Load Response Assumptions

Load Response Scenario Evaluations

- Conceptual evaluation of Energy Efficiency (EE) and Demand Response (DR) concepts
  - Comparison vis-à-vis other scenario technologies
  - Scenario Analysis is not an evaluation of specific programs
    - No metric are envisioned for specific programs
    - Only aggregate metrics for EE and for DR will be provided
    - Many variations in quantities of EE and DR among the scenarios

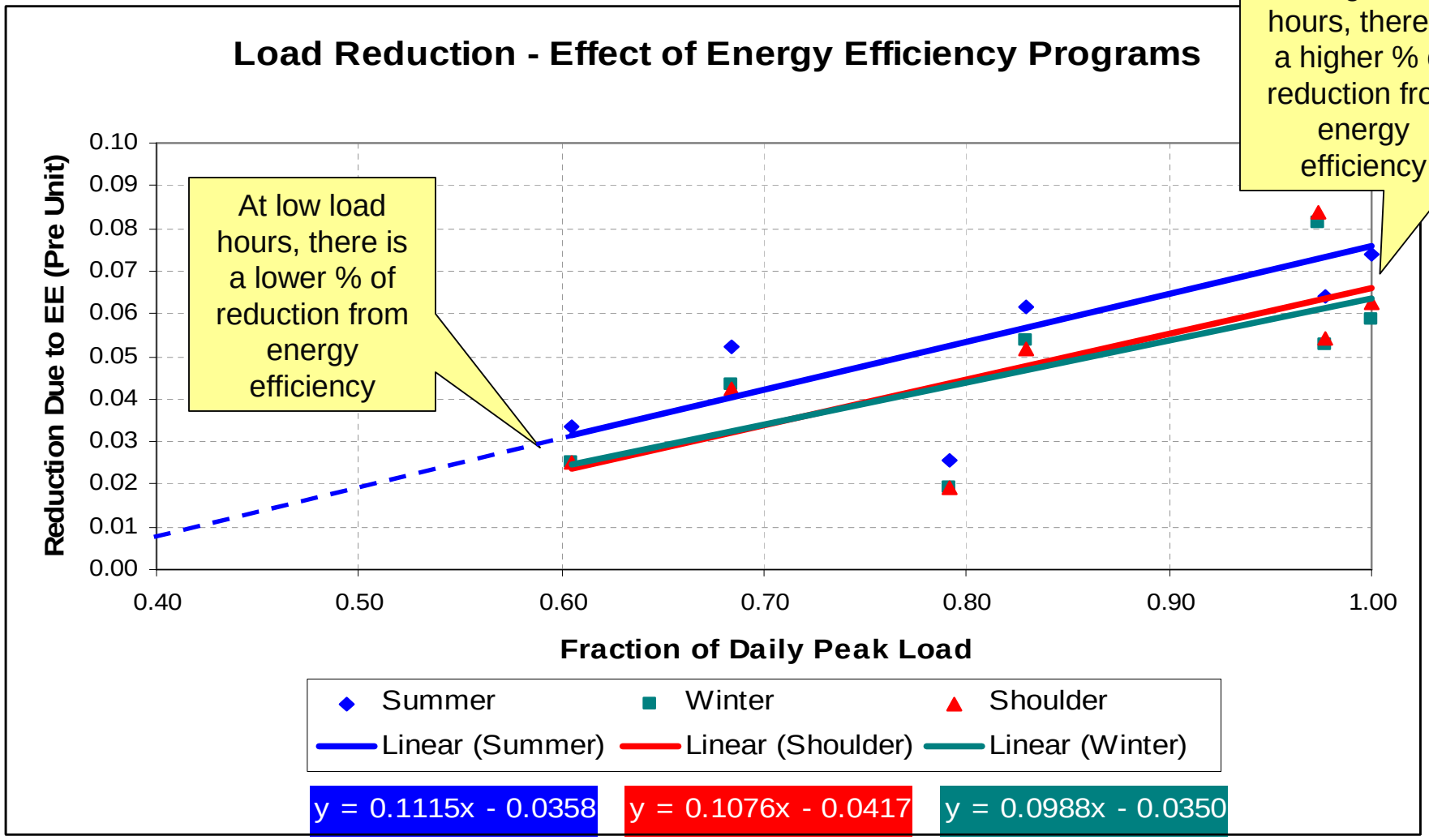
Load Response Scenario Evaluations

- Two types of customer load side - effects
  - Energy Efficiency – All hours assumed to be affected
    - Each day's peak load reduced by 7.7 percent
    - 2700 MW reduction on summer peak load hour (at 7.7 percent)
    - 1800 MW reduction on winter peak load hour (at 7.7 percent)
  - Demand Response – Only hours of peak use are affected
    - Top 2700 MW of annual demand served by Demand Response
    - Assumed to occur after Energy Efficiency adjustment is taken
- All load response (EE and DR) modeled as a resource
  - Receives energy revenues
  - Revenues included in Load Serving Entity expense
  - No "fuel" cost
  - Supportable investment in EE and DR calculated consistently

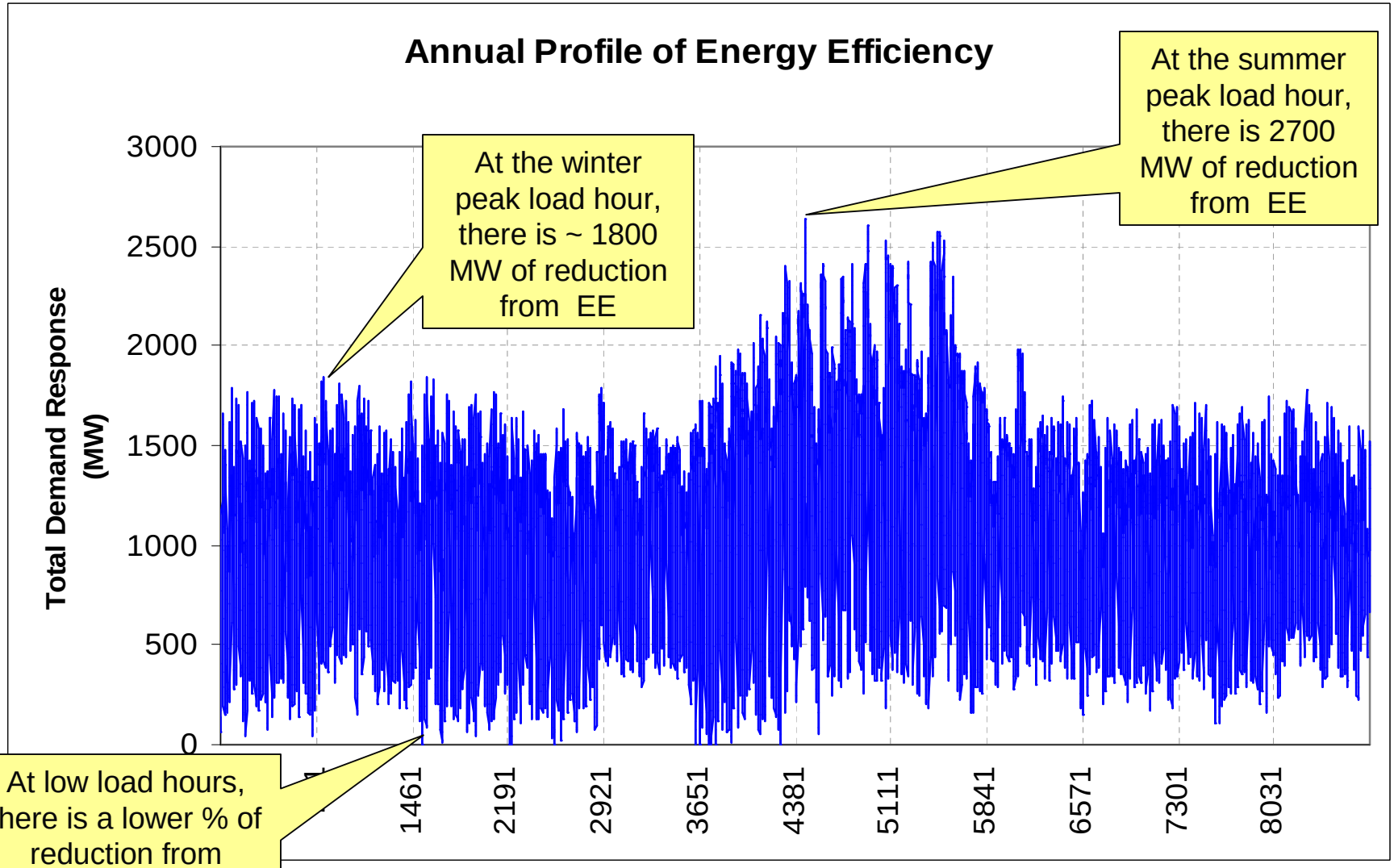
Development of Load Profiles: EE

- Energy Efficiency
  - Developed EE profile in conjunction with Demand-Response Working Group (DRWG)
    - Requested to provide input to Scenario Analysis
    - Comments received for typical summer, winter and shoulder seasons
  - Original assumption:
    - ~8% of load in every hour of the year
  - DRWG Comments suggested lower percentage reductions in off-peak
    - Developed a linear approximation of New England load and EE
    - Captures both on-peak and off-peak characteristics for aggregate technologies
  - Hourly profile of EE developed by applying percentages against New England hourly loads

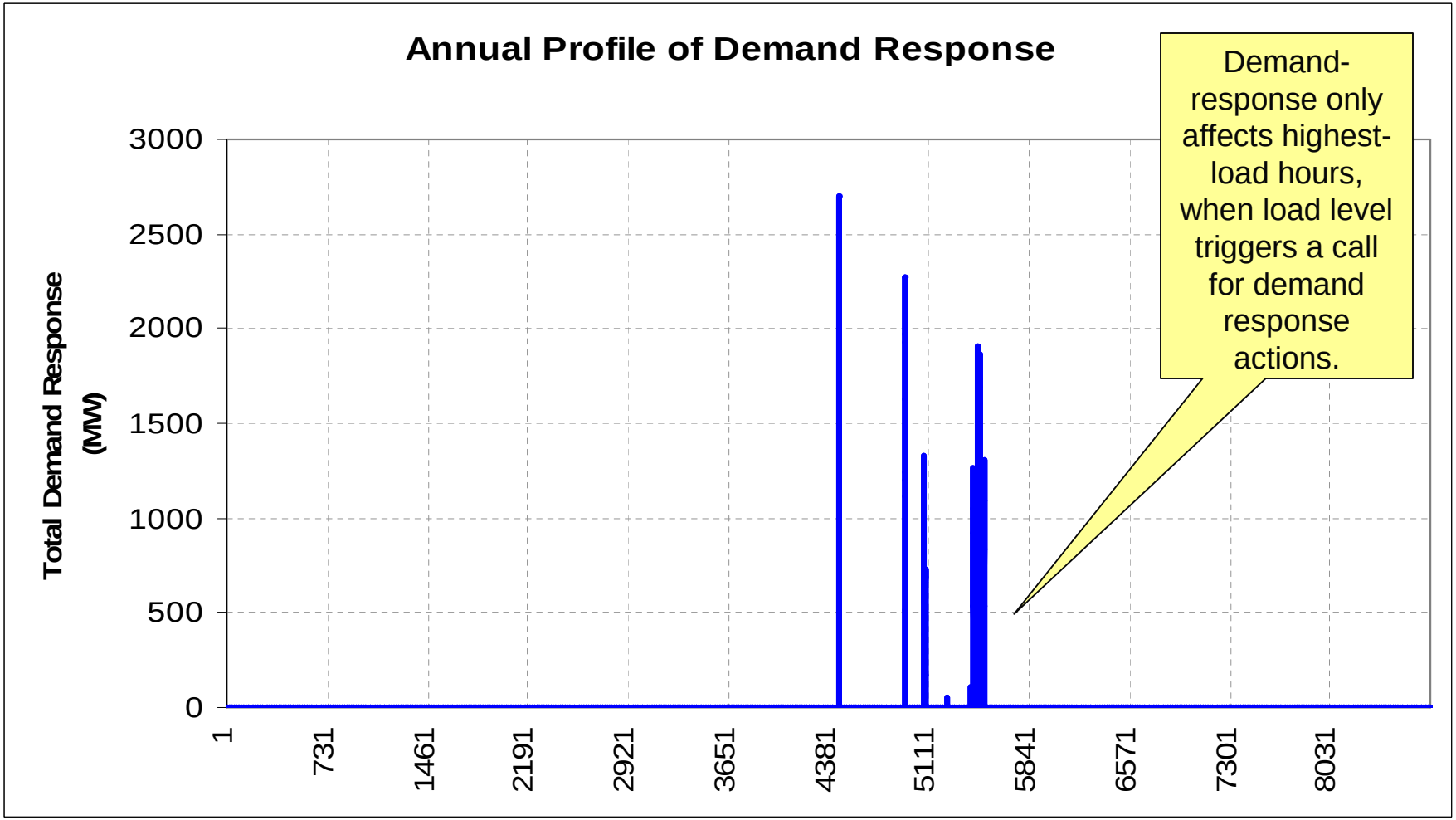
Reductions as a Function of Hourly Load



Annual Profile of Energy Efficiency



Demand Response Occurs With High Loads



Demand Response At High Penetration 5400 MW