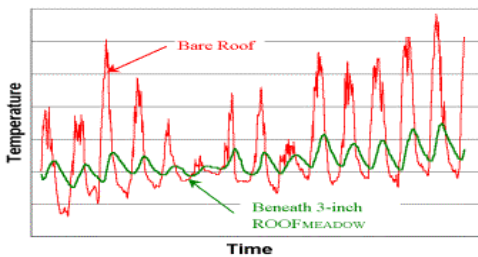


# ECONOMIC BENEFITS of GREENROOFS

## Invest in the Future of our Environment & Construct Healthy Buildings to Reap Biological and Financial Rewards

Higher initial first costs for greenroofs can be offset by their significant energy and maintenance/replacement potential, and possible green building strategy incentive programs. Economic advantages of greenroof systems can:



Source: Roofscapes, Inc.

- Reduce cooling & heating energy consumption with the vegetative surface. An energy study for the city of Chicago estimated peak demand would be cut by the equivalent of one small nuclear power plant if all the city's roofs were greened.<sup>1</sup>

- Reduce energy costs – The study said Chicago could save \$100 million in saved energy annually with greenroofs. A one story greenroof structure can cut cooling costs by 20 – 30%.<sup>2</sup>

- Protect the roof's structural elements from UV rays, wind & temperature fluctuation extremes with the added material layers.

- Extend the life of the roof by providing enhanced roof membrane durability - double or triple its life, to 50 years or more! The photo of the greenroofs at Rockefeller Center at left were constructed in the mid 1930's, and still have their original waterproofing membranes.

- In some cities, increase floor-to-area ratios for builders who employ greenroofs in their designs due to the permeability of plants and soil and water retention.

- Increase property values by utilizing previously unused space, and enhancing visual appeal with roof landscaping.

- Lower stormwater utility fees, energy tax credits, grant and subsidy programs. NASA, the DOE, EPA and many governments are studying the opportunity of using greenroofs as part of their infrastructure systems, including Portland OR, Seattle, Toronto, and Atlanta.



Rockefeller Center Courtesy of The Garland Co.



The GreenZone Ford Dealership, Sweden 2000 by VegTech AB



Mashantucket Pequot Museum & Research Center, CT 1998 by American Hydrotech



The Gap Headquarters, San Bruno CA, 1997 by McDonough + Partners and American Hydrotech

The Gap expects to have saved enough money by 2005 from lowered energy costs to have paid for the greenroofs and all the other environmentally friendly features of this award winning building.

**greenroofs.com**

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Data Sources other than [www.greenroofs.com](http://www.greenroofs.com).

<sup>1</sup> Weston Design Consultants, Dec. 2000

<sup>2</sup> Ibid & Environmental News Network, Dec. 2000

<sup>3</sup> Tom Liptan, ASLA, City of Portland, OR

Learn more about the ecology of greenroofs from the industry's complete resource and information warehouse website at