SWATeam Recommendation

Name of SWATeam: Energy Generation, Purchasing, and Distribution

SWATeam Chair: Mike Larson Date Submitted to iSEE: Feb 9, 2017

Specific Actions/Policy Recommended (a few sentences): Continue and/or start discussions with the Vice Chancellor for Research and/or NCSA regarding the development of a plan and budget to procure the offset for all emissions from the National Petascale computing facility as outlined in the 2015 iCAP.

Rationale for Recommendation (a few sentences): If the University is going to achieve this objective, planning and budgeting will need to start now.

Connection to iCAP Goals (a few sentences): The 4th objective in the Energy Generation, Purchasing, and Distribution chapter of the iCAP reads, "Offset all emissions from the National Petascale Computing Facility (and other successor facilities) by the conclusion of the current period of National Science Foundation support (FY18). This recommendation is directly related to this objective.

Perceived Challenges (a few sentences): This will have a direct impact on the budget of the department required to cover the cost of the renewal energy certificates. As noted in the budget impact section below, the minimum impact appears to be $35,000 annually.

Suggested unit/department to address implementation: Vice Chancellor for Research and/or NCSA.

Anticipated level of budget and/or policy impact (low, medium, high): Medium to high. The Petascale facility uses approximately 100,000 MWH of electricity annually. At present, renewable energy certificates (RECs) are the most cost effective means of procuring offsets. The lowest cost RECs cost approximately $0.35/MWH, which translates to an annual cost of $35,000 to offset the current Petascale electricity usage at 100,000 MWH per year.
Carbon offsets are another means of offsetting the emissions from NCSA. 100,000 MWH of grid purchased electricity translates to approximately 80,000 tons of CO2 emissions. At a price of $3.00 per ton (which is iSEE's estimated cost per ton of CO2 offset when purchased in bulk), that translates to an annual cost of $240,000 for the purchase of offsets.

Individual comments are required from each SWATeam member (can be brief, if member fully agrees):

Team Member Name	Team Member's Comments
Mike Larson	I agree with this recommendation. In order to meet this objective as outlined in the 2015 iCAP, discussions, planning and budgeting needs to start immediately.
Tim Mies	I agree with this recommendation to encourage administration to pursue planning and budgeting this carbon offset for the supercomputing facility. These plans should account for both current and future projected energy needs.
Catherine Yee	I agree with this recommendation. It is important that we take this step to meet our goals set in the iCAP.
Xinlei Wang	I agree with this recommendation. This is an important step toward the goals set forth by the 2015 iCAP.
Jack Morrissey	Unavailable for comment

Yu-Feng Forrest Lin	I support this recommendation and suggest to execute in a timely matter.

Comments from Consultation Group (if any; these can be anonymous):

Explanation and Background (can be supplied in an attachment):