

R-39 Rev. 02/2010

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State of Connecticut **REGULATION** of

NAME OF AGENCY

CONNECTICUT SITING COUNCIL

Concerning

SUBJECT MATTER OF REGULATION

CSC WIND REGULATIONS – Adoption of Regulations pursuant to Public Act 11-245, An Act Requiring the Adoption of Regulations for the Siting of Wind Projects, Sections 16-50j-2a, 16-50j-18 and 16-50j-92 to 16-50j-96, inclusive, of the Regulations of Connecticut State Agencies.

Sec. 16-50j-2a. Definitions.

As used in Sections 16-50j-1 to 16-50z-4, inclusive, of the Regulations of Connecticut State Agencies, except as otherwise required by the context:

- (1) “Associated equipment” includes, but is not limited to:
 - (A) any building, structure, fuel tank, backup generator, antenna, satellite dish, or technological equipment, including equipment intended for sending or receiving radio frequency signals that is a necessary component for the operation of a community antenna television tower or telecommunications tower; or
 - (B) any building, structure, fuel tank, backup generator, transformer, circuit breaker, disconnect switch, control house, cooling tower, pole, line, cable, conductor or emissions equipment that is a necessary component for the operation of an electric transmission line facility, fuel transmission facility, electric generating or storage facility, or electric substation or switchyard.

- (2) “Attorney” means an attorney at law, duly admitted to practice before the Superior Court of the state of Connecticut. Any other person who appears before the Council in any contested case or petition for a declaratory ruling shall be deemed to appear as the agent or representative of a person, firm, corporation, or association upon filing with the Council a written notification of appearance and the written authorization of the person, firm, corporation, or association being represented.

- (3) “Blade length” means the distance between the blade tip and the center of the hub of a wind turbine.

- (4) “Certificate” means a Certificate of Environmental Compatibility and Public Need as defined under Section 16-50k of the Connecticut General Statutes or a Certificate of Public Safety and Necessity as defined under Section 22a-117 of the Connecticut General Statutes to be issued, denied, conditioned, limited, modified, or amended, in accordance with the disposition of applications authorized by law to be submitted to the Council.

- (5) “Chairperson” means the public member of the Council appointed pursuant to the provisions of Section 16-50j(d) of the Connecticut General Statutes.

- (6) “Collocation” means the mounting or installation of antennas and associated equipment on an existing tower or other structure for the purpose of transmitting or receiving radio frequency signals for

communications purposes that is unlikely to have a significant adverse environmental effect and does not increase the tower height.

(7) “Component” means a part of a mechanical or electrical system.

(8) “Contested case” means a proceeding in the Council’s disposition of matters delegated to its jurisdiction by law in which the legal rights, duties, or privileges of a party are determined by the Council after an opportunity for hearing in accordance with Section 4-166(2) of the Connecticut General Statutes.

(9) “Council” means the members of the Connecticut Siting Council appointed under section 16-50j(b) and section 16-50j(c) of the Connecticut General Statutes and referred to in Section 16-50j(d) and section 22a-115 of the Connecticut General Statutes.

(10) “Customer-side distributed resources project” means a project designed to utilize “customer-side distributed resources,” as defined in Section 16-1 of the Connecticut General Statutes.

(11) “Facility” means a facility as defined in Section 16-50i(a) of the Connecticut General Statutes.

(12) “Fuel” means a fuel as defined in Section 16a-17 of the Connecticut General Statutes.

(13) “Grid-side distributed resources project” means a project designed to utilize “grid-side distributed resources,” as defined in Section 16-1 of the Connecticut General Statutes.

(14) “Hazardous waste facility” means land and appurtenances thereon or structures used for the disposal, treatment, management, storage or recovery of hazardous waste as these terms are defined in Section 22a-115 of the Connecticut General Statutes.

(15) “Hearing” means a proceeding whereby witnesses may be examined, and oral or documentary evidence may be received.

(16) “Hub” means the central part of a wind turbine that supports the turbine blades on the outside and connects to the rotor shaft inside the nacelle.

(17) “Intervenor” means a person other than a party, granted status as an intervenor by the Council in accordance with Section 16-50n of the Connecticut General Statutes.

(18) “Limited appearance” means the type of participation in a contested case, and the rights prescribed therefor in accordance with the provisions of Sections 22a-120(b) and 16-50n(f) of the Connecticut General Statutes.

(19) “Modification” means a significant change or alteration in the general physical characteristics of a facility, including, but not limited to, design, capacity, process or operation that the Council deems significant, except where a modification involves a temporary facility as determined by the Council.

(A) As defined pertaining to a hazardous waste facility “modification” means:

(i) any change or alteration in the design, capacity, process or operation of an existing hazardous waste facility requiring a new permit from the Commissioner of the Department of Energy and Environmental Protection pursuant to chapter 445, 446d, or 446k of the Connecticut General Statutes, that the Council deems significant, or

(ii) any change or alteration in the approved design, capacity, process or operation of a hazardous waste facility constructed or operating pursuant to chapter 445 of the Connecticut General Statutes that the Council deems significant. Such change or alteration may include, but is not limited to, a change or

alteration in the volume or composition of hazardous waste managed at such facility. The routine maintenance, repair, or replacement of the individual components at a hazardous waste facility that is necessary for normal operation or a change or alteration at a hazardous waste facility ordered by a state official in the exercise of his or her statutory authority shall not be deemed to be a modification.

(B) As defined pertaining to a low-level radioactive waste management facility, “modification” means any change or alteration in the approved design, capacity, process or operation of a low-level radioactive management facility constructed or operating pursuant to the provisions of the Northeast Interstate Low-Level Radioactive Waste Management Compact, Sections 22a-161, et seq. of the Connecticut General Statutes.

(20) “Municipality” means a city, town or borough of the state, and “municipal” has a correlative meaning.

(21) “Nacelle” means the structure at the top of a wind turbine tower behind or in front of the wind turbine blades that houses the key operational components of the wind turbine including, but not limited to, the rotor shaft, gearbox, controller, brake and generator.

(22) “Party” means each person entitled to be a party in a contested case pursuant to the provisions of Section 16-50n(a) of the Connecticut General Statutes, or in the event of a hazardous waste facility proceeding, pursuant to the provisions of Section 22a-120(a) of the Connecticut General Statutes.

(23) “Person” means any person as defined in Section 16-50i of the Connecticut General Statutes except for proceedings under Chapter 445. For proceedings under Chapter 445, “person” means any person as defined in Section 22a-115 of the Connecticut General Statutes.

(24) “Presiding Officer” means the Chairperson of the Connecticut Siting Council, or the Chairperson’s designee.

(25) “Regional Low-Level Radioactive Waste Management Facility” or “Low-Level Radioactive Waste Management Facility” means a facility to be located in Connecticut, including the land, buildings, equipment, and improvements authorized by the Northeast Interstate Low-level Radioactive Waste Commission to be used or developed for the receipt, treatment, storage, management or disposal of the low-level radioactive wastes generated within the party states to the Northeast Interstate Low-level Radioactive Waste Management Compact as these terms are defined in Section 22a-161 of the Connecticut General Statutes.

(26) “Renewable Energy Sources” include, but are not limited to, solar photovoltaic, solar thermal, wind, ocean thermal, wave or tidal, geothermal, landfill gas, hydropower or biomass.

(27) “Rotor” means the part of a wind turbine that consists of the blades and the hub.

(28) “Shadow flicker” means the intermittent shadows created by the wind turbine blades passing through the light of the sun.

(29) “Site” means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located, or is proposed to be located.

(30) “Tower” means a structure, whether free standing or attached to a building or another structure, that has a height greater than its diameter and that is high relative to its surroundings, or that is used to support

antennas for sending or receiving radio frequency signals, or for sending or receiving signals to or from satellites, or any of these, which is or is to be:

(A) used principally to support one or more antennas for receiving or sending radio frequency signals, or for sending or receiving signals to or from satellites, or any of these, and

(B) owned or operated by the state, a public service company as defined in Section 16-1 of the Connecticut General Statutes, or a certified telecommunications provider, or used in a cellular system, as defined in Section 16-50i(a) of the Connecticut General Statutes.

(31) "Tower Base" means the top of the foundation or equivalent surface that shall bear the vertical load of a tower.

(32) "Tower Height" means the measurement from ground level to the highest point on the tower;

(33) "Tower Share" means collocation on a facility in accordance with Section 16-50aa of the Connecticut General Statutes.

(34) "Wind turbine" means a device that converts wind energy to electricity.

(35) "Wind turbine height" means the measurement from ground level to the tip of the blade of a wind turbine in the vertical position.

(36) "Wind turbine tower" means the base structure that supports a wind turbine rotor and nacelle.

(37) "Wind turbine tower base" means the top of the foundation or equivalent surface that shall bear the load of a wind turbine tower.

(38) "Wind turbine tower height" means the measurement from ground level to the top of the hub.

Sec. 16-50j-18. Grant of hearing.

A hearing shall be held, where required by law, on all applications submitted pursuant to sections 16-50l to 16-50q, inclusive, of the Connecticut General Statutes, upon appeal as provided for in Section 16-50x(d) of the Connecticut General Statutes, on any petition for a declaratory ruling that the Council orders to be set for specified proceedings pursuant to Section 4-176 of the Connecticut General Statutes, and on any petition for a declaratory ruling for a wind turbine facility submitted pursuant to Section 16-50k of the Connecticut General Statutes. In the event of a hazardous waste facility proceeding, a hearing shall be held on all applications submitted pursuant to Sections 22a-117 to 22a-122, inclusive, of the Connecticut General Statutes.

Sec. 16-50j-92. Application for a Certificate of Environmental Compatibility and Public Need.

Pursuant to Section 16-50k of the Connecticut General Statutes, any person seeking to construct, operate and maintain a wind turbine facility with a generating capacity of more than 65 megawatts shall file an application for a certificate. The application shall be filed with the Council in accordance with the filing requirements of Section 16-50j-59 of the Regulations of Connecticut State Agencies and Sections 16-50l-1 to 16-50l-5, inclusive, of the Regulations of Connecticut State Agencies. The application filed with the Council shall also include additional information required to be submitted to the Council as part of the application under Section 16-50j-94 of the Regulations of Connecticut State Agencies. A motion for protective order may be filed with the Council for any information that may qualify as proprietary or critical energy infrastructure information pursuant to Subsection (d) of Section 16-50j-22a of the Regulations of Connecticut State Agencies.

Section 16-50j-93. Petition for a Declaratory Ruling.

Pursuant to Subsection (a) of Section 16-50k of the Connecticut General Statutes, any person seeking to construct, operate and maintain a customer-side distributed resources project or a grid-side distributed resources project with a capacity of not more than 65 megawatts or a wind turbine facility with a capacity of less than one megawatt provided the facility fails to meet the criteria for exemption under Section 16-50i (a)(3) of the Connecticut General Statutes, shall file a petition for a declaratory ruling. The petition for a declaratory ruling shall be filed with the Council in accordance with the filing requirements of Sections 16-50j-38 to 16-50j-40, inclusive, of the Regulations of Connecticut State Agencies. The petition for a declaratory ruling filed with the Council shall also include additional information required to be submitted to the Council as part of the petition under Section 16-50j-94 of the Regulations of Connecticut State Agencies. A motion for protective order may be filed with the Council for any information that may qualify as proprietary or critical energy infrastructure information pursuant to Subsection (d) of Section 16-50j-22a of the Regulations of Connecticut State Agencies.

Sec. 16-50j-94. Additional Information Required.

(a) Notification.

In addition to the notification requirements under Subsection (d) of Section 16-50j-12 of the Regulations of Connecticut State Agencies, as applicable, each application for a certificate or petition for a declaratory ruling for a wind turbine facility shall be accompanied by proof of service of a copy of the application or petition for a declaratory ruling on the following entities:

- (1) Department of Defense. The applicant or petitioner shall notify and consult with the Executive Director of the Department of Defense Siting Clearinghouse and the Department of Defense Regional Environmental Coordinator at Commander, Navy Region Mid-Atlantic. Any comments and recommendations received from the Department of Defense shall be submitted to the Council.
- (2) Federal Aviation Administration. The applicant or petitioner shall notify and consult with the Federal Aviation Administration. Any comments and recommendations received from the Federal Aviation Administration shall be submitted to the Council.
- (3) State Historic Preservation Office. The applicant or petitioner shall notify and consult with the State Historic Preservation Office, or its successor agency. Any comments and recommendations received from the State Historic Preservation Office, or its successor agency, shall be submitted to the Council.
- (4) Telecommunications Infrastructure Owners and Operators. The applicant or petitioner shall notify and consult with public and private owners and operators of telecommunications infrastructure within a two-mile radius of the proposed site and any alternative sites for wind turbine facilities. Any comments or recommendations received from the owners and operators of telecommunications infrastructure shall be submitted to the Council.

(b) Abutting properties map.

The applicant or petitioner shall submit a map that depicts the dimensions of the proposed site and any alternative sites, the names and addresses of abutting property owners and the dimensions of the abutting properties that clearly delineates the setback distance in feet from each of the proposed wind turbine locations and any alternative wind turbine locations for the proposed site and any alternative sites to each abutting property line.

(c) Visual Impact Evaluation Report.

The applicant or petitioner shall submit a visual impact evaluation report that analyzes the potential visibility of each of the proposed wind turbine locations and any alternative wind turbine locations for the proposed site and any alternative sites that includes:

(1) A detailed description of the potential visibility of each of the proposed wind turbine locations and any alternative wind turbine locations for the proposed site and any alternative sites, including a description of the potential visibility of the wind turbine heights, wind turbine tower heights and blade lengths, the sites, surrounding land uses, average tree canopy height and methodology used to evaluate visibility.

(2) A study area map for the proposed site and any alternative sites depicting the view-shed analyses study area radius used in accordance with Subdivision (3) of this section that delineates the view-shed radius, site boundaries of the proposed and any alternative sites, and locations of the photographic simulations submitted in accordance with Subdivision (4) of this section.

(3) View-shed analyses for the proposed site and any alternative sites depicting areas of potential year-round and seasonal visibility of each wind turbine, specifying the wind turbine heights, wind turbine tower heights and blade lengths, using a study area radius that is based on the wind turbine height of each of the proposed wind turbine locations and any alternative wind turbine locations at the proposed site and any alternative sites as follows:

- (A) less than 200 feet - 2 mile radius
- (B) between 200 feet and 400 feet – 4 mile radius
- (C) between 400 feet and 600 feet – 6 mile radius
- (D) greater than 600 feet – 8 mile radius

If the study area radius truncates any area of potential year-round and seasonal visibility, the applicant or petitioner shall expand the study area radius to include the entire area of potential visibility. The view-shed analyses shall depict the site boundaries of the proposed site and any alternative sites, the proposed wind turbine locations and any alternative wind turbine locations, town boundaries, and, as applicable, historic sites, historic districts, state and locally designated scenic roads, recreational areas, open space and conservation areas, schools, trails, forests, parks, and water resources.

(4) Photographic simulations from locations that may have potential seasonal and year-round visibility of each of the proposed wind turbines and any alternative wind turbines at the proposed site and any alternative sites, specifying the visibility of the wind turbine heights, wind turbine tower heights and blade lengths.

(5) Identification of any potential mitigation measures to minimize visual impact, including paint color of the facility, vegetative screening and landscaping.

(6) For wind turbine facilities with a capacity of more than 65 megawatts, the applicant shall submit, as part of the Visual Impact Evaluation Report, a separate view-shed analysis for the proposed site and any alternative sites using a study area radius of 10 miles that depicts the site boundaries, the proposed wind turbine locations and any alternative wind turbine locations, town boundaries, and, as applicable, historic sites, historic districts, state and locally designated scenic roads, recreational areas, open space and conservation areas, schools, trails, forests, parks, water resources, military bases, airports and weather stations. Each such application for a certificate shall be accompanied by proof of service of a copy of the application on all of the municipalities within the 10 mile study area radius.

(d) Noise Evaluation Report.

The applicant or petitioner shall submit a noise evaluation report for each of the proposed wind turbine locations and any alternative wind turbine locations at the proposed site and any alternative sites in accordance with the noise control regulations established by the Department of Energy and

Environmental Protection under Sections 22a-69-1 to 22a-69-7, inclusive, of the Regulations of Connecticut State Agencies. The report shall include the following:

(1) A detailed description of the potential noise levels that would be generated by the proposed wind turbines and any alternative wind turbines at the proposed site and any alternative sites including existing sound levels at the proposed site and any alternative sites, projected sound levels to be generated by the operation of the proposed wind turbines and any alternative wind turbines, the methodology used to monitor and evaluate sound levels, the wind turbine manufacturer's technical documentation of the noise emission characteristics of the proposed wind turbines and any alternative wind turbines, and an analysis of compliance with the noise control regulations established by the Department of Energy and Environmental Protection.

(2) Calculations in accordance with the noise control regulations established by the Department of Energy and Environmental Protection, of projected maximum cumulative sound levels generated when the proposed wind turbines and any alternative wind turbines are in operation at the proposed site and any alternative sites measured at the property lines, projected maximum day-time and night-time sound levels generated when the proposed wind turbines and any alternative wind turbines are in operation measured at the nearest receptors, and projected maximum levels of infrasonic sound, ultrasonic sound, impulsive noise and prominent discrete tones generated when the proposed wind turbines and any alternative wind turbines are in operation at the proposed site and any alternative sites measured at the nearest receptors.

(3) A study area map for the proposed site and any alternative sites depicting the noise analysis study area radius, site boundaries, sound level monitoring locations and nearest receptor locations.

(4) Identification of any potential mitigation measures to minimize sound levels at the nearest receptor locations, including utilization of best practical noise control measures in accordance with Section 22a-69-1 to 22a-69-7, inclusive, of the Regulations of Connecticut State Agencies.

(e) Ice Drop and Ice Throw Evaluation Report.

The applicant or petitioner shall submit an ice drop and ice throw evaluation report for each of the proposed wind turbine locations and any alternative wind turbine locations at the proposed site and any alternative sites that shall include:

(1) A detailed description of the conditions at the proposed site and any alternative sites that may cause ice to be dropped or ice to be thrown, or both, from the wind turbine blades of the proposed wind turbines and any alternative wind turbines, the methodology used to evaluate and assess the risk of ice drop or ice throw, or both, and the wind turbine manufacturer's technical documentation relating to recommended ice drop and ice throw setback distances and installed ice monitoring devices and sensors.

(2) Calculations in feet of the maximum distance that ice could be dropped from the wind turbine blades of each proposed wind turbine and any alternative wind turbines at the proposed site and any alternative sites when the wind turbines are stationary and calculations in feet of the maximum distance that ice could be thrown from the wind turbine blades for each proposed wind turbine and any alternative wind turbines at the proposed site and any alternative sites when the wind turbines are in operation.

(3) A study area map for the proposed site and any alternative sites depicting the ice throw study area radius, site boundaries and locations where ice could be dropped or locations where ice could be thrown from the wind turbine blades, or both, of each proposed wind turbine and any alternative wind turbines at the proposed site and any alternative sites when the wind turbines are stationary and in operation.

(4) Identification of any potential mitigation measures to minimize the risk, occurrence and impact of ice drop or ice throw, or both, from the wind turbine blades of each of the proposed wind turbines and any alternative wind turbines, including automatic and remote manual shutdown of the wind turbines.

(f) Blade Shear Evaluation Report.

The applicant or petitioner shall submit a blade shear evaluation report for each of the proposed wind turbine locations and any alternative wind turbine locations at the proposed site and any alternative sites that shall include:

(1) A detailed description of the conditions at the proposed site and any alternative sites that may cause blade shear from each of the proposed wind turbines and any alternative wind turbines, the methodology used to evaluate and assess the risk of blade shear, and the manufacturer's technical documentation relating to recommended blade shear setback distances and installed blade monitoring devices and sensors.

(2) Calculations in feet of the maximum distance that a blade could be sheared from each of the proposed wind turbines and any alternative wind turbines at the proposed site and any alternative sites when the wind turbines are stationary and calculations in feet of the maximum distance that a blade could be sheared from each of the proposed wind turbines and any alternative wind turbines at the proposed site and any alternative sites when the wind turbines are in operation.

(3) A study area map for the proposed site and any alternative sites depicting the blade shear study area radius, site boundaries and locations where a blade could be sheared from each of the proposed wind turbines and any alternative wind turbines at the proposed site and any alternative sites when the wind turbines are stationary and when the wind turbines are in operation.

(4) Identification of any potential mitigation measures to minimize the risk, occurrence and impact of blade shear from each of the proposed wind turbines and any alternative wind turbines, including automatic and remote manual shutdown of the wind turbines.

(g) Shadow Flicker Evaluation Report.

The applicant or petitioner shall submit a shadow flicker evaluation report for each of the proposed wind turbine locations and any alternative wind turbine locations at the proposed site and any alternative sites that shall include:

(1) A detailed description of the potential shadow-flicker producing features of each of the proposed wind turbines and any alternative wind turbines at the proposed site and any alternative sites, including, an analysis of conditions that may cause shadow flicker, the methodology used to evaluate shadow flicker and the manufacturer's technical documentation relating to shadow flicker.

(2) Calculations from each proposed wind turbine and any alternative wind turbines at the proposed site and any alternative sites to each off-site occupied structure location within a one-and-a-quarter mile radius, including, the following:

- (A) distance in feet;
- (B) shadow length and intensity;
- (C) shadow flicker frequency;
- (D) specific times shadow flicker is predicted to occur; and
- (E) duration of shadow flicker measured in total annual hours.

(3) A study area map of the proposed site and any alternative sites depicting the shadow flicker analysis study area radius, site boundaries, locations of the proposed wind turbines and locations of any alternative wind turbines, locations of off-site occupied structures, and areas of shadow flicker occurrence identified according to total annual hours.

(4) Identification of potential mitigation measures to minimize the impact of shadow flicker, including, vegetation, screening and fence construction.

(h) Natural Resource Impact Evaluation Report.

The applicant or petitioner shall submit a natural resource impact evaluation report for the proposed site and any alternative sites that includes bird studies, bat studies, wetland studies, and terrestrial and marine wildlife habitat studies, as applicable. The report shall also include:

(1) A detailed description of the potential natural resource impacts as a result of the construction, operation and maintenance of the proposed wind turbines and any alternative wind turbines at the proposed site and any alternative sites including an analysis of:

(A) the topography, geology, vegetation, soil types, water resources, and avian, terrestrial and marine wildlife habitat areas, as applicable; and

(B) compliance with air and water quality standards of the Department of Energy and Environmental Protection;

(C) compliance with the United States Fish and Wildlife Service Land-Based Wind Energy Guidelines, as applicable; and

(D) compliance with site-specific recommendations provided by the Department of Energy and Environmental Protection Natural Resources Division.

(2) Calculations based on the studies submitted in accordance with this subsection for the proposed site and any alternative sites that include, but are not limited to:

(A) estimated number of bird fatalities;

(B) estimated number of bat fatalities;

(C) total square feet of permanent wetland impacts;

(D) total square feet of temporary wetland impacts;

(E) total square feet of permanent terrestrial and marine wildlife habitat impacts, as applicable;

(F) total square feet of temporary terrestrial and marine wildlife habitat impacts, as applicable;

(G) total acreage of site disturbance;

(H) total acreage of site restoration;

(I) total volume in cubic yards of cut required; and

(J) total volume in cubic yards of fill required.

(3) A study area map for the proposed site and any alternative sites depicting the natural resource impact analysis study area radius, site boundaries and locations of, as applicable, important bird areas, bat hibernacula, terrestrial and marine wildlife habitat, as applicable, flood zones, wetlands and watercourses, forests, recreational areas, open space and conservation areas.

(4) Identification of potential mitigation measures to minimize natural resource impacts including, recommended protocols for protection of wetlands and wildlife, proposed open space or conservation areas, minimization of tree clearing, erosion and sedimentation controls, soil stabilization, re-vegetation and post-construction monitoring plans for avian, terrestrial and marine wildlife, as applicable.

(5) For wind turbine facilities with a capacity of more than 65 megawatts, the applicant shall submit, as part of the Natural Resource Impact Evaluation Report, a Terrestrial Habitat Conservation plan for land-based wind turbine facilities or a Marine Habitat Conservation Plan for off-shore wind turbine facilities, for the proposed site and any alternative sites. The applicant shall consult with the United States Fish and Wildlife Service and the Department of Energy and Environmental Protection in the development of the Terrestrial or Marine Habitat Conservation Plan.

(i) Decommissioning Plan.

Any application for a certificate for a wind turbine facility or petition for a declaratory ruling for a wind turbine facility shall contain a decommissioning plan for the proposed site and any alternative sites that shall include:

(1) the projected useful life of the wind turbines;

(2) identification of any circumstances that would trigger decommissioning of the facility in advance of the projected useful life of the wind turbines;

- (3) a description of the method by which foundations, wind turbines, associated equipment and components will be dismantled and removed;
- (4) a description of the method by which the site will be restored as near as possible to its original condition, including, stabilization, re-grading and re-vegetation;
- (5) an estimate of the total cost of implementing the decommissioning plan calculated by a certified professional engineer based on the projected useful life and the projected salvage value of the facility; and
- (6) financial assurance to ensure that sufficient funds are available for decommissioning the facility.

For purposes of this section, financial assurance may include a performance bond, surety bond, letter of credit, corporate guarantee, escrow, deposit, insurance, certificate of deposit, domestic security, trust, any combination of such financial devices, or any other form of financial device that is acceptable to the Council to ensure sufficient funds are available for decommissioning the facility.

(j) Waivers.

(1) Agreements. Pursuant to Section 16-50o of the Connecticut General Statutes, the applicant or petitioner shall submit any agreements entered into with any abutting property owner of record to waive the requirements under subsections (a) and (c) of section 16-50j-95 of the Regulations of Connecticut State Agencies.

(2) Requests. The applicant or petitioner shall submit to the Council any request for a waiver of the requirements under subsections (a) and (c) of section 16-50j-95 of the Regulations of Connecticut State Agencies at the time an application or petition is filed with the Council. If the Council finds good cause for a waiver of the requirements under subsections (a) and (c) of section 16-50j-95 of the Regulations of Connecticut State Agencies during a public hearing, the applicant or petitioner shall provide notice by certified mail to the abutting property owner of record that includes, the following:

(A) notice of the requirements under subsections (a) and (c) of section 16-50j-95 of the Regulations of Connecticut State Agencies;

(B) notice of the criteria considered for a good cause determination to waive the requirements under subsections (a) and (c) of section 16-50j-95 of the Regulations of Connecticut State Agencies;

(C) notice of the wind turbine manufacturer's recommended setback distances; and

(D) notice that the abutting property owner of record is granted a 30-day period of time from the date notice by certified mail is sent to an abutting property owner of record to provide written comments on the proposed waiver of the requirements under subsections (a) and (c) of section 16-50j-95 of the Regulations of Connecticut State Agencies to the Council or to file a request for party or intervenor status with the Council pursuant to Sections 16-50j-13 to 16-50j-17, inclusive, of the Regulations of Connecticut State Agencies.

Sec. 16-50j-95. Considerations for Decision.

In making its decision to grant or deny an application for a certificate or to issue or not to issue a petition for a declaratory ruling, the Council shall, consistent with the Uniform Administrative Procedure Act, Chapter 54 of the Connecticut General Statutes, and the Public Utility Environmental Standards Act, Chapter 277a of the Connecticut General Statutes, consider, among other relevant facts and circumstances, the following factors:

(a) Setback Distances.

(1) Requirements.

(A) Any application for a certificate for a proposed wind turbine facility with a capacity of more than 65 megawatts shall include setback distances from each of the proposed wind turbine locations and

any alternative wind turbine locations of not less than 2.5 times the wind turbine height from all property lines at the proposed site and any alternative sites or shall comply with the wind turbine manufacturer's recommended setback distances, whichever is greater. A copy of the wind turbine manufacturer's recommended setback distances shall be included in the application or petition. In its discretion, the Council may require greater setback distances based on the results of any evaluation report submitted under Section 16-50j-94 of the Regulations of Connecticut State Agencies.

(B) Any petition for a declaratory ruling for a proposed wind turbine facility with a capacity of less than 65 megawatts shall include setback distances from each of the proposed wind turbine locations and any alternative wind turbine locations of not less than 1.5 times the wind turbine height from all property lines at the proposed site and any alternative sites or shall comply with the wind turbine manufacturer's recommended setback distances, whichever is greater. A copy of the wind turbine manufacturer's recommended setback distances shall be included in the application or petition. In its discretion, the Council may require greater setback distances based on the results of any evaluation report submitted under Section 16-50j-94 of the Regulations of Connecticut State Agencies.

(2) Waiver of requirements. The minimum required setback distances for each of the proposed wind turbine locations and any alternative wind turbine locations at the proposed site and any alternative sites may be waived, but in no case shall the setback distance from the proposed wind turbines and any alternative wind turbines be less than the manufacturer's recommended setback distances from any occupied residential structure or less than 1.5 times the wind turbine height from any occupied residential structure, whichever is greater:

(A) by submission to the Council of a written agreement between the applicant or petitioner and abutting property owners of record stating that consent is granted to allow reduced setback distances; or

(B) by a vote of two-thirds of the Council members present and voting to waive the minimum required setback distances upon a showing of good cause, which includes consideration of:

- (i) land uses and land use restrictions on abutting parcels;
- (ii) public health and safety;
- (iii) public benefit and reliability;
- (iv) environmental impacts;
- (v) policies of the state; and
- (vi) wind turbine design and technology.

(b) Noise.

Noise levels generated by the operation of each of the proposed wind turbines and any alternative wind turbines at the proposed site and any alternative sites shall comply with the Department of Energy and Environmental Protection Noise Control Regulations under Sections 22a-69-1 to 22a-69-7, inclusive, of the Regulations of Connecticut State Agencies.

(c) Shadow Flicker.

(1) Requirements. Shadow flicker shall not occur more than 30 total annual hours cumulative at any off-site occupied structure location from each of the proposed wind turbine locations and any alternative wind turbine locations at the proposed site and any alternative sites.

(2) Waiver of Requirements. The maximum total annual hours of shadow flicker generated by the operation of each of the proposed wind turbines and any alternative wind turbines at the proposed site and any alternative sites may be waived:

(A) by submission to the Council of a written agreement between the applicant or petitioner and property owners of record stating that consent is granted to allow excess total annual hours of shadow flicker; or

(B) by a vote of two-thirds of the Council members present and voting to waive the total annual hours of shadow flicker requirements upon a showing of good cause, which includes consideration of:

- (i) land uses and land use restrictions on abutting parcels;
- (ii) public health and safety;
- (iii) public benefit and reliability;
- (iv) environmental impacts;
- (v) policies of the state; and
- (vi) wind turbine design and technology.

Sec. 16-50j-96. Requirement for a Development and Management (D&M) Plan.

The Council shall require the preparation of a full or partial D&M Plan for a proposed wind turbine facility or modification of an existing wind turbine facility. The full or partial D&M Plan shall be prepared in accordance with the final decision rendered by the Council and in accordance with Sections 16-50j-60 to 16-50j-62, inclusive, of the Regulations of Connecticut State Agencies.

Statement of Purpose: The main provisions of the proposed new regulations, pursuant to Public Act 11-245, require consideration of setbacks, shadow flicker, decommissioning, different requirements for projects of different sizes, ice throw, blade throw, noise, impact on natural resources and a requirement for a public hearing for all wind turbine projects. The proposed new regulations inform wind turbine applicants and petitioners of the wind turbine-specific information required to be submitted in applications for certificates and petitions for declaratory rulings for wind turbine facilities in addition to the information required to be submitted in accordance with Section 16-50j-59 and Sections 16-50l-1 to 16-50l-5, inclusive, of the Regulations of Connecticut State Agencies, and in accordance with Sections 16-50j-38 to 16-50j-40, inclusive, of the Regulations of Connecticut State Agencies, and the proposed new regulations require the submission of a full or partial Development and Management Plan to the Council for any proposed wind turbine facility or any modification to an existing wind turbine facility.

The proposed new regulations would impact, but not change, existing regulations and other law related to petitions for declaratory rulings, such as Conn. Gen. Stat. §16-50k(a) and Conn. Gen. Stat. §4-176(e), by requiring a hearing be held on a petition for a declaratory ruling. Under Conn. Gen. Stat. §4-176(e), within sixty days after receipt of a petition for a declaratory ruling, the Council shall act in accordance with one of five dispositions: 1) issue a ruling, 2) order the matter set for a hearing, 3) issue a ruling by a specified date, 4) initiate regulation-making proceedings, or 5) decide not to issue a ruling. The proposed new regulation would require the Council to order the matter set for a hearing rather than have the discretion to consider the other four possible dispositions. Under Conn. Gen. Stat. §16-50k(a), “the Council shall, in the exercise of its jurisdiction over the siting of generating facilities, approve by declaratory ruling... (B)... any... grid side distributed resources project or facility with a capacity of not more than sixty-five megawatts, as long as such project meets air and water quality standards of the Department of Environmental Protection.” The proposed new regulations would require the Council to order the matter set for a hearing rather than have the discretion to consider the other four possible dispositions pursuant to Conn. Gen. Stat. §4-176(e).

Statutory authority: Public Act 11-245; Conn. Gen. Stat. §16-50j(g)

Fiscal impact: There will be a fiscal impact due to the amendment of Section 16-50j-18. If a public hearing is required for a petition for a declaratory ruling, this will increase staff hours, meal and travel reimbursements, increase expenditures related to per diem payments (\$200 per event or day), meal and travel reimbursements for the Council members, incur costs for publication of notice, consultant fees, transcription and audio services. However, costs associated with staff hours, Council expenditures and services are invoiced directly to the project proponent and therefore, are recoverable in full by the Council. The Council received three petitions for declaratory rulings for wind projects in late 2010. Total invoice amounts for Petition 980 were \$92,873.80, total invoice amounts for Petition 983 were

\$43,495.91 and total invoice amounts for Petition 984 were \$41,101.25.¹ The average total invoice amount of the three petitions is \$59,156.99.

There will be a fiscal impact due to the addition of Section 16-50j-96. This will increase staff hours for review of the D&M plan. This provision will not require additional staff. In late 2010, the Council received 3 petitions for wind projects. One petition was denied. The Council received a D&M Plan for Petition 983 on September 16, 2011. The D&M was approved on November 17, 2011. The Council received a D&M plan for Petition 984 on October 21, 2011. The D&M was approved on December 15, 2011. Staff estimates that approximately 20 hours were expended in reviewing the D&M plans. For the two projects that were approved, an approximate total of 40 staff hours were expended reviewing the D&M Plans. At an average of \$37 per hour, the estimated cost for staff review of the two D&M Plans is approximately \$1,480 per year. However, costs associated with staff hours on specific projects are invoiced directly to the project proponent and therefore, are recoverable in full by the Council.

There will also be a fiscal impact due to the addition of Section 16-50j-94(i). This provision will require additional staff, services rendered by another state agency, or consultant services for review of the Decommissioning Plan and related Financial Assurance. If the Council engages the services of another state agency with expertise in this area, there will be a per project cost for review. If the Council hires a staff economist, the approximate annual total salary cost would be approximately \$107,000.00.² If the Council hires a consultant, based on past experience with consultant services rendered on wind projects, the average cost to review one project would be approximately \$28,000.00.³ However, costs associated with consultant fees on specific projects are invoiced directly to the project proponent and therefore, are recoverable in full by the Council.

¹ These calculations are based on the average invoice totals for Council review of Petition Nos. 980, 983 and 984 filed by BNE Energy, Inc. in late 2010 pursuant to C.G.S. §16-50v. These totals do not include invoices for the Development and Management Plan process under Section 16-50j-97 of the Regulations of Connecticut State Agencies. A separate fiscal estimate has been prepared for that section.

² Department of Administrative Services, Class Specification: Economist, available at <http://das.ct.gov/HR/JobspecNew/JobDetail.asp?FCC=6313> (base salary plus fringe), 2013.

³ Personal Services Agreement, Epsilon Associates, September 2010-September 2012, Invoice amounts for review of Petition 980 only.