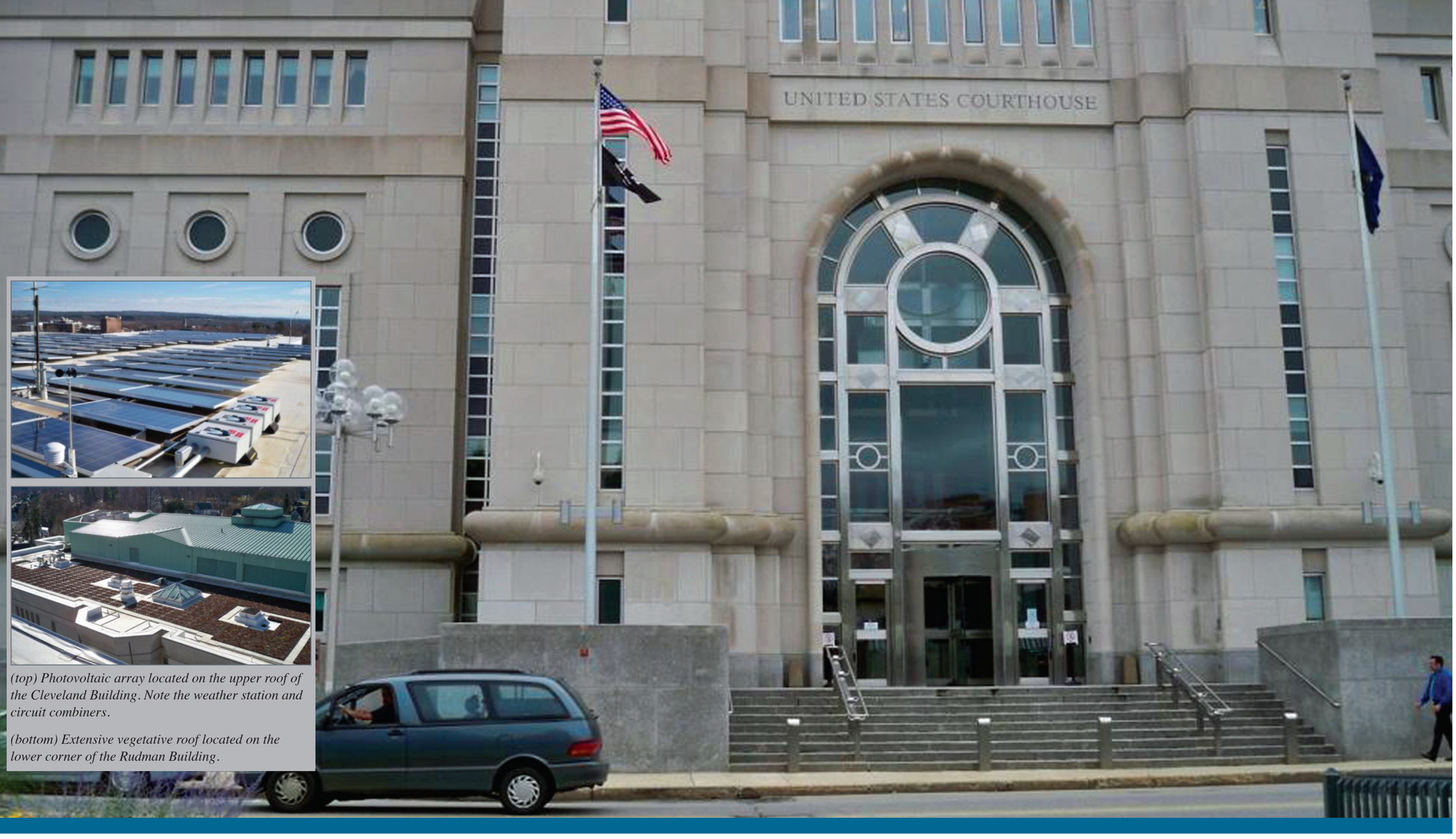
Federal Energy and Water Management AWARDS

2013



(top) Photovoltaic array located on the upper roof of the Cleveland Building. Note the weather station and circuit combiners.

(bottom) Extensive vegetative roof located on the lower corner of the Rudman Building.

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In FY 2010 the General Services Administration New England Region entered into a design and build contract for the Cleveland Federal Building and the connected Rudman Courthouse in Concord, New Hampshire. The project implemented comprehensive upgrades and new energy efficient, renewable energy, and water-conserving measures to save about 3.7 billion Btu and 137,000 gallons in FY 2012.

A lighting redesign and retrofit was completed using the latest high performance fixtures, ballasts, and lamps that reduce lighting energy density by more than 20 percent, for a projected minimum energy savings of about 594 million Btu per year. The new systems make use of dimmable ballasts, advanced lighting controls, and connection to the building management system to control heating, ventilation, and air conditioning (HVAC) demand. The roofing was replaced on both buildings with a 60 kilowatt grid-tied building integrated photovoltaic roof system at the Cleveland Building and an extensive modular tile vegetative roof system at the Rudman building.

Other measures included HVAC upgrades; recovery of waste heat for domestic water heating; a parking lot snow melt system; building automation system upgrades; plumbing retrofits; and rainwater capture systems for landscaping.