

# Long Island Offshore Wind Export PPTN: Capacity Benefit

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November 18, 2022

# Agenda

- **Overview of Capacity Benefit Evaluation**
- **Other Assumptions**
- **Next Steps**

# Overview of Capacity Benefit Evaluation

# Capacity Benefit Assessment

- The Capacity Benefit metric will rely on assessing the change in long-term reliability benefits (*i.e.*, LOLE reduction) attributable to the proposed projects over the twenty-year study period (2030-2049)
- A cost saving will be assigned to a measurable unit of reliability benefit (*e.g.*, 0.001 change in LOLE)
- Given the uncertainty of resource and market conditions over a 30-year period, these results can only be used for comparative purposes among proposed solutions and cannot be used as a predicator of long-term capacity market prices

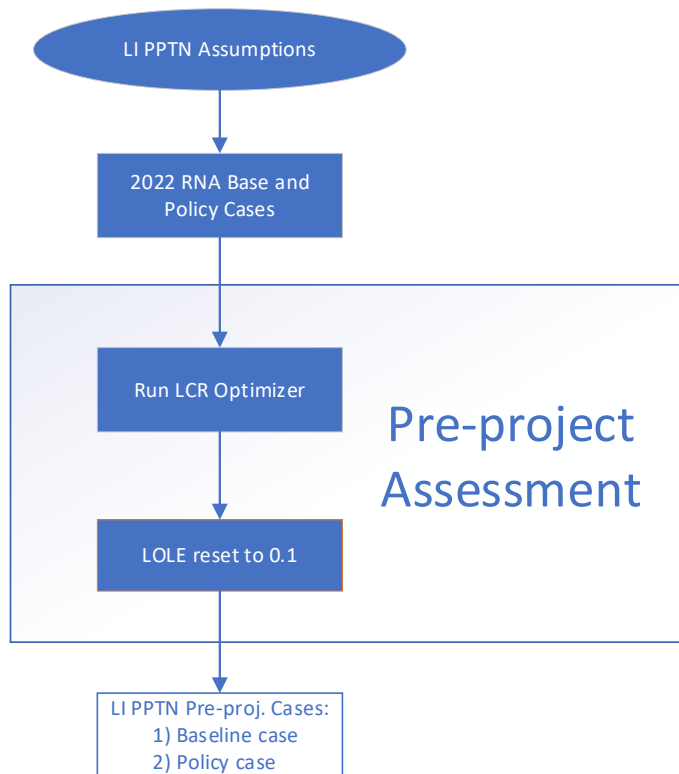
# Capacity Benefit Cases

## ■ 2 Study Cases:

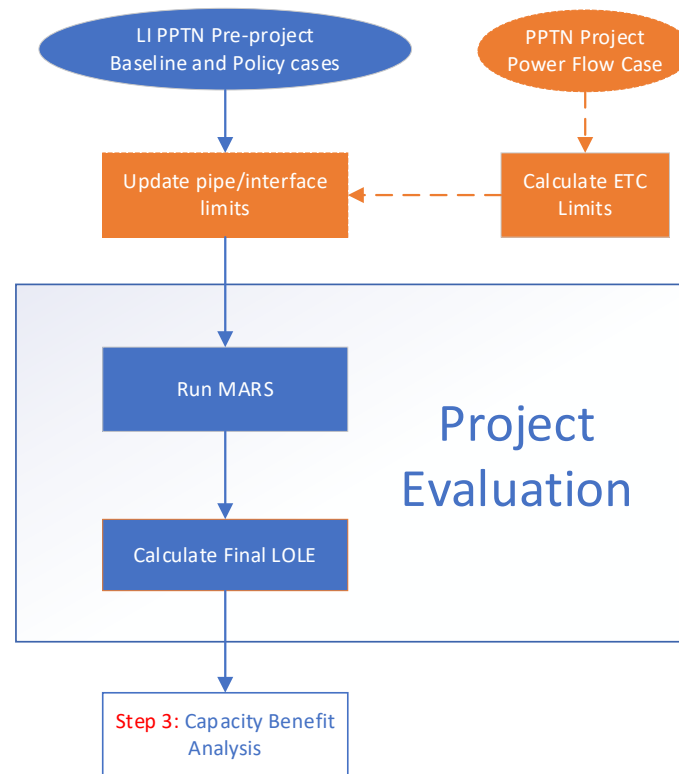
- Baseline Case:
  - 2022 RNA Base case as starting point
  - Gold Book base forecast
  - NYSERDA REC and OREC awards, but not Tier 4
  - Incremental buildup of 9 GW of OSW (6 GW in NYC, 3 GW in LI)
- Policy Case:
  - 2022 RNA Policy case (based on System Resource Outlook Policy Case S2) as starting point
  - Consistent with Climate Action Council forecast
  - Tier 4 projects, NYSERDA awards, and Outlook capacity expansion assumptions
  - Incremental buildup of 12 GW of OSW (6 GW in NYC, 6 GW in LI)

# Evaluation Phases:

## Step 1: LI PPTN Pre-project Cases Assessment



## Step 2: LI PPTN Project Capacity Benefit Evaluation



# Step 1: Pre-Project Cases

- **For the Pre-Project Cases that will be used to benchmark LI PPTN projects, NYISO will create the two baseline cases—a LI PPTN Baseline and a Policy Case—as follows:**
  - In creating the Pre-Project Cases, the starting point will be the 2022 RNA Base and Policy Cases for the study year 2030 with updates aligned with LI PPTN Baseline and Policy Cases assumptions
  - Using the LCR Optimizer, the LOLE for the case will be reset to 0.1 by removing and shifting capacity:
    - Remove capacity from Rest of State (Zones A/C/D)
    - Shift capacity between localities (Zones G-J, J, and K) and Rest of State

# Step 2: Calculate LOLE

- After establishing the LI PPTN Baseline and Policy Cases in Step 1, the two cases will be updated to reflect project-specific increases in interface limits
- Using standard planning methodology, NYISO will calculate Emergency Transfer Capability (ETC) of the interfaces in the MARS topology
- NYISO will then use MARS to calculate the post-Project LOLE



# Step 3: Calculate Capacity Savings

- The LOLE difference between each post-project case will be compared to the Pre-Project Cases
- Capacity Savings will be calculated using existing demand curves.
  - The capacity value will be measured by how the projects affect LOLE<sub>T</sub> and quantified based on the compensation that a generator would receive in the capacity market for providing comparable LOLE benefits

# Simplified Illustrative Example

- **Assume that:**
  - LOLE in the pre-project case for Year 2030 is at criteria (*i.e.*, 0.1)
  - A project case for the same year results in LOLE of 0.08
  - The nominal value of a 0.001 change in LOLE is \$3 million in capacity savings
- **The nominal annual reliability benefit for 2030 = \$60 million**
  - $(0.1-0.08 \text{ change in LOLE}) \times \$3 \text{ million} / (0.001 \text{ change in LOLE})$
- **The net present value of the total reliability benefit of the project is the sum of the discounted annual reliability benefits over the 20-year study period**

# Other Assumptions

# Stakeholder Feedback on Assumptions

- NYISO has posted comments received from PSEG-LI and NextEra related to the evaluation assumptions
- Additional questions can be addressed at this time

# Next Steps

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- **Further questions and comments regarding the assumptions and scenarios can be sent to**

[PublicPolicyPlanningMailbox@nyiso.com](mailto:PublicPolicyPlanningMailbox@nyiso.com)

- Comments are requested as soon as they are available, but no later than December 2, 2022
- **The NYISO tentatively plans to provide the draft results in Q1 2023**

# Questions?