How Small Cities Can Have a Big Impact in the Fight Against Climate Change

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The little things add up. If one light is left on in your home for the entire day, every day, your electric bill will inevitably increase. If a community stops the use of plastic water bottles, it can significantly reduce the amount of bottles that end up in the landfill. Just ask our alumni member company, Bevi! Their customers have collectively saved more than 1 million bottles from the landfill by relying on reusable bottles and a shared water supply, enabling companies around the county to have a smaller footprint with a bigger impact.

Efforts to protect the environment and initiatives to help mitigate climate change need to happen at all levels, in schools and communities, and across cities, states and countries. COP21 did an excellent job highlighting the importance and responsibilities of major cities to fight climate change but as we've seen, it can be incredibly challenging to execute initiatives on a global scale. Actions from small cities—and companies—are tremendously important and can set an example

for their larger counterparts since they can often move faster, be more experimental and encounter less bureaucracy in the implementation process.

The City of Somerville, MA, is a testament to this vision.

As one of the most densely populated cities in the country with a population of 78,000 people residing in 4.4 square miles, Somerville aims to set an example for the nation and the world with a net zero 2050 carbon goal. This is no small task but with its committed team focused on implementing ongoing efforts, carbon neutrality will be a reality for this amazing city!

Improvements to Infrastructure

In 2013, Somerville led the region in sustainable transportation with nearly 50 percent of its commuters walking, biking or taking advantage of public transit. But in order for Somerville to achieve its net zero carbon goal, the number of sustainable commuters needs to increase. To meet this demand, the City introduced initiatives to increase walkability and bikeability throughout the region and even more, Somerville secured Federal and State funding for the first major public transit expansion in the area since the 1980s. The expansion project known as The Green Line Extension, will make an enormous impact on the use of and access to commuting for Somerville-area residents.

Programs and Partnerships

Just last year, Somerville launched a global competition in collaboration with MIT's Climate CoLab to harness the community's ideas and proposals to address climate change issues. This contest generated dozens of ideas from around the world on reducing carbon emissions from the city's buildings, transportation and food supply. The contest engaged a broad range of citizens and is one of the underpinnings of the City's ongoing climate change plan.

Cities are potential end users of clean technology but Somerville believes cities have a role to play farther up the development pipeline, helping early-stage companies test technologies. With the goal of making Somerville an urban laboratory, the City launched its own Somerville GreenTech Program in 2015 to pilot green technologies throughout the city and make Somerville more sustainable. Thanks to Somerville Mayor Joseph Curtatone's exceptional leadership, Somerville recognizes that municipalities and industry must work together on the development and adoption of green technology to solve urgent environmental problems and move closer to its carbon neutral goal.

Access to Innovation

In addition to the City's ongoing efforts and initiatives, Somerville is uniquely home to the United States' largest clean technology startup incubator, Greentown Labs. Greentown was able to be move to Somerville through the City's $1MM Innovation Fund. It supports business expansion and assists businesses to locate in Somerville to support technology-related businesses and other traditional businesses that embrace innovation. Through that, we were able to secure 40,000 sq. ft. for our incubator, providing office and lab space to more than 50 startups that are all developing solutions for a carbon neutral future in the energy efficiency, energy distribution, energy storage, transportation, waste, water and agriculture sectors. Greentown Labs' mission is

to provide the best place in the world for cleantech startups to build their companies by providing the facilities, resources and access to funding they need to build their companies.

As a member of Greentown Labs, startups have direct connections to professional resources, software tools and equipment, potential corporate partners, investors and customers to help them raise private investment to launch their companies.

Our member companies typically stay in the incubator for 1.5–2 years and during their time in the community they're constantly seeking opportunities to test and pilot their technologies. When the City of Somerville launched its GreenTech program, our members knew it had the potential to be a strong partnership opportunity for both parties: the startups would have the ability to test and deploy their technology, and Somerville would increase the use of clean and green technologies throughout the City.

After executing a thorough application process, Somerville successfully deployed two of Greentown Labs' member companies' technologies. These included:

- Weather stations: Understory Weather provides weather and data analytics to understand weather at the ground level. This insight helps the City respond to disasters, floods and snow emergencies in a more efficient manner.
- Solar-powered cell phone charging stations and wifi hot-spots: WrightGrid designs, engineers and manufacturers industrial strength, point-of-use power products to enhance mobile connectivity. The startup's charging stations were scattered throughout Somerville to help residents, commuters, students and other city visitors.

And the City's plan for partnerships with Greentown Labs' startups doesn't end there! Another Greentown Labs member company is focused on creating a new path for easy, on-site hydrogen car refueling and the City is interested in finding ways to deploy this technology around Somerville. This partnership could serve as a model for city ridesharing with a fleet of hydrogen powered vehicles and highly efficient hydrogen refueling stations. Stay tuned for updates on this partnership!

Just as we have been successful in partnering with the City for various pilots and projects, the City also encourages other companies from the region to participate in the City's GreenTech program and pilots. Through Somerville GreenTech, City staff are available to talk with technology companies about potential pilots on an ongoing basis, and the City will be releasing solicitations focused on specific sustainability problems. If you have technology that can help the City reach its sustainability goals, they want to hear about it! Please visit Somerville's GreenTech website for more information.

An Example to Replicate

The City of Somerville's ambitious net zero carbon goal will require creative innovation and experimentation, and fortunately for the City, Mayor Curtatone welcomes out-of-the-box thinking and is eager to hear from passionate individuals who want to help the environment. Establishing partnerships among startups and cities, startups and corporations, and cities and corporations to develop clean technology solutions can be an example for larger cities and

ultimately nations around the world. Not only can small startups make a big impact in small cities, but small cities can make a big impact on a global movement toward green technology development and deployment.