

STATE OF CONNECTICUT, OFFICE OF CONSUMER COUNSEL  
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STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

RE: CL&P APPLICATION FOR THE : DOCKET NO. 370A  
GREATER SPRINGFIELD RELIABILITY : (Consolidated Docket)  
PROJECT AND THE MANCHESTER TO :  
MEEKVILLE JUNCTION CIRCUIT : APRIL 24, 2009  
SEPARATION PROJECT

RE: NRG ENERGY, INC. APPLICATION DOCKET NO. 370B  
PURSUANT TO CGS § 16-50L(A)(3) FOR (Consolidated Docket)  
CONSIDERATION OF A 530 MW COMBINED  
CYCLE GENERATING PLANT IN MERIDEN,  
CONNECTICUT APRIL 24, 2009

**OFFICE OF CONSUMER COUNSEL'S  
SECOND SET OF INTERROGATORIES**

The Office of Consumer Counsel ("OCC"), a party to this Connecticut Siting Council ("CSC") proceeding, requests responses to the attached questions by **May 8, 2009**. If there are objections to any questions, or if providing responses to certain questions would be unduly burdensome, please contact the undersigned as soon as possible.

**Questions OCC-27 through OCC-61 below, inclusive, are directed to The Connecticut Light and Power Company ("CL&P").**

**Questions OCC-62 through OCC-67 below, inclusive, are directed to ISO New England ("ISO-NE").**

**Questions OCC-68 through OCC-72 below, inclusive, are directed to the Connecticut Energy Advisory Board ("CEAB").**

- OCC-27. Please provide CL&P's best estimate of the effect of the Connecticut Valley Electric Transmission Reliability Projects (CVETRP), or GSRP/MMP, alone, without any other portions of the NEEWS system, on various measures of transmission capacity, including:
- (a) Transmission Interface Limits, as ISO-NE uses that term with respect to sub-area transportation models for production cost and resource adequacy (as described in "Transmission Transfer Limits for Transportation Models (to be used for 2009 analyses)," Frank Mezzanotte, presentation to ISO-NE PAC Meeting, March 31, 2009).
  - (b) The Connecticut N-1 Contingency Transfer Limit as used in computing the LFRM reserve requirements.
  - (c) The Connecticut N-2 Contingency Transfer Limit as used in computing the LFRM reserve requirements.
  - (d) The Connecticut Power-Transfer Limit as used in "Southern New England Transmission Reliability Report 1 Needs Analysis," ISO-NE, January 2008.
  - (e) The Connecticut Import Limit as used in Table 1.10 of the 2009 Connecticut Integrated Resource Plan ("IRP").
  - (f) CT Local Sourcing Requirement as used in Table 1.9 of the 2009 Connecticut IRP.
- OCC-28. Please provide CL&P's best estimate of the effect of the CVETRP alone, without any other portions of the NEEWS system, on the difference between Connecticut and Hub or WCMA locational market prices in the ISO energy market.
- OCC-29. The 2008 IRP, Figure G.33, estimated that omission of the Central Connecticut Reliability Project (CCRP) from NEEWS would reduce the Connecticut Import interface limit by 400 MW, compared to the full NEEWS configuration.
- (a) Does CL&P have any update to that estimate?
  - (b) If not, why not? If so, please provide that update.

- OCC-30. Application, p. F-12 states that:  
“completion of a 345-kV loop serving SWCT in 2009 will enable power to move freely through SWCT, and the construction of the Interstate Reliability Project and the GSRP will enable the import of sufficient power to provide more reliable service to the entire state, including SWCT. However, the increased power flows across central Connecticut necessary to serve the growing SWCT load will result in overloads on existing transmission lines following contingency conditions on the transmission system.”
- (a) Please explain whether the “increased power flows across central Connecticut” will be caused by “growing SWCT load,” the completion of the SWCT 345-kV loop, completion of the Interstate Reliability Project or completion of the GSRP.
  - (b) Please provide the basis for CL&P’s explanation of need for the Central Connecticut Reliability Project (CCRP).
  - (c) If the GSRP is not built, is there any need for the CCRP, and if so, what?
  - (d) If the Interstate Reliability Project is not built, is there any need for the CCRP, and if so, what?
- OCC-31. Please provide CL&P’s best estimate of the effect of the Interstate Reliability Project alone, without any other portions of the NEEWS system, on various relevant measures of transmission capacity.
- OCC-32. Please provide CL&P’s estimates of the initial capital cost of the Bethel-Norwalk 345-kV project:
- (a) at the time of CL&P’s original filing with the CSC,
  - (b) at the time of the CSC’s approval of the project design, and
  - (c) at the time of project completion.
- OCC-33. Please provide CL&P’s estimates of the initial capital cost of the Middletown-Norwalk 345-kV project:
- (a) at the time of CL&P’s original filing with the CSC,
  - (b) at the time of the CSC’s approval of the project design, and
  - (c) at the time of project completion.
- OCC-34. With respect to the statement that “The Needs Analysis determined that these resources were not sufficient to reliably serve the Springfield area load; and that the Springfield Area would suffer a “load

deficiency” in 2009 and through the end of the study period in 2016. Needs Analysis, at 10, 11.” (Application p. F-26)

- (a) Please reconcile the 874 MW of Springfield capacity for 2009 listed in Needs Analysis Table 3-1 with the 1,289 MW of existing Springfield capacity listed in Application Table F-1.
- (b) Please identify the 31 MW of capacity over 60 years old assumed retired in Needs Analysis Tables 3-1 and 3-2.
  - i. Please identify the units listed in Application Table F-1 that total 31 MW, or reconcile Table F-1 with Needs Analysis Tables 3-1 and 3-2.
- (c) Please provide the derivation of the unavailable generation in Needs Analysis Tables 3-1 and 3-2.
- (d) Please specify whether the “CT” and “RI” columns refer to the load and capacity in the states, in the load zones of those names, or the RSP areas of those names.

- OCC-35. Please provide the Springfield loads from the 2009 ISO-NE load forecast corresponding to the 2009 and 2016 Springfield loads reported in Needs Analysis Tables 3-1 and 3-2.
- OCC-36. Please provide the equivalent of Needs Analysis Tables 3-1 and 3-2, using the 2009 ISO-NE load forecast and including in the CT analyses all capacity under contract to the Connecticut utilities.
- OCC-37. Please describe the effect of operation of MMWEC’s proposed Stony Brook Unit #3 on the need for the CVETRP.
  - (a) Would Stony Brook Unit #3 be Springfield-area capacity in Needs Analysis Tables 3-1 and 3-2?
- OCC-38. Please describe NU’s understanding of the energy-efficiency targets under consideration by the Massachusetts Energy-Efficiency Advisory Council.
  - (a) Please describe the effect on Needs Analysis Table 3-2 if Massachusetts achieves the 3% annual load reductions suggested in “Context for EE Savings” (presentation at the March 10, 2009 EEAC meeting).
  - (b) Please describe the effect on the need for the CVETRP if Massachusetts achieves the 3% annual load reductions.
- OCC-39. With regard to the statement that “West Springfield unit #3 and Berkshire Power, have been frequently designated as daily second-

contingency units. These generators, in addition to West Springfield unit #1 and #2, are also needed to support local reliability during peak hours and to avoid overloads, in violation of reliability criteria.”

(Application p. F-26):

- (a) Please explain the “violation of reliability criteria,” and explain which units result in violation of reliability criteria.
- (b) Please specify the days on which Berkshire Power has been designated as a daily second-contingency unit over the last twelve months.
- (c) Since Berkshire Power is a combined-cycle unit, please explain how, if at all, its designation as a daily second-contingency unit has resulted in extra costs.
- (d) Please specify which ISO zones pay the costs of operating West Springfield unit #3 and Berkshire Power as daily second-contingency units.

OCC-40. For each of the following Springfield-area combined-cycle plants, if the plant is off-line, what generation level can the plant’s combustion turbines reach within 30 minutes?

- (a) Berkshire Power
- (b) MassPower
- (c) The Stony Brook combined-cycle units.

OCC-41. With regard to the statement that “In Dispatch 1, the critical unit outage is Berkshire Power and the units at West Springfield Station.... All other major units are assumed on-line.” (Application p. F-32)

- (a) Please explain why Table F-3 also shows an outage at Mt. Tom in Dispatch 1. (Table F-3)
- (b) Please provide any available data on the percentage of time in which Berkshire Power, West Springfield, and Mt. Tom were all off line, and the combustion turbines at Berkshire Power and West Springfield were unavailable.
  - i. Please provide the dates and times at which these conditions have occurred.
  - ii. Please provide the maximum MW load levels for the Springfield area and for Connecticut at which these conditions have occurred.

OCC-42. With regard to the statement that “In Dispatch 3, MASSPOWER is assumed to be off-line.... All other major units are assumed on-line.” (Application p. F-32):

- (a) Please explain why all five Stony Brook units are also assumed to be unavailable in this dispatch. (Table F-3)
  - (b) Please provide any available data on the percentage of time in which MassPower and all five Stony Brook units have been off-line, and the combustion turbines at both plants are unavailable.
    - i. Please provide the dates and times at which these conditions have occurred.
    - ii. Please provide the maximum MW load levels for the Springfield area and for Connecticut at which these conditions have occurred.
- OCC-43. Please explain why various dispatch cases assume that one or both Bear Swamp units are off line at the peak-load hour.
- OCC-44. Please state the date at which Northeast Utilities first became aware of the potential overloads in the Springfield area.
- OCC-45. Please explain what factors caused the problem referenced in OCC-44 to appear at that time, such as load growth in the Springfield area, load growth in Connecticut, addition of particular generators, and so on.
- OCC-46. Please provide ISO-NE's rules and standards for real-time 10-minute spinning reserves, 10-minute non-spinning reserves and 30-minute operating reserves for:
  - (a) the Springfield area
  - (b) Western Massachusetts
  - (c) Connecticut.
- OCC-47. Please demonstrate that the ISO-NE real-time reserve standards are met with each of the "all line in service" dispatch cases modeled.
  - (a) Please specify the units (or the MW in each zone) that would need to be operating in standby or part load to meet the standards.
- OCC-48. For each Connecticut and WMA unit not listed in the dispatch summaries, please explain the omission of that unit. Please include
  - (a) all such units with non-zero summer capacity in Section 2 of the 2009 CELT, and the reason for excluding each.
  - (b) all such units not included in Section 2 of the 2009 CELT but cleared in Forward Capacity Auction 2, and the reason for excluding each.

- (c) all such units not included above, but listed in Table 1.4 of the 2009 IRP, and the reason for excluding each.
- OCC-49. Please provide the generation and interface tables, comparable to those shown in redacted Attachment A.4 of CSC-018, SP01 Bulk for:  
(a) Each N-1 dispatch from each of the “all-lines-in” base dispatch runs (D1, D2, D3, the D2 sensitivity with 100 MW on the CSC line, and each of the cases with Meridian and Towantic).  
(b) Each N-1-1 dispatch from each of the base dispatch runs.
- OCC-50. Please clarify whether overloads in the power simulations are defined based on long-term-emergency (LTE) ratings or some other standard.  
(a) Please specify how long transmission circuits are assumed able to operate above the LTE or other standard used.
- OCC-51. For each dispatch case, for each Connecticut or WMA unit not assumed on-line with the N-1 contingency, please specify the output level that unit could reach in the time period at which the transmission circuits are rated to operate above their LTE ratings.
- OCC-52. If the N-1-1 dispatch cases do not include all the generation that would reduce the overloads and could be on line before the LTE ratings take effect, please explain why and provide the pre-GSRP results with the addition of that generation.
- OCC-53. Please clarify whether the “D1 With CT Import 1700 MW” dispatch case is the dispatch following the N-1 contingency with the system operating in dispatch mode D1.
- OCC-54. The “D1 With CT Import 1700 MW” differs from the D1 dispatch by the addition of generation from two plants: Wallingford and Kleen.  
(a) Please explain how these plants were determined to be off-line at the peak-load hour in the D1 dispatch.  
(b) Please explain how these plants were selected to reach full power in the “D1 With CT Import 1700 MW” case, including how long they would need to reach full power following the N-1 contingency.
- OCC-55. Please provide all available documentation and results for the power flow case performed by ICF for CEAB, as discussed at p. 30 of the CEAB Evaluation Report in this proceeding.

- OCC-56. Please provide the PDF attachments described at pp. 16, 17 and 84 of CSC-018, SP01 Bulk, as pdf files.  
(a) If available, please provide all of CSC-018, SP01 Bulk, as a searchable pdf.
- OCC-57. Is the same Connecticut generation in service in the analyses of Meridian and Towantic as in the corresponding dispatch (D1, D2 or D3), other than the addition of Meridian or Towantic?  
(a) If not, identify and explain the changes from dispatch D2.
- OCC-58. Please explain how NU “dispatched” Meridian or Towantic “against... Montville #6 and Bridgeport Harbor #2.” (CSC-018, SP01 Bulk, pp. 1-2)  
(a) Were Montville #6 and Bridgeport Harbor #2 the most expensive units operating in dispatch D2? If not, why were the new units dispatched against these particular units?
- OCC-59. Please explain why Devon 7 and 8 are listed as generating in the Power Flow Summaries.  
(a) Are these units currently operating, or expected to return to service?
- OCC-60. Please identify the generation listed as GLNBROOK in the Power Flow Summaries.
- OCC-61. According to p. 10 of CSC-018, SP01 Bulk (Section 1.3 of the 4/14/09 document), reduction of the CSC export to 100 MW in N-1-1 conditions was treated as a sensitivity.  
(a) Please explain why this was treated as a sensitivity, rather than a base case.  
(b) Please explain whether ISO-NE is obligated to continue exporting any power (even 100 MW) in an N-1-1 condition, if reliability standards would be violated. If so, please provide the documents that establish the requirement to continue the export.  
(c) Please explain whether ISO-NE is obligated to continue exporting the levels of power in the all-lines-in cases (approximately 350 MW) in the event of a first contingency, even if reliability standards would be violated. If so, please provide the documents that establish the requirement to continue the export.



- OCC-62. Please provide the formulae that ISO-NE uses in computing unavailable resources for Transmission Security Analyses.
- OCC-63. Please provide the basis for the percent of each type of resource assumed unavailable for Transmission Security Analyses, including supporting data for:
- (a) peakers
  - (b) other generation
  - (c) demand response
  - (d) other demand resources.
- OCC-64. Please provide all documents prepared by ISO-NE regarding the failure of LFRM resources to activate, since the initiation of the LFRM in October 2006.
- OCC-65. For the Connecticut and SWCT LFRM resources, please provide
- (a) the number of occasions on which one or more LFRM resource has been called on to activate.
  - (b) the number of such occasions on which an LFRM resource has failed to activate,
  - (c) the number of units and MWs failing to activate per occurrence (or, if that is confidential, the average number of units and MW per occurrence).
- OCC-66. For the LFRM resources located in the Springfield area, please provide
- (a) the number of occasions on which one or more LFRM resource has been called on to activate.
  - (b) the number of such occasions on which an LFRM resource has failed to activate,
  - (c) the number of units and MWs failing to activate per occurrence (or, if that is confidential, the average number of units and MW per occurrence).
- OCC-67. Please describe the conditions under which ISO-NE is allowed to interrupt exports over the CSC line to Long Island.
- (a) Can ISO-NE interrupt deliveries over the CSC line in the event of a first contingency that would reduce reserves in New England or in a portion of New England below the level required for the second contingency?

- (b) Please confirm that only 100 MW of exports to Long Island cleared in delists in the first and second forward capacity auctions.
- (c) If only 100 MW of New England capacity has been delisted to support an export, does ISO-NE have an obligation to maintain exports above the 100 MW level? If so, please explain the extent of that obligation.

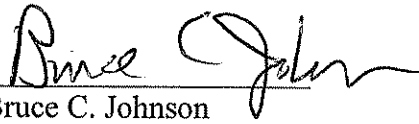
- OCC-68. Reference CL&P's answer to OCC-008, filed in the docket on 4/17/09.
- (a) Please provide any comments and/or response that CEAB considers appropriate.
  - (b) Does CEAB believe that the revised need analysis referenced in OCC-008(b), which CL&P has not carried out, would be a valuable addition to the record in this docket? Please explain any answer.
- OCC-69. Reference CL&P's answer to OCC-009, filed in the docket on 4/17/09.
- (a) Please provide any comments and/or response that CEAB considers appropriate.
- OCC-70. Reference CL&P's answer to OCC-10, filed in the docket on 4/17/09.
- (a) Please provide any comments and/or response that CEAB considers appropriate.
- OCC-71. Reference CL&P's answer to OCC-11, filed in the docket on 4/17/09.
- (a) Please provide any comments and/or response that CEAB considers appropriate.
  - (b) Reference the revised analysis described in OCC-11(d), which CL&P states will be provided as a supplement to CSC-018. Does the supplemental response to CSC-018, which CL&P filed on 4/20/09, make all of the assumptions [e.g., curtailment of the Cross Sound Cable] requested in OCC-11(d)?
- OCC-72. Reference CL&P's answer to OCC-12, filed in the docket on 4/17/09.
- (a) Please provide any comments and/or response that CEAB considers appropriate.

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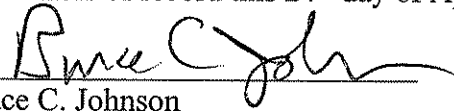
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Respectfully submitted,

MARY J. HEALEY  
CONSUMER COUNSEL

By:   
Bruce C. Johnson  
Principal Attorney

I hereby certify that a copy  
of the foregoing has been mailed and/or  
hand-delivered to all known parties and  
intervenors of record this 24<sup>th</sup> day of April 2009.

  
Bruce C. Johnson  
Commissioner of Superior Court