

**TOWN OF CHESTER
PLANNING BOARD MINUTES
March 2, 2016**

Members present: Chairman Serotta, Bob Conklin, Ernie Damiani, Barry Sloan, Carl D'Antonio, Steve Denes (present @ 8pm)

Also present: Dave Donovan-Attorney, John Nosek-Engineer, Alexa Burchianti-Secretary

Next meeting of the Planning Board is scheduled for April 6, 2016

Board updates: No minutes to adopt tonight, Alexa had some computer problems. Will be finished in a few days. After the meeting will have discussion on Solar Zoning Ordinance

GUANERI SUB-DIVISION – 90 DAY EXTENSION

They are still waiting for engineer and some financial issues.

Motion to grant 90 extension made by Bob. Second by Carl. Motion carried 5-0

WOODRIDGE SUB-DIVISION – WORK SESSION

Mark Siemers from Pietzrak & Pfau representing Woodridge. 10 Lot sub-division off Laroe Road. Last meeting there was no further questions and issues so they came back tonight for the Negative Declaration and the Preliminary Resolution.

Polled Board for questions or comments. No questions or comments made.

Motion made for Negative Declaration by Ernie. Second by Carl. Motion carried 5-0

Polled Board for questions or comments. No questions or comments made.

Motion made for Preliminary Approval by Bob. Second by Ernie. Motion carried 5-0

SIEMENS SUN-EDISON – PUBLIC HEARING #2

Amador LaPut from Fellenzer Engineering – there has been a change in the configuration of the array, and that's why the board called for another public hearing.

(Comparative drawings on the board) Amador is pointing out the original design that was shown to the public on the first public hearing which is on the left. The new configuration is on right. To avoid cutting the trees they changed the array. They were requested by the board to put up flags at each corner of the array so the public and the board can see where it will be.

Chairman Serotta: The board had commented about not cutting into the trees, also so did the OCDP. They recommended moving the array or cutting as little as possible.

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Fellenzer Letter:

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Principals:

Mark D. Fellenzer, P.E., LEED AP
John D. Fellenzer, P.E., MBA

Founder:

Archie D. Fellenzer, Jr., P.E.
(1924 - 2014)

February 23, 2016

Town of Chester Planning Board
1786 Kings Highway
Chester, NY 10918

Attention: Mr. Donald Serotta, Chairman

Subject: Johnson Farm Photovoltaic Array
121 Johnson Road, Chester, NY
Fellenzer Engineering Project 15-255

Dear Mr. Serotta,

Please find attached the following documents regarding the Johnson Farm Photovoltaic Array for consideration at the March 2, 2016 Public Hearing:

- Twelve (12) Johnson Farm Photovoltaic Array Site Plans
- Twelve (12) Cover Letter
- Twelve (12) SunEdison Antireflective Glass Tech Note
- Twelve (12) Spaven Consulting SPV Facilities: Assessment of Potential Impact to Aviation

At the previous planning board meeting, a revised array layout was presented based on restrictions due to topography, requirements from Johnson Farm, and other existing site conditions which requires that solar panels be added to the south end of the array.

To maximize the distance between the array and the existing residential homes, the layout has been further revised to eliminate solar panels from the south end of the array.

The closest house on Arthur Road is now 906.6 feet from the closest part of the array. This area is screened by existing trees along the back property lines and by existing trees near the array.

The closest house on Brennan Court is now 998.7 feet from the closest part of the array. This house is screened by existing trees in the back yard and by existing trees between the house and the array.

Following up on the question of glare, we have included in this submission documents from SunEdison and Spaven Consulting. The SunEdison Tech Note states that AntiReflective Coating (ARC) glass reflects approximately 4% of incoming light while glass used in other applications typically reflects 8%.

The Spaven Consulting paper assessed the potential impact of Solar PhotoVoltaic (SPV) arrays on pilots. The study concluded that:

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CHESTER SIEMENS SOLAR PROJECT
FE PROJECT 15-255

- Solar panels are designed to absorb rather than reflect light, typical panels are designed to reflect only some 2% of incoming light and reflected light from solar panels will have a significantly lower intensity than glare from direct sunlight.
- Solar facilities away from airfields are unlikely to present problems of glare to pilots.
- No evidence has been found around the world of solar array glare affecting pilots.
- The United Kingdom and United States aircraft accident databases contain no cases of accidents in which glare from solar panels was cited as a factor.

In addition to reflecting only 4% of the sunlight, the panels are designed to face due south at a fixed elevation angle to allow for the photovoltaic effect for both the higher Sun in the Summer months and for the lower Sun in the Winter months. The ideal elevation angle is when the face of the solar panel faces directly toward the Sun, which would then reflect light back toward the Sun.

We do not believe glare is an issue due to the fact that:

- Only 4% of the light is being reflected
- The closest residential home is 906 feet away and
- Existing trees screen much, if not all, of the array

We look forward to discussing this further at the March 2 Public Hearing.

Sincerely,



Amador C. Laput
Project Manager

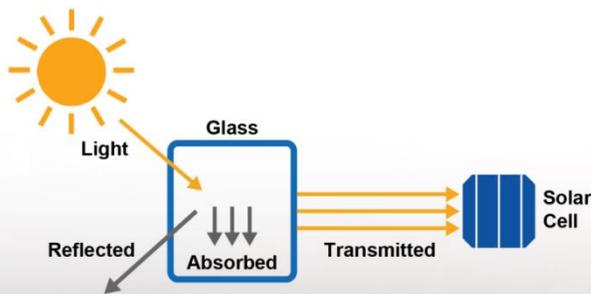
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Tech Note



ANTIREFLECTIVE GLASS

SunEdison Silvantis[®] photovoltaic modules are engineered to deliver maximum energy from high-efficiency monocrystalline silicon solar cells. In order to capture the greatest possible amount of sunlight, SunEdison has used glass that is treated with an antireflective coating (ARC) since 2012. When light reaches a material it is either transmitted, absorbed or reflected. SunEdison modules use a textured, high-transmission tempered glass that reflects and absorbs very little light and transmits as much as 94% of sunlight in the wavelengths useful to producing electricity with silicon cells. By adding an antireflective coating to the glass, light that would otherwise be reflected off the front surface of the glass is captured by the module.



CAPTURE MORE ENERGY WITH ARC GLASS:

- 94% light transmission
- Up to 4% higher energy yield
- Up to 2.4% increased efficiency



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Tech Note



BEHAVIOR OF LIGHT

When reflected, light produces specular reflection from any smooth surface where the index of refraction is different from that of air. The intensity of the reflection is dependent on the angle between the sun and the glass and the index of refraction of the glass. ARC glass has a refractive index closer to that of air than uncoated glass and has a reflectivity similar to that of water. At normal incidence, ARC glass reflects approximately 4% of incoming light while glass used in other applications typically reflects 8%. This increases the amount of light that reaches the cell; compared to modules made without ARC glass, SunEdison modules produce about 2% more module power under STC* conditions. Over the course of the day, as the angle of incidence of sunlight onto the glass changes, the ARC reduces reflection at all angles, thereby increasing energy harvest by as much as 4% compared to modules that do not use ARC.

ARC glass reduces glint and glare by reducing reflection and allowing more sunlight to transmit through the glass and into the cell. Using ARC glass is particularly important in applications where glint from a solar installation might be considered objectionable. Installation plans for solar modules near airports may need to be approved by authorities who assess the impact of glint and glare that might be produced to insure that pilot and flight tower operations are not affected. Many solar installations using ARC glass have been built at or near airports and air force bases without any disruption to aviation.

WHAT IS GLINT AND GLARE?



Glint: Also known as specular reflection, the direct reflection of the sun on the surface of the solar module can produce glint. This is the primary source of concern regarding visual distraction, and SunEdison modules with ARC glass are no more reflective than water and half as reflective as car windshields.



Glare: A continuous source of brightness, relative to diffused lighting. This is not a direct reflection of the sun, but rather a reflection of the bright sky around the sun. Glare is significantly less intense than glint.

*STC (Standard Test Conditions): 1000 W/m^2 , AM 1.5, 25 C cell temperature

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The Sun-Edison panels made with ARC glass only reflect 4% of light. Its main purpose is to absorb as much of the sun as possible.

A reflectivity study has been done (the full report can be reviewed on the Town of Chester website).

Arent Letter:

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Alexa Burchianti

From: Donald Serotta <donaldserotta@yahoo.com>
Sent: Tuesday, March 01, 2016 7:03 AM
To: Steve Denes; Alfred A Fusco Jr; Carl D'Antonio; Ernie Damiani; Alexa Burchianti; Dave Donovan; Barry Sloan; Frank Gilbert; Robert Conklin
Cc: Amador Laput; Mark Fellenzer
Subject: Fw: Siemens Public Hearing 3/2
Attachments: C-101.pdf; SIEMENS Mailing Notifications 500'.docx; SIEMANS Public notification 2.doc; ARC-Glass-Tech-Note_v4a.pdf; Reflectivity-of-Solar-Electric-PV-Modules.pdf.pdf

----- Forwarded Message -----

From: Karen Arent Landscape Architect <kala@hvc.rr.com>
To: Donald Serotta <donaldserotta@yahoo.com>
Sent: Monday, February 29, 2016 3:05 PM
Subject: FW: Siemens Public Hearing 3/2

Hello Don:

I visited the site to review the flagging installed by Fellenzer Engineering to represent the solar panel area. The proposed revised design will provide screening of the solar panels because they are far away from the viewers and there vegetation exists between the viewers and the solar panels.

Best regards,

Karen Arent

Karen Arent Landscape Architect
Phone: (845) 294-9958

From: Amador Laput [<mailto:ad@felp.com>]
Sent: Tuesday, February 23, 2016 11:09 AM
To: 'Alexa Burchianti'
Cc: rdf@felp.com; 'Drzymkowski, John'; aafjr@fuscoengineering.com; 'Karen Arent Landscape Architect'
Subject: Siemens Public Hearing 3/2

Hi, Alexa,

We're adding the attached C-101 drawing into the set to show the previous layout and this one. We have also attached information on glare that we will present on 3/2 and the notification and list. We're finalizing our cover letter and will get that and the rest of the drawings to you later.

Thanks,

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Al Fusco Letter:

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Alfred A. Fusco, Jr., P.E., Principal

Alfred A. Fusco, III, General Manager

- 233 East Main Street
Middletown, NY 10940
Phone: (845) 344-5863
Fax: (845) 956-5865
- 19 Waywayup Lane
Port Jervis, NY 12771
Phone: (845) 956-5866

March 1, 2016

Donald Serotta, Planning Board Chairman
Town of Chester
1786 Kings Highway
Chester, NY, 10918

Re: Siemens Solar
Johnson Farm Subdivision

Dear Chairman Serotta,

PROJECT:

Name: Johnson Solar Array
Applicant: Sun Edison LLC
Acreage: 83.8 Acres
SBL: 1-1-4
Zone: AR-3
Material Reviewed: Solar Photovoltaic Energy: Assessment of Potential Impact on Aviation
New set of plans dated 2/23/16 – Progress Print
2 page supplemental dated 2/22/16

We have reviewed the recently submitted material and offer the following:

1. Prints do not have revision dates – just print dates; no engineering certification.
2. Proposed solar array varies from 1/5/16 public hearing.
3. Array is closer to nearest homes and property lines.
4. Identify property line and clearly define.
5. Distance on C-101 and C-102 to closest house varies.
6. C-901: note line type difficult to read; adjust.
7. C902 (4) Solar Racking: Side elevation, dimensions varies; give range of dimensions.
8. Dimension equipment pad.
9. Town landscape architect has reported on revised location and screening.
10. Note on C-101 add bond for restoration to be given.
11. Board comments.

Action:
Pleasure of the Board.

Please advise if you have any questions.

Very truly yours,

Alfred A. Fusco, Jr., P.E.
Fusco Engineering
& Land Surveying, P.C.
AAF/cam

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Steven M. Neuhaus
County Executive

Orange County Department of Planning

124 Main Street
Goshen, NY 10924-2124
Tel: (845) 615-3840
Fax: (845) 291-2533

David E. Church, AICP
Commissioner

www.orangecountygov.com/planning
planning@orangecountygov.com

County Reply – Mandatory Review of Local Planning Action
as per NYS General Municipal Law §239-l, m, &n

Local Referring Board: Town of Chester Planning Board

Referral ID #: CHT 02-16M

Applicant: Siemans-SunEdison

Tax Map #: 1-1-4

Project Name: Johnson Solar Farm

Local File #: none provided

Proposed Action: Site Plan for installation of approximately 10 acres of ground-mounted photovoltaic cells producing approximately 2 megawatts of electricity

Reason for County Review: Within 500 feet of the Town of Chester/Town of Goshen boundary

Date of Full Statement: December 29, 2015; amended plan available February 29, 2016

Comments:

The Department has received the above referenced site plan and has found no evidence that significant intermunicipal or countywide impacts would result from its approval. We would like to offer the following advisory comments:

Environmental Impact: The proposed solar array has been redesigned following the previous submittal to Orange County Planning in December of this year, to substantially reduce or eliminate the removal of trees at the north end of the forested area onsite, which Planning is encourage to see. However, the proposed solar array will cover approximately 10 acres that currently have no impervious surface. We therefore continue to advise the Town to require green infrastructure/runoff reduction techniques for stormwater management on this project.

Solar Facility Regulations: The Town of Chester does not at this time include regulations for solar energy facilities in its zoning code. We encourage the Town to contact our office for resources, including model code language, if they choose to update their zoning code to include regulations for solar energy production.

County Recommendation: Local Determination

Date: February 29, 2016

Prepared by: Megan Tennermann, AICP, Planner

David Church, AICP
Commissioner of Planning

As per NYS General Municipal Law 239-m & n, within 30 days of municipal final action on the above referred project, the referring board must file a report of the final action taken with the County Planning Department. For such filing, please use the final action report form attached to this review or available on-line at www.orangecountygov.com/planning.

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Ground from the top of the panel is 7-8 feet depending on the angle that it is set at. The front of the racking system (bottom) is 2-3 feet from the ground.

John Dromdrowski- Discussed STEM project again for the schools.

Polled board for questions and comments.

Barry: What is the size of the acreage of the old array set up? Under the array. The ground? Wand what was the size for the new array set up? Amador: They over estimated on the first array set up. The second is approximately 10 acres. The amount of panels hasn't changed just the configuration. The ground area is slightly larger because of the new configuration. Which is approximately 10 acres. 1 Megawatt field is usually 4 acres.

Carl: Any additional trees to be added? Amador: No additional trees were going to be added. There are really 2 sets of tree lines.

Bob: The equipment pad, is that going to be an open pad? Amador: An open pad, but the transformer and inverters will be in their own cabinets on a concrete pad.

Public Hearing is now open: Let the record reflect legal notice was published in the Times Herald Record and all mailings were sent out.

James Gass 7 Arthur Rd – I have 2 simple comments. I know there is no answer to what this will do to surrounding property value. But the most upsetting the last time was is when they changed the array and they didn't notify the board. Chairman Serotta: Well they notified us by submitting the plans. That's why the board got upset that night you were here. James: That concerns me, they are a professional company they should know the right thing to do with a major change. I question the character of the company. When I first came in here I had an open mind. But now I don't want to see this built.

Phil Williams 30 Brennan Court- The water runoff from the glass panels, will the coating on the glass effect the well water?

Had a great view from the back yard. House is up hill. He will be able to see the top of the array from the back of his house. The top of the array is also uphill. I was under the impression this was going to be completely covered so it wouldn't be seen from another home. Would like orange fencing put up around the top of the array so can take pictures and show the board.

Robert Nywening Johnson Road- We have all been reading about the ground water leak at Indian Point, we are according to google map 17.9 miles. I would really like to have the board take into account and people to consider, we need to turn that thing off

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someday. And projects like this, this is a 2 megawatt project. It's 1/1000th of the output of Indian Point. We do this 1000 times we can make that beast go away! Think about it!

Tracy Shu-You mentioned the county letter they sent in, I thought you would discuss it before the hearing, they mentioned stormwater runoff. Is this going to cause any flooding to the Johnsons or any flooding? I was wondering if that was considered as an issue. Chairman Serotta: That was discussed in previous meetings that there will be no impervious surface's they are just putting poles in the ground. Tracy: The panels themselves though, the water goes underneath. Chairman Serotta: The rain water is going to hit it and run into the grass. Tracy: Oh ok, I miss understood.

Tracy: regarding the trees, is the map that they are showing does it show where the fence is going? Is there a limit of cutting trees? So that when they put the fence in all of a sudden all the trees have to come down. Chairman Serotta: yes Tracy: I was at the last Town Board meeting and I know they are almost ready to send to planning board the new zoning code, and was wondering since this project is happening at the same time, is this project compliant with what the town is putting in place. Chairman Serotta: The answer to that is Fusco Engineering has submitted a formal document to the Planning Board, the Planning Board tonight will be discussing it if you wish to hang around. We will be getting into a discussion, we probably won't finish tonight, it's the Planning Boards job to write a recommendation and comment on and give back to the town. Whether or not they listen to us is up to them. To answer the 2nd part of your question would be you and I both know how long it takes to get things done and time and public hearings. It wouldn't be fair, they are following the current rules that are in place there is no moratorium in place, it wouldn't be fair to them if we didn't proceed diligently done the line. We will listen to the public comments tonight, this may cause more discussions we don't know yet. Tracy: They are happening at the same time I would just assume projects like this, whatever the issues may be that they would be talked about now. Chairman Serotta: I can tell you basically everything that is in there has been covered by the board and probably even stronger language than they put in there.

Richard Rolland 6 Brennan Court-I am 2 houses down form the guy that was talking before me. I can see that from my front yard. I haven't looked recently. I didn't know until recently that this was going in. I would definitely see an 8 acre array from where I am. I am all for solar but I think we should put them on top of the schools and buildings not out in farm land. Are you guys going to change the drainage or no? Chairman Serotta: There is no real disturbance here. Mr. Rolland: The poles going into the ground are they treated? Mr. Dromdrowski: They are galvanized steel poles. Mr. Rolland: I feel this will depreciate out value.

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Keith Beck 22 Brennan Court-I am between the 2 people that already spoke. I agree with them, I can see that hill right now. I don't need poles. I can already see it.

AJ Burger 714 Craigville Road-I appreciate the boards decision in all this because the board has to listen to all this and walk in everyone's shoes. A couple of points to be brought up are, This is not a permanent project in 20-30 years when technology changes the panels wont be there and the ground will continue to be a farm. Which I would much rather see than 120 bi-levels. With that point, also Mr. Nywening Indian Point, I'm not contrary to nuclear power however again weighing things I would much rather go with the solar power, and it would reduce all fossils fuels by going solar. I have solar panels on my house. I don't think it has affected my property one bit.

Let the record reflect that no one else spoke for or against the application.

Polled board to close the public hearing or keep it open: All in favor to close.

Motion made to close Public Hearing by Bob. Second by Ernie. Motion carried 6-0

As far as the public goes, I encourage everyone to attend our meetings, we post documents on line. We will have a discussion and take everyone's comments in consideration. The next meeting will schedule Siemens for April 6th at 7pm.

FLORENCE MADONIA – SITE PLAN

Karen Emmerich from Lehman & Getz for Florence Madonia – All comments have been satisfied in the past. The Orange County DPW have approved there plans.

DPW Approval Letter:

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*Steven M. Neuhaus
County Executive*

**ORANGE COUNTY
DEPARTMENT OF PUBLIC WORKS**

Christopher R. Viebrock, P.E.
Commissioner

P.O. Box 509, 2455-2459 Route 17M
Goshen, New York 10924-0509

www.orangecountygov.com

TEL (845) 291-2750 FAX (845) 291-2778

Via Email: donaldserotta@yahoo.com

February 24, 2016

Don Serotta, Chairman
Town of Chester Planning Board
1786 Kings Highway
Chester, NY 10918

Re: Madonia - Commercial Entrance
1834 County Route 13 -- Kings Highway
Town of Chester, SBL: 7-1-1
Plans By Lehman & Getz, P.C.
Sheets 1-2 Date: Last Revised: 2/4/16

Dear Mr. Serotta:

This Department has reviewed the plans for the above referenced commercial entrance and Orange County Department of Public Works approval is hereby granted under the provisions of Section 239-f of the General Municipal Law. Therefore, it is now referred back to your Board for action and/or approval.

A Highway Work Permit must be secured from the Orange County Department of Public works under Section 136 of the Highway Law prior to any site preparation or construction.

If you have any questions, please contact this Office at your earliest convenience.

Very Truly Yours,

Mike Carroll
Senior Engineer

Cc: Travis Ewald, PE, Deputy Commissioner
Joseph Stankavage, PE, Principal Engineer
Karen Emmerich, Lehman & Getz, P.C. Via Email karen@lehmangetz.com

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Fences are down now. The fence in the right of way and will be removed. The entrance must be widened slightly and paved. No plantings or landscaping in the county of right of way. All future landscaping and planting must be in 5ft. They agreed to eliminate the stop sign and the stop bar. No signs in the right of way. They modified the plans accordingly and they approved it.

Polled board for comments or questions:

Barry: Can't we override the county. If she wants to beautify the street let her, why can't she make the highway look better. It's just a comment

Ernie: I agree with Barry.

Carl: I'm glad Barry brought it up. There is no curb appeal in this town. I agree with Barry.

Motion made for Negative Declaration by Barry. Second by Carl. Motion Carried 6-0

Motion mad for Final Approval by Ernie. Second by Steve. Motion Carried 6-0

EIGHTEEN-EIGHT GROUP – WORK SESSION

James Dillin – No Show

Planning Board discussion about Solar Zoning Law for the Town Board.

Meeting Adjourned 9:30pm

Respectfully Submitted,

Alexa Burchianti
Planning Board Secretary