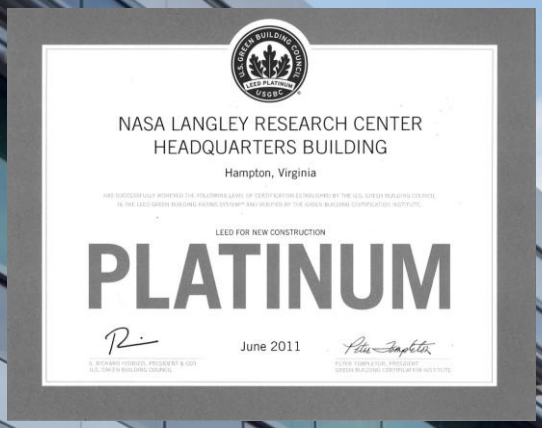
PROJECT PROFILE



Langley Research Center Building 2101 Langley Research Center Headquarters

Hampton, Virginia

LEED for New Construction

3% Renewable Energy

32% Recycled Content

32% Less Energy

41% Reduced Potable Water Use

77% Sustainable FSC Forest Wood

98% Construction Waste Diverted

LEED® Facts

Langley Research Center
Building 2101 Langley Research Center Headquarters
Hampton, VA

LEED for New Construction - Version 2.2
Certification Awarded June 14, 2011

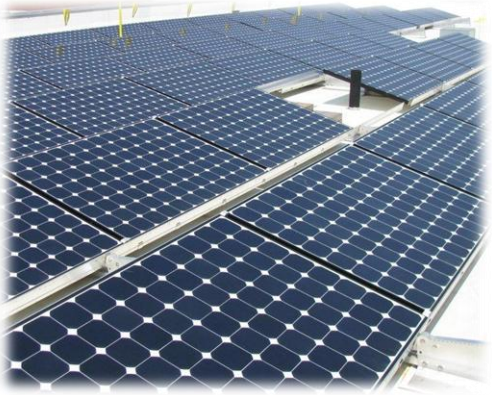
Platinum 52*

Sustainable Sites	9/14
Water Efficiency	4/5
Energy & Atmosphere	12/17
Materials & Resources	7/13
Indoor Environmental Quality	15/15
Innovation & Design	5/5

*Out of a possible 69 points

PROJECT PROFILE

Building 2101 Langley Research Center Headquarters
"New Town" Starts with LEED Success



PROJECT DESCRIPTION
NASA's Langley Headquarters is a 79,885-square-foot, three-story building filled with sustainable features, including underfloor air distribution, a closed-loop geothermal heat exchanger, photovoltaic (PV) elements, and a vegetated roof. Salvaged fan blades from one of the world's original wind tunnels at NASA provide a touch of historical architecture.

SUSTAINABLE SITES (9/14)
Building 2101 provides bicycle storage and shower facilities for the building occupants to promote bicycle commuting and exercising. There are four preferred parking spaces reserved for low-emitting and fuel efficient vehicles which represents over 5% of the total on-site parking. There are 87,782 square feet of dedicated open space adjacent to the building; 53% of the non-roof impervious surfaces have been paved with highly reflective material, will be shaded within 5 years, or have been paved with open grid pavement. The building features Solar Reflectivity Index compliant and vegetated roofing surfaces.

WATER EFFICIENCY (4/5)
The facility reduces potable water use by 41% from the calculated baseline through the installation of dual-flush water closets and low-flow lavatories, urinals, showers, and kitchen sinks. No permanent irrigation system has been installed, thus potable irrigation water use has been reduced by 100%.

ENERGY & ATMOSPHERE (12/17)
Energy efficiency measures incorporated into the building design include an improved thermal envelope, high efficiency glazing, shading devices, reduced interior lighting power density, daylighting controls, occupancy sensors, PV panels, energy recovery through heat wheel technology, and high efficiency water source heat pumps. These features reduced the energy use by 32% compared to ASHRAE 90.1-2004 and the PV system alone generates 3% of the facility's energy. The total refrigerant impact score of the project is 21 per ton – which is nearly five times less than the limit of 100. Building 2101 has a two-year purchase agreement to procure 36% of the predicted annual electrical consumption in Tradable Renewable Energy Certificates.

MATERIALS & RESOURCES (7/13)
The project diverted 98% of on-site waste generated by construction from the landfill. Additionally, 32% of the total building content is made from recycled materials and 26% is comprised of local materials. Of all the wood used in construction, 77% came from FSC-Certified forests.

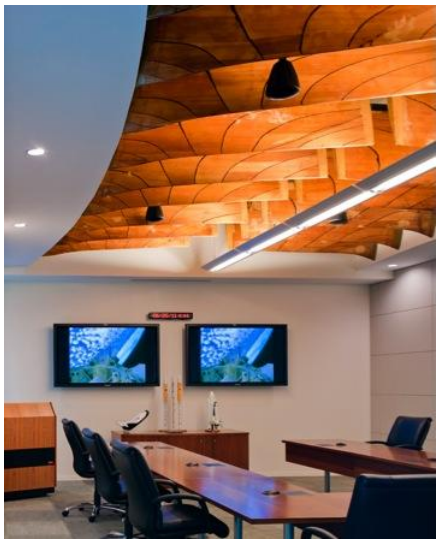
INDOOR ENVIRONMENTAL QUALITY (15/15)
The facility incorporates carbon dioxide monitoring in densely occupied spaces to improve ventilation performance and provides 30% more fresh air than required by ASHRAE 62.1-2004. All indoor adhesives, sealants, coatings, and paints comply with the VOC limits. The project has achieved a minimum of 2% glazing factor in 80% of occupied spaces and has enabled for direct line of sight views in 93% of occupied spaces.

INNOVATION IN DESIGN (5/5)
The facility received exemplary performance for its innovation in potable water reduction, implementation of a public education program to showcase the project, and development of a green housekeeping program.

"This building dramatically signifies a new Langley and is the first element in our revitalization plan. This is our strategy to create the future."

LESA ROE, NASA LANGLEY RESEARCH CENTER DIRECTOR

AWARDS
- ► Sustainability Award; GSA
- ► Presidential Award; White House
- ► Better Buildings Award; DOE
- ► Environmental Program GOLD Award; Virginia Governor
- ► Economy in Government Operations GOLD Medal; Federal Executive Board, Philadelphia Chapter



Salvaged wind tunnel blades accent the conference room at Building 2101.

Owner: NASA, Langley Research Center
Architect: AECOM
Structural Engineer: Structural Inc.
MEP Engineer: H.F. Lenz Co.
Commissioning Authority: Onix Inc.
Contractor: Whiting-Turner
Project Size: 79,885 SF
Project Cost: $26,000,000
Completion: April 2011
Photography: NASA

ABOUT LEED
The LEED Green Building Rating System is the national benchmark for the design, construction, and operations of high-performance green buildings. Visit the U.S. Green Building Council's Web site at www.usgbc.org and the Hampton Roads Chapter of USGBC at www.hrgbc.org to learn more about how you can make LEED work for you.