

Agenda Item 2.3

PSPC Meeting 271

January 14, 2010

2009 Audit of Demand Resources

Power Supply Planning Committee Meeting

January 14, 2010

Lemuel Gonzalez, Manager

Lindsay Perry, Associate Analyst

Chad Nelson, Principal Analyst

Resource Registration and Performance Auditing

Agenda

- Definitions
- 2009 Audit Schedule
- Review Results
 - System loads by audit date
 - Summary by zone and by program
 - Summary Statistics - comparisons against expected performance based on
 - Maximum Interruptible Capacity
 - Adjusted Capacity
- Other Comments
- Questions

Definitions

- Maximum Interruptible Capacity refers to the contracted MW or registered amount for each interruptible load asset.
 - Value should represent the maximum interruption that can be achieved by a Demand Resource in any recording interval during a Load Response Event.
- Adjusted Capability is defined in Section 7.1.1 of M-LRP.
 - In simplest terms, it adjusts an asset's ICAP credit for the maximum interruption achieved by the asset in any recording interval during a Load Response Event.
 - In this presentation, the Maximum Interruptible Capacity was used for new assets where there was no event data to account for
- Maximum Interrupted MWs is the maximum interruption achieved by the Demand Resource in any recording interval during a Load Response Event

Schedule of Audits: Week 1

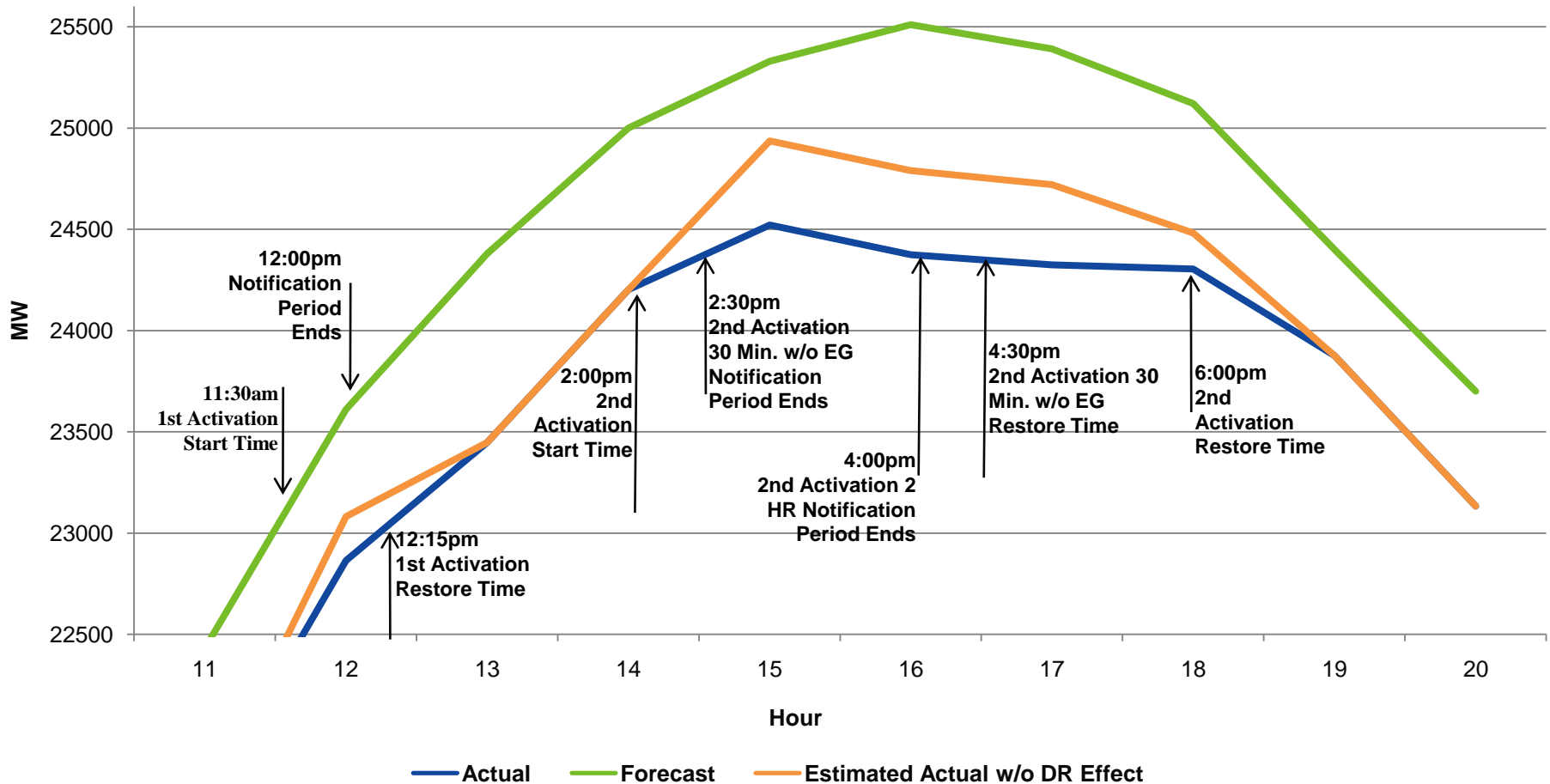
| Schedule | Load Zone | Program | Restore Time | MW by Zone | MW by Activation |
|-----------------------------|-----------|-----------------------|--------------|------------|------------------|
| Day 1: Monday, 8/17 | | | | | |
| 11:30am | CT | 30 w/ EG | 12:15pm | 401.85 | 401.85 |
| 2:00pm | CT | 30 w/o EG & DRR Pilot | 4:30pm | 339.795 | 606.839 |
| | | 2 HR RT | 6:00pm | | |
| | ME | 30 w/o EG | 4:30pm | 185.246 | |
| | | Profiled | 6:00pm | | |
| | VT | 2 HR RT | | 6.485 | |
| | | Profiled | | | |
| | RI | 2 HR RT | | 11.6 | |
| | | 2 HR RT | | | |
| | NH | 2 HR RT | | 5.742 | |
| | | 2 HR RT | | | |
| SEMA | 2 HR RT | 12.922 | | | |
| NEMA | 2 HR RT | 15.815 | | | |
| WCMA | 2 HR RT | 29.234 | | | |
| Day 2: Tuesday, 8/18 | | | | | |
| 2:30pm | VT | 30 w/o EG | 5:00pm | 42.768 | 376.843 |
| | | 30 w/ EG | | 18.719 | |
| | NH | 30 w/o EG | | 45.733 | |
| | SEMA | 30 w/o EG | | 47.129 | |
| | NEMA | 30 w/o EG | | 95.936 | |
| | WCMA | 30 w/o EG | | 98.555 | |
| | RI | 30 w/o EG | | 28.003 | |

Schedule of Audits: Week 2

| Schedule | Load Zone | Program | Restore Time | MW by Zone | MW by Activation |
|-----------------------------|-----------|---------------------------|--------------|------------|------------------|
| Day 3: Monday, 8/24 | | | | | |
| 11:30am | RI | 30 w/ EG | 2:00pm | 69.814 | 335.935 |
| | NH | 30 w/ EG | | 37.509 | |
| | SEMA | 30 w/ EG | | 52.658 | |
| | NEMA | 30 w/ EG | | 96.892 | |
| | WCMA | 30 w/ EG | | 79.062 | |
| 2:30pm | ME | 30 w/ EG | 5:00pm | 298.354 | 298.354 |
| Day 4: Tuesday, 8/25 | | | | | |
| 2:30pm | CT | 30 w/ EG, Block C Only | 5:00pm | 111.997 | 111.997 |

Results – Monday, 8.17.09

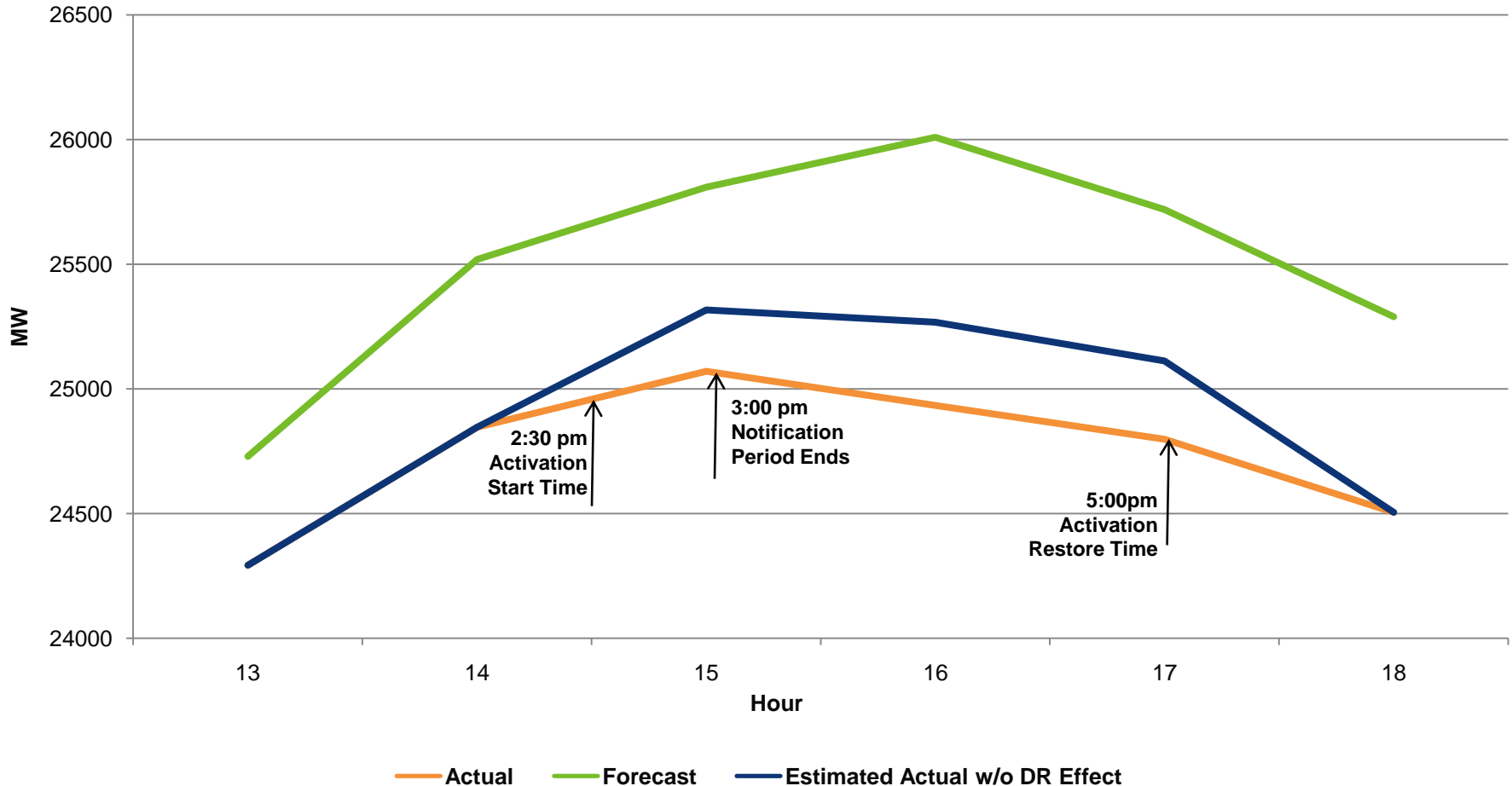
8.17.09 System Load with DR Audit Effect



Note: Actual interrupted MWs are added to the Actual Load in each hour.

Results – Tuesday, 8.18.09

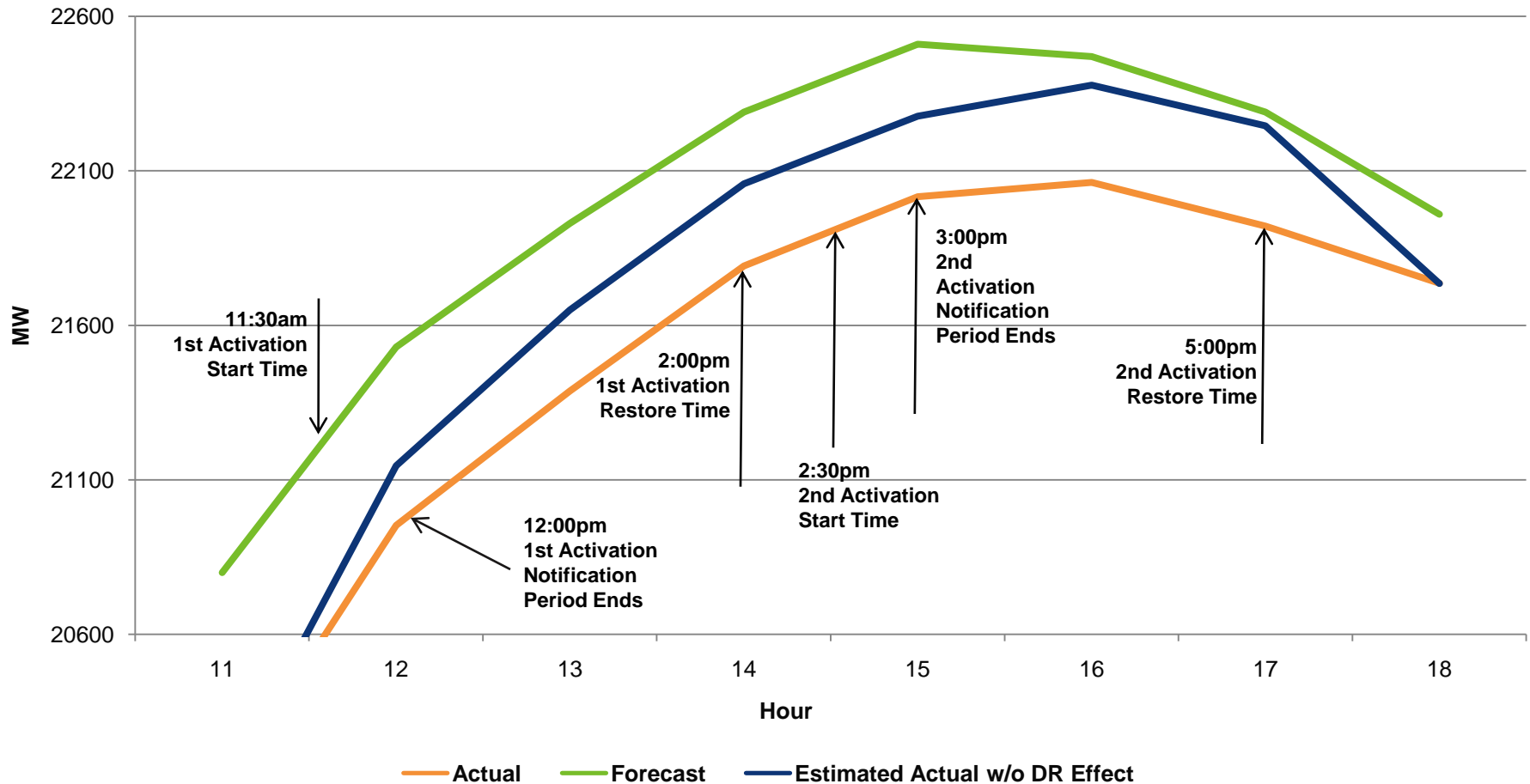
8.18.09 System Load with DR Audit Effect



Note: Actual interrupted MWs are added to the Actual Load in each hour.

Results – Monday, 8.24.09

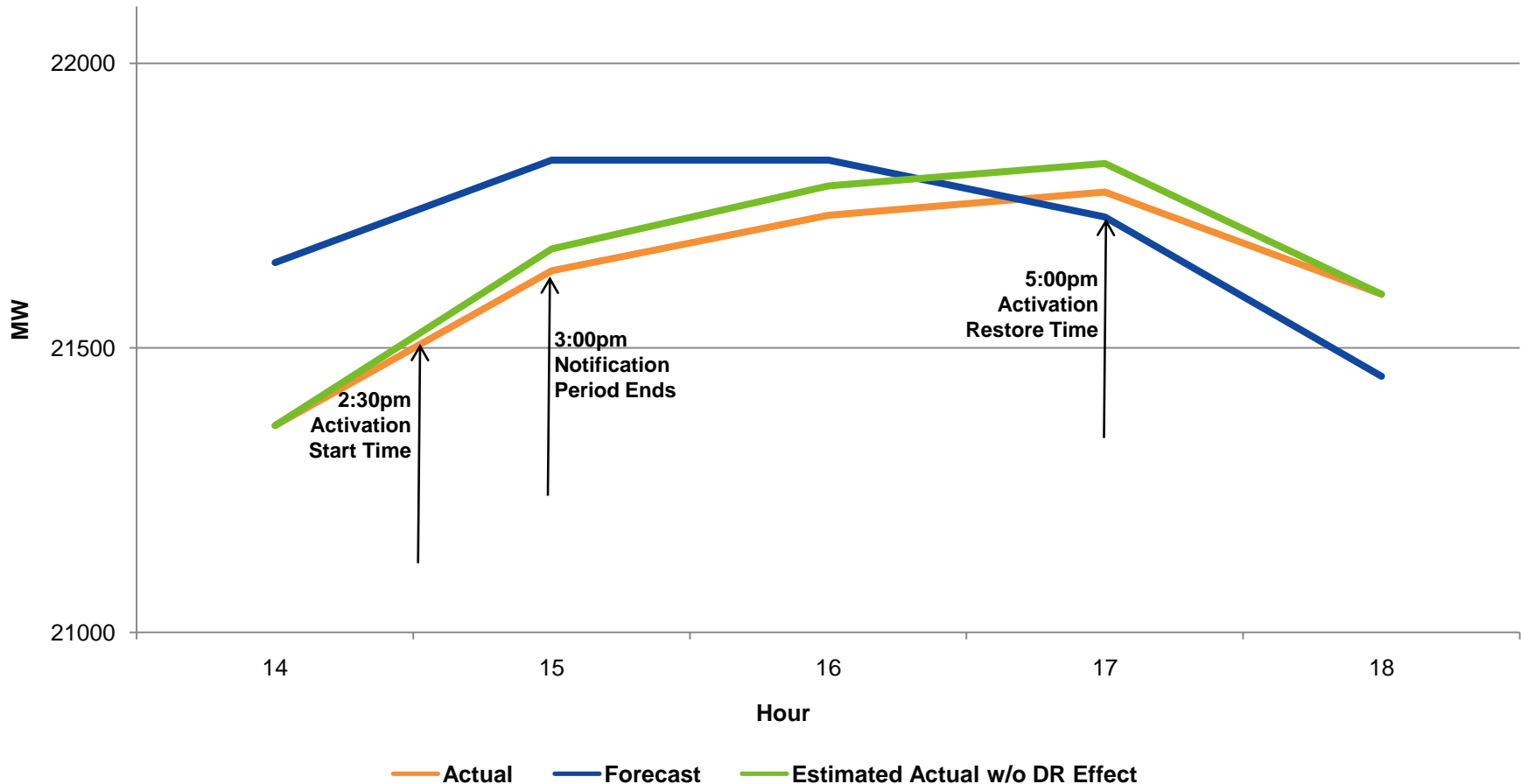
8.24.09 System Load with DR Audit Effect



Note: Actual interrupted MWs are added to the Actual Load in each hour.

Results – Tuesday, 8.25.09

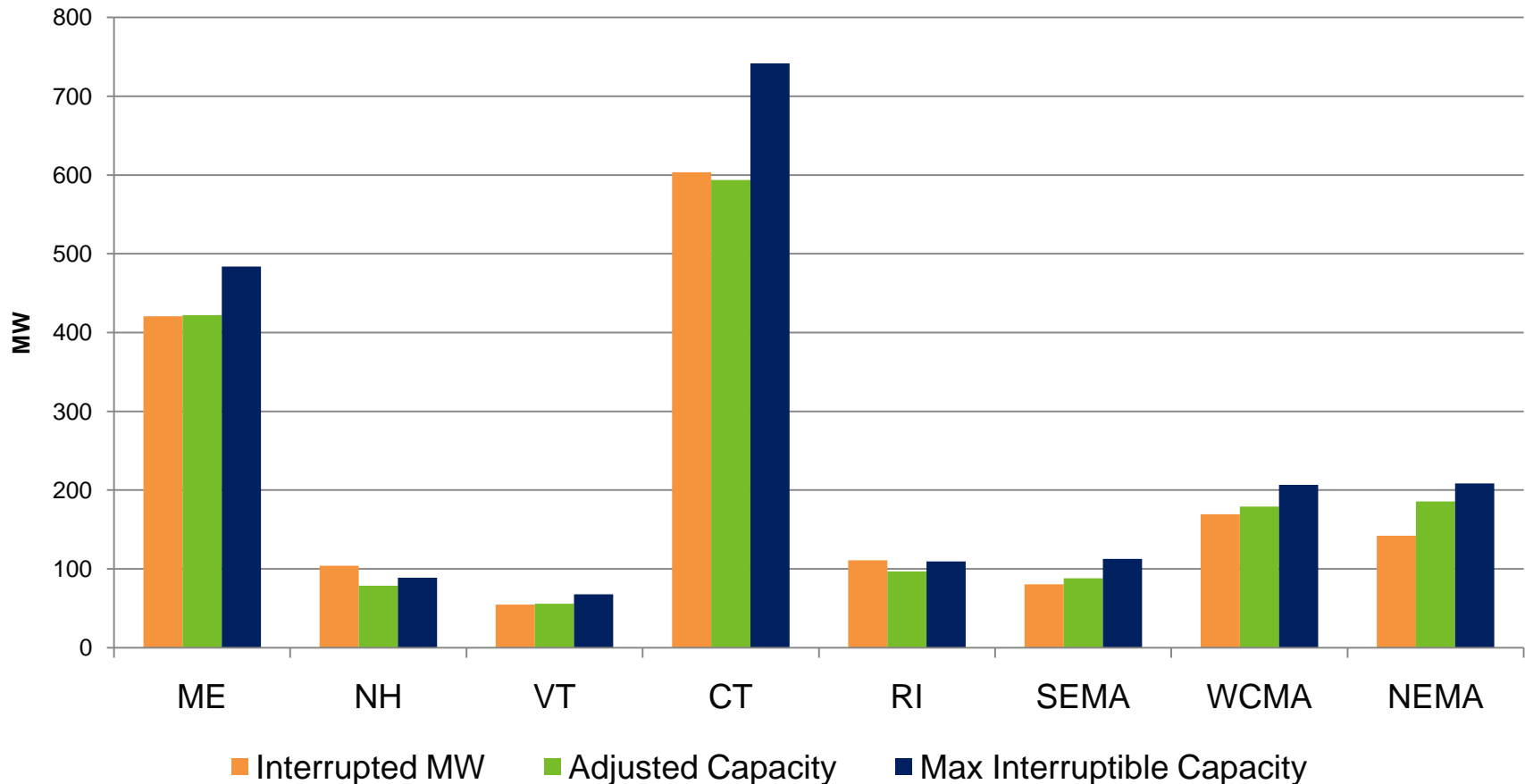
8.25.09 System Load with DR Audit Effect



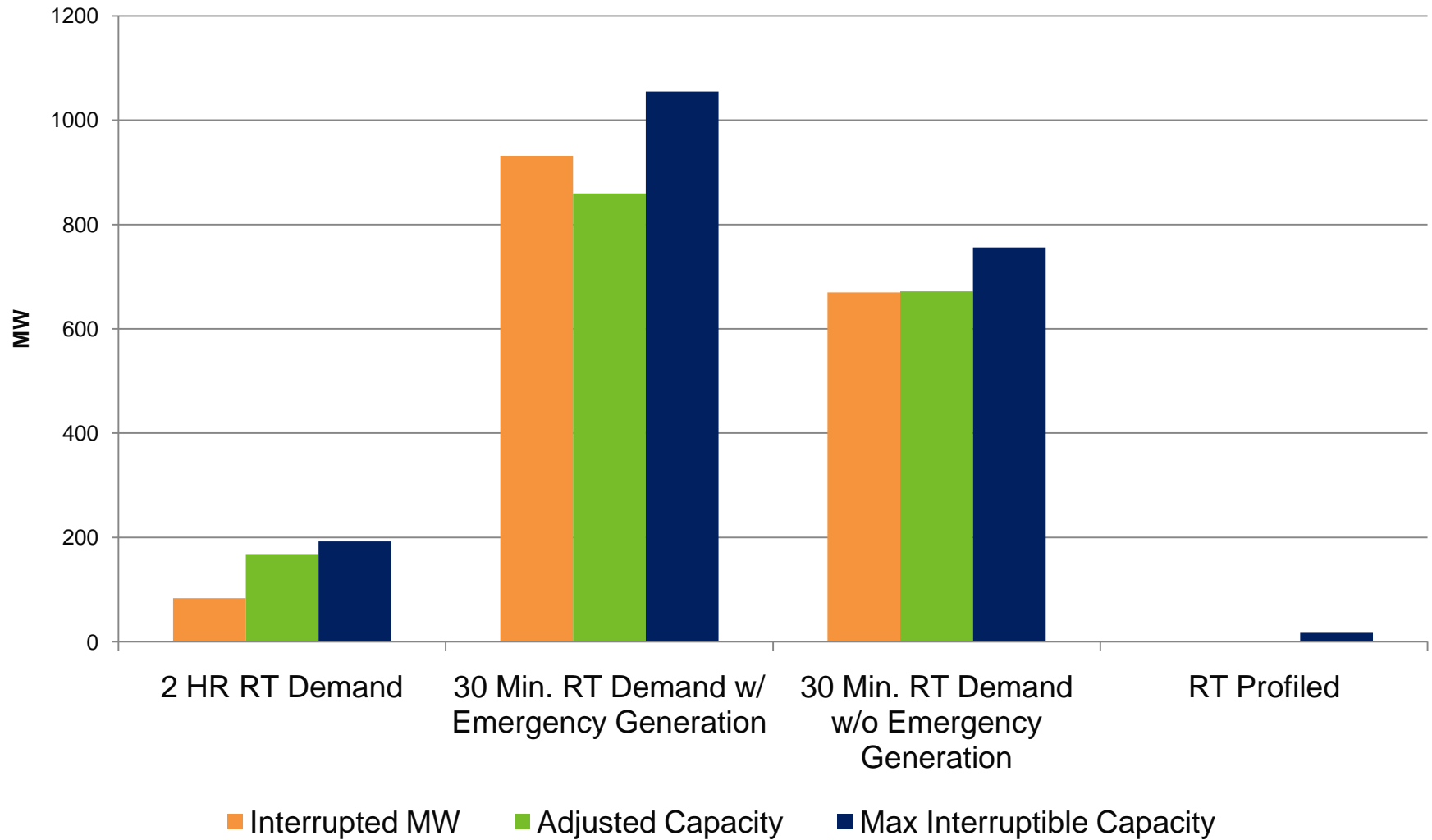
Note: Actual interrupted MWs are added to the Actual Load in each hour.

Results – By Zone

Capacity & Performance by Zone



Results – By Program



Summary Statistics

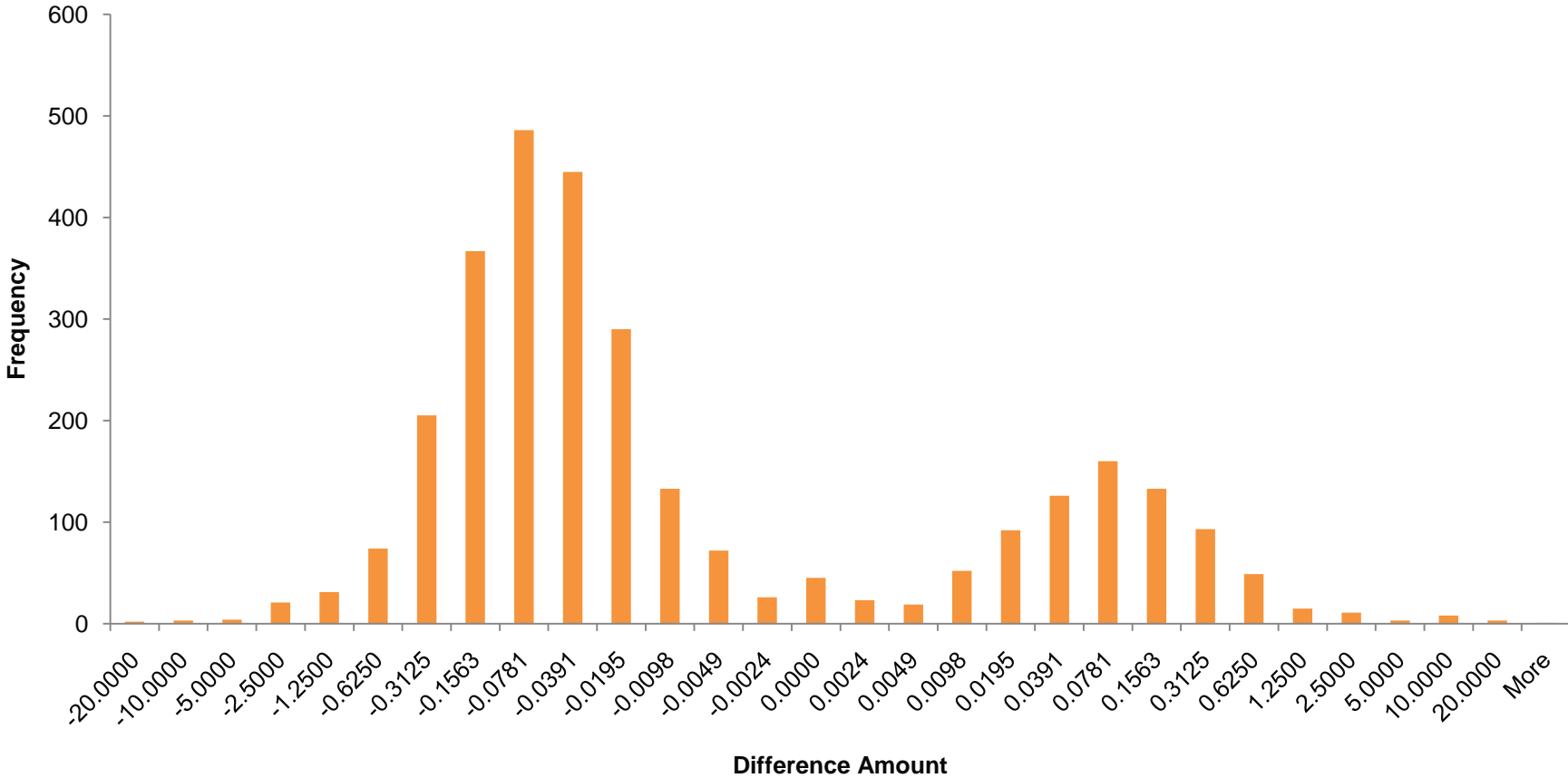
| | | |
|---|-----------------------------------|--------------------------|
| Total Number of Assets | 2992 | |
| Maximum Interrupted MWs | 1685.104 | |
| | | |
| | Performance compared to: | |
| | Max Interruptible Capacity | Adjusted Capacity |
| Total MWs | 2019.821 | 1700.03 |
| Maximum Interrupted MWs as a % of total MWs | 83% | 99% |
| Average asset performance | 91% | 135% |
| Median asset performance | 77% | 95% |

Summary Statistics (cont.)

| | | |
|---|----------------------------|-------------------|
| Total Number of Assets | 2992 | |
| Maximum Interrupted MWs | 1685.104 | |
| | Performance compared to: | |
| | Max Interruptible Capacity | Adjusted Capacity |
| "Exact performers" | 10 | 22 |
| Assets over performing | 789 | 1334 |
| as a % of total | 26% | 45% |
| Assets under performing | 2193 | 1636 |
| as a % of total | 73% | 55% |
| Average deviation for over performers | 0.314 | 0.254 |
| Average deviation for under performers | -0.266 | -0.218 |
| Median deviation for over performers | 0.055 | 0.046 |
| Median deviation for under performers | -0.089 | -0.066 |
| Standard Deviation for over performers | 1.617 | 1.475 |
| Standard Deviation for under performers | 1.322 | 1.243 |

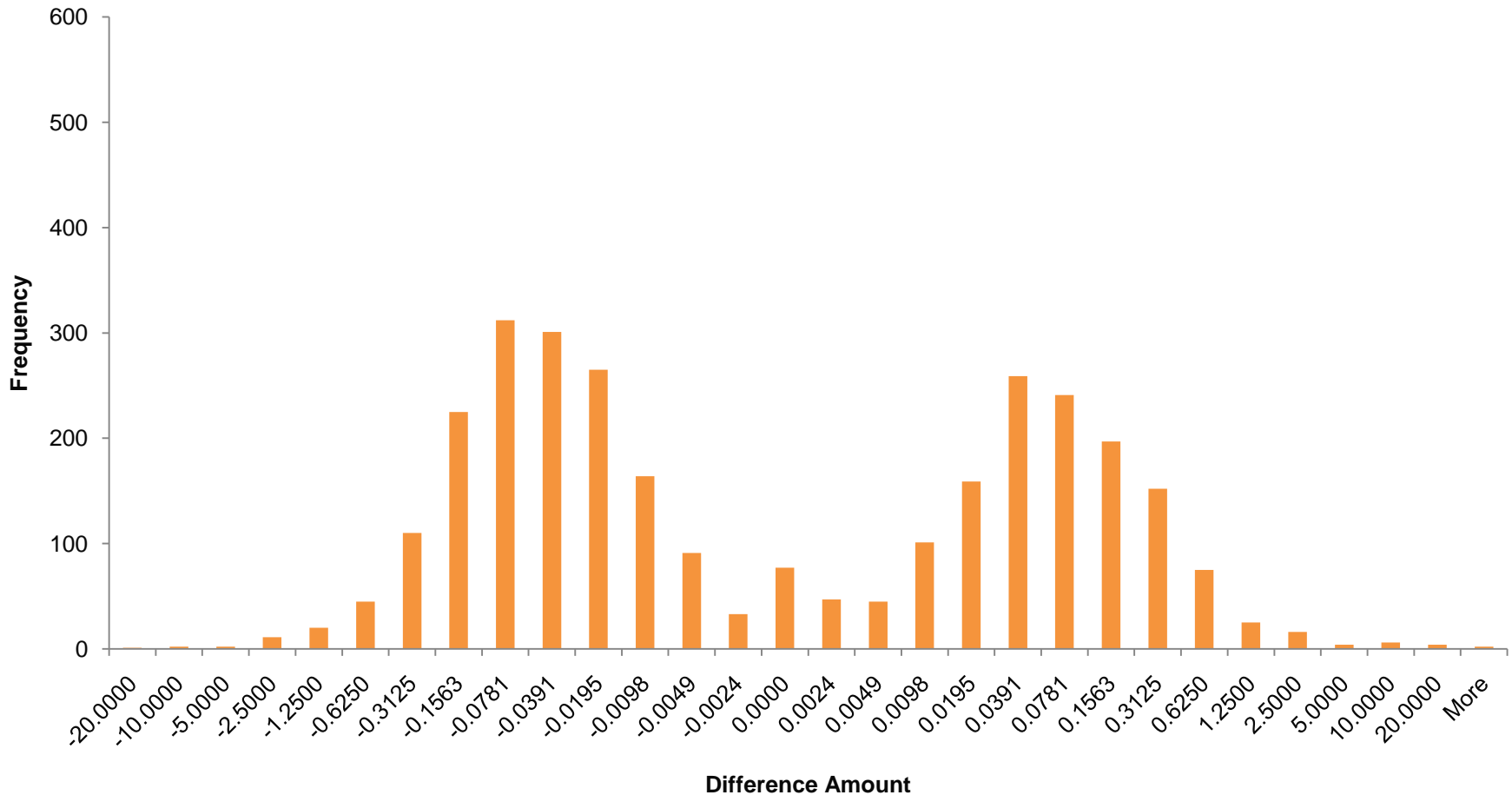
Summary Statistics (cont.)

Difference Between Maximum Interruptible Capacity and Performance



Summary Statistics (cont.)

Difference Between Adjusted Capacity and Performance



Contact Information

- Please contact the ISO Resource Registration & Performance Auditing group with any follow up questions you may have pertaining to this information:
 - Lemuel Gonzalez, lgonzalez@iso-ne.com, 413-540-4580
 - Chad Nelson, cnelson@iso-ne.com, 413-540-4508
 - Lindsay Perry, lperry@iso-ne.com, 413-540-4459



Questions