

City of Keene
New Hampshire

ENERGY AND CLIMATE COMMITTEE MEETING AGENDA

Wednesday, December 5, 2018 8:00 AM 2nd Floor **Committee** Conference Room, City Hall

Members:

Dr. Ann Shedd, Chair
Peter Hansel, Vice Chair
Ken Dooley, Member
Jessica Baum, Member
Jake Pipp, Member
Terry Clark, Councilor
Aperr Naadzenga, Alternate
Larry Dachowski, Alternate

Staff:

Mari Brunner, Planner
Med Kopczynski, Director of Economic
Development & Special Projects

Members not present:

Chris Brehme, Member

Guests present:

Caroline Jones, Clean Energy Team
Nancy Gillard, Clean Energy Team
Charles Daloz, Agriculture Commission Member

1. Call to Order and Roll Call

Dr. Shedd called meeting to order at 8:04 am and roll call was conducted.

2. Approval of November 7, 2018 Meeting Minutes

Mr. Brehme moved to approve the November 7 minutes with corrections, Mr. Naadzenga seconded and motion was passed unanimously.

Corrections as follows:

-Page 7, under item 4c.: change “public utility” to “New Hampshire PUC.”

3. Committee Membership

Dr. Shedd introduced newest ECC member Mr. Ken Dooley from SAU again, and said it would be great to have him present a quick review of the school district’s energy plans at the next meeting. Mr. Dooley agreed. Dr. Shedd said that Ms. Gaunt, Director of Sustainability at Keene State College, has put in her application for ECC membership, however, she will not join the meeting today as she is required to provide an updated CV. She said she may be nominated at tomorrow’s Council meeting. Councilor Clark stated that would be correct if that item is on the agenda. Then Council will vote at January’s council meeting. Dr. Shedd stated that Ms. Gaunt should be appointed as an ECC member by January’s meeting.

4. **Keene Building Better Together Project Update**

Dr. Shedd introduced City staff member, Mr. Med Kopczynski, who is subbing for Ms. Kessler and will provide an update for Keene's Building Better Together project as well as talk about the Department of Energy's Home Energy Score. Mr. Kopczynski stated that in 2010 the City of Keene adopted a Comprehensive Master Plan which contained a number of directives and action items to achieve under different subjects. However, the City Council, as part of their goal setting, recognized that many areas of the Master Plan were not being achieved. The Council looked at outcomes from the Economic Development Workshop committee's report as there were also a number of elements that related to the land development and City code. He stated that the report contains 15-16 chapters that impact development in some way.

Mr. Kopczynski said the Building Better Together process involves looking at all sections of City code that need to be modernized, reorganizing and rewriting them, as well as reviewing elements that need to be rewritten with the intention of creating a Land Development Code. The Land Development Code is a document which will compile all regulations and organize them in one place for the purpose of accessibility and transparency. Mr. Kopczynski said it has been a very long time since these regulations have been reexamined and reorganized.

Mr. Kopczynski stated that they are in the process of conducting interviews, holding workshops, meeting with people and groups, gathering information and have begun the process of drafting the regulations. As drafts become available, they will be released to the public for commentary, as well as to the Joint Planning Board and Planning, Licenses and Development Committee, for feedback. He said for the most part, this is a reorganization of regulations and not a rewrite for most districts, however, some districts will require a bit more thought. One of those districts is the Central Business District in Downtown. He stated that one of the charges for City Council was to look at "form-based code" for the use in Downtown. He said the zoning code is primarily a listing of uses and those uses can be restrictive, however, "form-based code" is much more interested in how a building fits in with other buildings in the neighborhood and less dependent on the uses themselves. He said the rewrite of the zoning code will allow mixtures of primary uses which are only allowed in the Central Business District today.

Mr. Kopczynski stated that the City's consultant, Camiros, delivered open presentations to the public about form-based code and spoke to several hundred people in relation to the Downtown. He said they also did a brief presentation the City Council. He stated that on December 10 at the next Joint Committee meeting, there will be discussion about the Central Business District and adjacent districts, whether or not the edges of the Downtown area are correct and the potential for about six standards. They will discuss the usefulness of these six standards as well as the possibility for edge concerns. Mr. Kopczynski handed out a technical review written by Camiros about the Downtown Zoning Initiative. Dr. Shedd asked if members had any questions for Mr. Kopczynski.

Mr. Kopczynski stated that there will be drafts of the schedule available in late spring 2020. He said that the process is moving very quickly for this type of land use code update process. Dr. Shedd asked if there are interfaces where the land use code update process intersects with ECC's charge to support efficiency and renewable energy. She said there is an Ordinance around solar installations in the historic district, however, are there other aspects of this process to discuss. Mr. Kopczynski stated that ECC should recognize the uses that are in the zoning code and the ones that are not. For example, he said they had a rigorous discussion yesterday about ground-mounted solar panels and how those would fit into the new codes. He said there are certainly aspects of generation of electricity or conservation energy that they might want to pay attention to. Dr.

Shedd asked how ECC would best be aware of those aspects and Mr. Kopczynski replied that Ms. Brunner would be the best conduit for that sort of information because she is involved with both the process and the committee. He also suggested that ECC be added to the list so they have easy access to drafts.

Mr. Naadzenga commented to Mr. Kopczynski that he thinks this is a great initiative and he is enthusiastic about seeing the codes become more accessible and user-friendly. Mr. Kopczynski stated that there are certain challenges in new urbanism and used the example of the City Planner Mr. Andrés Duany, who is famous for the purpose built community of Seaside in the Florida panhandle, has come out in recognition recently about how complicated things have become and is now advocating for “lean code.” He stated that most of the country was built without regulation and the average citizen has no idea what the landscape of the regulatory environment is. He said once you get beyond the zoning code there are many other ordinances, rules and regulations to think about and if you are someone who is just trying to start a business, there is often a lot of confusion. He said one of the main objectives of this overhaul is to make the rules and regulations as understandable and user friendly as possible.

Vice Chair Hansel commented that one of the charges of ECC is to maintain a long-term perspective and if they are serious about progressing towards their 100% renewable goals by a certain date, they need to think about what the community will look like if they want to accomplish that goal. He said that process would involve discussions about heating systems, heat pumps and other types of energy that might be envisioned during a thirty year time frame. It is hard to predict what that will be but they need to look at the composition of the City from a long-term energy perspective. Mr. Kopczynski replied that they need to build in flexibility as they update their Master Plan and build a mechanism into the system that keeps the Master Plan components up to date. He said there is only one section right now that deals with energy in the green code, so in concert with zoning code and land use regulations, other elements of the built environment and how they all interrelate need to be considered. He said that is a huge process and discussion. Dr. Shedd added that one of the NH seacoast towns has taken the approach of updating their Master Plan by updating one chapter or section per year as a rolling process to keep items current. She said it is an interesting model.

5. U.S. Department of Energy – Home Energy Score Program

Mr. Kopczynski stated that there was a need to expand the 79E district whose main incarnation was related to historic preservation and ensuring that buildings are kept and maintained over time, as the most sustainable building is the one that is already there. He explained that 79E allows property owners to apply to City Council for a temporary relief on improvements on buildings that increase their assessed value—as long as they provide a public benefit. He said originally the 79E district was along Marlboro Street however, there have been a number of downtown business owners interested in utilizing the 79E mechanism. He said the owner of the Methodist Church will probably be the first to utilize 79E to expand his business. Mr. Kopczynski emphasized that there needs to be a measurement for public benefit.

Mr. Kopczynski stated that there was a small piece of residential district that was included in the revised 79E map and there has been a lot of discussion at the Planning Board and Council levels about creating incentives in some of the neighborhoods around Keene State College. The objective, he said, is to encourage people to stay in the neighborhood, increase owner-occupancy and propensity for efficiency. He said he made a few phone calls to figure out what would be a reasonable public benefit to reducing carbon and increasing efficiency in a building. He stated that due to the City’s Greenhouse Gas Emissions goals, he explored types of mechanisms that

could be useful for improvements of existing buildings that would provide a measurable public benefit. He said one mechanism that is probably useful in this situation is the Department of Energy's Home Energy Score system.

Mr. Kopczynski stated that the system would entail training a staff member to perform scores for at least five houses a year to keep the scoring system active. He said they may begin offering the scoring in general or in conjunction with 79E, but in any event, the Department of Energy provides a software product that generates ratings through a detailed examination of properties that is similar to the miles per gallon rating system in automobiles. He said there is also a system in place for "green-certified realtors" and all of the MLS listings are converting to accept this rating, although it is still not very common. The national data shows that buildings that receive a home score rating of 6 or better sell quicker and for a greater price. Additionally, he said both FHA and Fannie May are also much more likely to provide loans for these properties as there is a demonstrated reduction in carrying costs. Mr. Kopczynski said the resolution states that owners would have to demonstrate a reduction of 10% in carbon and a home energy score rating of at least 6. Ms. Brunner stated that the scoring system goes from 1 -10.

Vice Chair Hansel asked Mr. Kopczynski who would conduct the scoring surveys. Mr. Kopczynski said they plan to train one of the City's building inspectors. Vice Chair Hansel asked if there is a weight on the number of occupants in the building. Mr. Pipp stated that it is more sustainable to have a small house; however, there is no weighting for square footage. Mr. Kopczynski responded that he does not believe they would use the home energy score for a newly constructed house and instead would use a HERS (Home Energy Rating System) rating. To his knowledge there is no modifier in the system for smaller houses, however, once they have familiarity with the system that could make changes or potentially create their own ratings. However, the latter approach would preclude the rating and loan benefits.

Dr. Shedd shared that she is in agreement with having the City as a neutral party for performing the Home Energy Score as opposed to vendors. However, there are contractors in Keene that are doing energy efficiency work and the challenge is cost-effectively encouraging more certification that would give them access to being contractors for the NH Saves program for job creation, economic vitality and energy goals. Mr. Kopczynski stated that the demand issue is also a challenge for the Home Energy Score program and the public does not know enough about the scoring system and are not offered information about it to make a choice. He said people do not want to pay for extra efficiency as they would rather have granite counter tops. However, perhaps it is not explained to property owners that for an extra \$500 now they can save more money in energy efficiency in the future. He said there are a number of builders in Brattleboro, VT that are very active in the green building movement and there is surprisingly little awareness here in the Monadnock region. Mr. Kopczynski stated that perhaps they need to do more educational outreach to create more demand. He said there are a lot of existing buildings in the community as they do not build very many new houses, and if the inspections are easy to do, perhaps that will become a part of the process which will build demand and spread awareness. However, they will need to show a recognizable public benefit to City Council.

Dr. Shedd asked under what circumstances the City scoring services would be invoked. Mr. Kopczynski replied that geographically, services will be provided anywhere in the City of Keene. He said the 79E portion from the standpoint of using home score would be geared towards the area around Water Street and Adams Street however, if they offer the home score as a generalized service it would be provided throughout the City. He added that there are some residential properties within the business district that could take advantage however; they do not anticipate that energy efficiency alone would be enough of a tax relief on assessment as there is not enough

money on the table. He stated that if someone was taking a residential building, gutting and refurbishing it that could make sense. In theory, a builder could take a property and flip it, or likewise, a situation where a young couple buys the house and they would do the evaluation pre-construction. Depending on the building, they could get historic tax credits as well as other funding mechanisms.

Ms. Jones asked about the idea of the property assessment raising the value of a house. Mr. Kopczynski replied that the minimum cost you need to bring a case to City Council is \$75,000 so this is a rehabilitative scenario for a house which provides a mechanism for tax relief. It is essentially an attempt to get renovation and rehabilitation out of the house and energy efficiency is a bonus. He said there must be at least two public benefits to get two years of relief, and three public benefits to get up to five years of tax relief. Mr. Kopczynski stated that considering most buildings in Keene were built before 1920; there is strong potential to make the case to Council that you will be preserving the building and improving its use

Mr. Daloz asked if the scoring system applies to apartment buildings downtown. Mr. Kopczynski stated that 79E itself applies, and there has been interest from property owners downtown as to whether or not it would be to their benefit to use 79E as a mechanism for doing things they want to do. Dr. Shedd thanked Mr. Kopczynski for this presentation and stated they would invite him back to ECC in the future to discuss green building, energy efficient and energy codes. Mr. Kopczynski stated there is a movement afoot in the legislature which would restrict the ability of municipalities to amend building and fire codes. He said they can comment on the proposal but legislature will probably pay no mind to those comments.

6. Sustainable Energy Plan Working Group Updates

a. Proposed Sustainable Energy Resolution

Dr. Shedd stated that the proposed 100% Renewable Energy Resolution was presented by the Clean Energy Team at the MSFI subcommittee of the Council meeting. She said there were almost two hours of public comment at the meeting, and 40 or more people present. MSFI voted 4 to 1 to recommend adoption to the full Council.

She said the Resolution is now going back through staff channels to put it into formal language that the City would use for a Resolution. City Manager, Ms. Dragon recommended taking the word “policy” out of the Resolution clauses and replacing with the word “goal.” Dr. Shedd said she is not sure how long the process will take for the Resolution to come back to MSFI. Ms. Brunner stated that she believes that the committee meetings at the end of December are not happening and the first Council meeting in January is a workshop. She said she will check and let ECC know. Councilor Clark stated that he does not think they will see it back until at least mid-January.

Councilor Clark asked if the committee is in agreement with taking the word “policy” out of the Resolution. He stressed that goals are not pressure points for City Council to take action and he sensed urgency at the MSFI meeting. The word “goal” does not convey that sense of urgency. Ms. Brunner replied that Ms. Dragon was referencing omitting the words “and policy” from “goals and policy” from the original language because there is a lot that is out of the City’s hands in terms of what they can control. They cannot regulate the community or dictate what people do with their personal lives. Councilor Clark stated that the Resolution is for ECC to advocate for clean energy. Ms. Brunner replied that the goal of the Resolution, which includes the entire

community, is to source 100% of their electricity from renewables by 2020, and 100% of the thermal and transportation sector by 2050.

Vice Chair Hansel asked Ms. Jones and Ms. Gillard about their thoughts on the wording. Ms. Gillard stated that it is understandable that the City cannot enact policies that intervene with people's personal decisions; however, the City can state their policy is to advocate and promote clean energy. Mr. Pipp suggested that the policy can be to encourage efficient choices by incentivizing and dis-incentivizing choices people make through policy. Ms. Brunner stated that the City has often taken the approach of trying to offer incentives, but they have fallen short in the areas of community outreach and education. She said there are solar, wind and biomass tax credits that are available but people are not taking advantage of them perhaps due to poor communication. She said for example, the SEED district was created by the City of Keene to encourage developers to build more energy-efficient buildings by providing bonuses but people rarely know that it exists. Councilor Clark said that Mr. Kopczynski was speaking about the reshuffling of the codes so that all of the rules and regulations would be organized in one place so that would make it easier for business owners and developers to access that information themselves and become better educated about different incentives. He stated that the difference between the policy and a goal is that a policy is more active, whereas a goal is just a goal and often gets "put up on a shelf" as is what happened with the 2010 Master Plan.

Ms. Baum suggested that maybe the words "policy" and "goal" are fraught with connotations and instead, perhaps the City can aim to adopt the Resolution as a guiding principle. She said the word "policy" is often surrounded by red tape and instead they can frame the Resolution as a commitment. Dr. Shedd added that the policies stated in the draft Energy Plan that will be developed in the next sixteen months can outline goals and then recommend that the City adopts certain policies to reach that goal. Vice Chair Hansel replied that they probably will not have another opportunity to change the wording of the Resolution. Ms. Gillard said this discussion has been useful and she does not want to focus a lot on the wording as she does not want the actions to be overlooked in terms of the City focusing on their leadership role in creating awareness within the community with these initiatives. Vice Chair Hansel agreed that a big component of the Energy Plan will be community education about the plan. Ms. Jones asked if the language in the Resolution can be changed. Councilor Clark replied when the City Manager comes back with the draft Resolution it will go back through MSFI again, the public will have another opportunity to provide comments at the meeting and that would be the time to make tweaks to the Resolution. He said that is why he suggested they put "tweaking the language of the Resolution" on the minute's record. Ms. Gillard shared that the City Clerk told her it would happen on MSFI's December 12 meeting. Ms. Brunner stated that she will check with the City Clerk and email the committee to confirm a date. Dr. Shedd stated that if the Resolution goes through successfully, it will be a major push in developing the Energy Plan. She said Vice Chair Hansel has been hard at work on investigating the solar installations in Keene.

b. Transportation Sector – Data Collection Needs- Ms. Brunner stated that Vice Chair Hansel, Mr. Webler and the KSC students are helping to tackle the data collection needs for the residential sector. So she stated brainstorming what the data collection needs would be for the transportation sector to keep things moving forward. She said Staff would like to use this body as a sounding board for the Energy Plan, so ECC can help guide and generate ideas as well as plan for data collection. Ms. Brunner said she is starting with the assumption that they will be adopting the goal of achieving 100% renewable in the transportation sector by 2050

Ms. Brunner outlined different performance measure metrics for collecting this type of data including: mode to work or school (census data), mode share by travel (bicycle, pedestrian

percentages). Bicycle or Pedestrian level of service which requires a lot of data inputs and uses a model. Traditionally, they looked at vehicle level of service which was based on amount of delay that a vehicle would experience when traveling down an intersection (the longer the travel time, the lower the score) which prioritized vehicle traffic as a primary mode of transportation. Bicycle level of service looks at speed of traffic, are sidewalks present, how many street trees there are present, the percentage of heavy trucks in the traffic stream and looking at specific corridors that may have high pedestrian and bicycle use.

Councilor Clark asked if this information is incorporated in the Complete Streets plan. Ms. Brunner replied that Complete Streets is mentioned in the Master Plan and then the City adopted a Resolution which sets forth a number of Complete Streets design guidelines. Ms. Brunner said the Complete Street Design Guidelines are used to check off what can be incorporated and every component is supposed to adhere to the Complete Streets guidelines whenever possible. She said the City will be redoing Roxbury Street in 2020 and they are incorporating those guidelines.

Ms. Brunner stated that they can also look at miles of bike and pedestrian pathways and sidewalks as there is a statewide data system that looks at sidewalks and structural condition and rates them as good, fair or poor. Also, the number of roundabouts is important as research shows they reduce emissions. She added that the number and distribution of EV charging stations or alternative fuel charging stations, City and Community investment in alternative transportation infrastructure are other metrics to assess. Also, looking at what the community is doing to promote sustainable transportation is essential as Keene has a number of large employers that could incentivize sustainable transport. She added that transit ridership and accessibility (ability of people to access destinations using transit), assessing vehicle fleet composition to see if more people are buying electric or alternative fuel are other avenues to explore. Finally, vehicles, truck and tractor information and the number of vehicle miles traveled per capita to see how much people are traveling are additional measurements.

Vice Chair Hansel stated he was confused as to how they would achieve those measurements. Dr. Shedd stated those would be discussions as they move forward, maybe through working and break out groups. Ms. Brunner stated that was aiming to brainstorm all the different measures that would relate to getting to 100% renewable energy in the transportation sector by 2050. She does recommend that they narrow the list to the data that is most strategic to measure. She posed the following questions to be considered: *What is the outcome, trend or objective that they are trying to measure or understand? What is the outcome of this data and how do we collect it?* She said if it is too difficult to collect the data, it will not be collected frequently enough. Mr. Pipp stated that looking at how many intersections at stoplights are optimized with sensors, as some have them and some do not. He said that would be fairly easy to measure.

b. KSC Student Residential Solar Project

Vice Chair Hansel stated that he, Ms. Brunner, Mr. Webler and KSC students have been concentrating on the solar side of data collection but eventually they will need to assess all aspects of the “energy pie.” He said they have extracted some good information; however, there are still some data gaps. They are focusing on the percentage of installed solar arrays in Keene and so far they have identified 80 installations, which they have estimated represents about 1.7 megawatts of power generated by solar right now. He is still not sure of the percentage of the total consumption in Keene and what percentage of that consumption is represented by solar. He believes it is probably less than 5%. Vice Chair Hansel stated that Eversource has not been overly helpful with the numbers but they estimated about 1.3 megawatts of installed solar which he believes is a bit low and may not be taking into account 350 Marlborough Street installation. He

stated that they will need to do a similar analysis of bio-heating in Keene (ground source heating, biofuel, wood pellets and chips) and establish the baseline so they can gauge the progress they are making. He said the KSC students have done some work on this and with Mr. Webler's help they will dig a bit deeper. Councilor Clark asked if they are mapping out installations and Vice Chair Hansel said they are planning to do that. Dr. Shedd stated that most of the residential installations are in the 3-6 kilowatt range. She said for frame of reference, when the Upper Valley campaign ran three cycles of solarize campaigns in a number of the small communities on both sides of the river, they added 2.2 megawatts of solar capacity which is more than Keene's total at this point. She said Peterborough, Rindge, Hancock and Fitzwilliam are underway on their solarized campaigns and will be having their first introductory conversations with four potential installers tomorrow morning. Ms. Baum added that the Windham County, Vermont Wastewater Treatment facility she visited, has a 5 megawatt array which powers the schools and other municipal buildings and is implementing an interesting model she would like to learn more about.

Vice Chair Hansel shared a map from a KSC student's presentation that showed it would require less than 2% of land area to generate all of Cheshire County's energy from solar. He stated that it is feasible to generate all of their energy from solar with the right battery storage and systems. Dr. Shedd added that Mr. Brehme could not be at the meeting to provide an update, but he is currently working on an ongoing senior seminar project which is focused on the specifics of where residential solar would be feasible in Keene. She suggested maybe the KSC students can present their findings to the committee in January and perhaps they can include the public as well.

7. Clean Energy NH Membership Request (formerly NH Sustainable Energy Association)

Dr. Shedd stated the NH Sustainable Energy Association is now called Clean Energy NH. She said there is a request for membership. They incorporate the local energy solutions working group which includes multisector representation: utilities, green energy, businesses, executive of Clean Energy NH and they are all available for questions and feedback to communities. She said they have set up a municipal membership category for \$250/year which includes two admissions to the annual conference which would otherwise be \$35-50/person. She said the question is can ECC afford \$250 membership. Their budget for the past eighteen years had included membership to ICLEI as the only item in their budget. Councilor Clark suggested they make a request to put that into next year's budget. Dr. Shedd asked if Councilor Clark could take that question on. She said ICLEI has a 100% renewable network for communities, however, how specific their support is not clear on their website. She said their membership is \$600/year whether it is a year they do a greenhouse gas inventory or not. Mr. Pipp asked if there are any other resources that are useful to them besides the inventory. Ms. Brunner said she included the link to their resources page in last month's packet. She said members have an online access network; ICLEI is a member of the Global Covenant of Mayors. Ms. Brunner said they are in the Climate Mayors group. Vice Chair Hansel recommended that they stay tuned to when ICLEI membership comes up for renewal and discuss it then. Ms. Brunner said that will be in the spring. She said the City is a member of the regional network of USDN but that does not cost money.

Vice Chair Hansel moved that they join the Clean Energy NH group, Mr. Pipp seconded the motion and it was passed unanimously.

8. Committee Retreat: January 2019

Chair Shedd asked what a good timeframe is for this year's ECC retreat. Ms. Brunner said she send out a Doodle Poll for sign ups. Dr. Shedd suggested that they focus on the Energy Plan for the New Year. Dr. Shedd said they will work on the Doodle poll, venue and facilitator.

Dr. Shedd suggested skipping their January 2 meeting and instead having their retreat in January and asked for thoughts from members.

Ms. Baum moved to skip the January 2 meeting in favor of the retreat for the month of January, unless something urgent comes up, Vice Chair Hansel seconded and motion was passed unanimously.

Ms. Brunner said to keep in mind that she has a 24-hour window to let committee know if something urgent comes up to notify the public. Ms. Baum suggested announcing a January meeting before the holidays if that is necessary.

Vice Chair Hansel stated they could also discuss urgent matters at the retreat. Dr. Shedd asked if anyone would be open to the retreat running beyond 6 pm if need be.

9. Updates:

a. Fourth National Climate Assessment – Released 11/23/18- Ms. Brunner included an excerpt from the 1,600 page Fourth National Climate Assessment and one of the local environmental reporters wrote an article on how the assessment would impact Keene; it was in Monday's (December 3rd) paper

b. Monadnock Energy Hub speaker/event regarding Volkswagen settlement funding for EV Charging Stations- Dr. Shedd handed out flyers and said she will let ECC know more details as they become available.

c. "Sideline Science" event: Union of Concerned Scientists, Ms. Abrash from AUNE is putting on a panel discussion event 12/5/18 at 6:30 p.m. at the Keene State College Alumni Center.

10. Next Meeting: Wednesday, January 2, 2019

Dr. Shedd adjourned the meeting at 9:34 am.

Respectfully submitted by,
Ayshah Kassamali-Fox, Minute Taker

Reviewed and edited by Corinne Marcou, Administrative Assistant