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IDAHO PUBLIC UTILITIES COMMISSION

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February 26, 2010

IPC-E-09-02

Ms. Jean D. Jewell, Secretary  
Idaho Public Utilities Commission  
P.O. Box 83720  
Boise, ID 83720-0074

RE: FlexPeak Management Demand Response Program Report

Dear Ms. Jewell:

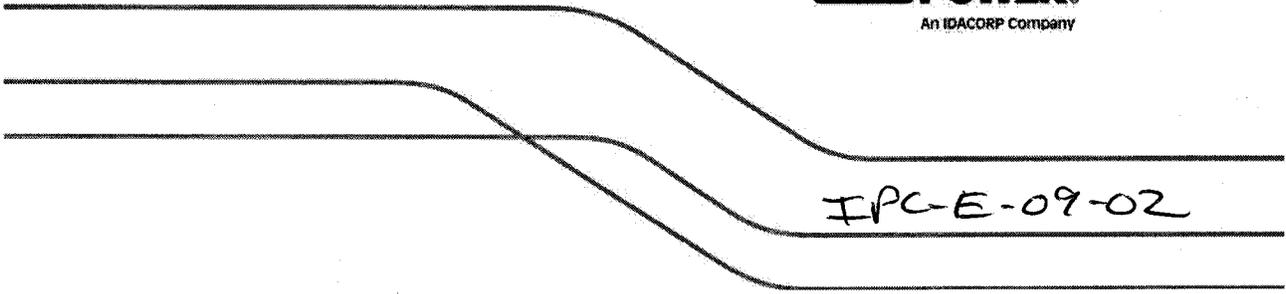
Enclosed please find a copy of the FlexPeak Management 2009 Preliminary Report. In accordance with the provision in Idaho Public Utilities Commission Order No. 30805, this report addresses the Commission's request for a preliminary evaluation of the program prior to making a request for a Commission determination of the prudence of the Company's expenditures for the FlexPeak Management Program. In light of the fact that the program has been in effect for only one season, a full scale evaluation is premature. The Company will report further on the Program in the 2010 DSM Annual Report to be filed March 15, 2010, and intends to request a prudence determination for 2009 expenditures for the FlexPeak Program subsequent to the March 15, 2010, filing.

If you have any questions regarding this report, feel free to contact Billie McWinn at 208-388-5871 or myself at 208-388-2505.

Sincerely,

Darlene Nemnich

cc: Randy Lobb  
Lynn Anderson



IPC-E-09-02

**FlexPeak Management  
2009 Preliminary Report**

**February 24, 2010**

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## Program Summary

FlexPeak Management is a voluntary demand response program targeting Idaho Power's industrial and large commercial customers that are capable of reducing their electrical energy loads for short periods during summer peak days. The program became available to the company's Idaho customers in May 2009. The program objective is to reduce the demand on Idaho Power's system during peak times through customers' voluntary electrical use reduction. The program is active June 1 to August 31, between the hours of 2:00 p.m. to 8:00 p.m. on non-holiday weekdays. Customers receive notification of a demand reduction event two hours prior to the start of the event, and events will last anywhere between two to four hours, with a maximum of 60 hours per season.

In November 2008, Idaho Power selected EnerNOC, Inc. through a competitive Request for Proposal (RFP) process, to implement the program. Idaho Power entered into a five-year agreement with EnerNOC in February 2009, pending the Idaho Public Utilities Commission (IPUC) approval. In May 2009, the IPUC approved the contract in Order No. 30805 and requested that Idaho Power submit a preliminary report.

EnerNOC is responsible for developing and implementing all marketing plans, securing all participants, installing and maintaining all equipment behind Idaho Power's meter used to reduce demand, tracking participation, and reporting results to Idaho Power. Idaho Power initiates demand response events by notifying EnerNOC, who then supplies the requested load reduction to the Idaho Power system.

EnerNOC meets with prospective customers to identify their potential to reduce electrical energy load during active program hours without negative impact to their business operations. Customers enroll in the program by entering into a contract with EnerNOC. EnerNOC then installs energy monitoring equipment at the customer site, simulates a demand response event to ensure customer satisfaction and performance, and officially enrolls the facility in the program.

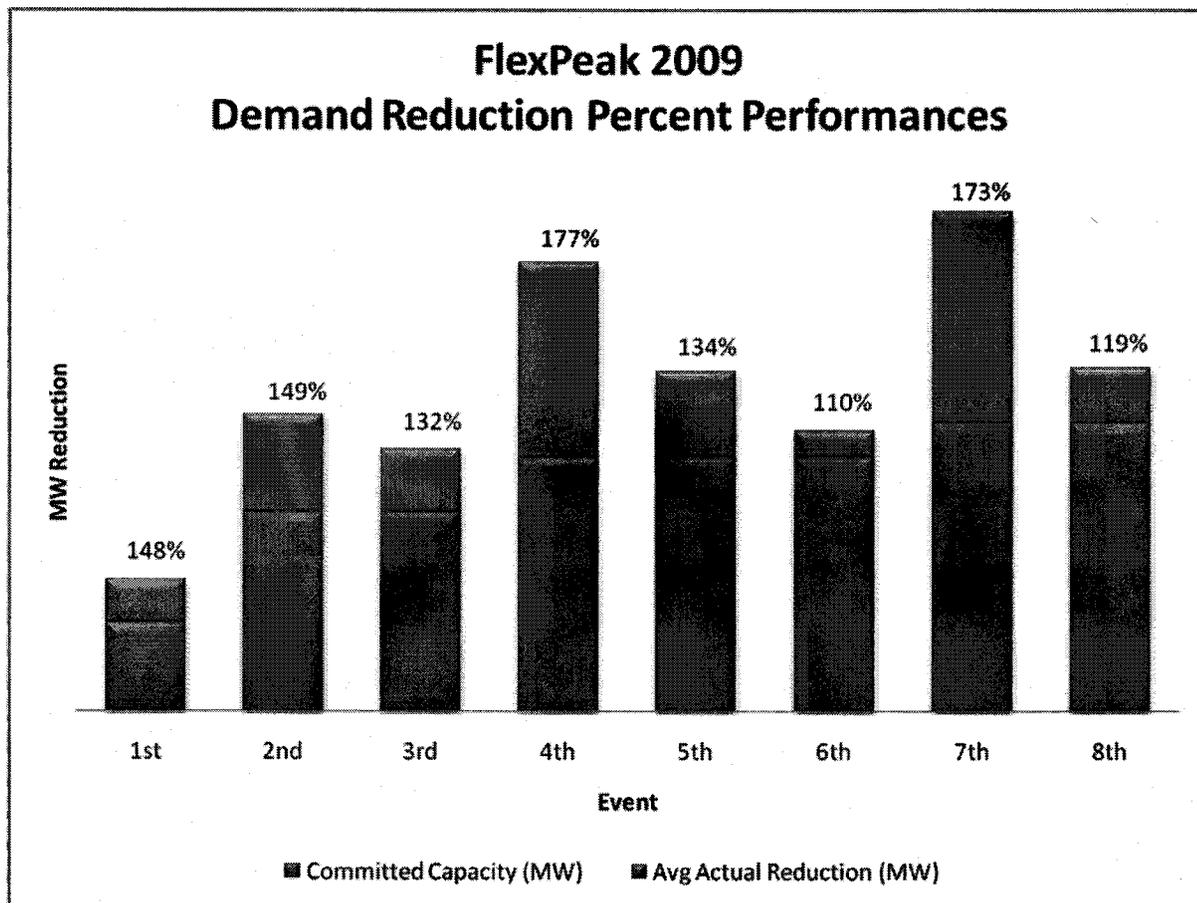
Contractually, EnerNOC has agreed to a target annual demand reduction amount for the five year contract length. Each week, EnerNOC commits a demand reduction level in megawatts (MWs) to Idaho Power that EnerNOC is obligated to meet in a demand reduction event. When Idaho Power anticipates the need for capacity, it schedules the date and time of the event and notifies EnerNOC.

Idaho Power has access to an EnerNOC web site that shows near real-time energy usage data of the aggregated load, and can continually monitor the success of the demand reduction event. Customers can also continuously monitor their demand reduction performance using their individual near real-time energy usage data available to them through the EnerNOC web site.

## 2009 Demand Reduction Event Results

During 2009, the first customers enrolled in the program in May and EnerNOC committed their initial reduction amount of 0.30 MW to Idaho Power by the second week of June. The target reduction for the season was 2 MW. By the end of the season, EnerNOC had enrolled 22 participants across 33 facility sites and had committed to a maximum weekly reduction of 15.2 MW. In July, participants achieved an actual reduction of 17.1 MW, surpassing the program target reduction by more than eight times.

Idaho Power initiated eight demand response events in July. In each case EnerNOC exceeded the committed MW reduction by the percentages shown in the table below.



## Marketing and Public Relations

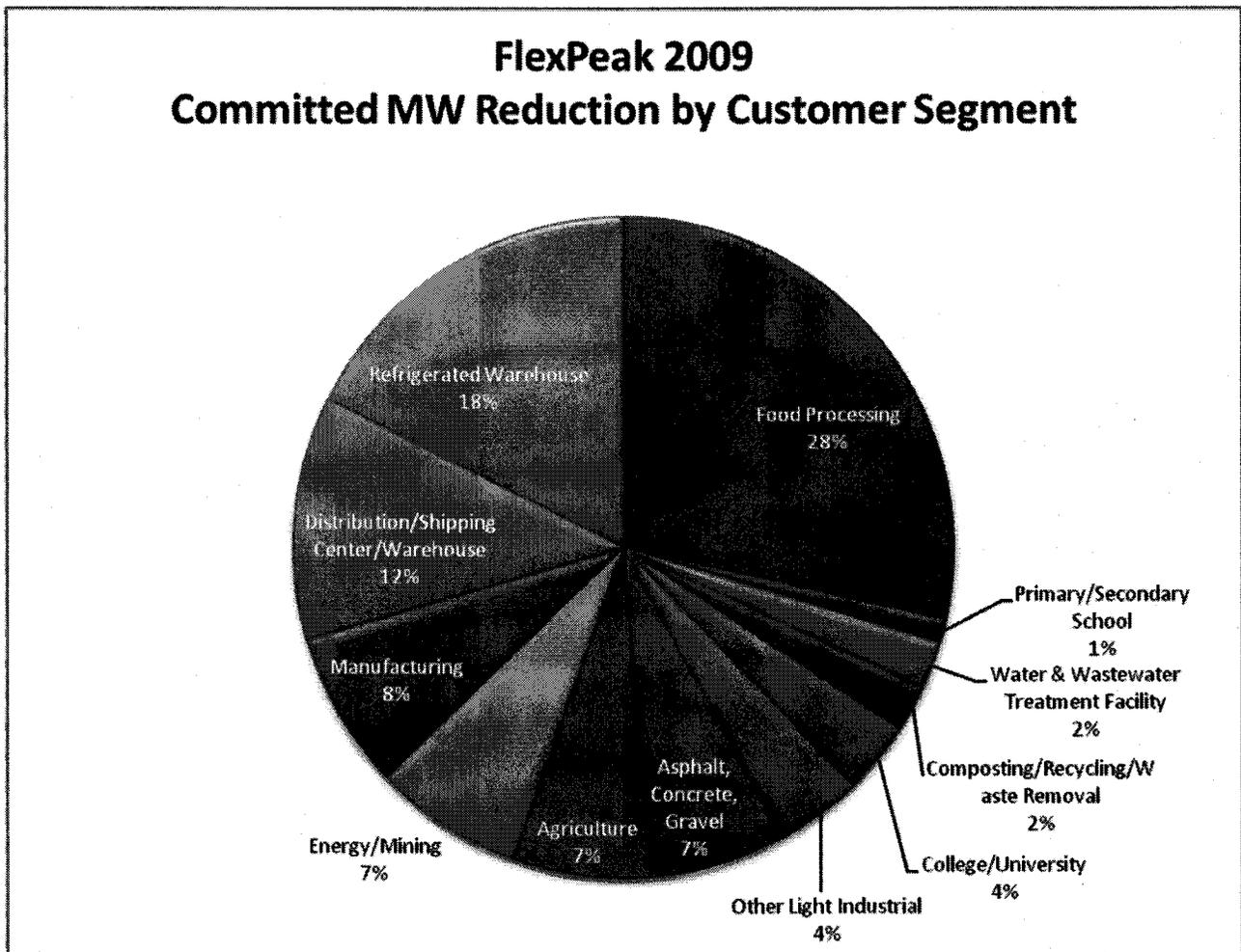
EnerNOC was responsible for the development of all marketing collateral. Idaho Power worked with EnerNOC to co-brand marketing materials, and reviewed and edited materials such as a “Frequently Asked Questions” Sheet and press releases. Idaho Power continues to work with EnerNOC on the development of a Utility Case Study, which will discuss the program development and rapid ramp-up process.

## Customer Recruitment

EnerNOC began the recruitment process by engaging customers with a demand of 500 kW and above. Idaho Power Customer Representatives contacted most of these customers prior to contact from EnerNOC in order to inform them of the program. EnerNOC employees reached out to customers first by phone, and then set up on-site meetings to determine a customer's potential for demand reduction. Idaho Power Customer Representatives often attended the on-site meetings.

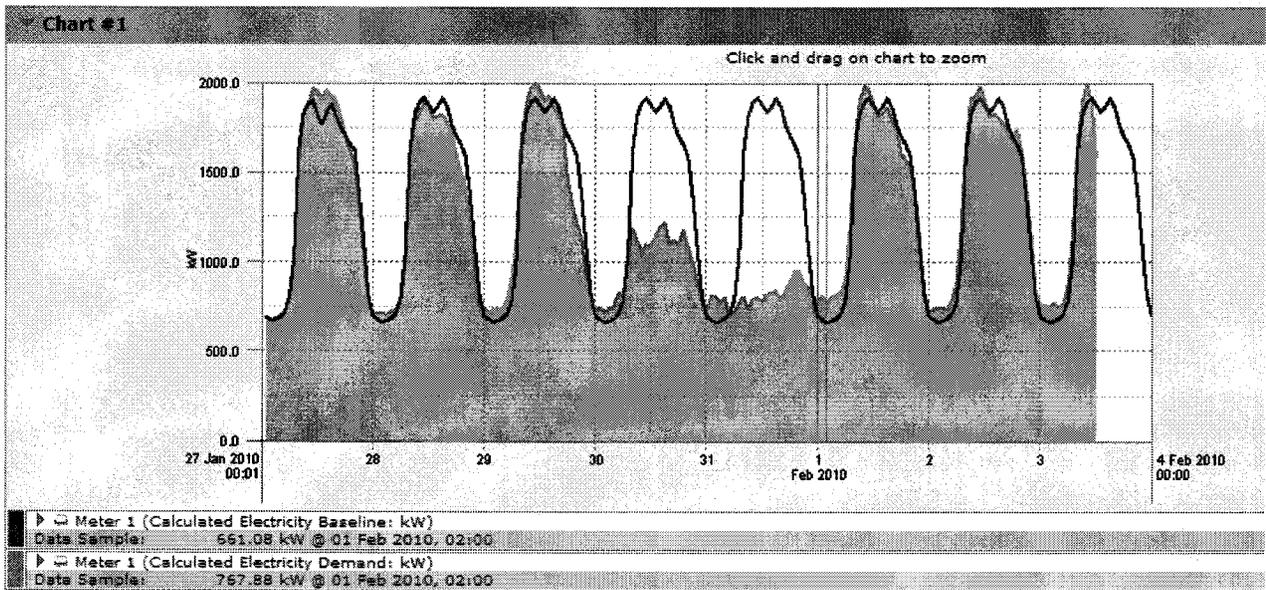
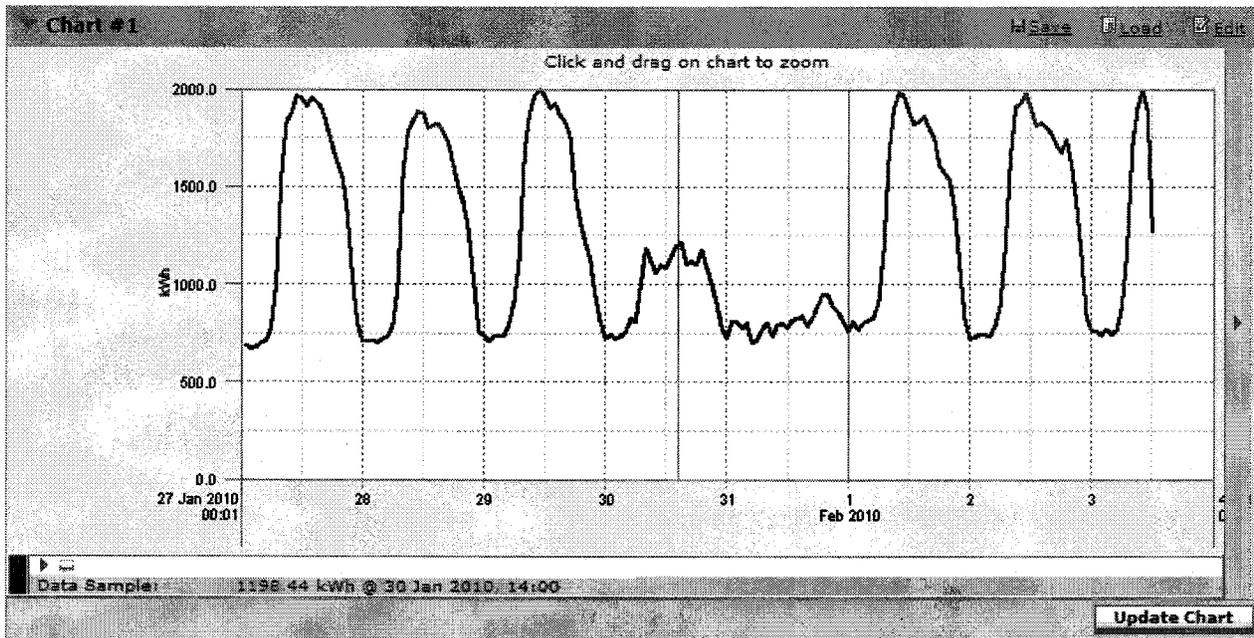
EnerNOC worked with each participant to develop a demand reduction plan that could be implemented at the site without negatively impacting the participant's business. Customers then were invited to sign a contract with EnerNOC to enroll in the program.

A breakdown of MW reduction committed by customer segment for 2009 is shown below.



## Metering

Once customers enrolled in the program by signing a contract with EnerNOC, EnerNOC submitted requests to Idaho Power to enable the customers' electric meters to transmit KYZ-pulse outputs. Some customer's meters were already enabled for pulse outputs. For each customer not receiving pulse outputs, Idaho Power metering technicians enabled the meters to transmit these outputs, and EnerNOC reimbursed Idaho Power for the associated costs. EnerNOC then installed monitoring equipment to obtain and transmit the pulse output to their servers. By using EnerNOC's proprietary software, PowerTrak, customers could then monitor their near real-time energy use on a continual basis. Below are examples of information participants can access at all times through the EnerNOC web site using their unique login and password. In these examples the reduction in energy use occurs on a Saturday and Sunday.



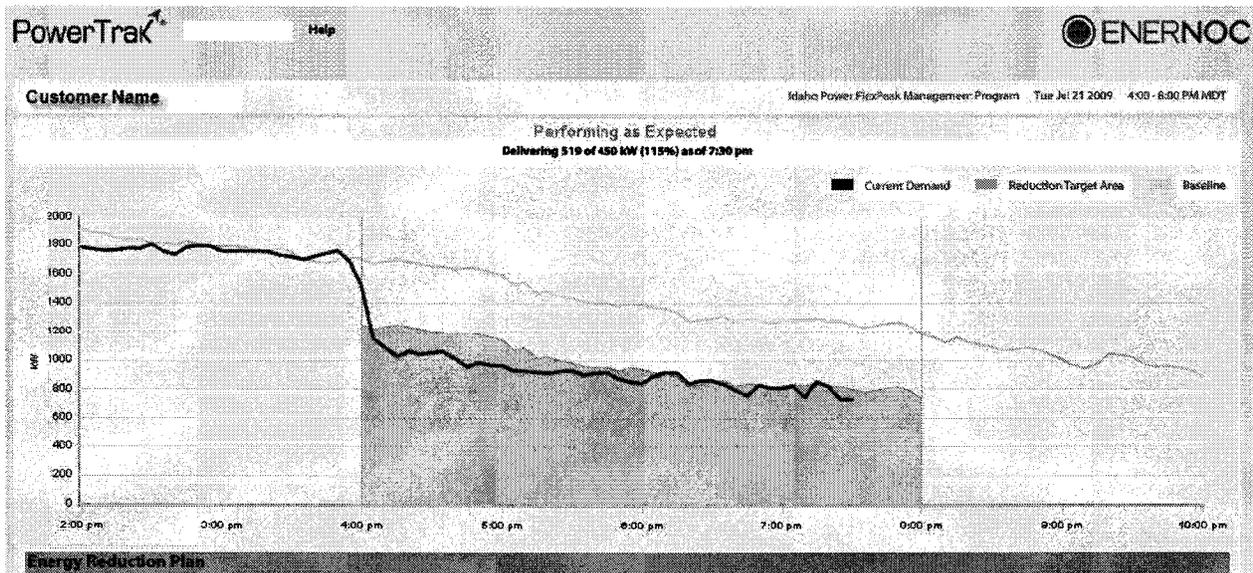
## Event Initiation

Idaho Power’s Power Supply group monitored system demand forecasts and evaluated up to date conditions in order to determine when demand reduction events would be initiated to reduce an expected peak on the system. Idaho Power sent e-mails to EnerNOC to initiate each event, and EnerNOC in turn, notified customers two hours prior to the event. In 2009, all of the demand reduction was achieved manually by the participants at their sites, with EnerNOC retaining no automatic control of the reduction processes.

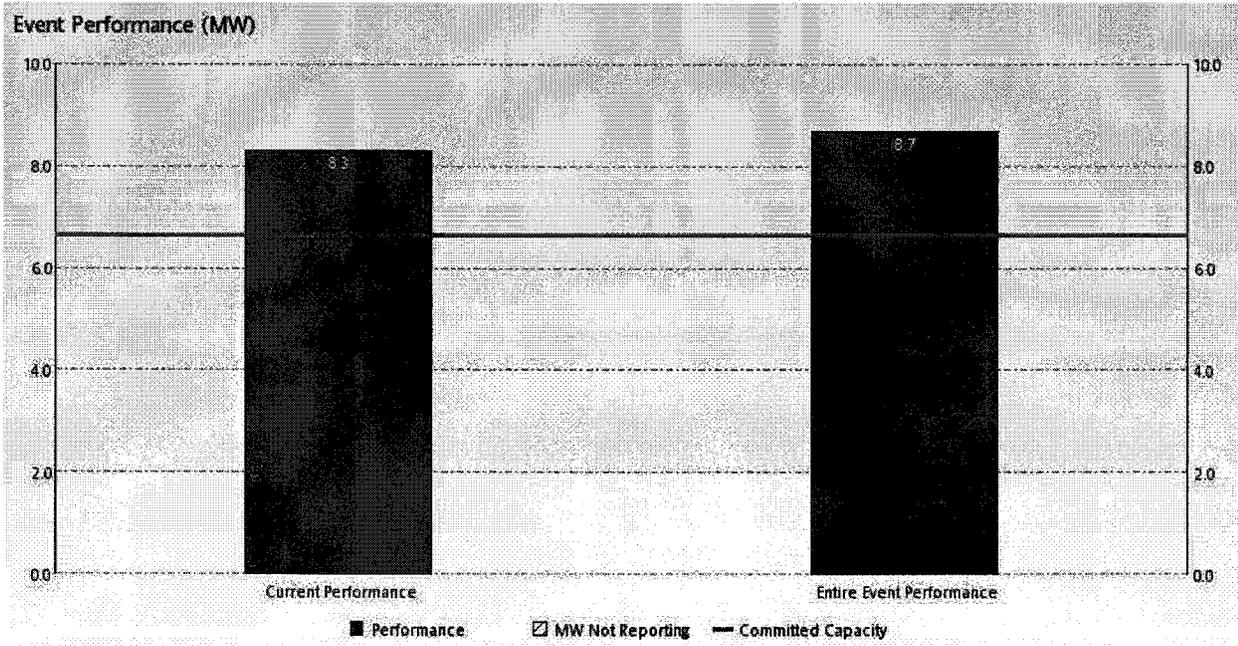
Idaho Power initiated a test event on July 7, 2009 in order to test the dispatch process and monitoring capabilities. To the participants, this event was treated as a normal demand reduction event. The next seven events in July were initiated in response to system demand needs.

## Event Monitoring

EnerNOC submitted weekly reduction commitments to Idaho Power by the Friday preceding the event week. During each event, participants had access to near real-time electric use data, which displayed their baselines and reduction commitments through EnerNOC’s web site. Below is an example of what a customer might see during a demand reduction event.



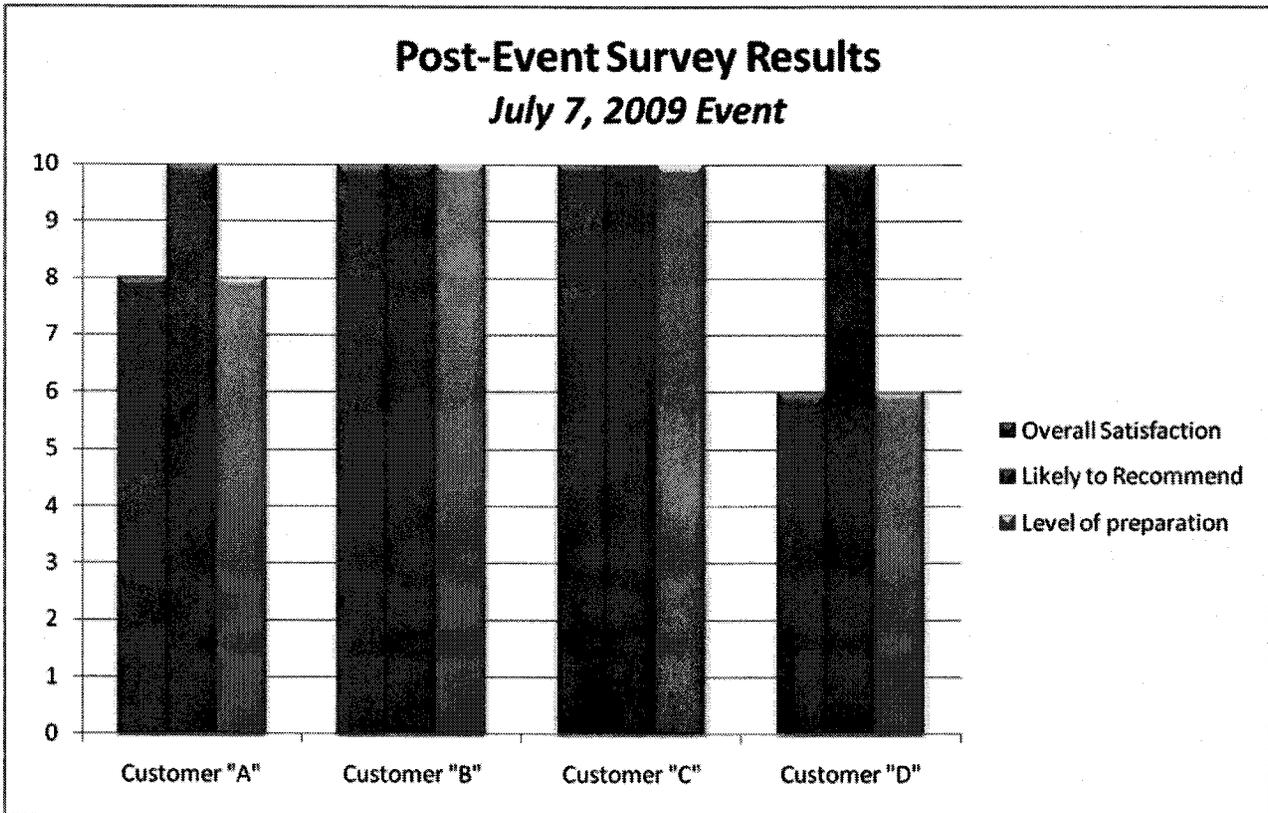
During each event Idaho Power had access to aggregate performance as shown below. The graph displays the current near real-time event performance, as well as the average performance throughout the event.



<b>Committed Capacity:</b>	<b>6.6 MW</b>	
<b>Current Performance:</b>	8.3 MW	124.9%
<b>Entire Event Performance:</b>	8.7 MW	130.6%
<b>MW Not Reporting:</b>	0.0 MW	0.0%

## Customer Satisfaction

EnerNOC conducted a post-event customer satisfaction survey after the July 7<sup>th</sup> test event, and while only a few customers were enrolled in the program at that time, results were positive. Six customers were enrolled across 10 sites for this event. Of the 19 contacts made, 4 responded to the survey, for a response rate of 21%. On a scale of 1 to 10, 10 being the most prepared, the average level of preparedness was 8.5. On a scale of 1 to 10, 10 being the most satisfied, the average level of overall satisfaction was 8.5. On a scale of 1 to 10, 10 being the most likely to recommend, all four customers were at a 10. Results are shown below.



Three of the four customers said the level of difficulty in the reduction plan was about what they expected, and the fourth said it was easier than expected. One general comment was submitted, requesting more advanced notice.

EnerNOC plans to conduct a 2009 post-season survey within the first quarter of 2010. Results of the survey will be made available to Idaho Power.

All 22 customers who enrolled and participated in the 2009 season are enrolled to participate in 2010.

## Payment Reconciliation

EnerNOC invoiced Idaho Power on a monthly basis. Invoices consist of both a capacity payment component, based on the amount of reduction available during active program times, and an energy payment component, based on measured reductions during each event. In June and August, there were no demand reduction events, so charges were based on a simple capacity payment calculation using EnerNOC weekly reduction commitments. During the month of July, in which eight demand reduction events were called, billed amounts had an energy component and a capacity component which were both based on actual participant reductions.

The overall demand reduction was determined by totaling the demand reduction of each participating facility. The demand reduction of each participating facility was determined by subtracting their actual use from a calculated baseline. The baseline in a demand reduction program is used to measure response and establish appropriate compensation for program participants. It estimates what would have happened on an event day, absent the demand reduction event, which then allows Idaho Power to determine how much load was reduced as a result of the program. Specifically, a baseline is calculated by selecting the three highest load days of the preceding ten non-event business days. A “day-of-adjustment” is then applied to the baseline to shift or scale the baseline based on electricity usage in the hours prior to an event so that electricity usage predicted by the baseline most closely matches actual electricity usage on the day of an event (absent any demand reduction program response). These adjustments are used to account for the impact that temperature has on a participant’s expected load. Without this adjustment, the baseline could underestimate expected electricity usage on the event day.

EnerNOC provided customer baseline and reduction data to Idaho Power with the July invoice, and Idaho Power worked in parallel, using the actual five minute interval data received from EnerNOC to determine baselines and reductions independently. Where there were discrepancies, the two companies worked together to determine the cause and correct any mistakes. Discrepancies were due to a misinterpretation of the day-of-adjustment calculation and a misunderstanding as to whether or not past event days would be included in the baseline. At the end of the reconciliation process, both companies agreed upon the individual reductions and composite reductions for each event.

## Cost-Effectiveness

In the initial cost-effectiveness analysis, Idaho Power estimated that the commercial demand response program would be cost-effective, both from the Utility Cost (UC) and Total Resource Cost (TRC) perspectives, beginning in year two (2010). Year one of the program was viewed as a ramp up year. It was projected that the TRC benefit-cost (b/c) ratio in year one would fall below 1.0, but that building the program foundation would contribute to a cost-effective program in ensuing years.

EnerNOC's initial goal was to achieve 2 MW of demand reduction, and the cost-effectiveness analysis indicated that under normal circumstances the program must reach 15 MW for the value in demand savings to be greater than program costs and for the program to be cost-effective.

However, after determining actual expenses and MW demand reductions achieved in 2009, the program was cost-effective in its first year. Lower expenses and higher demand reduction contributed to the program's cost-effectiveness in year one. Following are some of the reasons:

- Program administration costs were one-third of what was originally projected.
- Despite the late start, EnerNOC experienced a higher participation rate than what was originally expected. This resulted in higher demand reductions than were assumed in the original cost-effectiveness analysis.
- Most notably, the assumption in the cost-effectiveness analysis was that EnerNOC would achieve the exact MW demand reduction they committed to provide to Idaho Power. In actuality, EnerNOC achieved a much greater reduction than the committed MW reduction.

The actual TRC b/c ratio in 2009 was 1.60, and not the 0.51 originally predicted, as shown below.

<i>2009 FlexPeak Management Cost Effectiveness</i>		
	MW Reduction	TRC Ratio
Projected	2	0.51
Actual	11.1	1.60

The actual cost of the program in 2009 was \$528,681. In the remaining years of the contract, the program is expected to be cost-effective with a projected contract life b/c ratio of 1.11 from the TRC perspective.

## **Conclusion**

Given the speed with which FlexPeak Management was implemented and given demand reduction results that far exceeded expectations, Idaho Power considers 2009 to be an extremely successful year. Not only was the company able to offer customers a quality program with multiple benefits, but FlexPeak Management's contribution to Idaho Power's system peak reduction was more than eight times the original forecast capacity of the program. Going forward, Idaho Power will continue to evaluate the best use of the program in order to meet the program objectives. Results will be reported annually in the Demand Side Management Annual Report.