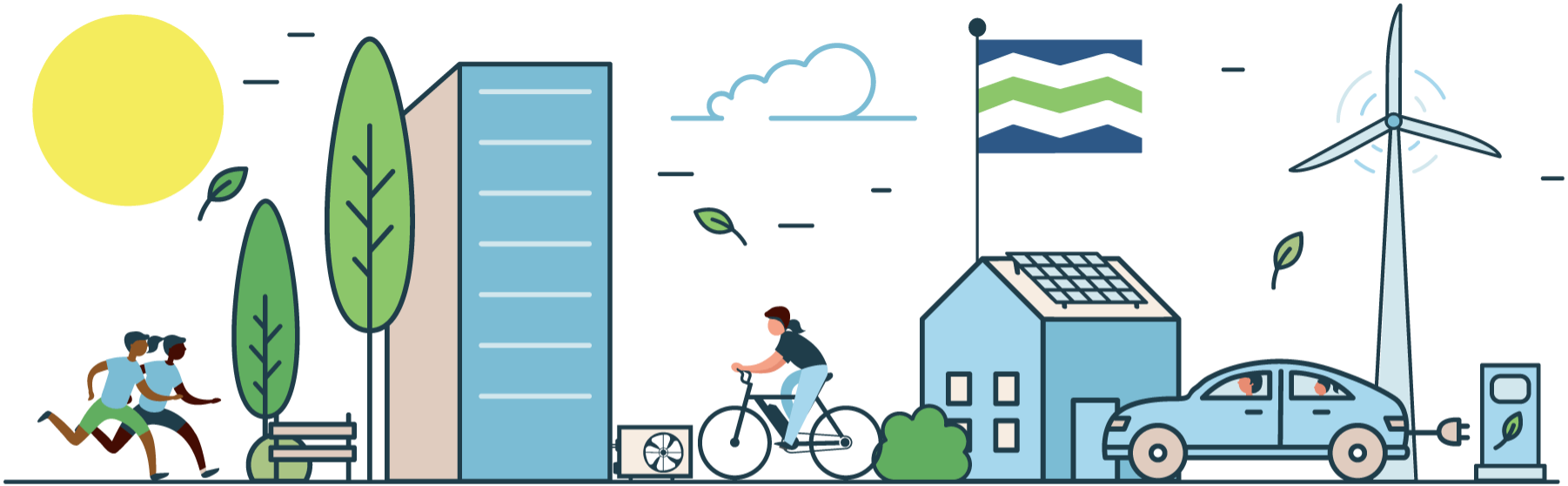

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BURLINGTON Electric DEPARTMENT

CITY OF BURLINGTON, VT. ORGANIZED FEB. 21, 1865

Timeline and Context for Thermal Energy Policy Development in Burlington:

- 2019 Net Zero Energy Roadmap presented by Mayor Weinberger and Burlington Electric
- October 2020 Mayor's Building Emissions Reduction Proposal
- Town Meeting Day Ballot Questions Charter Change March 2021
- Rental Weatherization Standards Adopted May 2021
- Renewable Heating Ordinance Adopted Summer/Fall 2021
- Charter Change Enacted by Legislature/Governor Spring 2022
- Council Resolution May 2022 for Decarbonization
- BED/DPI Interim Report July 2022
- BED/DPI Final Report December 2022

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Process Since July 2022 Interim Report:

- The BED and DPI teams held two group stakeholder meetings with building owners on August 30, and October 25, as well as some individual meetings with stakeholders.
- BED participated in a 2030 District webinar with building owners and building design professionals.
- BED has worked intensively with the Building Electrification Institute (BEI) to analyze policy proposals and draw on their expertise working with cities around the nation.
- BED attended NPA meetings to share possible approaches and seek feedback from the community (Wards 1/8 Nov. 9; Wards 2/3 Nov. 10; Ward 5 Nov. 17; Wards 4/7 Nov. 30; Ward 6 Dec. 1).

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Buildings Covered Under Proposed Policy:

- New Construction
- Large Existing Commercial/Industrial Buildings over 50,000 Square Feet
- Municipal/City Buildings

Buildings Not Covered Under Proposed Policy:

- ALL Existing Residential Buildings (including single-family, multi-family, rental, condo, and affordable housing buildings)
- ALL Existing Small Business Buildings
- ALL Existing Commercial/Industrial Buildings under 50,000 square feet

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Policy Recommendations for New Construction:

- **100% Renewable -** Require, starting in 2024 and subject to voter approval, new construction to be 100 percent renewable for thermal energy, including heating, water heating, cooking, appliances, and other systems.

- **Broad definition of renewable** - including geothermal heat pumps, air source and water source heat pumps, heat pump VRF, advanced wood heating, and conventional systems with renewable fuel supply (such as renewable gas, biodiesel, renewable hydrogen, or renewable district energy).

- **Alternative Compliance Carbon Pollution Impact Fee –** If a building does not use a renewable fuel or technology, assess at time of permit a carbon pollution impact fee accounting for the lifetime emissions of the fossil fuel system.

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Policy Recommendations for Large Existing Buildings and City Buildings:

- **Requirement -** Require, starting in 2024, 100 percent renewable technology or fuels for replacement heating or water heating systems at time of permit. If using fossil fuel system, carbon pollution impact fee applies for large existing buildings (with cap of 75% of installed cost of conventional system).

- **Definition of large existing building**- Over 50,000 square feet of space conditioned area. Approximately 80 buildings in the City. Exempts all residential/multi-family/affordable housing, as well as small businesses. Exemption process for historic buildings.

- **Credit for Emissions Reduction –** A building owner taking action to reduce emissions outside the scope of the policy, including purchasing renewable fuel or replacing other systems (cooking, appliances, etc.) with renewable, gets credit against future compliance.

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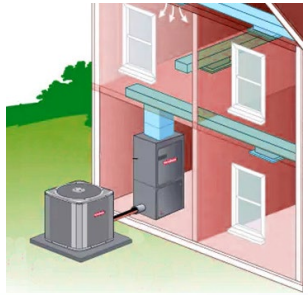
Policy Recommendations for Use of Carbon Pollution Impact Fee Proceeds:

- **City Fleet –** Support capital needs to electrify City vehicles and fleet.



- **Clean Heating Technologies for Low-Income Burlingtonians –** Create new city fund to support installation of clean heating technologies for low-income households and renters, consistent with Advisory Question 7 from Town Meeting Day 2021.

- **For Existing Building Payors –** For fee payors in existing buildings, provide a substantial portion available back to the payor if submit a plan to reduce emissions at their building or facility, including electrification (building systems, vehicles, lawn care) or energy efficiency work.

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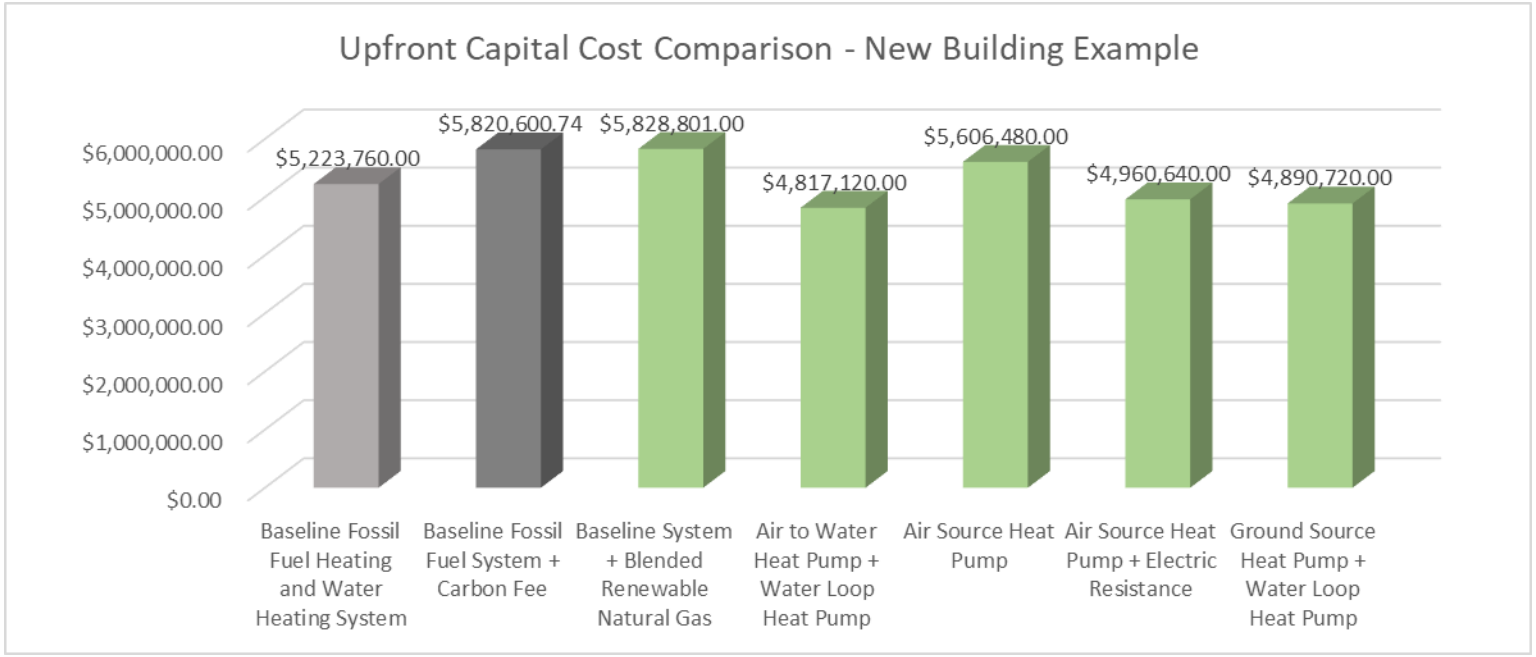
Analysis, New Multi-Family Building Example ~ 150,000 sq ft Upfront Capital Cost



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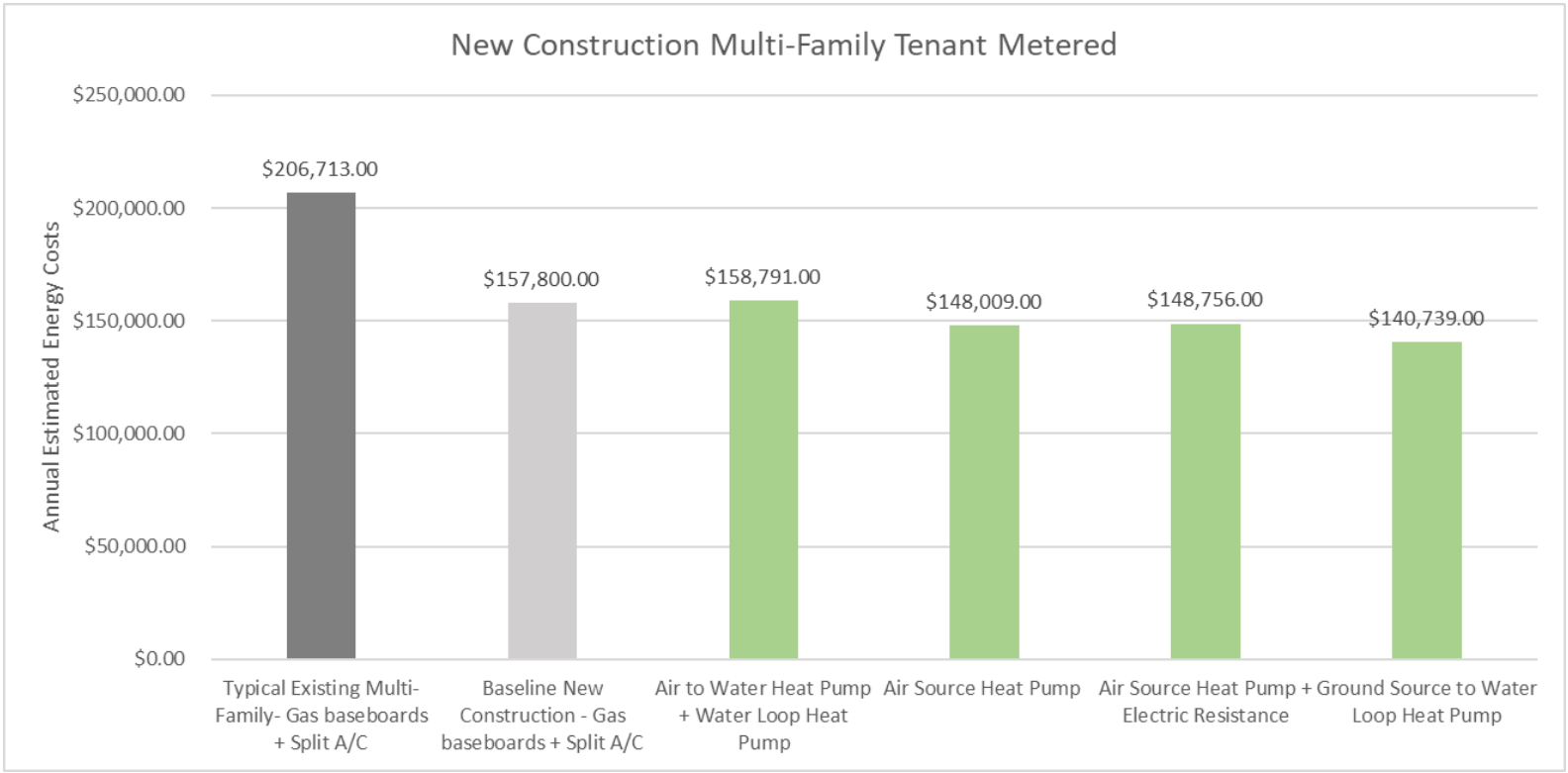
Analysis, New Multi-Family Building Example: Energy Operating Cost Estimates Tenant Metered



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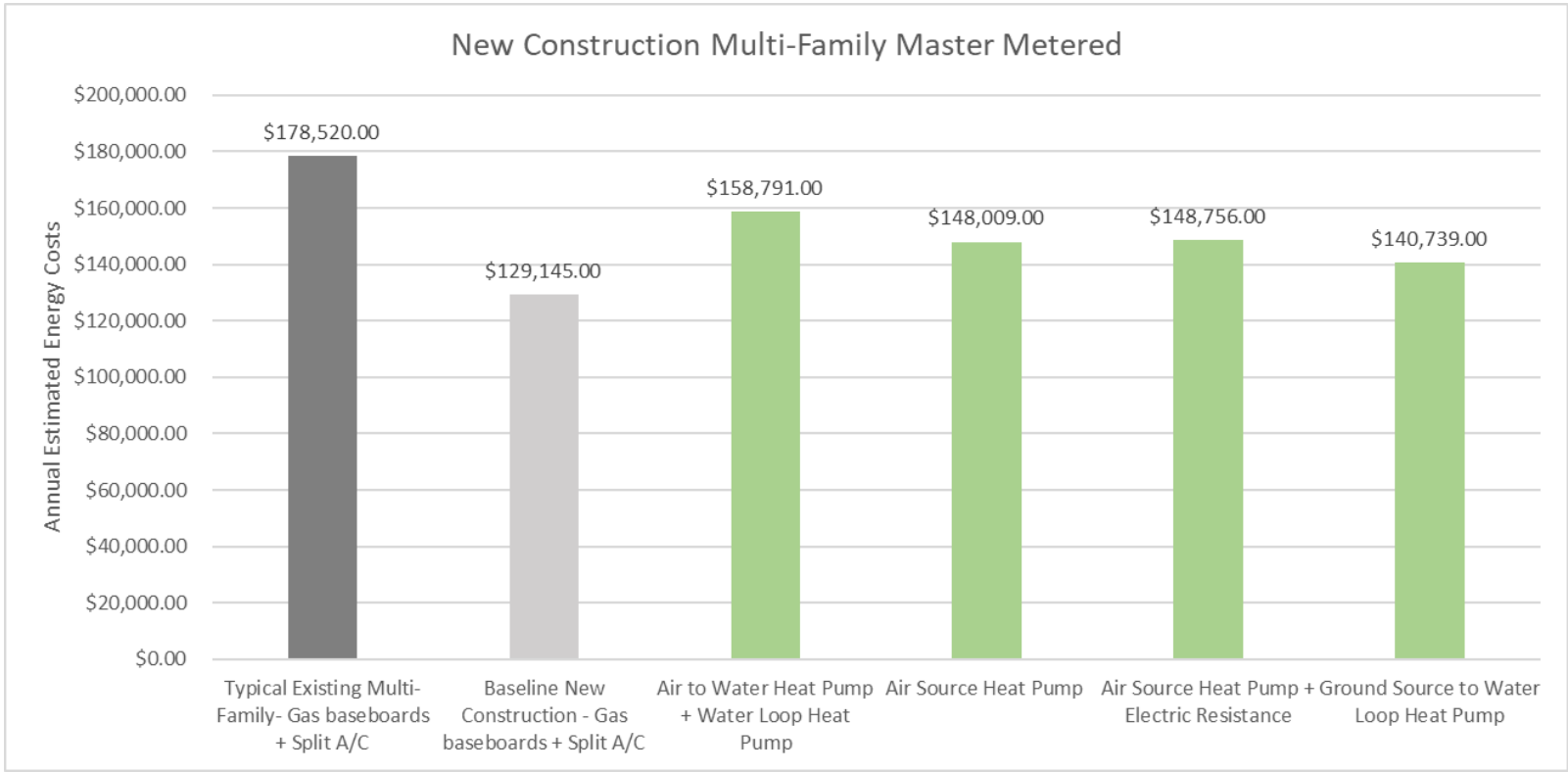
Analysis, New Multi-Family Building Example: Energy Operating Cost Estimates Master Metered



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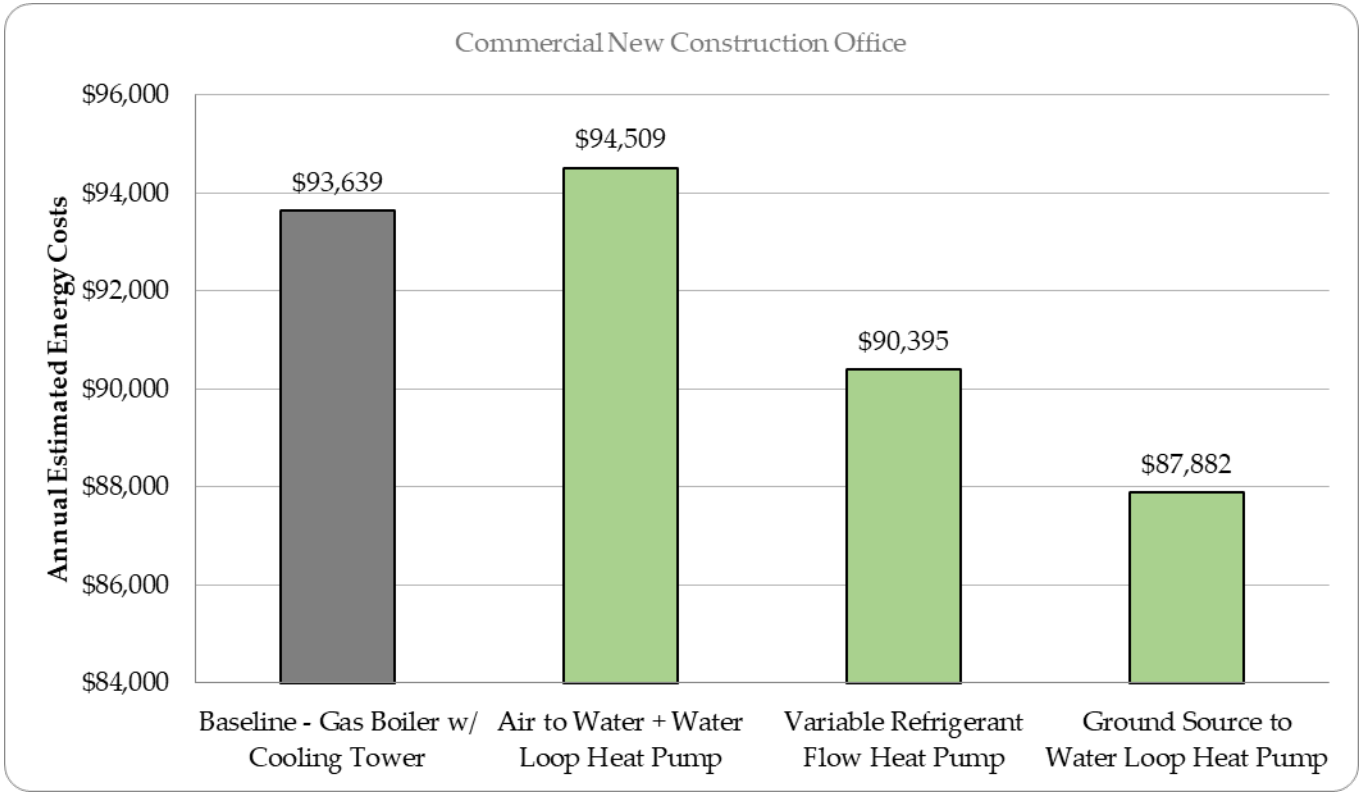
Analysis, New Building ~ 60,000 sq ft Office Example: Energy Operating Cost Estimates



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Analysis, Existing Building Example ~ 50,000 sq ft: