Smart Energy Pricing (SEP) Pilot
EEI Eforum on Dynamic Pricing Pilots

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BGE
A Constellation Energy Company

AMI/SEP Program Regulatory History

On January 23, 2007, BGE first filed a proposal for an AMI pilot with the Maryland Public Service Commission

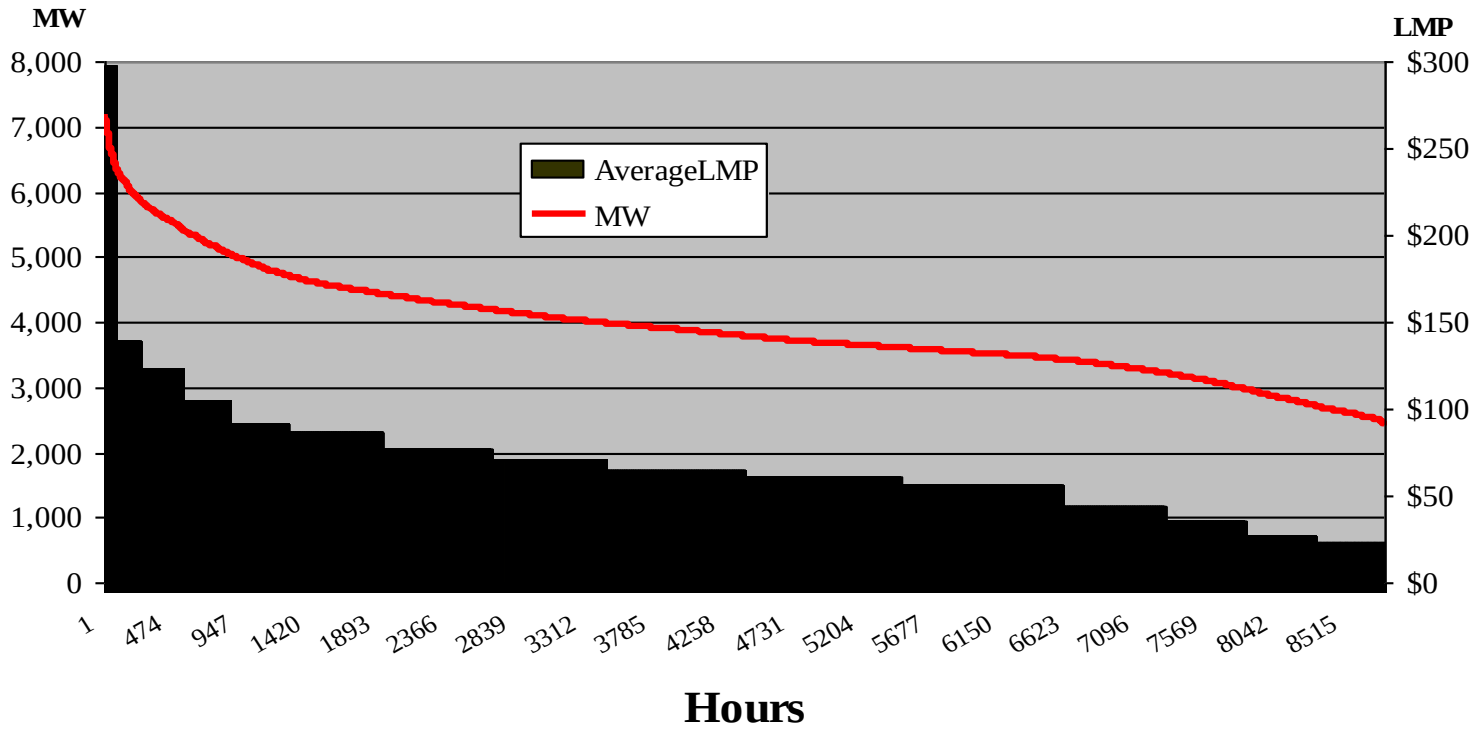
On April 13, 2007, the Commission conditionally accepted BGE's proposed AMI pilot. The Commission's approval was contingent upon "BGE developing and proposing a comprehensive pilot, inclusive of a viable critical peak pricing pilot component to gather statistically significant, measurable and meaningful information as to the potential positive effect of AMI on reducing peak system demand."

On March 31, 2008, BGE filed with the Commission its residential Smart Energy Pricing pilot proposal pursuant to the April 13, 2007 order

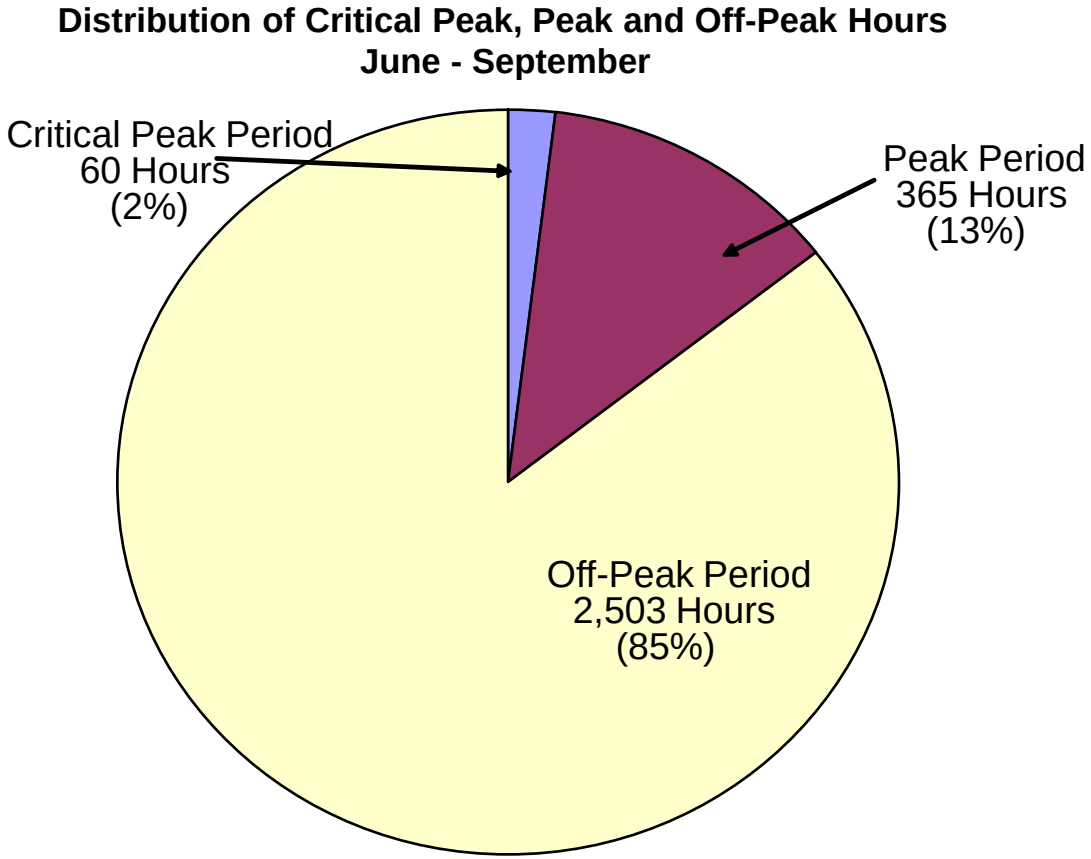
The Commission approved the Smart Energy Pricing pilot on April 23, 2008

BGE has been working with the Ahmad Faruqui from the Brattle Group to design and evaluate the results of our SEP pilot.

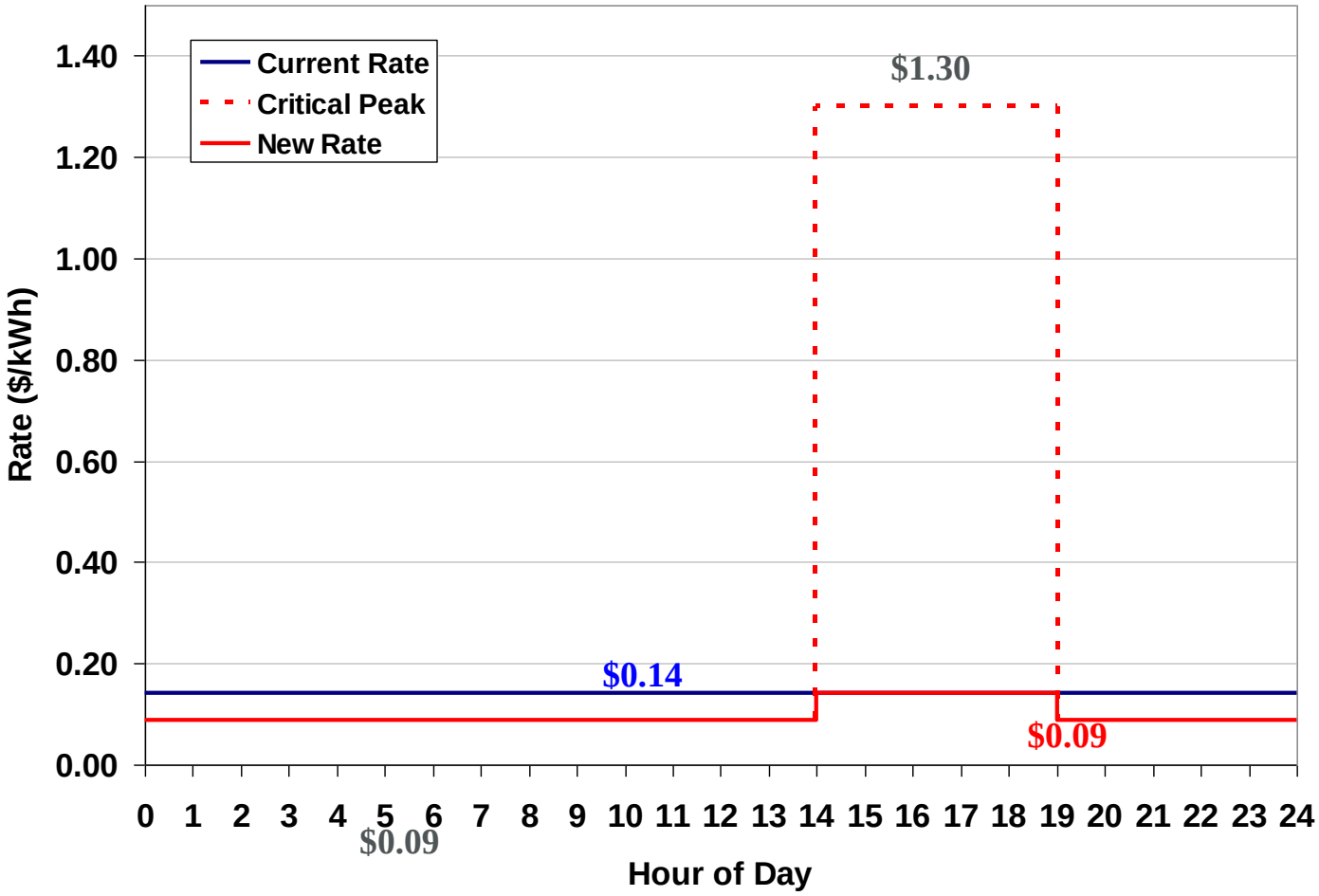
Controlling loads for just 60 hours per year can have a dramatic impact on capacity needs and prices…



Distribution of Summer Hours



Dynamic Peak Pricing - Overview



Pilot Pricing
All – in Rate*

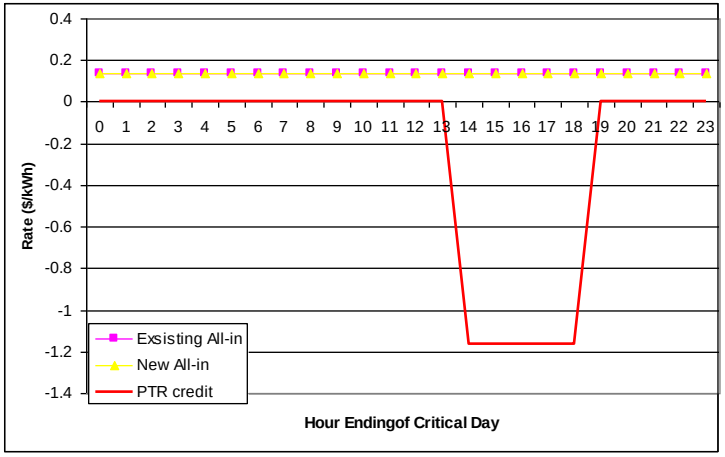
Critical	$1.30425
Peak	$0.14425
Off-Peak	$0.09425

*** Includes generation, transmission and delivery**

Peak Time Rebate - Overview

A Mirror Image of the DPP Rate

- Schedule R summer rates are $0.14 / kWh for all summer hours
- Up to 12 critical peak days will be called by 6 p.m. the prior day
- Customers who use less during the critical period (2 – 7 p.m.) on any critical peak day will receive a rebate. Two levels being tested:
  - $1.75/kWh
  - $1.16/kWh



Smart Energy Pricing Pilot Design

Group	Total	PTR Low Rebate	PTR High Rebate	Dynamic Peak Pricing	Control Group
Without Enabling Technology	675	125	125	125	300
With Orb Technology	250	125	125	0	0
With Orb and AC Switch Technologies	375	125	125	125	0
Total	1300	375	375	250	300

BGE's SEP Pilot: 1,300 accounts, a statistically significant sample

Energy Orb Device for Signaling CP Event

- Frosted glass ball with wireless chipset, microcontroller, LED lights
- Plugs into an AC outlet

When a CP event is declared

- the Orb will begin to pulse slowly
- email, voicemail, and text messages are sent

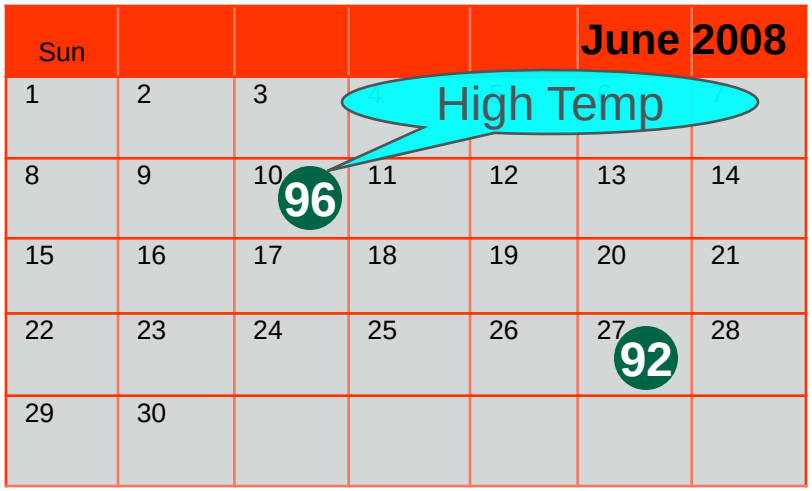
For DPP the Orb is

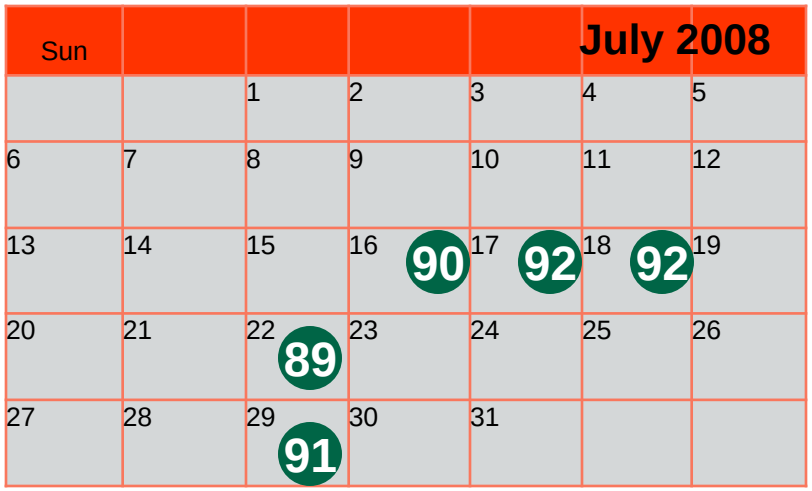
- green off-peak
- yellow during peak periods
- red during critical peak events

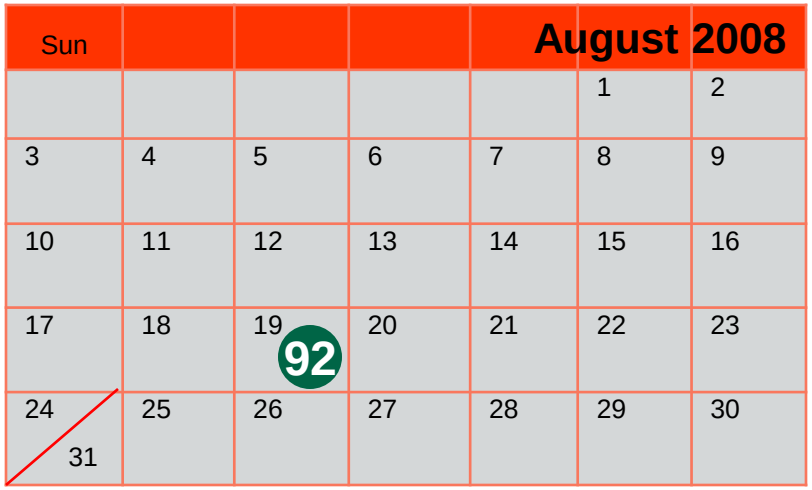
For PTR the Orb is

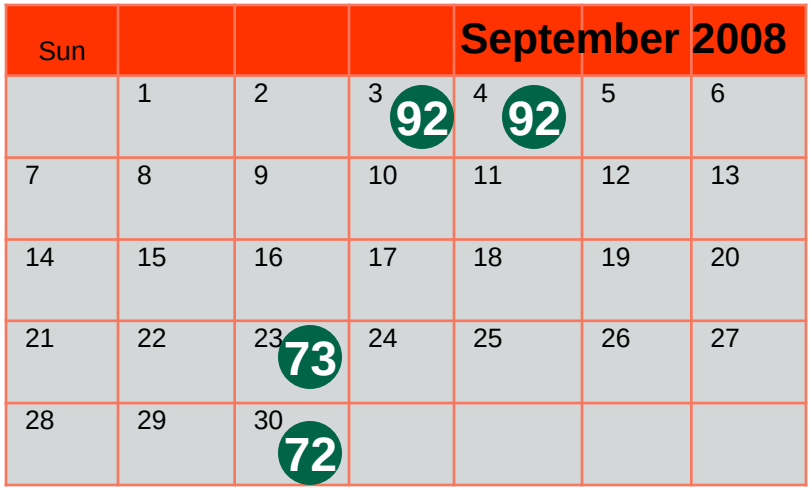
- green off-peak
- red during critical peak events

Smart Energy Pricing 2008 Critical Events

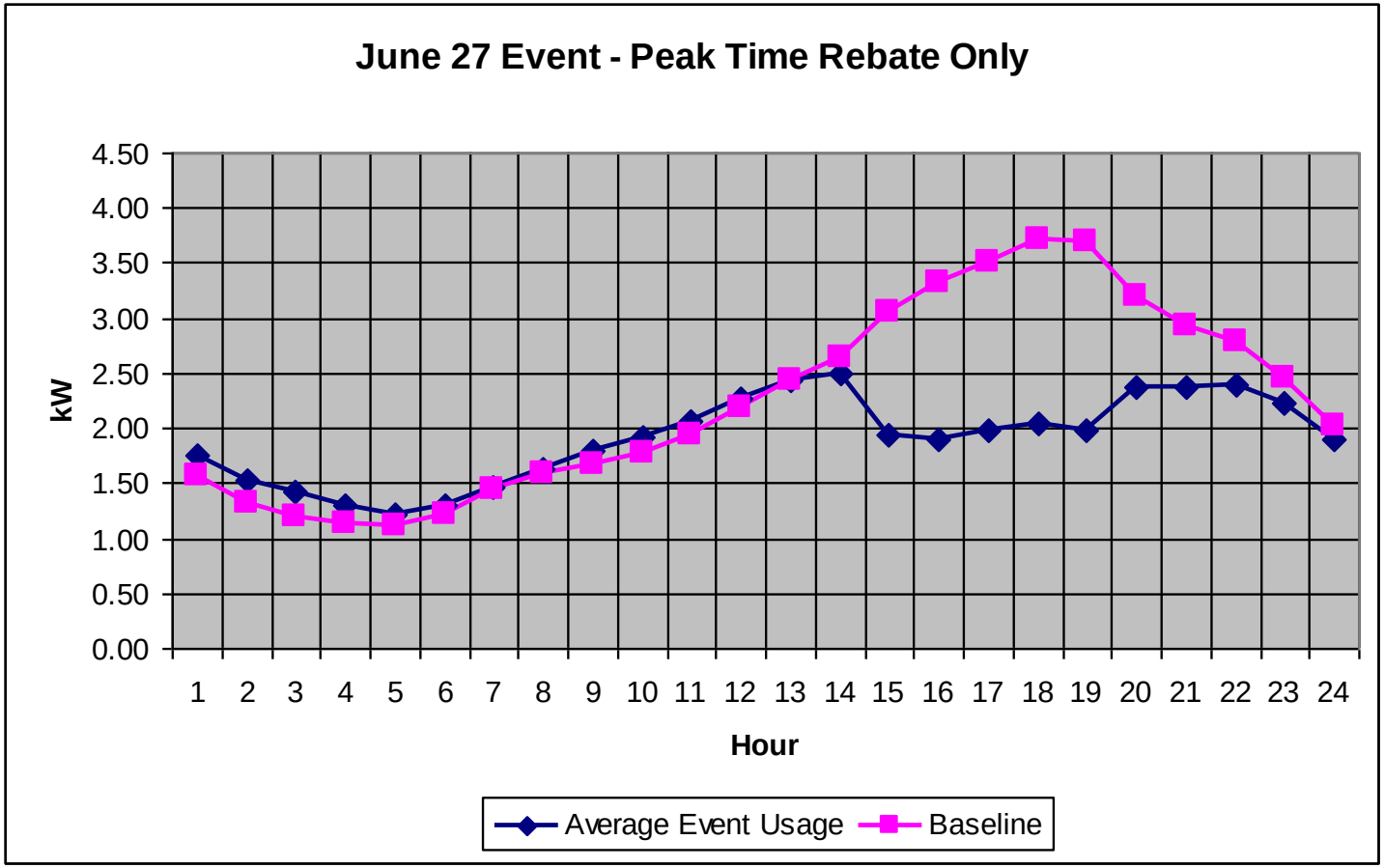








Average Customer Usage during a Critical Peak Event in June…

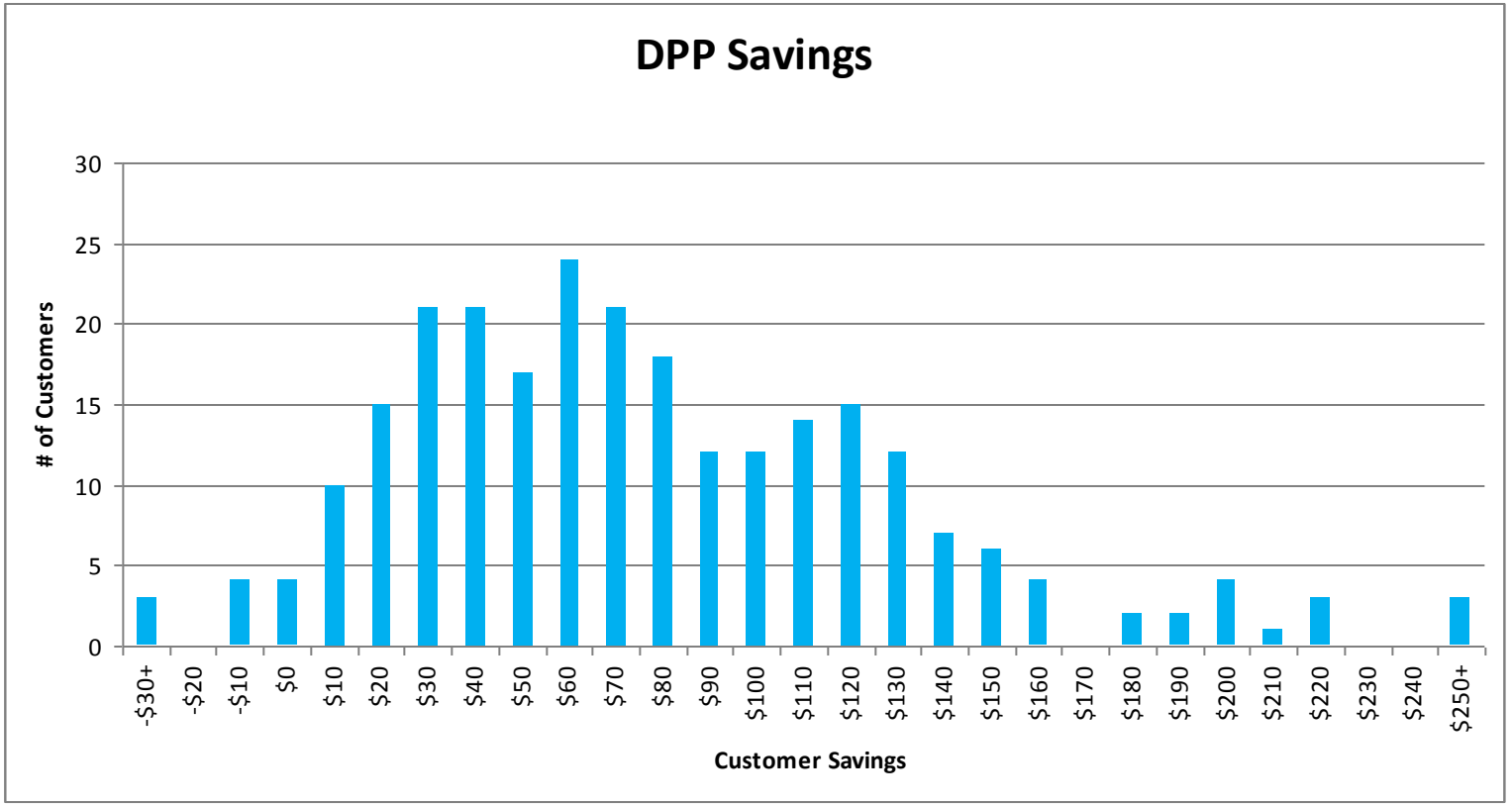


SEP – Preliminary Analysis of Average Load Reductions Over 5 hour Critical Period for First 7 of 12 Events

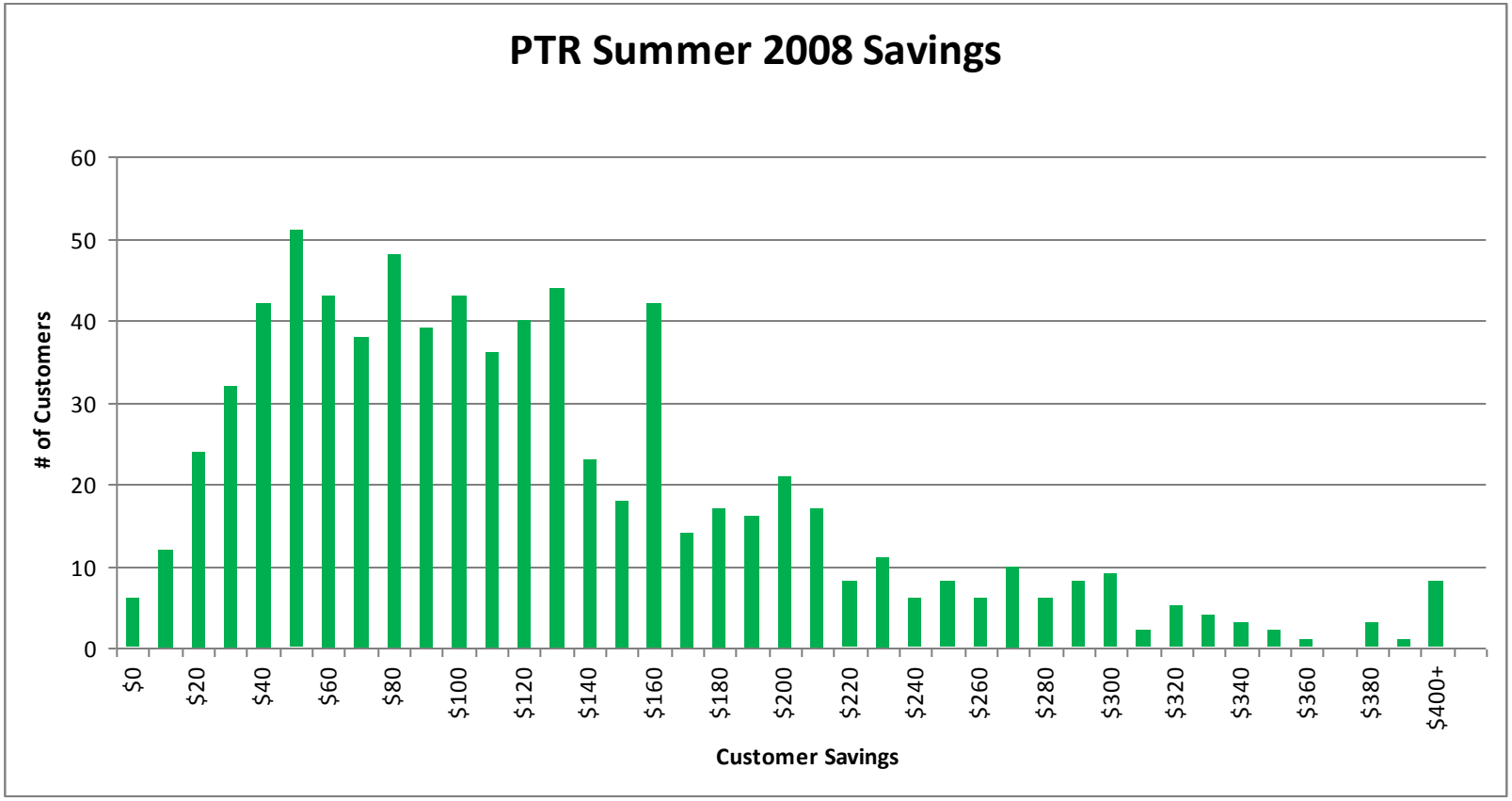
Program	Baseline Average Usage during CPP Period	Average Peak Reduction during CPP Period	
	kWh/hour	%	kWh/hour
DPP	3.13	-19.14%	-0.60
DPP_ET_ORB	3.13	-32.87%	-1.03
PTRL	3.13	-16.97%	-0.53
PTRL_ORB	3.13	-22.86%	-0.72
PTRL_ET_ORB	3.13	-28.95%	-0.91
PTRH	3.13	-19.85%	-0.62
PTRH_ORB	3.13	-26.53%	-0.83
PTRH_ET_ORB	3.13	-33.35%	-1.04

DPP = Dynamic Peak Pricing, **PTRL** = Peak Time Rebate Low ($1.16), **PTRH** = Peak Time Rebate High ($1.75), **ORB** = Customer Group that had an Orb only, **ET_ORB** = Customer Group that had Orb and Smart Switch

Distribution of DPP Customer Savings in Summer 2008



Distribution of PTR Customer Savings in Summer 2008



Value of Demand Response in PJM

- BGE will monetize the energy reductions and the peak load reductions in the PJM markets
  - Value of energy reductions will be realized in the day-ahead and/or real-time energy market
  - Value of peak load reductions will be realized in the Reliability Pricing Model (RPM)
- Energy value will be based on Locational Marginal Price (LMP) during the critical events
- Peak load value will be based on the cleared unforced capacity price in the Base Residual Auctions and the Incremental Auctions