Other Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

O/O 1: Research programs
Support research programs for undergraduate, master's, and doctoral programs in clean energy, energy efficiency, and energy conservation

Related Measures

M 1: Students in program
Numbers of students in the program and graduate each year

Source of Evidence: Academic direct measure of learning - other

Target: Maintain 4 undergraduate, 2 master's students, and 3 doctoral students in the program per year.

Finding (Fall 2014) - Target: Partially Met
Currently 2 undergraduates, 2 master's, and one doctoral students are in the research program. The reduced student numbers was caused by two reasons: (a) completion of two research projects and (b) no additional funding has been secured. Since the funding situation will not improve quickly, recruiting of additional doctoral students will aim at prospective students who can support themselves financially. Another option is to collaborate with mechanical engineering department to see if there is any teaching assistantship that can be used to support graduate students in ECCC.

Related Action Plans (by Established cycle, then alpha):
recruit more graduate students
Will take action to recruit additional doctoral students in two approaches: (a) Aiming at prospective students who can support themselves financially, typically they are international students who eager to come to United States to pursue advanced degrees. (b) Another option is to collaborate with mechanical engineering department to see if there is any teaching assistantship that can be used to support graduate students in ECCC.

Established in Cycle: Fall 2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Students in program | Outcome/Objective: Research programs

Implementation Description: Request a budget of 3000 to recruit international students at conferences or provide minimal support for the first semester.

Budget Amount Requested: $3,000.00 (one time)

O/O 2: Research proposals
Prepare and submit research proposals to funding agencies and private companies

Related Measures

M 2: Numbers of research proposals
Numbers of research proposals submitted

Source of Evidence: Academic direct measure of learning - other

Target: Maintain six per year

Finding (Fall 2014) - Target: Partially Met
Two preliminary proposals have been submitted to DOE and a private company. Will continue to write proposals next semester.

O/O 3: Research funding
Secure research funding

Related Measures

M 3: Funding levels
Funding levels

Source of Evidence: Academic direct measure of learning - other

Target: Maintain average $250,000 per year

Finding (Fall 2014) - Target: Not Met
Previous proposals submitted to NSF and DOE were not successful. The funding happened to dry out this semester. The funding condition will not improve quickly for the following reasons: 1. Due to the sever cut of state budget to the higher education in the past five years, the university infrastructure for supporting research has been significantly diminished. This results to the difficulty of including ambitious goals in the proposals to make proposal more competitive. There has been absolutely no support of any technicians in the past few years, so even some simple plumbing and electric work will take many weeks or even months to get through...
the paper work to get outside state contractors to do the job. The staff of support offices such as purchase, account payable, computer center has been also significantly reduced, which makes projects difficult to move forward. Considering the significantly reduced university infrastructures, worrying about the deliverability of completing the proposed goals hampered the motivation for proposing more ambitious goals. This results in submitting less competitive proposals. 2. Due to the state budget cut and the propriety of funds allocation set by the Office of Research and Sponsored Program, The university is lacking resource to provide required cost share. The largest support for ECCC came from the U.S. Department of Energy, which always require a cost share of at least 20% of total amount (or 25% of request amount of funding.) Although there are ways to come up with in-kind match or reduced teaching load to add on the cost share, but there is a limit of those ways. For example, any reduction of teaching load up to 25% will start to compromise the teaching duty required by each academic unit and may cause interruption of the curriculum because classes need to be canceled to meet more than 25% reduction of the teaching load. For a relatively small project in an amount of $90,000 per year, it is not difficult to come up with the funds for cost share, but with a bigger proposal in an amount over $300,000 per year, real cash will need to be provided to cover part of the cost share. UNO has not been able to provide the real cash funds to fill up the gap for cost share in the past two years, which has made it difficult to submit proposals to DOE.

**Related Action Plans (by Established cycle, then alpha):**

**Submit proposals**
Considering the content in findings and analysis, two approaches will be make in the future: (a) only submit proposals to funding agencies that do not require cost share. (b) for agencies that require cost share, only submit relatively small proposals in which the cost share can be satisfied by in-kind or up to 25% of the teaching duty.

**Established in Cycle:** Fall 2014  
**Implementation Status:** Planned  
**Priority:** High

**Relationships (Measure | Outcome/Objective):**
- **Measure:** Funding levels  
- **Outcome/Objective:** Research funding

**O/O 4:** Publish scholarly papers
Publish scholarly papers at both conferences and in journals

**Related Measures**

**M 4:** Research papers published  
Numbers of research papers published

**Source of Evidence:** Academic direct measure of learning - other  
**Target:**  
Maintain 8 conference papers and journal papers per year  
**Finding (Fall 2014) - Target:** Partially Met  
4 conference papers and one journal paper.

**O/O 5:** Services
Provide services to professional societies and communities.

**Related Measures**

**M 5:** Technical sessions  
Number of technical sessions organized for conferences and workshop.

**Source of Evidence:** Academic direct measure of learning - other  
**Target:**  
Maintain 10 per year  
**Finding (Fall 2014) - Target:** Partially Met  
Organized three technical sessions and one committee session at Turbo Expo 2014. Chaired four technical sessions at International Pittsburgh Coal Conference.

**Related Action Plans (by Established cycle, then alpha):**

**Continue to volunteer for organizing sessions**  
Need to have funds to travel to conferences to chair the sessions. At this point, it is not sure travel funds are available due to budget cut.

**Established in Cycle:** Fall 2014  
**Implementation Status:** Planned  
**Priority:** High

**Relationships (Measure | Outcome/Objective):**
- **Measure:** Technical sessions  
- **Outcome/Objective:** Services

**M 6:** Number of board and committees  
Number of board and committees served for professional conferences and workshops.

**Source of Evidence:** Academic direct measure of learning - other  
**Target:**  
Maintain 4 at a time  
**Finding (Fall 2014) - Target:** Met  
Served on 5 committees and conference board: Chair Gas Turbine Committee K-14, Heat Transfer Division, ASME Chair Heat Transfer Committee, International Gas Turbine Institute (IGTI), ASME Director, Clean Power and Energy Research Consortium (CPERC) Advisory Board of International Pittsburgh Coal Conference Energy Committee of World Trade Center of New Orleans

**M 7:** Number of editorial boards  
Number of editorial boards served for journals
Source of Evidence: Academic direct measure of learning - other

Target:
Maintain 3 at any time

Finding (Fall 2014) - Target: Met
Served on three Editorial Boards: International Journal of Rotating Machinery; International Associate Editor of Journal of Mechanics; Associate Editor, ASME Journal of Thermal Science and Engineering Applications;

M 8: Papers and proposals
Number of papers and proposals reviewed

Source of Evidence: Academic direct measure of learning - other

Target:
10 papers and 20 proposals per year.

Finding (Fall 2014) - Target: Met

O/O 6: Local community
Provide services to professional societies and communities.

Related Measures

M 9: Professional training courses
Provide professional training courses such as energy audit, solar energy, infrared thermography, etc

Source of Evidence: Academic direct measure of learning - other

Target:
Maintain 4 per year

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Editorial Board of professional journals
The target has been met. Continue the same target and effort.
Established in Cycle: 2013-14
Implementation Status: Planned
Priority: Medium
Projected Completion Date: 06/2015
Responsible Person/Group: ECCC
Budget Amount Requested: $2,000.00 (recurring)

Organize technical sessions
The target has been met. Continue the same target and effort.
Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Publish papers
The target has been met. Continue the same target and effort.
Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Research program
The target has been met. Continue the same target and effort.
Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Research proposals
The target has been met. Continue the same target and effort.
Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Review papers and proposals
The target has been met. Continue the same target and effort.
Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Revise the targeted criteria for research funding
Due to the recent difficulty in getting external funding, the targeted criteria is reduced to $100,000 for next year.
Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Serve on Professional Boards and committees
The target has been met. Continue the same target and effort.
Established in Cycle: 2013-14
Implementation Status: Planned  
Priority: Medium  
Projected Completion Date: 06/2015  
Responsible Person/Group: ECCC  
Additional Resources: Travel expenses  
Budget Amount Requested: $5,000.00 (recurring)

**Service to local community**  
The target has been met. Continue the same target and effort.  
Established in Cycle: 2013-14  
Implementation Status: Planned  
Priority: High

**Continue to volunteer for organizing sessions**  
Need to have funds to travel to conferences to chair the sessions. At this point, it is not sure travel funds are available due to budget cut.  
Established in Cycle: Fall 2014  
Implementation Status: Planned  
Priority: High

**recruit more graduate students**  
Will take action to recruit additional doctoral students in two approaches: (a) Aiming at prospected students who can support themselves financially, typically they are international students who eager to come to United States to pursue advanced degrees. (b) Another option is to collaborate with mechanical engineering department to see if there is any teaching assistantship that can be used to support graduate students in ECCC.  
Established in Cycle: Fall 2014  
Implementation Status: Planned  
Priority: High

**Submit proposals**  
Considering the content in findings and analysis, two approaches will be make in the future: (a) only submit proposals to funding agencies that do not require cost share. (b) for agencies that require cost share, only submit relatively small proposals in which the cost share can be satisfied by in-kind or up to 25% of the teaching duty.  
Established in Cycle: Fall 2014  
Implementation Status: Planned  
Priority: High

**Relationships (Measure | Outcome/Objective):**  
**Measure:** Technical sessions | **Outcome/Objective:** Services

**Relationships (Measure | Outcome/Objective):**  
**Measure:** Students in program | **Outcome/Objective:** Research programs

**Implementation Description:** Request a budget of 3000 to recruit international students at conferences or provide minimal support for the first semester.  
**Budget Amount Requested:** $3,000.00 (one time)