



ENERGY & CLIMATE COMMITTEE MEETING AGENDA

Wednesday, November 6, 2019, 8:00 AM

2nd Floor Conference Room, City Hall

Members:

Dr. Ann Shedd, Chair
Peter Hansel, Vice Chair
Terry Clark, Councilor
Chris Brehme
Jake Pipp
Ken Dooley

Cary Gaunt
Anna Schierioth
Rod Bouchard
Andrew Dey
Zach Luse

Staff:

Rhett Lamb, ACM/Community Development Director
Mari Brunner, Planner

1. Call to Order and Roll Call
2. Approval of October 2, 2019 Meeting Minutes
3. Energy Plan
 - a. October 22nd Community Workshop de-brief
 - b. Consultant Status and progress
 - c. Timeline Update
 - d. Community Energy Conversations (meeting-in-a-box activity)
 - e. Success Stories: www.ci.keene.nh.us/sustainability/success-stories
4. Committee Membership
5. Community Choice Aggregation / Community Power
6. Update on Recent Municipal Projects
7. Keene Solarize Campaign
8. New Business
9. Next Meeting Wednesday, December 4, 2019
10. Adjourn

City of Keene
New Hampshire

ENERGY AND CLIMATE COMMITTEE
MEETING MINUTES

Wednesday, October 2, 2019

8:00 AM

Second Floor Conference Rm.

Members Present:

Dr. Ann Shedd, Chair
Peter Hansel, Vice Chair
Councilor Terry Clark
Jake Pipp
Christopher Brehme
Rod Bouchard
Kenneth Dooley
Zach Luse
Andrew Dey

Staff Present:

Mari Brunner, Planner

Members Not Present:

Anna Schierioth
Cary Gaunt

1. Call to Order and Roll Call

Chair Shedd called the meeting to order at 8:08 AM. Roll call was conducted.

2. Approval of September 4, 2019 Meeting Minutes

Councilor Clark made a motion to approve the meeting minutes of September 4, 2019. Mr. Hansel seconded the motion, which passed by unanimous vote.

3. Energy Plan

a. Community Workshop: 10/22/10, 6:30 PM, KSC Science Center Rm. 101

Chair Shedd asked Ms. Brunner to speak about the plans for the Community Workshop, to be held October 22 at 6:30 PM at the Keene State College Science Center, Room 101. Ms. Brunner stated that there will be a community workshop on the energy plan, which will start with a panel. She continued that there will be a panel of speakers who will address different topics related to energy. The plan is to divide the group up into small groups after the panel, to discuss and give

feedback on the topics. Discussion ensued about the meeting space and other possibilities, and about the logistics of the meeting.

Chair Shedd asked for more information about the panelists. Ms. Brunner spoke about some of the panelists and the topics they will be presenting. Discussion continued. Chair Shedd asked if each breakout group will address the same questions. Ms. Brunner replied that the room is an auditorium/lecture-style room, and therefore the groups will break out into separate rooms and will not report back to the larger group. Each group will have the same guiding questions. There will be note-takers for each group. Chair Shedd stated that this workshop will be the first of four planned opportunities for Keene residents to give input to the City on the developing plan. In response to a question from Chair Shedd on the timing of the future workshops, Ms. Brunner replied that the exact timing has yet to be determined.

Chair Shedd asked about the plans for promoting this workshop on October 22. Ms. Brunner asked the ECC members to help get the word out in any way they can, such as through their social media channels. Discussion continued. Ms. Brunner stated that she can create a press release and flyer. Chair Shedd asked about print or broadcast media. Ms. Brunner replied that they can do that if the committee wishes. Chair Shedd asked for committee members' thoughts on promotion. Discussion continued about flyers. Nancy Gillard offered the services of the Clean Energy Team to help distribute flyers and spread the word on social media.

Chair Shedd stated that Ms. Brunner is recruiting ECC members to help facilitate, or at least to spread themselves out throughout the break-out groups. Ms. Brunner replied that she does not know how many people will attend the event and how many break-out groups they will need, but she is thinking approximately six groups, or a maximum of ten people per group. She continued that she has asked other staff members if they are available to facilitate but they will need ECC members' help if there are a lot of people at the meeting. Someone asked about having participants registering ahead of time. Ms. Brunner replied that there is no requirement for people to register ahead of time, but staff could create an options for people register ahead of time to get an idea of attendance. An ECC member asked Ms. Brunner if she wants input on the guiding questions to ask participants, and suggested having a survey. Ms. Brunner replied that the intent is to have note-takers at each break-out group, but yes, they could have a survey people could choose to write on and turn in. An ECC member suggested creating a Facebook event to get an idea of how many people are thinking of coming, and to help with promotion.

An ECC member asked if Ms. Brunner has received enough feedback on workshop questions. Ms. Brunner replied that she received feedback from Chair Shedd on the panel questions and the agenda, but she has not received feedback yet on the small group questions. She continued that the ECC has a folder on Google Drive, which includes documents where people have been brainstorming questions for October 22 and others are welcome to go there and add their feedback. Chair Shedd asked about the length of time for the small groups. Ms. Brunner replied and discussion ensued.

An ECC member asked if the small groups will come back together afterwards to report back, or just disperse. Ms. Brunner replied that if they wanted people to come back together and report

out, they would have to cut back on other portions of the workshop, due to timing, and switch to a different room/meeting space that would be more conducive to that.

b. Consultant Status and Progress

Ms. Brunner stated that a contract has been signed by both the consultant and the City. The consultant kick-off meeting with staff was last week. At this meeting, the consultants walked through their approach, timeline, and deliverables for the project. It was an overview of the project and they asked clarifying questions of staff. It was a good meeting. They gave staff an idea of their planned timeline. One piece that is unknown right now: they submitted a data request to staff, which staff shared with Eversource. Staff is waiting to hear back from Eversource. In the meantime, the consultant, Cadmus, is working on a policy context for the City, to give an understanding of the federal, state, and local policies, laws, and regulations that are relevant to what the City is doing.

Chair Shedd stated that they could probably draw heavily from the Concord plan, which probably has summarized a lot of that. Ms. Brunner replied yes, Cadmus has worked with lots of communities on these types of plans. Discussion continued. Ms. Brunner replied that she does not think that this task will take long – about a month. The next task is doing the baseline, which will require data from Eversource. The City met with some people from Eversource and they seem to think it is possible to get that data, which is encouraging. Chair Shedd asked if it will be broken out by sector, as with the 2018 data Eversource provided, and have more detail. Ms. Brunner replied that is the request. Cadmus has asked for several years of data broken out by month.

An ECC member asked if there is any sense of the timeframe. For example, will the whole project take six months, or two years? Ms. Brunner replied that the contract says everything will be completed by April, but Cadmus is aiming to have everything wrapped up by February. She continued that one deliverable is to provide a final, written report and to do a presentation on their recommendations to the public and a separate presentation to City Council. They hope to do that at the second City Council meeting in January. That is the goal, but it will depend on how long it takes to get the Eversource data.

Chair Shedd stated that Cadmus's report is not the total plan. She asked, how does the City see taking Cadmus's report and filling it out further to be a plan? Ms. Brunner replied that the intent has always been for Cadmus's report to feed into the plan. The recommendations they provide, and the analysis of the strategies, will be used for the plan, but Cadmus is not writing the plan. An ECC member replied that Cadmus is only focused on electricity. Ms. Brunner replied yes, they are focusing on the City's most immediate goal, which is the 2030 electricity goal. Chair Shedd asked what the City will be doing between February and December and what further target dates there are for at least getting sections of the plan drafted. Ms. Brunner replied that right now there is no timeline set for developing the other sections of the plan. She continued that a lot of her effort has been on getting the consultant on board, which was a process, and working on the outreach has taken up a lot of her time.

Chair Shedd asked about the City Manager's timeframe and process for allocating staff time. She continued that she thinks there will be a lot of demands on staff time to work on this project. She asked if Councilor Clark has any sense of this. Councilor Clark stated that he does not know about how the City Manager allocates staff time; it might be an annual thing. It is possible they could reintroduce the Sustainability Officer. Chair Shedd suggested this be an agenda topic next month. She continued that probably some discussion would need to happen, about whether the committee is ready to recommend that again. The ECC is advisory to the City Council. The ECC is not in charge of writing the plan. She asked, how can they best help the City keep this moving forward? A lot of it will fall on staff, who are already stretched. Ms. Brunner replied that her plan has always been to run things by the ECC and get the ECC's input. She continued that the ECC members represent a wide range of sectors from the community. Getting direction from the ECC on how the plan is evolving would be helpful. Also, the biggest piece, which is time-consuming, is public outreach and engagement. Anything the ECC could do to help with that would really help the project overall.

An ECC member stated that initially they are focusing on electricity but the other sectors will be complicated, too. The committee should start thinking about what they will do to address the other two sectors. Chair Shedd stated that the deadline for the resolution, to have a plan, is December 2020. She continued that if the goal is adoption by the City by December 2020, they would have to have a pretty good draft by October, to send it through the City Council channels. Discussion ensued about the City Council process and the possibility that the City Council would refer it back to staff or this committee or another City Council committee.

c. Community Energy Conversations (meeting-in-a-box activity)

Chair Shedd stated that this activity is for community members to be trained to go out and bring more community members into the conversation. Ms. Brunner has been working with volunteers from the community on this. Ms. Brunner stated that at the May workshop, Shaylin Salas (intern) presented on various outreach tools including an outreach strategy called "meeting-in-a-box." She continued that this format is meant to provide a less intimidating option for people to participate in a meeting and provide feedback to the City. A volunteer would get a package of materials from the City (hence the name "meeting in a box") and the volunteer would hold a meeting outside of City Hall somewhere, such as the library, a park, or a coffee shop, a place that is publically accessible. The City can facilitate people signing up to go to a community-run meeting like this. It is meant to be more accessible to members of the public.

Chair Shedd stated that the goal of this activity is to generate some documented feedback for the City on specific questions. Ms. Brunner agreed and said that the format is similar to that of the break-out groups at the October 22 workshop. There will be a facilitator and someone taking notes, which will be shared with City staff. They will gather feedback from people to feed into the plan. Chair Shedd stated that the hope is to have the training for the volunteer facilitators sometime this month. Ms. Brunner replied yes, she thinks next week. She continued that five people have signed up so far to be trained to be those facilitators.

d. Success Stories – www.ci.keene.nh.us/sustainability/success-stories

Chair Shedd stated that there are two success stories up on the website so far, one on Filtrine’s renewable energy projects, and one on Paragon Digital, which includes drone footage by Mr. Brehme. She continued that if anyone has thoughts on other interesting profiles to put up (of residents, businesses, or the school district), it can be brief, such as a one to 1.5 page read or a 5-minute video. Discussion ensued. An ECC member shared information about Greenwald Realty, Michele Chalice, and Toby Tousley. Ms. Brunner stated that the deadline to get them up for “Energy Month” is early October. Chair Shedd spoke about the Keene Unitarian Universalist Church. Other members spoke of possibilities they are working on. Ms. Brunner stated that Ms. Salas put together a “guide for success stories,” which she will share. Discussion continued.

4. Legislative Update: SB 286, “Relative to aggregation of electric customers by municipalities and counties”

Chair Shedd stated that this bill was enacted this summer. She continued that this is otherwise known as “community power” or “community choice aggregation.” New Hampshire has had legislation like this for some years now as an opt-in program only. Districts of whatever size could set this up, but it would only be by conscious enrollment by members of the community. What is different about the legislation this year is an entity of whatever scale can set it up as an opt-out program, so it would be the default energy supply unless customers took the action to say they are going to go another route.

Ms. Brunner stated that starting on page 12 of the agenda packet is an email the City received from Clean Energy NH that summarizes bill and provides links to more information. She continued that she also included a PowerPoint presentation by Clean Energy NH. She said there will be a presentation on November 4th to provide more information about this. Chair Shedd stated that the presentation is sponsored by the Monadnock Energy Hub, which is a group associated with the Monadnock Sustainability Network. It will be at the Marlborough Community House at 6:30. It will be geared towards decision-makers. Henry Herndon is the main presenter, and it will include a deeper dive on what Community Power could mean for the region. Ms. Brunner stated that there is a webpage on the Clean Energy NH website devoted to this, and they are calling it “Community Power” and will update it regularly. She continued that this is one of the options/strategies the consultant will be looking into; hopefully the City will get an analysis from them on how this could potentially work in Keene. Chair Shedd stated that the Local Solutions Energy Conference in Concord will also include conversations and presentations about this; it is a big opportunity for New Hampshire. It can be a cost savings and also has the potential to allow communities to source from local renewables.

An ECC member stated that there was a good presentation at Radically Rural about this, with a good overview, mainly from the perspective of Massachusetts. Discussion ensued about the materials and information available from this event. Discussion continued about Radically Rural.

Mr. Bouchard stated that he received a call from someone asking whether the County was aware of the legislation, and yes, the County is aware. He continued that he had talked with the

Commissioners about looking into lowering the electric costs for County operations. This seemed like one of the opportunities. Mr. Herndon is coming to Keene to give a presentation to anyone interested in learning what this is all about and how to get involved. The County is interested. Perhaps they can put a roadmap out there for anyone in the towns. The bigger question is, what level does this aggregation start or stop at? Is it every town for themselves? Is it county-level? There are a lot of questions about how this all works. He registered at the power pool and “quickly drowned in technology.” It is a challenge to navigate.

An ECC member agreed, one of everyone’s questions is, what administrative duties are there? What costs would there be? He thinks county-wide would be preferable, instead of having each community try to do it themselves. Mr. Bouchard replied that that begs the question of how this would all be bought and sold. That needs to be answered. Chair Shedd replied that she thinks that is one element that Katie from Clean Energy NH is sharing, to have the economy of not duplicating effort in whatever assortment of entities are collaborating/aggregating together. Mr. Bouchard replied that Mr. Herndon sent him a copy of the presentation and he thinks it will be challenging for the small municipalities to really do this; they have to find the appropriate level. They would have to be willing participants in this. Chair Shedd replied yes, each community would have to opt in and individual residents could opt out.

An ECC member wondered if the Southwest Region Planning Commission could be involved. Mr. Bouchard replied that he has talked with Tim about it and he is willing to talk. Chair Shedd stated that the Nashua Regional Planning Commission has been functioning as the aggregator for some of its areas for some years, so there is a precedent for that in the state. Someone added that Peterborough has that model, too, and gave some information about it. Brief discussion ensued. Chair Shedd stated that it sounds like there are documentations of the cost savings.

Mr. Bouchard stated that the possible dates with Mr. Herndon are October 28 or 29, or November 1. Chair Shedd asked who the intended participants are. Mr. Bouchard replied anyone here, or anyone from other groups that are interested in finding out more about this. Discussion ensued about the day and time. Mr. Bouchard stated that he will check with Mr. Herndon again.

Chair Shedd stated that the Local Energy Solutions conference is soon after that. She continued that the municipal membership in Clean Energy NH gives the City two admissions to the conference. She asked Ms. Brunner if that is available to committee members. Ms. Brunner replied yes, people can let her know if they would like to attend.

5. October Energy Awareness Month

a. Request for sign sponsorship from the Clean Energy Team

Chair Shedd stated that there are many activities scheduled for Energy Awareness Month, including a movie tonight at 7:00 PM. Tomorrow, the Mayor will issue a proclamation about Energy Awareness Month. There is a public hearing at the Recreation Center on October 15, at 6:00 PM, regarding the State’s update to its 10-year Transportation Plan.

Ms. Brunner stated that people should be aware that the funding for the Transportation Alternatives Program (TAP), which is the only available funding for bike/pedestrian improvements, has been cut back. She continued that projects that received TAP funding have had their deadlines pushed out. If people care about that topic, that might be something to weigh in on. The City's transportation goals include promoting alternative transportation as well as reducing carbon emissions from conventional vehicles.

Chair Shedd stated that the Community Workshop on October 22 is on the schedule. An ECC member asked if the film being shown on October 16 is the same one that was done a couple years ago. Chair Shedd replied yes. She continued that the presentation on offshore wind, on October 29, should be very interesting, and gave some more information about it and about how offshore energy works in Massachusetts.

Chair Shedd stated that Clean Energy Team has asked the ECC to sponsor a sign about the events happening throughout October. She continued that Clean Energy Team has put together a large, plywood sign and there would be a fee for them to post it, and they would like City co-sponsorship which would waive the fee. Ms. Brunner replied if the request comes from a City department, the requirement for liability insurance would be covered under the City's insurance. Chair Shedd asked about the process for the ECC to request City sponsorship, if the committee recommends that the City sponsor the sign. Does it go through the whole City process? Ms. Brunner replied that there is an application form to fill out and submit to the City Clerk's office, and then the City Clerk's Office assigns a time slot and a specific location. Chair Shedd asked the guests from the Clean Energy Team if they already had a timeslot. Clean Energy Team members spoke about insurance difficulties that prevented them from putting the sign up this week. They asked if someone could speak to the City Clerk's Office. Chair Shedd asked: if this committee recommends sponsorship, does that recommendation still have to go to the City Council? Ms. Brunner replied that she does not think so; she thinks a staff member could submit the application to the City Clerk's Office if that is what the committee recommends.

Peter Hansel made a motion to recommend that the City sponsor the Clean Energy Team sign. Mr. Brehme seconded the motion.

Discussion ensued about the sign location. A Clean Energy Team member stated that they will probably ask for the sign to be at Fuller Park near the Rec Center. She continued, saying that according to the City Clerk this would not have to go before the City Council first. Chair Shedd stated that the sign is fairly generic – it has the City's goal, a link to the Clean Energy Keene's website, which has information about the Sustainable Energy resolution, local success stories, and the schedule of October events. A Clean Energy Team member replied that there will be an evening with local residential success stories. Chair Shedd replied yes, they are pulling together a panel of local residents as part of the October events, to share what they have done with energy efficiency and renewable energy.

Mr. Brehme stated that Renewable Keene is a citizens group that is trying to promote some of the same things the ECC is trying to do. Chair Shedd replied that is the group that brought the resolution of 100% renewable energy goals to the City and passed through the ECC and the City

Council and was eventually adopted. Ms. Brunner replied yes, and they are partnering with the City to help with the outreach and engagement portion of the energy plan. Chair Shedd stated that it is somewhat analogous to Pathways for Keene or Friends of Open Space that support the work of some other City committees, but not exactly the same.

An ECC member asked if there is a website or location that has all of these various groups and what they are doing. Chair Shedd replied that Monadnock Energy Hub is working to create that. She continued that there is a meeting next week to talk about all of the groups working in this realm and see how they can synergize the efforts, particularly in terms of hosting events, and having better coordination and availability to the public. There is the City's Sustainability page, the Clean Energy Team's Clean Energy Keene website, plus all the Facebook pages, and the Monadnock Energy Hub; there is a lot of overlap and everyone is not very coordinated. The big picture of decreasing greenhouse gas emissions is what is common across the groups.

Ms. Brunner drew the group's attention back to the motion on the table.

Chair Shedd called for a vote and the motion passed unanimously.

6. Keene Solarize Campaign Status

Chair Shedd stated that a solarize campaign will happen in 2020 in Keene and Marlborough. She continued that there have been two meetings of volunteer teams coming from those two communities, and they have begun the work of looking at what each community has in terms of property tax exemptions, what the process for that would be, code and permitting processes, and so on and so forth. A subgroup will start looking at the vendor selection process. All of the work is drawing heavily on the Upper Valley's model and an incredibly useful solarize toolkit generated from the campaigns they ran in their area. Other communities in NH have used that model as well. She gave more information about solar in the state. The goal of Solarize is to increase solar installations and to do it in an organized fashion with the partner installer selection in a transparent process. In some sense it is marketing, because once the partner installer is chosen the local team is getting the word out that the opportunity is there. There are discounts built in, with different models for how the discounts happen. It contributes to the overall goal of decreasing greenhouse gas emissions, which is the goal of the ECC. The best cost effectiveness would be more community solar. There are also efforts happening in that realm, such as the project at the Co-op and the installation in Rindge.

Ms. Brunner stated that they had talked about a program Eversource had proposed, the Low and Moderate Income Solar Program, which would be run through their Electricity Assistance Program (EAP). She continued that staff finally got a chance to meet with Eversource to talk about renewable energy goals and also asked for an update on that program. Eversource has proposed it to the PUC and are still waiting for approval. Staff asked if a letter of support from the City would be helpful, and they are waiting to hear back from Eversource about that. What is really exciting is that this program, as proposed, would be excluded from the 1 megawatt cap and would allow projects to go up to 5 megawatts, which is currently what is preventing the City to do the project at the Wastewater Treatment Plant because the energy demand there is more than

1 megawatt. This is a program that would provide an on-bill credit for people that participate in the EAP to receive energy at a reduced cost.

Chair Shedd stated that they will put on the agenda for next month. Analogous to what they are doing to support the sign from the Clean Energy Team, there would be some benefit for the Solarize campaign if there was some level of City cooperation or co-sponsorship, such as the ability to use City meeting space without incurring rental fees or posting signs without having to pay for the liability insurance.

7. New Business

Chair Shedd asked if there is anything to add to next month's agenda. An ECC member stated that it is helpful, as a new member, to have the issues put into context, to understand how everything fits in together. He gave examples of how Chair Shedd and the committee did this today. He continued that he would like to see some sort of a road map, with what work is being done when and by who, so he can understand the committee's relationship to the eventual plan and how they anticipate it unfolding. Chair Shedd replied that they have a timeline that Ms. Brunner drew up. Ms. Brunner replied that their former intern was helping with outreach and she helped create an outreach timeline. She could share it with the ECC. It has not been updated for a few months. Chair Shedd replied that it is part of the group's shared Google Drive. She asked if Ms. Brunner could send that link to all the ECC members again, and explained what else is in the Drive.

8. Next Meeting Wednesday, November 6, 2019

9. Adjourn

The meeting adjourned at 9:17 AM.

Respectfully submitted by

Britta Reida, Minute-taker

Reviewed and edited by Mari Brunner, Planner

KEENE COMMUNITY CONVERSATION: 100% RENEWABLE ENERGY PLAN

October 22, 2019

Group A Discussion Notes

1. What concerns do you have about the City's goals for renewable energy? How do you think these goals will impact you?

- Wind and Solar are intermittent, this results in a storage problem / grid coordination problem
- PV with battery back-up on a local level
- Liberty utilities – get them to sell Btus rather than therms. Could do a regional water district heating and cooling.
- Learning curve with respect to energy contracting – do we have the capacity? Are there enough tradespeople to install?
- New hydro opportunities / flooding response protection - Pumped hydro storage at Goose Pond, hydro at Beaver falls?
- Small, modular nuclear reactors
- Distributed storage (batteries) – e.g. Westmoreland battery storage project
- Better weatherization needed, especially for rentals. Reducing the energy load is key. Weatherization also increases the comfort of homes.
- Low and moderate income people need to be involved
- Education and information for renewable energy suppliers

2. What, if anything, would you like to see change in terms of where and how we get our energy over the next 10-20 years? (See handouts for more info)

- Cheaper
- Cleaner
- Local Jobs
- Non-invasive/hidden infrastructure
- Equitable economically
- Education and information
- RECs

3. **What should the community be prioritizing in terms of where and how we get our energy? Please choose the top 2-3 priorities.**
- a. Upfront cost of energy and/or energy programs
 - b. Reducing energy burden for residents and businesses (i.e. percentage of income spent on energy)
 - c. Supporting local energy generation (rather than sourcing from outside the region or nation)
 - d. Reliability of energy source / resiliency during storms and natural disasters
 - e. Environmental & Health impacts of our energy (e.g. impacts to air quality, water quality, wildlife habitat)
 - f. Social impacts of our energy (e.g. energy burden for low income or elderly residents, proximity of energy generation sites to neighborhoods, etc.)
 - g. Other?

Group B Discussion Notes

1. **What concerns do you have about the City's goals for renewable energy? How do you think these goals will impact you?**
- Social equity: Make sure nobody is left-out especially if the cost to access the energy is high
 - Education is important; we need to keep the conversation going after a plan is adopted and provide people with information about options
 - Make sure we are partnering with contractors and investing in cooperative power purchasing agreement to make it affordable and increase buying power
 - Need to figure out what "100% renewable energy" means and communicate it clearly to the public.
 - Many people are worried about what it will cost them to be on 100% renewable energy. Will the tax rate increase? Need to make sure we are avoiding costs and lowering taxes, and then educating people so they know.
 - What are available options? There is a need for an easy-to-read, short document showing all the options with pros and cons about each option. This document should be visual and easy to understand.
 - Keene is not a young community. We have many people who are retired or disabled, and are on fixed income. If these people cannot afford the cost, could there be a way to help them access incentives that may be available for them?
 - How are we going to reach out to all players? Need to create opportunities for people who cannot install solar on their home or business (renters, people on fixed income, east-west facing roofs, etc.)
 - The process of switching to renewable energy is complicated. What can be done to make this process easy for people?

- Demonstrate that clean/renewable energy will save money with cost-benefit analysis, communicate in easily understood terms – show the numbers.
2. **What, if anything, would you like to see change in terms of where and how we get our energy over the next 10-20 years? (See handouts for more info)**
- With technology advancement, there are small, modular nuclear power plants that can generate enough to power a community such as Keene.
 - The type of energy selected should be cost efficient and this should consider the life cycle of the energy source, including the production cycle, transportation, waste disposal, use of water in cooling for nuclear power plants, etc. as well as “hidden costs” (e.g. need to hire guards to guard de-commissioned nuclear plants)
 - We should continue to use existing nuclear energy as long as it remains safe as a transition/bridge to renewable and clean energy sources. This can help us move away from fossil fuels while we work on getting more renewable energy on line.
 - Lower energy costs
 - Historically, our region ran on hydropower, which supported manufacturing. We need to tap into this resource using micro-hydro and small-scale hydro that is not harmful to the local environment.
 - We should consider local resiliency/dependability for businesses. Future energy should be resilient to power outages/flooding, dependable and reliable, as it is very important in bringing in new businesses and retaining the ones that are already here.
 - We should try to get as much energy produced locally as possible – this will increase resilience and dependability. For this to work, we need micro-grids / improvements to our grid infrastructure.
3. **What should the community be prioritizing in terms of where and how we get our energy? Please choose the top 2-3 priorities.**
- The top priority should be to reduce the cost of energy. Everything else will flow from that (reducing energy burden, increasing uptake of renewables, advances in technology, etc.)
 - Next top priority is reliability / dependability – if the energy source isn’t reliable, people will switch to a source that is reliable
 - Environmental and health impacts – we don’t want to encourage anything that might make people sick or harm the health of our environment

Group C Discussion Notes

1. **What concerns do you have about the City's goals for renewable energy? How do you think these goals will impact you?**
 - Gas infrastructure
 - Can infrastructure, especially transmission happen and happen accountably?
 - Thermal and transportation – how to engage everyone when effects of climate change are less visible here?
 - Time-of-use and utility tariffs
 - State & utility as “late adopters”
 - Infrastructure for end-of-life management (e.g. PV panels)
 - Impacts: Green jobs, cleaner air
2. **What, if anything, would you like to see change in terms of where and how we get our energy over the next 10-20 years? (See handouts for more info)**
3. **What should the community be prioritizing in terms of where and how we get our energy? Please choose the top 2-3 priorities.**
 - Weatherization – how to design a broad-scale program
 - Reducing energy burden: unanimous
 - Make access & process easier
 - Education with respect to most cost-effective options (highest impact per unit cost)
 - Resiliency/Reliability – six people voted for this
 - Underground power lines?
 - Local generation
 - Environmental and health impacts – four people voted for this
 - Other: behavior change
 - Net-zero ordinance for new construction (residential and commercial)
4. **What have you done and/or considered doing to increase energy efficiency or renewable energy usage at your home or place of work? What would make it easier for you to reduce energy use and/or switch to renewable energy?**
 - Emergency preparedness
 - Power back-up, especially for health vulnerabilities
 - Incentives for landlords to invest in energy efficiency and renewable energy
 - Recognition program for successes
 - Education

- Audits – prioritizing energy efficiency project elements
- Educate contractors to clean tech options
- “Green financing” on bill
- Vetted volunteer list for weatherization
- Certification of green contractors (through City?)

From: [Rhett Lamb](#)
To: [Mari Brunner](#)
Subject: Fwd: Energy Meeting follow up
Date: Thursday, October 24, 2019 10:32:48 AM

Rhett Lamb
ACM/Planning Director
Sent from phone

----- Forwarded message -----

From: "Bob King"
Date: Wed, Oct 23, 2019 at 2:22 PM -0400
Subject: Energy Meeting follow up
To: "Rhett Lamb", "[Ann Shedd](#)", "[Webler, Thomas](#)"

Rhett, Tom, Ann,

Not sure who to write to with comments on yesterday's meeting, but figured I'd start with you three. Rhett, sorry I had to leave early from small group. These comments don't exactly line up with the "guiding questions" hand out, but hopefully you will find them useful. I suspect you've already thought of much of this, and this is by no means comprehensive, just initial thoughts.

Energy literacy: the City's ambitious goals will require buy-in and assistance from thousands of citizens, not just the "usual suspects" who show up at these meetings. For this reason, I urge you to adopt and stick with simple terms and metrics that people can easily learn and remember. For starters, everyone needs to understand the difference between power (KW) and energy (KWH), and that KWH are meaningless unless you state the time frame over which they are measured (Julia made this mistake last night). And of course, the scaling of KW to MW to GW. At the start of meetings like last night, you may want to spend two minutes on this basic stuff, both to educate people and to show the experienced people in the crowd that you are on your game.

Metrics: As Julia said last night (and as I have discussed with Peter Hansel & Tom), we need to get good numbers for Keene's average monthly energy use and peak demand. Then you can demonstrate, in a standardized manner, at meetings, and on a giant outdoor gage (similar to United Way fundraiser) the City's progress towards 100% renewables. When I receive a bunch of handouts like last night with bar graphs and data on carbon emissions, I get a little overwhelmed. Suggest keeping it simple and keeping the focus on that which is easily measured: KW and KWH. **Sidebar:** the imagined outdoor gage would need an adjustable top end. Efficiency and curtailment will drive the top down, whereas EV's and heat pumps will drive the top upwards.

Breaking down the Goals: The resolution includes transportation and thermal, which are

critical. In order for people to not be overwhelmed, should we focus on the electric goal, at least for a few years until a process and program are up and running for 100% electric? Of course parallel efforts would be happening for transport and thermal, but in order to keep things “realistic”, might be good to break out goals for these three categories of energy use.

What is the electric Goal?: Does our definition of 100% renewable allow for imported power/energy via power purchase agreement (PPA), or do we require that a high percentage be local? May we fulfill some part of this goal with purchase of renewable energy certificates (RECs)? I could suggest a goal of 50% local energy, based on nothing more than a strong sense of self sufficiency, tempered by the need for reliable, large quantities of energy when the weather isn't cooperating locally. Regarding RECs, as Julia said last night, these are sort of a half hearted way to renewable energy. I would suggest fulfilling no more than 10% of the goal with RECs if at all. While it's true their purchase helps to finance distant renewable energy projects, the City wouldn't actually get any energy/capacity from the transaction. But they are quick, and easy to buy, particularly to make up a temporary short fall.

Who are the high level players?: I agree with George Hansel that Eversource buy-in would be great. Not necessarily easy, but great. Beyond that, who is going to enter contracts for renewable energy (PPA's)? Is the city going to form a municipal light company (as many NH towns have) or rely on the new community aggregation regs or simply rely on group net metering? Requires study and ask Clean Energy NH and PUC for guidance. What's Hanover doing along these lines?

Curtailement: we all know that energy efficiency improvements offer the greatest and cheapest potential, so I won't dwell on it. Next in line is curtailement, for example: shut down Keene Ice during the summer; shut off parking lot and some street lighting late at night (using that savings to charge EV's), get rid of one of your three TV's that are always running, etc, etc. Obviously these can all be construed as sacrifices. We should get used to pitching these as patriotic and environmental and cool (but not being a sales guy, I have no idea how you do this). I do know that our society is wildly wasteful, and we shouldn't assume that technology will solve all our problems. We should actually change our behavior and feel good about it.

Negativism: there will always be nay sayers. There was the gentleman in our small group last night (an old friend, actually!). There was the police chief worried about interrupting his antenna signals when we first proposed solar on the Keene Ice/DPW roof years ago (thank goodness we got past that one). We always need to be ready to compare the risk of climate change and not doing anything to minor perceived risks that people will throw in our path.

Specific technologies

Storage: brings multiple values. I've participated closely in the last two failed attempts to override Sununu's veto of Net Metering Cap 1 to 5MW. Last week we met with his top energy advisor and legislative liaison to learn more about their intransigence. They actually cited some relevant economic arguments, but I think lingering in the background is their multi-hundred thousand dollar donor, Eversource, and its concern that ever increasing penetration of net metering is going to be destabilizing, both for their finances and for the grid. I don't have a lot of sympathy for their finances, but I believe there is a legitimate concern about grid reliability at some level of distributed generation penetration due to the intermittency (diurnal & seasonal variability) of small scale renewables. Part of the cure is localized energy storage. In other words, storage is not just a cool technology tool, it's also a

political tool. There is progress: the GMP and Liberty pilots, and now the Westmoreland project. I think Keene should adopt a goal for local storage. It doesn't need to be deployed tomorrow, since prices are coming down, and different technologies are competing (Li, flow, concrete towers, compressed air). But I think our credibility and ultimately our resiliency go up if we include storage. Question: how much??

Hydro -existing: in western Cheshire Cty there are about 3700 KW of hydro operating. City could contract for some or all of this (I'll say no more, conflict of interest!). There is more small hydro available via group net metering, but as you know, this is a virtual exercise that usually doesn't bring new KW on line (rob Peter to pay Paul).

Hydro- potential: there's not much that's feasible in the area. Happy to discuss the Ashuelot Park dam as a case in point. The two projects that might warrant further study are Otter Brook and Surry Mountain. It's been years since I looked at them, and I don't know the available head or potential output, but the thing that would make them valuable is if the reservoirs could be used for some amount of storage. This would help iron out diurnal and maybe weekly swings (not big enough for monthly or seasonal). But attaining this type of operation would require a prodigious effort by the hydro developer, with rock solid backing from the City and State (and delegation) to convince the U.S. Army Corp not only to allow hydro development, but also to allow variations in impoundment level and downstream discharge. I've worked with the Corp on other sites and know that, w/o serious political support, nothing will happen. And further complicating any effort would be Nature Conservancy's work to use Corp dams to improve water quality/quantity. Pie in the sky: developing a new pumped storage project somewhere in the county using an old quarry....

Wind: offshore wind is out there in the wings, how long??? Annie and I collected several months of wind data on West Hill years ago and found the wind resource to be inadequate for commercial generation. I suspect that applies to most of the Keene hills, not that anyone is up for the fight of putting up windmills in sight of Keene!

Biomass: Annie and I are pretty firm believers that a major expansion of biomass for electric generation would be tough on wild forests. Equally important is the science that calls into question any carbon benefits during the bottleneck of the next few decades. That said, I don't believe existing plants should be closed. And there are solid arguments for small scale, super efficient biomass heating (aka Denmark).

Solar: My opinion: start with rooftops: residential, big box, and everything in between. Next, parking lots and brownfields. Parking lot arrays are great for shading, but the aluminum structure adds 25% to cost and adds embedded energy in all that aluminum. Let's get Bensonwood to design a wooden framing system for parking lot solar. Local material, local product. Of course, the fire chief/inspector may freak out about flammable wood, but this is where the risk of climate catastrophe belittles the risk of a burned up parking lot array. Filling good ag lands with solar seems like it should be a last resort. And cutting down trees for solar, even though our friends at Revision say it's 8-10 times more carbon avoidance, just doesn't strike me as a good idea. After all, the science on carbon sequestration of aging forests is evolving and it appears to favor forests.

Studies: what's proper ratio of local generation versus imported energy? what sort of entities/methods should the City use for procuring clean energy? how much solar can the city reasonably expect? how much storage makes sense?

Ok, out of time!

bob

ECC Energy Plan - Community Engagement Timeline (DRAFT)

		2019																																					
		May				June					July				August				September				October				November				December								
ENGAGEMENT TOOLS		5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29			
Monthly ECC meetings: provide updates, receive input, and establish Committee roles with respect to plan development	involve	Y				Y					Y				Y				Y					Y				Y				Y				Y			
Conduct informational interviews with key community contacts.	consult		Y	Y	Y	Y	Y	Y	Y	Y																													
Conduct focus/action groups (1 meeting with each group) (R.E. = Real estate; R. = Residential; B. = Businesses; I. = Institutions)	collaborate											R.E.					R.										B.							I.					
Create project webpage to provide project updates.	inform		Y																																				
Hold three community workshops to present draft objectives/strategies for each sector and receive feedback/input	involve																										#1												
Hold one final community forum to present on final draft plan prior to adoption by City Council	consult																																						
Present draft plan to City Council	inform																																						
Direct public to Clean Energy Team website	inform			Y																																			
Provide models, case studies, and success stories	inform					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y								
Provide informational videos	inform					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y								
Meeting-in-a-box (includes trainings and final input submission deadline)	empower											R.E.					R.										B.							I.					
Implementation Team Meeting (E/A/C = enviro ag, and conservation groups; E/F = energy and finance groups)	empower																																						
General Public Survey (includes initial survey distribution)	consult																					Y																	
Election Day Tabling	involve																																						

ECC Energy Plan - Community Engagement Timeline (DRAFT)

		2020																																																			
		January				February				March				April				May				June				July				August				September				October				November				December							
ENGT. TOOLS		5	12	19	26	2	9	16	23	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27
ECC Meetings	involve	█				█				█				█				█				█				█				█				█				█				█				█				█			
Interviews	consult																																																				
Focus Groups	ate																																																				
Webpage	inform																																																				
Workshops	involve																																																				
Forum	consult																																																				
City Council	consult																																																				
Direct to CET Website	inform																																																				
Provide Models, etc.	inform																																																				
Videos	inform																																																				
Meeting-in-a-box	empower																																																				
Implementation Meetings	empower																																																				
Survey	consult																																																				
Election Tabling	involve																																																				

Energy and Climate Committee Members 2019

1st Wednesday, 8:00 AM, 2nd Floor

Ch. 2. Article V. Div. 19. Sec. 2-1089. The energy and climate committee shall consist of 11 regular voting members, one of whom shall be a member of the city council, all of whom represent a cross section of organizations, institutions, businesses and interests in the city. Three alternates may be appointed to the committee. Membership shall not be restricted to residents of the city.

Kenneth M. Dooley, Jr. – slot 1
1st Term expires 12/31/21

Zach Luse – slot 7
1st Term expires 12/31/21

Jake Pipp – slot 2
1st Term expires 12/31/21

Cary Gaunt, – slot 8
1st Term expires 12/31/2019

Terry Clark, Councilor– slot 3
Exempt

Anna Schierioth – slot 9
1st Term expires 12/31/20

Dr. Ann Shedd, Chair– slot 4
2nd Term expires 12/31/20

Rodney Bouchard – slot 10
1st Term expires 12/31/21

Peter D. Hansel, Asst. Chair – slot 5
2nd Term expires 12/31/19

Andrew Dey – slot 11
1st Term expires 12/31/21

Chris Brehme – slot 6
1st Term expires 12/31/20

Three Alternate positions - Vacant

Staff

Rhett Lamb
Mari Brunner

Minute Taker

Ayshah Kassamali-Fox

Last updated 10/30/2019