

# Combined Heat & Power FACTSHEET

*For those VA facilities that have the opportunity for the development of a mutually beneficial combined heat and power project, the enhanced use lease authority provides an attractive mechanism for private sector financing and the use of private sector resource development expertise.*

## A Combined Heat and Power Project – A Good Business Model

The Veteran's Administration's (VA) James H. Quillen Medical Center in Mountain Home, Tennessee has just enjoyed the first year of operation of their new combined heat and power Energy Center constructed and operated by the private sector using their new Enhanced Use Lease (EUL) authority.

### **Innovative Legislative Authority:**

The EUL authority (38 USC Sections 8161-8169) allows the VA to out-lease unused assets to a private sector developer, with the revenues from the contract returned to the facility in the form of any benefits considered in the best interest of the government. The authority, enacted in 1991 and amended in 2000, encourages VA officials to view VA property as program resources and potential revenue sources. Through the out-lease of underutilized property, VA now has the opportunity to competitively attract private sector investment in VA assets that can develop cash flow to be shared with the VA in the form of new or upgraded facilities, space, or services. The out-lease can be for up to 75 years. While the private sector investor obtains use of the property through the lease period, VA retains control of the site, and the use must be compatible with the mission of the agency. All proceeds from the partnership remain with the agency.

### **Project Description:**

The major impetus for the development of the project was the need to upgrade the existing energy systems on the Medical Centers' 100-acre campus with a focus on reducing energy use and cost. The new Energy Center, provided completely from private funding, consists of: a 3.5 mega watt primary engine electric generator; 2 peaking or backup generators; a heat recovery steam generator; 1 – 100-ton absorption chiller; 3 - 1,300-ton centrifugal chillers; a 623,000 gallon thermal storage tank; cooling tower, integrating controls, and upgrades to the existing boilers. The plant configuration provides for flexible operation to accommodate future energy costs, and provides two levels of 100% back up emergency power for the Medical Center.

In addition, \$3 million in energy efficiency improvements were incorporated into the project resulting in a 20 to 25% reduction in energy use and annual costs. Energy conservation measures included; lighting retrofits in the 38 buildings on the campus, heating, ventilation and air conditioning controls upgrades, the installation of heat pumps to replace steam heating, insulation, and occupancy sensors. The contractor, Energy Systems Group (ESG) out of Evansville, Indiana, provided the energy efficiency improvement survey of the energy systems and buildings, the engineering, design, project management and project financing. Energy conservation measures were conducted with competitively selected specialty subcontractors.

The VA's contribution to the partnership is 2 acres of capital asset property currently valued at \$300,000, and the commitment to buy energy from the contractor operating the energy center at a negotiated price – contingent on annual appropriations and continued operation of the Medical Center.

## The Numbers:

Total cost of the privately financed project was \$27,038,000. It is estimated that the VA would have had to spend \$6 million in capital funds to simply maintain the existing energy infrastructure during the life of the contract. Annual energy efficiency improvement and operational savings to the facility are estimated to be \$814,000, or \$17.5 million in discounted life cycle cost savings. In addition, the facility will receive \$5 million in projected revenue from its share of the energy sales that the contractor will make to private customers from excess electricity generated from the energy center. This additional cash flow opportunity from a private business deal is what makes the Enhanced Use Lease authority so attractive for those facilities which have the potential for projects that result in mutual public/private benefits.

## Project and Authority Summary:

The Energy Center project will provide the VA's Mountain Home Medical Center with: improved space conditioning, indoor air quality, and comfort; significant energy efficiency improvement; reduced energy system operational responsibility; and a reliable source of energy with two 100% backup systems – at no capital cost to the agency. In addition the agency has avoided a conservative \$6 million in capital investment to maintain the condition of the existing inefficient energy systems.

For those VA facilities that have the opportunity for the development of a mutually beneficial combined heat and power project, the Enhanced Use Lease authority provides an attractive mechanism for private sector financing and the use of private sector resource development expertise.

Additional information on the technical and contract details can be obtained from

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Visit the following website for more information:

<http://www.energy.gov/> or <http://search.ornl.gov/>

Other Combined Heat and Power publications available:

<http://www.energy.wsu.edu/publications.html>

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