

Energy Action Plan

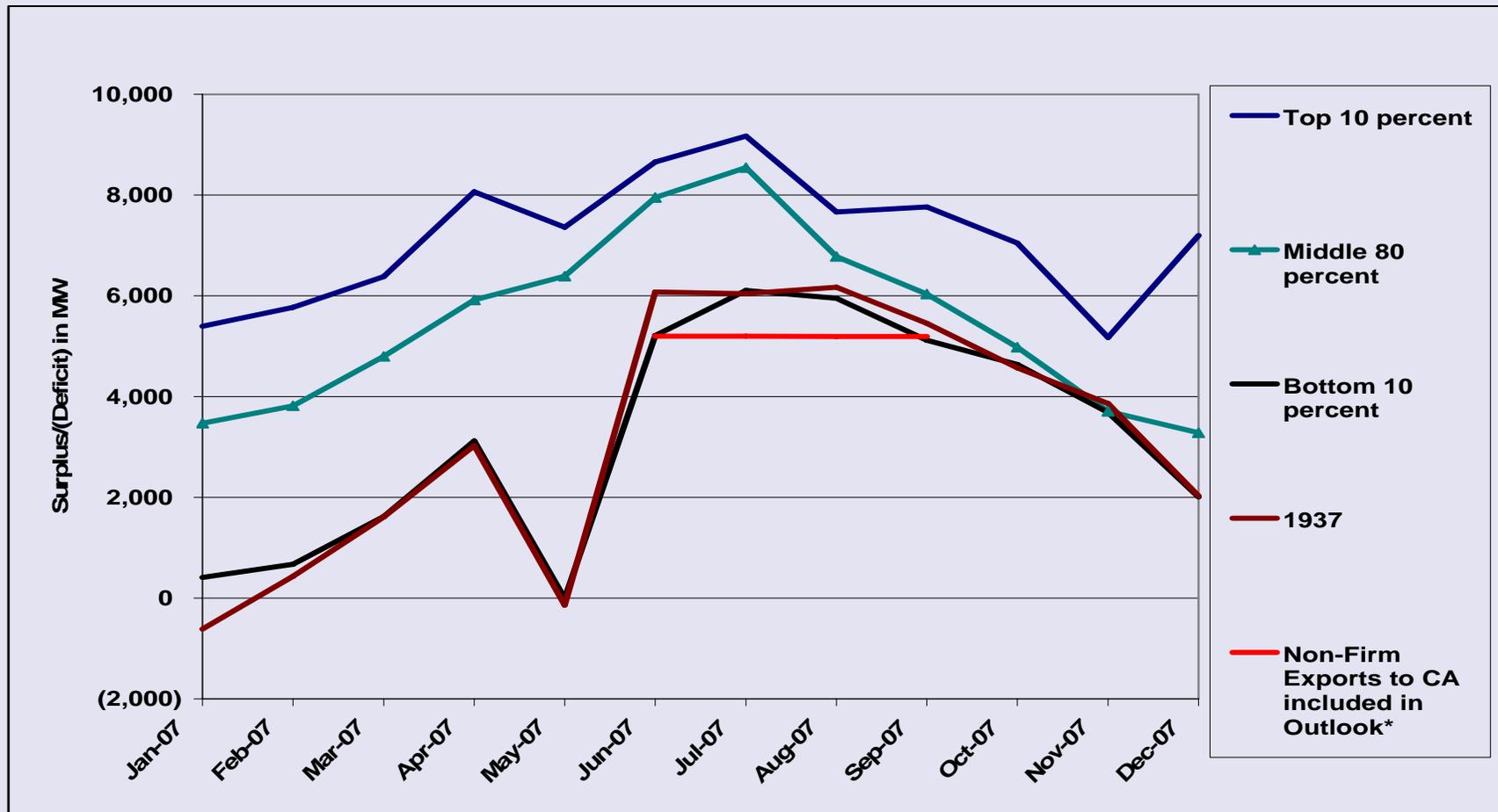
2007 Summer Outlook



Dave Ashuckian P.E.
California Energy Commission

Joint Meeting
May 22, 2007

2007 Forecast of BPA Regional Surplus (by Water Year)



Source: 2006 Pacific Northwest Loads and Resource Study Technical Appendix Vol 2, Section 10 & 12

2007 Peak System Reserves

(Based on Planning Reserve Conventions)
(Megawatts)

| | <u>NP 26</u> | <u>SP 26</u> | <u>CA ISO</u> | <u>Statewide</u> |
|--|--------------|---------------|---------------|------------------|
| 1 Existing Generation (Summer Derated) | 24,417 | 21,848 | 46,265 | 57,897 |
| 2 Retirements (Known) | 0 | 0 | 0 | 0 |
| 3 High Probability CA Additions (Summer Derated) | 74 | 429 | 503 | 656 |
| 4 Net Interchange | <u>500</u> | <u>10,100</u> | <u>10,600</u> | <u>13,118</u> |
| 5 Total Net Generation (MW) | 24,991 | 32,377 | 57,368 | 71,671 |
| 6 1-in-2 Summer Temperature Demand (Average) | 21,100 | 28,374 | 48,289 | 60,344 |
| 7 Demand Response (DR) | 322 | 202 | 524 | 524 |
| 8 Interruptible/Curtailable Programs | 316 | 1,087 | 1,403 | 1,603 |
| 9 Planning Reserve | 21.5% | 18.7% | 22.8% | 22.3% |

2007 Summer Monthly System Reserves

| Statewide | | | | |
|---|-------------|-------------|---------------|------------------|
| Resource Adequacy Planning Conventions | June | July | August | September |
| 1 Existing Generation | 57,897 | 57,986 | 58,224 | 58,553 |
| 2 Retirements (Known) | 0 | 0 | 0 | 0 |
| 3 High Probability CA Additions | 89 | 238 | 329 | 0 |
| 4 Net Interchange | 13,118 | 13,118 | 13,118 | 13,118 |
| 5 Total Net Generation (MW) | 71,104 | 71,342 | 71,671 | 71,671 |
| 6 1-in-2 Summer Temperature Demand (Average) | 57,125 | 59,726 | 60,344 | 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 | 28.2% | 23.0% | 22.3% | 24.2% |

| CA ISO | | | | |
|---|-------------|-------------|---------------|------------------|
| Resource Adequacy Planning Conventions | June | July | August | September |
| 1 Existing Generation | 46,265 | 46,354 | 46,592 | 46,768 |
| 2 Retirements (Known) | 0 | 0 | 0 | 0 |
| 3 High Probability CA Additions | 89 | 238 | 176 | 0 |
| Imports not carrying own reserves | 2,200 | 2,200 | 2,200 | 2,200 |
| 4 Net Interchange | 10,600 | 10,600 | 10,600 | 10,600 |
| 5 Total Net Generation (MW) | 56,954 | 57,192 | 57,368 | 57,368 |
| 6 1-in-2 Summer Temperature Demand (Average) | 46,148 | 48,138 | 48,289 | 47,858 |
| 9 Planning Reserve | 27.6% | 22.8% | 22.8% | 23.9% |

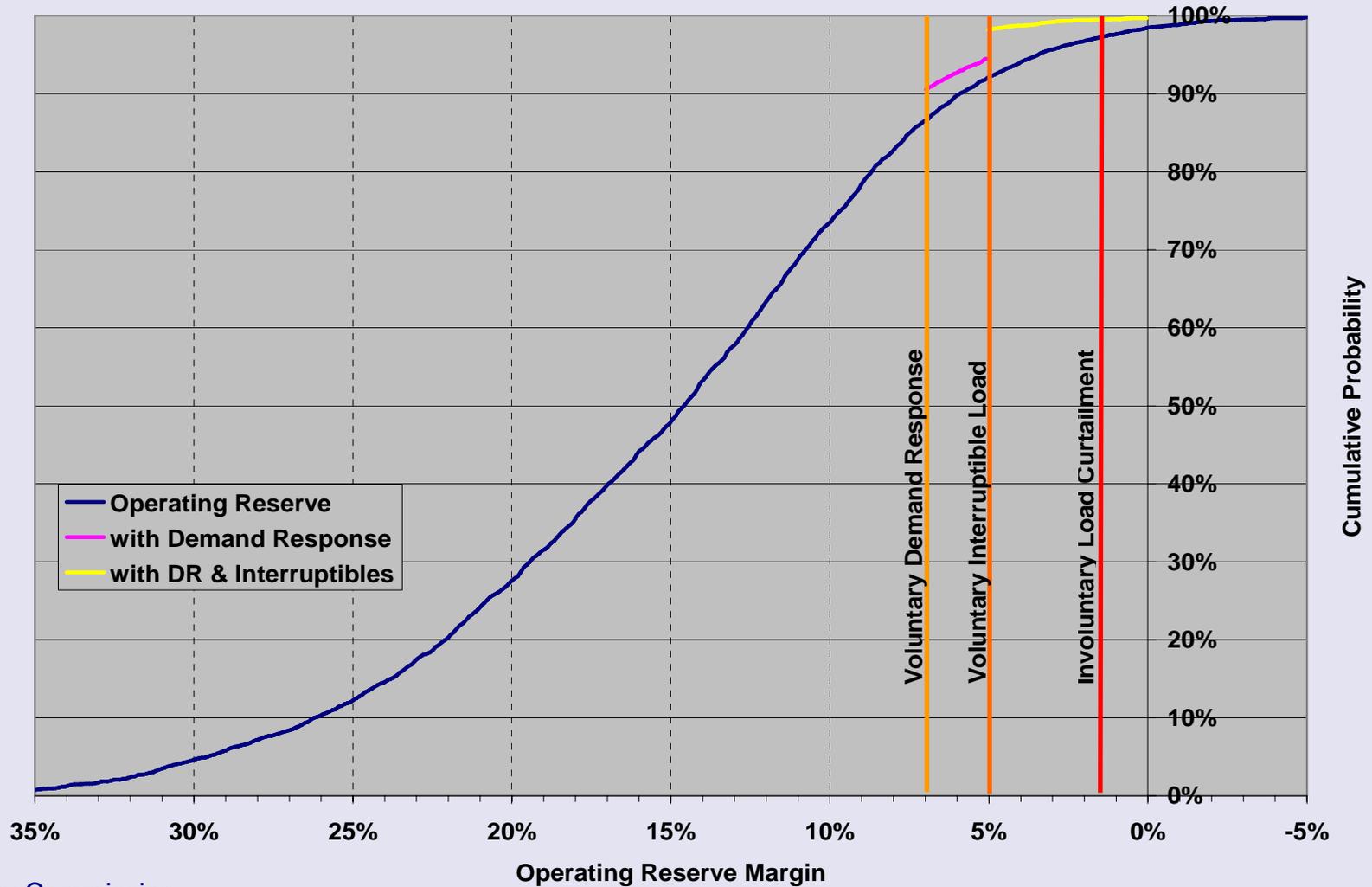
| Probabilistic Range of: | Minimum | Maximum |
|--------------------------------|----------------|----------------|
| Demand | 43,211 | 52,990 |
| Forced Outages | 155 | 4,535 |
| Transmission Outages | 0 | 3,784 |

2007 Summer Monthly System Reserves

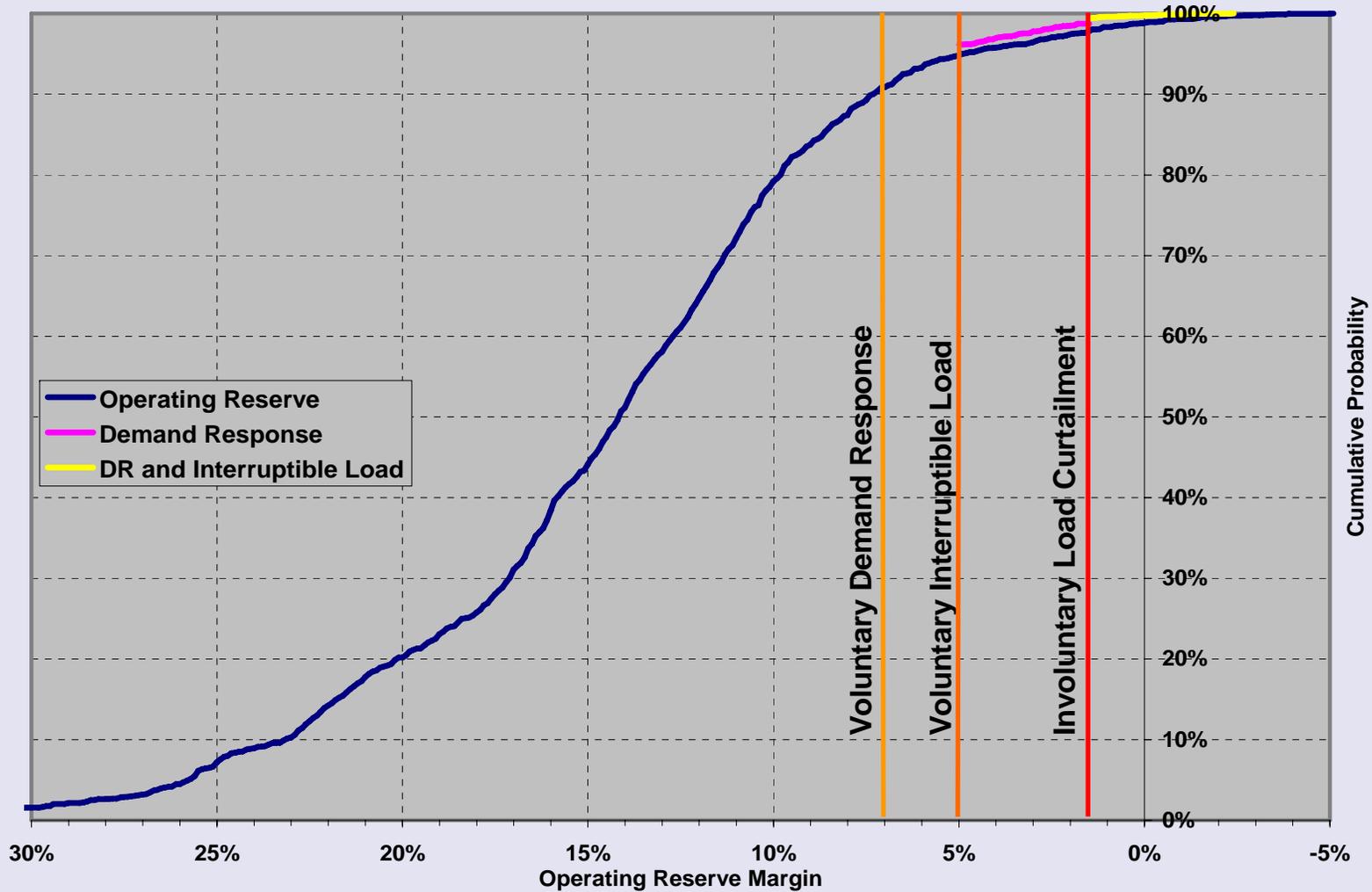
| CA ISO NP26 | | | | |
|---|----------------------|----------------|----------------|------------------|
| Resource Adequacy Planning Conventions | June | July | August | September |
| 1 Existing Generation | 24,417 | 24,491 | 24,491 | 24,491 |
| 2 Retirements (Known) | 0 | 0 | 0 | 0 |
| 3 High Probability CA Additions | 74 | 0 | 0 | 0 |
| 4 Net Interchange | 500 | 500 | 500 | 500 |
| 5 Total Net Generation (MW) | 24,991 | 24,991 | 24,991 | 24,991 |
| 6 1-in-2 Summer Temperature Demand (Average) | 20,653 | 21,098 | 20,815 | 20,052 |
| 7 Demand Response (DR) | 322 | 322 | 322 | 322 |
| 8 Interruptible/Curtailable Programs | 316 | 316 | 316 | 316 |
| 9 Planning Reserve | 24.1% | 21.5% | 23.1% | 27.8% |
| Probabilistic Range of: | | Minimum | Maximum | |
| | Demand | 18,979 | 23,148 | |
| | Forced Outages | 118 | 3,371 | |
| | Transmission Outages | 0 | 1,000 | |

| CA ISO SP26 | | | | |
|--|----------------------|----------------|----------------|--------|
| 1 Existing Generation | 21,848 | 21,863 | 22,101 | 22,277 |
| 2 Retirements (Known) | 0 | 0 | 0 | 0 |
| 3 High Probability CA Additions | 15 | 238 | 176 | 0 |
| 4 Net Interchange | 10,100 | 10,100 | 10,100 | 10,100 |
| 5 Total Net Generation (MW) | 31,963 | 32,201 | 32,377 | 32,377 |
| 6 1-in-2 Summer Temperature Demand (Average) | 26,044 | 27,612 | 28,050 | 28,375 |
| 7 Demand Response (DR) | 202 | 202 | 202 | 202 |
| 8 Interruptible/Curtailable Programs | 1,087 | 1,087 | 1,087 | 1,087 |
| 9 Planning Reserve | 27.7% | 21.3% | 20.0% | 18.6% |
| Probabilistic Range of: | | Minimum | Maximum | |
| | Demand | 25,125 | 31,785 | |
| | Forced Outages | 213 | 2,960 | |
| | Transmission Outages | 0 | 3,053 | |

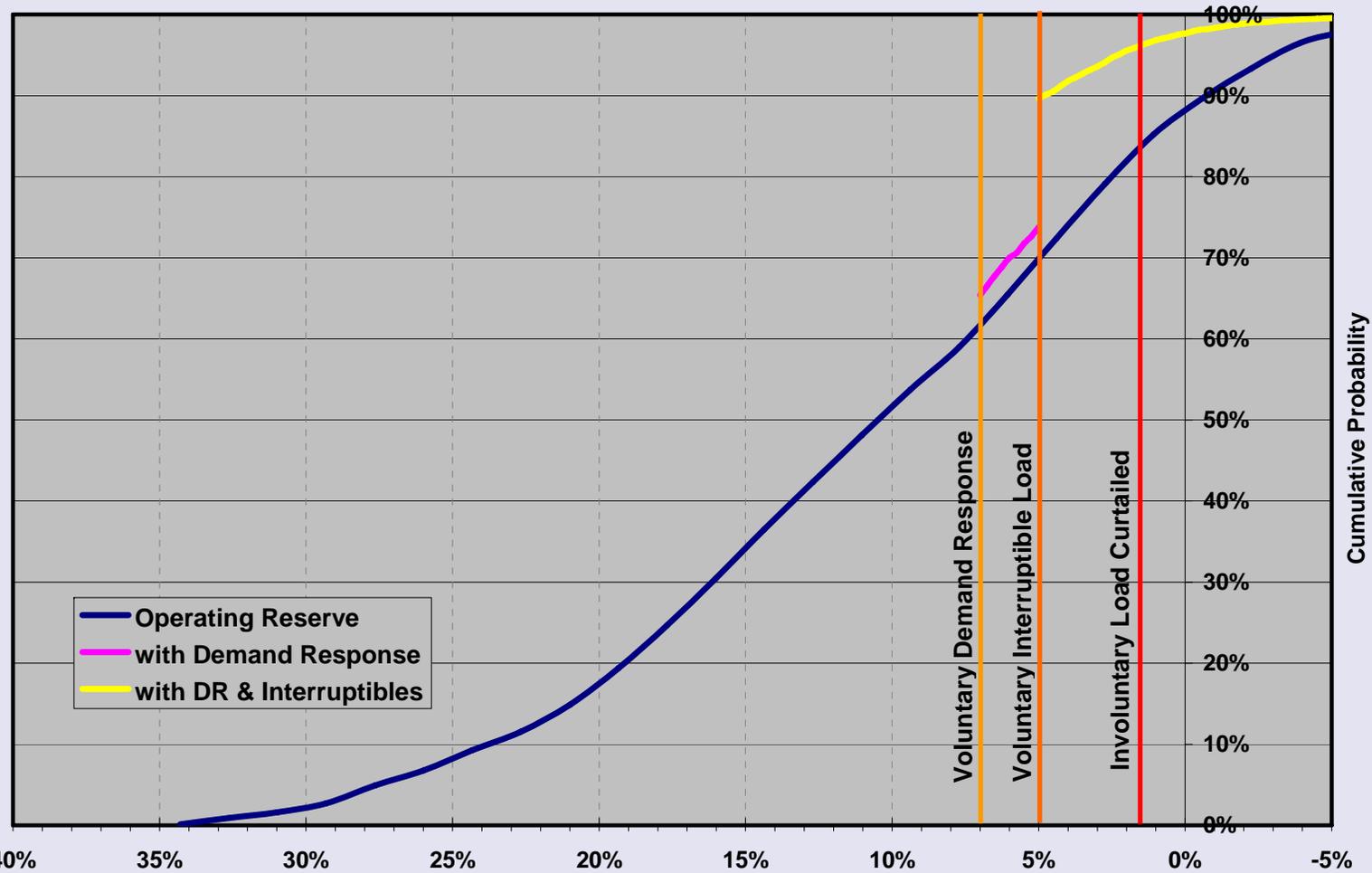
2007 Probability of Meeting Load CA ISO Control Area



2007 Probability of Meeting Load CA ISO -- NP 26



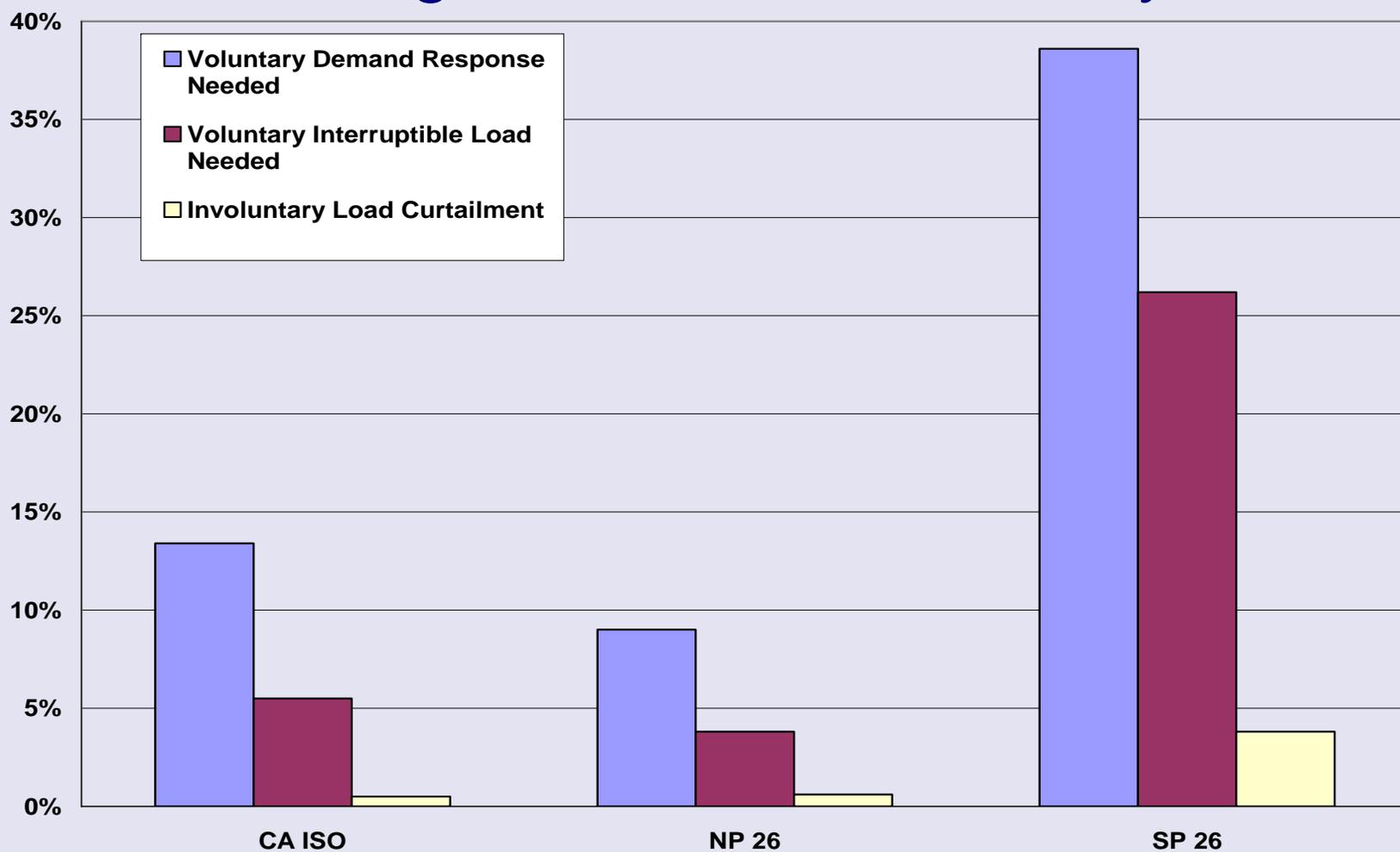
2007 Probability of Meeting Load CA ISO -- SP 26



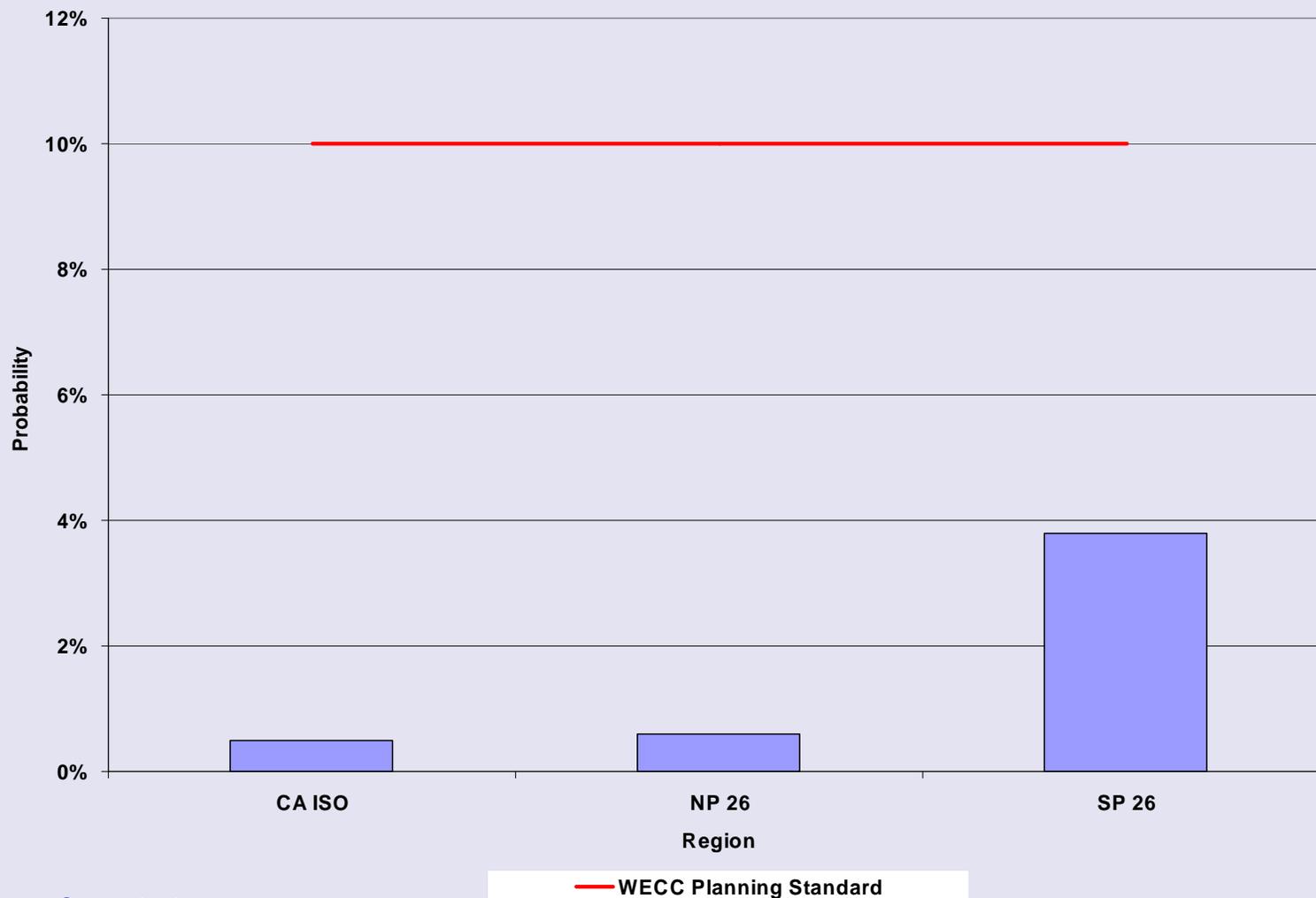
Energy Commission
Public Utilities Commission

Operating Reserve Margin
May 22, 2007

2007 Probability of Calling Load Reduction Programs on the Peak Day



2007 Probability of a Stage 3 Emergency



Upcoming Activities/Next Steps

IEPR Committee Workshop on 2008 Peak Demand Forecast and Supply/Demand Outlook Methodology, May 24, 2007

- Seeking comments on staff analyses
 - 2008 peak forecast
 - Long term probability of demand deviation
 - Wind capacity at time of system peak
 - Transmission transfers NP 26 to SP 26
 - Regional probability of loss of load using planning reserve targets