



ENERGY AND CLIMATE COMMITTEE (ECC)

AGENDA

Wednesday, October 2, 2024

8:00 AM

City Hall,
2nd Floor Conference Room

Members:

Zach Luse, Chair
Paul Roth, Vice Chair
Annu Joshi Bargale
Diana Duffy
Gordon Leversee
Jude Nuru
Clair Oursler
Kenneth Swymer Jr.
Councilor Bryan Lake

Lisa Maxfield
Chuck Redfern, Alternate
Rowland Russell, Alternate
Michael Winograd, Alternate
Jake Pipp, Alternate

Staff:

Megan Fortson, Planner

1. **Call to Order and Roll Call**
2. **Approval of Minutes** – September 4, 2024
3. **Keene Clean Energy Team Button-Up Workshop Reimbursement**
4. **Monadnock Clean Energy Fair Wrap-Up**
5. **Work Group Report Outs**
 - a. Community Solar
 - b. Grants, Fundraising, and Partnerships
 - c. Education and Outreach
 - d. Legislative Tracking
 - e. Food Security
6. **New Business**
7. **Next Meeting:** Wednesday, November 6, 2024, 8:00 am

Link to ECC Google Drive Folder:

<https://drive.google.com/drive/folders/1O1WIR0fADTNijRt13v3DU7k2FwxXDcGs?usp=sharing>

1 **City of Keene**
2 **New Hampshire**

3
4
5 **ENERGY AND CLIMATE COMMITTEE**
6 **MEETING MINUTES**
7

Wednesday, September 4, 2024

8:00 AM

**2nd Floor Conference Room,
City Hall**

Members Present:

Zach Luse, Chair
Councilor Bryan Lake
Jude Nuru
Diana Duffy
Clair Oursler
Gordon Leverage
Jake Pipp, Alternate
Charles Redfern, Alternate
Rowland Russell, Alternate
Michael Winograd, Alternate

Staff Present:

Mari Brunner, Senior Planner
Megan Fortson, Planner

Members Not Present:

Paul Roth, Vice Chair
Lisa Maxfield
Kenneth Swymer
Annu Joshi Bargale

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

10
11 Chair Luse called the meeting to order at 8:06 AM and invited all attending alternates to participate
12 as regular members.

13
14 **2) Approval of Minutes**

15
16 Councilor Bryan Lake moved to approve the prior meeting minutes with a second from Mr. Jake
17 Pipp. Ms. Diana Duffy noted that line 25 references “money.” She asked for clarification, and Mr.
18 Nuru responded that it should read “mandate.” With everyone in agreement, the word “money”
19 would be changed to “mandate” on line 25. With no further changes or corrections, the August 7,
20 2024, minutes were approved unanimously.

21
22 **3) City of Keene Flood Mitigation Efforts- Don Lussier, Public Works Department**
23 **Director, will provide an overview of the City’s efforts to mitigate flood risk and**
24 **prepare for future flood events.**
25

26 Chair Luse introduced Mr. Don Lussier, the Public Works Department Director. Mr. Lussier
27 explained that he would be speaking about what the City and Public Works Department have been
28 doing regarding flood management. He handed out an excerpt from the Capital Improvement Plan
29 and explained that the flood management plan is a “six-legged stool.” He noted that while that is
30 a terrible analogy, it does have six prongs. The first one, the Beaver Brook Flood Mitigation
31 Project, is a project the City undertook with the US Army Corps of Engineers before Mr. Lussier
32 started with the City. He explained that an earmark was put into the congressional budget to have
33 the Army Corps study Beaver Brook and develop mitigation measures. He stated that very little
34 work has been done and explained that while the Army Corps does a great job, they set their
35 priorities, and this project has not risen to the top of them.

36
37 Mr. Lussier explained that he met with the Army Corps in 2016, and at that time, they did
38 preliminary work to identify the feasibility of the projects. Through that feasibility analysis, they
39 learned that the value of the damages suffered from Beaver Brook does not warrant any potential
40 solutions' cost. They have moved from the Sanction 205 program into a Planning Assistance for
41 States program. The latter program provides further opportunities to work with the Army Corps
42 to investigate potential solutions, but does not offer money for construction at the tail end as the
43 former program did. The intention is that, eventually, this will lead to a mitigation project where
44 they will build infrastructure that will prevent flooding. The Army Corps will not be doing the
45 construction; they will provide the City with a report of potential options, including estimated
46 costs and possible benefits.

47
48 Mr. Winograd asked Mr. Lussier if he had met with the Army Corps since 2016. Mr. Lussier
49 responded that they had met five or six times since then, each time with a group of different
50 engineers. He joked that he could give the tour in his sleep now. Mr. Winograd followed up,
51 asking if Mr. Lussier had considered hiring a consultant. Mr. Lussier explained that they have a
52 certain amount of money available, and at some point, they will have to decide whether to thank
53 the Army Corps for their contributions and move on to a private consultant. Mr. Winograd
54 suggested it may be time to thank them and move on.

55
56 Mr. Lussier explained that a significant portion of this project is stormwater mitigation. For 2025,
57 2026, and 2027, approximately 4.5 million dollars are programmed for improvements in the
58 downtown area from Central Square to Church Street, Lamsen Street, and Gilbo Ave and as far
59 as St. James Street. On the periphery of the downtown footprint, roads like Railroad Street,
60 Roxbury Street, and Water Street have already upgraded their infrastructure to accept the water
61 from the downtown area once the downtown infrastructure is upgraded and installed. The work
62 to upgrade the downtown will be over the next few years.

63
64 He explained that next year, Key Road will have a substantial project. Most people do not realize
65 that a large diameter pipe runs from the back of the cinema through the plaza's parking lot to
66 Midas. The City has been chasing sinkholes in that area for three or four years. The 72-inch x 54-
67 inch elliptical pipe has failed, with only the top of the pipe remaining. The City does not have the

68 equipment for the repair, so they are advertising for a consultant to do the construction plans for
69 that. Design will likely be done over the winter, with construction taking place next year.

70

71 Mr. Lussier said that Church Street is a project that is near and dear to him. He explained that the
72 project will be phase two of the Eastside Improvements. Phase one was the Carpenter Street
73 Improvements, which was completed a couple of years ago. Phase two will eventually move the
74 footprint up to include Church, Edwards, and Gurnsey Streets. Pako Ave will also receive some
75 improvements in the coming years.

76

77 Mr. Lussier shared that in 2015, they completed work on Sullivan and Rule Streets. In 2016, they
78 worked on the town brook under City Hall. When the garage was built, the brook was routed
79 through it, but nothing was ever done about the pipe running through City Hall. There have been
80 continuous issues with that pipe, including cracking in the back of City Hall, which requires it to
81 be addressed. It will eventually be filled with expanding foam.

82

83 Roxbury Street was an important project to mitigate the flooding on Vernon and Elm Streets. A
84 four-foot-diameter pipe running through the parking garage enters a historic 36-inch-diameter
85 brick pipe. That pipe was upgraded to a five-foot-diameter pipe that can take water from the town
86 brook line and come through from Central Square.

87

88 In 2018, Winchester Street, Madison Street, and Ralston Street were all improved to address
89 flooding on Davis Street and Wilson Street. In 2024, an Island Street project was funded. There
90 was a bid on the project, but the contractor said it would take them two years to complete. The
91 City did not want to put the neighborhood through that, so they plan to put it out for bid again in
92 the Spring.

93

94 Mr. Lussier said the next prong of this is the channel maintenance program. It is brand new
95 funding for 2025. The intention is that over the coming years, they will address some of the open
96 drainage channels. The City maintains several of them, but some require maintenance beyond
97 what the City has the equipment or capacity to do, so that work will be coming up.

98

99 The stormwater spot repair program is relatively new. They have found that as they are being
100 more aggressive in the catch basin cleaning, they are identifying projects that must be addressed.
101 These are not major intensive projects, but fall outside the City's equipment availability or
102 capacity.

103

104 Stormwater system analysis provides some funds to hire a consultant to perform a preliminary
105 analysis of suggested repairs/replacements, equipment needs, and estimated costs. Mr. Lussier
106 stated, "These types of analyses allow the City to true up the costs before getting into the meat
107 and potatoes of the budget."

108

109 Mr. Lussier explained that the last one is very new and specific to metal pipes. It is the stormwater
110 mainlining. The analysis has shown that while some pipes do not need a total upgrade, they are

111 approaching the end of their useful life. If they can catch the pipe before it starts to fail, they can
112 install liners like sewer pipes, which allows the City to upgrade and replace the pipe at a fraction
113 of the cost compared to an open-cut replacement.

114
115 The last thing he wanted to mention is the bridge program. He explained that they replace the red
116 list of bridges with funding available through the state. As the bridges are being replaced, most
117 are getting a more significant hydraulic opening to comply with state rules and current state design
118 standards for bridge openings. This is helping eliminate bottlenecks, specifically in Beaver Brook.
119 They have also done Roxbury, and hopefully, next year, if the permitting is done in time, they
120 will do George Street. This will take the current 18-foot opening to a 22-foot opening, adding
121 more capacity to the bridge opening.

122
123 Chair Luse asked if the roofs of downtown buildings drain into the stormwater drains. Mr. Lussier
124 said many of the roofs in downtown are connected and drain into sanitary sewers, which is not
125 allowed, but those buildings predate those rules. As part of this project, the City will extend a
126 stormwater stub to the building to provide the infrastructure to building owners and educate them
127 that replumbing to the stub means the owners will then be in compliance with the federal Clean
128 Water Act.

129
130 Chair Luse asked if Mr. Lussier and his team had looked at vegetation or green roofs. Mr. Lussier
131 shared that the project will include some green infrastructure. It will not involve green roofs
132 because they are considered private property. The only one the City has access to is City Hall,
133 and City Hall is not designed to accommodate a green roof. The green infrastructure included in
134 the project will mostly be in the form of tree wells.

135
136 Dr. Russell asked if there was anything in the works for neighborhoods, such as tree wells, drains,
137 etc. Mr. Lussier shared that as streets get reworked, the City is looking for opportunities like that.

138
139 Mr. Pipp asked if they had investigated pervious surfaces, possibly in the center of rotaries with
140 a basin underneath to hold water. Mr. Lussier responded that it was an interesting idea. He
141 explained that the City has done some experimentation with pervious pavements and pervious
142 concrete, and they have not gone amazingly. In front of Franklin School on Washington Street,
143 he explained that it was done as a demonstration of pervious concrete, and within five to six years,
144 it essentially disintegrated and had to be replaced. The salt runoff from the school seemingly did
145 a number on the concrete.

146
147 Mr. Pipp asked about pervious asphalt and whether Mr. Lussier believed it was as affected by the
148 salt as concrete. Mr. Lussier said it is not as affected, but the salt and sand do get down into the
149 pores of the pervious asphalt and eventually clog up the pores, which are hard to correct. He
150 continued by saying there seems to be better success with pervious concrete and asphalt in the
151 south, where they do not have to contend with the salt and sand. He added that the exception
152 would be the pervious pavers as he believed those do marginally better.

153

154 Mr. Winograd asked if there was a significant storm, what the expected flow course was for the
155 flood waters would be. Mr. Lussier explained that Roxbury and Franklin Streets will still
156 experience temporary, localized flooding. That will continue until the Church Street, Edwards
157 Street, and Gurnsey Street lines are redone. Pako Ave and Colonial Drive are also known flooding
158 areas due to pipe capacity. Water Street and Main Street are also bottlenecked when water enters
159 Main Street.

160
161 Ms. Diana Duffy said she has nothing but praise because, during her time at Keene State, she
162 frequently referred to the floodplain maps put out by the City and Mr. Lussier's office. She
163 wondered how often the floodplain maps get updated. Mr. Lussier said FEMA is responsible for
164 updating and publishing those materials. He explained that FEMA started an update for the
165 Connecticut River Valley about four years ago. The City is still waiting to see what changes have
166 happened, but eventually, they will get updated flood insurance maps.

167
168 Mr. Redfern asked as they devised remedy projects; he wondered where all the water goes. Mr.
169 Lussier joked that it would go to Swanzey and that once it leaves the town of Keene, it will no
170 longer be his problem. He explained that the Ashuelot River almost entirely drives the flooding
171 along Beaver Brook. Ashuelot River has a particular capacity. If the Army Corps discharges Surry
172 Dam at bank full conditions, then water in the Ashuelot River and Beaver Brook has nowhere to
173 go, so it overflows. He noted that the flooding over the past years has not been caused by the river
174 not accepting any more water, but rather by the too-small pipes running from the street to the
175 river having reached capacity. Mr. Lussier explained that the Beaver Brook Hydraulic Study looks
176 at more global issues and potential options.

177
178 Councilor Bryan Lake thanked Mr. Lussier for coming and wondered if he would be available to
179 discuss how the City balances cost versus effectiveness and longevity. Mr. Lussier explained that
180 all of their projects are being designed for a 25-year storm event based on the Cornell University
181 Extreme Climate Models. Generally, they can do that and find that more than trying to
182 compromise on the design, they are compromising on the timing. Some projects have been pushed
183 back because the project in front of them was more expensive than they had hoped, while others,
184 like Key Road, have been pushed up because of changing priorities.

185
186 Mr. Clair Oursler asked if the City maintained any rainfall data. Mr. Lussier said they do have
187 rain and river gauges they use, but they do not maintain rain data on their own. They refer to other
188 public sources of rain information. He explained that they generally use Cornell data and refer to
189 that. Councilor Ed Haas commended Mr. Lussier on using Cornell Data, stating it is the best. He
190 suggested the City focus on channel and culvert maintenance and keep them as clear as possible.

191
192 Mr. Winograd asked how wastewater fits into all of this. Mr. Lussier said wastewater is unrelated
193 to stormwater; the sewer system is separate. He explained that Mr. Winograd was referring to a
194 problem with the substation, which takes all the sewage from the City of Keene and Marlborough
195 and pumps it through a two-mile-long pipe down to the wastewater treatment plant at the Southern
196 end of the airport. There was a leaking gate in that pump station, and because of how it was

197 designed and built, they could not shut it down. It can be shut down for 60-90 minutes before raw
198 sewage starts overflowing into the City's streets. Since they cannot shut it down, it required a
199 temporary fix on that valve. They were able to get the leak down to only a few gallons a minute
200 and managed that with little pumps in the pump station. They are currently working on a long-
201 term fix where they would build a bypass around that faulty gate. The committee thanked Mr.
202 Lussier for his time and his presentation.

203
204 Councilor Haas asked if there is any outreach to homeowners or business owners in flood-prone
205 areas. Ms. Mari Brunner said the City participates in the community rating system (CRS), and a
206 large part of that is outreach and education. She explained that Mike Hagan is the Certified
207 Floodplain Manager and that he would be the person to connect with about that.

208

209 **4) Work Group Report Outs**

210

211 **A) Community Solar**

212

213 Mr. Nuru had to leave before the report outs.

214

215 **B) Grants, Fundraising, and Partnerships**

216

217 Mr. Redfern said he had nothing to report at this time. He wondered if Mr. Luse had additional
218 success or whether there was any update on AmeriCorps. Mr. Luse said AmeriCorps is a dead-end
219 at this point.

220

221 Mr. Redfern asked if Mr. Luse wanted to contact Southwest Region Planning Commission. Mr.
222 Luse said he did not have the time to do so. Mr. Redfern said it was possible for him to do so, but
223 Mr. Luse was hesitant because he was not confident it would go anywhere.

224

225 **C) Education and Outreach**

226

227 Mr. Luse shared that they are working on some materials for marketing community solar and the
228 energy plan. They hope to have them ready for the energy fair at the end of the month.

229

230 Ms. Carolyn Jones shared that the Keene Clean Energy Team's Button-Up Workshop is set for
231 Wednesday, September 25th, from 6:30 p.m. to 8:00 p.m. at the Keene Rec Center. NHSaves put
232 on the event, which has been included in the newsletter and the clean energy board. She requested
233 that members post about it on social media to help promote it. She is also looking for additional
234 volunteers to assist with setup.

235

236 **D) Legislative Tracking**

237

238 Councilor Lake said he and Mr. Pipp had met recently and discussed plans they want to work on
239 this fall. They plan to look at the action plan in the Sustainable Action Plan, and since this session

240 is quieting, some of their focus will be on being proactive for the next session. They discussed
241 potential collaborations with Clean Energy, and whether there was anything in the City that they
242 could tackle. He gave the example of EV-ready and solar-ready guidelines, especially given that
243 there is now an ordinance. He believed there might be opportunities to pursue more of that. He
244 added that they are looking for more members to join their workgroup and have room for three
245 more members. Their next meeting is September 17th at noon. He requested that interested
246 members message him. Ms. Brunner offered to connect him with SolSmart, saying they might
247 have resources for the solar-ready guidelines. Mr. Redfern asked if Councilor Lake knew that
248 Councilor Phil Jones had been reassigned to the transportation committee and suggested bringing
249 him in.

250

251 **E) Food Security**

252

253 Dr. Russell shared that the focus group on food waste will be tomorrow. He expects a good turnout
254 and anticipates that a workgroup will emerge. He plans to report back on the event next month. He
255 also shared that the group working on a community garden has run into roadblocks on potential
256 sites. The group comprises Dr. Russell, the Cheshire County Conservation District, Monadnock
257 Farm and Community Coalition, and Community Garden Connections. They are working with an
258 Antioch Alum on her dissertation on Environmental Communication through a school in New
259 Zealand on a survey to gauge interest from the community in community garden spaces.

260

261 Ms. Brunner asked Dr. Russell if he had looked at 169 Church Street. It is in the floodway, and
262 the current owner had an approved site plan that has since expired. While many things are not
263 allowed in a floodway, community gardens would be allowed.

264

265 **5) Review of Keene Energy Plan Pillars**

266

267 Mr. Luse referred to the roadmap included in the agenda packet saying it is a great reference that
268 outlines the committees' strategies and how they plan to enact those strategies. He urged members
269 to review it as a way to help refresh their memory of the mandates.

270

271 **6) Monadnock Clean Energy Fair**- September 28th from 11:00 am- 4:00 pm at the Dillant-
272 Hopkins Airport

273

274 **7) Keene Clean Energy Team Button Up Event**- September 25th from 6:30 - 8:00 pm at the
275 Keene Rec Center.

276

277 Jack Lamont had flyers and promotional materials for those interested in helping spread the word.
278 He is also looking for additional volunteers.

279

280 Councilor Lake distributed a sign-up sheet for tabling at the Keene Clean Energy Button Up Event.

281
282 Chair Luse shared that Clean Energy New Hampshire has their 20th-anniversary celebration in
283 Bedford in the evening on September 19, 2024. He also shared that the Local Energy Solutions
284 Conference is coming up in Manchester on November 1st. Ms. Brunner believed they had four
285 tickets available. Anyone interested in attending can contact either Ms. Brunner or Ms. Fortson.

286
287 **8) Vision Keene Project Update (KeeneMasterPlan.com)**

288
289 Ms. Brunner shared that the project is moving forward. The next input opportunity will be the
290 Future Summit on October 5th in Heberton Hall at the Keene Public Library. She shared flyers with
291 committee members and explained that the event is scheduled from 9 a.m. to 12 p.m. They are
292 looking for people to join a team for each of the pillars. She stated that anyone interested in
293 attending register for the event ahead of time to give them an idea of how many people plan to
294 attend.

295
296 **9) New Business**

297
298 Ms. Brunner said the Public Works Department has requested a letter of support from the ECC for
299 the downtown project. She explained that funding is available through the Northern Border
300 Regional Commission Timber for Transit Program to use mass timber produced in the United
301 States for transit-related projects. The City is applying for a grant to obtain timber wood for the
302 parking structure and solar panels that are going to be constructed on Gilbo Avenue as part of the
303 Downtown Infrastructure Project. She noted that the letter is needed by Thursday. Mr. Luse shared
304 that he has already drafted it.

305
306 Councilor Lake asked if the original intent of that parking structure was for it to be made from
307 wood. He envisioned it being made from concrete or steel. Ms. Brunner said that this grant would
308 pay for the cost of the timber. She talked to someone who works on this project and explained that
309 mass timber is a more sustainable construction material with increased longevity.

310
311 **10) Next Meeting: Wednesday, October 2, 2024, 8:00 am**

312
313 **11) Adjournment**

314
315 With no further business, Chair Luse adjourned the meeting at 9:05 AM.

316
317 Respectfully submitted by,
318 Amanda Trask, Minute Taker

319
320 Reviewed and edited by,
321 Megan Fortson, Planner