



Philadelphia, USA

Solar-Powered Public Trash & Recycling Containers

Category

Waste

Population of city

1.4 million

Project start date

May 2009

Annual CO₂ reduction

Unknown, but both the decreased use of sanitation trucks to pick up litter in Philadelphia's congested downtown and increased consumer recycling contribute to CO₂ reduction.

Financial savings

More than \$800,000 annually

Initial investments

\$2.2 million (covered through a state recycling grant)

Project status

Initial phase complete.

Contact

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Summary

The City of Philadelphia installed 500 solar-powered trash compactors and 210 recycling containers on its downtown streets in the summer 2009.

What is it

In the summer 2009, the City of Philadelphia installed 500 BigBelly solar-powered trash compactors and 210 recycling containers along its busiest commercial corridors. Because the trash is compacted (using solar power), the containers can contain 150 to 200 gallons of waste – traditional public waste baskets hold 10 to 12 gallons. Therefore, the Streets Department need only pick-up trash 5 times per week, a significant decrease from its previous 19 times per week schedule. City recycling rates have also increased thanks to the ease of depositing cans, bottles and newspapers in public spaces. In the span of only a few months, Philadelphia's residential recycling rates have gone from 7 percent to more than 12 percent! Another benefit is the reduction of trash on the streets. The BigBelly contains trash within the unit – wind cannot blow litter down the street and people cannot pick through the containers, an act that sometimes results in spilled trash. Philadelphia's streets and parks are noticeably cleaner as a result.

How does it work?

The BigBelly, manufactured in Massachusetts, uses the power of the sun to compact trash after it is deposited into the container. When the receptacle gets full, it sends a signal to a Streets Department monitoring station alerting it to the need for trash pick-up. It also locks the can so that no more trash can be put into it until it has been emptied. Another freestanding container for recyclable materials sits next to the trash container.

Next steps

The City will purchase 500 additional BigBellies to expand the program to commercial corridors throughout Philadelphia.

The facts and figures in this case study have been provided by the highlighted city governments to the C40.