ID # (assigned by CSG): 12-MW-03-MN

Please provide the following information, adding space as necessary:

State: Minnesota

Assign Program Category (applicant) (Use list at end of application): Energy

Program Name: Plant Management Division Energy Team

Administering Agency: Minnesota Department of Administration

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1. How long has this program operated (month and year)? Note: the program must be between 9 months and 5 years old as of April 5, 2012 to be eligible for this year’s award.

   The Plant Management Energy Team was first formalized in July of 2008 and continues to be active today.

2. Describe the program:
   - Why was it created?
   - Why is it a new and creative approach or method?
   - What are the specific activities and operations of the program in chronological order?
   - Is it effective? Provide tangible results and examples.

Reducing the environmental and budget impact of utilities for Minnesota’s Capitol Complex has become a bipartisan goal in recent years. This was most evident with Governor Mark Dayton’s signing of Executive Order 11-12, which set forth a 20 percent reduction goal for energy consumption
in Capitol Complex buildings by 2015. Minnesota’s Plant Management Division (PMD), part of the Department of Administration, oversees the 23 buildings totaling 4.2 million square feet which make up the State Capitol Complex, making it a vital part of this effort. Within PMD, the PMD Energy Team was formed, bringing together building management and operational staff to work toward the 20 percent energy reduction goal.

The team took on the Governor’s challenge by initiating projects and studies on multiple fronts including lighting, lighting controls, HVAC system optimization as well as mechanical and electrical system modifications. In each of these areas, the team creatively used hard data and technology to better understand each building’s operational characteristics. They developed a Building Automation System (BAS) network and software upgrade which allowed for improved monitoring, control, communication and data collection about various building systems. These new upgrades have allowed PMD to pinpoint adverse energy consumption trends early and respond to them rapidly.

At weekly meetings the PMD Energy Team analyzes the data, which includes electric demand charts and work orders, and formulates new strategies for energy reduction that can be achieved through operational improvements and minor system retrofits. Today, there are 24 different projects in different stages of implementation. Some of these to date have included: parking lot and ramp LED lighting upgrades, building lighting control installations, lighting fixture upgrades, building variable air volume system upgrades, building automation system schedule and equipment optimization, mechanical hot water system upgrades, and sub metering implementation and analysis. Projects are tracked and analyzed to measure outcomes against a 10-year or better payback criteria requirement.

Thus far, the PMD Energy Team’s efforts have been very effective. The State has reduced energy usage in the Capitol Complex significantly since 2009. Compared against the fiscal year 2008 baseline, energy usage was down 5.5 percent in fiscal year 2009, 14.4 percent in fiscal year 2010, 13.6 percent in fiscal year 2011 and 25.2 percent seven months into fiscal year 2012, putting the team on track to exceed the Governor’s goal of 20 percent energy reduction. The value of the current energy reduction is estimated at approximately $1.8 million in savings annually.

These money savings result in lower lease rates for building customers and tenants. For the average Minnesotan it lowers the cost of state government operations at a time when the rising cost of utility services is putting increasing pressures on the budget. Beyond the financial impact, these efforts result in greater maintenance and operational efficiency, and limit the state’s environmental impact and build toward a cleaner future.

3. Did this program originate in your state? If YES, please indicate the innovator’s name, present address, telephone number, and e-mail address.

The approach the PMD Energy Team has taken to reduce energy consumption in Capitol Complex Buildings did originate here. The efforts come from thinking from the members of the team, who over the years have developed a unique operational awareness of each Capitol Complex building. Using that knowledge, the team works together to identify and implement opportunities to reduce energy consumption.

4. Are you aware of similar programs in other states? If YES, which ones and how does this program differ?

While other states are surely making efforts of their own to make their buildings more energy efficient, we are unaware of any other programs with the level of organization and discipline seen in Minnesota. The PMD Energy Team has met every week since it was formed in 2008, and only through this level of focus and discipline has the team been able to achieve the energy reduction results it has. These meetings have regularly made a huge difference in the team’s efforts, with the latest real-time data pinpointing areas of concern and empowering building engineers and project
managers to respond quickly and effectively.

5. **What limitations or obstacles might other states expect to encounter when attempting to adopt this program?**

The feasibility for other states to utilize this program is very high. The Minnesota Department of Administration is fortunate to have an in-house team of individuals within PMD who have developed a unique operational awareness of each building over the years. This team has the ability to understand, assess and make operational changes to maintain system efficiency. The team, and this program, demonstrate what can be achieved when you set a goal, identify all of the sources of energy use, define standards for operations, track performance 24 x 7, analyze the data on a real time basis, and take appropriate corrective action when systems are operating outside of the standards. For other states that may not have this level of expertise on staff, there are programs in place through private Guaranteed Energy Savings Contracts and State Energy Improvement Financing Programs that can help to identify potential energy reduction opportunities.

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Use these as guidelines to determine the appropriate Program Category for your state’s submission and list that program category on page one of this application. Choose only one.

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- Transportation

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- Administration
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- Revenue
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**Health & Human Services**
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- Health Services
- Housing
- Human Services

**Human Resources/Education**
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- Labor
- Management
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