



TOWN OF ARLINGTON
DEPARTMENT OF PLANNING and
COMMUNITY DEVELOPMENT

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MEMORANDUM

To: Paul Schlichtman, Chair, Arlington School Committee
Cc: Dr. Elizabeth Homan, Superintendent, Arlington Public Schools
Francis Gorski, Assistant Superintendent of Finance & Operations, Arlington Public Schools
Jim Feeney, Town Manager
Claire Ricker, Director, Planning and Community Development
Ryan Katofsky, Chair, Clean Energy Future Committee
Liz Diggins, Administrative Assistant, Arlington School Committee
From: Talia Fox, Sustainability Manager, Planning and Community Development
Date: November 27, 2024
RE: Climate Leader Communities Decarbonization Roadmap

The Arlington School Committee is asked to provide review and approval of a Decarbonization Roadmap (the Roadmap) that outlines how Arlington will achieve net zero greenhouse gas (GHG) emissions from its municipal buildings and vehicle fleet by 2050. This memorandum provides context for and an overview of the Roadmap.

Context for the Decarbonization Roadmap

The primary motivations for the Roadmap are the achievement of local climate mitigation goals and fulfilment of the requirements of the MA Department of Energy Resources (DOER) Climate Leader Communities program. First, Arlington has made a commitment to achieving net zero GHG emissions by 2050. In pursuit of this goal, the existing Net Zero Action Plan (NZAP) lays out actions for the Town to transition to zero emission vehicles and efficient, all-electric buildings. The Town has begun to purchase electric vehicles and prioritize all-electric new construction and renovations. The Town has also developed an [Electrification & Air Quality Master Plan](#) for six school buildings. It has yet to take a data-driven, comprehensive approach to planning for the complete transition of its building portfolio and fleet.

Second, Select Board and School Committee adoption of the Roadmap is a requirement for municipal designation as a Climate Leader Community, a new program that DOER has developed to supplement the Green Communities program. The Climate Leader Communities program is an opportunity for municipalities that are leading climate change mitigation efforts to achieve further recognition and pursue larger amounts of grant funding. DOER has acknowledged that the current Green Communities grant funding amounts (\$200,000 for energy efficiency projects and \$500,000 for electrification projects) are insufficient to support the scale of investment in electrification and clean energy required to achieve local and state GHG reduction goals. (DOER has suggested that Climate Leader Communities funding would be on the order of one million dollars per grant.)

Overview of the Decarbonization Roadmap

DOER awarded the Town technical assistance funds to work with the nonprofit PowerOptions to develop the Roadmap. PowerOptions utilized data provided by the Town including fuel usage, vehicle identification numbers, building square footage, year and condition of heating/cooling systems, and facility renovation plans.

The goal of the Decarbonization Roadmap is to identify specific emissions reduction strategies that will enable the Town to meet the following minimum timeline provided by DOER, using a 2022 baseline:

Targets	2027	2030	2040	2050
Emissions reduction from onsite fossil fuels	-20%	-35%	-60%	-100%
Zero emission vehicles (ZEVs) in light-duty fleet adoption	5%	20%	75%	100%
Zero emission vehicles (ZEVs) in heavy-duty fleet adoption	0%	20%	50%	100%
Energy Use Intensity reduction (<i>deep energy retrofits/retro commissioning</i>)	-20%	-25%	-25%	-30%
Total Emissions Reduction Goals (% of 2022 emissions)	>15%	>35%	>65%	>95%

The Roadmap provides an Arlington-specific version of the DOER table above. Percentages of emissions reductions correspond to strategies to eliminate the use of onsite fossil fuels (natural gas and heating oil for heating and gasoline and diesel for vehicles); strategies to reduce energy use; and anticipated emissions reductions from the electric grid. The Roadmap takes a “Zero Over Time” approach, leveraging anticipated “trigger events,” such as vehicle replacement, equipment end-of-life, and/or planned substantial building renovations, to specify timeframes for decarbonization strategies. The buildings section of the Roadmap highlights strategies for Town buildings that emit the most GHG emissions. For example, the Stratton Elementary School, the Town’s sixth highest emitting building, has natural gas boilers that will reach the end of their useful life in 2031. The Roadmap proposes that the Town focus on energy efficiency measures from 2025-2029, introduce electric heat pumps by 2031, and replace the gas stove with an induction stove by 2035.

The vehicles section of the Roadmap divides the Town’s fleet into light-, medium-, and heavy-duty vehicles, proposing a procurement timeline based on the vehicles’ remaining useful life and market availability of electric vehicle (EV) options. A replacement schedule includes recommended EV models to replace each internal combustion engine vehicle and an estimated total cost of ownership. The Town’s Zero Emission Vehicle First Policy, which the Town adopted in June 2024, supports implementation of the Roadmap by requiring that department directors prioritize the purchase of EVs when creating annual capital plans. The Town will also need to install charging infrastructure; an in-depth analysis completed alongside the Roadmap provides site-specific recommendations for charging equipment and electrical upgrades, as well as cost estimates (including rebates).

Roadmap Implementation & Next Steps

If the Town takes advantage of trigger events as the Roadmap suggests, it could see minimal additional cost or even savings associated with electrification over asset lifetimes. Operating costs are lower for EVs and ground-source heat pumps compared to their fossil fuel counterparts, significant incentives exist for electrification, and heat pumps provide both heating and cooling (the Town will need to invest in cooling equipment if fossil fuel heating equipment is retained). Unlike the cost of replacing fossil fuel system components in-kind, however, the upfront cost of electrifying buildings likely cannot be accommodated solely in the capital plan. The Sustainability Manager has had conversations with the Capital Planning Committee, department directors, the Town Manager, and Finance Director to determine how to approach financing this transition. The Town will pursue funding through DOER, the MA Clean Energy Center, utilities, and federal agencies, as available, to minimize direct costs.

Following the Select Board and School Committee’s approval of the Roadmap, the Town’s Sustainability Manager will apply for certification as a Climate Leader Community by December 31, 2024, to secure Arlington’s participation in the program’s inaugural cohort. The Roadmap will then serve as a planning tool that the Town will strive to follow and adjust as needed. To maintain Climate Leader Communities certification status, the Town will need to update the Roadmap every three years.