



# Highlights from the 2022 State of the Market Report for the NYISO Markets

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## Introduction

- As the Market Monitoring Unit for NYISO, we produce an annual State of the Market (SOM) Report to:
  - ✓ Evaluate the performance of the markets;
  - ✓ Identify market flaws or market power concerns; and
  - ✓ Recommend improvements in the market design.
- Given the breadth of the report, this presentation covers only highlights from our 2022 SOM Report, including:
  - ✓ A summary of market outcomes and investment trends.
  - ✓ High priority recommended market enhancements for the:
    - Energy and ancillary services markets; and
    - Capacity market



## Schedule

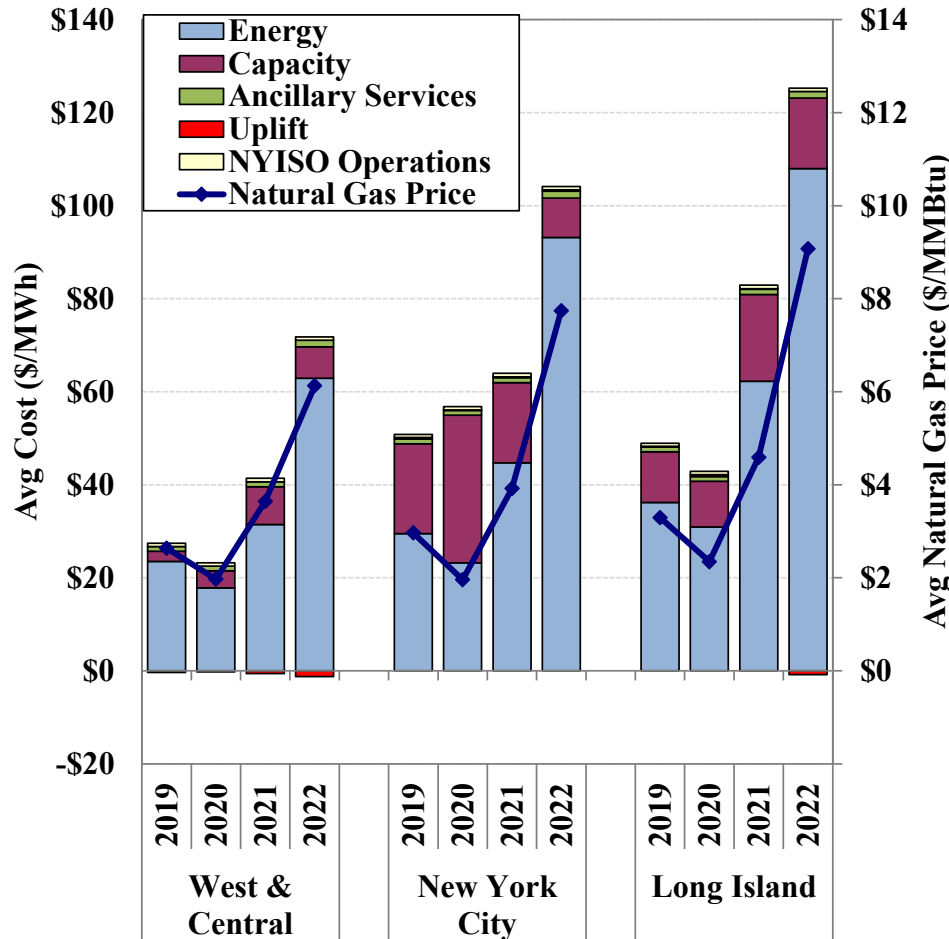
- The 2022 SOM Report was posted [here](#) on May 17.
- The report is being presented at several meetings:
  - ✓ May 25: MIWG
    - Energy and Ancillary Services focus – 90 minutes
  - ✓ May 31: Management Committee
    - Overview – one hour
  - ✓ June 6: ICAPWG
    - Capacity Market & Policy focus – 90 minutes
  - ✓ Plan to stay on schedule for each presentation – Additional slots can be scheduled if there is interest.



# Market Outcomes and Investment Trends

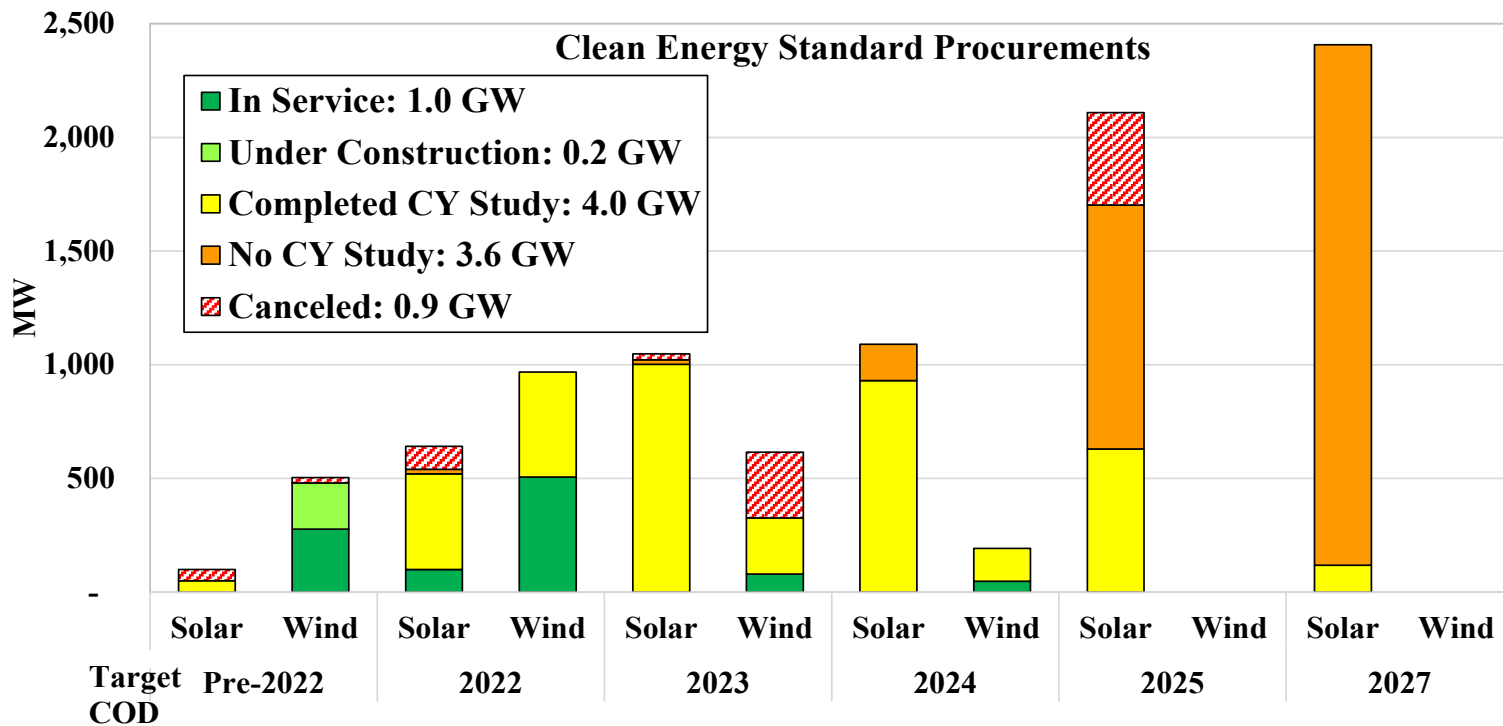


## All In Price Trends



- In 2022, energy prices rose, especially in winter, because of:
  - ✓ Gas prices
  - ✓ Retirement of fuel secure capacity in NY/NE (e.g., Indian Point 3)
  - ✓ Planned and forced transmission outages
- Capacity prices are still very low in 2022 ahead of expected retirements in NYC

# Renewable Investment Behind State Targets

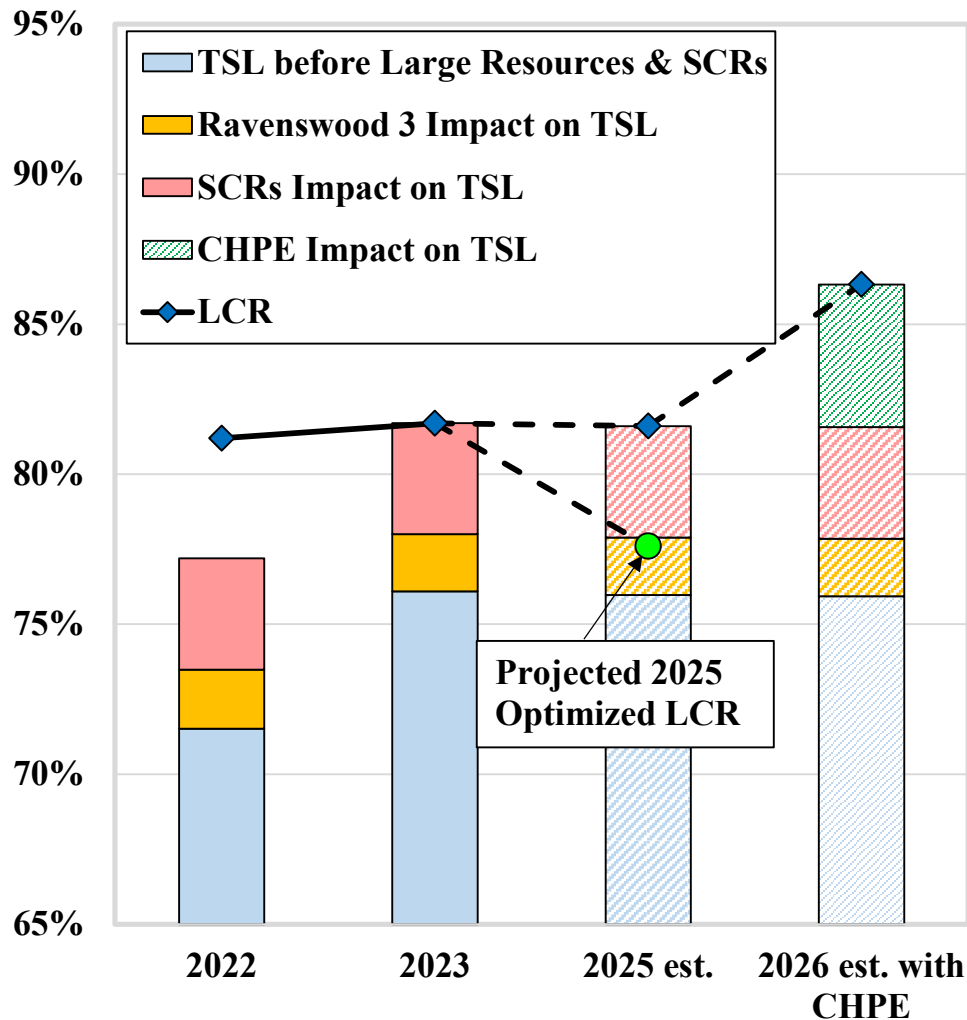


- NYISO developing reforms to streamline the Class Year process
- New investment hampered by:
  - ✓ REC cannibalization → NY Cap-and-Invest could help address
  - ✓ Deliverability Test process → see next page

## Deliverability Process Deters New Investment

- In CY21, 4+ GW of renewables and storage were assigned System Deliverability Upgrades (SDUs) costing **50-293%** of their Net CONE.
  - ✓ Vast majority rejected these upgrades and will not receive CRIS.
- Deliverability framework is a barrier to new investment because it:
  - ✓ Models unrealistic dispatch patterns when testing deliverability;
  - ✓ Is poorly suited to test renewables and storage accurately;
  - ✓ Establishes permanent CRIS rights that may not accurately reflect deliverability over time; and
  - ✓ Protects existing resources from competition.
- Testing deliverability within the capacity zones means that the poor granularity of the zones is a primary cause of these concerns.
  - ✓ Rec #2022-4 to disaggregate the zones would mitigate the effects of and need for the deliverability test.

# Increasing Role of Transmission Security Limits in ICAP Market



- TSL sets LCR floor
- TSLs recently updated to align with reliability planning process
- TSL floors raise NYC LCR starting in 2023
- TSL raised by SCRs and very large units
  - ✓ They are overpaid when TSL binds (up to \$52M in 2023/4)
  - ✓ See Rec #2022-1





# Recommended Market Enhancements

## Prioritizing Market Enhancements

- Unprecedented levels of policy-driven investment are expected over the coming decade
- The NYISO should focus on enhancements that:
  - ✓ Guide renewable investment to where it is most deliverable
  - ✓ Provide incentives for investment in resources that help integrate intermittent renewables
  - ✓ Encourage retirement of existing generators that have:
    - Inflexible characteristics, and/or
    - Limited availability during gas supply constraints
- These enhancements will facilitate state policy goals at the lowest cost and minimize market harm

## Energy & Ancillary Services Market Enhancements

- Increasing E&AS net revenues for flexible units would:
  - ✓ Reduce the capacity revenues needed to maintain reliability
  - ✓ Encourage older inflexible units to retire
  - ✓ Become more important as intermittent penetration rises
- NYISO is working on addressing five recommendations:
  - ✓ 2015-17 & 2020-2: Enhanced transmission shortage pricing and treatment of offline fast start units (2023 & 2024)
  - ✓ 2015-16: Dynamic reserve requirements (2026)
  - ✓ 2019-1: Set price using Long Island reserve requirements (2026)
  - ✓ 2017-1: NYC locational reserve requirements (2027)
- We recommend three other enhancements to E&AS markets:
  - ✓ 2017-2: Reserve demand curve increases for statewide
  - ✓ 2021-2: Model full Long Island reserve requirements
  - ✓ 2016-1: Compensate reserves that increase transfer capability

## Capacity Market Enhancements

- The capacity market has been instrumental in maintaining reliability with minimal OOM investment over the last 20 years.
- However, the changing resource mix creates major challenges:
  - ✓ Capacity prices provide inadequate locational signals
    - Retirements lead to bottlenecks in existing capacity regions
    - Deliverability test is a barrier to new investment
  - ✓ Many resources are under or over-compensated
    - Duration-Limited & Intermittent Generation – Their value falls with penetration, but they complement each other
    - Slow-start low-capacity factor units – their value will fall as intermittent penetration increases
    - Over-qualified units – Ambient-dependent & emergency gens
    - Gas-only units – Their value will fall in winter



# Capacity Market Enhancements

## Key Near-term Recommendations

*Recommendation #2022-4* – Implement a dynamic process for defining granular locations in the capacity market.

- Current four zones insufficient; zone creation process is deeply flawed
- Recommend zones based on bottlenecks, align with planning model
- Will reduce need for and effects of flawed deliverability process.
- Allow for more efficient zonal prices to reduce overpayments and improve incentives to retain capacity in key areas.

*Recommendation #2022-1* – Compensate capacity suppliers based on their contribution to transmission security LCRs are set by TSL.

- Would eliminate overcompensation of large resources and SCRs when they cause the LCR in their zone to increase.

*Recommendation #2022-2* – Seasonal requirements and demand curves.

*Recommendation #2021-4* – Improve capacity modeling and accreditation for specific types of resources.

- NYISO is actively pursuing this.