

Making the
**SKY A
LITTLE
GREENER**

By Jane Carroll



PECO's green roof at 23rd
& Market streets

Photo by Margaret Funderburg

PHS staff member Julie Snell has been making friends in high places. The project manager and landscape architect has spent a lot of time 100 feet in the air on the roof of PECO headquarters in Center City Philadelphia, learning about the new “green roof” there. Julie is leading a skilled PHS team that will oversee maintenance of the green roof after its guarantee period ends.

Green roofs offer big benefits to the environment. They absorb and retain large quantities of rainwater, reducing runoff that contributes to flooding. They filter pollution from rainfall and keep it from entering rivers and streams. They extend the life of roof structures and help moderate temperatures, keeping energy costs down. They reduce the “heat island” effect of metropolitan areas and help improve air quality.

A green roof is also much prettier to look at than a black tar roof.

Designed by Philadelphia-based Re:Vision Architecture, the PECO green roof was installed on the eight-story building adjacent to the PECO tower with its familiar illuminated message board; it is part of an ongoing environmental initiative at PECO. At about 45,000 square feet, it's the largest green roof on an existing building (as opposed to new construction) in Pennsylvania.

According to Cathy Engel, PECO's manager of communications, the company's environmental efforts support a broader undertaking by its parent company, Exelon. “Exelon 2020” is the corporation's “roadmap to reduce, offset, or displace more than 15 million metric tons of greenhouse gas emissions per year by 2020”—the equivalent of taking more than three million cars off the road. “The green roof is a perfect fit,” says Engel. “It will keep peak summer temperatures on the roof 60 to 80 degrees lower than on a conventional roof [where summer temperatures can reach 150 degrees Fahrenheit or higher].”

PECO's green roof will also keep a lot of rainwater out of Philadelphia's over-taxed sewer system. “We expect that it will capture 60 to 70 percent of all rainwater that falls on the roof, which is about 1.6 million gallons per year,” Engel says.

Other PECO green projects include replacing the lights on its famous message board with an energy-efficient L.E.D. system and promoting energy efficiency among customers. The company has also contributed funds for a demonstration green roof on the central branch of the Free Library of Philadelphia.

As part of her training, Snell is working closely with consultant

Charlie Miller, who created the construction plan for the PECO green roof. His Philadelphia-based company, Roofscapes, Inc., has designed more than 100 green roofs throughout the country.

An engineer by training, Miller became intrigued with green roofs in Germany, where they have been used for decades. Philadelphia's flat roofs provided another inspiration. “The thing that motivated my interest in this from the beginning,” Miller says, “was living in this city and looking out over the sea of black roofs and understanding that there was a whole other landscape there.”

The green roof has a paved observation area with railings, along with four large planters filled with native grasses and perennials such as switchgrass, little bluestem grass, *Coreopsis*, and *Amsonia*. PECO will open the roof for tours and educational events, hoping to inspire other companies and individuals to follow its lead.

Miller likes that idea. “Taking advantage of this ‘roof plane’ in the city becomes a way to preserve, protect, improve—or undo in many cases—the damage that's been done to streams in the area,” he says.

Snell gets a charge simply from taking in the view: “It's pretty amazing to look out across Center City from the middle of a sedum field eight stories up!” 🌿

A green roof is a multi-layered roof covering consisting of a waterproof membrane, a drainage system, a growing medium, and tough vegetation that can survive harsh conditions—usually a mixture of low-growing sedums. Green roofs are part of the “green building” movement, which aims to make buildings more environmentally friendly and energy efficient.

You can see a mini version of PECO's green roof in the company's exhibit at the Philadelphia Flower Show (March 1 – 8, 2009). PHS will offer education programs on green roofs this spring. Visit pennsylvaniahorticulturalsociety.org and click on “Calendar” for more information. For more on PECO's environmental initiatives, visit peco.com. See roofscapes.com for green roof information.