

Getting to Net Zero Task Force

January 28 Meeting Notes

Present Task Force Members: Jane Carbone, Caitriona Cooke, Barun Singh, Quinton Zondervan, Joseph Maguire, Tom Sieniewicz, Julie Newman, Shawn Hesse, Paul Lyons, Heather Henriksen

Community Development Department (CDD) Staff: Iram Farooq, Susanne Rasmussen, Ellen Kokinda, Jen Lawrence, Lisa Hemmerle

City Councilors & Staff: Dennis Carlone, Nadeem Mazen, Craig Kelley, Mike Connolly

Welcome and Introductions

Overview

Iram Farooq, Acting Deputy Director for Community Development highlighted the [Connolly petition](#), a resident-driven petition that has facilitated much of the constructive dialogue in the community about reducing carbon emissions from building operations. Though the Connolly Petition was placed on file by the City Council due to an expired time consideration, it has been a catalyst in bringing the issue of greenhouse gas emissions from buildings to the forefront.

Task Force Charge

- Reduce greenhouse gas emissions from the built environment
- Improve energy efficiency and conservation in existing and new buildings
- Support renewable energy generation both on- and off- site
- Best practices to engage and educate users and influence occupant behavior

Related Cambridge Initiatives

Susanne Rasmussen, Director of Environmental & Transportation Planning discussed related initiatives in Cambridge [see below]. The key for the Getting to Net Zero Task Force is not to end up with redundant activities.

- [Climate Protection Action Committee](#)
 - 2020 goals for GHG and EUI reduction
- [Compact for a Sustainable Future](#)
 - Building Energy Subcommittee
- **Kendall Square EcoDistrict**
 - District energy analysis
 - Stakeholder driven process tasked to assess and come up with goals for improving Kendall Square's sustainability
 - Received \$200,000 grant support from the Barr Foundation
- **MLK School: Targeting Net Zero**
- **Building Energy Disclosure Ordinance**

- Possible early action item for the Task Force?; CDD staff are working on this initiative for possible adoption in the spring
- Look into other localities who have already passed similar ordinances, i.e. Seattle, Washington, D.C., NYC

Other comments:

- Green House Gas (GHG) inventory – there are many things we are still unable to measure; i.e. fuel oil consumption
- There is a need for reliable data that may be compared every one-to-two years
- Municipal data is much easier to track; it is solid and updated consistently (i.e. electricity consumption, municipal employee commute trips)
- It remains a challenge to measure waste [separating residential waste from other sources]

Task Force Scope

CDD has been working with consultants from Integral Group to map out a framework for the Net Zero Task Force process. Iram briefly presented the proposed **Topics to Be Addressed (p. 3 of agenda)**:

- Building Energy Use
- Renewables and District Energy Systems
- Renewable Energy and Carbon Offsets
- Planning Approaches
- Policy
 - Managing the city's growth in the future, what are the available policy tools that could make an impact?; i.e. improvements to the electricity grid – how to influence this possibility
- Economics and Finance

Task Force Reactions to the Proposed Topics to Be Addressed:

Comments about Scope

- This is an aggressive list; focused on coming up with building energy use.
- Pleased to see a broad scope
- The Task Force should focus on what we know can work; what we want to do now versus five years from now
- Key phrases of the Petition: Reduce, Reduce, Purchase – it is key that we focus on reducing our energy consumption
- There is an opportunity for the Task Force to weigh in at the state level – this issue must be addressed at the regional level
- Never seen such an interest and ambition in Cambridge around a topic
 - Task Force should make sure to be ambitious so that Cambridge can be more of a leader

- Pleased with the complexity of the topics; design towards efficiency combined with policy, loads within buildings
 - Interested in the growth phase of Cambridge –responsible growth – there is a desire for Cambridge to grow, and also move toward Net Zero – it will be useful to have this informed lens – Task Force can capture this
- Not clear whether the group is addressing Net Zero carbon or Net Zero energy; just buildings not infrastructure related to building – what are we doing?
 - The Connolly petition focused on NZ emissions →for this Task Force, it is safe to focus on buildings

→Iram pointed out that while the focus of the Task Force is on building emissions, the Task Force may still make recommendations to other committees to continue to work on issues

- Start by defining what Cambridge would like to look like in 2050 and set a goal or 90% of what we use now; we will be underwater if not – then work backwards
 - What would the buildings need to look like in order to accomplish this?
 - How are they going to get us to the goal? - Ambitious focus areas
- Ambitious – needs focus so we aren't here for five years
- Tradeoffs- environmental, community preparedness, economic
 - Need to look at issue holistically, digging through the tradeoffs

Initial Thoughts/Ideas

- Take advantage of working with Wegowise. Wegowise provides data of buildings and use that as a tool to see what can be done; For example – put in new boiler – reduction in carbon emissions and can track savings and reduce costs
- Fascinated by the EcoDistrict model
- Building energy use- the savings we see from retrofits is very clear- we know how much to expect from savings; utility rebates help
- Policy side – whether or not get Utilities to enforce incentive programs
- It is important to understand mistakes of other cities
- When bicycling through Kendall Square – overwhelming to think how to get these buildings to NZ. Start with a 2050 vision and work backwards:
 - Solar maps – can do 25% of the city's use –solar on K2 buildings can produce 25% of total energy
 - On-site geothermal – much more efficient
 - 25%-40% renovating buildings in the next 35 years
 - Then find 3500 acres for solar farm in MA
 - Offsite – build 15 large turbines out of site floating – *done*
- Engagement strategy- examples of MIT, Harvard, identify other engagement strategies to look at best practices for doing this work
- Benchmarking- look at what others have learned

Raised Concerns

- Renewables are a concern – finding the right application in the building or space for it
- Other concern regarding the economics of solar
- Loans for energy Efficiency (financing) – how to underwrite loans; banks aren't doing it nor are people taking out loans to perform energy efficiencies; some people are crowdsourcing funding; however, nothing has stuck yet
- We shouldn't give up on financing to fund energy use reduction
- Solar- there is a need to dispel the myth that solar is expensive – often it is paid for by someone else or through a program
- Great state programs – be aware that these programs are being defunded slowly
- Concerned about the unintended consequences – fearful of how NZ policies/initiatives might affect the built environment (i.e. historic structures that are not NZ- altering historic buildings to be NZ)
- Examine water – nexus of energy and water - don't want to lose that in the conversation
 - Water is very much overlooked – it would be interesting to address this issue
- Concern about foresight & what is sustainable economically and environmentally – energy efficiency of properties
 - Net Zero is aspirational generally
 - Concerned that Cambridge's innovation economy could be hurt

Proposed Work Plan

Iram Farooq presented the proposed work plan [refer to p. 4 of the agenda]

Phase 1: Understanding the state of the world, finding the right expertise; procure consultants for the process & work in flexibility if the Task Force identifies there are other areas that the group must address

Phase 2: Opportunity Identification and Analysis

Public Workshop

- Present opportunities and analysis for feedback

Phase 3: Firming up Recommendations

- What are policy tools, control of utility- what's the mechanism to do that
- What is net metering?
- What are the information gaps?
- What do we need to do to understand?
- Build out scenarios- city's growth scenario- how to interface with environmental goals
- What's the right time horizon? 2050? 2030? Multiple horizons?
- Big picture scan of other jurisdictions
 - What examples are applicable to Cambridge?

Proposed Ideas for Working Groups:

1. Residential
2. Commercial, including labs/institutional
3. Renewables, and district energy

Iram explained that there was discussion about forming a Policy and Economics Working Group; however, since policy and economics issues cross over into every category, there did not seem to be a need to form a separate Working Group.

Considerations about Working Groups:

- Participation- need volunteers to populate working groups
- The City Manager received close to 50 applications to serve on this Task Force – an overwhelming response; there are many people who are interested in this issue
- At least 1 or 2 Task Force members should be in each working group to report back
- Does anyone have ideas about who would be helpful to serve on the working groups?

Other Issues to Note:

- The City Manager expects to see early action items- it is important to keep this in mind
 - Possible early action item: Building Energy Disclosure Ordinance?

Task Force's Reactions to Proposed Ideas for Working Groups:

- Proposal for a Working Group on public engagement – although crosscutting with other topics, this group could interface with other groups
- There is no clear emphasis on municipal activity
- Also suggest a Policy Working Group
- Important for the Task Force to adopt principles we want to use – it is key to explicitly state what we're doing so the Task Force does not fret about anything outside the agreed upon principles
- It is important that the economics are feasible
- Think about Utility early on because utility companies move slowly
- Creating a good environment makes for a better business sector
- Utility –franchise; cogeneration is a problem
- Also concerned about fairly priced energy and if it is sensible to the environment
 - Kendall Station – is there room in the streets? and what can be discharged to the river?
 - It is especially difficult for tall buildings because of air changes – use of power/utilities
 - It is key to understand functionality of what happens for buildings and laboratories
- Concerned about the consultants role and how they will participate in Working Groups
- Wants to see consultant expertise in legal and economic issues to understand what the Task Force is eligible to propose

- Cross-cutting groups is not ideal; It is better to deal with topics in the Task Force rather than crosscutting; otherwise people will have to go to every meeting or not enough information to make recommendations
- The key thing for this group is to establish a clear mission, vision, and deliverables
- It is important to talk about our ambitions early on –there is tremendous excitement around this topic – chance for the City of Cambridge to lead the nation
- Question raised about how ambitious both the Task Force members and the City are
 - Once we can understand ambitions, then we can balance what is possible
- Short term goals – 2050 too far, best to do 1, 5, 10 years; then throughout process measure impact
- 2050, 2030 too far out, 1 and five year better – clear objective
- To be really bold, set a citywide carbon tax

Public Comment from Audience Members

- Susan Ringler- The Connolly Petition focused on zoning amendments for new buildings- it would be ideal to do something with zoning in the next 3 months and 12 month timeline
- Review the Cambridge Energy Alliance – look at history what worked and what didn't work; availability of finances
- Archana [MIT grad student] – Greenhouse Gas Inventory accurate – it should warrant its own task Force group – a carbon tax would influence user behavior
- Mike Connolly – thankful and excited about the turnout and response to this issue
- Scott Walker- would like the Task force to address barriers to solar lease in condo buildings – companies contract with housing arrangement – a municipal ordinance to push companies to incorporate condos
- Brian Butler- Cambridge & Somerville are locked out of programs because of NSTAR's utility monopoly- this point should be raised; The companies are thinking about bringing back pilot program – it would be a huge useful tool for reducing energy
- Steven Burke- it is important that consultants offer legal and economic expertise – keep private interest at table
- John Pipkin- keeping public engaged is critical- concerned that this is an urgent and rapid issue; There are so many things we can do now without needing data

- Audrey Schulman- carbon tax- energy transparency bill – something like zillow.com concept – a free-market system
- Councilor Dennis Carlone- available information – mechanical engineer's society –there is a group devoted to just working on efficiency –we don't need to try and reinvent the rules; it is important to engage other groups

Public Comment via Email

- I would like to suggest a topic concerning residential energy use: Condominiums. This past year my association (66 residential units) looked at putting a solar installation on our roof to provide electricity for our common areas We only got a short distance on this quest because there seemed to be no practical way to pass on and "harvest" the tax savings that would make such a project economically feasible.

There may be a series of other things condos can do to lessen their environmental footprint, but it is a bit hard to figure out the full range of things. (e.g. we also looked at putting our hallway lights on a timer as they do in Europe, but folks were concerned about insurance liability and building regs; I suggested we unpave our parking area and install permeable pavers, but that idea had no traction due to cost and concerns about plowing; we have changed over our common area lights to CFL's and put the outside lights on a photo sensor, and have conducted an energy audit

Some guidance from the city might be helpful.

-Kathy Dalton
6 Arlington St
(and president of board of trustees of Porter Square Condominium Trust)

- One area which I think the city could improve is in the support of alternative energy related businesses.
Case in point:
Black Magic Woodstoves (in Fresh Pond)
-James Oliver Brown Jr., 32 Avon Hill Street
- Saw this and thought it would be a good initiative for the task force to support:
http://www.boston.com/lifestyle/green/greenblog/2014/01/ma_on_road_to_smart_grid.html
-Scott Walker

Meeting was adjourned at 8:00PM.