



Demand Response Saturation

Planning Committee
April 14, 2010

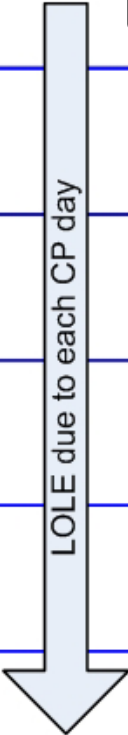
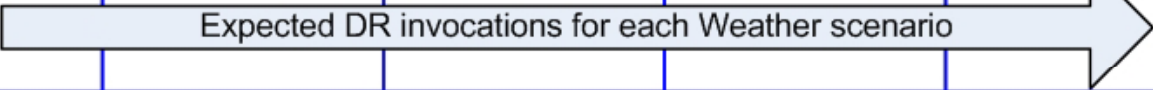
- Active Load Management (ALM) implemented in early 1990's
- Requirements set at 10 interruptions per summer and 6 hour duration per interruption
- Limit of 5% ALM for each zone
- In 1995, limit was increased to 7.5% ALM for entire RTO
- Projected amount of DR + ILR for summer 2010 is 6.3%

2009 Load Forecast for Summer 2013					
Scenarios	CP Day 1	CP Day 2	CP Day 3	CP Day 20
A1971					
⋮					
A2006					
⋮					
⋮					
M2007					

481 Weather Scenarios

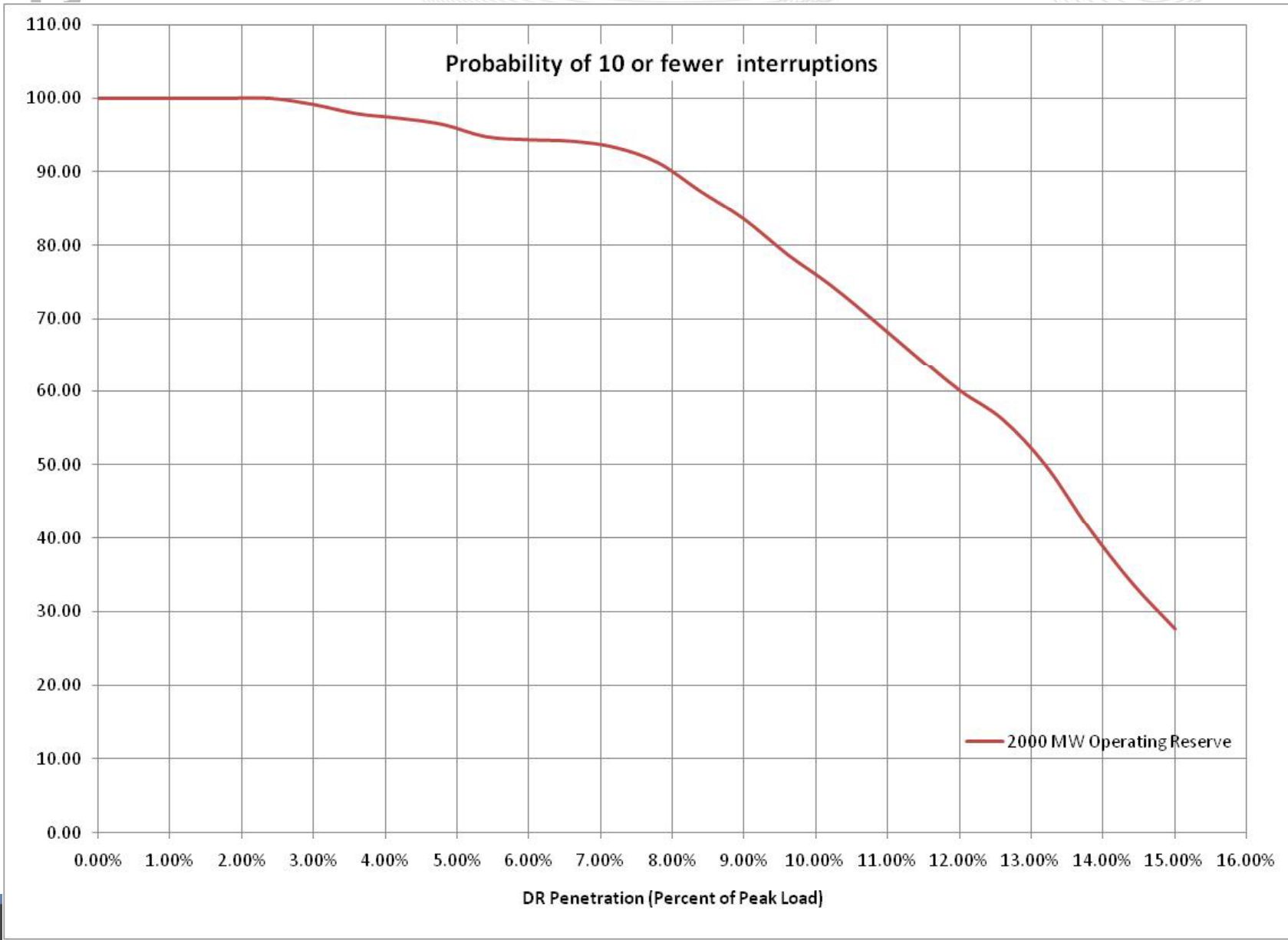
Top 20 Ranked Summer CP Loads

- 2009 RRS PRISM Base case used to calculate 2013/2014 DY IRM
 - Capacity Distribution from week 10.
- DR is assumed to be 100% available capacity resource.
- PJM reserve level set to IRM of 15.3%
- Operating Reserve at which DR is invoked
 - 2,000 MW assumed for RTO (150% of largest contingency – provided by PJM Operations)

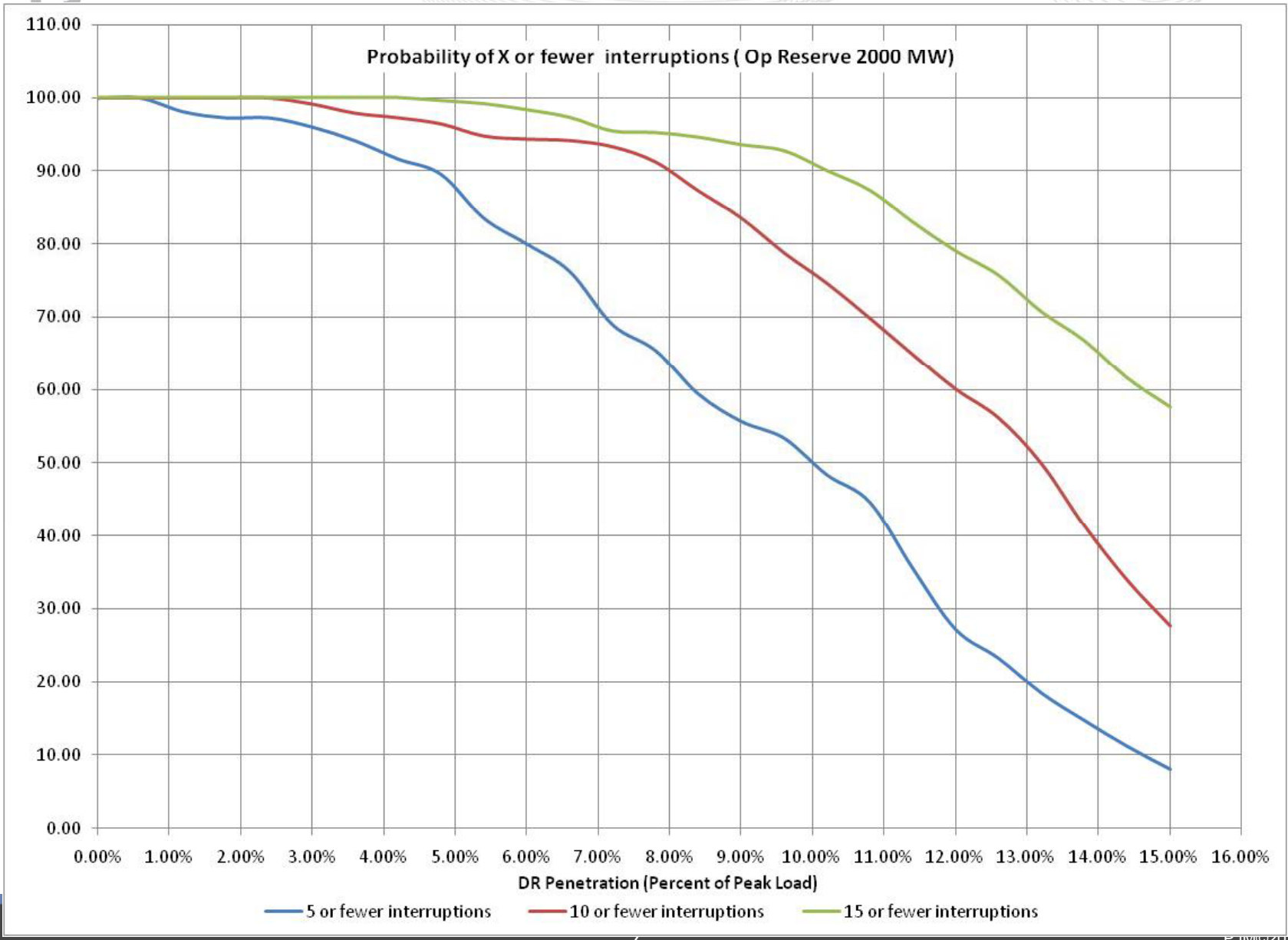
2009 Load Forecast for Summer 2013					
Scenarios	CP Day 1	CP Day 2	CP Day 3	CP Day 20
A1971					
...					
A2006					
...					
...					
...					
M2007					

- LOLE due to all 20 CP days is summed to calculate Total LOLE.
- Expected DR invocations for all 481 weather scenarios are used to create a Histogram

DR Saturation - PJM RTO at 15.3% IRM



DR Saturation - PJM RTO at 15.3% IRM



- Full vs. partial implementations of DR
- DR may interrupt more than 10 times and in the non-summer if requested by PJM, but compliance is not mandatory
- Should PJM reserves be set to IRM or IRM+1?
- Confirm DR is implemented at +2,000 MW load margin
- Coordinate with Scarcity Pricing WG



DR Saturation – Impact of Six-Hour Reduction Limitation

