

Operators of medium-sized and large commercial buildings are benefiting from California's Building Operator Certification (BOC) program. Through the BOC program, which is sponsored by the state's investor-owned utilities, and owned and administered by the Northwest Energy Efficiency Council (NEEC), building operators from a wide range of industries are learning to identify and implement energy-saving opportunities as an integral part of their operations and maintenance activities.

The four gentlemen profiled below were among the initial group of students to complete California's first BOC Level I course. When asked what they thought of the BOC program, overall, the response was resounding...the BOC program increased their job skills, and they want a seat in the Level II course.



**Jim Roberts**, of California State University Monterey Bay (CSUMB), is responsible for managing the CSUMB's physical plant operations, which spans 500,000 square feet, in addition to supervising a staff of 13 mechanics.

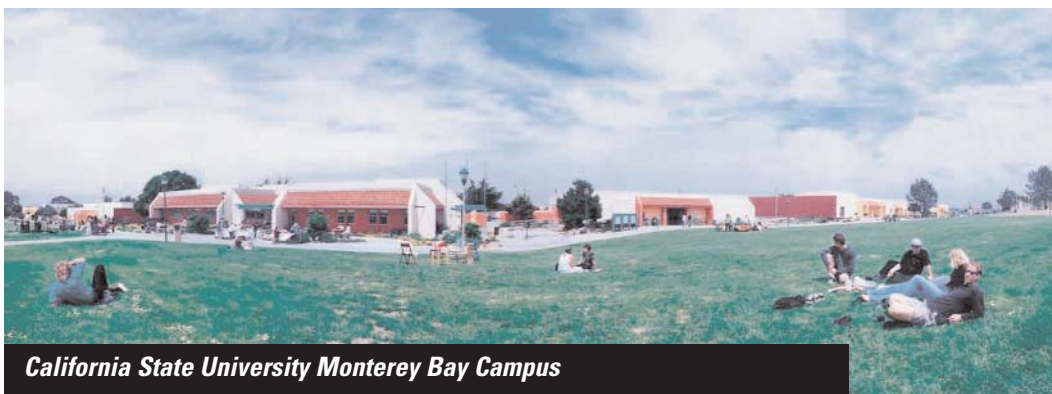
When asked to identify the best thing he gained from the BOC program, Jim said, "I learned to focus on how individual buildings function in terms of energy and how one can very easily, and with little investment, save energy. There's ample opportunity to conserve."

Jim reached this conclusion from completing the BOC program's Occupancy Profile assignment. This assignment led Jim to observing the occupancy rate at one of the smaller facilities on the campus that normally operated 24 hours a day, seven days a week. Jim monitored when the building's systems came on in the morning and went off at night, and when people came and went from the facility. He found that people usually left the building by 7 PM and that there was no reason to have the building's systems functioning on a 24-hour basis after all. As a result, he had the controls that operate the facility's mechanical units reset.

Jim has turned his BOC class project into a pilot program. He is continuing to track the building's occupancy level and energy usage in order to validate the accuracy of his initial snapshot. So far, the feedback from the building occupants is positive and Jim estimates resetting the controls has saved 5,700 kilowatt-hours and \$456 in energy costs annually. Jim plans to branch out and survey other buildings on the University's campus in the future. He estimates he could save over \$16,500 per year if he applies this energy saving approach in all 58 buildings he manages.

Having a structural engineering background, Jim found the idea of participating in the BOC program a little spooky at first thinking that his background would make it difficult to participate in a course with other attendees who are more experienced with maintaining mechanical systems. Jim soon discovered the BOC program could help strengthen the personal relationships he shares with the building operators at the University. "I was able to see first-hand what mechanics face every day. The BOC program helped increase my vocabulary and helped me develop a better relationship with the people providing preventative maintenance here." In fact, Jim believes the operators on his staff would also benefit from participating in the BOC program.

In order to maintain the certification gained from completing the BOC program, participants must complete five hours of continuing education each year. Jim has realized that all of the classes offered at the Pacific Energy Center will qualify for his continuing education requirements. "I have never participated in the PEC courses, but you can bet I'll be at the table in the future."



California State University Monterey Bay Campus

## About the BOC Program:

The statewide Building Operator Certification (BOC) program provides building personnel an opportunity for professional certification in the field of building operations. Certification is competency-based and offered on two levels. Level I provides a foundation in building systems and equipment. Level II emphasizes equipment troubleshooting and maintenance.

To be certified, building operators must:

- Successfully complete all classes and exams
- Successfully complete project assignments
- Submit a certification application to BOC
- Renew certification annually

Each of the classes (scheduled one day a month) consists of classroom study, small group exercises, tests and project assignments, some performed at the BOC program participant's own work facility. These projects demonstrate the program participant's ability to perform skills addressed in the BOC classes. Some project work requires students to gather information about their facility, and provide descriptions of and recommendations for particular systems. These work assignments give participants a useful overview of their facility's operational characteristics, energy consumption, and maintenance status.



## Future Classes

BOC courses are delivered as close to the participant's home towns as possible, in order to minimize travel time and expense.

For schedule and registration information, please visit [www.theboc.info/ca](http://www.theboc.info/ca) or contact your utility.



Pacific Gas and Electric Company™

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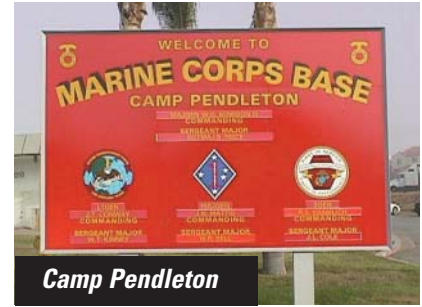
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1-800-GAS-2000

This program is funded by California utility customers and administered by the state's investor owned utilities – Pacific Gas and Electric Company, Southern California Edison, San Diego Gas and Electric and Southern California Gas Company – under the auspices of the California Public Utilities Commission.



**Randy Monohan**, is a Certified Energy Manager with Tetra Tech EM Inc, a firm that provides energy management services for Marine Corps Base (MCB) Camp Pendleton and other Federal Agencies in Southern California. Randy focuses on coordinating efforts to address demand reduction and energy conservation programs throughout MCB Camp Pendleton. Randy conducts training, analyzes systems and methods of operation, and identifies and develops new opportunities to reduce energy demand and consumption. Randy also focuses on behavior, operation and maintenance, and efficiency upgrades to reduce energy use, help the environment, and save money. He found the BOC training program to be a refresher on a variety of topics and is recommending that three of his colleagues complete the program. Randy says, "The challenging part to energy conservation on Military installations is effectively managing the number of ongoing, energy intensive activities that are mission-critical, and the sheer size and complexity of operations".



**Thom Coffey** is the Facilities Manager at Rose Hills Memorial Park and Mortuary in Whittier, California. Rose Hills is known to be the largest single-operated cemetery in the world with property spanning 1,400 acres where he is responsible for approximately 550,000 square feet of chapels, administration, and office areas.

Thom says the BOC program is good for supervisors who are responsible for overseeing all of the systems at a company. Participating in the BOC program gave him a "good basic knowledge of various types of systems" and improved his ability to communicate with the resources he contracts with to repair and maintain Rose Hills' systems. "Now when an HVAC technician comes to me and says he needs to replace something, I can ask meaningful questions and know what they're talking about."

The program also helped Thom better understand his utility bills, and to identify actions he can take to save energy and money at Rose Hills. In fact, as a result of completing the program, Thom now feels confident that he can determine how an upcoming rate change will impact Rose Hills.



As the Facilities Supervisor for Fair Isaac and Corporation in Irvine, California, **Tom Wishart** is responsible for overseeing operational performance of a 63,000 square foot single-tenant office building.

Tom says the BOC Program made him more aware of the energy conservation measures he could look for that may be costing Fair Isaac and Company money and more cognizant of the preventative maintenance schedule he could employ.

As a result of participating in the program, Tom:

- Immediately had cleaned all of Fair Isaac and Company's supply vents, which helped improve the indoor air quality and is now part of the Company's regular preventative maintenance routine;
- Increased overall knowledge of HVAC mechanical operations which has assisted in trouble shooting repair needs and assisting with preventative maintenance on the two 60 ton units; and
- Adopted a more cost effective "group relamping" process in place of the spot relamping process.



Fair Isaac, Irvine