

# TOWN OF WOODSTOCK

## CLIMATE SMART TASK FORCE

Erin Moran, Coordinator  
Kenneth Panza, Secretary

Application for 5 Points

### PE4 Action: Renewable Energy Feasibility Studies

3 Points

4 Points

5 Points

## Solar Feasibility Study – 2017

### A Proposal from Solar Generation for Solar Arrays at Yerry Hill Rd. Pump House #1 and Town Offices on Comeau

The Town of Woodstock has investigated photovoltaic solar, a wind power ESCO, micro-hydro, and run of the river hydro. The town eventually subscribed to hydroelectric plants on the Wallkill and at Wappingers Falls for hydroelectric energy available through the Natural Power Group under the terms of Community Distributed Generation.

Evaluation of solar began in 2012 and extended through 2017 encompassing three requests for proposals (RFPs). Although the 2012 and 2014 efforts fall beyond the five year limit established in the Climate Smart Protocol, it was during 2012 when substantial work to understand solar was completed. Understand Net Metering, Remote Net Metering, the town's power requirements, the challenges of utility interconnection, site plan considerations, etc. mostly occurred in 2012, but the results were carried forward into 2017.

#### April 5, 2017 Meeting of the Environmental Commission

Bill Dubilier updated the group on Woodstock's solar initiatives. Bill has been in touch with Todd Koelmel of Solar Generation and Chad Dickason (Red Hook Solar), among others. Bill later distributed to the Board Ken Panza's March 27, 2017, "Ulster Country Climate Smart Committee, Town of Woodstock Update," and also a March #274-page PDF from the NYS Public Service Commission (PSC), entitled "Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters" (plus the related press release).

#### May 3, 2017 Meeting of the Environmental Commission

David promised to distribute to the group a quote developed by Todd Koelmel of Solar Generation to equip Woodstock's pump house #1 with solar arrays. The members will review that quote and decide at the May 17th meeting whether to recommend to the Town a standalone solar solution for each metered Town building.

(The proposals from Solar Generation are included in Appendix A of this Document.)

**May 17, 2017 Meeting of the Environmental Commission**

The members discussed quotes received from Todd Koelmel of Solar Generation for solar arrays at Yerry Hill pump house #1 and at the main Comeau offices. The group then considered various strategies to fund such arrays.

**June 17, 2017 Meeting of the Environmental Commission**

David will draft a letter to the Town Board regarding the WEC's recommendations for a solar array program. He will send the letter to the other WEC members for review.

(The letter, dated June 26, 2017 is included in Appendix A of this Document.)

**June 21, 2017 Meeting of the Environmental Commission**

David had drafted a letter to the Town Board regarding three separate options to provide solar power for all the electricity needed by the town buildings. He invited Ken Panza to the meeting to offer additional perspectives. Ken discussed various possibilities and answered questions. He brought to the group's attention the Mid-Hudson Community Solar Workshop scheduled on July 11, which David will try to attend. As a result of Ken's input David will revise his draft letter and circulate it to the group for review.

**July 10, 2017 Meeting of the Environmental Commission**

David had drafted a letter to the Town Board regarding three separate options to provide solar power for all the electricity needed by the town buildings. He will further revise the letter and circulate it to the group for review.

**September 6, 2017 Meeting of the Environmental Commission**

David updated the group regarding a plan for Town solar arrays. Earlier this week he spoke with Bill McKenna, and received advice from someone familiar with financing community projects via bonds. The best way forward is for David to draw up a plan to finance solar arrays for the town buildings through issuance of a bond; this can be approximated by calculating the cost of a self-amortizing mortgage for 10- and 15-year periods. David will write this up and send it to the other WEC members for review.

**September 30, 2017 Meeting of the Environmental Commission**

David updated the group regarding a plan for Town solar arrays. He discussed salient points in a memo he has prepared to be sent to the Town Board. It was decided that members will take additional time to study the memo and it will be added to the agenda for further discussion at the October 4th meeting.

**October 4, 2017 Meeting of the Environmental Commission**

David Gross briefed the group regarding a plan for Woodstock's solar arrays and a memo prepared by him to be sent to the Town Board. David M. weighed in with expertise gleaned from a career in solar equipment installation. He advised the members to recommend that the town move quickly to lock in currently favorable conditions. David Gross agreed to write up an e-mail cover note and share it with the other members. The note will emphasize the need for prompt action, and the WEC's willingness to help the TB craft an effective RFP. Ann moved to approve David's memo and proposed cover note; Mary seconded the motion and the vote was carried as follows:

<b>Name</b>	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
<b>Vote</b>	Yes	Absent	Yes	Yes	Yes	Yes	

(The letter, dated October 4, 2017 is included in Appendix A of this Document.)

#### Correspondence Concerning the Commission's October 4, 2017 to the Town Board

- Ken Panza's comments on the October 4, 2017 letter.
- Ken Panza's financial analysis of the proposal offered in the October 4, 2017 letter.
- Ken Panza's updated financial analysis of the proposal offered in the October 4, 2017 letter.

(These letters are included in Appendix A of this Document.)

#### October 18, 2017 Meeting of the Environmental Commission

David reported that he spoke with Bill McKenna on October 6th about the WEC's proposal for solar arrays, reiterating the need for prompt action. Several of the WEC members will reach out to council people on the Town Board to make sure they're familiar with the proposal and ready to move on it as soon as possible.

In terms of a solar RFPs for the various town properties, David Gross will speak with David Martindale and Todd Koelmel. Julia will reach out to Larry Brown.

#### November 1, 2017 Meeting of the Environmental Commission

David G. reported that he had reached out to Todd Koelmel regarding the best way to structure an RFP for solar arrays on Town buildings. Julia had contacted Larry Brown, who will be in touch with David G. by mid-November. WEC members discussed the need to move quickly to secure cost savings. David G. asked David M. about the likely timeframe for an RFP, receipt and review of proposals, project award(s) and implementation.

#### November 10, 2017 – Ken Panza's Letter to WEC and Town Board

During the past six years, the Woodstock Town Board has worked to install a large scale solar array at the Waste Water Treatment Facility (WWTF) to supply the town government's electrical needs with renewable energy. Since 2012, the board has approved four solar procurements, but has been unsuccessful in completing an installation. Recently, the Environmental Commission was instructed to review the requirements and offer a proposal based on multiple smaller arrays. This note is a comment on some of the possible options for the town.

- David Gross, WEC Chair, responds to Ken Panza's Nov. 10 letter
- Ken Panza replies to David Gross' comments on the Nov. 10 letter

(Correspondence is available in Appendix A of this Document.)

#### November 15, 2017 Meeting of the Environmental Commission

David G. reported that he had reached out to Luke Forster at NYSERDA to better understand the Value Stack calculator now associated with solar arrays. Luke suggests that interested parties listen to the "Value Stack Calculator and VDER Overview Webinar" available on NYSERDA's VDER (value of distributed energy resources) webpage: <http://nyserda.ny.gov/vder>.

Appendix A – Proposals, Correspondence, Financial Analysis, etc.

Appendix B – Minutes of the Woodstock Environmental Commission, 2017

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Kenneth Panza, Secretary

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## Appendix A

### Photovoltaic Solar Feasibility Studies

2017 – A Proposal from Solar Generation for Arrays at  
Yerry Hill Rd. Pump House #1 and Town Offices on Comeau

Proposals, Correspondence, Financial Analysis, etc.

Town of Woodstock  
Yerry Hill Pump House #1  
c/o David Gross  
whineguy@gmail.com

April 18, 2017

**49.9 kW Ground Mounted Solar Array**

(175) Trina 285 Watt all black solar panels.

(6) SMA String Inverters.

Aluminum and steel ground mounted racking system.

Approximately **60,000 kWhs** per year.

5 year SOLARgeneration, inc. workmanship warranty.  
25 year Trina linear power warranty.  
10 year SMA warranty.

**Pollution Reduction Attributed to a PV System of this Size**

**94,650 lbs. Carbon Dioxide** per year – biggest contributor to global warming.

**90 lbs. Nitrogen Oxides** per year – forms ground-level ozone, and acid rain.

**260 lbs. Sulfur Dioxide** per year – produces respiratory illness, and smog.

**Pricing**

Total Value	\$144,640
NYSERDA Grant estimate	<u>\$ 19,950</u>
<b>Installed Price</b>	<b>\$124,690</b>

## Pump House #1

<u>Pump House #1 Electrical Usage</u>		2016	
kWh Used	59,593		Volumetric Cost/kWh
Volumetric Supply Cost	\$4,430		\$0.07434
Basic Service & Demand	<u>\$4,392</u>		
Total PH #1 Central Hudson Billing	\$8,822		
60 KW Pump House #1 Solar Array			
Estimated solar generation (kWh)	78,840		
Volumetric solar credit	(\$5,861)		\$0.07434
Adjusted Central Hudson Billing	\$2,961		
Cost of Solar	<u>\$12,655</u>		Percent Change
Revised Pump House #1 Expense	\$15,616		77%
Solar Savings/(Deficit)	(\$6,794)		

Town of Woodstock  
Main Comeau Offices  
c/o David Gross  
whineguy@gmail.com

May 17, 2017

**22.8 kW Ground Mounted Solar Array**

(80) Trina 285 Watt all black solar panels.

(3) SMA String Inverters.

Aluminum and steel ground mounted racking system.

Approximately **27,000 kWhs** per year.

5 year SOLARgeneration, inc. workmanship warranty.  
25 year Trina linear power warranty.  
10 year SMA warranty.

**Pollution Reduction Attributed to a PV System of this Size**

**43,160 lbs. Carbon Dioxide** per year – biggest contributor to global warming.

**41 lbs. Nitrogen Oxides** per year – forms ground-level ozone, and acid rain.

**120 lbs. Sulfur Dioxide** per year – produces respiratory illness, and smog.

**Pricing**

Total Value	\$66,120
NYSERDA Grant estimate	<u>\$ 9,120</u>
<b>Installed Price</b>	<b>\$57,000</b>





## WOODSTOCK ENVIRONMENTAL COMMISSION

MEMORANDUM

To: Woodstock Town Board

From: Woodstock Environmental Commission

Date: June 26, 2017

Re: Solar energy options for the town

You have asked us to consider the various options before the town to provide solar power for all the electricity needed by the town buildings. We have considered three options: 1. Entering into a PPA; 2. Community solar; and 3. Correcting and paying for solar arrays.

We recommend that the town provide electricity by erecting its own solar arrays. None of the concerns about quality of components or overpayment of rates, discussed below, would then be present. According to the estimates we have received from Solar Generation, which we assume, for the purposes of this memorandum, are accurate, and on the assumption that the spreadsheet created by Ken Panza with respect to the town's 2015 electricity payments is accurate, the arrays would be paid off in approximately 14.75 years--if we repay the loan in the same amount per month we are now paying Central Hudson for electricity. This is based on the assumption that we could bond the arrays at a 2% interest rate and that the term of the bond is within our control. We understand that both assumptions are open to question and need to be verified. If the interest rate were double, 4%, the loan would be repaid after 17 years and 10 months. After the bond was repaid, the town's electricity would be free. By which we mean, totally free, 100% free.

The question of how to finance the arrays is open. The only obstacle to erecting either one remote net metering array, or a series of stand alone arrays, all at once, is the availability of financing. If that can't be done, the town could set aside a given amount of money every year. If the amount set aside in year one were greater than the cost of a particular array, that array could be erected, with the

balance being set aside for the next year's array. That method can continue for a number of years, until all the arrays the town needs had been erected.

We have not researched the question of whether the town should do standalone, point-of-use arrays, or a remote net metering array. Ken Panza has said that, as he understands the current state of the law, the town would be compensated at a rate higher than the rate it is paying for electricity were it to have a remote net metering array. We are not sure Ken is certain he is arrived at the right conclusion and we say that without in any way wishing to disparage Ken. We don't believe the town has to make that decision today. The decision the town needs to make is whether or not it is going to erect its own arrays or buy electricity from someone else who has erected its own array.

At first blush, entering into an agreement with a PPA seems attractive. It allows the town to do business with a for-profit entity, thus allowing the town to take advantage of the federal tax credits for solar arrays. The problem we have identified with PPAs (and this is true of community solar as well), is that the town would be entering the wild, wild West. There is no law and order there, no regulations upon which the town could rely, and there's no way the town can know with any certainty, what it would end up with. The town has already noted the uncertainty and wildness that adhere to PPAs and there is no reason to expect that the future will be any different than the past. In fact, there is every reason to believe it would be the same.

The above has no bearing on the question whether the town should lease land for someone to erect a community solar array. The old town landfill has been mentioned as a possibility. If that were to happen, it would be a business venture and could easily be done without the town's participation in the electricity generated by the array. That, too, would be a business decision to be made by the town. What the town would need in that circumstance is the best poker player we can find. What we can squeeze out of any developer is what the traffic will bear, no more, no less.

One interesting possibility is that the town could require, as a condition of the deal, that the entity erecting the community solar array erect ours as well and pay as much of the cost of operating the array as possible. Again, we would need a good poker player.



WOODSTOCK ENVIRONMENTAL COMMISSION

MEMORANDUM

To: Woodstock Town Board

From: Woodstock Environmental Commission

Date: October 4, 2017

Re: Solar energy options for the town

You have asked us to consider the various options before the town to provide solar power for all the electricity needed by the town buildings. We have considered three options: 1. Entering into a PPA; 2. Community solar; and 3. Erecting and paying for solar arrays.

We recommend that the town provide for its electricity by erecting its own solar arrays. None of the concerns about quality of components or overpayment of rates, discussed below, would then be present. According to the estimates we have received from Solar Generation, which we assume, for the purposes of this memorandum, are accurate, and on the assumption that the spreadsheet created by Ken Panza with respect to the town's 2015 electricity payments is accurate, and if the information provided by the town's municipal bond expert is correct, we could get a 20 year bond. The bond would provide for the repayment of principal semi annually and the payment of interest annually. If the bond underwriters agreed that the arrays had a reasonable lifespan of 20 years, that would be the period of the bond. According to the information in Ken's memo, we are now paying Central Hudson \$10,110.93 per month for electricity. The monthly payment of a bond issued for 20 years at 3.5% interest is \$8,699.40. If the bond underwriters thought that 15 years was a more reasonable lifespan, that would be the period of the bond and our monthly payment would be \$10,989.07. We understand that all the above assumptions need to be verified. After the bond was repaid, the town's electricity would be free. By which we mean, totally free, 100% free. We urge the town to begin its due diligence on the above concept—issuing an RFP for the erection of the solar arrays, pursuing the question of the interest rate and length of the bond, etc.

The biggest outstanding question is whether to erect one remote net metering array, or a series of stand alone arrays. We have not yet been able to understand how the state intends to credit solar producers in a remote net metering situation and how to charge them for the electricity consumed. Unless and until we can come to that understanding, we do not see any reason to consider the remote net metering scheme. In addition, the question arises where it would be located. Finally, from the point of view of the image of Woodstock, we believe that a display of solar arrays throughout the town would be a plus.

Ken Panza has said that, as he understands the current state of the law, the town would be compensated at a rate higher than the rate it is paying for electricity were it to have a remote net metering array. We are not sure Ken is certain he has arrived at the right conclusion and we say that without in any way wishing to disparage Ken. We don't believe the town has to make that decision today. The decision the town needs to make is whether or not it is going to erect its own arrays or buy electricity from someone else who has erected its own array.

At first blush, entering into an agreement with a PPA seems attractive. It allows the town to do business with a for-profit entity, thus allowing the town to take advantage of the federal tax credits for solar arrays. The problem we have identified with PPAs (and this is true of community solar as well), is that the town would be entering unregulated territory. There is no law and order there, no regulations upon which the town could rely, and there's no way the town can know with any certainty what it would end up with. The town has already experienced the uncertainty inherent with PPAs and there is no reason to expect that the future will be any different than the past. In fact, there is every reason to believe it would be the same.

The above has no bearing on the question of whether the town should lease land for someone to erect a community solar array. The old town landfill has been mentioned as a possibility. If that were to happen, it would be a business venture that is as unregulated as the purchase of electricity from a PPA. The business negotiation could easily be done without the town's participation in the electricity generated by the array. What the town would need in that circumstance is the best poker player we can find. What we can squeeze out of any developer is what the traffic will bear, no more, no less.

One interesting possibility is that the town could require, as a condition of the deal, that the entity erecting the community solar array erect ours as well and pay as much of the cost of operating the array as possible. Again, we would need a good poker player.



TOWN OF WOODSTOCK, NEW YORK  
45 Comeau Drive, Woodstock NY 12498



Colony of the Arts

ENVIRONMENTAL COMMISSION

(845) 679-2113, Ext. 7 • Fax: (845) 679-7915

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WOODSTOCK ENVIRONMENTAL COMMISSION

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One problem with the town's last two RFPs was only to consider PPAs. As we learned, although PPAs have their advantages, the high costs and escalators make them unattractive for solar acquisitions under most conditions.

The recommendation to consider other financing options, i.e. lease agreements, and direct purchase, should be seriously considered.

The town's policy for the past six years has been to use solar to supply its own electricity needs. Community solar is a complex undertaking, and may be beyond the town board's ability to execute and manage.

We recommend that the town provide for its electricity by erecting its own solar arrays. None of the concerns about quality of components or overpayment of rates, discussed below, would then be present. According to the estimates we have received from Solar Generation, which we assume, for the purposes of this memorandum, are accurate, and on the assumption that the spreadsheet created by Ken Panza with respect to the town's 2015 electricity payments is accurate, and if the information provided by the town's municipal bond expert is correct, we could get a 20 year bond. The bond would provide for the repayment of principal semi

## Ken Panza's comments on WEC memo

annually and the payment of interest annually. If the bond underwriters agreed that the arrays had a reasonable lifespan of 20 years, that would be the period of the bond. According to the information in Ken's memo, we are now paying Central Hudson \$10,110.93 per month for electricity. The monthly payment of a bond issued for 20 years at 3.5% interest is \$8,699.40. If the bond underwriters thought that 15 years was a more reasonable lifespan, that would be the period of the bond and our monthly payment would be \$10,989.07. We understand that all the above assumptions need to be verified. After the bond was repaid, the town's electricity would be free. By which we mean, totally free, 100% free.

It's not clear from the WEC's memo how these numbers are calculated.

One interpretation of 100% free is that after the solar panels are paid for, the electricity is free. This is the current status of the solar panels on the highway garage and town hall. But as the last two RFPs have shown, solar electricity costs more than purchasing the same electricity from Central Hudson. The decision for the town board is how much of a premium it's willing to pay for solar.

Even if the town generates all of its electricity using solar, it would only reduce our Central Hudson bill by 60%. The town still needs to pay the fixed charges, the demand charges, and rental on fixtures and poles for the municipal lighting districts. These charges represent about 40% of our Central Hudson bills, and would remain unchanged.

We urge the town to begin its due diligence on the above concept—issuing an RFP for the erection of the solar arrays, pursuing the question of the interest rate and length of the bond, etc.

Of course, the town has been doing due diligence on the above concept for the past six years. The conclusion has always been one large array at the Waste Water Treatment Facility. There has never been an alternative proposal that made sense. (We did debate adding solar to the Community Center renovation, but that alternative was rejected.)

The biggest outstanding question is whether to erect one remote net metering array, or a series of stand alone arrays. We have not yet been able to understand how the state intends to credit solar producers in a remote net metering situation and how to charge them for the electricity consumed. Unless and until we can come to that understanding, we do not see any reason to consider the remote net metering scheme. In addition, the question arises where it would be located.

## Ken Panza's comments on WEC memo

Finally, from the point of view of the image of Woodstock, we believe that a display of solar arrays throughout the town would be a plus.

Actually, we do understand how the remote net metering works, and considering the lack of space for adequate solar capacity at most the town's facilities, remote net metering is the only viable option.

Ken Panza has said that, as he understands the current state of the law, the town would be compensated at a rate higher than the rate it is paying for electricity were it to have a remote net metering array. We are not sure Ken is certain he has arrived at the right conclusion and we say that without in any way wishing to disparage Ken. We don't believe the town has to make that decision today. The decision the town needs to make is whether or not it is going to erect its own arrays or buy electricity from someone else who has erected its own array.

At first blush, entering into an agreement with a PPA seems attractive. It allows the town to do business with a for-profit entity, thus allowing the town to take advantage of the federal tax credits for solar arrays. The problem we have identified with PPAs (and this is true of community solar as well), is that the town would be entering unregulated territory. There is no law and order there, no regulations upon which the town could rely, and there's no way the town can know with any certainty what it would end up with. The town has already experienced the uncertainty inherent with PPAs and there is no reason to expect that the future will be any different than the past. In fact, there is every reason to believe it would be the same.

The above has no bearing on the question of whether the town should lease land for someone to erect a community solar array. The old town landfill has been mentioned as a possibility. If that were to happen, it would be a business venture that is as unregulated as the purchase of electricity from a PPA. The business negotiation could easily be done without the town's participation in the electricity generated by the array. What the town would need in that circumstance is the best poker player we can find. What we can squeeze out of any developer is what the traffic will bear, no more, no less.

One interesting possibility is that the town could require, as a condition of the deal, that the entity erecting the community solar array erect ours as well and pay as much of the cost of operating the array as possible. Again, we would need a good poker player.

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## Ken Panza's financial analysis of the WEC's memo

It wasn't clear from the WEC's memo how the above numbers were calculated, but I recalculated the conclusions using the numbers provided by the commission.

The commission assumes the monthly payment on a bond issued for 20 years at 3.5% interest is \$8,699.40. This payment schedule and interest rate supports a bond for \$1.5 million to purchase solar panels.

At \$3/Watt, \$1.5 million would allow the purchase of 500,000 Watts, or 500 KW, of solar capacity.

Using a 15% capacity factor, the solar panels would generate 657,000 kWh per year. In 2016, the town used 732,834 kWh, thus the proposed solar panels would supply about 90% of the town's requirements. The effective cost of solar electricity is \$0.16/kWh, over twice what the town now pays.

Monthly Payment	\$8,699.40
Principle	\$1,500,000
Solar Watts	500,000
Solar KW	500
Solar kWh	657,000
kWh/Month	54,750
Solar \$/kWh	\$0.16

The volumetric cost of electricity from Central Hudson in 2016 was \$0.076/kWh, so each solar kWh generated would reduce the town's Central Hudson bill by \$0.076.

The commission assumes the town is now paying Central Hudson \$10,110.93 per month. Each solar kWh generated will reduce Central Hudson's bill by \$0.076, for a total reduction of \$4,161. This solar credit will reduce the Central Hudson bill by about 40% to \$5,949.93.

Monthly Electric Bill	
Central Hudson	\$10,110.93
Solar Credit	(\$4,161.00)
Reduced CH Bill	\$5,949.93
Solar Payment	\$8,699.40
Electric Cost with Solar	\$14,649.33

After adding in the \$8,699.40 bond payment, the town's monthly bill for electricity is \$14,649.33, or 45% more for solar electricity than what Central Hudson is charging.

One interpretation of 100% free is that after the solar panels are paid for, the electricity generated is free. But under the above scenario, the town would be paying \$4,538.40/month more for solar electricity, and at the end of the 20-year bond, the town will have paid an additional \$1.089 million for solar electricity. With a monthly credit of \$4,161 from Central Hudson, it would take an additional 20 years for the town to break even with solar.

## Ken Panza's financial analysis of the WEC's memo

We urge the town to begin its due diligence on the above concept—issuing an RFP for the erection of the solar arrays, pursuing the question of the interest rate and length of the bond, etc.

The biggest outstanding question is whether to erect one remote net metering array, or a series of stand alone arrays. We have not yet been able to understand how the state intends to credit solar producers in a remote net metering situation and how to charge them for the electricity consumed. Unless and until we can come to that understanding, we do not see any reason to consider the remote net metering scheme. In addition, the question arises where it would be located. Finally, from the point of view of the image of Woodstock, we believe that a display of solar arrays throughout the town would be a plus.

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## Ken Panza's financial analysis of the WEC's memo

One interesting possibility is that the town could require, as a condition of the deal, that the entity erecting the community solar array erect ours as well and pay as much of the cost of operating the array as possible. Again, we would need a good poker player.

## Updated financial analysis of the WEC's memo using Solar Generation estimates

I did not have the estimates that SolarGeneration provided to the Environmental Commission when I submitted my first comments. Since then, I obtained a copy of the SolarGeneration submissions and revised my financial analysis.

TOWN OF WOODSTOCK, NEW YORK  
45 Comeau Drive, Woodstock NY 12498



**Colony of the Arts**

ENVIRONMENTAL COMMISSION

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WOODSTOCK ENVIRONMENTAL COMMISSION

### MEMORANDUM

To: Woodstock Town Board

From: Woodstock Environmental Commission

Date: October 4, 2017

Re: Solar energy options for the town

You have asked us to consider the various options before the town to provide solar power for all the electricity needed by the town buildings. We have considered three options: 1. Entering into a PPA; 2. Community solar; and 3. Erecting and paying for solar arrays.

We recommend that the town provide for its electricity by erecting its own solar arrays. None of the concerns about quality of components or overpayment of rates, discussed below, would then be present. According to the estimates we have received from Solar Generation, which we assume, for the purposes of this memorandum, are accurate, and on the assumption that the spreadsheet created by Ken Panza with respect to the town's 2015 electricity payments is accurate, and if the information provided by the town's municipal bond expert is correct, we could get a 20 year bond. The bond would provide for the repayment of principal semi annually and the payment of interest annually. If the bond underwriters agreed that the arrays had a reasonable lifespan of 20 years, that would be the period of the bond. According to the information in Ken's memo, we are now paying Central Hudson \$10,110.93 per month for electricity. The monthly payment of a bond issued for 20 years at 3.5% interest is \$8,699.40. If the bond underwriters thought that 15 years was a more reasonable lifespan, that would be the period of the bond and our monthly payment would be \$10,989.07. We understand that all the above

Updated financial analysis of the WEC's memo using Solar Generation estimates assumptions need to be verified. After the bond was repaid, the town's electricity would be free. By which we mean, totally free, 100% free.

#### Revised Financial Analysis using Solar Generation Estimates

It wasn't clear from the WEC's memo how the above numbers were calculated, but I recalculated the conclusions using the numbers provided by the commission.

The commission assumes the monthly payment on a bond issued for 20 years at 3.5% interest is \$8,699.40. This payment schedule and interest rate supports a bond for \$1.5 million to purchase solar panels.

SolarGeneration's pricing, which includes the NYSEDA subsidy, prices solar at \$2.50/Watt. This is a rather aggressive price. A \$1.5 million bond would allow the purchase of 600,000 Watts, or 600 KW, of solar capacity.

Monthly Payment	\$8,699.40
Principle	\$1,500,000
Solar Watts	600,000
Solar KW	600
Solar kWh	720,072
kWh/Month	60,006
Solar \$/kWh	\$0.145

SolarGeneration used a 13.7% capacity factor, which would result in the solar panels generating 720,072 kWh per year. In 2016, the town used 732,834 kWh, thus the proposed solar panels would supply almost 100% of the town's requirements. The effective cost of solar electricity is \$0.145/kWh, about twice what the town now pays.

The volumetric cost of electricity from Central Hudson in 2016 was \$0.076/kWh, so each solar kWh generated would reduce the town's Central Hudson bill by \$0.076.

The commission assumes the town is now paying Central Hudson \$10,110.93 per month. Each solar kWh generated will reduce Central Hudson's bill by \$0.076, for a total reduction of \$4,560.46. This solar credit will reduce the Central Hudson bill by about 45% to \$5,550.57.

Monthly Electric Bill	
Central Hudson	\$10,110.93
Solar Credit	(\$4,560.46)
Reduced CH Bill	\$5,550.57
Solar Bond Payment	\$8,699.40
Electric Cost with Solar	\$14,249.87

After adding in the \$8,699.40 bond payment, the town's monthly bill for electricity is \$14,249.87, or 40% more for solar than what Central Hudson is charging.

One interpretation of 100% free is that after the solar panels are paid for, the electricity generated is free. But under the above scenario, the town would be paying \$4,138.94/month more for solar electricity, and at the end of the 20-year

## Updated financial analysis of the WEC's memo using Solar Generation estimates

bond, the town will have paid an additional million dollars for solar electricity. With a monthly credit of \$4,560 from Central Hudson, it would take an additional 18 years for the town to breakeven with solar.

We urge the town to begin its due diligence on the above concept—issuing an RFP for the erection of the solar arrays, pursuing the question of the interest rate and length of the bond, etc.

The biggest outstanding question is whether to erect one remote net metering array, or a series of stand alone arrays. We have not yet been able to understand how the state intends to credit solar producers in a remote net metering situation and how to charge them for the electricity consumed. Unless and until we can come to that understanding, we do not see any reason to consider the remote net metering scheme. In addition, the question arises where it would be located. Finally, from the point of view of the image of Woodstock, we believe that a display of solar arrays throughout the town would be a plus.

Ken Panza has said that, as he understands the current state of the law, the town would be compensated at a rate higher than the rate it is paying for electricity were it to have a remote net metering array. We are not sure Ken is certain he has arrived at the right conclusion and we say that without in any way wishing to disparage Ken. We don't believe the town has to make that decision today. The decision the town needs to make is whether or not it is going to erect its own arrays or buy electricity from someone else who has erected its own array.

At first blush, entering into an agreement with a PPA seems attractive. It allows the town to do business with a for-profit entity, thus allowing the town to take advantage of the federal tax credits for solar arrays. The problem we have identified with PPAs (and this is true of community solar as well), is that the town would be entering unregulated territory. There is no law and order there, no regulations upon which the town could rely, and there's no way the town can know with any certainty what it would end up with. The town has already experienced the uncertainty inherent with PPAs and there is no reason to expect that the future will be any different than the past. In fact, there is every reason to believe it would be the same.

The above has no bearing on the question of whether the town should lease land for someone to erect a community solar array. The old town landfill has been mentioned as a possibility. If that were to happen, it would be a business venture that is as unregulated as the purchase of electricity from a PPA. The business

Updated financial analysis of the WEC's memo using Solar Generation estimates

negotiation could easily be done without the town's participation in the electricity generated by the array. What the town would need in that circumstance is the best poker player we can find. What we can squeeze out of any developer is what the traffic will bear, no more, no less.

One interesting possibility is that the town could require, as a condition of the deal, that the entity erecting the community solar array erect ours as well and pay as much of the cost of operating the array as possible. Again, we would need a good poker player.



**WOODSTOCK, N.Y.**  
COLONY OF THE ARTS

Kenneth S. Panza, Liaison  
Town of Woodstock  
45 Comeau Dr.  
Woodstock, NY 12498  
kpanza@woodstockny.org

November 10, 2017

## Solar Options for Woodstock

During the past six years, the Woodstock Town Board has worked to install a large scale solar array at the Waste Water Treatment Facility (WWTF) to supply the town government's electrical needs with renewable energy.

Since 2012, the board has approved four solar procurements, but has been unsuccessful in completing an installation. Recently, the Environmental Commission was instructed to review the requirements and offer a proposal based on multiple smaller arrays. This note is a comment on some of the possible options for the town.

The last solar RFP (Request for Proposal) was approved by the town board in June 2014. Four vendors responded by September 2014, and after due diligence, in April 2015, the board approved an Energy Service Agreement (ESA) with OnForce Solar. After a year's delay, it was evident OnForce Solar was unable to fulfill the terms of the ESA, and in April 2016, the agreement was transferred to IGS Solar, Dublin, Ohio. Although not fully explained, by the end of 2016, various legal entanglements caused IGS Solar to withdraw and the ESA reverted to OnForce Solar. Mindful of the Supervisor's condition, the board took no action to salvage the agreement.

### Option – Select another 2014 RFP Responder

The most immediate option for the board is to award the project to one of the other responders to the RFP. Four vendors submitted proposals, of which three were considered competitive. OnForce Solar was awarded the contract, but SolarCity and Standard Solar were seriously considered.

One advantage of awarding the contract to one of these other vendors is that the project could proceed without the need and delay of another RFP. Both vendors are well aware of the constraints of the waste water treatment site, and could move quickly. This is an option the town board should consider.

### Option – Five Small Solar Arrays

There are advantages and disadvantages for smaller solar arrays. The town has successfully installed small solar arrays at the highway garage and town hall, which demonstrated it is



capable of managing and completing smaller projects. Smaller solar systems would attract well established, local vendors to bid on the projects. The vendors that responded to the town's RFP all had experience with large scale solar installations. Also, smaller scale arrays reduce project complexity and exposure for failure.

The disadvantages include higher costs. Each project would require its own engineering design and site plan. Larger arrays enjoy an economy of scale that reduces overall cost. Financing for smaller projects would generally be more expensive than for large projects.

One serious disadvantage of multiple smaller arrays is the lack of space at some of the possible locations.

The Environmental Commission is considering solar arrays for sites with high electrical usage. The town has seven sites with demand meters that are considered high usage: the waste water treatment facility, pump houses #1 and #2, the town offices at Comeau, the highway garage, the town hall, and the community center.

### Waste Water Treatment Facility

The board has thoroughly studied the use of solar at the waste water treatment facility for six years and certainly this location would be appropriate for a smaller array. In fact, a smaller array for this site had been previously proposed.

### Pump House #1

Pump house #1 has never been seriously considered for solar, but observations confirm there is ample room for a small array.

### Pump House #2

A solar array at pump house #2 has never been considered, and it's unknown if space is available. It would be appropriate for the Environmental Commission to make a site visit as part of its evaluation.

### Town Offices at Comeau

Although there is space at Comeau for solar arrays, the area is subject to the constraints and limitations of the conservation easement and its impact on "Bird on a Cliff." Any solar array at Comeau would need the approval of CSAC and the Land Conservancy.

### Highway Garage, Town Hall

Both of these locations are already equipped with small solar arrays, and there doesn't seem to be space for additional capacity. When the arrays were installed, it was the town's intention to build out solar for its maximum capacity. It's not clear where additional capacity could be installed.

### Community Center

The town board thoroughly reviewed the options for including solar in the community center's renovation, but was informed the roof was incapable of supporting the weight of solar panels. The Little League baseball field and the parking lot were considered, but rejected.

## Summary – Smaller Solar Arrays

Although the possibility of smaller solar arrays is intriguing, it's difficult to identify obvious sites beyond the waste water treatment plant and pump house #1. The highway garage and town hall are already equipped with small solar arrays, and the town offices at Comeau and the community center would seem to present significant obstacles and delay for any substantial array.

## Other Options

There are other options available that board might consider.

**Purchasing Solar through MEGA:** the county signed contracts with SolarCity for solar arrays acquired through MEGA (Municipal Energy & Gas Association). The board may want to consider using MEGA as its purchasing agent.

**Acquiring Renewable Energy Credits:** the county is purchasing renewable energy credits (RECs) to achieve 100% renewable energy. With the use of RECs, the EPA certified that Ulster County is using 100% renewable energy. By purchasing RECs, Woodstock could acquire the same EPA certification.

**Community Solar:** some community solar providers are offering solar panels for purchase. Purchasing solar panels from a third party would relieve the town of the need to install its own panels, but allow the town to claim credit for the installed capacity.

**California Quarry:** Another possible site for a solar array is the town's California Quarry property. One advantage of a solar array at California Quarry is that the array could provide power to the town's police antenna during power outages.

**Subject:** Re: Solar Options

**From:** David Gross <whineguy@gmail.com>

**Date:** 11/13/2017, 10:29 AM

**To:** Supervisor <supervisor@woodstockny.org>

**CC:** Ken Panza <kpanza@hvc.rr.com>, Cathy Magarelli <cmonaco@hvc.rr.com>, Laura Ricci <lr Ricci@woodstockny.org>, "Jackie Earley, Town Clerk" <jearley@woodstockny.org>, "Jay Wenk, Councilman" <jaywenk1@gmail.com>, Richard Heppner <rheppner@hvc.rr.com>, Lorin Rose <mountainrose@hvc.rr.com>, "David Gross, WEC" <whineguy@hvc.rr.com>, Mary Phillips Burke <roseveere@hvc.rr.com>, "Ann Brandt, WEC" <AnnBrandt@prodigy.net>, "Gabi Raphael, WEC" <gabiraphael@aol.com>, Julia Blelock <jblelock@hvc.rr.com>, David Martindale <23dcmsolarenergy@gmail.com>, Kealey Viglielmo <kealeygv@aol.com>

Ken raises some interesting points, and I'd like to go through them one by one.

Selecting a 2014 RFP responder. This is interesting, but there are two obstacles I see. The first is that the rules of the game may have changed so significantly that none of the responders would be bound by their bids. The second is that the town's experience has always been that at the end of every PPA agreement we have found a gonif. I don't believe it is in the town's long-term best interest to enter into a PPA agreement, but I'm sure willing to be proven wrong.

Five small solar arrays. My concern is with the rules of the game that the PSC has established and how they affect the economic viability of any solar array. The WEC had originally proposed arrays at a number of sites, and be the assumption that net metering rules still applied. It appears that that option is foreclosed to us, so any standalone array, whether one large, or five smaller ones, would have to fall under the rules of the Value Stack. I am in the midst of wading through the webinar that purports to explain the Value Stack. I'm not there yet.

In terms of the technical obstacles to the various arrays, I've been told that the area where the array for pump one would best be located could support an additional array to support pump two (there is no place to put an array at pump two, or so I've been told). While I am not willing to state this conclusively, it's my belief that one larger array would create a smaller footprint, if anything, than two smaller arrays. Some of the engineering concerns Ken has raised may require out-of-the-box thinking, such as Bill's suggestion about mounting arrays on high posts at the edges of fields. The WEC, in its proposal to the Comprehensive Plan Committee, recommended that we seriously look at a multistory carport at either the existing parking facility on Rock City Road or at the Mountain View lot. Any such carport could easily be engineered to include a solar array that could provide energy to the Community Center. In that light, I'm not sure the Comeau Building array would be limited to the field immediately to the North of the building.

In the past, the town purchased its electricity from a green Esco. Ken's proposal includes that as an option and it is certainly something worth considering. As far as community solar is concerned, there are clearly advantages in the way the Value Stack is constructed that would make community solar a plus, at least for a limited time. Once again, the devil is in the details. It may be possible to negotiate a deal with a commercial entity that wants to install a community solar array that would include providing the town's electric service at no charge, or any greatly reduced charge. I have no opinion on whether or not California Quarry could sustain a solar array and I don't know if anyone else on the WEC does.

I will be through wading through the webinar today and may have further opinions after I've completed that and spoken with the man at NYSERDA sent to me. I'll be back to you when I have further information.

Best regards,  
David Gross  
845.679.0062

Questions are a burden to others, answers a prison for one's self.

**Subject:** Re: Solar Options

**From:** Ken Panza <kpanza@hvc.rr.com>

**Date:** 11/13/2017, 12:45 PM

**To:** David Gross <whineguy@gmail.com>, Supervisor <supervisor@woodstockny.org>

**CC:** Cathy Magarelli <cmonaco@hvc.rr.com>, Laura Ricci <lricci@woodstockny.org>, "Jackie Earley, Town Clerk" <jearley@woodstockny.org>, "Jay Wenk, Councilman" <jaywenk1@gmail.com>, Richard Heppner <rheppner@hvc.rr.com>, Lorin Rose <mountainrose@hvc.rr.com>, "David Gross, WEC" <whineguy@hvc.rr.com>, Mary Phillips Burke <roseveere@hvc.rr.com>, "Ann Brandt, WEC" <AnnBrandt@prodigy.net>, "Gabi Raphael, WEC" <gabiraphael@aol.com>, Julia Blelock <jblelock@hvc.rr.com>, David Martindale <23dcmsolarenergy@gmail.com>, Kealey Viglielmo <kealeygv@aol.com>

Some comments from Ken.

On 11/13/2017 10:29 AM, David Gross wrote:

Ken raises some interesting points, and I'd like to go through them one by one.

Selecting a 2014 RFP responder. This is interesting, but there are two obstacles I see. The first is that the rules of the game may have changed so significantly that none of the responders would be bound by their bids. The second is that the town's experience has always been that at the end of every PPA agreement we have found a gonif. I don't believe it is in the town's long-term best interest to enter into a PPA agreement, but I'm sure willing to be proven wrong.

David's correct in questioning the willingness of the remaining RFP vendors to consider reengaging with Woodstock. After the Town Board approved OnForce Solar, the other vendors had no further responsibility or obligations under the RFP. It would be up to the town to approach them and ask. If they agreed, we could proceed without the delay of another RFP. And given the changes in the solar industry since 2014, it would be appropriate to ask the vendors to lower their prices. There are good technical reasons to ask them to reduce the size of the solar array at the waste water treatment plant to 400 KW.

The original 2014 RFP request both PPA prices and full purchase prices so that the town could make the comparisons David is suggesting. OnForce Solar refused to provide a purchase price stating that a PPA was the only viable option for the town. I don't recall if the other vendors offered purchase prices, but they certainly could be requested.

Five small solar arrays. My concern is with the rules of the game that the PSC has established and how they affect the economic viability of any solar array. The WEC had originally proposed arrays at a number of sites, and be the assumption that net metering rules still applied. It appears that that option is foreclosed to us, so any standalone array, whether one large, or five smaller ones, would have to fall under the rules of the Value Stack. I am in the midst of wading through the webinar that purports to explain the Value Stack. I'm not there yet.

David's correct stating that the town is subject to the new Value Stack crediting for solar generation.

In terms of the technical obstacles to the various arrays, I've been told that the area where the array for pump one would best be located could support an additional array to support pump two (there is no place to put an array at pump two, or so I've been told). While I am not willing to state this conclusively, it's my belief that one larger array would create a smaller footprint, if anything, than two smaller arrays. Some of the engineering concerns Ken has raised may require out-of-the-box thinking, such as Bill's suggestion about mounting arrays on high posts at the edges of fields.

I'm not sure identifying area and location for solar arrays should be considered a technicality. It would seem fundamental to identify the feasible solar capacity at the pump houses

The WEC, in its proposal to the Comprehensive Plan Committee, recommended that we seriously look at a



multistory carport at either the existing parking facility on Rock City Road or at the Mountain View lot. Any such carport could easily be engineered to include a solar array that could provide energy to the Community Center.

The issues of a multistory carport go way beyond a simple question of solar. I'm not aware we have collected any information about the capacity and performance of solar carports.

In that light, I'm not sure the Comeau Building array would be limited to the field immediately to the North of the building.

As with most issues related to Comeau, CSAC and the Land Conservancy should be consulted.

In the past, the town purchased its electricity from a green Esco. Ken's proposal includes that as an option and it is certainly something worth considering. As far as community solar is concerned, there are clearly advantages in the way the Value Stack is constructed that would make community solar a plus, at least for a limited time. Once again, the devil is in the details. It may be possible to negotiate a deal with a commercial entity that wants to install a community solar array that would include providing the town's electric service at no charge, or any greatly reduced charge.

I have no opinion on whether or not California Quarry could sustain a solar array and I don't know if anyone else on the WEC does.

Once again, the devil is in the details. Something to be looked at.

I will be through wading through the webinar today and may have further opinions after I've completed that and spoken with the man at NYSERDA sent to me. I'll be back to you when I have further information.

Best regards,  
David Gross  
845.679.0062

Questions are a burden to others, answers a prison for one's self.

# TOWN OF WOODSTOCK CLIMATE SMART TASK FORCE

Erin Moran, Coordinator  
Kenneth Panza, Secretary

Application for 5 Points

## PE4 Action: Renewable Energy Feasibility Studies

3 Points

4 Points

5 Points

## Appendix B

### Photovoltaic Solar Feasibility Studies

2017 – A Proposal from Solar Generation for Arrays at  
Yerry Hill Rd. Pump House #1 and Town Offices on Comeau

Minutes of the Woodstock Environmental Commission, 2017



WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – April 5, 2017

WEC Chair David Gross called the meeting to order at 7:07 PM. Members present in addition to David were Jim Hanson, Ann Brandt, Bill Dubilier and Julia Blelock. Mary Burke, Grace Bowne and Gabi Raphael (student member) were absent.

David moved to add an item to the agenda: discussion of State Environmental Quality Review (SEQR) + Town of Woodstock Environmental Quality Review (TWEQR) topic—“Installation of Reed Bed System at Woodstock Watershed Treatment / Town Board.” Ann moved to accept the revised agenda. Julia seconded the motion and it was accepted as follows:

Name	Gross, D.	Hanson, J.	Burke, M.	Brandt, A.	Dubilier, B.	Blelock, J.	Bowne, G.
Vote	Yes	Yes	Absent	Yes	Yes	Yes	Absent

Ann moved to approve the draft minutes proposed for March 1. David seconded the motion. The minutes were approved as follows:

Name	Gross, D.	Hanson, J.	Burke, M.	Brandt, A.	Dubilier, B.	Blelock, J.	Bowne, G.
Vote	Yes	Yes	Absent	Yes	Yes	Yes	Absent

There was no WEC meeting on March 15<sup>th</sup>.

WEC issues discussed on April 5<sup>th</sup>:

- Special guest Ms. Lindsey Halvorson, Regional Field Organizer of The Climate Reality Project, made a presentation regarding her group’s I AM PRO SNOW program. This initiative is part of a growing movement of winter and mountain communities that are working to protect the future of our winter season. I AM PRO SNOW is asking mountain communities to commit to 100% renewable electricity. The WEC agreed to investigate how it can work with Lindsey’s group by furthering Woodstock’s adoption of renewable electricity. Lindsey distributed a handout (“Renewable Electricity Roadmap”) and we will remain in touch. Lindsey confirmed that I AM PRO SNOW, in conjunction with Woodstock Transitions, will participate in the WEC’s Earth Day celebration at Sunflower Natural Foods Market on April 22<sup>nd</sup>.
- Bill Dubilier updated the group on Woodstock’s solar initiatives. Bill has been in touch with Todd Koelmel of Solar Generation and Chad Dickason (Red Hook Solar), among others. Bill later distributed to the Board Ken Panza’s March 27<sup>th</sup> “Ulster Country Climate Smart Committee Town of Woodstock Update,” and also a March 9<sup>th</sup> 274-page PDF from the NYS Public Service Commission (PSC), entitled “Order on Net Energy Metering Transition, Phase One of Value of

- David Gross informed the group that there won't be a Town purchase of electric vehicles in the immediate future. However, the grant application for charging stations was submitted on time, and plans are proceeding for installation of electric vehicle charging stations in two locales: 1) at the back of the restrooms on Rock City Road and 2) on the north side of the Mescal Hornbeck Community Center. The timing on those is expected to be summer or fall.
- Ann Brandt updated the Board on preparations for Earth Day at Sunflower on 4/22. She has been gathering packets of information from various local sources, including the DEC, Cornell Cooperative Extension, the Department of Health et al. This year Sunflower has asked the WEC to manage the event, so Ann will coordinate with Andy, one of the managers at Sunflower, to let him know the needs of participating vendors and non-profits in terms of table space.
- Jim Hanson was supposed to make a presentation regarding the emerald ash borer (EAB) at a conference on April 4<sup>th</sup>, but the meeting was cancelled. Jim mentioned to the Board another source of forest devastation, *oak wilt* (caused by the fungus *Ceratocystis fagacearum*). It isn't yet prevalent in our region, but is commonplace on Long Island and “heading north.”
- David brought before the group the SEQR TWEQR referenced on page 1, “Installation of Reed Bed System at Woodstock Watershed Treatment / Town Board.” The Town has asked the WEC to review the material and respond by April 20<sup>th</sup>. Jim Hanson agreed to study it and report back to the WEC at the next meeting, April 19<sup>th</sup>.
- David adjourned the meeting at 8:30 PM.





WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – May 3, 2017

WEC Chair David Gross called the meeting to order at 7:05 PM. Members present in addition to David were Jim Hanson, Ann Brandt, Mary Burke, Julia Blelock and (student member) Gabi Raphael. Bill Dubilier and Grace Bowne were absent. Guest attendees were Jackie Katz and Jake Castellano, Onteora seniors fulfilling a civics class requirement to attend a local government meeting.

Gabi proposed to add to the agenda a discussion of a new student member. Mary moved to accept the revised agenda. Jim seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Absent	Yes	Yes	Absent	Yes	Yes

Ann moved to approve the draft minutes proposed for April 19<sup>th</sup>. Julia seconded the motion. The minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Absent	Yes	Yes	Absent	Abstained	Yes

Updates:

- David promised to distribute to the group a quote developed by Todd Koelmel of Solar Generation to equip Woodstock's pump house #1 with **solar arrays**. The members will review that quote and decide at the May 17<sup>th</sup> meeting whether to recommend to the Town a standalone solar solution for each metered Town building.
- Ann warmly thanked all the members for their efforts to make this year's **Earth Day** celebration a success. The group discussed plans for next year's event, which will be celebrated on Saturday, April 21<sup>st</sup>. We'll begin our outreach to potential participants and the media (press + social media) well in advance.
- As noted in the minutes from the April 19<sup>th</sup> meeting, Jim had reviewed the "Installation of Reed Bed Systems at Woodstock Watershed Treatment" **SEQR/TWEQR**, and found it to be in good order—apart from several instances of omitted information. Jim submitted his comments to the Town Supervisor and Secretary on April 20<sup>th</sup>.
- Mary updated the members briefly regarding **Eco-Districts**. She will invite Melissa Everett, Executive Director of Sustainable Hudson Valley, to attend the WEC's May 17<sup>th</sup> meeting to present details regarding SHV's eco-districts workshop scheduled on Saturday, June 10<sup>th</sup>.

## New Business:

- David promised to distribute to the members two documents regarding the 13<sup>th</sup> annual **Volunteers Day**, taking place on Saturday, August 19<sup>th</sup>: 1) an invitation from Woodstock Appreciates its Volunteers to help with preparation for the day, and 2) a listing of Town of Woodstock volunteer boards and members. The picnic will begin at 2 PM, with food being served starting at 3.
- The members agreed to study an e-mail message circulated earlier by David titled “**2017 Climate Smart Communities Grant Program.**” This will be on the agenda for discussion at the May 17<sup>th</sup> meeting.
- The members discussed a notice from the NYS DEC regarding 2017 **iMapInvasives Training Sessions**. The one closest to Woodstock will take place on Saturday, June 3<sup>rd</sup> at the Catskill Interpretive Center in Mt. Tremper. Julia will attend and report to the group.
- Mary and Julia agreed to attend the Planning Board’s meeting on May 4<sup>th</sup> to request a redlined copy of the proposed **Water Supply Protection Law**, and to represent the WEC during the PB discussion.
- Gabi told the members about Natalie, an 8<sup>th</sup> grader at Onteora who sounds like a good candidate to join the WEC as a **student member**. Gabi will invite Natalie to attend the May 17<sup>th</sup> meeting.
- David adjourned the meeting at 8:20 PM.



WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – May 17, 2017

WEC Chair David Gross called the meeting to order at 7:00 PM. Members present in addition to David were Jim Hanson, Ann Brandt, Mary Burke, Bill Dubilier, Grace Bowne and Julia Blelock. Gabi Raphael (student member) was absent. The WEC welcomed guest attendees Jo Yanow-Schwartz, Jessica Lunt and Adelaide Bronstein from the Woodstock Farm Festival.

Ann moved to adopt the draft agenda. Julia seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Jim moved to approve the draft minutes proposed for May 3<sup>rd</sup>. Ann seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Abstained	Yes	Yes	Abstained	Yes	Yes

Announcements:

- David reported that grants were approved by the DEC for two electric vehicle (EV) charging stations. They'll be located 1) behind the public restrooms and 2) on the north side of the Mescal Hornbeck Community Center.

Updates:

- The members discussed quotes received from Todd Koelmel of Solar Generation for solar arrays at Yerry Hill pump house #1 and at the main Comeau offices. The group then considered various strategies to fund such arrays. David promised to ask Ken Panza about the potential efficacy of forming a for-profit corporation.
- Jo Yanow-Schwartz and Jessica Lunt described a **composting initiative** planned as part of this season's Woodstock Farm Festival, beginning on May 31<sup>st</sup>. The public will be invited to deposit food scraps in composting cans; a local farm will use the resulting compost. Jo and Jess asked for help in securing youth volunteers to support the project.

Further, Jo raised the issue of reducing plastic bag and bottle consumption in Woodstock and Ulster County.

David promised to call Amanda LaValle to find out about the County's composting efforts.

- The group briefly discussed the **EPA's regulatory reform agenda**, and submission of comments on the <https://www.regulations.gov> website.
- David brought up procedures for **expense reimbursement**, and promised to reach out to Jackie Earley regarding paper and print cartridges for use by the WEC.

New Business:

- Mary reported that she'd been in touch with Melissa Everett, Executive Director of Sustainable Hudson Valley, regarding SHV's plans for an **Eco-Districts** workshop, tentatively scheduled on Saturday, June 10<sup>th</sup>. Mary promised to update the members at the WEC meeting on June 7<sup>th</sup>.
- The group discussed an e-mail message circulated by David titled "**2017 Climate Smart Communities Grant Program**." Julia offered to study the requirements for securing Climate Smart Communities Certification; this would help with grant applications in 2018 and beyond.
- Mary summarized the Planning Board's May 4<sup>th</sup> discussion of the proposed **Water Supply Protection Law**. The WEC members then explored the possibility of extending the Woodstock sewer district to encompass the Bearsville flats. David proposed to draw up a letter for submission to John LaValle of the PB.  
Further, the group discussed the **Simonetti application** to the Planning Board.
- David adjourned the meeting at 8:29 PM.



WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – June 7, 2017

WEC Chair David Gross called the meeting to order at 7:04 PM. Members present in addition to David were Jim Hanson, Mary Burke, Bill Dubilier and Julia Blelock. Ann Brandt and Grace Bowne were absent, as was Gabi Raphael (student member). There were no guests.

Jim moved to adopt the draft agenda. Julia seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Absent	Absent	Yes	Yes	Yes	Yes

Mary moved to approve the draft minutes proposed for May 17<sup>th</sup>. David seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Absent	Absent	Yes	Yes	Yes	Yes

There were no announcements.

Correspondence:

- The WEC received confirmation from the Town Board that they will proceed with the installation of a reed bed system at the Woodstock watershed treatment facility.
- All members of the WEC have been asked to sign their intent to comply with a local law amending Chapter 71 of the Woodstock Code, the Ethics Law of the Town of Woodstock.

Updates:

- David will draft a letter to the Town Board regarding the WEC's recommendations for a solar array program. He will send the letter to the other WEC members for review.
- Mary reported that she'd been in touch with Melissa Everett, Executive Director of Sustainable Hudson Valley, regarding SHV's plans for an Eco-Districts workshop, scheduled on Friday, June 9<sup>th</sup>. David will phone Melissa and he may attend the workshop.
- Julia summarized the steps required for Woodstock to achieve Climate Smart Communities Certification. Jim will reach out to Ken Panza and invite him to get involved.

- Jim updated the members regarding the Simonetti application to the Planning Board. Jim accompanied Paul Shultis, Jr. and Conor Wenk onsite, and he said that what's being done looks safe from an environmental standpoint. When the permit is issued David will request a copy from PB secretary Therese Fernandez.

New Business:

- Mary offered to send a condolence note on behalf of the WEC to Liam Kahn regarding the recent death of his father, Arthur.
- David brought up the issue of Grace Bowne's correct e-mail address ([gbowne199@gmail.com](mailto:gbowne199@gmail.com)) to make sure that the other members are aware of it.
- Julia reported to the group about the iMapInvasives training she received on June 3<sup>rd</sup>. She demonstrated the smart phone app, which is an excellent way to report sightings of invasive species from the field. She promised to forward iMapInvasives program documentation to the group.

David adjourned the meeting at 8:08 PM.





WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – June 21, 2017

WEC Chair David Gross called the meeting to order at 7:02 PM. Members present in addition to David were Mary Burke, Grace Bowne, Ann Brandt, Julia Blelock and Gabi Raphael (student member). Jim Hanson and Bill Dubilier were absent. The WEC welcomed two guests: Ken Panza and Harriet (Hatti) Iles.

At Hatti's request two items were added to the agenda: 1) the clear-cut area at the top of Macdaniel Road, and 2) the impact of Japanese barberry plants. Julia moved to adopt the draft agenda as amended. David seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Yes	Yes	Yes	Absent	Yes	Absent

Mary moved to approve the draft minutes proposed for June 7<sup>th</sup>. Ann seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Abstained	Abstained	Yes	Absent	Yes	Absent

There were no announcements, and no correspondence was discussed.

Updates:

- David had drafted a letter to the Town Board regarding three separate options to provide solar power for all the electricity needed by the town buildings. He invited Ken Panza to the meeting to offer additional perspectives. Ken discussed various possibilities and answered questions. He brought to the group's attention the Mid-Hudson Community Solar Workshop scheduled on July 11<sup>th</sup>, which David will try to attend. As a result of Ken's input David will revise his draft letter and circulate it to the group for review.
- The members asked Ken about Climate Smart Communities Certification, since Ken is Woodstock's liaison to the Ulster County Climate Smart Community Committee. Ken said there is a great deal of paperwork involved, which may be more than Woodstock can take on at the present time. Ken shared with the group a document titled "Ulster County Climate Smart Committee: Woodstock Climate Smart Community Inventory—August 24, 2015."
- David will draft a separate letter to the Town Board regarding the WEC's electric vehicle (EV) recommendation(s).
- The group briefly discussed the iMapInvasives app for smart phones, which several members have installed on their phones or plan to do so.

## New Business:

- Hatti Iles voiced her concern regarding plants to be selected by the DEC and Macdaniel Road residents to mask the new parking lot just below Magic Meadow. She hopes the plantings will be carefully chosen, with proper regard for the environment (i.e. non-invasives that will be beneficial to birds and wildlife). Hatti has already been in touch with one of the Macdaniel Road residents; David suggested that she reach out to other neighbors and ask whether they've yet heard from the DEC. He said the WEC will draft a letter to the Town Board in support of Hatti's efforts. Also, Mary suggested that Hatti write a letter to the *Woodstock Times*. If Hatti does so, the WEC will write a letter for submission in the following week's paper supporting Hatti on this issue.
- Hatti next brought up the dangers posed by the spread of Japanese barberry plants in Woodstock. The dense foliage of these plants promotes the high humidity needed by ticks to flourish. These plants also harbor white-footed mice and other rodents, causing a proliferation of the ticks associated with Lyme disease. Though challenging, it's possible to cut down and dig out barberry plants and use vinegar to destroy remaining roots. The group suggested that Hatti write an informative letter to the *Woodstock Times*.
- David will add Woodstock's Comprehensive Plan (WCP) project to the next meeting's agenda. He is scheduled to meet with the Comprehensive Plan Committee (CPC) on Wednesday, September 27<sup>th</sup>, at 6:30 PM. The CPC wants to hear from the WEC regarding its views on the following: 1) Where are we now? 2) Where are we going? 3) Where do we want to be? and 4) How do we get there?
- Gabi will be leaving for college on August 14<sup>th</sup>, but will try to attend the August 2<sup>nd</sup> meeting and recommend someone to take her place as a student/youth member of the WEC.
- David cancelled the WEC's July 5<sup>th</sup> meeting; the group will next convene on July 19<sup>th</sup>.

David adjourned the meeting at 8:17 PM.





WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – July 19, 2017

WEC Chair David Gross called the meeting to order at 7:09 PM. Members present in addition to David were Jim Hanson, Mary Burke and Julia Blelock. Grace Bowne, Ann Brandt, Bill Dubilier and Gabi Raphael (student member) were absent. The WEC welcomed one guest: Laura Rose Abbott. Laura would like to present her concerns to the WEC regarding the Simonetti Planning Board application; she has been invited to do so at the August 2<sup>nd</sup> meeting.

Julia moved to adopt the draft agenda for the July 19<sup>th</sup> meeting. David seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Absent	Absent	Yes	Absent	Yes	Yes

Mary moved to approve the draft minutes proposed for the June 21<sup>st</sup> meeting. David seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Dubilier, B.	Gross, D.	Hanson, J.
Vote	Yes	Absent	Absent	Yes	Absent	Yes	Yes

David announced that no funds have yet been charged against the WEC's 2017 budget. Further, David mentioned several items of correspondence pertaining to the John and Stacy McCormack building project currently before the Planning Board. David promised to forward this correspondence to the group via e-mail.

Updates:

- David had drafted a letter to the Town Board regarding three separate options to provide solar power for all the electricity needed by the town buildings. He will further revise the letter and circulate it to the group for review.
- Michael Veitch sent to David a list prepared by George Profous of recommended plantings to help screen the Macdaniel Road clear cut/parking lot. It seems like an environmentally sound list and the DEC is amenable to using it. David will send a note to Hatti Iles letting her know.

New Business:

- The group briefly discussed the Woodstock's Comprehensive Plan (WCP) project. David is scheduled to meet with the Comprehensive Plan Committee (CPC) on Wednesday, September 27<sup>th</sup>, at 6:30 PM in the Great Room. The CPC wants to hear from the WEC regarding its views on the following: 1) Where are we now? 2) Where are we going? 3) Where do we want to be? and 4) How do we get there? WEC members should spend time developing ideas concerning these issues; they'll be discussed at upcoming WEC meetings in advance of September 27<sup>th</sup>.

- David received an e-mail message from Rosalinda Gonzalez, introducing her architecture firm—Paul Castrucci, Architect. Based in Manhattan, her firm is opening an office in Troy, and they are certified in Passive House design. They would like to make a presentation to the Town of Woodstock. The WEC will arrange an event welcoming this and other such firms to present their Passive House capabilities to town officials and interested citizens.
- David will inquire about the installation date of the EV charging stations so the WEC can schedule a celebratory event (ribbon cutting, etc.), with publicity beforehand.

David adjourned the meeting at 7:56 PM.



WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – September 6, 2017

WEC Chair David Gross called the meeting to order at 7:04 PM. Members present in addition to David were Jim Hanson, Mary Burke and Julia Blelock. Grace Bowne and Ann Brandt were absent. The WEC welcomed three guests: Laura Rose Abbott, Anthony Countey and Marty Korn. The first two guests were interested in hearing updates regarding the Simonetti property. Marty Korn has a proposal that he will send to the WEC via e-mail.

David added one item to the evening's agenda: the Somers Planning Board issue. Mary moved to adopt the agenda as amended. Jim seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Absent	Yes	Yes	Yes	

Jim moved to approve the draft minutes proposed for the August 2<sup>nd</sup> meeting. Mary seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Absent	Yes	Yes	Yes	

David distributed a couple of issues of *Talk of the Towns & Topics*. He announced that no funds have yet been charged against the WEC's 2017 budget. David also announced that Bill Dubilier has resigned from his position on the WEC, much to the regret of the other members.

Updates:

- Jim spoke about the Simonetti Planning Board matter: he has requested a wetlands and watercourse delineator. Further, the Army Corps of Engineers has been asked to submit a wetlands drainage map. Once those two items are in place a recommendation can be made.
- David updated the group regarding a plan for Town solar arrays. Earlier this week he spoke with Bill McKenna, and received advice from someone familiar with financing community projects via bonds. The best way forward is for David to draw up a plan to finance solar arrays for the Town buildings through issuance of a bond; this can be approximated by calculating the cost of a self-amortizing mortgage for 10- and 15-year periods. David will write this up and send it to the other WEC members for review.
- The group next discussed Woodstock's Comprehensive Plan. The WEC needs to prepare environmental-centric recommendations for presentation to the Comp Plan Committee on Wednesday, September 27<sup>th</sup>, 6:30 PM. It was agreed that each

member would focus on a particular issue or issues, referencing the Sustainable Hudson Valley's *Guide to Eco-Districts, Especially for Small Cities, Towns and Villages*. For David the areas of focus will be energy and food + agriculture; for Jim it will be water; for Mary the focus will be land, buildings and infrastructure (and also water); for Julia it will be art and amenities. Each member should summarize their thoughts in a page or so and share them at the September 20<sup>th</sup> meeting.

#### New Business:

- The WEC warmly thanks Bill Dubilier for his many years of service to the Commission and to the Town. Formal acknowledgment will follow; Mary will draft a letter.
- David discussed the Somers Planning Board issue. The property is located at 50 Silver Hollow Road. The proposed building project involves a guardrail that the Town will partially remove, and the construction of a driveway that must be built in compliance with wetland regulations.
- Mary raised a question regarding the condition of the Cooper Lake/Kingston Reservoir dam. If the dam were to fail due to torrential rains (the sort that recently impacted the Houston, Texas area), water could flood the Sawkill, the Cooper Lake Road, Route 212, and potentially sweep into the center of Woodstock. The group voted on whether to ask the Town to investigate this on the WEC's behalf. The resolution passed as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Absent	Yes	Yes	Yes	

- The WEC's proposed public presentation/discussion on passive housing, tentatively scheduled on October 7<sup>th</sup>, has been postponed until a robust panel of presenters can be assembled. In the meantime, WEC members will further research the subject.

David adjourned the meeting at 7:59 PM.



WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – September 20, 2017

WEC Chair David Gross called the meeting to order at 7:02 PM. Members present in addition to David were Jim Hanson, Ann Brandt and Julia Blelock. Mary Burke was slightly delayed, arriving at 7:11 PM, and Grace Bowne was absent. The WEC welcomed two guests: Laura Rose Abbott and Kealey Viglielmo (the latter invited by Jim).

David added one item to the evening's agenda: discussion of Kealey Viglielmo joining the WEC. Jim moved to adopt the agenda as amended. David seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Yes	Absent	Yes	Yes	

Jim moved to approve the draft minutes proposed for the September 6<sup>th</sup> meeting. David seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Yes	Absent	Yes	Yes	

There was no correspondence and there were no announcements.

Updates:

- David updated the group regarding a plan for Town solar arrays. He discussed salient points in a memo he has prepared to be sent to the Town Board. It was decided that members will take additional time to study the memo and it will be added to the agenda for further discussion at the October 4<sup>th</sup> meeting.
- The group next discussed input to Woodstock's Comprehensive Plan. Each member is focusing on a particular issue or issues. For David the areas of focus are energy, food and agriculture; for Julia they are transportation and mobility + arts and amenities; for Mary the focus is water; for Jim it is water and air. WEC members had summarized their thoughts in writing and shared them at the meeting. These recommendations will be compiled and submitted to the Comprehensive Plan Committee at a meeting scheduled on Wednesday, September 27<sup>th</sup>, 6:30 PM (in the Great Room at the Comeau offices). All WEC members are asked to attend that meeting.
- Mary had drafted a letter from the WEC to Bill Dubilier for his many years of service to the Commission and to the Town. David will print, sign and send the letter.
- At the September 6<sup>th</sup> meeting Mary had raised a question regarding the condition of the Cooper Lake/Kingston Reservoir dam. David will request inspection reports of the dam over the past five years.

## New Business:

- Amanda Bayley wrote to Bill McKenna, who passed her e-mail note to David. Amanda is starting her own business, focused on replacing lawn with native plant and pollinator-friendly gardens. The WEC will invite Amanda to present her ideas and expertise at its Earth Day celebration in April 2018.
- Next the WEC asked Kealey Viglielmo to talk about his education, background, and interest in joining the WEC (to replace Bill Dubilier, who recently resigned). Kealey is a native of Woodstock and a recent graduate of St. Lawrence College, where his major was biology and his minor was outdoor studies. It was agreed that because of his interests and education Kealey could bring valuable perspectives to the WEC. Even though he may not remain in Woodstock for the long term, his presence at the WEC would be very welcome. David asked him to submit a letter of interest to Bill McKenna.
- Mary mentioned a phone call she had received, as member of the WEC, from a woman who feels that the new Hannaford store in West Hurley is using too much plastic. West Hurley is outside the WEC's area of jurisdiction; anyone who has such a complaint is encouraged to submit their thoughts directly to Hannaford.

David adjourned the meeting at 9:05 PM.



WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – October 4, 2017

WEC Chair David Gross called the meeting to order at 7:01 PM. Members present in addition to David were Mary Burke, Ann Brandt and Julia Blelock. Jim Hanson was slightly delayed, arriving at 7:05 PM, and Grace Bowne was absent. (Please use Jim's new e-mail address: [whiteoak401@gmail.com](mailto:whiteoak401@gmail.com).) The WEC welcomed four guests: David Martindale, David Griffiths, Abbey Mitchell and Marty Korn. The first three are interested in becoming members of the WEC, and Marty Korn had been invited to discuss his proposal for a Woodstock Ecology Festival.

David Gross added one item to the evening's agenda: discussion of Woodstock's Comprehensive Plan. Mary moved to adopt the agenda as amended. David Gross seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Yes	Yes	Yes	Absent	

Ann moved to approve the draft minutes proposed for the September 20<sup>th</sup> meeting. Julia seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Yes	Yes	Yes	Absent	

There was one piece of correspondence—a letter delivered to Mary. The only announcement was that the WEC has not yet expended any of its 2017 budget.

Updates:

- David Gross briefed the group regarding a plan for Woodstock's solar arrays and a memo prepared by him to be sent to the Town Board. David M. weighed in with expertise gleaned from a career in solar equipment installation. He advised the members to recommend that the town move quickly to lock in currently favorable conditions. David Gross agreed to write up an e-mail cover note and share it with the other members. The note will emphasize the need for prompt action, and the WEC's willingness to help the TB craft an effective RFP. Ann moved to approve David's memo and proposed cover note; Mary seconded the motion and the vote was carried as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Yes	Yes	Yes	Yes	

- The group briefly discussed the WEC's input to Woodstock's 2017 Comprehensive Plan, presented to the Comp Committee in a meeting on September 27<sup>th</sup>. David Gross, who had compiled the members' contributions in a single document, thanked everyone for their input. Most members have also filled

out and submitted the Comp Plan community survey questionnaire; those who haven't yet done so are reminded that the deadline is October 13<sup>th</sup>.

- Next the group discussed an e-mail note received from Bill McKenna about the Cooper Lake dam. Mary expressed disappointment that Bill had failed to mention the dam inspection reports requested by the WEC. David Gross said he will send an e-mail message to Bill reiterating the WEC's desire to see those reports; if the Town Board doesn't already have the reports they should request them.
- We need to add to the agenda for the November 15<sup>th</sup> WEC meeting a presentation from Amanda Bayley on use of native and pollinator-friendly plants in local gardens—in place of traditional lawns.
- Then the members discussed two matters currently before the Planning Board: 1) A Wetland and Watercourse Determination application involving the Somers property on Silver Hollow Road and 2) The Sunflower Natural Food Market application to the PB. The WEC will monitor both matters and plan site visits when appropriate.

#### New Business:

- Marty Korn presented his ideas for a Woodstock Ecology Festival intended to establish an artistic “voice and vision” of ecology. Further, the festival will foster development of ecological solutions and networking. David Gross suggested to Marty that he consider organizing a musical program for the community dinners on Thanksgiving and/or Christmas. Marty agreed to look into this. Separately he will send the WEC his proposal for a major reforestation project: “Victory Trees and Gardens.” Marty can be reached at [martybstone@gmail.com](mailto:martybstone@gmail.com).
- The group discussed an e-mail memo received from the DEC titled “The Naked Truth on Textiles Recovery.” Everyone is encouraged to gather worn but clean clothing and other textiles (sneakers, shoes, stuffed animals, towels, carpets, etc.) for donation or recycling. Here is the link to find the nearest collection location: [http://www.nysar3.org/textile\\_recovery\\_locations.php](http://www.nysar3.org/textile_recovery_locations.php).
- WEC members may wish to register for the New York State Association of Conservation Commissions (NYSACC) 2017 Conference on the Environment. It's taking place on November 17<sup>th</sup> and 18<sup>th</sup> at The Chateau in Kingston. The registration cost is \$60 per person. Members should let one another know which workshop panels they plan to attend so that all presentations are covered, and we can bring back a full report to the WEC.
- David Gross invited Abbey Mitchell and David Martindale to talk a bit about their backgrounds and their interest in joining the WEC. (David Griffiths had to leave early, so the group didn't hear from him.) Abbey ([admitchell811@gmail.com](mailto:admitchell811@gmail.com)) is a retired social worker who is currently volunteering for Family of Woodstock and has a strong interest in mitigating climate change. David Martingale has had a 27-year career in solar installation, he has studied geology, and he has a particular interest in wetland and watercourse regulations. Both Abbey and David have communicated with Bill McKenna about their interest in joining the WEC.

David Gross adjourned the meeting at 8:19 PM.





WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – October 18, 2017

WEC Chair David Gross called the meeting to order at 7:04 PM. Members present in addition to David were Jim Hanson, Mary Burke, Ann Brandt and Julia Blelock. Grace Bowne was absent. The WEC welcomed one guest: Kealey Viglielmo, who is an applicant to join the commission.

David corrected a date on the evening's proposed agenda (the next meeting will take place on November 1<sup>st</sup>). Julia moved to adopt the agenda as amended. Mary seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Yes	Yes	Yes	Yes	

Jim moved to approve the draft minutes proposed for the October 4<sup>th</sup> meeting. Mary seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Yes	Yes	Yes	Yes	

There was one item of correspondence (a couple of issues of *Town Topics*) and there were no announcements.

Updates:

- David reported that he spoke with Bill McKenna on October 6<sup>th</sup> about the WEC's proposal for solar arrays, reiterating the need for prompt action. Several of the WEC members will reach out to council people on the Town Board to make sure they're familiar with the proposal and ready to move on it as soon as possible.  
In terms of solar RFPs for the various town properties, David Gross will speak with David Martindale and Todd Koelmel. Julia will reach out to Larry Brown.
- Next the members discussed two matters before the Planning Board: 1) the Somers property on Silver Hollow Road and 2) the Sunflower Natural Food Market project. Jim reported that the Somers issues have been resolved without the need for a formal wetland and watercourse determination. David said the DEC is looking into the impact of the Sunflower project on Ferguson Creek. The WEC will continue to monitor the Sunflower project.
- In preparation for the NYSACC Conference on the Environment—taking place November 17<sup>th</sup> and 18<sup>th</sup> at The Chateau in Kingston—Mary will draft a summary of environmental initiatives and milestones undertaken/accomplished over the past decade as part of Woodstock's Carbon Neutral Initiative. This will be used in a submission for a 2017 NYSACC Project Award. Mary will share her draft with the other members for their input. The award submission due date is November 3<sup>rd</sup>.

In terms of the conference registration costs, David will talk with Bill McKenna about shifting WEC budget line items so that the \$60-per-person fee can be covered or reimbursed for those members who attend. During the course of the conference WEC attendees may informally offer others from around New York State the opportunity to tour Woodstock.

- David will talk with John Lavallo about the expected timeline for installation of the two EV charging stations.

New Business:

- David reported that the Town Board will soon reach out to three WEC applicants (Kealey Viglielmo, David Martingale and Abbey Mitchell) for interviews.

David adjourned the meeting at 8:13 PM.



WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – November 1, 2017

WEC Chair David Gross called the meeting to order at 7:00 PM. Members present in addition to David were Jim Hanson, Ann Brandt and Julia Blelock. Mary Burke was slightly delayed, arriving at 7:07 PM. Grace Bowne was absent. The WEC welcomed two guests: David Martindale ([23dcmsolarenergy@gmail.com](mailto:23dcmsolarenergy@gmail.com)) and Kealey Viglielmo ([kealeygv@aol.com](mailto:kealeygv@aol.com)), both of whom are applicants to join the commission.

Ann moved to adopt the evening's proposed agenda. Julia seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Yes	Absent	Yes	Yes	

Ann moved to approve the draft minutes proposed for the October 18<sup>th</sup> meeting. David seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	TBD
Vote	Yes	Absent	Yes	Absent	Yes	Yes	

There was no correspondence, and the only announcement was David G.'s: the amount of money in the WEC's budget is currently \$415.

Updates:

- David G. reported that he had reached out to Todd Koelmel regarding the best way to structure an RFP for solar arrays on Town buildings. Julia had contacted Larry Brown, who will be in touch with David G. by mid-November. WEC members discussed the need to move quickly to secure cost savings. David G. asked David M. about the likely timeframe for an RFP, receipt and review of proposals, project award(s) and implementation.
- David G. confirmed that the WEC budget can be used to pay for or reimburse members for the \$60-per-person registration fee to attend the NYSACC's [2017 Conference on the Environment](#) (taking place November 17<sup>th</sup> and 18<sup>th</sup> at The Chateau in Kingston).
- David G. reported that the Town Board is making a decision regarding the three WEC applicants (Kealey Viglielmo, David Martindale and Abbey Mitchell); the TB is expected to make an announcement at their November 14<sup>th</sup> meeting.
- David G. said he talked with John Lavalley about the expected timeline for installation of the two EV charging stations. The DEC is still finalizing the necessary paperwork; that process may or may not be completed in time for the Woodstock Highway Department to begin installation before winter sets in.

- Next the members discussed the Cooper Lake reservoir dam and the inspection reports requested by the Town Board on behalf of the WEC several weeks ago. Those reports have still not been received, so the TB or the WEC or the Woodstock Land Conservancy—also an interested party, particularly in regard to the Zena dams—may need to “FOIL” the City of Kingston Water Department (i.e. submit a formal request via the Freedom of Information Law).

David G. adjourned the meeting at 7:46 PM.



WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – November 15, 2017

WEC Chair David Gross called the meeting to order at 7:02 PM. Members present in addition to David G. were Jim Hanson, David Martindale, Ann Brandt and Julia Blelock. Mary Burke arrived at 7:08 PM; Grace Bowne and Kealey Viglielmo (student member) were absent. The WEC welcomed two guests: Amanda Bayley, who made a presentation later in the evening, and Ken Panza.

Julia moved to adopt the evening's proposed agenda. Ann seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	Martindale, D.
Vote	Yes	Absent	Yes	Absent	Yes	Yes	Yes

Ann moved to approve the draft minutes proposed for the November 1<sup>st</sup> meeting. Jim seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	Martindale, D.
Vote	Yes	Absent	Yes	Absent	Yes	Yes	Yes

The two items of correspondence were Planning Board updates involving 1) Sunflower Natural Foods Market and 2) the Simonetti property. There were no announcements.

Updates:

- David G. reported that he had reached out to Luke Forster at NYSERDA to better understand the Value Stack calculator now associated with solar arrays. Luke suggests that interested parties listen to the "Value Stack Calculator and VDER Overview Webinar" available on NYSERDA's VDER (value of distributed energy resources) webpage: <http://nyserdera.ny.gov/vder>. The group discussed this and several local solar initiatives, including an upcoming presentation by East Light Partners to the Town of Woodstock.
- Next the members discussed the agenda for NYSACC's [2017 Conference on the Environment](#) (taking place Friday, November 17<sup>th</sup> at The Chateau in Kingston), and the various sessions that each member will attend. In terms of carpooling, Mary offered to drive Kealey.
- Jim promised to talk with the Woodstock Land Conservancy about getting their help with the WEC's ongoing attempts to secure dam inspection reports from the City of Kingston Water Department.

New Business:

- The WEC warmly welcomed new member David Martindale—and also student member Kealey Viglielmo, who was absent due to a death in the family.

- Amanda Bayley, landscape architect, made a presentation to the WEC regarding her Grow Garden Squares business ([growgardensquares@gmail.com](mailto:growgardensquares@gmail.com); [www.growgardensquares.com](http://www.growgardensquares.com)). Amanda and her partner encourage residents and commercial entities to “replace your lawn with a native plant garden one square at a time.” David G. suggested to Amanda that she consider joining the WEC at its Earth Day celebration planned on Saturday, April 21, 2018. David moved that the members put this to a vote; Julia seconded the motion and it was approved as follows:

<b>Name</b>	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	Martindale, D.
<b>Vote</b>	Yes	Absent	Yes	Yes	Yes	Yes	Yes

- David G. confirmed that the WEC’s December 20<sup>th</sup> meeting will be cancelled due to the holidays; David will notify Jackie Earley and Kerry Muldoon.

David G. adjourned the meeting at 8:24 PM.



WOODSTOCK ENVIRONMENTAL COMMISSION

Minutes – December 6, 2017

WEC Chair David Gross called the meeting to order at 7:00 PM. Members present in addition to David G. were Mary Burke, David Martindale, Ann Brandt, Julia Blelock and Kealey Viglielmo (student member). Jim Hanson and Grace Bowne were absent. The WEC welcomed guests Ken Panza and Europa McGovern. The latter is Planner and Clean Energy Communities Coordinator with NYSERDA's Hudson Valley Regional Council; she made a presentation to the WEC later in the meeting.

Ann moved to adopt the evening's proposed agenda. Julia seconded the motion and it was adopted as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	Martindale, D.
Vote	Yes	Absent	Yes	Yes	Yes	Absent	Yes

Ann moved to approve the draft minutes proposed for the November 15<sup>th</sup> meeting. Julia seconded the motion and the minutes were approved as follows:

Name	Blelock, J.	Bowne, G.	Brandt, A.	Burke, M.	Gross, D.	Hanson, J.	Martindale, D.
Vote	Yes	Absent	Yes	Yes	Yes	Absent	Yes

David G. distributed a couple of copies of *Talk of the Town & Topics*. He announced that \$55 remains in the WEC budget for 2017 and that the budget for 2018 would be \$415 (the same as in 2017). At Mary's suggestion David will send an e-mail note to Supervisor Bill McKenna, stating that while the WEC is not currently asking for a budgetary increase, we respectfully request that a contingency plan be considered if the need arises. David G. further announced that the Ashokan Watershed Stream Management Program is offering a workshop titled "Managing Your Flood Risk in the Hudson Valley" on Monday, December 11, from 6 to 8 PM at 232 Plaza Road in Kingston. David G. will reach out to Jim to ascertain if he will be able to attend.

Updates:

- David G. reported that he and David M. are discussing various solar options for the town. He noted that solar contractor East Light Partners is no longer interested in bidding on a project at the town's former landfill due to the possible presence of a large body of water immediately adjacent to it. Julia made a brief presentation on microgrids, and suggested several resources for further study.
- The members recapped impressions of and key takeaways from NYSACC's [2017 Conference on the Environment](#) (which all but David M. were able to attend on Friday, November 17<sup>th</sup> at The Chateau in Kingston). At this conference the WEC



received an Environmental Action Award from NYSACC for Woodstock's Carbon Neutral Initiative.

New Business:

- Europa McGovern, whom David G. and Julia had met at the NYSACC conference, made a presentation on NYSERDA's Clean Energy Community Program. Europa explained various resources available to Woodstock and to the WEC, and she challenged the group to consider which of ten high-impact environmental actions it may undertake. Julia will coordinate with Europa on an LED street lights initiative, David G. will work with her on Woodstock's acquiring an EV truck, and David M. will reach out to Woodstock's building inspector regarding energy code enforcement training. David G. will sound out the local Transitions group on undertaking Climate Smart Communities Certification for Woodstock. Europa promised to send the WEC additional information regarding potential grants.
- David G. asked Kealey to consider becoming a full (voting) member of the WEC in January; Kealey said he would send a note to Bill McKenna indicating his interest in doing so.
- David G. postponed the group's discussion of a summary of 2017 WEC actions. Instead, members will e-mail to David G. their proposed lists for discussion in January. (David G. confirmed that the WEC's December 20<sup>th</sup> meeting would be cancelled due to the holidays; the next meeting will take place on January 3<sup>rd</sup>.)

David G. adjourned the meeting at 8:43 PM.