

Library HVAC Replacement

Frequently Asked Questions — **DRAFT**, Sept. 28, 2206

Project Summary:

The library's heating, ventilation, and air-conditioning (HVAC) system is well beyond its useful life and needs major investment. On October 24, voters will consider whether to replace it with a comprehensive ground source heat pump system (Article 1). If Article 1 is not approved, voters will then consider Article 2, which would replace the existing boiler as an interim measure to address the library's immediate heating needs. The town would then develop options to replace the remaining components of the existing gas-fired HVAC system and return to town meeting either comprehensively or over time.

What is the fundamental choice?

Voters are being asked to choose the library's long-term HVAC direction: proceed now with a comprehensive ground source system, or replace the boiler now, retain natural gas and develop a conventional replacement plan for consideration at a future Town Meeting.

Why are we proposing to replace the Library's HVAC system?

The existing system is well beyond its useful life, with most components more than 37 years old. Continuing to rely on aging equipment increases the risk of failures and does not address the library's long-term heating, cooling, ventilation, and building modernization needs.

What alternatives have been studied?

Multiple comprehensive studies were completed examining several HVAC options (air source, ground source, conventional, etc.). After reviewing results of those studies, the town has focused on two long-term approaches: (1) a comprehensive ground source heat pump system, which would provide heating and cooling without on-site natural gas use for the HVAC system; and (2) a conventional system replacement using a high-efficiency gas boiler and related HVAC equipment.

At a glance: How do the two long-term alternatives compare?

The two approaches involve different costs, benefits, risks, and practical considerations. The chart below summarizes the principal differences so voters can weigh the tradeoffs.

Consideration	Ground Source	Conventional
Estimated net town project cost	\$3.696 million	\$3.322 million
Total comprehensive project cost	\$6.246 million	\$3.322 million
Identified grants and incentives	~\$2.55 million	None identified
Reduction in annual energy	~657 MMBtu	~104 MMBtu
Reduction in annual GHG emissions	~32 metric tons CO ₂ e	~8 metric tons CO ₂ e
Implementation	Winter 2027	Boiler now, remaining work TBD
Exposure to future cost escalation	No; can proceed immediately	Yes; delayed implementation

What work has been done to date?

The town has a stated goal to decarbonize town buildings and fleet by 2050. When the Library first identified the need to replace their boiler, we wanted to consider solutions that align with the town's climate action plan. Staff, consultants, and town boards have evaluated different technologies, refined

the scope and cost estimates, studied energy use and greenhouse-gas emissions, identified grants and incentives, and worked through procurement and financing options. As the design and analysis became more detailed, project costs and incentive assumptions also changed. The additional work has given the town a more complete basis for the October vote.

What choices are being offered in October?

Voters will first consider Article 1, which proposes a comprehensive ground source heat pump system. If Article 1 is approved, Article 2 will be passed over. If Article 1 is not approved, voters will then consider Article 2, which proposes approximately (\$330 - Need updated number] to replace the existing boiler with a high-efficiency gas boiler. This would address immediate heating needs while the town develops comprehensive conventional HVAC replacement options for a future Town Meeting.

Why aren't we offering a full conventional system replacement at this time?

The conventional system replacement alternative is not at the same stage of design. Through a state grant, PowerOptions was able to complete the feasibility study and design work for the ground source system, allowing the town to advance that alternative without using town funds for design. Modest funds were spent on independent expertise and cost estimation, and *the conventional alternative continued to be evaluated for comparison purposes but was not advanced through formal design*. The town therefore does not yet have a sufficiently developed design and cost estimate to request construction funding for a comprehensive conventional system in October, nor are funds currently appropriated to complete that design. If the ground source system is not approved, the town would replace the boiler as an interim measure and return to a future Town Meeting for conventional-system design funding and eventual construction funding.

Cost Comparisons: A Closer Look

The table below shows the current estimated costs and identified funding sources for the two alternatives.

Cost Comparison	Ground Source	Conventional
Total comprehensive project cost	\$6.246 million	\$3.322 million
State Climate Leader grant received	(\$1.0 million)	—
Estimated tax credits and other identified incentives	(\$1.55 million)	—
Estimated net town project cost	\$3.696 million	\$3.322 million

Additional Mass Save/Eversource incentives may be available for the ground source project but are not included yet.

What happens if some of the anticipated tax credits or incentives are not received?

The town has already received confirmation of the \$1,000,000 climate leader grant, as well as guidance from our Energy Tax Consultant that \$1,550,000 is a good conservative estimate for the expected federal incentive payback. Additionally, the proposed Town Meeting motion provides a backup of \$1.55 million from the Stabilization Fund to be used to cover any shortfall in anticipated tax credits or other project incentives. Any Stabilization Fund money used for that purpose would reduce the amount borrowed for the project.

How will the town proceed if the ground source replacement system is not approved?

If Article 1 is not approved, the town would urge the passing of Article 2 so we can replace the boiler immediately and then consider options to replace the rest of the existing gas-fired HVAC system.

Further information is available on the town's website:

www.lincolntown.org/1624/2026-Special-Town-MeetingState-of-the-To