



FY20 Energy Use Report

Green Communities Analysis

Performance during COVID-19

Presented by Jillian Wilson Martin, Sustainability Coordinator

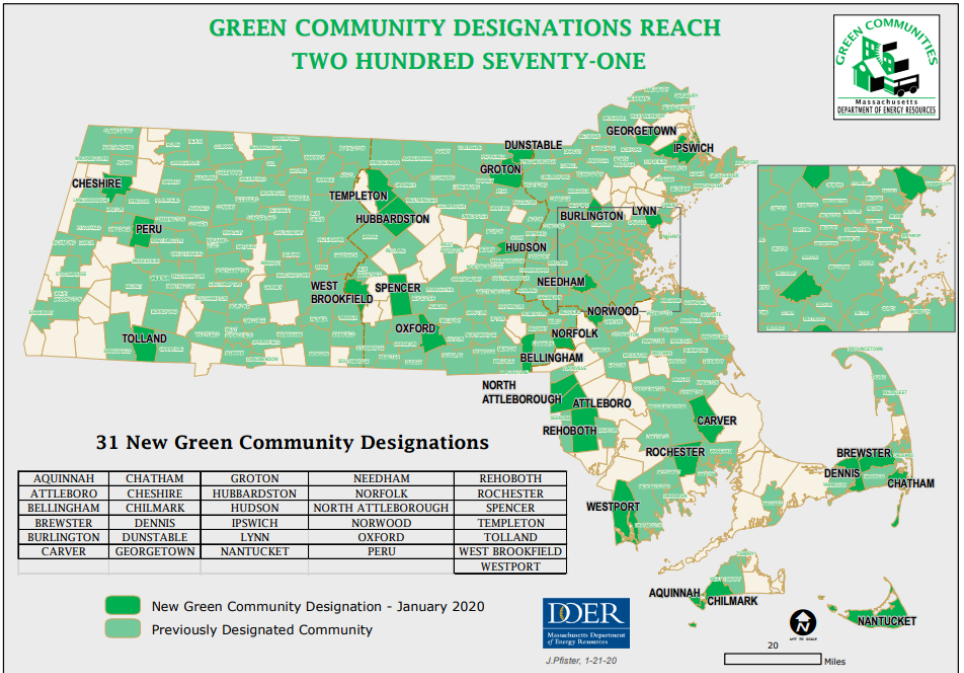
November 3, 2020

Green Communities Designation

In 2010, Natick became a founding member of the Green Communities program and committed to:

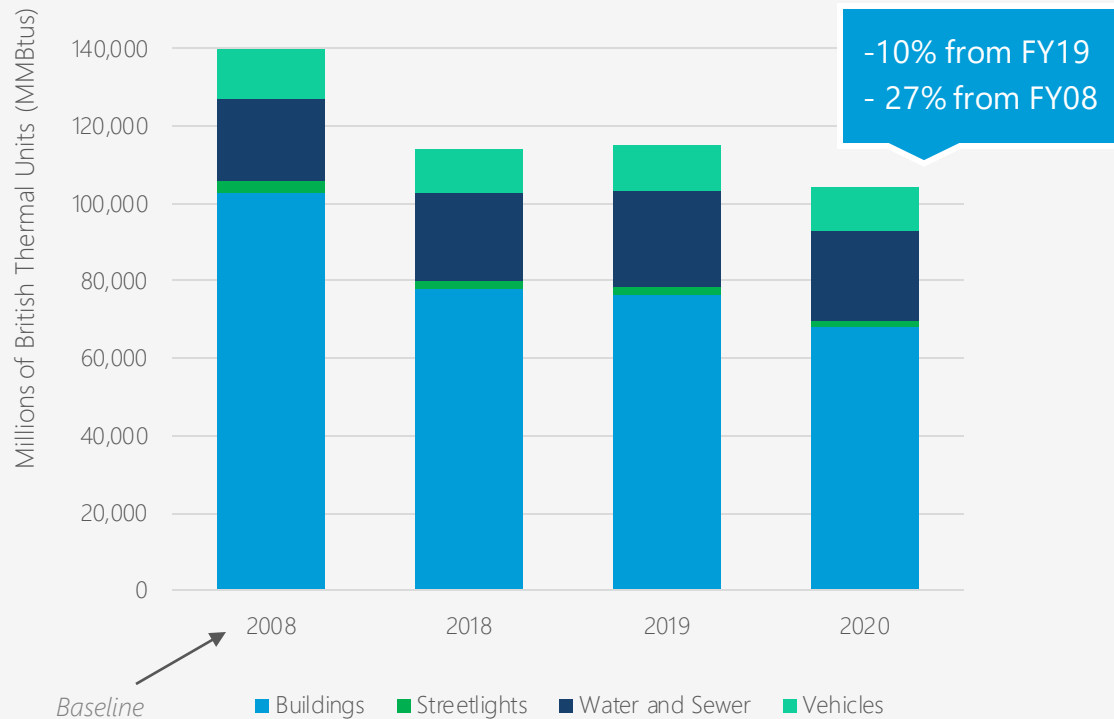
- 1 Allow for as-of-right siting of renewable or alternative energy research and development facilities
- 2 Provide expedited permitting for such facilities
- 3 Reduce the municipality's (including schools) energy use by 20% against our 2008 baseline
- 4 Adopt a Fuel-Efficient Vehicle Policy requiring all municipal departments and divisions to purchase fuel-efficient vehicles, and to develop and maintain a vehicle inventory for all four-wheeled vehicles
- 5 Adopt the Massachusetts' Board of Building Regulations and Standards (BBRS) Stretch Code (780 CMR 115.AA)

\$1.67M Amount Natick has received in Green Communities grants since 2010

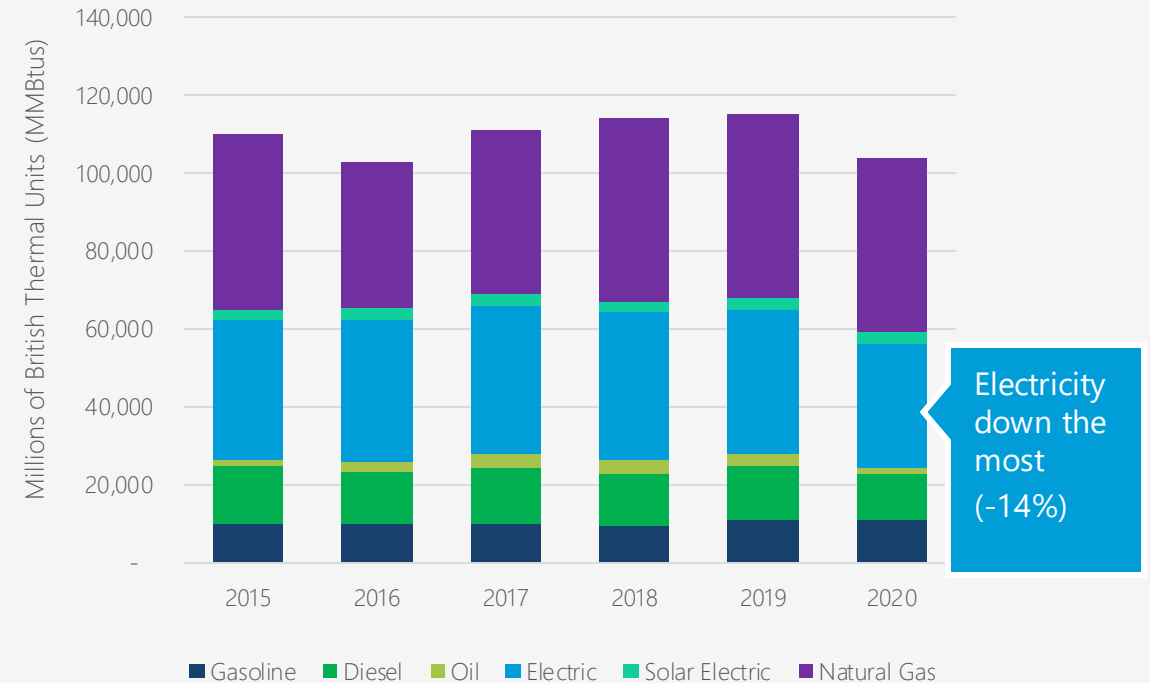


Green Communities Report: Annual Energy Use

Annual Energy Use by Sector



Annual Energy Use by Fuel Source

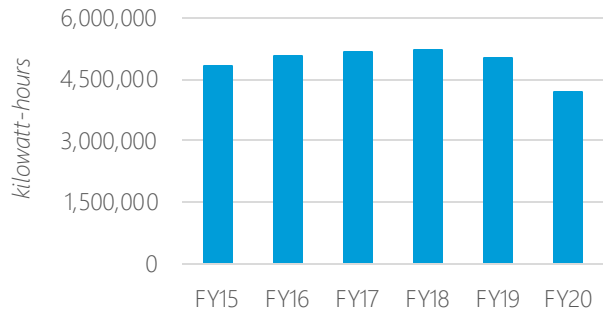


Note: Charts reflect totals for School and Municipal Accounts

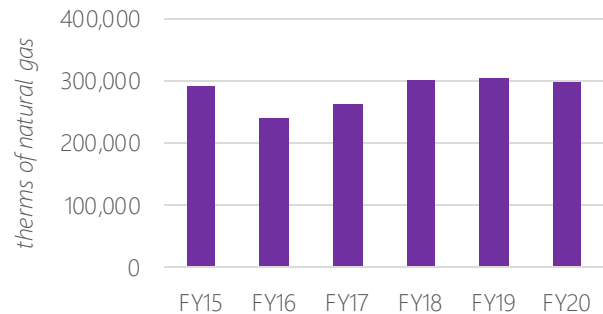
Green Communities Report: Buildings Analysis

School Buildings

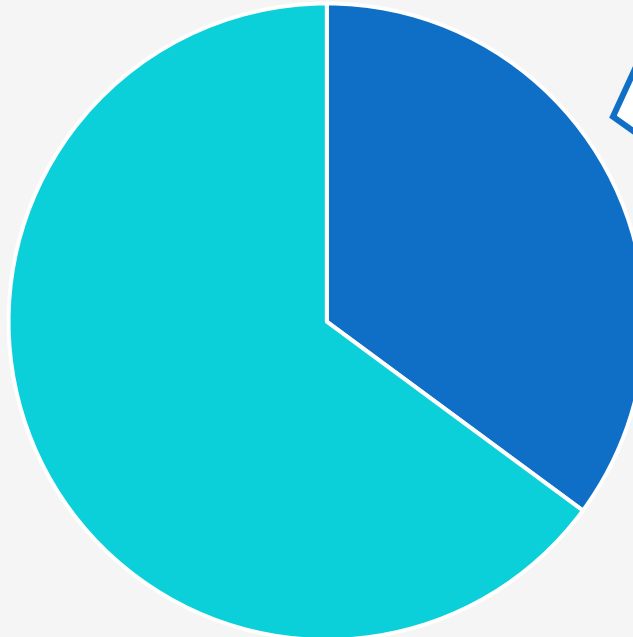
Annual Electricity Use



Annual Natural Gas Use

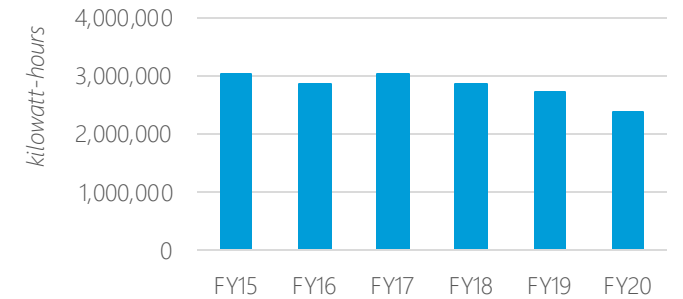


FY20 Energy Use by Building Type

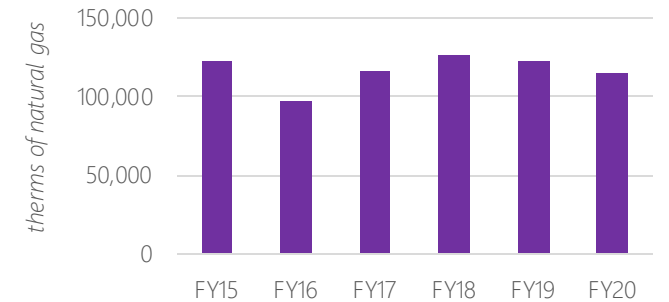


Municipal Buildings

Annual Electricity Use



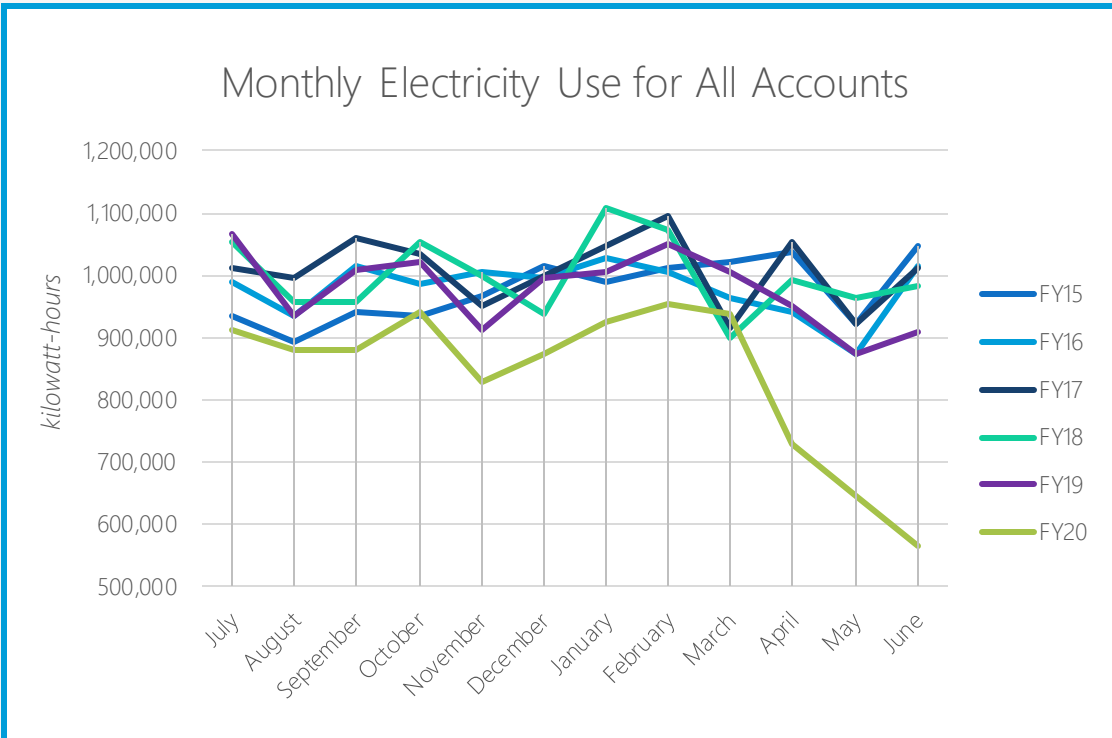
Annual Natural Gas Use



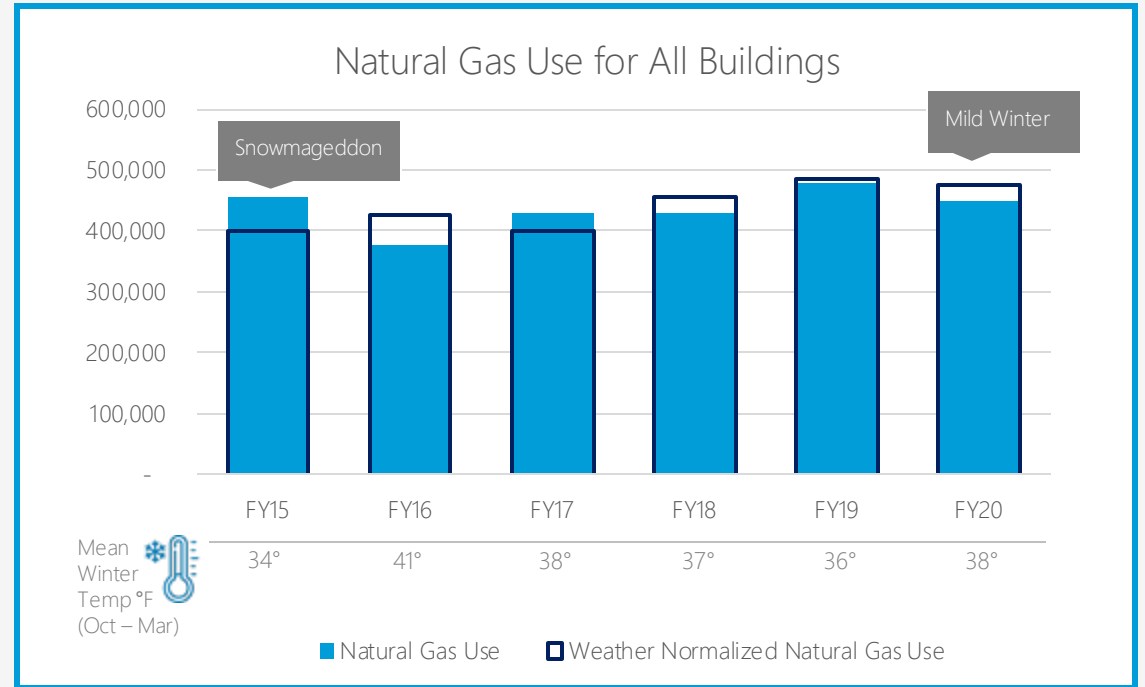
Green Communities Report: Assessing Our Performance



We were on track to reduce electricity by 10% pre-COVID (July 19 – Feb 20)



*Includes electricity from all buildings, street, traffic and park lights, Chase Arena and Water and Sewer operations



*Includes natural gas from all buildings, including Chase Arena

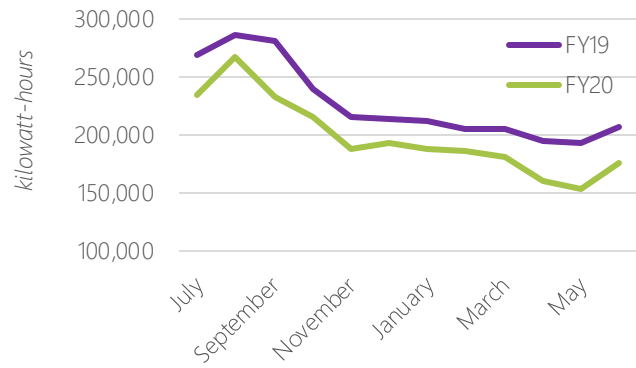


We continue to be less efficient at heating our buildings. In FY20, we used 19% more natural gas than we did in FY15 (weather normalized).

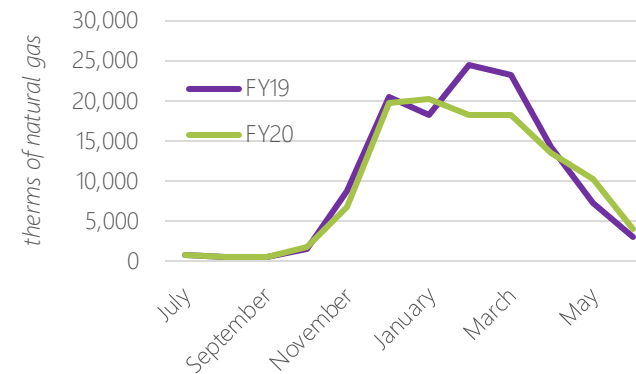
Green Communities Report: COVID-19 Performance

Municipal Buildings

Monthly Electricity Use

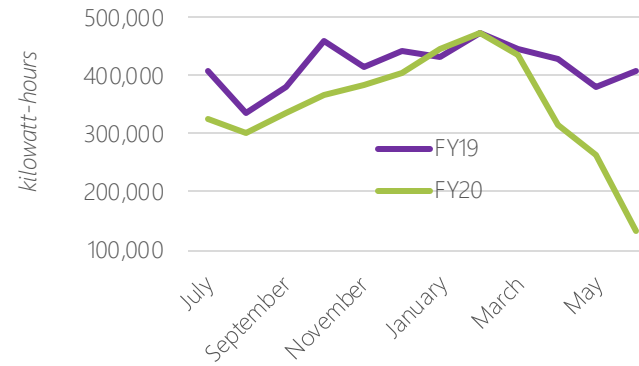


Monthly Natural Gas Use

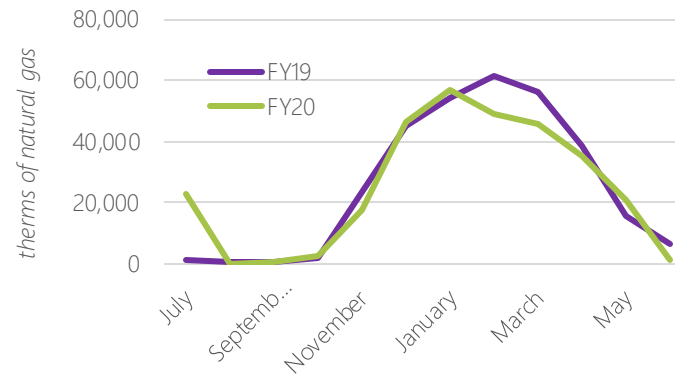


School Buildings

Monthly Electricity Use

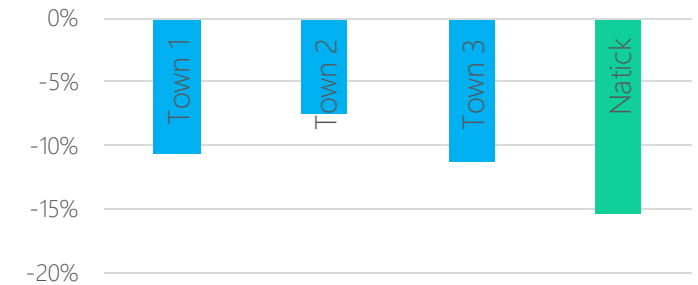


Monthly Natural Gas Use

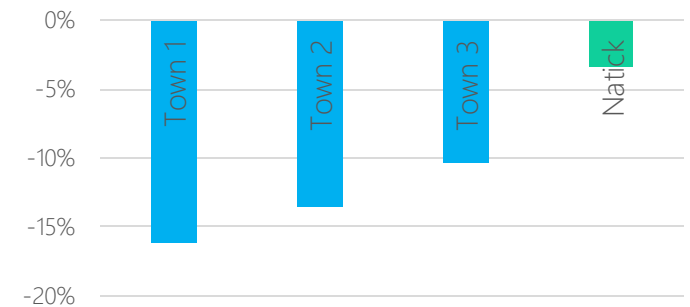


Our Performance vs. Peers

Year/Year Electricity Reduction v Peers



Year/Year Natural Gas Reduction v Peers



Green Communities Report: Other Metrics

Energy Conservation Measures



8 projects

complete in FY20

3 LED retrofits
1 building controls
4 EV chargers

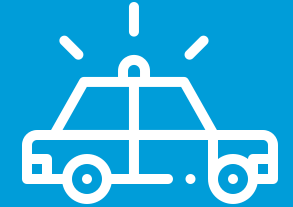
\$42,000

Estimated annual savings

\$252,000 in grants and utility
incentives

3 year payback on Town
contributions

Vehicle Inventory



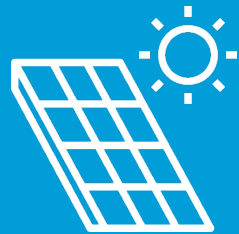
+ 9 new vehicles

+ 4 transfers

- 8 retired vehicles

5 net increase in vehicle inventory

Renewable Energy



9 systems saving \$200K/year

CSC
DPW
Ice Rink
Natick High
Wilson Middle

Kennedy Middle
Ben Hem Elementary
Lilja Elementary
Memorial Elementary

Top 3+ Energy Using Buildings

Natick High School (38 Energy Use Intensity)

Kennedy Middle School – existing (63 EUI)

Brown Elementary* (120 EUI)

Ben Hem Elementary (75 EUI)

**One year bump in energy intensity due to natural gas leak*



Questions?

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