

# 2016 Best Practices Proposal Form



**CACUBO**  
Central Association of College  
& University Business Officers

Completed proposals are to be submitted to [bestpractices@cacubo.org](mailto:bestpractices@cacubo.org) or by contacting Donna Rohlfer, Director, CACUBO Best Practices Awards, [rohlfedm@miamioh.edu](mailto:rohlfedm@miamioh.edu).  
The deadline is April 30, 2016.

## Best Practices Program Submission:

**Title:** A Model Energy Program for Higher Education

## Primary\* Contact Information:

*The primary contact must be a CACUBO member institution of higher education.*

Institution: Northwest Missouri State University

Address1: 800 University Drive

Address2:

City: Maryville State/Prov: Missouri Zip Code: 64468

Salutation:  Prof.  Dr.  Mr.  Mrs.  Ms.

First Name: Stacy Middle Name/Initial: R

Last Name: Carrick Suffix (Jr, III, etc.)

Professional Title: Vice President of Finance

Email : CARRICK@nwmissouri.edu

Phone: 660.562.1579 Fax:

\*Additional team contacts may be listed at the bottom of this form.

## Institution Information:

Institution:  Research  Comprehensive/Doctorate  Small Institutions  Community College

Year Founded: 1905

Geographical Location: Northwest Missouri

Number of Students: 6,593

Website: www.nwmissouri.edu

# 2016 Best Practices Proposal Form

## **Statement of the Problem:**

*Provide a brief statement identifying the challenge your institution encountered that benefited from your best practice.*

During the past decade, the University and all of Missouri has faced rapidly rising energy costs. According to the Energy Information Administration, commercial rates in the state increased 53% between 2004 and 2014, outpacing the national average of 31%.

During that same timeframe the University has added several buildings with complex systems and energy intensive academic programs that further strained financial resources with utility expenses rising at a double digit pace year-over-year. Like most universities our campus also has aging infrastructure and mechanical systems that are inefficient.

The University sought to address these rising costs and minimize environmental impact in the most cost-effective way.

## **Identify the Solution (250-words maximum):**

*Describe how you identified and developed your best practice solution including those involved with the process, impact on the organization, finances and resources.*

Rising energy costs motivated the institution to evaluate our position and make investments that have improved our environmental stewardship, advanced the local economy, and provided significant operational savings.

In 2012, the University partnered with our facilities management contractor to implement an energy management program. The program includes a full-time on-site energy manager with a support network, a small annual capital investment from the University, and guaranteed annual savings.

Unlike traditional performance contracting, our energy management program captures low-cost opportunities that leverage lucrative utility incentives as well as no-cost measures such as scheduling and optimization of existing equipment. This provides the opportunity to optimize investments on an ongoing basis as utility prices or incentive programs change and deficiencies are identified.

Projects are evaluated and selected based not only on financial ROI, but with consideration given to improvements in building conditions and reducing burdens on our O&M team. For example, in some cases, maintenance problems that may not have been considered on their own merit can be justified based on energy ROI. Systems are monitored on an ongoing basis, while making capital investments where appropriate.

Having the energy manager (a degreed engineer) on-site also delivers significant additional benefits such as project design review and operations support, both of which drive additional energy and operations savings over time.

Finally, since the program and projects are not capital intensive and there is no debt service for the projects, the program energy savings result in direct operating budget savings for the University.

# 2016 Best Practices Proposal Form

## Implementation Timeline:

*Provide a bulleted list of the steps and implementation timeline of your best practice solution.*

1. 6/1/2012 Energy program begins
2. Evaluation of systems, optimization of sequences, curtailments
3. 12/15/2015 First year of winter break curtailment
4. 1/15/2013 Energy policy is implemented
5. 5/1/2013 Lighting project, variable frequency drives, controls
6. 6/30/2013 First year of program yields savings of \$415k (11.7%)
7. 6/30/2016 Year 3 program savings of \$816k (22.2%) for 36-month savings of \$1.9M

## Benefits & Retrospect:

*Provide a brief statement of the benefits achieved by implementing the best practice solution.*

Active management of utility costs through an ongoing energy program has contributed to the financial viability of the institution. Innovative strategies to reduce project costs and maximize benefits have resulted in over \$2 million in savings with capital investments under \$500k.

Impactful low-cost measures such as curtailments over extended breaks and optimization have uncovered savings that would be missed in a traditional O&M model or a performance contract. The program provides ongoing benefit by ensuring these opportunities are captured while savings from previous efforts are compounded through the pursuit of additional measures.

Additionally, employing an energy manager on site who understands MEP systems increases the overall effectiveness of the facility operations team. The facility operations team is more knowledgeable about systems on the campus and, as a result, administrators can make better decisions about institutional priorities and investments.

The solutions developed at Northwest address a challenge common to campuses and are highly scalable based on the size of the institution and the energy conservation opportunities available.

# 2016 Best Practices Proposal Form

## Additional Team Contact Information:

### Additional Contact #2:

Institution: Northwest Missouri State University

Address1: 800 University Drive

Address2:

City: Maryville State/Prov: MO Zip Code: 64468

Institution:  Research  Comprehensive/Doctorate  Small Institutions  Community College

Salutation:  Prof.  Dr.  Mr.  Mrs.  Ms.

First Name: Allen Middle Name/Initial:

Last Name: Mays Suffix (Jr, III, etc.)

Professional Title: Director, Facility Services

Email : [ajmays@nwmissouri.edu](mailto:ajmays@nwmissouri.edu)

Phone: Fax:

### Additional Contact #3:

Institution: Northwest Missouri State University

Address1: 800 University Drive

Address2:

City: Maryville State/Prov: MO Zip Code: 64468

Institution:  Research  Comprehensive/Doctorate  Small Institutions  Community College

Salutation:  Prof.  Dr.  Mr.  Mrs.  Ms.

First Name: Dan Middle Name/Initial:

Last Name: Boyt Suffix (Jr, III, etc.)

Professional Title: Energy Manager

Email : [energy@nwmissouri.edu](mailto:energy@nwmissouri.edu)

Phone: Fax: