

July 7, 2003

Bill Dalton  
1225 17<sup>th</sup> Street  
Suite 1200  
Denver, CO 80202

Subject: Frito Lay; Project Measure Verification Report

Dear Mr. Dalton:

Xcel Energy has completed its Measurement and Verification (M&V) activities for the installation of power conditioning equipment at the Frito Lay facility located 11645 East 37<sup>th</sup> Avenue in Denver, CO. The Verified Demand Reduction is summarized in the table below.

<b>Project Savings Summary</b>		<b>Frito Lay</b>
<b>Submitted Savings Estimate (kW)</b>		<b>85.0</b>
<b>Final Verified Demand Reduction (kW)</b>		<b>107.6</b>

The Verified Demand Reduction was determined as stated in the approved Project Specific Measurement and Verification Plan. The baseline and post-retrofit energy consumption were estimated using measured energy and power data taken from 1:30 pm to 6:30 pm on June 2, 2003.

One-minute interval power and energy data was collected in 20-minute periods on the secondary side of the main transformer at Frito Lay. The three ElectroFlow™ devices were all turned either on or off for each twenty minute duration. A total of eight “on” periods and eight “off” periods were performed. The data was then analyzed to determine the average demand reduction during the period as shown in Table 1. The coefficient of variation of the on and off periods are under 6% thereby indicated a rather stable load over the measurement period. The savings is the difference between average “on” demand use and the average “off” demand use.

**Table 1. Power Measurement Summary**

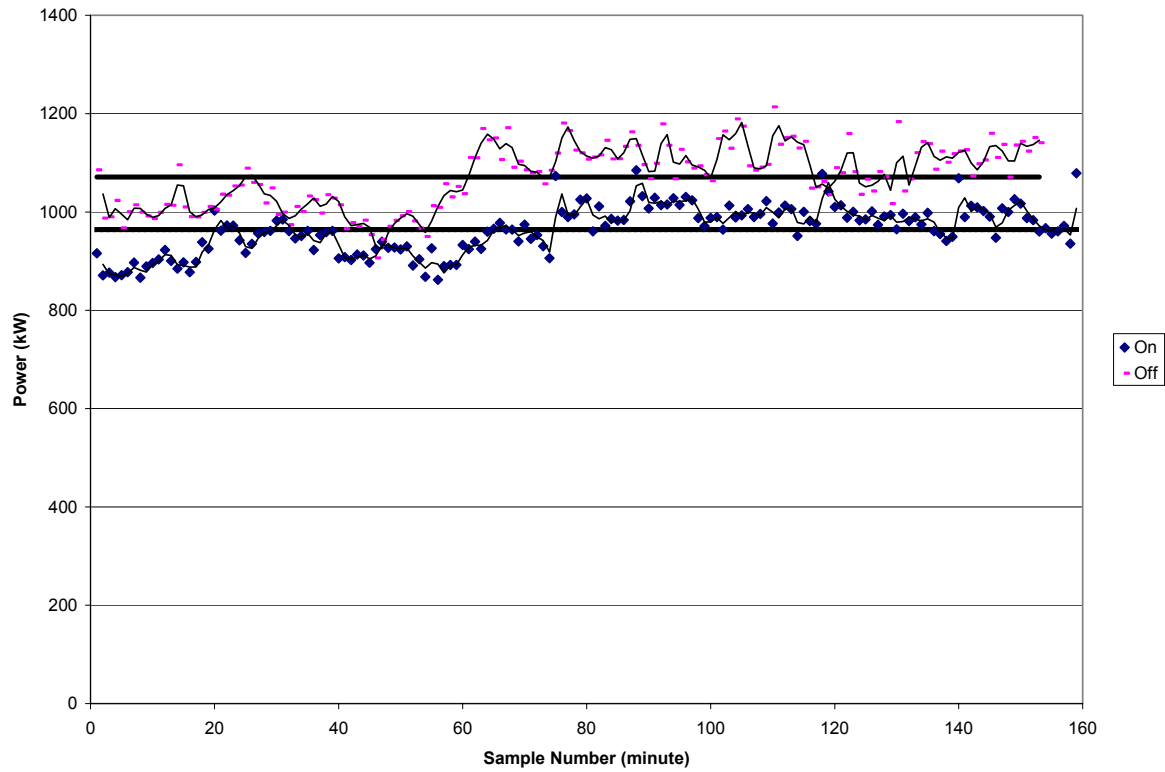
Sample Period /State of Device	Standard Deviation (kW)	Mean (kW)	Coefficient of Variation	% Difference	kW Savings
Total On	48.11	963.34	5%	10.0%	107.6
Total Off	63.77	1,074.11	6%		

The energy consumption was reduced by 13.4% over the measured period as shown in Table 2.

**Table 2. Energy Measurement Summary**

Sample Period /State of Device	Standard Deviation (kWh)	Sum (kWh)	% Difference
Total On	1.23	2,452	13.4%
Total Off	1.38	2,832	

Figure 1 illustrates the relationship of the power use at the Frito Lay facility when the ElectroFlow devices are operating and turned off.



**Table 1. Power use profile for the Frito Lay facility when the ElectroFlow devices are on and off**

Lighting Solutions has 10 business days to review this Project Measure Verification Report and contact the Program Administrator with any questions.

**DRAFT**