- 1-1. On page 3 of Mr. Short's direct testimony, he states that he "represents the owners or developers of wind, biomass, solar and hydro-electric projects," and that he qualifies, manages and sells for "these clients" all of their REC production. In reference to this testimony, please provide the name and address of each of his clients who are owners or developers of wind, biomass, solar and hydro-electric projects for which he qualifies, manages and sells REC production.
- 1-2. On page 3 of Mr. Short's direct testimony, he states that he represents "load serving entities in Connecticut, Massachusetts, Maine, New Hampshire and Rhode Island" and that he regularly manages and purchases all the REC requirements for "these clients." In reference to this testimony, please provide the name and address of each of his clients who are load serving entities for which he purchases all their REC requirements.
- 1-3. Please provide all of Mr. Short's testimony or public comments with or on behalf of Industrial Wind Action Group, and describe Mr. Short's affiliation with Industrial Wind Action Group.
- 1-4. On page 17 of his testimony, Mr. Short states that the Block Island Wind Farm Project will only minimally enhance environmental quality as opposed to other renewable energy projects." Regarding this testimony, please state the following:
  - a. The identity of the other projects referred to in Mr. Short's testimony.
  - b. The factual basis relied on by Mr. Short that these projects exist.
  - c. The type of renewable energy in each of these projects.
  - d. The generating capacity of each of these projects.
  - e. The cost of each of these projects.
  - f. The bundled energy price for each of these projects (expressed in price per kilowatt hour) for each year of each project(s) operation.
- 1-5. Please produce all of Mr. Short's work papers, which collectively support his opinions, calculations and the conclusions reached in his testimony.
- 1-6. Please provide copies of all testimonies referred to on page 4, lines 81 to 89 of Mr. Short's testimony.
- 1-7. Please have Mr. Short list and describe all offshore wind projects that he has been involved in developing, engineering, constructing or operating.
- 1-8. Please have Mr. Short list all offshore wind projects in which he has participated in securing equity investments and describe his role in the capital raise.

- 1-9. Please have Mr. Short describe his experience in securing project financing for renewable energy projects whose capital costs exceed \$100 million. In providing his description, please have Mr. Short identify:
  - a. The specific projects,
  - b. The financial institutions involved:
  - c. His role in the financing;
  - d. Whether each project qualified for the U.S. Treasury program introduced by Section 1603 of the American Recovery and Reinvestment Act of 2009; and
  - e. Whether each project has already applied for or received funds under that program.
- 1-10. Please have Mr. Short list all renewable energy projects with capital costs in excess of \$100 million in which he has participated in securing equity investments and have him describe his role in the capital raise.
- 1-11. Has Mr. Short forecasted REC prices in New England for any period over the next 20 years? If yes, please provide a copy of any such forecast(s).
- 1-12. Has Mr. Short forecasted energy prices in New England of any period over the next 20 years? If yes, please provide a copy of any such forecast(s).
- 1-13. Has Mr. Short forecasted capacity prices in New England of any period over the next 20 years? If yes, please provide a copy of any such forecast(s).
- 1-14. Please identify all forecasts of energy, capacity, or RECs that Mr. Short relied upon for drawing any of the conclusions in his testimony.
- 1-15. Please provide the support for Mr. Short's testimony on page 9, lines 232-234, of his testimony that a "comparable utility rates of return of 7.2% for investment and 9.0% for equity would be the norm."
- 1-16. Please provide the support for Mr. Short's contention that rates of return of 7.2% for investment and 9.0% for equity are commercially reasonable for the Block Island Wind Farm Project.
- 1-17. Please have Mr. Short identify all of the offshore wind projects of a similar size and location and using the same technology as the Block Island Wind Farm proposed in this Docket that form the basis of his opinion on page 9, lines 232-234, of his testimony that a "comparable utility rates of return of 7.2% for investment and 9.0% for equity would be the norm." For each project, please list the following:
  - a. Project name;
  - b. Location;
  - c. Energy source;

- d. Nameplate capacity;
- e. Capacity factor;
- f. Year of commercial operation;
- g. Total capital costs;
- h. Unlevered IRR;
- i. Capital structure (use of equity and debt financing); and
- j. Levered IRR.
- 1-18. Regarding pages 7 and 8 of Mr. Short's testimony, the Great Lakes Wind Energy Center project (the Cleveland Project) is presented as a comparable price. Regarding this testimony:
  - a. Does the Cleveland Project have any commercial sponsors and is it actively in development.
  - b. Please provide a copy of the Cleveland Project's PPA.
  - c. Please provide a detailed capital cost breakdown for the Cleveland Project.
- 1-19. On page 8 and 9 of Mr. Short's testimony, he provides testimony on the MWh price of the Bluewater Wind Farm in Delaware. In reference to this testimony, please provide the following:
  - a. All workpapers and analysis to show calculation of the adjustment to Bluewater's price to determine the project's price if it was built as a 28.8 MW project rather than the 450 MW cited Please state your assumptions on how large will the Bluewater project be in terms of installed capacity.
  - b. Please provide the calculations supporting the Bluewater Wind Farm in Delaware costs described in his testimony submitted in Docket 4111, showing how he adjusted for the fact that most RECs are not conveyed to the buyer under the references contract price. Describe the difference and provide all supporting calculation between the 2013 \$140/MWh cost identified in your testimony and the 2012 all-in price of \$178.35/MWh that you testified to in footnote 7 of your prefiled testimony.
  - c. Does the Bluewater project convey the same products to the buyers as the Deepwater Wind Block Island PPA?
- 1-20. On page 9 of Mr. Short's testimony, he indicates that "the commercially reasonable cost to construct the Project is in the vicinity of \$160 million..." In reference to this testimony, please provide all workpapers and analysis to show his calculation of the \$160 million cost.
- 1-21. Please provide all economic development, economic benefit and/or economic impact studies performed by Mr. Short in the last five years.

- 1-22. Regarding electricity generation on Block Island:
  - a. Does Mr. Short acknowledge that electricity on Block Island is currently produced using diesel fueled generators?
  - b. If the answer to subsection "a" is yes, does Mr. Short contend that this is "best practices" for the production of clean energy?
  - c. If the answer to subsection "a" is yes, how is the fuel delivered to BI and what are the annual emissions produced on BI with regard to particulates, nitrogen oxides, sulfur oxides and carbon dioxide?
- 1-23. Regarding Jay Apt's Carnegie Mellon Study referenced on page 19 of Mr. Short's testimony, please state why Mr. Short believes that a small, isolated system is a more appropriate model than a model of the ISO-NE system?
- 1-24. Describe the difference and provide all supporting calculation between Bluewater's 2013 \$140/MWh cost identified on page 8, line 212 of Mr. Short's direct testimony in Docket 4185 and the 2012 all-in price of \$178.35/MWh set forth on page 6, footnote 7, of Mr. Short's testimony in Docket 4111.
- 1-25. Please provide the support for Mr. Short's contention that 2.5% is a commercially reasonable rate of annual escalation.