Concord School District
Joint Facilities and Finance Committee

School Board Committee: Joint Facilities and Finance Committee

Date: August 22, 2016

Capital Facilities Committee members present: Rusty Cofrin, Chair, Jim Richards, Nathan Fennessy, Tom Croteau

Finance Committee members present: Tom Croteau, Chair, Jim Richards, Nathan Fennessy

Administration: Terri Forsten, Superintendent, Jack Dunn, Business Administrator, Matt Cashman, Director of Facilities and Planning

Agenda:
1. Purpose and goals
2. Notices from Concord Steam
3. Feasibility study - scope of work
4. Project by school (including alternates)
5. Project cost by school
6. PUC hearing
7. Next steps
8. Questions

Finance Committee Chair Tom Croteau called the meeting to order at 5:38 p.m., noting that this was a combined meeting of the Facilities and Finance Committees to review the mechanical conversion from steam to natural gas study results.

Business Administrator Jack Dunn reviewed the purpose of the meeting:

- Overview of RFS engineering study and options for four affected schools
- Develop understanding of timeline
- Outline process for moving forward
- Action: recommendation to the full Board for the September 6, 2016 meeting

Concord School District’s steam provider, Concord Steam Corporation, recently announced that it will discontinue steam production in May, 2017. This will require immediate action by CSD to ensure that a reliable heating source is available for the 2017/2018 heating season.
Scope of Work:

- Developed in cooperation with RFS and the administration through meetings held on 6/2, 7/13, 8/1, 8/12, 8/21, and 8/22 as well as various phone conferences.

- Existing steam heating systems will need to be removed from each building and replaced with new gas-fired equipment.

- Improvements at Abbot-Downing and Christa McAuliffe Schools will be less extensive, as these schools were designed and built to accommodate conversion and require minimal re-work of existing systems. These schools will have two (2) natural gas boilers added to each building.

- It would be recommended that Rundlett Middle School, a facility being considered for renovation or a new building, have three (3) new gas-fired boilers and modifications to the mechanical room.

- Concord High School will require significant modifications to existing steam mechanical systems, and will require the addition of a small building adjacent to the existing mechanical room to accommodate seven (7) new gas boilers.

- The administration worked with RFS to incorporate the School Board’s 10-year Capital Improvement Plan (CIP) and to consider the life expectancy of the existing infrastructure for this project. The determination was made to incorporate options for the HVAC systems at Concord High School for Board consideration. RFS has been asked to price out these upgrades as alternates.

- Develop a timeline to be off steam heat by October 2017.

Projects by School: Abbot-Downing and Christa McAuliffe

- Elementary schools designed and built to handle the conversion to gas

- Minor demolition of existing steam equipment for two incoming gas boilers

- Cut and cap Concord Steam line into the building

- Add domestic natural gas hot water heater and associated pumps

- Add expansion tanks, air separators, and feeds

- Add chimney and associated combustion ventilation

Rundlett Middle School:

- Contained oil-fired boilers prior to conversion to steam in 2009

- Demolition of existing steam equipment

- More extensive work than elementary schools

- Install adequate gas line from utility company

- Cut and cap Concord Steam line into the building

- Install three (3) natural gas boilers (two primary, one backup)
• Add domestic hot water heater
• Add expansion tanks, air separators, and feeds
• Add chimney and associated combustion ventilation

Concord High School:
• Addition in 1996, added steam, reduced the mechanical space footprint to save money
• Most complex and challenging site of the four conversions
• Demolition of existing steam equipment
• Building 1,440 square-foot building (estimated) with 22-foot ceilings with chimney and combustion ventilation
• Install adequate gas line(s) from utility company
• Cut and cap Concord Steam line into the building
• Install seven (7) high-efficiency natural gas boilers
• Install domestic hot water heater(s)
• Add expansion tanks, air separators, and feeds

Concord High School Alternate Options:
• The high school has a total of 14 air handling units (AHU)
• 7 of the 14 AHU’s are steam-fed
• The remaining 7 AHU’s are hydronic
• All 14 units are at 75% of their useful life and are on the CIP to be replaced in the next 10 years
• Alternates #1 and #2 replace these AHU’s with in-kind new units
• Alternate #3 replaces the AHU’s and adds dehumidified air (same as in the new elementary schools)

ALTERNATE #1 – In-kind replacement
• Replace seven (7) existing steam-fed air handling units (AHU’s)
• Leaves other seven (7) as they are

ALTERNATE #2 – In-Kind replacement
• Replace all fourteen (14) existing air handling units (AHU’s)

ALTERNATE #3 – Dehumidified air system
• Replace all fourteen (14) existing air handling units (AHU’s)
• Provide a fully dehumidification air system throughout the building (same as in the new elementary schools)
• Requires further study to confirm costs
• Phased approach –
  o Summer 2017 heat conversion
  o Summer 2018 dehumidified air

Project Costs: Economic Analysis

• The numbers presented are based on current economic conditions, other bids, and industry standards that were provided by a general contractor the District added to the scope of this work.

• The numbers presented are estimates only. For those involved in the elementary project, initial estimates were $68 million, final cost was $55 million. For those involved in the RMS HVAC upgrade, the initial estimate was $4.1 million with a final cost of $3.6 million.

• RFS has evaluated the potential energy cost savings associated with this conversion and the anticipated project cost payback. The conversion to a natural gas heating system will provide significant energy cost savings (estimated at $660,000) when compared with CSD’s current steam rates, which result in short payback period. The initial estimate is a simple payback of 13 years.

• The administration plans to work with the State, financial advisors, and researching various energy programs to assemble the financial plan.

PUC Hearing notes:

• 120 customers impacted
• PUC question: number of people impacted: State: 2,800 / CSD: 3,850 (students/staff)
• PUC comment: “Plane is on fire; we are just trying to control the landing.”
• State comment: limited mechanical contractors to handle state conversion
• PUC: Concord Steam is a private company
• PUC: Talk to each other; don’t wait for us, coordinate your efforts.
• Liberty Utilities: Adding these additional customers will be less than an additional 1% load.
• Infrastructure upgrades to run boilers will not be in place until next spring.
• State: planning on bringing in temporary heating sources to run their 26 buildings; do not plan to operate existing steam plant.
• PUC: steam rates will fluctuate. As customers drop, rates will likely rise because the costs will be spread among fewer customers. There will likely be additional charges for shutting down the plant as well. Rates likely to increase 23% or more.
• PUC needs plans and a conversion schedule as soon as possible, as this is an emergency.
Next steps:

- September 6th: Non-meeting prior to monthly Board meeting; presentation to Board and request for approval to move forward
- Additional September meetings (to be determined)
- Additional Joint Financial and Capital Facilities meeting
- Review overall project
- Review of alternates and additional CIP considerations
- Bond schedules

Discussion took place throughout the meeting pertaining to individual schools. Concord High School will be the most complex and challenging. Nathan Fennessy asked if there were alternate locations available for the addition needed at the high school, to which Mr. Cashman replied there were. Mr. Croteau was concerned with the placement of the air handlers at the high school, and whether they will cause noise and interfere with learning for the students near that area of the building. Mr. Cashman pointed out the amount of room available on the existing roof area, and indicated that there should not be an issue with noise. Rundlett Middle School concerns included the possibility of asbestos, and working with an abatement with students present. Mr. Cashman explained that the greatest caution will be taken to ensure the safety of students and staff if this occurs. Jim Richards expressed concerns about hot water being unavailable during the conversion, and Mr. Cashman addressed this concern by indicating that this would not happen and that hot water would be available.

Mr. Fennessy was concerned that the school district is in this situation due to the state of New Hampshire forcing the closure of Concord Steam. He wondered why the state isn’t offering some kind of reimbursement to the school district to offset the monies the district is being forced to spend for this emergency conversion.

Mr. Dunn reiterated the importance of moving this conversion forward due to the need to hire a reputable contractor and lock in the price to complete the conversion in a timely manner. The school district timeline is to have the project completed by October 2017.

The Committee voted 4-0 to move forward with a recommendation and discussion to the full Board on September 6, 2016 (motioned by Mr. Fennessy; seconded by Mr. Richards).

The Committee voted 4-0 (motioned by Mr. Fennessy; seconded by Mr. Richards) to adjourn the meeting.

The meeting adjourned at 7:02 p.m.