

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/gov/building/projects/energycomm/default.asp>



Mayor Ruthanne Fuller

Halina Brown (Chair), Michael Gevelber, Stephen Grody, Philip Hanser, Asa Hopkins,
Jonathan Kantar, Jon Klein, James Purdy (Vice Chair), Puja Vohra,
Ann Berwick, William Ferguson (ex-officio)

Advisory Members: Cory Alperstein, Edward Craddock, Beverly Craig, Ira Krepchin

Telephone 617-796-1019
c/o Office of the Sustainability Director
Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, November 25, 2020 7:00 PM
Remote meeting

AGENDA

1. Quick Updates (Chair Halina Brown). 30 min
Outreach by Arlington regarding the Energy Coach website
Interviews for Energy Coach
HERS ratings: maintenance of the database
Sustainability Webpage, and communication generally
2. Annual report for the City Council on implementation of the
Climate Action Plan: progress report (Halina) 10 min
3. The future of Scorecard in Newton (Halina) 15 min
4. Before2050 – presentation by Stephen Grody 30 min
5. Zoning redesign: progress report time left before adjourning

Join Zoom Meeting

<https://us02web.zoom.us/j/82059075148?pwd=VHVPc0FCaExtcGZLSnUzT29oeWdUQT09>

MEMORANDUM

To: Barney Heath, Director of Newton Department of Planning and Development,
Zachery LeMel, Newton Chief of Long-term Planning
Deb Crossley, Chair of the Zoning and Planning Committee of Newton City Council

From:

- **Working Group on Climate and Zoning Redesign:** *Halina Brown, Newton Citizens Commission on Energy; Cory Alperstein, Jay Walter, Green Newton Building Standards Committee and Engine 6; 350.Mass-Newton; Barbara Brussel-Glaser, former City Councilor, Jim Purdy, Green Newton.*
- **Newton Citizens Commission on Energy:** *Halina Brown (chair), Jim Purdy, Michael Gevelber, Asa Hopkins, Phil Hanser, Puja Vohra, Jon Klein, Jonathan Kantar, Associate members: Fred Brustman, Bev Craig, and Cory Alperstein*

Date: November 11, 2020

Topic: Zoning redesign and Climate Action Plan

Note: This document replaced the October 6th Memorandum

Executive Summary

Newton's revised zoning ordinance could be a critical and effective tool to reduce Newton's per capita GHG emissions, in line with the Newton Climate Action Plan (NCAP). The adopted NCAP explicitly recommends that the City use the zoning ordinance to advance energy efficiency and reduce GHGs from both buildings and transportation. However, the current draft of the zoning ordinance does not explicitly discuss energy efficiency or GHG emissions. This memo contains our recommendations for changes that would better align the zoning ordinance with the NCAP. Its goal is to minimize the per capita energy consumption in new dwellings, support the growing electric vehicle infrastructure, and reduce the number of automobile trips.

Five broad strategies underpin the recommendations for specific actions.

1. Encourage production of smaller and more diverse dwellings by encouraging duplexes, triple family houses, conversions of large single-family houses to multi-unit houses, cluster housing, rear lot development, and accessory apartments.
2. In special permits, incentivize highly energy efficient building methods by conditioning the square footage of houses.
3. Further limit the size of new single-, two-, and three-family houses and townhouses to achieve energy goals of the Climate Action Plan.
4. Require electric vehicle charging infrastructure in all types of new construction in order to encourage a rapid transition of Newton automobile fleet toward electric vehicles.
5. Allow multi-unit construction within a half mile of major transportation corridors in order to reduce the number of automobile trips.

Our recommendations regarding climate action support other priorities for the City: more housing and more diverse housing, social justice, transit-oriented growth, and a relief for the housing crisis in the region. We recognize that the details will matter, and that many still need to be developed. We encourage City Councilors and/or City staff to request the analysis required to design the details.

Time is of the essence. Every year without a sea change in the kind of dwellings that are created and the kind of construction methods that are deployed in Newton locks us into growing GHG emissions for many decades while providing no relief to the housing crisis in Newton and the region. We therefore urge the Planning Department and the City Council to adopt the proposed strategies and as many specific recommendations as possible as soon as possible, and to move swiftly toward implementation. We are looking forward to working together to get that accomplished.

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A. Introduction

One of principal goals stated in the draft of the revised zoning ordinance is to “promote economic and environmental sustainability” and to support the Newton Climate Action Plan. The draft zoning proposal presented by the Planning Department to the Zoning and Planning Committee of the City Council (ZAP) at its August 13th meeting, does not directly discuss energy consumption or greenhouse gas emissions. The purpose of this memorandum is to include the goals of Newton Climate Action Plan in the ongoing discussions. The recommendations we offer for ZAP’s consideration, if implemented, will reduce the per capita energy use and greenhouse gas (GHG) emissions in Newton in support of the City’s NCAP responsibilities. (Different recommendations may belong in different parts of the city Code).

The recommendations in this memorandum, if implemented, will also advance the second principal goal of the draft zoning plan to “facilitate an increase and diversity of housing opportunities.”

Why the zoning ordinance and why now?

The Newton Climate Action Plan, adopted unanimously in November 2019 by the City Council, aims to make Newton carbon neutral by 2050. That is a great challenge for its residents, as 33% of all GHG emissions come from residential housing and 29% from transportation. Zoning

reform presents an unparalleled opportunity to reduce per-capita GHG emissions from the residential and transportation sectors. Such an opportunity is unlikely to present itself for years or decades to come.

Climate-related changes in the zoning code will take years to fully manifest their impact in the form of GHG reductions. Therefore, the recommendations we propose are an urgent investment in Newton's future. If we do not act now, each year another 100+ homes will be demolished and replaced with large single family and townhouses with a few occupants, all dependent on fossil fuels. If we do not act now, we will be locking in the high emissions of greenhouse gasses for another hundred plus years, adding to our tremendous challenge instead of being part of the solution.

Sustainability and social policies

The zoning redesign process is an opportunity to re-envision Newton as a vibrant, economically diverse, welcoming, and resilient 21st century city. Zoning has often been used as a tool of exclusion and inward-looking indifference to the broader societal needs of this region. We therefore join the Newton Planning Department in its efforts to reverse some of these past practices in Newton.

Many social justice advocates are concerned that climate protection policies compete with social justice goals by driving up the cost of housing construction. This memorandum should dispel this perception. Many of our recommendations seek to reduce the per-capita GHG emissions in Newton by creating *more compact and energy efficient housing* characterized by *low utility bills*. The recommendations, if implemented, will contribute to creating more of the missing middle-income housing throughout Newton and the region without appreciably raising the construction and operating cost of new housing.

The recommendations show that the two goals—climate protection and social justice—can mutually support each other.

B. The Newton Climate Action Plan (NCAP)

The Climate Action Plan calls for making Newton carbon neutral by 2050. For the existing residential housing stock, which contributes 33% to total GHG emissions, the Plan calls for minimizing energy consumption by 20% through insulation and air sealing, and for phasing out all uses of fossil fuels in favor of electric heating, cooling, hot water, and cooking. For new construction, the Plan calls for minimizing GHG emissions through highly energy efficient buildings and electrification.

For the transportation sector, which contributes 29% of total emissions, the Plan calls for eliminating by 2050 all greenhouse gas emissions. To that end the Plan calls for minimizing single-occupancy short automobile trips, and for increasing biking, walking, and using public

transit, in addition to telecommuting and ride sharing. The Plan also calls for gradual phasing out of gasoline-powered private automobiles in favor of electric vehicles (EVs).

Moving the needle for existing buildings will require the City to incentivize significant action by the private sector. Overall, the Plan calls for using the zoning code to pursue the above objectives. Below are the NCAP recommendations regarding buildings and transportation that involve zoning.

E.3.2. Explore opportunities for requiring a standardized, broadly accepted, building energy performance scorecard, to be obtained by a potential seller and disclosed to potential buyers.
D.3.1. Work with City Council to amend the Zoning Ordinance to require new construction and major renovations seeking a Special Permit maximize energy efficiency, maximize the use of renewable energy including thermal energy, and use electricity for heating and cooling.
D.3.2. Work with City Council to require that all new construction and major renovations analyze the costs, benefits, and GHG impacts of maximizing energy efficiency; utilizing electric heating, cooling, and hot water; and using renewable energy, including thermal energy.
D.3.5. Work with City Council to adopt Zoning Ordinances that encourage additional, appropriate low-carbon, housing near public transportation.
C.4.1. Work with City Council to develop a Transportation Demand Management (TDM) program to reduce single-occupancy vehicle trips through amendments to the Zoning Ordinance.
C.4.2. Work with City Council to explore reducing or eliminating the minimum parking requirement in the Zoning Ordinance and instead setting a maximum on parking allotments.
C.4.3. Create and encourage the use of safe bicycle and pedestrian facilities for commuters and residents.

C. Recommendations for Residential Buildings

Minimize energy use and GHG emissions in new construction

There are three options for reducing per capita GHG emissions from new residential construction: smaller dwellings, more energy efficient construction, and replacement of fossil fuels with (renewable) electricity. Our recommendations address the first two factors. They promote construction of well built, durable, compact, and highly energy efficient houses in the size range that is typical for Newton, which a century from now will continue using minimal amount of energy and not emit any greenhouse gases.

This memo uses the term “*passive house*” as a placeholder to denote a highly energy efficient construction. While the City Council may consider a certified Passive House (PH) as a desirable objective for new construction, other metrics can also be used, such as low HERS rating or net

zero building. We recommend a further discussion of that issue. For comparison, passive houses have HERS scores in the range of approximately 20-25.

We applaud the Planning Department's proposal to restrict the size of dwellings for by-right construction to 50 to 80% of the existing housing stock. At the same time, we recommend further deliberation on whether the currently specified by-right sizes, which are based on existing housing stock and not on the goals of the NCAP, are too generous and should be reconsidered. The existing housing stock was largely created in the era when energy consumption and its climate impacts were not considered to be critical social issues.

Further reducing a size limit would have two advantages: prevent the increase in the GHG emission in Newton that generally comes with more and larger dwellings; and create leverage in the special permit process to offer additional square footage in exchange for highly energy efficient construction, and without preempting the State Building Code. A further size reduction would encourage construction that is at a scale comparable to the existing building stock in Newton. Our research conducted for the Citizens Climate Action Plan indicates that 77% of all single-family houses in Newton are 3000 sf or smaller, and a 97% of duplexes are 2700 sf or smaller (for both dwellings combined) (See Figure 1 in Section F).

A special permit to build larger than the by-right sizes would be conditioned on building to a Passive House (PH) or similar standard. We recommend adoption of a *prescriptive special permit path* which would use a standardized building area bonus as an incentive for climate-ready construction. A by-right construction might be expanded with a special permit incentive of an additional specified floor area if the new home or substantial renovation was a built to a high energy efficiency performance standard. HERS rating, already required in all new projects and major renovations, can serve as a metric. For example, to prevent an increase in energy consumption when a 3500 sf house is increased by 25% (to 4375 sf) would require reducing its HERS rating by 20%, from 55 (required by the Building Code) to 44. We hope that the Zoning Code goes significantly further in granting the special permit size bonus by requiring a *reduction* in energy consumption of the enlarged house, as compared with the smaller version, toward the passive house or comparable performance standard.

The City might also consider developing a *point system for sustainability features* for proposed projects, to be used for granting such "rewards" as area bonus or expedited permitting. For example, if you get more than X points for climate-readiness, you get a bonus of Y sq. ft. without needing to go to the full special permit process. The feasibility and effectiveness of such a system requires further study since it is unclear if it would be within the scope of Zoning Ordinance.

Reuse the existing housing stock

The carbon and energy embodied in Newton's existing buildings is substantial, and the zoning ordinance can encourage effective use of these materials and existing buildings. To use existing buildings effectively, the ordinance could provide additional incentives for energy efficient multi-unit conversions and rear lot developments.

We recommend allowing smaller units (less than 1200 sf) within conversions, and allowing more than one ADU per lot, for buildings which meet high energy efficiency standards. Requiring a deconstruction and required materials re-use for demolitions should be encouraged in teardowns to minimize embodied carbon impacts.

Detailed items for consideration.

- Condition all Special Permits for new construction on adopting the passive house performance standard or other comparable performance metrics, such as net zero energy or HERS rating below that required by the Building Code. The Passive House is a recognized (though not required) energy efficiency standard in the State Building Code.
- By special permit, allow two external ADUs on a property if the energy performance of the units meets the PH performance standard.
- For multi-unit conversions and new multi-unit construction, allow dwelling units to be 1050 sf (from the currently proposed 1200 sf) if they adopt highly efficient construction methods: PH for new construction and yet-to-be-determined appropriate standard for conversions.
- To encourage creation of more smaller dwelling units in the areas close to transportation routes, allow multi-unit conversions in *all single-family house types*. To encourage the construction of smaller units in multi-unit conversions provide a sliding scale values that are appropriate for the different sized house types. This would allow multi-unit conversions in smaller houses.
- For multi-unit conversions, do not count egress paths and elevators as part of a building's maximum allowable area.
- To encourage the creation of accessory apartments in existing housing, remove the area limitations for internal Accessory Apartments. Allow homeowners to completely build-out existing outbuildings. Ease the reporting requirements for accessory units.

- To encourage rear lot development, ease the dimensional requirements for rear lot development including the setback and lot area requirements. Remove the site line requirement for rear buildings.
- For all teardown and demolitions of more than 50% require de-construction instead of mechanical demolition of the old structure.
- Conduct a study on a feasibility of further reduction in the upper limit on the square footage of new houses constructed by right.

Special Permits

Several of the recommendations listed in the preceding sections would require the applicant to request a special permit. The criteria for reviewing such a special permit would include reducing GHG emissions in construction and operation of a building. This has been already done for large (20,000 sf or more) projects, for which the review criterion 5 has adopted some of the Green Newton Building Standards Committee’s recommendations.

Newton is an outlier in Massachusetts by allowing its City Council to administer its Special Permits. Typically, the Zoning Board of Appeals or the Planning Board is the permit granting authority. This approach reduces the long delays, uncertainty, and political nature of Newton’s special permitting process. We applaud the Planning Department for recommending an alternative special permit granting authority for small residential projects. But who that is and what the new rules would look like have yet to be determined.

Summary of potential process

- All special permits requested for a relief from dimensional or area requirements in the residential sector should be conditioned upon including a building performance standard (PH or other accepted standards) that will ensure higher energy performance.
- Simplify and streamline the special permit process by creating an alternative Special Permitting Authority for all residential projects. Members of the permit granting authority should be versed in “best practice” environmental building methodology to help guide applicants toward more sustainable projects.

D. Minimize GHG emissions from transportation

The Newton Climate Action Plan calls for gradual replacement by 2050 of all gasoline-powered cars with electric vehicles (EVs), and for less driving by Newton residents, especially in single occupancy vehicles.

The zoning ordinance can steer and facilitate these changes by improving the EV charging network, enabling residents to walk and bike to local destinations and public transit services,

supporting the use of public transit for commuting to work, and by removing barriers to reduced car ownership. We applaud the Planning Department for encouraging greater density near village centers and transportation hubs.

The future of private mobility is unknown at this time but if the recent past is a guide it will certainly be different than today. Car sharing services became extremely popular in the past 3-4 years, then declined during the Covid 19 pandemic. Self-driving cars are a distinct possibility in the near future. Traditional buses may change routes or become replaced with smaller and more nimble mini busses with flexible routes. With ongoing rapid technological advances, we cannot predict the next 5 years, much less the next 30 years. The zoning policy should therefore focus on creating *conditions* for any future reductions in the use of single occupancy private automobiles.

- In special permit applications require that all new construction and major remodeling projects include installation of a conduit for future installation of an EV charger and assure that the electric service has sufficient capacity for EV level 2 charger and for heat pumps.
- Allow by-right multi-family zoning within half a mile distance from the public transportation hubs and from major streets where crosstown automobile traffic concentrates.

E. Conclusions

We recognize that the details will matter. We encourage City Councilors and/or City staff to request the analysis required to design the details. We are also, of course, open to other ideas for how incentives could be implemented. The zoning ordinance is a policy about land use and the types of buildings we want in Newton for years and decades to come. It is the most effective tool for influencing those building characteristics which determine long-term energy use and GHG emissions. It is also an effective tool for guiding housing density and, indirectly, automobile traffic. In short, it is an effective and timely tool for implementing the main provisions of the Newton Climate Action Plan.

Our recommendations seek to make maximum use of the zoning code to implement NCAP. The recommendations regarding climate action align nicely with other priorities for the City: more housing and more diverse housing, social justice, transit-oriented growth, and a relief for the housing crisis in the region.

Time is of the essence. Every year more than a hundred buildings are demolished and replaced with very large and energy inefficient houses. This locks us into growing GHG emissions while providing no relief to the housing crisis in Newton and the region. We therefore urge the Planning Department and the City Council to adopt as many of these recommendations as possible as soon as possible, and to move swiftly toward implementation. We are looking forward to working together to get that accomplished.

F. Background research and status of the issue in current draft proposal

Minimize GHG emissions from new construction.

Status of the issue in the current draft. The current zoning code proposal regulates the size of buildings through limitations on the building footprint, height, and architectural details of buildings, as well as lot coverage. The form-based zoning develops house type footprints and area standards based on the survey of existing housing in Newton as of 2016 as described in the Pattern Book. But the plan does not directly consider the size of dwellings from a sustainability perspective.

The currently proposed plan will incentivize a larger number of small units through conversions of single- to multi-unit buildings. The current plan allows the construction of very large homes: townhouses, duplexes and triplexes with 3500 sf dwelling units, or single-family houses described in the plan as types A, B, and D (6000, 3500 and 2300 sf of living space, respectively).

Why energy efficient construction. Energy efficiency of a building envelope is a determining factor in the energy use for a home's operational life. Building inefficient houses which needs to be retrofitted later on is much more expensive than building them to high energy efficiency standards in the first place. For that reason, zoning should seek to increase energy efficiency of new construction as much as possible, within the legal constraints of the state building code.

Under the current Massachusetts Building Code, a Home Energy Rating System (HERS) score of 55 must be achieved for all new residential construction and major renovations. The code's 2019 Amendments allow (but does not require) the use of the Passive House performance standard as an alternative to HERS of 55. Building to the much stricter performance standard of "Passive House", with a typical HERS rating of 20-25, could reduce energy demand of a housing unit by more than 50% relative to a similar unit built to code, and reduce the cost of utilities accordingly.

A growing number of Passive House units are being built in Massachusetts, including Newton. Currently, Newton has 676 Passive House residential units either in existence or planned (the

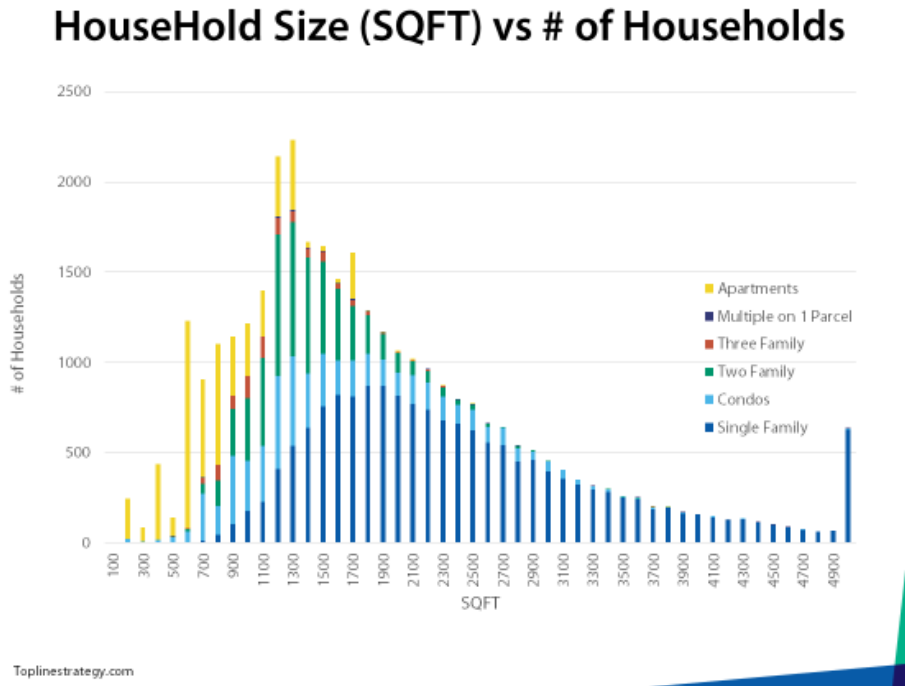
majority in Northland and Riverside). With a growing number of Passive House units on the market, their cost in larger commercial buildings is now comparable to the cost of building to code. For single family houses the cost premium is in the 0-2% range.

Size matters. Next to energy efficiency of building envelope, the size of a dwelling unit is one of the main determinants of its energy consumption and associated GHG emissions. Research conducted by the Oregon Department of Environmental Quality has shown that reducing the square footage of a house by half reduces its GHG emissions by close to 40%. It also showed that a dwelling unit which is part of a multi-unit structure consumes less energy than a free-standing dwelling of the same size. Putting these two factors together -- halving the size and embedding the dwelling in a 12-unit building -- cut the energy use by as much as 50%, according to the above research.

In the above research, the calculations of GHG emissions were based on a lifecycle assessment over 70 years and included both *embodied* and *operating* energy. The embodied energy of the building materials and construction process represented approximately 15% of total lifecycle energy consumption. (<https://www.oregon.gov/deq/FilterDocs/ADU-ResBldgLCA-Report.pdf> ; <https://www.oregon.gov/deq/FilterDocs/2050-ResidentialGreenBuilding.pdf>).

Our research indicates that 77% of all single-family houses in Newton are 3000 sf or smaller, and a 97% of duplexes are 2700 sf or smaller (for both dwellings combined) (Figure 1). Houses larger than the limit would, through the special permit process, be built to the PH performance standard.

FIGURE 1 (from the Citizens Climate Action Plan for Newton
<http://www.newtonma.gov/civicax/filebank/documents/100188>)



Some U.S. cities have introduced into their zoning ordinances limits on residential house sizes. Our incomplete research provides several examples:

Austin Texas passed in 2006 the so-called “McMansion Ordinance”, which significantly limits the size of new structures. For example, if someone wants to build a new duplex or single-family structure on a lot where a structure has been or will be demolished or relocated, the new structure is limited to the greater of a) the 0.4 to 1 floor-to-area ratio; b) 2,500 square feet; or c) 20% more square feet than the existing or pre-existing structure.

<https://www.austinchronicle.com/columns/2006-03-10/346218/>

A full copy of the McMansion Ordinance can be found at www.ci.austin.tx.us.

In **Portland** Oregon on August 12, 2020, the City Council passed in a 3-1 vote a new zoning ordinance “Residential Infill Project”. The new law establishes size limits for residential buildings (1-8 units) on small lots and allows for greater density by right. Portland uses a “bonus” on the floor area ratio as a way to reward the creation of affordable housing.

<https://www.portland.gov/bps/rip>; https://www.portland.gov/sites/default/files/2020-08/exhibit_b_volume_2_code_commentary_adopted1_0.pdf

https://www.theurbanist.org/2020/08/12/portland-passes-sweeping-zoning-reform/?utm_source=Supporters&utm_campaign=8e32fe9cb4-

For Newton we propose a similar approach by allowing a bonus for being *climate ready*. If you get more than X points for climate-readiness, you get a bonus of X sq. ft. or whatever without needing to go to the full special permit process, etc.

In Chilmark on Martha's Vineyard in 2013 residents overwhelmingly passed an ordinance that calls for an extra layer of review and a special permit from the zoning board of appeals for new houses 3,500 square feet per three acres, and limits total living area to 6,000 square feet. Homeowners are allowed 250 square feet per additional acre. Existing homes that already exceed the threshold will be given a one-time exception to increase the total living area by five per cent.

On the Outer Cape, in 2018 **Truro's** Planning Board voted to limit the size of houses in the Seashore area. Under the proposal, a house on a three-acre lot—the minimum size building lot in the Seashore District—could have by right no more than 3,600 square feet of livable floor area. An additional 200 square feet of floor area would be allowed per additional acre of land. **Wellfleet** has a limit of 2,800 square feet in gross floor area, with 3,600 possible with accessory buildings, according to town records.

Smaller houses would be a natural fit with the currently existing houses in Newton. 77% of single-family houses in Newton are 3000 sf or smaller and 97% of duplexes are 2700 sf or smaller (for both units). In other words, the climate-motivated preference for limits on the size of newly constructed houses are entirely consistent with the types of houses we have come to love in our Garden City: well-proportioned and in harmony with the landscape.

In summary, the energy savings from simultaneously reducing the size and raising energy performance can be large. For example, a back of the envelope calculation shows this: if a 6000sf PH building with 4 units is built instead of a 6000 sf single-family dwelling built in compliance with the building code, the energy demand of each dwelling in the 4-unit house could be as low as 15% of the energy demand in the large single-family dwelling.

[Reuse and retrofit the existing housing stock](#)

Status of the issue in the current draft. The current rules around accessory apartments in Article 9 are so restrictive that they discourage their use as a viable way for existing homes to be remodeled for extended families, in-home caregivers or additional rental unit income. We support the current proposal for RU area reductions to 900 sf from 1250 sf for creating more affordable housing units.

The current proposal allows multi-unit conversions in only House Type ‘A’, the largest houses in the City. Most houses in the City would not qualify.

The current proposal allows by-right building of rear and side extensions up to 25% of the building type footprint area for both new construction and remodeling. If the bonus were only allowed in remodeling it would keep the size of new houses down and incentivize remodeling existing houses.

The current rules for rear lot development (Section 3.5.1 in the proposed zoning plan) require the lots to be so large that few qualify. Then the setback restrictions are so restrictive that rear lot development is rarely viable. Rear lot development can add density while maintaining the current streetscape and preserving our current housing stock.

Why de-construction. The requirement for de-construction instead of demolition, which will make demolition more expensive, create *disincentives* to indiscriminate mechanical demolishing of houses slated for replacement. Reusing the existing housing instead of demolishing and replacing will also reduce wasting the *embodied* energy in existing buildings, which is now widely recognized as an important factor in GHG emissions from building construction. The research conducted by the Oregon Department of Environmental Quality (see section C.1.c) attributes approximately 15% of a lifecycle energy consumption of a single-family house to its embodied energy. (<https://www.oregon.gov/deq/FilterDocs/ADU-ResBldgLCA-Report.pdf> ; <https://www.oregon.gov/deq/FilterDocs/2050-ResidentialGreenBuilding.pdf>).

De-construction requirements have been adopted by several cities. Our ongoing research has so far identified the following examples:

Portland OR, <https://www.portland.gov/bps/decon> . The deconstruction requirement has created a thriving construction salvage business in Portland.

<https://www.oregon.gov/deq/FilterDocs/ADU-ResBldgLCA-Report.pdf> ;
<https://www.oregon.gov/deq/FilterDocs/2050-ResidentialGreenBuilding.pdf>

Vancouver,

San Antonio TX, [Deconstruction and Salvage Initiative](#)

Milwaukee <https://city.milwaukee.gov/ImageLibrary/Groups/ccCouncil/District-4-Bauman/PDFs/DeconstructionOrdinance.pdf>

Cook County IL, <https://stage-drupal.cookcountyil.gov/service/demolition-permitting>

<https://www.sanantonio.gov/Portals/0/Files/HistoricPreservation/Deconstruction/CookCountyDemolitionDebrisDiversionOrdinance.pdf?ver=2018-10-15-173740-230>

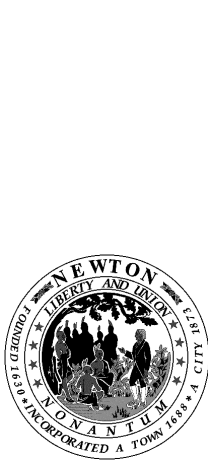
Minimize GHG emissions from transportation.

We commend the City for reducing the restrictions on multi-family buildings in the areas currently zoned for only single-family houses. We also commend the City for relaxing minimum parking requirements and for requiring bicycle parking in various locations. That will open an opportunity for increasing the number of multi-unit dwellings to be within a walking or biking distance from transportation routes and nodes.

The proposal uses the term “transportation routes” without specifying its meaning. It could mean T and express bus stops, or it could mean major streets where most of crosstown traffic takes place. We use the term “transportation routes” to denote major streets where crosstown traffic concentrates.

On average, a car in Newton travels 40 miles per day at 23 miles/gal fuel economy. On average, each Newton household owns 1.7 vehicles. Although there are no data on the destinations of the car trips, it is reasonable to assume that probably half of the mileage is for local short trips under 5 miles, including getting to and from public transit nodes.

Ideally, during the next three decades Newton residents would replace their SUVs with more energy efficient compact cars, replace gasoline-powered cars with EVs, discover the joy of bicycling on short local trips, and drive less in single occupancy vehicles. These changes will depend on voluntary private decisions, but the zoning ordinance can steer and facilitate them in several ways: by improving the infrastructure for EV charging, by enabling residents to walk and bike to local destinations, by supporting the use of public transit for commuting to work and traversing Newton, and by removing barriers to reduced car ownership.



Mayor Ruthanne Fuller

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Wednesday, October 28, 2020 7:00 PM
Remote meeting

AGENDA

1. Status of Climate Action Plan implementation
2. Energy Coach website
3. New Newton Power Choice contract

Join Zoom Meeting

<https://us02web.zoom.us/j/82059075148?pwd=VHVPc0FCaExtcGZLSnUzT29oeWdUQT09>

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Mayor Ruthanne Fuller

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Minutes of the Meeting of October 28, 2020

The meeting was held on Zoom.

Attending: Halina Brown, Michael Gevelber, Stephen Grody, Phil Hanser, Asa Hopkins, Jon Kantar, Jon Klein, Jim Purdy, Puja Vohra; Fred Brustman, Karen Shilo

1. Status of Climate Action Plan implementation

Halina provided an update on the CAP – this is the first anniversary of the City’s adoption of the CAP; Nicole Friedman, Jennifer Steel, Dana Hanson, and Ann Berwick are to give a progress report to City Council.

They should address HERS reporting, hiring an Energy Coach, and communication work by Demi Stathoplos’s group.

Halina talked with Susan Albright about scorecards for Newton households; the Council will probably be open to a proposal that households doing more than some threshold amount of renovation should get a scorecard. In Portland OR, they have a system like this, and it costs around \$300 to get the scorecard. So is \$500 a reasonable number to propose?

Phil suggested that they consider the type of construction, e.g. shell, A/C system, etc., as opposed to small renovations such as kitchen cabinets, etc.

Asa pointed out that by the time a building permit is requested, most of the decisions have already been made. However, many contractors engage with the City on permit questions before actually pulling the permit. He suggested a scorecard fee of maybe \$400 on \$20-25k worth of work, e.g., HVAC work.

Stephen made the following suggestions: (1) We should clarify the objective of a scorecard, who the user is, etc. before deciding how to do this. (2) There’s a public interest in getting a broad set of information. So rather than supply side we should look at demand side: Who is going to consume the information collected? Will it be public data? What about downloadable data on energy consumption for

anyone who wants to use it – prospective buyers, developers, planners, etc. In summary, what purpose is served?

Philip suggested that the Energy Coach would be one of the first to know about what people are planning to do with their homes. So we should hold back until we know more. Stephen added: and whether it should be tied to the Energy Coach work.

Halina agreed, but said in the meantime, we can do useful research. Who would do the scorecard? Is it for public posting? Who are the potential users of the data?

Michael said it's great if one or two people want to take this on, but not off-the-cuff; it needs some research. EnergySafe, which was doing home assessment work, also channeled customers to contractors providing this type of services.

Philip said that a bigger question, from the standpoint of evaluating the housing stock, is whether it is worth the investment? Would a scorecard affect the decision of a potential buyer of the home?

Asa said he would like to get a sense of the distribution across the city's housing stock. It might relate to the coming MOU with the utilities. If efficiency is related to overall property value, you need it before sale. If you want aggregate data that isn't building specific, then individual scorecards prior to a sale are not necessary.

Halina said the scorecard would change the way the homeowner thinks about energy, which should motivate action. Public listing of this data is a basic type of description of the property in Newton. Stephen asked, but how do you justify the cost to the homeowner. (The Mayor seemed to think that the price point of a HERS rating was too high to be required.) What's the value? What's the use?

Phil said that if you could make the case that an energy efficient home sells better and/or for a higher price, that would be enough to get people to do it.

Michael noted that if we're successful in getting people to buy EVs and heat pumps, it puts some burden on the house's electrical system. There should be a framework to evaluate how the CAP is being implemented.

Stephen said Michael's point is serving the need for a scorecard. It would inform Year 2 of CAP implementation.

Jon Klein said we have specific metrics in the CAP, and we should determine whether we have the data to track them.

Halina said that so far, the CAP status update is primarily a list of things accomplished. She told the City that we need to evaluate whether we are on the right trajectory, and the idea was well-received in general. Philip said he's requested some data, but it hasn't been forthcoming, e.g. tracking electric car ownership.

Michael requested that Halina should set up a CAP "scorecard" and members should choose categories to fill in. Philip and Asa noted that we need to identify things that didn't happen and get the City to determine how to rectify this. There could be 5 or 6 metrics.

Philip added that we should hold the City's feet to the fire on CAP implementation.

Halina said what is needed is not simply more effort, but we also need a plan for how to accomplish these things.

Puja said that the utilities are going forward with the MOU, with some data at a high level.

Halina said an example of what we need is the number of heat pumps installed per year, with the target escalating each year.

Michael said there's more than just the MOU and CAP, e.g. HeatSmart. Our objective is to get a picture of Newton as a community overall.

Asa said what counts is what is happening in the world, regardless of what program it relates to. Jon said the data we listed ties back to a source, e.g. EVs and heat pumps.

Halina asked where we can we get the number of heat pumps installed? From MassSave for example?

Puja noted that the MOU is based on the number installed in previous years.

Halina said the City's goals should require a stretch. Karen Shilo volunteered to go to MassSave for the data on heat pumps.

Jon Kantar pointed out that the permits aren't very specific about things like heat pumps. Bev Craig would know who to go to for data.

Michael will get the EV data. Halina will send out the whole list of data to be tracked.

** ** *

Halina raised a related topic: where does NCCE want to go next?

Philip said there's ongoing things, like hiring an Energy Coach. Puja added, and Green Leadership Collaborative; we can start that if Ann Berwick OKs it. Halina thinks Green Leadership Collaborative is probably not going to be active for a few more months.

Halina noted that we expect an opportunity to present to ZAP on the zoning redesign. Green Newton's Building Standards Committee is involved with in this.

Philip suggested some EV activities and other things with NCCE participation.

Jim said there's a lot on our plate already – perhaps we need to digest for a while before adding more.

Phil said we also need to consider what are the consequences of ongoing Covid pandemic, e.g., for transportation and commercial real estate.

Jim will try to get more recent vmt data.

There was discussion of how to relate to the City – we should demand what they will do with the data before we provide input.

Halina said she will make it her job to work with the City on how best to get these things done.

2. Energy Coach website

Jon Klein provided an update on the EC website:

- It is now fully operational. We have received a couple of questions (about bicycling).
- We're working to port the EC site into the City's overall website. We need to wait and see.
- The EC website has four reciprocal buttons with four other websites: EV, Heat Smart, Take Action, etc.
- When the EC website is announced by the Mayor's newsletter, we can get our intern to spread it to social media.

3. New Newton Power Choice contract

Michael presented a PowerPoint on aggregation, using data he received from the City's consultant Peregrin Energy Group. Newton leads all other Massachusetts municipalities by far in the previous contract, both as to the default percentage (60% including the state mandated amount); with the new contract, which has an 80% mandate, Newton will be even farther ahead. Newton also led all other municipalities in the percentage of customers (7 percent) who opted up to 100% renewable.

The meeting was adjourned at 8:50 pm.

Respectfully submitted by Jim Purdy

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/gov/building/projects/energycomm/default.asp>



Mayor Ruthanne Fuller

Halina Brown (Chair), Michael Gevelber, Stephen Grody, Philip Hanser, Asa Hopkins,
Jonathan Kantar, Jon Klein, James Purdy (Vice Chair), Puja Vohra,
Ann Berwick, William Ferguson (ex-officio)

Advisory Members: Cory Alperstein, Edward Craddock, Beverly Craig, Ira Krepchin

Telephone 617-796-1019
c/o Office of the Sustainability Director
Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, September 23, 2020 7:00 PM
Remote meeting

AGENDA

1. Memo on zoning redesign for transmittal to Zoning and Planning Committee
2. Status of Energy Coach website
3. New Newton Power Choice contract

Join Zoom Meeting

<https://us02web.zoom.us/j/86501232851>

Meeting ID: 865 0123 2851

One tap mobile

+13126266799,,86501232851# US (Chicago)

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Find your local number: <https://us02web.zoom.us/j/86501232851>

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Minutes of the Meeting of September 23, 2020

The meeting was held on Zoom.

Attending: Halina Brown, Michael Gevelber, Stephen Grody, Asa Hopkins, Jon Kantar, Jim Purdy; Cory Alperstein, Fred Brustman, Lucia Dolan

1. Consideration of Halina's draft memo to Zoning and Planning Committee

Halina summarized the zoning redesign process as it now stands.

Key issues in Halina's draft memo

1. Proposed reduction in size of new houses, which is the fundamental way to reduced ghg emissions.
2. Passive House vs net zero
3. Deconstruction to salvage materials with embodied energy
4. Half mile zone for multifamily
5. Accessory dwelling units
6. Streamlining permitting process.

Asa suggested that the proposed zoning should refer to heavily used roads rather than transit line, because that creates opposition to transit. Also, he is not sure there should be a size limit for houses; better to use an energy limit or to encourage energy reduction

Halina proposed that in conversion of an existing house to multiple units, the maximum unit size should be 1250 sf, or 950 sf for affordable units.

Asa suggested that the key question is what are the right "hooks" to incorporate in the zoning to trigger and incentivize energy reduction.

Michael said he wants to be clearer about the process and NCCE's position on the zoning redesign:

what kind of area definition should be used?

He agrees with Halina's point about discouraging teardowns – but might want to use a new system for framing the issue. For example, we don't care so much about absolute floor area, but rather should focus on area per person.

Halina believes that “livable space” is the important measure, not gross square footage or building footprint.

Halina will speak to the City's lead staffer Zach LeMel on Friday September 25; he may be waiting for someone else to introduce the climate-related issues. She will also discuss the memo with Deb Crossley.

Halina will use the memo in its current form to discuss informally with those people. She will also share it with Green Newton and other organizations with a stake in these issues.

Halina asked whether Asa has more ideas for leveraging the zoning process to reduce ghg.

Lucia said that in the current memo to City Council from Councilor Pam Wright [who is on the zoning and Planning Committee], the Councilor discusses whether and how people build to the limit that the zoning permits.

Jon Kantar likes the Halina's memo, but he pointed out that the Code and the proposals are complicated, and there may be unforeseen ramifications. While the City's draft defines house types [based on the Pattern Book analysis done in 2019], and assigns the “Type A” house a maximum size of 6000 sf, there are probably few parcels in the City that would support this large a house.

Asa suggested that for buildings that replace an existing structure, the focus should be on maximum effect on total ghg, not the largest house size that is possible under the Code.

Halina asked members how to leverage the zoning to reduce ghg? Stephen replied that if the objective is to churn the installed base and replace existing structures with higher performing structures, then the zoning should provide that the owner: (a) gets their desired step-up in size; in return for (b) PH construction and expected longevity, and (c) gets the procedural benefit of a free pass through historical review commissions. Jim asked if this issue would apply only within historic districts (which has regulations and a separate review process. Stephen and others replied that historic issues are considered even outside official historic districts.

So, Stephen's answer to Halina's question about leverage is that the leverage comes from allowing the desired size.

Asa added that leverage comes also by creating regulatory hurdles that slow down poor construction, and streamline high quality energy-efficient construction. Stephen agrees.

Stephen noted that owner-occupied single family homes are the most common residential building type in Newton, so it is appropriate to focus on that building type.

Jon pointed out that zoning needs to focus on the review and approval process in order to stay clear of the building code [which municipalities are not permitted to go beyond on materials and methods].

Asa agreed and emphasized the importance of a faster, simpler, approval process as an incentive.

Jon noted that we don't understand the real numbers of houses that pose a problem – are they common or rare?

Halina doesn't think the NCCE is in a position to do this kind of analysis, but the Planning Department can and should.

Jon suggested that we need real examples in the zoning memo, as well as ideas from other cities; but he would request the Planning Department to analyze how many lots will be affected by these provisions.

It was suggested that any incremental change is an opportunity to limit the City's additional carbon footprint.

Asa proposed that there's not categorical limits, but the extra process is what governs. The memo should say the zoning process can offer incentives for the kinds of things that are desired for ghg reduction, and the staff should develop these ideas into technical provisions.

Cory suggested, "such as all electric".

Asa said we're being pulled in two directions: a) smaller is better and b) people are building houses that are not energy efficient.

Stephen suggested that "the trend is your friend." So make use of it.

Halina asked Asa or Stephen to wordsmith this concept and get it back to her within a few days. Asa agreed.

The next ZAP meeting is October 6; Halina will talk with Zach LeMel and Councilor Deb Crossley this Friday (9/25), but it doesn't need to be in final form for that.

Michel emphasized that electrification should be a required part of high building performance.

Jim summarized that revisions to the memo will be made after Halina talks to LeMel and Crossley; then it would be sent to the ZAP Committee.

Cory added: and also the Green Newton Building Standards Committee.

Jon noted that the general ideas in the draft zoning memo are really good, but some of the numbers are problematic, e.g. the maximum square footage for a house. Halina responded that we can put forward the idea without the details.

Stephen asked who is our audience? What we write might inform Crossley's framework that she puts forward in ZAP.

Halina responded that the customer is City Council ultimately, but they don't all recognize energy use and GHG as a zoning problem; So we want the memo to identify the problem and offer a solution. She will add a "Goal" section at the top of the memo.

Jon added, and it should include Stephen's suggestion to use the zoning code to motivate people to save energy.

2. Progress on Energy Coach website

Members discussed the need for a liability disclaimer on the home page, such as, “This is a good place to start but you should do your own research on contractors, etc.”

Halina asked Jim to offer assistance to Jon Klein on coach training and other matters.

3. Newton Power Choice

Halina reported that Ann Berwick says they will bid on next contract in November. The market price of RECs is currently very high. So they expect to need to reduce the renewable percentage in the default.

Halina pointed out that the opt-up campaign resulted in 7% of households moving to the 100% renewables option.

Halina asked if we should promote opt-down for the many households that can’t survive the current pandemic economic environment.

Michael responded that we should find out the price structure from Paul Gromer. Michael will do it.

Cory stated that Mothers Out Front, 350 and others want to increase the default level of renewables. We should go back to our beginning position from last time.

Halina suggested that Michael can run some numbers; then 350, MOF, and GN should organize a response to the City.

Michael asked how many households are affected by Covid? Jon suggested that the state unemployment system may have data by zipcode.

How many people are turning to the City’s help fund? Cory suggested that we could put together a fund to support people with insufficient means (like last time).

Michael said we need to know how many people really are in economic straits.

Cory suggested the City should maybe go for a shorter term contract.

The meeting was adjourned at 8:50 pm.

Respectfully submitted by Jim Purdy

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/gov/building/projects/energycomm/default.asp>



Mayor Ruthanne Fuller

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Ann Berwick, William Ferguson (ex-officio)
Advisory Members: Cory Alperstein, Edward Craddock, Ira Krepchin

Telephone 617-796-1019
c/o Office of the Sustainability Director
Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, August 19, 2020 7:00 PM
Remote meeting – link to be provided

AGENDA

1. Taking stock of CAP implementation and planning for the next six months.

<https://us02web.zoom.us/j/82685589544?pwd=NENrRmxmTG1VQ05yS2tlbDNwNlNlbnR1eU5kdz09>

Meeting ID: 826 8558 9544

Passcode: 929249

One tap mobile

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Dial by your location

+1 646 558 8656 US (New York)

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+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

Meeting ID: 826 8558 9544

Find your local number: <https://us02web.zoom.us/u/kcv1iAdxP2>



Mayor Ruthanne Fuller

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Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, July 29, 2020 7:00 PM
Remote meeting – see access ID below

AGENDA

1. Progress on Energy Coach site. Jon, Halina
2. Brief update on zoning redesign.

The meeting will be remote, on Zoom. Use the link below.

<https://us02web.zoom.us/j/88485576256?pwd=MWIGNWtSSEdMdElzMVFaWExUFB6Zz09>

Meeting ID: 884 8557 6256
Password: 356943

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/gov/building/projects/energycomm/default.asp>



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Newton City Hall, 1000 Commonwealth Avenue
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Minutes of the Meeting of July 29, 2020

The meeting was held on Zoom.

Attending: Michael Gevelber, Stephen Grody, Asa Hopkins, Jon Kantar, Jon Klein, Jim Purdy; Cory Alperstein, Fred Brustman, Phil Hanser, Demie Stathoplos, Philip Vergragt

The meeting minutes for July 2020 were accepted as corrected.

1. Progress on Energy Coach site

Jon Klein reported on the status of the Energy Coach website. There is a new home page design, and improved navigation to route people to the expert coach based on their question. The user can type in a question and the site will suggest some existing Q&A. The user can submit their question, and a coach will answer them directly.

The site will say that your question will be answered in 24-48 hours.

Jon estimates that we will need 6 coaches to start with, a minimum of 2 for each area. The coaches input their available hours. Jon will set up office hours for each coach, starting with about one hour per week.

Ann Berwick and Bill Ferguson saw the site this week. They were extremely supportive, and they said having the website might even affect the job description of the person to be hired by the City – e.g., more management vs technical experience. They are comfortable with the NCCE members as expert coaches; they said that additional coaches should be vetted and tracked.

Michael applauded the work Jon has done, and he asks how we will make it known to the public.

Demie said other websites oriented to climate action should have the same four navigation buttons linking to subject areas as well as the Energy Coach site. How do we drive traffic? She suggested that Green Newton, HeatSmart, churches, school groups, Parent Teacher Organization, and other organizations are

community influencers that can help to build audience. The Mayor and City Council are open to using their newsletters to publicize the Energy Coach website.

Demie recommended that we should get Craig Forman involved (he runs Newton's Heat Smart program.) Demie will be doing church presentations, and can start sending people from those to the EC site.

Philip V. asked how to link to the right resources, which are often embedded within the answers to questions. Jon said that the EC site design will make that possible.

Stephen said that we need to maintain brand integrity.

Stephen said he has a method to block trolls and spam. He and Jon will confer.

Jon Klein will send email to each of us to establish our areas of expertise. The site will round robin around the list of expert coaches to distribute the load.

2. Brief update on zoning redesign.

Jim led a discussion about the City's ongoing work to redesign the Zoning Ordinance. It is led by the Zoning and Planning Committee with major input from the Planning Department; Zachery LeMel is the lead technical staff person. He has bi-weekly remote office hours.

ZAP's schedule is to finish Article 3 Single Family zoning districts by early fall and go on to commercial and mixed use zones, which is where large multifamily buildings would be located. The proposal being discussed by ZAP addresses 2-3 unit buildings, including conversion of single family houses. In July LeMel showed an analysis of the walking distances to transit, rail, and express bus stops and stations, as well as local bus routes. These transit-accessible locations have potential for multi-family approvals by right instead of through special permit.

The impact of the zoning proposals on the Climate Action Plan was discussed. Increased density in proximity to public transportation is one key factor that influences Newton's GHG footprint.

Asa pointed out that the effect of more housing in Newton is important in terms of per capita emissions. Regional impacts need to be considered, because of the regional housing market: units not built in Newton will be built elsewhere (Westborough for example) that entire much greater transportation-related emissions through automobile commuting that could be done by transit from houses in Newton.

Asa agreed to help Halina develop a conceptual estimate of the magnitude of emissions saving through greater density in Newton

Stephen commented that the City should consider air rights development linked to commuter rail stations with high speed outbound as well as inbound service.

Remote telecommuting may greatly increase in the future owing to the behavior patterns developed during the Covid-19 pandemic. Phil Hanser noted that Palo Alto has zoning provisions that require telecommunications capabilities adequate to promote telecommuting. He also pointed other cities that have innovative zoning provisions aimed at reducing emissions.

The meeting was adjourned at 9:15 pm.

Respectfully submitted by Jim Purdy

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Telephone 617-796-1019
c/o Office of the Sustainability Director
Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, June 24, 2020 7:00 PM
Remote meeting – see access ID below

AGENDA

1. Updates on the City's redesign of the zoning code, with a briefing by Jay Walter.
2. Updates on the recent activities around CAP implementation, and next steps

The meeting will be remote, on Zoom. Use the link below.

<https://zoom.us/j/4146771464>

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/gov/building/projects/energycomm/default.asp>



Mayor Ruthanne Fuller

Halina Brown (Chair), Beverly Craig, Michael Gevelber, Stephen Grody, Asa Hopkins,
Jonathan Kantar, Jon Klein, James Purdy (Vice Chair), Puja Vohra,
Ann Berwick, William Ferguson (*ex-officio*)
Advisory Members: Cory Alperstein, Edward Craddock, Ira Krepchin, Philip Hanser

Telephone 617-796-1019
c/o Office of the Sustainability Director
Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Minutes of the Meeting of June 24, 2020

The meeting was held on Zoom.

Attending: Halina Brown, Michael Gevelber, Stephen Grody, Jon Kantar, Jon Klein, Jim Purdy; Cory Alperstein, Fred Brustman, Ed Craddock, Lucia Dolan, Phil Hanser, Kathleen Hobson, Alice Ingerson, Demie Stathoplos, Philip Vergragt

The meeting minutes for May 2020 were accepted as corrected.

1. Updates on the City's redesign of the zoning code, with a briefing by Jay Walter.

Jay made a presentation on the City's zoning redesign process, which began in 2015 (improving format of the zoning ordinance, but no change in content) and revising content and substance beginning in 2017; this is referred to as "Zoning Redesign". After a hiatus, the redesign process resumed in 2020. The City Council hope to adopt a completely revised ordinance before the 2021 municipal election.

The Zoning and Planning Committee is currently considering only residential zones; mixed use and commercial zones will be taken up in the fall of 2020.

This is a "form-based zoning" approach, beginning with a "Pattern Book" prepared by Sasaki Associates. Jay thinks it is a good product, albeit with some questions about completeness and accuracy at the detailed level. The Pattern Book is basically an inventory of the current built environment (buildings and sites).

Based on the pattern book, generic house types were defined, called A-B-C-D each with a typical footprint and number of stories.

Current zoning uses floor area ratio (FAR) to regulate bulk and size. New zoning does not use this method. Instead, the new zoning uses the building footprint for each type of house in relation to site coverage. The effect of the new approach makes frontage more important than lot area; e.g., it does not count narrow "tails" that aren't buildable but increase lot area.

New code uses building components to incentivize additions to increase residential square footage without need to tear down and replace the entire structure. The new zoning also uses setbacks to define the range of potential expansions of the existing house.

Lot coverage includes all impervious surfaces, including driveways and parking areas. Pervious paving does not count – but that needs to be better defined. Phil noted that there are toxics that come from cars that could enter the soil. Jon Kantar noted that leakage is much lower in cars built in the past decade.

Halina asked about grandfathering of existing houses – an addition to existing house would increase coverage and the new zoning would therefore limit size, which is the key variable in how much energy the house uses.

Phil asked – does setback requirement aim at controlling shading by adjacent house? No – this is not really about sun and rooftop solar.

Jay noted that many older lots in the City don't conform to proposed setbacks; those houses would continue to be legal as non-conforming uses, but could not be enlarged in a way that increases non-conformity, e.g., by further encroaching into a setback.

A two-tier special permit process is being contemplated that takes special permits for smaller projects away from the City Council and gives those permit decisions to the Zoning Board of Appeals or the Planning Board.

Permitted uses are addressed by category.

District mapping will be a big issue. New zoning would define neighborhood and village zones, and multifamily residential would be allowed in more zones.

Multi-unit conversions would allow more units to be created within a large house, thus increasing housing stock while preserving existing houses.

Jay wants to impress that each type of provision has implications for creating new units; he thinks that some of the provisions being discussed are more restrictive than necessary.

Jay thinks the new zoning district maps should be based on walking distances from transit, etc.

Jon Kantar noted that preserving context is tricky – there is generally confusion about what context means; the zoning needs to clearly articulate what change is desirable.

HB observed that there is nothing in the goals of the zoning redesign about Greenhouse Gas per capita.

Phil is worried that this approach makes retrofitting the main route, and it is more expensive than new construction.

Jon Kantar said that they haven't been able to get Planning to focus on sustainability, which is not reflected in the redesign. For example, it would be possible to consider overlays with bonuses for desired sustainability characteristics.

Cory stated that we need to show up and have an impact. The NCCE should form a working group on zoning to develop our own point of view.

Jay showed a comparison of the old zoning map with a potential proposed map. He thinks that areas that are now single family are often close to transit and should become multifamily. Jim agreed.

Jay cited an example of a street where conversions of single family houses to two-family have been allowed, but only two owners have chosen to do it.

He also noted that demographics are important in influencing what kinds of housing is demanded.

Jay said it might be possible to devise a way to get performance standards into the zoning.

Phil asked - are there models we could look at to see what a more aggressive sustainability code looks like? Jay said Cambridge is a good example of a progressive code. Cory added, also Somerville.

Alice suggested that we could use the simplified Special Permit process to incentivize energy goals.

Halina asked if there is potential to require an energy budget for tear-downs. Jon Kantar noted that most of the construction here is renovation. Halina replied that tear downs are frequent enough and big enough so that it's worth addressing this issue.

Phil noted that Palo Alto had a huge number of teardowns, and that city restricted them to a limited scale.

Alice is doing a history of Newton's zoning, and she observed that the Pattern Book is about establishing an average for the street, based upon what is already there.

Jay noted that Victorian houses can be converted to multifamily, which is good. But Jon noted that very large old houses subdivide into two units that are still very large.

Halina started a to-do list.

Research on good codes and innovative ways of using energy budgets Phil suggested Santa Monica as a good example. Jon added Evanston and possibly Ann Arbor.

Michael said that we need to put weight on automobiles and how they are encouraged or discouraged by the zoning.

Cory set up a Google Doc to assemble everyone's work -

<https://docs.google.com/document/d/1Dr4dkRH4pVBrBJ6zqUZpPkPskAnmlj-tPSMakeXCWA/edit>

Phil said he'll do Palo Alto. He also mentioned Christopher Alexander's work, such as *A Pattern Language*, which is about urban form and is reflected in Palo Alto's built form.

Jim and Cory will accept input over the next two weeks. Cory will reach out to Puja.

Alice observed that during the Covid hiatus, the Planning Dept is hearing from people who don't want teardowns, which have become the main goals by default.

2. Updates on the recent activities around CAP implementation, and next steps

Not discussed, other than as included in discussion of zoning, above.

The meeting was adjourned at 9:15 pm.

Respectfully submitted,

Jim Purdy

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/gov/building/projects/energycomm/default.asp>



Mayor Ruthanne Fuller

Halina Brown (Chair), Beverly Craig, Michael Gevelber, Stephen Grody, Asa Hopkins,
Jonathan Kantar, Jon Klein, James Purdy (Vice Chair), Puja Vohra,
Ann Berwick, William Ferguson (ex-officio)
Advisory Members: Cory Alperstein, Edward Craddock, Ira Krepchin, Philip Hanser

Telephone 617-796-1019
c/o Office of the Sustainability Director
Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, May 27, 2020 7:00 PM
Remote meeting – see access ID below

AGENDA

1. Updates on the recent activities around CAP implementation, and next steps
2. Cost comparisons for heating a house with electricity vs. gas (Phil Hanser)
3. Redesign of the Zoning Code with recorded video interview with Deb Crossley.

The meeting will be remote, on Zoom. Use Access ID below.

Join Zoom Meeting

<https://us02web.zoom.us/j/84141377751>

Meeting ID: 841 4137 7751

One tap mobile

+13017158592,,84141377751# US (Germantown)

+13126266799,,84141377751# US (Chicago)

Newton Citizens Commission on Energy

City of Newton

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Mayor Ruthanne Fuller

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Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Minutes of the Meeting of May 27, 2020

The meeting was held on Zoom.

Attending: Halina Brown, Beverley Craig, Michael Gevelber, Stephen Grody, Asa Hopkins, Jon Kantar, Jon Klein, Jim Purdy, Puja Vohra; Cory Alperstein, Fred Brustman, Ed Craddock, Lucia Dolan, Phil Hanser, Jane Hanser

The meeting minutes for April 2020 were accepted as corrected.

1. Updates on the recent activities around CAP implementation, and next steps

1. Current activities in Climate Action Plan implementation

Halina listed current activities:

- The NCCE Energy Coach website in development
- The Communications Working Group,
- Steps toward a Green leadership Collaborative by Puja, Jon Kantar, and Halina
- EV taskforce by Michael,
- Developing public access to HERS ratings by Stephen
- The City Council's zoning redesign being followed by Jim, Jon Kantar and Cory,
- The Heat Smart program by Bev,
- The Green Newton "Take Action" website by Bev, Cory, and other GN members
- People are working on a logo for climate action and a story line for the narrative.
- Halina is working to get a landing page for all climate action efforts on the City's website, with links to the CAP and the working groups.

Energy Coach website: Jon Klein made a push a few weeks ago. He made a demo of the website (newtoneneergycoach.org.) with improved navigation. Jon needs some technical assistance on content of certain topics, e.g., home remodeling; Bev and Jon Kantar are working on this. Jon Kantar suggested

that the website could have sortable Q&A by topic, e.g., water heating. Bev plans to create a section on remodeling.

Jon Klein said we should be able to proceed by starting with a list of high level questions. Jon Kantar noted that there are probably already some of these in the Heat Smart website FAQs – but those questions don't currently address remodeling, for example. Jon Klein suggested that we get a group together to come up with the Qs and content of answers, then he can write it up.

Michael suggested that we can review building permits to get a distribution of kitchen remodels, etc. ISD does a monthly data dump. Asa said we can get a quick dataset of the last 1000 permits, but Jon Kantar said it would be difficult, because the information of interest is in the brief narrative description, not numbers, so there is other key information that one would want to know. Asa responded that detail is not needed for our purpose.

Stephen has looked at this data; we can get it through newtonma.gov. Stephen will send what he has to Jon Klein.

Heat Smart: Bev said the planned June 15 webinar will cover these topics. Information is on the HeatSmart website, media section; there are also videos. Stephen said that the case studies should be identified by type, e.g., minimizing cost, with a full menu of types. Bev offered the example of what homeowners with a dying AC system can do. Stephen added that we should indicate the level of expenditure so that people are able to decide what they can undertake. Jon Kantar suggested that we can develop criteria and create a table summarizing options with symbols for cost (\$bills) and level of greenness that can be achieved (tree symbols).

Jon Klein will go to the HeatSmart site for the info. Cory proposed that we should get links to the information onto a variety of websites so more people can find it; and cover a variety of topics such as solar, that would be found on some websites but not others.

Jon Klein noted that we also need to finalize a list of energy coaches. He suggested that we keep it in the inner circle of experts as we get the site up and running, then expand.

Jon Kantar cautioned that there could be the appearance of conflict of interest, because he and other building experts do paid work in some of these areas. However, Stephen thinks this is OK if it is disclosed in advance.

Bev does a once a month group on home efficiency. These are listed on the Green Newton calendar.

Jim asked about EV information for the Energy Coach website; Jon Klein said he has it covered.

2. Heat Smart Program

A Request for Qualifications (RFQ) is out to choose installers who are vetted for both kinds of work; there two reviewers on the Heat Smart committee to select them. Puja will point a couple of companies she knows to HeatSmart for heat pump/water heaters. Stephen concludes that there is no financial interest by any party, so there are no conflicts.

3. Green Leadership Collaborative

Puja described a meeting with the Boston GLC and information from them that we could apply. Newton staff and the two utilities have identified the top 16 electric and top 10 gas customers. We are getting their information together, but don't plan to reach out to them right now (owing to Covid). Puja and Halina have talked with Ann Berwick and Bill Ferguson about how to proceed. They shared a list with Puja and Michael. They will categorize the top customers by building type – e.g., grocery, hospitality, office/real estate, apartment housing. They will then characterize these customers and how they compare to national baselines for these building sectors. And they will identify targets for each sector. The City will develop a channel of communication to these owners, and identify modes of involvement (e.g., providing incentives to their employees).

Michael cautioned that he thinks the City staff is not being forthcoming, but they are listening though, and need to be convinced.

Halina said there has been some back-and-forth with the City, and we now have been granted permission to proceed.

4. HERS Rating Disclosure

Stephen reported a breakthrough on publishing HERS scores. He has the HERS scores from Inspectional Services Department (ISD) files for the past 10 years organized and accessible through a web interface, with no password required. Jonathan Yeo is cooperating with this effort.

The HERS ratings became available in hard copy list form with street addresses and associated scores. He made it map-searchable through MapGeo. Or searchable by the parcel ID from assessor database.

Asa asked: are there HERS ratings that are not related to a building permit? Stephen said yes, there is a state legal requirement to submit the rating. Also, some owners will want to get their rating in the accessible database.

5. Zoning Reform

Halina discussed the zoning reform process with Jay Walter. Weekly tasks are posted on the city website (Zoning and Planning Committee).

A current list of upcoming topics:

ability to build houses as small as 800 sf (currently 1400).

density – permitting multifamily within ½ mile from major T stations/stops, and no mega-houses within these zones.

ZAP will deliberate all summer; there is a weekly newsletter from planning

One proposal is that energy use by new houses is not to exceed the energy use of the house(s) that were torn down.

We need someone to work with Green Newton's Building Standards Committee and with Engine 6 over the summer to coordinate involvement with ZAP.

6. Comparative Costs of Heat Pumps Versus Natural Gas

Phil Hanser gave a presentation on this topic. Bottom line: it's about the relative efficiency of the systems and the comparative energy prices.

A heat pump more efficient in creating hot air than a natural gas-fired system, but electric rates are currently higher than gas rates.

Heat pump capacity declines below 5 degrees F, but is very efficient even below that temperature.

The conclusion is that the ratio of electric vs gas is not advantageous at current energy prices.

Bev said the big question is a new construction discussion, which is very different than retrofit. A 15% difference is a tiny margin. Jon Kantar is talking with CADMUS about this.

Asa pointed out that using rooftop solar to meet the new load addresses this cost disparity.

JP – the presentation to PST from a representative of Brookline's gas ban bylaw made a good comparison, that the town meeting seemed to find persuasive; they included both capital and operating costs in their comparison and included state incentives that reduce the capital cost to the homeowner.

Bev noted that people buying new heating/cooling systems should do everything they can to make the home energy efficient (air sealing and insulation of the envelope). Those improvements are highly cost effective in reducing overall heating and cooling cost.

The meeting was adjourned at 9:15 pm.

Respectfully submitted,

Jim Purdy



Mayor Ruthanne Fuller

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/gov/building/projects/energycomm/default.asp>

Halina Brown (Chair), Beverly Craig, Michael Gevelber, Stephen Grody, Asa Hopkins,
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Advisory Members: Cory Alperstein, Edward Craddock, Ira Krepchin, Philip Hanser

Telephone 617-796-1019
c/o Office of the Sustainability Director
Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, April 29, 2020 7:00 PM
Remote meeting – see access ID below

AGENDA

1. Progress on the Energy Coach project: Halina, Jon Klein (20 min)
2. Public Facilities Committee consideration of ban on natural gas hookups.
3. Updates on the recent activities around CAP implementation, and next steps

The meeting will be remote, on Zoom. Use Access ID below.

Join Zoom Meeting

<https://zoom.us/j/96754708221?pwd=SEhEeHdiTy9tLytPaS9xbTBYaUdVUT09>

Meeting ID: 967 5470 8221

Password: 269255

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/gov/building/projects/energycomm/default.asp>

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Minutes of the Meeting of April 29, 2020

The meeting was held on Zoom.

Attending: Halina Brown, Michael Gevelber, Stephen Grody, Asa Hopkins, Jon Kantar, Jon Klein, Jim Purdy, Puja Vohra; Cory Alperstein, Fred Brustman, Lucia Dolan, Councilor Emily Norton, Demie Stathoplos

The meeting minutes for March 2020 were accepted as corrected.

1. Letter to Mayor Fuller

Halina's draft addresses the need to fill the Energy Coach position. Should we send it?

Jon Klein suggested that the first sentence should be empathetic and recognize the challenges she faces. Our goal is to make progress, and here's our proposal on how to do that. Parallel with Covid might be taken the wrong way.

Michael said Green Newton is going ahead with action of its own, so what are the one or two things we want the Mayor's buy-in for?

Emily said working with the City Council should be mentioned, as it doesn't require extra effort from her staff, so continue to mention it.

Jon Kantar said the other big item out there is the zoning redesign. Expect to see the Massachusetts AG's reaction to the Brookline gas ban bylaw in the next few months; it is important to be part of that process to ensure that the new Newton zoning code is as sustainable as possible.

Halina asked what would our role be in zoning? Jon gave examples such as to increase permitted density for housing in appropriate areas, like transition zones between village centers and surrounding areas. Cory suggested we could provide some research on how zoning is being used in other places as tools for sustainability.

Halina asked if we should work as an advisor to the Planning Department? Jon replied yes. They're seeking input from everyone. Since James Freas left, there is a new group of staff, who are very new to this zoning code.

Jon Kantar agreed to represent the NCCE in this process. Jim volunteered to participate. Emily asked if we are working with MCAN or MAPC on achieving net-zero energy in Newton; they have resources to take advantage of. Cory suggested also Somerville and cities outside Massachusetts that are using zoning as a tool to achieve the net zero goal.

Puja is on the MCAN board and she will forward material to us.

Halina said that Jon, Jim, Cory, and Puja should coordinate.

2. Efforts to ban natural gas in new buildings.

Emily reported that Newton's legal dept agrees with Cambridge that we don't have the authority to legislate in this area, so we should be discreet. If Brookline's gas ban is overruled, a home rule petition is one avenue, but may be difficult to get through the Mass legislature. Emily has talked with Brookline's lawyer on this issue. An AG announcement is expected June or July. The Newton Public Facilities Committee will take this up again after progress is made on the budget. Gas ban issues will be on PFC's agenda for May 13.

3. Progress on the Energy Coach website.

A meeting is scheduled for May 8. We plan to present it with next generation improvements.

A library meeting on heat pumps was held on Monday. There was a series of good questions. Michael will get the Q&A from this meeting. Green Newton also has Q&A in some of the categories on their website. We should ask to use some of their material on the Energy Coach site. Halina will direct JYK to this material.

4. Updates on the recent activities around CAP implementation

The City staff wants a landing page on climate action instead of burying the documents on the Planning Department's documents page; this page should include the NCCE's 30-year Climate Action Plan and links to information sites, e.g., the Heat Smart program site,

Green Newton Building Standards Committee (BSC): Peter Barrer is tracking several projects including Four Corners, Riverdale, Riverside, Dunstan East, etc. BSC is making progress with these developments, especially regarding electrification. In talking with developers, they are pushing the education aspect and free money for studies from Massachusetts Clean Energy Center.

Cory asked about the status of special permit regulations development? Jon Kantar reported that Deb Crossley is pushing to make the requirements applicable to 10ksf buildings. Emily said the City Council is also looking at climate resilience as special permit condition.

Jon Kantar reported that the ZBA chair Brooke Lipsett has welcomed our input. We can make an argument on behalf of the future tenants' health, etc.

Halina asked if there is any way to promote passive house for single-family residential? Jon replied that BSC is concentrating its efforts on the bigger developments.

Stephen proposed that we could push for the City's Inspectional Services Department to do things at the desk to get small project developers to consider passive house and electrification. This is difficult, as Bill Ferguson once said, because people go to ISD for a building permit with the project already advanced. Stephen added that If we want to shoot the moon, working through the City Council on zoning amendments is the way to go; but a procedural strategy for projects that go to ISD is also a way to seek improvement.

Cory suggested that new construction is more susceptible to modification than a systems replacement that has already been decided by the owner.

Halina said that we'll follow up on this and consider how to introduce the idea to the City Council, but we need to decide where to put our effort. Cory proposed that we bring Bill Ferguson into the conversation.

5. Green Leadership Collaborative for commercial properties –

Ann Berwick and Puja met with City of Boston staff about their Green Ribbon Commission to get ideas. Their initiative is much bigger than ours, and involves many different building types, e.g., health care facilities. Their Commission has a real estate group, a universities group, a cultural facilities group, etc.

Their research is pretty comprehensive, and their tracking tools might be useful in Newton. For Newton, their healthcare group's experience is relevant; Puja is getting deeper into how the group is operating and what tools we might emulate. Benchmarking is a particular thing that they find very valuable. We should aim to get 5-10 Green Leadership participants in Newton to make commitments to benchmark their progress and share the data with us and the carbon emission reductions they achieve. Later we can look into best practices.

It was suggested that Newton's GLC might take on a bigger role in things besides energy, e.g., sustainability.

For the next NCCE meeting we need to make a list of Newton commercial property owners/managers to be on this commission. A GLC Meeting is scheduled for May 5 at 4pm. Halina will ask Ann to include us in the Zoom invite.

Jon Kantar pointed out that it will be hard to get the Mayor's time on this during Covid. He is not sure if the MOU with the utilities has been signed yet. Bill Ferguson wants to get them involved in the GLC process.

6. Communication Working Group

Halina sent an email update a few days ago. The group is looking to create a narrative that could be customized to specific situations, but always with an overarching message. Demie, Karen Sloat, and Halina came up with: *Powerful. Make a difference. Not alone.*

This was modeled after the New Economics Foundation in the UK, which aims to mobilize progressive people to create a better economy. There are two story lines: 1. populist and 2. elitist.

Suggestions were made by various members:

Stephen suggested that we avoid the negative in “Not alone”. Asa likes that the message encourages individual action that goes to the two big things to make an impact.

Michael – prominently call for “Take Action”

Jim – the three statements speak to people at a personal level.

Stephen – convey the point that we are looking for substantive action. Also, the idea of ownership of the problem and solution should be in there.

Michael – building on a strong start. Newton leads the state in aggregation, so extend from our strength into these other areas. Appeal to the sense of community.

The meeting was adjourned at 9:15 pm.

Respectfully submitted,

Jim Purdy



Mayor Ruthanne Fuller

Newton Citizens Commission on Energy

City of Newton

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Halina Brown (Chair), Beverly Craig, Michael Gevelber, Stephen Grody, Asa Hopkins,
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Advisory Members: Cory Alperstein, Edward Craddock, Ira Krepchin, Philip Hanser

Telephone 617-796-1019
c/o Office of the Sustainability Director
Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, March 25, 2020 7:00 PM
Remote meeting – see access ID below

AGENDA

1. Database of Newton HERS ratings: Stephen Grody (20 min)
2. Michel Gevelber: Analysis of the Power Choice experience (15 min)
3. Demie Stathoplos: Update on the Communication-Outreach Working Group (15 min)
4. Update on the Energy Coach interactive website and request for Green Newton grant: Jon Klein and Jim Purdy (20 min)
5. Working together during the Covid-19 crisis. And general discussion.

The meeting will be remote, on Zoom. Use Access ID _____.

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/gov/building/projects/energycomm/default.asp>



Mayor Ruthanne Fuller

Halina Brown (Chair), Beverly Craig, Michael Gevelber, Stephen Grody, Asa Hopkins,
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Minutes of the Meeting of March 25, 2020

The meeting was held on Zoom.

Attending: Halina Brown, Beverly Craig, Michael Gevelber, Stephen Grody, Asa Hopkins, Jon Kantar, Jon Klein, Jim Purdy, Puja Vohra; Cory Alperstein, Ed Craddock, Deb Crossley, Lucia Dolan, Jane Hanser, Karen Sloat, Demie Stathoplos; Bill Ferguson

The meeting minutes for February, 2020 were approved.

1. Database of HERS Ratings

Stephen presented on his work to develop a database for HERS data. (Item E.3.2 in the CAP.) He looked in the assessors' database for a sample of properties that had building permits found that their data is incomplete – missing construction updates for 170 records in the Assessors' database. Newton needs a real database – sortable, searchable, etc. – rather than paper based files. Stephen used available Inspectional Services Department (ISD) data and created a url for user interface. JYK asked if it will be added to the City GIS? SG – yes

Jon Kantar said that inspectors from ISD make entries at the construction site on iPads. So they could easily add the HERS score when they get the result.

Halina suggested that next, the HERS ratings from the early years should be added. Based on her previous research, it will total around 1000 records. Stephen proposed that we get Ann Berwick or other staff that we work with to authorize this and request that the database is given official status.

Halina noted that, ideally, recent home energy assessments created a scorecard for each property: it is a resource awaiting a City policy that utilizes it.

Bill Ferguson asked Stephen to summarize his proposal. How is the database maintained? Stephen replied that it could connect directly to ISD input on each property. Bill/Ann B can help move this project along – get the url onto the <https://newtonma.mapgeo.io/> site. Is there risk from hacking into City's

data? Stephen said none at all, it's a separate thing. Jim Shaughnessy has all of the files that Stephen has pulled together.

Halina said that a meeting is scheduled with Deb Crossley and Ann Berwick on April 1; she will introduce them to this topic.

2. Analysis of the Power Choice experience

Michael Gevelber gave a presentation on the aggregation program and CAP scorecards. He got the info from Paul Gromer, the City's consultant for Newton Power Choice. He addressed costs, impacts, and future options.

The RECs that Newton bought total \$1.067 million – they secured a very favorable cost of \$10.00 per REC under the aggregation contract, but today, the RECs would cost \$30.

Statewide there are 23 aggregation programs totaling 460,000 RECs. Newton is 24% of the state total.

Cambridge invests the cost of the RECs in the City. E.g., Energy Coach, communications of CAP, etc.

Newton is the leader in the state in terms of default percentage of renewables. Michael asks: Is there a better use of \$1 million than buying RECs? Gromer believes the PUC regs allow this kind of use of the REC money.

JYK asked, is it valid to claim that the use of the money for another program would actually make things greener, e.g., reducing energy consumption. Jon Kantar suggested that we could capture the same amount of money that RECs would cost in the next aggregation contract, say \$2 million, and leverage half of it through investment in a partnership or revenue stream on a larger project. . Cory noted that Cambridge's use for the money is community solar.

Deb Crossley suggested that we need to discuss this quietly and with the Administration. Ann Berwick needs to be in the loop

Halina pointed out that the time to the end of the current contract is relatively short. Need a much longer discussion of this issue, e.g. how much do we burden Newton citizens? Who volunteers to initiate this conversation? Asa said we need to talk big picture about the next aggregation contract period.

Jon Klein disagreed; he recommends that we table this issue forever – there's other more important stuff to get done.

Bill Ferguson noted that we need to go out to bid for the next aggregation contract next fall, maybe late October 2020. So there's not much time. The expected cost to consumers of \$30 RECs is about 1 cent per kwh.

The members decided to defer the discussion and whether to table the issue or move forward at a future meeting.

3. Working Group on CAP Communication/Outreach

This group comprises Demie, Karen Sloat, Halina, Philip Vergragt, and Cory.

A brainstorming session had to be rescheduled.

Demie gave a status report. They started by meeting with Ellen Myers and Dana Hanson from the Mayor's office. They need content team – Ann Berwick, Bill Ferguson, and Nicole Friedman. They are planning a 1-hour meeting with those people to develop a framework for the communication plan. Issues include how do you get people to identify with the communication process. We need to develop content and strategy, consistent with the Administration's plans for Newton. We need to use positive emotional language and other best practices in climate communication.

Green Newton has been working with MassEnergize on the communication platform. It is currently in a beta version. It is to be populated with the communication plan that we're working on. GN is asking for comments.

Bev presented the beta version. It includes a "Green Navigation" box on what Newton is doing to implement the CAP.

The goal is for ½ of households to participate. Charts show the participation percent and the impact in terms of actions completed, e.g., solar, home energy improvements, etc. The point is motivation.

All of the actions described have a climate impact. They can be searched by level of cost, level of impact, etc.

There is a place on the site for testimonials, for a deep dive for more information. The user creates her own to do list. The site uses the UC Berkeley calculator to estimate the CO2 impact of each action.

The site can also support the creation of teams that can compete.

HB – seems to be designed to mobilize citizens. It doesn't (at present, anyway) report on progress in implementing the CAP. Could navigate between websites. such as "What is the City of Newton doing?"

They are meeting on April 3 (unless rescheduled)

Halina is going to delay the meeting with the City CAP team which is backed up owing to the epidemic.

4. Energy Coach platform

Jon Klein reviewed the site: its purpose is to be clearinghouse for information, and a place to schedule a conversation with an Energy Coach, including experts who are not City employees.

The site will provides a basic knowledge base. This requires a database full of questions and answers, which NCCE members and others will provide.

Demie asked if engineers from her church community participate? JYK – absolutely.

Everyone can do whatever they please, and we can consolidate entries if more than one has been entered on a topic.

Jon will send a weekly update. He added that no other cities have done something quite like this.

Cory proposed that the HeatSmart program should be coordinated with this. Jon said they have a whole list of FAQs from Arlington and other towns in the HeatSmart program.

Laya Steinberg is doing the graphics.

Cory pointed out that this endeavor is more than just the website – it's all the people who will help answer the public's inquiries.

Demie said she would like to train some people from her church to serve in that capacity.

NCCE will ask Green Newton for a grant to cover costs. Jon said that until the site goes live, it's \$50/month. Then \$8.00/month/participating energy coach. Want to ask for \$1000. Jim will discuss with Marcia Cooper and get this on the agenda of Green Newton's March 31 Board meeting.

5. City Staffing

The City Controller's office had issues with the Energy Coach position, according to Jonathan Yeo. Deb Crossley will ask about this when she meets with the Administration tomorrow.

Bill Ferguson reported that the EC job description has been approved by HR – but they asked if there is a FTE position in the staff template for the upcoming fiscal year. Deb said that this needs to come from the Mayor's office in her budget proposal; it is not unheard of creating a position during the year. Bill agreed that it shouldn't be a big problem to get the position into the staffing template, but Jonathan Yeo is currently tied up with the City's response to Covid19, so it won't happen right away.

A new sustainability position has been proposed for the school system. The members decided to table discussion of the School Department position. Bev suggested that Halina should talk with Joanna Canedo, who leads Green Newton's School Connections group.

The meeting was adjourned at 9:15 pm.

Respectfully submitted,

Jim Purdy



Newton Citizens Commission on Energy

City of Newton

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Telephone 617-796-1019
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Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, February 19, 2020 7:00 PM
City Hall Room B17

AGENDA

1. Data analysis and update on the EV taskforce: Michael
2. A working session on the Energy Coach interactive website: Jon Klein
3. The outreach-communication-marketing update: Halina

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Minutes of the Meeting of February 19, 2020

Present: Halina Brown, Beverly Craig, Jon Kantar, Stephen Grody, Asa Hopkins, Jon Kantar, Jon Klein,; Kathy Pillsbury

The meeting minutes for January 19, 2019 were approved.

1. Pilot platform for Energy Coach.

Jon Klein and other members have been meeting to develop an Energy Coach pilot web interface. We need a scalable way to engage with the large public, and a person is not yet in the EC position, so the idea is to populate the website with written answers to potential questions the EC would receive. An online infrastructure has been developed, to about 90% level – better graphics are needed, and we would provide content.

Bev said that when populated with content, the platform needs to incorporate this thru built-in capabilities. Jon said it would cost \$50/month to host the site. The site could be brought to launch level in a few weeks if we all work on content.

The construction is being done at the Wordpress site newtonenergycoach.org

At the moment the site just uses a standard layout, but we should get a professional designer to improve it.

Navigation:

- Online Q&A
- Connect with a Coach
- Meet the Coaches

Stephen thinks it should be separate from the City web infrastructure with a simple link to get there from this site. We could pattern it after MassEnergize.org site; Bev Craig is involved in expanding it to include Newton issues through Green Newton.

The Q&A section of energycoach.org uses the *Answerbase* platform.

People can browse by topic or look at the most popular questions.

There is a link to the carbonfootprint.com calculator.

Another link allows the user to schedule a live conference with City's energy coach – it would distribute requests to all people currently performing the EC role – notably, people from the community with expertise in particular areas that the person hired as EC might not be expert in.

The platform could run for a year on \$2500. with 10 coaches.

Asa noted that people will want answers to specific questions, not general ones.

E.g., I need a new furnace: what should I do? Or what kind should I get?

Jon Kantar suggested an article, for example, explaining heat pump water heaters.

Jim suggested that this website will be like a primer, but the next step is to talk to a live person, the City EC or another person with expertise.

Halena said that we want to get people to do certain things, like contact MassSave, or be in a position to look further into a heat pump.

Bev suggested following up with an email to the person with what you told them.

Halena said, for example the City has a HeatSmart grant to promote heat pumps – so the site can direct customer to the City's HeatSmart coach.

Bev proposed that the City should adopt a goal of half of Newton households taking some step toward lower climate impact. There should also be a feedback loop to keep track of who has done something.

Jim said the site should show people what is out there to take advantage of

The site might say “Browse thee questions, then schedule a session with a coach.”

Someone suggested a market value performance (MVP) vendor to calculate what you've saved.

Jim asked if there is any liability for us or the City, if people do something that turns out badly, based on what we told them.

Halina raised the question of how do we go about populating the website? JYK: he will give each of us an author log-in and then you start writing a Q&A. It will also need second person's review.

He estimates it will take about an hour to write a question and answer. Then each one needs review by someone else.

Jon Kantar suggested that it needs a section about all the incentives that are out there for the customer to take advantage of.

Stephen asked, should we take the City's group chaired by Jonathan Yeo through this soon? Bev suggested that it would be better to wait until we're farther along.

Bev also suggested that we can migrate over Mass Energize material to the EC website.

JYK said the design of the platform allows all of us to work independently.

Halina asked, Are we all committed to do this? Everyone said they are.

Bev suggested that we need to have both an elementary level and a deeper dive – e.g. MassCEC has 16 pages of FAQ about rooftop solar.

JYK said the starting document has some questions to begin with.

There was discussion on whether to use Google docs for group editing of this content? Jim grumbled but agreed to go along with using Google docs.

Asa suggested that no entry should be long enough for the user to need to scroll.

Stephen asked, do we need to go to Jon Yeo and tell him that we're about to spend \$2500? The members decided it is better to fund the project separate from the City at the outset. It was suggested that we each donate \$100 per year into a kitty controlled by NCCE. We could go to Green Newton to take this money as a donation and then provide a grant for platform expenses.

It was resolved that the proposal for NCCE members to donate \$100 each to a Green Newton Energy Coach fund will be on the March meeting agenda,

2. Energy Coach staffing

Halina reported that Jonathan Yeo says the EC position will be posted next week. A NCCE member will be on the City's review panel. We should talk it up to draw more applicants. The members voted 7-0 to appoint Halina to the City's committee interviewing EC candidates.

Halina has scheduled a meeting next Tuesday March 25 with the City's new Economic Development Director Devra Bailin about the Green Ribbon Commission, with Halina, Jon Kantar, and Michael Gevelber.

The MOU has been approved by the Eversource and NGrid, and sent to the Mayor by Bill Ferguson. Money is not mentioned, but Bill is confident that the money will be easily worked out with the utilities.

An Outreach and Communication group has been formed –it is led by Demie Stathoplos, with Karen Sloat, Philip Vergragt, Cory Alperstein, and Halina. A brainstorming session will be held on 2/28 from 3:30-5:30, the first of several to figure out how to communicate the CAP and frame it (“give it identity”). Karen Sloat's husband will lead the brainstorming on “How do we talk about this Climate Action Plan?” with Dana Hanson and Ellen Iskanian from Mayor's office. Plus Ellie Goldberg, Peter Smith, Bev Craig, Halina Brown, and Cory Alperstein.

After March 25, we need to meet again with Jon Yeo's group.

The EV Task Force is promoting EV purchase; a flyer is being prepared, but the City's excise tax bill mailing is too soon to include an flyer as an insert.

Michael is getting a list of EV owners in Newton from the public records of EV rebates. There are currently about 700 EVs registered in Newton. A Drive Green campaign is up on Facebook.

The Task Force is recommending that the City should hold a “drive green” event at City Hall. Preferential parking spaces for EVs are to be put in place at City owned parking lots sometime this year. There are Greenspot charging stations at a couple of location in Newton.

A program on Heat Smart campaigns in Concord and Arlington will be held on 2/25 at 7pm.

The meeting was adjourned at 9:00 pm.

Notes transcribed from audio recording.

Respectfully submitted,

Jim Purdy

Newton Citizens Commission on Energy

City of Newton

<http://www.newtonma.gov/building/projects/energycomm/default.asp>

Halina Brown (Chair), Beverly Craig, Michael Gevelber, Stephen Grody, Asa Hopkins,
Jonathan Kantar, Jon Klein, James Purdy (Vice Chair), Puja Vohra,
Ann Berwick, William Ferguson (ex-officio)

Advisory Members: Cory Alperstein, Edward Craddock, Ira Krepchin, Philip Hanser



Mayor Ruthanne Fuller

Telephone 617-796-1019
c/o Office of the Sustainability Director
Newton City Hall, 1000 Commonwealth Avenue
Newton Centre, MA 02459

Wednesday, January 22, 2020 7:00 PM
City Hall Room B17

AGENDA

1. Welcome to Bev Craig, the newest member of NCCE.

 2. Coordination with the City and community organizations on CAP implementation: debriefing on the January 13 meeting; working teams and their mode of operation. See attached Version 1 of the Implementation Working Teams.General discussion

 3. Analysis of what the aggregation fees have done and prospects for the future.
.....Michael Gevelber

 4. How to facilitate a shift toward the Passive House standard and electrification for teardown construction.Halina

 5. Heat island effect: a topic raised by Alicia Bowman, newly elected Ward 8 Councilor.
-

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Mayor Ruthanne Fuller

Halina Brown (Chair), Beverly Craig, Michael Gevelber, Stephen Grody, Asa Hopkins,
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Minutes of the Meeting of January 22, 2020

Present: Halina Brown, Beverly Craig, Michael Gevelber, Jon Kantar, Stephen Grody, Asa Hopkins;
Fred Brustman

The meeting minutes for December 18, 2019 were approved.

1. Welcome to Bev Craig, the newest member of NCCE.

Beverly was formally welcomed as a full member of the Commission.

The members present at the meeting talked about their backgrounds. Jon Kantar has been in building construction since the early 1990s, and has been involved with Newton building projects from North High School through the three recent elementary schools, and the High Performance Buildings Council; he talked about the building materials and technologies that have come into use in his career

Stephen has worked as a consultant in high tech and business information systems for large companies and the development of data over cellular communications.

Michael has a PhD in mechanical engineering; he has worked in energy field since the Carter administration. He is a professor at Boston University and does work in building control systems.

Asa is a PhD physicist by training; he has worked in local political efforts and energy policy at Berkeley Energy Lab, developing standards for appliances and carbon pricing; he worked in Washington as a AAAS policy fellow and worked on the quadrennial energy technology review in the Office of the Under Secretary for Science at the U.S. Department of Energy under the Obama administration. He then went to Vermont to run the state energy office and develop a policy framework for transportation and buildings. He now works for Synapse Energy Economics and will be based in the UK next year.

Fred Brustman is a mechanical engineer and was an NCCE member for many years, working on the changeovers of City street lights.

Beverly Craig went to USC and set up their environmental science program; she worked on energy programs under President Clinton. She worked at OMB then went to the Kennedy School and Harvard

Business School. She did brownfields development in Milwaukee, then worked for Dorchester Bay Economic Development Corporation on affordable housing; she worked on homeowner rehab for lower income residents in Cambridge, plus solar PV. The Finch Project in Cambridge is the first affordable Passive House development in Massachusetts. She then went to Mass CEC and helped create the Passive House design challenge, and got MassSave to offer PH incentives. They also provided solar incentives for over 4000 homes.

2. Coordination with the City and community organizations on CAP implementation: debriefing on the January 13 meeting; working teams and their mode of operation. See attached Version 1 of the Implementation Working Teams.

The people at the January 13 meeting were impressive in terms of the City's commitment to a collaborative effort. (The Mayor cited NCCE in her State of the City speech.) Halina asked if we should send a note of appreciation to the Mayor and City Council regarding the hiring of an Energy Coach; all agreed.

Michael asked why the City turned around its earlier non-committal regarding the Energy Coach. Jon noted that the Council is even more committed to climate action. Stephen feels that the ideas in the Climate Action Plan are powerful enough to draw support on the political side and day-to-day participation by the Administration. Asa feels that they hold back until they are sure that an idea is feasible and then come out in support of it; Energy Coach is an example of that.

Halina noted that the Mayor has given several speeches in recent weeks on Newton and Climate Action showing her enthusiasm in being a leader in Massachusetts. Also, the City's green coalition is strong and respected in Newton. Jon noted that we made real progress on getting Passive House into the two biggest developments happening now, as well as the zoning amendments for energy efficiency in special permits. Michael recognized the importance of Halina's role in leading and working with the City.

Halina met with new Councilors Bowman, Ryan, and Humphrey. Councilors Malakie and Wright did not reply to her invitation to meet. Jon thinks there are some subjects on which they may be cooperative; Councilor Baker is an exemplar of coming to agreement with a former skeptic.

The natural gas prohibition passed by Brookline may be a guide to what Newton could do; Bev noted that it has many provisions that make it more acceptable.

Halina identified two topics that are currently orphans:

The Green Ribbon Commission; Devra Bailin is the new Economic Development director and was identified by Jonathan Yeo as potential leader of this effort. Peter Smith is being asked to join, and Puja will play a lead role as NCCE representative. Halina suggests that we call a meeting, including Bill Ferguson, Devra Bailin, and Nicole Freidman. Michael suggested that a high level position is needed to work successfully with these large institutions; Asa thinks Econ Dev Director Bailin satisfies this. Halina will reach out to Devra along with Jon Kantar. Bev suggested that staffing is needed for outreach; a lower level 20-hour position in the Chamber or one of the participating companies is a possibility. Halina reminded that supervision of such a position is necessary.

Freestanding EV chargers need more thought in terms of cost. Jon suggested that the spread in price of power is a potential source of revenue to the City. Ann Berwick has a role in this.

the Energy Coach position was discussed. It is likened to an hourglass that concentrates questions from the public and also advice from knowledgeable citizens on how the Coach should handle them. Bev said that it is important to standardize responses, and have written answers.

Doug Stewart at Eliot Church is enthusiastic big-picture thinker with experience in convincing people to implement energy efficiency in their homes. Halina suggested that someone like this should be enlisted as a standby advisor on specific issues. Can we set up a network of such people?

Stephen likened the question to Fashion Forward in the apparel industry, where there are people at the leading edge of fashion trends who become social leaders through emulation. So in addition to people who can answer questions, we should identify some people who can play this role in energy in Newton. We might create a label and recruit local "Energy Forward" examples/celebrities (e.g., Asa Hopkins) that people can emulate. "Be more like Asa..." (These people are not the ones who answer questions like the network that funnels through the Energy Coach; however, they might do public speaking about doing it.) Assemble is set of examples about how they addressed particular energy situations.

Jon Kantar suggested that this is in line with what Jon Klein is doing to provide access to the answers to, say, 75 questions.

Halina sees two separate teams, one led by Jon Klein, the other assembling people who are energy resources; starting with around a dozen. Bev suggested we start a list of such people, e.g., from the Green Newton Building Standards Committee. Green Newton's energy savers campaign used weekly examples in the TAB of homeowners who took action. But we need to go beyond MassSave.

Halina feels that Bev is a good connector between the top of this hourglass and the citizens who have questions. Bev should present this idea to the group led by Jon Klein. Stephen suggested that we shouldn't be asking people to provide their expertise as individuals, but rather to be part of an organization. Bev added that there needs to be training on these questions. Halina said that Energy Coach could assemble this group of people with expertise and train then trainers. Bev said there will be differences in approach among different people, but Jon said that is OK: just note that people disagree on the exact approach and offer information for customers to use to make their own decision about what is best for them.

Michel sees a discontinuity between the Coach and the volunteers who provide information. Halina said that the Coach is the first to respond to questions and does outreach, but can draw on experts in the community. Bev and Asa think the outreach role for the Coach is a big improvement in itself.

[Dan Ruben joined the meeting, coming from a hearing about the Dunstan East 40B project on Washington Street. Betsy Harper spoke about the incentives for doing Passive House analysis.]

Halina mentioned two "orphans" in the climate action effort under new construction. (1) Requiring that all new construction is required to analyze alternatives regarding energy. But what about requiring that a new house doesn't generate more GHG than the house it is replacing. Jon thinks this gets very complicated and a better approach is to restrict the use of gas. Asa noted that a new house built to code will be suitable for a heat pump energy system, and more so in new editions of the code. So the point of intervention should be to discourage the use of gas. Bev suggested that more smaller units on a site would be better from the energy point of view. But others feel that this issue will come up on its own; just let the economics work.

Fred suggested that the power footprint of the former house could be used as a limit to the new house on the site. But Jon thinks this runs afoul of the building code; addressing gas is an easier path to take. Asa

thinks that Newton Inspectional Services may not be giving the energy issues the attention they deserve. Bev pointed out that additions to a house don't trigger a HERS evaluation, even though Inspectional Services should flag this.

Other business:

Bev asked about scorecards. Halina said we're working on this with the utilities under the MOU. Municipal Light Plant communities are working on this.

Halina noted that a referendum will be held on March 3 on whether to uphold the City Council approval of the Northland project, which the NCCE endorsed.

Members agreed to change the calendar to put the December 2020 meeting on 12/16.

3. Analysis of what the aggregation fees have done and prospects for the future.

Michael would prefer to defer this to next meeting when more members will be attending and there is more adequate time.

4. How to facilitate a shift toward the Passive House standard and electrification for teardown construction.

[Not discussed]

5. Heat island effect: a topic raised by Alicia Bowman, newly elected Ward 8 Councilor.

[Not discussed.]

The meeting was adjourned at 9:00 pm.

Notes transcribed from audio recording.

Respectfully submitted,

Jim Purdy