



ENERGY & CLIMATE COMMITTEE MEETING AGENDA

Wednesday, September 1, 2021, 8:00 AM

City Hall, Second Floor Council Chambers

TO JOIN THE MEETING:

The public may join the meeting online or at City Hall in the **2nd Floor Council Chambers**. To join the meeting online, please visit www.zoom.us/join or call (888) 475-4499 (toll-free) and enter the Meeting ID: **860 6322 7039**. If you encounter any issues accessing this meeting online, please call 603-209-4697 during the meeting.

Members:

Peter Hansel, Chair
Cary Gaunt, Vice Chair
Ken Dooley
Councilor Raleigh Ormerod
Jake Pipp
Jude Nuru
Paul Roth
Zach Luse
Suzanne Butcher
Bryan Lake
Andrew Dey
Clair Oursler, Alternate
Hillary Ballantine, Alternate

Staff:

Rhett Lamb, ACM/Community Development
Director
Will Schoefmann, GIS Technician
Tara Kessler, Senior Planner

1. Call to Order and Roll Call
2. Approval of Minutes – August 4, 2021 Meeting
3. Landuse Code Update – Discussion
4. EV Ready Code Update
5. Energy Plan Work Group Report-outs
 - a. Weatherization
 - b. Home Energy Labeling
 - c. Electric Vehicles
 - d. Community Solar
6. Community Power Program
7. Legislative Updates
8. New Business
9. Next Meeting: Wednesday, October 6, 2021
10. Adjourn

1 City of Keene
2 New Hampshire

3
4
5 ENERGY AND CLIMATE COMMITTEE
6 MEETING MINUTES
7

Wednesday, August 4, 2021

8:00 AM

2nd Floor Conference Room,
City Hall

Members Present:

Peter Hansel, Chair
Jake Pipp
Paul Roth
Zach Luse
Suzanne Butcher
Bryan Lake
Andrew Dey
Jude Nuru
Clair Oursler, Alternate

Staff Present:

Will Schoefmann, GIS Technician
Tara Kessler, Senior Planner

Members Not Present:

Cary Gaunt, Vice Chair
Councilor Raleigh Ormerod
Ken Dooley
Hillary Ballantine

8
9
10 **1) Call to Order and Roll Call**

11
12 Chair Hansel called the meeting to order at 8:00 AM. Roll Call was taken.
13

14 **2) Approval of Minutes – July 7, 2021**

15
16 Chair Hansel noted a minor correction to the minutes stating the second line on page 5 should
17 read “21 houses by 2021.”
18

19 Bryan Lake made a motion to approve the minutes of July 7, 2021. Zach Luse seconded the
20 motion which passed unanimously.
21

22 **3) Update from UNH Sustainability Fellow: Municipal Building Benchmarking**
23 **Project**
24

25 Tara Kessler introduced UNH Fellow Jackie Harris to give her final presentation consisting of an
26 overview on her research for establishing a benchmarking program for the City. She reminded
27 the committee that benchmarking was one strategy of the Sustainable Energy Plan that was
28 adopted in 2020 to help the City reach its renewable energy goals. Mrs. Kessler went on to state
29 that starting a benchmarking program for municipal buildings involves a lot of steps, which Ms.
30 Harris' research illuminated, as well as key lessons learned and recommendations for the City to
31 consider moving forward.

32
33 Ms. Harris first went over the work she completed during the duration of her fellowship, noting
34 that all deliverables will be compiled into a report for viewing at the end of August, 2021. She
35 mentioned a "Creating a Benchmarking Program" plan that offers a step-by-step breakdown of
36 the process with detailed descriptions of work completed and recommendations for future
37 development. This will include recommendations for Phase 2, the voluntary benchmarking
38 program, and Phase 3, the mandatory program, based on interviews conducted with other
39 municipalities who are also undertaking city-wide benchmarking.

40
41 Ms. Harris reported that she collected energy use and cost data and completed Energy Star
42 Portfolio Manager (ESPM) profiles for 13 City buildings and 2 sub-buildings, as well as
43 connected electric meters that have data automatically uploaded. She added that documentation
44 for the methodology used is included in the report, as well as an example building profile using
45 data from ESPM.

46
47 Next, Ms. Harris reviewed key steps and recommendations for the City to consider as it works to
48 develop a municipal benchmarking program. She noted that the original vision was for her to
49 start and complete the benchmarking program and provide suggestions for energy and water
50 usage reduction; however, during the process it became clear that there were important steps that
51 needed to take place before the program could launch. As a result, Ms. Harris shifted her focus to
52 create an Action Plan that could be used by the City to develop its benchmarking program. She
53 reported the main points as follows:

54
55 • Laying the Groundwork – Ms. Harris recognized this as the first step to creating a
56 successful benchmarking program, which involves establishing benchmarking objectives.
57 She noted the City's goals of transitioning to 100% renewable energy by 2050 and
58 increasing participation in energy efficiency programs, stating that the benchmarking
59 objectives need to be more specific in order to set measurable targets and utilize collected
60 data in the most effective way.

61
62 Additionally, securing buy-in from key stakeholders is necessary and Ms. Harris reported
63 realizing there were more people than originally anticipated that needed to be involved to
64 obtain energy data. She made note that not all individuals contacted for data were aware
65 that a benchmarking program was being considered and reiterated that obtaining
66 everyone's buy-in early on is critical for making the process smoother and ensuring
67 active participation. She mentioned that individuals from the Finance Department and

68 Parks and Recreation Department agreed that finding a more effective way to centralize
69 the energy and water consumption data would be beneficial.
70

71 Lastly, Ms. Harris stated it's important to decide which buildings to benchmark before
72 undergoing data collection and data entry. She gave the example of having a building size
73 threshold, noting that larger buildings are typically easier to benchmark,
74

75 • Data Collection and Framework – Mr. Harris stated output metrics must be identified first
76 and will depend on the chosen benchmarking objectives. These will inform what metrics
77 are useful for input and how to track the progress of building performance. Next, she
78 suggested setting data input requirements to reduce time spent on data collection and
79 more easily identify data gaps and errors. Ms. Harris reported that the City should
80 develop a standardized process for data collection and hold the data in one format and
81 place that is accessible to everyone in the City. She noted that she found a standardized
82 method using ESPM which could be used to help guide the City in the future. She then
83 touched on selecting a benchmarking tool and noted that she used ESPM for the pilot
84 program to determine the benefits and limitations of the tool. She described the program
85 as free and having many features, but stated it had a significant learning curve and some
86 limitations, which she outlined in her report. Lastly, she mentioned that the City should
87 consider a data verification process for quality control.
88

89 • Data Analysis – Ms. Harris clarified that the steps taken in data analysis are heavily
90 dependent on the aforementioned steps. She stated when evaluating analysis techniques
91 it's important to consider questions such as whether or not the performance should be
92 based on baseline to current year comparison or compared nationally. Lastly, she
93 mentioned that the City must plan for change and constantly check in on what works and
94 what doesn't, keep key stakeholders engaged, and obtain a variety of feedback.
95

96 Ms. Harris showed an example of a building profile for the West Fire Station
97 demonstrating the possible data ESPM offers for reporting. She clarified that EUI stands
98 for Energy Usage Intensity, noting it is a very useful output metric. The current
99 consumption data can be compared to the manually set baseline year of 2019, which she
100 noted is adjustable, or to the national median values of other fire stations. Ms. Harris
101 reported that target values could be set for benchmarking goals as well.
102

103 • Communicating the Data – The final steps Ms. Harris covered were to communicate the
104 plan to ensure transparency and security, and then develop a dashboard as a way for the
105 community to see the benefits of benchmarking and highlight the purpose and positive
106 outcomes of the program.

107 Ms. Harris then summarized key lessons learned and challenges presented. She stated that more
108 communication is needed, data collection is challenging and requires pre-planning,
109 benchmarking takes more time and labor than originally anticipated and analyzing and reporting

110 data is limited by the data entered into the system. Additionally, there were challenges measuring
111 how much green energy is being utilized by certain buildings so that information couldn't yet be
112 uploaded by the benchmarking tool.

113 After conducting interviews with other municipalities, Ms. Harris noted some key
114 recommendations for Phase 2 and Phase 3, which she stated the City is not quite ready for at the
115 present time. These recommendations included having a diverse group of individuals involved,
116 outreach as a key step, providing as many resources as possible for training and building owners
117 to use the benchmarking tool, having a mentality of adaptation, using incentives, and adjusting
118 building thresholds for compliance.

119 Mrs. Kessler thanked Ms. Harris and noted her incredible work during her time with the City,
120 and gave thanks to Mari Brunner for her efforts as well. She stated there is much more that they
121 need to do within the city to have a successful benchmarking program beyond just data
122 collection and choosing a tool. A critical component of that will be laying the groundwork and
123 obtaining buy-in internally, which she stated is a process that has begun. She mentioned that if
124 the City is interested in considering a voluntary program they have an opportunity to understand
125 benchmarking tools and how metrics can be best utilized for measuring the achievement of
126 goals. Additionally, understanding the staff commitments for measuring the City's programs as
127 well as the potential for a community-wide initiative is an important next step. Mrs. Kessler
128 ended by stating that they are going to continue to work on the benchmarking program and see if
129 there's enough confidence in the tool that they are using and the output measurements they've
130 identified, and whether or not their objectives are being met.

131 Chair Hansel thanked Ms. Harris for her work and inquired whether or not the building size
132 threshold had been decided. Ms. Harris stated she believed the City should make that decision,
133 noting that it depends on which buildings are being looked at, such as City buildings versus
134 multi-residential. She reiterated that it's typically easier for larger buildings to get benchmarked.

135 Chair Hansel then asked if she had received feedback from those she interviewed on the ESPM
136 tool and if it was the best option out there. Ms. Harris stated she felt the tool was great but that it
137 isn't very intuitive when you first start using it, making note that other municipalities had mixed
138 reviews. She stated the smaller rural cities mostly used ESPM and larger cities were using
139 programs established by their government to better meet their individual needs.

140 Chair Hansel next referred to planning for change, agreeing that it was an important point made
141 during the presentation. He offered the scenario of ESPM changing their format in the upcoming
142 years causing the City to be able to adapt and merge new data with old data.

143 Mr. Dey mentioned the recommendation of having resources for training building owners to use
144 the tool with the intention of building owners benchmarking their own buildings. He noted that if
145 there's a steep learning curve with the tool it might be a lot to ask of the owners.

146 Chair Hansel wondered if they would have the building owners do the data collection and entry
147 using the tool, or would it just be data collection and they provide it to a centralized place where
148 it would then be added into the tool by someone from the City. Ms. Harris stated most

149 municipalities she interviewed had building owners collect and upload data using the tool
150 because they can have their own accounts and share it with the City. Mrs. Kessler added that the
151 municipalities provided support staff to answer questions for owners collecting and uploading
152 data so they weren't left on their own to figure out the tool.

153 Mr. Roth asked if the municipalities that had their own programs continued to use Energy Star or
154 if they exclusively use their own programs. Ms. Harris stated it appeared that most only used
155 their own programs. Mr. Roth stated with their own program they would lose the national
156 comparison option.

157 Scott Melansky stated, from past experience, using ESPM with mixed-use buildings can be
158 challenging to benchmark. Ms. Harris stated she did run into some issues with mixed-use
159 buildings and had to adjust, but noted that if the primary function of the building is over 50% of
160 the gross floor area, you can say the whole building is that one function.

161 Chair Hansel brought up green energy and stated it needs to be decided whether they want to
162 measure energy consumption or energy purchasing. He suggested energy consumption regardless
163 of where the energy is coming from. Ms. Harris stated with solar energy the only data they could
164 find was solar energy generated. ESPM can capture the information but they did not have the
165 numbers.

166 **4) City of Keene, Land Development Code Presentation**

167
168 Mrs. Kessler informed the committee that on May 20, 2021 City Council adopted a new set of
169 land use regulations, including zoning, planning board and Historic District regulations, and
170 other standards and rules that relate to how the City uses and develops land. The regulations will
171 be officially taking effect on September 1, 2021. She explained that over time regulations need to
172 be revisited and updated because they impact economic opportunities, as well as the look and
173 feel of the City.

174
175 Mrs. Kessler went on to state that the regulations have not been comprehensively updated since
176 1970, but have been updated in a fragmented way over time. In the 2010 Master Plan a top goal
177 was to update the land use regulations to be more aligned with the goals of the Master Plan and
178 to look at the zoning in the City to make sure it was meeting desired development patterns. There
179 are currently a number of regulatory documents that are difficult to navigate and sometimes
180 inconsistent.

181
182 Mrs. Kessler explained that for the past three years, in partnership with the Planning, Licenses
183 and Development Committee, City Council, and a number of stakeholders in the community,
184 they have embarked on an effort to make the City's Land Development Code more simple,
185 efficient and thoughtful, and put all regulations into one document. This included reviewing all
186 regulations to identify and fix outdated information and any conflicts with current development
187 patterns and needs in the City. Additionally, they updated the downtown zoning and created six
188 new zoning districts, which she pointed out is a significant change. Mrs. Kessler showed the
189 color coded zones to the committee and mentioned that each has its own set of standards for

190 buildings in the area. She explained that they worked with a consultant to develop standards that
191 will help preserve the current pattern of development so the look and feel can persist into the
192 future. With respect to uses, they tried to expand the number of uses allowed in the downtown
193 districts and modernize it, while ensuring the current development pattern continues.
194 Additionally, they established regulations to encourage a new development pattern in areas such
195 as Gilbo Avenue to promote the look and feel of Main Street.

196
197 Mrs. Kessler stated that they tried to align, where possible, with the Master Plan and one of those
198 areas is introducing solar energy into the code. Current regulations do not address solar systems.
199 She noted that when referring to solar energy she means solar as the primary use of a lot, which
200 is different than accessory solar where someone has solar on their roof or in their back yard. She
201 explained that they worked with the SolSmart Program to understand National standards and
202 ordinances around solar energy and tailored that around Keene's needs. They clearly identified
203 solar as an allowed accessory use in any district. The standards they established are as follows:

- 204
- 205 • Roof Mounted Solar: On a sloped roof the highest point of the system cannot exceed the
206 highest peak on the roof which it is attached. On flat roofs the highest point of the system
207 cannot exceed 10 feet above the roof surface. Any associated devices/equipment shall not
208 extend beyond the exterior perimeter of the building.
 - 209 • Ground Mounted Solar: Cannot exceed 2,000 square feet as a footprint as an accessory
210 use, must be accessory to principal use which is on the same lot, cannot exceed 15 feet
211 high at maximum tilt, and has to comply with setback and lot coverage requirements
212 from zoning, which relates to measuring panel coverage for impervious calculations.

213
214 Mrs. Kessler next explained that they introduced solar energy standards that are focused on solar
215 as the primary use of the lot, for energy generation purposes. They created 3 categories of small
216 scale, medium scale and large scale solar based on size in footprint. She briefly reviewed each
217 category's standards as well as the districts where each category would be allowed. Mrs. Kessler
218 noted that medium and large scale solar would be allowed by a Conditional Use Process which is
219 an approval that would need to be granted by the planning board with additional standards
220 required. The board will review the nature, scope and scale of a proposed energy system and
221 ensure that standards are being met, and, if approved, the permit would stay with the lot into the
222 future.

223
224 Mrs. Kessler mentioned that there had been questions as to why solar systems in the Industrial
225 District would require additional review, and they changed it so that they would be permitted by
226 right since they allow manufacturing by right in that district.

227
228 Paul Roth and Clair Oursler left the meeting and a physical quorum was lost. Chair Hansel stated
229 they will distribute report-outs electronically and anyone with questions on Mrs. Kessler's
230 presentation could reach out to her directly.

231

- 232 **5) Energy Plan Work Group Report-outs**
233 **A) Weatherization**
234 **B) Home Energy Labeling**
235 **C) Electric Vehicles**
236 **D) Community Solar**
237 **6) Community Power Program**
238 **7) Legislative Updates**
239 **8) New Business**
240 **9) Next Meeting: Wednesday, September 1, 2021**
241 **10) Adjourn**

242
243 Chair Hansel adjourned the meeting at 9:09 AM.

244
245 Respectfully submitted by,
246 Nicole Cullinane, Minute Taker

247
248 Reviewed and edited by,
249 Will Schoefmann, Community Development Staff

Potential EV Ready Updates for the City of Keene's Building and Zoning Codes

Energy and Climate Committee

City of Keene, NH

8/24/2021

For one and two family homes:

Chapter 18 - Building Regulations, Article III - Property & Housing Standards, Division 3 - Housing Standards

Sec. 18-263 - Electrical Service and Outlets

https://library.municode.com/nh/keene/codes/code_of_ordinances?nodeId=PTIICOOR_CH18BURE_ARTIIIIPRHOST_DIV3HOST_S18-263ELSEOU

7. For one or two dwelling unit buildings, a 240V outlet must be within 20 feet and accessible by a parking space, whether in a garage, carport or other parking area, per dwelling unit.

For multifamily residences:

Chapter 102 – Zoning (New Sections)

Article 9.2 On-site Parking Requirements, 9.2.10

Or Article 9.4 Parking Lot Design Standards, 9.4.6

1. For Residential Uses, excluding Single-Family and Two-Family/Duplexes, a minimum of 20% of parking spaces, rounded up, must have a 240V dedicated branch circuit installed. The circuit shall terminate in a suitable termination point such as a receptacle, junction box, or an electric vehicle charging station.
2. For Residential Uses with more than 50 parking spaces, a minimum of 1% of spaces, rounded up, must have an electric vehicle charging station installed that utilizes a 240V or higher electrical connection.
3. For each parking space with an electric vehicle charging station installed, the total space requirement for a 240V circuit installation in this section is reduced by 1.

Small Business Energy Solutions

Coming to Keene September 14 & 15

No matter what type of business you own or operate, your facility is likely full of opportunities for energy-efficiency improvements. A few ways we can help you re-energize your facility, improve your profit margins, and stay competitive with year-over-year savings include:

LIGHTING

LEDs are brighter, longer-lasting and lower maintenance with a fraction of the energy use. Indoors, controls can let you use lights only when you need to and create a more inviting ambiance.

Outdoors, LEDs create a safer environment for your employees and customers.

REFRIGERATION

Commercial refrigerators and freezers use a lot of energy, operating around the clock to keep perishable products cold.

Installing controls, upgrading compressors and coil maintenance reduce energy, lower maintenance costs and prevent food spoilage.



“ We worked very closely with Eversource and their contractor to develop a project that would not only save the Museum money on our electric bill but also save on future maintenance costs. Our visitors love the brighter space and we are very happy with the result. ”

Deb Ganley, Executive Director
Cheshire Children’s Museum



What to expect:

Eversource is sending authorized energy-efficiency experts to the City of Keene from September 14-15 to analyze your energy use and perform non-intrusive upgrades, working with you at every step. You’ll receive a customized plan, assuring you have the expert guidance and financial assistance to help reduce energy bills and maintenance costs, while shrinking your carbon footprint and enhancing your brand.

**Schedule Your No-Cost
Energy Assessment Today!**

(603) 621-6874 • efficiencyNH@eversource.com



August 18, 2021

Dear Keene Business Owner,

The City of Keene and Eversource are excited to announce that you are now eligible for a no-cost energy analysis of your business.

Through the NHSaves Small Business Energy Solutions Program offered by Eversource, not only could you save money on your electric bill each month, but you'll gain a competitive edge by decreasing your energy consumption through energy efficiency.

In addition to the no-cost energy analysis, you might be eligible for significant incentives toward the installation of energy-efficient equipment, plus interest-free financing on your portion of the project costs. As a result of the energy analysis, you will learn which efficient upgrades such as interior and exterior LED lighting or refrigeration controls are best to help your business cut operating costs.

With the support and cooperation of the City of Keene, this turnkey program allows you to focus on your core business while Eversource puts our expertise to work on saving you energy. World Energy an XLFleet Company and National Resource Management, Inc., the vendors under contract with Eversource, will arrange professional installation of your project by licensed and local technicians and ensure that there is minimal disruption to your daily operations. Your new, high-efficiency products will be backed with warranties on both materials and labor.

A team from Eversource, World Energy an XLFleet Company and National Resource Management, Inc., will be in the area and visiting businesses on September 14 & 15, 2021 to provide the no-cost analysis. To schedule your no-cost assessment at a convenient time, contact us directly at efficiencyNH@eversource.com or 603-621-6874.

We look forward to working with you to help your business in Keene.

Sincerely,

A handwritten signature in blue ink that reads "Elizabeth Dragon".

Elizabeth Dragon,
City Manager

A handwritten signature in black ink that reads "Kristin Bahny".

Kristin Bahny
Eversource