
SUBSTITUTE HOUSE BILL 2645

State of Washington

66th Legislature

2020 Regular Session

By House Environment & Energy (originally sponsored by Representatives Smith, Eslick, and Pollet)

READ FIRST TIME 02/07/20.

1 AN ACT Relating to the photovoltaic module stewardship and
2 takeback program; and amending RCW 70.355.010.

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

4 **Sec. 1.** RCW 70.355.010 and 2017 3rd sp.s. c 36 s 12 are each
5 amended to read as follows:

6 (1) (~~(**Findings.**)~~) The legislature finds that a convenient, safe,
7 and environmentally sound system for the recycling of photovoltaic
8 modules, minimization of hazardous waste, and recovery of
9 commercially valuable materials must be established. The legislature
10 further finds that the responsibility for this system must be shared
11 among all stakeholders, with manufacturers financing the takeback and
12 recycling system.

13 (2) (~~(**Definitions.** For purposes of this section the following~~
14 ~~definitions apply:)~~) The definitions in this subsection apply
15 throughout this section unless the context clearly requires
16 otherwise.

17 (a) "Consumer electronic device" means any device containing an
18 electronic circuit board that is intended for everyday use by
19 individuals, such as a watch or calculator.

20 (b) "Department" means the department of ecology.

1 (c) "Distributor" means a person who markets and sells
2 photovoltaic modules to retailers in Washington.

3 (d) "Installer" means a person who assembles, installs, and
4 maintains photovoltaic module systems.

5 (e) "Manufacturer" means any person in business or no longer in
6 business but having a successor in interest who, irrespective of the
7 selling technique used, including by means of distance or remote
8 sale:

9 (i) Manufactures or has manufactured a photovoltaic module under
10 its own brand names for use or sale in or into this state;

11 (ii) Assembles or has assembled a photovoltaic module that uses
12 parts manufactured by others for use or sale in or into this state
13 under the assembler's brand names;

14 (iii) Resells or has resold in or into this state under its own
15 brand names a photovoltaic module produced by other suppliers,
16 including retail establishments that sell photovoltaic modules under
17 their own brand names;

18 (iv) Manufactures or has manufactured a cobranded photovoltaic
19 module product for use or sale in or into this state that carries the
20 name of both the manufacturer and a retailer;

21 (v) Imports or has imported a photovoltaic module into the United
22 States that is used or sold in or into this state. However, if the
23 imported photovoltaic module is manufactured by any person with a
24 presence in the United States meeting the criteria of manufacturer
25 under ~~((a))~~ (e)(i) through ~~((d))~~ (vi) of this subsection, that
26 person is the manufacturer;

27 (vi) Sells at retail a photovoltaic module acquired from an
28 importer that is the manufacturer and elects to register as the
29 manufacturer for those products; or

30 (vii) Elects to assume the responsibility and register in lieu of
31 a manufacturer as defined under ~~((b))~~ (e)(i) through (vi) of this
32 subsection.

33 ~~((d))~~ (f) "Photovoltaic module" means the smallest
34 nondivisible, environmentally protected assembly of photovoltaic
35 cells or other photovoltaic collector technology and ancillary parts
36 intended to generate electrical power under sunlight, except that
37 "photovoltaic module" does not include a photovoltaic cell that is
38 part of a consumer electronic device for which it provides
39 electricity needed to make the consumer electronic device function.
40 "Photovoltaic module" includes but is not limited to

1 interconnections, terminals, and protective devices such as diodes
2 that:

3 (i) Are installed on, connected to, or integral with buildings;
4 (~~(e)~~)

5 (ii) Are used as components of freestanding, off-grid, power
6 generation systems, such as for powering water pumping stations,
7 electric vehicle charging stations, fencing, street and signage
8 lights, and other commercial or agricultural purposes; or

9 (iii) Are part of a system connected to the grid or utility
10 service.

11 (~~(e)~~) (g) "Predecessor" means an entity from which a
12 manufacturer purchased a photovoltaic module brand, its warranty
13 obligations, and its liabilities. "Predecessor" does not include
14 entities from which a manufacturer purchased only manufacturing
15 equipment.

16 (h) "Rare earth element" means lanthanum, cerium, praseodymium,
17 neodymium, promethium, samarium, europium, gadolinium, terbium,
18 dysprosium, holmium, erbium, thulium, ytterbium, lutetium, yttrium,
19 or scandium.

20 (~~(f)~~) (i) "Reuse" means any operation by which a photovoltaic
21 module or a component of a photovoltaic module changes ownership and
22 is used for the same purpose for which it was originally purchased.

23 (~~(g)~~) (j) "Retailer" means a person who offers photovoltaic
24 modules for retail sale in the state through any means including, but
25 not limited to, remote offerings such as sales outlets, catalogs, or
26 internet sales.

27 (k) "Stewardship plan" means the plan developed by a manufacturer
28 or its designated stewardship organization for a self-directed
29 stewardship program.

30 (~~(h)~~) (l) "Stewardship program" means the activities conducted
31 by a manufacturer or a stewardship organization to fulfill the
32 requirements of this chapter and implement the activities described
33 in its stewardship plan.

34 (3) (~~(Program guidance, review, and approval.)~~) The department
35 must develop guidance for a photovoltaic module stewardship and
36 takeback program to guide manufacturers in preparing and implementing
37 a self-directed program to ensure the convenient, safe, and
38 environmentally sound takeback and recycling of photovoltaic modules
39 and their components and materials. By January 1, 2018, the
40 department must establish a process to develop guidance for

1 photovoltaic module stewardship plans by working with manufacturers,
2 stewardship organizations, and other stakeholders on the content,
3 review, and approval of stewardship plans. The department's process
4 must be fully implemented and stewardship plan guidance completed by
5 July 1, 2019.

6 (4) (~~(Stewardship organization as agent of manufacturer.)~~) A
7 stewardship organization may be designated to act as an agent on
8 behalf of a manufacturer or manufacturers in operating and
9 implementing the stewardship program required under this chapter. Any
10 stewardship organization that has obtained such designation must
11 provide to the department a list of the manufacturers and brand names
12 that the stewardship organization represents within sixty days of its
13 designation by a manufacturer as its agent, or within sixty days of
14 removal of such designation.

15 (5) (~~(Stewardship plans.)~~) Each manufacturer must prepare and
16 submit a stewardship plan to the department by the later of January
17 1, 2020, or within thirty days of its first sale of a photovoltaic
18 module in or into the state.

19 (a) A stewardship plan must, at a minimum:

20 (i) Describe how manufacturers will finance the takeback and
21 recycling system, and include an adequate funding mechanism to
22 finance the costs of collection, management, and recycling of
23 photovoltaic modules and residuals sold in or into the state by the
24 manufacturer with a mechanism that ensures that photovoltaic modules
25 can be delivered to takeback locations without cost to the last owner
26 or holder;

27 (ii) Accept all of their photovoltaic modules sold in or into the
28 state after July 1, 2017;

29 (iii) Describe how the program will minimize the release of
30 hazardous substances into the environment and maximize the recovery
31 of other components, including rare earth elements and commercially
32 valuable materials;

33 (iv) Provide for takeback of photovoltaic modules at locations
34 that are within the region of the state in which (~~the~~) their
35 photovoltaic modules were used and are as convenient as reasonably
36 practicable, and if no such location within the region of the state
37 exists, include an explanation for the lack of such location;

38 (v) Identify how relevant stakeholders, including consumers,
39 installers, building demolition firms, and recycling and treatment
40 facilities, will receive information required in order for them to

1 properly dismantle, transport, and treat the end-of-life photovoltaic
2 modules in a manner consistent with the objectives described in
3 (a)(iii) of this subsection;

4 (vi) Establish performance goals, including a goal for the rate
5 of combined reuse and recycling of collected photovoltaic modules as
6 a percentage of the total weight of photovoltaic modules collected,
7 which rate must be no less than eighty-five percent.

8 (b) A manufacturer must implement the stewardship plan.

9 (c) A manufacturer may periodically amend its stewardship plan.
10 The department must approve the amendment if it meets the
11 requirements for plan approval outlined in the department's guidance.
12 When submitting proposed amendments, the manufacturer must include an
13 explanation of why such amendments are necessary.

14 (6) (~~(Plan approval.)~~) The department must approve a stewardship
15 plan if it determines the plan addresses each element outlined in the
16 department's guidance.

17 (7) (~~(Annual report.)~~) (a) Beginning April 1, ((2022)) 2023, and
18 by April 1st in each subsequent year, a manufacturer, or its
19 designated stewardship organization, must provide to the department a
20 report for the previous calendar year that documents implementation
21 of the plan and assesses achievement of the performance goals
22 established in subsection (5)(a)(vi) of this section.

23 (b) The report may include any recommendations to the department
24 or the legislature on modifications to the program that would enhance
25 the effectiveness of the program, including management of program
26 costs and mitigation of environmental impacts of photovoltaic
27 modules.

28 (c) The manufacturer or stewardship organization must post this
29 report on a publicly accessible web site.

30 (8) (~~(Enforcement.)~~) Beginning January 1, ((2021)) 2023, no
31 manufacturer, distributor, retailer, or installer may sell or offer
32 for sale a photovoltaic module in or into the state unless the
33 manufacturer of the photovoltaic module has submitted to the
34 department a stewardship plan and received plan approval.

35 (a) The department must send a written warning to a manufacturer
36 that is not participating in a plan. The written warning must inform
37 the manufacturer that it must submit a plan or participate in a plan
38 within thirty days of the notice. The department may assess a penalty
39 of up to ten thousand dollars upon a manufacturer for each sale that
40 occurs in or into the state of a photovoltaic module (~~(in or into the~~

1 ~~state that occurs)~~ for which a stewardship plan has not been
2 submitted by the manufacturer and approved by the department after
3 the initial written warning. A manufacturer may appeal a penalty
4 issued under this section to the superior court of Thurston county
5 within one hundred eighty days of receipt of the notice.

6 (b) The department must send a written warning to a distributor,
7 retailer, or installer that sells or installs a photovoltaic module
8 made by a manufacturer that is not participating in a plan. The
9 written warning must inform the distributor, retailer, or installer
10 that they may no longer sell or install a photovoltaic module if a
11 stewardship plan for that brand has not been submitted by the
12 manufacturer and approved by the department within thirty days of the
13 notice.

14 (9) (~~Fee-~~) The department may collect a flat fee from
15 participating manufacturers to recover costs associated with the plan
16 guidance, review, and approval process described in subsection (3) of
17 this section. Other administrative costs incurred by the department
18 for program implementation activities, including stewardship plan
19 review and approval, enforcement, and any rule making, may be
20 recovered by charging every manufacturer an annual fee calculated by
21 dividing department administrative costs by the manufacturer's pro
22 rata share of the Washington state photovoltaic module sales in the
23 most recent preceding calendar year, based on best available
24 information. The sole purpose of assessing the fees authorized in
25 this subsection is to predictably and adequately fund the
26 department's costs of administering the photovoltaic module recycling
27 program.

28 (10) (~~Account-~~) The photovoltaic module recycling account is
29 created in the custody of the state treasurer. All fees collected
30 from manufacturers under this chapter must be deposited in the
31 account. Expenditures from the account may be used only for
32 administering this chapter. Only the director of the department or
33 the director's designee may authorize expenditures from the account.
34 The account is subject to the allotment procedures under chapter
35 43.88 RCW, but an appropriation is not required for expenditures.
36 Funds in the account may not be diverted for any purpose or activity
37 other than those specified in this section.

38 (11) (~~Rule-making-~~) The department may adopt rules as necessary
39 for the purpose of implementing, administering, and enforcing this
40 chapter.

1 (12) (~~(National program.)~~) In lieu of preparing a stewardship
2 plan and as provided by subsection (5) of this section, a
3 manufacturer may participate in a national program for the
4 convenient, safe, and environmentally sound takeback and recycling of
5 photovoltaic modules and their components and materials, if
6 substantially equivalent to the intent of the state program. The
7 department may determine substantial equivalence if it determines
8 that the national program adequately addresses and fulfills each of
9 the elements of a stewardship plan outlined in subsection (5)(a) of
10 this section and includes an enforcement mechanism reasonably
11 calculated to ensure a manufacturer's compliance with the national
12 program. Upon issuing a determination of substantial equivalence, the
13 department must notify affected stakeholders including the
14 manufacturer. If the national program is discontinued or the
15 department determines the national program is no longer substantially
16 equivalent to the state program in Washington, the department must
17 notify the manufacturer and the manufacturer must provide a
18 stewardship plan as described in subsection (5)(a) of this section to
19 the department for approval within thirty days of notification.

20 (13)(a) By July 1, 2020, the director of the department of
21 ecology must appoint a photovoltaic module recovery, reuse, and
22 recycling task force to review and provide recommendations in a final
23 report on potential methodologies for the management of end-of-life
24 photovoltaic modules, including modules from utility scale solar
25 projects. The task force's report is due to the legislature by
26 December 1, 2021. The duties of the task force include, but are not
27 limited to:

28 (i) Obtaining and reviewing existing data from the Washington
29 State University extension energy program pertaining to the
30 manufacturer, location by zip code, in-service date, and estimated
31 volumes of modules deployed under the state's renewable energy cost
32 recovery incentive program established under RCW 82.16.165;

33 (ii) Obtaining from manufacturers or existing studies the
34 expected economically productive life cycle of various types of
35 photovoltaic modules currently in use in the state;

36 (iii) Obtaining from manufacturers and other sources the past,
37 present, and potential future material and components of photovoltaic
38 modules sold in or into the state. The material list must identify
39 recyclable materials, rare earth elements, and materials that exhibit

1 any of the characteristics of hazardous waste identified in 40 C.F.R.
2 Part 261 (2019);

3 (iv) Reviewing product stewardship programs in Canada, the
4 European Union, and other countries; and

5 (v) Analyzing and recommending financing mechanisms including
6 advance recovery fees, recycling and disposal fees, and the
7 manufacturer-financed product stewardship and takeback program
8 established under this section, as it existed on December 31, 2019.

9 (b) The report submitted by the task force must include the task
10 force's recommendations for the financing and management of the
11 recovery, reuse, and recycling of photovoltaic modules and their
12 components and disposing of the remaining end-of-life residual
13 materials. The report must identify legislation, if any, necessary to
14 implement the recommendations of the report.

15 (c) The director of the department of ecology or the director's
16 designee must chair or designate a chair of the task force created in
17 (a) of this subsection and must appoint task force members. Task
18 force membership must include, but is not limited to, members
19 representing:

20 (i) A manufacturer of photovoltaic modules located in the state;

21 (ii) A manufacturer of photovoltaic modules located outside the
22 state;

23 (iii) A national solar industry group;

24 (iv) Solar installers in the state;

25 (v) A utility scale solar project;

26 (vi) A nonprofit environmental organization with expertise in
27 waste minimization;

28 (vii) A city solid waste program;

29 (viii) A county solid waste program;

30 (ix) An organization with expertise in photovoltaic module
31 recycling;

32 (x) A community-based environmental justice group; and

33 (xi) Other members with expertise in relevant areas to be
34 reviewed by the task force.

35 (d) The director of the department of ecology or the director's
36 designee shall convene the initial meeting of the task force.

37 (e) Participation in the task force creation in (a) of this
38 subsection is strictly voluntary and without compensation.

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