

# Proposal to Better Accommodate Public Policy Resources



August 23, 2017 Update

PJM Capacity Construct Public Policy Senior Task Force

Sustainable **FERC** Project

Policies for a Clean Electric Grid

# Problem 1: Capacity oversupply

- Drives down market prices for generators
  - Particularly detrimental to energy-only resources which make less due to revenues shifting from the energy to capacity market
- Increases costs to consumers
  - Consumers pay more in total by procuring more capacity than needed
- Mutes price signals incenting flexibility

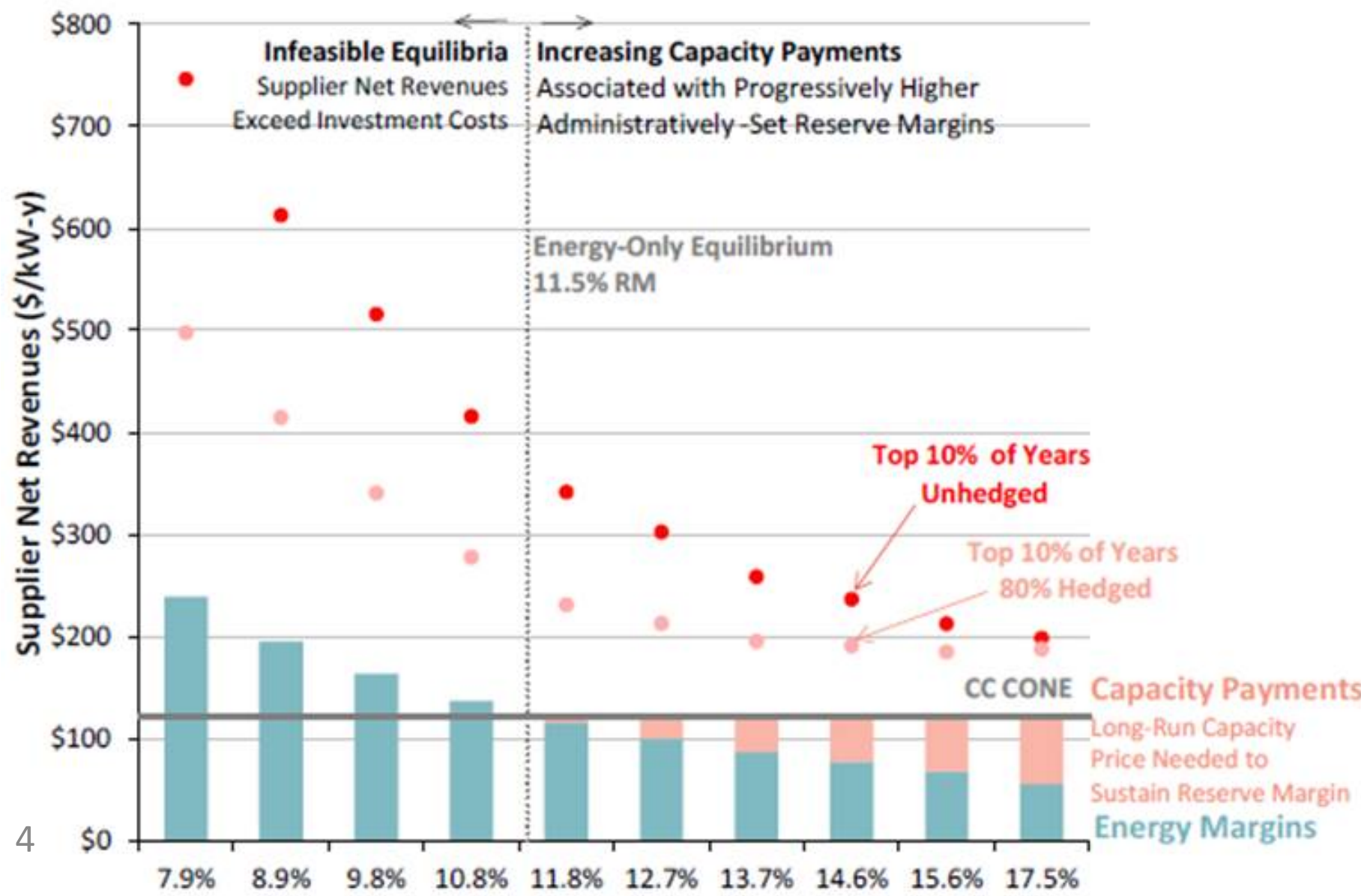
Figure 20: PJM Reserve Margin Including Uncleared Capacity

Source: UBS

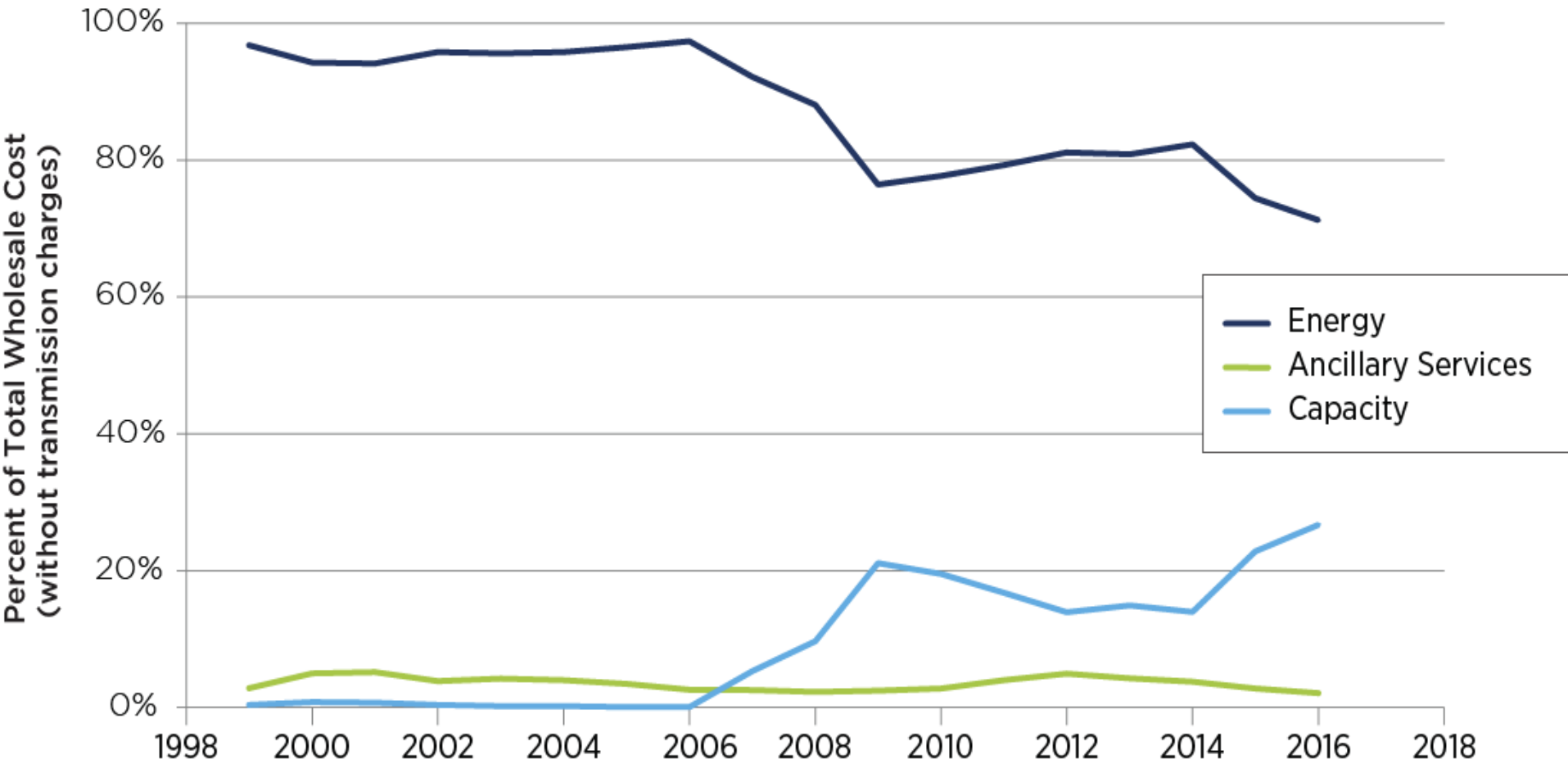


Source: Brattle, study  
pertains to ERCOT

# Supplier Net Revenues On Average and in the Top 10% of Years

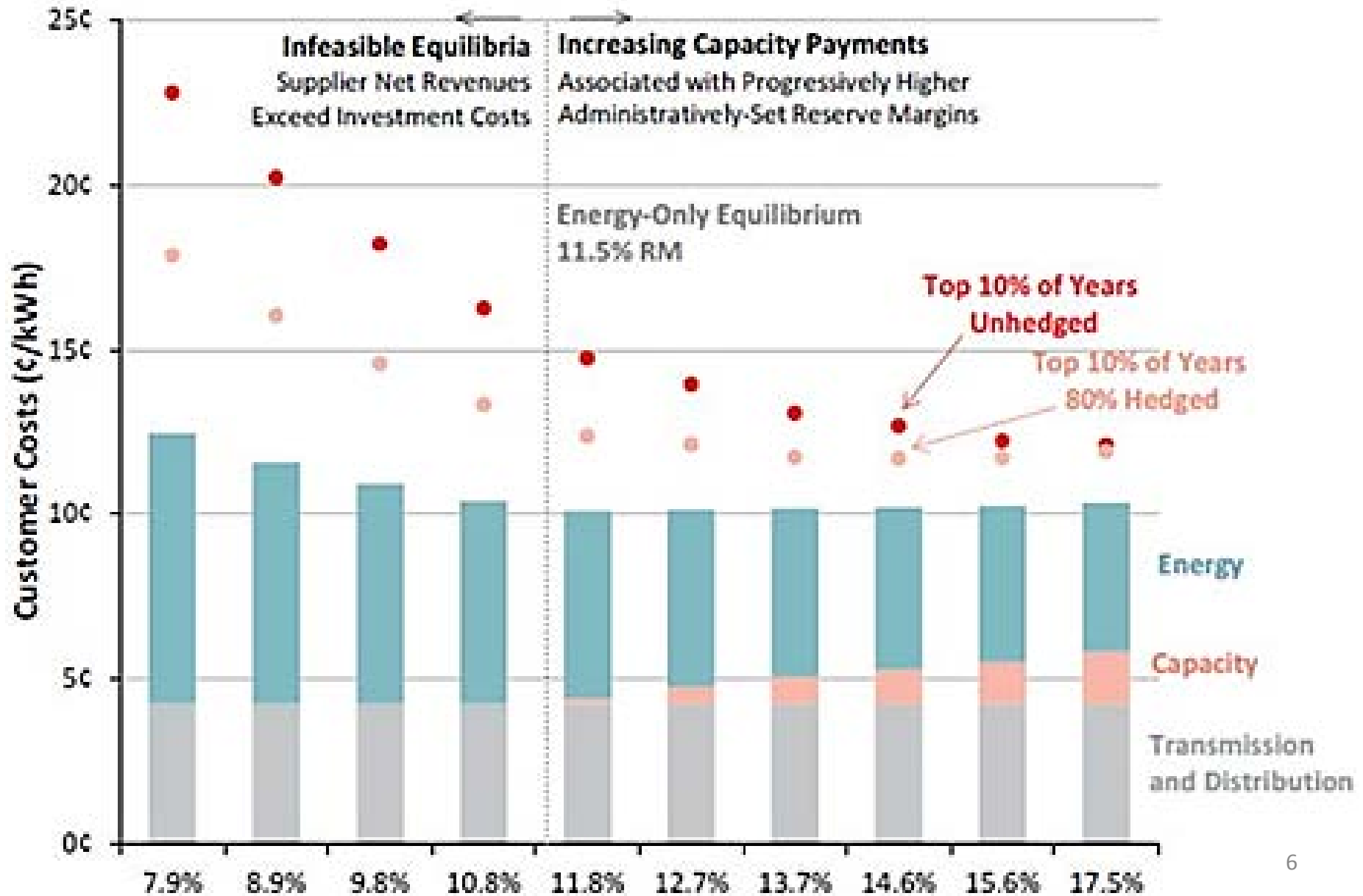


# Trend in wholesale costs



Source: Brattle, study  
pertains to ERCOT

# Total Customer Costs On Average and in the Top 10% of Years

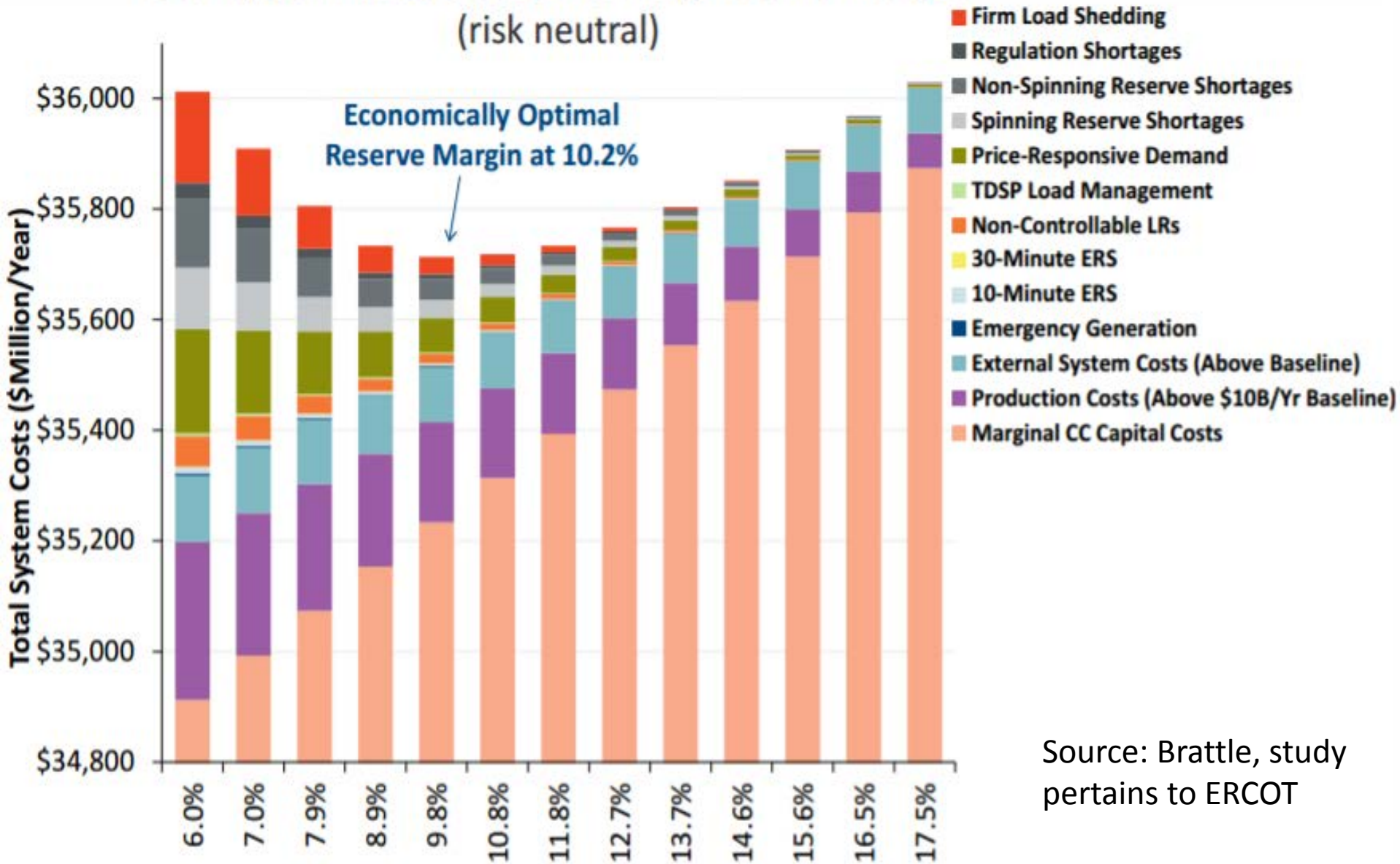


# Oversupply mutes price signals for flexibility

- Large reserve margins: costs borne by customers regardless of willingness to pay for high level of resource adequacy
- Smaller reserve margins: customer see incentives to invest in flexibility
  - Customers desiring a higher degree of reliability can invest in DG, storage, and microgrids
  - Customers wishing to save money can participate in flexible demand programs

# Total System Costs across Planning Reserve Margins

(risk neutral)



Source: Brattle, study pertains to ERCOT

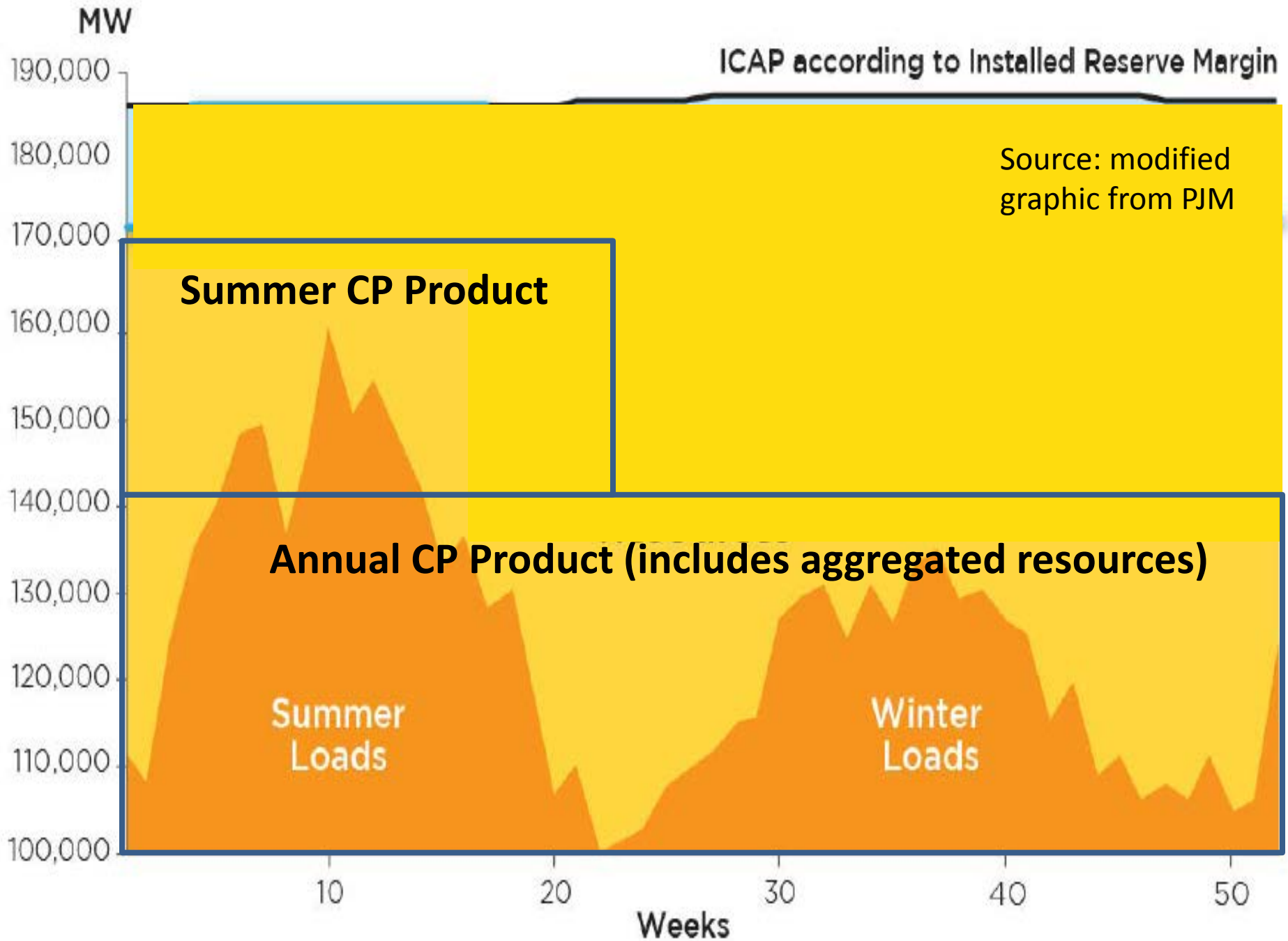


# Problem 2: Accommodate

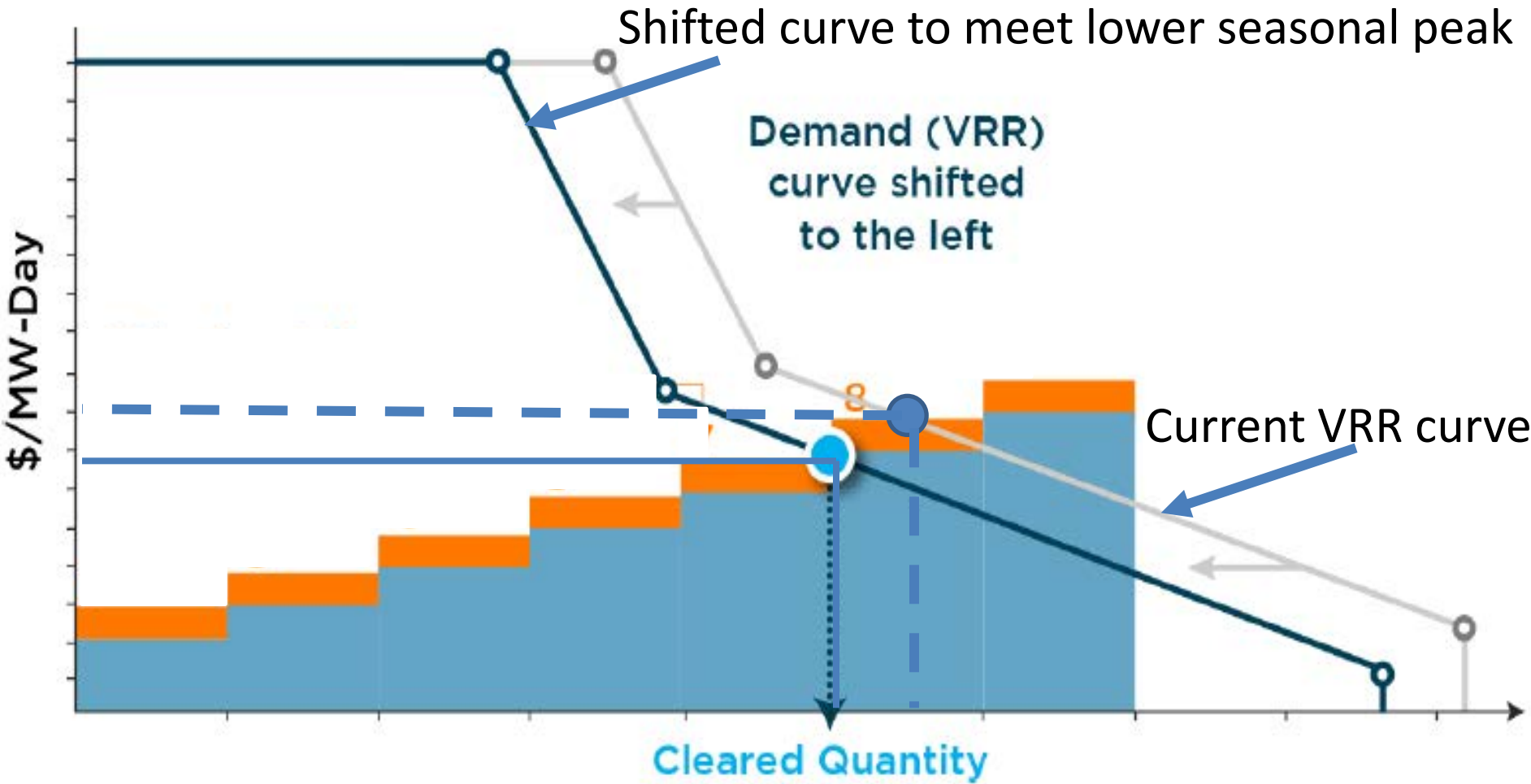
- RPM not sufficiently accommodating public policy resources
  - Does not take into account or compensate attributes (e.g., CO2-free) desired by policies, only procures and compensates basic MWs necessary to satisfy resource adequacy needs
  - Annual-only product has made this worse: 2017 BRA under 100% CP – much lower participation from renewables and DR
    - DR fell by 24%, solar fell by almost 63%
    - Wind fell by 8% compared to last year

# Proposal part 1

- Procure annual CP product to meet off-peak seasonal needs and procure
  - a summer CP product for summer peaking zones
  - a winter CP product for winter peaking zones
- Keep cost allocation as is; seasonal CP product can be cleared like summer-only DR prior to CP changes
- Separate CP products would reduce oversupply, and enable seasonal state policy resources to participate
- Continue to investigate improvements to aggregation
  - Seasonal aggregations < 400 MWs ~ 0.2% of the total capacity procured in 2017



Shift Annual CP demand to left -> lower cleared quantity and price



# Proposal part 2

- To address accommodate and oversupply problems:
  - Public policy resources or attributes may be procured (bilaterally or otherwise) prior to auction
  - Ensure these policy MWs are accounted for in RPM
    - If public policies/subsidies only compensate for the attribute (e.g., carbon-free) but not for the basic part of the MWs needed for resource adequacy purposes, continue enabling these resources to obtain RPM revenue for the basic part of the MWs
    - If public policies/subsidies are sufficient such that resource does not need RPM revenue, enable LSEs contracting these resources to opt out of the corresponding amount of capacity obligation