Appendix B: Federal Agency Profiles

U.S. Department of Health and Human Services

I. Organization

The U.S. Department of Health and Human Services (HHS) is comprised of 11 Operating Divisions (OPDIVs), six of which manage real property. These six are the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the Indian Health Service (IHS), the National Institutes of Health (NIH), the Office of the Secretary (OS), and the Program Support Center (PSC). Each OPDIV is responsible for the program and project implementation regarding green buildings, under the direction of the Division of Real Property Policy and Management Programs (DRP), Office for Facilities Management and Policy, Assistant Secretary for Administration and Management, and the Office of the Secretary.

DRP establishes program policy and oversight, generates reports on activities, and provides information to the OPDIVs on Executive Orders, directives, and initiatives set forth regarding real property, such as green buildings and sustainability. The two primary programs developed to meet these responsibilities are the HHS Energy Program and the HHS Environmental Quality Program. The Energy Program specifically addresses the improvement of energy and water efficiency in HHS facilities, through the design and construction of new buildings or renovations, the installation of projects, and the implementation of energy awareness programs. The HHS Environmental Quality Program coordinates the environmental program of the OPDIVs, disseminates information from Federal and private resources, and ensures that environmental regulations are upheld.

Typically, green building initiatives and strategies are coordinated under the HHS Energy Program and the HHS Environmental Quality Program, with support from HHS procurement offices. These programs are designed to provide a framework for the OPDIVs regarding sustainable principle; each OPDIV has developed its own structure for carrying forth the goals of green guildings and sustainability. Due to the diversity and missions of HHS sites, detailed aspects of functions such as the design and construction of new buildings or renovations, the maintenance of indoor air quality, the removal of solid and hazardous waste, the improvement of energy and water efficiency, and the procurement of products are addressed separately by each OPDIV, and often each site. However, best management practices and lessons learned are shared through the HHS Energy and Environmental Quality Programs.

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II. Baseline Data

HHS has 25.4 million square feet of facility space located in an array of diverse facilities throughout the country. Eighty-nine percent is classified as energy intensive facilities including laboratories, hospitals, health clinics, and animal housing space. The remainder is office buildings and warehouses.

III. Policies and Resources

Beginning in FY 2000, the HHS Energy Program and the HHS Environmental Quality Program began specifically addressing green buildings and sustainability. Applicable Executive Orders, directives, and initiatives were analyzed and integrated into the existing policies, programs, and projects. The Assistant Secretary issued policy memoranda and directives addressing alternative financing, renewable energy applications, Energy Star® buildings and hospitals, state funding for renewables and clean energy, and training. The OPDIVs in turn incorporated the information into the existing energy and environmental programs and goals.

CDC, FDA and NIH Design Policies and Guidelines include the mandated use of life-cycle costing, Energy Star® and energy efficient product specification and procurement, sustainable design and development principles included in the *Whole Building Design Guide* and in the LEED™ rating system, and the analysis of renewable energy systems.

In FY 2002, CDC joined the USGBC and is actively promoting the use of the *Whole Building Design Guide* and LEED™ rating system. Three new major construction projects were registered with USGBC in FY 2002, with a goal of achieving a LEED™ certification for these new buildings. In addition, HHS OPDIVs participate in the EPA Labs for the 21st Century program with the intent of designing and constructing more sustainable laboratories.

IV. Results and Case Studies

The following outlines green building or sustainable projects implemented by the HHS OPDIVs.

CDC

- Solar Power Project, Kenya, Africa. The solar project will eliminate the extensive use of diesel fuel and provide a reliable source of energy for a laboratory clinic. <http://www.eere.energy.gov/femp/newsevents/cfm/fempfocusarticle.cfm?newsID=6>

- Clifton Road Campus Building 21 Design and Construction, Atlanta, Georgia. The laboratory is being designed and constructed under the LEED™ rating system. <http://www.eere.energy.gov/femp/newsevents/cfm/fempfocusarticle.cfm?newsID=249> http://www.eere.energy.gov/femp/newsevents/cfm/fempfocusarticle.cfm?newsID=249.

FDA

- Jefferson Laboratories Energy Program, Jefferson, Arkansas. This facility surpassed energy reduction mandates as the result of a strong energy program that centered on Utility Energy Services Contract (UESC). The greening efforts on the campus have decreased energy consumption by 39 percent, energy costs by 24 percent, and greenhouse gas emissions by 27 percent on a square foot basis.

- White Oak Campus Design and Construction, Maryland. This new, GSA-leased campus will include a 10-kW photovoltaic system, cogeneration, absorption chiller, variable frequency drives on chilled and condenser water pumping and cooling tower fans, reduced lighting loads, variable air volume systems with variable frequency drives,

demand control ventilation, night-setback strategies, and an economizer cycle.

- Irvine Laboratory Design and Construction, Irvine, California. The design of this new laboratory utilized basic sustainable design principles such as the construction of a tall and narrow building to take advantage of natural lighting and walls constructed of architectural concrete that will not require insulation and drywall. In addition, native vegetation was planted to reduce maintenance and irrigation requirements of the landscaping, and reclaimed water will be used for those plants.

IHS

- Ground Source Heat Pump Application in Residential Housing in Rosebud and Pine Ridge, South Dakota. <http://www.eere.energy.gov/femp/newsevents/femp_focus/feb01_groundsource.html>

- Albuquerque Indian Hospital (AIH) Energy Improvement Project, Albuquerque, New Mexico. This ongoing renovation project includes a ground source heat pump heating and cooling system consisting of roughly 60 heat pumps of various sizes serving the entire hospital 24 hours per day. More than 100 wells located beneath the parking lot provide the ground source temperature exchange and a new direct digital controls system provides precise control of each zone. Conservative and preliminary studies estimate that natural gas consumption has been reduced by 30 percent or $10,000 per year, and more significantly, maintenance man-hours have been decreased by 45 percent.

- Alaska Native Medical Center Ground Water Cooling Project, Anchorage, Alaska. A ground water cooling project is currently under construction for the Alaska Native Medical Center, and is expected to be completed in FY 2003. The estimated savings of the project is $50,000 annually.

- IHS Blackfeet Hospital 2002 Energy Star® Label, Browning, Montana. In 2002, only three other private or public hospitals nationwide received the Energy Star7 label. The Blackfeet Hospital was able to earn this honor by maintaining indoor environment requirements for air quality, thermal comfort and lighting. It has not only the distinction of being the first HHS building to receive the label, but the first hospital in the nation to receive a "Mark of Excellence in Energy Performance."

NIH

- Louis Stokes Laboratory/Building 50 Design and Construction, Bethesda, Maryland. This state-of-the-art laboratory was designed to incorporate the latest energy efficient technologies. The facility will use roughly 40 percent less energy than a comparable, standard design laboratory. <http://www.eere.energy.gov/femp/techassist/pdf/029413m_BR_Labs21C.pdf>

- NIH Bethesda Campus 23-MW Cogeneration Plant, Bethesda, Maryland. This project is a prime example of a highly efficient energy system with an approximate efficiency rating of 85 percent, which will save more than 640 billion Btu and approximately $3.6 million per year. In addition, the plant will reduce greenhouse gas emissions by roughly 100,000

tons per year, and other pollutant emissions and particulate matter by close to 600 tons per year.
<http://www.eere.energy.gov/femp/newsevents/femp_focus/aug00_cogeneration.html>

- NIH Animal Center (NIHAC) Non-Potable Water Distribution System, Poolesville, Maryland. This innovative non-potable water (NPW) distribution system recycles treated effluent from the NIHAC Waste Water Treatment Plant to be used for cage wash flushing operations at the Animal Center and for cooling tower make-up water. The annual water savings is estimated at 10.4 million gallons that would normally have been supplied by well water. The NPW system will be the first of its kind in the State of Maryland.

- NIH Bethesda Campus Recycling Program, Bethesda, Maryland. The NIH Bethesda Campus has established an extensive solid waste recycling program covering white and mixed paper, plastic, glass, aluminum cans, cardboard, scrap metal, wooden pallets, alkaline batteries, polypropylene research racks, toner cartridges, computers and other office equipment, yard waste, and chemical/solvent waste. Currently, the campus is recycling 30 percent of the solid waste stream.

PSC

- PSC Parklawn Building, Rockville, Maryland. An alternative financing contract with the local utility allowed for the installation of energy efficient lighting and water saving plumbing fixtures. The projects' annual savings is $211,000, equating to nine percent of annual electricity consumption and 6.3 million gallons of water.

OS

- OS Hubert H. Humphrey Building, Washington, DC. Many energy conservation measures have been installed including energy efficient lighting, window solar film, water saving fixtures, and an automated building control system.