From: Kimberli Kienia
To: Kimberli Kienia
Subject: FW: Webform submission from: Planning Board > Body Blocks
Date: Wednesday, January 24, 2024 8:05:08 AM

-----Original Message-----
From: City of Portsmouth <webmaster@cityofportsmouth.com>
Sent: Tuesday, January 23, 2024 6:19 PM
To: chellman@TNDEngineering.com; Peter L. Britz <plbritz@cityofportsmouth.com>; Peter M. Stith <pmstith@cityofportsmouth.com>
Subject: Webform submission from: Planning Board > Body Blocks

Submitted on Tue, 01/23/2024 - 18:18

Submitted by: Anonymous

Submitted values are:

Name
Effie Malley

Email
effie.malley@gmail.com <mailto:effie.malley@gmail.com>

Subject
EV Charging Stations

Message
Thank you for taking up the EV charging station ordinance and continuing work on it this week. I urge you to move this action as quickly as possible. I have owned an EV for over five years, and to drive to Seabrook or Rochester to use a level 3 charger is at a minimum inconvenient. In addition, as EV ownership increases, chargers are often busy: we need more chargers overall in the seacoast. Please feel free to contact me if you have any questions. Thanks again.

bcc-email
chellman@TNDEngineering.com,plbritz@cityofportsmouth.com,pmstith@cityofportsmouth.com

Meeting: Planning Board
Date: January 18, 2024, 7PM
RE: EV Ordinance

Dear Members of the Planning Board, January 11, 2024

The EV ordinance may need some review prior to moving it forward. Please take the time to review this link regarding Level 3 charging stations and consider the following thoughts regarding these necessary devices. https://energy5.com/addressing-noise-and-vibration-issues-in-ev-charger-systems

Level 3 charging stations are currently not recommended to be built near residential units due to the noise and vibrations they emit. Most recommend these charging stations be installed along highways, in mall parking lots or very large parking lots. These are high end electrical devices. They need high levels of ventilation. Due to many issues these stations perhaps consider them to go through a proper permitting process or be reviewed by the Technical Advisory Committee (TAC). **Level 3** charging stations should not be permitted in or abutting residential units of any kind, such as CD4-L2 (most of Islington St), CD4-W (large residential development in the West End), G1 or G2 (commercial on the first floor with residential above) without excellent sound level protections. Level 3 stations could include a set back to residential units and properties of 100' or more.

Electrical charging stations are a great idea and having proper parking is accounted for in the ordinance. Level 2 charging stations also vibrate and hum which, if they are in a well insulated garage, can't be heard. However, what about if a few are put in a parking lot, it's night time and windows are open. Will they be disturbing to those living above or near them? *The number of charging stations next to each other may want to be included in this ordinance*. Could an entire parking lot be filled with Level 3 stations in CD4-L2, like a gas station? Remembered that parking meters were removed from sidewalks to increase pedestrian experiences, be sure to remember that as these stations are added throughout the city.

There doesn't seem to be a limit on *how many charging stations are allowed per X area and of which kind; maybe something to consider.* There don't appear to be any *setbacks to residential units or properties* included. **Think of these as generators for cars.** The sound level and the vibrations are similar, except *a generator only runs when the power is out*. EV stations run all the time. National Physical Laboratory (NPL), the noise produced by EV charging points can range from **50 to 85 decibels (dB**). Generator loudness can range anywhere from under 50 dB to around 100 dB.

This is a great start to an ordinance worth putting into place. It may need to be tweaked a little more before moving it forward. Noise levels do need to be considered as more EV stations are needed. Hopefully the technology will work on the vibration and the noise but until then please consider what it would be like to have a generator pulsating next to your open window, every night, all night long. Please add necessary quality of life stipulations to this ordinance.

Respectfully,
Elizabeth Bratter
159 McDonough St
Property Owner

From:	Planning Info
To:	Kimberli Kienia
Subject:	EV Station
Date:	Thursday, January 25, 2024 8:24:03 AM

From: Private General <qatoday@yahoo.com>
Sent: Wednesday, January 24, 2024 5:07 PM
To: Planning Info <Planning@cityofportsmouth.com>
Subject: Fw: EV Station

Good Morning, Planning Department,
I would appreciate it if these pictures could be forward to the Planning Board for tonight's Work Session with this note. Thank you, Liz

Dear Members of the Planning Board,

These are pictures of a fast charging stations in Kittery, ME (next to Columbia Sports).

The first picture is from the side. It shows how the generator is enclosed and has a combination lock on it for access by the necessary people who made need to get at the generator. No one was charging at the time and it was pretty cold therefore the ventilation system was just humming.

The second picture shows the generator and the electric transformer both are needed for this station. Notice the various types of bollards. The State of Maine regulates electricity supplies in their state, they must meet safety and fire protocols.

The third picture is the warning label on the transformer. It has some of setbacks and other requirements listed.

The fourth picture is to aid in understanding how big these are, that is a toyota RAV 4 parked parallel to the generator.

The fifth picture is EV Station connections with me standing (5' 5") next to it to aid in assessing height of the station. These are not ADA complaint stations, something to think about as these are proposed.

This charging station is run by Electrify America. Here is a link to their website about how their systems work.
Electrify America in Kittery, ME, 375 US-1

Respectfully submitted by Elizabeth Bratter, 159 McDonough St, Property Owner.

WARNING

rdous voltage inside.

P OUT!

k, burn or cause death.

amaged or unlocked call your local
tility company or 911.

WARNING

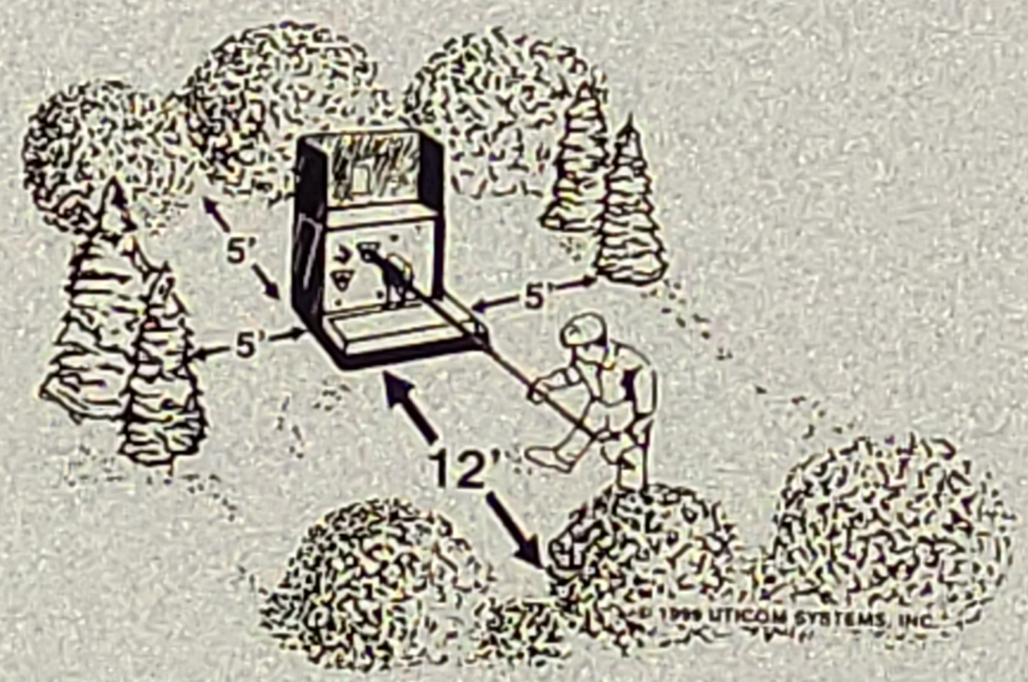
round power cables
ted in this area.

e digging call 811.

ck, burn or cause death.

811
Know what's below.
Call before you dig.

NOTICE



We need room to work safely on this device. Please keep shrubs and structures 12 feet away from the side with doors and 5 feet from other sides.

Obstructions may be damaged or removed during service restoration or maintenance.

▲ USI (11/18) U7010WWN-RGE-NY

ADVERTENCIA

je peligroso adentro.

ENTRAR!

oducir choques eléctricos,
ras, o causará la muerte.

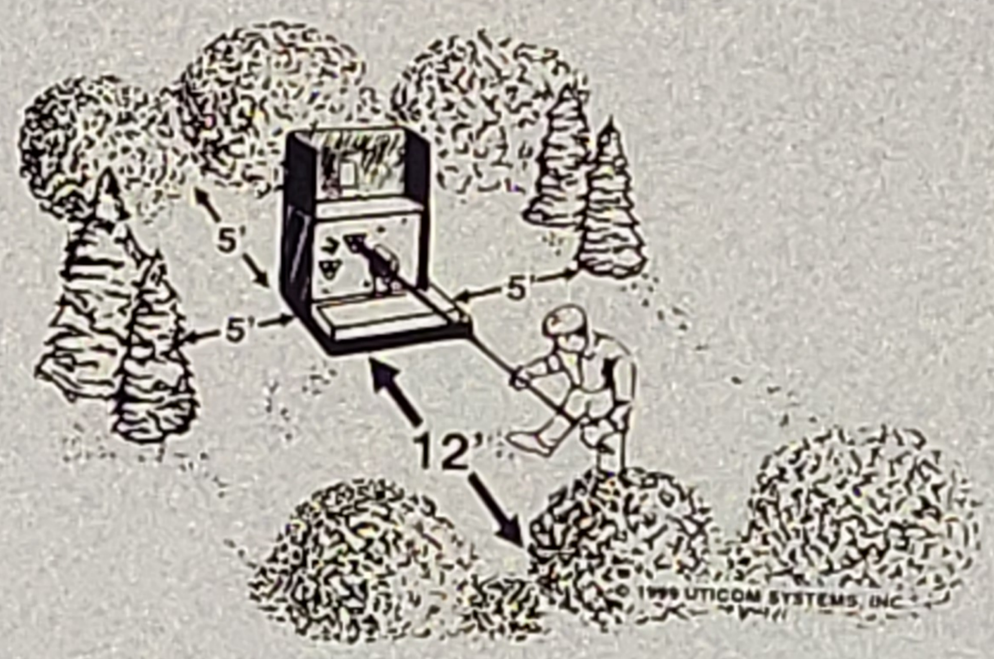
ñado o abierto por favor llame a su
a local eléctrica o al 911.

ADVERTENCIA

ubterráneos de voltaje peligroso
n esta área.

e excavar llame al 811.

AVISO



Necesitamos espacio suficiente para trabajar sin riesgos en este sitio. Por favor mantenga arbustos y estructuras a 12 pies de las puertas y 5 pies de los lados.

Obstáculos podrán ser dañados o removidos durante restauración de


Columbia


NO PARKING
EXCEPT WHILE CHARGING
EV CHARGING ONLY
EV CHARGING ONLY


NO PARKING
EXCEPT WHILE CHARGING
DXL
Sox Market

City of Portsmouth
Planning Board
Attn: Rick Chellman, Chairman
1 Junkins Avenue
Portsmouth, NH 03801

RE: HDC-Solar Proposal

Dear Chairman Chellman and Members of the Board,

Regarding the proposal to exclude solar power from the HDC's review, I am submitting the following for your review. I have also forwarded a slide show showing 16 solar installations within a few blocks of my home which I hope will contribute to the discussion. At the end there are some specific recommendations to the possible ordinance change.

Thank you

Joe Caldarola

Comments regarding the proposal

Those of us who have not paid close attention may have missed the tremendous advances in Solar PV in the last 10 years.

15,000 pounds of CO_2**.** The carbon emissions saved from the solar power system on just one house, my house, in 2023

15,000 lbs=7.5 tons. How much is that? by reference the EPA says that the average new car sold in 23 will emit 4 tons on CO_2 per year

Adding solar to just one house has more impact than taking a car off the road for an entire year

ASTOUNDING.

This is not an either- or, It is a both-and

It's not that we shouldn't support historic preservation….. Of course we should.

It's that, given where we are with the climate crises, a new value has arisen that is at least equal in importance: carbon reduction and clean energy.

Both-and…..Neither should be allowed to impede the other

It *is* subjective, witness the split votes.

If somehow, we *could* get solar power installed on every roof in the Historic District,

my subjective opinion is that it would be beautiful, something Portsmouth could be proud of.

It would make National News: “Historic Portsmouth supporting green solar power”

WOW!

Follow-up: the slideshow shows how facilitating solar power requires that the panels be allowed to face the sun. Any requirement to keep them out of view makes the system not possible most of the time. In 14 of the 16 homes with solar arrays near my home the panels are visible from the street.

Comments to a possible ordinance:

Attorney McCourt’s suggestion of adding related wording to include related hardware would be helpful. It might be best to specify such items as mounting tracks and hardware, electrical conduits, squirrel barriers, and other necessary hardware.

Re the suggestion that the exception apply to panels mounted directly on a roof, it might be better to use the language in the HDC renewable energy criteria: “parallel to and as close to the roof structure a possible.” , as the panels are always mounted on tracks which position the panels slightly above the roof surface.

16 Solar Power Arrays Near Dennett Street

Two not visible from public view

Fourteen Visible

To facilitate solar power, the panels need to be located where the sun is

Historic District Commission
Guidelines for Renewable Energy

“Locate collectors where they are hidden or minimally visible from public view.”

“The frame and panels should be the same color as the roof structure…”

Dennett Street-Not visible from public view-1

Pine Street-Not visible-2

Clinton Street-Visible-1

Clinton Street-Visible-2

Burkitt Street-Visible-3

Pine and Stark Streets-Visible 4

Thornton Street-Visible 5

Thornton Street-Visible 6

Thornton and Thornton Extension-Visible 7

Thornton Street-Visible 8

Thornton Street-Visible 9

Thornton Street-Visible 10

Thornton Street-Visible 11

Thornton And Burkitt Streets-Visible 12

Bartlett Street-Visible 13

Bartlett and Thornton Streets-Visible 14

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

16 Solar Power Arrays Near Dennett Street

Two not visible from public view

Fourteen Visible

To facilitate solar power, the panels need to be located where the sun is

Historic District Commission
Guidelines for Renewable Energy

“Locate collectors where they are hidden or minimally visible from public view.”

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Thornton Street-Visible 9

Thornton Street-Visible 10

Thornton Street-Visible 11

Thornton And Burkitt Streets-Visible 12

Bartlett Street-Visible 13

Bartlett and Thornton Streets-Visible 14

From:	Kerry Vautrot
To:	Planning Info
Cc:	Emma Stratton; Portsmouth Advocates
Subject:	1/18 Planning Board Meeting: Public Comment re: Proposed HDC Ordinance Change Exempting Solar Panels
Date:	Thursday, January 18, 2024 4:46:54 PM

Dear Planning Board Members,

It has long been recognized that historic preservation and sustainability are intrinsically linked and can successfully coexist. Portsmouth Advocates is the historic preservation advocacy arm of the Portsmouth Historical Society and we are writing tonight to note that there is ample guidance for how to integrate renewables and energy efficiency improvements while maintaining the historic integrity of the built environment. The National Park Service (NPS) is the technical authority on historic preservation in the US. In their publication, Secretary of the Interior's Standards for Rehabilitation: Guidelines for Sustainability, the NPS provides clear direction for how to successfully install photovoltaic systems on historic buildings.

As the 2023 host for the National Conference, Keeping History Above Water, Portsmouth should strive to model how to successfully integrate innovative sustainability practices while preserving the historic character that serves as an economic engine for the City.

The initially proposed amendment language that simply removes solar panels from the purview of HDC is too broad a "solution." There are many other ways to adjust the ordinance language to assist both applicants, the HDC members, and the City as a whole in order to meet sustainability goals.

We respectfully request that the Planning Board follow the Council and Deputy City Attorney's recommendation to refer the proposed language to the HDC for their input. The HDC is composed of preservation professionals, architects, and other technical experts who volunteer untold hours to uphold the objectives of the Historic District as outlined in the ordinance. Their familiarity with resources and guidance documents, like the Guidelines for Sustainability referenced above, will help ensure Portsmouth can meet both non-exclusive goals: preserving our historic character and integrating sustainability practices. Providing the HDC an opportunity to review and comment on the language is not only a professional courtesy, but it shows that the Planning Board values the expertise present on their sister land use boards.

Portsmouth Advocates looks forward to continuing to provide comment on this matter as it progresses.

Sincerely,

Emma Stratton, Executive Director, Portsmouth Historical Society
Kerry Vautrot, Portsmouth Advocates