

## MINUTES

**COMMITTEE MEMBERS PRESENT:** James Horwitz, Tracey Lane Russo, James Stirling

**Also Present:** Chris Browe, Charles Dumais, Marianne Lippard, Paul Michaud (attorney), Jim Saisa, Michael Skroski (engineer, Weston and Sampson)

---

A meeting of the MicroGrid Committee of the Amity Regional Board of Education was held on Thursday, May 22, 2014 at 5:30 p.m. in the Superintendent's Conference Room at the District Offices.

**1. Call to Order:** James Stirling called the meeting to order at 5:37 p.m.

**2. Discussion with Legal and/or Engineer Regarding MicroGrid**

It was noted that this meeting will address the proposed MicroGrid. The next regular meeting of the Amity Board of Education will take place on Monday, June 9, 2014. One member from each town has been asked to participate in this Committee in order to investigate this proposal and report back to the Board.

This meeting was set up specifically to provide details about where the MicroGrid will be located, how much money it would cost, and the timeframe for making a decision on whether to proceed.

*Discussion:*

Facilities Director Jim Saisa said that the proposed MicroGrid would be located in the old ice storage area near the auto shop.

Mr. Dumais noted that some concerns have been raised about emissions from the campus as well as the sound of the machinery. A similar MicroGrid is in Branford and plans are in place to visit the site on Tuesday, May 27<sup>th</sup> to observe the operation.

It was noted that tonight's meeting will address the MicroGrid from an engineering perspective as well as from a legal perspective to determine the District's financial liability if we were to decide not to proceed. We would also like to determine the relationship between the District and the town of Woodbridge in making a determination as to whether to proceed.

Ms. Russo said that she would like to have a better understanding of this project from a legal perspective. She would like to know more about the agreement. She questioned why we are considering fuel cells and why the District should get involved with the MicroGrid to begin with.

Mr. Dumais questioned how to shift the risk to the developer. There could be new, better and cheaper technology coming out in the next five years.

Mr. Skroski said that he can only address technical questions. With the proposed MicroGrid, the emissions around the school will be more than what is there now. This system will generate electricity, when recovering heat it is about 80 percent efficient. The emissions are from natural gas. There would be no stack. You can't see that it is operating unless the rain flapper is up. This is the cleanest burning fuel that is available today other than hydrogen, which isn't available. This will generate all the electricity needed at the High School. The proposal calls for an engine at the High School and a fuel cell in the town.

Ms. Russo asked for an explanation of Capstone.

Mr. Skroski said that Capstone makes micro turbines. This is like a smaller version of a Pratt and Whitney jet engine. A fuel cell is an electrochemical reaction. The technology of power generation isn't changing that quickly.

Ms. Russo said that it is her understanding that fuel cells are no longer used.

Mr. Skroski said that at the time this was proposed, we they were in a competition to win \$15 million. It was important to propose something that people would embrace. The fuel cell does not represent a technology problem, but a financial problem. He believes the fuel cell is off the table with this proposal. The fuel cell has a high cost per unit of energy.

Mr. Michaud said that if this project moves forward, it would involve a competitive RFP. We can determine what kind of technology wins out through the RFP process.

Ms. Russo said that she isn't sure what this Committee should be looking at. If we are open to all technology, that makes the committee's job even more difficult. It isn't clear what we should be evaluating.

Mr. Dumais said that the RFP process would answer some questions for us.

Ms. Russo said that one the main questions the Committee is trying to answer is whether or not we would want this on our property. We have a large number of questions, but not knowing what type of technology will be used will make it difficult to get answers.

Mr. Skroski said that the technology that would have the least impact would be a fuel cell. The challenge is the economics of it, a fuel cell is expensive to operate and buy.

Mr. Horwitz questioned the possibility of solar power.

Mr. Skroski said that the intent of this effort is to have power that is reliable during an outage and solar wouldn't offer this.

Mr. Michaud said that the town of Woodbridge is in favor of solar if it can fit into the mix. The RFP would answer these types of questions.

Mr. Horwitz said that as he understands it, 70 percent of the power usage is at the High School. One would think that we would be the driving force behind this. One of the challenges that we face is that we would be signing off on the 30 percent user on what works and doesn't work, yet we are a separate political body from the town of Woodbridge.

Ms. Russo said that she would like a legal agreement between Amity and the town of Woodbridge. We have no authority in the current agreement.

Mr. Michaud noted that the agreement we have now is a grant agreement.

Ms. Russo said that Amity has no control and veto power and the RFP hasn't been designed yet.

Mr. Michaud said that an amendment to the agreement can be proposed. He believes this can be solved fairly easily. A memorandum between the two parties can be drafted to establish a partnership. The risk is on his firm, which won't be paid if the system isn't built.

Ms. Russo questioned who Mr. Michaud's client is.

He explained that the town of Woodbridge is his client.

Ms. Russo questioned how it would work if the District wants independent counsel. She questioned how Mr. Michaud's firm would be paid.

Mr. Skroski said that the DEEP has conceded that there are development costs that need to be paid.

Mr. Horwitz said that there are two different legal relationships.

Mr. Michaud noted that his firm isn't getting paid out of this RFP.

Mr. Michaud said that the firm is paid by the developer if the project goes through.

Mr. Skroski noted that there are line items in the grant for legal fees.

Mr. Horwitz noted that Mr. Michaud has an inherent conflict, as he isn't really the lawyer for the town and has an interest in the outcome.

Mr. Michaud said that this is ethical.

Ms. Russo said that this makes the conversation less objective than she anticipated it would be.

Mr. Stirling questioned who would make the selection.

Mr. Michaud said that a committee is set up and a technical consultant would be involved. There is a subcommittee of whatever government entity is doing the reviewing.

Mr. Horwitz said that taking out the town of Woodbridge altogether, this Committee needs to know why this is good for Amity.

Mr. Skroski said that if a developer can't install this cost effectively, it will be an uphill battle. Reliability is particularly important.

Mr. Horwitz questioned how many school days have been lost because the school was without power.

Ms. Russo said that during a seven year period, six days were lost.

Mr. Skroski said that this is a high priority area for power restoration.

Mr. Stirling questioned whether the area would lose its high priority status.

Mr. Skroski said he doesn't know if this area would lose its priority designation.

Ms. Russo questioned how the system would be fixed if it were down.

Mr. Skroski said that the fuel cell would have maintenance. There should be service and maintenance contracts.

Ms. Russo questioned how many companies producing fuel cells have gone out of business in the last 10 years.

Mr. Michaud said fewer companies maintain fuel cells.

Mr. Stirling said that he is concerned about the financial risk of not going forward after issuing an RFP. There could be costs involved even if we don't go forward.

Mr. Browe questioned what happens if neighbors don't want this.

Mr. Skroski noted that there is a generator at the school now.

Mr. Browe questioned why this system is more efficient and whether it has to do with transmission loss or heat capture.

Mr. Skroski said it is because of transmission loss, heat capture and for other reasons. This is considered a Class 3 renewable because it's so efficient. You need heat recovery to make it worthwhile.

Mr. Browe questioned whether neighbors and zoning boards have problems with these types of projects.

Mr. Skroski said that hearings are held and feedback is gathered.

Mr. Michaud said that he is not aware of the need for reimbursement once a project is approved.

Ms. Russo questioned what types of reasons are acceptable to use for not moving forward after the RFP process.

Mr. Skroski said that these are excellent points. The town met with DEEP and raised similar concerns.

Ms. Russo said that this is a very uncomfortable road to go down if a valid reason is in question. It is her understanding if there isn't a valid reason not to proceed, there is no way to get out of the deal. It was noted that this point must be further explored.

Mr. Michaud said he doesn't believe costs would be incurred until an RFP is approved.

Mr. Skroski said that he would not oppose this type of project if he were an abutting property owner.

Mr. Stirling said that if Amity uses 70 percent of the power, if the District built this and decided to forgo the grid, he would like to know how much money could be saved.

Mr. Skroski said that this is a good project. If it is determined that this isn't good for the town, the school might be approached about this type of project. If the school is designated as a shelter, this would be a community resource and the more energy that could be sold, the cheaper the price.

Ms. Russo questioned what the profit would be. Mr. Skroski said that he could share the spreadsheet with the subcommittee. It isn't a windfall, but it's a good investment.

Mr. Stirling questioned that if this is good to do financially, why it isn't approached differently.

Mr. Skroski said that it is not as lucrative for tax credits.

Ms. Russo questioned the generation and whether it would be at maximum capacity. She noted that this is a 20-year investment.

Mr. Skroski said that air conditioning isn't a critical load. He described how the energy system works.

Ms. Russo questioned whether the existing equipment would need to be retrofitted to use this power source.

Mr. Skroski said that, in fact, this is a higher quality of power.

Mr. Horwitz questioned whether the cost to run the system would be equal to or less than what we're paying.

Mr. Skroski said that would be the goal.

Mr. Horwitz questioned why there isn't more certainty. We don't want to be stuck with anything if in 10 years there is new and better technology available. Twenty years ago, nobody was talking about natural gas.

Mr. Skroski said that he doesn't see any surprises with this project. The location is ideal for this type of application. It's hard to predict the future of technology.

Ms. Russo questioned the District's responsibility for this technology.

Mr. Michaud noted that a PPA is helpful.

Mr. Horwitz said that if there is a problem, we revert to the grid. He questioned how to assess the reliability of this compared to the system that we have had.

Mr. Stirling said that concerns about air quality have been expressed. Having information about air quality would be helpful for comparison purposes.

Mr. Horwitz said that we have heard about how the MicroGrid will be quiet, non-polluting, lower cost, safe, reliable, satisfy all electrical needs, etc. It seems like there must be more to the story or these would be springing up all over the place.

Mr. Skroski said that MicroGrids are being used more and more.

Ms. Russo said that a 20 year commitment to this energy source seems like a big leap of faith. This is a stretch for a district that routinely shaves money from the budget with efficiencies.

Mr. Skroski said that Hartford has CHP systems. Most universities have them. Public safety in Hartford had issues with their fuel cells, but they are working through the issues there. DEEP has a list of all CHP projects in the State.

Mr. Stirling questioned what size would be needed for our heating needs.

Mr. Skroski said that he would need to get that number.

Ms. Russo questioned whether the system with Woodbridge would qualify for net metering.

Mr. Skroski noted that this would be CHP. It is pretty sophisticated.

Mr. Michaud questioned when a decision might be made as to whether to join Woodbridge. The town may go forward with a smaller microgrid without the school.

Mr. Stirling noted that the next Board of Education meeting is on Monday, June 9<sup>th</sup>. A decision isn't likely before then.

Mr. Skroski noted that DEEP has a goal to install the MicroGrid by March of next year.

Mr. Horwitz said that it is too early for a decision on a joint operating agreement.

Ms. Russo said that she would like a legal opinion letter advising us as to our rights and responsibilities under the current contract.

Mr. Stirling said that there are valid reasons for saying no at this point.

Mr. Michaud said that Woodbridge can go forward and submit jointly or alone.

Mr. Dumais questioned whether the town would qualify if the infrastructure doesn't include the school.

Ms. Russo said that a decision needs to be made by the full Board.

Mr. Skroski said that the project needs to be built by May 31, 2015. DEEP likes this project. This is a small town and it is ideal for this type of project.

Mr. Skroski said that the questions raised include issues that he hadn't thought about. Technically there's not much risk involved in this project. Neighbors

should not have a problem with this, but you never know who you have for a neighbor. He doesn't recommend anything in his professional life that I wouldn't tolerate in his personal life and sees no issues with the MicroGrid.

Mr. Horwitz questioned the usefulness of a trip to Branford to see the MicroGrid there.

Mr. Skroski said that the trip should provide the subcommittee with some valuable information. Mr. Saisa agreed that the group would probably find a visit to Branford to see a MicroGrid to be very interesting.

Mr. Horwitz questioned whether electromagnetic fields are associated with this and whether we know what would be coming from this project.

Mr. Skroski said that at times electromagnetic fields can be found in homes at greater levels than from power lines. He said that he doesn't have data on electromagnetic fields related to this project.

Mr. Horwitz said that the field is probably not zero. We aren't sure of the health effects of electromagnetic fields. Just because we don't know what the health effects are, that doesn't mean that there aren't any.

Mr. Skroski said that he wouldn't want to live under a transmission line, but would have no problem with riding a bike under one. He will get the EMF information if it is available.

Mr. Horwitz said that he wants to make sure that he asks every question possible to protect the kids. He questions whether to move ahead with a project like this if cost and reliability are the same.

Ms. Russo said that during the last power outage, there were people using the High Plains Community Center for 11 days. If this facility is used for emergency power during an outage, we won't know who is here using the school.

Mr. Skroski said that UI should have the historical data that we are looking for concerning power outages in the area.

Mr. Skroski said that Chris Wester understands this well and is more accessible for future meetings.

### **3. Adjourn**

The meeting adjourned at 7:55 p.m.

Respectfully submitted,  
Marianne Lippard, recording clerk