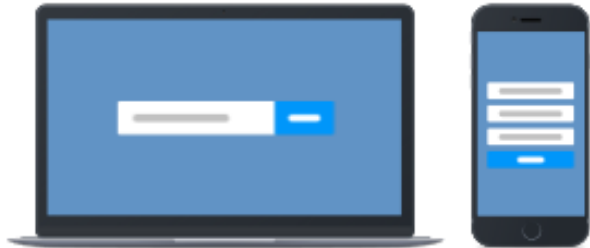




Poll Everywhere

Join by Web



- 1 Go to **PollEv.com**
- 2 Enter **VHBPLANNING007**
- 3 Respond to activity

Join by Text



- 1 Text **VHBPLANNING007** to **22333**
- 2 Text in your message



Public Workshop #2

City of Portsmouth

Portsmouth's Climate Future

July 31, 2023

Welcome Message



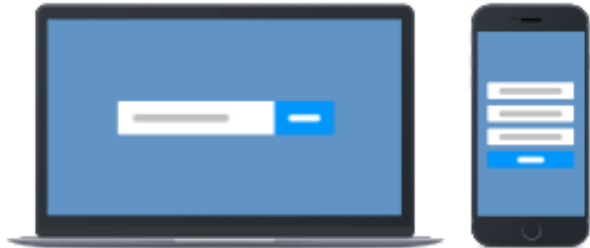
Today's Agenda

1. Real Time Polling (10 minutes)
2. Update on the Planning Process and Engagement (10 minutes)
3. Presentation of the 2021 GHG Emissions Inventories (5 minutes)
4. Presentation of Draft Mitigation Strategies (15 minutes)
5. Group Brainstorming (55 minutes)
6. Group Report Backs (20 minutes)
7. Next Steps in the Planning Process (3 minutes)
8. Thank You and Workshop Closing (2 minutes)



Poll Everywhere

Join by Web



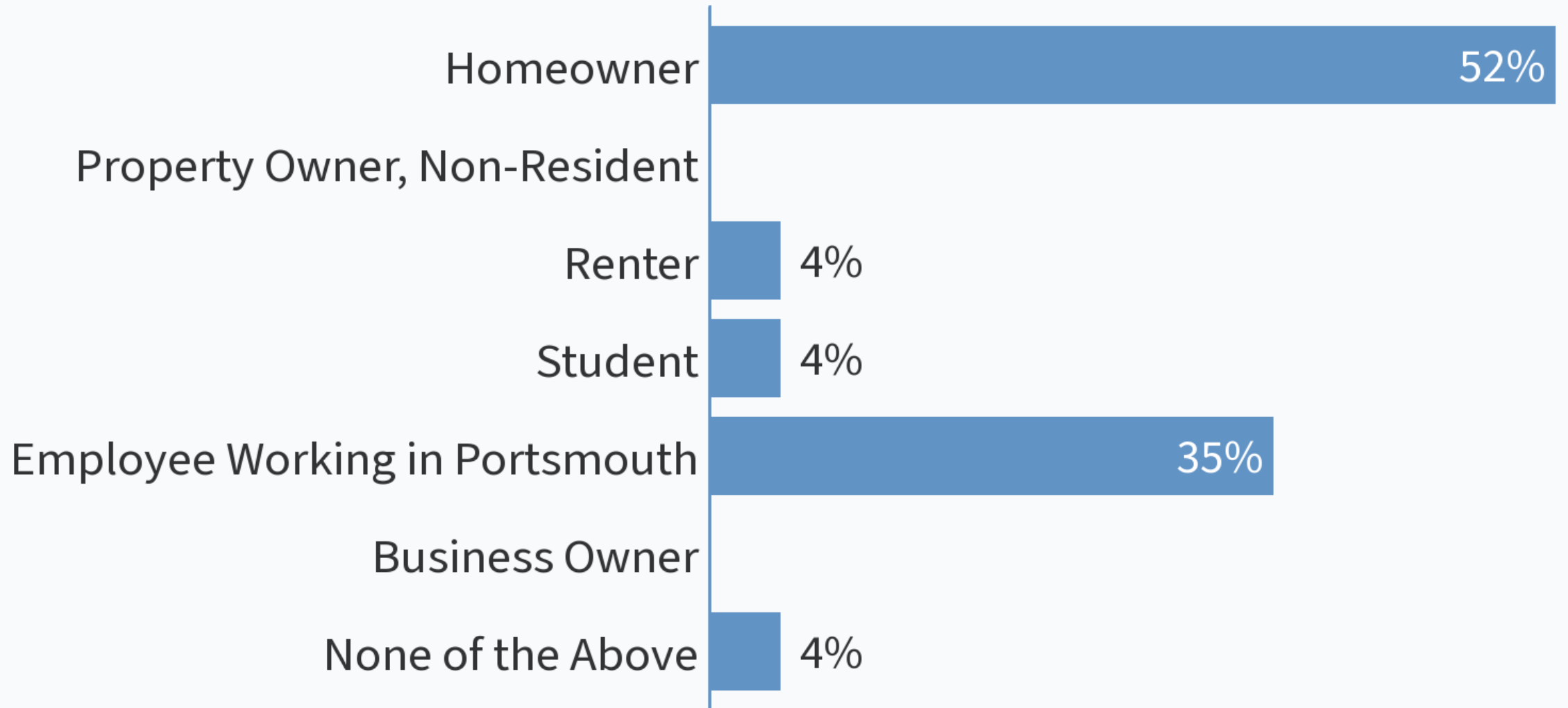
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Join by Text

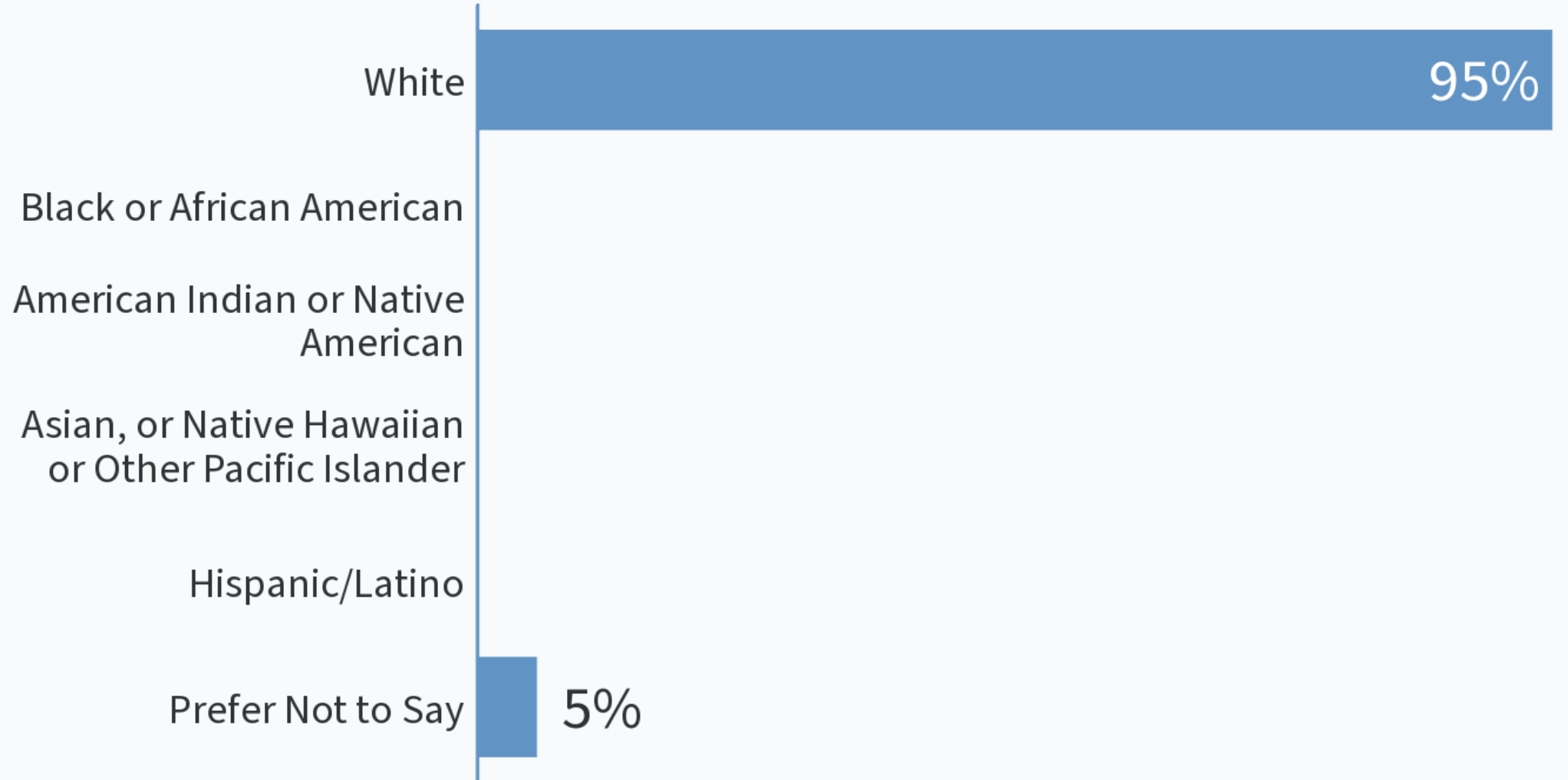


- 1 Text **VHBPLANNING007** to **22333**
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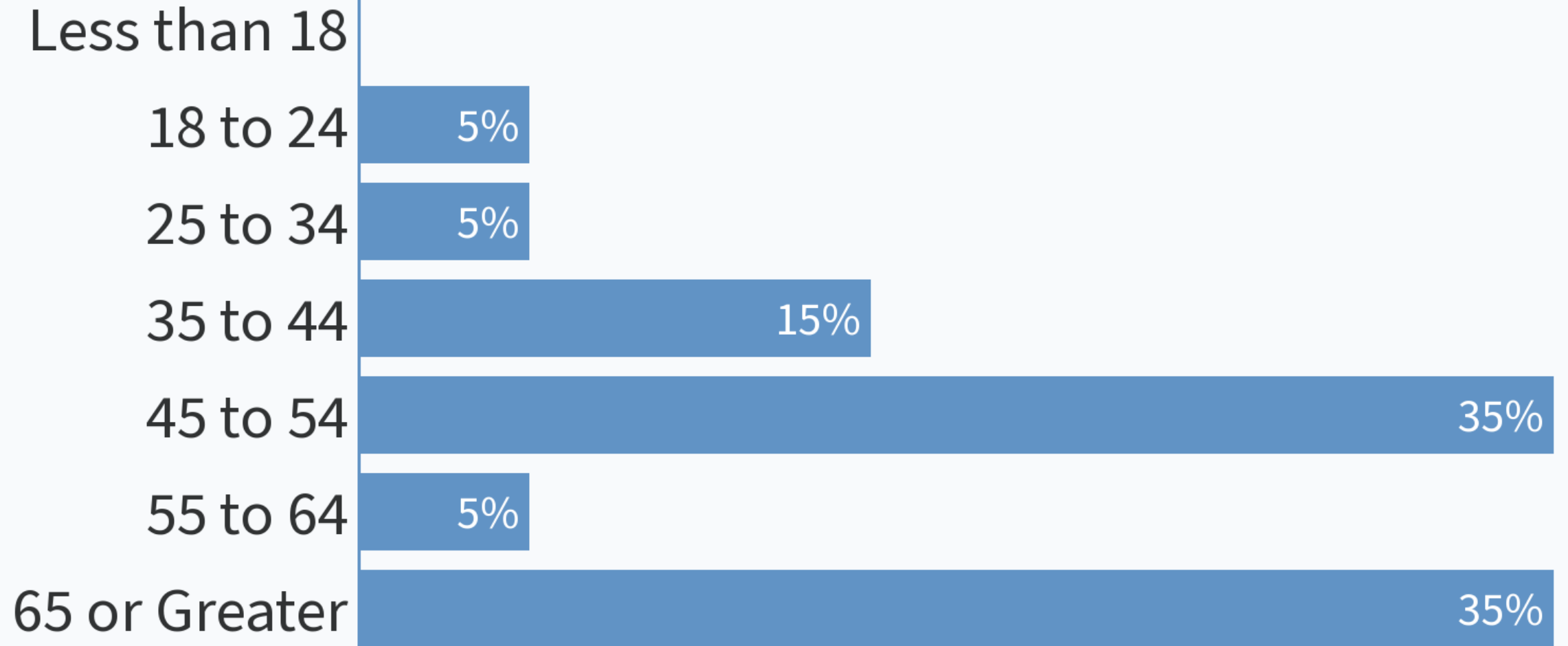
I Am A... (Select All That Apply)



What is Your Race/Ethnicity? (Select All That Apply)



What is Your Age?



Update on the Planning Process and Engagement



Outreach and Engagement

- Meeting 1 – May 4, 2023
- Climate Ambassadors Training and Coordination
- Feedback Form, Tabling, Discussions, and Surveys



I SUPPORT



PORTSMOUTH'S

CLIMATE

FUTURE

SCAN ME



For more information, please scan the QR code above or visit:
<https://portsnh.co/climatefuture>

<https://www.portsnh.co/climatefuture>

Outreach and Engagement

- Meeting 1 – May 4, 2023
 - Hybrid event - 75 participants
- Feedback Received:
 - Ways the City (government operations) and Community (mainly residential, commercial, and institutional activities) should focus their efforts on reducing or preventing GHG emissions
 - Barriers to action
 - How aggressive should we be in pursuit of GHG emissions reductions?
 - How have the climate hazards presented today affected you or others that you know?
 - How should the City prioritize its climate action investments?
 - Population groups you are worried about?
 - How can the City promote education and awareness?



Outreach and Engagement

- Climate Ambassadors
 - Spring Meeting at Portsmouth Library
 - Coordinated Outreach Efforts to Organizations and Businesses
 - Getting the Word Out
 - Broadening Engagement Efforts
- Zoom Coordination Session – May 16th
 - Project Overview
 - Role of Climate Ambassadors
 - Orientation to the Climate Ambassador Guide



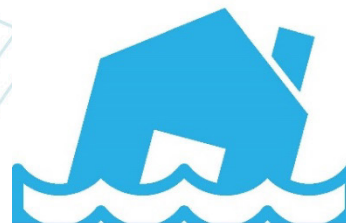
Calling all Climate Ambassadors!

Come and learn about the plans for Portsmouth's Climate Future and how you can help bring the community together to give input to and support the City's upcoming climate action plan.



MONDAY APRIL 17TH, 2023

HILTON GARDEN INN ROOM
**PORTSMOUTH
PUBLIC LIBRARY**



6 - 7:30 PM



Stop by the kickoff meeting or email kehomet@cityofportsmouth.com if you have questions

Outreach and Engagement

- Feedback Form, Tabling, Discussions, Surveys
 - Sustainability Fair
 - Market Square Day
 - Keeping History Above Water Conference
 - Five classes at the Senior Center – 32 participants!
 - Riverfest
 - Neighborhood Discussion
 - Community Conversation on Transportation, Land Use, and Climate Change – 60 participants!
- Feedback Received:
 - Participants are aware of the impacts and the need for action!
 - They would like to see:
 - Community power & 100% renewable power supply option, walkability, bike lanes, solar on City buildings, more native trees for landscaping and pollinators, compost accessibility, and the emerging sustainability community of practice in Portsmouth...



Presentation of the 2021 GHG Emissions Inventories



Greenhouse Gas (GHG) Emission Inventories

- Portsmouth conducted Local Government and Community-Based GHG Emissions Inventories in 2006, 2012, and 2018, and **has recently prepared an update for the 2021 reporting year**
- GHG emissions inventories are developed to help community leaders and members understand how and in what quantities their activities generate GHG emissions
- They are prepared based on standards/protocols to enable consistent reporting across organizations and to limit double-counting of emissions sources
- To distinguish GHG emissions, they are typically categorized as either Scope 1, Scope 2, or Scope 3

Why Conduct a GHG Inventory?

- To identify current sources of carbon dioxide (CO₂) and other GHGs generated in Portsmouth
- To quantify GHG emissions from municipal and community-wide activities
- To compare GHG emissions over time to measure progress towards meeting reduction targets

Greenhouse Gas (GHG) Emission Inventories

Local Government Operations

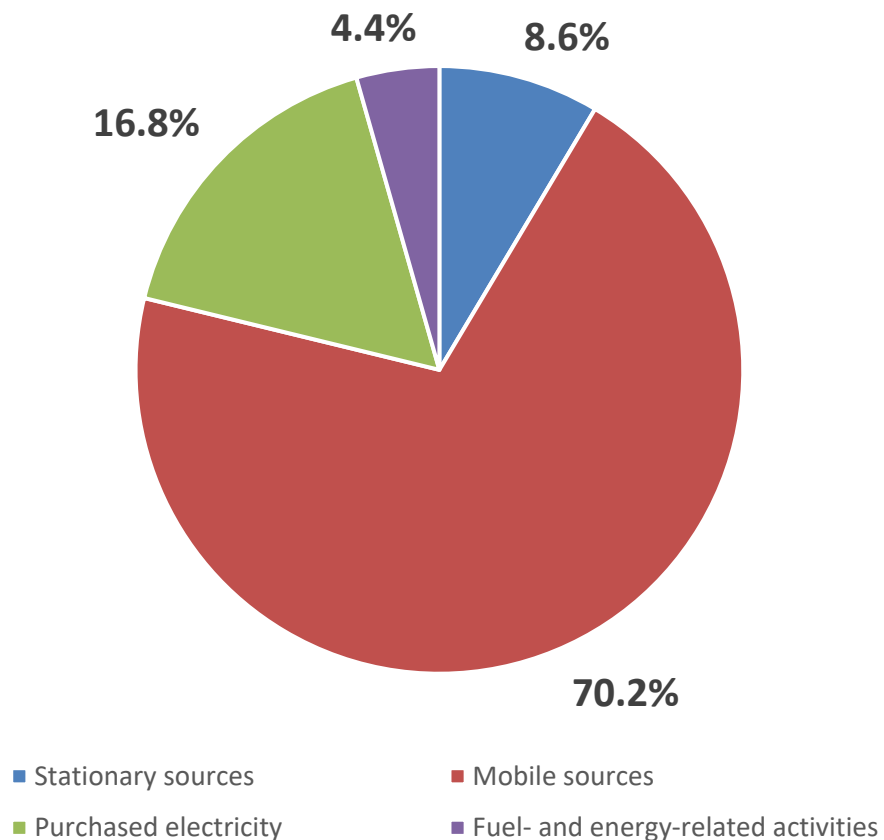
- **Scope 1:** Direct GHG emissions generated by sources owned or controlled by the City (e.g., fossil fuel consumption in the municipal fleet)
- **Scope 2:** Indirect GHG emissions associated with purchased electricity, steam, and district heating/cooling consumed by the City (i.e., in City facilities)
- **Scope 3:** All other indirect GHG emissions occurring as a consequence of the activities of the City but from sources not owned or controlled by the City (e.g., employee commuting)

Community-Based

- **Scope 1:** Direct GHG emissions from sources located within the City, such as gasoline consumed by cars and natural gas used to heat buildings
- **Scope 2:** Indirect GHG emissions associated with electricity supplied by the grid to power buildings and motorized modes of transport
- **Scope 3:** All other indirect GHG emissions occurring outside of the City limits resulting from activities taking place within the City (for example, treatment of the City's waste outside of Portsmouth)

Portsmouth's GHG Emissions Generation (2021 - Prelim)

Total Municipal GHG Emissions by Source
(2021)



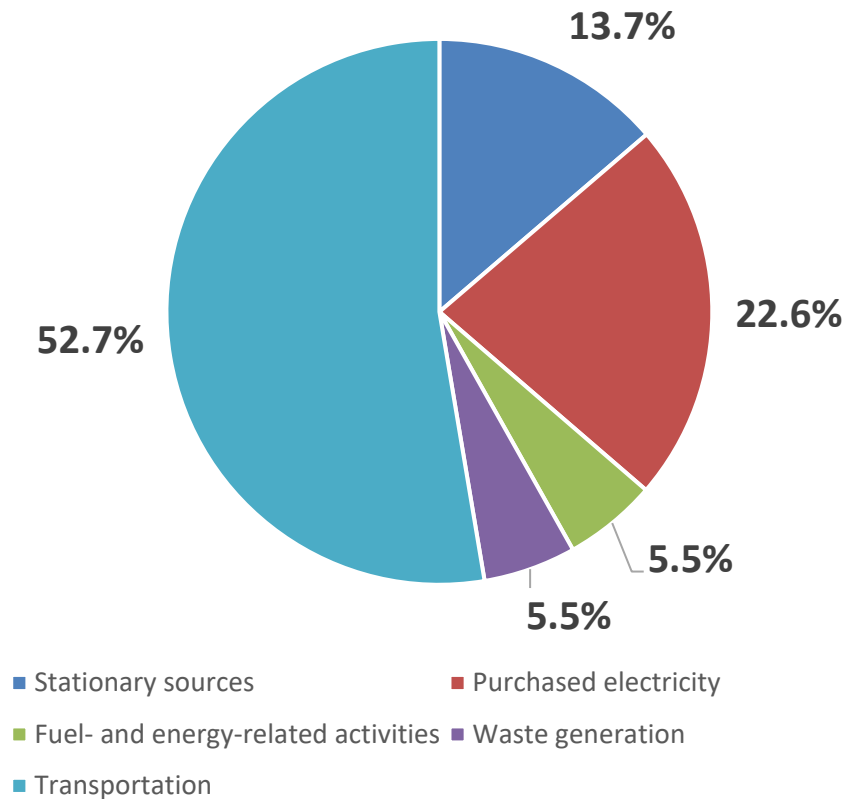
In Calendar Year 2021, Municipal GHG Emissions amounted to:
18,693 MT CO₂e.

This is equivalent to about 47,920,400 miles driven by an average gasoline-powered passenger vehicle.

- Scope Breakdown
 - Scope 1 = 78.8% (Natural Gas Usage and Fleet)
 - Scope 2 = 16.8% (Electricity Purchases)
 - Scope 3 = 4.4% (T&D Losses)
- The School Department and School Buildings comprise the majority of the City's reported Scope 1 emissions and nearly 20% of its Scope 2 emissions

Portsmouth's GHG Emissions Generation (2021 - Prelim)

Total Community GHG Emissions by Source
(2021)



In Calendar Year 2021, Community GHG Emissions amounted to:
93,790 MT CO₂e.

This is equivalent to over 240 million miles driven by an average
gasoline-powered passenger vehicle.

- Scope Breakdown
 - Scope 1 = 13.7% (Fuel Consumption)
 - Scope 2 = 22.6% (Electricity Purchases)
 - Scope 3 = 63.7% (Transportation, Solid Waste, T&D Losses,)
- Nearly 150 million vehicle miles traveled within the City contributed nearly 50,000 MT CO₂e

Presentation of Draft Mitigation Strategies



Local Government Operations

Action	Sector	GHG Emissions Reduction Potential
Conduct ASHRAE energy audits of all municipal facilities and implement energy efficiency measures where needed. For facilities in which energy upgrades were enacted within the last five years, implement a retro-commissioning program to ensure proper functioning.	Built Environment	Medium-High
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.	Built Environment	High
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.	Built Environment	High

Local Government Operations

Action	Sector	GHG Emissions Reduction Potential
Enter into Power Purchase Agreements (PPAs) to purchase energy from renewable sources for all municipal electric accounts.	Energy	High
Plan, design, and build solar arrays with battery storage of sufficient generating capacity to power municipal buildings. Solar panels could be sited on building roofs 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.	Energy	High

Local Government Operations

Action	Sector	GHG Emissions Reduction Potential
Develop 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.	Vehicle Fleet	Medium-High
Work with the School Department to electrify the school bus fleet.	Vehicle Fleet	High
Incorporate carbon emissions and the cost of carbon as evaluation criteria in the City's capital planning process.	Various	Medium

Community Activity

Action	Sector	GHG Emissions Reduction Potential
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 and life safety.	Built Environment	High
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.	Built Environment	High
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.	Built Environment	High

Community Activity

Action	Sector	GHG Emissions Reduction Potential
Coordinate with appropriate stakeholders, including developers of prominent commercial properties within the City, to establish a 2030 District (https://2030districts.org/become-a-member/).	Built Environment	Medium-High
Adopt tax incentives (e.g., preferential rates) for multi-family and commercial buildings that are both highly efficient and fossil-fuel free.	Built Environment	Medium-High
Investigate a tax structure that gradually increase taxation on carbon-intensive activities.	Built Environment	Medium-High

Community Activity

Action	Sector	GHG Emissions Reduction Potential
Amend zoning and other City policies to eliminate existing barriers to solar development. For example, consider 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.	Energy	Medium-High
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. Consider expediting the building permit and inspection process as well as lowering permitting fees for renewable energy distributed generation systems.	Energy	Medium-High
Continue to participate and educate residents about Community Power, established under RSA 53-E. Establish targets for participants signing up for the "Clean 100" (i.e., 100 percent renewable content).	Energy	Medium-High

Community Activity

Action	Sector	GHG Emissions Reduction Potential
Increase opportunities for passenger rail (e.g., creating a line going to Exeter) and other forms of public transportation. Provide fixed route bus service to meet emerging demands and opportunities. To maximize the sustainability benefits of public transportation, plan to electrify the fleet and prioritize city investment in options benefitting lower income communities.	Transportation	Medium-High
Advocate for a State-level residential sector rebate for the purchase or lease of a new or used electric vehicle (BEV-only).	Transportation	High
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.	Transportation	Medium-High

Local Government Operations + Community Activity

Action	Sector	GHG Emissions Reduction Potential
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.	Built Environment	High
Actively promote offshore wind interconnection through Piscataqua River into existing electric infrastructure in Newington/Portsmouth to improve renewable energy mix in ISO-NE grid.	Energy	High
Advocate for an increase in the State's Renewable Portfolio Standard (RPS) requirements beyond 2025.	Energy	High
Invest in community-scale energy and storage projects. Consider having commercial scale renewable energy distributed generation facility applications ready for when Alternative Compliance Payments (ACP) grant funds become available.	Energy	High
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.	Energy	High
Evaluate the feasibility of forming a municipal utility or joining a cooperative utility and becoming a utility scale renewable energy generator.	Energy	Medium-High

Group Brainstorming



Group Exercise

- Breakout sessions will last approximately **55 minutes**.
- Each table will be assigned a **primary topic**.
- If you move through quickly and want a secondary topic to review let us know!
- Before You Begin...
 - Identify a **Facilitator/Notetaker**
- Once you have reviewed and ranked the strategies please place your **top 3** on the flip chart.
- Ground Rules:
 - Everyone gets the chance to talk
 - Be respectful of everyone's contributions
 - If you get stuck, then move on
 - Be creative and have fun!

Strategy Groupings

Built Environment

Energy

Transportation

Land Management

Solid Waste

Others

Questions??

Group Report Backs



Next Steps in the Planning Process



Next Steps

1. Continued engagement by the Portsmouth Climate Future Ambassadors and with Target Communities
2. GHG Emissions Forecasting
3. Strategy Prioritization and Assessment
4. Setting GHG Emissions Reduction Targets
5. Development of Implementation Timelines and Funding Plans

Thank You and Workshop
Closing



Thank you.

Questions?

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Kate Homet, City of Portsmouth | kehomet@cityofportsmouth.com | (603) 610-7225

Donny Goris-Kolb, VHB | dgoris-kolb@vhb.com | (617) 607-2140

