

➤ Summary of 60-Day Notice: Data Center Efficiency

Public Service Company of Colorado (“the Company”) posts this 60-Day Notice to add a “new construction” measure to its Data Center Efficiency program in 2016.

There is an opportunity to better serve data centers by providing needed energy efficiency information and services during the siting, design, and construction phases of new data center facilities. There are considerable energy savings opportunities associated with these projects. To meet this customer need the Company will add a “new construction” measure to the existing Data Center Efficiency program.

The measure will deliver 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 approach of the Energy Design Assistance (EDA) offering within New Construction, it will provide free consulting during the site selection and design phases of new data center construction projects and provide financial incentives to offset some of the increased cost of more advanced energy systems. While similar in approach to EDA, the measure will be specifically catered to the Data Center industry with a designated consultant and modeling approach unique to this program. The “new construction” measure will commence at the customer’s first discussion with Xcel Energy regarding the siting of a new data center and will end after construction and occupancy of the last in-scope portion of the data center.

These updates result in the following forecasted impacts for the Data Center Efficiency product in 2016. Due to the nature of construction, 2016 participation is forecasted, but the projects will not realize energy savings until 2017, when they come on line. Therefore, no additional achievements have been forecasted for 2016.

Table 1: Summary of Forecasted Impacts

Data Center Efficiency	2016	
	<i>As Filed</i>	<i>Revised per 60-Day</i>
Electric Savings (kWh)	8,310,341	8,310,341
Electric Demand Reduction (kW)	863	863
Budget* (\$)	\$1,289,422	\$1,394,422
MTRC Test Ratio	1.90	1.85

*While the anticipated expenditure impacts are forecasted, the Company acknowledges that this Notice does not change the filed budget.

Included with this Notice are the following documents:

- a) Redlined Product Write-Up;
- b) Redlined Deemed Savings; and
- c) Redlined Electric Forecast Technical Assumptions.

These documents can be found on our website at the following link:

http://www.xcelenergy.com/Company/Rates & Regulations/Filings/Colorado_Demand-Side_Management.

➤ Data Center Efficiency

A. Description

The Data Center Efficiency product helps customers address energy conservation opportunities in both new and existing data centers. 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 over the next several years.

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

Any size data center may participate, the product encourages a holistic approach to energy efficiency within the data center when feasible for the customer.

For existing facilities, the product provides funding toward an onsite evaluation and analysis, and rebates based on the energy savings resulting from implementing opportunities recommended in the study. Additionally, individual projects will be analyzed and rebated using a custom model. ~~New Construction design assistance is available for data center customers as well; if the facility participates, the contractor will partner with a study provider for analysis of the data center portion of the project.~~

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 selects third parties to perform data center studies and analysis. Study paths leverage third-party experts, who have been provided training on Company tools, to conduct the analysis. The Company maintains a list of qualified contractors whose studies may be rebated by Public Service. Data Center projects that do not require a study, or have completed a study in the past, will be evaluated through the custom model and evaluated for rebate opportunities.

Prescriptive equipment rebates from products across the Company's DSM portfolio are available to data center customers.

B. Targets, Participants & Budgets

Targets and Participants

Electric savings and participation targets were determined by looking at historic participation and identified projects since the 2009 product launch through mid-year 2014. A logical division of data center square footage size was applied based on actual participation, and the estimated savings of the individual measures were calculated and totaled.

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 savings goals, based on historical ratios. The largest cost in the budget is for implementation and study rebates, which represent more than 60% of the overall product budget.

C. Application Process

Customers learn about the product through a variety of channels, including: the Xcel Energy website, Account Managers, Business Solutions Center (BSC) representatives, and trade partners or study providers. In addition, the Company will recruit data center experts to help promote 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 includes 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 and the BSC focus on recruiting data center customers to participate. 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.

Data Center Efficiency customers typically require a great deal of effort to influence into participating in DSM. Many are reluctant to make any changes to their mission-critical operations, and upgrades require agreement across many customer functions.

Tactics include collateral materials, newsletter articles, direct mail campaigns, advertising, presentations, and event marketing outreach.

E. Product-Specific Policies

Existing Facilities

Customers may perform a study by selecting a pre-qualified provider or other vendor of their choice. New providers 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 savings/payback has changed. This re-analysis is conducted prior to issuing a rebate check.

Studies, once preapproved, will 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.

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.

Some of the recommendations resulting from the focus groups which were considered by Public Service in the product design include:

- Create an analysis product that is specific to data centers and utilizes experts in data center design and operation.
- Assess products so they are more dynamic and better reflect the nature of the data center.
- Develop materials to help data centers select energy efficient equipment; and to develop a case study on how a carefully managed, energy efficient data center may be more reliable than a standard data center. Connect reliability to energy efficiency.
- Provide a quick “hit list” of things that data center operators should be aware of to aid in conservation of energy.
- Design the product to increase the awareness around information technology strategies that have an impact on energy conservation in a facility.

The Company continues to develop collateral and education materials to support the product as the conversation around data center efficiency matures. 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.¹ 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 (<http://www.afcom.com/>), the leading association of data center and facilities management professionals.

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.](#)

¹ <http://www.cee1.org/content/committee-work>