

# Evaluation of Historical and Proposed Alert and EECP Pricing

True North Associates



# Evaluate Impact of Proposed Compromise Solution

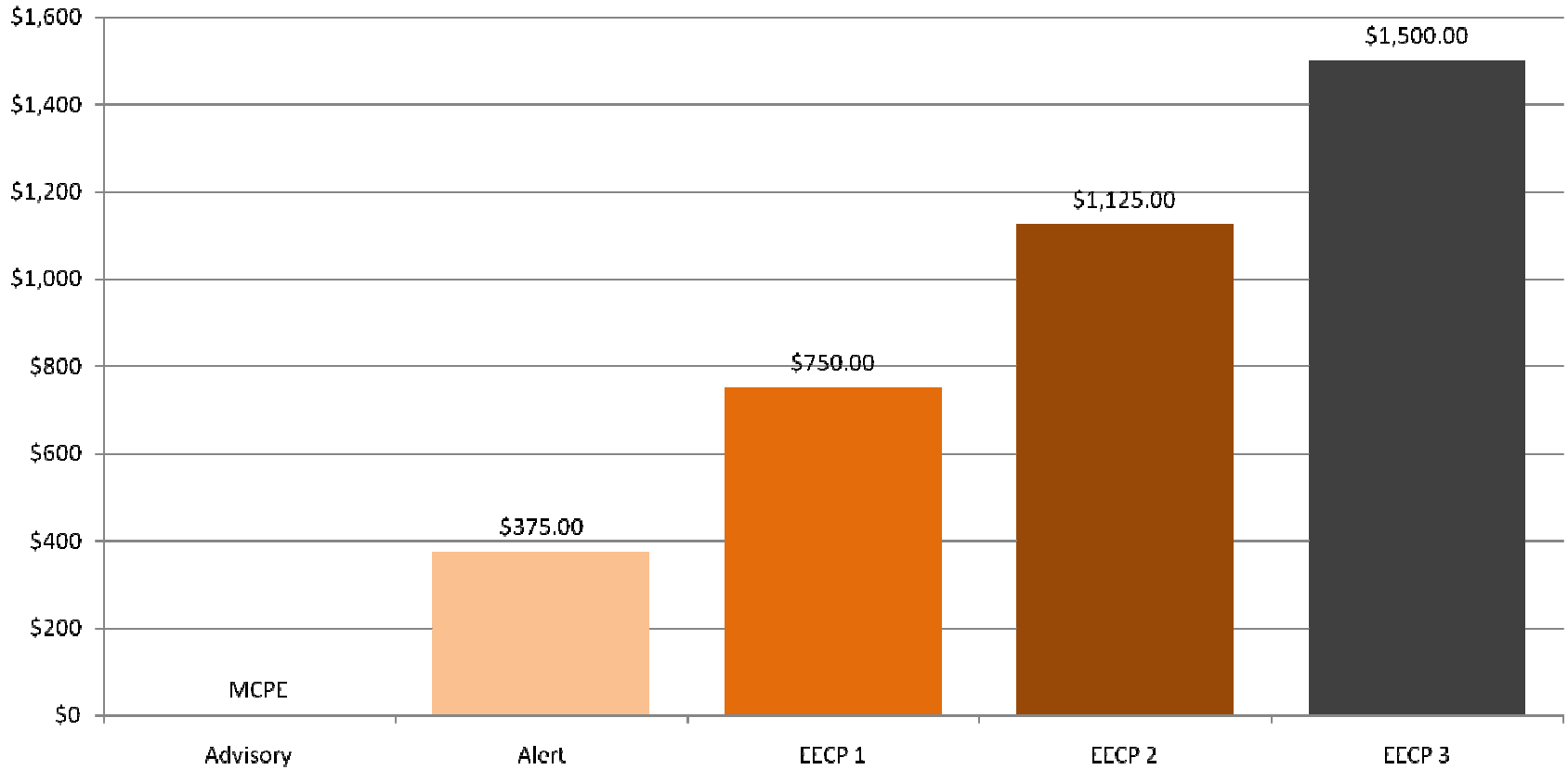
- Administratively set Alert and EECP Pricing Floors extending up to Market Maximum Clearing Price (HCAP)
  - Changes to Service Cost
  - Ability to offer a true ‘Long-Term Solution” within the context of risk management decisions affecting capital investment

	Advisory	Alert	EECP
	<3,000 MW / 59.9 Hz.	<2,500 MW / 59.8 Hz.	<2,300 MW / 59.7 Hz.
2006	2093	226	19
2007	3468	727	23
Total Intervals	5561	953	42
Proposed Pricing	BES MCPE	Greater of 25% HCAP or BES MCPE	<u>Step 1:</u> 50% HCAP or BES MCPE <u>Step 2:</u> 75% HCAP or BES MCPE <u>Step 3:</u> 100% HCAP

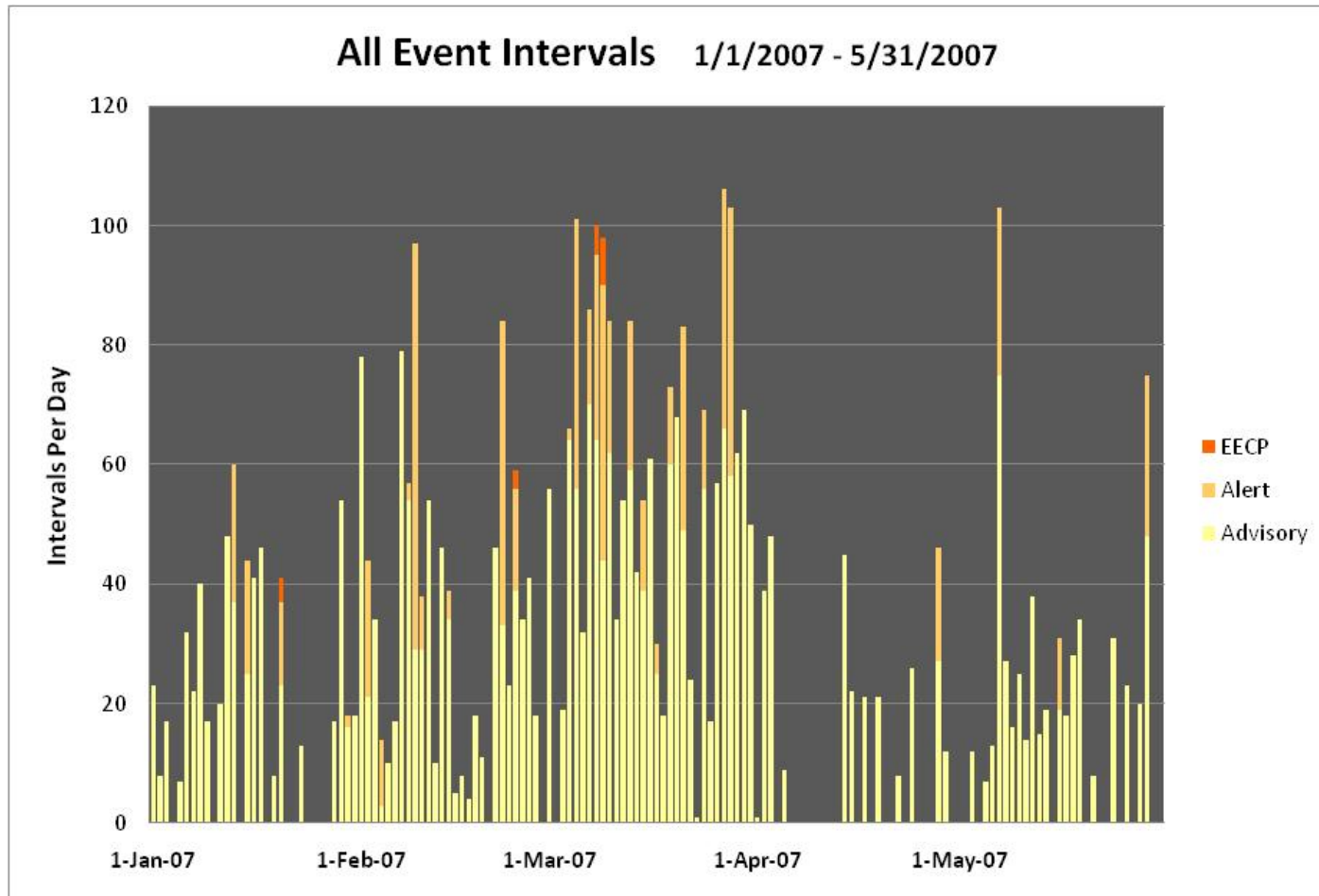


# Compromise Pricing Ramp

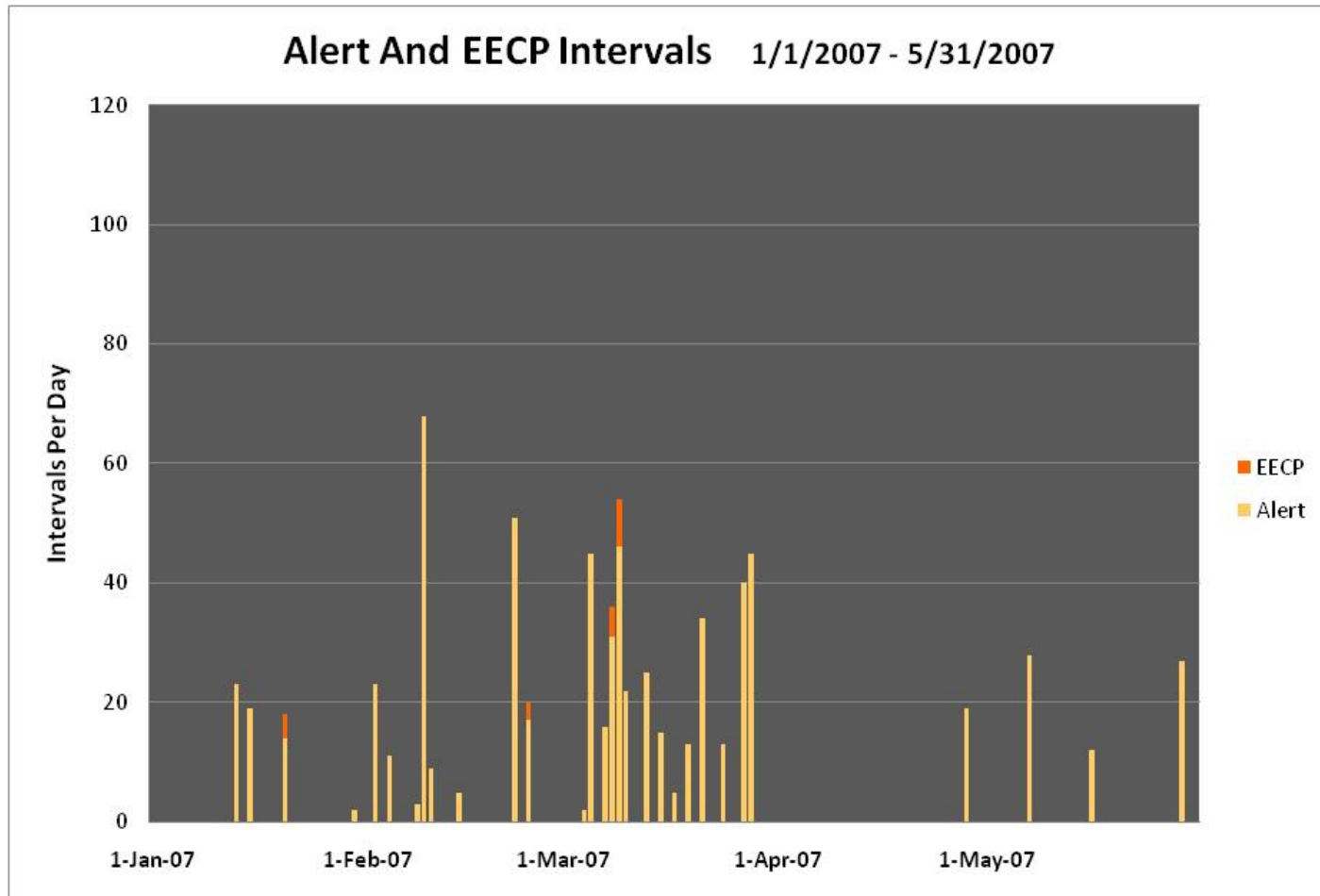
Compromise Proposal BES Pricing, \$/MWh



# Affected Intervals



# Intervals Considered



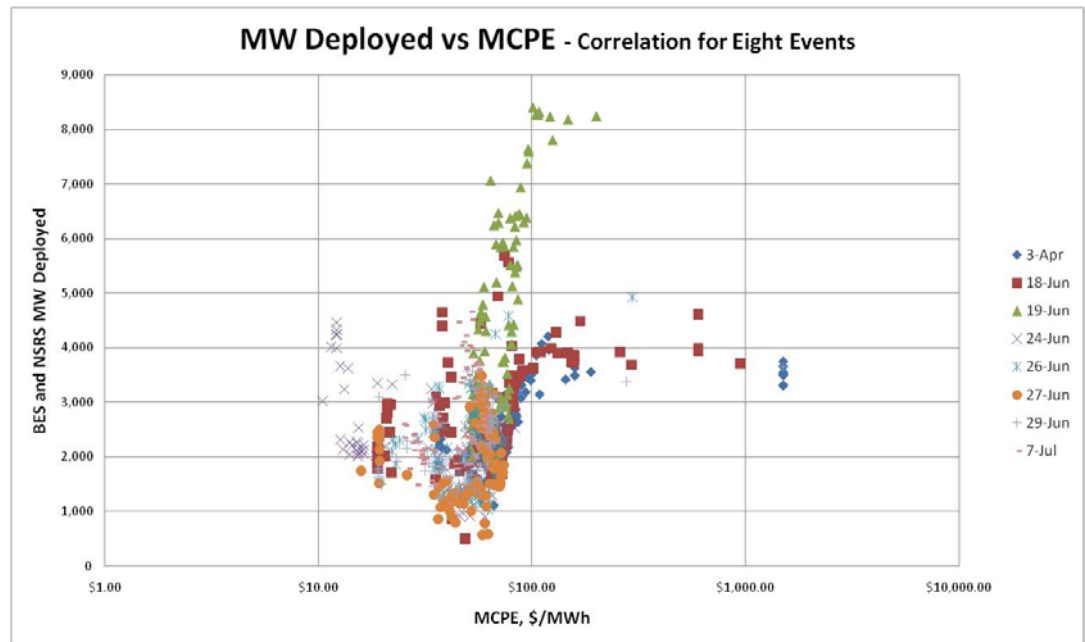
# Approach

Examine BES database and evaluate eight Events between April 3 and July 7, 2007 identified by LTSTF members

Identify interval MCPE and MW conditions during Events

Recalculate BES costs under Alert and EECF conditions per alternative 'Compromise Proposal' framework

Determine change in Event costs for BES and NSRS



# Converting Energy To Revenue

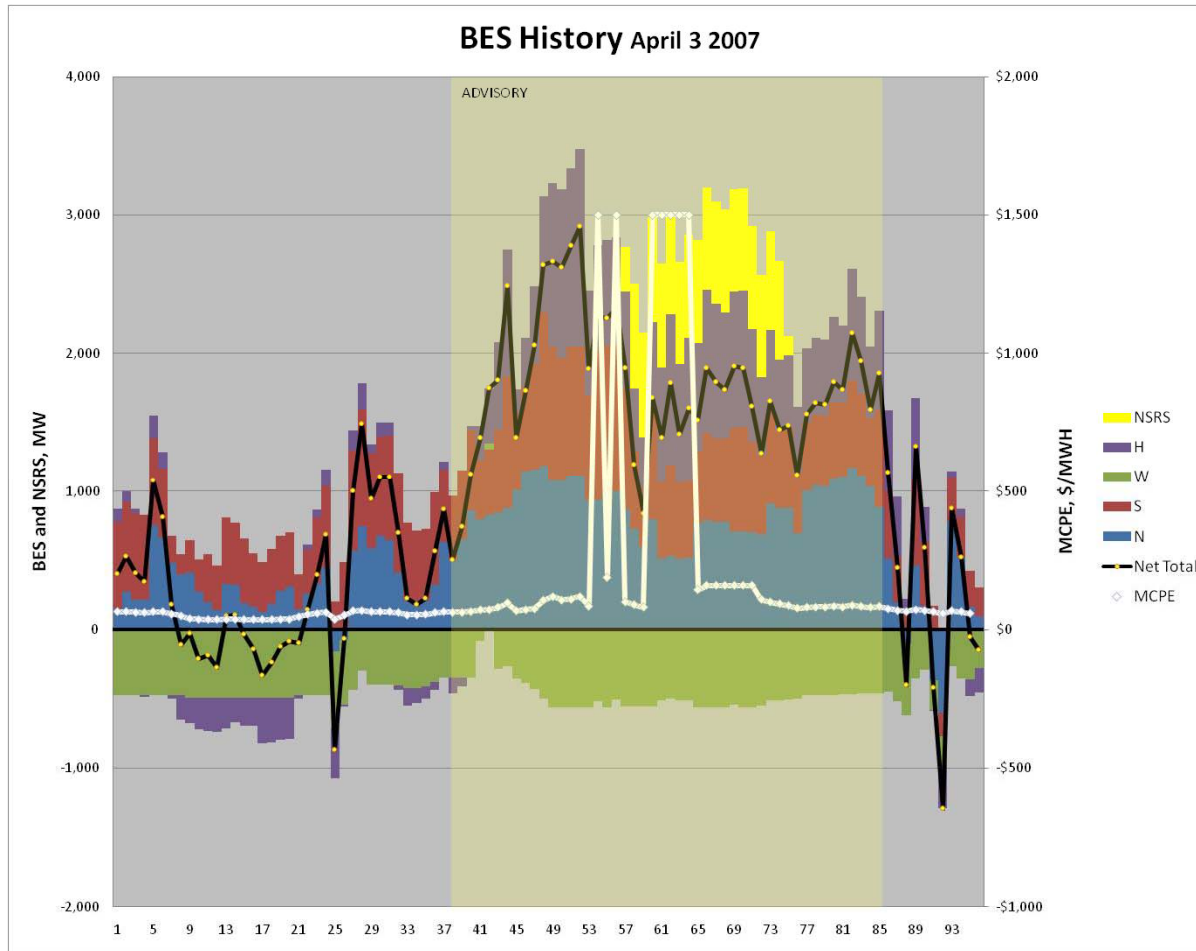
- Procedures and archival data contained in ERCOT BES Spreadsheets
  - Total BES Cost based on UBES and DBES resource deployments in N, S, W, and Houston zones
  - BES Costs calculated at each interval as:  
 $MW_i * 0.25 \text{ Hour/Interval} * MCPE, \$/MWh_i$  or  
 $\$Compromise \text{ Plan}/MWh$
  - Compromise Plan pricing logic utilized in computing revised total cost
    - Interval Price set to Greater of MCPE and Compromise Proposal Values
    - Compromise Pricing for Stages 2 and 3 EECF not considered





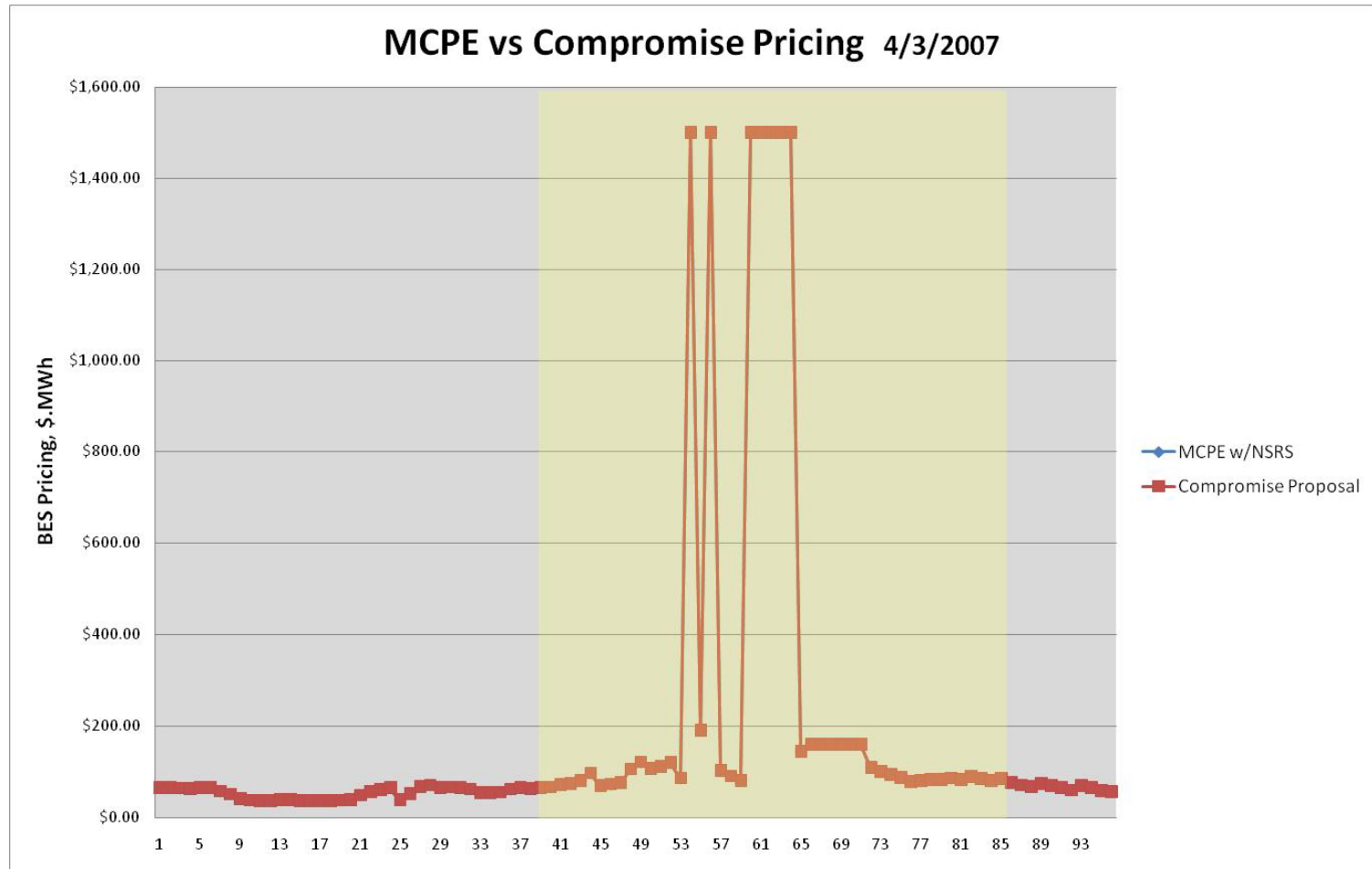


# April 3, 2007



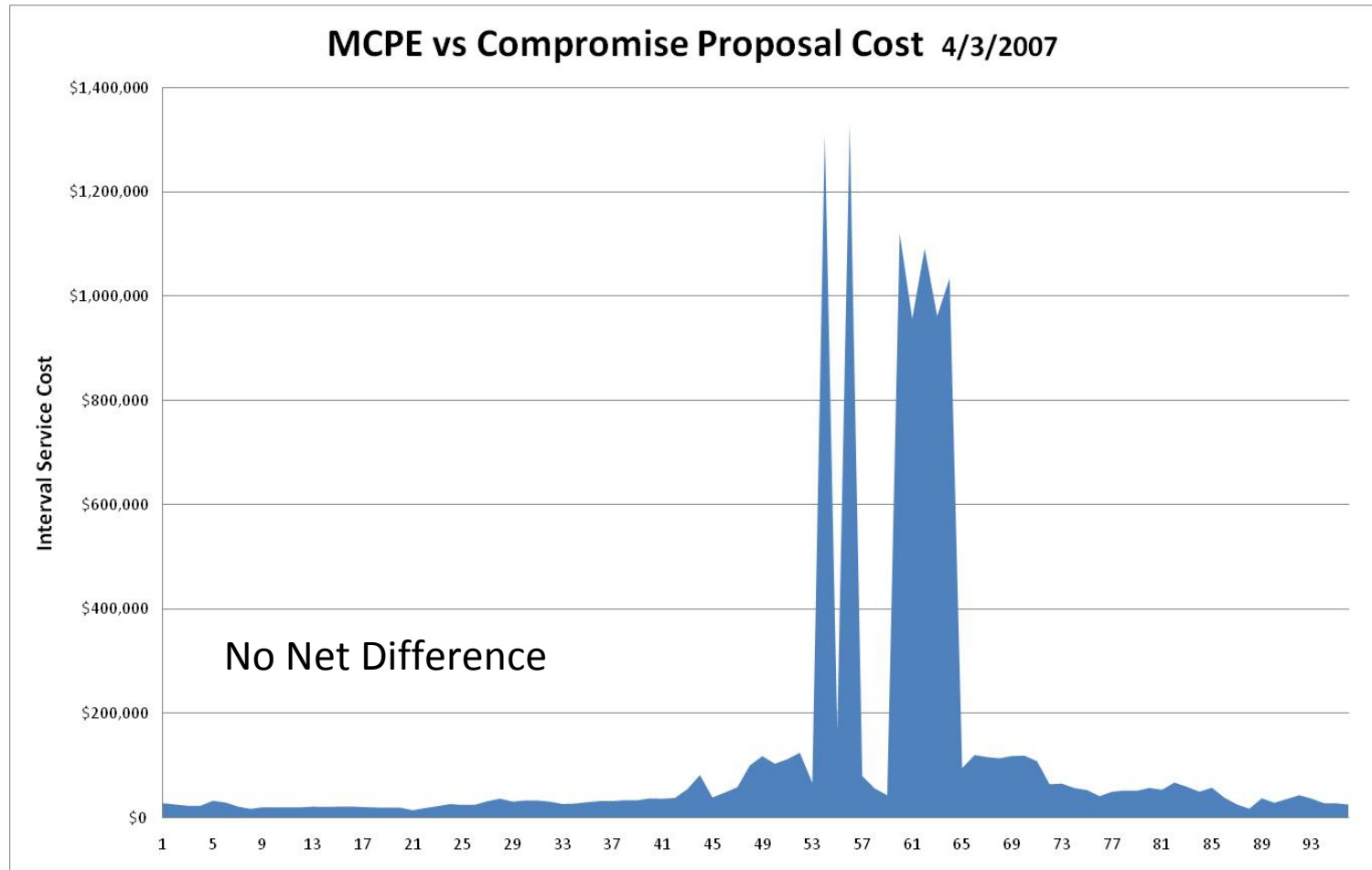
# Pricing Comparison

## 4/3/2007



# BES Cost Comparison

## 4/3/2007



# June 18, 2007

Balancing Energy Information for June 18-Jun-07

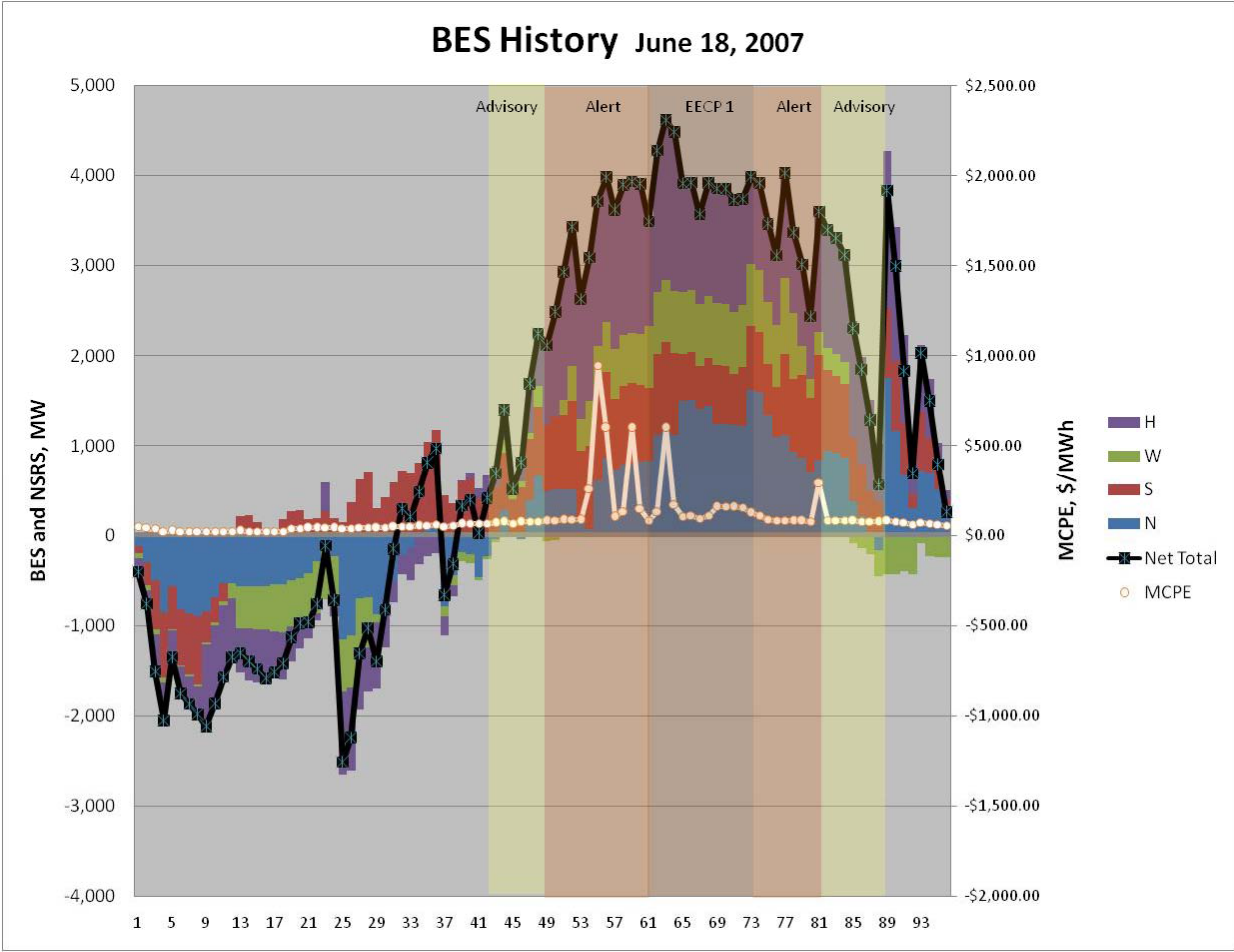
Interval Ending	MCPCE Results					BES Deployments										BES Cost (\$)										Trading Hub Prices						NSRS							
	Price					DSES MW					BSW MW					Net BES MW (UBES - DSES)					Net BES (\$/MWh) x MCPCE					ALL ZONES						Trading Hub Prices						NSRS	
	N	S	W	H		N	S	W	H	N	S	W	H	N	S	W	H	N	S	W	H	N	S	W	H	N	S	W	H	Hub Average	Bus Average	NSRS Deployed	Total UBS/B	UBES Awarded					
18-Jun-07	N	S	W	H		N	S	W	H	N	S	W	H	N	S	W	H	N	S	W	H	N	S	W	H	N	S	W	H										
0:15	548.78	548.78	548.78	548.78		128	128	128	128	0	0	0	0	128	75	52	35	13	400	215	52	35	76	51	560.88	559.84	559.84	559.84	548.78	548.78	548.78	548.78	548.78	548.78	3,717	1	1		

Intervals

Advisory  
Alert  
Stage 1 EECF

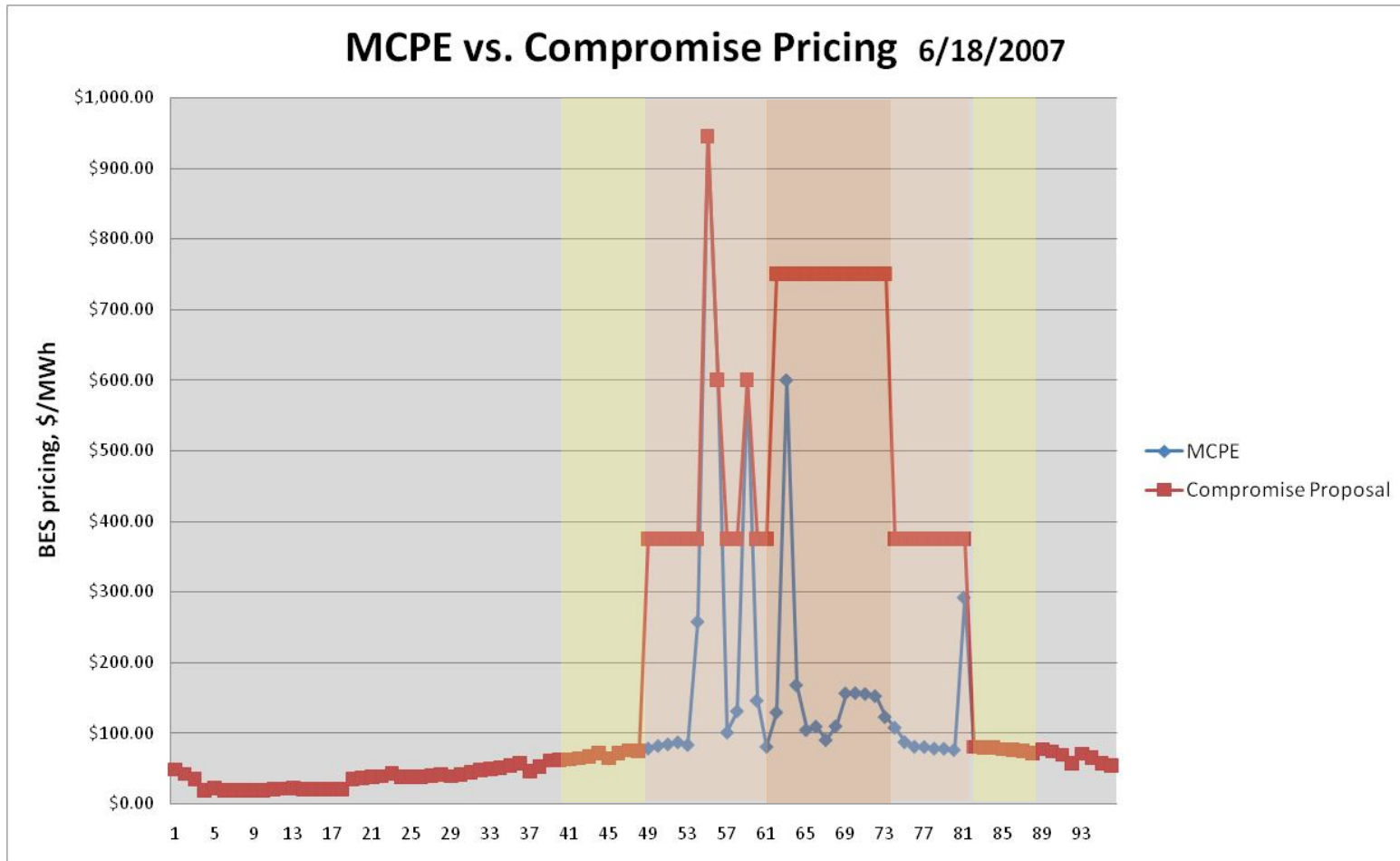


# June 18, 2007



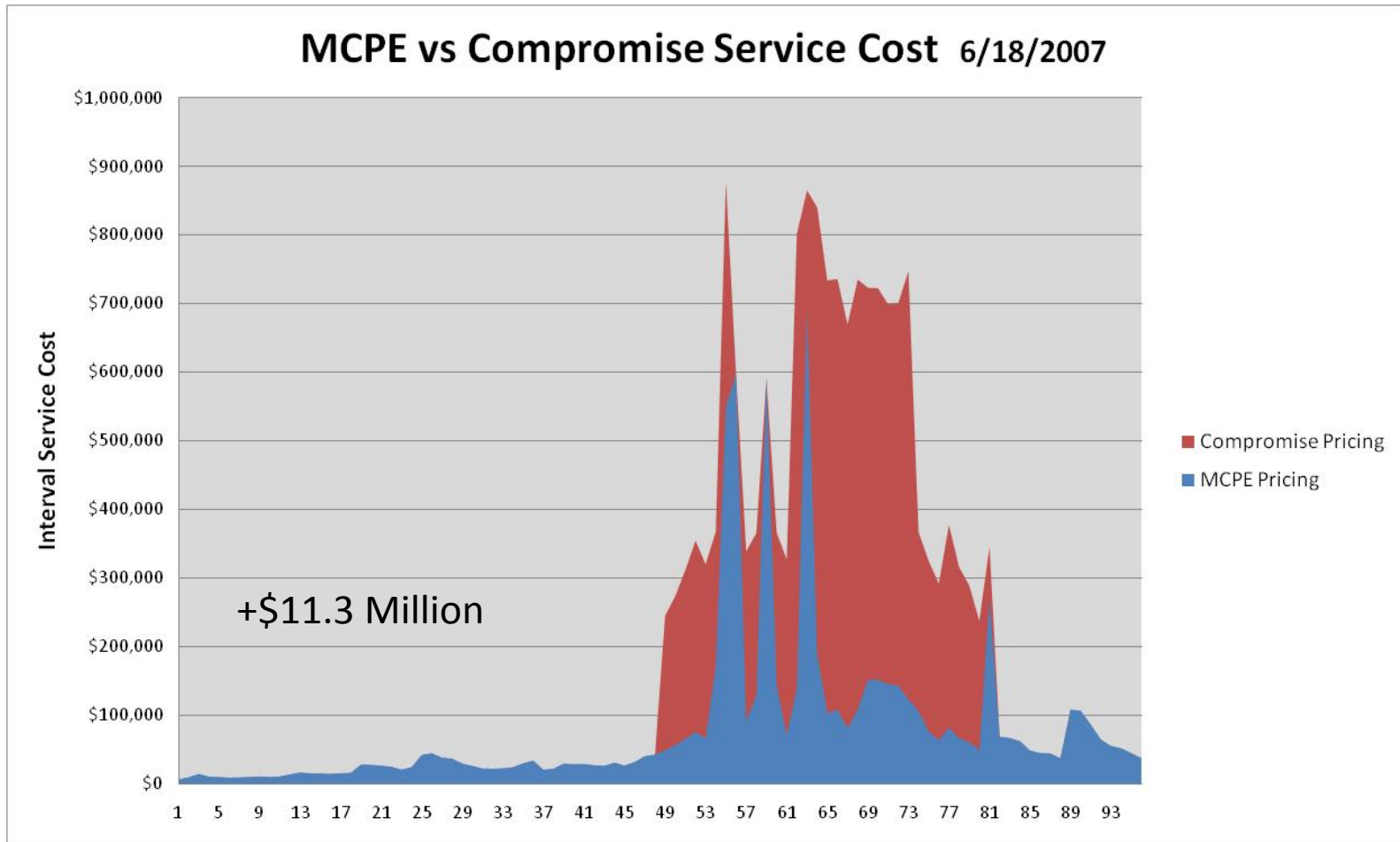
# Pricing Comparison

## 6/18/2007



# BES Cost Comparison

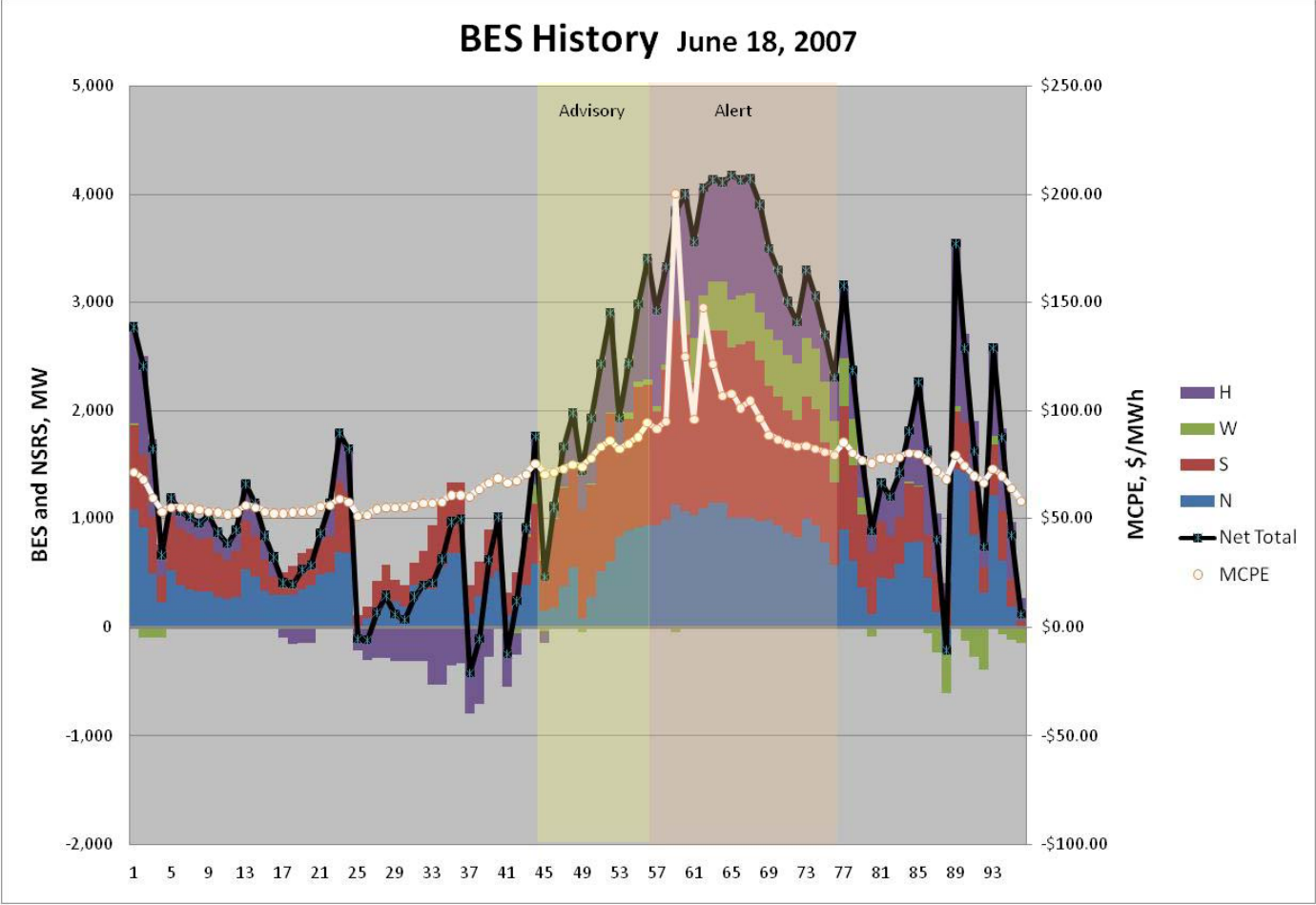
## 6/18/2007





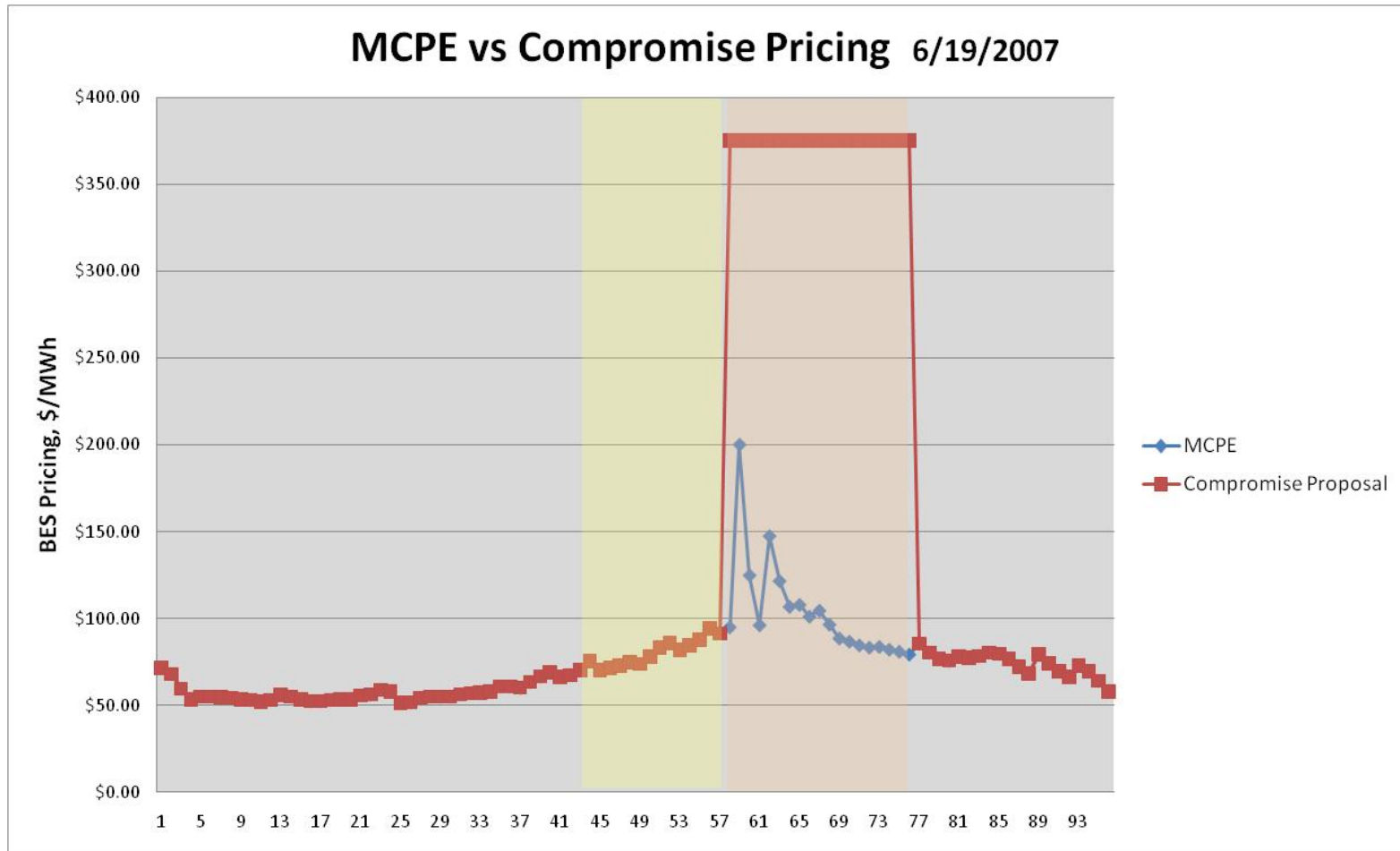


# June 19, 2007



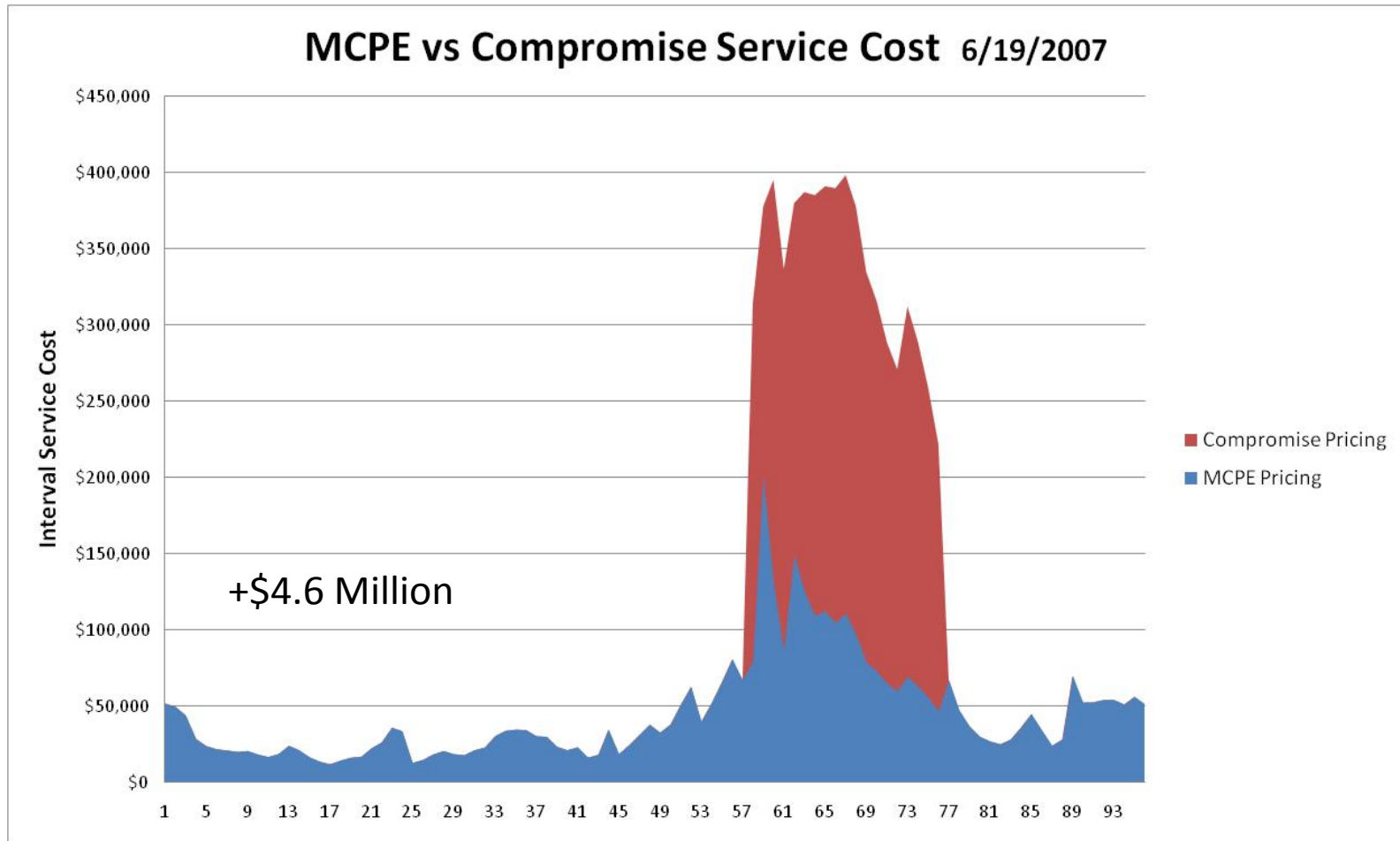
# Pricing Comparison

## 6/19/2007



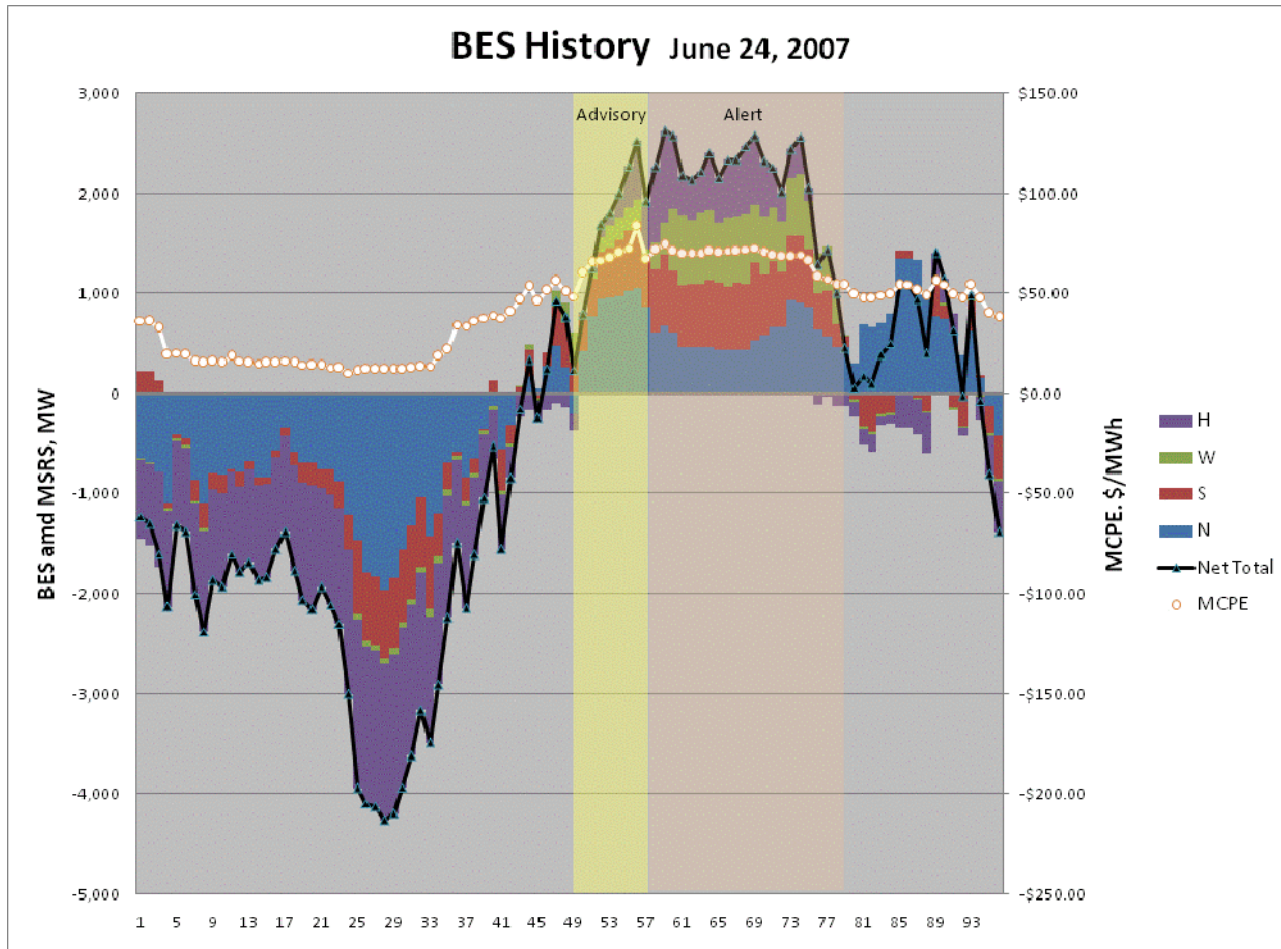
# BES Cost Comparison

## 6/19/2007



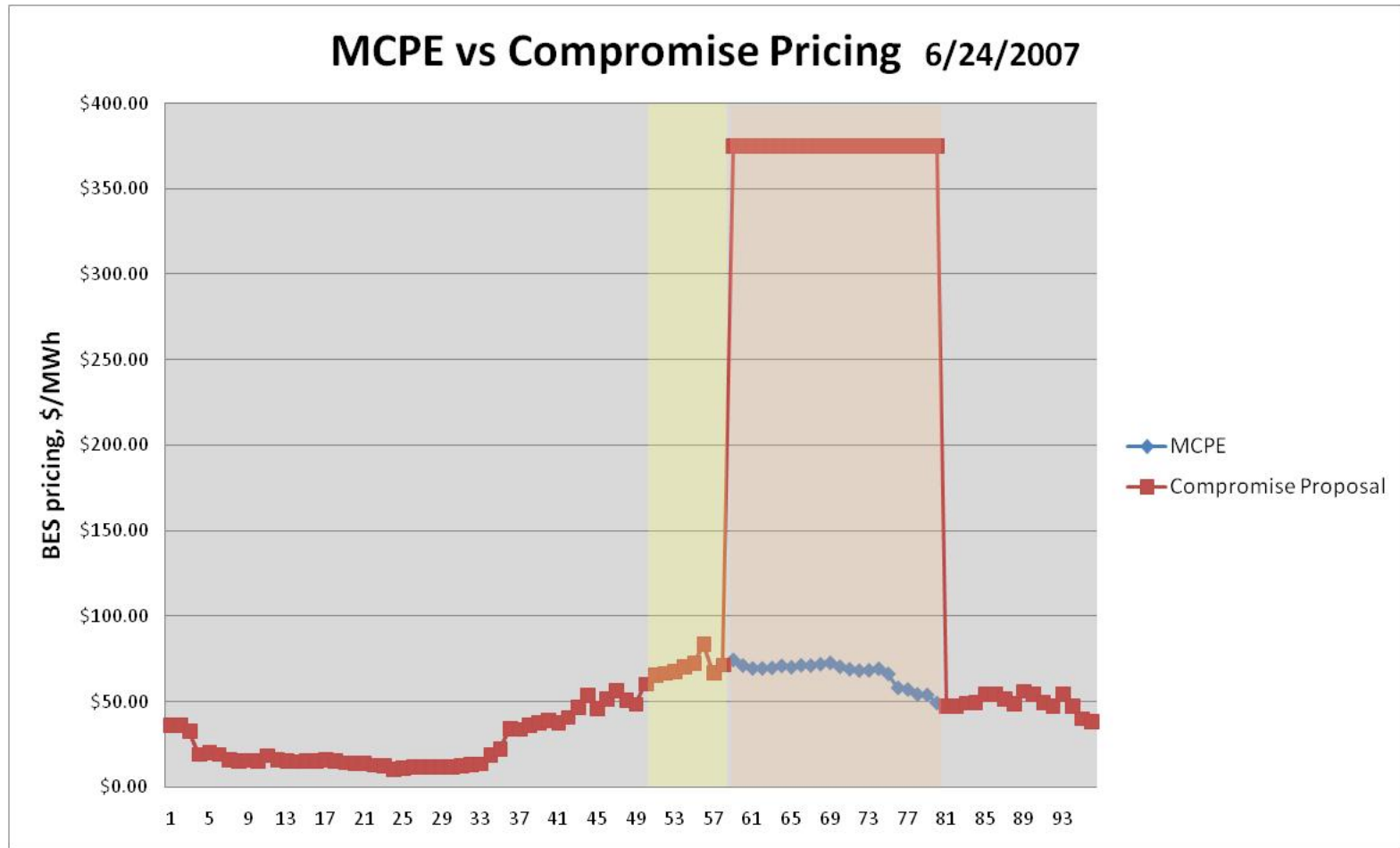


# June 24, 2007



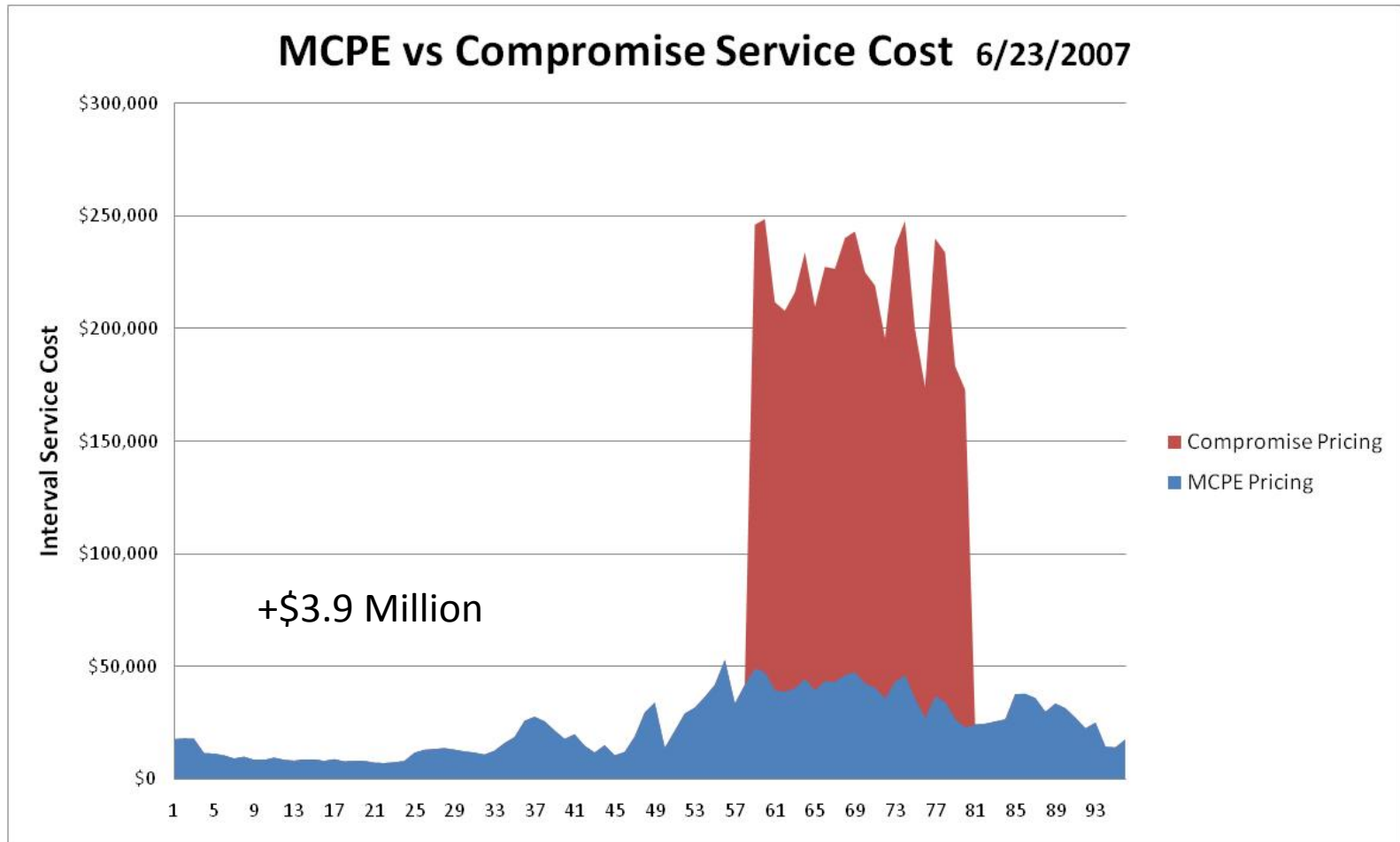
# Pricing Comparison

## 6/24/2007



# BES Cost Comparison

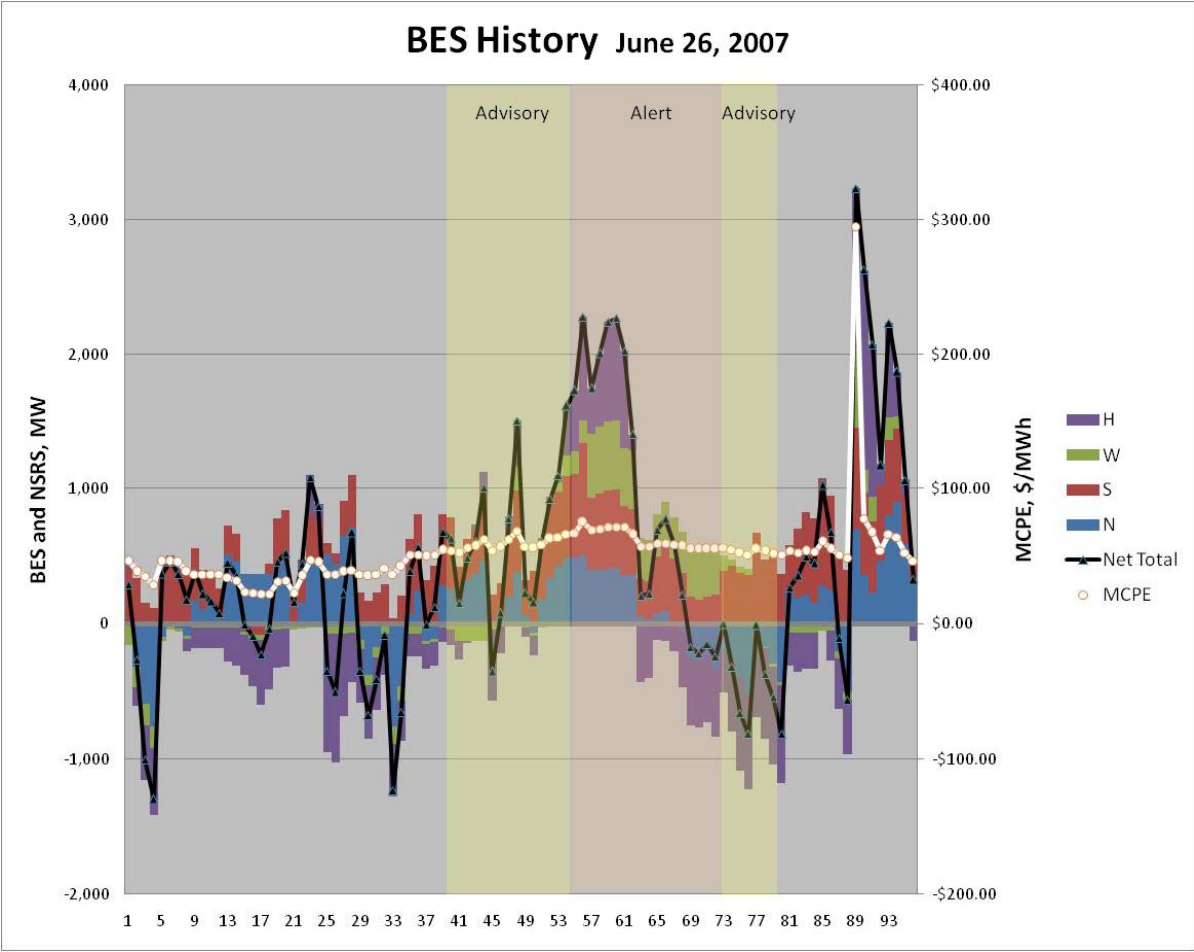
## 6/24/2007





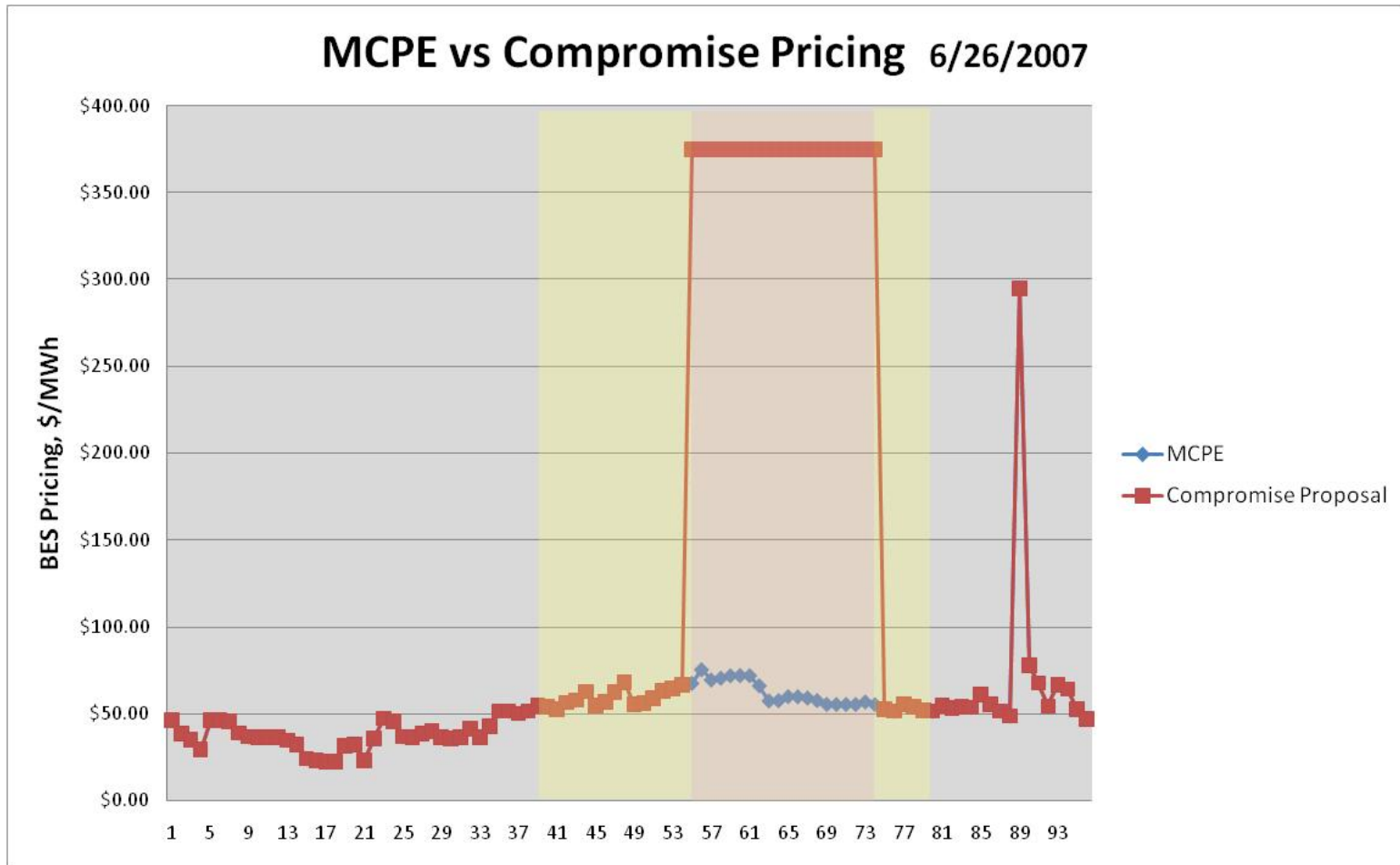


# June 26, 2007



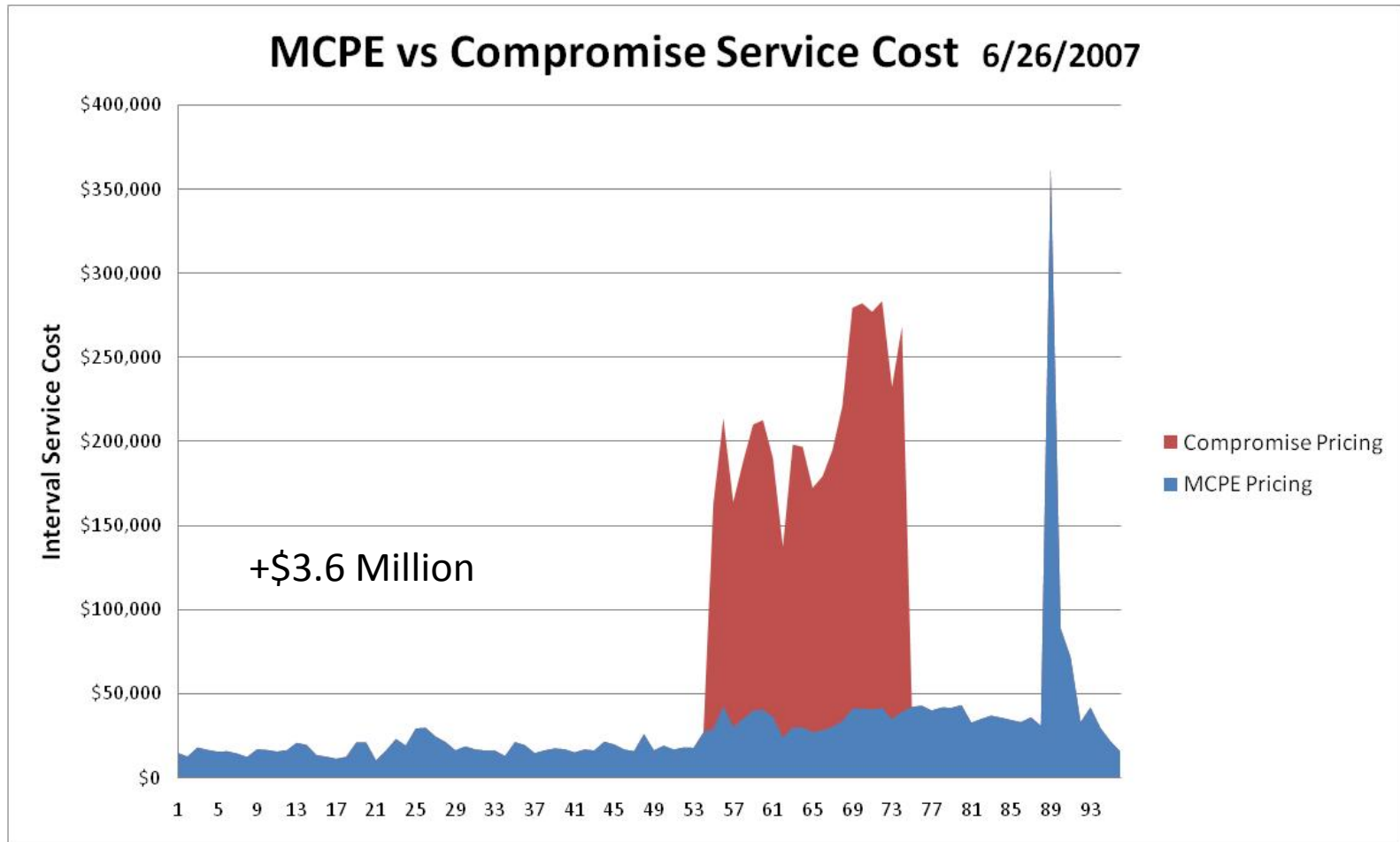
# Price Comparison

## 6/26/2007



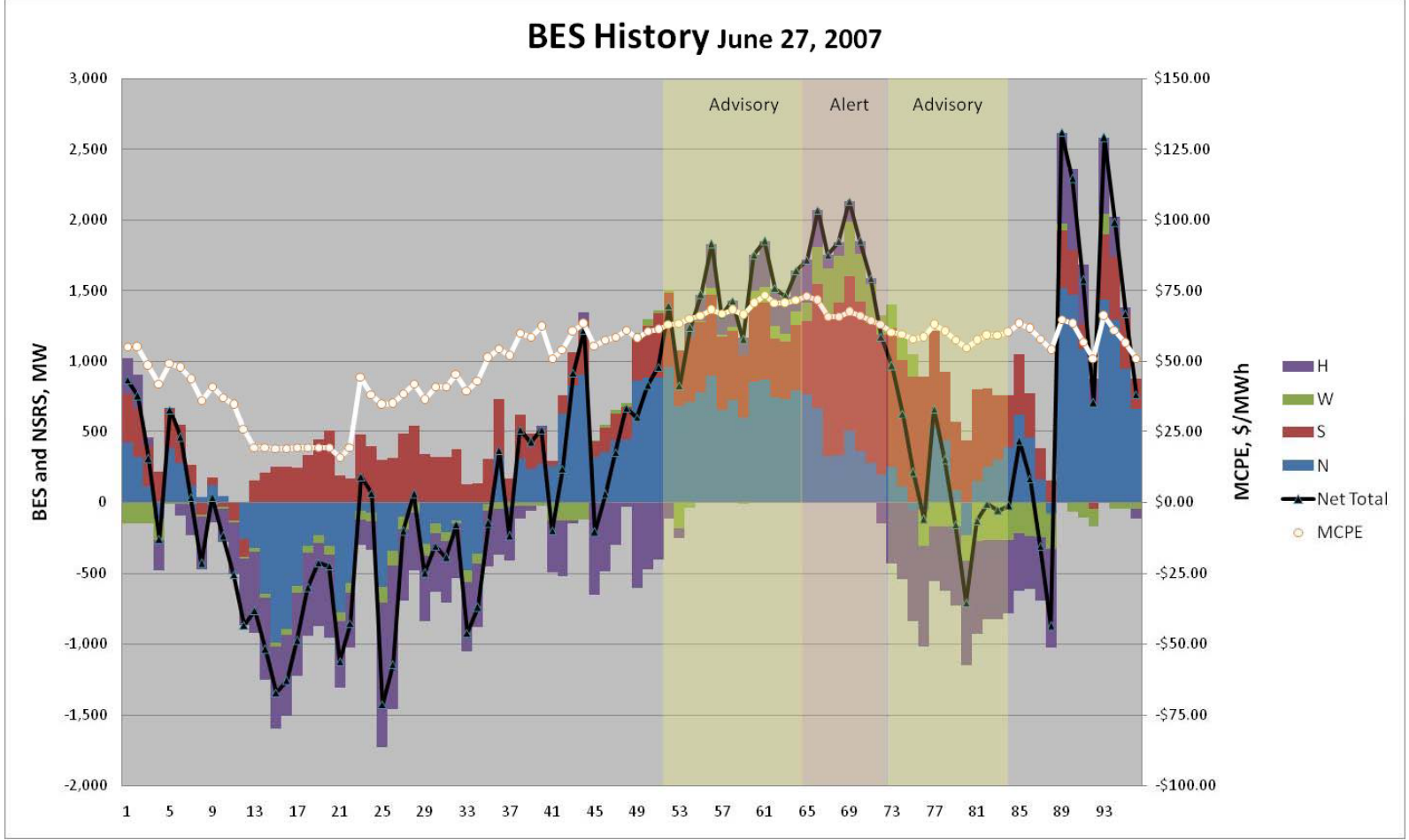
# BES Cost Comparison

## 6/26/2007



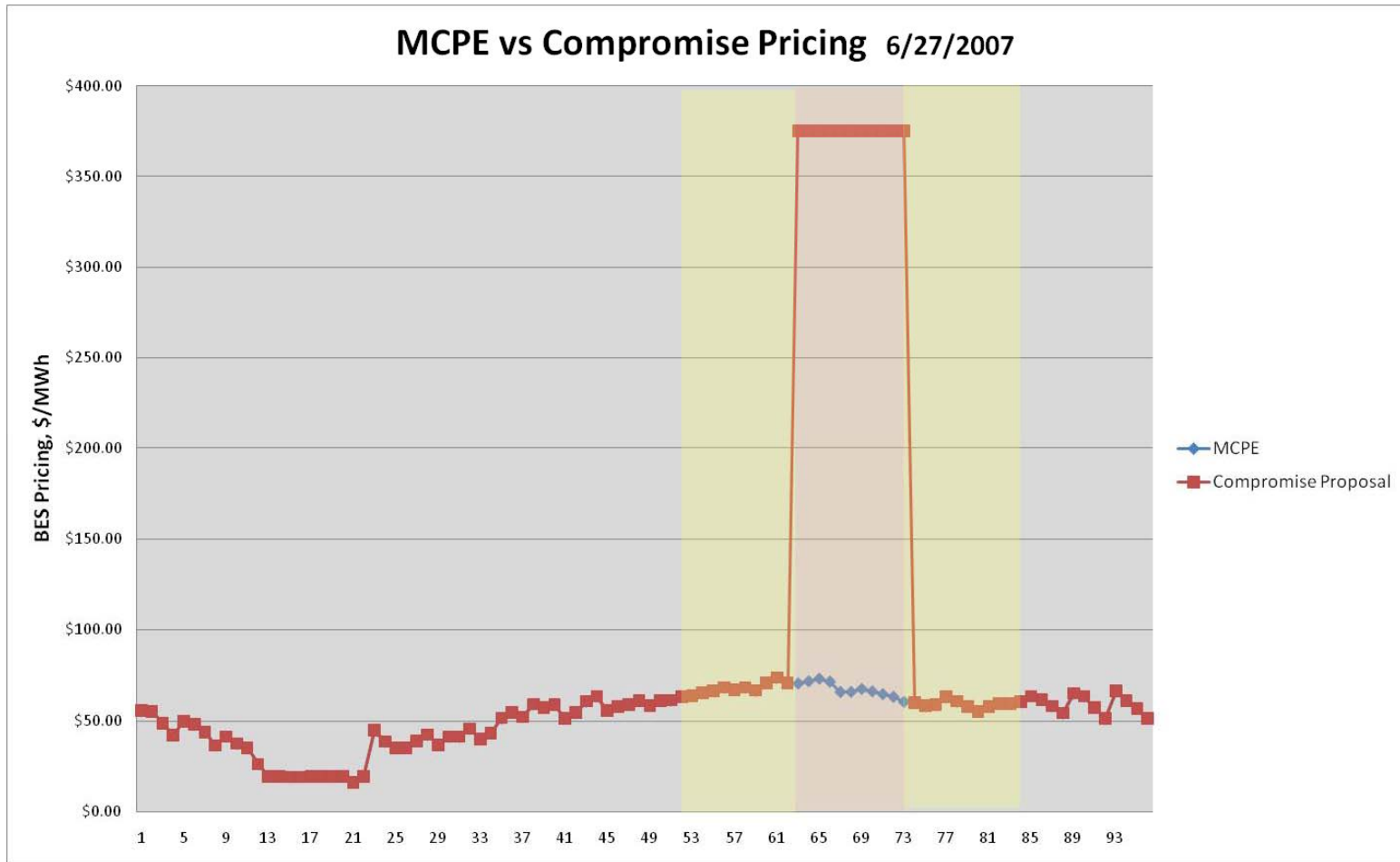


# June 27, 2007



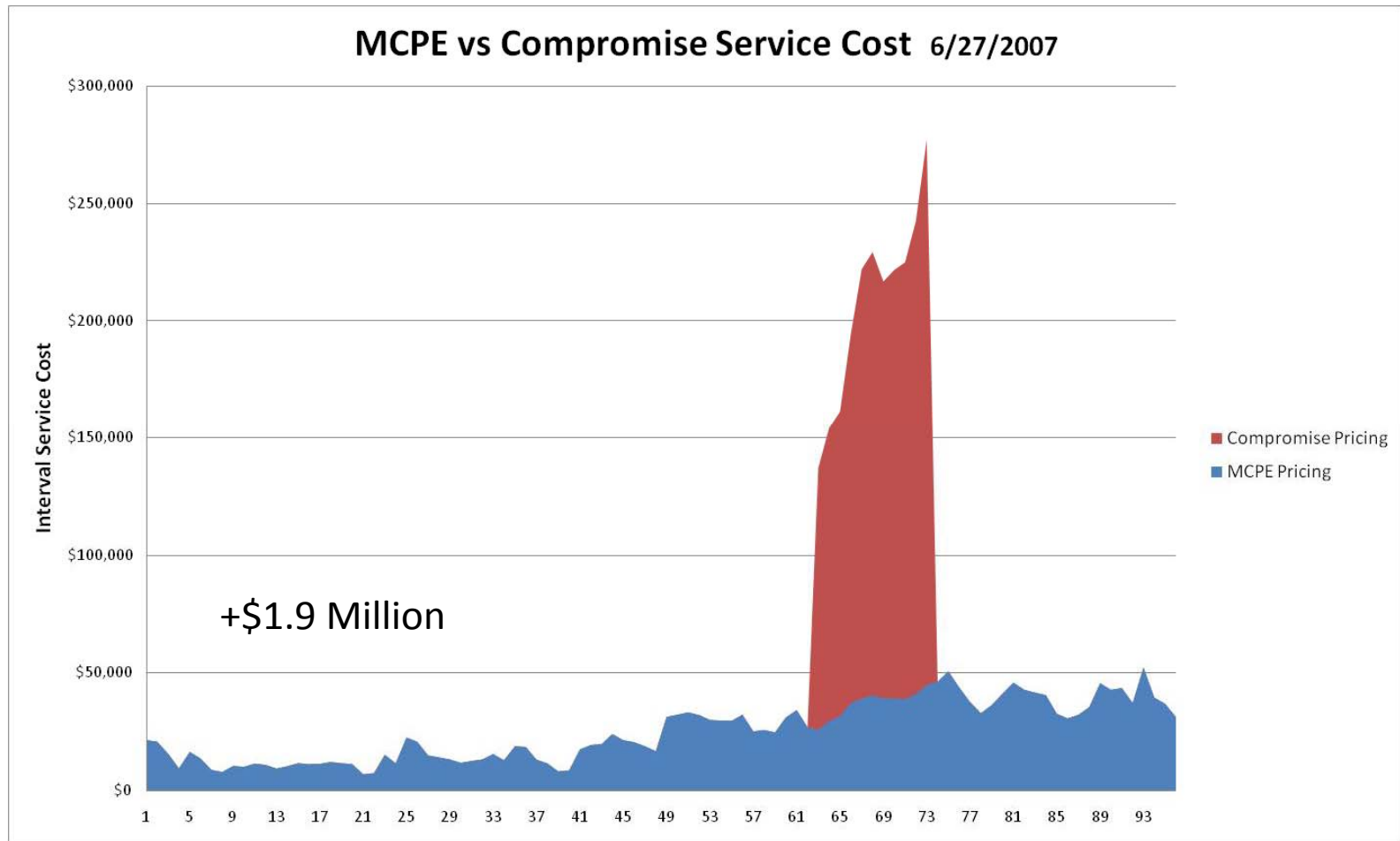
# Pricing Comparison

## 6/27/2007



# BES Cost Comparison

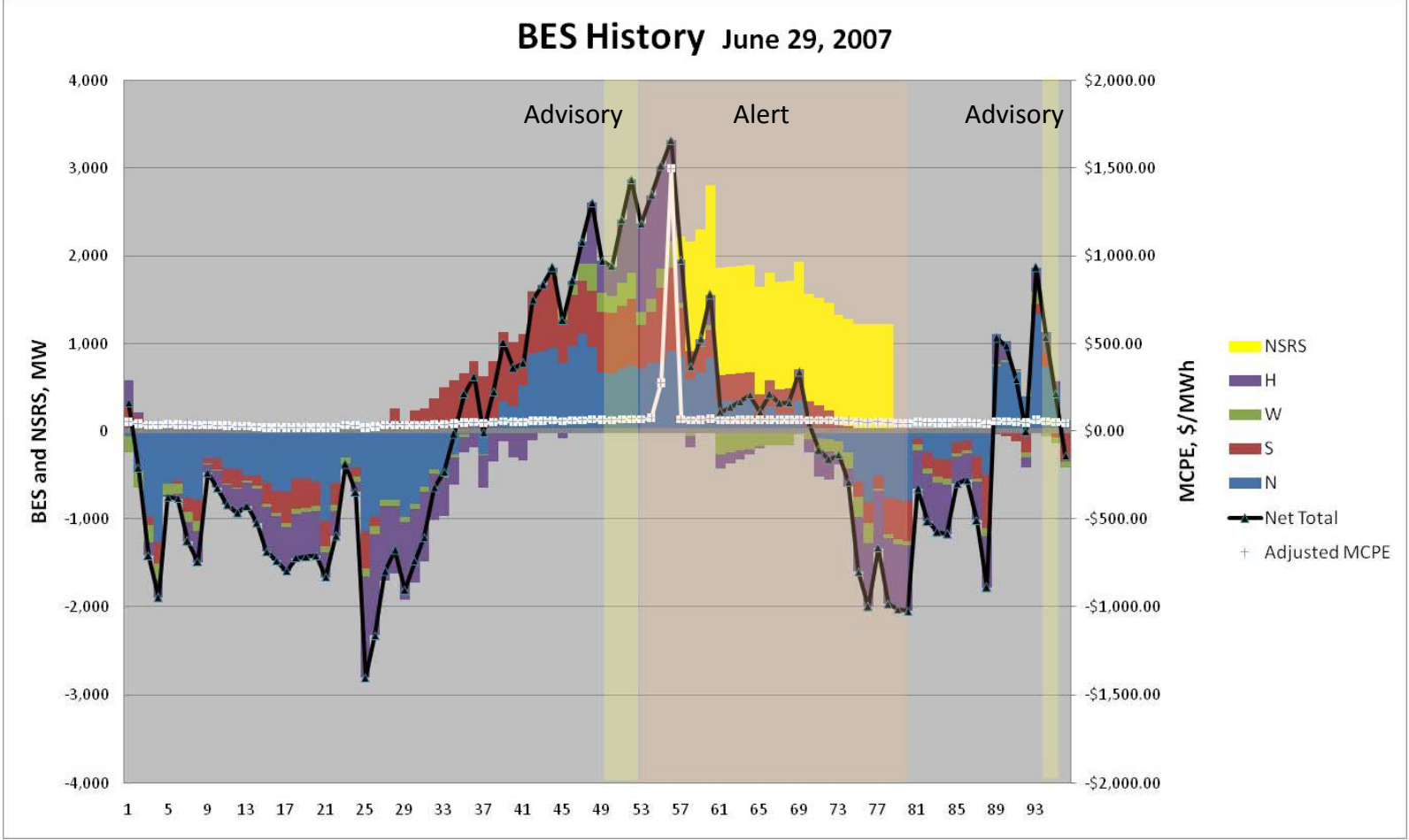
## 6/27/2007





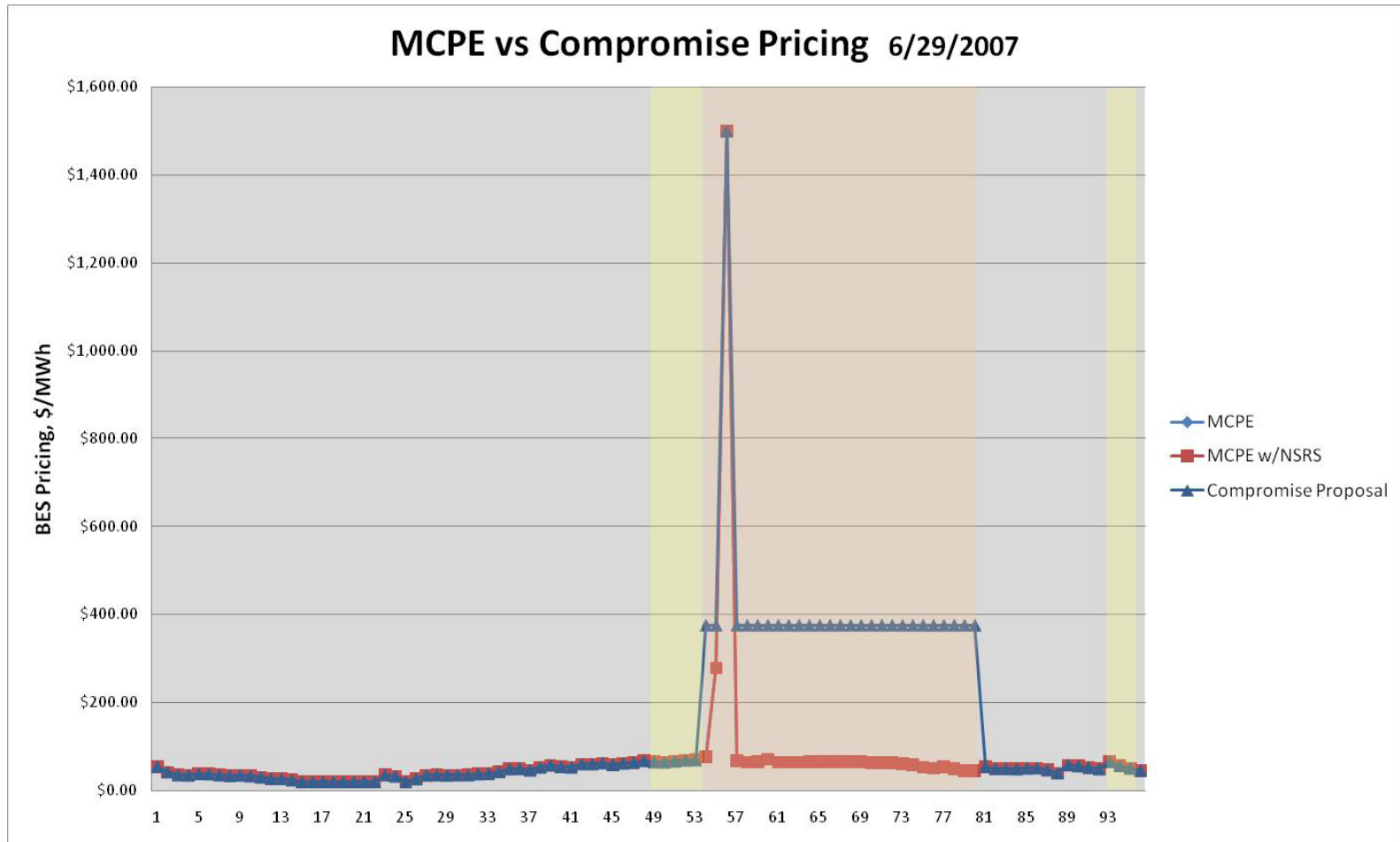


# June 29, 2007



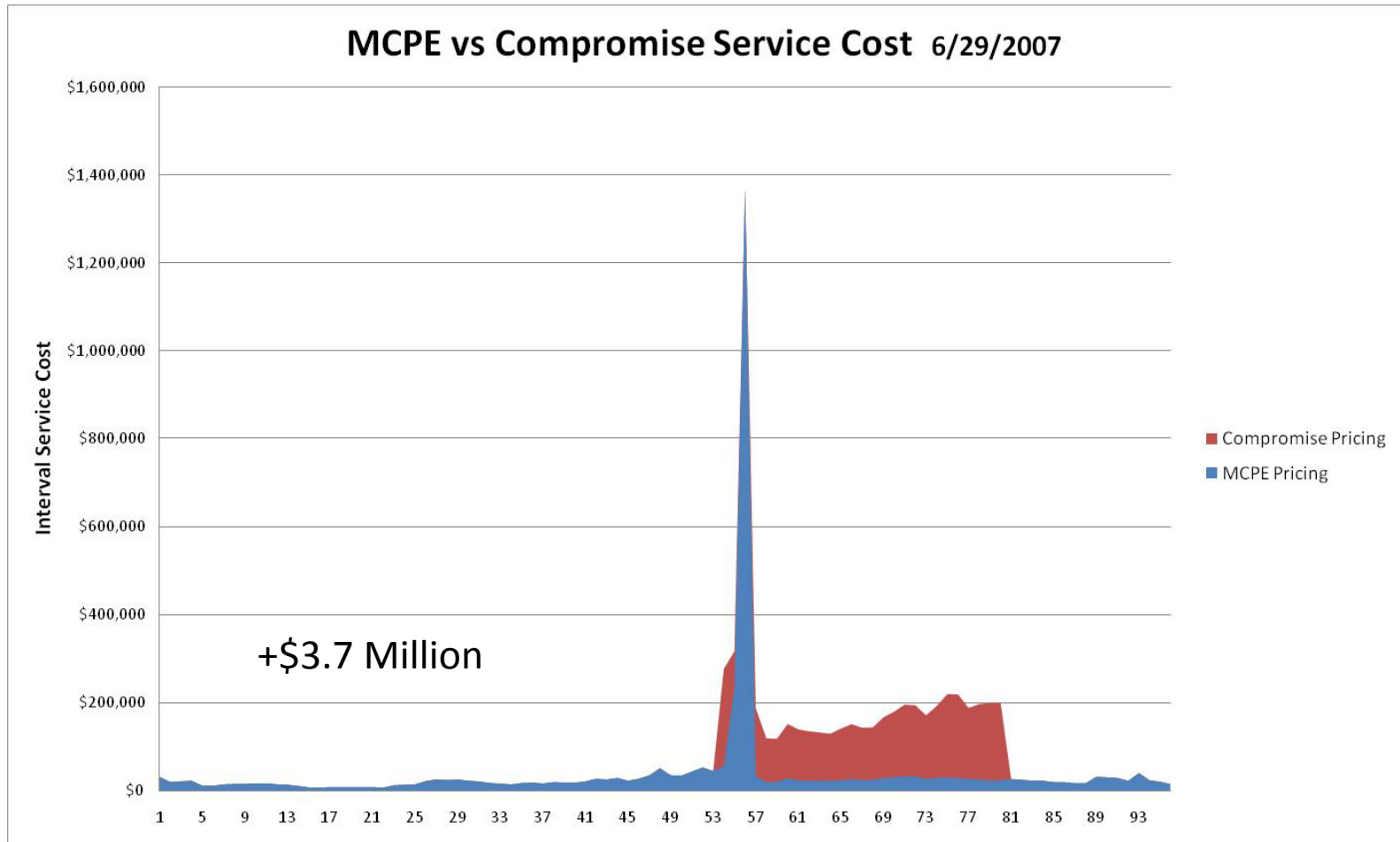
# Pricing Comparison

## 6/29/2007



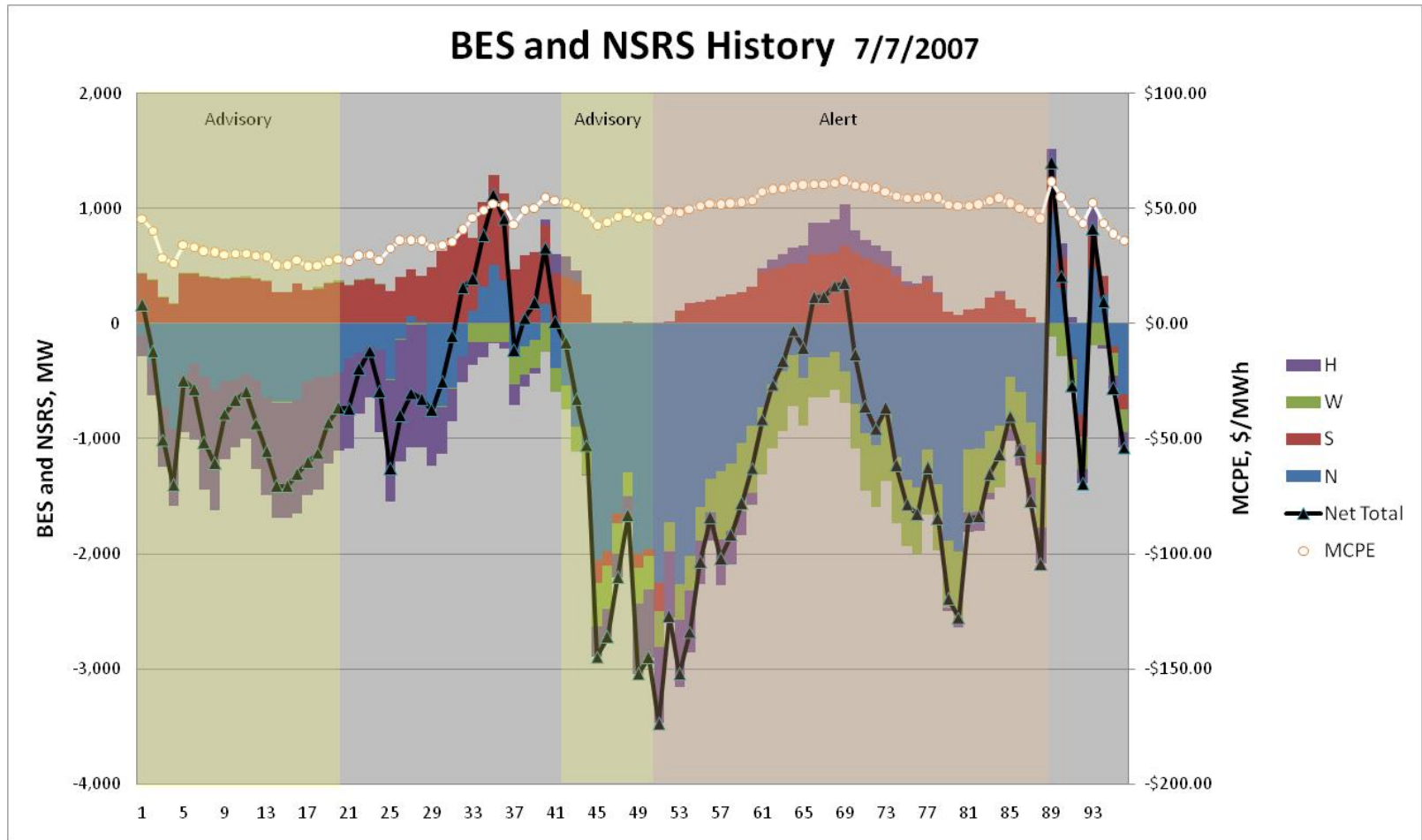
# BES Cost Comparison

## 6/29/2007



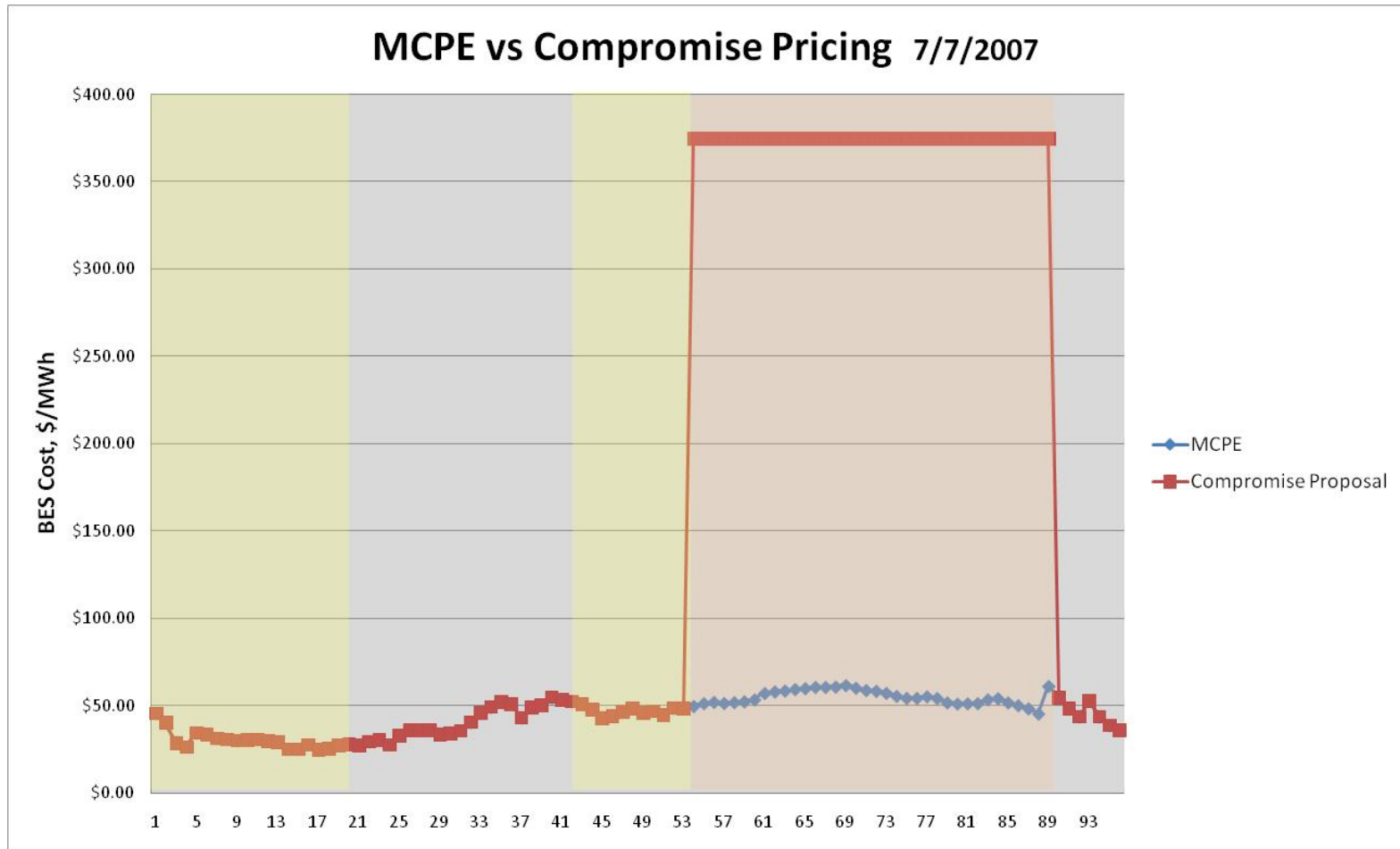


# July 7, 2007



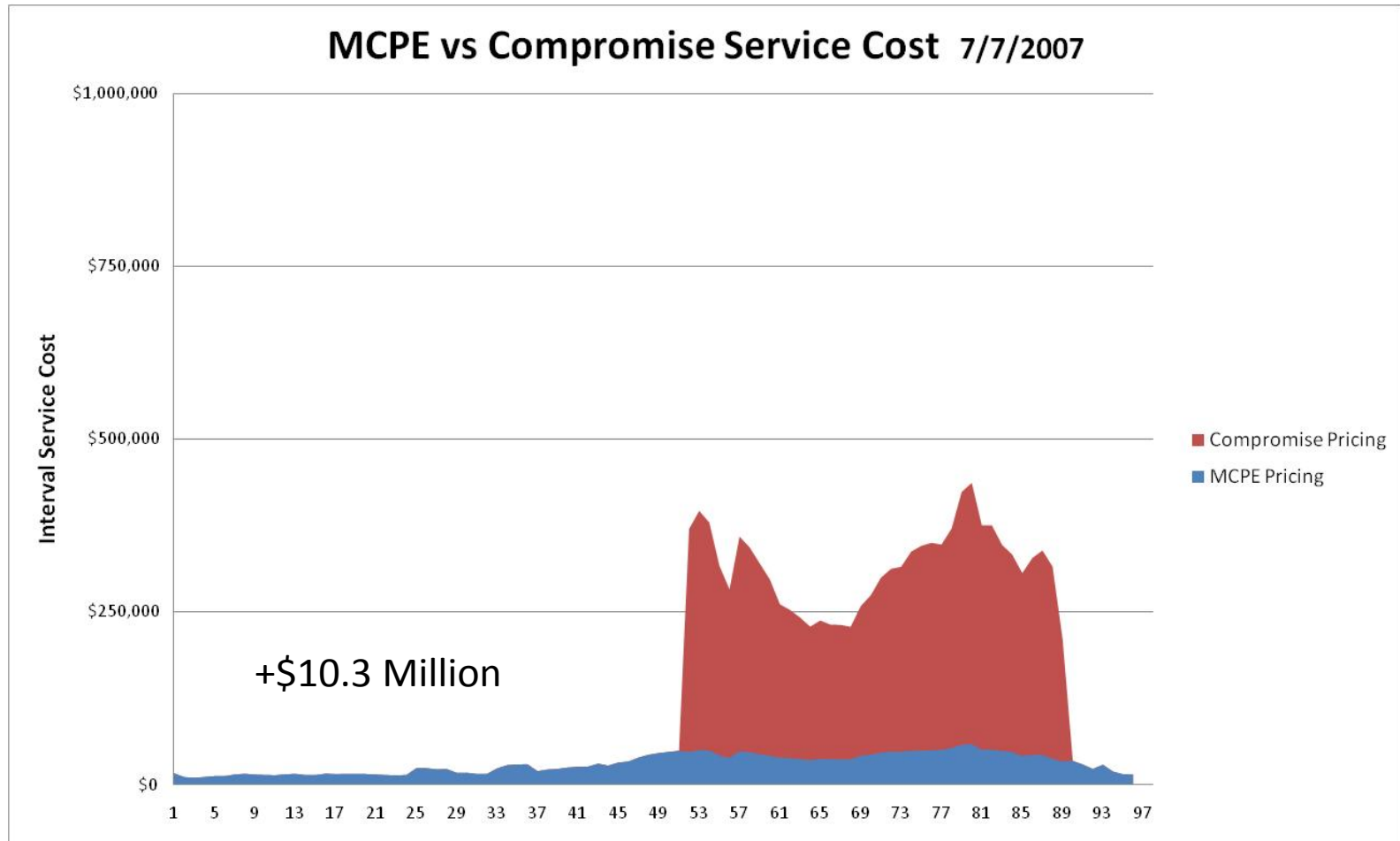
# Pricing Comparison

## 7/7/2007



# BES Cost Comparison

## 7/7/2007



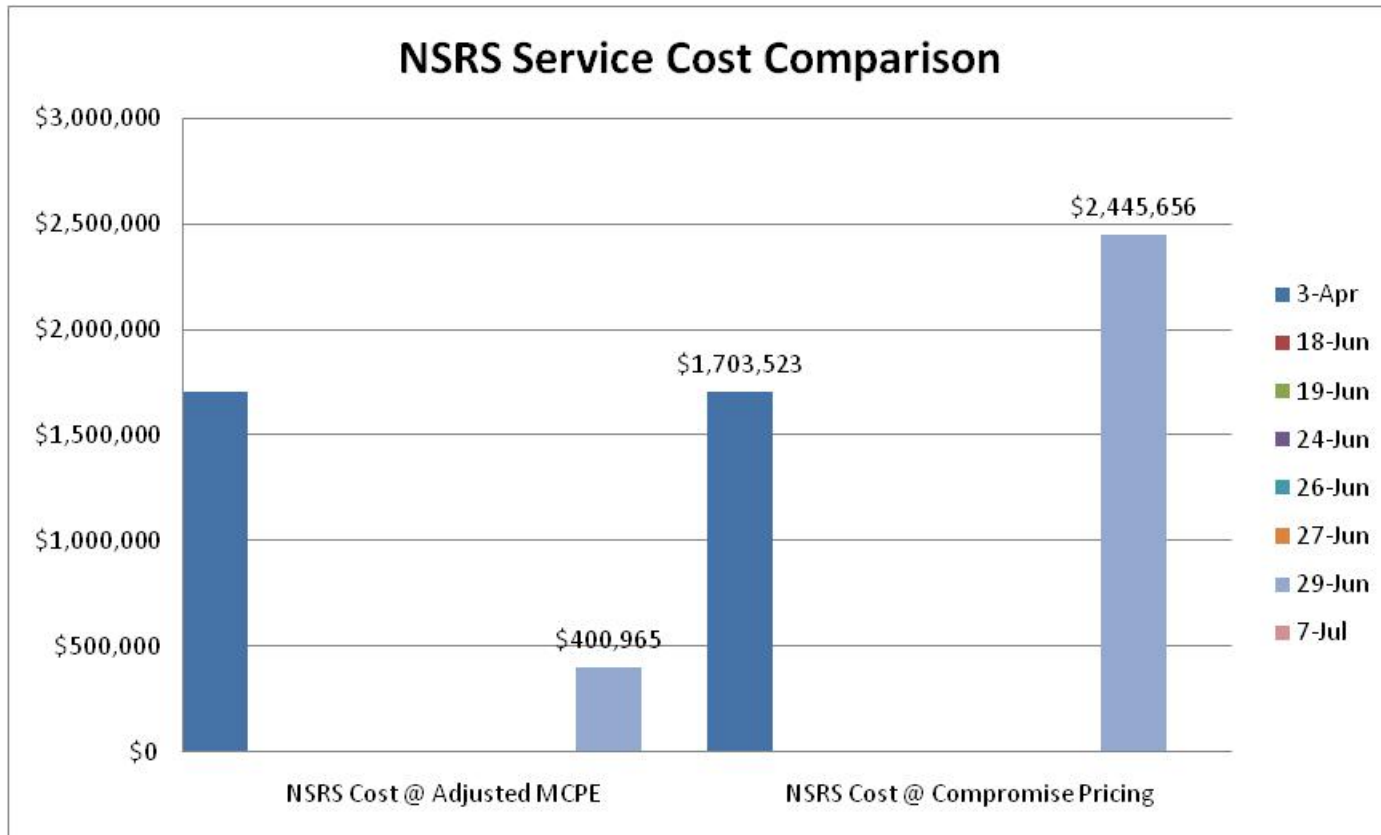
# BES Event Cost Summary

	MCPE Cost	Compromise Cost	Change
3-Apr	\$12,165,347	\$12,165,347	0.0%
18-Jun	\$7,551,602	\$18,868,018	149.9%
19-Jun	\$4,374,114	\$8,978,354	105.3%
24-Jun	\$2,257,961	\$6,231,124	176.0%
26-Jun	\$2,876,459	\$6,445,898	124.1%
27-Jun	\$2,410,908	\$4,285,598	77.8%
29-Jun	\$3,784,734	\$7,468,380	97.3%
7-Jul	\$3,032,027	\$13,298,010	338.6%
Totals	\$38,453,152	\$77,740,729	102.2%





# Impact On NSRS

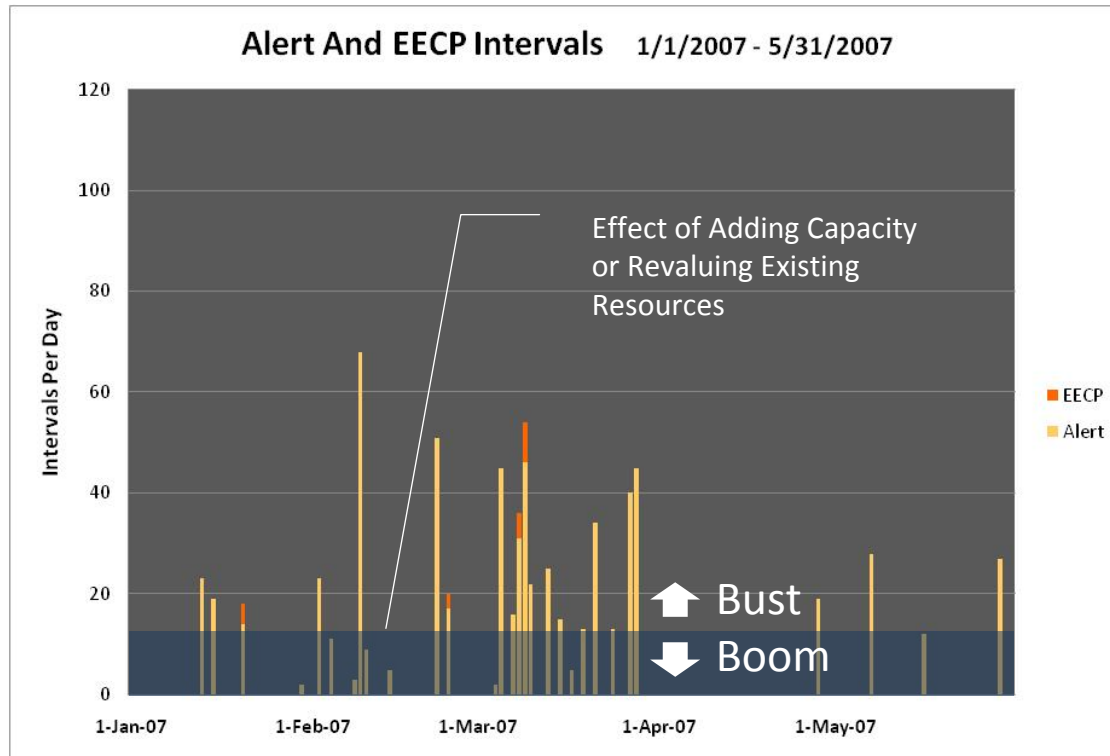


# Observations - 1

- BES has been and is being successfully provided based on MCPE pricing
- SPD is presently finding price solutions in and above the range proposed in the Compromise Solution
- The proposed 'Compromise Solution' appears to increase the cost of BES and NSRS significantly
  - The increase will double over the next 2 years, per PUC SR25.605(g) as HCAP increases to \$3,000/MWh
- The number of Alert and EECP Intervals and their levels of UBES are relatively small and load factors will decrease as new resources are added
  - The magnitude and distribution of revenues is uncertain under present and future competition



# Revenue Still At Cyclical Risk



Increasing prices is one way to address the problem of 'Missing Money,' but higher prices alone will not stabilize revenue or provide the long-term security that large capital investments typically require



# Observations - 2

- Raising prices alone offers no assurance that needed or desired new resources will be deployed
  - No Obligations for Addition or Commitment of New Resources
  - No Protection for New Investment
    - *“Resource Adequacy programs work, where they do, by signaling investors that they can expect stable and reasonable cost recovery for many years to come. This is no easy task, and an RA policy stamped ‘TEMPORARY,’ cannot succeed. It may pay out large sums of money, which will be gladly accepted by existing generation, but it will not induce new investment at anything close to a reasonable price.”*

## **The Convergence of Market Designs for Adequate Generating Capacity**

Cramton & Stoft, 2006

- No Revenue Prioritization Favoring New Generation Units
- No Mitigation Plan Addressing Increased Potential for Collusion or Exercise of Market Power by Existing Providers

