Planning Commission Mtg.
NOVEMBER 20 2019
Agenda Item # 7C

Quackenbush, Alexandria

From: McDowell, John
Sent: Tuesday, November 19, 2019 2:40 PM
To: PlanningCommissionClerk
Cc: Bordona, Brian; Gallina, Charlene; Apallas, Chris; Anderson, Laura
Subject: FW: Additional R.E. Ordinance Recommendations
Attachments: Renewable Energy Ordinance Plus.docx; Evaluation of the Contract.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Alex is working on this

Planning Commission correspondence for Renewable Energy Systems Ordinance, November 20, 2019.

From: Laura T. <lauratinthoff@gmail.com>
Sent: Tuesday, November 19, 2019 10:12 AM
To: McDowell, John <John.McDowell@countyofnapa.org>
Cc: Eileen Pereira <eileen@aston.com>; Ramos, Belia <Belia.Ramos@countyofnapa.org>; Morrison, David <David.Morrison@countyofnapa.org>; Gregory, Ryan <Ryan.Gregory@countyofnapa.org>; Dillon, Diane <Diane.DILLON@countyofnapa.org>; Wagenknecht, Brad <BRAD.WAGENKNECHT@countyofnapa.org>; Pedroza, Alfredo <Alfredo.Pedroza@countyofnapa.org>; Cottrell, Anne <Anne.Cottrell@countyofnapa.org>; Joelle Gallagher <joellegPC@gmail.com>; Mazotti, Andrew <Andrew.Mazotti@countyofnapa.org>; Whitmer, David <Dave.Whitmer@countyofnapa.org>; JeriGillPC@outlook.com; Aston Pereira <aston@aston.com>; Tran, Minh <Minh.Tran@countyofnapa.org>; Valdez, Jose (Louie) <Jose.Valdez@countyofnapa.org>
Subject: Additional R.E. Ordinance Recommendations

John,

Thank you for the detailed response to Mrs. Pereira's letter. I know you have put in many hours developing this draft, and we appreciate the time you have taken to clarify some of our questions.

While I understand that the County codes are "permissive", I would like to present a list of recommendations for your consideration (attachments below). This is a new territory, and not many people in the Cities or County are "experts" on this building/management process. The more information and direction that we can provide, in one way or another, the better.

Thank you very much,

Sincerely,

Laura Tinthoff
707.339.1481

On Nov 19, 2019, at 8:59 AM, McDowell, John <John.McDowell@countyofnapa.org> wrote:

Ms. Pereria,

Thank you for your comments. Your comments will be provided to the Planning Commission and incorporated into the administrative record for consideration during their public hearing commencing tomorrow. In advance of the hearing, I'll offer the following responses to your questions:

- The ordinance is structured to prohibit commercial renewable energy facilities from agricultural and residential districts. We have included maps in the Planning Commission materials showing the zoning where such facilities will be allowed with grant of a use permit. Previously approved power generation facilities were processed under a provision of the Exceptions zoning chapter that currently allows 'other public utilities' in any zoning district. That Exceptions provision of code would be changed with this ordinance by eliminating 'other public utilities' and the a new term, 'commercial renewable energy systems,' is not included in the Exceptions Chapter. Commercial systems are only listed as an allowable use (with a use permit) in those zoning districts which correspond with the map.
- Yes, the County's codes are permissive, which is the case for most codes across the country. It would be very difficult to list all of the things that are not allowed, so codes tend to list only those uses which are allowed and it is up to applicants to demonstrate that their use conforms to a listed allowable use.
- Napa County is one of several member communities of MCE (see map below). I'd estimate there are roughly 30,000 dwelling units within City of Napa and unincorporated County of Napa combined. The previous American Canyon power plant could power up to 800 homes. The other currently pending project in the industrial park will power 750, if approved. Under County/City agreements geared to the steer housing to cities and preserve unincorporated agricultural land, City of Napa is obligated to take 80% of Napa County's housing production mandate during the State's next housing cycle (what is called RHNA – Regional Housing Needs Allocation). It could be viewed that solar production within unincorporated industrial/commercial areas (where housing is prohibited) is appropriate as a measure that supports housing within the City of Napa.
- <image003.jpg>

- Yes, if an environmental impact from a project cannot be fully mitigated, then an EIR must be prepared including adoption of a Statement of Overriding Consideration.
- Timeline for restoration – we can look at changing ordinance wording to address the point – linking decommissioning and restoration.

- Water use – in my research into the topic of water use associated with solar facilities, it is one of the lowest water uses I've seen compared to other land uses – less than one single family home over one year. Water use during construction (primarily for dust control) will be far less than an equivalent sized vineyard, industrial, residential, winery project because grading activities are minimal and the construction period is relatively short. Water use after operation commences is nominal, roughly the equivalent to seasonal window washing at an office building.
- We can add "secured" to the fencing criteria
- We can add inflation indexing to the engineer's estimate criteria
- State law addresses property ownership changes – use permits "run with the land" – meaning that whomever owns a property containing a use with a use permit not only enjoys the benefits of the use permit but shoulders the responsibilities for complying with its terms.
- Staff supports undergrounding of utilities at commercial renewable energy facilities – currently proposed code language requires undergrounding but allows decision maker (Planning Commission or Board of Supes on appeal) to waive the requirement.

For tomorrow's hearing we are asking the Planning Commission to take testimony and provide comments before continuing the hearing to December 4th. For the December 4th hearing we can provide the Commission with a tracked changes ordinance update based on their comments from November 20th. On Dec 4th will be asking them to finalize their recommendation and forward to the Board of Supervisors for hearing on December 17th.

Thank you – John

John McDowell
Napa County Planning, Building and Environmental Services Department
(707) 299-1354

From: Eileen <eileen@aston.com>

Sent: Saturday, November 16, 2019 9:17:58 AM

To: Ramos, Belia <Belia.Ramos@countyofnapa.org>; Gregory, Ryan <Ryan.Gregory@countyofnapa.org>; Dillon, Diane <Diane.DILLON@countyofnapa.org>; Wagenknecht, Brad <BRAD.WAGENKNECHT@countyofnapa.org>; Pedroza, Alfredo <Alfredo.Pedroza@countyofnapa.org>; Anne Cottrell <anne.l.cottrell@gmail.com>; Joelle Gallagher <joellegpc@gmail.com>; Mazotti, Andrew <Andrew.Mazotti@countyofnapa.org>; Whitmer, David <Dave.Whitmer@countyofnapa.org>; jerigillpc@outlook.com<jerigillpc@outlook.com>; Aston Pereira <aston@aston.com>; Laura Tinthoff <lauratinthoff@gmail.com>; Tran, Minh <Minh.Tran@countyofnapa.org>; Morrison, David <David.Morrison@countyofnapa.org>; Tom

McDonnell <tom_mcdonnell@cushwake.com>; Kathy Felch <kathylynnfelch@gmail.com>; Valdez, Jose (Louie) <Jose.Valdez@countyofnapa.org>

Subject: Fwd: Letter to Planning Commissioners & Board of Supervisors

Please see letter attached for your review and record.

My best, Eileen Pereira
2145 First Avenue
Napa, CA 94558

In Behalf of Napa Valley Citizens for Smart Planning

Sent from my iPhone

Begin forwarded message:

> **From:** Eileen Pereira <eileen@aston.com>
> **Date:** November 16, 2019 at 11:50:26 AM EST
> **To:** Eileen <eileen@aston.com>
> **Subject: Letter to Planning Commissioners & Board of Supervisors**

> Sent from my iPad

<Renewable Energy Ordinance Zoning Figures.pdf>

November 18, 2019

Thank you to the Planning Staff for the hard work developing a Renewable Energy Ordinance draft. Before approval, please take into consideration the issues detailed below.

"In addition to personal and governmental revenue, one must also consider one of the goals for establishing solar panels is to provide energy production to lessen the reliance upon energy sources that are considered a negative impact upon the environment or are available in limited quantity. However, energy production from solar farms is not equal for all locations. Too, current federal or state mandates and tax incentives that make this technology feasible may not exist in the future. Lastly, technology changes rapidly. Thus, carefully examine the transition. Past solar and wind farm production has experienced this situation and many sites were abandoned rather than upgraded." https://craven.ces.ncsu.edu/considerations-for-transferring-agricultural-land-to-solar-panel-energy-production/

Concerning both accessory and commercial renewable energy systems, this ordinance must be crafted to be far more detailed and specific to be effective. I propose that we "tighten the reins" regarding the owner/operator/developer's responsibilities and roles.

I have researched several issues that must be considered to avoid future problems that may potentially cost all taxpayers, whether they use solar energy or not, considerable amounts of time, frustration and money.

These precautionary measures not only provide awareness of potential problems but also offer means of monitoring proper land use, reducing utility rates, maintaining facility function, ensuring community safety and well-being, and offering financial and contractual security.

I. LAND USE

Drainage, Storm Water and Soil Quality Considerations

The owner/operator applicants shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation, or

maintenance of the solar farm including roadways, access roads and the entire solar development property.

"Irrespective of state-specific permitting approaches, elevated ground-mount solar PV arrays may have the potential to alter the volume, velocity, and discharge pattern of stormwater runoff at a site during and after construction. According to MPCA, sites can expect a 15 – 50% increase in volume due to the installation of solar PV panels. Additionally, a solar PV development site stripped of vegetation may result in erosive stormwater flows. Project proponents are advised to carefully consider the impacts of this additional runoff on their operations and overall compliance with environmental regulations." rainy day at a solar farm

Planning should include discussion with appropriate planning departments (County or Municipal) depending upon jurisdiction as well as the local Soil & Water Conservation office.

In contrast to storm water management, addressing soil management is a relatively simple process. Simply protect soil by planting a permanent ground cover. Many types of permitted grasses will qualify. Aim to provide proper fertilization to maintain growth. Proper soil testing for plant nutrients and lime is called for. Note that some fertilizers may be corrosive to metals, plastics and glass used in the solar farms. Thus, fertilizer must be applied with care to avoid damage to the panels or electrical conduits.

The goal of fertilization should be to provide adequate nutrients to establish the desired ground cover. Poor ground cover, in a worst-case scenario, may result in sheet flow erosion as large quantities of water rush off of the solar panels during heavy storm events. Even frequent, yet less heavy rainfall events may create a dripline directly beneath the individual panels that may cause a shift in equipment angle. If this occurs, restoring the eroded land and prevention of runoff into surrounding surface waters will be the responsibility of the landowner or contractor/developer, depending upon the designation made within the contract.

Lastly, most solar farms are indeed safe to operate. However, potentially toxic heavy metals and silicone by-products are used in these projects. Damaged units or time may release these contaminants into the environment. As such, consider taking soil samples to monitor for potential contaminants. For additional information concerning potential contaminants

as outlined by the EPA, visit https://www.epa.gov/chemical-research/ecological-soil-screening-level-metal-contaminants.

Herbicides

Left alone without cultivation and management, farmlands will progress from a mixture of weeds to small shrubs and eventually forest. Thus, weed, shrub and small tree maintenance must be considered. Either the developer will need to provide for this effort or contract these tasks with a service provider. Applying a non-restricted use herbicide does not require a license for pesticide applications to manage the lands. However, many of the shrubs and small trees are not easily controlled by these general herbicides. Thus, a license to purchase and use a restricted use herbicide may be necessary.

Anyone applying pesticides must **comply with federal and state** laws. In general, states have primary authority for compliance monitoring and enforcing against illegal pesticide use. Often, a state's department of agriculture has this responsibility, but it can be a state's environmental or other agency.
EPA compliance information.
EPA enforcement information.
Find your state's lead pesticide agency.
https://www.epa.gov/pesticide-registration/about-pesticide-registration

A commercial applicator may be contracted to provide vegetative maintenance on the solar farm. Simply ensure that the person or company has the appropriate license(s). Within current legal structure, most commercial applicators are likely to have license permitting general weed control, but one must be licensed in forestry to manage trees or shrubs. Thus, as a worst-case scenario, it may be necessary to contract with more than one person/company. *(Note: Farmers are allowed to apply herbicides on farms they own or lease but are not permitted to apply on property of others. Such privilege is allowed only for commercial operators.)*

An ordinance must include a regulation of the use of herbicides to limit the growth of weeds around solar panels and EPA compliance.

A Complete Professional Revegetation Landscape and Installation Plan is Required (to detail new plantings and to prevent invasive species from taking over).

Topsoil shall not be removed from the site during development unless the removal is expressly approved as part of the special use permit.

Perennial vegetative ground cover shall be maintained or established in all areas containing solar arrays and in required setbacks to prevent erosion and manage run-off.

Vegetative Buffer Zones

"An ordinance must mandate a vegetative buffer zone. There are some reasonable functions that a vegetative buffer zone will serve. As example, a vegetative buffer zone may provide some protection against wind-blown objects from entering the area where panels are established, may provide some protection against intrusion of vehicles if the area is located on a major highway, or may provide some deflection of potential sunlight glare if the areas is located near neighborhoods or a major highway. Thus, not only will the vegetative border be pleasing, it may serve some practical functions. "

https://craven.ces.ncsu.edu/considerations-for-transferring-agricultural-land-to-solar-panel-energy-production/

Concrete

Due to the lack of construction detail in the formerly submitted permit plans, we are not sure how much concrete will be necessary to support posts in our rocky region. This information is highly important for both the commissioning and decommissioning plans. An independent evaluation, by a professional engineering firm, should be required.

The cement industry is one of the primary producers of carbon dioxide, a potent greenhouse gas.[1] Concrete causes damage to the most fertile layer of the earth, the topsoil. Concrete is used to create hard surfaces which contribute to surface runoff that may cause soil erosion, water pollution and flooding.

Concrete dust released by building demolition and natural disasters can be a major source of dangerous air pollution. The presence of some substances in concrete, including useful and unwanted additives, can cause health concerns due to toxicity and radioactivity.

Roads

The owner/operator applicants shall identify all roads to be used for the purpose of transporting components and equipment for construction, operation or maintenance of the solar farm and obtain applicable permits from the applicable highway authority prior to construction.

Existing road conditions

The owner/operator applicants shall conduct a pre-construction survey, in coordination with the applicable highway authority to determine existing road conditions. The pre-construction survey shall include photographs and a written agreement to document the condition of the roads and applicable public facilities. The owner/operator applicant is responsible for on-going road maintenance and dust-control measures identified by the applicable highway authority during all phases of construction and installation.

II. BATTERY POWER REQUIREMENTS AND RELATIONSHIP TO UTILITY PRICES FOR CONSUMERS

Back-up power is needed for night-time and cloudy days in order to maintain stability for the grid. This is costly and must be the responsibility of the developer. If not provided this puts unreasonable costs to the citizens.

Power production is currently exceeding the needs of the public. At this time, we have an *abundance* of solar energy in California (and other states as well). On a regular basis we are paying Arizona, and seven other states, to take excess electricity to avoid overloading our own power lines. This results in Californians having to pay some of the highest utility rates in the country.

http://www.latimes.com/projects/la-fi-electricity-solar/

Net metering is a state policy that allows residential solar producers to be compensated for surplus power they send back into the electric grid. Electric utilities are required to purchase electricity generated by residential solar arrays. Forty-four states, the District of Columbia, and four U.S. territories have established net metering policies.

Net metering benefits those who install residential solar panels but increases the cost of electricity for regular consumers and expands costs to utility companies.

Net metering inflicts mechanical stress on the electric grid and incurs other costs that fall disproportionately on America's poor. A study conducted by the California Public Utilities Commission estimates that by 2020, costs associated with net energy metering in California alone would be $1.1 billion. Utilities are not allowed by most net metering laws to charge solar producers for the added grid stress that results from feeding electricity back into the grid. To compensate for increased costs, utility companies raise electricity prices for everyone. Energy consumers who do not have their own solar panels bear the brunt of these raised prices, even though they do not directly contribute to the costs associated with net metering.

reliability of renewable energy: solar - Utah State University

Cost to taxpayers: **"**Under even optimum circumstances, therefore, converting the electrical grid by 2045 would cost California's residential and commercial ratepayers hundreds of billions of dollars in capital investment." *The high cost of zero-emission California, by Dan Walters, Napa Register, October 1, 2018*

III. MONITERING AND MAINTENANCE

7,133 to 11,888 Gallons (27,000-45,000 liters) of Water per Cleaning.

Water requirement for cleaning panels (and its frequency) mainly depends on the cost which a developer is willing to pay. Roughly 9000 to 15000 liters of water (per MW) is required for cleaning. The location of the site and its surroundings plays a crucial role.

Renewable Properties suggested that the panels would be washed once a year. Solar panels require constant cleaning to maintain efficiency. In Napa we have high levels of dust due to farming practices and nearby fires. Our research suggests that panels, like cars, would need to be cleaned far more frequently, perhaps twice a month.

The developer/operator must be held accountable for maximum efficiency of a project of this magnitude.
https://www.quora.com/How-much-water-is-required-for-cleaning-of-1-MW-solar-power-plant

The owner or operator of the solar farm shall be responsible for keeping the facility in safe, sound and well-maintained condition, including painting, grounds keeping, structural repairs, internal access drives and the integrity of security measures. This issue must be part of the Ordinance.

IV. HEALTH AND WELL-BEING

An Analysis of the Noise Level (Decibels) Including Initial Construction Must Be Required.

Before issuance of a zoning certificate, the subject property owners shall provide to the Zoning Administrator signed affidavits acknowledging receipt of the noise level reports and how the associated costs will be guaranteed by the owner/operator as well as, their respective responsibility for noise level issues and costs.

We were told by Renewable Properties, at the community meeting, that the noise generated from the inverters would be no louder than an average car. Noise travels and reverberates in this valley. Unlike traffic noise, the noise from the inverters will be continuous and, possibly, a severe health hazard.

Wildlife Impacts

We must aim to evaluate the potential impact a project might have upon wildlife. Consider both the good and unfavorable potential consequences. Small shrubs or tree borders may protect the investment as well as provide an aesthetically pleasing area. However, some plants will simply not tolerate the amplified light or heat if planted too close to the solar panels. In addition, the establishment of a border may increase activity of small birds,

insects and small mammals. However, this also increases the chance of wildlife nesting.

Removal of bird's nest or wasp nest should be a routine maintenance to prevent potential fires or permanent damage to equipment (See Wildfire and Electrical Safety Concerns). Wildlife conservation and wildlife protection must be a priority during planning and development.

Pacemakers:

According to an article included in Renewable Properties, "Anyone relying on a medical device such as pacemaker or other implanted device to maintain proper heart rhythm may have concern about the potential for a solar project to interfere with the operation of his or her device."

This suggests that anyone with potential to have a pacemaker could be impacted over the potential 30-year project duration. Adjacent homes would have to disclose this for any sale or refinancing process limiting values and marketability. Legal action would be certain to happen.

http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2017/10/Health-and-Safety-Impacts-of-Solar-Photovoltaics-2017_white-paper-1.pdf

Other Counties have insisted that nearby neighbors be notified as follows:
An EMF and full report with graphics on all high voltage Power Lines to be Run to the Transfer Station and Then to the Point of Connection
(by an objective expert and posted to public).

Before issuance of a zoning certificate, the subject property owners shall provide to the Zoning Administrator signed affidavits acknowledging receipt of the EMF report and high voltage power line information and how the associated costs will be guaranteed by the owner/operator as well as, their respective responsibility for the EMF report and high voltage power line costs.

V. HAZARDS INTRODUCED INTO OUR COMMUNITY

Fire Safety

“Fire codes will apply to this structure, just as with any other commercial property. Thus, it is advisable to discuss the potential regulations prior to establishment. Having thus said, most solar farms can be established with minimum restrictions. Generally, clearly marking all direct-current conduits, conductors, enclosures, etc., as well as leaving a clear area (brush free) of at least 10 feet around the array is sufficient.

Another consideration for fire safety will be to discuss fire plans and facility layout with the appropriate Fire Marshal (county and/or city). These panels should always be considered as having maximum voltage and a potential electrical hazard. Nest from birds, insects and small animals may cause fires. Fires on site may place fire-fighters and others at risk of electrocution. As such, a pre-fire plan to determine a salvage treatment, if any, in case of a fire should be discussed with all contracting parties, fire departments and Fire Marshal.” https://craven.ces.ncsu.edu/considerations-for-transferring-agricultural-land-to-solar-panel-energy-production/

Lightning

The National Fire Protection Association (NFPA 780) and International Electro-Technical Commission (IEC-62305) standards suggest solar developers take stock of lightning risk to establish a baseline for lightning protection systems. In other words, it’s the developer/owner applicant’s responsibility to conduct a cost-benefit analysis and decide what type of lightning protection should be added to an array.

Installation of a stable, low resistance and low impedance grounding system to bond all electrically conductive surfaces together. The installed grounding system should provide safety step and touch voltage criteria appropriate for a power generation facility. After providing a stable grounding system, it is important to properly install a surge protection device (SPD) system. Finally, a well-designed structural lightning protection system can be installed.

Electric Shock and Arc Flash Hazards

There is a real danger of electric shock to *anyone* entering any of the electrical cabinets such as combiner boxes, disconnect switches, inverters, or transformers; or otherwise coming in contact with voltages over 50 Volts.

Another electrical hazard is an arc flash, which is an explosion of energy that can occur in a short circuit situation. This explosive release of energy causes a flash of heat and a shockwave, both of which can cause serious injury or death. Properly trained and equipped technicians and electricians know how to safely install, test, and repair PV systems, but there is always some risk of injury when hazardous voltages and/or currents are present.
https://nccleantech.ncsu.edu/wp-content/uploads/Health-and-Safety-Impacts-of-Solar-Photovoltaics-2017_white-paper.pd

Wildfire and Electrical Safety Concerns

Removal of bird's nest or wasp nest should be a routine maintenance to prevent potential fires or permanent damage to equipment.

Firefighting Concerns

"Research conducted by the London-based Microgeneration Certification Scheme (MCS), for example, found that various solar panels reacted in 'radically different' ways during fire tests. Some experienced problems like their glass coverings shattering or sealant material combusting; these pose obvious challenges for firefighters."

https://xlcatlin.com/fast-fast-forward/articles/solar-panels-a-new-challenge-for-firefighters

Firefighters are at risk by not only the chemicals but also electric shock and burn.

A Firefighting and Training Plan/Schedule released by the Napa County Fire Department and submitted to the Napa County Project Planners for a Special Use Permit must be created.

Toxicity Risk to Firefighters and Neighborhood

In the case of a fire it is known that hazardous chemicals including cadmium telluride, copper indium selenide, cadmium gallium, (di) selenide, hexafluoroethane, lead, and polyvinyl fluoride and silicon tetrachloride, a byproduct of producing crystalline silicon-as well as the plastic solar panels-would be released into the air and aquifer.

Compliance Report of Firefighting Safety Codes for Special Use Permit

New codes issued by the NFPA call for solar panels to have spacing that allows firefighters to move between them as well as shutdown mechanisms that de-electrify the panels.

https://xlcatlin.com/fast-fast-forward/articles/solar-panels-a-new-challenge-for-firefighters

The owner/operator applicant shall submit a copy of the NFPA plan to all property owners within the boundaries of the special use permit. Before issuance of a zoning certificate, the subject property owners shall provide to the Zoning Administrator signed affidavits acknowledging receipt of the NFPA plan and how the associated costs will be guaranteed by the owner/operator as well as, their respective responsibility for fire damage and costs.

A Hazardous Chemical Clean-Up Plan and Financial Surety

a. A hazardous chemical fire evacuation plan for the surrounding community by an objective expert in this field.

b. A professional and objective ground water chemical spill response and a ground water chemical cleanup plan.

c. A chemical clean-up bond, letter of credit, established escrow account, or other financial surety approved by the Napa County State's Attorney's Office, including an inflationary escalator, in the amount outlined in the chemical clean-up plan.

d. The owner/operator applicant shall submit a copy of the chemical clean -up plan to all property owners within the boundaries of the special use permit. Before issuance of a zoning certificate, the subject property owners shall provide to the Zoning Administrator signed affidavits acknowledging receipt of the chemical cleanup plan and how the associated costs will be guaranteed by the owner/operator as well as, their respective responsibility for chemical clean-up costs.

An Emergency Services Plan, including but not limited to the project summary, electrical schematic and means of shutting down energy systems throughout the life of the installation, should be required

One community member stated" We need to provide insurance for the life of the project if there is any issues regarding earthquakes, fire, vandalism, terrorism, or any other acts of god."

VI. FINANCIAL AND CONTRACTUAL CONCERNS TO RESIDENTS

Prior to approval of Special Use Permit:

A protocol and financial surety agreement for the removal of any panels that create glare beyond the property after the initial installation

A Commissioning Plan and Related Financial Surety

An objective, licensed professional engineer, with local solar development experience, to estimate commissioning costs which vary across the United States.

A Commissioning Bond, letter of credit, escrow account or other financial surety approved by the Napa County Attorney's Office, including an inflationary escalator, in the amount outlined in the commissioning plan in order to assure completion of the project and thus *enable MCE to accept* the Renewable Properties contract.

The owner/operator applicant shall submit a copy of the commissioning plan to all property owners within the boundaries of the Special Use Permit. Before issuance of a zoning certificate, the subject property owners shall provide to the Zoning Administrator signed affidavits acknowledging receipt of the commissioning plan and how the associated costs will be guaranteed by the owner/operator as well as, and their respective responsibility for commissioning costs.

DECOMISSIONING PLAN

A separate, detailed commissioning and decommissioning plan should be created including specific removal processes and recycling instructions for PV panels, electric wiring and racking structures. A signed summary of terms for solar module collection and a recycle agreement should be in place. Belectric sample here.

A few additional suggestions:

- The plan should include provision of soil (and water if near a stream) sample reports from a private lab showing soil (water) on the location is free of heavy metals and contaminates and is suitable for agricultural production or desired use.

- All removal and decommissioning shall occur within **180 days** of the facility ceasing to produce power for sale. The owner/contractor of the solar installation should be responsible for this decommissioning.

- The owner/contractor should provide the County planning departments, Register of Deeds and landowner a signed decommissioning plan within 30 days of change in the facility owner.

https://craven.ces.ncsu.edu/considerations-for-transferring-agricultural-land-to-solar-panel-energy-production/

The current draft ordinance allows concrete removal to only three feet below ground level with approval. On a commercial site of several acres, it is unacceptable to allow this amount of useless concrete and equipment to remain. We have little idea what the state of future land and energy development will be- possibly more than thirty years from now. The owner/contractor must be responsible for removing all traces of the project once energy production has stopped.

- Financial Considerations for Decommissioning

Estimated Cost of Decommissioning

Obviously, the cost of decommissioning a solar array more than 20 years into the future cannot be known with any precision. However, given the cost

of components today, and the salvage value associated with such components today, one can begin to have an educated estimate as to the cost of salvage. For purposes of the Project, this means that the cost of decommissioning the solar arrays will be offset by the salvage value of the solar panels and components. As of the date of this plan, the estimated salvage value is expected to exceed the decommissioning costs, as shown in Table 1, below.

Table 1. Estimated Decommissioning Costs and Salvage Values

Category	Salvage Value	Less Decommissioning Costs	Net Cost/Benefit
Project Management (contractor costs, equipment, etc.)	$0	$250,000	($250,000)
Site work/Civil (site reclamation)	$0	$1,000,000	($1,000,000)
Foundations	$0	$0 (included in site work estimate)	$0
Solar Array Components (solar panels, racks, inverters, etc.)	$3,000,000	$1,000,000	$2,000,000
Total			**$750,000**

Ensuring Decommissioning and Site Restoration Funds

The estimated cost of decommissioning and the estimated salvage value as provided above will be updated upon commencement of commercial operations. The total updated estimated cost of decommissioning, if any, shall be funded in equal annual installments over the first ten years of Project operations. On or prior to December 31 of each calendar year beginning with the calendar year in which the project commences commercial operations through and including calendar year 10, an amount based on the estimate provided herein, if any, to be updated upon commencement of commercial operations, shall be reserved for decommissioning and site restoration. Such annual amounts may be in the form of a performance bond, surety bond, letter of credit, parental guaranty or other form of financial assurance acceptable to the Siting Council (the "Financial Assurance"). On or prior to the end of calendar year 15 of the Project's operation, the estimated costs of decommissioning and the estimated salvage value will be reassessed and an amount equal to the balance of such updated estimated cost of decommissioning (minus salvage value) less the amounts reserved, if any, will be reserved for decommissioning and site restoration. The Financial Assurance shall be

kept in place until such time as the decommissioning work has been completed, provided, however, to the extent available as liquid funds, the Financial Assurance may be used to offset the costs of the decommissioning.
https://www.ct.gov/csc/lib/csc/pending_petitions/3_petition_1301through1400/pe1313/filing/20_exhs.pdf

EVALUATION OF THE CONTRACT

"Care should be taken to examine all aspects of the contract. Typically, such contracts are written to protect the company, not the landowner. As such, the contract outlines responsibilities and rights of the two parties but are typically one-sided in that they protect the developer/contractor's rights but may greatly limit the landowner's rights. One must remember, the developer/contractor is approaching the agreement to protect himself from as much liability as possible and to make a profit.

It is not the intent of this article to outline all considerations of a contract. However, a few of the major issues that need to be considered are listed below. It is *highly recommended* to consult legal counsel prior to signing the contract.

Potential contractual considerations include:

- Avoid clauses or phrases that are vague such as allowing entry of the developer, contractors or assignee to "undertake any activities that are necessary, helpful, appropriate or convenient in connection with, incidental to, or for the benefit of one or more projects." Such statements give the contractor/developer or others open-ended rights and even the right for future development. Make sure to specifically outline all activities and responsibilities for all parties and specifically state that no others are implied.
- Can the contract or any agreement/obligation of the contract be sold, transferred or assigned to another party. If so, what are the terms? The ability to sell a contractual obligation may mean that the company or individual you contract with today is not the same tomorrow. Too, if allowed, the company/contractor to which the agreement is transferred may be limited in liability or simply not agree to all original terms. In some cases, transferal of the agreement may be to a company/contractor that does not have the ability to provide adequate financial backing or proper authority to meet original obligations. Simply make sure that if this clause is included in the contract that the specific conditions, terms, liability and risks associated with such transferal are outlined.
- Easement, right of ways, permission to enter the farmland at will and/or right to work of other parties should be considered carefully. Leases allow a landowner to provide a tenant exclusive rights for a specific time period. They are easily terminated. An easement provides the owner the right to continue using his/her land but transfers an interest in the property, and associated rights, to a third party. They are often recorded with the deed. As such, they are not easily terminated.

- Does the contract allow the developer/contractor access to the land at any time? Some clauses allow entry, without notification, at any time during the term of the contract. Specifically outline who has access to property and under what terms or conditions. Failure to do so may allow the contractor, developer, sub lessee or others access at any time without notification to the landowner.
- Does the contract require the landowner to protect the developer/contractor's interest? If so, this broad term may imply legal fees, liability insurance or other matters. Avoid such clauses and terms and specify exactly what is needed by the contractor rather than a general, unclear clause that might increase the landowner's risks. Make sure these items are specifically outlined.
- Who is liable for injury of a person during establishment, operation or maintenance of the solar panels? In some cases, landowners may become entangled in legal disputes over worker injury. Make sure to protect yourself against such situation by specifically outlining such liability and responsibilities.
- Who is responsible for disputes with sub-contractors, sub lessee or others? As a landowner, it is especially critical to separate your responsibility from those of the contractors/developers. Otherwise, legal action for which you have no control over may result.
- Do both parties have the right to terminate the agreement without cause? If not, then what are the terms of termination? Solar farms do not generate power equally. In some cases, poor performance may result in an inactive site. If so, as a landowner, do you have the right to terminate the agreement? These issues need to be clearly defined in the contract.
- If there is a dispute or legal matter, what state determines the applicable laws. Some contracts specify that all legal matters be handled by arbitration in the state of the contracting company's origin or operation. Insist that all legal matters and disputes follow local state laws and that disputes be settled within the state that the solar farm is located.
- Consider having the contract publicly recorded. Many contractors not only do not wish for this to occur, the contract may specifically have wording preventing disclosure of terms, operation or any business matters concerning the solar farms. Rather a "memorandum" is executed. Many states do not regard these memorandums as a binding legal agreement and thus are not as enforceable as publicly recorded contracts.

- Make sure that any changes to the contract or agreements is in writing and that the party representing the contract and work has the authority to make changes to the contract. In some cases, a third-party administrating company provides sales or initial contact. These individuals or companies may or may not have authority to accept changes to a contract.
- Many lending institutions, for various liability and risk concerns, will not allow solar farms to be placed onto farms with a lien. If the farm is not fully paid, check with the lending institution. Otherwise, full payment of the remaining balance may be due should the farm be placed into a solar farm.
- Evaluate the liability of injury to workers, visitors to the site, potential environmental damage, fire, vandalism, or other unintended consequences. Liability insurance costs and needs for commercial property may greatly differ from liability insurance for farmland. As such, make sure the contract clearly specifies who owns the equipment and liability of damage to equipment or personal injury.

”https://craven.ces.ncsu.edu/considerations-for-transferring-agricultural-land-to-solar-panel-energy-production/

Quackenbush, Alexandria

From: McDowell, John
Sent: Tuesday, November 19, 2019 2:50 PM
To: PlanningCommissionClerk
Cc: Bordona, Brian; Gallina, Charlene; Apallas, Chris; Anderson, Laura
Subject: FW: Fwd: Letter to Planning Commissioners & Board of Supervisors
Attachments: Blank 2.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Alex is working on this

Planning Commission correspondence for Renewable Energy Systems Ordinance

---

From: Eileen <eileen@aston.com>
Date: Saturday, Nov 16, 2019, 9:23 AM
To: Ramos, Belia <Belia.Ramos@countyofnapa.org>, Gregory, Ryan <Ryan.Gregory@countyofnapa.org>, Dillon, Diane <Diane.DILLON@countyofnapa.org>, Wagenknecht, Brad <BRAD.WAGENKNECHT@countyofnapa.org>, Pedroza, Alfredo <Alfredo.Pedroza@countyofnapa.org>, Anne Cottrell <anne.l.cottrell@gmail.com>, Joelle Gallagher <joellegpc@gmail.com>, Mazotti, Andrew <Andrew.Mazotti@countyofnapa.org>, Whitmer, David <Dave.Whitmer@countyofnapa.org>, jerigillpc@outlook.com <jerigillpc@outlook.com>, Aston Pereira <aston@aston.com>, Laura Tinthoff <lauratinthoff@gmail.com>, Tran, Minh <Minh.Tran@countyofnapa.org>, Morrison, David <David.Morrison@countyofnapa.org>, Tom McDonnell <tom_mcdonnell@cushwake.com>, Kathy Felch <kathylynnfelch@gmail.com>, Valdez, Jose (Louie) <Jose.Valdez@countyofnapa.org>
Subject: Fwd: Letter to Planning Commissioners & Board of Supervisors

Please see letter attached for your review and record.

My best, Eileen Pereira
2145 First Avenue
Napa, CA 94558

In Behalf of Napa Valley Citizens for Smart Planning

Sent from my iPhone

Begin forwarded message:

> **From:** Eileen Pereira <eileen@aston.com>
> **Date:** November 16, 2019 at 11:50:26 AM EST
> **To:** Eileen <eileen@aston.com>
> **Subject: Letter to Planning Commissioners & Board of Supervisors**
>
> Sent from my iPad

We would like to thank Planning Staff for their hard work on the draft Solar Ordinance. The draft does address several concerns that we had mentioned.

We do have a few questions and would like to raise some concerns.

We understand that Napa County follows the "permissive zoning" policy. Are we right in assuming that this means that areas not specifically called out in the draft solar ordinance as being zoned acceptable for Commercial Renewable Energy Projects are not to be considered for locating such projects? In other words, the AG Watershed and Residentially zoned areas, for example, are off limits for such projects.

Another general and overarching concern relates to the distribution of the power from the Commercial Renewable Energy Projects located in Napa County.

We understand that the Bay Area is our community and that the CCA structure for Commercial Renewable Energy Projects is designed to benefit the Greater Bay Area. We have seen our sister communities such as Solana, Sonoma and Marin etc. resist and control the location of Commercial Renewable Energy projects in their counties for a myriad of reasons from the increase in temperature by 3-4 degrees that they bring to erosion and potential soil and waterway. contamination...fire hazards etc.

When we say that projects such as these power thousands of homes, where are these homes? How wide is the distribution of the power harvested from projects located in Napa County? How much of this generated power goes to homes in Napa? Our concern is that Napa County, if it adopts a permissive stance, could become home to a disproportionate volume of such projects and thereby inherit a disproportionate volume of the problems that come with these projects.

18.117.040 A. 4: "...avoids sensitive species to the maximum extent feasible and provides adequate mitigation of potential impacts."
We assume that if full mitigation is not accomplished a full EIR will be required. Please confirm.

18.117.040 A. 7: "Areas used...-reconstruction...shall be restored and revegetated to preconstruction conditions."
The timeline for this is not provided. Could that be included? A timeline is requested for the decommissioning plan but not for restoration post construction.

The Development Standards for Commercial Renewable Energy facilities does not include a reference to water usage and sourcing during and post construction (for maintenance). In our water challenged areas this would be important to understand for the use permit.

18.117.040. A. 11: "...the production facility shall be fenced....". Could the word "and secured" be added?

18.117.040. A. 15.f.: The engineer's estimate should be indexed for inflation and certified.

18.117.040. A. 15.i: The sale or transfer or repossession of the project and the impact/action should this occurs needs to be addressed.

18.117.040. C. 2: Given our recent experiences with overhead wiring, under grounding wires should be mandated. If they can dig for the poles that hold the panels, undergrounding the wires should be far easier.

In conclusion, and as a reminder, a Use Permit application specific to each type of Commercial Renewable Project should be developed.