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• Dallas Convention Center •



VA Energy Program Updates

Topics

- Energy Efficiency Reduction
- Advanced Metering
- Energy Efficiency Benchmarking
- Renewable Energy
- Sustainable Building

Energy Efficiency (30% reduction)

- 1st Round Energy Audits Completed (FY-06 Thru FY-09)
- ECM Implementation
 - Direct Funding
 - ESPC
 - UESC
- 2nd Round Energy Audits will be performed by Group of Facility Energy Managers
 - Consistency
 - Facility's involvement
 - Energy Benchmarking

Energy Efficiency (30% reduction)

- Energy Efficiency Reduction over 12.3% in FY-09
 - Over 97% of VA indoor sqft – Hospitals
 - Average Energy Efficiency – 176,393 Btu/sf/yr
 - New Building at Harborview Medical Center in Seattle (ASHRAE's Best, Honorable Mention, April 2010 ASHRAE Journal) - 214 kBtu/sf/yr
- All VA facilities and regions have the same 30% requirements

Energy Efficiency (Major Construction)

- All VA projects – meet “VA Sustainable Building and Energy Reduction Manual”
- At Least 30% better than ASHRAE 90.1-2007

Metering

- Pilot advanced metering project (\$14 million)
 - Awarded in FY-08 for 2 regions (out of 21)
 - Completed in FY-10
 - Central Web-based Data Management System set up & running
 - Included Building level Electric, steam, chilled water, Natural gas, water meters
- Advanced Electric Meter project (\$27 million)
 - Awarded in FY-09 for 19 regions
 - Installation will be completed in 2010
 - Data aggregation device will be set up for each facilities
 - Will be connected to Central Data Management system
 - Include Building level and Campus level Electric Meters

Metering

- Advanced Thermal and Flow Meter project (\$92 million)
 - Awarded in FY-10 for 19 regions
 - Installation will be completed in 2011
 - Include building level steam, chilled water, natural gas, and water meters
 - Include campus utility (shadow utility meters)
 - Will be connected to Existing Data aggregation device and Central Data M. System

Energy Efficiency Benchmarking

- EISA 2007 requires Benchmarking complete by 2015.
- VA Completed benchmarking for 99% of VA Owned facilities:
 - Used Energy Star Portfolio Program
 - Updating ratings every 3 month
 - automatic data transfers
 - Include all VA owned medical facilities and cemeteries
 - Energy Engineers review ratings & apply for Energy Star labels
- Future Plan – automatic data upload from advanced meters real-time

Renewable Energy (15%)

- EISA requires 7.5% : VA's internal requirement 15%
- Existing Renewables
 - 2 Solar PVs (660 kW, installed in FY-08 and 09)
 - Direct Geothermal (covers 95% of heating for a hospital)
 - Bio-mass CHP (using process methane gas)
 - Covers 0.27% of VA electricity use
- Renewables awarded in FY-09
 - 20 solar PV projects (3.5 MW, installation completed in 2010)
 - 2 wind turbine projects (600 + 60 kW)
 - 1 GSHP project (installation complete in 2010)
 - 1 test drilling (found hot water source)
 - detailed feasibility studies
 - Overall Renewables cover 0.51% of VA electricity use

Renewable Energy (15%)

- Renewables awarded in FY-10
 - 5 Solar PV projects (6.5 MW)
 - 1 Direct Geothermal project
 - Test Drilling (3)
 - 5 GSHP projects
 - 6 Bio-mass CHP projects (using wood chips or landfill gas)
 - 3 wind turbine projects
 - Covers 1.4% of VA electricity use
- Implementation Process:
 - Renewables Screening for all VA facilities in FY-07 (NREL)
 - Based on Screening and interest from facilities, selected sites for Detailed Feasibility Study
 - EA study and Design-build contract awarded

Renewables for Major Construction

- Implementation Process
 - Use Screening data initially
 - Detailed feasibility study conducted during planning PH
 - Include Renewables in budget request
- Projects
 - Las Vegas VAMC – 3.2 MW Solar PV
 - Denver VAMC – 2.7 MW Solar PV
 - Dallas VAMC – 5 MW CHP
 - Bronx VAMC – 3 MW CHP
 - Long Beach VAMC – 2 MW CHP
 - American Lake and Seattle VAMCs - GSHPs
 - VAMCs at Orlando, New Orleans, Palo Alto, St. Louise, etc – Solar PVs
 - Not easy to include Wind turbines in Major Projects

Sustainable Building (15%)

- FY-10 (currently), VA facilities are sustainable for
 - 13.7% based on SQFT
 - 6.6% based on number of buildings
- 1st Sustainable Building Assessment completed in FY-08
 - Based on LEED-EB criteria
 - Selected top 21 hospitals for 3rd party certification
 - Registered for Green Globe (GG) certification – one LEED & GG dual certification (in FY-08)
 - Obtained GG certifications for 21 hospitals and 3 LEED in 2009
- 2nd Sustainability assessments completed in FY09
 - Based on 5 Guiding Principles (requirements)
 - Selected 5 facilities for next 3rd party certification
 - Retro-Commissioning being performed for the selected facilities

Sustainable Building (15%)

- 3rd SB Assessment completed in FY-10
 - Used Energy Star Portfolio Manager HPSB checklist
 - FRPP report will use this data information
 - Assessment data will be used for future SB certifications
- Register all VA hospitals for 3rd party certifications
 - To use screening tool
 - To find out what needs to be improved to obtain certification
 - Coordination
- Major Construction Projects
 - 3rd Party Certification required (LEED Silver or 2 GG)