

Department of the Interior Receives Three Federal Energy and Water Management Awards

The Department of the Interior (DOI) has won three Federal Energy and Water Management Awards for FY 2013. The awards, sponsored by the Department of Energy's Federal Energy Management Program (FEMP), recognize innovative energy- and water-saving projects, programs, and individuals across the Federal Government. The DOI has a strong track record of success in this competition and this year's winners continue that tradition of excellence. The three awards exemplify the commitment to sustainability and conservation that is central to mission of the DOI's bureaus. These winning projects help strengthen the nation's energy security and reliability and increase its use of renewable energy sources. They likewise protect the environment by avoiding greenhouse gas emissions, using water efficiently, and containing environmentally-friendly materials. The winning projects also showcase sustainable features and practices to visitors that come to see the natural beauty of America's great outdoors.

Award recipients will be honored at a ceremony on Wednesday, November 6 at the DOI's Sidney R. Yates Auditorium, 1849 C Street, N.W., Washington, DC 20240. An informal networking session to highlight the award winners will immediately follow the ceremony.

The Department's three award recipients are as follows:

National Park Service – The Visitor and Research Center at Mesa Verde National Park, Colorado, received a Project Award. The National Park Service (NPS) constructed a new 23,620 square foot Visitor and Research Center (VRC), a showcase high-performance building that demonstrates use of energy efficiency, renewable energy, water conservation, recycling, and environmentally preferable materials. Performance goals for siting, energy, water, materials, and indoor



Mesa Verde Visitor and Research Center

environmental quality were set at the earliest stages of the building delivery process. The project achieved LEED Platinum Certification, a technically difficult feat because of the special challenges of a curatorial facility that is also open to the public. Temperature, humidity, lighting levels, and contaminants must be very carefully controlled, requiring innovative systems, careful design engineering, proper construction, and very extensive commissioning to secure the priceless and irreplaceable artifacts. The building includes improved envelope; reduced lighting; advanced controls; high-efficiency ground-source heat pumps; energy recovery; chilled beams and slabs; and on-site renewable energy systems. Energy

use is estimated to be 193,893 kilowatt-hours (kWh) per year with 100,500 kWh provided by a 67 kilowatt (kW) solar photovoltaic (PV) system, 7,552 kWh by solar water heating, and 75,976 kWh/year by a micro-hydro turbine, such that renewable energy systems are capable of providing 95% of the building energy requirements. The VRC avoids an estimated 260 metric tons of carbon dioxide equivalent (MT CO₂e) – as much as the annual emissions of 54 passenger vehicles or 39 homes.



Santa Monica Mountains Visitor Center

National Park Service – The Visitor Center at the Santa Monica Mountains National Recreation Area (NRA) in California received a Project Award. The NPS completed the first grid-tied net-zero visitor center in the National Park System, achieving the federal standard for 2030 18 years ahead of time. A 94 kW PV system provides all the energy needs for the facility over the course of a year, and surplus energy from the system helps to offset the carbon footprint at other facilities in the NRA. The 7,000 square foot

LEED Platinum facility is heated and cooled by an innovative and highly efficient ground and water source heat pump system using an artificial pond as the primary heating and cooling source. Extensive natural lighting and high-efficiency LED lighting with a daylight dimming system keeps electricity use a very low level. During the period from February 2012 to February 2013, the PV system produced over 91,000 kWh of renewable electricity, while only 34,400 kWh of electricity was purchased from the power company, which means the building achieved about 2.5 times net zero energy use. In total, the renewable energy systems avoid GHG emissions by 72 MT CO₂e annually, equal to taking 15 vehicles off the road for a year.

U.S. Fish and Wildlife Service – The Headquarters and Visitor Center at San Luis National Wildlife Refuge Complex, Los Banos, California received a Project Award. The U.S. Fish and Wildlife Service’s first net-zero energy LEED Platinum certified building, the 16,500



San Luis Headquarters and Visitor Center

square foot Headquarters and Visitor Center at San Luis National Wildlife Refuge Complex, is a model of sustainability. During the first year of operation, the new building produced 103 megawatt-hours of renewable energy via nine PV arrays totaling 59.2 kW that helps save 42.2 MT of CO₂e annually (the annual emissions of nine cars). Seventeen new energy technologies used include: structural insulated panels; a cool roof; abundant daylighting achieved with “SolaTubes,” clerestories, and skylights, and operable low-e glazed windows; passive and evaporative cooling; and energy-efficient lighting, yielding energy performance far better than 30% compared to an average building. Many building elements are composed of recycled materials such as: countertops; ceiling tiles; wallboard; wheat straw cabinetry; fly ash in the concrete; and certified sustainably harvested lumber. Low-VOC carpets, paints, and adhesives provide a healthy indoor work environment. Remarkably, 90% of construction waste was recycled. Water use is reduced more than 35% with low-flow and waterless plumbing that saves approximately 396,000 gallons annually. Xeriscaping, native plants, limited drip-irrigation, and stormwater containment conserve water outdoors. Interpretation of the facility’s “green” features is highlighted by dynamic, interactive exhibits for the estimated 150,000 visitors annually.