

# All About Peak-Time Rebates (PTR)

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- DR Roadmap is more complete in that it provides options for load reduction capability to participate in the market as:
  - Demand Response, a resource that competes with generation and merchant transmission in the energy, capacity, Day-ahead scheduling reserve, synchronized reserve and regulation markets; or
  - Price Responsive Demand that changes the quantity of energy consumed and capacity required in response to prices



## Evolution of Demand Response to Price Responsive Demand

- Interruptible load was DR 1.0
  - No response at all to prices, but response as the retail supplier/distributor needed it as a capacity resource
  - Treats DR as supply-side from planning perspective
- Current wholesale/retail paradigm is DR 2.0
  - Responses to wholesale market prices and emergency events = supply-side resource
  - Little integration and coordination with actions at the retail level as CBL and LMP act as a proxy for dynamic retail rates
- Price Responsive Demand is DR 3.0
  - Integrates wholesale and retail prices
  - Treats DR as a demand-side resource

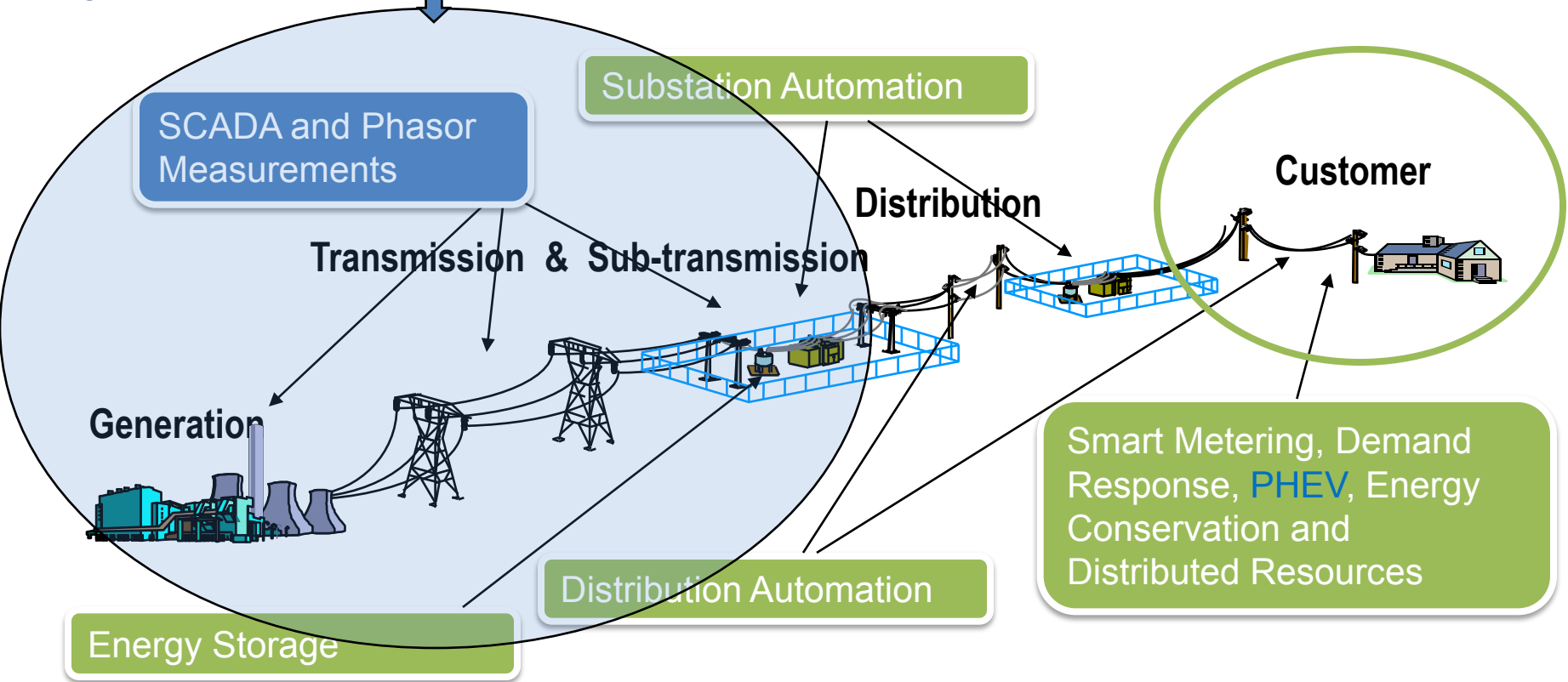
- Dynamic prices that produce predictable & measurable changes in usage (e.g. Critical Peak Pricing, Critical Peak Rebate, Real-Time Pricing)
- Meters capable of recording hourly or sub-hourly usage
- **Automation** that implements customer usage decisions in response to dynamic prices
- Communication of price/quantity data to PJM by LSEs or CSPs
- Energy and capacity obligations of Load Serving Entities that take account of Price Responsive Demand

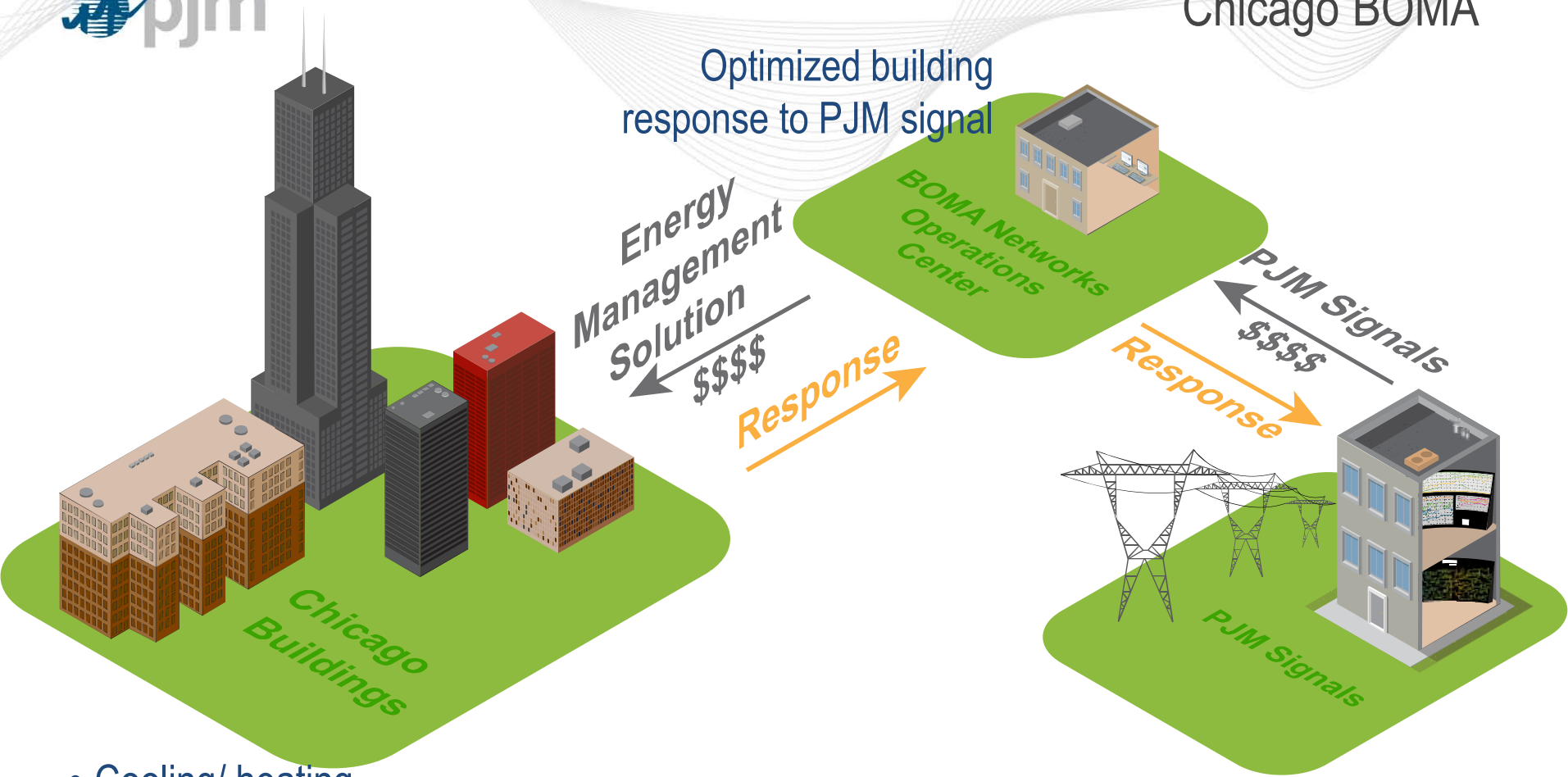
- Document the price/quantity data provided in a Forecast Demand Response Curve
- Use Forecast Demand Response Curves to improve accuracy of load forecast and system dispatch in the Energy Market and to inform planning and capacity procurement
- Provides penalties/consequences for LSEs that exceed capacity entitlements during emergency events

- Default Capacity value of installed wind resources in PJM = 13%
- Default Capacity value of installed solar resources in PJM = 38%
- 11 of 13 states + the District of Columbia have renewable portfolio requirements
- More than 40,000 MW of wind in the PJM planning process

The Smart Grid is realized by merging data from these areas of automation to achieve a total end-to-end systems view by integrating information technology and operational technology.

## System Operator





- Cooling/ heating
- Lighting
- Refrigeration
- Water heating

- Regulation signal
- Synchronized reserve event
- Emergency event
- Price



