## DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

### GOVERNOR'S EXECUTIVE ORDER NUMBER 59: DEEP AND PURA JOINT PROCEEDING

# PUBLIC UTILITIES REGULATORY AUTHORITY

DOCKET NO. 17-07-32 - DEEP AND PURA JOINT PROCEEDING TO IMPLEMENT THE GOVERNOR'S EXECUTIVE ORDER NUMBER 59

#### NOTICE OF FINAL SCOPE OF STUDY

In response to its Notice of Request for Written Comments dated August 9, 2017 and at its Public Meeting held on August 17, 2017, the Department of Energy and Environmental Protection (DEEP) and the Public Utilities Regulatory Authority (PURA) received close to three hundred written and oral comments. Many of the comments related to the assumptions that go into the modeling that will be conducted as part of this study. Only a few of the comments related to the scope of the study itself. In response to comments received, DEEP and PURA want to clarify the timeframe of the study analysis. We have selected to model out until 2035 because that coincides with the expiration of the license on Unit 2. We will not look beyond 2035 because assumptions put into the model become increasingly less reliable as they go further out. Corollary to that, although we are modeling out until 2035, greater weight will be given to the near-term output as assumptions are more reliable and there is a smaller likelihood of significant deviation from our assumptions.

DEEP and PURA appreciate this input and took the comments, including the addendum comments filed by August 23, 2017, into consideration before releasing the Final Scope of Study included as Attachment 1 to this Notice. DEEP and PURA will continue to consider the comments on the assumptions and will release information related to the modeling base case and other assumptions when it is finalized.

Additional information related to these proceedings is available at DEEP's website: www.ct.gov/deep/energyfilings and PURA's website: <a href="http://www.ct.gov/pura">http://www.ct.gov/pura</a>. The DEEP case coordinator assigned to this proceeding is Debra Morrell, who can be reached at (860) 827-2688 or via e-mail at <a href="mailto:DEEP.EnergyBureau@ct.gov">DEEP.EnergyBureau@ct.gov</a>. The PURA case coordinator assigned to this proceeding is Laura Lupoli, who can be reached at (860) 827-2631 or via e-mail at <a href="mailto:Laura.Lupoli@ct.gov">Laura.Lupoli@ct.gov</a>.

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action and Equal Opportunity Employer that is committed to complying with the Americans with Disabilities Act. To request an accommodation, contact us at (860) 418-5910 or deep.accommodations@ct.gov.

Dated at New Britain, Connecticut, this 29th day of August, 2017.

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#### <u>ATTACHMENT 1: FINAL SCOPE OF STUDY OUTLINE</u>

- 1. Background of the electricity market and the role of nuclear
  - a. Executive Order
  - b. New England and CT electric market structures
    - i. Recent market conditions
    - ii. ISO-NE market rules regarding resource retirement and de-list
    - iii. Connecticut wholesale and retail supply
  - c. Nuclear power in Connecticut and contribution to local/regional reliability, energy resource mix, and economy
  - d. Connecticut's environmental/climate goals
- 2. Modeling the economic viability of the Millstone units in the ISO-NE market and the expected impacts of a potential retirement of one or both Millstone
  - a. Study timeframe: 2018 until 2035 analyze based on both a shorter term (through 2021) and longer term (through 2035) timeframe
  - b. Economic viability of Millstone annual analysis of going forward costs and profitability between 2018 and 2035
    - Millstone costs and revenues for the two units (Per the Executive Order, DEEP and PURA have requested this information from Millstone. If it is not provided, DEEP and PURA will estimate based on best available information)
    - ii. Base Case
      - 1. Sensitivities:
        - a. High and low gas prices in New England
        - b. High and low renewable and/or hydropower penetration
        - c. Millstone costs (including interdependency of units)
        - d. Other
  - c. Potential retirement assuming that one or both Millstone units retire, what would be the impacts to the items identified in 2(d)?
    - i. One unit v. both units
    - ii. Replacement Scenarios
      - 1. Merchant Entry Replacement: Millstone unit(s) replaced with merchant entry (likely natural gas-fired generation)
      - 2. Public Policy Replacement: Millstone unit(s) replaced with public policy resources (zero-emission Class I, large-

scale hydropower, demand reduction, storage, etc. based on local sourcing requirements)

- d. Analysis of the base case and retirement scenarios
  - System costs and revenues (energy, capacity, and retaining/replacement cost)
  - ii. Emissions
  - iii. Electric reliability/fuel diversity/fuel security
  - iv. Economic development
  - v. Other
- Options and mechanisms to ensure resource adequacy and achievement of environmental goals
  - a. Options/Mechanisms
    - i. No action
    - ii. Contract (long-term or short-term)
      - 1. Wholesale contracts
      - 2. Contracts for retail supply
    - iii. Zero emission credits/clean energy standard
    - iv. Other non-ratepayer-funded economic incentives (e.g. tax incentives)
    - v. Reliability Must Run contract
    - vi. Emergency mechanism implementation
    - vii. Other
  - b. Factors to be considered for all options and mechanisms
    - i. Wholesale market impacts
    - ii. Price formation/competition (i.e., how well does the mechanism ensure the least cost to ratepayers)
    - iii. Standard service and retail market impacts
    - iv. Environmental impacts (achievement of GWSA reduction targets)
    - v. Gas pipeline infrastructure impacts
    - vi. Ratepayer risk (magnitude and duration)
    - vii. Legal considerations
    - viii. Economic impacts
    - ix. Use as proactive v. reactive to de-list bid
    - x. Other