

UCI Facilities Management Working For You

Working For You is a quarterly communication from Facilities Management designed to share facility-related initiatives and encourage two-way communications.

Fall 2015

Campus Power Reliability and Power Outages Current Improvement Initiatives



Damaged Motor Control Center Circuit Breaker

Facilities Management understands the importance of ensuring reliable power for the campus community. To reduce the possibility of unscheduled power outages and premature equipment failure, we plan for maintenance outages in collaboration with building facility managers and occupants to select times that will minimize the effects on research and teaching. During these scheduled outages, Facilities Management completes preventive maintenance activities such as transformer dielectric testing, substation and distribution panel cleaning, and high-voltage partial discharge testing. On a regular basis, we identify electrical equipment that would have failed if preventive maintenance were not completed. As a result, our campus has experienced very few unplanned outages over the past 20 years, and none has lasted longer than several hours.

Over the past decade, our campus has completed a series of projects that improve the campus high-voltage grid. In early 2016, the final phase of this work will begin. These projects provide redundancy with a dual electrical loop around the campus core and dual electrical feeds into most buildings.

It is important to note that in the event of a full utility outage in our area, our co-generation facility would not be operable, resulting in a loss in power to the campus. Additionally, the campus does not have the ability to restart our co-generation facility without stable power from Southern California Edison. We are currently exploring options with the Advanced Power and Energy Program in The Henry Samueli School of Engineering to be able to operate our co-generation facility without SCE power.

Campus buildings and facilities may lose power for the following reasons:



T-Body Failure in High Voltage SF-6-19A

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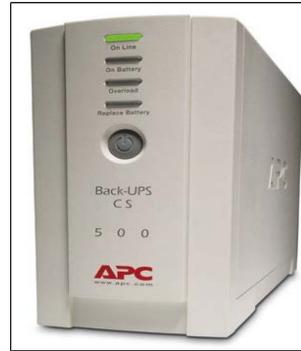
1. Generator and automatic transfer switch testing (a few seconds of power loss to emergency circuits)
2. Renovations that require a power outage
3. Provider service failures
4. High-voltage distribution equipment failures
5. Circuit breaker trips at the panel level
6. Equipment failures at the building level

An independent review of the partial campus power outage originating near Aldrich Hall in February 2015 verified that the outage was caused by the failure of a connector at the high-voltage switch. Recent testing and preventive maintenance did not predict this failure. The faulty connector (pictured above) has been replaced.



Facilities Management is evaluating several initiatives to improve campus power reliability. We want to share two with you at this time:

1. **Improved Automatic Transfer Switches** - Generators and automatic transfer switches require testing. Testing these systems involves starting the generators and transferring the electrical load from the grid to the generators. With the "break-before-make" switches installed on campus, this results in a brief outage (generally a few seconds) during each test (usually monthly). Replacing these ATS switches with more expensive "make-before-break" transfer switches would greatly reduce these outages. The cost of replacing all the ATS switches on campus is approximately \$2 million and would involve outages to the building's emergency electrical system. As funding allows, we are moving to the improved switches that prevent these few seconds of power interruption.
2. **Wider Use of Uninterruptible Power Supplies** - With the goal of protecting computers and other specialized research equipment from unplanned power outages, adding an uninterruptible power supply (UPS) is a good solution. For the majority of computers and research equipment on campus that are critical, battery-based units are most effective. The UPS will provide power and allow the specialized equipment to "ride through" the power outage. Facilities Management is planning to use Campus Renewal and Infrastructure Improvement Phase 2 funding to assist campus units with UPS purchases. We plan to begin this project as soon as funds are available.



[FM Services Portal](#)



[Emergency Medical Treatment](#)



UCI Named "Most Energy Efficient" College in the United States



Energy efficiency at UCI continues to attract media attention. Electricchoice.com named UCI the most energy efficient university in the United States, and the Electric Choice ranking has been highlighted online in "Cogeneration and Onsite Power Magazine" and "Energy

Management Today." UCI has an award-winning energy management program that has been recognized by the U.S. Department of Energy and acknowledged internationally as a model for improving energy efficiency.

UCI continues to reduce energy consumption by retrofitting internal and external lighting with more energy efficient options and converting labs into energy efficient Smart Labs. Our campus has 21 LEED Platinum and Gold buildings.

UCI Leads the Way in BSL3 Training



UC President Janet Napolitano has appointed a UCI-led team to assess safety practices and help standardize operating procedures in all UC research facilities involved in infectious disease research. The 10-person team -- led by Gary Landucci, director of the BSL3 Training and Development Program in UCI's School of Medicine -- includes four members from Facilities Management and works closely with the biosafety group in UCI's Environmental Health & Safety office. BSL3 is a designation given by the Centers for Disease Control and Prevention to clinical, diagnostic, teaching, and research facilities that deal with potentially lethal agents. Laboratories with this designation are characterized as "high-containment" laboratories.

Interest in the safe operation of these laboratories has grown to such an extent that UCI in August opened a new, fully functioning high-containment laboratory training facility to provide hands-on training to staff, faculty, students, emergency responders, and other personnel associated with high-containment laboratories from around the world. The facility houses state-of-the-art equipment donated by major manufacturers and includes a classroom area; biosafety cabinets; an autoclave; an anteroom; and mechanical space housing heating, cooling and ventilation equipment.

The 10-member UC Site Visit team lead by Landucci will inspect high-containment facilities at all UC campuses. Pictured below from left to right are Facilities Management team members John Ward, Kevin Lane, Bo Petkov and Steve DePetris, all of whom have received specialized training in this area.



From left to right: Kevin Lane, Steve DePetris, Bo Petkov and John Ward

Aldrich Park Improvement Project Out With the Old, In With the New



Aldrich Park Electrical Power Expansion

The Facilities Management Electrical Shop, with assistance from the Grounds and Exterior Construction crew, recently completed the repair and expansion of the Aldrich Park electrical power system that provides electrical power for lighting and special events. Installed decades ago, the original equipment had been exposed to the elements and regularly used by generations of student organizations.

In addition to repairing and upgrading the electrical components, the Electrical Shop staff initiated the installation of large circuit extensions to three regularly used areas of the park. These circuits are installed underground and provide 50 amps of 208 volt power remotely. By plugging in an electrical splitter at any of the new outlets, power can be provided for campus events. This will benefit our campus customers and vendors, who in the past needed to hire the Electrical Shop to temporarily install large heavy cables above the ground to provide needed electrical power. Now, with extension reaching several hundred feet, extension cords will not be needed as

often. The overall reliability of temporary power usage should improve while minimizing a potential trip hazard.

Something to Celebrate: UCI Zero Waste Events

Each year, UCI hosts a wide variety of events on its campus. We are proud to report that more and more of these events are Zero Waste Events. With a little planning, any event can become a Zero Waste Event, which means that 95 percent or more of all waste produced is diverted away from landfills and is instead recycled or composted.



In the fiscal year that ended June 30, Homecoming, Summerlands, the Staff Appreciation Picnic, the Orange County Water District Children's Water Education Festival, and the Dalai Lama Summit all achieved a diversion rate of more than 95 percent. This is an extremely significant accomplishment considering that each event attracted more than 4,000 attendees.

There are several ways in which campus events can become Zero Waste Events. Facilities Management provides Zero Waste Stations that consist of three bins: Landfill, Compost, and Recycling. This system provides attendees

with options to sort the waste. Additionally, "Trash Talkers," who are friendly volunteers, attend events to help students and event-goers learn more about how to sort their waste. Visit <https://www.youtube.com/watch?v=Z-Rr6VTzdTw&feature=youtu.be> to watch a video about UCI Trash Talkers and Zero Waste.

Facilities Management has created a set of [Zero Waste Event Guidelines](#) for event planners that includes a complete list of Zero Waste techniques. Event planners can make sustainable improvements with regard to waste disposal, bin signage, communication materials, food materials, and transportation.

With the increase of Zero Waste Events on our campus, attendees will be able to contribute to our campus sustainability efforts as well as enjoy the event experience. Now that's something to celebrate!



Trash talker assisting event participant

Filling Water Bottles and Making Change



UCI's bottle filling stations are making waves all around campus! In 2014, UCI's 162 bottle filling stations helped the campus avoid the purchase of more than 2.3 million plastic bottles, equal to 65 tons of plastic. This also saves water and petroleum that is used in the manufacturing of these bottles. On average, students, faculty and staff fill their reusable water bottle 6.3 times per month. In one year, 298,355 gallons of refreshing filtered water was dispensed from these stations.

We now have two new bottle filling stations in Aldrich Park. These stations are equipped with two drinking fountains, a filling station, and a water-wise Anteater message. You can find the stations adjacent to the Commencement Lawn and Student Services 1 near the rock garden.



New Facilities Management Services Portal

The Facilities Management Services Portal can be found at service.fac.uci.edu.

This new system replaces both the Online Service Request form and Facilities Management's internal work management system.

Features include:

1. Service-specific request forms
2. Access to the status of your:
 - o Facilities Service requests
 - o Active Facilities jobs and related work tasks
 - o Requests for estimates
3. Access to information related to Facilities jobs in areas you manage

Job ID	Building	Floor	Room	Request Class	Description	Customer Reference	Capital Project	Status	Created
226201	Facilities Management Building	Floor 1	Room 0106	Carpet Cleaning	TEST TEST TEST - custodial work tasks ***PLEASE LEAVE OPEN*** (until FM OIT closes job/work order)			In Progress	07/08/2015
226200	Facilities Management Building	Floor 1	Room 0106a	Special Cleaning Request	TEST TEST TEST - custodial work tasks ***PLEASE LEAVE OPEN*** (until FM OIT closes job/work order)			In Progress	07/08/2015
226197	Facilities Management Building	Floor 1	Room 0106a	Special Electrical Request	TEST TEST TEST - single trade ***PLEASE LEAVE OPEN*** (until FM OIT closes the job/work order)			In Progress	07/08/2015
209564	110 Theory	Floor 2		Events Coordination	TEST TEST TEST			Estimating	09/26/2014

Facilities Management welcomes your feedback related to this system (fmcsr@uci.edu) and looks forward to providing services to you in the future.

Requesting a Facilities Management Service

- You can contact one of our Customer Service Representatives at the Service Desk (949) 824-5444 between the hours of 7 a.m. and 4:30 p.m. or
- Submit an online request (pictured below) to the [Facilities Management Services Portal](http://service.fac.uci.edu) (UCInetID is required).
- In the event of an after-hours emergency, please call the Service Desk at (949) 824-5444 or Central Plant at (949) 824-5520.



Medical Treatment Information

Environmental Health & Safety wants to remind faculty, staff and students where to go if they experience a work-related injury.

Graduate and Undergraduate Students (non-UCI employees):

Campus: Student Health Center (East Peltason and Pereira) Call (949) 824-5304. Hours: Mon-Fri 7:30 a.m. - 5:30 p.m.

After Hours: Go to the nearest urgent care center or hospital emergency room. Be sure to contact Student Health Center for follow-up care as soon as possible.

Employees, Student Employees, and Volunteers: Always notify your supervisor as soon as possible if you experience an injury while at work, or contact Human Resources if your supervisor is not available.

Newport Urgent Care (949) 752-6300. Hours: Mon-Fri 8:00 a.m. - 9:00 p.m.; Sat-Sun 9:00 a.m. - 6:00 p.m.
1000 Bristol Street North, Suite 1-B, Newport Beach (Bristol and Jamboree)

Occupational Health Clinic at UCI Medical Center (714) 456-8300. Hours Mon-Fri 7:30 a.m. - 5:00 p.m.;
After hours - Go to the UCI Medical Center Emergency Room, Pavilion III, Building 29

Memorial Occupational Medical Services (562) 933-0085. Hours: Mon-Fri 7:00 a.m. - 9:00 p.m.
1720 Termino Avenue, Long Beach, CA 90804

ProCare Work Injury Center (949) 752-1111. Hours: Mon-Fri 7:00 a.m. - 6:00 p.m.
17232 Red Hill Ave., Irvine, CA 92614

For further information and a detailed look at the Injuries and Medical Treatment Poster please visit:

<http://www.ehs.uci.edu/MedEmergPoster.pdf>

Facilities Management
201 Facilities Management Building, Irvine, CA 92697-5444
www.fm.uci.edu | 949-824-5444 | fmavc@uci.edu