**Adjusted A*-*factor for Alternate Scenario**

 SDG&E provided CE tests with an adjusted A-factor given its importance in determining the capacity (or RA) benefit of the DR programs. The current A-factor, developed from the RECAP model, uses the current DR program limitations to devalue the capacity (or RA) provided by DR. The RECAP model develops the hours of expected loss of load. The A-factor looks at the percentage of those hours that are within the hours of DR availability. With increased renewables, many of the hours of likely loss of load have shifted to later in the day, outside the hours of availability required by the CAISO market. DR programs are subsequently being devalued because they are geared toward providing load drop during the hours specified by the CAISO. Because the CAISO has not yet changed its hours of availability to receive full capacity (RA) credit, DR programs are appearing to be less cost effective than they could optimally be if allowed to choose the hours of availability to optimize their use in hours of likely loss of load.

The CE protocols approach differs substantially from the approach in DRAM where DR gets 100% of capacity (RA) value if its availability meets the CAISO market requirements regardless of the A-factor. In the DR Potential Study, the researchers assumed that the hours of availability would be optimized and not constrained by the current CAISO rules. The detailed analysis in the DR Potential Study concludes, “(e)xamining the distributions of LOLP over each of the 63 years of results from RECAP, we find that nearly the entirety of a year’s LOLP is contained in the top 100 net load hours.”[[1]](#footnote-1) This would indicate that a DR program with 100 hours of potential dispatch would have an A-factor close to 100%, or 1.0. Further, a DR program with 50 hours of potential dispatch would have an A-factor close to 95%, or 0.95.[[2]](#footnote-2)

The adjusted A-factor of 0.95 can then be viewed as the capacity (RA) value of meeting the CAISO required availability hours or the capacity (RA) value if the CAISO changes its availability hours for DR to better match the changing grid needs resulting from the substantial penetration of solar energy that has shifted the relative needs for new capacity to later in the day.

1. Lawrence Berkeley National Laboratory, E3, and Nexant; 2015 California Demand Response Potential Study Charting California’s Demand Response Future, Final Report on Phase 2 Results; November 14, 2016 in R.13-09-011, Appendix I, page 297. [↑](#footnote-ref-1)
2. LBNL, Appendix I, figure I-3, page 297. [↑](#footnote-ref-2)