The Fed Goes Green in its Own Backyard

When I first started talking about a green roof in 2006, many people had ready answers that included smiles and a hearty laugh. To start the real conversation, we had to get beyond visions of lawn mowers, putting greens and people's reservation that the roof had no practical purpose. Thankfully, once we clarified many functional and financial misconceptions there were ready ears and a willing mindset to look at this project in its totality. Looking back, "going green" was just beginning to gather steam. The Bank believed this was the perfect opportunity to embrace innovation and contribute to a sustainable, healthy community.

So what is a green roof and why did the Bank decide to do it? A green roof is a conventional roof system that substitutes a specialized drainage layer with engineered soil and plants specifically suited for a roof climate. A roof climate is more arid, hotter and windier than ground level conditions. The environmental benefits of installing our green roof include conserving energy, minimizing storm water runoff and reducing building temperatures in warm months.

From a financial standpoint, the most significant benefit for the Bank is a considerable reduction in life cycle costs, or the amount of resources needed to maintain the roof over its lifetime. Many green roofs installed before World War II are still working today, and industry expectations are that green roofs more than double roof-life in most cases. The Bank predicts that during the lifespan of the green roof a traditional roof would need to be replaced at least one additional time. The cost of roof replacement in today's dollars is at least 3 times more expensive than the anticipated reduction in energy costs, making the decision to go green fairly easy. The price of the green roof was 1.21 times the cost of a conventional roof. So, for approximately $320,000 more in up-front costs, we anticipate a gain of at least $2 million in cost-savings over the lifespan of the roof. The extended life also means a 38 percent reduction in annual depreciation costs. The green roof not only made financial sense, but established the Bank as a leading example of sustainable construction in the Carolinas and nationally.

Adam Pilsbury is Assistant Vice President of the Federal Reserve Bank of Richmond, Charlotte Branch.

Photo: Federal Reserve Bank of Richmond

Federal Reserve Bank of Richmond invests in green technology with the installation of a green roof at its Charlotte Branch.

Photo: Federal Reserve Bank of Richmond

"I have always been passionate about community development issues. I look forward to applying my economics background and work experience to enhance research and outreach activities for the Federal Reserve."

– Kim Zeuli
Assistant Vice President and
Community Affairs Officer

Kim Zeuli has joined the Federal Reserve Bank of Richmond as assistant vice president and the new officer of Community Affairs. Kim brings a wealth of community development experience to the position. She has worked on community development issues internationally and domestically. Before joining the Fed, she was a professor in the University of Wisconsin's Agricultural and Applied Economics Department. Most recently she was a research director and business consultant with the Corporate Executive Board, Business Leadership Forum, in Washington, D.C. A graduate of Vassar College, Zeuli earned a masters and doctorate in Applied Economics from the University of Minnesota, St. Paul, Minn.