Appendix B: Federal Agency Profiles

National Aeronautics and Space Administration

I. Organization

The National Aeronautics and Space Administration (NASA) is committed to implementing sustainable designs in their Construction of Facilities (CoF) program. NASA policies stating their requirements for implementing sustainable designs recently established goals for CoF projects to meet the LEED™ rating of Silver. NASA encourages its designers to strive for the LEED™ Gold rating, if cost effective. NASA has included sustainable design factors in its overall corporate prioritization and rating process, for approving projects and obtaining CoF funding.

NASA employs an extensive NASA Procedures and Guidelines (NPG) manual that stipulates NASA's commitment to green building and resource conservation. Within the NPG, a Facility Project Implementation Guide provides guidance to incorporating sustainable design principles in facility construction. NPG also includes guidance for evaluating and implementing cost-effective energy efficiency, renewable energy, and water conservation measures in NASA facilities and operations. The NPG also includes policy for incorporating sustainable design in facility-type projects under agency authority and control.

NASA offers training on Sustainable Design to its field centers on a continuous basis. These courses provide information on the overall principles of sustainability in design and construction, as well as an introduction to LEED™ certification. Through additional education and exposure on Sustainable Designs, such as its Sustainable Design course, NASA is raising the level of awareness at its centers. NASA emphasizes that sustainable designs cover the full cost of a facility from planning through de-construction.

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II. Baseline Data

NASA owns 2,824 buildings comprising of more than 44.5 million square feet. Nearly all NASA buildings are owned, with only 33,000 square feet of leased space.

III. Policies and Resources

NPG 8570.1, Energy Efficiency and Water Conservation Technologies and Practices: Provides guidance for accomplishing cost- and energy-efficient, renewable energy, and water conservation measures in NASA facilities and operations.

- NPG 8570.1.P.1.2: "NASA Procedures and Guidelines (NPG) has been prepared to assist NASA Headquarters, Centers, and Component Facilities, Strategic Enterprises, and Institutional Program Offices in implementing the requirements of Federal law,

Executive Orders, and NASA policy related to energy and water conservation and efficiency management. This NPG serves as a practical reference and source of guidance for use by NASA managers and other responsible staff in ensuring that NASA facilities and related operations comply with the letter and spirit of NECPA and EO 13123."

- NPG 8570.1.3.1.1: "Energy efficiency and conservation management ensure that energy and water are used effectively and judiciously. A successful program not only involves energy conservation and engineering, but every area of institutional management, including facilities and maintenance management, procurement, administration, and communications and public affairs."

- NPG 8570.1.3.7.2: "The purpose of an energy awareness program is to eliminate energy waste by making energy users more energy conscious. An awareness program attempts to influence energy users' attitudes and behavior to reduce energy waste, promote energy efficiency, prevent pollution and reduce costs. Potential savings from awareness depends on the Center's current level of efficiency and the motivation of its personnel. An effective program targets specific audiences, involves as many energy users as possible, is widely publicized, and makes energy-saving actions and goals as concrete as possible. The program should be creative, consistent, continuous, and informative."

NPG 8500.1, NASA Environmental Management: Provides guidance for overall environmental stewardship in NASA facilities through resource conservation, waste reduction, waste management, and remediation of toxic sites.

- NPG 8500.1.f: "Actively partner with Federal, State, and local regulatory agencies, as appropriate, to leverage available resources and comply with environmental requirements, prevent pollution, reduce waste generation, and manage natural resources in the most efficient and effective manner possible."

NPG 8820.2C, Facility Project Implementation Handbook (FPIH): provides a ready reference to pertinent policy and guidance for management of facility planning, budgeting, design, construction, and activation.

- Committed to making "provisions for alternate energy sources for reasons of reliability, economy, and/or pollution control."

- About Sustainability at NASA <http://www.hq.nasa.gov/office/codej/codeje/je_site/sustainability/about_sustainability.html>

IV. Results and Case Studies

NASA notes that more centers are implementing sustainable designs in their projects. The following list of projects demonstrates that NASA remains committed to improving the environment and conserving energy and natural resources through the CoF program:

- Marshall Space Flight Center, Huntsville, AL - Construct Replacement Office Building (139,000 square feet, $23 million, Completion Date: Fall 2004); LEED™ Certification
- Goddard Space Flight Center, MD - Space Science Building, (350,000 square feet, $65 million, Completion Date: June 2007) LEED™ Silver Certification
- Kennedy Space Center, FL - Construct Operations Support Building II (189,000 square feet, $26.8 million Completion Fall 2004) considering LEED™ Certification
- Kennedy Space Center, FL - Construct Technology Development Complex (100,000 square feet, $24 million Completion mid 2007) LEED™ Silver Certification
- Ames Research Center, Moffet Field, CA – Replacement Office Building 266, (60,000 square feet, $13 million, Completion Date Fall 2006) LEED™ Silver Certification
- Dryden Flight Research Center, Edwards, CA- Construct Solar Heating System, $1.5 million, Completion Date: Spring 2007

NASA Energy Star® Buildings:

Building Name	Building Type	Building Owner	Location	Years Labeled
Child Development Center (M6-883)	Office	National Aeronautics and Space Administration	John F. Kennedy Space Center Kennedy Space Center, FL 32899	2000
Commander, Naval Meteorology and Administration Facility (Building 1020)	Office	National Aeronautics and Space Administration	John C. Stennis Space Center Stennis Space Center, MS 32529	2000