



Resource Adequacy
2014-2015 Plan Year
Planning Resource Auction (PRA)
Results
April 2014

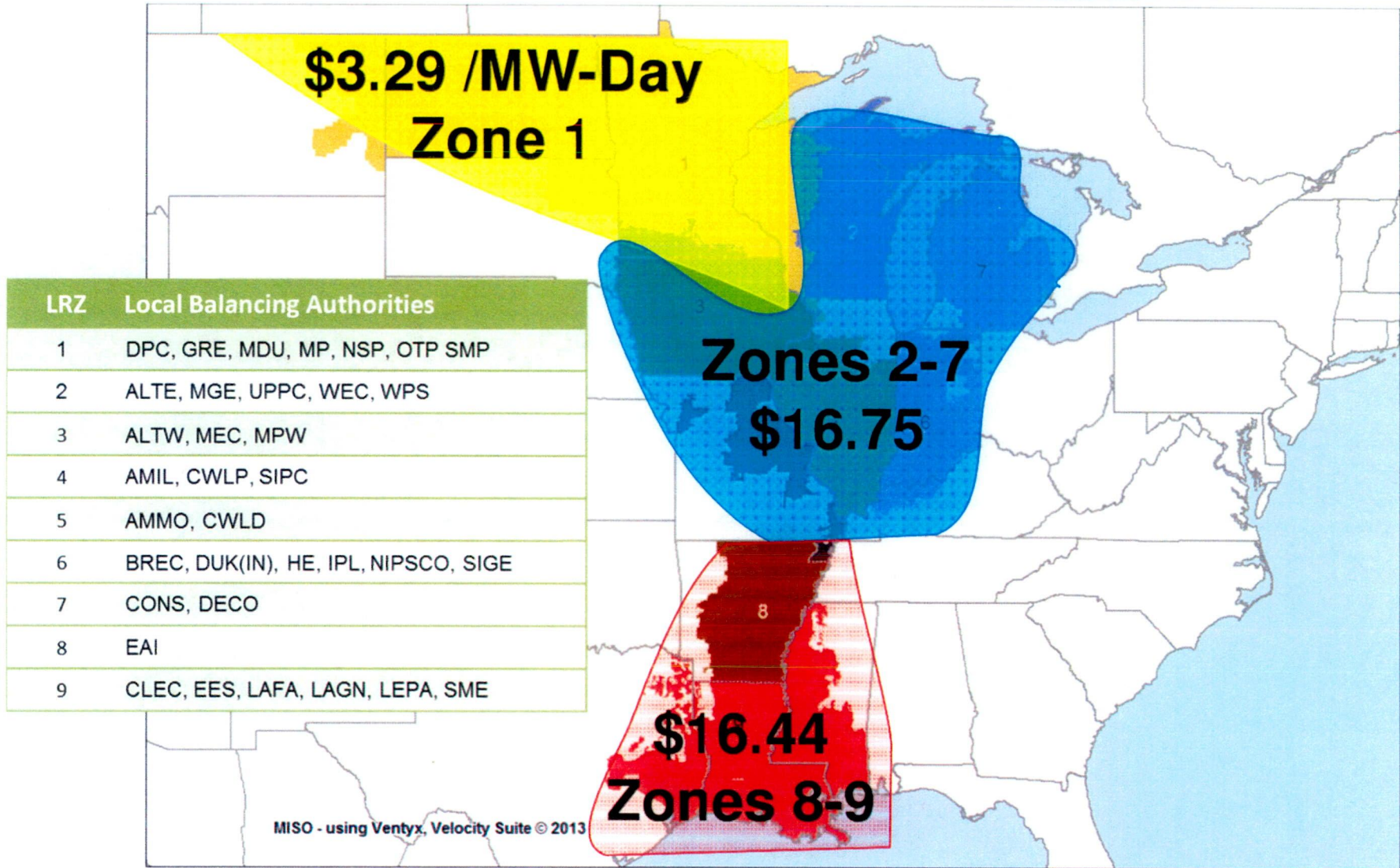
2014/2015 Planning Resource Auction (PRA)

- MISO completed its Annual Planning Resource Auction for Planning Year 2014-2015 which will run from June 1, 2014 through May 31, 2015
- Market Participants submitted Offers between March 27 and 31
- MISO posted final results on April 14, 2014
- The Auction produced three clearing prices: \$3.29 per MW-Day, \$16.75 per MW-Day, \$16.44 per MW-Day
- A total of 136,912 MW of Planning Resources, including Generation, Behind-the-Meter-Generation, Demand Response, and External Resources.
- The MISO Planning Reserve Margin Requirement (PRMR) increased by 2,475 MW to 136,912 MW from 2013-14 requirements
- Excess Zonal Resource Credits of 12,201 MW remained after meeting the PRMR

Auction Clearing Prices

- This year's auction produced three Auction Clearing Prices across the nine Local Resource Zones (LRZs):
- Zone 1 (Minnesota, North Dakota, and Western Wisconsin) cleared at \$3.29 per MW-day driven by the zone's capacity export limitations
- Zones 2-7 (Upper Michigan, Eastern Wisconsin, Iowa, Missouri, Indiana, Illinois, Kentucky, and Lower Michigan) cleared at \$16.75 per MW-day
- Zones 8 and 9 (Arkansas, Louisiana, Mississippi, and Texas) cleared at \$16.44 per MW-Day as constraints related to expected intra-RTO dispatch ranges bound between the MISO South and the MISO Central/North Regions

Auction Clearing Prices by Local Resource Zone



2014/2015 MISO Planning Resource Auction Results

| Local Resource Zone (LRZ) | Z1 (MN,ND, Western WI) | Z2 (Eastern WI, Upper MI) | Z3 (IA) | Z4 (IL) | Z5 (MO) | Z6 (IN, KY) | Z7 (MI) | Z8 (AR) | Z9 (LA, MS, TX) | System |
|---------------------------|------------------------|---------------------------|---------|---------|---------|-------------|---------|---------|-----------------|---------|
| Demand Forecast | 16,540 | 12,347 | 8,757 | 9,680 | 8,106 | 17,629 | 20,791 | 7,363 | 22,999 | 124,212 |
| PRMR (based on CPF) | 18,236 | 13,504 | 9,628 | 10,616 | 8,884 | 19,404 | 22,998 | 8,043 | 25,224 | 136,537 |
| Local Clearing Reqt (LCR) | 15,070 | 11,739 | 8,971 | 8,879 | 5,002 | 15,457 | 21,293 | 8,417 | 24,080 | N/A |
| Effective PRMR | 18,236 | 13,504 | 9,628 | 10,616 | 8,884 | 19,404 | 22,998 | 8,417 | 25,224 | 136,912 |
| Total Offer Submitted | 7,045 | 2,879 | 9,520 | 11,370 | 387 | 17,985 | 15,190 | 9,406 | 25,966 | 99,747 |
| Total FRAP applied | 12,620 | 12,352 | 391 | 874 | 7,722 | 1,846 | 8,449 | 397 | 2,372 | 47,022 |
| Offer Cleared + FRAP | 18,522 | 14,358 | 9,787 | 9,316 | 8,109 | 19,551 | 22,627 | 8,582 | 26,059 | 136,912 |
| Import Limit | 4,347 | 3,083 | 1,591 | 3,025 | 5,273 | 4,834 | 3,884 | 1,602 | 3,585 | N/A |
| Export Limit | 286 | 1,924 | 1,875 | 1,961 | 1,350 | 2,246 | 4,517 | 3,080 | 3,616 | N/A |
| Import/(Export) | (286) | (854) | (158) | 1,299 | 775 | (148) | 371.7 | (165)* | (835)* | N/A |
| ACP (\$/MW-Day) | 3.29 | 16.75 | 16.75 | 16.75 | 16.75 | 16.75 | 16.75 | 16.44 | 16.44 | N/A |



* Zones 8 & 9 were limited to 1,000 MW aggregate imports or exports

Participation by Resource Type (System-wide)

| Planning Resource Type | Capacity (UCAP) | *Unused Capacity | Offers | Cleared | Fixed Resource Plans | Commit | % Commit | ZRC Balance |
|-----------------------------|-----------------|------------------|--------|---------|----------------------|---------|----------|-------------|
| Generation | 138,668 | 3,480 | 90,645 | 82,162 | 42,394 | 124,556 | 91.0% | 10,632 |
| Behind the Meter Generation | 4,071 | 59 | 1,693 | 1,602 | 2,141 | 3,743 | 2.7% | 270 |
| Demand Response | 5,750 | 3 | 4,298 | 4,008 | 1,449 | 5,457 | 4.0% | 290 |
| External Resources | 4,238 | 73 | 3,111 | 2,117 | 1,038 | 3,156 | 2.3% | 1,009 |
| Energy Efficiency | 0 | 0 | 0 | 0 | 0 | 0 | 0% | 0 |
| Total | 152,727 | 3,615 | 99,747 | 89,890 | 47,022 | 136,912 | 100% | 12,201 |
| %UCAP | 100% | 2% | 65% | 59% | 31% | 90% | N/A | 8% |

*Unused Capacity = Capacity – Cleared – Fixed Resource Plans – ZRC Balance



Appendix - Acronyms

ACP - Auction Clearing Price (\$/MW-Day)

CEL - Capacity Export Limit (MW)

CIL - Capacity Import Limit (MW)

CPF – Coincident Peak Forecast (MW)

FRAP - Fixed Resource Adequacy Plan (MW)

LCR - Local Clearing Requirement (MW)

LRZ - Local Resource Zone

PRA - Planning Resource Auction

PRM - Planning Reserve Margin (%)

PRMR - Planning Reserve Margin Requirement (MW)

SFT – Simultaneous Feasibility Test

UCAP - Unforced Capacity (MW)

ZRC - Zonal Resource Credit (MW)