March 31, 2017

Dear Analyze Boston Open Data Challenge participants,

I hope this letter inspires you and your team to look at building energy data more closely and begin to see it as an integral part of Boston’s long-term climate mitigation planning. Open datasets such as Boston’s city-wide building energy data offers huge potentials for analysis that can directly benefit Bostonians and the environment.

In 2013, the City of Boston enacted the [Building Energy Reporting and Disclosure Ordinance](https://www.boston.gov/environment-and-energy/building-energy-reporting-and-disclosure-ordinance) (BERDO). This ordinance requires large buildings to track their energy and water use and annually report it to the City, which then makes the resulting data available to the public. While the data is all self-reported by building owners and managers, it offers a huge quantity of data points for analysis. Covered buildings report on their building types, usage, presence of renewable energy systems, water, electricity, natural gas, oil, and district steam usage, and more. Starting in calendar 2017, BERDO will cover all buildings, commercial and multifamily, 35,000 square feet in size or larger. To date the City has data from calendar year 2014 and 2015 for a slightly smaller universe of buildings. Calendar year 2016 data will be made available in October of 2017.

Mayor Walsh has committed Boston to be [carbon neutral by 2050](http://www.wbur.org/news/2017/01/17/watch-live-mayor-walsh-delivers-state-of-the-city-address). With 74 percent of citywide greenhouse gas emissions originating from buildings citywide, and most buildings existing today will still be in operation in 2050, the task to make Boston’s buildings carbon neutral is of great importance. The question for you is what will Boston’s buildings look like in 2050 and how do we get there?

Using BERDO data, Boston [Inspectional Services Department permitting data](https://data.boston.gov/dataset/approved-building-permits), [Boston Tax Assessing Department data](https://data.boston.gov/dataset/property-assessment), [Google’s Project Sunroof](https://www.google.com/get/sunroof), and any other publicly available sources, strategize pathways towards carbon neutrality for Boston’s largest buildings. Some of the questions you can explore include:

* What are some of the buildings that are likely leading candidates for achieving deep carbon reductions?
* Which will require the most amount of work to achieve these goals?
* Which building sectors are most critical to address for energy efficiency improvements?
* How much off-site renewable energy will be needed to offset building emissions that can’t be eliminated through on-site renewables and efficiency improvements?

The goal is not to create a single all-encompassing plan for Boston’s buildings reaching carbon neutrality, but to leverage big data to explore innovative strategies for individual segments, or even individual buildings, of the buildings sector. There is no one right answer or correct way to use the data, but a diversity of paths for buildings and the City can take towards achieving a carbon free Boston.

We look forward to exploring the future of deep green buildings with you.

Sincerely,

Benjamin Silverman

City of Boston’s Office of the Environment, Energy, and Open Spaces