Clean Energy Future Committee (CEFC)

Date: Friday, January 24, 2025.
Time: 8:15 a.m.
Location: Conducted virtually, on Zoom.

- To register for the Zoom Meeting, visit the calendar event: https://www.arlingtonma.gov/Home/Components/Calendar/Event/35965
- After registering via the link in the calendar event, you will receive a confirmation email containing information about joining the meeting.

Members of the public are asked to send written comment to Talia Fox at tfox@town.arlington.ma.us with a copy to Ryan Katofsky at rkatofsky@town.arlington.ma.us.

Notice to the Public on meeting privacy
In the interest of preventing abuse of videoconferencing technology (e.g., "Zoom Bombing") all participants, including members of the public, wishing to participate via Zoom must register for each meeting and will notice multi-step authentication protocols. Please allow additional time to join the meeting. Further, members of the public who wish to participate without providing their name may still do so by telephone at 929-436-2866 Meeting ID: 832 4479 5162.

Agenda

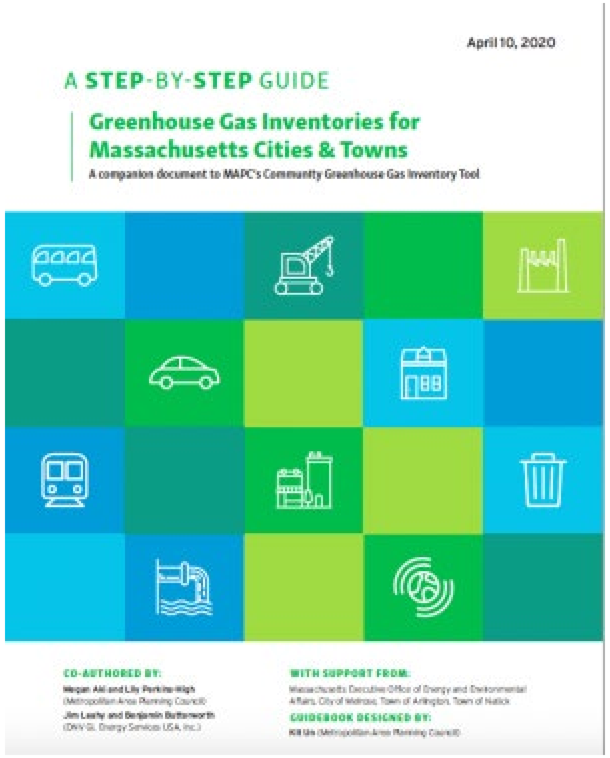
- 8:15-8:20am. Roll call and virtual meeting reminders.
- 8:20-8:25am. Review and approve minutes from previous meetings.
- 8:25-8:45am. Greenhouse Gas Inventory update.
- 8:45-9:15am. NZAP reprioritization and update:
    a. Energy & Transportation sections.
    b. NZAP update next steps.
- 9:15-9:20am. Sustainability updates.
- 9:20-9:25am. Next meeting dates.
- 9:25-9:30am. Other items.

Arlington GHG Inventory (2023, using 2020 data)

Prepared by Bentley College students for the Town of Arlington

GHG Update Background

- Town worked with team of students from Bentley College
- Class led by Zana Cranmer, PhD, Associate Professor, Natural & Applied Sciences
- Students used MAPC inventory template and methodology
- Same methodology used for 2017 inventory done as part of development of the NZAP



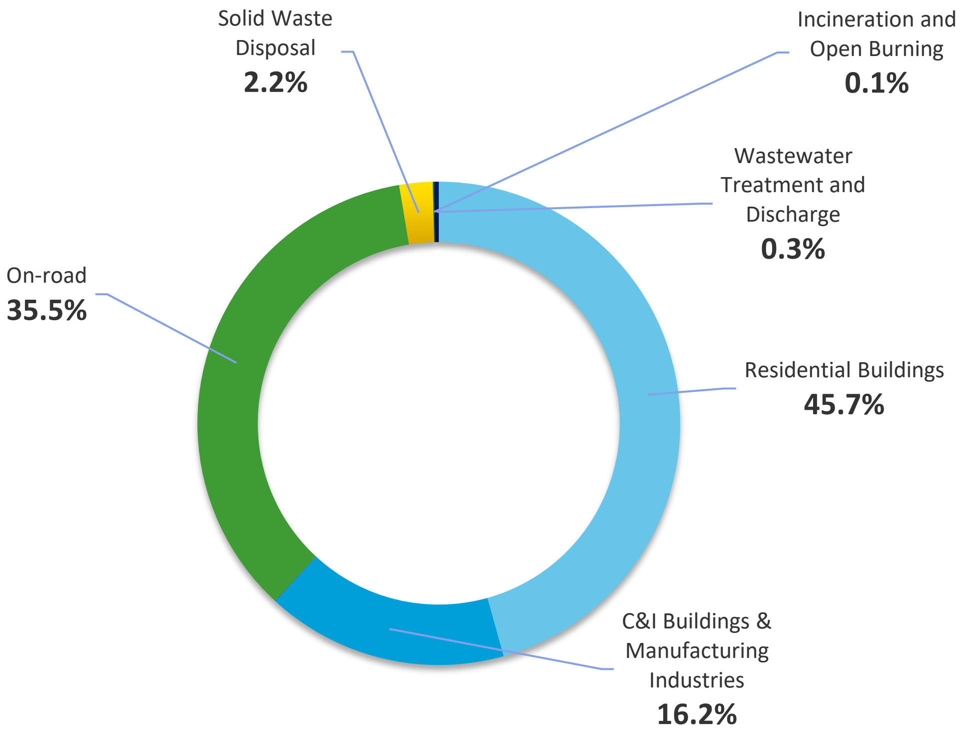
Community-wide Emissions Summary

Sector	Subsector	2017 Emissions (MT CO2e	2020 Emissions (MT CO2e)	Percent Change
Stationary Energy	Residential Buildings	129,748	121,171	-6.6%
	C&I Buildings & Manufacturing Industries*	39,692	32,844	-17.3%
	Municipal Buildings	6,259	6,345	1.4%
	Construction	46	0	-100.0%
Transportation	Passenger Vehicles	94,289	97,965	3.9%
	Commercial Vehicles	4,072	4,072	0.0%
	Municipal Vehicles	1,041	934	-10.3%
	On-road Buses and Trolleys	1,459	1,420	-2.7%
	Railways	0	0	
Waste	Solid Waste Disposal	6,336	0	-100.0%
	Biological Treatment of Waste	0	59	
	Incineration and Open Burning	234	268	14.5%
	Wastewater Treatment and Discharge	902	5,077	462.9%
All Sectors & Subsectors		**284,078**	**270,152**	**-4.9%**

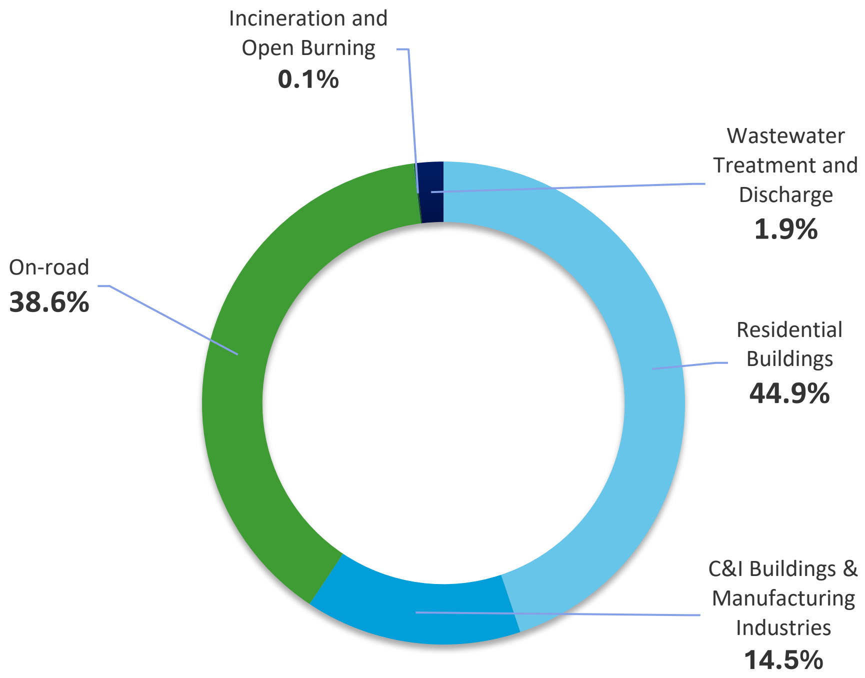
*Municipal electricity and natural gas usage has been subtracted from C&I usage to disaggregate municipal usage for the purposes of this Table.

Percent of Total Community-Wide Emissions by Subsector

2017

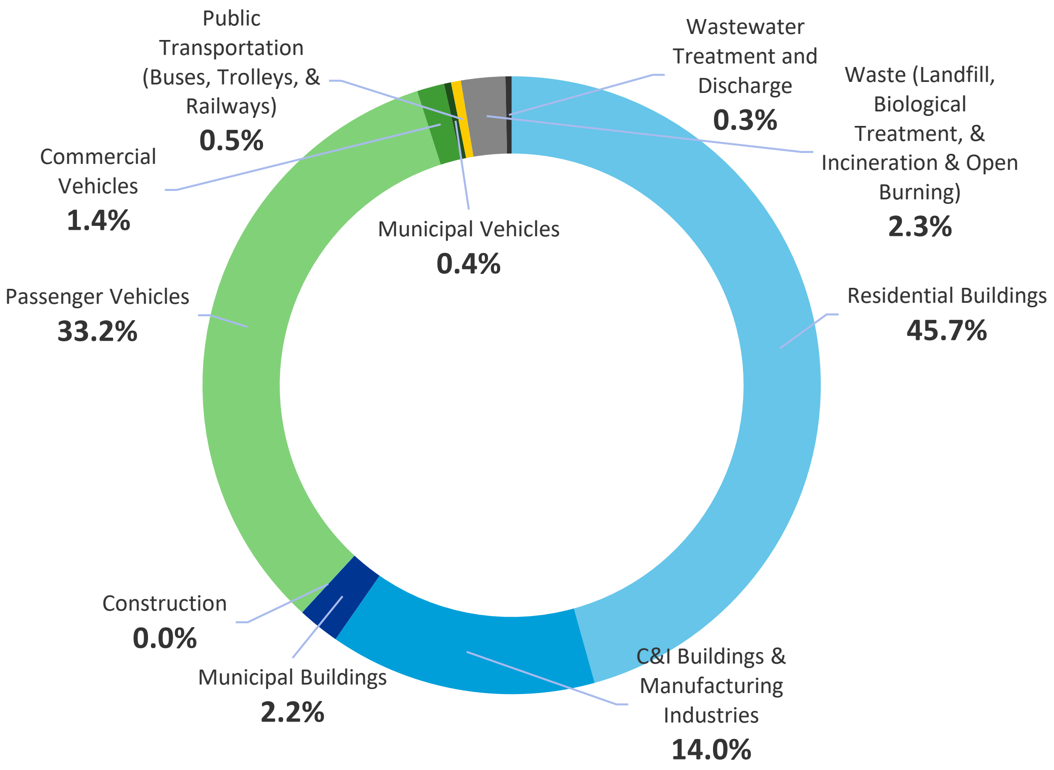


2020

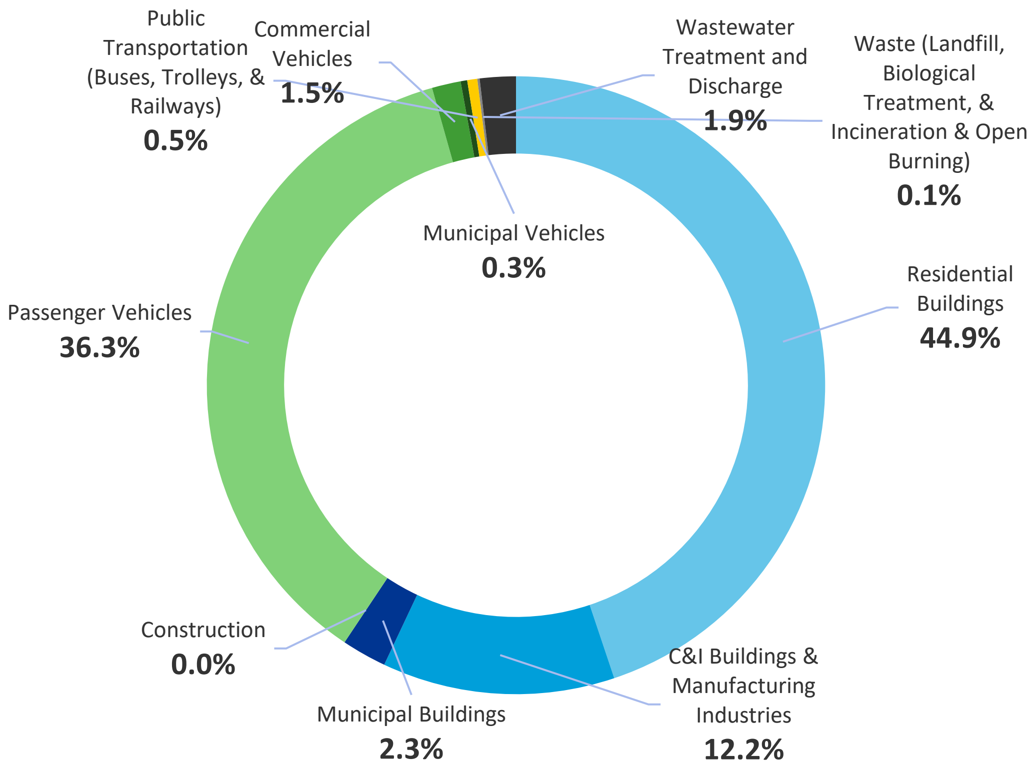


Percent of Total Community-Wide Emissions by Subsector (municipal emissions disaggregated)

2017

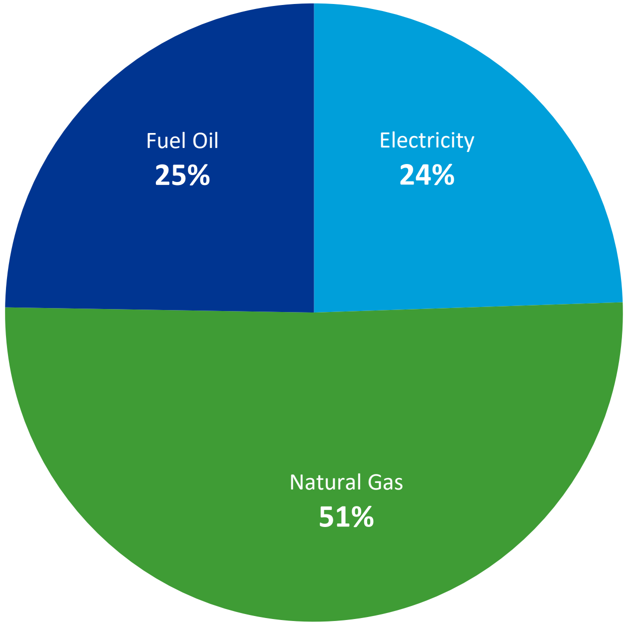


2020

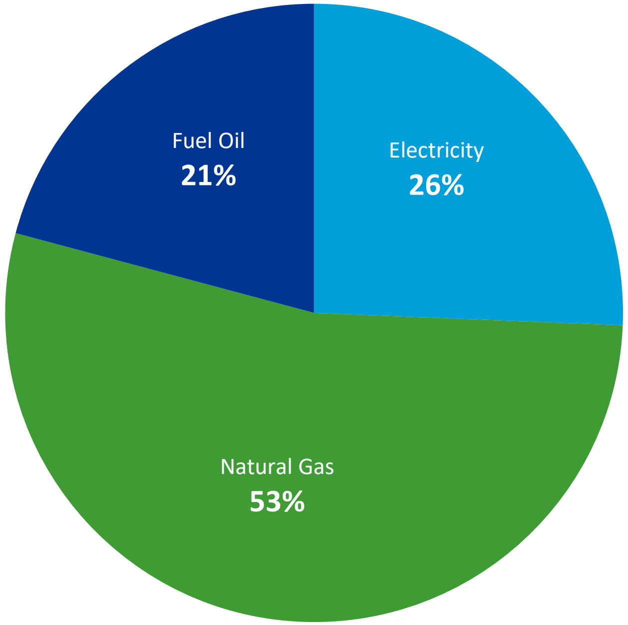


Percentage of Building Energy Emissions by Source Energy

2017

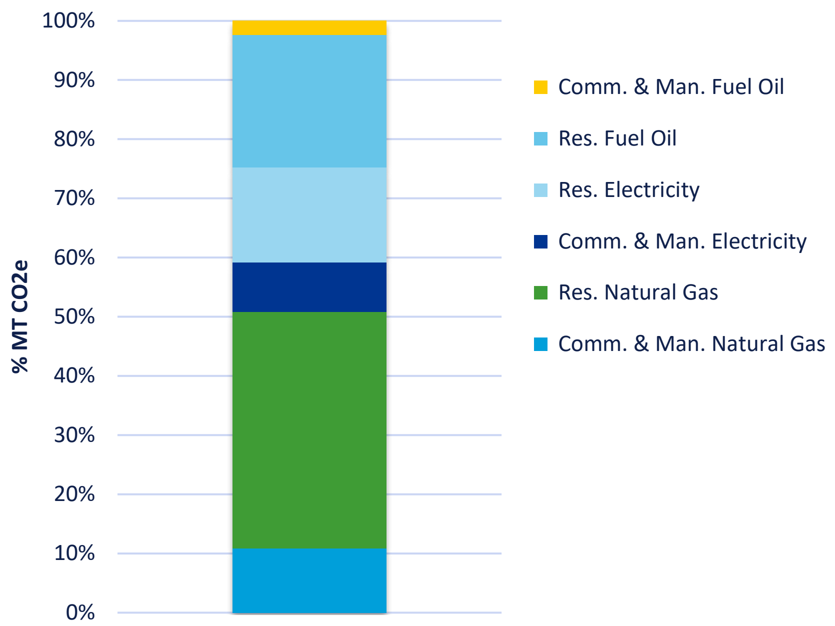


2020

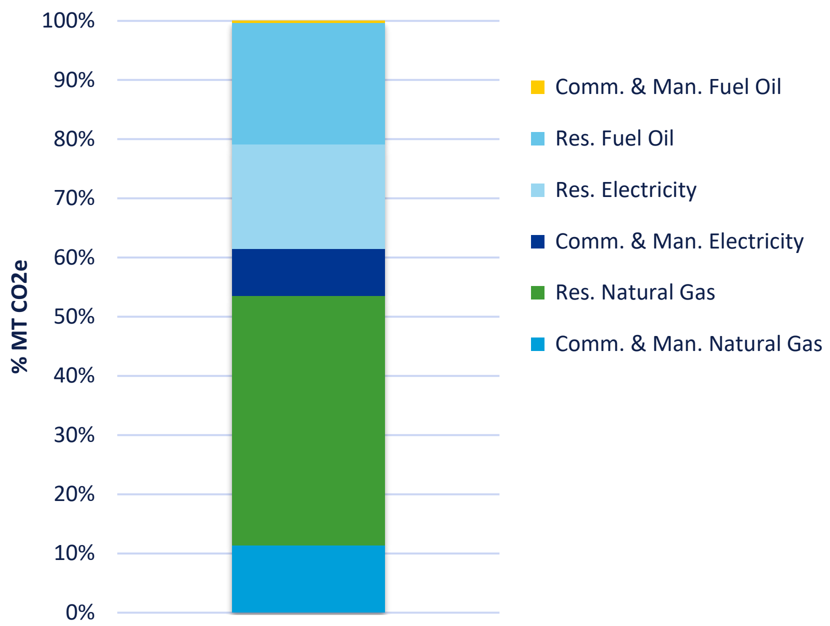


Percent of Total Building Energy Emissions by Customer Type and Fuel

2017



2020



Some Takeaways

- Fuel oil use has gone down, balanced by both increased use of natural gas and electricity
- Residential building emissions decreased slightly
- Personal vehicle usage increased
- Vehicle emissions increased

What else did you notice?

What does this mean for our NZAP update?

Category	Priority lvl	ID	Action	Status (Brief)	Date started	Date completed	Lead	Notes / Detailed Status	Implementation Successes (What's working?)	Implementation Challenges	What is the priority level of this action for the next 5 years?	Priority level notes (why?)	If priority, how can we accelerate progress on this action / address implementation challenges? (E.g., bylaw, program, staff capacity)	Other Notes
BUILDINGS	High priority	NZB 1.	Electrify buildings, "Electrify Arlington" campaign	Ongoing	6/1/2021		Talia Fox / Lori Kenschaft	Hired Energy Advocate through Community First Partnership. Energy Advocate maintains website, hosts events, takes individual requests, manages team of heat pump coaches	Program is active, making a difference, >500 people engaged in courses and coaching, >600 ppl on EA list. Constant requests to Lori.	Near future challenge: local electrical grid capacity constraints (can we electrify? who is working on this); complexity of Mass Save is hard to get around; need more skilled coaches with technical capacity	High priority	Need to electrify a home a day! Need to accelerate.	Real estate transfers -- disclosures of utility bills; HERS ratings before property transfer; rental registry to help reach landlords; rental disclosures (require landlords to give prospective tenants info about utility bills); further advocacy around Mass Save	
BUILDINGS	High priority	NZB 2.	Community-wide deep energy retrofit campaign	Not started				HomeWorks on board for MassSave audits, though these are not deep energy retrofits; focus has been on breadth not depth	Not doing it.	Very expensive to do a deep energy retrofit; embodied energy involved in work is so immense. Modest savings compared to heat pumps	Low priority / as opportunities arise	Not a priority; reconceptualize (maybe as permit trigger point action)		REK: It was noted that MassSave is only piloting this. The question is how can we otherwise work to accelerate building envelope repairs, e.g., can we make that part of permitting process when replacing a roof or replacing siding.
BUILDINGS	High priority	NZB 3.	Change Zoning for net zero buildings (incl. new foundations)	Completed	1/1/2021	5/24/2021		Already passed new foundations zoning bylaw. Are there other zoning changes that we would want to make here that are suggested in the text of the action?	Some builders have taken advantage of this already	Relatively few people are taking advantage of this bylaw; are there still barriers that we are unaware of?		TBD -- Talia talk to Mike Ciampa about what barriers still exist to energy efficient / net zero construction (that an additional zoning or other bylaw change could help with)	builder / property owner education	Can we develop a case study to help raise awareness so more people will take advantage of it?
BUILDINGS	High priority	NZB 4.	Create "Electrify Arlington" website	Ongoing	4/15/2022	7/5/2022	Talia Fox / Lori Kenschaft / Joan Roman	Website created, receives periodic updates	Ask Joan for traffic stats; getting active use from residents		Priority		REK: check with Joan Roman about website t	REK: recommend this be combined with NZB1. It's now just part of running the Electrify Arlington program.
BUILDINGS	Priority	NZB 5.	Retrofit Town buildings for energy efficiency & renewable generation	Ongoing	6/1/2021		Talia Fox	Electrification Master Plan Completed Dec 2022; Thompson electrification study underway a/o summer 2024; decarbonization roadmap underway a/o summer 2024	Have forced the conversation with capital planning, others	Upfront cost estimates Town has received are staggering; upgrades are not done in an efficient manner	High priority	Figuring out how Town can lead by example is critical	Policies to take advantage of work happening; Eg. anytime you do a roof replacement, have to do X for energy efficiency	REK: when new facilities director is hired, make sure they get engaged and brought up to speed.
BUILDINGS	Priority	NZB 6.	Advocate for state Net Zero Energy Stretch Code	Completed	6/1/2021	4/30/2023	Amos Meeks / Pat Hanlon	Updated language code finalized Dec 2022. Passed specialized stretch code in 2023. Will be another round of updates to code... will fossil fuel free be part of next round? What about embodied carbon?	Code prioritizes electrification. Now that we've passed it, all future changes will be automatic for Arlington.	Learning curve for building inspectors on stretch code; issues already being addressed at state level	Low priority / as opportunities arise	Add to an action related to state advocacy around policy?	Keep eye on true NZ stretch code.	REK: State is already working on v2.0. Potential additional action: advocate for inclusion of FFF standrds into the Specialized Stretch Code.
BUILDINGS	Priority	NZB 7.	Evaluate Town policies for low- or zero-emissions contracts for goods and services, and when selling property	Not started				Need to decide how much of a priority this is.		Action is quite broad; there are several ways to go about this.			Not ready to drop yet, think about how to make this more actionable; concrete policy? Land management contracts.	REK: connect with Town Counsel on updating standard T&Cs in contracts.
BUILDINGS	Priority	NZB 8.	Review Historic District Commission Design Guidelines	In startup	5/19/2022		Nellie Aikenhead / Charles Barry	Need to decide how much of a priority this is.		Not black and white, live discussion a	Priority	Focus on removing barriers, broaden to other commissions		Need to add Historical Commission into this scope
BUILDINGS	Priority	NZB 9.	Prohibit fossil fuel heating in new construction & major renovations	Completed	12/15/2019	5/21/2024	Talia Fox	225-18-2 TM vote on 11/18/2000. Submitted Fossil Fuel Free Pilot Application to DOER Sept 1, 2023. Fossil Fuel Free Bylaw passed at Special Town Meeting, Oct 2023. Town accepted into Pilot Feb 2024. Bylaw took effect May 21, 2024.	Wait and see! Talia to talk to Mke C	TBD! Recently passed			Data collection, advocacy for statewide adoption of fossil fuel free	
BUILDINGS	Priority	NZB 10.	Allow adjustments to dimensional requirements by Special Permit for energy efficiency and renewable energy installations	Not started				Is this necessary anymore with updated stretch code? Talk to Mike C.					check in with inspetional services	
BUILDINGS	Priority	NZB 11.	Require new commercial & Apartment Buildings to include solar PV/thermal (or be "solar ready")	Completed	12/2/2021	5/25/2022		Article 30 approved by Town Meeting;	This is generally going well, solar must be installed before CoO is issued, per Claire Ricker & Mike			Are there other solar bylaws that we'd want to consider? Does the Stretch / Specialized Code include solar requirements sufficiently?		Question was asked how this is working in practice in terms of verifyng it is being done, e.g., are the requirements verified as part of the certificate of occupancy?
BUILDINGS	Priority	NZB 12.	Explore opting-into commercial Property Assessed Clean Energy	Not started				Is this still a priority? Only 2-3 projects statewide that took advantage of this... roll-out has largely been slow		High implementation costs, not well-publicized. Unclear what benefit was and so Town did not take it up.	Low priority / as opportunities arise	Still an issue, use different tool. Monitor program.		Ask HCA about this?
BUILDINGS	Priority	NZB 13.	Promote planting trees on private property near the sidewalk	In progress			David Morgan	Tree Committee working on this	Pilot back of sidewalk program is tree committee initiative -- plant on lawn and driveway space, developing RFP for vendor to maintain this, 20 sites. First 20 feet of public right of way is where you can plant per state law	Liability concerns -- getting around them	Priority	Can we expand this program? Prioritize locations in heat islands, EJ neighborhoods		
BUILDINGS	Priority	NZB 14.	Partner with local vocational / technical schools to encourage more HVAC and clean tech workers	In startup				Followed up with AHS contacts from Rachel Oliveri; additional capacity needed to support this action if priority. This is a major challenge at the regional level.		Action wording is vague. Unclear what the role of CEFC / Town is here beyond advocating.	Low priority / as opportunities arise		Enhanced advocacy at state level; Ask MassCEC what they need from municipalities to support this?	
BUILDINGS	Priority	NZB 15.	Consider establishing a Chapter 40R Smart Growth Zoning Overlay District for dense residential or mixed-use development	Not started				Is this still a priority? Has MBTA Communities essentially accomplished this, or would we want to consider this?	MBTA Communities passed!		Priority	Generally density is a priority, Chapter 40R may not be the route if there are other efforts at play (e.g., affordable housing overlay district). CEFC's role could be supporting denser housing efforts, ensuring our priorities are reflected in zoning bylaws		
BUILDINGS	Priority	NZB 16.	Support training opportunities on LEED, Net Zero, Passive House, etc.	Not started				Mostly important for inspectional services with new specialized code? Decide how much of a priority		Action is somewhat vague; not sure what role of CEFC is here	Low priority / as opportunities arise	This is important but it's not clear what the role of the Town is. **Ask Mike Ciampa.**		
BUILDINGS	Priority	NZB 17.	Continue & expand participation in Green Communities, etc.	Ongoing	6/1/2021		Talia Fox	Applying for next iteration of program which is prioritizing electrification and clean energy projects: Climate Leader Communities program. Need to decide from capacity perspective how important it is to spend time on energy efficiency measures from within the planning dept v. facilities. May need more staff capacity.			High priority	High priority but implementation challenges	Suggest additional staff support? Separate action focused on decarbonization financing strategy...? Consider what CEFC's role is in advocating for these things	

BUILDINGS		NEW XX	Develop strategies, policies, and procedures for minimizing embodied carbon in public buildings. [Pat Hanlon]	Not started				This is fast developing subject and will surely be major theme in the next 5 years. Major event this year was embodied carbon challenge sponsored by Mass CEC. This will involve consideration at analysis, design, and procurement levels. First step is to consult with MAPC, Mass CEC, and DOER to see what others are doing at this stage. Basically, embodied carbon is on many other actors' agendas, and it should probably be on ours.						
BUILDINGS		NEW XX	Explore collective electrification: programs for two or more residential buildings (or maybe just buildings) rather than one by one. Networked geothermal (see below) is one example. But there could be economies of scale - and of time - in even 2 or 3 houses on a block. Objectives would be to promote electrification via efficiency and also to allow the pace of electrification to accelerate in a way that makes our net-zero target more plausible.	Not started									Note overlap wioth CES4 & CES5	This item and the one below on grid capacity and energy transition planning suggest a need for better communication and coordination with our utilities. Both have new planning requirements and electric utilities have their ESMPs. Can Arlington be a place for them to test out innovative solutions?
BUILDINGS		NEW XX	Trigger point policy for building permits: When someone pulls a permit, inform them of efficiency opportunities and/or require that certain actions be taken.											
BUILDINGS		NEW XX	Grid capacity questions, coordinating with utility around constraints/plans					This may be more of a energy section action						
BUILDINGS		NEW XX	Energy transition planning on block-by-block basis (data / community engagement exercise)					This may be more of a energy section action						
BUILDINGS		NEW XX	Municipal building decarbonization financing strategy											
BUILDINGS		NEW XX	Networked geothermal for Town building complex											
MOBILITY	High Priority	ZEM 1.	Support full implementation of the Connect Arlington plan	Ongoing	6/1/2021		John Alessi	No anticipated end date. Decide how better to support / coordinate with John's work.	TAC, ABAC focused on roadway infrastructure to support biking/walking/transit, safety measures	Not so focused on micromobility, EVs, carshare. Funding is a key challenge. Need more advocacy to dedicate more funding.	High priority		CEFC could support more policy (i.e., TDM policies) that advisory committees don't	
MOBILITY	High Priority	ZEM 2.	Create and implement a plan to expand public charging at libraries, shopping centers, etc., both on- and off-street	In startup			Talia Fox	Expansion is underway at HS and informal plan exists for additional schools, library, etc., but no formal plan is in place. Have requested $5k in capital funds for an assessment of viable locations. Have applied for curbside charging funding.		Capital Planning Committee will not provide funds for this, have asked twice. Rebates can fully cover installations and equipment in some but not all locations. Ongoing software and warranty costs.				
MOBILITY	High Priority	ZEM 3.	Provide a suite of education and awareness building services to promote electric vehicle adoption	Ongoing			Talia Fox / Lori Kenschaft	Vehicle information added to Electrify Arlington website. How much do we build this out?						
MOBILITY	High Priority	ZEM 4.	Adopt a zero-emission municipal fleet plan/policy (complete transition to zero emission vehicle purchases by 2030).	In progress	6/1/2021		Talia Fox	Awarded META grant in fall 2022 for fleet transition planning support with Power Options; plan complete! Policy passed at Select Board meeting 6/24/24						
MOBILITY	Priority	ZEM 5.	Create an action plan to advocate for community transit service needs	Ongoing			John Alessi							
MOBILITY	Priority	ZEM 6.	Change parking policies to promote efficient use of space, reduce use of single occupancy vehicles, and promote electric vehicles	Ongoing			John Alessi							
MOBILITY	Priority	ZEM 7.	Develop policies and guidelines to promote safe use of electric bicycles, scooters, and other micromobility technology	Ongoing			John Alessi							
MOBILITY	Priority	ZEM 8.	Advocate for improved utility rate designs to facilitate smart electric vehicle charging and accelerate EV adoption	In progress	6/1/2021		Talia Fox / Ryan Katofsky	EV charging rate already exists for stations with demands exceeding 100kW, for commercial customers. Question about status of this for residential side. There will be EV Charger managed charging program.						
MOBILITY	Priority	ZEM 9.	Promote car sharing.	Ongoing				Is this a key priority still? If so may need additional capacity						
MOBILITY		NEW XX	Transportation Demand Management policy for larger developments (through zoning?)					E.g., Everett policy example. Plans for developers to put in less parking, subsidize BlueBikes / MBTA		Might be tricky in Arlington because we don't have so much larger commercial development				
MOBILITY		NEW XX	Funding for additional staff to support transportation planning / engineering											
MOBILITY		NEW XX												
CLEAN ENERGY SUPPLY	High Priority	CES 1.	Increase renewable energy in default ACE to 100% by 2030	Completed	1/15/2021	4/3/2024	Ryan Katofsky / Talia Fox	New contract signed for 100% total default, begins Nov 2024						
CLEAN ENERGY SUPPLY	High Priority	CES 2.	Transition municipal electricity supply to 100% renewable by 2030	In startup			Ryan Katofsky / Talia Fox	Exploring options for vPPA / RECs						
CLEAN ENERGY SUPPLY	High Priority	CES 3.	Support state legislation and policies that decarbonize the region's electricity supply	Ongoing			Ryan Katofsky / Talia Fox	This seems like it's happening... is this still a priority?						
CLEAN ENERGY SUPPLY	Priority	CES 4.	Partner with utilities and others to promote pilot neighborhood-scale shared ground source heat pump projects	In progress	1/29/2024		Talia Fox / David Morgan	Awarded HEET Kickstart Grant for networked geo feasibility study in East Arlington; working on integrated energy planning with Gas Leaks Task Force and others						
CLEAN ENERGY SUPPLY	Priority	CES 5.	Advocate for accelerated repair of gas leaks and phasing-out the natural gas distribution supply network.	In progress	7/1/2022		David Morgan	Gas Leaks Task Force, David Morgan actively working on this; suggestion that wording/action be more specific to planning						
CLEAN ENERGY SUPPLY		NEW XX	Add batteries and other demand flexibility capabilities at town facilities											

CLEAN ENERGY SUPPLY		NEW XX	Encourage residents to participate in Connected Solutions					Get students involved through Civics Action projects					
CLEAN ENERGY SUPPLY		NEW XX	Implement effective time varying rate options and other demand flexibility programs as part of future ACE contracts					Likely requires AMI to be deployed					
CLEAN ENERGY SUPPLY		NEW XX	Establish small ACE surcharge to fund clean energy projects					Use for community based projects!					

Other / Cross-Cutting

Waste & recycling actions TBD

Should the updated NZAP have a section that lists out items that are now part of the normal course of business for the Town?

Establish process for getting feedback on the various things we are pursuing. They have both real and perceived costs, and we shold better understnd how peopel are reacting to them. Similarly, are we effectively communicating the value of what we are doing.