



**Warner Board of Selectmen
Meeting Minutes
Informational Session for the Solar Array
Thursday, March 3, 2016
APPROVED**

The public information session opened at 7:00 pm.

In attendance: Selectman Clyde Carson, Ray Martin – Water District, George Horrocks – Harmony Energy

Others present: It is estimated that about 25 or more attended this meeting. Those who spoke have been indicated in the body of the minutes.

1. Selectman Carson provided an overview of the project. One solar array will be in between the Transfer Station and the Highway Department and the second array at the Treatment Plant for the Warner Village District.
2. In 2012 the NH Legislature passed a net metering law. That allows electric customers to use solar to generate electricity and sell it back to the electric company. When the solar produces electricity it pumps it back into the grid, the electric company nets it out, it looks at what you fed in and what you used in the course of a month and the difference is written in a check. The following year the NH Legislature went a step further and went into an area called group net metering. Group net metering is producing more than what is used, you can share the solar power which works for the municipal level. In 2014 the Public Utilities Commission adopted a rule governing group net metering. When they set the group net metering they allocated for 50 megawatts of power that we spread across multiple electric companies in the state and what's been going on now is solar has become so popular we are reaching what they call a cap. Legislation is being discussed right now to raise that cap.
3. Selectman Carson said when the group net metering came into play it began to make sense for the Town of Warner. The Energy Committee, the Selectboard and the Village Commissioner's got together and formed a committee to look at this for the town. The Committee members were Jim Bingham, Darren Blood, myself, Ray Martin and Neil Nevins. The goal was to bring a proposal to Town Meeting in 2015. We started working on the project in September. We issued RFQs to several solar companies and received 2 responses and they gave up proposals to do a power purchase arrangement which the company will own the array and will sell the power back to the town at a good rate for a period of time. We as a committee looked at the power purchase agreement and it really didn't look that great. We decided not to move forward with that proposal. What we did learn was a lot about what we wanted to do in the process and learned the best arrangement would to have 2 solar arrays at 100 kilowatts, one by the Transfer Station and one by the Treatment Plant, close to where the 3 phase power is.
4. The key thing with the state is they set a threshold for small and large producers, the cut off is 100 kilowatts AC. If you stay at the 100 kilowatts or below the rate of which you get reimbursed for the electricity produced is much better, so it made sense for the town to stay within that cap. We sent companies proposal for both power purchase arrangement or an arrangement to own the arrays. Three companies responded and the Committee looked at all three of which they liked 2 and after interviews selected Harmony Energy Works to help us with the project.
5. The town in the last 12 months used basically 150,000 kilowatt hours. The largest user is the Library, the total electric bill for all of the buildings in town was just over \$30K. The actual cost to build the array is \$346K, up to a few weeks ago we thought EverSource was going to hit us with a \$30K equipment upgrade charge. EverSource took another look at the equipment and found it doesn't need to be upgraded, but there are some ancillary charges from EverSource that will need to be addressed. We want to make sure the solar array is built according to specifications and at the end, when it's turned on it performs to specifications. It has been recommended to have a clerk of the works to watch over that for us. This project has the interest of the Community Development Finance Authority, they have a specific interest in solar projects so they dedicated one of their people that helped to advise us. The total project cost comes in just under \$368K.
6. How to finance. We put our application into EverSource to get approved under the current cap; the application was submitted at the end of 2015 and has been accepted. The Public Utilities Commission, there is a rebate that comes from the state and our rebate will amount to \$75K. The PUC pay those rebates out of a pool, and that pool has gotten smaller because of the Legislature. Not only is the pool smaller, more people are going for it as well. Today the town has submitted the application for the rebate. Rural Development offered low cost financing at 3.4% for 20 years. The monthly payment would be about \$1,463.

7. The solar array on an annual basis will produce about 149,000 kilowatt hours. Net metering credit is about 11.8 cents per kilowatt hour. The energy credits are sold on the open market which is running about 4.5 cents per kilowatt hour. The project will lower the towns cost for electricity by about 14% on the low end to as high as 26% on an annual basis. If approved the project will be built in 2016, we will see an increase in revenue in 2017 for the next 20 years.

8. Ray Martin, Administrator Assistant for the Warner Village Water District, explained an array will be constructed at the water treatment plant. Because the arrays are split we are each eligible for the \$75K rebate. We also qualify for different programs in the rural development area. Any loans from rural development offer a 2.9% rate for 20 years. The array has about 2 or 3 more panels than the town. Our cost will be \$361,000. Because we can qualify under the Community Block Grant program, we can get up to \$69K and the Public Utilities rebate in the amount of \$75K which will reduce the cost down to as low as \$216K to finance (\$1,100 per month for 20 years). Both arrays are similar and Harmony Energy will construct the District array as well.

9. George Horrock said the two arrays are equal to planting over 1,400 acres of new trees. That is the green aspect of this project. George said Harmony Energy was established in 2008. He believes Harmony does more commercial installations than anyone in the state. George provided a list of commercial projects. George said the array that is at Brochu Nursery in Concord is identical to the array that is being proposed for the town.

George said it's also about the electrical power at each site, the Transfer Station site is 208 3phase and the other site is 480 3phase. Each one uses a slightly different model of the inverter and each one lends itself exactly to the area of the property. There will be 3 rows with a connection to the grid. At first it was thought it would cost \$30K extra to upgrade the utility service, but luckily it was found not to be needed. The panels are American manufactured solar panels, we are committed to American made. A question that comes up often is about the anti-reflective coating, reflectivity off the panels is less than dirt. Every 2 panels has an optimizer under them, and what that does is if a portion of the array gets snow on it or a cloud passes over you can see the difference. By using an optimizer only the particular panel that's covered is effected, the rest of the string still produces at 100% power. Not only are the modulars warrantied for twenty five years so are the optimizers.

The meeting was opened to public comments

John Dabuliewicz: You made a point of saying you want to stay under 100 kilowatt hours.

Selectman Carson: Correct, the design is 100 KW AC, that's what it is rated at and staying at that level we qualify as being a low producer. The DC of it is 114.

George Horrock: The rules for PUC for years were if you go over 100 kilowatts, instead of getting \$75K. The second thing is when you go over 100 kilowatts the utility company says you are no longer a small producer, you're a large producer and you get paid at a much lower rate. So by staying under that 100 kilowatt, what we are able to do is guarantee a full rate for everything you produce.

Selectman Carson: This was an economic decision. Someone might say why didn't you do it enough so you can cover all your usage and a little bit of growth. By doing this, from the start we qualify for a good rate and if we need to add rates in the future we can do that without jeopardizing.

Nancy Ladd: I first want to mention that maybe we can get under that usage by changing the lights. Secondly I am still slightly confused, you phrased it in two different ways. When you have detailed slides of all the different costs and reductions you talk about saving between \$5K and \$7K. And the very next slide you talk about net income and it sounds like your making money.

Selectman Carson: If you had a home array and you produce more power than you use they give you a credit on your electric bill. When your a commercial operation, as the town would be, and you have net metering, what will be produced at the Transfer Station is going to far exceed what the Transfer Station uses for electricity. We could never use up the credit they give us. We pretty much will receive electric bills as we receive them today and that's going to be a cost on the operating budget, we're going to get a check from EverSource for the difference and that's going to be recognized as revenue.

Ray Martin: The best way to look at it is the town has \$30K worth of electrical costs today, they could have as low as \$23K annual cost including the loan payment so in the best case your saving \$7K to \$8K and worst case \$4K.

Selectman Carson: If electricity doesn't go up in cost, if it stays the same, we're still going to get bills for \$30K per year. On top of that we are going to have to make a loan payment, insurance costs, but we are going to get credits which off-set those amounts, our net cost of electricity will go down. This is actually going to be net revenue because we get a check from EverSource.

Nancy Ladd: I'm still confused, I don't think that's net revenue.

Ray Martin: It's not net revenue, it's a savings.

Kimberley Edelmann: It's money we didn't spend.

John Dabuliewicz: Since you don't have the rural development grant yet. Will there be enough money if you don't get the grant?

Selectman Carson: If we don't get the grant, it still shows favorable.

John Dabuliewicz: I mean in terms of up front financing.

Ray Martin: The borrowing would increase, we don't believe, in the town's case, the borrowing cost would go up because the town didn't get the grant.

John Dabuliewicz: My question has to do with how much we are bonding.

Ray Martin: Both of the warrant articles say "up to" the amount. In the Water District, if we don't receive any grants, we are still better than breaking even, just a little, not much. Again we froze the cost of electricity for 25 to 40 years. In the district we are not making it totally dependent on any kind of grant.

Nancy Ladd: The net metering credit, is that a contracted number that stays the same.

Selectman Carson: Not necessarily, no. If electricity goes up our credit may go up.

Nancy Ladd: So it's based on the current rate?

Selectman Carson: The rate that is for the Transfer Station in this case.

George Horrock: For example, even though this is depicted as a flat rate, which is very conservative. When you look for example between 2005 and 2009 PSNH rates went up 5% per year. None of us know the future, but what we're trying to do is do a very conservative model and say even at a flat rate we're still at net and if the rate increases then the town wins in a big way.

Nancy Ladd: Is it grandfathered? Or can the fee be as they change the rules.

Selectman Carson: The rate at which you get reimbursed is designated by he believes the Legislature and the PUC.

Peter Merrill: My name is Peter Merrill and I work with Harmony Energy Works. The first solar cells that were made in the 50's are still working today. The same technology is being used for these cells, this is not something new. It's gotten better because of the way the cells are made. Regardless which direction net metering goes for rates you have fixed those costs at this pricing of the purchase of the unit for at least 25 years, certainly possible as long as 50 years. There may be some things that need to be replaced in 28 years or 30 years out, but it's easy enough to allocate those types of things for future just as you do insurance. I did it at my house 5 years ago, it was more expensive then but I was willing to take the gamble and it has definitely paid off. The rates have not climbed dramatically in that time, but they certainly climbed enough that my break even point was reached this year. From now on it saves me money at the full amount each year. Ironically my system has become more productive with each year.

George Horrock: PUC had a hearing today that I attended. It was about how the rebates will be changed. Currently it's .75 cents per block, the new proposal is to reduce this. Some will say why don't we do this next year, the price will be lower, well it might be, but you will lose 50% of that rebate, they are proposing .55 per block. Right now you have the perfect storm of rebates, low costs, good financing that make it profitable for the town.

Audience member: Next week at Town Meeting is this a 2/3 vote?

Selectman Carson: It's a 2/3 vote, essentially it's a bond.

Kimberley Edelmann: If this array is going to generate nearly 100% of the power used by the town, why is the net metering credit only half of our electric bills.

George Horrock: We can only off-set the delivery charge and supply charge. There is another piece that is very large for commercial properties, that is the demand charge. If you can produce power you not only effect the usage, but the peak demand during the month. The demand charge is dictated by EverSource and they say during the month at any time you use more power than normal for two 15 minute intervals then that's the higher charge they zing you with. I assume their logic is simply we have to be available to produce the higher demand in case you want. We can't guarantee that we are going to eliminate the demand charge, but, based on experience we think the conservative numbers may give you a lot more benefit.

Selectman Carson: George correct me if I'm wrong, the demand charge impacts mostly the Transfer Station.

George Horrock: Any of these buildings, who are predominately using their power during the day when solar is producing.

Kimberley Edelmann: The Police Station is using a lot of electricity. If we can figure out why they use so much electricity and reduce it then we will have excess that can be sold?

Selectman Carson: Exactly.

Kimberley Edelmann: Do we have an active Energy Committee?

Selectman Carson: We do. They meet on the third Wednesday of every month at the Town Hall.

Nancy Ladd: I'm wondering if there are other buildings that have a high demand, if we would be allowed to put a small solar array on the building then that net meter would be their actual meter.

George Horrock: That's good except for one small problem, the utilities had written into it that if you are participating in virtual net metering that you can't also have.....what you can do at any time if it turns out you have a larger demand you can take one of those properties out of the virtual net metering and put an array on just that one.

Kimberley Edelmann: If we build a fire station it can be added?

George Horrock: Absolutely.

Sue Hemingway: The Energy Committee several years ago had a professional come in and completed an evaluation on each building and there's recommendations for each building.

Andy Bodnarik: Are each of the meters smart meters?

George Horrock: There is no charge, they have something called a AMR meter, EverSource is in the process of upgrading everybody in the entire state.

Andy Bodnarik: Does that tie into the system that you were talking about monitoring?

George Horrock: The inverters is what is being monitored.

Andy Bodnarik: Are they alarmed so if you go below a certain amount of level of generation it would trigger an alarm?

George Horrock: We get email alerts.

Audience member: Construction of the site, snow loads and snow removal.....

George Horrock: There is an 80lb. per square foot snow load and so the design takes that into account.

Selectman Brown: Will they take 1" hail?

George Horrock: Yes, you can go to the Solar World website where it shows a series of tests.

Selectman Carson closed the questions and encouraged all to attend Town Meeting and would appreciate everyone's support.

Adjournment

A motion was made and seconded to adjourn at 8:05 pm.

Board of Selectmen

David E. Hartman

Clyde Carson

Allan N. Brown

Recorder of the minutes: Mary Whalen