

City of Cambridge

CLIMATE PROTECTION ACTION COMMITTEE

Minutes

September 12, 2019

City Hall Annex

*Attendees:* Melissa Chan (chair), Trisha Montalbo, Julie Wormer, Rosalie Anders, Fred Hewitt, Lauren Miller, Lyn Huckabee, Tom Chase (secretary), Keith Giamportone, Emily Pesquira, Jerrad Pierce, Ted Live, etc; *staff:* Bronwyn Cooke, John Bolduc, Nikhil Nadkarni

*Guests:* Henry Vandermark, Councilor Quentin Zondervan, Joel Nogie

Approval of Minutes

- July minutes approved

ETP Director Report

- Proposal to update BEUDO to report GHG emissions instead of energy
- Urban Forest Masterplan in draft this Summer
- Net zero transportation plan RFP draft in progress
- September 20<sup>th</sup> is climate strike
- September 14<sup>th</sup> Denehy Park EV event

Resilient & Renewable Thermal Study

- Nikhil Nadkarni presented preliminary results of study of technical feasibility of renewable thermal technologies, such as air source heat pumps and solar thermal domestic hot water for the building stock in Cambridge
- For most buildings, supporting a transition to heat pumps is optimal, for very high demand buildings, district energy is viable, per Low Carbon Energy Supply Strategy
- Various programs supporting air source and ground source heat pump installations, such as HeatSmart
- EnergySage Cambridge Clean Heating and Cooling Marketplace
- ASHP, air-to-water heat pump, GSHP, HPWH, and Solar Thermal DHW considered, solar air heaters not considered
- Looked at common building types in Cambridge, technology, and economics
- For the future, looking at potential overlap with climate resilience
- How does this energy transition support equitable outcomes?
- Technical feasibility: (see slides)
  - 57% of 2-3 family buildings do not have central cooling, e.g.
  - Other considerations include electrical service capacity, retrofit of distribution, e.g.
- Could identify priority areas like higher rates of natural gas leaks or flood areas where removing mechanicals from basement?
  - Mothers Out Front work

- Looking at high level issues like availability of geothermal well location opportunity and availability of three-phase power
- Sump pump feasibility as geothermal source?
- Cost analysis
  - Developing calculator to test financial feasibility with multiple variables
  - Calculator includes impact of doing building envelope improvements
  - For 80 scenarios, no retrofit project that is cost effective vs. natural gas
  - Non-gas buildings (all electric and oil) buildings can save money
  - Economics improved with building envelope energy efficiency
- Task 4, yet to come, is testing resiliency and renewable thermal
- Task 5, equity considerations
- Task 6, final report
- Recommendations to consider metrics outside cost-effectiveness, several ancillary benefits
- Question on how to take report results to implementation, focus on outcomes

### Consumption & GHG Emissions

- Opportunities to advise recycling committee about GHG emissions and the role of consumption
- Forming a sub-committee to make recommendations for meeting with recycling committee in November or December
  - Topics:
    - Moving-related waste
    - Meat consumption
    - Sharing economy and circular economies
    - Local currency
  - Volunteers:
    - Julie Wormser
    - Lyn Huckabee
- Focus on products that are high emissions, or that are difficult to dispose of? Are those the same or is there productive overlap?
- Break into technical and persuasion tasks? Venn diagram of plausible and meaningful
- Books: Inconspicuous Consumption, Drawdown

### Climate Preparedness Update

- Climate Preparedness Plan kicking off now, goal is to complete by January
- Climate Visioning Workshop, volunteers contributed “big ideas”
- Will do outreach by going out to community organizations this Fall and Winter in addition to public City meetings
- Last week of September is Climate Preparedness Week, 2<sup>nd</sup> Annual, working with Communities Responding to Extreme Weather (CREW)
  - Big event is screening of film, Cooked, about 1995 Chicago heat wave
  - (see climate newsletter and website for full list of activities)
- MBTA beginning vulnerability assessments for all subway lines, hired new climate preparedness person and AECOM and Weston & Sampson doing Red and Orange Line projects

- Resilient Mystic Collaborative, now 16 of 21 communities in watershed and near 90% of landmass
  - Steering committee of predominantly city planners and engineers
  - Cambridge taking a lead on stormwater flood management at a regional level, which is very expensive in Cambridge but may be less expensive upstream and potential for upstream neighbors to receive community benefits in exchange
  - \$350k state grant to look at opportunities for stormwater retention, where could large projects go, green infrastructure projects, and active reservoir management prior to large rainfall events
    - After year 1 will have
  - Working with DCR on Amelia Earhart dam management
  - Just hiring social resilience project manager to look at how people are differentially impacted by heat waves and extreme weather
  - Working with T on lower Mystic storm resiliency
- Boston Living with Heat project with Urban Land Institute, impact of heat on urban design and planning
  - Charrette in June for 4 sites, Somerville, Everett, and Boston
  - Report due out early October

### Member Reports

Lauren Miller

- UMass Boston and Environmental Business Council next Friday, September 20<sup>th</sup> on Health and Resilience, Gina McCarthy keynote, Tom Chase speaking

Lyn Huckabee

- ACEEE Energy Efficiency Day, October 2<sup>nd</sup>

Jerrad Pierce

- Opportunities for meeting DHW demand
  - Shower water heat recovery
  - Heat pumps doing cooling in summer, put into DHW

### Public Comment

Quinton Zondervan

- Introducing ban on new natural gas hookups
  - Recently passed in Berkeley, CA
  - Under consideration in Brookline, MA & Newton

Joel Nogic

- Participated in Wicked Hot Boston mapping project

*Notes by Tom Chase*