

Commission for Energy Use and Climate Change

Meeting Minutes

May 11, 2016

Tufts Administration Building, 167 Holland St., Somerville, MA

Attendees:

Ranger, Andrea – Commissioner

Rooney-Varga, Juliette – Commissioner

Johnston, Eliza - Commissioner

Saunders, Alyssa – Commissioner

Boukili, Vanessa – Commissioner

Sellers-Garcia, Oliver – (member ex-officio) Director of Office of Sustainability and the Environment

Mary Mangan – solar coach

Gregory Hall – Cadmus

Melissa Lowitz

Natalie Johnson

Greg Nadeau

Brook Detterman

Max Nadeau

Jerrad Pierce

Stephen Moore

Ryan Fahey – Cadmus

Julie Wood

Matt Bean

Meeting notes from April 20, 2016

- Approved

Somerville High School

- Greg Nadeau presented background on Somerville High School reconstruction process.
- Building committee has selected design with \$270m estimates (state would pay \$110m, \$160m for city). \$270 includes 58 LEED points (50 needed for silver).
- 7 add-ons voted on for priorities last Monday:
 - \$20m add on for 2 level parking downhill from city hill with soccer field on top,
 - additional SCAT add-on,
 - daycare add-on,
 - DPW storage (voted low priority),
 - \$7m to have expansion of auditorium (voted low priority),
 - Other one (not discussed)
 - \$36m (to be covered by the city) for exceeding LEED silver by unspecified environment additions. Price based on assumed \$50/sq ft. premium plus price escalators/for project management, etc.) was estimated by architect's estimators. Two individuals on the committee dissented and did not want it to be high priority.

- Gregory Nadeau will work closely with Mayor and Superintendent going forward.
- SMMA process: normally would do high level design, get preferred option, then send to state, get ok, then to schematic, then would figure out geothermal, etc. which would be July. However, the Mayor is supposed to make presentation in June in order to get this to vote for November presidential election ballot. So there is a sequencing issue. If Green Charrette can't happen until after board of alderman mtg, that's an issue.
- A special election ballot would likely end up with a difference response, so need to rush to get everything set by August 3rd so that this can be on November ballot.
- Greg Nadeau suggest that it's important that the green charrette (or whatever needs to happen to design on efficiency measures) to happen now, prior to Alderman meeting in June.
- Alyssa asked who is aware of sequencing issue – seems like that is more the issue than the design possibilities.
- Juliette asked if energy savings cost overtime has been taken into account in terms of projections for total cost for add-ons? Requested back of the envelop energy savings to be included in projected costs. Would like to go back to SMMA on cost projections to ask for what is lifecycle cost.
- The features included for the \$36m add-on for silver plus is unclear. There may be a wind possibility, but that could possibly be done later. Solar is about how much roof space there is. Current building has solar on building and future building will likely optimize it as well. Don't want to miss the chance to do geothermal.
- High need to get this right now and not have to do renovations in 2050.
- Oliver suggested that maybe commission could set goals for how building would perform and bring alternatives for technologies or designs. Could be a new way to quantify costs.
- Greg Nadeau says we are focused on geothermal because we could change electric later.
- Jerrod mentioned that there are some viable electric options (air source heat pumps, ERVs, and others) that might be better than geothermal (passive solar collector type thing – metal wall away from building that collects heat, etc.). Might still want geothermal, but wouldn't necessarily be as big.
- SMMA designed net zero building for Cambridge.
- Stephen Moore noted that cost numbers are arbitrary.
- Commission expressed desire for Mayor to consider the sequencing of decision making and the ballot measure. The implications of this decision will mean tax increases for properties for next 30 years. City is talking about selling some buildings, to off-set cost of H.S. as well.
- Matt Bean that instead of talking about specific systems, could get designers to agree that the additional cost is intended for the building to beat ASHRAE x by y%.
- Greg Nadeau believes they will probably have those answers in November – but that is too late.
- Though there will be energy savings need to think about how much you are bonding for this year.
- Jerrod noted that Newton geothermal system in the high school was turned off because people there didn't know how to manage it. So important to have energy manager to make sure Somerville HS performs as designed.
- Oliver will dig into Cambridge information, will express general goal to rethink how we are thinking about actual costs (re: how it may limit what we do with environmental performance).
- Oliver has been pushing for net zero high school, does commission want that?

- Juliette: It matters where electrons come from and if they are using fossil fuel onsite. Also, this is opportunity to get whole community on board.
- Commission agrees that it's important to use this building as showcase for community education, curriculum development. This is the big building they are building. Ripe to be a "living lab".
- Juliette: Property owners wouldn't want taxes going to a sub-par new building that is not designed to be top notch/most efficient.
- If Green Charette is really inflection point for this decision – then maybe commission should weigh in to bring that issue up to city.
- Probably will pass during a presidential election with voter turnout, probably not with special election. So need to do all this by August 3rd to get it on Nov. election.
- Commission feels that it is important not to focus on LEED, but rather on performance and outcomes.

Community shared solar feasibility assessment findings

- City got small technical assistance grant from DOER for feasibility assessment for community shared solar on municipal properties – recognizing old building stock was an issue - Cadmus did the assessment.
- Draft of 1st report is ready – Ryan and Greg from Cadmus shared findings.
- Tried to narrow down sites from 45 properties with desktop analysis, roof analysis/shading, etc. Did PV design for 3 sites and looked at overall cost savings.
- Top 3 sites: East Somerville School, DWP, High School addition. However, all 3 sites were all on margins for community shared solar.
 - DWP roof is more than 25 yrs old (looking for 1-5 yrs old – b/c otherwise, during life of system need to replace roof – cost for labor and need to pay owner of system for lost production).
 - HS has PV on it already.
 - East Somerville Community School was limited roof space (250kw would fit, but that is low end of a community shared solar project).
- Another way to structure project would be to build project on municipal property and have city be sole off-taker. Might get interest from developer. Limits administrative burden of getting lots of property owners together.
- Jerrod – if DPW needs new roof soon – maybe keep that as a possibility.
- DPW has greatest available roof space. Some shading issue, but if they replaced roof then array could be 300 kw without cutting trees. Potentially 500kw if you remove some tree shading. Lower cost with building mounted systems generally (less permitting).
- Depending on time horizon for replacement roof- incentives are bound to change – so hard to project cost if roof is replaced in a few years.
- Many buildings have roof issues, but now we have documentation that says feasibility for these buildings in future – if roof is replaced.
- With a community shared solar array, you might have 60 individual off-takers for a DPW system (each building taking 5kw). And that doesn't really supply that many people with energy. So if we are really so space constrained – maybe we just have city be off-taker.
- Ryan: there are lots of community shared solar around state.

- If new High School is going for LEED silver, I'd assume that it'd be built solar ready. Shading wouldn't be issue with 6 stories. But it could depend what's on roof- how it meets fire-code. Site itself isn't a concern.
- Andrea: Why not go for an existing community shared solar company?
- Oliver – pleasantly surprised that some bidders for Solarize could offer conduit to community solar. Will be asking about that in interviews. It wouldn't be installed in Somerville though.
- Might be worth looking at using rights of way owned by a 3rd party (rail core, etc.)?
- Hockey Rink is a metal dome which is an issue for solar. Part of East Somerville community school is the same way.
- Big parking lots are not city-owned.
- Cadmus didn't look at Somerville private property. In other communities have – issue with privately owned retail parking is that they want option to change their plans/redesign later. Also they want to use energy onsite and take advantage of tax credits.
- Would like to expand analysis with a few more sites, less of a focus on community shared solar and more with concept of city as likely off-taker of energy. Cadmus can't do that within this contract, but after contract ends may be able to.
- Ryan: With most recently net metering regulations, municipalities get full retail rate, whereas private system (which would be community shared solar) would only get 60% of net metering credit value which eats into the credit value. House Bill 4173 raised net metering caps, but reduces value of net metering credits for private projects. Went into effect today.
- Antares Group – is checking in on existing arrays in Somerville.
- Important for any municipal bldg. that is newly designed to consider solar.
- Andrea suggested that the aggregation broker (Good Energy) – might be able to help us with community solar – by finding sites outside of Somerville where people here could buy that energy. We'd want it to be Massachusetts-based.

Solarize Somerville – event planning and outreach to organizations

- Second volunteer mtg took place, website is up to sign up for more info – limited info, but includes timeline.
- Mary is collecting mailing lists, and planning for upcoming Memorial Day parade. Starting get print materials to send out, business cards, etc. – don't have full story yet so delaying outreach purposely.
- Volunteers are going to each ResiStat meeting. Need Oliver to go to Ward 2 ResiStat meeting.
- City is in procurement process for installer – got 4 great proposals – met with review committee this morning (Eliza, Russell Koty, Mary, Oliver and John Power, the electrical inspector) Hoping to select vendor by end of May. Vendors are aligned with City on outreach pieces with special meetings on condos, financing, etc.
- Suggestion for Mary and team to approach large property owners/commercial retail in a purposeful way to find the right person to talk to – building owner.
- Discussion on Solar 101 and 201 – when to do them?
- Would like to see the Solar 101 meetings be more community focused (rather than vendor led) since it would be less sales-like.

- Potentially could do some cross-city meetings with Cambridge, others (for those living in Porter, Inman).
- Brainstorm groups and networks and individual ppl for outreach and send info to Mary (she will share her spreadsheet with Commissioners)
 - A few ideas: Local banks b/c they may offer Heat loan. MA solar loan – rates are super low. Nextdoor.com (one volunteer is active there). Get one person from every neighborhood to post.
- Other ideas for outreach: Solar tour/house party. Something like a garden tour – sort of like Open Studios. Maybe have kids learn about systems and lead tours.
- Eliza, Andrea, Vanessa and Alyssa will participate in PV 101. For Eliza it needs to be in June or after August 16 b/c she is out of town rest of summer.
- Suggestion to host PV 101 at Greentown labs. Envisioning an evening lecture at community space. Possibly churches. Basic solar concepts.
- Mary will provide direction as to what PV 101 would entail. To help figure out which commissioners could speak about which topics.
- Andrea will provide info on the basic pieces of information she gives to clients who are new to solar.

Update on residential energy efficiency – renewable/non-carbon thermal

- Non-carbon options in residential energy efficiency program: Oliver reported that historically, they haven't talked about it in past. At Resiliency Task Force Meeting – Mass CEC talked about new program: loan program for heat pumps and solar hot water, biomass boilers, wood chips. They will be pushing this a lot more. Oliver asked if they were coordinating with Mass Save for outreach – said they were talking with Mass Save – trying to require mass save audit in order to qualify for their program. Trying to do outreach to installers rather than home owners so they can push loans to installers and the installers will do marketing.
- In next month or two Russel doesn't have bandwidth to include this in his outreach, but maybe after that.
- It might be an opportunity to let people getting central AC know that they can get heat out of same system.
- Refrigerants in US are terrible greenhouse gases – may be opportunity to make some noise about that. One of those is phased out by 2020, but if we could address anything before that, would be good.
- Eversource is pushing natural gas hard.
- Boston area committee for USGBC – working on program they want to pilot (Boston inspectional Services head is on committee) – trying to intercept people at permitting point. Commission not sure this is a good point to intervene and educate.
- Mother's Out Front have been tagging/highlighting gas leaks in Cambridge. Would like to help change the storyline re: gas leaks to talk about natural gas in general not being a clean fuel. Consider heat pumps. Cambridge moms have been tagging gas leaks.

Review CEUCC priorities for fiscal year 2017 and determine next steps

- Postponed until new commissioners join and fill 3 vacancies
- H.S. is clearly a priority

CEUCC vacancies

- Andrea, Matt and Spencer are leaving.
- Backgrounds of remaining commissioners:
 - Eliza – background not in climate – in economics and community outreach, community development, engaged in environmental work through Community Action/Mother’s out front. Economics/Energy/Green Communities program that DOER runs (ICF is sole contractor)
 - Alyssa – works at intersection of Economic and Community Development and Policy. Does Program and Process Evaluation often for Foundations funding innovative work nationally (in health, economic and community development, workforce development, etc.). Previous history working for Renewable Energy Trust and the Cadmus in Energy Group – focused on municipal solar and wind projects, energy efficiency evaluation work, etc.
 - Vanessa – Ecology/bio side of things, plants/trees, ran citizen science program in urban forestry, urban resource management plan
 - Juliette: degree in biology – directing a climate change initiative at UMASS Lowell. Climate change education and decisions support/cross discipline systems thinking. Simulation support/decision making
- It would be useful for future commission members to have some of the following qualities: Someone who understands:
 - State/DOER perspective, renewables, technology, energy efficiency, policies from utilities perspective, someone with inside ear to DOER
 - Transportation
 - Utility companies
 - Energy retrofits for buildings
 - Energy systems/gets building issues/physical constraints – engineer, architect/ energy modeling, etc.
 - District Energy, larger systems, understands technology
 - New innovative technology/attends conferences where cities doing pilot projects are sharing best practices, etc.
 - Information/feedback systems (rather than next coal fusion)
 - Net zero background/planning
 - Community at large (someone who is really plugged in) - Maybe someone from welcome project
- Being available to attend meetings is important.

Any and all business before the Commission

- None