

Thank you for your interest in Portsmouth's Climate Future!

The table below presents every climate change mitigation strategy the City of Portsmouth is considering for inclusion in its forthcoming Climate Action Plan (CAP). The City is keenly interested in receiving public input on a refined list of these strategies, those with the greatest impact potential (i.e., greenhouse gas emissions reduction) and/or highest costs – see grey highlighting. The public should review and provide their feedback on these high impact/high-cost strategies through the [EasyRetro](#) tool. To provide feedback on the remaining strategies, please email Kate Homet, Associate Environmental Planner, at kehomet@cityofportsmouth.com.

Reminder – the strategies highlighted in gray are included in the EasyRetro tool, and feedback on those strategies should be provided through this link: <https://bit.ly/Portsmouth-climate-future>

Built Environment		Preliminary Estimates (1 = low, 5 = high)	
		Impact	Cost
Municipal			
BE.1	Ensure all new municipal construction (new or major renovations) are net zero ready. To support performance verification and reporting, adopt a requirement that these projects meet USGBC's Leadership in Energy and Environmental Design (LEED) Zero Energy.	5	4
BE.2	Conduct American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) energy audits of all municipal facilities and implement energy efficiency measures as feasible (e.g., LED lighting, HVAC equipment upgrades, water efficient fixtures). For facilities in which energy upgrades were enacted within the last five years, implement a retro-commissioning program to ensure proper functioning. Retrofit projects can be supported by rebates and loans available through the state and utilities (e.g., NH Electric Co-op Commercial and Municipal Retrofit Energy Efficiency Programs).	4	2
BE.3	Periodically assess installed LED streetlights and traffic signals for efficiency improvements.	3	3
BE.4	Eliminate building systems that utilize fossil fuel sources (i.e., oil, natural gas, propane) for space heating and hot water and replace these systems with electric alternatives in all municipal and School Department buildings.	5	5
BE.5	Prioritize the redevelopment and reuse of existing municipal buildings over new development. Refer to the CARE Tool (caretool.org).	3	1
Community			
BE.6	Establish a green incentive fund that would support lower income residents and renters making improvements in energy efficiency and use of renewables.	4	2
BE.7	Consider using City's bond rating to explore offering financing options similar to PACE for retrofits or renewable energy distributed generation systems at a lower rate than individuals could obtain. The Community Power Coalition of New Hampshire can also be a resource for this purpose.	3	3
BE.8	Develop, launch, and maintain consolidated community education program that engages residents and other property owners/developers to provide resources on a range of energy efficiency and transition technologies, relating to buildings (e.g., Weatherization Assistance Program) and building systems (e.g., NHSaves), electric vehicles (e.g., Granite State Clean Fleets, Plug-In Electric Drive Vehicle Tax Credit), and renewable energy deployments (e.g., Low-Moderate Income Solar Renewable Energy Grant). Organize such resources and information by their target audience. Afford this program a prominent place on the City's website, enlist staff and/or	Enabling	1

	community members to serve as "Coaches" to perform direct engagements, and engage partners in planning and conducting community-scale education events.		
BE.9	Incentivize energy efficiency retrofits of existing buildings, especially the older housing stock. Remove any barriers in the land use ordinances to enable the addition of exterior insulation and improve the efficiency in renovations to existing buildings while being sensitive to both historic preservation and fire & life safety.	5	1
BE.10	Incentivize projects to incorporate exceptional energy design standards. For example, create an Energy Efficiency Chapter in the Zoning Ordinance that either creates a Sustainable Energy Efficient Development (SEED) Overlay Zoning District allowing for scaled (based on building size) floor area ratio bonuses and building height relaxations, or adds the same incentives to current Zoning Overlay Districts. Permit fees could also be reduced as an additional incentive.	3	1
BE.11	Strengthen Article 7.1 of the Site Plan Regulations to require Low Impact Development (LID) design practices and techniques in building design. Encourage the planting of trees and greenery around new or renovated buildings and sites that are being developed or subdivided. Prioritize the inclusion of open space.	1	1
BE.12	Apply sustainable design and construction frameworks and rating systems, such as LEED for Neighborhood Development standards and the EcoDistricts protocol in neighborhood planning.	Enabling	1
BE.13	Implement and enforce building energy performance standards. Require buildings of a certain size to report their energy usage and GHG emissions to the City for purposes of enforcement and benchmarking. ENERGY STAR Portfolio Manager can be used to track, benchmark, and report data.	5	2
BE.14	Adopt an advanced energy code, with an incentivized net-zero pathway. Include solar- and EV- capable, ready, and install requirements. Once adopted, ensure that resources are put in place to support code compliance.	5	2
BE.15	Directly promote heat pump technologies to current natural gas and fuel oil customers.	3	1
BE.16	Coordinate with appropriate stakeholders, including developers of prominent commercial properties within the City, to establish a 2030 District (https://2030districts.org/become-a-member/).	4	2
BE.17	Adopt tax incentives (e.g., preferential rates) for multi-family and commercial buildings that are both highly efficient and fossil-fuel free.	4	3
BE.18	Investigate a tax structure that gradually increase taxation on carbon-intensive activities.	4	1
BE.19	Expand the City's Urban Forestry Ordinance to place restrictions on the removal of mature trees on privately-owned properties.	1	1
Municipal and Community			
BE.20	Implement a Building Management System (BMS) to monitor, measure, and control energy use in municipal buildings. Investigate a demand response and/or routine load sharing program whereby peak demand energy use is reduced and operational changes are instituted to lessen overall energy demand year-round. On the community side, ensure the proposed advanced energy code includes a BMS requirement, where appropriate.	3	3
BE.21	Identify staff to continue to monitor Federal and State incentives, rebates, and tax breaks that support climate mitigation and resiliency.	Enabling	2
BE.22	Implement measures to reduce embodied carbon emissions in new construction. For example, incentivize the use of sustainable building products like cross laminated timber and wood fiber insulation.	5	3

Energy		Preliminary Estimates (1 = low, 5 = high)	
		Impact	Cost
Municipal			
EN.1	Plan, design, and build solar arrays with battery storage of sufficient generating capacity to power municipal buildings. Solar panels could be distributed across building roofs and parking lots, or aggregated into one site. The Public Undeveloped Land Assessment lists several sites that may be suitable. Loans and grants are available to support municipal renewable energy development (e.g., NH CDFA Clean Energy Fund)t, as are ownership and financing options (e.g., power purchase agreements [PPAs]).	5	5
EN.2	Building off of the University of New Hampshire’s Living Bridge Project, explore opportunities to install tidal turbines at the Sarah Mildred Long Bridge, Memorial Bridge, and the bridge at Interstate 95.	4	4
Community			
EN.3	Encourage the Pease Development Authority, with input from tenant units, to install onsite renewable energy systems at the Portsmouth International Airport at Pease (PSM).	2	1
EN.4	Rezone the Schiller Station area to ensure that the existing power infrastructure stays intact for a future uses such as energy storage. Explore the opportunity for this site to support the conveyance and perhaps storage of power generated by off-shore wind projects.	2	1
EN.5	Adopt/Enact state statutes specific to renewable energy. For example, consider expanding the Solar Energy Systems Exemption under N.H. R.S.A. 72:62 by eliminating the self-imposed five-year time limit and \$25,000 maximum deduction. Consider enacting the Wind-Powered Energy Systems Exemption under N.H. R.S.A. 72:66. Consider adopting a Renewable Energy System Zoning Ordinance under N.H. R.S.A. 674:17 to encourage and protect energy access.	3	2
EN.6	Amend zoning and other City policies to eliminate existing barriers to solar development. As examples, consider allowing solar arrays as a principal use and adopting a policy that allows more visible PV Solar Arrays in the Historic District. Revisit recent limitations that were placed on rooftop solar arrays with the adoption of the 2015 International Fire Code.	4	1
EN.7	Promote renewable energy development through regulatory incentives. For example, adopt dimensional incentives/density bonuses for new or redeveloped sites that incorporate solar power energy systems into building design (including their parking lots). . Consider expediting the building permit and inspection process as well as lowering permitting fees for renewable energy distributed generation systems.	4	1
EN.8	Encourage the development of community solar projects - consistent with RSA 362-A:9, XIV (as amended), where residents who are unable to install solar PV on their own accord (e.g., due to living in a multi-family residential development, financial limitations) are able to access the benefits of owning a solar PV system (e.g., credits on their electricity bill).	3	1
EN.9	Clarify zoning ordinance to specify that roof mounted solar panels are permitted by right, unless located in the City's historic district (additional provisions apply). Determine which solar applications to regulate and in which zoning district.	3	1
EN.10	Partner with utilities to evaluate the existing capacity and redundancy of the electric grid, considering the expected future demand due to electrification of vehicles and building systems. As part of this study, identify smart electric grid technologies that could be implemented. Additional considerations should include microgrid technology and distributed energy resources.	Enabling	1

EN.11	Provide resources about the installation of solar panels on historic properties. Information should be in line with the National Park Service and the Security of the Interior Design Standards for Rehabilitation.	2	1
EN.12	Continue to participate and educate residents about Community Power, established under RSA 53-E, so that individual household energy goals can be met regardless of their available infrastructure. Establish targets for participants signing up for the "Clean 100" (i.e., 100 percent renewable content).	4	1
EN.13	Explore local solar access laws that would limit building restrictions for solar PV installations (e.g., imposed by homeowners associations) and protect such installations from unwanted shading.	3	1
<u>Municipal and Community</u>			
EN.14	Invest in community-scale energy and storage projects. Consider having commercial scale renewable energy distributed generation facility applications ready as New Hampshire Renewable Energy Funds become available.	5	5
EN.15	Actively promote offshore wind interconnection through Piscataqua River into existing electric infrastructure in Newington/Portsmouth to improve renewable energy mix in ISO-NE grid.	5	1
EN.16	Advocate for an increase in the State's Renewable Portfolio Standard (RPS) requirements beyond 2025. Do so in partnership with other municipalities and in coordination with the Community Power Coalition of New Hampshire and in coordination with local and regional environmentally-conscience agencies.	5	1
EN.17	Advocate for a Clean Heat Standard in New Hampshire, similar to Massachusetts and Vermont. A Clean Heat Standard generally requires heating energy suppliers to replace fossil heating fuels with clean heat over time. Do so in partnership with other municipalities and in coordination with local and regional environmentally-conscience agencies.	5	1
EN.18	Working with partners (e.g., the State, Eversource, and Offshore Wind Developers), leverage the City's coastal facilities to support offshore wind construction and energy production, including manufacturing/marshalling, transmission interconnection, and energy storage. Seek Host Agreements that would provide the City with various fiscal and economic benefits.	Enabling	1
EN.19	Invest in workforce development to support clean energy jobs, including through partnerships with the School Department and local colleges.	Enabling	2

Solid Waste		Preliminary Estimates (1 = low, 5 = high)	
		Impact	Cost
<u>Municipal</u>			
SW.1	Conduct a local government waste audit and track diversion rates over time.	3	1
<u>Community</u>			
SW.2	Reconsider the feasibility of a regional anaerobic digester at the Pease WWTF. This strategy is also important for food waste diversion since composting facilities may be difficult to permit in the state.	4	5
SW.3	Expand curbside food waste collection services, perhaps in coordination with existing private-led services, to all residential households that receive Municipal Solid Waste and recycling services. Require all new multi-family development projects to site potential locations for the adequate storage and handling of composting material should a municipal composting program become available in the future. Add information on at-home composting to the City's website.	3	3
SW.4	Create a voluntary certification program for Portsmouth restaurants working to reduce food waste (levels might include "skip the stuff", composting, and offering smaller portion sizes.)	3	1

SW.5	Assess the effectiveness of the current recycling program. Evaluate the feasibility of developing an expanded recycling center, as well as reverting back to multi-stream collection.	2	4
SW.6	Create a "borrow/lease" culture in Portsmouth in relation to tools, appliances, transportation, etc. (similar to tool libraries and what RadMoto is doing). Establish a repair/reuse center.	1	2
Municipal and Community			
SW.7	Increase landfill diversion rates for municipal, commercial, and residential users by promoting waste reduction, reuse, recycling, and composting. Priority should be given to food waste management and overall waste reduction strategies at the source. Public education will be a key aspect of effective waste diversion.	3	2
SW.8	Prepare and implement a Zero Waste Plan, which would see the Portsmouth community reduce, reuse, recycle, and compost at least 90 percent of its solid waste.	5	4
SW.9	Implement strategies associated with ICLEI's Circular City Actions Framework (https://circulars.iclei.org/action-framework/) to transition the local government and broader community from a linear to a circular economy that closes material loops.	3	2

Transportation		Preliminary Estimates (1 = low, 5 = high)	
		Impact	Cost
Municipal			
TR.1	Develop and implement a fleet electrification plan. Ensure that this plan adequately assesses future charging needs by department and vehicle use types. Install additional Level 1, Level 2, and DC Fast Charger stations, as appropriate. Concurrently, assess opportunities to right-size the municipal fleet to ensure the fleet inventory does not exceed operating requirements. The cost of this strategy may be offset through funds available through the Granite State Clean Fleets program.	4	4
TR.2	Work with the School Department to electrify the school bus fleet.	5	5
Community			
TR.2	Find a new vendor to restart a bicycle share program in the City and explore the possibility of expanding into Kittery and other regional attractions based on origin-destination data.	2	2
TR.3	Expand public transportation within as well as into and out of Portsmouth to attract more "choice" riders on a regular basis and more efficiently serve "captive" riders. This includes making bus connections to regional transportation hubs, such as the rail stations in Dover and Exeter, as well as exploring new forms of public transit (e.g., passenger rail). To maximize the sustainability benefits of public transportation, plan to electrify the fleet and prioritize city investment in options benefiting lower income communities.	4	4
TR.4	Form a focus group comprising both potential and current EV owners to better understand what it will take to increase local and regional EV adoption. Ensure representation from disadvantaged demographic groups.	Enabling	1
TR.5	Use a standard permit process for all accessory use EV charging station installations as opposed to a CUP or SP. In general, ensure that the EV charger installation permitting process is streamlined for electricians and communicated to homeowners and businesses.	3	1

TR.6	Promote EV charging installations among private developers. Provide density bonuses for the installation of EV charging in new development or redevelopment (e.g., decrease in total required parking spots, reduced floor area, etc.) and/or provide adjusted parking requirements in exchange for EV spaces. This could go in 10.5A46.20 of the Zoning Ordinance -incentive overlay district. For existing businesses, allow them to sponsor public EV charging stations, or otherwise incentivize EV charging installations.	3	1
TR.7	Continue to install the wiring of circuits for Level 1, Level 2, and DC Fast Chargers when maintenance is performed on public parking lots.	Enabling	2
TR.8	Include specific site and equipment design standards for EV charging stations including but not limited to where EV spaces are to be in the parking lot or structure, signage, site lighting, clearance, maintenance responsibilities, time limit regulations, etc. Increase the profile and wayfinding signage for existing and new EV charging stations so that they are highly visible and easy to find. Consider preferred parking and other incentives for the use of alternative energy vehicles.	2	1
TR.9	Complete and implement an electric vehicle charging plan to identify feasible and strategic locations for the installation of publicly available Level 1, Level 2, and DC Fast Chargers.	4	4
TR.10	Include EV parking spaces in the calculation of minimum and maximum number of parking spaces required in new development or redevelopment. In general, reduce parking requirements currently specified by the Building Code. Use this space for public amenities, shops, and a mix of economic activities to increase the walkability and desirability of neighborhoods/nodes.	3	1
TR.11	Update the City's Bicycle and Pedestrian Plan (2014) with a focus on creating a viable alternative transportation network that reduces the community's dependency on motor vehicles as well as provides recreational opportunities. Projects should be prioritized based on their ability to reduce overall vehicle miles traveled.	4	5
TR.12	Where and as appropriate, require developers to implement transportation demand management measures to reduce congestion, improve traffic flow, and reduce greenhouse gas emissions associated with motor vehicle travel.	3	1
TR.13	Require all new or reconstructed parking structures or lots to install EV charging stations if they meet certain threshold criteria, either by the number of parking spaces or size of the development. This could go in Section 10.1110 - off-street parking. Require all new or reconstructed parking spaces to also provide electrical capacity for additional future EV charging stations. Consider requiring a specific number of accessible stations that meet general requirements for accessible parking in the ADA Accessibility Standards.	3	1
TR.14	Advocate for a State-level residential sector rebate for the purchase or lease of a new or used electric vehicle (BEV-only). Do so in partnership with other municipalities and in coordination with local and regional environmentally-conscience agencies.	5	1
TR.15	Work with local and regional transportation partners in conducting a microtransit feasibility study to identify projects that would augment and/or replace fixed-route public transit service.	3	4
TR.16	Identify partners to establish an electric car share program.	2	1
TR.17	Raise residential and commercial densities in areas that are within reasonable walking and biking distances to public transit stops. Identify opportunities to further mixed-use developments within these areas.	4	1
TR.18	Implement already City Council approved rewording of gas station definition to permit EV charging stations in business parking lots, and allow reduced number of parking spaces requirement to accommodate.	1	1

TR.19	Work with transportation network companies (e.g., rental cars, carshares, ride apps, and taxis) to encourage EV procurement and use.	3	2
TR.20	Study neighborhood completeness (i.e., amenities and services within walkable and bikeable areas) and work to address gaps through regulatory (e.g., zoning-based incentives) and non-regulatory (e.g., business recruitment, tax incentives) means.	3	1
TR.21	Adjust the City's Zoning ordinance to incentivize non-vehicular trips and promote increased public transit ridership and active transportation modes. For example, the removal parking minimums, where present, and the codification of parking maximums.	3	1
TR.22	Establish zero emissions zones throughout the City, where appropriate. In such zones, only zero emissions vehicles and pedestrians/bicyclists would be permitted. Other vehicles would be prohibited or allowed upon payment of a fee.	3	1
Municipal and Community			
TR.23	Install solar PV arrays, other renewable energy sources, and/or battery storage at locations with municipally-owned EV charging stations to improve the energy profile of transportation electrification.	3	3

Land Management		Preliminary Estimates (1 = low, 5 = high)	
		Impact	Cost
Community			
LM.1	Expand the City's tree cover to combat urban heat, enhance public health, and reduce the energy need for cooling. For example, plant a shade way at locations such as State Street in downtown and Parrot Ave from the Library to Junkins.	2	4
LM.2	Implement blue carbon strategies (i.e., carbon sequestration through coastal resource conservation).	3	4
LM.3	Identify publicly-owned land areas - or privately-owned lands for acquisition - that are suitable for new or enhanced greenhouse gas emissions sequestration and storage, for example reforestation/afforestation, forest management, and wetland restoration. Work with private landowners to develop and manage similar projects, where appropriate. This could include improved forest management plans.	3	4

Applicable Across Sectors		Preliminary Estimates (1 = low, 5 = high)	
		Impact	Cost
Municipal			
AA.1	Adopt an environmentally preferable purchasing policy and include energy efficiency and waste provisions in standard specifications and government contracts.	3	2
AA.2	With state approval, as necessary, incorporate carbon emissions and the cost of carbon as evaluation criteria in the City's capital planning process and in Department operating budget requests where relevant.	4	1
Community			
AA.3	Continue to hold community conversations on climate and sustainability topics to keep momentum going upon CAP completion and to further the culture of climate awareness in Portsmouth. Hold these conversations across the City, but in particular, in neighborhoods that experience/are exposed to the most impact.	Enabling	1
AA.4	Raise awareness about local climate impacts through art - shows, installations, local cultural events, etc.	Enabling	1

Municipal and Community			
AA.5	Appoint a Climate Action Coordinator or similar position to manage the implementation of the CAP.	Enabling	2
AA.6	Institute a tourism tax to reduce the greenhouse gas emissions associated with tourist activities. Projects to be funded through this tax could support the tourism industry by positioning Portsmouth as a "green destination."	3	1