➢ Data Center Efficiency

A. Description

The Data Center Efficiency product helps customers address energy conservation opportunities in both new and existing data centers, as well as other computing spaces. This specialized product was designed in response to the significant energy savings potential of these customers, and their projected growth in energy use in data centers and computing spaces.

There are numerous ways data centers can become more energy efficient, including:

- High Efficiency Servers;
- Server Virtualization/Consolidation;
- Airflow Improvements;
- Electrical Equipment;
- High-Efficiency Cooling;
- Humidification;
- Power Systems;
- High-Efficiency Lighting;
- Electrically commutated (EC) plug fans;
- Plate and frame heat exchangers; and
- Virtual Desktop Infrastructures (VDI).

Any size data center or computing space may participate. The product encourages a holistic approach to energy efficiency within the data center or data closet or computing space.

For existing facilities, the product provides funding toward an onsite evaluation and analysis and rebates based on the energy savings resulting from implementation. Projects will be analyzed and rebated using a custom model. However, prescriptive rebates for EC plug fans, plate and frame heat exchangers, servers and VDI equipment are available. Data center customers can also apply for prescriptive equipment rebates from other products offered in the Company's DSM portfolio. Data Center prescriptive equipment rebates will also be available to non-data center customers.

For new facilities, the product delivers expert knowledge and resources to help data center owners optimize the efficiency of their facilities during the siting, design, and early construction and operation stages of the new data center. Aligned closely with the design of the Energy Design Assistance (EDA) offering within New Construction (for commercial new construction projects), this new Data Center offering will provide free consulting during the site selection and design phases of new data center construction projects, and provide financial incentives to offset the increased costs of more advanced energy systems. The product commences with the customer's first discussions with Xcel

Energy regarding siting of a new data center and ends after construction and occupancy of the last in-scope portion of the data center.

Public Service maintains a list of approved study providers to perform data center studies and analysis. Study paths leverage the study providers, who have been provided training on Company tools, to conduct the analysis.

B. Targets, Participants & Budgets

Targets and Participants

Electric energy savings and participation targets were determined by looking at historic participation and identified projects since the 2009 product launch through 2015.

In the new construction market, the Company plans to promote this offering to owners and developers of new data center facilities. For 2016, the Company expects three new projects to begin design assistance in this sector.

Budgets

Budgets were developed commensurate with the electric energy savings target, based on historical cost of achievements. The largest cost in the budget is for energy efficiency project implementation and study rebates.

C. Application Process

Customers learn about the product through a variety of channels, including: the Xcel Energy website, Account Managers and trade partners or study providers. In addition, the Company will identify data center experts to help with education of the product to customers. Product applications are available through all of these channels. Customers may submit an application through their account manager or a trade partner, or send it via mail or email to Public Service.

Customers building a new data center need to submit their application in the early phases of design to ensure recommended strategies are included in final design plans. The data center design study will follow the New Construction product's Energy Design Assistance guidelines for facilities.

Preapproval is required to receive rebates for studies and custom measures. Prescriptive measures do not require preapproval and will be rebated for implemented projects.

D. Marketing Objectives & Strategies

The marketing strategy for Data Center Efficiency leverages a variety of channels, including Account Managers, trade relations managers, professional organizations, and direct customer communications. The goal of the Data Center Efficiency product is to build and/or retrofit data centers, with their copious electronic equipment, to be as efficient as possible. Because the market for this product is so specific, Public Service will have Account Management focus on recruiting data center customers to participate. Account Management and a product engineer will work together to maintain contact with data center customers from identification of potential energy saving measures through implementation of the recommended measures. Face-to-face contact with our customer base is necessary to engage them in the product.

The Company will also conduct meetings with study providers and design firms to provide rebate information and other support for customer engagement. The Company will use these meetings to discuss potential energy saving measures and best practices to encourage energy efficiency in a data center. Additional study providers will be sought after to help data center customers identify potential energy saving strategies at their location.

Soliciting Data Center Efficiency participation has typically required significant marketing effort to influence customers; many are reluctant to make changes to their mission-critical operations, and upgrades require agreement across many function areas.

Public Service will offer on-site walkthrough audits of a customer's data center by a product engineer to help identify energy efficiency opportunities. Once the walkthrough is complete, the customer will receive a report that describes the identified opportunities and the possible paths for earning a rebate. This offer is intended to generate awareness of the product to data centers that have not previously participated in the product.

E. Product-Specific Policies

Existing Facilities

Customers may perform a study by selecting a pre-qualified study provider[1]. If they select a provider who is not on the Company's list, the new provider will be required to submit qualifications prior to receiving study funding approval.

The Company typically evaluates measures identified within a study as one project, based on the customer's indication to implement all measures included in the project. Preapproved projects must be cost-effective. If at least two years has passed since a project was approved, the technical staff will re-analyze it to determine if the

[1] http://www.xcelenergy.com/staticfiles/xe/PDF/Marketing/CO-BUS-Data-Center-Efficiency-Provider-List.pdf

savings/payback has changed. This re-analysis is conducted prior to issuing a rebate check.

Studies, once preapproved, need to be submitted to Public Service within three months of issuance of the preapproval letter.

New Facilities
To participate in this measure, customers will work directly with contracted agents of the Company who will facilitate the integrated design and modeling components of the measure. The choice of contracted providers is influenced primarily by the fact that the new Data Center market is highly dynamic and complex. To manage the risk introduced by this complexity, the Company chose to move forward with a limited provider delivery model. As the market evolves, the Company will evaluate the potential to open the consulting services of this measure up to other providers in a manner similar to the existing Data Center Efficiency studies and EDA offerings.

Computing Spaces
For prescriptive VDI measures and prescriptive high efficiency servers, all equipment rebated through the measure must be new and meet all measure rules and requirements. A minimum of 10 units must be purchased in order to qualify for the rebate. The application must be submitted within twelve months of the invoice date.

F. Stakeholder Involvement

As part of the product design effort, prior to the 2009 product launch, Public Service conducted focus groups with data center facility managers and one-on-one interviews with information technology executives in order to better understand their needs and interest in energy efficiency.

The Company continues to develop collateral and education materials to support the product. As participant feedback is received, suggestions will be evaluated for feasibility of incorporating changes.

Xcel Energy has been an active participant in the Consortium for Energy Efficiency (CEE) Data Centers and Servers Initiative.[2] The initiative focuses on collaboration among utilities striving for energy efficiency standards for data center equipment, including knowledge sharing data center efficiency product development.

Xcel Energy is also a member of AFCOM[3], the leading association of data center and facilities management professionals.

[2] http://www.cee1.org/content/committee-work
[3] http://www.afcom.com/

G. Rebates & Incentives

Data Center Efficiency studies for existing facilities will be rebated up to 75% of the incremental study cost not to exceed $25,000. This cap may be reevaluated if a very large data center is being reviewed.

Prescriptive rebates will be applied where applicable, and all other energy efficiency upgrades will be handled through a custom analysis. Individual custom projects will be rebated at up to $400 per kW saved. Additional promotional incentives may be considered, depending on the expected impact on market penetration and product cost-effectiveness. For new facilities, incentive levels will follow those of EDA.