

City of Keene
New Hampshire

ENERGY AND CLIMATE COMMITTEE
MEETING MINUTES

Wednesday, January 8, 2025

8:00 AM

**Room 22,
Parks & Recreation Center**

Members Present:

Paul Roth, Vice Chair
Councilor Bryan Lake
Maureen Nebenzahl
Lisa Maxfield
Kenneth Swymer
Gordon Leverage
Clair Oursler
Steven Larmon

Staff Present:

Megan Fortson, Planner
Emily Duseau, Planning Technician

Members Not Present:

Jude Nuru
Timothy Murphy
Annu Joshi Bargale
Jake Pipp, Alternate
Charles Redfern, Alternate
Rowland Russell, Alternate

1) Call to Order and Roll Call

Vice Chair Roth called the meeting to order at 8:07 AM.

2) Election of Chair & Vice Chair

The Vice Chair explained that Chair Luse's term on the Committee has ended and stated that he would entertain nominations for the positions of ECC Chair & Vice Chair on the floor. Without any nominations for the position of Chair from ECC members, Vice Chair Roth asked Councilor Bryan Lake what they should do. Councilor Lake explained that they do need a Chair of some kind. Usually, he would offer his services here, but he thought it inappropriate for the City Councilor on the committee to be the Chair. He encouraged one of the previous Chairs attending the meeting to speak about the amount of work that might go into it because some of the newer members might be nervous about the required time commitment.

Vice Chair Roth entertained that Mr. Zach Luse shared that "it is what you make it." He explained that there is a premeeting with City Staff to go over the agenda, which typically takes about twenty

minutes, and can be done via Teams. He stated that there is not anything else that the Chair is obligated to do. He shared that he did much more than he had to during his time as Chair and felt Mr. Peter Hansel did as well. The core task is running the meetings. He explained that he did more work to arrange and invite speakers in and put more thought into the items on the agenda.

Mr. Hansel added that occasionally, the group votes to send a letter to someone either in the Council or at the State, and it often falls to the Chair to draft the letter. He reiterated Mr. Luse's statement that it is not a heavy lift. Mr. Luse shared that he had situations where he was traveling and was able to get assistance from City Staff in drafting letters, adding that the staff was there to help you.

Vice Chair Roth asked if there were any nominations. Ms. Lisa Maxfield asked if they could nominate someone that was not there. Councilor Lake asked if she intended to nominate Mr. Jake Pipp. Ms. Megan Fortson clarified that Mr. Pipp is an alternate and, as such, cannot serve as Chair.

Ms. Maxfield asked if there were any open spots. Ms. Fortson explained that there are three new members, including one who filled Zach Luse's position on the committee. Mr. Roth stated that there were nine listed members and asked Ms. Fortson if that was correct. Ms. Fortson clarified that the agenda he was viewing was before the appointment of the new members. There are 11 regular members, three acting alternates, and two open spots for alternates.

Ms. Maxfield asked who the two members were not on the previous agenda. Ms. Fortson explained that the new members were Dr. Steven Larman, Mr. Tim Murphy, and Ms. Maureen Nebenzahl.

Ms. Brunner said it was possible to wait until the next meeting, to which Mr. Roth agreed, stating he was about to suggest that. Mr. Roth offered to serve as interim chair and reach out to new members to determine if there was any interest.

Mr. Roth welcomed nominations for Vice Chair, to which Ms. Maxfield nominated Mr. Roth. Councilor Lake seconded the nomination. With no one joining remotely, a hand vote was made. The vote for Vice Chair Roth to serve another term as Vice Chair was approved with all in favor.

3) Introduction of New Members

Ms. Fortson updated the committee on the changes in membership and explained that Mr. Luse timed out as chair. She thanked him for all his outstanding leadership. She shared that Mr. Michael Winograd had to resign unexpectedly from the committee. These changes in membership will go through the City Council approval process during their upcoming cycle of meetings. She reiterated that there are three new members. A new member in attendance, Ms. Maureen Nebenzahl, shared her real estate background. Vice Chair Roth thanked Ms. Fortson for the update and Mr. Luse for his service.

4) Approval of the Minutes – December 4, 2024

Vice Chair Roth welcomed a motion to approve the minutes. Mr. Ken Swymer motioned to approve, which was seconded by Councilor Lake. With all in favor and no opposition, the December 4, 2024, minutes were approved.

5) Community Power Presentation

Vice Chair Roth shared that friends from Standard Power were there to present updates on the Community Power Program and turned it over to Mr. Bob Hayden. Mr. Hayden stated that he was there to help answer questions, but his team member, Patrick Roche from Good Energy, would be doing the presentation.

Mr. Roche thanked the committee for the opportunity, sharing that he had a few slides to present and would walk them through a presentation with an opportunity at the end for questions. He recognized some new faces since he last presented and noted the familiar faces, like Vice Chair Path Roth. His team had worked closely with the committee on the Community Power Program and he recognized Peter Hansel.

Mr. Roche explained that he works for Good Energy, while Mr. Hayden works for Standard Power. Both companies are electricity consultants. He offered some backstory, explaining that they had teamed up for work in New Hampshire to deliver community power programs. Good Energy has extensive experience with community power programs, especially in states like Massachusetts and Rhode Island.

Standard Power also has deep experience in New Hampshire, and they have been working collaboratively with the committee since 2020. He shared that it has been a great process to get this program up and running, and now they are looking at the next project phase. They have met with the City Manager and staff and now want to update the committee and bring some things to the forefront for them to consider and provide feedback.

He wanted to provide some background since he knew some people may not be familiar with this. Keene Community Power is a community power program that is, effectively, a state-authorized process allowing for the pooling of the entire community's electricity to make bulk purchases. This helps give the small, particularly the small residential and commercial customers, access to buying power with terms and conditions that the most prominent electricity users get. Keene Community Power has been a way to help bring more renewable energy into the City and the supply mix while providing stable energy prices through these bulk competitive procurement contracts. This is part of Keene's more considerable effort to get 100% renewable energy for the community. A plan governs the program, so the community power plan is very high-level. They lay out the organizational structure and commit to how they intend to notify people, mainly when the program is launched.

The plan describes how they handle the opt-out process, ensuring people are correctly notified, and discusses the program's goals and products the community thinks they will offer. Still, it serves as a guiding document. Then, when the actual electrical contract is signed, they can determine the exact price, renewable content, and other specifications. The City initially adopted the plan and then City Council would approve any amendments. The City Manager provides the day-to-day direct management and oversight, issues the bids, and executes the power supply agreements. One of Good Energy's primary functions is to assist and provide high-level oversight throughout the procurement process. They help and complete all the education, outreach, and mailings to facilitate

optimization. They also offer quality assurance to the supplier. The collective team of Standard Power & Good Energy is essentially an extension of the City staff and they both help to operate the program.

When the plan was started, the Ad Hoc Community Power Committee advised and helped develop it. That committee has since been rolled into the Energy and Climate Committee, but the plan says that the committee will provide input to the City Council and the City Manager on any potential updates or changes to the plan.

He did not want to go into the entire timeline, but wanted to provide that background as context for the newer members. The Community Power Committee was created back in June 2020. In May 2020, the City Council adopted the first version of the plan. The plan was not launched, however, until 2023. Keene was head of the curve, which was great. When the law was passed to enable the development of a community power program, Keene moved forward with creating and adopting a plan; however, the Public Utilities Commission (PUC) was still in the process of developing a set of rules and regulations to fill in some of the details of the law that they had not yet addressed. This required a pause until those rules were in place. The City of Keene and his team heavily participated in getting those rules in place in June 2023.

As a recap of the program, he explained that it included fixed electricity prices for 30 months, which would take them through to December 2025. The program has four options: Keene Standard (community default), Keene Basic, Keene 50, and Keene 100. Keene Standard adds 10% renewable energy to the 2025 state standards. In 2025, the state standards are going to be 25%. Adding 10% would bring the plan up to 35% renewable energy for the community default (the Keene Standard plan). Individuals can also drop down to Keene Basic, which meets the state minimum requirement for renewable energy inclusion, or choose to opt up to 50% or 100% renewable energy by participating in the Keene 50 and Keene 100 plan options. This provided nice options for people to decide where they want to be and choose a plan that reflects that. The idea is that the vast majority of users would probably stay with the standard product. What a community decides to do with the standard determines the impact on a larger scale. Keene was looking to provide as many people as possible with cleaner electricity while keeping prices competitive.

All of the voluntary renewables they add above the state standard are considered Class 1 renewables. Essentially, this is the state's term for "new renewable energy," and that renewable energy has to be on the New England grid.

Mr. Roche said one of the things he also wanted to talk about is that part of the reason for choosing that class is its potential to affect the future growth of renewables in New England.

He showed a graph and explained that the graph is of the state's renewable portfolio standards. In 2023, you can see an extra bar. That bar is the level of voluntary Class 1 renewables that Keene will add to the default option. New Hampshire has several categories that make up the state's minimum renewable portfolio standards (RPS), but they are pretty much all static except for Class 1. He explained that Class 1 is light green bar shown on the graph. If you were to go back a decade, you would see that this has been the only piece of this RPS that has grown consistently. This is very similar to most of the other states in New England.

New England states all generally have a Class 1 designation for new renewables, and that quantity rises yearly. Thus means that new renewable infrastructure needs to be built and come online to meet that guaranteed demand from everybody in the market. He noted that if a community does not buy that amount of renewable energy, it results in a financial penalty. This is a suitable enforcement mechanism to ensure people buy appropriate amounts.

He shared that there are also a good number of studies out there. Berkley Labs has one he likes, and they do an annual update on these different standards across the region. One of the things Mr. Roche finds essential is that they continue to say that, particularly in the Northeast region, these Class 1 standards continue to increase and serve as a key driver of the growth of renewables in the area. This is important because cities like Keene voluntarily add a significant amount of demand for Class 1 over and above what the state standards are requiring, effectively accelerating and incentivizing that demand.

To put it in perspective, Mr. Roche explained that the green bar in 2025 represents the required class, which is just about 12% renewable energy. Keene is adding 10% on top of that, almost doubling it. In terms of scale, that 10% may not sound like a lot, but it is significant relative to where the state is, and this is also the strategy that is being pursued by several other communities in the state. The cities of Concord, Hanover, and Dover also added a 10% Class 1 renewable energy adder in their default product. Down in Massachusetts and Rhode Island, this is also the strategy. The cities of Boston and Worcester are doing this and he estimated that about 40 other cities and towns in Massachusetts are also participating. This significant movement in the region is driving a lot of extra demand for Class 1 renewables.

As for future growth in the region and understanding where things stand today, he showed another slide highlighting the number of accounts and percentages for each of their four products. It showed that 93% of the accounts in the program are with the default. Most people stay with the default option. They have seen that if people choose to move, more people have moved to the basic plan than to the 50% or 100% renewable options. About 4% of the accounts are in the basic category, with under 3% in either the 50% and 100% renewable options. The bottom row of the slide showed the total amount of Class 1 renewable energy, which can be measured either in MW hours purchased or what they call an "REC," which is a renewable energy certificate. Effectively, a REC is how renewable energy production is measured, certified, bought, and traded.

So, if one were to look at the emissions impact of those additional voluntary Class 1 RECs purchased above the state minimum, they would probably amount to avoiding about 6.4 million pounds of CO2 emissions. This figure can also be turned into several different equivalent measures. It is nearly 7,000 barrels of oil, for example. The point is that it has a definite impact on the number of actual emissions.

Ms. Maxfield asked if that was per the whole year or the whole program. Mr. Roche clarified that this was for the entire program. He noted that they would be able to provide the annual metrics later.

Looking ahead, Mr. Roche explained that after the December 2025 meter read, they can start to prepare for procurements effectively. He noted that they can procure the next electricity supply contract at any time before then. Historically, springtime has been a great time in the markets, and so effectively, the City wants to be ready to procure if a good opportunity presents itself. As such, they are looking for the committee's input in terms of the updated renewable energy levels and potentially including an "adder" fee as part of the updated program options. He explained that the electricity price covers all the requirements and power supply associated with purchasing electricity, capacity, ancillaries, and renewable energy certificates to meet the state minimum requirements. That price also includes the RECs and the cost of voluntary renewable energy, as Keene does today. It also includes a fee for Good Energy's services, eliminating any impact on the City's budget for this program. The critical thing to know is that the plan was approved by City Council and the Public Utilities Commission (PUC).

The PUC has also approved plans that have an "adder fee" that is used to fund energy-related services in the community. This fee serves to fund local energy projects or things that would be related to providing some energy-associated benefits. Keene's plan does not include that option now, but it would be a simple process to amend the plan to allow the City to do that. If this change were made, it would mean that a portion of each resident's electricity payment would be directed to an account in the City. Through their usual processes, the City could then determine what to do with that fee and how to use it, and he imagined that the ECC would be heavily involved in figuring that out. Mr. Roche said his goal was to provide the committee with an idea of what some of the trade-offs might be as they think about renewable energy and the fee and offer some of the building blocks to move towards deciding. He thought it would be great if they could get feedback from the ECC during the February meeting about where they would like to see things go.

Mr. Roche said some considerations to keep in mind are that whether it is additional renewable energy or a fee that are added into the program options moving forward, both are additional costs, and they want to be sensitive to how much additional cost is going into the default product. He noted that the focus is on the default product because that is the option most people will select. Suppose the goal is to collect enough revenue to do something meaningful or use enough renewable energy to have a meaningful impact climate-wise. In that case, it requires looking at what is happening with the default product. Adding additional extra Class 1 renewables would mean two things: one is that someone would be using cleaner electricity and have an indirect impact, as evidenced by the Berkeley study, on growing renewables in the future. It will allow the ability to point to the facilities where that renewable energy came from. Still, there will not necessarily be the ability to demonstrate that they caused a new solar field to be built. The evidence will be more general in that they will be supporting the growth of renewable energy sources.

The interesting thing about the fee is that it might offer a more direct impact because it would allow the community the ability to fund a particular and identifiable future renewable energy project. The fee option would require more time to collect the fee, and then once the money had been built up, they would need to contract for something to get constructed, resulting in a lag time.

In trying to demonstrate their direct impact, Mr. Roche explained that the 10% at the bottom of the slide is the additional Class 1 RECs today, which are about \$0.37 per kWh. That is the difference

between the Keene Basic and the Keene Standard options for the average residential user. It works out to be a cost of about \$30 extra over the course of the year or a couple of dollars a month.

Regarding the input he is interested in receiving, Mr. Roche explained that they are interested in whether the default product should have both the additional renewables and the fee or just one or the other. If the decision is to have additional renewables, he wanted their thoughts on whether that should be maintained at today's 10% level, noting there is an opportunity to increase or decrease it. He was interested in their thoughts on the fee and the fee amount. While this does not need to be set in stone, having a good sense of the magnitude would be helpful. Lastly, he sought input on whether the optional products should have fees. While they do not necessarily have to, there could be benefits to adding a fee to them.

Mr. Roche moved on to the next slide and explained that in today's contract, the cost of the REC is \$0.37 per kWh. In the middle row, the slide showed that for the next contract, it would likely increase to \$0.41 per kWh. The average annual cost today for the customer is about \$32. This could have a yearly impact of 10% for additional Class 1 renewables, which would be about 6,300 RECs purchased voluntarily, above and beyond what is required. If that dropped to 5%, it would be around \$0.2 and if you went up to 15%, it would increase to approximately \$0.06, which is over half a cent.

He stated that an astute observer would notice that the number of RECs purchased between the three options does not increase linearly. That is because the 50% and 100% options still purchase roughly the same amount of renewable energy.

In looking at the fee, if a \$0.1 fee is collected for one year, it would be about \$58,000 worth of revenue. Collected for three years (keeping in mind the City will be looking at multiple different term lengths) that would increase the revenue to \$174,000. Mr. Roche explained that the slide presents general figures but provides a sense of scale based on what it costs to develop small-scale solar projects today. If Keene considered building a solar array, thinking about size would be necessary. A \$0.1 one-year fee could fund roughly a 14-kilowatt solar array. He believed that the typical residential system is about 7 kilowatts, which gives a sense of size. Collecting that three-year fee would allow funds for a 42-kilowatt solar array.

Mr. Roche continued to explain that the second table demonstrates that if they collect a \$0.37 fee and do not collect or buy any additional Class 1 RECs, there is potential to use that same amount of money and collect it as a fee. In one year, that would result in \$214,000, and collected for three years, it would result in \$643,000, which could be used to fund a much larger solar array.

All of these are meaningful amounts of money. There is only so much space in the default regarding how much cost could be added before people determine that the product is not for them. He thanked the ECC for having them and hoped his presentation provided information that allowed the group to dig into this topic.

Ms. Brunner spoke and said she did not want to cut off any discussion, but she knew they had Mr. Hayden from Standard Power available if anybody had questions. She suggested the committee consider mulling this over, and noted that the slides can be sent out for review. Mr. Hansel added that the committee might want to consider setting up a work group to examine this. Ms. Brunner

added that the City Council is the ultimate decision-making body and suggested getting a recommendation to them sooner rather than later. If a working group would be interested in meeting this month, she supported the idea and said she would be happy to meet with them.

Vice Chair Roth thanked Mr. Roche for the presentation and moved on to the next item on the agenda. He stated they had Ms. Nora Traviss available to present on Fine Particulate Matter.

While Ms. Brunner and Ms. Traviss worked on pulling up the presentation, Mr. Roth welcomed any questions on Mr. Roche's presentation. Mr. Bob Hayden wanted to explain that the REC cycle is that the money accrued from the RECs goes to the PUC and is distributed for new projects, which is done continuously. He added that collecting additional RECs or buying additional RECs does not guarantee they will go to one project. A community must apply to the PUC to get yearly grants associated with the revenue generated from renewable energy certificates.

Mr. Swymer asked Mr. Hayden if the idea of adding a fee was to gradually transition from buying credits to having those credits to build funding. Mr. Hayden responded that it could do a few things if you have that fee. It allows you to direct the money to a specific project in the community. It also generates more renewable energy certificates, which you could either retain or sell at a fee. That same 4/10 of a cent is relative to the ones you produce and have at your disposal. If they are retired, the greenness is also retired. If they are sold, money keeps circulating in your ability to fund new projects.

Mr. Roche added that the idea was to transition from buying them into producing them; however, it can take a long time to make what would be purchased for 10%, adding that scale is a key factor.

Mr. Hansel wanted to put this at a 3000-foot level; the task for the committee is to try to guide Keene towards 100% renewables for electricity in five years. He explained that they are roughly between 35%-40%. Considering that of that 45%, approximately 25% is being mandated by the state, 10% and above is what the City is getting from their program. In addition, what the City generates within its borders is not counted, which might get up to 35%-40% of total renewable energy used in the community. The goal is to get to 100%, so that is where the gap is and what needs to be kept in mind.

6) Fine Particulate Matter Presentation

During her presentation, Dr. Nora Traviss, Professor Emerita at Keene State College & Senior Scientist at NESCAUM, provided an update on her air quality research and findings. Dr. Traviss, who served as a professor for 20 years and currently works as a senior scientist for the Northeast States for Coordinated Air Use Management (NESCAUM), highlighted key insights from an ongoing study on fine particulate matter (PM 2.5) exposure in the Keene community. The study's results are currently under peer review and are aimed for publication by April.

Dr. Traviss explained that air quality monitoring data from sensors and federal equivalent monitors revealed significantly elevated PM levels in certain Keene areas, with localized exposure disparities. Notably, the area near the middle school exhibited the highest 8-hour average of 71 micrograms per cubic meter, far exceeding the EPA's standard of 35 micrograms per cubic meter

over 24 hours. Despite daily fluctuations that moderate seasonal averages to around 15 micrograms per cubic meter, the findings underscore wood smoke's contribution to heightened PM levels during winter air inversions.

She emphasized that the centrally located federal monitor does not fully represent the diverse exposure levels experienced across Keene neighborhoods. Dr. Traviss encouraged residents to consider using portable air purifiers, which have been shown to reduce indoor fine particulate matter, particularly when placed in bedrooms. She directed attendees to resources such as Consumer Reports for recommendations. She advised prioritizing units with a high Clean Air Delivery Rate (CADR) while avoiding unnecessary features like ozone or UV capabilities.

Dr. Traviss also highlighted the importance of public outreach, noting that such efforts had stalled since the COVID-19 pandemic. She acknowledged Henry Underwood, a Senior Planner at Southwest Region Planning Commission, with whom she has previously collaborated with on public outreach initiatives. She praised ongoing community engagement through social media platforms like Facebook, where updates and resources are shared.

Lastly, Dr. Traviss expressed enthusiasm for the state's citizen air monitoring program, which has expanded upon the local project's success, and extended gratitude to the many contributors and funders who supported the research. She concluded by inviting questions and welcoming volunteers to participate in future efforts.

Dr. Traviss thanked the ECC and welcomed any questions. Vice Chair Roth thanked Dr. Traviss and welcomed questions but noted that the meeting was running late, apologizing for running over. Councilor Bryan Lake shared that he had a few questions and asked if it was possible to email them to Dr. Traviss. Ms. Brunner offered to send the slides and Dr. Traviss's e-mail to committee members for follow-up questions.

Vice Chair Roth recognized Henry Underwood, representing the Southwest Region Planning Commission. During the meeting, Mr. Underwood provided an update on outreach activities related to fine particulate air pollution. He began by emphasizing the ongoing relevance of this issue and suggesting that the City and the committee could play a more active role in addressing it.

He explained that the Southwest Region Planning Commission (SWRPC), one of nine regional planning commissions in New Hampshire, has provided technical assistance to municipalities in various areas for over 50 years. The commission became involved in air quality initiatives due to elevated fine particulate matter pollution levels detected in the region, with Keene's air quality being of particular concern. Mr. Underwood noted that these elevated levels, exceeding the EPA's standard of 35 micrograms per cubic meter, could potentially lead to additional regulatory measures across Cheshire County.

Around 2012, a coalition of partners—including Keene State College, the City of Keene, Cheshire Medical Center, and others—developed a strategy to address these air quality concerns. This effort focused on public education and outreach, producing materials and presentations based on the EPA's "Burn Wise" principles: burning the right wood correctly and using the right stove. Mr.

Underwood highlighted that proper wood moisture content, EPA-certified stoves, and proper combustion techniques can significantly reduce fine particulate matter emissions.

He provided examples of past outreach efforts, including news releases, presentations, and educational materials designed to increase community awareness and offer practical solutions for improving air quality. Mr. Underwood emphasized that the committee has an opportunity to reinvigorate such campaigns and invited collaboration to brainstorm future initiatives.

In closing, Mr. Underwood shared practical tools for monitoring air quality, recommending the AirNow app and EnviroFlash service. These tools provide real-time air quality data and forecasts, enabling individuals to adjust their activities based on air quality conditions, particularly for those individuals sensitive to poor air quality. He encouraged the committee and residents to leverage these resources and was willing to support future efforts.

Vice Chair Roth thanked Mr. Underwood for abbreviating his speech and noted that this is very relevant and that he looked forward to digging further into it. Dr. Traviss responded that she believed that when there was more outreach previously, they were hitting a stride. Now, with oil prices, wood stove usage has increased. She also underscored Mr. Underwood's point that most people do not know about wet wood and how it significantly reduces fine particulate matter. To be able to get that message out certainly relates to the mission of the ECC.

- 7) **2025 Monadnock Region Earth Day Festival**
- 8) **2025 Meeting Schedule & Retreat Updates**
- 9) **Work Group Report Outs**
 - A) **Community Solar**
 - B) **Grants, Fundraising and Partnerships**
 - C) **Education and Outreach**
 - D) **Legislative Tracking**
 - E) **Food Security**
- 10) **New Business**
- 11) **Next Meeting: Wednesday, February 5, 2024, at 8:00 am**
- 12) **Adjournment**

The Vice Chair noted that the meeting had reached the maximum of their available time and suggested postponing the remaining agenda items to a later date. Vice Chair Roth requested a motion to adjourn the meeting, given there was no new business to attend to. Ms. Lisa Maxfield offered a motion, which was seconded by Councilor Bryan Lake.

There being no further business, Vice Chair adjourned the meeting at 9:24 AM.

Respectfully submitted by,
Amanda Trask, Minute Taker

Reviewed and edited by,
Megan Fortson, Planner