

CONNECTICUT SITING COUNCIL DRAFT WIND REGULATIONS

Section 1. Section 16-50j-2a of the Regulations of Connecticut State Agencies is amended to read as follows:

Sec. 16-50j-2a. Definitions. As used in these rules, except as otherwise required by the context:

[(a)]**(1)** “Associated equipment” [means] 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 [to or from satellites,] that is [an integral part to] 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.

[(b)] **(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.

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

[(c)] **(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 those terms are used in sections 16-50k, 22a-117 and 22a-163g of the General Statutes] 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.

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

(NEW) (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.

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

[(e)] **(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 [of Connecticut].

[(f)] **(9)** “Council” means the members of the Connecticut Siting Council appointed under section 16-50j(b) and section 16-50j(c) of the [General Statutes of] Connecticut General Statutes and referred to in Section 16-50j(d) and section 22a-115 [and sections 22a-163—22a-163w,] of the Connecticut General Statutes.

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

[(g)] **(11)** "Facility" means

(1) an electric transmission line of a design capacity of 69 kilovolts or more, including associated equipment;

(2) a fuel transmission facility except a gas transmission line having a design capacity of less than 200 pounds per square inch gauge pressure;

(3) any electric generating or storage facility using any fuel, including nuclear materials, including associated equipment for furnishing electricity but not including a facility;

(A) owned and operated by a private power producer, as defined in section 16-243b of the General Statutes,

(B) which is a qualifying small power production facility or a qualifying cogeneration facility under the Public Utility Regulatory Policies Act of 1978, as amended, or a facility determined by the council to be primarily for a producer's own use, and

(C) which has, in the case of a facility utilizing renewable energy sources, a generating capacity of one megawatt of electricity or less and, in the case of a facility utilizing cogeneration technology, a generating capacity of 25 megawatts of electricity or less;

(4) any electric substation or switchyard designed to change or regulate the voltage of electricity at 69 kilovolts or more or to connect two or more electric circuits at such voltage, which substation or switchyard may have a substantial adverse environmental effect, as determined by the council, and other facilities which may have a substantial adverse environmental effect;

(5) community antenna television towers and head-end structures, including satellite dishes and other associated equipment, which may have a substantial adverse environmental effect; and

(6) telecommunications towers owned or operated by the state or a public service company as defined in section 16-1 of the General Statutes, or used for public cellular radio communications service as defined in section 16- 50i of the General Statutes, which may have a substantial adverse environmental effect.]

a facility as defined in Section 16-50i(a) of the Connecticut General Statutes.

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

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

[(h)] **(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.

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

(NEW) (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.

[(j)] **(17)** “Intervenor” means a person other than a party, granted status as an intervenor by the Council in accordance with [Section 16-50j-15a of the Regulations of State Agencies] Section 16-50n of the Connecticut General Statutes.

[(k)] **(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) [and section 22a-16j] of the Connecticut General Statutes [of Connecticut].

[(l)] **(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 [approved] determined by the council.

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

[(A)] **(1)** 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

[(B)] **(2)** 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 statutory authority shall not be deemed to be a modification.

[(2)] **(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 [Secs. 22a-163—22a-163w, inclusive, of the General Statutes] the provisions of the Northeast Interstate Low-Level Radioactive Waste Compact, Sections 22a-161, et seq. 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 low-level radioactive waste managed at such facility. The routine maintenance, repair or replacement of the individual components at a low-level radioactive waste management facility that is necessary for normal operation or a change or alteration at a low-level radioactive waste management facility ordered by a federal or state official in the exercise of his statutory authority shall not be deemed to be a modification.]

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

(NEW) (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.

[(n)] **(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 [of Connecticut], or in the event of a hazardous waste facility proceeding, pursuant to the provisions of section 22a-120(a) of the Connecticut General Statutes. [of Connecticut. or, in the event of a low-level radioactive waste management facility proceeding, pursuant to the provisions of section 22a-163j of the General Statutes.]

[(o)] **(23)** "Person" means any [individual [sic] corporation, joint venture, public benefit corporation, political subdivision, governmental agency or authority, municipality, partnership, association, trust or estate, and any other entity, public or private, however organized. As defined in the event of a hazardous waste or low-level radioactive waste management facility proceeding, "person" means any individual, corporation, joint venture, public benefit corporation, the state and its agencies and political subdivisions, the federal government and its agencies, municipality, partnership, association, trust or estate, and any other entity, public or private, however organized.] person as defined in Sections 16-50i and 22a-115 of the Connecticut General Statutes.

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

[(p)] **(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

Compact as these terms are defined in section [22a-163a] 22a-161 of the Connecticut General Statutes.

(NEW) (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.

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

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

[(t)] **(29)** “[Tower] 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 [one or more CATV or telecommunications towers as defined in section 16-50j-2a of these regulations and associated equipment, if any, are or will be located] a facility and associated equipment is located, shall be located, or is proposed to be located.

[(q)] **(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:

[(1)] **(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

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

[(r)] **(31)** “Tower Base” means the top of the foundation or equivalent surface [which will] that shall bear the vertical load of a tower.

[(s)] **(32)** “Tower Height” means the measurement from [the base of the tower] ground level to the highest point on the tower;

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

(NEW) (34) “Wind turbine” means a device that converts wind energy to electricity.

(NEW) (35) “Wind turbine height” means the measurement from ground level to the tip of the blade in the vertical position.

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

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

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

Sec. 2. Section 16-50j-18 of the Regulations of Connecticut State Agencies is amended to read as follows:

Sec. 16-50j-18. Grant of hearing. A hearing [will] shall be held, where required by law, on all applications submitted pursuant to sections 16-50l [through] to 16-50q, inclusive, of the Connecticut General Statutes, [and] upon appeal as provided for in section 16-50x(d) of the Connecticut General Statutes [of Connecticut], on any petition for a declaratory ruling for a wind turbine facility submitted pursuant to section 16-50k of the Connecticut General Statutes and 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. In the event of a hazardous waste facility proceeding, a hearing [will] shall be held on all applications submitted pursuant to sections 22a-117 [through] to 22a-122, inclusive, of the Connecticut General Statutes. [In the event of a low-level radioactive waste management facility, a hearing will be held on all applications submitted pursuant to sections 22a-163i—22a-163m, inclusive, of the General Statutes.]

Sec. 3. The Regulations of Connecticut State Agencies are amended by adding **Section 16-50j-92** as follows:

(NEW) **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 customer-side distributed resources wind turbine facility with a capacity of more than 65 megawatts or a grid-side distributed resources wind turbine facility with a 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, but not be

limited to, additional information required to be submitted to the Council as part of the application under Section 16-50j-96 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. 4. The Regulations of Connecticut State Agencies are amended by adding **Section 16-50j-93** as follows:

(NEW) Sec. 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 wind turbine facility or a grid-side distributed resources wind turbine facility with a capacity of not more than 65 megawatts 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, but not be limited to, additional information required to be submitted to the Council as part of the petition under Section 16-50j-96 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. 5. The Regulations of Connecticut State Agencies are amended by adding **Section 16-50j-94** as follows:

(NEW) Sec. 16-50j-94. Additional Information Required. In addition to the information required to be submitted to the Council as part of an application for a certificate for a proposed wind turbine facility in accordance with 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, and in addition to the information required to be submitted to the Council as part of a petition for a declaratory ruling for a proposed wind turbine facility in accordance with Sections 16-50j-38 to 16-50j-40, inclusive, of the Regulations of Connecticut State Agencies, the application or petition shall also include, but not be limited to, the following:

(a) Abutting properties map. The applicant or petitioner shall submit a map of sufficient scale 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.

(b) Visual Impact.

(1) 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, but is not limited to:

(A) 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, but not limited to, 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.

(B) A study area map for the proposed site and any alternative sites depicting the view-shed analyses study area radius used in accordance with Subparagraph (C) 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 Subparagraph (D) of this section.

(C) 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:

- (i) less than 200 feet - 2 mile radius
- (ii) between 200 feet and 400 feet – 4 mile radius
- (iii) between 400 feet and 600 feet – 6 mile radius
- (iv) 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.

(D) 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.

(E) Identification of any potential mitigation measures to minimize visual impact, including, but not limited to, paint color of the facility, vegetative screening and landscaping.

(2) State Historic Preservation Office Review. The applicant or petitioner shall submit the visual impact evaluation report to the State Historic Preservation Office, or its successor agency, for review. Any comments and recommendations received from the State Historic Preservation Office, or its successor agency, shall be submitted to the Council.

(c) 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, but not be limited to, 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, but not limited to, 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, if available, 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, but not limited to, utilization of best practical noise control measures in accordance with Section 22a-69-1 of the Regulations of Connecticut State Agencies.

(d) 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, but not be limited to:

(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, if available.

(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, but not limited to automatic and remote manual shutdown of the wind turbines.

(e) Blade Drop and Blade Throw Evaluation Report. The applicant or petitioner shall submit a blade drop and blade 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, but not be limited to:

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

(2) Calculations in feet of the maximum distance that a blade or any portion of a blade could be dropped 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 or any portion of a blade could be thrown 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 throw study area radius, site boundaries and locations where a blade or any portion

of a blade could be dropped or locations where a blade or any portion of a blade could be thrown, or both, 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 drop or blade throw, or both, from each of the proposed wind turbines and any alternative wind turbines, including but not limited to, automatic and remote manual shutdown of the wind turbines.

(f) 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, but not be limited to:

(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, but not limited to, 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, if available.

(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 mile radius, including, but not limited to, 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, but not limited to, vegetation, screening and fence construction.

(g) 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, but is not limited to, bird studies, bat studies, wetland studies, and terrestrial and marine wildlife habitat studies, as applicable. The report shall also include, but not be limited to:

(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, but not limited to, an analysis of:

- (A) the topography, geology, vegetation, soil types, water resources, and avian, terrestrial and marine wildlife habitat areas, as applicable;
- (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 recommended standards and guidelines, as amended; and
- (D) compliance with the Department of Energy and Environmental Protection recommended standards and guidelines.

(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) potential number of bird fatalities;
- (B) potential 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, but not limited to, 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.

(h) 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, but not be limited to:

- (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 detailed description of the method by which foundations, wind turbines, associated equipment and components will be dismantled and removed;

(4) a detailed description of the method by which the site will be restored as near as possible to its original condition, including, but not limited to, stabilization, re-grading and re-vegetation; and

(5) an estimate of the total cost of implementing the decommissioning plan calculated in present dollars and future dollars based on the projected useful life of the wind turbines.

Sec. 6. The Regulations of Connecticut State Agencies are amended by adding **Section 16-50j-95** as follows:

(NEW) Sec. 16-50j-95. Considerations for Decision. The Council shall render a decision on an application for a certificate or a petition for declaratory ruling for a proposed wind turbine facility in accordance with Sections 16-50g, 16-50k, 16-50p and 16a-35k of the Connecticut General Statutes. In making its decision to grant or deny a certificate or a petition for a declaratory ruling, the Council shall consider, but shall not be limited to consideration of, the following requirements:

(a) Setback Distances.

(1) Requirements. Any application for a certificate for a proposed wind turbine facility and any petition for a declaratory ruling for a proposed wind turbine facility shall include setback distances from each of the proposed wind turbine locations and any alternative wind turbine locations of not less than 1.1 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, if available. In its discretion, the Council may require greater setback distances based on the results of any evaluation report submitted under Section 16-50j-96 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:

(A) by submission to the Council of a written agreement between the applicant or petitioner and abutting property owners stating that consent is granted to allow reduced setback distances, but in no case shall the setback distance from the proposed wind turbines and any alternative wind turbines be closer than 1.1 times the wind turbine height from any occupied residential building; or

(B) by a vote of the Council to waive the minimum required setback distances upon a showing of good cause, which includes, but is not limited to, abutting parcels with non-buildable configurations, abutting parcels with intervening topographical barriers and abutting parcels subject to development restrictions.

(b) Noise.

(1) Requirements. 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, as amended. In accordance with the Noise Control Regulations, the proposed site and any alternative sites shall be categorized as Class C industrial emitters and noise level measurements shall be taken at the property lines. A copy of any variance or partial variance from the provisions of the Noise Control Regulations granted by the Department of Energy and Environmental Protection under Section 22a-69-7.1 of the Regulations of Connecticut State Agencies, as amended, shall be submitted to the Council with the application or petition.

(2) Waiver of Requirements. The required maximum 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 may be waived:

(A) by submission to the Council of a written agreement between the applicant or petitioner and property owner stating that consent is granted to allow excess day-time or night-time noise levels, or both, but in no case shall noise levels be greater than day-time levels of 61 dBA from the proposed wind turbines and any alternative wind turbines of the proposed site and any alternative sites at any occupied residential receptor and in no case greater than night-time levels of 51 dBA from the proposed wind turbines and any alternative wind turbines of the proposed site and any alternative sites at any occupied residential receptor; or

(B) by a vote of the Council to waive the noise level requirements upon a showing of good cause, which includes, but is not limited to, abutting parcels with non-buildable configurations, abutting parcels with intervening topographical barriers and abutting parcels subject to development restrictions.

(c) Shadow Flicker.

(1) Requirements. Shadow flicker shall not occur more than 30 total annual hours 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 owner stating that consent is granted to allow excess total annual hours of shadow flicker; or

(B) by a vote of the Council to waive the total annual hours of shadow flicker requirements upon a showing of good cause, which includes, but is not limited to,

abutting parcels with non-buildable configurations, abutting parcels with intervening topographical barriers and abutting parcels subject to development restrictions.

Sec. 7. The Regulations of Connecticut State Agencies are amended by adding **Sec. 16-50j-96** as follows:

(NEW) 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 also 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.

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.