CITY OF PORTSMOUTH NH
Portsmouth Energy Advisory Committee

AGENDA

Wednesday, July 24, 2024 at 6:30 pm
City Hall Conference Room A
and via Zoom

Members of the public may attend in person or via Zoom. To attend via Zoom, you must register in advance. Please click on the link below or copy and paste this into your web browser:

https://us06web.zoom.us/j/86768321481

After registering, you will receive a confirmation email containing information about joining the meeting.

AGENDA

1. Chair comments and roll call
2. Approval of June minutes
3. CPCNH new rates for Augst 1, 2024 through January 31, 2025
4. Opt-ups and explaining RECs
5. Community Conversation “Solar for All” - recap
6. NREL meeting on sewer plant renewable energy options
7. Seacoast Green Challenge - draft press release
8. Old business
9. Public comment

CITY OF PORTSMOUTH NH
Portsmouth Energy Advisory Committee
Wednesday, June 5, 2024 at 6:30 pm

Meeting recording:
6.5.2024 Portsmouth Energy Advisory Committee (youtube.com)

Attending: Councilor John Tabor, Tom Rooney, Kevin Charette, Betsy Blaisdell, Tracey Cameron, Peter Somssich. Via Zoom: Herb Lloyd. Excused: Councilor Cook, Ben D'Antonio. Staff: Jillian Harris, Stephanie Seacord (recording secretary)

1. Roll call – Chair Tabor called the meeting to order at 6:35 pm.
2. Approval of Minutes – on a motion by Betsy Blaisdell seconded by Peter Somssich.
3. Chairman's remarks
    i. City Council voted unanimously to engage NRLB on a renewables feasibility study for the Peirce Island Wastewater Treatment facility. Requested the PEAC think about its work for the balance of the year during this discussion, to determine where the most impact can be made.
4. Solar working group update – Betsy reported meeting with the Sustainability Committee and their plan to partner on a Community Conversation, July 11 at 6:30 pm in the Levenson Room of the Portsmouth Public Library. She supplied this outline and notes for the event:

PEAC Community Conversation - Renewables
Levenson Room on Wednesday July 11th from 6:30-8

I. Context Setting (2 min)
    a. Current US personal carbon budget
    b. What we need to achieve
II. City's Climate Action Plan Overview (2 min)
    1. Building Energy Conservation and Efficiency
    2. Clean Buildings and Transportation
    3. Renewable Energy Production and Procurement
    4. Sustainable Waste Management
    5. Climate-Smart Land Use
III. What the City is Doing- quick slide with highlights (2 min)
IV. The Importance of Efficiency (5 min)
    a. Fastest to slowest payback chart
    b. Rebates and resources
V. The focus of tonight's presentation: Accessing renewables (20 min)
    a. Community Power Opt-in
    b. On-site solar
        i. What you need
            1. Sunlight

2. Real estate
3. Permission (condo assoc. or landlord, city, grid interconnection)

ii. Financing options
1. Lease
2. Loan
3. Cash

iii. Getting quotes
1. Solar developers – who are they/what do they offer
2. What you need to know

iv. Financing pros and cons

VI. Introduction to Portsmouth experts (1 min)

VII. Breakout groups (condo/rental; homeowners) with leading questions (30 min)
a. What are the benefits?
b. What barriers do you have to overcome?
c. For experts: what lessons did you learn; what would you do differently?

<u>Feedback from the 6/6/2024 PEAC meeting:</u>
John to send me some contacts (Byron Matto – on the school board)
Peter to send a neighbor who did SunRun leasing
Ask a realtor about resale values for solar homes
Stephanie/Monte to promote thru City channels: newsletter, social media, website, Library
Determine CPCNH marketing support and invite
Tracey/Tom to send NH Saves contact

5. Seacoast Green Energy Challenge – Chair Tabor and the City Manager held a Zoom call with Dover, Durham, Newmarket and Rye and set the challenge parameters:
   i. Trophy to the town that increases opt-up enrollments by the greatest percentage.
   ii. Trophy to the town who improves its renewables by the largest percent
   iii. Provide "I've opted up! Portsmouth Community Power" lawn signs to raise awareness and recognize participation.
   iv. The towns will meet again on June 28 to refine the challenge. Goal is to conduct a promotional blitz in conjunction with the July announcement of the new rates effective August 1, 2024.
6. CPCNH –
   i. The Committee discussed the new CPCNH possible 5th option on rates: an "adder rate" that allows a member (PCP) to add a few pennies to build a savings reserve intended for a specific project. This is separate from the CPCNH reserves currently being built and which will ultimately provide funds for a PCP project. PEAC agreed that it makes sense to see what the member communities of Peterborough and Enfield do with their pilot adder rates. Kevin noted that since it would be an optional rate rather than being applied across all customers, the funds collected through an adder rate would be small.
   ii. There is no update on the net metering legal challenge CPCNH is pursuing but unlike MA and CT there is no defined decision schedule in the NH PUC docket. Betsy reported an offhand discussion with a Lowe's employee who sells solar panels. When asked what Portsmouth customers see as the biggest obstacle to going solar he said, "Not being able to participate in Portsmouth Community Power."
7. Municipal energy conservation work – Herb's discussion with DPW Director Peter Rice about the NLRB study led to additional discussion about the city's existing conservation initiatives and energy management program contract, renewables and energy efficiency projects such as anaerobic digesters at Peirce Island WWTF and municipal energy contracts. Peter and Brian Goetz also agree

with Herb that we have a long runway for implementing the recommendations that come from the NLRB report.

8. Future item – Among the discussion items with Peter Rice was the idea of the Jones Avenue capped landfill as a potential solar array site (along the lines of the Exeter solar array description and cash flow in the packet). There are many questions to answer: weight and ground penetration affecting the cap, own or lease? Where would the power go (interconnect infrastructure)? Kevin observed that this type of project is on the CPCNH Project Director's radar, especially while Federal funds are available for 30 percent of the upfront investment. At the same time, it would build goodwill with citizens to see Portsmouth taking action.
9. Tracey suggested PEAC might define some energy efficiency/savings benchmarks:
    i. Portsmouth Public Library LEED benefits
    ii. DPW energy and facilities management results – Lebanon has documented millions of dollars saved through the city's programs.

Next meeting: Wednesday, July 10, 2024 at 6:30 pm

Meeting adjourned on a motion by Tracey, seconded by Peter at 8 pm.

CITY OF PORTSMOUTH NH

July 16, 2024

Portsmouth Community Power Announces Lower Electricity Rate from Community Power Coalition of NH, Effective August 1, 2024 through January 31, 2025

Portsmouth, New Hampshire – The Community Power Coalition of New Hampshire (CPCNH) Board of Directors has announced an 18 percent decrease in the Portsmouth Community Power base electric rate compared to the rate Eversource has requested from the Public Utilities Commission for the same period. A base rate of 8.6¢ per kilowatt-hour for residential and small commercial customers goes into effect from August 1, 2024 through January 31, 2025 for Portsmouth and other CPCNH customers. Customers do not need to do anything to receive this new rate but do have the option to buy electricity from more renewable sources.

The default 8.6¢ per kilowatt-hour Granite Basic rate from CPCNH is for electricity generated with 24.3 percent renewable sources. Portsmouth customers also have the choice to "opt-up" to 33 percent or even 50 percent renewable power sources while still paying less than the Eversource default rate of 10.403¢. Options include 9.3¢ per kilowatt-hour for Granite Plus with 33 percent renewable and 10¢ per kilowatt-hour for Clean 50, with 50 percent renewable. Clean 100 with 100 percent renewable sources is just 12¢ per kilowatt-hour.

"Right now, 11,927 local residents and businesses in Portsmouth take advantage of Portsmouth Community Power," said Councilor John Tabor, chair of the Portsmouth Energy Advisory Committee that oversees Portsmouth Community Power. "From the launch of Portsmouth Community Power in May 2023 through March 2024, the program delivered $3.1 million in benefits to Portsmouth ratepayers: $1.8 million in rate savings and $1.3 million in reserves that provide rate stability. Portsmouth Community Power is also enabling residents to make real strides in addressing the goals of the City's Climate Action Plan by opting up to reduce our carbon footprint. To opt up to Granite Plus, Clean 50 or Clean 100 options, go to portsnh.co/commpower."

"CPCNH empowers communities to better control their energy future with enhanced local control, greater customer choice, and low competitive rates," said Brian Callnan, CEO of CPCNH. "We are excited to continue to deliver on these goals and create significant cost savings for our communities, including for those customers looking for more renewable energy."

Since launch, CPCNH has offered the state's lowest residential and small commercial energy supply rates and collectively has created nearly $14 million in customer savings to utility default rates and $23 million in collective CPCNH member community reserves for rate stability. There are now 58 municipal or county CPCNH members serving 66 communities and representing more than 35 percent of the population of New Hampshire. For more information, visit: portsnh.co/commpower.

1/24/24

City of Portsmouth
City Council
Attn: Deaglan McEachern, Mayor and Councilors
1 Junkins Avenue
Portsmouth, NH 03801

Re: Community Based Power: Does Opting Up reduce CO2 emissions?

Dear Mayor and Councilors,

Does Opting Up with Community Based Power to the Clean 100 power option reduce CO2 emissions? The Council is currently considering a proposal to exempt solar power from HDC jurisdiction. A statement was made at the last meeting that one can "opt-up" and achieve essentially the same benefits as installing solar power. We can evaluate this by evaluating the reductions in CO2 emissions.

The average residential customer will pay an extra $28/month more for opting-up to Clean-100. Consumer Power uses those funds to purchase Renwable Energy Certificates (REC's), which provide a subsidy to clean power providers. One REC per megawatt. For example, for the solar power system on our house we receive $216 per year in REC payments.

There are no published estimates of reductions of CO2 emissions from opting-up. I think we need to find a way to quantify CO2 emissions to the best of our ability. The following is an analysis using three different approaches: Present, Future by Incentives and Future by Funding.

Below are the outcomes of these analyses. The section following describes these approaches in detail.

SUMMARY OF ANALYSES

APPROACH #1: THE PRESENT: There is no reduction in CO2 emissions. The electricity used by the customer is not generated from 100% renewables. It is generated by the same mix of fuels supplied to the power grid. There is only one set of wires and one stream of electricity.

APPROACH #2: THE FUTURE: INCENTIVES: The incentive amounts to about 1% of the cost of the system per year, using my solar power system as an example. The effectiveness of the incentive is unclear due to the small size of the incentive.

APPROACH #3: THE FUTURE: PROPORTIONAL FUNDING: The REC's that are purchased with the extra funds paid by the customer can be credited with between 11.7% and 18.2% of the reduction of CO2 emissions resulting from direct investment in solar power.

SOME BACKGROUND INFORMATION

Opting-up to the Clean 100 power option adds $28/month to the bill for an average residential customer. How are these extra funds used?

Attached is a copy of question 23 in the FAQ section from the Community Power of NH website. It answers the question directly. It explains that the extra funds are used to purchase REC's (Renewable Energy Certificates) from clean power generators.

The following is an excerpt from the attachment that explains this:
"To meet state law, and to verify the increased renewable content for customers who "opt-up" the Coalition purchases Renewable Energy Certificates (RECs).

New Hampshire's Renewable Portfolio Standard (RPS) requires all electricity providers to acquire specific percentages of RECs sourced from five different categories of renewable resources: Class I (new renewable resources), Class I thermal (useful thermal energy), Class II (new solar), Class III (existing biomass / methane), and Class IV (existing small hydroelectric)."

REC's are paid by the New England power pool to clean power producers to provide a subsidy for clean energy. For example, the solar power system on our house generates REC payments to us of $216 per year.

APPROACH #1: THE PRESENT: Does Opting Up to the Clean 100 power option reduce CO2 emissions in the present?

When I first heard about this program, I had the impression that the electricity coming through the wires to a customer was somehow different than the power provided by choosing the default option or Eversource. I think this impression stemmed from the use of terms such as "Clean 100" and "100% Renewable Content" in the Consumer Power literature. Digging a little deeper it is clear that there is only one set of wires and only one stream of electricity flowing through those wires.

If a residential customer opts-up to clean 100 and pays the extra $28 per month, does the mix of fuel sources that generated that electricity change? No. There is only one set of wires and one stream of electricity.

No matter whether it is purchased from Eversouce or Community Power, and what power option is chosen, the electricity was generated by the same mix of power generation that is currently supplying the grid. The REC payments do not increase the percentage of clean power in the mix in any immediate way, so there is no present reduction of CO2 emissions.

APPROACH #2: THE FUTURE: INCENTIVES: Does Opting Up to the Clean 100 power option reduce CO2 emissions in the future by way of incentives?

The REC program provides a subsidy for clean power generation and therefore an incentive to those considering installing clean power systems. But it is unclear that it is large enough to be an effective motivator.

Every system is different, but the numbers from one system are helpful in framing the issues. Using the solar system on our house as an example, the system cost was $22,971. Our savings on our 2023 power bill was $2,477. The REC payments in 2023 were $216. The REC subsidy amounts to about 1% of the installation cost per year and 9% of the savings on the power bill. Because the REC subsidy is so small, it played no part in our decision to install the system.

Do the REC subsidies cause clean energy producers to increase production or invest in additional systems? They seem to be too small to be effective. The effectiveness of the subsidy is unclear. So any reduction in CO2 emissions under this analysis approach is unclear.

APPROACH #3: THE FUTURE: PROPORTIONAL FUNDING: Does Opting Up to the Clean 100 power option reduce CO2 emissions in the future by way of Proportional Funding?

One can calculate the present value of a projected income stream. That present value can be used to analyze the proportional funding of a clean energy system. This approach results in a quantifiable reduction in CO2 emissions.

Again, using the solar system on our house as an example, we can calculate the present value of the projected subsidy of $216 per year over an expected 20 year system life. The present value calculates to $2,691, assuming a 5% inflation rate.

This can be characterized as a one-time subsidy for installing the clean power system. In the case of our system, $2,691 amounts to 11.7% of the cost of the system. The REC payments can be credited with an 11.7% reduction of CO2 emissions. In the case of our system, 11.7% of 15,000 pounds, or a reduction in CO2 emissions of 1,755 pounds per year.

This number improves if the calculation is scaled up to the full amount of the customer's extra payment of $28/month, which equals $336 per year. Based on the ratio of the customers REC payments of $336 and our systems receipt of $216 per month, the extra customer payments can be credited with an 18.2% reduction of CO2 emissions: 2,730 pounds per year.

In the future Community Power may use the extra $28/month to directly purchase clean power instead of purchasing REC's. The amount of reduction of CO2 emissions under that scenario will depend on whether the directly purchased clean power newly added to the grid or is already supplying the grid. It will also be necessarily limited by the ratio of the extra $28 to the total bill of $91, or about 30%

SUMMARY

The average residential customer will pay an extra $28/month for opting-up to Clean-100. Consumer Power uses those funds to purchase REC's, which provide a subsidy to clean power providers. One REC per megawatt.

Three approaches have been employed to attempt to quantify the reductions in C02 emissions.

APPROACH #1: THE PRESENT: There is no reduction in CO2 emissions. The electricity used by the customer is not generated from 100% renewables. It is generated by the same mix of fuels supplied to the power-grid

APPROACH #2: THE FUTURE: INCENTIVES: The incentive amounts to about 1% of the cost of the system per year. The effectiveness of the incentive is unclear due to its small size.

APPROACH #3: THE FUTURE: PROPORTIONAL FUNDING: The REC's that are purchased with the extra funds paid by the customer can be credited with between 11.7% and 18.2% of the reduction of CO2 emissions resulting from a direct investment in solar power.

I want to be clear that Community Power is an excellent step forward in the renewable energy transition. Opting up with community power is a great way to support/ fund existing clean energy generators. The benefits are NOT equal to solar power, but people who are unable to go solar (renters, condo owners, homeowners with shaded roofs, etc.) can still support the renewable energy industry by opting up.

This letter is offered to help the Council, Planning Board, and HDC have a conversation and make a decision on the solar power question. Thank you for your work on this issue.

Sincerely,

Joe Caldarola

From: Mark Bolinger <Mark.Bolinger@communitypowernh.gov>
Sent: Monday, July 15, 2024 2:32 PM
To: Clifton Below <clifton.below@communitypowernh.gov>; lisacsweet@comcast.net <lisacsweet@comcast.net>
Cc: Brian Callnan <brian.callnan@communitypowernh.gov>; Councilor John Tabor <councilor.tabor@cityofportsmouth.com>; Henry Herndon <henry.herndon@communitypowernh.gov>
Subject: Re: Citizen input questioning use of RECs - time sensitive

Hi John. In addition to the various thoughts that Clifton and I relayed earlier in this email thread, **we've collectively gone through your draft "talking points" and edited or augmented them per your request. The edited versions are pasted directly below**; we hope they are useful. Thanks for raising this important issue and forwarding Mr. Caldarola's letter. If anything notable comes out of your meeting tonight, please let us know!

Best,
-Mark

...it's true, you are not buying renewably generated power to your house. Grid power is grid power. But you are buying, and can importantly claim, green energy generation on the grid. RECs directly support more renewable energy generation in a proportion of one REC for every megawatt-hour of renewable generation, helping solar, hydro and wind development be competitive with fossil fuel generation. The purchase of a REC means no one else can claim the support for that renewable generation. The more support, the higher the demand for Renewable Generation. By exceeding the state mandate (Renewable Portfolio Standard) we help to reduce the supply of RECs, increasing the need for renewable generation in the region.
RECs are used all the time by entities of all kinds as acceptable offsets to carbon emissions (Google for example). They count in Portsmouth's measurements of carbon reduction, as they do for other towns and cities. Our Energy Advisory Committee wanted to be very clear about that in understanding "opt ups".
CPCNH is working to buy renewables directly from solar and other types of renewable generators in New Hampshire with hopes to conclude its first solar facility output purchase this summer, with more to come. However, it is a goal of the Coalition to enable Member cities and towns to grow their contract base for renewable energy because it enables greener power to flow to customers, helps stabilize costs (because the fuel is essentially free), or otherwise meets the local community's energy and climate objectives.
CPCNH is developing "Environmental Disclosure Labels" for each of its products, including the "opt-up" products. This helps the buyer quantify the emissions difference between each product. We have just completed our first Calendar Year (RPS Compliance year) and will have these disclosure labels completed in a month or so for review.
As a note on the overall value of a REC: I forwarded these questions to CPCNH and they assured me that while the REC value for an individual residential photovoltaic (*PV) system*

may seem small, it makes a significant difference to larger systems, often 20-30% of the value of the output from a larger commercial solar facility. This significant value can make the difference in getting a project built or not getting one built.

From: Mark Bolinger <Mark.Bolinger@communitypowernh.gov>
Sent: Monday, July 15, 2024 11:16 AM
To: Clifton Below <clifton.below@communitypowernh.gov>; lisacsweet@comcast.net <lisacsweet@comcast.net>
Cc: Brian Callnan <brian.callnan@communitypowernh.gov>; 'Councilor John Tabor' <councilor.tabor@cityofportsmouth.com>
Subject: Re: Citizen input questioning use of RECs - time sensitive

Thanks, Clifton. Yes, my main thought on this letter is very similar to your first bullet. The value of a REC to a small residential system is not all that material, given the relatively high cost of smaller installations (which can't take advantage of economies of scale) and the relatively high value that they otherwise earn from avoiding retail prices. But for larger commercial PV systems—which typically cost less (due to economies of scale) and generate more kWh/kW (due to optimal orientation, oversizing the array relative to the inverter, and perhaps using single-axis tracking), and therefore have a lower levelized cost of energy (LCOE)—the value of a REC can make a significant contribution to total revenue received. The letter from Mr. Caldarola focuses exclusively on his own residential system, and so doesn't really capture the more-substantial impact of RECs on larger commercial systems.

In general, though, his point is well taken—RECs are certainly not a perfect mechanism by which to procure renewable generation. Rather, they are primarily a legal and accounting construct that enables the attributes of different types of generation to be stripped away from the underlying generation itself and be sold separately (given the physical limitations that Mr. Caldarola notes—i.e., one grid, one wire), all while avoiding double-counting.

We are working to try to buy renewable generation directly from newly built solar projects (though, as Clifton notes, there are legal/regulatory challenges). But even once we're able to do that, we will still rely to a great extent on RECs as the underlying currency of such transactions, as that's the way that the market is set up to operate.

Best,
-Mark

From: Clifton Below <clifton.below@communitypowernh.gov>
Sent: Monday, July 15, 2024 10:55 AM
To: lisacsweet@comcast.net <lisacsweet@comcast.net>
Cc: Brian Callnan <brian.callnan@communitypowernh.gov>; Mark Bolinger <Mark.Bolinger@communitypowernh.gov>; 'Councilor John Tabor' <councilor.tabor@cityofportsmouth.com>
Subject: RE: Citizen input questioning use of RECs - time sensitive

Thanks for sharing this Lisa. A couple of thoughts, which I hope will be reflected in Mark and Brian's response, but are already reflected in John Tabor's brief explanation to some extent:

- Although the value of RECs may not be a material factor when someone decides to install PV at their home or business, because most of the value is in usage behind-the-meter (BTM)* offsetting the full suite of kWh charges on the electric bill it is often decisive for most larger projects. For systems up to 100 kW the export value that includes credit for 100% utility default service and transmission charges and 25% of distribution charges, REC value may also not be quite critical, though it often makes the difference that makes projects pencil and get built. (It was key to getting a package of systems built on City of Lebanon facilities.) However, for most, if not all, projects over 100 kW, which only get the default service supply rate if net metered, the projected value of RECs is not only material but decisive in determining whether the project gets built, or in the case of some existing smaller hydros (< 5 MW) and biomass facilities, whether they continue to operate. So, maintaining the demand for RECs is actually critical for getting new renewables built in NH and New England, as well as keeping some renewables operating. Purchasing discretionary RECs does drive GHG reductions on the margin in terms of what new generation gets proposed and built.
- The power provided from the distribution grid will always be an undifferentiated mix of whatever is generated at that point in time and injected into the grid. Choosing more renewable content is about choosing what generation operates (and gets built) to put more renewables into the grid. The emission and other environmental attributes of renewables goes with the REC. Each REC does represent 1 MWH of actual qualifying renewable generation in New England. Overtime the environmental disclosure statements for our cleaner more renewable products will change based on how those attributes can be accounted for, which is fairly consistent across New England.
- Mr. Caldarola makes this observation:

In the future Community Power may use the extra $28/month to directly purchase clean power instead of purchasing REC's. The amount of reduction of CO2 emissions under that scenario will depend on whether the directly purchased clean power newly added to the grid or is already

…

- Under NH law we could not properly claim such CO2 reduction from purchasing clean generation if it generated RECs and they were sold to someone else. The buyer of the RECs can claim the CO2 reductions and they can't or shouldn't be counted twice.
- Unfortunately, we are still not able to purchase distributed renewable generation to use to offset our load, as much as we would like to. That is what HB 1600 was all about (for 1 MW to 5 MW community scale renewables) as well as other regulatory and legislative initiatives that we have been and continue to work on. We can buy centralized renewable generation from the ISO-NE market and have tried to solicit power from larger hydroelectric facilities (that don't generate RECs but are renewable), but so far we have not received competitive bids for such.

Clifton Below
Chair, Community Power Coalition of NH ❖ Assistant Mayor, City of Lebanon
personal office: 1 COURT ST, STE 300, Lebanon, NH 03766-1358
(603) 448-5899 (O), 667-7785 (M) ❖ CPCNH.org ❖ www.linkedin.com/in/clifton-below

From: lisacsweet@comcast.net <lisacsweet@comcast.net>
Sent: Friday, July 12, 2024 3:44 PM
To: Clifton Below <clifton.below@communitypowernh.gov>
Subject: Fwd: Citizen input questioning use of RECs - time sensitive

Hi Clifton,
This is an email thread from John Tabor in Portsmouth. They are launching an opt-up campaign and John received a well reasoned letter asking good questions about the value of RECs.

Brian has shared with Mark and they will be working with John to make sure concerns are addressed.

I just wanted to share with you as the attached is a really good letter asking great questions. For me it helps to frame the current situation and why it is important for us to work together to add more renewables to the grid.

Thanks,
Lisa

☼ Lisa Sweet
Rye Energy Committee Member
lisacsweet@comcast.net

Begin forwarded message:

From: Councilor John Tabor <councilor.tabor@cityofportsmouth.com>
Subject: Citizen input questioning use of RECs - time sensitive
Date: July 11, 2024 at 3:30:36 PM EDT
To: 'Henry Herndon' <Henry.Herndon@communitypowernh.gov>
Cc: Brian Callnan <brian.callnan@communitypowernh.gov>, "Rooney, Tom" <TRooney@trccompanies.com>, Lisa Sweet <lisacsweet@comcast.net>, Stephanie Seacord <sseacord@cityofportsmouth.com>

Henry,

In our City Council packet for Monday night, the council has received the following very informed letter analyzing the use of RECs in Granite Plus, Clean 50 and Clean 100, from Joe Caldarola, a Portsmouth resident and former city councilor.

I'd love some help on talking points to engage with this, as it challenges (in a supportive way, I think) what we are doing with RECs. Please take a moment to read and review.

My explanation of RECs when we encourage residents to "opt up" is that

...it's true, you are not buying renewably generated power to your house. Grid power is grid power. But you are buying green energy generation on the grid. RECs directly support more renewable energy generation in a proportion of one REC for every megawatt of renewable power and directly fund solar, hydro and wind development.

RECs are used all the time by entities of all kinds as acceptable offsets to carbon emissions (airlines for example). They count in Portsmouth's measurements of carbon reduction, as they do for other towns and cities. Our Energy Advisory Committee wanted to be very clear about that in understanding "opt ups".

CPCNH is starting to buy renewables directly from hydro and solar providers in New Hampshire but it will take a long time to make these proportional (if at all?). However it is a goal of the Coalition to grow it's contract base for renewable energy because it enables greener power to flow to customers and it reduces cost - a double benefit.

Would love your help sharpening the arguments for opting up as a way to offset/reduce carbon footprint....

* Front-of-the-meter (FTM) systems are the large-scale power plants that are interconnected with the distribution and transmission systems. The “meter,” in this case, is a reference to the end-user’s service meter that measures how much grid energy is being used by the residence, business, or other facility. Power generated by FTM systems must pass through that electric meter before reaching an end-user, hence power plants are “front of the meter.” In contrast, behind-the-meter (BTM) systems refer to electric-generating and storage systems (such as solar and battery storage) that are connected to the distribution system on the customer’s side of the meter. Energy that a facility receives from behind-the-meter solutions bypasses the electric meter, hence “behind the meter.”

From: Herb Lloyd <herb_lloyd@hotmail.com>
Sent: Wednesday, July 10, 2024 5:42 PM
To: Peter L. Britz <plbritz@cityofportsmouth.com>; Kate E. Homet <kehomet@cityofportsmouth.com>; betsyblaisdell@gmail.com <betsyblaisdell@gmail.com>; peter.somssich@gmail.com <peter.somssich@gmail.com>; Councilor John Tabor <councilor.tabor@cityofportsmouth.com>; Peter H. Rice <phrice@cityofportsmouth.com>; Brian F. Goetz <bfgoetz@cityofportsmouth.com>
Subject: NREL July 22 - Objectives & Outcomes Draft

NREL Objectives & Outcome

The information provided outlines a comprehensive plan to enhance the sustainability and resilience of the Pierce Island and Pease Wastewater Facilities in Portsmouth, NH. Here's a structured summary of our engagement objectives and outcomes:

Engagement Objectives:

1. **Renewable Energy and Energy Storage Integration:**
    - To meet the growing electricity needs due to increased wastewater volume and additional treatment technologies.
    - To provide valuable insights through a feasibility assessment for renewable energy and storage solutions.
2. **Resiliency:**
    - To enhance the facilities' resilience against climate hazards like hurricanes, coastal storms, and flooding, given their coastal locations.
3. **Reduction of Greenhouse Gases:**
    - To support Portsmouth's Climate Future initiative, focusing on GHG emissions reduction, avoidance, and removal at municipal and community levels.
4. **Energy Cost Reduction:**
    - To leverage federal funding and natural resources to reduce long-term operational costs.
5. **Demonstrated Commitment:**
    - To underscore the City of Portsmouth's commitment to its Eco-Municipality mission and Climate Action Plan (CAP) goals through a feasibility analysis with NREL.

Engagement Outcomes:

1. **Feasibility Assessment:**
    - To identify the viability and benefits of renewable energy solutions and storage, considering resource availability, site suitability, environmental impact, regulatory requirements, and economic feasibility.
2. **Project Cost Estimate:**
    - To document a rough cost estimate of recommended solutions, with the understanding that further validation will be needed.
3. **Funding Options:**

    - To document potential federal and state funding options, including eligibility criteria, application procedures, funding sources, and potential grant or incentive programs.
4. **Project Management and Guidance:**
    - To provide a conceptual roadmap and recommended project management strategies, including best practices for obtaining funding, project planning, procurement, financing, permitting, construction, operation, and maintenance, as well as potential partnerships.

Pre-Engagement Notes:

- **General:**
    - Limited availability of city staff; Portsmouth Energy Advisory Committee members will coordinate the engagement with NREL.
- **Pease Wastewater Treatment Plant:**
    - Owned by Pease Development Authority; ground sub-lease by the City of Portsmouth.
    - Located near Portsmouth International Airport (PSM).
    - Previous assessment (January 2020) found Biogas Cogeneration not financially viable.
- **Pierce Island Wastewater Treatment Plant:**
    - Co-located with federal navigational beacons on Pierce Island.
    - Adjacent to several protected areas.

City of Portsmouth Stakeholder Roles and Responsibilities:

<To be added>

July x, 2024

Seacoast Community Power Communities Launch Green Energy Challege to Fight Climate Change

Seacoast, New Hampshire -- The cities of Dover and Portsmouth, along with the towns of Newmarket and Durham are challenging each other to see which community's residents can do the most to fight climate change.

Specifically, the municipalities are launching a friendly competition to see which town can convince the highest percentage of customers of their community power programs to "opt-up" to greener (generated by from more renewable sources) electricity choices.

All the cities and towns are members of the Community Power Coalition of New Hampshire (CPCNH), which is now the default source of electricity supply for their residents and small businesses. Each town or city's Community Power program offers green energy options not available in the past through Eversource. They can choose Granite Plus (33% renewables), Clean 50 (50% renewables) or Clean 100 (100% renewables). Residents can choose these options ("opt-up") to offset carbon in their electric usage and help their communities transition off fossil fuels.

"Providing more choices for electricity supply for everyone was a goal of CPCNH from the start," said Lisa Sweet, vice-chair of the CPCNH board. "All customers in these communities can opt up to two of the three choices and still pay less than the Eversource rate."

The contest will start August 1, 2024 and extend through January 31, 2025 (the timing matches the next rate period for the community power programs). The community with the highest percentage of "opt-ups" will win recognition as the Seacoast town whose residents are doing the most to decarbonize daily electricity use. There will also be an award for a town that achieved the largest reduction in tons of carbon.

[EXETER QUOTE]

"As Newmarket has a number of apartments, condominiums and some homes where it's not practical to install solar panels, this is an excellent opportunity to help the town transition to clean energy and it's still cheaper than Eversource," noted Newmarket Town Councilor Joe Lamattina.

"Durham's Climate Action Plan establishes a clear course of action for local efforts toward a reduction in GHG emissions of 2019 levels by 42.8% by 2030 and achieving zero emissions by 2050," said Administrator Todd Selig. "Because the Built Environment and Transportation sectors represent around 93% of Durham's overall emissions, the faster we can move electrical consumption to renewable sources, the more rapidly we can move the needle on lowering local emissions."

"This challenge is an opportunity for our residents and business owners to take concrete action against climate change," said Jackson Kaspari, Dover's Resilience Manager. "By opting for

greener energy products at competitive rates, we're not just reducing our carbon footprint; we're setting an example for communities across New Hampshire and beyond."

“In the past, it was complicated to buy greener electricity. Either you had to research half a dozen third-party vendors with complicated contract terms, or install solar panels,” said Portsmouth City Councilor John Tabor. “CPCNH’s green options allow you to have an immediate impact on your community’s carbon footprint with a few clicks. I personally feel a lot better using my dryer during rainy summer days with Clean 100 for my electricity.”

CPCNH is a non-profit agency “by local governments, for local governments,” started in 2021. It now serves 66 communities representing more than 35 percent of the population of New Hampshire. Since launch in March 2023, CPCNH has offered the state low competitive residential and small commercial energy supply rates and collectively has created nearly $14 million in customer savings while offering more green options.

To opt for a greener electric source, customers can go to these pages with a pull-down menu of choices. Have your utility bill handy with your account number…

https://www.communitypowernh.gov/newmarket

https://www.communitypowernh.gov/dover

https://www.communitypowernh.gov/portsmouth

https://www.communitypowernh.gov/durham

“May the greenest town win!” said Lamattina.