

TOWN OF BEDFORD
ENERGY COMMISSION MINUTES
August 24, 2023

A meeting of the Bedford Energy Commission was held on Thursday, August 24, 2023 in the Town Meeting Room, 10 Meetinghouse Road.

I. Call to Order: Vice Chair Bandazian opened the meeting at 7:00 PM.

Present: John Russell (Chair), Chris Bandazian (Vice Chair), Jeanne Walker (Assistant Town Manager), Matt McLaughlin, Bill Foote (SB Liaison), Carolyn Mahoney, Sue Thomas (TC Liaison), James Dumont

Absent: Chuck Nettleship, Lori Radke (TC Alternate), Mindy Bator (SB alternate)

Chairman Russell introduced the newest member to the Energy Commission.

James Dumont stated that they bought 316 Wallace Road at the end of May and moved in mid-June. He's originally from northern California. He has a Maritime background. Specialized in grant writing for clean transportation and clean technologies. He was looking forward to bringing his expertise on getting larger emerging technologies funded and see what they could do to bring sustainability and emissions projects to the region. Look to see where they could partner with nearby communities to maximize their ability to track Federal funds back to Bedford.

II. Approval of July 27, 2023 Minutes

MOTION by Mr. Bandazian to approve the minutes of the July 27, 2023 meeting. Seconded by Mr. McLaughlin. Vote taken – Motion Passed – 6-0-1 (Thomas abstained).

III. Reports of Members and Committees

a. School projects progress and planning

1. Progress with systems upgrades

Mr. Foote stated that the summer work was about wrapped up. He thought they had sprinklers at all of the schools. They don't have the control system set up yet, but they're well on their way. The heating and ventilating work at Riddlebrook wouldn't start until next year. The other schools were pretty far along and will be wrapped up pretty soon. The sprinkler system controls were the last holdup for the sprinklers in Memorial and McKelvie, but they can do that on the fly; it doesn't cause disruption with the facilities. Chairman Russell thought it was a big deal that they got the sprinklers in for the most part. Mr. Foote stated that they want to get the HVAC improvements finished off on all of them too, but that's major work for Peter Woodbury mainly. Memorial was pretty much wrapped up. Chairman Russell congratulated him on the progress. Mr. Foote stated that they weren't finished yet. For them, a \$5M bond was hard to digest and it will have taken about three years by the time they wrap it up.

Mr. Foote stated that they talked about long-term capital plans and for them it's going to be roofs. Kara LaMarche brought up the idea of bringing up their energy study where they actually talked about solar three or four years ago. The holdup will be the roofs and those won't actually happen for at least another three years. They were looking at trying to bond those, because the next big roof coming was going to be the high school/middle school. It's been 20 years. They're hoping the roof was going to last longer, but if it doesn't, it's still going to be \$5M-\$7M, plus the other running \$600K here, \$400K there, so it might be an \$8M-\$10M bond when that comes. That won't be for three or four years. That's probably going to predict the time when they can talk about solar on the School facilities. With the IRA passing, it's going to make funding a whole lot more effective, because they couldn't garner that 30% tax break; they can now. If they wait until they do the roofs, it's still going to be that three to four years out before they can actually get it done.

Mr. McLaughlin wanted to know if there was any information about solar panels increasing the longevity of a roof; keeping the sun from doing damage. Mr. Foote stated he's sure it does, but they have to worry about roof penetrations. It doesn't leave the roof damage free.

Chairman Russell wanted to know if they had thoughts on that for flat roof penetration of the panels. Mr. Foote thought they were ballasted, but there's still a lot of weight you have to put on there and those become points where rain or water can make its way through; also ice and snow damage. It still has to be very carefully installed.

2. Portfolio Manager – No update

IV. Old Business

a. Solar Project Update

Mr. Bandazian stated that since their last meeting, they conducted interviews and discussed, among other things, 1 megawatt proposals, inverters, slopes and all of those things that were summarized on the materials that had been circulated. All four have submitted 1 megawatt proposals and those seem to provide vastly greater return on the Town's investment than the $\frac{3}{4}$ megawatt proposals. From interviews, all four could do the work responsibly and competently. Some have business models that were more designed to develop and then sell to investors as opposed to theirs, which is develop for an owner. He thought they could confidently say that all of them could do the job.

Mr. Bandazian stated that they had discussions about slopes for the development of slopes and what degree slope. That is a bit of a concern when you get on steeper slopes that it might cause erosion or damage to the landfill cap, which they would like to avoid.

Mr. Bandazian mentioned that two had options for operation/maintenance option going forward.

Mr. Bandazian stated that they wanted clarification, because some had implied IRA qualifications for percentages and some affirmatively stated that they would meet those. All of them affirmed that they would do the prevailing wage part, which would allow either a 30% IRA. Then they now have established that the 15% haircut was 15% of 30%, not 15% of the basis. That is 26.5% with tax exempt financing and 30% taxable financing and the same 15% haircut appears to apply to the adders as well. All of them said domestic content they would be very likely to meet and the hesitancy among them was there's no vendor certification yet in place from domestic content. Ms. Walker stated that they only came out with that guideline last week and they haven't quite figured out all of the ins and outs of it, all of the manufacturers. Mr. Bandazian thought it would be likely that they would meet that adder. Brownfields wasn't anyone's local control, but he thought if the

EPA makes PFAS substances hazardous substances in February, they would be entitled to brownfields regardless of how they interpret the IRA. Chairman Russell wanted to know if there PFAS inside the landfill and Mr. Bandazian stated that there was and if it's classified as a hazardous substance; he thought it was pretty clear. Mr. Foote wanted to know how they know and Mr. Bandazian stated that they had monitoring wells.

Mr. Bandazian stated that they talked about warranties. The panels are what they are; they're the manufacturer warranties. The inverters were all 10, but some had offers for enhanced warranties. All of them were tier 1 inverters. They talked about strings. There are string inverters and central inverters. With central inverters when one goes down the whole thing goes down. All of them were proposing string inverters. ReVision at one extreme is 20 strings, Kearsage at the other extreme is 3 strings, and the other two were 4 strings. So does a 1/3 of the system, 1/4 of a system, or 1/20 of the system go down when you need to replace them. Chairman Russell wanted to clarification on what the string meant and was it sequential series of panels. Mr. Bandazian yes, they're panels connected in series to an inverter. Ms. Walker stated that she thinks of them like Christmas lights; they're plugged in one right after the other.

Ms. Walker thought Mr. Bandazian explained everything very well. It's a lot of information they've been getting and digesting in smaller bits as they try and wrap their arms around the whole thing. They have four very solid vendors; that's a great problem to have.

Ms. Mahoney wanted to know the final opportunity to present or answer questions and when will the decision be presented. Mr. Bandazian stated that bids were open for 90 days from when they were provided at the end of June, so the Council would have to act next month. Mr. McLaughlin wanted to know if they recommendation to the Council. Mr. Bandazian stated that he's going to suggest they make some findings and a recommendation and make the recommendation agnostic. He can do that by motion and then they can talk about what and why, but he thought they'd been over what and why.

Mr. Bandazian stated that the only thing they haven't talked about was DC versus AC. All of them were for 1 megawatt AC. There's variability in DC and that's not what gets net metered. He didn't know what the value was of more DC output to the Town; what the economic value was. It may be that some were a little bit more conservative in their estimates. It didn't seem like there was anything to point to for efficiencies, but he didn't know that those on the Commission had the expertise. He didn't have any insight as to one is better and one isn't, because of DC output. Mr. Dumont wanted to know if they had any direct loads attached to the solar array. Mr. Bandazian stated that they did not and none of them offered behind the meter. They asked why weren't their compactors being connected behind the meter, and it's basically too expensive to do that to run back and forth compared to the benefit that you get and uniformly they all said that. Chairman Russell confirmed that the compactors were not behind the meter and Mr. Bandazian responded correct. None of them have offered to do that. There could come a day when that is desirable. Mr. Foote stated that that was something they made an assumption that they would be looking for; put everything behind the meter. He wanted to know if that would affect the economics, because they assumed they wouldn't be paying power costs for the compactors, because it would be free if it was behind the meter. Mr. Bandazian thought the exposure would be demand charges; the principal exposure and he wasn't sure what that was. Ms. Walker stated that some of the vendors looked at that and they explained it to them. It had something to do with the way they would being paid back for the net metering, because they would lose out on a particular rate if they did it behind the meter with the compactors. Mr. Bandazian stated that he wasn't sure he completely understood why none

of them felt it was in the Town's interest to do it, but none of them felt it was in the Town's financial interest to do it. Chairman Russell wanted to know if the economics changes for the Town. Mr. Bandazian stated that they assumed. Mr. Foote wasn't sure if that was a benefit. If all the power they generate goes out into the grid and they get net metered for the difference, it's a wash. Mr. Bandazian stated that if they use up all the power they generate, there's no benefit. Mr. Foote stated whether it's used for the compactors, the lights at the guard house or the salt shack. Mr. Bandazian stated that the difference would be looking at the demand charges when that materializes. There's ways to minimize that. Mr. Bandazian stated that at this point the cost benefit analysis militates against it.

Mr. Foote stated that one bid that was almost \$4.1M and the cheapest bid was \$3.2M. He wanted to know how big the bond was. Mr. Bandazian stated that the bond, which included the compactors, was almost \$4.4M. With the IRA stuff, it's more than enough to cover everything. Mr. Foote stated that by whatever means they choose and they look at the \$3.2M one, they would have taken out the bond money, but they won't have to spend as much money as the cost is. Mr. Bandazian stated that there were a lot of things that go into the financing part, which was another discussion not with them, but with the Finance Department and their consultant, Town Manager, and Town Council. One thing they could pull in the IRA up to 50%, but he would assume that their upgrade was all domestic content; those poles were probably not. The Town's cost, not the Congressional Direct Spending grant, could be pulled into the basis for the solar project. Even though some of it or most of it was beyond the intraconnect. That much in his perusing of codes seemed to be clear. They might get 30% of \$500K back added to the basis or more. There's the DERA diesel thing they've talked about that if they get 45% of the compactors that's another piece of money that could get pulled in, plus less than 40% if they take the haircut of this project. If they put it all together, ultimately they might only have to fund about \$2.5M. That raises other questions, not their decision, but was it so low that they do a 10-year bond. Mr. Foote wanted to know if they scored a bond or were they going to wait until all the figures settle out. Councilor Thomas stated that they don't have a price yet. Mr. Foote stated that the School bonded in July and they got 3.65. Mr. Bandazian stated that 15% haircut, depending on what the spread is between taxable and non-taxable, makes taxable financing look a lot better. With a bond probably like the School's; they don't have a prepayment option, so when you're paying at a higher rate than you would 10 years from now. With other bonds they've had a prepayment option. Not their consideration right now, but there was a lot of potential to do it well within that bond amount. Some of it's a timing issue and liquidity issue for the Town how they choose to do that.

Mr. Dumont was glad to hear that all of the bidders were able to come up to that 1K kilowatt target to match it so they could get maximized. Mr. Bandazian stated that all the work that went into that 3-phase power extension plus the fact that they don't have other places they could put large scale solar in Town. He thought that was an asset that it definitely made sense to optimize.

MOTION by Mr. Bandazian that the Bedford Energy Commission makes the following findings:

- 1. All four respondents are qualified and responsible to perform the work.**
- 2. The 1 megawatt alternating current proposals submitted by the four respondents provide vastly superior return on investment to the Town compared to the 750 kilowatt options and offered by three of the respondents.**

Their recommendation is to pursue a 1 megawatt AC proposal. ReVision's proposal is the lowest cost of the 1 megawatt AC bids. ReVision's development proposal is limited to 10% slopes, which is less than the others and it is more protective of the landfill cap. Post project, ReVision and Ameresco offer operation and maintenance services, which may ease long-term management by the DPW. The Ameresco proposal, which has an initial cost of \$241,670, more than ReVision's proposal, does offer higher DC output and a lower cost per kilowatt hour annually. However, the Energy Commission is unable to determine whether there is any financial benefit to the Town of higher DC output. Seconded by Mr. McLaughlin.

Mr. McLaughlin thought it was great. He thought all of the mentioning of DC power was kind of meaningless, because nobody uses DC power. All they are doing is converting it to AC, and that's what is metered, that's what drives the compactors, that's what drives the lights and the motors. He wouldn't want to base their whole decision based on a cost for DC on an annual basis. Mr. Dumont agreed. The only thing that comes to mind for him was electric vehicle charging stations on DC fast power and they aren't going to put fast chargers at the dump. Mr. Bandazian stated unless they were for Town vehicles, but that's 10 years from now when they might be thinking about that. Mr. McLaughlin stated that it didn't seem it would make it worth an extra \$200K give or take based on the two overall prices. Mr. Bandazian stated that he didn't see a benefit to it and Mr. McLaughlin stated that he didn't either.

Mr. McLaughlin wanted to know if they were picking a company to recommend. Mr. Bandazian stated that they weren't, but they're making some findings. The only recommendation he was making with the motion was to do the 1 megawatt. Chairman Russell thought the key thing was Mr. Bandazian felt all four were viable and that would be his opinion as well. They want the 1 megawatt AC and Mr. Bandazian commented very much so.

Mr. McLaughlin wanted Mr. Bandazian to re-read his findings on his comment on the DC, because they may want to strike that. That might just add confusion to the motion. Mr. Bandazian thought or clarity if somebody was looking at the numbers. If someone was inclined to divide the dollars by the annual kilowatt hour output if they reviewed what the Commission reviewed.

Mr. Bandazian stated that what he said was, **'The Ameresco proposal, which has an initial cost of \$241,670, more than ReVision's proposal, does offer higher DC output and a lower cost per kilowatt hour annually. However, the Energy Commission is unable to determine whether there is any financial benefit to the Town of higher DC output.'**

Chairman Russell thought that made sense and Mr. Dumont agreed.

Vote taken – Motion Passed – 7-0.

Chairman Russell stated that he was happy with the progress and was struck with the amount of detail just trying to get to a point of decision. Mr. Bandazian stated that it was a little challenging to get to apples to apples from the original proposals, but thought they were able to do that. Chairman Russell stated that he walked away initially being impressed by all four. Mr. Bandazian thought they were fortunate having four very good proposals. Chairman Russell wanted to know when it would go before Town Council. Mr. Bandazian stated next month; there are two meetings. Councilor Thomas guessed the 2nd meeting, September 27th. The 13th was a really packed agenda.

Mr. McLaughlin wanted to know if it was inside the 90 day window. Mr. Bandazian stated that it's from June 28th. Councilor Thomas stated that the agenda wasn't done for the 13th yet. Mr. Bandazian thought it would be prudent to put it on the 13th. Councilor Thomas stated that they would put it on in plenty of time. Mr. McLaughlin clarified that the prices were valid through September 28th. Mr. Bandazian pointed out that there were two months in between with 31 days. Ms. Walker stated that they could extend those dates with just a written agreement between the bidders. Mr. Bandazian stated that he didn't want to do that. Ms. Walker clarified if they need it, but she wouldn't be surprised to see it go forth at the earlier meeting. Councilor Thomas stated that if it's that closer to the day, they'll move it up. Chairman Russell stated that September 27th would be 91 days.

b. Compactors – Already discussed

c. Eversource 3 Phase Power update

Ms. Walker stated that she didn't have an update. She knows they've been waiting to get the rest of the poles that were found to be located in ledge. They were working on that. She didn't know if they've made any progress since last month.

d. Community Power Initiative: Discussion regarding RFP vs. CPCNH

Chairman Russell stated that he's been so busy he's done nothing on this. Mr. Bandazian stated that with Eversource coming down so dramatically, he thought this wasn't the time to make a convincing case. Chairman Russell wanted to know what Eversource was coming down to. Mr. Bandazian responded 12 something. Mr. Dumont wanted to know when that was going into effect, because his power bill last month. Mr. Foote thought next month. Mr. Bandazian stated that your next bill should reflect the lower number. Mr. McLaughlin wanted to know if that was just the generation fee of 12 and then 8 for distribution. His last bill was 22 cents, but that was the combined energy creation and distribution. Mr. Bandazian stated that it's going to go way down and thought people weren't going to be impressed to take a risk and all of those people who did do community power were locked into 15. Temporarily fuel costs were low.

e. Solsmart – Bronze Level Achieved

Chairman Russell was excited to hear they were going to go for silver. They have bronze and thinking of silver; it's within grasp. Ms. Walker stated that they need to set up some training sessions and she's hoping to get them scheduled in September. If she can get the training sessions in September and October, by the end of the year she thought they could qualify for silver. Chairman Russell wanted to know if those training sessions were for Town personnel. Ms. Walker stated that the Solsmart program created some training videos. Anyone could watch those training videos, because they're on the Solsmart website, but you have to have staff watch those videos. She thought it was staff from the Planning Department as well as the Building Department. She just needed to get it on their calendars. Mr. Bandazian wanted to know if they got a plaque. Ms. Walker responded no, they didn't get the plaque because they were so close to silver. The plaques themselves were only about \$100 and you get one plaque for free. They could have taken the bronze plaque, and then once they qualified for silver they would have to pay for the silver plaque, but they were so close. The gentleman that was in charge there was doing the ordering the next day and needed a decision. If they all decided they wanted to get a bronze plaque and not wait to

get silver, she could let him know and he would order it in the next order. Ms. Walker stated that her intent was to get the training set for this fall and be silver certified by the end of the year.

f. Website Review – No updates

g. Messaging Signage at Transfer Station

Chairman Russell stated that he photographs all the time the cost of comingled recycling. They can see the actually cost of the trash and comingled recycling. The glass was cheaper and you can bring your food stuff. Councilor Thomas stated that the composting will save the Town a lot of money by getting it out of the regular trash. They are using the compost at Joppa Farm this fall and if all goes well, they're going to use it on all the fields. She's heard it's a really good product.

h. Other

Ms. Mahoney stated that she was going to bring the school roofing and where they were at with the safety complex RFP and does the Commission have any opportunity to help out looking at the best way to get to net zero or decrease the carbon footprint of the new complex.

Councilor Thomas stated that the subcommittee was looking at designs and trying to finalize. The layout of the interior of the building was pretty much set. Now they're looking at the façade of the building; there were three options. Having them be energy efficient was always a goal. Right now they didn't know what the roof lines were yet. At the September 13th Town Council Meeting they're going to show what the building was going to look like. There was a meeting yesterday that she couldn't attend; they talked about solar panels. Ms. Walker stated that the consultant that's doing the design had been directed to consider solar panels to make sure that they could be incorporated within the design should the Town so choose. This was the conceptual design, so it didn't preclude that from happening. It is a one-story building, so there is a lot of roof area. She thought they could do something potentially with solar. It comes at a cost. The building itself they were going to use as much energy efficient fixtures and all of those types of things, but that's more part of the final design.

Chairman Russell referred to the meeting where the resiliency/security people presented about pulse and EMP. He wanted to know if they've factored in anything there or was it not being considered by them or the consultant. There were a couple of ideas for a small amount of money where they could protect certain parts of the new station. Ms. Walker stated that at this point in the conceptual design phase, they haven't broached that situation as of yet. Being a safety facility with Police and Fire that was very much on their minds, so protection of those types of systems would be more part of the final design. Councilor Thomas stated that the chief architect on this plan was a safety complex expert; that's all he does. They aren't at the granular level yet. Ms. Mahoney wanted to know if they were at utilities and how they were going to heat the building yet and if they didn't do solar right away, but they plan to do it later. Councilor Thomas stated that they weren't at that yet. Since it's a shared complex the mechanicals would be shared; that's a cost savings. They're still too higher level. Mr. Bandazian wanted to know if there was a ballpark footprint. Councilor Thomas stated that there was a footprint. On September 13th, they're going to show. Mr. Foote didn't know if it was going to be out in public yet. Ms. Walker stated that they have the footprint of the building right now; she thought it was 44,000 sq. ft. It includes the full Police station, Fire substation, a community room, Emergency Operations center space, and shared space between the Police and Fire. If they were very interested in the footprint of the building, it

is on the website. There's a button on the front of the Town website that says South River Road Police and Fire complex. Councilor Thomas stated that there was 43,727 sq. ft.

V. New Business:

a. CENH Updates

Mr. Bandazian stated that they were getting active again with meetings.

b. Other new business

Mr. McLaughlin stated that he learned there was a housing meeting at the Library on September 20th with various Town commissions. He wasn't sure who was putting it on or presenting, but it might be good for the Energy Commission to show their face there. It's from 6 – 8 PM.

VI. Reminders:

a. Next upcoming meeting September 28, 2023

VII. Adjournment

MOTION by Mr. McLaughlin to adjourn. Seconded by Ms. Mahoney. Vote taken – Motion Passed -8-0.

The meeting adjourned at 7:42 PM.

Respectfully submitted by,

Dawn Boufford