistent with ALUCP policy and County Code. The project's potential for glare impacts resulting from reflected light off of panels has been evaluated in the attached glare analysis. As noted above, the evaluation relies on glare analysis modeling software developed under the guidance of the FAA and Energy Commission. The report preparer indicates that they followed FAA technical guidance for evaluating glare impacts from solar applications. The model and technical evaluation concludes that the project has no potential to cause glare impacts to pilots. The main reason the project will not produce glare is that the solar arrays will continuously track the sun throughout the day to maintain an optimum angle for solar energy collection. The tracking has the side benefit of reducing glare potential, because glare only occurs when panels are at a 45 degree angle or greater between the sun and the affected aircraft.

**6. Communications** – No electronic equipment is proposed as part of this facility that could interfere with airport communication.

**7. Noise** – The project results in no employees on site exception for occasional visits for site maintenance and upkeep. The project has no potential to result in significant noise impacts to persons on the ground.

**8. Overflight Easement** – County of Napa Airport Compatibility Overlay Zoning and the ALUCP require recordation of an overflight and aircraft hazard easement on all developing properties. The conditions of approval require recordation of the overflight and aircraft hazard easement consistent with ALUCP policies.

**9. Caltrans Aeronautics** – The submittal materials were forwarded to Caltrans Aeronautics, and no response has been received at this time.

**10. Processing** – ALUCP Policy 2.1.9 requires referral of a project to the ALUC prior to the local governing body's final action to allow the local jurisdiction to consider the ALUC's finding prior to acting on a project. ALUCP Policy 2.1.8 specifies that formal referral to the ALUC should not occur until after at least one substantive hearing has

been held by the local jurisdiction. The County is scheduled to conduct its public hearing on December 18, 2019 prior to the ALUC hearing, and then complete their final action after the ALUC hearing concludes.

#### **Airport Land Use Compatibility Plan Consistency Analysis Summary:**

##### **Noise**

Finding: Consistent – The project will not result in exposure of persons on the ground to significant levels of aircraft noise, and the proposed uses are not sensitive receptors to single event noise intrusion.

##### **Safety**

Finding: Consistent – The project generates no population density limits, and although the project is generally located under the final approach path, the occasional visits to the site by employees will not expose person on the ground to a significant safety risk from overflight.

##### **Airspace Protection**

Finding: Consistent – Solar panels are ground mounted and fall well below established height limits outside of navigable airspace. The glare analysis prepared for the project conforms to FAA technical guidance, and the project should not result in glare impacts to pilots.

##### **Overflight**

Finding: Consistent – Recordation of an overflight easement as mandated by the ALUCP and County ordinance has been required, which is the prescribed measure for addressing potential overflight annoyance for non-residential uses.

#### **SUPPORTING DOCUMENTS**

- A . ALUC Application Submittal
- B . County of Napa Staff Report & Draft Conditions
- C . Soscol Ferry Solar Glare Impact Study
- D . Soscol Ferry Solar Graphics

Airport Land Use Commission: Approve

Reviewed By: Charlene Gallina