Steve Cornwall

From:

Kevin Bliss [kbliss@ric.energy]

Sent:

Friday, August 26, 2022 8:51 AM

To:

machias.supervisor@wny.twcbc.com; MMyers@CattCo.org; Yorkshirecode@yahoo.com;

drule@mdaengineers.com

Cc: Subject: Ivaylo Tomchev, Nancy Viahos

Attachments:

Machias Sola--Public Hearing Comment Response image001.png; image002.png; Solar Property Value FactSheet 2019-PRINT_1.pdf; Machias

Public Hearing--Machias Solar--Response to Comments pdf

Good morning,

As agreed at the Town of Machias August 15 Public Hearing on Machias Solar, I have prepared a responsiveness summary to comments offered. Also attached is a document on property values as related to solar power. (You'll find the negative correlation raised at the hearing is not what's generally experienced.) I am concerned the project was not well understood by many of the residents speaking, in that they described it as being 47 acres of panels, and having numerous negative qualities that are not actually applicable. Having been asked not to speak, I am hoping the attached will be objectively reviewed as part of the public record and found to be helpful, as I think it should go a long way toward easing the concerns raised. If you have any questions, please let me know. Meanwhile, thank you for your continued kind assistance—it is much appreciated.

Respectfully,

Kevin



Kevin R. Bliss, PhD, PWS

Senior Permitting Manager

Cell: 315 973 0140 Landline: 917 463 0421 ext 1011

E-mail: kblissey is energy RIC Development, LLC

85 Broad St, 28th Floor, New York, NY 10004

USAme shelley

Correcting the Myth that Solar Harms Property Value

It is a common misconception that ground mounted solar farms decrease nearby property values.

- Examining property value in states across the United States demonstrates that large-scale solar arrays often have no measurable impact on the value of adjacent properties, and in some cases may even have positive effects.
- Proximity to solar farms does not deter the sales of agricultural or residential land.
- Large solar projects have similar characteristics to a greenhouse or single-story residence. Usually no more than 10 feet high, solar farms are often enclosed by fencing and/or landscaping to minimize visual impacts.



Vegetative screening will grow to obscure panels from the road and nearby homes, when desired. Photo Credit: Borrego Solar

The Numbers

- A study conducted across Illinois determined that the value of properties within one mile *increased* by an average of 2 percent after the installation of a solar farm.¹
- An examination of 5 counties in Indiana indicated that upon completion of a solar farm, properties within 2 miles were an average of 2 percent more valuable compared to their value prior to installation.²
- An appraisal study spanning from North Carolina to Tennessee shows that properties adjoining solar farms match the value of similar properties that do not adjoin solar farms within 1 percent.³

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	Potentially Impacted by Solar Farm	Adjusted Median Price Per SF
Control Area Sales (5)	No: Not adjoining solar farm	\$79.95
Adjoining Property 10 (Test Area)	Yes: Solar Farm was completed by the sale date	\$82.42
Difference		3.09%

Various studies have shown that solar can potentially have a positive impact on adjoining property value. The above table references one of many in a report written by CohnReznick.4

¹ Kirkland, Richard C. Grandy Solar Impact Study. Kirkland Appraisals, 25 Feb. 2016, kirdlandapprasials.com.

² Lines, Andrew. "Property Impact Study: Solar Farms in Illinois." Mcleancounty.gov, Nexia International, 7 Aug. 2018.

³ McGarr, Patricia. Property Value Impact Study. Cohn Reznick LLP Valuation Advisory Services, 2 May 2018.

Harmony with Nearby Residential and Agricultural Property

- 1. Appearance: Large solar projects have similar characteristics to a greenhouse or single-story residence. Usually no more than 10 feet high, solar farms are often enclosed by foncing and/or landscaping to minimize visual impacts.
- 2. **Noise:** Solar projects are effectively silent. Tracking motors and inverters may produce an ambient hum that is not typically authors from outside the enclosure.
- 3. **Odor**: Solar projects do not produce any byproduct €1 odor.
- 4. Traffic: Solar projects do not attract high volumes of additional traffic as they do not require frequent maintenance after installation.



A ground-mounted solar system sited in a rural area.

Credit: Blattner

5. **Hazardous Material**: PV modules are constructed with the solar cells laminated into polymers and the minute amounts of heavy metals used in some panels cannot mix with water or vaporize into the air. Even in the case of module breakage, there is little to no risk of chemicals releasing into the environment.⁵

July 2019

^{5 &}quot;Clean Energy Results, Quantiens and Answers, Ground Mounted Solar Photovoltaic Systems." Energy Center, June 2015. http://doi.org/10.1001/j.j.com/10.1001/j



Kevin R. Bliss, Ph.D., PWS

Sr. Permitting Manager
RIC Development, LLC
85 Broad Street, 28th Floor
New York, New York 10004
315 973-0140 / kbliss@ric.energy
https://usa.ric.energy

To: Town of Machias Town Board, Attention: Supervisor/Chairman Steve Cornwall

From: Kevin R. Bliss, Sr. Permitting Manager, RIC Development, LLC

Date: August 26, 2022

Re: Public Hearing Response to Comments--Machias Solar--August 15, 2022

Greetings Supervisor/Chairman Cornwall:

If you would, please provide this response to comments to other members of the Town Board for the public record. You may recall I asked at the conclusion of the public hearing if providing such a response would prove helpful, and was informed it would. Your assistance with this, and other aspects of the review process is very much appreciated.

Kevin

Dear Board:

Thank you for allowing us to attend the recent Town Board public hearing about Machias Solar. Though we were not allowed to speak during the hearing, we did appreciate hearing the public concerns expressed. Having recorded the comments as best we could, we thought it may be helpful to provide responses to questions raised, not only as a means to assist your review, but also as a means to alleviate some of the public concern for what may be a somewhat poorly understood new technology and new undertaking for the Town. Your indicated willingness to review our response to those comments is very much appreciated.

As you know, the proposed Project is a 2 MW AC ground-mounted solar facility located on 9475 Main Street in Machias. The project will provide a clean, renewable source of energy that will help reduce carbon dioxide emissions and lower New York State's carbon footprint. The Machias Solar Project supports New York's 2030 goal of generating 70% of the state's energy by renewable sources. Unlike traditional fossil fuels such as coal and oil, solar energy does not contribute to air pollution or water pollution. As opposed to solar, burning fossil fuels for energy releases particulates, mercury, arsenic, chromium, sulfur dioxide gas, and other compounds that can be harmful to human health.

Solar facilities present no noise or odors and do not pose a danger to birds, bats, or other wildlife.

The Machias Solar Project will provide a tangible economic benefit in the form of tax revenue to the local community. The Project will enter a PILOT (Payment in Lieu of Tax) agreement, whereby the Town, County, and School District will receive annual payments, based on the capacity of the project. This PILOT revenue is significantly greater than the taxes that are generated by the existing agricultural use and will support local and county services, education, and infrastructure while creating very minimal if any demand for Town or county services and no demand for services from the School District.

Residents can enroll in the New York State Energy Research and Development Authority's (NYSERDA) community solar program and save money on their electric bills, while the Project will provide opportunities for construction jobs, as well as part-time long-term employment for maintenance services throughout the operation phase.

Rather than attribute specific comments to specific individuals, as many comments were repeated, and some people simply said they agreed with others, I have summarized the comments below in the form of a question to which a response is provided immediately thereafter. If you believe there are comments or questions missed, please let me know, and I'll promptly supplement this responsiveness summary.

This response is also being provided to the Cattaraugus County Planning Department for consideration in their ongoing GML 239 review. (As will any supplement you deem needed.) Lastly, a commentor at the public hearing indicated that he had an environmental attorney submit a letter to the Town Board. It would be appreciated if you could provide me a copy of that letter, so we may reply should it prove helpful.

Again, thank you very much for your continued consideration and assistance.

Question 1: Will the solar facility present a contamination hazard to future agriculture, or either the groundwater or air, as for example from hazardous leaching or fire?

Response 1: First, it should be clarified that the proposed facility is not comparable to other facilities referenced for comparison at the hearing, which included Bethlehem Steel and USMC Camp Lejeune. Those facilities are many orders of magnitude larger than the 9 acres (not 47, as was suggested by public comment) proposed to house the Machias solar facility. Nor is this a facility that contains hazardous materials used in numerous manufacturing, waste and water treatment or other purposes on site.

Problems at Bethlehem Steel and Camp Lejeune are substantial and real, adversely affecting many people. We respectfully suggest the human suffering and environmental impact experienced at either Bethlehem Steel or Camp

Lejeune should not be trivialized by comparison to a small solar farm. And vice versa—a small solar farm should not be held in comparison to such sites.

It was also noted that solar panels do not break down in a landfill. By-and-large, that is true, at least on any near-term time scale. However, at the end of its useful life, the vast majority (95%) of the panel is not landfilled. It is glass, aluminum and other materials that are recycled. Recycling of the minimal amounts of rare metal components is advancing, and performed, but currently may not suffice to keep all material from a secure landfill. With recycling advancement ongoing, at the time of decommissioning, it is hoped there will be no need for landfilling.

It may help to realize RIC employs a non-hazardous silicon cell solar panel technology. The primary material used for solar cells today is silicon, which is derived from quartz—the mineral forming most sand on our beaches. The primary alternative technology employed, which RIC is not using, is thin-film technology. Thin-film solar panels may include heavy metal components that, when discarded, may be deemed a hazardous waste, owing to levels of toxicity. Nonetheless, leaching from these panels in the field is not regarded to be a substantive threat, simply because the metallic components, e.g., copper, lead, cadmium, are securely encased within a sturdy glass and aluminum frame that can withstand most disturbances short of a hurricane, tornado, or earthquake.

The International Energy Agency studied the risk to human health from heavy metals leaching out of solar panels and reported it was below US screening levels, while water contamination levels were within the guidelines from the World Health Organization. As an example of how secure solar panels are, it is noted that Cohoes, a city near Albany, NY, is placing solar panels on their drinking water reservoir, which is larger than the proposed Machias site, as part of their "Cleaner Greener Cohoes" initiative.

A <u>2021 life-cycle analysis</u> by the United Nations found that solar panels produce greenhouse gas emissions (GHG) in the manufacturing stage, but it is low in comparison to other energy forms.

The technology employed by RIC is silicon-cell, which uses almost no heavy metals by comparison to thin-film technology. Though some small amount of heavy metals will be found in our panels, these materials are secured from leaching within the panel. The metals are insoluble and are bound to the silicon cells, or as in the case of copper wiring, encased in the wiring sheath, all of which is secured by the panel frame and tempered glass. By comparison, a car in a grocery store parking lot or home garage contains similar and more hazardous materials, but in larger quantity and less secure from environmental exposure.

The RIC panel of choice is a Canadian Solar brand silicon-cell unit. Canadian Solar is a worldwide distributor whose solar panels are subject to and pass toxicity characteristic leaching procedure (TCLP) tests, as required by the Resource

Conservation Recovery Act (RCRA). Products that do not leach toxic materials at levels exceeding regulatory limits are termed TCLP compliant.

As noted by the Solar Energy Industries Association (SEIA), fires at solar facilities are extremely rare. Solar panels are tested by Underwriters Laboratories (UL), which subjects them to the rigors of everyday use before they are certified. Also, solar-specific building codes and the National Electric Code have added safety measures to lessen fire risk and to allow first responders to turn off a PV system safely and effectively, if necessary, to remove an electrical hazard. Unlike a small number of other solar facilities we are aware of in New York, the proposed Project will not have a propane tank or other flammable liquids stored on site. Also, the project site will not include battery storage, which can increase a fire hazard in some instances. With the above in mind, hazardous contamination or fire at this facility is not considered a plausible threat.

Question 2: How does the fact there is a bald eagle nest in the vicinity affect the development, in light of such things as the Bale and Golden Eagle Protection Act? (Or vice versa: How might the development affect the bald eagle nest?)

Response 2: The federal Bald and Golden Eagle Protection Act, as well as the State Endangered Species Act (the species is no longer listed as threatened or endangered at the federal level), were recognized, and as a result, RIC personnel self-reported the presence of a bald eagle's nest in the vicinity of the proposed facility. The distance to the nest and the nature of the facility were assessed by the New York State Department of Environmental Conservation and the U.S. Fish and Wildlife Service. Both agencies concluded the risk was not sufficient to stop the project.

(In fact, the on-going agricultural practices at the proposed site are more disruptive than will be future operational aspects of a passive solar farm.) Consequently, the agencies suggested mitigation on the property of the eagle nest. Unfortunately, that proved not possible, and the agencies agreed off-site mitigation would suffice. RIC then contracted with a respected natural resource consultant, who prepared a "Net Conservation Benefit Plan," that was acceptable to the involved agencies, thus resolving the issue.

Question 3: Could the Town do more to solicit public comment?

Response 3: The Town addressed this question during the hearing very well. Their response included pointing out the public noticing must (and did) employ the Town's official paper, the Arcade Herald. RIC will add now that some of the public who indicated they would be more prepared had they known about the project sooner, have been aware of the project, conversing with RIC relative to related work for over a year.



Question 4: Is solar a passing fad?

Response 4: Ironically, RIC received a comment last week from another Town official who said, "solar is the future." Though no one can predict the future with certainty, one thing is certain: There is a consensus among experts and (most) politicians that climate change presents an earth-changing adverse impact and that renewable energy, including solar development, is a necessary component to addressing that impact. Toward that end, the federal and New York State government have declared it imperative that solar and other forms of renewable energy be prioritized. At RIC, we believe solar is not a passing fad. As declared in our company manifesto, solar is critical to developing and generalizing more efficient and durable energy production systems essential to achieving the sustainable social model we aspire to put in place.

Question 5: Will the floodplain on the property present a problem?

Response 5: The public comment that, "solar panels will be half under water," is maccurate. Granted, a portion of the site contains a portion of the Ischua Creek floodplain as designated by the associated Flood Insurance Rate Map. This floodplain cannot be avoided when accessing the site, and in fact the site has an existing access road across it. Apart from the access drive, panels and other facility components will be raised above any foreseeable flood waters per local, state, and federal code. As concluded by the NYSDEC in their 10/7/2020 memo on the subject of Machias Solar Facility Floodplain Analysis, "It is the Floodplain Management staff's opinion that the proposed work is permissible. There is no requirement for encroachments in unnumbered A Zones in the Town of Machias local law. Even still, the calculated rise of 0.01 ft is less than the 1.00 ft allowed rise in numbered A Zones."

Considering this conclusion, and after engineering models showed no impacts either upstream or downstream, the Town issued their own favorable local review concluding the floodplain on the property will not present a problem. Subsequently, the Town of Machias issued a Floodplain permit for the proposal.

Question 6: How was the Machias solar law developed, given it seems less stringent than other municipalities, e.g., Olean, e.g., setbacks and noise?

Response 6: As with question 3, the Town addressed this question during the hearing very well. The Town Board noted that local code preparation was led by Town attorney, Joel Seacrest. The Town also noted that in comparison to the other municipality mentioned, Machias is a Town, not a City, and as such warrants different considerations and conclusions when preparing a local ordinance.

Question 7: Will runoff be exacerbated by this project?

<u>Response 7:</u> First, it should be noted that a public comment incorrectly indicated the project would consist of 47 acres of solar panels. Whereas the project site is

contained within 9 acres. It was also stated that solar panels are not pervious, implying water will runoff the panels, presenting a problem. This later comment is partially correct—panels are impervious. However, unlike roofs, roads, and many other structures, panels are suspended on relatively small diameter posts above the ground such that the majority of rainfall will not runoff the Site, but will fall on the (pervious) ground under and around the panels where it will continue to soak into the ground as before. Nonetheless, to the extent that stormwater runoff might be minimally exacerbated, the New York State Department of Environmental Conservation regulates construction of solar facilities and other operations, requiring the preparation of a site-specific stormwater pollution prevention plan to insure no impacts. This plan has been prepared by a licensed professional engineer in conformance with state requirements and will be in place prior to construction.

Question 8: What authority does the Town have as (SEQRA) Lead Agency? (Is the Lead Agency responsible to ensure the facility operates as it should?)

Response 8: Here again, the Town addressed this question during the hearing very well. This Project went through a thorough SEQRA review when it was first proposed, prior to the Town having jurisdiction. That process resulted in a coordinated review by all other involved (i.e., county and state) agencies, ultimately leading to a conclusion by the Lead Agency at that time that the project will have no significant adverse impacts. The Town's current role as Lead Agency is a result of their new law and current status as the only involved agency. (Others having concluded their review.) As Lead Agency, the Town must conclude whether or not the proposal will present significant adverse environmental impacts, not addressed and considered significant by conclusion of the prior review. As noted by the Town, ensuring the facility operates as it should is ultimately the responsibility of the Project owner.

Proper operation is defined in part by federal, state, and local laws, and the conclusions of agencies overseeing the various application processes. As for example, ultimate decommissioning requires a bond in place with the Town, which may be called in should the owner not perform as required. Or, the Town may exercise their authority and close the operation, should the operation not comply with issued approvals. Though, again, ensuring compliance starts with and is a legal responsibility of the owner.

Question 9: Will the project adversely affect the viewshed and small-town atmosphere?

<u>Pesponse 9:</u> At 2MW of energy production and affecting only 9 acres, the proposal is an uncommonly small operation for commercial solar. It will not be visible to neighbors, particularly after any intended and required screening is in place; exceptions from a substantial distance or through the small spaces between vegetation upon very close inspection, notwithstanding. The local rural character is not assumed to be at risk of substantive impact.

Question 10: Do solar projects give off an adverse heat signature?

Response 10: Contrary to claims made at the public hearing, this solar facility will not give off a heat signature or raise temperatures in the neighborhood. Though solar panels do warm in the sun, as would any dark object, no temperature differential will be noted at even a short distance from the panels from such a small facility as the current proposal. Ironically, the counter claim of some solar opponents is that in the winter, panels do not work, as they are covered by snow. (That claim, which was not presented at the Machias public hearing, is also false.) As noted above, solar is one of the intended means of slowing global warming.

Question 11: Can't anyone just put solar on their house if they want solar energy?

Response 11: People who rent their home or who cannot afford rooftop solar or have a home that cannot support solar do not have the option of household solar. With that in mind, the State and Federal government are encouraging community solar as a means to encourage renewable energy. Moreover, participation in community solar has the advantage of a reduced energy bill, providing an added advantage to those in the neighborhood that do not already generate their own electricity.

Question 12: How does the project benefit the Town and taxpayers?

Response 12: As noted by public comment, a savings is afforded to electric bills for those participating in community solar. Participants may include anyone signing up for the benefit—a program of the state intended to encourage community solar. However, contrary to public comment made, the program has been in place for several years, and has no provisions for disappearing after one year (or at any stated interval). Other benefits include the Payment In Lieu of Taxes negotiated by the County.

This PLOT payment exceeds the estimated tax revenues, and will be split by the County, Town, and local school district. Of course, the many benefits of green energy relative to the bigger picture of global warming, contamination, and adverse politics and global economics associated with fossil fuels are also to be expected, though admittedly the small nature of the Machias site must be considered with other renewable energy developments before that latter benefit may be substantively felt.

Question 13: Are there federal laws that apply to solar projects?

<u>Response 13:</u> There are no federal laws specifically addressing this solar facility development, apart from the need to address glare with the Federal Aviation Adrem stration (see question 14). That is, unless certain aspects of the proposal invoke other related laws. Examples may include when an access road crosses a federally protected stream (not applicable here) or (as is the case, here, though successfully resolved) a bald eagle nest is located in the vicinity. Federal solid and nazardous waste regulations apply to solar panels when they are discarded. When a solar panel reaches the end of its usable life the majority is recycled, but some

may be considered becomes solid waste. Solid waste is regulated federally under the Resource Conservation and Recovery Act (RCRA) Subtitle D and through state and local government programs. The decommissioning plan will follow the regulations outlined by these agencies, such that non-recyclable materials shall be properly disposed of in a landfill. To date, the applicant has reviewed all of the permitting requirements and coordinated technical review with all required agencies.

Question 14: Will glare present a problem?

Response 14: There are no predicted glare occurrences from the proposed solar errays for nearby residences or roadways. Solar panels are designed to capture sunlight for conversion to usable, electrical energy. Dispersing or reflecting light is counter to that intent. Consequently, the panels are treated with anti-reflective coatings to reduce and nearly eliminate sunlight reflection. (Reflection is estimated at 1 to 2 percent, which is equivalent to that resulting from concrete or soil.) Nonetheless, the applicant has consulted with the Federal Aviation Administration (FAA) to review glare from the project to confirm compliance with FAA standards. As noted within application materials, the FAA concluded the solar facility will not have adverse effects related to issues such as glare, radar atterference, and physical penetration of airspace. Despite this, a landscape screening plan will be implemented to obscure the facility from view.

Question 15: Will the project lower property values?

Response 15: There is no reason to believe Machias Solar will lower property values.

Scale solar arrays across the United States. The results¹ (see attached and below references) concluded that solar facilities generally have no measurable impact on the value of adjacent properties, and in some cases may have positive effects with increased property values. Machias Solar was designed to ensure that it is in narmony with the nearby residential and agricultural properties. During the construction and operation of the facility, there will not be excessive traffic, noise, dash oners, glare, pollution, or other nuisances. Traffic conditions will be compacible to pre-construction conditions. The Project will generate very ninimal traffic, with maintenance expected only two or three times per year with a crew of two people performing inspections and mowing.

ं Kirkiand, Richard C. Grandy Solar Impact Study. Kirkland Appraisals, 25 Feb. 2016, acirdian epprasials.com.

र देवन हो। उपन्थाः "Property Impact Study: Solar Farms in Illinois." Mcleancounty.gov, Nexta idearnational, 7 Aug. 2018.

McCare, Patricia, Property Value Impact Study. Cohn Reznick LLP Valuation Advisory Sarvices, 2 May 2018.

Question 16: Who is responsible for the decommissioning plan?

Response 16: The Applicant is responsible for developing the decommissioning plan and for the decommissioning. The goal for decommissioning of the Project is the safe and efficient removal of all Project components while restoring the occupied land to its pre-construction condition as deemed acceptable and required by all review processes. Restoration activities ensure the site is returned to its original condition for continued use in agriculture or other productive land use opportunity. The safety measures and protocols utilized during construction and operation of the Project will be applied during the decommissioning and restoration process to ensure the safety of the personnel and the public. The Plan includes financial assurances in the form of Decommissioning Bond, whereby the Town of Machias will be the beneficiary. This instrument would ensure that decommissioning is performed by the project owner and operator.

Question 37: Is the decision to approve this facility already determined? (Is approved a "done deal" or can the project be denied, as was a dismantling yard at one time?)

Response 17: Once again, the Town provided a very good response to this question at the public hearing. No, this decision has not been determined as yet, though the existing code, put in place by the Town, is intended to guide the decision concorne. To the extent any project complies with Town law, a presumption is made the project is permittable. A review of the project is intended to consider the law as it applies to the project as proposed so that an objective decision may be made at the conclusion of the review process. The dismantling yard was not comparable to the present proposal, and that outcome is not indicative of this or other project reviews.

Question 17: Is the fire department trained to handle fires at solar facilities?

Response 17: While RIC cannot speak for the Town of Machias Fire Department's maining they are presumed to be very professional and capable of handling all manage of emergency situations. Nonetheless, a number of training courses have migrated online during COVID to ensure everyone can access them. As a means to provide support, should it prove helpful, the following list is provided:

The Interstate Renewable Energy Council (IREC):

- https://sustainabieenergyaction.org/clean-energy-clearinghouse/
- https://cleanenergytraining.org/firefighter-training

Jinderwaters Laboratories (UL) and Fire Safety Research Institute (FSRI):

- <u>ps://ur_ander.fire-samty/fire-</u>
- https://fsri.org/research/firefighter-safety-and-photovoltaic-systems
- https://ul.org/news/underwriters-laboratories-publishes-safetystandard-photovoltaic-hazard-control

The Fire Safety Academy:

- <u>http://itanning.fsri.org/</u>
- https://training.fsri.org/course/003-photovoltaic-systems

This concludes the comments recorded at the August 15 Machias Public Hearing. hope the responses included here prove helpful. Thank you very much for your continued cooperation and direction. I (we) will look forward to further commenduations.

Best Regards,

Kavin



Kevin R. Bliss, PhD, PWS

Senior Permitting Manager

Cell: 315 973 0140 Landline: 917 463 0421 ext 1011

E-mail: kbliss@ric.enercy

RIC Development, LLC

85 Broad St, 28th Floor, New York, NY 10004

USAricenergy