

**CITY OF PORTSMOUTH, NEW HAMPSHIRE
PORTSMOUTH ENERGY ADVISORY COMMITTEE**



WEDNESDAY, SEPTEMBER 2, 2026,

6:30 pm

City Hall Conference Room A

1 Junkins Avenue, Portsmouth NH

Please register in advance to participate via Zoom:

https://us06web.zoom.us/meeting/register/7Y-D72VDQ_KziqMfcPr60g

AGENDA

1. Call to order and Roll Call
2. Approval of minutes for July 1, 2026
3. Chairman's Remarks
4. City Solar Arrays – Deliberation and Recommendations
5. CENH C-Pacer program
6. CPCNH update—
 - New Directors of Finance and Power Operations
 - Updated Customer FAQs: [FAQs | CPCNH – Community Power NH](#)
7. Other Business
8. Public Comment
9. Adjourn

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PORTSMOUTH ENERGY ADVISORY COMMITTEE**



WEDNESDAY, JULY 1, 2026, 6:30 pm

City Hall Conference Room A

1 Junkins Avenue, Portsmouth NH

For the Zoom recording:

<https://youtu.be/8aHxdRSibul?si=fdvBRvINc1uD7Nmo>

MINUTES

1. **Roll call** – Meeting called to order at 6:30 pm. Attending, Councilor John Tabor, chair; Kevin Charette, Peter Somssich, Ben D'Antonio, Mary Claire Rodriguez-Abbott, Tracey Cameron. Excused: Sustainability Committee: Fred Calciniari, Tom Rooney, Betsy Blaisdell. Staff: Peter Rice, Christine Sproviero, Jillian Harris, Stephanie Seacord
2. **Chairman's Remarks** –
 - Window Dressers, following Tracey's lead, met with City Manager to find a location and date for a work date with Portsmouth Rotary. Cameron reported: January 25-Feb 1, 2027 at Community Campus.
 - The PEAC Communications Plan was approved as presented to City Council on June 22.
 - Will review the question raised by Councilor Bagley on the CPCNH 'refresh' and also the Jones Avenue solar project questions raised by PEAC – realities and numbers.
3. **Jones Ave financial Q&A with Ian Springsteel and Michael Goldman from APEX.**
 - D'Antonio asked to expand on Jones Ave analysis, seeking clarification on state and federal policy assumptions and their impact on the conclusions. Questions related to available net metering opportunities and the financial returns resulting, with or without the tax credit for the three options presented:
 - Single direct interconnection, in front of the meter
 - Hybrid interconnection, with some in front of the meter and a portion behind the meter and serving Portsmouth High School – more attractive with net metering incentives
 - Turnkey Power Purchase Agreement (PPA)
 - 1. All attractive options if ITC comes back; nothing in CIP – so time
 - 2. The net metering options: how do municipal group net metering size limits and use affect whether it makes sense for a project move more in front of the meter? DPW evaluating additional opportunities to use the municipal net metering cap.
 - 3. Cash flow projections: when does the project generate positive cash flows and a discussion of impacts to the City's operating expenses.

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PORTSMOUTH ENERGY ADVISORY COMMITTEE



- APEX: all three scenarios assume the City will apply the remote group net metering concept at Jones Ave, exporting electricity and getting a credit at the supply rate to use credit elsewhere.
- The privately-developed approach, with a turnkey PPA, offers the least return but does not require a significant up-front capital outlay. In exchange, a discount on the net metering rate is paid to the developer (15%) so the City does not get its full value on its accounts.
- The hybrid model has one main benefit: the project is assumed that it can move faster through the interconnection study process, to a design/build this summer to take advantage of the ITC if one firm does it all; one going behind the meter at PHS offsetting demand during the day. (APEX did not have access to PHS load data). There are savings associated with the ITC and the avoided consumption at PHS in this scenario, but involves a 1/3 mile line from Jones Ave. through the woods to PHS.
- The single line project drawback is that it would be large enough to trigger the need for an Affected System Operator (ASO) Study with Eversource (Transmission Level Study) required of projects > 1 MW, which can take about 9 months. The smaller project with two systems does not require the ASO study. The ASO Study process takes time that would prevent taking advantage of the ITC, under the APEX analysis.
 - All use remote group net metering City gets full benefit at base cost of raw cost
 - 2-system same output as single – but can move faster, get ITC. High cost due to second line but offset by ITC.
- The split option assumes greater speed to ITC. APEX assumes the split option does not need the ASO study but would invoke DES permitting to cross the wetlands in the woods. APEX understands that the City controls the Conservation Commission permitting assessment. Director Rice commented that DES is likely to require more permitting, including a review of the capped landfill.
- On the net metering behind the meter at PHS – Avoided PHS energy use is more valuable than the power exported by the Jones Ave concept. PHS bill includes fixed demand charges based on power consumption at peak, which affects both volumetric distribution rates and demand charge allocation. If solar on at peak, that saves demand charges. Battery storage would really control the demand charge.
- Slide 9 NPVs summary:
 - Single array without ITC/two system with ITC. NPVs = 25% difference: \$5.2 v \$4.1 m. Higher due to ITC and net metering benefit going behind meter at direct load customer. Option with ITC would be better. Possible that ITC could be reinstated. The major ITC advantage in single is offset by incremental connection cost on the hybrid. ASO study cost factored into scenario of single system.

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- Cash flow impacts: The combined energy savings credit > \$300k/year to the City accounts, with \$100k/year revenue from sale of RECs – so project cost is offset by \$400-500k/year. Assuming a 20 year, \$3.75 m bond, the borrowing cost is \$278k/year for a net cash flow benefit of \$167k/year, growing over time to \$200k. Assuming a successful bonding and capital investment, the project is cash-flow positive on Day 1.
 - 2.5% conservative supply rate escalation assumed; if supply rates go up more than 2.5% over time, savings go up – not factoring changes in the distribution/ transmission cost escalating at 5-6%. Levelized cost of energy (LCOE) estimated at \$58/MWh (5.2 cents/kWh).
- Chair Tabor asked whether the APEX scope included a review of multiple rooftop solar arrays on City buildings. The original scope was just Jones but DPW has requested an alternative scope with rooftops and consideration of a project that bought out and expanded the Madbury water treatment plant array. Then PEAC could make a recommendation to Council that compares the Jones Ave. project and the rooftop option, noting cash-flow-positive from the beginning even without ITC.
- APEX is preparing a final report with more detail than the presentation slides.
- Clr Tabor asked whether the municipality can leverage the buying power of a nearby residential property as part of the Jones Ave project. APEX said the City can certainly apply the Jones Ave project benefits to any City accounts, but including an adjacent residential property in a financing deal would not be consistent with municipal net metering. In terms of a local microgrid, the City cannot physically connect with private customer using Eversource lines or build its own microgrid system in the Eversource right of way. Would require a 240v transformer and power distribution mini-system even if on City property to abutting private residences. APEX Springsteel: "I've never seen a microgrid that made sense to anyone."
- Private partnership with the condo association to finance the project? APEX: that would then not be eligible for the municipal group net metering rate. The City would get the same benefit by taking the credits (RECs) and save operating/maintenance costs and risks.
- Pluses: Jones Avenue is a great, flat, sunny piece of land, and a project would bring revenue to the City that helps lower tax bills and deliver a \$3.8 million project after debt. The downside is adding to the bonding capacity. The pass-through benefit is to lower City energy costs and lower carbon footprint. City's municipal energy contract at 10.22 cents, is in place through October 2027. CPCNH contract periods (2x/year) are not in synch with City longer-term purchasing cycle.
- Potential rooftop issues: structural capacity and higher (up to 2x) installation costs. Possible fire department concern.
- Dir Rice commented that the rooftop alternative is envisioned for gradual implementation on a pay-as-we-go basis but that Council policy could

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PORTSMOUTH ENERGY ADVISORY COMMITTEE



change that. APEX would draft an RFP to be used to solicit a proof of concept template for other installations.

- Somssich noted that advances in solar technology suggest greater solar return in a smaller footprint in the future.
- Charette recommended PEAC support a letter to the NH Congressional delegates and solar industry lobby in favor of restoring ITC for its municipal savings and decarbonizing benefits.

4. **CPCNH and Eversource utility rates for next rate period: messaging and tactics**

- PEAC members reviewed and edited the draft Portsmouth Community Power rate change press release. Subsequently the revised draft (Appendix A) was approved by the City Manager and distributed on July 6.
- Balancing the playing field between utilities and CPCNH: Eversource still has an under-collected balance to address and CPCNH is still factoring a 0.667 cent adder to rebuild the depleted reserves. Charette noted that things seem to be moving in the right direction and while CPCNH had an advantage in the regulatory environment at start up in 2023, that advantage, with new PUC utility rule-setting, has gone the other way.

5. **CPCNH new customers: Refresh or not to refresh?**

- CPCNH reports 650 new customers would be refreshed to Portsmouth Community Power in September.
- Rooney proposed Portsmouth adopt a policy that no refresh happen if the delta between PCP and Eversource was 10-15%. But Charette argued, as Mayor McEachern suggested at the Work Session, that that would create two 'classes' of customers – when would they be reconciled? Committee agreed that all residents are part of the Community Power process – but why not refresh monthly so there are no such big groups being impacted?
- PEAC urged that the refresh be communicated well in advance, along with the reasons for the refresh and an emphasis on PCP benefits (choice, carbon benefits, voice in Concord and the ability to opt-in or out without penalty). Having an option over the default utility – which didn't exist before – is good for Portsmouth residents. Consensus of 5 PEAC members was not to set a 'no refresh' policy.

6. **Other Business** – Comment on alternative power brokers such as Freedom Energy and adoption by Hampton, Hudson, Epping, Laconia, Salem, Windham. Watching the landscape.

7. **Public Comment** – none.

8. **Minutes** - On a motion by Peter Somssich, seconded by Councilor Tabor the June 3, 2026 meeting minutes were approved unanimously.

9. **No August meeting.**

10. **Adjournment** – On a motion by D'Antonio, seconded by Cameron, the committee voted unanimously to adjourn at 8:23 pm.

**CITY OF PORTSMOUTH, NEW HAMPSHIRE
PORTSMOUTH ENERGY ADVISORY COMMITTEE**



APPENDIX A: Final Press Release (July 6, 2026)

***Community Power Coalition of NH Announces an Increase in
Portsmouth Community Power Rates, Effective August 1, 2026***

Portsmouth, New Hampshire – The Community Power Coalition of New Hampshire (CPCNH) has advised its member municipalities, including Portsmouth Community Power, that the electricity supply rates for the next regularly-scheduled rate period of August 1, 2026 through January 31, 2027 will increase. The new CPCNH Granite Basic default rate for residential and small commercial customers will be 14.949 cents per kilowatt-hour (kWh), less than a penny higher than the default utility Eversource rate, which the Public Utilities Commission approved at 14.009 cents.

The Portsmouth Energy Advisory Committee reminds residents that they can switch from Portsmouth Community Power (PCP) to Eversource and back again, at will and without penalty, to take advantage of a lower rate. Electric customers in NH can choose between Community Power, third-party options, or their default utility, which in Portsmouth is Eversource. For more information on Portsmouth Community Power, visit portsnh.co/commppower.

Rates are based upon energy prices CPCNH is able to negotiate on the basis of its aggregated customer base across 68 NH towns and regions. According to the CPCNH announcement, “The adjustment reflects higher energy supply costs associated with wholesale market conditions, including impacts from geopolitical conflicts and increased electricity demand during the past winter.”

“Community Power rates increased 2% from their winter rates in the first half of the year, while Eversource went up 24% from 11.3 cents to 14 cents. Eversource is still the lowest rate by about \$6 per month for basic service customers,” said City Councilor John Tabor, Chair of the City’s Energy Advisory Committee which monitors the Portsmouth Community Power program. “New Hampshire Consumer Advocate Don Kreis advised us again at the June 8 City Council meeting that he supports sticking with CPCNH because their financial reserve issues are being addressed, they can advocate on behalf of their statewide customer base of energy consumers and because they afford consumers choices they didn’t have before, which include supporting

CITY OF PORTSMOUTH, NEW HAMPSHIRE
PORTSMOUTH ENERGY ADVISORY COMMITTEE



more renewable power generation in the long term,” Councilor Tabor continued. “Still, our Energy Advisory Committee is watching CPCNH closely.”

Community Power estimates the savings from switching back to Eversource for now could be \$6.11/month for the next six months, based on average household use of 650 kwh per month. Customers can move back and forth between Eversource and Portsmouth Community Power with no penalties.

To opt in or out, use Community Power’s online customer portal at communitypowernh.gov/community/portsmouth, call 1-866-603-7697, or email info@communitypowernh.gov.

Eversource also offers customers who need assistance several programs to help them pay their electric bill. Learn about assistance programs at: eversource.com/residential/account-billing/payment-assistance.

“Portsmouth Community Power gives residents and small businesses a choice when it comes to their energy supply,” continued Councilor Tabor. “In the long-term, our residents will benefit from the Coalition’s combined buying power and advocacy on our behalf in the NH Legislature. In addition, being able to select options with higher proportions of renewable sources means the City is better able to achieve its Climate Action Plan by reducing our carbon footprint and saving towards future funding of our own green energy projects.”

To receive updates about rate changes from CPCNH sign up at communitypowernh.gov/customers.

To: Peter Rice, Christine Sproviero, City of Portsmouth Department of Public Works

From: Michael Goldman, Apex Analytics LLC, Ian Springsteel

Subject: Preliminary Findings, Financial Analysis, and Development Considerations for City of Portsmouth Jones Avenue Solar Project

Date: July 14, 2026

Executive Summary

The City of Portsmouth contracted with Apex Analytics to assess the feasibility and economics of installing a solar photovoltaic development at the Jones Avenue landfill site. The Apex analysis focused on whether to pursue a single system above 1 MW or to divide the project into two smaller systems below that threshold. This distinction is central to both interconnection and study requirements, with implications on the timeline that impact potential eligibility for federal incentives.

The analysis found that the regulatory and economic landscape, specifically ISO New England interconnection rules and the scheduled phase-out of the federal Investment Tax Credit (ITC) after December 31, 2027, substantially shifts the optimal project configuration. Under current assumptions, structuring the project as two separate sub-1 MW systems may allow the City to avoid certain transmission-level study requirements while also qualifying for a direct-pay ITC benefit worth approximately 30–40 percent of eligible project costs.

Although the two-system configuration entails higher upfront capital costs relative to a single system, the value of the ITC is sufficient to more than offset this increase, resulting in a higher net benefit-to-cost level for the City. The analysis further indicates that direct municipal ownership provides superior economic outcomes compared to a privately developed power purchase agreement, primarily due to lower financing costs and the absence of developer profit and tax equity requirements.

However, the viability of the two-system approach depends on interconnection determinations, procurement timelines, and the ability to achieve commercial operation prior to the ITC deadline. Also, as discussed with the Portsmouth Energy Advisory

Committee members on July 1, it is possible that the ITC phaseout could eventually be reversed, which would enable the cheaper, single project to qualify.

Project Design Scenarios

The analysis evaluates two primary system configurations. The first consists of a single 1.7 MW alternating current (AC) system. The second divides the project into two physically and electrically distinct systems: one 950 kW array located at Jones Avenue and a second 750 kW array connected via new infrastructure to the Portsmouth High School.

A conceptual representation of the two-system configuration, including conductor routing to the high school and the spatial arrangement of arrays, is shown below.

Figure 1. Two-System Layout and Cable Routing



Despite differences in configuration, total annual energy production is assumed to be equivalent between the single-system and two-system cases, as both represent alternative configurations of the same underlying generation capacity.

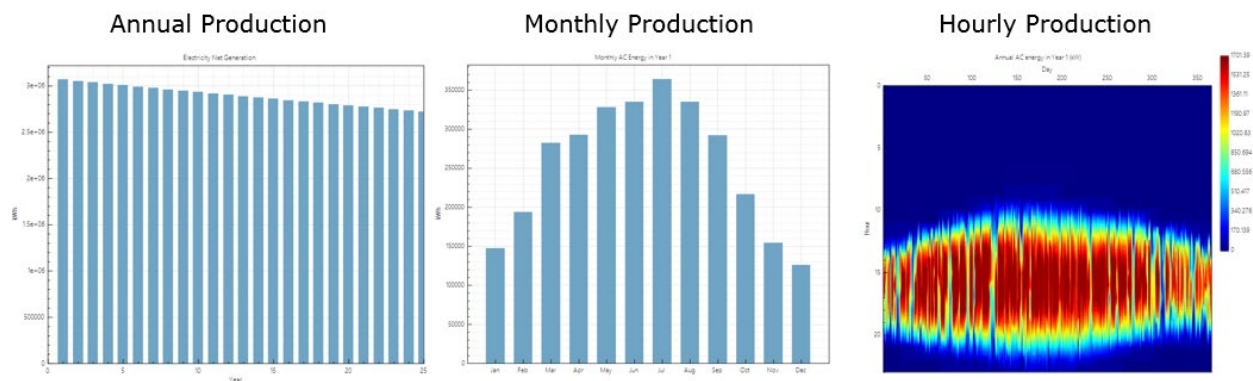
The tradeoff between configurations is therefore not primarily related to energy production, but instead to interconnection timelines, regulatory classification, and financial structure.

Energy Production Analysis

Energy production was modeled using the National Renewable Energy Laboratory's System Advisor Model (SAM), which estimates photovoltaic system output based on site characteristics, system configuration, and meteorological data.

The modeling confirms the City's prior expectations regarding both annual and seasonal production levels. Key outputs include annual generation totals, monthly variability, and hourly production patterns that are relevant for assessing alignment with load.

Figure 2. Modeled Solar Production Profiles

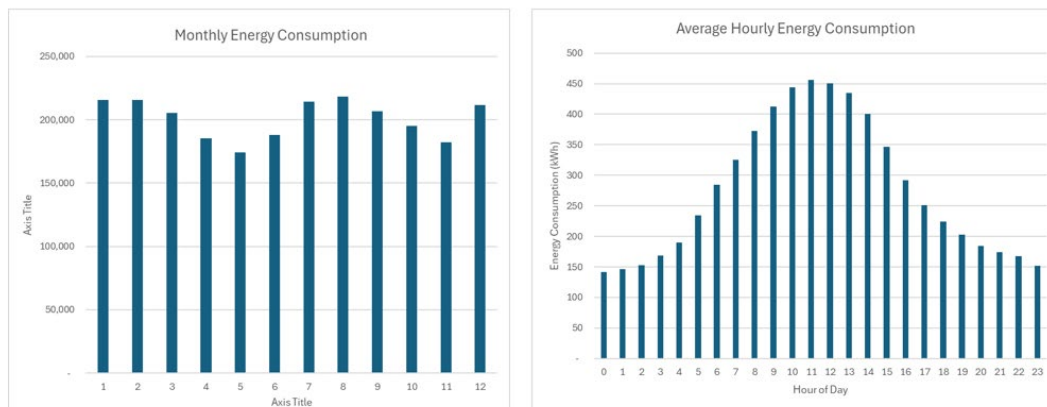


These production profiles form the basis of the financial analysis and provide necessary inputs for estimating energy value under New Hampshire's net metering framework.

Load Profile and System Integration

To evaluate how solar output aligns with facility demand and the implication on self-consumption at the high school vs. exporting back to the grid, the analysis uses a representative high school load profile derived from NREL's ComStock dataset for New Hampshire.

Figure 3. Representative High School Load Shape



While this approach provides a reasonable proxy, the analysis would benefit from site-specific hourly load data for each of the accounts at the high school. Access to such data would allow for more precise estimation of potential demand charge reductions and improved optimization of system interconnection.

Financial Analysis and Key Assumptions

The financial modeling incorporates capital expense budgets with both bottom-up cost estimation based on component-level inputs and developer feedback, and top-down benchmarking against comparable projects.

Key assumptions for the value of the output to the City include escalation of electricity supply costs at 2.5 percent annually, system degradation at 0.5 percent per year, and discount rates of 3.75 percent for municipal financing and 8 percent for private developers.

Net metering compensation is assumed to be used in all of the use cases, based on current New Hampshire policy, under which systems of this size are compensated at the supply rate only and do not capture demand-related or other delivery charge savings unless directly connected in a manner that reduces peak demand.

Table 1. Summary of Key Financial Assumptions

Parameter	Assumption
Supply Rate Escalation	2.5% annually
System Degradation	0.5% annually
Municipal Discount Rate	3.75%
Private Discount Rate	8.0%
Municipal Borrowing Cost	~3.75%
Private Borrowing Cost	~6.75%
PPA Savings Assumption	15% vs. supply rate

Capital Cost Comparison

The analysis finds that the two-system configuration requires additional infrastructure, including extended conductor runs and increased site work, resulting in higher upfront capital costs. However, the single-system configuration is expected to incur higher utility-related costs, particularly associated with transmission studies and potential system upgrades.

Table 2. Capital Cost Comparison (Relative)

CAPEX	System 1	System 2	1+2	Combined	Differences
Predevelopment Costs	\$ 17,500	\$ 17,500	\$ 35,000	\$ 35,000	\$ -
Utility Costs (apps, studies, CIAC)	\$ 516,000	\$ 56,000	\$ 572,000	\$ 726,000	\$ (154,000)
Other Costs (Site Etc)	\$ 215,000	\$ 290,000	\$ 505,000	\$ 215,000	\$ 290,000
System and EPC Cost (no profit)	\$ 1,463,000	\$ 1,404,750	\$ 2,867,750	\$ 2,575,500	\$ 292,250
EPC Profit %	\$ 246,300	\$ 240,475	\$ 486,775	\$ 357,550	\$ 129,225
Total System and EPC Cost	\$ 1,709,300	\$ 1,645,225	\$ 3,354,525	\$ 2,933,050	\$ 421,475
Total Project Cost	\$ 2,457,800	\$ 2,008,725	\$ 4,466,525	\$ 3,909,050	\$ 557,475

The critical financial distinction arises from the ITC, which is likely to be only available under the two-system configuration due to the timing of the phase out of the ITC. Two smaller systems are more likely to avoid lengthy studies and may have a chance to be in service before the phaseout of the ITC. However, there are significant timing risks associated with this strategy. The estimated ITC value of approximately \$1.64 million more than offsets the incremental capital cost. If the ITC were at a later point reinstated by the U.S. Congress, it would potentially be available for the single system option with a completion date in 2028 or later.

Timeline and Interconnection Considerations

A key determinant of feasibility is the interconnection process. Systems larger than 1 MW are generally required to undergo ISO New England's Affected System Operator (ASO) study and participate in the cluster study process, adding approximately 9 to 11 months to development timelines.

Figure 4. Timeline Comparison



This delay poses a material risk to current ITC eligibility, which requires systems to be placed in service by December 31, 2027. In contrast, sub-1 MW systems may avoid this requirement if deemed electrically non-impactful, allowing for accelerated development.

Comparative Economic Outcomes

The modeling results indicate that total nominal savings are similar between the one-system and two-system configurations, but the net present value is higher for the two-system option due to the combination of lower financing requirements and ITC benefits.

The privately developed PPA alternative produces the lowest value for the City due to higher capital costs, tax equity structures, and developer returns, even under optimistic assumptions regarding contract pricing.

The Total Net Value is the discounted value of all the economic benefits minus the value of all the economic costs in present dollar terms. The City's debt cost of approximately 3.75% was used as the rate for the publicly owned scenarios below as an approximation of a public benefits discount rate. For the private owned analysis, a discount rate of 8% was used. The benefits to the City in that scenario represent the discount on net metering credits that the City would receive under a PPA with the developer, which was set at a 15% savings rate.

As an additional sub-scenario, the case of the single system with the "Tax Equity Refund" (TER) applied to it was calculated. With a 30% tax credit refund on 95.9% of the costs, \$1.124 million in additional value is gained, bringing the Nominal Total Net Value to \$8.294 and the NPV Total Net Value to \$5.005 million.

Table 3. Project Economics Comparison

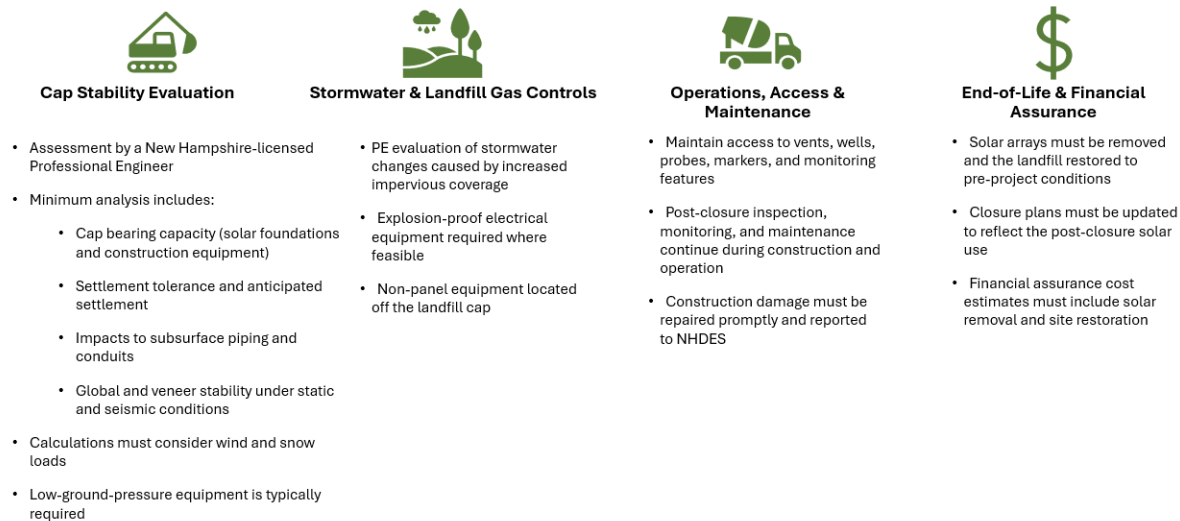
Two Systems - TER		
Nominal Total Savings and Cash	\$	13,045,175
Nominal Total Net Value	\$	8,480,412
NPV Total Net Value	\$	5,116,764
Single System - No TER		
Nominal Total Savings and Cash	\$	12,734,324
Nominal Total Net Value	\$	6,693,803
NPV Total Net Value	\$	3,893,599
Private Owned - TE Flip (5 yr)		
Nominal Total Savings and Cash	\$	6,591,009
Nominal Total Net Value	\$	5,347,043
NPV Total Net Value	\$	2,387,947
NPV for City, 15% savings	\$	1,211,380

Permitting and Site Constraints

The project site, a closed landfill, requires compliance with New Hampshire's Solid Waste Management Act and associated regulatory framework. Development of solar infrastructure on the landfill will require a permit modification submitted to the Department of Environmental Services and must be integrated into the site's closure plan.

Engineering analysis must confirm the structural integrity of the landfill cap, including its ability to support solar infrastructure and withstand construction-related impacts. Additional requirements include stormwater management, protection of landfill gas systems, and long-term maintenance and restoration planning. Finally, the City's Conservation Commission, and potentially state environmental authorities, would need to review the pathway for the conductors in the conservation area around the former landfill, which may travel within close proximity to known wetland areas and require disturbance of the conservation area during construction. This permitting process would run in parallel with the utility study process and thus should not impact the timeline for the smaller project option.

Figure 5. Permitting and Site Context



The project is not subject to additional federal permitting under Superfund or wetland regulations, simplifying the permitting pathway relative to other brownfield developments.

Remaining Data Gaps and Next Steps

Several issues remain that will affect the final design and financial outlook. Most importantly, access to hourly load data from Portsmouth High School is necessary to quantify potential demand charge savings and refine system sizing. Additional information is also needed regarding the configuration and net metering status of the existing on-site solar resources, including to which high school electric account it is connected.

The physical feasibility of routing new electrical infrastructure, including potential impacts to vegetation and site conditions, must also be confirmed as part of detailed engineering design.

Conclusion

The analysis indicates that a two-system configuration offers a more favorable economic outcome for the City, provided that key regulatory and timing conditions can be satisfied. The value of the ITC, combined with the ability to avoid extended interconnection timelines, creates a compelling case for pursuing this approach.

However, the decision remains contingent on confirmation of interconnection treatment, procurement feasibility, and the City's ability to advance the project rapidly enough to meet federal incentive deadlines. The option of waiting to develop this project later as a single project to see if the ITC is at some point reinstated is also a viable path, though project cost assumptions would likely change over an extended period.

Jones Avenue Solar Project plusses and minusses

PLUS	MINUS
- Cash flow positive day 1 - \$167k annual, at least \$500k plus after 2046 and bond paid off	- Remote Group Net Metering savings and ROI not as robust as behind the meter (rooftop); staff recommends do these first
- Net benefit over 25 years in PV dollars - \$4.146mm	- Permitting risk – lengthy process and possible new requirements for landfill
- Reduce city’s carbon emissions 11%; electric emissions 36%	- Delays (18-36 mos) getting interconnects
- Unused land put to use for community benefit	- Higher construction cost than rooftop due to size
- Achieve a Climate Action Plan goal	- Biden-era credits for 30% don’t exist anymore
- Potentially much more benefit if electricity prices go up more than model’s 2.5% a year	- \$3.9mm capital cost vs. other CIP projects
- Unique advantages: no land cost, outstanding parcel, city AAA rating to borrow at 3.5%	

House Republicans introduce bill to extend renewables tax credits

The American Energy Dominance Act would remove the accelerated deadlines that the One Big Beautiful Bill Act placed on the renewable energy 45Y production tax credit and 48E investment tax credit.

Published April 27, 2026



Diana DiGangi
Reporter



An engineer walks by solar panels with wind turbines in the background. Business group E2 estimated that \$34.8 billion in clean energy investments were cancelled in 2025, outnumbering new investments three to one. Getty Images

Republican lawmakers in the House of Representatives are trying to restore clean tax credits for wind, solar and other clean energy technologies that were curtailed by the One Big Beautiful Bill Act.

The American Energy Dominance Act, introduced Thursday, would remove the accelerated deadlines that the One Big Beautiful Bill Act placed on the renewable energy 45Y production tax credit and 48E investment tax credit, and make similar changes to other impacted credits, like the 45V clean hydrogen production credit.

The bill was introduced by Rep. Brian Fitzpatrick, R-Pa., Rep. Max Miller, R-Ohio, Rep. Mike Carey, R-Ohio, and Rep. Mike Lawler, R-N.Y. A release from Fitzpatrick's office said the legislation was “developed in direct partnership with the North America’s Building Trades Unions.”

“Under current law, key incentives such as 179D and 45L are scheduled to expire on June 30, 2026,” said the release. The legislation would “fully restore” the 179D, or Energy Efficient Commercial Buildings Deduction credit, without a scheduled expiration.

“For capital-intensive sectors, a shortened policy horizon does more than disrupt planning — it raises the risk that critical projects are delayed, scaled back, or never built at all,” the release said. “When that happens, it is American workers, American employers, and American families who pay the price through slower growth, tighter energy supply, and continued cost pressure.”

E2 estimated that \$34.8 billion in clean energy investments were canceled in 2025, outnumbering new investments three to one. In a Friday release, E2 executive director Bob Keefe called the legislation a “modest – but smart – step back in the right direction.”

Capstone analyst Andrew Lascaleia said in a Saturday research note that the firm does “not expect [Fitzpatrick’s] bill that would

reverse many of the changes made to energy tax credits under the One Big Beautiful Bill Act to gain traction in this Congress.”

“However,” Lascaleia added, “we believe the bill, which would restore clean electricity, hydrogen, and energy efficiency tax credits, may find support if Democrats win the House or Senate in the 2026 elections. This would benefit renewables developers and manufacturers.”

Democratic lawmakers in March introduced a clean electricity bill that would, among other measures, restore clean energy tax credits that were eliminated by the OBBBA.

Fitzpatrick’s office did not respond to a request for comment.

From: Sarah Brock <sarah@cleanenergynh.org>

Sent: Friday, July 17, 2026 4:31 PM

To: Councilor John Tabor <councilor.tabor@portsmouthnh.gov>

Subject: Updated C-PACER adoption process: only a public hearing and select board / council vote required

Friends,

Governor Ayotte has officially signed SB440 and created a new, simpler way for NH municipalities to adopt C-PACER. Hurray!

The new process simply requires a noticed public hearing followed by a vote of your Select Board, Town Council, or City Council. And all that can be done in one meeting.

Ready to approve C-PACER? Here are the resources you'll need, all updated to reflect the recent changes:

a. **C-PACER 101** - a great one-page program overview, co-created by NH Municipal Association, NH Business Finance Authority, and Clean Energy NH. Use it to help educate your local leaders and residents about C-PACER ahead of any votes.

NH BFA's Document List - a comprehensive list of official documents related to the C-PACER program. These documents have been carefully vetted to comply with statute and program requirements. Pay particular attention to:

"C-PACER Adoption Process" - detailed instructions and vote language

b. **"C-PACER Municipal Ordinance"** - ready-to-adopt language that should NOT be modified beyond what NHBFA obviously intended. Questions or concerns about the text of the ordinance should be directed to Jeff Cook at NHBFA (jeffc@nhbfa.com).

c. **"C-PACER Municipal-County Participation Agreement"** - the agreement between the municipality and NHBFA that must be enacted after the official vote to adopt C-PACER in order to activate the program.

2. **C-PACER FAQ** - a comprehensive list of questions we've already received and answered. If you have any questions, check here first, then contact Sarah Brock (sarah@cleanenergynh.org) if you don't see what you're looking for.

Clean Energy NH is ready and willing to help you through your C-PACER adoption process. **Please let us know if you are planning to move forward** and contact me anytime if you have questions or need assistance.

- Sarah

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Sarah Brock | Energy Circuit Rider Program Director

[Clean Energy NH](#) | [Energy Circuit Rider Program](#)

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Commercial Property Assessed Clean Energy and Resiliency (C-PACER) District

Section 1. Purpose.

The commercial property assessed clean energy and resiliency program (C-PACER) permitted by RSA 53-F, allows the [] to establish an energy efficiency and clean energy district whereby properties within the boundaries of the district may fund qualifying improvements to real property through private lenders/capital provider whereby the financing is then secured by a special assessment lien on the property through an assessment agreement between the property owner and the [].

Section 2. Authority.

The [] of [] hereby adopts RSA 53-F following a vote by the [] subject to the following provisions.

Section 3. Declaration of Public Purpose and Findings.

It is declared that the financing of qualified projects through special assessments is a valid public purpose. The [] of [] therefore intends, in accordance with RSA 53-F, the following:

- A. To authorize direct financing between property owners and capital providers as the means to finance qualified projects; and
- B. To authorize special assessments, entered into voluntarily by a property owner with the [] by means of a written assessment contract ("Assessment Agreement"), as the means to repay the financing for qualified projects available to property owners by Capital Providers pursuant to a Financing Agreement.

Section 4. Applicability/Boundaries.

The commercial property assessed clean energy and resiliency district [shall encompass the entire area within the boundaries of the [] OR [] OR [].

Section 5. Definitions.

This Ordinance hereby incorporates the definitions as set forth in RSA 53-F, as may be amended; in addition, as used in this chapter, the following definitions apply:

Administrative Agreement – means the agreement entered into between the New Hampshire Business Authority and the [] outlining the terms of the NHBFA's administration of the C-PACER program for the [] and the [] roles and responsibilities.

Property Owner – means the fee title owner(s) of the property seeking participation in the C-PACER Program. Property Owner may also include the holder of a leasehold estate on the property, provided it is approved by the NH BFA, the holder of said lease provides a copy of the recorded lease or lease term sheet, and a signed and notarized consent of the fee title owner(s) or some other recorded document sufficient to show the leaseholder’s right to bind the property to a C-PACER assessment and lien.

Real Estate Taxes – as defined in RSA chapter 72, RSA 76:5 and RSA chapter 80, except shall not include the C-PACER special assessment.

Taxes – means Real Estate Taxes including the C-Pacer special assessment.

Section 6. Qualified Projects and Improvements.

The following applies to qualified projects and improvements:

- A. Must be a type of resiliency improvement, energy conservation and efficiency improvement, clean energy improvement, or water conservation improvement, on privately owned commercial, industrial, or agricultural real property, or multifamily residential real property with five or more dwelling units.
- B. May be new construction or a retrofit, rehabilitation, or redevelopment of existing construction.
- C. The types of qualified projects and improvements include, but are not limited to:
 - a. Solar PV
 - b. Solar Thermal
 - c. Wood biomass
 - d. Wind
 - e. Geothermal systems
 - f. Air sealing
 - g. Insulation
 - h. HVAC systems meeting or exceeding ENERGY STAR standards
 - i. Building modifications to increase use of daylighting
 - j. Replacement of windows with units meeting or exceeding ENERGY STAR standards
 - k. Energy controls or energy recovery systems
 - l. Efficient lighting equipment
 - m. Air quality improvements
 - n. Snow and/or flood mitigation
 - o. Energy storage and microgrids
 - p. Alternative vehicle charging infrastructure
 - q. Fire and/or wind resistance improvements
 - r. Measures, equipment, or devices that:
 - i. decrease the consumption of, or demand for, water,
 - ii. address safe drinking water
 - iii. eliminate lead from water used for drinking or cooking
- D. Improvements must be permanently affixed to a building or facility that is part of the real property.

Section 7. Program Administration.

The C-PACER Program shall be administered by the New Hampshire Business Finance Authority (“NHBFA”), or a third party designated by the NHBFA.

Section 8. Local Administration; Program Official.

The [] shall be the designated []’s] Program Official responsible for: executing the appropriate documentation for the imposition of the special assessment; working with the NHBFA; and administering the duties and responsibilities of the [] set forth in the administrative agreement with the NHBFA.

Section 9. Priority; Collection and Enforcement.

The [] has the authority to bill and collect on the special assessment and lien, except that the [] may delegate such responsibilities to any outside third party approved by the NH BFA; such delegation shall occur on the “Assignment of Notice of Assessment and C-PACER Lien and Assignment of Assessment Agreement for C-PACER Financing” (the “Assignment”) whereby the [] assigns the special assessment lien to the Capital Provider.

- A. If the [] does not delegate billing and collection responsibilities to a third party, the [] shall bill and collect the special assessments, and such billing and collection may be made by the tax collector or other official responsible for property tax collection pursuant to RSA 80:19, by bills for water or sewer service or another municipal service, or by separate bills.
- B. Delinquent payments incur interest and penalties as specified in the financing agreement between the property owner and the Capital Provider.
- C. Each special assessment imposed under this ordinance, including any interest on the assessment and any penalty, constitutes a first and prior lien against the property on which the assessment is imposed, from the date on which the notice of special assessment is recorded at the Registry of Deeds in the county in which the district area is located until the assessment, interest, and any penalty, is paid.
- D. The lien runs with the property.
- E. Notwithstanding RSA 80:19, in the case of default or delinquency, enforcement shall only be by the capital provider through the procedures under RSA 479, including the power of sale, or as set forth in the Deed of Trust, if applicable. Any outstanding and delinquent property taxes at the time of the enforcement action shall be satisfied along with the delinquent amounts of the special assessment lien. The [] is not responsible for, nor required to, tax deed the property for any default or delinquency of C-PACER payments to the Capital Provider.

F. Assessments not yet due may not be accelerated.

G. Assessments may not be eliminated by foreclosure or bankruptcy.

Section 10. Tax Liening, Tax Deeding, Sale Proceeds.

For any C-PACER property which is tax liened pursuant to RSA chapter 80 for failure to pay Real Estate Taxes, the C-PACER lender shall be permitted to redeem the property by making sufficient payment as required by RSA 80:32 or RSA 80:76.

For any C-PACER property which is tax deeded pursuant to RSA chapter 80 for failure to pay Real Estate Taxes, the [] will make all reasonable attempts to sell the property in as short a time frame as possible, following the process of RSA 80:76 et seq., including the 90-day right of repurchase requirements contained in RSA 80:89. The [] will include in any public notice for the sale of the property, any auction notice, any bid documents, and any Purchase and Sale, a clear notification that the property is subject to a C-PACER assessment and lien.

Upon sale of the property, the process laid out in RSA 80:88 et seq. for the distribution of proceeds shall be followed, and any delinquent C-PACER special assessment payments are considered "Taxes" for purposes of payment from sale proceeds (RSA 80:19 – "For the purposes of this chapter, the word 'taxes' shall include special assessments.").

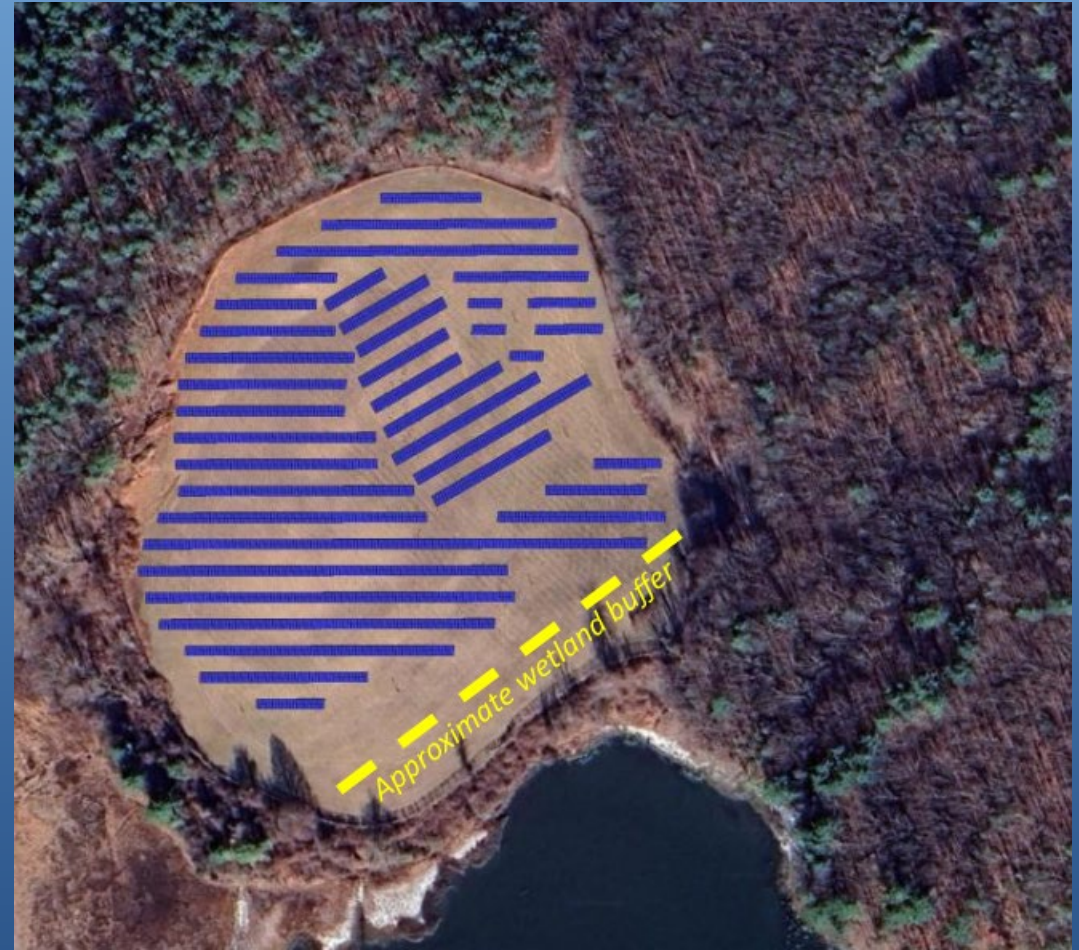
The C-PACER special assessment and lien remain on the property and shall pass to the new owner, who becomes responsible for payment upon transfer of title.

Section 11. Liability.

The [] shall incur no liability as a result of the C-PACER Program or for the private debt created or evidenced by the Assessment Agreement, the Assessment and C-PACER Lien, the Financing Agreement, or any related document, nor shall any members of the governing body, employees, board members or officers of the [] be personally liable for exercising any rights or responsibilities pursuant to or in furtherance of the C-PACER Program. The []'s participation in the C-PACER Program shall not be interpreted to pledge, offer, or encumber the []'s full faith and credit.

Jones Ave Solar Array - Feasibility Study

Study performed by Apex Analytics
Presented by The City of Portsmouth



City of Portsmouth, Public Works

Portsmouth Energy Advisory Committee Meeting

April 8, 2025





Utilized the Department of Energy's (DOE) System Advisor Model (SAM)

- Estimated solar production for the Jones Ave landfill site
- The tool estimates photovoltaic system sizing based on space availability and site conditions

Cost data from DOE and other Northeastern state solar programs

- Validated with the APEX's bottom-up site estimate

APEX modeled three scenarios

- Option 1 – City-owned single 1.7MW-ac system
- Option 2 – City-owned two systems sized at 950kW-ac and 750kW-ac with one Behind the Meter (BTM) at the High School
- Option 3- Modeled option 2 using a credit purchase agreement with a private developer assuming a 15% discount on market rates



Options Evaluated

Option 1: A single 1.7 MW City-owned solar array

Front-of-the-meter (FTM) system connection to the electrical grid at Jones Ave

PROS	CONS
• Lowest total cost to construct • Medium Net Benefit (if 2 system qualified for ITC) • No time pressure for Investment Tax Credit (ITC) • No behind-the-meter (BTM) complications at High School • Minimal (if any) disturbance to woodlands and wetlands	• No ITC refund to the city • Larger new bond issuance by City • Longer and more complicated study by the utility/transmission company (Eversource)

Option 2: Two City-owned systems totaling 1.7 MW

One 950 kW FTM system connecting to the electrical grid at Jones Ave and one 750 kW behind-the-meter (BTM) system connecting directly to the high school

PROS	CONS
• Medium total cost to construct • Smaller system can be connected BTM at HS to lower demand charges from utility • Highest Net Benefit if qualified for ITC • Both systems should have shorter, less costly study by Eversource • Potential for project phasing and financing	• Time pressure to approve and start to qualify for ITC • Additional new electric line through woodlands and wetlands to HS (recommend underground conduit) • Consider additional development costs such as ledge removal and time • Disturbance to HS during construction • Higher total cost overall



Options Evaluated Cont.



Option 3: Power Purchase Agreement for Option 2

Credit purchase agreement with a private developer. This option was determined to provide a lower overall benefit to the City compared to City Ownership

PROS	CONS
• Low upfront Cost to the City • Developer performs all design and construction activities	• Lower City benefit (assumed 15% of savings power rate) • Private entity operating power generation on City property • Risk of not realizing power savings rates



Timelines of 1-system and 2-system Options

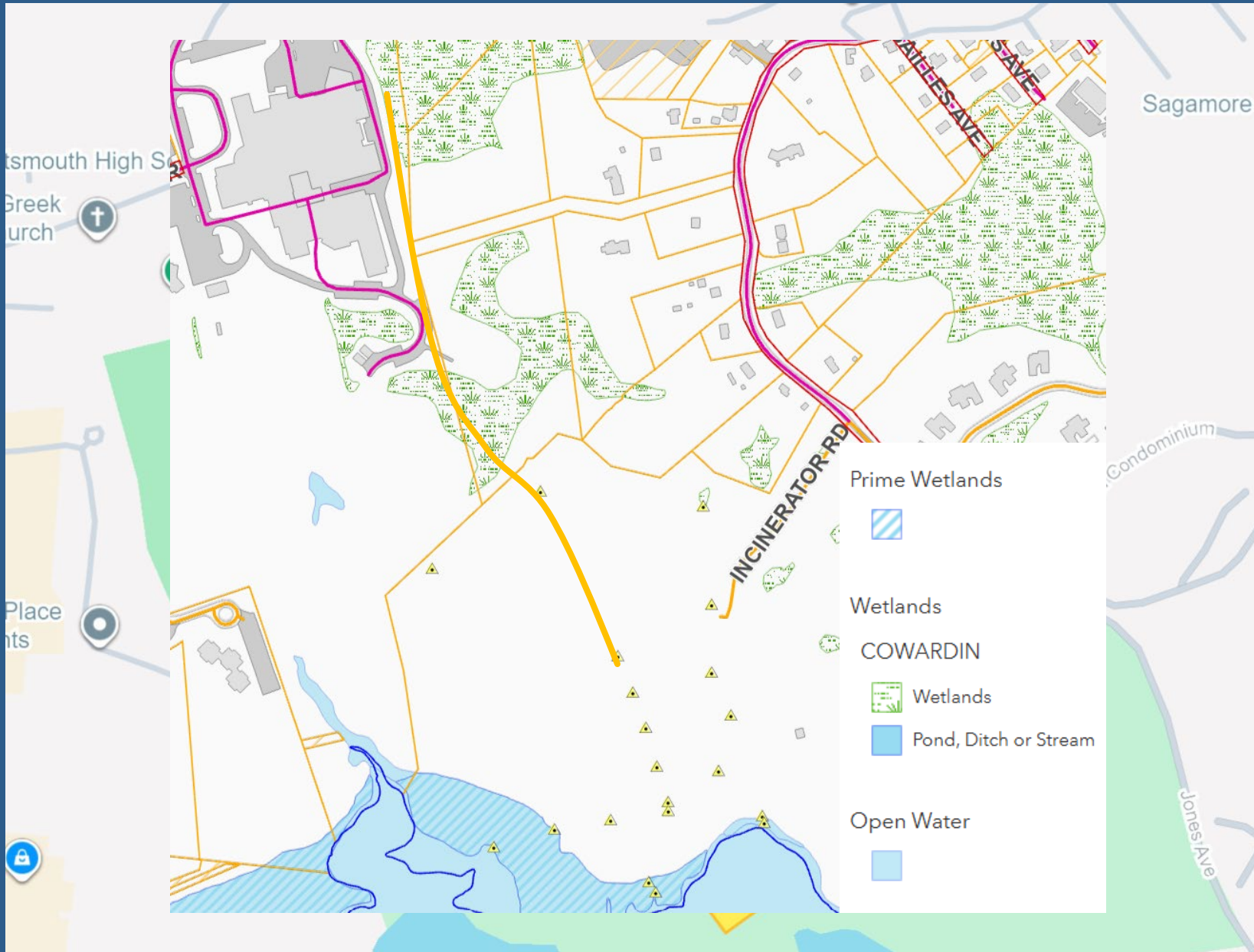


- **By phasing the two-system project, the City can potentially capture 35%-40% of eligible costs**
 - Project must be online by 12/31/2027 to qualify for ITC
 - Analysis by the City, including anticipated DES permitting time-frames, indicate that it's unlikely to meet the schedule identified below for the 2-system option
- **Option 1 timeline considerations:** The requirement for systems >1 MW to undergo a complex transmission level study would add 9-11 months to the schedule, and exceed the 12/31/2027 deadline for systems to be "in service" to qualify for the ITC
- **Scenario 2 timeline considerations:** A two-system approach will potentially not trigger transmission study, and would likely be less impactful to each feeder they would connect to, reducing needed upgrades from Eversource
 - If the two-system approach takes too long to start/contract, or ends up requiring the transmission study, the City could decide to change the design back to a one-system 1.7 MW-ac design and reapply to Eversource
 - There are still significant long-term benefits from this 1-system approach

	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28								
Two Systems 750 & 950 KW ac	Hire EPCand Design						Appl. Accept.		ASO Determ.		Dist. Impact Study			ISA	Construction			Comm & PTO																				
	Environmental Permitting																																					
One System 1.7 MW ac	Hire EPCand Design						Appl. Accept.		ASO Determ.		ASO/Cluster Study Process								Dist. Impact Study			ISA	Construction			Comm & PTO			Cutoff for ITC									



ELECTRICAL CONNECTION PATHS OF OPTIONS 1 & 2





LANDFILL CLOSURE PERMIT WILL REQUIRE MODIFICATION



Cap Stability Evaluation

- Assessment by a New Hampshire-licensed Professional Engineer
- Minimum analysis includes:
 - Cap bearing capacity (solar foundations and construction equipment)
 - Settlement tolerance and anticipated settlement
 - Impacts to subsurface piping and conduits
 - Global and veneer stability under static and seismic conditions
- Calculations must consider wind and snow loads
- Low-ground-pressure equipment is typically required



Stormwater & Landfill Gas Controls

- PE evaluation of stormwater changes caused by increased impervious coverage
- Explosion-proof electrical equipment required where feasible
- Non-panel equipment located off the landfill cap



Operations, Access & Maintenance

- Maintain access to vents, wells, probes, markers, and monitoring features
- Post-closure inspection, monitoring, and maintenance continue during construction and operation
- Construction damage must be repaired promptly and reported to NHDES



End-of-Life & Financial Assurance

- Solar arrays must be removed and the landfill restored to pre-project conditions
- Closure plans must be updated to reflect the post-closure solar use
- Financial assurance cost estimates must include solar removal and site restoration

Solar array development on a closed solid waste landfill is a post-closure use that would require a Type I-B permit modification from NHDES.



■ **Nominal Total Savings & Cash (Gross)**

- **All project cash inflows over a 25-year analysis period.**
 - Includes Utility bill savings, net metering credits, REC sales, and any direct cash the systems generate.
 - Excludes Construction/installation costs, borrowing costs, and O&M costs.

■ **Nominal Total Net Savings**

- **Nominal Total Savings & Cash (Gross) minus all project costs.**
 - Project costs include financing, construction, installation, interconnection, and all associated system equipment.

■ **Net Benefit (Net Present Value of Nominal Total Net Savings)**

- **True value of the project in today's dollars after accounting for costs, financing and when the savings occur.**
 - Includes all construction and financing costs, all project savings and revenues, the timing of cash flows, and the City's cost of borrowing (3.75%).



FINANCIAL SUMMARY OF OPTIONS



- With ITC, Option 2: Two System has largest Net Benefit (breakeven 16 years)
- Without ITC, Option 1: Single System has largest Net Benefit (breakeven 20 years)
- If the ITC refund is not received, break even point is significantly extended by 3-4 years for Option 2
- The private option has lower overall benefits.
 - Assumption of 15% savings on electrical costs may not be realized
 - Existing PPA solar array currently ~30% over market rate

Single System - Without ITC			
Nominal Total Savings & Cash		\$	12,734,324
Nominal Total Net Savings		\$	7,057,343
Net Benefit (NPV)		\$	4,146,253
Two Systems - with Tax Equity Refund			
Nominal Total Savings & Cash		\$	13,045,175
Nominal Total Net Savings		\$	8,707,889
Net Benefit (NPV)		\$	5,274,818
Private Owned - Private Tax Equity Flip (5yr)			
Nominal Total Savings & Cash		\$	7,039,575
Nominal Total Net Savings		\$	5,701,410
Net Benefit - All Parties		\$	2,961,840
Net Benefit for City, 15% savings		\$	1,211,380



SUMMARY AND CONCLUSIONS



- The Single City-owned 1.7 MW system
 - Provides the highest long term cost benefit (without ITC for option 2)
 - Lowest construction cost for City-owned system
 - Simple interconnection infrastructure
 - Greater construction schedule certainty
- The Two City-owned systems totaling 1.7 MW
 - Provides the highest long term cost benefit (with ITC)
 - Higher Construction Cost than single system (without ITC)
 - Complicated interconnected infrastructure (to HS & Jones Ave)
 - Higher value behind the meter electricity generation
- Power Purchase Agreement for Option 2
 - Provides the lowest long-term cost benefit (risk of no financial benefit to City)
 - Low Upfront Costs for the City
- The City should explore alternative BHM options throughout the City that would require less environmental impact and lower construction and O&M costs

Appendix with Detailed Slides

Jones Ave Solar Array Feasibility Study



DETAILS ON FINDINGS



- The combination of ISO-NE/transmission company study requirements and the phase out of the Section 48E ITC for solar at 12/31/2027 shifted the analysis to focus on the potential for two <1 MW systems
- By remaining below 1 MW, the ISO-NE rules allow for a proposed DG system to avoid participating in an Affected System Operator Study* if it is deemed "electrically irrelevant" shortening the interconnection timeframe by about 9-11 months
- Doing so would enable the City to qualify for the ITC using the "direct-pay" or "refund" method, receiving a grant for 30-40% of eligible cost directly from the IRS (30% plus the 10% bonus for domestic content if the equipment qualifies)
- This structure, with or without the ITC, would be more beneficial to Portsmouth than entering a long-term PPA led by a private developer
- All savings and capex estimates are subject to variance in practice, and can be bounded with some sensitivity analyses

*[ISO-NE Section 1.3.9](#), governs the process and requirements for impact assessment of new generation on the transmission system, which is not required but currently in practice done for all projects >1 MW; [ISO-NE Planning Procedure No. 5-1](#) at section 2.1 explicitly states <1 MW projects are exempt from this review, but two projects in the same area adding up to >1 MW may be reviewed as a single project by the transmission company.



- The consulting team used both a bottoms-up and top-down approach for estimating the Cap Ex costs of the systems, with historical data from other states further validating the estimate
- Bottoms-up included unit-specific component costs based on conversations with active solar developers, and best-estimate additions for project-specific differences, such as the conductor to the H.S.
- Vendor estimates are general, private market assumptions, but could be higher for the City due to public contracting requirements
- Savings are based on current NH Net Metering law, which allows for the Supply rate only for systems > 100 kW, including public systems of > 1 MW, and does NOT currently include demand rate savings for a BTM connection of one of the two smaller systems
- Supply rates are increased 2.5% per year average, system degradation is 0.5% a year, public discount rate is 3.75% and private discount rate is 8%
- Private system PPA is assumed to provide 15% savings to City vs. Eversource supply rate; this could be negotiated higher or lower, or be fixed with an escalator-style contract
- The City's borrowing cost was estimated at 3.75%, a recent (Fall 2025) value for a AAA municipal bond; private borrowing was estimated at 6.75%



CAP EX COMPARISON



- The separate systems will require more privately owned conductor, more site work, more vendor costs, and slightly higher install costs
- Utility costs are assumed higher for the combined system due to the cost of ASO study, and likelihood of higher system upgrade costs (3V0, voltage management, etc.)

CAPEX	System 1	System 2	1+2	Combined	Differences
Predevelopment Costs	\$ 17,500	\$ 17,500	\$ 35,000	\$ 35,000	\$ -
Utility Costs (apps, studies, CIAC)	\$ 516,000	\$ 56,000	\$ 572,000	\$ 726,000	\$ (154,000)
Other Costs (Site Etc)	\$ 215,000	\$ 290,000	\$ 505,000	\$ 215,000	\$ 290,000
System and EPC Cost (no profit)	\$ 1,463,000	\$ 1,404,750	\$ 2,867,750	\$ 2,575,500	\$ 292,250
EPC Profit %	\$ 246,300	\$ 240,475	\$ 486,775	\$ 357,550	\$ 129,225
Total System and EPC Cost	\$ 1,709,300	\$ 1,645,225	\$ 3,354,525	\$ 2,933,050	\$ 421,475
Total Project Cost	\$ 2,457,800	\$ 2,008,725	\$ 4,466,525	\$ 3,909,050	\$ 557,475

Thank you!

Questions?