
A BILL FOR AN ACT

RELATING TO WIND ENERGY FACILITIES.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. Section 205-4.5, Hawaii Revised Statutes, is
2 amended by amending subsection (a) to read as follows:

3 "(a) Within the agricultural district, all lands with soil
4 classified by the land study bureau's detailed land
5 classification as overall (master) productivity rating class A
6 or B and for solar energy facilities, class B or C, shall be
7 restricted to the following permitted uses:

- 8 (1) Cultivation of crops, including crops for bioenergy,
9 flowers, vegetables, foliage, fruits, forage, and
10 timber;
- 11 (2) Game and fish propagation;
- 12 (3) Raising of livestock, including poultry, bees, fish,
13 or other animal or aquatic life that are propagated
14 for economic or personal use;
- 15 (4) Farm dwellings, employee housing, farm buildings, or
16 activities or uses related to farming and animal
17 husbandry [~~— "Farm dwelling", as used in this~~



1 ~~paragraph, means a single family dwelling located on~~
2 ~~and used in connection with a farm, including clusters~~
3 ~~of single family farm dwellings permitted within~~
4 ~~agricultural parks developed by the State, or where~~
5 ~~agricultural activity provides income to the family~~
6 ~~occupying the dwelling];~~

7 (5) Public institutions and buildings that are necessary
8 for agricultural practices;

9 (6) Public and private open area types of recreational
10 uses, including day camps, picnic grounds, parks, and
11 riding stables, but not including dragstrips,
12 airports, drive-in theaters, golf courses, golf
13 driving ranges, country clubs, and overnight camps;

14 (7) Public, private, and quasi-public utility lines and
15 roadways, transformer stations, communications
16 equipment buildings, solid waste transfer stations,
17 major water storage tanks, and appurtenant small
18 buildings such as booster pumping stations, but not
19 including offices or yards for equipment, material,
20 vehicle storage, repair or maintenance, treatment



- 1 plants, corporation yards, or other similar
- 2 structures;
- 3 (8) Retention, restoration, rehabilitation, or improvement
- 4 of buildings or sites of historic or scenic interest;
- 5 (9) Agricultural-based commercial operations as described
- 6 in section 205-2(d)(15);
- 7 (10) Buildings and uses, including mills, storage, and
- 8 processing facilities, maintenance facilities,
- 9 photovoltaic, biogas, and other small-scale renewable
- 10 energy systems producing energy solely for use in the
- 11 agricultural activities of the fee or leasehold owner
- 12 of the property, and vehicle and equipment storage
- 13 areas that are normally considered directly accessory
- 14 to the above-mentioned uses and are permitted under
- 15 section 205-2(d);
- 16 (11) Agricultural parks;
- 17 (12) Plantation community subdivisions, which as used in
- 18 this chapter means an established subdivision or
- 19 cluster of employee housing, community buildings, and
- 20 agricultural support buildings on land currently or
- 21 formerly owned, leased, or operated by a sugar or



1 pineapple plantation; provided that the existing
2 structures may be used or rehabilitated for use, and
3 new employee housing and agricultural support
4 buildings may be allowed on land within the
5 subdivision as follows:

6 (A) The employee housing is occupied by employees or
7 former employees of the plantation who have a
8 property interest in the land;

9 (B) The employee housing units not owned by their
10 occupants shall be rented or leased at affordable
11 rates for agricultural workers; or

12 (C) The agricultural support buildings shall be
13 rented or leased to agricultural business
14 operators or agricultural support services;

15 (13) Agricultural tourism conducted on a working farm, or a
16 farming operation as defined in section 165-2, for the
17 enjoyment, education, or involvement of visitors;
18 provided that the agricultural tourism activity is
19 accessory and secondary to the principal agricultural
20 use and does not interfere with surrounding farm
21 operations; and provided further that this paragraph



1 shall apply only to a county that has adopted
2 ordinances regulating agricultural tourism under
3 section 205-5;

4 (14) Agricultural tourism activities, including overnight
5 accommodations of twenty-one days or less, for any one
6 stay within a county; provided that this paragraph
7 shall apply only to a county that includes at least
8 three islands and has adopted ordinances regulating
9 agricultural tourism activities pursuant to section
10 205-5; provided further that the agricultural tourism
11 activities coexist with a bona fide agricultural
12 activity. For the purposes of this paragraph, "bona
13 fide agricultural activity" means a farming operation
14 as defined in section 165-2;

15 (15) Wind energy facilities, including the appurtenances
16 associated with the production and transmission of
17 wind generated energy; provided that the wind energy
18 facilities and appurtenances are compatible with
19 agriculture uses and cause minimal adverse impact on
20 agricultural land; provided further that any wind
21 energy facility that utilizes wind turbine generators



1 and that has the capacity to generate one megawatt or
2 more shall be located not less than from
3 the nearest farm dwelling or off-site residential
4 dwelling unit in existence at the time of the
5 application for necessary permits, measured from the
6 center of the nearest wind turbine generator to the
7 nearest exterior of the farm dwelling or residential
8 dwelling unit;

9 (16) Biofuel processing facilities, including the
10 appurtenances associated with the production and
11 refining of biofuels that is normally considered
12 directly accessory and secondary to the growing of the
13 energy feedstock; provided that biofuel processing
14 facilities and appurtenances do not adversely impact
15 agricultural land and other agricultural uses in the
16 vicinity.

17 For the purposes of this paragraph:

18 "Appurtenances" means operational infrastructure
19 of the appropriate type and scale for economic
20 commercial storage and distribution, and other similar



1 handling of feedstock, fuels, and other products of
2 biofuel processing facilities.

3 "Biofuel processing facility" means a facility
4 that produces liquid or gaseous fuels from organic
5 sources such as biomass crops, agricultural residues,
6 and oil crops, including palm, canola, soybean, and
7 waste cooking oils; grease; food wastes; and animal
8 residues and wastes that can be used to generate
9 energy;

10 (17) Agricultural-energy facilities, including
11 appurtenances necessary for an agricultural-energy
12 enterprise; provided that the primary activity of the
13 agricultural-energy enterprise is agricultural
14 activity. To be considered the primary activity of an
15 agricultural-energy enterprise, the total acreage
16 devoted to agricultural activity shall be not less
17 than ninety per cent of the total acreage of the
18 agricultural-energy enterprise. The agricultural-
19 energy facility shall be limited to lands owned,
20 leased, licensed, or operated by the entity conducting
21 the agricultural activity.



1 As used in this paragraph:

2 "Agricultural activity" means any activity
3 described in paragraphs (1) to (3) of this subsection.

4 "Agricultural-energy enterprise" means an
5 enterprise that integrally incorporates an
6 agricultural activity with an agricultural-energy
7 facility.

8 "Agricultural-energy facility" means a facility
9 that generates, stores, or distributes renewable
10 energy as defined in section 269-91 or renewable fuel
11 including electrical or thermal energy or liquid or
12 gaseous fuels from products of agricultural activities
13 from agricultural lands located in the State.

14 "Appurtenances" means operational infrastructure
15 of the appropriate type and scale for the economic
16 commercial generation, storage, distribution, and
17 other similar handling of energy, including equipment,
18 feedstock, fuels, and other products of agricultural-
19 energy facilities;

20 (18) Construction and operation of wireless communication
21 antennas, including small wireless facilities;



1 provided that, for the purposes of this paragraph,
2 "wireless communication antenna" means communications
3 equipment that is either freestanding or placed upon
4 or attached to an already existing structure and that
5 transmits and receives electromagnetic radio signals
6 used in the provision of all types of wireless
7 communications services; provided further that "small
8 wireless facilities" shall have the same meaning as in
9 section 206N-2; provided further that nothing in this
10 paragraph shall be construed to permit the
11 construction of any new structure that is not deemed a
12 permitted use under this subsection;

13 (19) Agricultural education programs conducted on a farming
14 operation as defined in section 165-2, for the
15 education and participation of the general public;
16 provided that the agricultural education programs are
17 accessory and secondary to the principal agricultural
18 use of the parcels or lots on which the agricultural
19 education programs are to occur and do not interfere
20 with surrounding farm operations. For the purposes of
21 this paragraph, "agricultural education programs"



1 means activities or events designed to promote
2 knowledge and understanding of agricultural activities
3 and practices conducted on a farming operation as
4 defined in section 165-2;

5 (20) Solar energy facilities that do not occupy more than
6 ten per cent of the acreage of the parcel, or twenty
7 acres of land, whichever is lesser or for which a
8 special use permit is granted pursuant to section
9 205-6; provided that this use shall not be permitted
10 on lands with soil classified by the land study
11 bureau's detailed land classification as overall
12 (master) productivity rating class A;

13 (21) Solar energy facilities on lands with soil classified
14 by the land study bureau's detailed land
15 classification as overall (master) productivity rating
16 B or C for which a special use permit is granted
17 pursuant to section 205-6; provided that:

18 (A) The area occupied by the solar energy facilities
19 is also made available for compatible
20 agricultural activities at a lease rate that is



1 at least fifty per cent below the fair market
2 rent for comparable properties;

3 (B) Proof of financial security to decommission the
4 facility is provided to the satisfaction of the
5 appropriate county planning commission prior to
6 date of commencement of commercial generation;
7 and

8 (C) Solar energy facilities shall be decommissioned
9 at the owner's expense according to the following
10 requirements:

11 (i) Removal of all equipment related to the
12 solar energy facility within twelve months
13 of the conclusion of operation or useful
14 life; and

15 (ii) Restoration of the disturbed earth to
16 substantially the same physical condition as
17 existed prior to the development of the
18 solar energy facility.

19 For the purposes of this paragraph, "agricultural
20 activities" means the activities described in
21 paragraphs (1) to (3);



1 (22) Geothermal resources exploration and geothermal
2 resources development, as defined under section 182-1;
3 or

4 (23) Hydroelectric facilities, including the appurtenances
5 associated with the production and transmission of
6 hydroelectric energy, subject to section 205-2;
7 provided that the hydroelectric facilities and their
8 appurtenances:

9 (A) Shall consist of a small hydropower facility as
10 defined by the United States Department of
11 Energy, including:

12 (i) Impoundment facilities using a dam to store
13 water in a reservoir;

14 (ii) A diversion or run-of-river facility that
15 channels a portion of a river through a
16 canal or channel; and

17 (iii) Pumped storage facilities that store energy
18 by pumping water uphill to a reservoir at
19 higher elevation from a reservoir at a lower
20 elevation to be released to turn a turbine
21 to generate electricity;



1 (B) Comply with the state water code, chapter 174C;

2 (C) Shall, if over five hundred kilowatts in
3 hydroelectric generating capacity, have the
4 approval of the commission on water resource
5 management, including a new instream flow
6 standard established for any new hydroelectric
7 facility; and

8 (D) Do not impact or impede the use of agricultural
9 land or the availability of surface or ground
10 water for all uses on all parcels that are served
11 by the ground water sources or streams for which
12 hydroelectric facilities are considered.

13 For the purposes of this subsection, "farm dwelling" means
14 a single-family dwelling located on and used in connection with
15 a farm, including clusters of single-family farm dwellings
16 permitted within agricultural parks developed by the State, or
17 where agricultural activity provides income to the family
18 occupying the dwelling."

19 SECTION 2. The University of Hawaii at Manoa John A. Burns
20 school of medicine shall conduct or contract for a study on the
21 effects of noise produced by wind energy facilities in Hawaii



1 that utilize wind turbine generators and that have the capacity
2 to generate one megawatt or more on the health of residents and
3 students. The study shall include but not be limited to:

4 (1) Measurements of noise levels associated with wind
5 turbines currently operating in locations around
6 Hawaii and under diverse conditions that include
7 differing wind directions and velocities, varied
8 atmospheric conditions, various distances, and
9 different background sound levels; and

10 (2) Collection and examination of data from noise-exposed
11 residents, including quantification of noise
12 annoyance, sleep disturbance, and potential noise-
13 related health issues, such as headache, vertigo,
14 tinnitus, concentration, anxiety, and hearing loss.

15 The University of Hawaii at Manoa John A. Burns school of
16 medicine shall submit a report of the study's findings and
17 recommendations, including any proposed legislation, to the
18 legislature no later than twenty days prior to the convening of
19 the regular session of 2021.

20 SECTION 3. There is appropriated out of the general
21 revenues of the State the sum of \$ or so much thereof



1 as may be necessary for fiscal year 2020-2021 to carry out the
2 study set forth in section 2 of this Act.

3 The sum appropriated shall be expended by the University of
4 Hawaii at Manoa John A. Burns school of medicine for the
5 purposes of this Act.

6 SECTION 4. Statutory material to be repealed is bracketed
7 and stricken. New statutory material is underscored.

8 SECTION 5. This Act shall take effect on July 1, 2050.



Report Title:

Wind Energy Facilities; Wind Turbines; Setback; Study; Health Effects; Appropriation

Description:

Establishes a one-mile setback from the nearest existing farm dwelling or residential dwelling unit for certain wind energy facilities in agricultural districts. Requires a study on the effects of noise production by wind energy facilities on the health of residents and students. Appropriates funds. Effective 7/1/2050. (HD1)

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.

