

STARTER AREA

ENERGY EFFICIENCY

TOPIC: COMPUTERS, COPIERS, AND PRINTERS

ISSUE:

Energy consumed by computer workstations, copiers and printers.

BACKGROUND:

Energy User News in its August 1998 issue reported:

“ The Environmental Protection Agency states that operating office equipment in U.S. businesses costs millions of dollars each year. In the average office, computers that are turned on are in use only four hours a day. Additionally, 25 percent of computers are left running overnight and on weekends. When equipment is left on all of the time, energy consumption for a single workstation can total 2,500 kWh per year or from \$125 to \$250, depending on utility rates.

Source: Association of Energy Engineers:

- *Laser printers use 300 watts; ink jets use only 10, for similar quality.*
- *A computer monitor uses 60 watts of power; it should be turned off if the employee leaves for more than 10 minutes.*
- *By using the stand-by button on a copier, the energy load will be lightened by 70 %.*
- *For three copies or less, use the printer. For more use the copier.*
- *Recycling paper reduces energy by 70%.”*

RECOMMENDATION:

This is for your general information. Contact equipment manufacturers for specific information and recommendations.

FOR ADDITIONAL INFORMATION:

Contact Facilities Quality Service at til@va.gov

CONSTRUCTION WASTE MANAGEMENT

A. ISSUE:

The Memo of Understanding (MOU) on “Federal Leadership in High Performance and Sustainable Buildings” that the Department of Veterans Affairs signed, stated that government agencies shall establish programs to “recycle or salvage at least 50 percent construction, demolition and land clearing waste, where markets or on-site recycling opportunities exist”.

B. BACKGROUND:

Construction demolition waste around the country is more than 30 percent of the total municipal solid waste going into landfills, and there is a greater effort to analyze this waste and determine how much can be recycled.

Almost all government agencies now require demolition waste from their building construction sites be recycled.

The Whole Building Design Guide website (<http://www.wbdg.org>) has a Construction Waste Management Database that contains information on companies that haul, collect, and process recyclable debris from construction projects. Created in 2002 by GSA's Environmental Strategies and Safety Division to promote responsible waste disposal, the Database is a free online service for those seeking companies that recycle construction debris in their area.

C. DISCUSSION:

Recycling and reuse of materials have long been associated with wise construction practices. Experienced contractors are now reaping the economic advantages of Construction Waste Management. Communities are also seeing the side benefits.

Recycling, reusing, and salvaging construction waste can save money. Many of the contractors that have embraced Construction Waste Management have made changes to their operations and practices to take advantage of reduced waste disposal costs and revenues derived from recycle, reuse, and salvage materials. Efforts to prevent waste, to recycle, and to use recycled-content materials on a project can help the project team earn points towards qualifying for LEED and other local and national programs.

D. RECOMMENDATIONS:

PERFORMANCE

FM will develop a master construction specification section for the management of non-hazardous construction and demolition waste materials. As part of implementing MOU discussed under "ISSUE" above, the construction contractors shall be required to (1) practice efficient waste management when sizing, cutting and installing products and materials and (2) use all reasonable means to divert construction and demolition waste from landfills and incinerators and to facilitate their recycling or reuse.

E. FOR ADDITIONAL INFORMATION:

Contact Jeet Kumar at 202-565-5214, in the Facilities Quality Service (181A).

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ENERGY EFFICIENT AND SUSTAINABLE DESIGN POLICY FOR VA NEW CONSTRUCTION

A. ISSUE:

Mandatory compliance requirement of Energy Policy Act (EPACT) of 2005, and application of sustainable design principles in new construction.

B. BACKGROUND:

The EPACT 2005 mandates that all new federal facilities shall reduce the energy cost budget by 30 percent compared to the baseline building performance rating per the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2004, Energy Standard for Buildings except Low-rise Residential Buildings or International Energy Conservation Code (IECC), and employ sustainable design principles.

C. DISCUSSION:

To assure that all new Federal buildings incorporate the best energy efficiency techniques available, Section 109 "Federal Building Performance Standards" of the EPACT 2005 directs the Secretary of Energy, within one year, to issue a rule that establishes Federal building energy efficiency performance standards. The standards will require that, if life-cycle cost effective, all new Federal buildings will be designed to achieve energy consumption levels thirty percent below those of the current version of the applicable ASHRAE standard or the IECC. The requirement further states that sustainable design principles will be applied to the siting, design, and construction of all new and replacement buildings. The section also requires DOE to perform a review within one year of any change to the ASHRAE standard or IECC to see if the Federal guidance should be updated. As an oversight provision, the section also directs each agency to include in its annual budget request, and report under the National Energy Policy Act, identification of all new buildings and whether they meet or exceed the developed standards.

D. VA POLICY:

The design of all new VA buildings must comply with mandatory EPACT 2005 requirements and employ sustainable design principles.

E. REFERENCES:

See Section 109 requirements

@ http://www.eere.energy.gov/femp/pdfs/epact05_fem_chart.pdf

F. FOR ADDITIONAL INFORMATION:

Contact Kurt Knight at 202-565-4980 or Satish Sehgal at 202-565-5032 in the Facilities Quality Service (181A).

ALERT

SUSTAINABLE BUILDINGS POLICY FOR NEW AND VA RENOVATION CONSTRUCTION

A. ISSUE:

VA's commitment to design and construct sustainable buildings is set forth in Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (MOU).

B. BACKGROUND:

VA along with other 16 federal agencies signed a Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding and committed itself to federal leadership in the design, construction, and operation of High Performance and Sustainable Buildings.

C. DISCUSSION:

The highlights of guiding principles for federal sustainable buildings stated in the MOU are:

1. Employment of integrated design principles including total building commissioning to ensure that design requirements are met.
2. Optimization of energy performance by establishing a whole building performance target; designing to earn Energy Star targets and reducing the energy cost budget by 30 percent from American Society of Heating, Refrigeration and Air-Conditioning Engineers, Inc., (ASHRAE), Standard 90.1-2004, Energy Standard for Building Except Low-Rise Residential to the baseline building performance mandated by the 2005 Energy Policy Act; and employment of building utility meters in new major construction and renovation projects to track and continuously optimize performance.
3. Protection and conservation of water by employing strategies that use less potable water, efficient use of outdoor water for landscape and irrigation, including water reuse and recycling to conserve water.
4. Enhancement of indoor environmental quality by meeting current ASHRAE standards 55-2004 and 62-2004; moisture control to prevent building damage and mold contamination; employment of day lighting; use of low-emitting materials; and protection of indoor air quality during construction.
5. Reduction of environmental impact of materials by using EPA designated products meeting or exceeding EPA's recycled content recommendations; bio-based content meeting or exceeding USDA's bio-based content recommendations; construction waste management for recycling or salvaging materials; and elimination the use of ozone depleting compounds during and after construction.

D. VA POLICY:

1. Projects shall be designed to comply with MOU located in the Technical Information Library (TIL) at www.va.gov/facmgt/standard. VA must meet the goal and objectives of MOU.

E. FOR ADDITIONAL INFORMATION:

Contact Kurt Knight at 202-565-4980 or Satish Sehgal at 202-565-5032, in the Facilities Quality Service (181A).

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