

ENERGY COMMITTEE
TOWN OF SOUTH WINDSOR

Minutes

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September 19, 2017

Madden Room – South Windsor Town Hall

1. Call Meeting to Order

The meeting was called to order at 4:32 p.m.

2. Roll Call

Members Present: Hank Cullinane, Resident
Mike Gantick, Director of Public Works
Patrick Hankard, Board of Education
Deputy Mayor Janice Snyder, Town Council
Richard Stahr, Board of Education
Sherman Tarr, Resident
Stephen Wagner, Resident

Members Absent: Larry Brown, Resident
William Carroll, Town Council
Councilor Edward Havens, Town Council
Athena Loukellis, Resident

Others Present: Cody Anselmo, Earthlight Solar & Energy Solutions
Doug Lombardi, Earthlight Solar & Energy Solutions

4. Next Meeting

The next Energy Committee meeting is scheduled for Tuesday, October 17, 2017 at 4:30 p.m. in the Madden Room

5. Business

A. Solar on Town Facilities

a. Update on Orchard Hill RFP Discussions with BOE

Chairman Wagner informed the Committee that he had sent a letter to the Board of Education through the Superintendent of Schools. At the Board of Education meeting, the letter was discussed briefly, and there were good comments made by Richard Stahr and the Superintendent. Mr. Stahr stated that if there is a cost savings, there is no reason not to move forward.

(Discussion Continued on Next Page)

5. A. (Continued)

Mr. Hankard explained that he would have to see how much roof is stable enough for solar. The new Orchard Hill Elementary School may become a shelter. Another option would be to not put solar on the roof.

Mr. Wagner stated he would be going to the Board of Education meeting again when this item is put on the agenda.

3 Approval of Minutes

Mr. Cullinane made a motion to approve the July 18, 2017 minutes. Mr. Stahr seconded the motion; and they were approved, unanimously.

5. Business (Continued)

C. **Small Business Outreach Effort**

a. *Presentation by Earthlight Technologies (Doug Lombardi, Cody Anselmo)*

Mr. Doug Lombardi from Earthlight Technologies stated that Earthlight Technologies works with energy conservation and solar solutions; and explained the outreach program to the Committee members. Earthlight had previously done an outreach program to all the small businesses in Bloomfield. Letters were mailed and were also sent electronically, (a sample letter is attached as **Exhibit A**). Mr. Cody Anselmo is the individual who identifies companies that would benefit from this program.

Committee members discussed the program and how it would work. They also had various questions and stated that they would put this item on the next agenda for further discussion.

B. **Zoning Changes Regarding Solar Height Limits (Steve)**

- a. *Update on Planning and Zoning Discussion*
- b. *Rough Draft of Zoning Changes*
- c. *Photos from Hammonasset State Park, Stafford Town Hall, and Stafford Middle School*

Chairman Wagner informed the Committee that he had sent a letter to Michele Lipe who is the Director of Planning. She responded to the

(Discussion Continued on Next Page)

ITEM:

5. B. (Continued)

proposed changes to the regulations. Chairman Wagner reviewed the proposed changes to the zoning regulations, as shown in attached, **Exhibit B**. Chairman Wagner explained that he had attended a Planning & Zoning meeting but did not get the opportunity to review the changes thoroughly and would be going to the next meeting.

D. Solarize South Windsor Update (Steve and Sherm)

- a. Metrics*
- b. Cutoff Extension*
- c. Sign removal*

Chairman Wagner informed the Committee that there had been 77 leads, 30 visits, 17 sites not feasible, and six contracts. The program has been extended to September 30th. Signs regarding the program will need to be removed.

E. Energize South Windsor Update (Athena, Hank, and Larry)

- a. Mailing and other publicity*
- b. Tables at events*

Chairman Wagner reviewed an email from Athena, as shown in attached **Exhibit C**.

F. Virtual Net Metering Update

Chairman Wagner reviewed the email from Jaime Smith regarding Virtual Net Metering, as shown in attached **Exhibit D**. The site may be able to be toured in the future.

6. Miscellaneous

Chairman Wagner informed the Committee about an event that is being held by South Windsor Alliance for Progress on Thursday, October 12th. The presentation will be about what to do with food waste.

Mr. Gantick stated that the Town went out for a new energy contract. The contract with MG Resources will start in December of 2018.

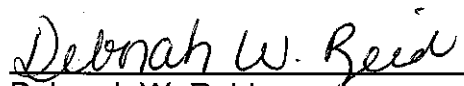
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ITEM:

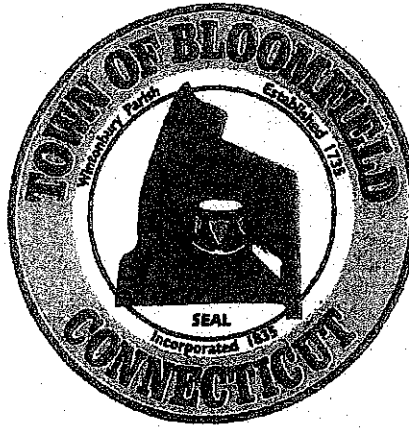
7. Adjournment

At 5:46 p.m. Mr. Cullinane made a motion to adjourn the meeting. Mr. Gantick seconded the motion; and it was approved, unanimously.

Respectfully submitted,

A handwritten signature in dark ink, reading "Deborah W. Reid", is written over a horizontal line.

Deborah W. Reid
Clerk of the Council



Dear Bloomfield Business:

Are you looking for cost-effective energy saving solutions to help your business grow?

You can **Save Money by Saving Energy!** The Town of Bloomfield, Bloomfield Conservation Energy & Environment Committee and Bloomfield Chamber of Commerce have partnered with Eversource and certified energy contractors: Victory Energy Solutions and Earth Light Technologies to bring energy saving offerings to Bloomfield Businesses to provide free assessments of ways to make your business more efficient.

With support from Energize Connecticut, the Bloomfield business energy-saving initiative can provide cash incentives towards energy efficiency equipment upgrades and likely zero percent financing for structural changes.

"This is the perfect time for you to *save money by saving energy* ... we've vetted the contractors, planned the initiative and now invite all of our Bloomfield businesses to participate. All that's necessary is that you call for your free energy assessment. Please, do it now!

... Marie MacDonald, Chair, CEEC

Now through December 2017, up to a \$250 donation will be made to the Bloomfield Fuel Bank for every business that participates in an Energize Connecticut business energy solution which includes:


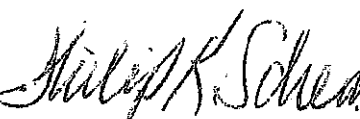

- Free on-site energy audits for eligible small businesses
- Rebates and discounts on energy-efficient lighting, heating and cooling equipment, insulation and more
- New construction incentives to help build your new business using energy-efficient design techniques and equipment
- Solutions for existing buildings to help upgrade equipment to more efficient models, or evaluate and analyze existing building management systems, operations and maintenance practices

Call **860 871-9700** to speak to an energy expert and schedule your free energy assessment.

These business energy solutions are funded by a small charge on electric and natural gas bills—it's **your money, so take advantage and start saving today.**

Thank you for helping make Bloomfield a clean, energy-efficient community.

Very truly yours,

Joan A. Gamble
Mayor

Philip K. Schenck Jr.
Town Manager

Marie MacDonald
Bloomfield CEEC Chair


Jerry Katrichis
Chamber of
Commerce President

SOUTH WINDSOR PLANNING AND ZONING COMMISSION
TEXT AMENDMENT
SOLAR ENERGY SYSTEMS
ADOPTED 6-23-15; EFFECTIVE 7-5-15; DRAFT 8-23-17

Exhibit B

(ADD TO ARTICLE 10 DEFINITIONS)

Definitions:

Solar Energy System: Solar energy systems include ground, pole and roof mounted systems.

Solar Energy System, Large: A solar energy collection system, which is interconnected to the local utility electrical grid and generates electricity that can be sold directly into the wholesale electricity market through a regional transmission organization, and/or be used to serve all or part of the electric load at one of more properties and consumers.

Solar Energy System, Roof-Mounted: A solar collection system that is installed upon or is part of the roof of a building or structure located on the subject property. Systems integrated as awnings or attached to the roofs of porches, sheds, carports, and covered parking structures also fall under this distinction.

Solar Energy System, Ground-Mounted: A free-standing solar collection system that is installed as either a principal structure or an accessory structure on a recorded lot.

Solar Energy System, Small: An accessory solar energy collection system that includes either a solar photovoltaic system and/or a solar thermal system ~~used generally in residential settings.~~

Solar – Parking Lot Canopy – A solar energy system with a supporting framework that is placed on, anchored in, the ground and that is dependent of any building or other structure, which is used in a parking lot or the top story of a parking structure to shade vehicles in such lot or structure.

Solar Photovoltaic (PV) System – A solar collection system consisting of one or more building systems, solar photovoltaic cells, panels or arrays and solar related equipment that rely upon solar radiation as an energy source for collection, inversion, storage and distribution of solar energy for electric distribution.

Solar Thermal Energy System – A solar collection system that directly heats water using sunlight. The heated liquid is used for such purposes as space heating and cooling, domestic hot water and heating pool water.

SECTION 7.20 Solar Energy Systems

7.20.1 Purpose:

The purpose of this subsection is to promote the use of solar collectors and provide for the regulation of the construction and operation of Solar Energy Systems, subject to reasonable conditions that will protect the environment, public health, safety, and welfare.

7.20.2 Provisions

7.20.2.1 Small solar energy systems shall be permitted as an accessory use by right in all zoning districts subject to the requirements set forth in this section. Solar energy systems include ground, pole and roof mounted systems.

7.20.2.2 The energy generated by the small solar energy system shall be used for direct consumption on the subject property and/or to be interconnected to the electric utility power grid to off-set energy use on the subject property, in accordance with current state net-metering laws and regulations.

7.20.2.3 The construction of the small solar energy system shall be in accordance with an approved building permit application.

7.20.3 Setbacks and Height

- A. In residential districts ground mounted small-scale solar energy systems are limited to 12 feet in height and shall be conform to setbacks for accessory structures in accordance with Table 3.2.1.A. Ground or pole-mounted solar energy system shall only be allowed in the rear or the side yard behind the front building line. Systems taller than 12 feet in height, shall be allowed by Special Exception for: accessory structures associated with agricultural use, non-residential parking lots subject to the following review criteria:
 - a. Impact on surrounding residential properties
 - b. Aesthetic of the proposal
 - c.
 - d.

- B. In Commercial and Industrial zones, ground mounted small-scale solar energy systems shall be placed so that no individual component of the solar system may extend into the front, side or rear setback in accordance with Table 4.2.1.A for the district. Systems, taller than 12 feet in height, shall be allowed by Special Exception subject to the following review criteria:
 - a. Impact on surrounding industrial properties
 - b.
 - c.
 - d.

7.20.4 Ground-Mounted Small Solar Energy Systems

- A. ~~The total height of the solar energy system, including any mounts shall not exceed 12 feet above the ground at maximum height.~~ Additionally, if the solar energy system is intended to provide power for outdoor lighting or part of a parking lot solar canopy, the system shall not extend higher than the permitted height of the structure to which it is attached and/or interconnected.
- B. Panels shall be mounted onto a pole, rack or suitable foundation, in accordance with manufacturer specifications, in order to ensure the safe operation and stability of the system. The mounting structure (fixed or tracking capable) shall be comprised of materials approved by the manufacturer, which are able to fully support the system components and withstand adverse weather conditions.
- C. Multiple mounting structures shall be spaced apart at the distance recommended by the manufacturer to ensure safety and maximum efficiency.
- D. Any electrical wiring used in the system shall be underground (trenched) except where wiring is brought together for inter-connection to system components and/or the local utility power grid.

- E. No ground-mounted small solar energy systems shall be affixed to a fence.
- F. Ground mounted small-scale solar systems shall be screened from adjoining residential districts by arborvitae or similar evergreen hedge planted six feet on center located on the outside of the perimeter fence. The Commission may allow additional or alternative screening methods such as berms and opaque fencing when it is determined that such alternatives are more appropriate for the particular site and will not impact sun exposure.
- G. Ground-mounted small-scale solar energy systems in all Residential A and RR zones are subject to Special Exception/Site Plan approval. Small scale solar energy systems in Commercial and Industrial zones shall be subject to Site Plan review pursuant to the provisions of Section 8.5 of these Regulations.

7.20.5 Roof-Mounted Small Solar Energy Systems

- A. Roof-mounted small solar energy systems shall include integrated solar shingles, tiles, or panels as the surface layer of the roof structure with no additional apparent change in relief or projection, or separate flush or rack-mounted solar panels mechanically fastened to and/or secured with ballast on the roof surface.
 - 1. Separate flush or rack-mounted small solar energy systems installed on the roof of a building or structure shall not:
 - a. Project vertically more than 4 inches above the peak of the sloped roof to which it is attached; or
 - b. Project vertically more than five (5) feet above a flat roof installation.
 - 2. It shall be demonstrated that the placement of the system shall not adversely affect safe access to the roof, pathways to specific areas of the roof, and safe egress from the roof.
 - 3. Any glare generated by the system must be mitigated or directed away from an adjoining property or adjacent road when it creates a nuisance or safety hazard.
- B. Appearance
 - 1. Appearance, color, and finish: The small solar energy system shall remain painted or finished in the color or finish that was originally applied by the manufacturer.
 - 2. All signs, other than the manufacturer's or installer's identification, appropriate warning signs, or owner identification on a small solar energy system shall be prohibited.

C. Code Compliance

A small solar energy system shall comply with all applicable construction and electrical codes.

D. Removal

All obsolete or unused systems shall be removed within twelve (12) months of cessation of operations without cost to the Town or may be subject to Zoning Enforcement.

E. Violations

Subsequent to the effective date of this ordinance, it is unlawful for any person to construct, install, or operate a small solar energy system that is not in compliance with this chapter or with any condition contained in a building permit issued pursuant to this chapter.

7.21 LARGE SCALE SOLAR ENERGY SYSTEM

7.21.1 Purpose:

The purpose of this subsection is to promote the use of large scale solar collectors and provide for the regulation of the construction and operation of Large Scale Solar Energy Systems, subject to reasonable conditions that will protect the environment, public health, safety, and welfare.

7.22.1 Compliance with Laws, Ordinances and Regulations

The construction and operation of all large scale Solar Energy Systems shall be consistent with all applicable local, state, and federal requirements, including but not limited to, all applicable safety, construction, electrical, and communications requirements.

7.22.2 Zoning, Building Permit and Building Inspection

No large scale Solar Energy System shall be constructed, installed, or modified as provided in this section without first obtaining a zoning and building permit.

7.22.3 Special Exception/ Site Plan Review

Ground-mounted large scale Solar Energy System are allowed by Special Exception in Industrial Districts and Residential Districts subject to site plan review prior to construction, installation or modification as provided in this section.

A. Required Documents

Pursuant to the special exception/site plan review process, the project proponent shall provide the following documents in addition to the Site Plan submission requirements of Section 8.5 and Special Exception requirements of Section 8.7.

1. Blueprints or drawings of the Solar Energy System signed by a Professional Engineer licensed to practice in Connecticut showing the proposed layout of the system and any potential shading from nearby structures;
2. Manufacturer's data sheets or similar documentation of the major system components to be used, including the PV panels, mounting system, and inverter;
3. An operation and maintenance plan;
4. Proof of liability insurance.

The Commission may waive documentary requirements that it finds are unnecessary to determine compliance with these regulations, as it deems appropriate.

7.22.4 Site Control

The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed Solar Energy System.

7.22.5 Operation & Maintenance Plan

The project proponent shall submit a plan for the operation and maintenance of the large scale ground-mounted Solar Energy System, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.

7.22.6 Utility Notification

No large scale ground-mounted Solar Energy System shall be constructed until evidence has been given to the Planning and Zoning Commission that the utility company that operates the electrical grid where the installation is to be located has been informed of the Solar Energy System owner or operator's intent to install an interconnected customer-owned solar energy system. Off-grid systems shall be exempt from this requirement.

7.22.7 Dimension and Density Requirements

A. Setbacks

For large scale ground-mounted Solar Energy System, front, side and rear setbacks shall be as follows:

1. Front yard: The front yard depth shall be at least 10 feet; provided however, where the lot is across from a residential district, the front yard shall not be less than 50 feet.
2. Side yard: Each side yard shall have a depth at least 25 feet; provided however, where the lot abuts a Residential district, the side yard shall not be less than 100 feet.
3. Rear yard: The rear yard depth shall be at least 20 feet; provided however, where the lot abuts a Residential district, the rear yard shall not be less than 100 feet.

B. Minimum Lot Size

The minimum lot size for any large scale Solar Energy System shall be seven (7) acres.

C. Height

The total height of any large scale Solar Energy System, including any mounts, shall not exceed twelve (12) feet above the ground.

7.22.8 Accessory Structures

All accessory structures to large scale ground-mounted Solar Energy Systems shall be subject to the underlying zoning requirements concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. All such accessory structures, including but not limited to, equipment shelters, storage facilities, transformers, inverters and substations shall be architecturally compatible with each other. Whenever reasonable, structures should be shaded from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

7.22.9 Design Standards

A. Lighting

Lighting of large-scale Solar Energy Systems shall be consistent with local, state and federal law. Lighting of other parts of the installation, such as accessory structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Lighting of the Solar Energy System shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

B. Signage

Signs on large-scale ground-mounted Solar Energy System shall comply with the Sign regulations. A sign consistent with the regulations shall be required to identify the owner and provide a 24-hour emergency contact phone number. All appropriate warning signs shall be posted.

C. Utility Connections

Reasonable efforts, as determined by the Planning and Zoning Commission, shall be made to place all wiring from the Solar Energy System underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers, inverters and switchgears for utility interconnections may be above ground.

D. Screening

A ground mounted large solar energy system shall be screened from adjoining residential districts by arborvitae or similar evergreen hedge planted six feet on center located on the

outside of the perimeter fence. The Commission may allow additional or alternative screening methods when it is determined that such alternatives are more appropriate for the particular site. The Commission may also allow fencing up to eight (8) feet in height where deemed appropriate.

7.22.10 Safety and Environmental Standards

A. Emergency Services

The large scale Solar Energy System owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the local fire marshal. Upon request, the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the Solar Energy System shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.

B. Land Clearing and Soil Erosion Impacts

Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the large scale ground-mounted Solar Energy System or otherwise prescribed by applicable laws, regulations, and bylaws.

7.22.11 Monitoring and Maintenance

A. Solar Energy System Conditions

The large scale ground-mounted Solar Energy System owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Marshal and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the Solar Energy System and any access road(s), unless accepted as a public way.

B. Modifications

All material modifications to a Solar Energy System made after issuance of the required building permit shall require approval by the Planning and Zoning Commission.

7.22.12 Abandonment or Decommissioning

A. Removal Requirements

Any large scale ground-mounted Solar Energy System which has reached the end of its useful life or has been abandoned shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Planning and Zoning Commission by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

1. Physical removal of all large scale ground-mounted Solar Energy System, 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 Planning and Zoning Commission may allow the owner or operator to leave

landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.; and

4. A stabilization/re-vegetation plan shall be submitted along with the Site Plan application.

B. Abandonment

Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the Solar Energy System shall be considered abandoned when it fails to operate for more than one year without the written consent of the Planning and Zoning Commission. If the owner or operator of the large scale ground-mounted Solar Energy System fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the Town may enter the property and physically remove the installation.

wagnersg-sw@outlook.com

From: Stephen Wagner-SW
Sent: Tuesday, September 19, 2017 10:23 AM
To: 'Athena Loukellis'
Subject: RE: Canceled: Energy Committee Meeting

Thanks for the update. Cox.com seems to reject emails sent to even modest sized groups.

Steve

Stephen Wagner
wagnersg-sw@outlook.com
860-648-4434
860-490-8764 (m)

From: Athena Loukellis [mailto:aloukellis@cox.net]
Sent: Tuesday, September 19, 2017 12:50 AM
To: Steve Wagner <wagnersg-sw@outlook.com>
Cc: Hankard, Patrick T <PHANKARD@swindsor.k12.ct.us>; Tarr, Sherman <shermtarr@aol.com>; Brown, Larry <laurence-brown@att.net>; Cullinane, Hank <henrycu@cox.net>; William A. Carroll <william.a.carroll2@gmail.com>; Stahr, Richard <richard.stahr@swindsor.k12.ct.us>; Michael Gantick <Michael.Gantick@southwindsor.org>; Havens, Ed <ehavens@imperialoilco.com>; Snyder, Janice <janice.snyder@cox.net>; Rick Stahr <rickstahr@gmail.com>
Subject: Re: Canceled: Energy Committee Meeting

Hi Steve ~

I didn't receive a meeting notice/agenda from Deb, however, the online calendar shows a meeting for tomorrow. I'm sorry, however, I will be in New York for most of the day and will not be back, should there be a meeting.

As you know, our primary contact at Eversource, Samantha Sojka left in early August and our account was transitioned to Alison Jackman. I finally recieved a draft of our HES poster in early August, recommended 2 changes. I received a new draft back in late August. I ok'd the minor changes on the poster and am waiting for the printed materials.

I'm sorry that the HES program dragged all summer...We'll have to give it a big push this Fall ~

Hope your summer has been fun.....

Athena

On Sep 18, 2017, at 9:07 PM, Rick Stahr <rickstahr@gmail.com> wrote:

I'll be there.

Rick

On Mon, Sep 18, 2017 at 9:05 PM, Stephen Wagner-SW <wagnersg-sw@outlook.com> wrote:

wagnersg-sw@outlook.com

From: Jaime Smith <jsmith@lodestarenergy.com>
Sent: Monday, September 11, 2017 1:39 PM
To: Galligan, Matthew; Stephen Wagner - sw
Cc: Jeff Macel; Jack Funk
Subject: East Windsor Solar Project - Estoppel & Consent
Attachments: Town of South Windsor Estoppel Certificate VNM Agreement (Norcap S.).docx; Town of South Windsor - Consent to Pledge of PPA.docx

Hope you both had a great summer.

Construction is progressing on our East Windsor project. Panels are in transit arriving in October. Our plan is to energize the system in late November.

Please find attached an estoppel and consent for our tax equity and debt providers respectively. These are routine documents confirming that our contract remains in place and getting the Town's consent on our debt.

Please let us know if you have any questions; otherwise, please sign and send back to us at your earliest convenience.

Thanks,

Jaime



~~~~~  
Jaime A. Smith  
Lodestar Energy  
(O) 203-677-0947  
(M) 703-883-7413  
~~~~~