



COUNTY OF HUMBOLDT

For the meeting of: 9/19/2024

File #: 24-1289

To: Planning Commission

From: Planning and Building Department

Agenda Section: Public Hearing

SUBJECT:

North Coast Highway Solar
Assessor Parcel Numbers (APNs) 204-171-045, 204-171-047, 204-081-002, 204-081-006, 204-081-007,
204-171-001
Record No.: PLN-2020-16341
Alton area

A Conditional Use Permit is being requested to authorize construction and operation of a 2.8-megawatt solar photovoltaic power generation facility to produce renewable energy for the power grid. The automated facility would occupy an approximately 11-acre fenced area with arrays of solar panels, single-axis trackers, string inverters, transformers, and associated electrical equipment. Approximately 300 feet of new road is proposed to be developed to connect with a new driveway encroachment along Highway 36, approximately 70 feet west of the existing driveway encroachment. A power line and poles will be run to the site along the driveway route, to allow interconnection to the nearby 12 kilovolt power distribution line located within the highway right-of-way near the driveway encroachment. Approximately 7 acres of the site will be occupied by the solar array. New impervious surfaces totaling approximately 1,500 square feet will be limited to the piles supporting the panel arrays and concrete pads below electrical equipment (approx. 1,060 ft.) Areas beneath the panel will remain vegetated and the project sponsor will maintain continual operation of agricultural uses on the property, including but not limited to sheep grazing, the keeping of honeybees, or planting of row crops, on a rotational basis. Site construction is expected to take approximately 4 months and operation will run for a minimum of 20 years under a power purchase agreement with Redwood Coast Energy Authority (RCEA). Maintenance staff are expected to visit the site on a weekly basis following the start of operation.

RECOMMENDATION(S):

That the Planning Commission:

1. Adopt the resolution (Resolution 24-___), (Attachment 1) which does the following:
 - a. Finds the Planning Commission has considered the Draft Initial Study and Mitigated Negative

Declaration prepared for the North Coast Highway Solar project; and

- b. Finds the proposed project complies with the General Plan and Zoning Ordinance; and
- c. Adopts the Mitigated Negative Declaration prepared for the project; and
- d. Approves the Conditional Use Permit subject to the recommended Conditions of Approval (Attachment 1A) and Mitigation Monitoring and Reporting Program (Attachment 3)

DISCUSSION:

Project Location: The project site is located in an unincorporated area of Humboldt County, 1 mile south of the City of Fortuna, on land situated on the south side of State Route 36 between the communities of Alton and Hydesville, just west of the intersection of Highway 36 and River Bar Road on the property known as 2020 State Highway 36, and further described as APNs 204-171-045, 204-171-047, 204-081-002, 204-081-006, 204-081-007, 204-171-001

Present General Plan Land Use Designation:

AE (Agricultural Exclusive)
RA5-20 (Residential Agriculture)
RE1-5 (Residential Estates)
AP (Airport Land use Compatibility Zone Overlay)

Present Zoning:

AE-20 (Agriculture Exclusive specifying a 20-acre minimum parcel size)
AE-B-5(60) (Agriculture Exclusive specifying a 60-acre minimum parcel size)

Environmental Review: Environmental review for the proposed project included the preparation of an Initial Study/Mitigated Negative Declaration (IS/MND) pursuant to the California Environmental Quality Act (CEQA) Statute (Public Resources Code 21000-21189) and Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387). The IS/MND was circulated from August 1, 2024, to August 30, 2024, at the State Clearinghouse. No comments were received during the circulation period.

The Draft IS/MND (SCH #2024071264) is included in Attachment 3.

State Appeal: The project is located outside the Coastal Zone and is therefore NOT appealable to the California Coastal Commission.

Major Concerns: Conversion of Ag land, Aircraft Safety

Executive Summary: The project proposes development of 2.8-megawatt solar power generation facility (solar facility) on an 87-acre property in the Alton area. The project would occupy approximately 11-acres of the property which would be fenced and developed under a lease agreement between the owner and the applicant.

The proposed solar facility would include single-axis trackers, arrays of solar panels, string inverters, transformers, and associated electrical equipment to optimize efficiency and performance. Single-axis trackers are designed to rotate the arrays in the east-to-west plane to track the sun's movement across the horizon. The ground-mounted arrays would be supported on driven pipe piles, driven H-piles, or predrilled helical screw piles. Once installed, the ground-mounted solar arrays would be up to approximately 8 feet in height depending on the time of day and degree of tilt of the panels.

Approximately 4,624 modules on ground-mounted solar arrays would be installed within two discrete areas. Arrays would convert sunlight to direct current (DC) electrical power which would then be converted to alternating current (AC) by string inverters before being delivered to the electrical system. Battery and power conversion devices would be co-located with the solar panels.

The project includes a number of mitigation measures and conditions of approval designed to address concerns about potential impacts to existing agricultural land as well as safety concerns surrounding hazards from glare resulting from the proposed panel arrays. They are further discussed below.

Agricultural Resources: The General Plan and Zoning Regulations both identify "Utilities & Energy Facilities" as an "allowable" use on lands designated and zoned AE (Agriculture Exclusive), subject to a Conditional Use Permit. This is balanced with policies, implementation measures and standards that call for preservation of agricultural land and prime soils. Two General Plan policies are applicable to the proposed project.

AG-P6 The "No-Net Loss" policy is designed to protect AE lands from conversion to non-agricultural uses and reads as follows:

AG-P6. Agricultural Land Conversion - No Net Loss. Lands planned for agriculture (AE, AG) shall not be converted to non-agricultural uses unless the Planning Commission makes the following findings:

- A. There are no feasible alternatives that would prevent or minimize conversion;
- B. The facts support an overriding public interest in the conversion; and
- C. For lands outside of designated Urban Development Boundaries, sufficient off-setting mitigation has been provided to prevent a net reduction in the agricultural land base and agricultural production. This requirement shall be known as the "No Net Loss" agricultural lands policy. "No Net Loss" mitigation is limited to one or more of the following:
 1. Re-planning of vacant agricultural lands from a non-agricultural land use designation to an agricultural plan designation along with the recordation of a permanent conservation easement on this land for continued agricultural use; or
 2. The retirement of non-agricultural uses on lands planned for agriculture and recordation

of a permanent conservation easement on this land for continued agricultural use; or

3. Financial contribution to an agricultural land fund in an amount sufficient to fully offset the agricultural land conversion for those uses enumerated in subsections a and b. The operational details of the land fund, including the process for setting the amount of the financial contribution, shall be established by ordinance.

Portions of the property where project-related development is proposed are composed of relatively flat grassland that has been managed as pasture for over 100 years. The property is approximately 87 acres in size and the project proposes to occupy approximately 11 acres of the property. The proposed solar installation has been designed to minimize the footprint of new impervious surfaces which are confined to piles supporting the panel arrays and concrete pads below electrical equipment, in total estimated to be approximately 1,500 sq. feet. Areas under the solar panels would remain vegetated and pervious. While decommissioning and restoration of the site is proposed at the end of its useful life, the conversion could extend from 25 to 35 years or perhaps longer if the facility is repowered.

The Farm Bureau have provided comments in a letter from their Executive Director dated August 12, 2020. It is included under Attachment 4. In their letter they express opposition to the proposed project, noting they regard the proposal as resulting in the conversion of 13 acres of agricultural land. They also recommend that if the project is to be approved, the permit should include a requirement to restore the land to its original condition when operation of the facility ends, and the permittee should be required to post and maintain a bond covering the cost of site reclamation.

Mitigation Measure AG-2 has been included and requires that when the facility is ultimately decommissioned, the site must be fully restored to its original pre-project condition. Very little grading will be undertaken to install the solar arrays, so restoration efforts will primarily be focused on removal of equipment and infrastructure. The project sponsor must provide a Decommissioning and Remediation Plan that includes removal and proper disposal of all above and below ground improvements, restoration of surface grades, placement of topsoil over all removed structures, and revegetation and erosion control, as well as an estimated timeframe for completing site restoration, an engineer's cost estimate for all aspects of the removal and restoration plan, and an agreement signed by the property owner and operator ensuring the permittee's commitment to decommissioning of the site.

Mitigation Measure AG-1 has been included and requires development and implementation of an Agricultural Management plan to maintain continual operation of agricultural uses on the property during the lifespan of the project. This could include sheep grazing, the keeping of honey bees, and planting of row crops, on a rotational basis. The plan must also include planting and maintenance of locally appropriate native plants during rotational periods, focusing on species that provide the greatest value to bees, moths, butterflies, and other native pollinators.

There is a growing understanding that agriculture and photovoltaic systems can effectively co-exist on property. The term “Agrovoltaic” has been applied to this practice. Studies are showing that both power production and agriculture can effectively share the same sun resource. This is the third time this concept has been applied in the unincorporated area of Humboldt County. The first instance was the Hatchery Road Solar Project in Blue Lake that was approved on April 1, 2021 and the second was a 3 megawatt installation in the Arcata bottoms on Foster Avenue approved on January 19, 2022.

General Plan Policy AG-P16 calls for the protection of productive agricultural soils and reads as follows:

AG-P16. Protect Productive Agricultural Soils. Development on lands planned for agriculture (AE, AG) shall be designed to the maximum extent feasible to minimize the placement of buildings, impermeable surfaces or non-agricultural uses on land as defined in Government Code Section 51201(c) 1- 5 as prime agricultural lands.

With implementation of the Agricultural Management plan required under **Mitigation Measure AG-1**, the project can improve soil health, moisture retention, and increase biodiversity over its present condition. **Mitigation Measure AG-2** will ensure that the soils and pastureland within the 13-acre project area will be returned to their pre-development condition following reclamation of the site. Compliance with these two mitigation measures will ensure no loss of agricultural land or soil productivity will result from the project.

Biological Resources: A Biological Habitat Assessment and Special Status Plant Survey Report was prepared for the project, which included a literature search, and a pedestrian survey to identify special status plants, wildlife, and habitats known to occur in the vicinity of the project site. General plant and wildlife surveys were also conducted to identify any biological resources on or adjacent to the project site.

Overall, the results of the Habitat Assessment indicate that the proposed development is situated within two farmed areas. Native but degraded habitats surround these areas to the north and east but have largely been avoided by the chosen siting and design of the proposed project. Some nesting habitat exists on the project site, with potential to provide foraging for passerine and raptor species. **Mitigation Measure BIO-1** has been included to require that survey for nesting birds occur if construction is proposed to occur during the nest season (generally between March 1 and August 31)

Energy: The proposed location provides adequate solar resources to produce 2.8 MW of locally generated power available for local purchase and export, which is consistent and helps implement several goals and policies of the General Plan supporting local renewable energy development.

This includes Policy E-P3 of the Energy Element which states *“The County shall support renewable*

energy development projects including biomass, wind, solar, 'run of the river' hydroelectric, and ocean energy, consistent with this Plan that increases local energy supply."

Additionally, *"Increased local energy supply from a distributed and diverse array of renewable energy sources and providers available for local purchase and export"* is state under Goal E-G3 of the Plan.

Access: The project will take access from State Highway 36. Approximately 300 feet of new road is proposed to be developed to connect with a new driveway encroachment along State Highway 36, approximately 70 feet west of the existing driveway encroachment. Installation of this new driveway will help prevent conflict with existing agricultural uses of the property. The location and alignment of this new driveway section lies immediately west and adjacent to existing developed areas of the property. The siting helps to avoid fragmentation and minimizes impacts on existing agricultural land uses.

The project lease area lies adjacent to a former railroad right-of-way which runs east-west through the property. The right-of-way is planned to be converted into a multi-modal trail facility, that will serve as a spur of the forthcoming Great Redwood Trail. Use of an existing "at-grade" crossing of this right-of-way is proposed and will require permission from the Great Redwood Trail Agency (GRTA). This is captured under **Condition of Approval #6**. Additionally, an encroachment permit through Caltrans will be needed for the new proposed driveway encroachment. This requirement is captured within **Condition of Approval #5**. Both Caltrans and GRTA have been consulted during review and processing of the Use Permit application and generally support the proposal.

Airport Compatibility: The project site is located approximately ½ mile south of the Rohnerville Airport. The project site is primarily zoned AE and includes the Airport Land Use Compatibility Zone Overlay (AP) due to its proximity to the Airport. The entire project property (Nyberg) is located on land governed by the Humboldt County Airport Land Use Compatibility Plan (ALUCP). The plan includes maps for each county airport, which identify various "Safety Zones" based on proximity and position relative to each airport and its runways and other infrastructure. Generally speaking, the closer a property is to an airport, the higher the concern relative to airport safety. Each airport has 6 distinct safety zones which together describe "airspace protection area".

The proposed solar array(s) are primarily located in Safety Zone 2 (Inner Approach/Departure Zone) with portions also in Safety Zone 3 (Inner Turning Zone) and Safety Zone 4 (Outer Approach/Departure Zone). Policies in the plan discourage land uses and structures that result in glare in the eyes of flyers using the airport, or otherwise endanger the landing, taking off or maneuvering of aircraft.

The potential impact of glint and glare from photovoltaic modules, concentrating solar collectors, receivers, and other components has received increased attention as a potential hazard or distraction for pilots, air-traffic control, and other personnel. Hazards from reflected solar radiation include the

potential for permanent eye injury (e.g., retinal burn from concentrated sunlight) and temporary disability or distractions (e.g., glint, glare, after-images).

The light reflected from the surface of solar panels can result in glint (a momentary flash of bright light) and glare (a continuous source of bright light). These two effects can cause a brief loss of vision which can hamper the safe maneuvering of the aircraft while in flight. Ocular impacts from solar glare can result in green glare or yellow glare. Green glare can be defined as glare with low potential to cause after image or flash blindness for a few seconds which would not hamper safe aircraft maneuvering. Yellow glare can be defined as glare with potential to cause temporary after-image lasting more than a few seconds that might hamper safe aircraft maneuvering.

A solar glare analysis of the proposed panel array(s) was prepared by EPD Solutions to analyze the project's potential glare impacts throughout operations. The solar glare analysis analyzed the flight path and runways at the Rohnerville Airport and location and characteristics of the proposed panel arrays. The glare analysis also included modeling to estimate the potential amount of green glare and yellow glare, depending on the orientation and angle of the proposed arrays. The solar glare analysis determined that the project as modeled passes glare hazard model criteria, with zero minutes per year outside the 'green zone' of acceptable reflected energy. The panel configuration that will result in the greatest amount of annual energy production (1,986 kwh) uses a resting angle of 75° and a maximum tracking angle of 65°, resulting in the creation of approximately 433 hours of green glare annually. The glare analysis and information was reviewed by the County's Aviation Department as well as the Battalion Chief of the CalFire Aviation Unit, which is based at the Rohnerville Airport (FOT). Cal-Fire's pilot team have indicated that the development should not be a factor for them conducting safe arrivals and departures to/from the FOT Airport. Furthermore, the County's Airport Planning Consultants have run the project details through the FAA's Notice Criteria Tool regarding airspace and determined that the project would not require further evaluation from an airspace safety perspective.

Because there exists the possibility for creation of more dangerous yellow glare at certain angles and orientations, **Mitigation Measure AES-1** has been included to ensure that the configuration of the arrays remain within the parameters identified and analyzed in the solar glare analysis.

Tribal Consultation: A Phase I Cultural and Paleontological Assessment was prepared was prepared for the project, which included intensive field surveys conducted on April 30, 2020 and again on May 30, 2023. Though no resources were discovered during survey, potential for encountering significant cultural resources within the project area is considered low to moderate. The Tribal Historic Preservation Officers for the Wiyot Tribe and Bear River Band of the Rohnerville Rancheria were both notified during preparation of the survey as well as during circulation of referrals for the project. Both tribes support approval of the project subject to requiring use of a tribal cultural monitor during ground disturbance. This has been included as **Mitigation Measure CUL-1**.

OTHER AGENCY INVOLVEMENT:

The project was referred to responsible agencies and all responding agencies have either responded with no comment or recommended approval or conditional approval. One notable exception is the Humboldt County Farm Bureau, who recommend denial or conditional approval subject to the applicant posting a bond for reclamation of the site, including removal of all concrete, metal, and equipment and preparation of the soil for agricultural operations. Their comments are included with the summary of referral responses provided in Attachment 4.

ALTERNATIVES TO STAFF RECOMMENDATIONS:

The Planning Commission could elect to add or delete Conditions of Approval. The Planning Commission could elect not to approve the project, or to require the applicant to submit further evidence, or modify the project. Modifications may cause potentially significant impacts, additional CEQA analysis and additional findings may be required. These alternatives could be implemented if the Commission is unable to make all of the required findings. Planning Division staff believes that the required findings in support of the proposal can be made. Consequently, Planning staff does not recommend further consideration of either alternative.

Staff prepared a thorough environmental analysis which included the preparation of an IS/MND pursuant to the CEQA Statute (Public Resources Code 21000-21189) and Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387). The Commission could also decide the project may have environmental impacts that would require further environmental review pursuant to CEQA. Staff did not identify any potentially significant unmitigable impacts.

ATTACHMENTS:

1. Resolution
 - A. Conditions of Approval
 - B. Mitigation Monitoring and Reporting Program
 - C. Site Plan(s)
2. Location Map
3. Draft Initial Study & Mitigated Negative Declaration
 - Appendix A - Solar Glare Analysis
 - Appendix B - CalEEMod Emissions Summary
 - Appendix C - Biological Habitat Assessment
 - Appendix D - Aquatic Resources Delineation
 - Appendix E - Special Plant Species Survey Report
 - Appendix F - Phase I Cultural and Paleontological Assessment [omitted - confidential]
 - Appendix G - Phase I ESA

Appendix H - Phase II ESA

Appendix I - Trip Generation Memo

4. Referral Agency Comments and Recommendations

Applicant:

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and

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