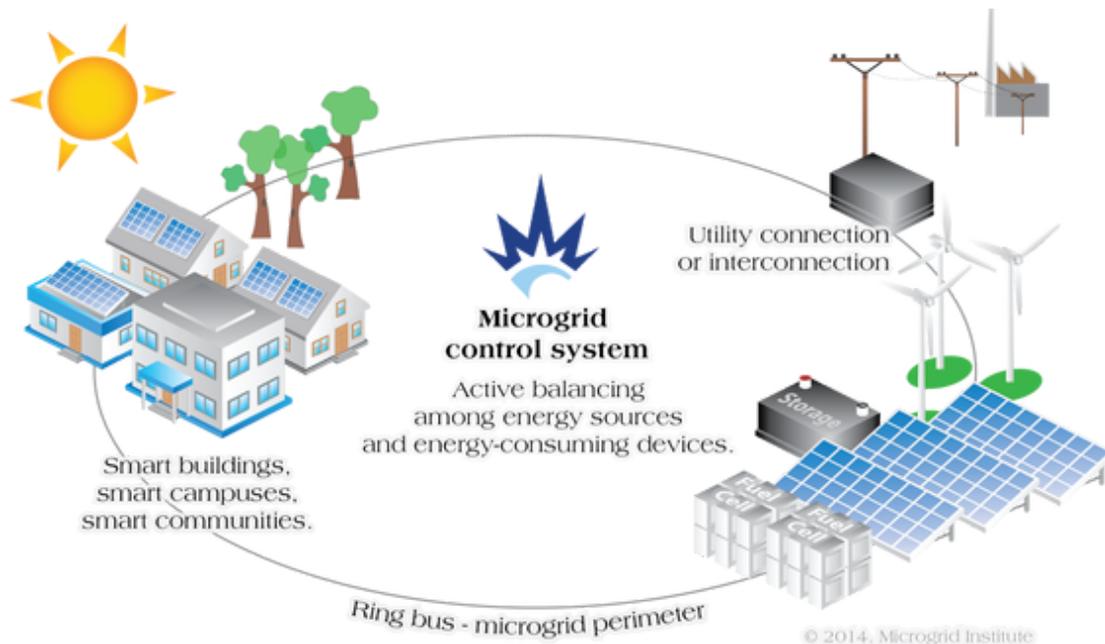


## What is a microgrid?

A microgrid is a local energy grid with control capability, or “islanding” capability, which means it can disconnect from the traditional grid and operate autonomously. This is helpful because if the larger grid goes down, in case of storms or other outages, the local microgrid can continue to provide power. Microgrids often deliver heating and cooling in addition to electricity. Microgrids can be an effective and efficient way to heat and cool all of homes and buildings as well as providing electricity.



## What are the benefits of running on a microgrid?

- Resilient - Microgrids are resilient because they make and deliver local energy, and can be “islanded” during outages on the larger grid.
- Efficiency - Microgrids do a great job of increasing energy efficiency and utilizing renewable energy while decreasing costs. Microgrids can provide combined heat and power (CHP), using waste heat from making electricity to heat buildings that are on their grid.
- Demand Side management - Because they have local generation, they reduce peak demand on the overall grid as well as helping reduce the demand for power to heat or cool buildings.
- Price - Microgrids can be cheaper to the because frequently there are no delivery tariffs paid to maintain the larger grid.

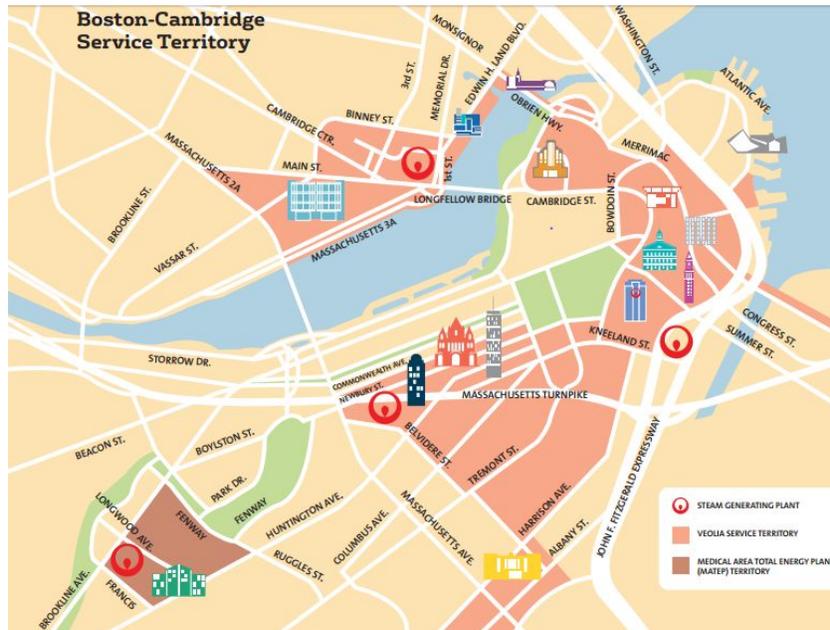


### Pieces of a microgrid:

- Generation assets - gas turbines, solar panels, wind turbines
- Demand management - financial incentives and behavioral change through education
- Storage - generally battery storage
- Distribution - the power lines and heating and cooling pipes

### Success Story:

There are microgrids already in place in Massachusetts. One system is set up in the Cambridge-Boston district. Veolia Energy installed a system that provides district heating, cooling, and electricity to local residents. For heating, this system of steam pipes pushes environmentally friendly thermal energy, or as Veolia calls it, “Green Steam,” throughout the city. This Green Steam recycles thermal energy previously lost to the environment. In addition to heating, Cambridge’s microgrid produces 250 megawatts of electricity.



***We want to help you establish a micro-grid project in your town. Contact us at [info@massclimateaction.net](mailto:info@massclimateaction.net) to learn if your town is one of the ones already started, or how to begin the process of creating one!***