

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
ENERGY FACILITIES SITING BOARD

IN RE: INVENERGY THERMAL DEVELOPMENT :  
APPLICATION TO CONSTRUCT AND OPERATE : DOCKET NO. SB 2015-06  
THE CLEAR RIVER ENERGY CENTER :

**OFFICE OF ENERGY RESOURCES'**  
**FOURTH SET OF DATA REQUESTS DIRECTED TO INVENERGY**

- 4-1** The pre-filed supplemental testimony of Ryan Hardy of PA Consulting Group, Inc. (“PA”) on behalf of Invenergy summarized the results of PA’s updated analysis of the Clear River Energy Center (“CREC”) under the assumption that CREC Unit 2 clears FCA-13 instead of FCA-12. Results were provided for the years 2019-2025. Please confirm whether this encompasses the entire of the study period analyzed in this update. If additional years were modeled, please provide the results of those years in the same format as was provided for study years 2019-2025, in electronic spreadsheet format with all cell formats and cell references intact.
- 4-2** On page 7 of Mr. Hardy’s pre-filed supplemental testimony, he states that he expects the one-year delay of CREC Unit 1 would not significantly change his conclusions regarding ratepayer savings or emissions reductions. Please provide an updated analysis of Invenergy’s proposed CREC project, assuming both CREC Unit 1 and 2 are delayed by one year (i.e. Unit 1 does not come on line until June 2021 and Unit 2 does not come online until 2022). Provide the following information derived from PA’s market model in electronic spreadsheet format with all cell formats and cell references intact.
- (a) Provide the annual change in CO<sub>2</sub>, NO<sub>x</sub>, and SO<sub>2</sub> emissions ascribable to the addition of CREC across New England and New York.
  - (b) Provide the emissions of CO<sub>2</sub> for each control area or RTO across the study region, other than New England and New York, for each year of the forecast, with and without CREC.
  - (c) Provide the fuel use by type (including but not limited to natural gas, coal, distillate fuel oil, kerosene, jet fuel, residual fuel oil), for each year of the forecast, with and without CREC. The data should cover the same years for which Invenergy provides CO<sub>2</sub> impact results.
  - (d) For each technology type listed below, provide the annual MWh of generation with and without CREC, for ISO-NE and NYISO.
    - (1) Combined cycle plants
    - (2) Combustion turbines
    - (3) Oil-fired steam plants
    - (4) Coal-fired plants
    - (5) Nuclear
    - (6) Wind
    - (7) Hydro (excluding pumped storage)
    - (8) Solar

- (9) Imports
- (10) Biomass, landfill gas
- (11) Other
- (e) Provide the total annual generation (MWh) for the Rhode Island zone

**4-3** The Commonwealth of Massachusetts has initiated in Sections 83C and 83D of the Energy Diversity Act two large-scale procurements that are expected to result in long term contracts for renewable and other clean energy resources. The Long Island Power Authority has also executed a long-term contract with South Fork Wind Farm, an offshore wind project. Please provide an updated analysis of the Invenenergy's proposed CREC project, assuming that these renewable resources are developed and therefore should be included in the model runs with and without CREC. For the purpose of this analysis, represent the buildout under Section 83C as 400 MW of offshore wind interconnected in the Rhode Island load zone with an in-service date of 2023 and another 400 MW with an in-service date of 2025. Also assume that 90 MW of offshore wind, representing the South Fork Wind Farm, is in service in 2022 and interconnected in New York Zone K. As a proxy for resources to be procured under Section 83D, assume that a new 1,000 MW HVDC transmission line delivers Canadian hydropower at a 90% capacity factor to one of the northern New England states (either Vermont, New Hampshire, or Maine, to be specified by Invenenergy). For this analysis, assume a June 2020 in-service date for CREC Unit 1 and an in-service date of June 2022 for CREC Unit 2. Provide the following information derived from PA's market model in electronic spreadsheet format with all cell formats and cell references intact.

- (a) Provide the annual change in CO<sub>2</sub>, NO<sub>x</sub>, and SO<sub>2</sub> emissions ascribable to the addition of CREC across New England and New York.
- (b) Provide the emissions of CO<sub>2</sub> for each control area or RTO across the study region, other than New England and New York, for each year of the forecast, with and without CREC.
- (c) Provide the fuel use by type (including but not limited to natural gas, coal, distillate fuel oil, kerosene, jet fuel, residual fuel oil), for each year of the forecast, with and without CREC. The data should cover the same years for which Invenenergy provides CO<sub>2</sub> impact results.
- (d) For each technology type listed below, provide the annual MWh of generation with and without CREC, for ISO-NE and NYISO.
  - (1) Combined cycle plants
  - (2) Combustion turbines
  - (3) Oil-fired steam plants
  - (4) Coal-fired plants
  - (5) Nuclear
  - (6) Wind
  - (7) Hydro (excluding pumped storage)
  - (8) Solar
  - (9) Imports
  - (10) Biomass, landfill gas
  - (11) Other
- (e) Provide the total annual generation (MWh) for the Rhode Island zone

- 4-4 Please conduct the same analysis requested in Data Request 4-3, but assume a June 2021 in-service date for CREC Unit 1 and an in-service date of June 2022 for CREC Unit 2. Provide the same information from PA's market model requested in Data Request 4-3 in electronic spreadsheet format with all cell formats and cell references intact.
- 4-5 Please provide in map format the trucking route that would be used, including mileage, to draw water from the Lower Wood Watershed as proposed in CRECs Proposed Water Use from the Lower Wood Watershed from October 23, 2017.

OFFICE OF ENERGY RESOURCES  
By its Attorney,



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Dated: December 18, 2017

CERTIFICATE OF SERVICE

I certify that the original and ten copies of this Data Request were sent to the Energy Facility Siting Board, by regular U.S. mail. In addition, PDF copies of the Data Request were served electronically on the entire service list of this Docket. I certify that all of the foregoing was done on December 18, 2018.



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