ENGLISH SERVICES-UTILITIES

Please detail the responsibilities of the department.
The department of Energy Services at USC creates, manages, and distributes energy in the form of electricity, steam, and chilled water throughout the University campus.

How many employees are in the department?
Currently there are approximately 50 staff members. This encompasses the HVAC, high voltage, steam, energy facility operators, energy management system operators, National Advocacy Center and planned maintenance crews.

Please provide the name(s) of individuals in the department that are involved with decisions regarding environmental issues concerning the department.
Charles Stevenson and Glen Kelly

Please list future plans/goals regarding environmental issues
Maintain current programs.

Survey 2003-2004
Please answer the following questions as completely as possible. They are intended to assist the Environmental Advisory Committee (EAC) with assessing the status and progress of the University’s environmental policy. Feel free to add additional comments, explanations, or data where relevant.
1. Does your department have an environmental policy and how does it determine the environmental impacts of its products, processes, and/or services?
   We have a policy to follow local, state, regional and national regulations.

2. What is the status/progress of the plans/goals stated in 2000?
   a. replace boilers On-going (part of Energy Performance Contract)
   b. campus wide lighting retrofits On-going (part of Energy Performance Contract)
   c. replace energy facility chillers On-going (part of Energy Performance Contract)
   d. expand energy management system On-going
   e. replace energy facility cooling towers On-going (part of Energy Performance Contract)
   f. install thermal energy storage system Uncertain as to the status of this particular item due to the commencement of the Energy Performance Contract

3. How many gallons of water did the University consume in 2003-2004?
   493,104,000 Gallons

4. How many gallons did the University consumer per square foot of building space?
   Approximately 46 Gal/Sq. Ft.
5. How have these figures changed since 2000?
   In FY99/00 the usage was approximately 44.5 Gal/Sq. Ft. compared to FY03/04 usage of approximately 46 Gal/Sq. Ft.

6. What was the total cost of water for the University in 2003-2004?
   In FY03/04, the total cost of water was $2,056,916.

7. What is the cost of water (per CCF)?
   In FY03/04, the cost per DDF of water was $3.12.

8. How have these figures changed since 2000?
   Since FY99/00, the total cost paid for water has risen 39.04%, the usage has increased 15.14% (based on CCF and 1000 Gals), the cost per CCF has increased 20.75%. Additionally, the campus has increased 11.35%.

9. Have any of the following water conservation measures been implemented on campus? If so, please provide comments and explain.
   a. leak detection and repair Yes. Leaks are repaired when identified.
   b. low-flow showerheads and faucets in new bathrooms Yes. There is an understanding to have this stipulation included in future projects.
   c. low-flow showerheads and faucets in existing bathrooms Yes. The Energy Performance Contract includes the installation of these devices.
   d. automatic sensors Yes. Part of the Energy Performance Contract includes the installation of automatic sensors to some lavatories and sinks.
   e. automatic timers
   f. use of reclaimed water
   g. other

10. Are any estimates of water savings available for these measures? If so, how much in terms of gallons and cost?
    In total, the completion of the Energy Performance Contract is estimated to save approximately 91,000,000 gallons of water at a savings of $805,000 on an annual basis.

11. How much energy did the campus consume in the last year, and what were the associated costs?
    a. Electricity 185,655,276 kWh, $10,218,621
    b. natural gas 616,911 MCF, $4,824,209

12. How has energy usage and cost changed since 2000?
    In general, the total electricity costs have increased 37.23% from FY99/00. This increase is due to an increase in costs (17.21%) of electricity and an increase in consumption/square foot (5.16%).
13. Have any of the following energy saving measures been implemented on campus? If so, please provide comments and explain.
   a. regular energy audits of campus buildings Two independent audits were performed in the early 2004.
   b. replacement of incandescent lighting with more efficient lighting systems As part of the Energy Performance Contract, lights are being modified to more efficient systems.
   c. computerized energy-management system This technology is being utilized.
   d. energy conservation awareness program for staff and/or on-campus residents
   e. solar water heating This technology is being utilized in the recently completed South Housing Project.
   f. passive solar building design
   g. on campus cogeneration
   h. energy-efficient windows This is becoming a new standard in new projects. Energy efficient windows have been installed on the recently completed South Housing Project.
   i. energy-efficient appliances It is the policy of the Energy Services Department to purchase and use Energy Star compliant appliances when available.

14. Has the University considered increasing the use of alternative energy? (solar, fuel cells, wind, etc.)
   There is a project that is being reviewed to build a Biomass Energy Plant on campus. The plans are in the very early stages and no decisions have been made concerning the implementation of such a project.

15. Has the University considered sub-metering by building for water and energy use?
   Most buildings are sub-metered for electrical purposes. Not all buildings have water sub-metering devices.

16. How is the University billed for stormwater fees, and what is the approximate yearly fee?
   The University is billed semi-annually for stormwater fees. The total yearly fee is between $85,000 and $100,000.

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