

# Paris Session 2022



## Market Structure for a Decarbonized New York Electricity Market

*Electricity Markets and Regulation*  
Preferential Subject 3 + What Market  
Structures should be put in place to ensure a  
smoother transition to the market of the future  
to support a fully decarbonized grid – Q4

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# Reliability Through Markets

- The NYISO supports reliability through three complementary markets for energy, ancillary services, and capacity.
  - Capacity Markets provide fixed cost recovery supporting an installed resource base needed to support the 1 in 10 Loss of Load Expectation Planning Criterion
  - Energy and Ancillary Markets incent real time resource performance corresponding to operational needs.
  - Though energy and ancillary services markets provide infra-marginal revenues for fixed cost recovery, the volatility of energy and ancillary service markets is not as effective in attracting and retaining needed generating resources compared to the capacity market.
  - The complementary nature of the energy, ancillary services, and capacity markets allow for stable investment signals and real time system performance.

# Reliability Through Markets

- Energy Markets, the marginal resource is either
  - Zero variable cost renewable resource, or
  - High cost zero carbon fuel (e.g., hydrogen), or
  - Price Responsive demand, or
  - Opportunity cost offered in by storage resources.(Expected to result in increased volatility of real time prices)
- Ancillary Services become increasingly important for price formation
  - Set by defining granular areas for procurement of reserves and regulation
  - Guided by demand curves (anchored by value or lost load – VOLL)
  - The definition of granular areas and quantity of resources to be procured likely to be defined dynamically(Volatility of intermittent resources and the co-optimization with energy also increases price volatility)
- Capacity Markets provides fixed cost recovery (net of energy and ancillary services revenues and subsidies)
  - Capacity accreditation – important to value resources based on marginal contribution to reliability
  - Granular capacity zones allow for locational capacity prices