

Montague Energy Committee

Town Hall-1st Floor Meeting Room

Tuesday, July 3, 2018

Present: Chris Mason, Chair; Jason Burbank, Tim Van Egmond, Ariel Elan, Pam Hanold, Sally Pick, Committee members. Also attending: Mike Langknecht – Gill-Montague Regional School Committee, who is acting as liaison between the schools and the Capital Improvements Committee (CIC).

Mike says that the CIC is becoming more active and pro-active with the school district.

Chair called the meeting to order at 6:22pm.

*** Approved minutes of 6/12/18 meeting as Amended. (Unanimous)**

*** Schools' oil tanks replacement**

This item was moved up in the Agenda because two MEC members and Mike L. attended the most recent CIC meeting, where a possible alternative to replace oil heat was discussed.

The two existing oil tanks at Sheffield and Hillcrest Schools are so old that keeping them is considered risky. GMRSD wants replacement tanks or a replacement heating system to be in place by the time school opens in fall of 2019. A Special Town Meeting article will be needed.

Chris first touched upon pellet boilers, which MEC has discussed researching for this purpose. State SAFIRE grants are not currently offered.

Chris, Tim, and Mike attended the last CIC meeting, where Jonathan Parrot of the Dept. of Energy Resources (DOER) presented information and advocacy for a "dry chip boiler". Jonathan is a DOER specialist in biomass, but downplays that word, because biomass is controversial.

Chris, Tim, and Mike report that everyone at the meeting was enthusiastic about dry chip boilers, based on Jonathan's presentation. Discussion ensues; unattributed statements were made mainly by Chris, with Tim and Mike contributing.

--This is NOT a pellet boiler.

--*Do chips need to be vetted for quality?* Probably yes; there will be state certification of chips that can be sold on the open market. Tom Bergeron, DPW superintendent, had asked someone whether Montague DPW can *supply* chips it could make from tree-fall & brush collected from Town properties. Ariel adds that some property owners, including her, would love to get rid of their brush and have it used to supply energy.

--If chips are DRY enough, and produce enough BTUs, they can earn Renewable Energy Credits (RECs), which Montague can sell. 3 RECs per ton burned. This is using certified chips. They think this rate is based on chips producing 3 btus per ton.

Pam: Is there a detailed comparison available of dry chips vs. pellets, in terms of full-life-cycle carbon emissions, climate impact overall, air quality issues, and health impacts?

She recommends we each look up an article in *The Guardian* published a couple of days ago: www.theguardian.com/environment/2018/jun/30/wood-pellets-biomass-environmental-impact Many qualified people are challenging our state government's current assumptions regarding what safe/clean air is in relation to wood-based fuels. And they are challenging the assumptions that wood-based fuels are climate-positive.

--Mass. Clean Energy Center (CEC) will buy down 50% of the cost of a wood-chip-burning system UP TO the costs of the distribution system—which will not be subsidized. Future subsidies could be higher.

--The U.S. Forest Alliance will pay for a feasibility study—free to us.

Ariel: Reminding everyone that the U.S. Forest Alliance is an industry trade group. It isn't a government agency, and not an environmental or forest-protection organization. Dislikes the misleading quality of the name. Recommends that we always keep in mind that a trade group will always be sharing only partial information that is favorable to the business interests it represents.

Discussion refocuses on the oil tanks and other options for replacing oil-fired heat:

--The schools have two oil tanks that have to be removed.

--Plus one plastic tank that "should" be removed.

--To remove the two oil tanks will cost an estimated \$50,000.

--To remove these and replace with two new oil tanks is estimated to cost \$600,000 in total.

CEC incentives for ASHPs are up to \$125,000; or up to \$240,000 for affordable-housing projects.

[Minutes-taker's note: Different locations on the CEC website show different maximum rebates for a government or non-profit project: up to \$120,000, \$180,000, or \$210,000; with a \$240,000 or \$250,000 maximum for affordable-housing projects.]

Could consolidate as one operational heating system for the two schools & administration building. Ganged boilers. Keep the 3rd tank that doesn't need to be removed, or add smaller oil tanks, as back-up system.

Discussion shifts back to wood chips:

--Everyone who attended the CIC meeting with Jonathan P. was quite enamored of this idea.

Discussion and general agreement that a unbiased feasibility study is needed before we as a committee take a position—particularly evidence related to air quality, especially taking into account local conditions such as air inversions, air stagnancy, and the health impacts on children.

Are there technologies that clean the effluent air better than others? If so, what is the additional cost? It seems that all wood-burning systems emit particulates—a big concern. Are there any that don't?

Also, what are the state criteria for wood chips? How are they sourced? Do current and/or proposed regulations allow for cutting live trees to make chips and pellets? Do the regs allow for clear-cutting (that otherwise would not need to be done for some other land-clearing purpose)?

How much transportation would be involved in bringing the wood to processing plants, and from processing plants to customers? I.E., how “local” can the sourcing be? How sustainable is the process? What is the GHG footprint of the full-life-cycle of wood chips? Is the state’s promotion of wood-burning a ‘foot in the door’ for exporting wood fuel? [See *Guardian* article.]

--What studies are already available, based on how many years, on air quality and health effects?

--Jonathan Parrot says state support is going to 3 wood-chip start-up providers locally. He says pellets are falling out of favor because they are too expensive to produce.

Pam: Uncomfortable that we have only heard from one segment of opinion on burning wood. Last she heard, the American Lung Assn. does not support any of these biomass forms-- especially not pellets.

As an Energy Committee, we should also be concerned, and study, the air quality around the production facilities.

Increasingly there is evidence that older trees are being cut down to chip. That means we are taking carbon-sequestering trees out, 100 years old, and we are not improving our carbon balance.

Chris: Right now, we would be using only waste wood. If the market grows, wood might be taken from forests. Biomass has always brought controversy: For example, clear-cutting red pine was not a good direction.

Pam: Has heard several presentations from Forest Alliance & similar groups: Their business model IS based on being able to commercially harvest more wood than “waste wood”.

Chris & Pam each acknowledge "this is complicated".

Sally: Has a lot of red flags coming up about the wood direction. Especially after the biomass plant in Greenfield was defeated, she thinks (supporting wood-chip heat) could be seen by some as a mark against our Committee.

Chris: I support reasonably done biomass; if it is limited and done carefully.

Chris & Jason: If this is the only alternative to oil, or even to natural gas, it IS better.

Ariel: Unsure this has been proven. Where is the independent evidence? And air-quality could still be a deal-breaker. When we have an air inversion, it’s already hard to breathe at my house.

I agree with Chris, that I have been wishing there was some safe and low-impact way we could use my brush and other truly ‘waste wood’ as an alternative to gas and oil. I’d really like to see this wood in the mix, instead of taking 20 years to compost. I just don’t see the state requiring the restrictions that would limit wood-processing and burning in the necessary ways.

Pam: Would want to move slowly (on wood). *Not* have only one source of professional information on the subject. Agrees with Sally that our Committee's integrity and relationships with other energy committees and our townspeople & neighbors are at stake.

--Ground Source Heat Pumps (GSHPs) are an option to evaluate: Grants up to \$250,000 from CEC. And Air Source Heat Pumps (ASHPs).

TIMETABLE reminder: School District needs to replace existing oil tanks by September 2019.

--MEC's sense of *immediacy* is for getting away from *oil* for these schools.

Jason: We need a liquid biofuel that we can use—for example, at U.Mass.

Ariel: Northeast Biodiesel! The plant keeps running short of investment money to meet one or another requirement to open. I still think biodiesel sourced from waste grease & industrial oil should be in the mix. Especially locally produced from local & nearby sources.

Chris: Thought it was terrible that the biomass plant in Greenfield was defeated so easily.

Mike & Chris discuss district heating for the two schools & administrative building. Everyone seems to have a positive feeling about reviving this once-widespread form of infrastructure.

Mike & Chris got a .pdf from Jonathan on the wood-chip system, showing estimated savings of this technology versus replacing the oil tanks and continuing to heat with oil.

Pam: If we are trying to pollute less, that is different than trying to get to a neutral position.

Chris: We have written down many concerns that we want to answer. We have an offer of a free feasibility study.

--Hesitation is expressed about looking at an industry-generated feasibility study of wood without at least having at least a professional independent review of such a study, and counter-information to the extent legitimate counter-information exists.

--We would also like to study the feasibility of a geothermal heating system for all three buildings; air-source heat pumps; combination of these? Can include study of conversion to biomass.

META grant opportunities enter the discussion here. Touches upon two Agenda items in addition to Schools oil-tanks replacement: **Outdoor lighting upgrades to LED**; and **DPW Building**.

DOER will accept separate applications from different entities that serve the same municipality. Possibilities MEC has discussed previously include:

- Turners Falls Fire District can apply for a study of streetlight upgrades to LEDs;
- GMRSD can apply for a feasibility study comparing different options to replace oil as a heating fuel, as we've been discussing;
- The Town can apply for a study of passive-design features, efficiency features, and renewable-energy options—and combinations thereof—including anticipated upfront costs and operational savings, for the new DPW facility.

--The window to submit META grant applications this year is July 19-20, opening July 19 at 9am.

--First-come-first-served is still a criterion for receiving a META grant, though not the dominant criterion.

--Projects funded by this round of META grants must be completed by May 30, 2020.

--Applications must be submitted electronically via COMMBUYS.

(Chris shared the step-by-step to submit or view the application form: See end of these Minutes.)

Regarding the schools' oil tanks, the District may need to establish that a complete thermal audit of the buildings served by the oil tanks has been done. If such audit(s) is not in place, this META grant may be needed to accomplish one.

Sebesta, Inc., conducted an ASHRAE Level II Energy Audit of Sheffield Elementary School) in 2016 or 2017 [*CEE report states two different years for this study*]. This audit was funded by a previous META grant. Someone at the meeting recalls this audit included a building-envelope audit. Per published information, a Level II audit should include the building envelope: www.microgridenergy.com/news/2014/01/01/understanding-ashrae-level-1-2-3-energy-audits

ACTION ITEM: Jason has Sebesta's report; he will forward to all of us if he can find it.

ACTION ITEM: Chris will go over the Sebesta work and determine whether the District needs to apply to fund a thermal audit, or whether the District can apply to study GSHPs, ASHPs, and potentially evaluate a wood-chip feasibility study that would be provided by another source.

Chris will work with Mike L. to determine whether GMRSD will apply for a META grant, and will help with the grant application if the District decides to pursue one.

ACTION ITEM: Chris will work with T.F. Fire District on META grant for a study of upgrading streetlights in that district with LED lights for the T.F. Light District.

ACTION ITEM: Ariel will work with Walter on an application for cost/benefit analysis of various design features, energy-efficient infrastructure, & renewable fuel sources for the new DPW operations center.

*** DPW Building** (additional)

Chris spoke with Walter about current status of the DPW Building Committee and process. The Committee is in the process of responding to a Draft RFQ (Request for Qualifications) for the Owners Project Manager (OPM)—a state-required and state-certified role that will be the first hire in the building process.

Chris let Walter know MEC wants to see the RFQ before it is issued to the public.

Ariel updated MEC that she, Pam, and Jason are members of the DPW Building Committee, and that the three of us were appointed by the Building Committee as a Procurement Subcommittee to assist Steve Ellis, in his role as Chief Procurement Officer, to finalize the RFQ based on the Building Committee's requests. This is mainly a group-editing task, considering the nuances of language in order to most accurately convey Montague's needs to a potential OPM, within legal requirements. The subcommittee's meetings are open meetings.

Chris says *very* important to find an OPM who is at least familiar with energy-saving technologies and preferably has designed buildings that are efficient. The Building Committee agrees; subcommittee is working with Steve on the best language.

*** Report from Pam Hanold about the workshop on future vulnerabilities planning for Montague**

The Municipal Vulnerability Report is linked on Town website.

*** Recommending a lifecycle analysis policy and solar-ready roofs for new buildings.**

Tabled.

*** Town buildings and energy infrastructure, including Sally's list of town energy projects.**

We addressed one of the highest priorities: **Schools' Oil Tanks Replacement**

*** Report from Ariel Elan on CIC meeting.**

Inadvertently retained on Agenda:

Ariel reported on this CIC meeting (April 11, 2018) at MEC meeting May 1, 2018.

*** Discuss future directions, priorities of committee, building membership -including scheduling meeting with Peter Wingate of Community Action.**

Tabled.

Next meeting Aug. 7, 2018

Meeting adjourned at 7:52pm.

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Supplementary information:

**META Grant Application, online access**

--Go to COMMBUYS.com:

--Scroll down to Contract & Bid Search; Click on it

--Click on Bids

--A search menu pops up; under Bid Description, type in "Grant", then Enter

--Scroll down & look for Municipal Energy Technical Assistance Grant program (META grant).

--Select that.

*There will be lots of info in TINY print.*

--Click the LINK to the .pdf on that page titled Program Opportunity Notice

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<http://www.masscec.com/success-stories/pittsfield-school-renovation-chooses-vrf-heat-pump>