# The Role of Demand Response in Electric Sector Decarbonisation

## EPRI-IEA Challenges in Electricity Sector Decarbonisation Expert Workshop:

Integrating New Technologies While Maintaining Resource Adequacy

28 September 2015

M. Gary Helm Lead Market Strategist

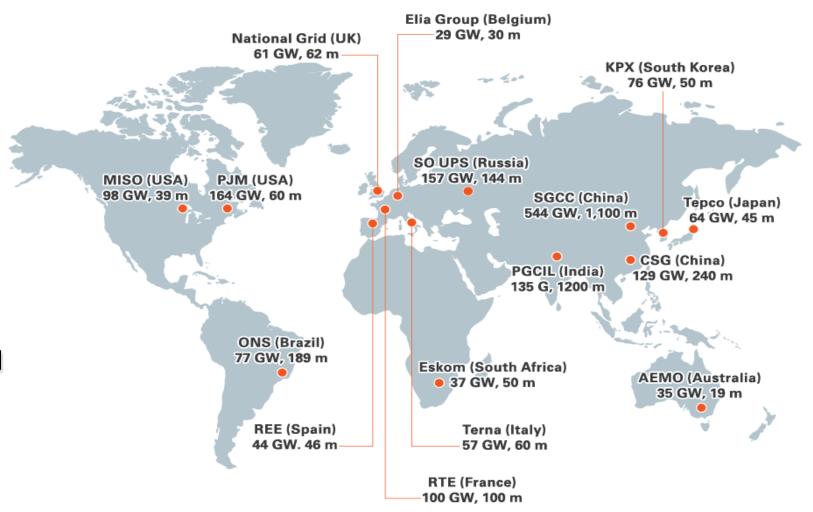


PJM

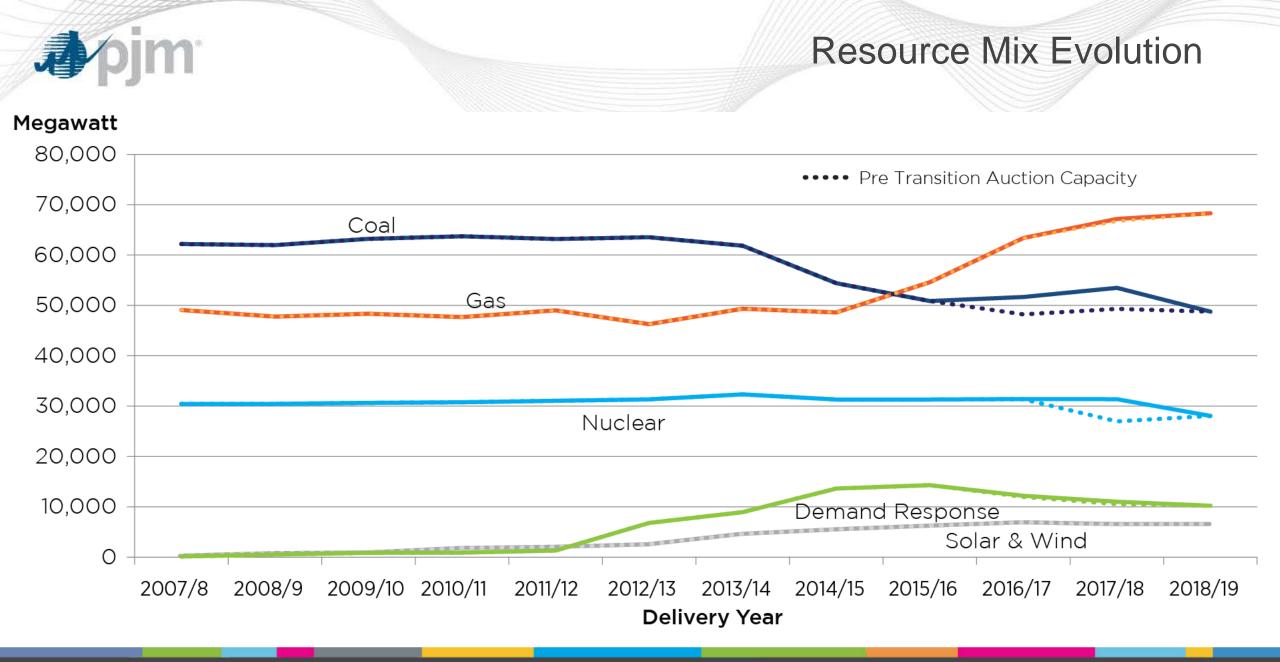
### PJM KEY STATISTICS

IM.

Member companies: 925+ People Served: 61 Million Peak load in megawatts:165,492 MWs of generating capacity:183,604 Miles of transmission lines: 62,556 2014 GWh of annual energy: 797,461 Generation sources: 1,376 Square miles of territory: 243,417 States served: 13 + DC



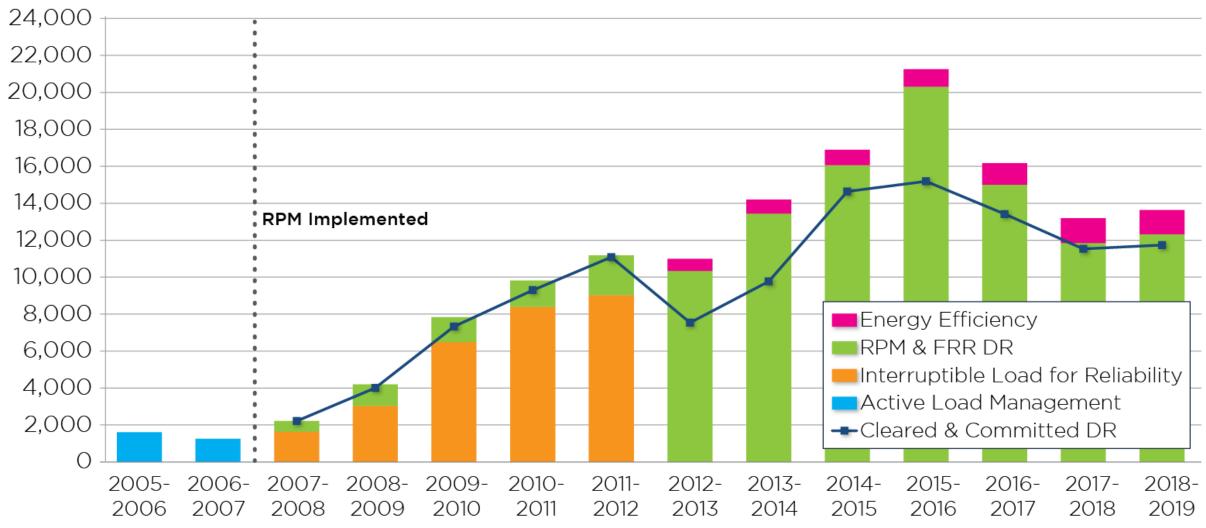
Information for each member refers to peak load and customers served Source: GO15

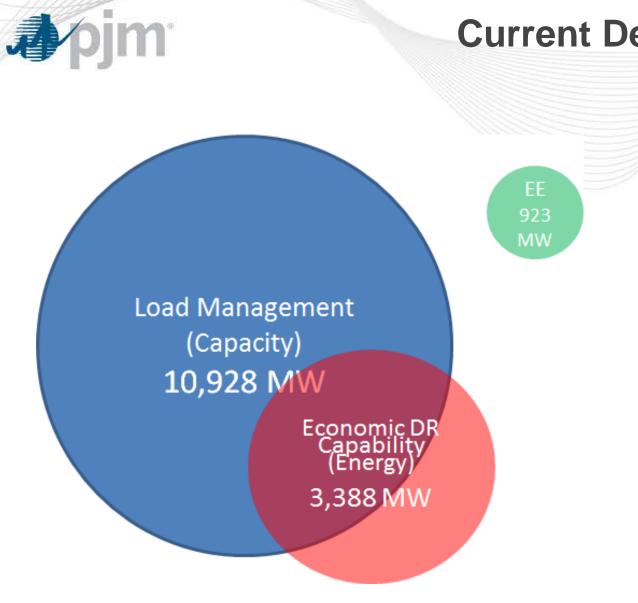




# **Demand Response Evolution**

#### Megawatts



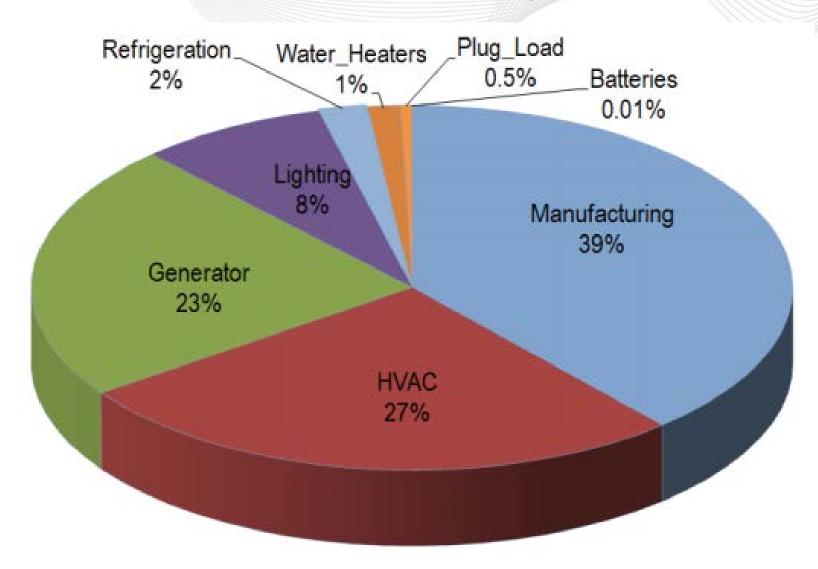


# **Current Demand Response Participation**

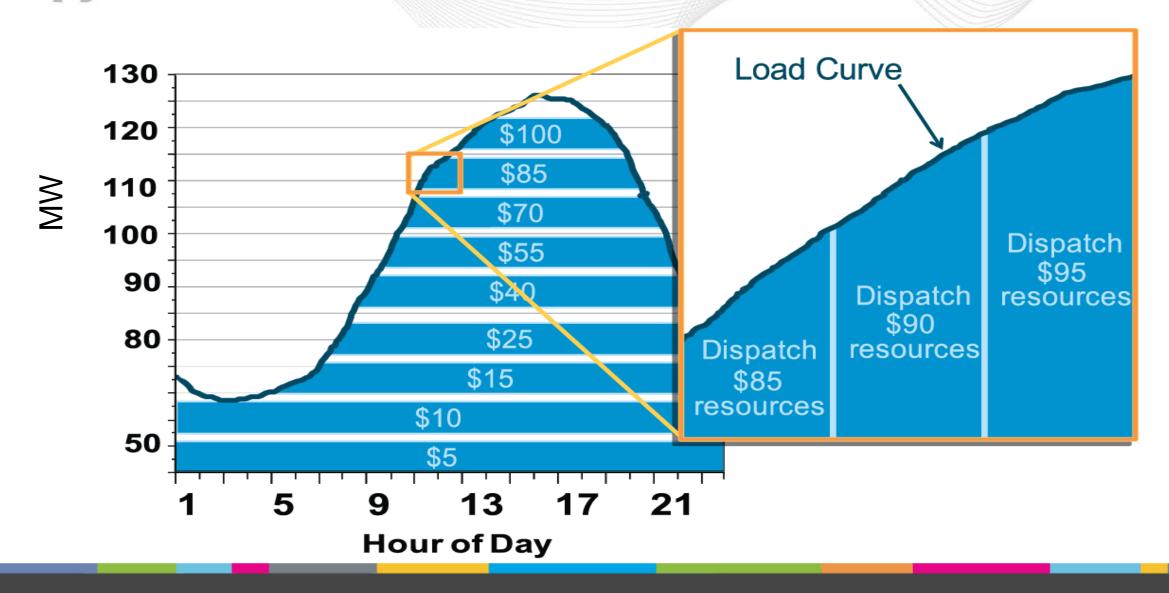
- DR Capacity 2018/2019
  Delivery Year = 10,244 MW
- Typical Economic Energy DR in market ~ 50 MW
- DR Synchronous Reserve capability ~ 513 MW, typical amount in market ~ 65 MW (~ 4% of SR requirement)
- DR Regulation capability ~ 13 MW, typical amount in market ~ 4 MW

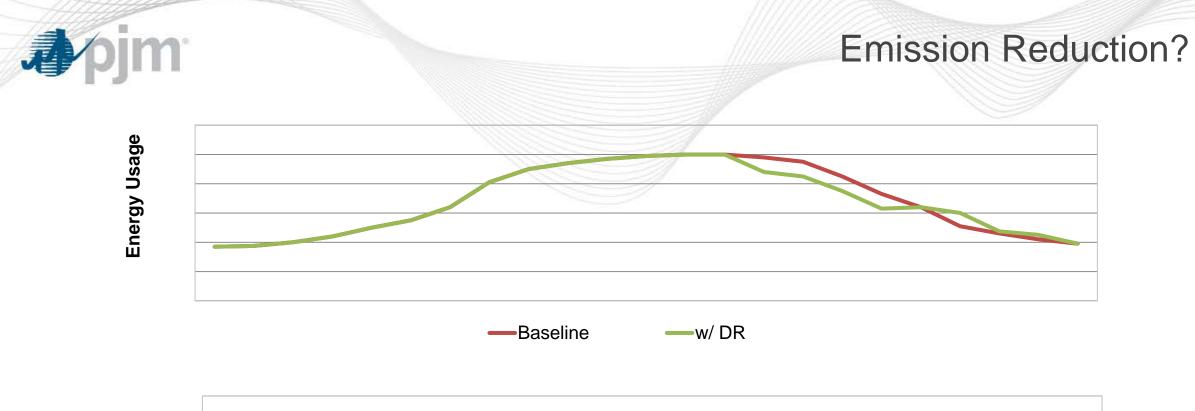
### 

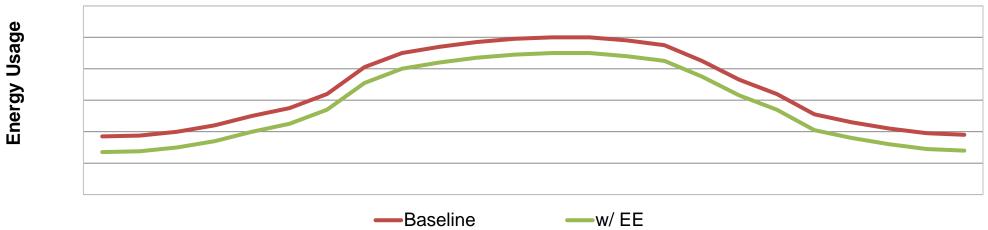
# Demand Response Resources 2015/16



# **Economic Dispatch**







PJM©2015