

OCT 17 2018

Agenda Item # 1B

Good Morning. Laura Tinthoff, 20 Lupine Hill, Napa.

Our Planning Commission is considering approval of an estimated 13 million-square-foot **industrial manufacturing-facility** which the developers casually label a "solar farm". It has been held by courts in alternate jurisdictions that solar (photovoltaic) farms represent a manufacturing use<sup>1</sup>. A silicone skyscraper/factory laid on its side.

This massive, rotating machine, composed of 12,096 panels, requires regular cleaning, routine maintenance and may operate for thirty years. I ask you, with no regulation in place, inadvisable land use concerns, serious legal concerns about MCE, a developer that has only been in business since 2017 and first funded in February, 2018 and a precedent for unmitigated and reckless solar installation for all of Napa County, how is this acceptable?

Renewable Properties states that the majority of the Project Area "was mapped" as agricultural and is located in the Napa River watershed.<sup>2</sup> (Biological Constraint Analysis)

This site may simply be a remote pasture, but it is a proper primary use of the land. Our General Plan states explicitly, *"Right to Farm" provisions ensure that agriculture remains the primary land use in Napa County and is not threatened by potentially competing uses or neighbor complaints.* Napa County Farm Bureau defines agriculture as "the raising of crops, trees, and livestock."

If we begin to blur the lines between what proper use of this land is, what is to stop more traditional manufacturers from using this decision as persuasive argument that additional manufacturing is allowable?

**At our very first meeting with the Planners, we were told, "The magnitude of this project is outside the scope of our current zoning regulations."**

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<sup>1</sup> <https://pv-magazine-usa.com/2018/08/03/ri-judge-rejects-solar-project-rules-solar-to-be-manufacturing/>

<sup>2</sup> <http://ca-napacounty.civicplus.com/DocumentCenter/View/8456/50-Amer-Canyon-Solar-BCR---180328> (site location)

The WDO was created to define, refine, and regulate wineries; the Conservation Regulations were designed to regulate vineyard development. How is a solar generating facility any different?

Napa County lacks the necessary tools to stop this invasion of our land. Neighboring counties are far ahead of us with zoning regulations. We are the weak-link and a "sitting duck" for commercial solar development. Consider all the vacant hillside properties for sale due to the fire. **Stop** to recognize the long-term consequences<sup>3</sup> and defend our General Plan.

With SB100 newly mandated, educated decisions will need to be made in order to avoid altering the very essence of Napa County. While developing the Climate Action Plan, we can thoroughly examine the complex issues that accompany large-scale solar installations.<sup>4</sup>

As my wise friend and PhD, said, "the sun will still be here next year."

**PAUSE ANY POSITION ON THIS MATTER.**

Thank you very much.

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<sup>3</sup> [Exhibit A.docx](#) Written version included in package

<sup>4</sup> <https://sonomacounty.ca.gov/CAO/Ordinances/Ordinance-6064-Exhibit-F/>



# Renewable Properties

- Overview
- Unlock Charts
- Funding Rounds
- Investors

Planning Commission Mtg.

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AdChoices

## Overview



Total Funding Amount

**\$12.5M**

CB Rank (Company)

**47,307**



## Renewable Properties

Developing and investing in small-scale utility and commercial solar energy projects throughout the United States.

[San Francisco, California, United States](#)

Categories	<a href="#">Environmental Engineering, Renewable Energy</a>
Headquarters Regions	<a href="#">San Francisco Bay Area, West Coast, Western US</a>
Founded Date	2017
Founders	<a href="#">Aaron Halimi</a>
Operating Status	Active
Funding Status	Private Equity
Last Funding Type	<a href="#">Private Equity</a>
Number of Employees	1-10

IPO Status **Private**

Website [www.renewprop.com/](http://www.renewprop.com/)

Website

[www.renewprop.com/](http://www.renewprop.com/)

LinkedIn

[View on LinkedIn](#)

Renewable Properties specializes in developing and investing in small-scale utility and commercial solar energy projects throughout the United States. Led by experienced renewable energy professionals with development and investment experience, we work closely with communities, developers, landowners, utilities and financial institutions looking...

[Read More](#)



UNLOCK CHARTS

## Funding Rounds



Number of Funding Rounds

1

Total Funding Amount

**\$12.5M**

Renewable Properties raised a total of **\$12.5M** in funding in its only round. The latest funding came from a **Private Equity** round on **Feb 8, 2018**.



Which funding types raised the most money?

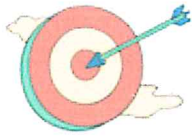
**pro** Show



How much funding has this organization raised over time?

**pro** Show

Announced Date	Transaction Name	Number of Investors	Money R:
Feb 8, 2018	<a href="#">Private Equity Round - Renewable Properties</a>	1	



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### Investors



Number of Lead Investors **1**

Number of Investors **1**

[Renewable Properties](#) is funded by [New Energy Capital](#).



Which investors participated in the most funding rounds?








**pro** Show

Investor Name	Lead Investor	Funding Round	Partners
<a href="#">New Energy Capital</a>	Yes	<a href="#">Private Equity Round - Renewable Properties</a>	<a href="#">Patrick Fox</a>

### Related Hubs



Hub Name	Number of Organizations
<a href="#">West Coast Private Equity Stage Companies</a>	360
<a href="#">Private San Francisco Bay Area Companies (Top 10K)</a>	9,966
<a href="#">California Private Equity Stage Companies</a>	316

 <a href="#">University of San Francisco Alumni Founded Companies</a>	175
 <a href="#">University of California, Santa Barbara Alumni Founded Companies</a>	421
 <a href="#">San Francisco Companies (Top 10K)</a>	9,982
 <a href="#">Private California Companies (Top 10K)</a>	9,998
 <a href="#">San Francisco Bay Area Companies (Top 10K)</a>	9,968
 <a href="#">United States Environmental Engineering Companies</a>	260
 <a href="#">United States Private Equity Stage Companies</a>	1,592

[VIEW ALL >](#)

## Website Tech Stack by BuiltWith

Active Technology

[Renewable Properties](#) is actively using 14 technologies for its website. These include Viewport Meta, Google Analytics, and SSL by Default.

[UNLOCK WEBSITE TECHNOLOGIES DATA >](#)

## Web Traffic by SimilarWeb

Traffic

[Renewable Properties](#) is ranked 12,285,790 among websites globally based on its 919 monthly web visitors.

[UNLOCK MORE WEBSITE TRAFFIC DATA >](#)

## Current Team

Number of Current Team Members **1**

Renewable Properties has 1 current team member, President [Aaron Halimi](#).



**Aaron Halimi**  
President


### Recent News & Activity ▼

Date	Activity
Feb 8, 2018	<a href="#">Renewable Properties</a> raised \$12,500,000 / <a href="#">Private Equity</a> from <a href="#">New Energy Capital</a>

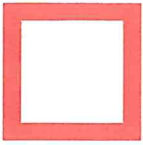


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**The Marin Post**  
*The Voice of the Community*

Planning Commission Mtg.

OCT 17 2018

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## Blog Post



Wikipedia-Phelps

[MARIN COUNTY](#) | [POWER, WATER & UTILITIES](#)

### Shell Games - Part II: MCE's cash hoard

Posted by: [Jim Phelps](#) - March 25, 2018 - 9:13pm

Marin Clean Energy is sitting on a mountain of cash that continues to grow. The cash doesn't belong to MCE, a not-for-profit government agency, it belongs to its ratepayers. MCE has no plans of returning it.

MCE's pre-launch commitments with the community included:

- Delivering cleaner energy than PG&E;
- Lower prices than PG&E;
- Payment of customers' monthly exit fees that are levied by PG&E. This broken commitment amounts to more than \$100 million that MCE did not honor.

MCE has failed in serving the community while it feathers its own nest.

### MCE – Massive Cash Exploit



MCE now holds \$37 million in cash and expects that to more than triple to [\\$118 million](#) by the end of its 2019/20 fiscal year. This behavior is more fitting of a private for-profit company that claims altruistic social objectives, then takes advantage of busy consumers who aren't aware of what is happening.

MCE's cash accumulation has not been used to reduce prices, unless [6/100 of 1%](#) below PG&E prices is considered low; nor has the cash been applied to the purchase and delivery of *real* clean energy to MCE's customers during the past few years.

Where's the money going?

To assuage onlookers' potential objections, MCE claims the cash is needed for "working capital requirements." However, as a percent of operations, MCE's desired cash dwarfs its previous requirements, as identified in each generation of its several revised Implementation Plans.

MCE also claims the cash is needed for "rate stability" and to "procure energy at competitive rates." That is a reasonable suggestion, but it must be weighed against MCE's record. It is just as reasonable to ask: How can MCE have banked \$37 million in cash if it's not already procuring energy at competitive rates?

Discovery of MCE's cash horde prompted one energy trader in Oregon to offer the following off-the-record observation:

*The place is gorging on cash. MCE is, to be generous, nothing more than a trading house -- a broker -- that is not exposed to having risk associated with acquiring and maintaining an inventory while holding it to fulfill customer demands for that inventory. MCE's inventory is dispatched instantaneously. MCE has no power resources to maintain. It doesn't even pay to clean the panels at its "local" solar power plants -- those solar farms are owned by private developers who bankrolled and own those resources. So, what does MCE's staff need all of this cash for? Legal, consulting fees, staff salaries, and bonuses."*

Those comments are more troubling after examining MCE's history of choreographed bait & switch that extends through all of its operations with fashionable, headline-grabbing commitments that it quietly changes when it believes no one is reconciling its behavior. This includes:

- Continued support of oil ([Shell](#)) after declaring it is severing ties;

- Private support of nuclear (EDF (aka Électricité de France) and [Palo Verde](#) nuclear in Arizona) while publicly rejecting support of the nuclear industry and the purchase of nuclear generated electricity;
- Import of coal and nuclear that it repackages as "clean" energy (MCE lobbied for the cessation of including granular e-Tag data in public reports that was included at the end of [this letter](#) -- these data identified MCE's imports);
- Use of [RECs](#) (renewable energy certificates) that is rebranded fossil-fired power;
- Commitment to pay ratepayers' PG&E exit fees, then cancelling that commitment, and keeping the cash for itself;
- Amassing enormous sums of cash as a government agency, rather than returning it to its ratepayers.

MCE got it "wrong" even before its business launch, when its leadership failed to prioritize its customers first, and instead favored its staff and consultants. MCE elicits a communal awareness of environmental sell-out each time it tells consumers that Shell is gone and that it has cleaned up its own oily mess, then surreptitiously cuts another million-dollar payment to Royal Dutch Shell for electricity purchases.

MCE is beyond tone-deaf.

Imagine the bait & switch uproar at MCE if, instead of receiving paychecks, staffers were suddenly given coupons that identified someone else, someplace else, had already completed similar work to what they completed and that, as a result, the coupon could be redeemed for pennies on the dollar.

This is akin to what MCE does to the community each time it enters into a REC transaction. Consumers paid for clean energy, but MCE delivers fossil-loaded power (known as "Unspecified power," sourced through California's electric grid manager, [CAISO](#)). This arrogance extends to, and is underwritten by, MCE's board. The cash hoarding occurs under its watch.

**Think the deviations won't happen to your CCA board if you're forewarned?**

**Yes. They will.**

The list of MCE's bait & switch is exhaustive and illuminates the absence of integrity in community choice aggregation (CCA). It's a problem that will only grow as CCA (aka community choice energy (CCE)) boards grow in number, as municipal representatives come aboard to take their representative

positions on unwieldy large governing bodies.

It's a matter of conversion and indoctrination. Group-think boards are shaped by ambitious executives and shrewd consultants who hone their skills from experience and information-sharing with other consultants at other CCAs.

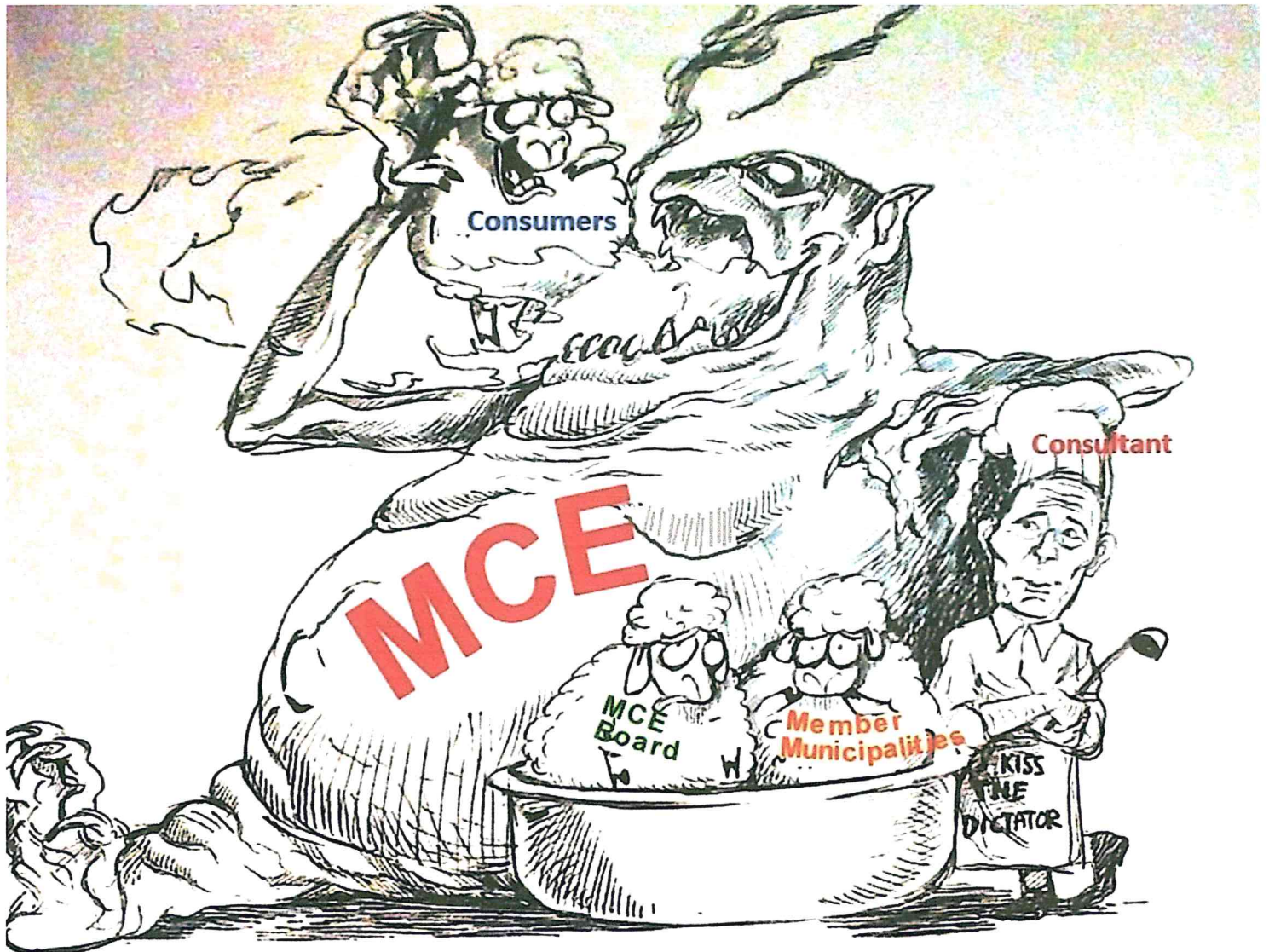
The loss of critical and independent thinking by MCE's board was evident when meeting with one of its board members in January 2015, after one year of his service on MCE's board (see the comments at bottom of board member's [post](#)). When MCE's green-washing activities with RECs was discussed, he denied what had happened and said, "That's not my understanding of it." Fair enough.

When he was shown MCE's Business Plan identifying MCE's unlikely use of RECs, he bristled, "It says '[potentially](#)' right there! MCE isn't doing anything with RECs it said it wouldn't. So, what's the problem?"

Here is the [problem](#).

Language is carefully twisted. Today, to combat objections, proposed CCAs throughout California promise one thing during public presentations, while their Business Plans include parsed wording that includes loopholes big enough to pass a coal-fired power plant through. Los Angeles' CCE believes it can ignore California's clean energy mandates and simply make up its own rules.

[Footnote 1]



**MCE has become what it claimed it wouldn't – greedy, overly dependent on consultants, and dismissive of consumers**

Why hasn't MCE spent its cash on clean energy deliveries to its customers over the past several years? MCE's prices are [6/100 of 1%](#) lower than PG&E prices. Why hasn't MCE put its cash (ratepayers' cash) into lowering its energy prices these last several years?

Through 2015 -- five years of available data -- MCE's energy portfolio emits an average of 43% more greenhouse gas (GHG) than PG&E's energy, or 181 pounds more GHG per megawatt-hour, per anti-REC legislation AB 1110. According to MCE's own filings with state regulators, one of its biggest "clean" electricity providers is New Mexico's [San Juan](#) coal-fired power plant.

San Juan's power is cheap. Why are MCE's prices high?

## Who is MCE's top priority, cuz it's not MCE's customers

MCE recently submitted a proposal to its Executive Committee on behalf of its CEO, Dawn Weisz. The compensation study called for adjusting Weisz's annual salary to upwards of \$332,062, putting her in the highest echelon of public service pay in California. Weisz came to MCE as a [county planner](#) with zero electricity experience.

CCA executive pay is skewed by comparisons to CEO pay at other CCAs. These government agencies mirror and escalate one another's executive pay, creating a compensation bubble that is not based upon government energy agencies in California.

Appropriate executive pay is more aptly [found](#) in the government agencies that regulate all of California's energy sector, and carry responsibilities that dwarf MCE's brokerage house existence. Similar to MCE, these agencies have no power generation fleet to maintain or transmission & distribution maintenance costs:

- President of the California Public Utilities Commission (CPUC), Michael Picker: \$149,226
- Chair of California Air Resources Board, Mary Nichols: \$166,710
- Executive Director of California Energy Commission, Drew R. Bohan: \$178,508
- MCE CEO Dawn (Brown) Weisz current [regular](#) pay (2015 data): \$259,744
- MCE CEO Dawn (Brown) Weisz requested pay (2018): \$316,250 + 5%, or [\\$332,062](#)

## MCE's cash king

Weisz is set to take a large sum from MCE's coffers, along with her many consultants, lawyers, and wholesalers -- collectively known as "CLAW" -- who also feed at MCE's trough. Some of MCE's outside legal counsel collects more than \$500 per hour.

However, MCE's money grab winner is Pacific Energy Advisors (PEA). After its help off-loading MCE liabilities, Weisz was indebted to share MCE's wealth.

MCE's combined payments to PEA's two main principals since MCE launch, including the late arrival of a third person at PEA, is \$4 million through March 2018.

**MCE's masterpiece: its multi-hundred-million dollar swindle that began in 2010 and continues today**

When MCE launched into business in 2010, it committed to pay all customers' exit fees levied by PG&E. PG&E's fee is known as "PCIA," or Power Charge Indifference Adjustment. PCIA covers long-term energy contract obligations that PG&E assumed before MCE switched consumers from PG&E into its program, via its Opt Out mechanism.

Weisz made presentations throughout Marin before MCE's launch, and in the months afterward. MCE would provide each customer with an "energy credit" on their monthly electricity bill as full reimbursement of PG&E's exit fees.

The credit would show as a deduction on each customer's monthly electricity bill from PG&E (PG&E includes MCE's charge for "Generation" on its monthly electricity bills).

PG&E's exit fee currently amounts to about 3.5¢ per kilowatt-hour, almost \$18 per month for a typical MCE home.

### **Dawn Weisz's titanic problem – who to blame?**

MCE's original Implementation Plan, submitted to the California Public Utilities Commission (CPUC), identified MCE's "phase in" first-five-years of exit fees (energy credits to be paid by MCE) as **\$27.4 million**. This would be applied to each MCE customer's monthly bill, based upon their energy usage. [2] [3]

But there was a problem. A big financial problem.

The energy credits calculated by MCE weren't coinciding with the exit fees charged by PG&E. There was a \$2 million-plus shortfall in the first year alone.

Weisz was alarmed. MCE's ballooning liability, which would ultimately prove to be \$48 million over its first five years of operations, could torpedo her ship, along with the salaries and fees that MCE staff and consultants garnered each month from her agency.

But Weisz had a plan, and she engaged her chief consultant, John Dalessi, in its execution.

### **Smoke & mirrors**

Nine months after its business launch, MCE announced a 14% price reduction. The news captured [headlines](#) of Marin's primary media outlet, the Marin Independent Journal (IJ). Weisz touted MCE's

“superior product,” while Dalessi claimed the price cut would bring MCE prices into parity with PG&E.

As part of its 14% price slash, MCE quietly *cancelled* its energy credit.

The cancellation instantly shifted hundreds of millions of dollars of MCE’s long-term liability onto its customers.

The 14% deal was complex and beyond the focus of Marin’s busy consumers. MCE's price cuts weren't uniform through its five price tiers. Furthermore, each residence’s energy use was different each month. Quantification of savings was next to impossible.

Nevertheless, a 14% price-cut was a good deal, right?

Consumers, unable to decipher what they were getting in the deal, did what they always did -- glanced at the multitude of line item charges on their monthly PG&E bill, cursed, and paid the amount due.

Average ratepayers realized an 18% **increase** in their total electricity costs. High-electricity-use residences benefitted the most, realizing about 4% savings after also paying the exit fees that MCE had off-loaded onto them. Ultimately, any savings that consumers realized vanished with MCE’s next price increase.

Weisz was privately exuberant. She had achieved the tantamount of a bloodless coup right under her customers’ noses. Successfully off-loading MCE’s ever-growing, monster-sized exit fee liability onto her ratepayers was a watershed event that signaled revitalized life for her new career. Life was better than good.

No one was the wiser.

### **Sleight of hand -- MCE’s board didn’t see a thing**

Dalessi’s **recommendation** to MCE’s board, which was reviewed by MCE’s CEO, Weisz, said that MCE’s energy credit was being eliminated “in the interest of *rate simplification and in anticipation of the reduction in PG&E’s exit fees* – its power charge indifference adjustment” (emphasis added).

The red herring was lost on MCE’s board, which lacked financial acumen. There was no rate

simplification. Rates remained as convoluted as before, through five tiered price levels.

### **Most troubling of all was this...**

If Weisz and Dalessi “anticipated” a reduction in PG&E’s exit fees (a reduction in MCE’s corresponding energy credit liability), why, after only nine months of operation, would they suddenly recommend that MCE cancel payment of its energy credit? Wasn't this a cornerstone of what MCE sold to consumers?

After all, Weisz and her consultant were regularly tracking PG&E’s exit fees – they effectively had CPUC regulators on their speed-dial -- everything was on the up-and-up, wasn't it?

- Shortly after MCE’s “14% price reduction” was implemented PG&E’s exit fees increased 3.3%.
- Through 2015, MCE’s ratepayers were left holding more than \$112 million of costs that MCE had previously committed to pay in the form of its monthly energy credit.

### **\$118 million cash – it’s not MCE’s – it belongs to the ratepayers**

MCE is a government agency that is supposed to be a not-for-profit.

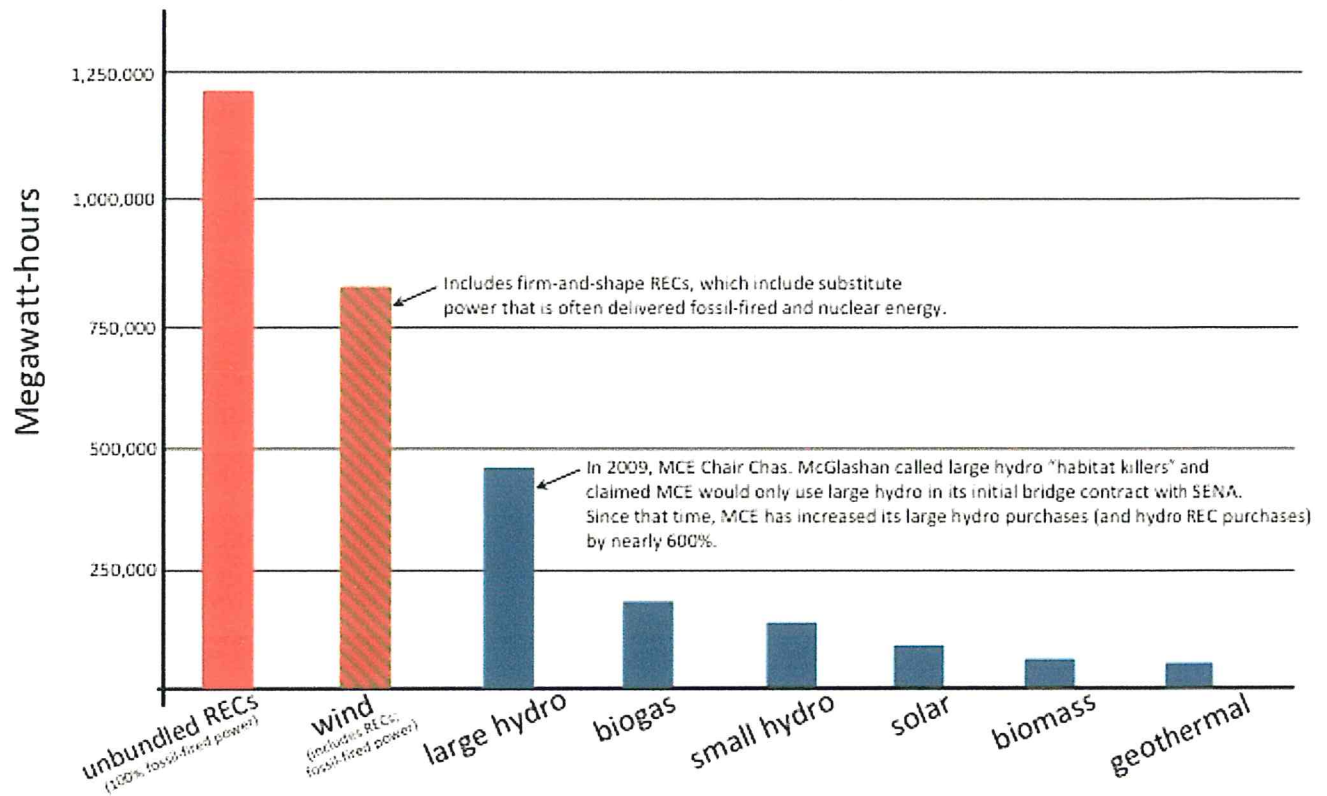
The cash that MCE is accumulating belongs to MCE’s ratepayers. Those ratepayers paid higher prices for the delivery of low-quality fossil energy that was, and is, loaded with GHGs while MCE, and other CCAs (CCEs) following the MCE model, rebrand it “[clean](#).” Contrary to Dawn Weisz’s claim, MCE does not deliver a “superior product.”



# Marin Clean Energy “Clean” Energy Volumes

Through 2015

(2016 and 2017 data not yet available)



Sources: “CY 2010 Energy Sources Breakdown,” Marin Energy Authority Technical Committee (Oct 24, 2011) detailing MEA Supply CY 2010. “Understanding MCE’s GHG Emission Factors,” 2011, 2012, 2013, 2014. Author: Kirby Dusek, MCE consultant (Paradigm Energy Consulting, now as Pacific Energy Advisors). J. Phelan, March 2017. Marin Energy Authority (Marin Clean Energy) Power Source Disclosure report to California Energy Commission for years ending December 31, 2011, 2012, 2013, 2014, and 2015.

[Click image of chart to enlarge](#)

To date, Weisz ignores inquiries about returning its cash to MCE’s ratepayers.

## What to do?

Opt Out of MCE at (888) 632-3674. You will need your PG&E bill in hand to refer to your account number. You may also complain to your city council or, if you reside in an unincorporated area, County Supervisors.

It is recommended that MCE’s board does the following six things to introduce integrity to its operations:

- Return its cash to its customers in the form of a large, one-month credit on their energy bills.

Credits would reflect the amount of time a given customer has been an MCE ratepayer;

- Cease all cash accumulation activities;
- Freeze, or reduce, energy prices for three years;
- Sever all ties with Pacific Energy Advisors;
- Engage an executive search firm for the replacement of MCE's current CEO, Dawn Weisz.
- Redesign the board so that it is staffed with representatives who are not prone to group-think, and who have a skill set that is suitable for serving on the board of an energy reseller.

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## FOOTNOTES

[1] LACCE Business Plan, dated June 30, 2016. Page 21, Exhibit 15, shows LACCE (aka Clean Power Alliance of Southern California) believes it can satisfy California's clean energy requirements with 100% Bucket 2 energy. However, California regulations limit Bucket 2 to a maximum of 25%.

[2] Marin Energy Authority Community Choice Aggregation Implementation Plan and Statement of Intent, January 2010: Retail Sales (MWh), p. 29, and Marin Clean Energy Summary of CCA Program Phase-In (January 2010 through December 2015), p. 43.

[3] PG&E Power Charge Indifference Adjustment Rates, updated 5/31/2016 by MCE. See also footnote 2.

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**Part 1 in this series** may be found [here](#).

**Part 3 in this series** will discuss **(1)** MCE's public rejection of false green energy – renewable energy certificates (RECs) – and its concurrent use of a front organization that lobbies for the continued use of RECs; and **(2)** MCE's quid pro quo outreach where jobs are promised in exchange for favorable public relations in its coming fight with legislators and utility companies.

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## About the Author:

Jim Phelps is retired after serving the power, petrochemical, and geothermal industries for nearly 35 years as a power contractor and utility rate analyst. He is not now, nor has he ever been, employed by PG&E. He has not received any money from PG&E for his work tracking Community Choice Aggregation and Community Choice Energy activities. He has also completed consulting and thermal performance test work for Shell Oil at one of its Gulf Coast refineries. Shell is formerly MCE's full-services energy manager and currently one of its regular energy providers.

Among the former power company clients of Mr. Phelps' are Pacific Corp, Utah & Power Light, Kansas Power & Light, Duke Power Company, Cincinnati Gas & Electric, Pacific Gas & Electric, and Carolina Power & Light.

Mr. Phelps operates one of Marin's largest residential solar electric systems at his home in Novato. Several years ago he initiated contact with PG&E about its carbon emission practices and also with MCE about its emission practices. He requested clarification from MCE and other CCAs about several business conduct issues, however, those CCAs declined to provide answers. To this time, MCE's only input about its business is to ignore Public Records Act requests, to identify the costs for copies of public documents, or to deny the existence of basic information, such as invoices detailing its procured volumes of system power (fossil energy).

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MCE Clean Energy  
Volumes

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0 Comments

Marin Post

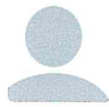
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John Parulis — Total agreement Peter. Thanks

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RosesandGrapes — Niether should San Rafael. Go fight city hall!

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## Exhibit A

Over the past few months, we, as a community, have been very concerned regarding the application submitted by Renewable Properties requesting a variance to install and operate an 11.5-acre solar facility at 10 Palm Drive. We believe that the proposed solar “farm” is highly inappropriate for the proposed location.

The plans provided to the county by the developer are not sufficient in detail for the citizens or government officials to fully understand this project. The application was for commercial use and primarily requested information that would be used for a winery permit.

In a recent letter from the project engineer, Tommy Cleveland of Raleigh, NC, this project was compared to “nothing more than glass buildings, and parking lots full of cars with windshields.” In truth, this solar “farm” is simply a 500,940 sq. ft. high rise laid horizontally or several Walmart parking lots placed on a bucolic hillside.

The Coombsville community as well as organizations such as Napa Vision 2050 and Napa Oaks, (we have three more in tow) have come together to protest this application for site placement AG Watershed and Ag Preserve.

We would like to refer to the Napa County General Plan which clearly states:

“Well into the future, Napa County will be a place where agriculture is the primary land use, and where a vast majority of the county is open space, and where residential and employment growth is concentrated in the incorporated cities and town and existing urbanized areas of the county. Urban centers will be livable communities with compact forms that maximize the preservation of rural landscapes, and those rural landscapes will be both productive and ecologically diverse, with abundant and healthy natural resources.

This vision will not be achieved by accident, but by the careful application of land use policies contained in this Element, by implementation of action items identified here and elsewhere in the General Plan, and through the continued participation and vigilance of the county’s citizens.”

We believe that this project flies directly in the face of the intent of the Napa County General Plan.

## **Our Research**

### **General**

#### **Manufacturing Plant**

The developer claims an exception under the guise of being a “utility” when in fact, it is a manufacturing plant as stated below.

“A Rhode Island Superior court judge has reversed a zoning board’s decision to approve a 2.9-megawatt solar farm in Portsmouth. Judge Brian Van Couyghen, citing a previous state Supreme Court decision, delivered his own, arguing “Even though the Board found that the proposed solar farm was similar to a public utility, it would be, in fact, a manufacturing facility because it would transform sunlight into electricity. As stated above, manufacturing is expressly prohibited in residential zones under the Ordinance. As a result, the granting of a special use permit for a manufacturing facility—the solar farm—was clearly erroneous.”

<https://pv-magazine-usa.com/2018/08/03/ri-judge-rejects-solar-project-rules-solar-to-be-manufacturing/>

(Further legal documents regarding this case available upon request)

#### **Need for Regulations**

“ The magnitude of the Palm Drive Solar Project is outside the scope of the current Napa County zoning code. It is our concern, that there is no

precedent for this project and the developer is attempting to skew and interpret the code to suit their purpose.

The issues that the project raises take the County into uncharted territory. This presupposes that the County does not have the council, in-house, to evaluate the complex issues and factors that come into play.

According to Tracy Krumpfen, aide to state Assembly member Cecilia Aguiar-Curry, “Sonoma County has a zoning classification. Basically, it’s very hard to build a solar project in the unincorporated county unless it’s under 1 megawatt and on 5 acres (or greater) of land. Building on prime land, i.e. not impacted, creates an even higher standard.

SCP prefers to avoid prime land, and have picked sites that aren’t pristine, or in the visible public green belt corridor, etc.”

<https://sonomacounty.ca.gov/CAO/Ordinances/Ordinance-6064-Exhibit-F/>

We would like to share concerns about issues that have been identified through the course of our research within the Napa, Coombsville Community. It is our hope that the County will acquire the expertise needed in order to properly and objectively evaluate the project.

We believe that, based on this evaluation, the County findings will substantiate our Community’s concerns and reject the proposed Solar Project.

## Site Placement

It is agreed that a solar “farm” should be sited on a southern facing, relatively flat site in an industrial or non-residential area. It should be adjacent to the point of grid interconnection and require little land to be cleared, provide minimal visibility to the public, be buffered by natural vegetation and have high site security.

The proposed Palm Drive Solar Project does not comply with *any* of these criteria.



According to Renewable Property Data, property slope elevation varies from 8% to 25%. This slope may be suitable for individual property use with significantly smaller scale solar panels. However, in Napa Valley, a project covering 11.5 hillside acres clearly makes the project visible from a large number of homes and open spaces. Any evaluation of the project must take into consideration the high negative impact of the aesthetics/views within the neighborhood. No possible buffer could mitigate the effect on residential and open space views.

<https://www.countyofnapa.org/DocumentCenter/View/9112/06-Resubmit-Palm-Drive-Solar-General-Plan-Detailed-Statement-180619-FINAL>

It is an affront to the citizens of this Community to consider that their private residence is to act as a “natural buffer” for a large-scale solar project. This will impact the health and well-being of our citizens in a significantly negative way.

In addition, Improper placement of a solar project of this size and scope has the precedent to unleash a wave a protests and legal battles. This would be true in our community as well.

<https://www.dailynews.com/2017/10/23/solar-panel-projects-at-mt-sac-occidental-inspired-years-of-protest-more-like-them-are-planned-across-socal/>

Utility scale solar plants require large areas, negatively impacting local wildlife and their habitats. Solar has environmental benefits, but its hidden environmental costs make it a less environmentally reliable energy source than most people believe.

Efforts by the EPA and California lawmakers may help with offering alternate locations that would decrease these wildlife impacts.

The EPA has recently identified at least 80,000 abandoned mining sites and other contaminated lands that can be used for the construction of future renewable energy plants. The EPA provides information and technical support for those who are trying to reuse these abandoned mining sites

[reliability of renewable energy: solar - Utah State University](#)

## **General Economic & Resource Considerations**

“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.

Perhaps the most troubling issue involving solar farm establishment is to consider the possibility that the solar farm is abandoned within the first few years. If this occurs, what risks or financial obligation will the landowner face? Can the solar farm actually be decommissioned with ease and low cost? Will the farm be limited in use due to environmental, wetland or even contractual limitation? These types of consideration must be examined prior to converting land from agricultural use to solar farms.”<https://craven.ces.ncsu.edu/considerations-for-transferring-agricultural-land-to-solar-panel-energy-production/>

## **Comparison of Commercial vs. Agricultural Environmental Concerns**

“Land classification may impact land use. Many current farms are lands that were considered wetlands that were cleared decades ago when this activity was allowed. As land currently in agricultural use, it is protected as a “previously cleared wetland” (PC) and farmers are allowed to continue farming the land. Under current regulations, PC farmland will be permitted to change from agricultural to commercial use. However, future conversion from a solar farm established on PC farmland to non-agricultural uses will be regulated by various agencies and environmental regulations. In worst case scenario, solar farms established on PC farmland may not be permitted to other uses without wetland mitigation. PC farmlands, may, however, be eligible to convert back into agricultural production depending upon soil hydrology. Conversion of PC farmlands may also impact farm program participation for the current tenant

farmer. If an entire farm is not placed into solar energy production, then the remaining portion of the farm still in agricultural production must meet requirements set forth in the 2014 Farm Bill. Currently, a farmer tending any farm or portion of farm that is not in compliance with all wetland provisions jeopardizes federal farm support programs for all lands tended and may face fines and penalties. This could result in thousands to hundreds of thousands of dollars loss to the farmer, depending upon the size of the farming operation and value of crops produced. Currently, the USDA Farm Service Agency, the USDA Natural Resource and Conservation Service, and the Army Corps of Engineers coordinates to make these wetland and compliance determination. All landowners are encouraged to examine the land classification and status prior to conversion of land from agricultural production to avoid potential liability and regulatory actions.

In addition to potential wetland ramifications, some farms may be near rivers or streams with restrictive land uses. As example, the Neuse Rules and associated legislation established a 50-foot vegetative buffer requirement along the Neuse River and tributaries of the river (Blue line streams). If land currently utilized as agricultural production lies within this buffer, the land is allowed to continue in agricultural production. However, if removed from agricultural production, no alternative land use is permitted.

Another scenario, and admittedly perhaps the worst-case scenario, involves abandonment of the solar farm. Solar farms left idle not only decrease land value, abandonment also subjects the land to provisions of the Clean Water Act. Thus, if land is left idle for long and the land also has a wetland hydrology, reclaiming the land may be difficult, if not impossible. Should this occur, within Eastern Coastal Carolina, land use would be regulated by the EPA, the Corps of Engineers and the Coastal Area Management Act.

These examples are provided to emphasize the need to examine environmental rules and regulations prior to establishment of a solar farm. Generally speaking, farmlands that are not classified as PC or do not have portions of the farmland with wetland hydrology do not fall under many regulations restricting land use. For these farmlands, simply consider that historically, environmental rules have not become less restrictive, but more restrictive.

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

## **Story Poles Must Be Erected for View Assessment Before Board of Supervisors Review of Project Application.**

For a project of this impact on the land and community, story poles are highly recommended for understanding the impact and magnitude of this “farm”.

“Story poles must be required by city ordinance, architectural committee, a home owners association and need to be certified by a licensed land surveyor, civil engineer or architect.”

<http://cstorypoles.com/what-are-story-poles/>

## **Solar Site Placement *Statewide* is an Additional Concern.**

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.<sup>32</sup> 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*

Is this our fate? Will this project cost the taxpayers in the short and long term?

## Energy Production

“The decision to transfer land use from agricultural production to solar panel electrical production (solar farms) should be made by careful examination of immediate and long-term potential risks and benefits. Currently, the transition seems a logical and profitable venture since payments made by contractors are much greater than revenue received from farmland rental. However, one must also consider that the transfer of land from agricultural use may also result in additional tax liability, greater insurance requirements, personal injury/liability issues, potential future environmental mitigation, and even the inability to transfer lands into other uses.”

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

## Impact on Environment

The impact of removal of 3.5 acres of oak trees will have a significant effect on the eco-system which all adjacent vineyards, residential orchards and gardens rely on. In addition, wildlife, including birds and pollinating bees, will be highly affected by this abuse to the land.

A mandatory in-depth EIR should be required for any Special Use Solar Farm Permit

An Independent Heat Effect Study, Including Wind and Temperature Variables (“Heat Islands”) (on the surrounding region by a professional engineering firm.)

The engineer hired by Renewable Properties, Mr. Cleveland (mentioned above), wrote in a letter to a concerned neighbor:

“There are several studies on the potential for large solar facilities to create a heat island effect, but this effect is not due to the glare from solar panels. Some studies have found slight local increases in temperature and some have found slight decreases in temperature. Any temperature effects are concentrated in daylight hours because the solar systems are not massive enough to store very much thermal energy that could affect nighttime temperatures. Also, any effects are very local, with the vast majority of any temperature impact area being inside of the site perimeter fence.”

However, studies have shown that there is as much as a 5-7 degree Celsius change in temperature associated with solar projects of this magnitude. The fact that the project engineer mentioned this, albeit slightly, is a red flag for local growers, firefighters and the community at large.

<https://www.nature.com/articles/srep35070>

<https://www.google.com/amp/s/phys.org/news/2016-11-solar-island-effect-large-scale-power.amp>

## **Drainage, Storm Water and Soil Quality Considerations**

We have been informed by the project developer that the solar farm is considered a “pervious structure”. He did not mention that this implies that the panel is positioned such that water does not pond on the panels. Even so, large systems may require inclusion of drainage and/or storm water plans. Additionally, soil erosion and soil quality must be maintained,

regardless of size. Both of these may require modification in layout. Due to the potential complexity of this issue based upon size, location and existing structures, it is not possible to provide guidance for storm water or all erosion control within this article. 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>.

**An Independent Hydrology Study, by a Professional Engineering Firm Must be Required**

**According to Renewable Energy's application: "Setbacks from Creeks, Wetlands, and Riparian Habitats**

Per the Project’s Biological Constraints Analysis report, dated March 2018, no wetlands, waters of the United States, or other aquatic features are located within the project or surrounding 500-foot buffer.”

[Stormwater Control Plan for a Regulated Project. Item III, B and C. Renewable Properties.](#)

While setbacks may fall under the “projects biological constraints, the streams in this area regularly flood in the spring affecting homes and agriculture. If it is not within a 500-foot buffer, it is very close and homes downhill from 10 Palm Drive are significantly impacted. The removal of 3.5 hillside oaks will also have a negative effect on our region’s watershed.

Flooding is an issue that must be examined before a Special Use Permit is considered. Storm events within this area historically cause flooding for some areas. Maps showing the flood plains are available for review at <https://www.cityofnapa.org/313/Map-of-Flood-Inundation-Areas>. However, also consider that continued development and increased impervious surface modifies this map data. Thus, some variance is due to a changing environment, increased development and water management.

“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.”

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjw57f11OrdAhURbKwKHU9oDQAQFjAAegQIChAB&url=http%3A%2F%2Fwww.kennedyjenks.com%2F2017%2F11%2F10%2Fa-rainy-day-at-a-solar-farm%2F&usg=AOvVaw14555AQcBeEG95RADIkw1T>

## 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.

### Potentially large amounts of herbicides

Used over an 11.5 acre area herbicides may have a measurable impact on groundwater which is already contaminated largely by agricultural usage.

“We analyzed the geochemistry of 44 public supply wells in Napa and Sonoma Valleys. ► We investigated mixing of groundwater with hydrothermal fluids. ► We used multivariate statistical analyses and modeling to characterize wells. ► We found that nine public supply wells contained 14–30% hydrothermal fluids. ► Some contaminated wells contain potentially harmful concentrations of As, F and B.”

<https://www.sciencedirect.com/science/article/pii/S0883292713000206>

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

1. Top soils shall not be removed from the site during development unless the removal is expressly approved as part of the special use permit.
2. 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.

### **Concrete:**

Due to the lack of construction detail in the submitted permit plan, we are not sure how much concrete will be necessary to support posts in our rocky region. 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. 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. Conversely, concrete is one of the most powerful tools for proper flood control, by means of damming, diversion, and deflection of flood waters, mud flows, and the like. Light-colored concrete can reduce

the urban heat island effect, due to its higher albedo. 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.— Wet concrete is highly alkaline and should always be handled with proper protective equipment. Concrete recycling is increasing in response to improved environmental awareness, legislation, and economic considerations.

In addition to solar panel mounts there are “2 proposed equipment pads of approximately 300 sq. feet each to be constructed on reinforced concrete to accommodate 2 proposed solar stations.”

[Stormwater Control Plan for a Regulated Project. Item III, B and C. Renewable Properties.](#)

## **Developer provides Battery Power:**

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. (More to come)

## **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.

## 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.

According to the plans submitted by Renewable Properties, the minimum embedment for over 7,500 panels is 138” for exterior rows and 11” for interior rows. This will result in substantial noise, dust and vibration for a large number of neighbors.

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. Homes that are acres away can clearly hear passing traffic on First Avenue. Unlike traffic noise, the noise from the inverters will be continuous and, therefore, a severe health hazard.

### **A Panel Glare and Glint and Movement Analysis Must Be Required** (from an objective professional engineering firm.)

#### PROXIMITY TO AIRPORT:

“Establishment of solar farms has been noted as a potential hazard for airports and air traffic controllers. Generally, the requirements of notification are not necessary for solar panels established more than 5 nautical miles from an airport. According to their website, the Federal Aviation Administration (FAA) essentially has two objectives as follows:

1. No potential for glint or glare in the existing or planned Airport Traffic Control Tower (ATCT) cab, and

2. No potential for glare or “low potential for after-image” along the final approach path for any existing landing threshold or future landing thresholds (including any planned interim phases of the landing thresholds) as shown on the current FAA-approved Airport Layout Plan (ALP)17. The final approach path is defined as two (2) miles from fifty (50) feet above the landing threshold using a standard three (3) degree glide path.

In most cases, solar farms do not emit frequencies that are not in compliance with the FAA Co-location Policy or other regulations that may impact flight paths. However, it is advisable to discuss potential solar farm issue with the FAA’s local Airport District Office (ADO) for civilian airports or the NC Commander’s Council for military facilities if this might be a concern.

Steps below can assist in evaluation of proper procedure should one question whether the solar farm might create a potential hazard for air traffic. Tools and steps that will assist in these evaluations are listed below.

1. Google Earth – Use this mapping tool (or similar program) to determine if the proposed facility is within 5 nautical miles of an airport as well as to gather the GIS coordinates and elevation of the field site.
2. Go to the FAA website, <https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp> and enter this data. If a report is required, it will be noted at this site.
3. Visit the website, <https://www.sghat.com/> to determine if glare or after-images might be a problem with major flight paths.

Take printed copies of the above data to the local airport for discussion.”  
<https://craven.ces.ncsu.edu/considerations-for-transferring-agricultural-land-to-solar-panel-energy-production/>

Hot air balloons regularly pass over this area and, contrary to the Renewable Properties report, there is a flight path. Hot air balloons have been known to have quite a few emergency landings in this area. This one in my back yard. (video available upon request).

20 Lupine Hill Road just off First Avenue

May 23, 2016



In addition, the Napa County Airport is a mere 6.5 miles away, only a partial mile from the zone required for other applications. Residents have several pictures of flights passing overhead. The scale of the proposed project suggests that requirement be reviewed and expanded.

The FAA, or other applicable government agency or authority, may require the proposed project be illuminated for public safety.

## Horses/Livestock

The potential effect of solar farms on horses should be carefully considered on any route used by horses – including byways, bridleways, roads and permissive routes – and on equestrian businesses where horses are kept or trained. The proposed Coombsville project nearly abuts an equestrian center to the east and a private horse ranch to the west.

“Arrays should be avoided where glare is likely to affect users of an equestrian route or an equestrian business.”

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=11&ved=2ahUKEwjA76XL1srcAhVCR6wKHeMxChcQFjAKegQIBhAC&url=http%3A%2F%2Fwww.bhs.org.uk%2F~%2Fmedia%2Fbhs%2Ffiles%2Fpdf-documents%2Faccess-leaflets%2Fsolar-farms.ashx%3Fla%3Den&usg=AOvVaw2fkGqd4SM>

## 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 initial 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](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.

### Monitoring 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. This scale is huge because 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. This is an unconscionable use of trucked in community water.

<https://www.quora.com/How-much-water-is-required-for-cleaning-of-1-MW-solar-power-plant>

## Safety

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.

## Avoidance and Mitigation of Damages to Public Infrastructure

### **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 applicants is responsible for on-going road maintenance and dust-control measures identified by the applicable highway authority during all phases of construction and installation.



## **Drainage Systems**

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.

Many Coombsville residents have dealt with lengthy and expensive legal issues regarding drainage problems from nearby hillside wineries.

## **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/>

## 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.pdf](https://nccleantech.ncsu.edu/wp-content/uploads/Health-and-Safety-Impacts-of-Solar-Photovoltaics-2017_white-paper.pdf)

## **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.

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.

## **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.

## **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 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 clean up 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."

## Financial and Contractual Concerns to Residents

### 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:

- 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 administering 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.

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

### **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.



# A Decommissioning Plan and Related Financial Surety.

## DECOMMISSIONING

“Decommissioning may be warranted should the contracting company choose not to utilize the site, the site becomes damaged beyond reasonable repair, as the equipment ages, or equipment becomes too inefficient to provide profit. At some point, whether by choice or by default, the solar panels and equipment will need to be removed.

One of the primary obstacles currently faced by solar farms is that many of the products used consist of heavy metals and contaminants that cannot be disposed within a landfill. Many of the products will need to be recycled. Some companies offer this service for free or a small charge. However, the current concern is that there are not enough decommissioned solar panels to justify recycling of the materials. Thus, it may be difficult and costly to decommission the site.

Consider decommissioning under if any of the following conditions:

1. The land lease ends
2. The system does not produce power for 12 months
3. The system is damaged and will not be repaired or replaced

The owner/contractor of the solar farm, as provided for in its lease with the landowner, should do the following as a minimum to decommission the project.

1. Remove all non-utility owned equipment, conduits, structures, fencing, and foundations to a depth of at least three feet below grade.
2. Remove all graveled areas and access roads unless the owner of the leased real estate requests in writing for it to stay in place.
3. Restore the land to a condition reasonably similar to its condition before development, including replacement of top soil removed or eroded.

4. Revegetate any cleared areas with warm season grasses that are native to the region unless requested in writing by the owner of the real estate to not revegetate due to plans for agricultural planting.
5. Provide 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 contaminants and is suitable for agricultural production or desired use.

All removal and decommissioning shall occur within 12 months of the facility ceasing to produce power for sale. The owner/contractor of the solar farm should be responsible for this decommissioning. The owner/contractor of the solar farms should provide the Town/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/>

A decommissioning plan outlining the anticipated means and costs of removing the solar farm must be submitted with the Special Use Application.

The decommissioning plan should ensure that the owner/operator properly removes the equipment and facilities upon the end of project life or after their useful life.

The plan shall include provisions for the removal of all structures and foundations, the removal of all electrical transmission components, the restoration of soil and vegetation, and a soundly based plan ensuring financial resources will be available to fully decommission the site.

#### 1. Abandonment

Solar farms that are not producing energy shall be considered abandoned after one year. Any solar farm that has been abandoned shall be decommissioned and removed within 180 days.

#### 2. Decommissioning shall consist of:

1. Physical removal of all solar photovoltaic installations, structures, equipment, security barriers and transmission lines from the site.
2. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
3. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Zoning Administrator is authorized to allow the owner/operator to leave landscaping or designated below-grade foundations in place in order to minimize erosion and disruption to vegetation.
4. Financial surety

The owner/operator shall provide a present-day decommissioning cost estimate and shall post a bond, letter of credit, establish an 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 decommissioning plan in excess of the scrap value of the system prior to the issuance of the Special Use Permit. Said decommissioning surety shall take effect ten (10) years after completion of construction. An update to this decommissioning plan shall be submitted to the Zoning Administrator and property owner every three years.

The applicant/owner/operator shall continuously maintain a financial guarantee in a form security approved by the State's Attorney's office, for the period of the life of the facility. The amount of the financial security shall be equal to the total decommissioning cost identified in the decommissioning plan less the scrap present value of the system. All decommissioning, removal and remediation fund requirements shall be fully funded and approved by the State's Attorney's office before a zoning certificate is issued.

The owner/operator applicant shall submit a copy of the decommissioning 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 decommissioning plan and how the associated costs will be

guaranteed by the owner/operator applicant as well as, their respective responsibility for decommissioning costs.

Redacted lease notification and public submission requirements during lifetime of project.

## FUTURE CONSIDERATIONS

- “Currently, development evaluates water quantity and quality impacts based upon the structures and property site alone. Increasingly more are supporting efforts to evaluate water impacts on a watershed scale. Thus, long-term plans should provide to protect against soil erosion, stream protection (if near a stream) and water quality.
- Across the state, evaluations are occurring to provide some insight into the potential impact of solar farms on wildlife. Loss of farmland, foods and shelter from farmlands will have an impact upon the environment. Whether or not the long-term impact is positive or negative is yet to be determined.
- What will the solar farm do to neighboring land values? Law suits alleging decline in value of homes or businesses due to construction of businesses or farms (swine operations, as example) are numerous. Currently, law protects the original land owner but no law currently addresses the specific glare, frequencies or unfavorable view of a functioning or non-functioning solar farms.”
- <https://craven.ces.ncsu.edu/considerations-for-transferring-agricultural-land-to-solar-panel-energy-production/>
- 

## SUMMARY

“Each landowner will need to determine whether or not the transition of agricultural land to solar energy production is feasible. Higher revenue on a per acre basis does not necessarily mean greater profit. Higher expenses, future land use and/or opportunity costs may negate profits. Secondly, many of the solar farm projects are established with financial tax incentives, government

mandates for alternative energy sources and initial depreciation values anticipated. While these add immediate revenue, they also come at a cost to society and government. Too, they can disappear as quickly as initiated. Lastly, serious consideration of “best and worst case” scenarios should be evaluated. Solar farms providing 15-20 years of alternative energy, revenue to the landowner, and tax revenue to the county is beneficial. In contrast, abandoned solar farm production, excessive cost of decommission or loss of future land use is a detriment to the landowner and area.”

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

In conclusion, while we support solar power as an important source of renewable energy, a solar project larger than that which would provide on-site energy for a single residence or an average size business will destroy the scenic and aesthetic character of the neighborhood and possibly the whole of Napa Valley.

With no ordinance yet in place for a project of this magnitude, this enterprise is not appropriate for our agricultural watershed and is proposed to the detriment of many residents and our agricultural land itself. We encourage the County, as it redrafts the Climate Action Plan, to initiate and develop solar power that is generated on site. County owned rooftops, parking lots and the Napa County Airport are just a few examples of the many suitable sites for solar panels in which the County government could take the lead.

It is our elected and appointed officials, rather than private individuals, corporations and developers, who should be accountable for creating well-considered strategies with substantial input from our citizens.

**From:** Leland, James H. <JHLeland@SolanoCounty.com>  
**Sent:** Tuesday, October 16, 2018 7:43 AM  
**To:** Smith, Vincent (PBES) <Vincent.Smith@countyofnapa.org>  
**Subject:** JHILA ZAREBI / AMERICAN CANYON SOLAR PROJECT BY RENEWABLE PROPERTIES, LLC / USE

Vin,

I staff the Solano County ALUC. Our Travis AFB Land Use Compatibility Plan (Travis Plan) calls for commercial scale solar projects to conduct a glint and glare (SGHAT) analysis to determine if there is an impact to aircraft over a proposed solar facility. I notice that such a study was conducted for the Napa County Airport. A portion of the project site lies within the Area of Influence for the Travis Plan. Travis routes traffic over this location frequently. While I don't believe there is much likelihood of a glint or glare issue, I would recommend that the County add a mitigation measure requiring the submission of a SGHAT study to Travis AFB for review prior to issuance of any building permits for the project. I can put the project sponsor or County staff in touch with the appropriate staff over at Travis. They have assisted several projects in Solano County with the analysis. I am available to discuss this with you at your convenience.

Thanks,

Jim

Jim Leland  
Principal Planner

Department of Resource Management  
Solano County  
675 Texas Street, Suite 5500  
Fairfield, CA 94533-6341

Tel: 707-784-6765  
Fax: 707-784-4805

[jhleland@solanocounty.com](mailto:jhleland@solanocounty.com)

**JOHN P. ZIMMERMANN, M.D.**  
A PROFESSIONAL CORPORATION  
PLASTIC AND RECONSTRUCTIVE SURGERY  
CERTIFIED BY THE AMERICAN BOARD OF PLASTIC SURGERY

Planning Commission Mtg.

OCT 17 2018

Agenda Item # 7B

To the Napa County Board of Supervisors  
To the Napa County Planning Commission

October 17, 2018

Ladies and gentlemen,

First and foremost, thank you all for your selfless and tireless work on behalf of all the residents of Napa County.

As neighbors to the proposed solar installation on Palm Drive, we were recently exposed to attempts by outside business interests to decimate the rural neighborhoods of Napa County... promoting their selfish, personal financial interests under the guise of "alternative energy" and "solar farms".

We had obviously been under the false impression that the Ag Preserve/Ag Watershed zoning of these areas protected them from such blatant commercial intervention.

Clearly, for the sake of our planet and it's future, we are all desirous of energy that is clean and hopefully derived from natural resources, including solar. We welcome individual homeowners and the wineries, for which Napa County is famous, to derive energy from tastefully constructed personal solar installations.

The Palm Drive and American Canyon projects do not fit into the scenario that our previous elected and appointed officials so wisely envisioned in their designation of "Ag zoning" and "Ag preserve" almost thirty years ago. If they hadn't had the courage and foresight at that time, our hills and valley floor would have been filled with condos and homes, and what makes the Napa Valley so incredibly beautiful and special would have been lost forever.

American Canyon is the the entrance to the Napa Valley that hundreds of thousands of tourists (and residents) pass through annually. Their positive impression starts there and goes on to help drive the tourist industry that financially sustains our beautiful valley.



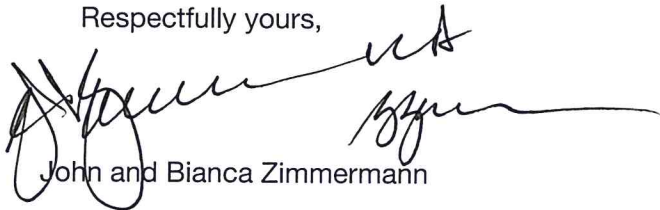
American Canyon deserves the same protection from unbridled and poorly planned development as the rest of our county. The time is now.

There is, and will be, plenty of acreage more appropriate for these large scale solar facilities in commercial zones throughout the county.

We must not create an "inappropriate precedent" by placing these facilities in an Ag. Preserve or Ag. zone before we thoughtfully consider our options and their long term effect on our Valley. It makes no difference whether it is in Coombsville or in American Canyon. Our way of life is at stake.

We ask you, the Board of Supervisors and the Planning Commission, to decline these requests for unbridled development on Ag. Zone land. We similarly request that you create additional regulations to establish just what is and what is not appropriate for these spaces, so that we have a reasonable template for future development. You have that responsibility for what will affect generations to come. Please exercise that responsibility wisely.

Respectfully yours,

The image shows two handwritten signatures in black ink. The signature on the left is more stylized and appears to be 'John Zimmermann'. The signature on the right is more cursive and appears to be 'Bianca Zimmermann'. Both signatures are written over a horizontal line.

John and Bianca Zimmermann



NEWPORT, SC.

SUPERIOR COURT

C.A. NO. NC-2017-0261

Planning Commission Mtg.

OCT 17 2018

Agenda Item # 7B

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

ROGER FONTAINE and JANE FONTAINE : : V. : : JAMES EDWARDS, JAMES HALL,  
JOHN : BORDEN, ERIC RAPOSA, BENJAMIN : FURIEL and KATHLEEN PAVLAKIS, in  
their : capacity as Members of the PORTSMOUTH : ZONING BOARD OF REVIEW, :  
PORTSMOUTH SOLAR, LLC, and SEABURY : APARTMENTS, LLC :

<https://law.justia.com/cases/rhode-island/superior-court/2018/17-0261.html>

Planning Commission Mtg.

OCT 17 2018

Agenda Item # 7B

**BIOLOGICAL CONSTRAINTS ANALYSIS FOR THE  
NAPA COUNTY RENEWABLE PROPERTIES  
AMERICAN CANYON SOLAR PROJECT**

Privileged attorney-client review product

**PREPARED FOR:**

Renewable Properties, LLC  
2914 Larkin Street  
San Francisco, California 94109  
Contact: Vince Gibbs  
(510) 812-3028

**PREPARED BY:**

Garcia and Associates  
435 Lincoln Way  
Auburn, California 95603  
Contact: Susan Dewar  
(530) 823-3151

**March 2018**

# Introduction

## Project Description

Renewable Properties, LLC (proponent) has entered into a purchase option agreement with the property owner (Barrow Irrevocable Trust) and intends on purchasing land in order to facilitate the development of a small scale, utility solar power generation facility in Napa County, California.

The American Canyon Solar Project (Project) consists of three phases and will generate a total of 3 megawatts (MW) alternating current (AC)<sup>1</sup> of clean, reliable solar energy when complete. The Project will interconnect to Pacific Gas and Electric Company's (PG&E's) pre-existing electrical distribution system located onsite. The power generated from this facility will be sold to Marin Clean Energy (MCE) through a long-term Power Purchase Agreement (PPA).

The Project will utilize approximately 12,096 solar modules and 66 string inverters, which convert the sun's energy into usable, AC power. Single axis tracking technology will be utilized to allow the modules to efficiently track the sun throughout the day and maximize the efficiency of solar collection. The modules will be mounted on a steel racking system, anchored into the ground using driven steel piers. The overall height of the array will be no more than 8 feet tall and the array will require approximately 18 acres of disturbance. Detailed plans are provided in Appendix F.

## Background and Objectives

The purpose of this analysis is to evaluate the potential for special-status species and habitats to occur and to be affected by the Project. This assessment identifies the habitat types present on and adjacent to the site; any wildlife movement corridors on the site; and additional wildlife or botanical surveys needed to determine the presence of special-status species and the effects of the proposed Project.

For this analysis, a desktop review was performed to assess the potential presence of special-status species and their habitats in the vicinity of the Project Area. This was followed by a floristic survey for special-status plants and a habitat-level reconnaissance survey for special-status wildlife habitat. Based on the results, recommendations, including recommendations for further surveys and avoidance and mitigation measures (AMMs) are provided herein.

## Site Location

The Project encompasses approximately 21 acres (Project Area, Figure 1) in unincorporated Napa County at 2180 American Canyon Road. The Project Area consists of two parcels (APN 059-090-012 and APN 059-090-016) and is located within the Napa River watershed. The field survey primarily focused on the Project Area and a 500-foot buffer (approximately 95 acres total). Habitats within a larger Biological Resources Evaluation Area (BREA) (all lands within 1 mile of the Project Area and all lands in the Napa River watershed drainage [approximately 234,031 acres]) were also assessed (Appendix D).

The Project Area is currently being utilized as a goat and sheep farm. The majority of the Project Area was mapped as agricultural (pastures) (13 acres, Figure 2). The southern and eastern portions of the Project Area are dominated by pens, stalls, and exercise areas for livestock (horse, cow, sheep, goat, chicken). The northern boundary of the Project Area supports a strip of riparian woodland (mixed

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<sup>1</sup> 3 MW AC = 4 MW direct current (DC)

willow alliance) and is protected from livestock grazing and disturbance by a fence (Appendix E, Photos 3, 9, and 10). Outside of the Project Area, areas to the east are vegetated with coyote brush (*Baccharis pilularis*) - California sagebrush (*Artemisia californica*) super alliance (Sawyer et al. 1995), and to the west and south with agriculture.

The desktop review identified one soil mapping unit underlying the Project Area (National Resource Conservation Service [NRCS] 2018): Clear Lake clay, drained, 0 to 2 percent slopes.

# Exhibit F for Ordinance 6064

## Contact Information

**County Administrator's Office**  
County of Sonoma

Accessibility Assistance  
Contact Us

Contact us by Phone  
Phone: (707) 565-2431  
CA Relay: 711  
Fax: (707) 565-3778

Address  
575 Administration Drive  
Suite 104A  
Santa Rosa, CA 95403  
Google Maps™ Directions

Planning Commission Mtg.

OCT 17 2018

Agenda Item # 7B

## 26.88.206 Solar Energy Facilities – Special Use Standards

- A. **Purpose.** This section establishes minimum development and operational standards for solar energy facilities, where allowed by the base zone or the Renewable Energy (RE) combining zone. The intent of these standards is to promote and facilitate the siting and permitting of solar electric (photovoltaic) systems and facilities in a manner that minimizes adverse environmental impacts.
- B. **Applicability.** These standards apply to all solar energy facilities not otherwise exempted.
- C. **Exempt facilities.** The special use standards set forth in this section shall not apply to the following exempt systems:
  1. Solar hot water systems designed as an accessory use to serve a legally established use of the property;
  2. Solar photovoltaic systems, subject to planning clearance that meet any one of the following:
    - a. Roof-mounted accessory systems and commercial facilities located on a legally established building containing the primary allowed use on the site, and/or on legally established accessory structure(s) containing use(s) allowed as accessory to the primary use, where the installations meet Fire Safe Standards for access along the roof peak and eaves.
    - b. Solar accessory systems and commercial facilities affixed to shade structures located over required parking areas, in accordance with Parking and Fire Safe Standards.
    - c. Accessory ground mounted solar photovoltaic systems designed to provide no more than 125% of the estimated energy demand on-site meeting all of the following health and safety standards:
      - i. Not exceeding 15-feet in height, unless demonstrated by a structural engineer to meet public safety standards;
      - ii. For residential installations, the system design capacity does not exceed the average kW use for similar sites, unless a higher energy need for legal uses on the installation site is demonstrated as determined by the Director, subject to a zoning permit;
      - iii. The system installation complies with required yard setbacks and lot coverage limitations of the underlying zone district, unless demonstrated that the installation does not impair sight distance for safe access to or from the property or other properties in the vicinity as determined by the Director subject to a zoning permit;
      - iv. The system installation meets fire safe standards and provisions for emergency access, and defensible space around the system components are provided;
      - v. The system is not located over a septic system or leachfield area or identified reserve area, and is not located in a floodway as designated by FEMA; and,
      - vi. Does not otherwise create a fire or other safety hazard as determined by the Fire Marshal and Building Official.
  3. Solar photovoltaic systems and facilities owned by the County or other local agency as defined in Government Code Section 53090 or the California Public Utility Code Section 12808.5.
- D. **Minor Commercial Solar Facilities (Incidental to a Primary Use)**  
The following special use standards apply to all minor solar electric (PV) systems and facilities designed to provide energy for on- and off-site use, that are incidental to the primary use of the property. These standards apply in addition to the general site planning and development standards

of Section 26.88.200.

1. **Parcel Coverage.** Minor commercial solar facilities shall cover less than 15% of the parcel and no more than 5 acres. The area covered by panels shall be the lesser of 50% of the maximum lot coverage allowed by the zone, or if applicable, 50% of the allowable building envelope as designated on a final map. Facilities mounted on the roof(s) of legal, permitted structures that otherwise comply with lot coverage maximums are exempt from these limitations.
2. **Minimum setbacks.** The facility shall meet the minimum front yard setbacks for primary structures of the zone. In urban service areas, the facility shall meet fire safe standards and provisions for emergency access and defensible space around the facility are required.
3. **Height Limits.** Facilities mounted on a structure may exceed the height limit of the zone by no more than 2 feet. Ground-mounted facilities shall not exceed 15-feet in height.
4. **Incompatible Locations.** Ground mounted facilities shall not be located in the following areas:
  1. over a septic system or leachfield area or identified reserve area
    - a. in a floodway as designated by FEMA
    - b. in a designated sensitive habitat or biotic resource area as identified in an adopted General Plan, Area Plan, Specific Plan or the California Natural Diversity Database.
    - c. in an approach zone (inner or outer safety zones) or the inner turning zone of a public use airport.
    - d. Glare. Concentrated reflections or glare shall not be directed at occupied structures, recreation areas, roads, highways or airport flight landing or takeoff areas.
    - e. **Farmland Protection.** If the facility is located within or near an agricultural area, the owner/operator shall sign and record a Right to Farm declaration and an agricultural easement.

**E. Commercial Solar Facilities**

The following special use standards apply to all solar electric (PV) facilities that are developed as a primary use of the property as allowed by the underlying zone, in addition to the siting criteria and development standards of Section 26.88.200.

1. **Minimum setbacks.** The facility shall meet the minimum front yard setbacks for primary structures of the zone. In urban service areas, the facility shall meet fire safe standards and access for emergency vehicles shall be provided along the periphery of the facility.
2. **Height Limits.** Facilities mounted on a structure may exceed the height limit of the zone by up to 2-feet. Ground-mounted facilities shall not exceed 15-feet in height unless otherwise allowed by use permit.
3. **Undergrounding Electrical.** Electrical distribution lines on the project site shall be underground up to the low voltage side of the step up transformer, to the point of on-site use or to the utility interface point of an on-site substation. This provision may be waived by the decision-making body if the undergrounding is determined to be an undue burden.
4. **Glare Effects.** Concentrated reflections or glare shall not be directed at occupied structures, recreation areas, roads, highways or airport flight landing or takeoff areas. A detailed analysis of potential glare effects may be required at the time of application, and the applicant may be required to minimize glare effects by installing vegetative screens or berms, and/or by adjusting solar collector position or operation to minimize glare.
5. **Farmland Protections.** In addition to the Right to Farm and

Agricultural Use Easement requirements set forth in 26.88.200 B1 e (Farmland Protection), the site area used for the installation of a commercial solar facility shall exclude mapped Important Farmlands, and a protective easement may be required over these lands.

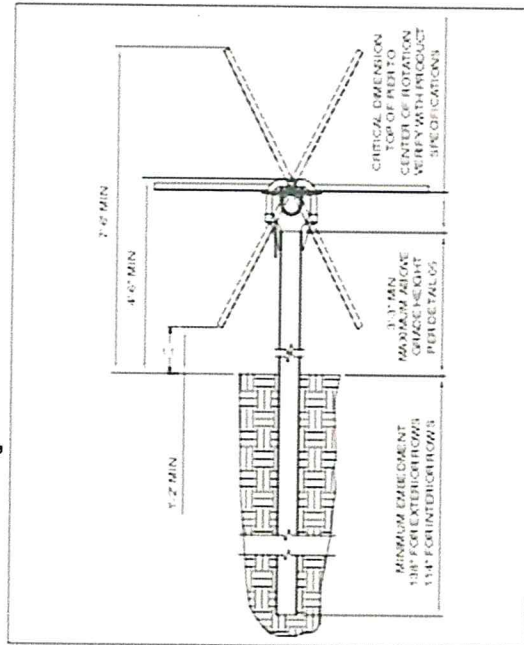
6. **Scenic and Biotic Resource Protections.** Ground mounted commercial solar facilities shall not be located in the following areas:
  - a. over a septic system or leachfield area or identified reserve area;
  - b. in a floodway as designated by FEMA;
  - c. within a Scenic Resource (SR) or Biotic Resource (BR) Combining Zone, nor within a sensitive habitat or biotic resource area as identified in an adopted General Plan, Area Plan, Specific Plan, or the California Natural Diversity Database, unless a protective easement is recorded to protect these resources;
  - d. in an approach zone (inner or outer safety zones) or the inner turning zone of a public use airport.
7. **Photovoltaic Module Management.** Reuse, recycling or disposal of any photovoltaic panels shall be conducted in accordance with the *Standards for Universal Waste Management – Photovoltaic Modules* as set forth in California Code of Regulations, title 22, division 4.5, chapter 23, and subsequent amendments thereto.

OCT 17 2018

Agenda Item # 7B

Above Ground  
7'6" MIN

Exterior Posts 138"  
Interior Posts: 114"  
Estimated Average: 120"  
10 square feet  
Total 17.5 sq. ft



2 RACKING ELEVATION  
SCALE: NTS

17.5 x (17.5 acres) or 762,300 square feet

= 13,340,250 square feet

APPROXIMATED