

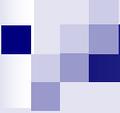
Energy Action Plan

A Preliminary look at Peak Loads and Resources for 2007 and Policy Issues to Consider

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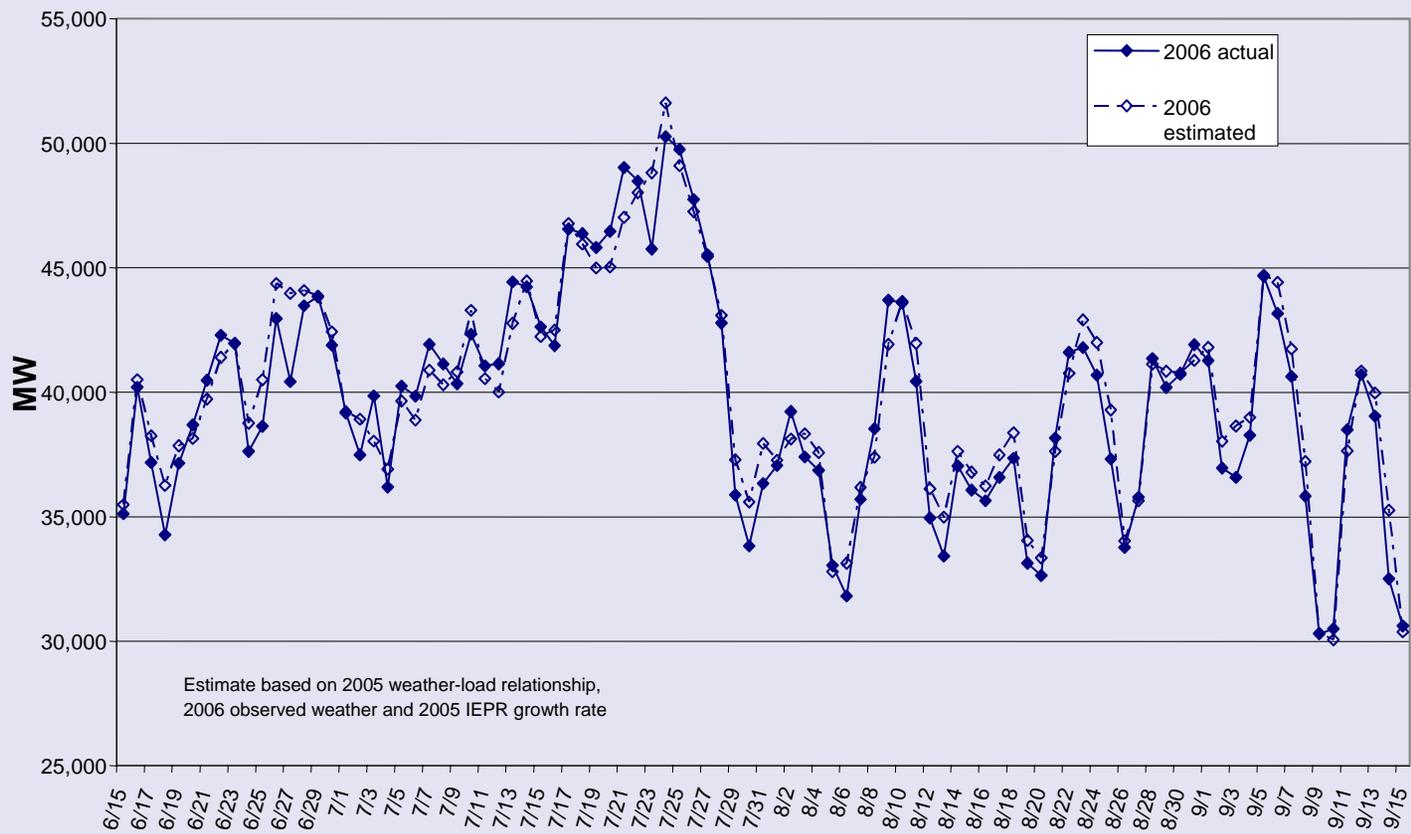


Topics of this presentation

- Review of 2006 weather adjusted demand.
- Preliminary look at Probability of meeting reserve margins in 2007.
- Policy issues regarding the use of Demand Response and Interruptibles.
- Review of CA ISO Emergencies called over the last 5 years and possible options for reducing frequency.

2006 Weather Adjusted Actual Loads

2006 ISO summer daily peak tracking

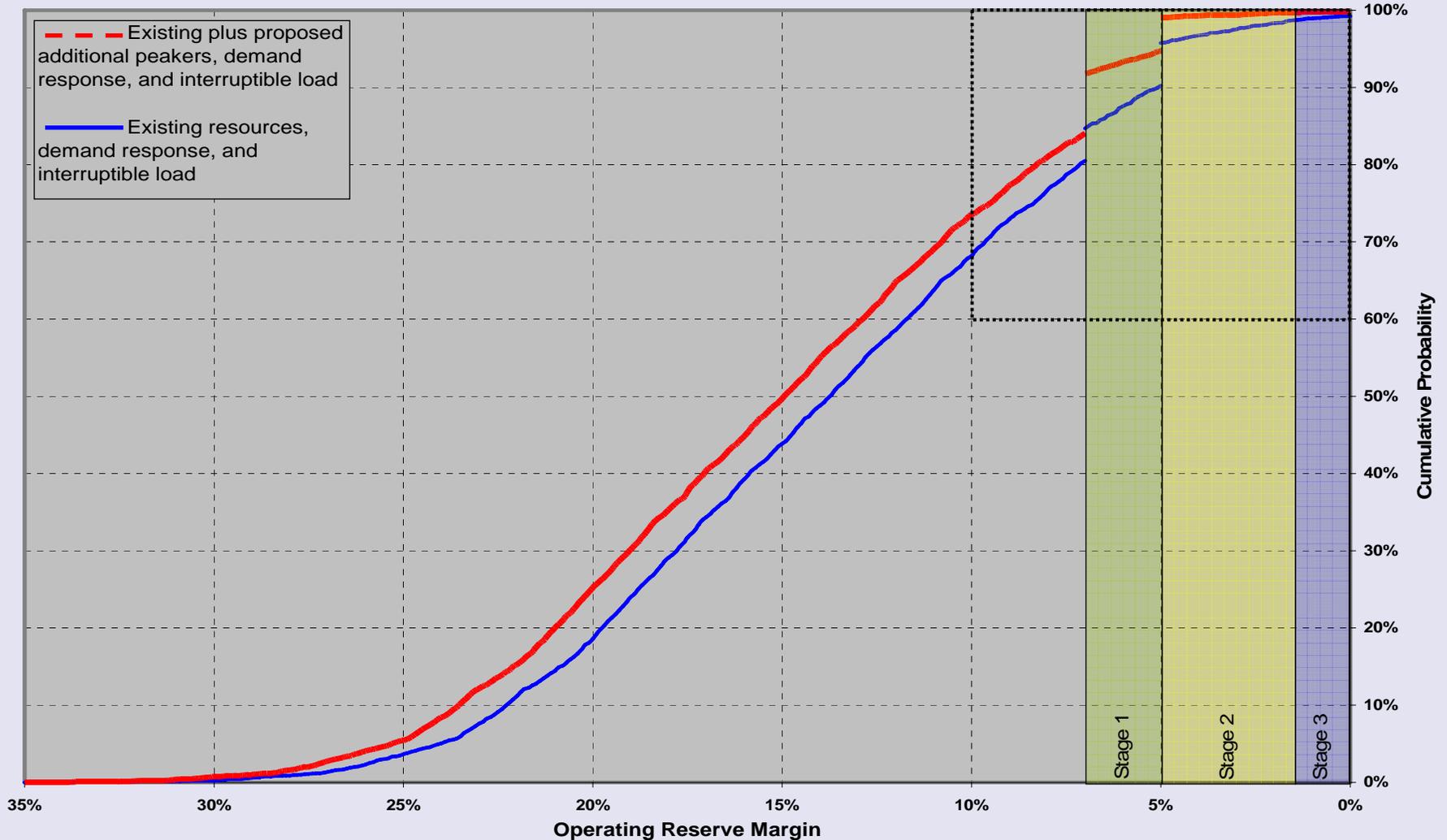


2007 Preliminary Outlook - Statewide

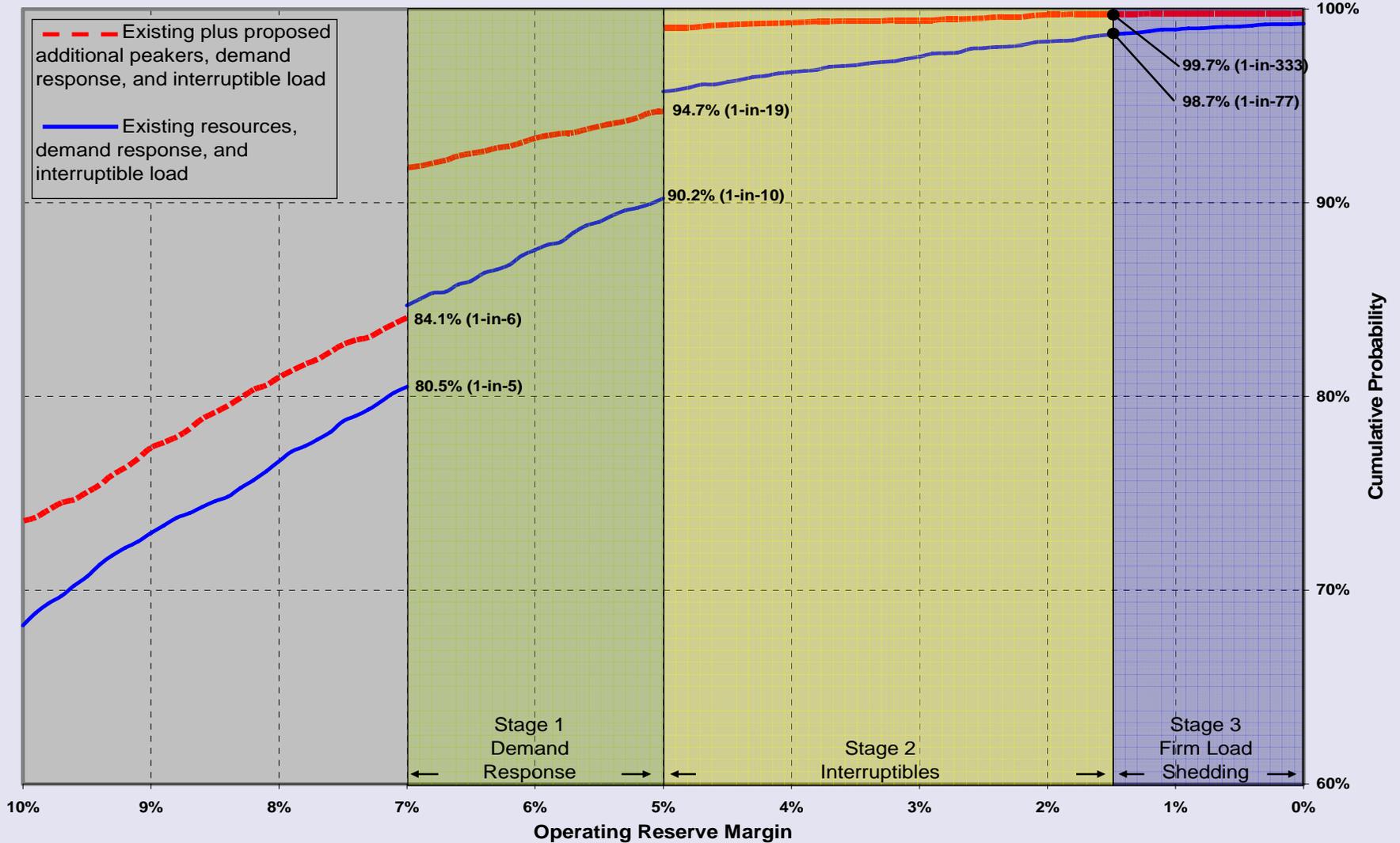
2007 Summer Monthly Outlook California Statewide

Resource Adequacy Planning Conventions		<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>
1	Existing Generation ¹	57,897	57,897	57,897	57,897
2	Retirements (Known)	0	0	0	0
3	High Probability CA Additions	0	0	0	0
4	Net Interchange ²	13,118	13,118	13,118	13,118
5	Total Net Generation (MW)	71,015	71,015	71,015	71,015
6	1-in-2 Summer Temperature Demand (Average) ³	57,125	59,726	60,350	59,419
7	Demand Response (DR)	524	524	524	524
8	Interruptible/Curtailable Programs	1,603	1,603	1,603	1,603
9	Planning Reserve ⁴	28.0%	22.5%	21.2%	23.1%
Expected Operating Conditions					
	Total Net Generation (MW)	71,015	71,015	71,015	71,015
10	Outages (Average forced + planned)	-2,695	-2,695	-2,695	-2,695
11	Zonal Transmission Limitation ⁵	-150	-150	-150	-150
12	Expected Operating Generation with Outages/Limitations ⁶	68,170	68,170	68,170	68,170
13	Expected Operating Reserve Margin (1-in-2) ⁷	24.5%	17.7%	16.2%	18.5%
Adverse Conditions					
14	High Zonal Transmission Limitation	-250	-250	-250	-250
15	High Forced Outages (1 STD above average)	-1,160	-1,160	-1,160	-1,160
16	1-in-10 Summer Temperature Demand	60,573	63,330	63,992	63,005
17	Adverse Scenario Reserve Margin ⁷	12.8%	6.7%	5.3%	7.4%
18	Adverse Scenario Reserve Margin w/DR and Interruptibles ⁸	17.2%	10.9%	9.4%	11.6%
19	Resources needed to meet 7.0% Reserve (W/DR & Interruptibles)	0	0	0	0
20	Surplus Resources Above 7.0% Reserve (W/DR & Interruptibles)	4,923	1,972	1,264	2,320
21	Existing Aging Generation Without Capacity Contracts ⁹	-2,070	-2,070	-2,070	-2,070

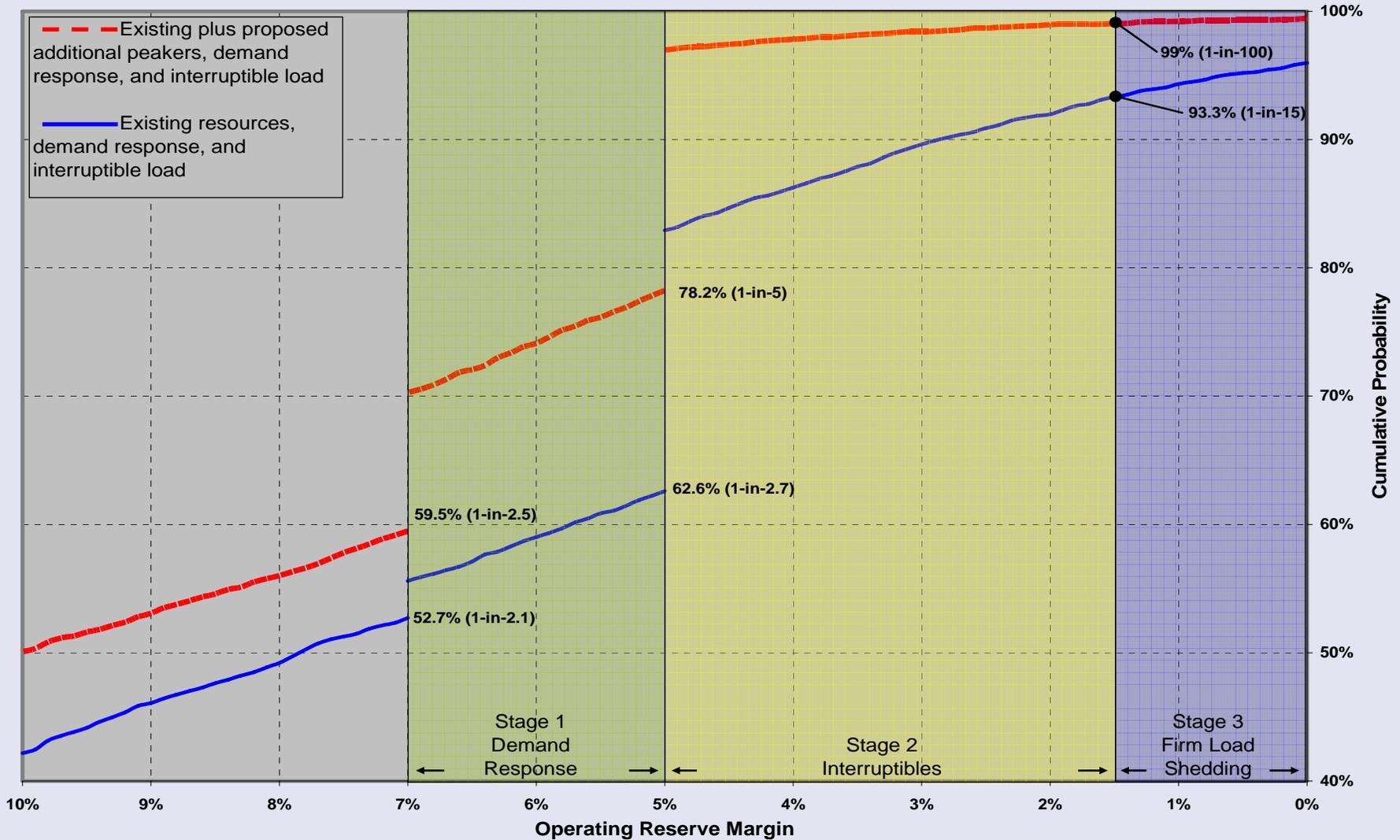
2007 Preliminary Outlook - Probability of meeting reserve margins for CA ISO Control area



2007 Preliminary Outlook - Probability of meeting reserve margins for CA ISO Control area



2007 Preliminary Outlook - Probability of meeting reserve margins for SP 26



Policy Issues that have surfaced

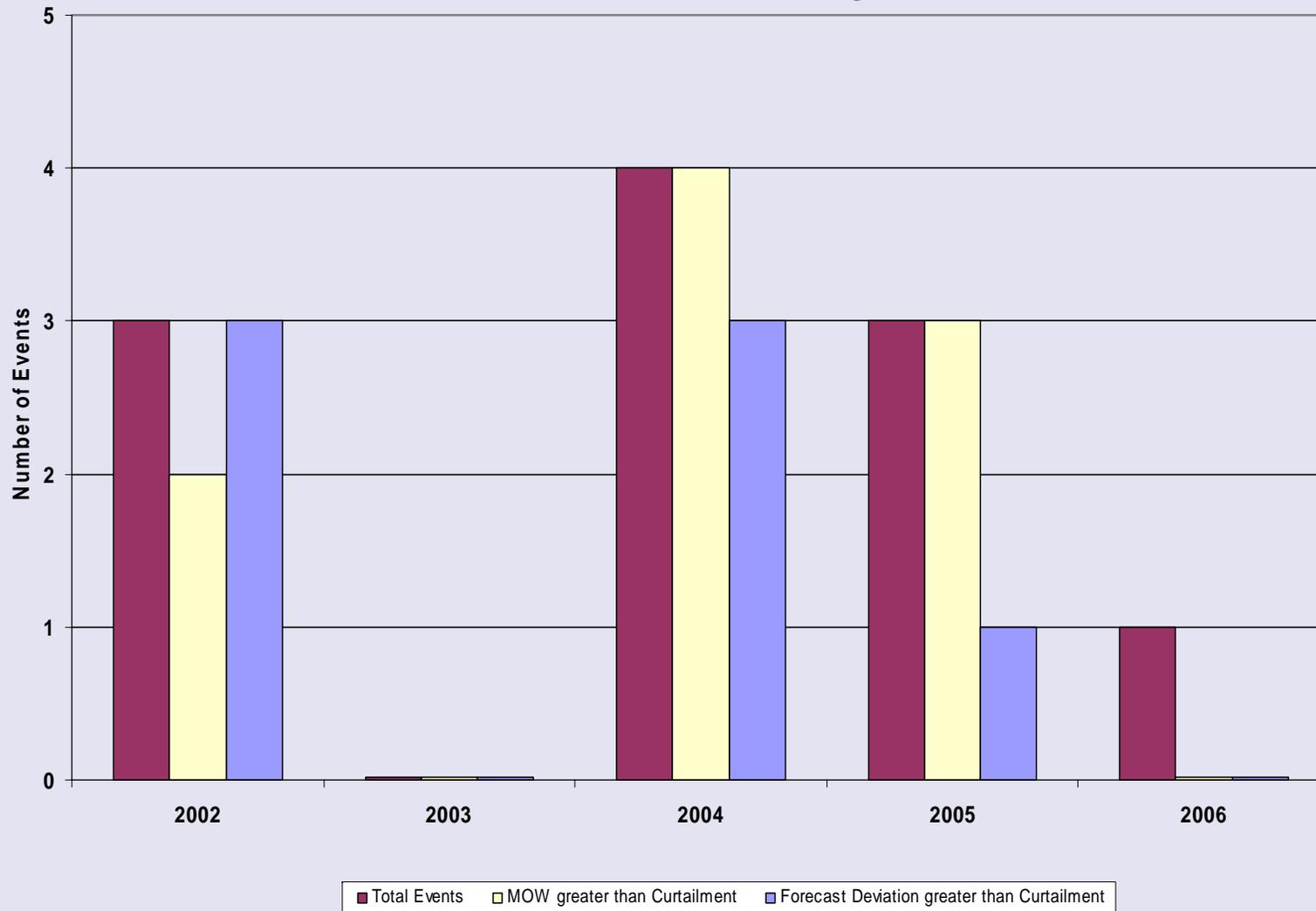
- Generators have complained that Demand Response is not being called often enough.
- Program operators concerned that excessive use of DR and Interruptibles will result in customers dropping out of program.

Summary of CA ISO load Curtailments over the Last 5 years

- Total number of ***Firm Load*** curtailments that have occurred over last 5 years: **2 (two)**
 - March 8, 2004
 - August 25, 2005

- Total number of ***Non-Firm*** (interruptible) load curtailments that have occurred over the last 5 years: **11 (eleven)**
 - 2002 (3) - June 18 (SP 26), July 10, September 3.
 - 2003 (0) -
 - 2004 (4) - March 8 (SP26), May 3 (SP26), July 20 (SP26), September 14 (Humboldt).
 - 2005 (3) - July 21 (SP26), July 22 (SP26), August 25 (SP26).
 - 2006 (1) - July 24.

Summary of CA ISO load Curtailments over the Last 5 years



Policy issues to consider:

- How can we tell when the number of load curtailments is excessive?
- Because DR and Interruptibles do not reduce the probability of emergencies being called,
 - Is the CA ISO getting a bad rap?
 - Is the public being alerted when there may not be a true emergency?
- What are some possible options to address these issues?

Possible option to reduce number of emergencies: *Add More Generation*

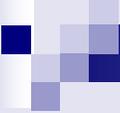
- Increase Resource Adequacy requirements.
- Change Planning criteria from 1-in-2 to 1-in-10.
 - Pros: - Provides more generation.
 - Increases reserve levels at all times.
 - Cons: - Additional cost (at all times).
 - Resources not likely to be used frequently.
 - Likely to have only minimal effect on reducing the number of emergencies as most emergencies declared with additional generation available.

Possible option to reduce number of emergencies: *Add More DR and Interruptibles*

- Direct LSE's to expand DR and increase number of Interruptible customers.
 - Pros: - Provides greater reserve margins once emergency is called.
 - Reduces need for additional generation resources.
 - Cons: - Additional cost (at all times).
 - Likely to have minimal effect on reducing the number of emergencies as resources are called after an emergency is declared.

Possible option to reduce number of emergencies: *Change tariffs*

- Change DR and/or Interruptible tariffs to allow use before emergency is declared.
 - Pros: - Reduces probability of emergencies being called.
 - Better Alignment of these resources with Loading Order.
 - Public is altered less, only for true emergencies and may be more apt to respond.
 - Cons: - May increase the frequency of use of these resources.
 - May reduce customer participation.



Questions that might provide additional insight:

- How many *hours* have interruptibles been called over the last 5 years?
- How many times has *an individual customer* been interrupted over the last 5 years?
- How have customers' *interruption histories compared with their agreements?*

Staff efforts are ongoing to gather additional information and data.