

Finance Committee Meeting
10_15_14

The meeting was called to order at 6:35 by Mr. Valentini.

Finance committee: Vito Valentini, Charles Flynn, H. Dennis Sears, Arthur Batacchi, Kristen Sparhawk

Other school committee: Maria Rundle, E. Bonnie Slivers

Administration: David Hastings, Bruce Turner, Ingrid Borwick
Architect: Kevin Reardon

Town officers: Kevin Basler and Wayne Burkhart (Monterey BOS), Michele Shalaby and Nat Yohalem (New Marlborough BOS), Charlie Ketchen (Alford BOS), David Smith Jr. and Nadine Hawver (Sheffield BOS), John Littlechild (Alford, FC), Laura Allen, (Egremont FC), Colin Smith and David Steinler (Sheffield FC)

Press: Julie Ruth of the Berkshire Record

The minutes of 9_18_14 were approved by the members who had been present at that meeting.

Mr. Valentini described the need for a new roof and new boilers for the main campus building. One of the three current boilers is broken and the other two are the same age and model. During the coldest months the building requires two boilers to run. There is currently no spare boiler should one need repairs during the winter.

The district applied and was accepted to the Massachusetts School Building Authority (MSBA) to participate in their accelerated repair program. The process dictated by the MSBA began this past May.

Additionally Ms. Borwick had helped the district apply for a SAPHIRE grant with Massachusetts Department of Energy. This grant is for districts to upgrade facilities to achieve greater energy efficiency. This grant is available to supplement the boiler work should the district install a new boiler system that uses renewable energy. This granting agency will coordinate with the MSBA.

The DOE fully funded two studies to determine which would be the most cost effective renewable energy available to the district. They have determined that moving to a biomass (pellet) boilers would offer the district significant fuel savings and enormous carbon savings. They did investigate moving to a geothermal system but the cost would be prohibitive.

The final numbers with regard to this whole project are to be released by December 3rd. This figure will include an estimate of construction costs, "soft costs", and

design fees. Mr. Reardon said that this number will most likely be larger than the eventual cost of the project as it includes a cushion for contingency.

In order to go forward with the process the towns will have to hold special town meetings in February or March to get approval of financing. If approved, construction would begin next summer.

Ms. Borwick said that the MSBA reimbursement rate for the whole project would most likely be 39.4 %. The SAPHIRE grant will fund up to 350,000 of the boiler portion of the project: 250,000 definitely and 100,000 more if the district can prove it has achieved a 20% energy savings. Certain design fees are also covered by SAPHIRE.

Mr. Valentini explained that if a district works with the MSBA, they must do the project their way.

Mr. Reardon explained more about the proposed roofing project. He said the insulation level must be improved to meet code and as a result mechanical structures on the roof will need to be lifted. He explained there were a few other changes necessary to meet code, but not many because of the newness of the school. The new roof would have increased insulation (R-value =25) and the new PVC membrane would be 72 mil. The proposed roof would have a 25 year warranty. The estimated cost currently is figured at \$20 per square foot, resulting in a cost of roughly 3 - 3.5 million.

An audience member asked how much money had already been spent by the district. Mr. Turner explained that thus far the district had been using funds the insurance company gave the district in compensation for its defunct boiler. Should the project be approved these expenses will be reimbursed at the 39.4% rate.

A few people noted that the R-value of the proposed roof would only be 25, a rate that meets code, but is not the best for energy efficiency. A few voices suggested Mr. Reardon do a cost-benefit analysis considering a higher R-value.

There was inquiry into whether the district was looking into solar and if so whether this proposed roof would be able to handle solar panels in the future. Mr. Reardon said the 72 mil membrane might be sufficient, but 96 mil would be preferable. Mr. Valentini said that while the Buildings, Grounds, and Technology committee has had discussions about solar, that element was not going to be part of this proposed project. Mr. Sears asked that Mr. Reardon also give the district an estimate of a roof using a thicker membrane that could eventually support solar. Mr. Reardon stated he believed that a 96 mil membrane roof would come with a 30 year warranty.

Ms. Shalaby inquired how much the district currently spends to heat and cool the building. Neither Mr. Turner nor Ms. Borwick could state a definitive number but they believed it to be at least 200,000.

The committee then began discussing the boiler portion of the project. The current estimated cost for one large and one small pellet boiler as well as one spare oil burning boiler is between 1.8-2.3 million.

Mr. Reardon explained that this plan was based on the information that pellet boilers run best at 100%. The plan would be for the district to use the smaller boiler in the fall and spring and use the larger one in the winter. The third fossil fuel boiler would be used as a supplement for the very coldest days and be there as a back-up.

Ms. Hawver inquired about the state of all the current boilers and whether they all had the same usage hours. Mr. Turner explained they were all the same age and that normally the district runs one in the fall and spring and two in the winter. Currently there is no spare should another fail this winter.

Mr. Basler expressed concern that there may be a shortage of pellets. Ms. Borwick explained that this was an issue the district had asked many questions about and even inquired of other schools using pellet systems. Her understanding is that the shortages may have been a problem for residential suppliers, but the district uses different suppliers through the state that have not had any such shortage issues. Berkshire School moved to pellet boilers a few years ago and has had a good experience with them.

Mr. Burkhart asked why the district not consider wood chips as a fuel rather than pellet as it is considered the cheaper and more responsible choice. Mr. Valentini replied he thought it was because pellets worked more easily. Mr. Turner said wood chips were considered.

Mr. Steinler asked whether there was any long term information available about the quality and life of pellet boilers. He didn't think Berkshire School's few years of experience was really enough to base a judgment on. Mr. Reardon explained that the technology and the boilers themselves come from Europe where the technology has been in place for decades and there is evidence of its long term sustainability.

Mr. Valentini stated that the estimated pay back using DOE numbers is 3.3 years. The district should save 76,000 year moving from oil to pellet. Additionally they will have 675 tons less CO2 emissions a year.

Audience members inquired why the third boiler would be oil? Why not propane or another pellet? This led to some inquiry about the district's current oil storage tanks. They are underground. There was concern that if the tanks are not used they will have to be removed or encased, both most likely at great expense. This may be argument enough to keep one small oil burning boiler. No one present could answer what the life of the oil tanks was nor how much it would cost to have them removed. These questions require further research.

Mr. Littlechild asked about the anticipated life of the new pellet boilers, but no one could give a definitive answer.

Mr. Valentini stated that there were obviously questions that still needed answers but the purpose of having this meeting was to disseminate as much information to the towns as the district currently has. He said the questions arising from this meeting would be very helpful moving forward.

Mr. Valentini also informed everyone that loosely connected to this project is an identified inefficiency in the domestic hot water system at this school. Currently the district keeps a 1000 gallon tank heated at all times using the boiler system. If the hot water system is detached from the boilers there could be great savings in the summer months. This project would most likely not have participation by the MSBA except perhaps those portions of the project that take place within the boiler room itself. This project would not be particularly expensive (compared to the other items on the table) and currently is all in the design phase.

There was some discussion about how the entire cost of the project, including the MSBA's portion and the portion covered by the SAPHIRE grant, would have to be approved by the towns. Therefore the number to be approved by the towns would likely be around 6 million. There was some concern that this method is so that the MSBA can back out if they do not have the funds as they had done to some degree in the 90's when constructing the new school. Mr. Turner explained that the funding of the MSBA had changed from one of appropriation to one of direct compensation of percentage of state sales tax. As a result the agency is able to set aside the promised funds at the beginning of the project and for the last decade has not been known to default on their share of the projects.

Mr. Ketchen stated that these projects had to be done. There was general agreement by those present.

Mr. Valentini then distributed historical numbers pertaining to what he called "applied capital", what the district has spent per year to maintain facilities and technology as opposed to paying off bonds. He identified what he called a "capital crisis" in the waning years of the bond issue for the school's construction. Not enough money in the capital budget was being applied to maintenance of facilities. He said that in the last few years the district has attempted to find that ideal level maintenance number (around 400,000) and come up with long term revolving plans for equipment replacement and regular maintenance.

He also expressed his interest in making a long term planning effort with the operating and transportation budgets in an effort to smooth out the increases in budget from year to year to something equaling about 2.5%. He noted that three things have stabilized making this sort of planning possible: The district has a rough parity in the number of students who choose and choose out, the enrollment numbers have stopped declining and the state manipulations of town contribution

percentages seems to have finally come in line with enrollment numbers from the towns which helps in planning.

Ms. Steinler asked that in the future enrollment figures be included when presenting historical budget figures.

The meeting adjourned at 8:40 pm.

Minutes submitted by Kristen Sparhawk

Answers to Questions Presented at October 15, 2014 SBRSD Finance Committee Meeting

1. Request for running CBA on increasing R-value of insulation. **Increase R-value would run anywhere between \$200,000-\$475,000 with a payback of 64-103 years depending on the increase.**
2. Request to run numbers on increasing thickness of membrane in order to allow for solar paneling in the future. **Current membrane is 42. Putting in 72. Increase to 80 to accommodate solar would cost an additional \$200,000. District has decided to go with 72. Additional padding can be added down the road if we decide to do a solar project.**
3. What is the yearly cost of heating/cooling the building presently? **\$200,000**
4. Why pellets? Why not wood chips? **Wood chip handling systems can be more complex since the chips aren't uniform like pellets, so for small to medium scale systems such as this, the easier operational profile of the pellets outweighs the fuel cost savings you may achieve by using wood chips instead of pellets. Additionally, pellets are more dense than wood chips, so they take up less space and have lower moisture content which allows them to produce more heat on both a weight and volume basis.**
5. Why third boiler as oil? Why not another pellet? Why not propane? **Oil/propane boilers have lower upfront costs and higher operational costs. Since the third boiler is a 'peaking boiler' the capacity will not be used for the majority of the heating season, thus capital cost plays a more important role than fuel costs. The oil infrastructure is there and there is a backup generator that requires oil to operate.**
6. What about oil tanks in the ground? What is their life expectancy? **The District will keep the existing oil tanks since the third boiler will be oil. This makes sense because the oil infrastructure exists and there is no significant savings with propane. Furthermore the District has a backup generator that utilizes oil. To remove and replace oil tanks would cost approximately \$50,000.00. In the latest engineer's evaluation of SBRSD's infrastructure, it was their opinion that the oil tanks, which are double-walled and alarmed, have an effective life until 2021 and beyond.**
7. What is the life expectancy of the pellet boilers? **The engineer's financial model assumed 25 years; Viessmann model boilers are of high quality and are recommended by the engineers. The life expectancy can exceed 25 years.**

Note: In addition to the two engineers working on the boiler project, the district is working with the Veissmann regional representative as an additional resource.