



A Tradition of Stewardship
A Commitment to Service

Agenda Date: 4/23/2019
Agenda Placement: 9A
Set Time: 9:15 AM
Estimated Report Time: 1 Hour

NAPA COUNTY BOARD OF SUPERVISORS Board Agenda Letter

TO: Board of Supervisors
FROM: David Morrison - Director
Planning, Building and Environmental Services
REPORT BY: John McDowell, Principal Planner - 299-1354
SUBJECT: Utility-Scale Solar Facilities Study Session

RECOMMENDATION

Director of Planning, Building, and Environmental Services requests direction regarding potential zoning ordinance changes to address utility-scale solar power generation facilities.

EXECUTIVE SUMMARY

Preliminary direction is requested regarding potential updates to zoning regulations, and possibly General Plan policies, concerning the siting and design of utility-scale solar power generation facilities. Napa County Code Section 18.120.010.B.8 permits public utility uses in any zoning district with grant of a use permit by the Planning Commission. In 2018, two applications for privately owned and operated utility-scale solar power generation facilities were submitted that would provide power to Marin Clean Energy (MCE), a non-profit public agency providing utility service within Napa County. One application faced neighborhood opposition and was withdrawn from processing. The other project was approved, however the Planning Commission expressed concerns over the compatibility of the use with agricultural zoning. Subsequent to the Planning Commission's action, members of both the Planning Commission and Board of Supervisors requested that the existing regulations be evaluated to determine if additional refinements are required.

With this study session, it is requested that the Board review existing zoning and General Plan provisions, and provide direction on any regulation and/or policy updates to be drafted. In the event zoning and/or General Plan updates are requested, staff will prepare draft materials and solicit comments from stakeholders in advance of scheduling a hearing on the item at the Planning Commission and ultimately with the Board for final consideration.

This item aligns with Action Item 9.C. of the Napa County Strategic Plan 2019-2022, which is to "work with stakeholders to update and develop sustainable regulations for issues including but not limited to residential

development, viewshed development, solar facilities, winery compatibility, outdoor winery hospitality, food pairings, and pesticide use."

PROCEDURAL REQUIREMENTS

1. Staff report
2. Public comments
3. Board discussion and direction

FISCAL IMPACT

Is there a Fiscal Impact? No

ENVIRONMENTAL IMPACT

This study session is not a project as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

BACKGROUND AND DISCUSSION

In 2018, two use permit applications for utility-scale solar power generating facilities were received from a private solar development company intending to sell power to Marin Clean Energy (MCE), a non-profit renewable energy public agency (joint powers authority). One project was located in southern Napa County off of American Canyon Road near Interstate 80. The other project was located in the Coombsville area east of the City of Napa. Both project sites were located within AW - Agricultural Watershed zoning and Agriculture Watershed and Open Space General Plan designation. Napa County Code Section 18.120.010.B.8 allows "Other public utility uses including, without limitation, warehouses, storage yards, gas holders, substations, electric generating plants, reservoirs, storage tanks, pumping stations, and communication equipment buildings" in any zoning district. The Coombsville area proposal generated concern from adjoining neighbors on a number of issues, including whether power generation facilities were allowed on agricultural land or in rural residential areas, and was withdrawn. The American Canyon proposal was approved, under the provision cited above. No new applications for utility-scale solar facilities have been filed since November 2018, but there have been two preliminary concepts discussed with staff within the Napa Valley Industrial Park in 2019.

In November of 2018, the Board of Supervisors directed staff to provide background and options for better defining the compatibility of solar facilities with surrounding land uses. This direction was prioritized in the 2019-2022 Strategic Plan approved in January of 2019.

EXISTING CONDITIONS AND REGULATORY SETTING

In 2002, California Assembly Bill 117 passed allowing communities to purchase power on behalf of their residents and businesses with the establishment of a Community Choice Aggregation (CCA) program. CCAs provide an alternative to traditional service from a regional public utility company. Marin County established MCE in 2010, which was the first CCA in the Bay Area. MCE's service area has since expanded to include numerous Bay Area communities. Napa County formed a CCA with MCE in the summer of 2014. Pacific Gas and Electric (PG&E) continues to deliver electricity through its transmission and distribution system and partners with local area CCAs on sourcing energy for the power grid. PG&E also provides meter-reading, billing, maintenance, and outage

response services. MCE offers customers a choice on the level of renewable energy received, allowing customers to select from four options ranging from 100% MCE-sourced power, to retaining 100% PG&E traditional service.

MCE procures energy from a variety of clean, renewable power sources such as solar, wind, biogas, geothermal, and small hydroelectric. The California Public Utilities Commission (CPUC) allows this form of transaction through various contractual arrangements collectively referred to as Power Purchase Agreements (PPA or PPAs). The majority of MCE's power is sourced from the Federally-operated Western Area Power Administration and from several larger for-profit private companies including Calpine and Dominion Energy Solutions. MCE also receives significant locally-generated power through smaller scale PPAs with public and private entities. MCE actively solicits smaller scale private developers and owners of renewable energy facilities to help fulfill MCE's future resource requirements. Their PPA programs allow for both stand alone power generation facilities and excess power generation from accessory-scale projects to feed back into the grid. For example, a large multi-acre warehouse building may have relatively small on-site power demand compared to the power generation capabilities of their rooftop solar array. With a PPA, the warehouse developer could sell excess power to MCE in the same manner as a stand alone commercial solar facility. The developer of the two solar projects from 2018 proceeded under MCE's PPA program.

General Plan

The Napa County General Plan and zoning ordinances both predate the creation of MCE as a CCA and its service to Napa County. The 2008 General Plan contains a number of general policies encouraging energy conservation and alternative power generation, but otherwise does not directly speak to generation of renewable power within Napa County for a CCA. In addition, there are several Agriculture/Land Use Element policies that require Board of Supervisors interpretation to determine the consistency of power generation facilities on agriculturally-designated land. Notable policies related to renewable energy production are as follows:

- | AG/LU-12: No new non-agricultural use or development of a parcel located in an agricultural area shall be permitted unless it is needed for the agricultural use of the parcel...
- | AG/LU-29: Governmental uses and public utility uses shall be permitted in appropriate locations. Only those new governmental and public utility uses which specifically implement programs mandated by the state or federal government shall be permitted in non-urban areas...
- | AG/LU-117: The County shall seek to be involved to the extent possible in the decisions of local, state, federal, and other agencies regarding the location of energy generation facilities....with the potential to negatively affect the visual character of the county.
- | CON-68: The County shall promote research and the development and use of advanced and renewable energy technology...
- | CON-70: The County shall seek to increase the amount of energy produced through locally available energy sources, including establishing incentives for, and removing barriers to, renewable and alternative energy resources (solar, wind) where they are compatible with the maintenance and preservation of environmental quality.

Voter-enacted components of the General Plan (Measures J and P) must also be considered regarding utility-scale solar projects, or for any "other public utility use" allowed under Zoning Section 18.120.010.B.8 on agricultural land. Measure J requires voter approval of any land use changes enabling new non-agricultural uses on agriculturally-designated lands. Policies AG/LU-12 and 29 directly relate to utility-scale solar projects. In considering Policy AG/LU-12, it is clear that on-site power production supporting permitted uses is allowed, like a solar array meeting the power needs of a winery or a home. Policy AG/LU-29 allows PG&E's facilities (and any other public utility uses) when warranted in any part of the County, but the extent to which privately owned or operated power generation facilities qualify as a public utility use has not yet been defined.

The Planning Commission's approval of the American Canyon Road project was based on a finding that the project qualified as a public utility use because it was linked to the County's CCA program with MCE. In that case the developer was entering into a PPA to sell the electricity produced from the solar array to MCE. I

Draft Climate Action Plan

The County's Draft Climate Action Plan identifies the importance of shifting energy consumption toward clean, renewable energy sources. The development of regulations that encourage renewable energy use and generation would support Draft Climate Action Plan objectives. Notable draft policies related to solar power are as follows:

- | Measure BE-4: Require new or replacement residential and commercial water heating systems to be electrically powered and/or alternatively fueled (e.g., solar water heating).
- | Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances.
- | Measure BE-11: Encourage solar panel installations on commercial roof spaces.
- | Measure AG-1: Support the conversion of stationary diesel or gas-powered irrigation pumps to solar, electric, or other alternatively- fueled pumps.

Existing Zoning Regulations

There are no zoning design regulations that directly address solar projects or power generation facilities. County has complete land use authority and discretion over regulating private, utility-scale solar facilities. Consistent with provisions of the International Building Code (i.e. - "green building code"), the County has a long standing administrative practice of allowing on-site power generation as an 'accessory use' (defined in Napa County Code Section 18.08.020) to serve primary land uses that are otherwise allowed or conditionally allowed by zoning. Accessory on-site, small-scale installations appear common in the studied jurisdictions with projects generally only subject to building permits. Additionally, not at issue here is County's regulation of "small residential rooftop solar" at Chapter 15.14.050. Impacts associated with the construction and operation of these small-scale projects are rare. Quite often, solar panels are mounted on existing structures, or over existing parking areas. Free standing solar fields generally do not occupy much land area, however several winery and residential projects have been installed in areas with a high degree of visibility from County scenic highways.

Utility-scale power generating facilities have been allowed with use permits under the provisions of Napa County Code Section 18.119.010.B.8. Prior to the two 2018 solar project applications, one other utility-scale solar project was processed and approved by the Planning Commission in 2010 under this code section. The facility was never constructed, and was planned at the decommissioned American Canyon Land Fill on Eucalyptus Drive south of Napa County Airport. The land fill site can be differentiated from the two most current proposals in that the site was publicly owned. Pacific Union College also received approval of a gas-fired power generation facility on the upper portion of the campus in 2004 under the same provisions of the code. A solar facility was also constructed on State land near Rector Reservoir in 2018, which was exempt from local land use regulation.

Chapter 18.119, Exceptions, allows a number of by-right and conditionally-allowed uses in any zoning district, and is intended to account for land uses that can be suitable in any zoning district. Government and public utility uses are listed as allowable in any zoning district. The Exceptions Chapter and the section allowing "other public utility uses" date from 1976. There are currently no design standards for solar generation facilities or public utilities other than the general zoning requirements that apply to all other uses including general setback/coverage requirements, viewshed, and conservation regulations. Since utility-scale projects currently trigger use permit processing, construction and operational related environmental impacts are evaluated on a case-by-case basis. As with all discretionary development projects, the potential for significant impacts depends on the characteristics of the site. For example, the most recent solar project approved off American Canyon bordered a

blue-line creek and the project was conditioned to avoid encroachment and earth disturbance within the creek's setback.

SOLAR REGULATION EXAMPLES

Attached for reference is a chart of solar facility regulations applicable in other nearby communities. Sonoma and Butte Counties' regulations are discussed below. Both agencies comprehensively updated their regulations within the last six years. Butte County's vision statement with guiding principles from their community-based stakeholder group is attached and other resources are available through their webpage listed below. Sonoma County's Renewable Energy Combining Zone Chapter is also attached.

Sonoma County

In 2013, Sonoma County established a Renewable Energy Combining Zone with siting and design criteria for a variety of large scale renewable energy facilities including solar, biomass, wind, and geothermal energy production. Sonoma County's zoning ordinance is structured in a similar manner to Napa County with base zoning district chapters that contain listings of allowable uses, and separate chapters containing land use requirements such as viewshed and conservation regulations. Sonoma County structured renewable energy uses within a combining zone, meaning that properties where such uses occurred would need to contain the combining zone or require rezoning. There are several combining zones within Napa County's regulations with the most notable being the :AH - Affordable Housing Combining Zone that allows affordable housing by-right in addition to the uses of the underlying zoning. Additional information regarding the Sonoma County Renewable Energy Regulations is attached.

Butte County

In 2014, Butte County received a grant under the Sustainable Communities Planning Grant and Incentives Program (Proposition 84) administered by the Department of Conservation, to develop a solar overlay zoning district. The project evolved over the next three years resulting in the 49-page Butte County Utility-Scale Solar Guide (Guide). The Guide identifies suitability criteria, constraints and opportunities for solar and is paired with an on-line 'suitability model' mapping tool. Both the Guide and model are available at <https://www.buttecounty.net/dds/Planning/Notable-Projects/Butte-Utility-Scale-Solar-Guide>.

The Guide and suitability model apply the following siting criteria:

1. Unsuitable Areas: Prime Farmlands, Sensitive Biological Areas, and Residential Zones;
2. Farmland Categories: Grazing Lands are weighted as highly constrained.
3. Constrained Areas: Wetlands, Oak Woodlands, Migratory Deer Range, Natural Hazards, Land Use Compatibility.
4. Constrained Buffers: Proximity to Residential and Scenic Highway General Plan Designations.
5. Parcel Size: Parcels greater than 20 acres are considered most feasible.
6. Opportunity Areas: Contaminated Sites, Urban Permit Areas, Neal Road Recycling, Energy, and Waste Facility Overlay Zone, Large Rural Parcels.
7. Opportunity Buffers: Proximity to transmission lines and substations.

In reviewing Butte County's process, the following statement from the final staff report stands out: "While this project was originally conceived as a solar overlay zone to streamline the development of utility-scale solar facilities in Butte County, input received during the process suggested that a case-by-case evaluation of facilities through a conditional use permit is more appropriate, especially given significant concerns about impacts to grazing lands and agricultural resources." Initially, Butte County intended to allow by-right utility-scale solar projects in suitable areas, but after hearing from all interested parties, they opted to both maintain a discretionary

use permit process and establish siting criteria that essentially prohibit utility-scale solar facilities from many areas. Butte County's Utility-Scale Solar Vision Statement is attached for reference.

Napa County's Geographic Information System (GIS) has a great deal of similarity to Butte County's Suitability Model, other than it contains no information on proximity to transmission lines and substations. If the County implements similar suitability criteria, the County GIS would be available to aid in suitability determinations.

PUBLIC INPUT

Two emails announcing this study session were sent to the county-wide stakeholder group. Three persons responded to those emails with general inquiries about how the meeting on April 23rd would be conducted. Attached to this report is a letter from Napa County Farm Bureau.

OPTIONS

Four options are listed below for Board consideration. The options are not intended to be exhaustive, and instead provide a range of alternatives which the Board may use in providing direction.

Option 1 – No Changes to Existing Policy and Regulations

Under existing regulations, on-site power solar arrays would continue to be allowed by-right as an accessory use, and utility-scale solar projects would continue to be permissible on any property in any zoning district with issuance of a conditional use permit. Projects would be subject to standard zoning requirements including Viewshed and Conservation regulations.

In staff's opinion, retaining the existing discretionary use permit process as-is leaves a great degree of uncertainty in the process for applicants, neighbors, staff, and decision-makers and is therefore not recommended.

Option 2 – Limit Utility-Scale Solar Projects to Certain Zones or Public Property

Utility-scale solar projects could be limited to certain zoning districts, or restricted only to public or quasi-public lands. The County is not technically obligated to zone land for solar projects or power plants. However, the General Plan encourages the County to support and manage the energy needs of our community, including both large-scale energy generation as well as on-site accessory uses.

Unincorporated Napa County accounts for only a small portion of the energy demand within MCE's service area, with most demand coming from urbanized areas. It is appropriate to structure Napa County's regulations to ensure that the power demands of urban areas are not disproportionately fulfilled within the agricultural areas of Napa County, as there may be economic incentives to locate in rural areas. Generally speaking, solar developers have a difficult task finding acceptably priced land with appropriate zoning that allows the use, and that is not overly burdened with regulatory or development costs. Land is generally more scarce and expensive to develop within urbanized areas as compared to rural or agricultural areas. Development regulations for urbanized areas also tend to be more stringent and costly than what typically occurs in rural areas. As a result, the combination of zoning allowance and development costs tend to push projects toward the unincorporated area.

Napa County could limit utility-scale solar projects to its non-agricultural zones. Unincorporated land designated for urban use represents less than 5% of the County's land area, with the majority of that land located within Napa Valley Business Park industrial area. The industrial lands, as well as most other unincorporated urban areas are subject to similar development costs and requirements as would apply in many other communities served by MCE. Alternatively, utility-scale solar projects could be limited to public or quasi-public lands. Attached is a

description of three projects developed in Lake County on public property. Limiting projects to public property could be a basis for determining that privately operated utility-scale solar projects qualify as "other public utility uses".

Alternatively, a combining zone could be required for projects in the Agricultural Watershed (AW) zone. The combining zone option would subject any project within an eligible base zone to both a use permit and rezoning application. Re-zonings are legislative in nature triggering Board of Supervisor action, which provides the Board with a great degree of flexibility in either approving or denying the application. However, re-zonings add complexity to application processing and trigger at least one hearing before the Planning Commission and two before the Board of Supervisors.

Staff believes that limiting utility-scale solar projects to either public lands or specified zoning districts is a feasible option, but it is not recommended. Existing non-agricultural land is limited and plays an important role in providing housing and industrial support services for local businesses. Establishing a combining zone requirement for the AW zone creates a much more complicated process for both applicants and the public, and creates additional demand on County staff and resources.

Option 3 – Establish Siting and Design Criteria for Utility-Scale Solar Powers; Define Public Utility Uses

Under this option, utility-scale solar facilities and other power generation facilities could remain conditionally allowed in all zoning districts, but siting and design criteria would be established designating areas where such uses are either appropriate or inappropriate. For example, projects could be prohibited from areas containing prime farmland or Williamson Act agricultural contracts, but allowed on lands designated "other" in the farmland mapping program. Criteria could be applied to land use characteristics such as viewshed, proximity to scenic highways, and residential uses. Siting and design criteria for other forms of renewable power generation facilities (biomass, geothermal, etc.) may also be warranted.

Regarding on-site accessory solar power generation, it is recommended that these uses continue to be allowed as a by-right, but specification could be added to the code to clarify the extent of use allowed, as well as formalize past administrative practices. Sonoma County regulations directly address accessory use and may prove a good example to follow. Their design criteria sets a limit on the capacity of the power facility to no greater than 125% of the power generation needs of the property. Setting a cap on accessory use power generation appears necessary as a mechanism to differentiate between utility-scale project (selling power into the grid) and solar power generation to meet on-site needs.

Staff recommends updating zoning to: 1) clarify what types of uses qualify as "other public utility uses" within the Exceptions Chapter; and 2) establish new regulations for utility-scale solar generation facilities, including defining the use and establishing siting and design criteria. This approach would require minimal adjustment to the County Code and would continue to allow flexibility for both land owners and the public.

Option 4 – Allow By-Right Utility-Scale Solar Facilities Subject to Siting and Design Criteria

Similar to Option 3, siting and design criteria could be established through zoning, but the requirement for a discretionary use permit could be removed. Projects could be processed in a similar manner to lot line adjustments or home occupation permits, where they are administratively reviewed with approval granted so long as the proposal complies with certain specified criteria. This type of process is streamlined compared to the use permit process, and adds a great deal of certainty for the developer. The disadvantage of this process is that there is virtually no discretionary authority to adjust or amend a project to address unique circumstances.

Staff does not recommend a by-right process for utility-scale solar facilities. Retaining discretionary review over the process allows decision makers to address site-specific conditions that administrative design criteria may not adequately address.

RECOMMENDATION

Staff recommends Option 3. This option would update the zoning code to establish siting and design criteria for utility-scale solar projects, but would not amend General Plan policies. The existing General Plan provides sufficient policy direction, as well as flexibility, to address current trends in accessory and utility-scale solar power generation and public utility uses. The zoning ordinance text amendments would establish "utility-scale solar facilities" as a separate use from "other public utility uses" and would establish siting and design criteria similar to Butte and Sonoma County to address criteria such as, but not limited to, and as may be revised by the Board:

- | Agricultural Preservation - Avoid locating utility-scale facilities on land zoned Agricultural Preserve, containing a Williamson Agricultural Contract, or on lands designated as Prime, Statewide or Locally Important Farmland.
- | Conservation Regulations - Ensure that utility-scale facilities are subject to the Conservation Regulations (Chapter 18.108) in the same manner as applied to agricultural and structural development including but not limited to slope, stream setback, oak woodland, and sensitive environmental communities protection.
- | Viewshed Regulations - Ensure that utility-scale facilities are subject to the Viewshed Regulations (Chapter 18.106) in the same manner as applied to residential, commercial and agricultural development.
- | Residential Buffers - Establish appropriate separation of facilities from existing residential uses.
- | Airport Compatibility - Establish appropriate standards to ensure facilities do not negatively impact aviation or airport operations.
- | General Siting Criteria - Establish use-specific road and property line setbacks; and consider applying lot coverage requirement.
- | Environmental Impact Analysis - Require discretionary use permit process necessitating evaluation of all potential environmental impacts.
- | Public Lands - Develop streamlined zoning review process for projects located on publicly owned properties, excluding park and open spaces.
- | Accessory Use Criteria - Define extent of power generation allowed for on-site accessory use.
- | Public Utility Contracts - Require that facilities are only permissible in conjunction with a PPA, and must be decommissioned if no longer controlled by a PPA.
- | Extent of On-Site Power - Define the amount of power that may be developed as a by-right accessory use.

Upon receiving direction from the Board, staff will prepare a draft ordinance and circulate it to the public for review and comments. The revised ordinance will be evaluated under the California Environmental Quality Act (CEQA). The revised ordinance and CEQA document will be provided for public review and comment. The ordinance and supporting documents will then be submitted to the Planning Commission for a public hearing with a request for their recommendations. The Commission's recommendation(s) will be forwarded to the Board of Supervisors for another public hearing and final action. Staff estimates that this process will take approximately six months.

SUPPORTING DOCUMENTS

- A . Comparison of Regulations in Other Agencies
- B . Correspondence - Napa County Farm Bureau Letter
- C . Butte County Utility-Scale Solar Vision Statement
- D . Sonoma County Renewable Energy Regulations
- E . Lake County Public-Private Projects Narrative

CEO Recommendation: Approve

Reviewed By: Leigh Sharp