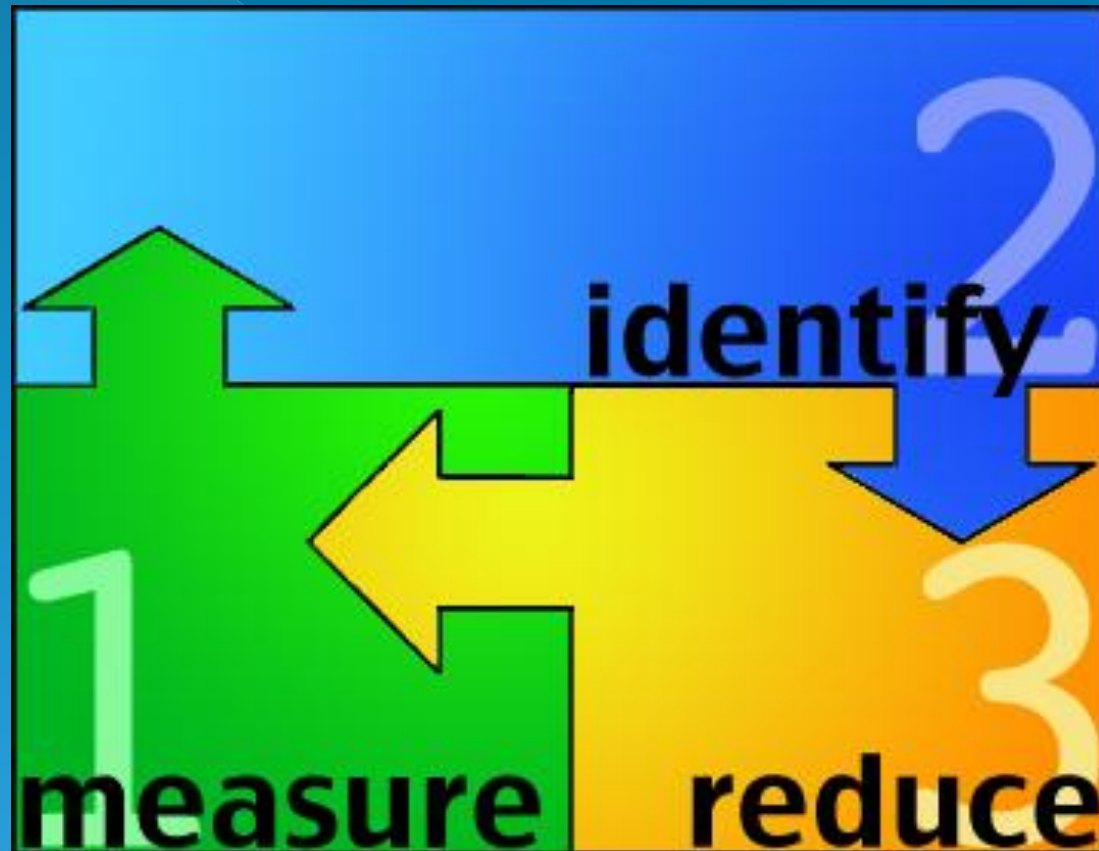


FMD Energy Management Plan 2011

Virginia Commonwealth University



Purpose

- Ensure an adequate and reliable supply of energy in a cost effective manner to support Virginia Commonwealth University's core missions of teaching, research and public service. Also to reduce consumption on a per square foot basis without compromising VCU's core missions.

Present

Future



Goals

Short Term

- Comply with Executive Order 19 to reduce energy consumption by 5% for FY 2012

Medium Term

- Continue responsible energy usage
- On going investigation into technically and financially feasible sources of alternative energy

Long Term

- Assist the University in becoming greenhouse gas neutral by 2050



Forecasting and Procurement

How we forecast

- Every January the Utility department reviews the previous years key energy data including energy usage, weather, and new or removed building space.

What is procurement?

- Procurement pertains to the purchasing of natural gas the university will use for the upcoming 30 months. Prices for this gas are contracted in advance.

Consumption and Reporting

Measuring Consumption

- A utility management system is used to track consumption and cost
- The program is used to compare buildings by size and type
- The numbers on usage are reviewed monthly by VCU's Energy Manager



How usage is reported

- The utility department reviews monthly usage and billing.
- Reports include data on electricity, natural gas, steam, and water.



Reductions

- Each year during May and June, the previous year's performance is evaluated and new goals are set to reduce consumption
- Reductions are usually the result of goals set by the University, Executive state orders, or the Facilities Management department
- Within VCU, goals for reductions are set by the Energy Manager, Utilities director, Director of sustainability on electricity, steam, water, and natural gas usage



Vehicles for Reductions

- ◎ PPEA
- ◎ Performance contracting
- ◎ Self funded/ Maintenance Reserve
- ◎ Behavior change



Reduction Projects

- ◎ PPEA
- 1. Solar panel installations on Broad Street, N parking deck, and around campus.
 - a) 163.30KW planned for N-Deck on 10th Street
 - b) 179.4KW planned for Broad Street Deck
 - c) 14.4KW Pole mounted tracking solar panels around campus.
- 2. Solar Thermal installation at Shaffer Dining Hall
 - a) 15 roof mounted solar thermal panels will heat water via the sun for use in dishwashing area



Reduction Projects

- ◎ PPEA continued
- 3. Sanger Hall/ Kontos Medical Science Chiller Modernization Feasibility Study.
- 4. MCV Steam Plant Biomass Fuel Feasibility Study



Reduction Projects

- ◎ Performance Contracting
 1. VCU is currently in the procurement process to select an Energy Services company to partner with to move forward with a performance contract to upgrade several of our large energy using buildings.



Reduction Projects

- Self Funded/Maintenance Reserve projects
 1. VCU is currently conducting a feasibility study to renovate the Monroe Park Campus Steam Plant.



Reduction Projects

- ◎ Behavior Change
 1. Dashboard Project, VCU is currently setting up a web based dashboard that will allow Students, Faculty and Staff to view real time energy consumption in several of our larger buildings and residence halls.

Questions?

Closing questions and comments

