

IFMA Central Pennsylvania Chapter

August 20, 2014

Facility Managers Roundtable: Sustainability Practices

- Alan Brunner, Project Manager for the Financer Department, PSECU
 - Michele Sinadinos, Facility Manager, TE Connectivity
- Joseph R. Wojtysiak, Ret. Sr. Director Facilities Manager, Harrisburg Area Community College

Pennsylvania State Employees Credit Union

- Established in 1934
- Started with 22 members. Now have over 400,000 members
- Asset size of \$4 billion
- Service members across the United States and overseas
- Electronic based credit union with only two branches

Pennsylvania State Employees Credit Union

Why LEED?

- LEED was brand new to PSECU - Introduced to us by our Architect and Construction Manager
- Utility costs were killing us at our previous building. By incorporating LEED goals (co-generation, water use reduction through low flow sinks, toilets, etc.) we hope to show a decrease in overall utility costs
- Employee benefits – daylight harvesting with more use of natural sunlight, smoke free campus
- Environmental improvements by encouraging employees to car pool or drive fuel efficient vehicles, 76% of construction debris was recycled, etc.

Pennsylvania State Employees Credit Union

Biggest Success

- Co-Generation through the use of natural gas powered Micro-Turbines
- Heat Exhaust from the Micro-Turbines is captured and used as an energy source
- Heat Exhaust is either piped to an absorption chiller that provides a chilled water source in the summer or to a heat exchanger that provides a hot water source in the winter
- Separate water loops that allow for isolation of our critical systems in a load shed scenario
- Can power close to 100% of building (during off peak & winter months) and 60% of building (during peak & summer months)
- Data Center is the priority for the co-generation system

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Biggest Success

- Adjustable height workstations for all cubicles and office desks- use minimal power (LEED certified) and are an extremely successful employee benefit.
- Roof Garden – employees love this area for breaks/lunch
- Water use reduction – our baseline calculation was 30% reduction. Actual is around 44% based on low flow sinks, showers, toilets, etc.

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Biggest Challenges

- Water reduction for work-out showers
- FEV (Fuel Efficient Vehicles) and HOV (High Occupancy Vehicles)
- Smoke Free Campus
- Glare through the natural light coming into the building



IFMA Roundtable Discussion

August 20, 2014 Michele Sinadinos Facility Manager



Michele Sinadinos, CFM

Facility Manager TE Connectivity

25 years with the company

13 years as an FM

BFA in Interior Design

CFM credential

TE Connectivity Corporate Goal: Reduce carbon footprint by 10% over three years

- EHS Database tracking KWH usage, water usage and trash/recycling
- KWH metering and monitoring per building

Target high KW usage

Work with maintenance to determine where the opportunities are for improvement

Examples: replace 20 year old air compressor that runs 24/7 with a unit that runs when needed

- Temperature set backs during unoccupied hours
 - Winter and Summer temperature settings
- Utilize lighting controls during unoccupied hours
- Capital equipment requests required a 2 year payback
- Took advantage of the Act 129 rebates

Other Sustainable Initiatives

Moved from night time to day time cleaning

Utilize single stream recycling

Utilize hand dryers

North America Campus Revitalization

Facility Management ~ Environmental Sustainability

Rehabbing 15 Existing Buildings ~ 4 Campus's ~ 1.3M Sq. Ft

ENERGY MANAGEMENT



5-8% Improvement

HVAC:

- New Heating, Air Conditioning, Controls and Ductwork

Lighting:

- Interior Design - More Natural Light
- Energy Efficient Lighting w/ Motion Sensors
- Daylight Harvesting

Building Envelope:

- Insulated Tinted Windows
- Increased Exterior Wall Insulation
- White Roof & Increased Insulation

Other:

- Removal of Personal Appliances
- Energy Star Rated Kitchen Appliances

WATER REDUCTION

20-30% Improvement

- Landscaping Drought Resistant Plants
- Low Flow Plumbing Fixtures
- Automated Flush Valves & Water Faucets



WASTE MANAGEMENT

40% Recycling / 60% Trash

- Central Recycling Areas

30% Reduction Copy Paper / Year

- Copiers Default Setting to Print Double Sided

RECYCLED ITEMS

- Ceiling Tiles
- Carpet
- Copper Wire & Pipe
- Glass & Aluminum Window Frames

New Materials w/ Recycled Content:

- Ceiling Tile
- Carpet
- Floor Tile
- Countertops
- Light Fixtures
- New Office Furniture & Partitions
- Low or Zero VOC Adhesives & Paint



HARRISBURG AREA COMMUNITY COLLEGE

SUSTAINABILITY ACHIEVEMENTS

- Two “Energy Performance Contracts” over seventeen years, with Johnson Controls. Projects included:
 - 27 kw solar array on the gymnasium roof
 - Conversion to energy efficient fluorescent fixtures and occupancy sensors throughout campus
 - Upgrading mechanical and HVAC equipment
 - Water conservation by converting to low volume water commodes, urinals and sink aerators
 - Weatherization of buildings to address insulation deficiencies to prevent air leaks and excessive CO2 emissions, and the infiltration of outside air
 - These efforts are estimated to save \$7.1 million in costs and avoidance of 5,417 metric tons of greenhouse gas emissions.

HARRISBURG AREA COMMUNITY COLLEGE

SUSTAINABILITY ACHIEVEMENTS

- College policy of minimum LEED Silver for all new construction and major renovations. One building is rated LEED Gold and two other buildings are rated LEED Silver.
- A geo-thermal system has been installed for the Central Administration building, multi-stack HVAC air handling units have been installed in two buildings, and high energy mercury vapor metal halide units are being replaced with T-8 fluorescent fixtures.
- Massive recycling program for: paper, glossy magazines, cardboard, plastic, aluminum, steel, and Styrofoam.
- Increased use of public transportation, hybrid vehicles, and golf carts.
- Extensive use of green custodial and landscaping products
- Installation of several electric hand dryers in rest rooms
- In 2013 participated in a demand response load shedding program which resulted in about \$40,000 in revenue which is now being re-invested in other campus energy projects.