

114TH CONGRESS
1ST SESSION

S. _____

To amend the Public Utility Regulatory Policies Act of 1978 to assist States in adopting updated interconnection procedures and tariff schedules and standards for supplemental, backup, and standby power fees for projects for combined heat and power technology and waste heat to power technology, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mrs. SHAHEEN introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To amend the Public Utility Regulatory Policies Act of 1978 to assist States in adopting updated interconnection procedures and tariff schedules and standards for supplemental, backup, and standby power fees for projects for combined heat and power technology and waste heat to power technology, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Heat Efficiency
5 through Applied Technology Act” or the “HEAT Act”.

1 **SEC. 2. FINDINGS.**

2 Congress finds that—

3 (1) combined heat and power technology, also
4 known as cogeneration, is a technology that effi-
5 ciently produces electricity and thermal energy at
6 the point of use of the technology;

7 (2) by combining the provision of both elec-
8 tricity and thermal energy in a single step, combined
9 heat and power technology makes significantly more-
10 efficient use of fuel, as compared to separate genera-
11 tion of heat and power, which has significant eco-
12 nomic and environmental advantages;

13 (3) waste heat to power is a technology that
14 captures heat discarded by an existing industrial
15 process and uses that heat to generate power with
16 no additional fuel and no incremental emissions, re-
17 ducing the need for electricity from other sources
18 and the grid, and any associated emissions;

19 (4) waste heat or waste heat to power is consid-
20 ered renewable energy in 17 States;

21 (5)(A) a 2012 joint report by the Department
22 of Energy and the Environmental Protection Agency
23 estimated that by achieving the national goal out-
24 lined in Executive Order 13624 (77 Fed. Reg.
25 54779) (September 5, 2012) of deploying 40
26 gigawatts of new combined heat and power tech-

1 nology by 2020, the United States would increase
2 the total combined heat and power capacity of the
3 United States by 50 percent in less than a decade;
4 and

5 (B) additional efficiency would—

6 (i) save 1,000,000,000,000,000 BTUs of
7 energy; and

8 (ii) reduce emissions by 150,000,000 met-
9 ric tons of carbon dioxide annually, a quantity
10 equivalent to the emissions from more than
11 25,000,000 cars;

12 (6) a 2012 report by the Environmental Protec-
13 tion Agency estimated the amount of waste heat
14 available at a temperature high enough for power
15 generation from industrial and nonindustrial appli-
16 cations represents an additional 10 gigawatts of
17 electric generating capacity on a national basis;

18 (7) distributed energy generation, including
19 through combined heat and power technology and
20 waste heat to power technology, has ancillary bene-
21 fits, such as—

22 (A) removing load from the electricity dis-
23 tribution grid; and

24 (B) improving the overall reliability of the
25 electricity distribution system; and

1 (8)(A) a number of regulatory barriers impede
2 broad deployment of combined heat and power tech-
3 nology and waste heat to power technology; and

4 (B) a 2008 study by Oak Ridge National Lab-
5 oratory identified interconnection issues, regulated
6 fees and tariffs, and environmental permitting as
7 areas that could be streamlined with respect to the
8 provision of combined heat and power technology
9 and waste heat to power technology.

10 **SEC. 3. DEFINITIONS.**

11 (a) IN GENERAL.—In this Act:

12 (1) COMBINED HEAT AND POWER TECH-
13 NOLOGY.—The term “combined heat and power
14 technology” means the generation of electric energy
15 and heat in a single, integrated system that meets
16 the efficiency criteria in clauses (ii) and (iii) of sec-
17 tion 48(c)(3)(A) of the Internal Revenue Code of
18 1986, under which heat that is conventionally re-
19 jected is recovered and used to meet thermal energy
20 requirements.

21 (2) OUTPUT-BASED EMISSION STANDARD.—The
22 term “output-based emission standard” means a
23 standard that relates emissions to the electrical,
24 thermal, or mechanical productive output of a device

1 or process rather than the heat input of fuel burned
2 or pollutant concentration in the exhaust.

3 (3) QUALIFIED WASTE HEAT RESOURCE.—

4 (A) IN GENERAL.—The term “qualified
5 waste heat resource” means—

6 (i) exhaust heat or flared gas from
7 any industrial process;

8 (ii) waste gas or industrial tail gas
9 that would otherwise be flared, incinerated,
10 or vented;

11 (iii) a pressure drop in any gas for an
12 industrial or commercial process; or

13 (iv) any other form of waste heat re-
14 source as the Secretary may determine.

15 (B) EXCLUSION.—The term “qualified
16 waste heat resource” does not include a heat re-
17 source from a process the primary purpose of
18 which is the generation of electricity using a
19 fossil fuel.

20 (4) WASTE HEAT TO POWER TECHNOLOGY.—

21 The term “waste heat to power technology” means
22 a system that generates electricity through the re-
23 covery of a qualified waste heat resource.

1 (b) PURPA DEFINITIONS.—Section 3 of the Public
2 Utility Regulatory Policies Act of 1978 (16 U.S.C. 2602)
3 is amended by adding at the end the following:

4 “(22) COMBINED HEAT AND POWER TECH-
5 NOLOGY.—The term ‘combined heat and power tech-
6 nology’ means the generation of electric energy and
7 heat in a single, integrated system that meets the ef-
8 ficiency criteria in clauses (ii) and (iii) of section
9 48(c)(3)(A) of the Internal Revenue Code of 1986,
10 under which heat that is conventionally rejected is
11 recovered and used to meet thermal energy require-
12 ments.

13 “(23) QUALIFIED WASTE HEAT RESOURCE.—

14 “(A) IN GENERAL.—The term ‘qualified
15 waste heat resource’ means—

16 “(i) exhaust heat or flared gas from
17 any industrial process;

18 “(ii) waste gas or industrial tail gas
19 that would otherwise be flared, incinerated,
20 or vented;

21 “(iii) a pressure drop in any gas for
22 an industrial or commercial process; or

23 “(iv) any other form of waste heat re-
24 source as the Secretary may determine.

1 “(B) EXCLUSION.—The term ‘qualified
2 waste heat resource’ does not include a heat re-
3 source from a process the primary purpose of
4 which is the generation of electricity using a
5 fossil fuel.

6 “(24) WASTE HEAT TO POWER TECHNOLOGY.—
7 The term ‘waste heat to power technology’ means a
8 system that generates electricity through the recov-
9 ery of a qualified waste heat resource.”.

10 **SEC. 4. UPDATED INTERCONNECTION PROCEDURES AND**
11 **TARIFF SCHEDULE.**

12 (a) ADOPTION OF STANDARDS.—Section 111(d) of
13 the Public Utility Regulatory Policies Act of 1978 (16
14 U.S.C. 2621(d)) is amended by adding at the end the fol-
15 lowing:

16 “(20) UPDATED INTERCONNECTION PROCE-
17 DURES AND TARIFF SCHEDULE.—

18 “(A) IN GENERAL.—Not later than 1 year
19 after the date of enactment of this paragraph,
20 the Secretary, in consultation with the Commis-
21 sion and other appropriate agencies, shall es-
22 tablish, for generation with nameplate capacity
23 up to 20 megawatts using all fuels—

24 “(i) guidance for technical inter-
25 connection standards that ensure inter-

1 operability with existing Federal inter-
2 connection rules;

3 “(ii) model interconnection proce-
4 dures, including appropriate fast track pro-
5 cedures; and

6 “(iii) model rules for determining and
7 assigning interconnection costs.

8 “(B) STANDARDS.—The standards estab-
9 lished under subparagraph (A) shall, to the
10 maximum extent practicable, reflect current
11 best practices (as demonstrated in model codes
12 and rules adopted by States) to encourage the
13 use of distributed generation (such as combined
14 heat and power technology and waste heat to
15 power technology) while ensuring the safety and
16 reliability of the interconnected units and the
17 distribution and transmission networks to which
18 the units connect.

19 “(C) VARIATIONS.—In establishing the
20 model standards under subparagraph (A), the
21 Secretary shall consider the appropriateness of
22 using standards or procedures that vary based
23 on unit size, fuel type, or other relevant charac-
24 teristics.”.

25 (b) COMPLIANCE.—

1 (1) TIME LIMITATIONS.—Section 112(b) of the
2 Public Utility Regulatory Policies Act of 1978 (16
3 U.S.C. 2622(b)) is amended by adding at the end
4 the following:

5 “(7)(A) Not later than 90 days after the date
6 on which the Secretary completes the standards re-
7 quired under section 111(d)(20), each State regu-
8 latory authority (with respect to each electric utility
9 for which the authority has ratemaking authority)
10 and each nonregulated electric utility shall com-
11 mence the consideration referred to in that section,
12 or set a hearing date for such consideration, with re-
13 spect to each standard.

14 “(B) Not later than 2 years after the date on
15 which the Secretary completes the standards re-
16 quired under section 111(d)(20), each State regu-
17 latory authority (with respect to each electric utility
18 for which the authority has ratemaking authority)
19 and each nonregulated electric utility shall—

20 “(i) complete the consideration under sub-
21 paragraph (A);

22 “(ii) make the determination referred to in
23 section 111 with respect to each standard es-
24 tablished under section 111(d)(20); and

1 “(iii) submit to the Secretary and the
2 Commission a report detailing the updated
3 plans of the State regulatory authority for
4 interconnection procedures and tariff schedules
5 that reflect best practices to encourage the use
6 of distributed generation.”.

7 (2) FAILURE TO COMPLY.—Section 112(c) of
8 the Public Utility Regulatory Policies Act of 1978
9 (16 U.S.C. 2622(c)) is amended by adding at the
10 end the following: “In the case of each standard es-
11 tablished under paragraph (20) of section 111(d),
12 the reference contained in this subsection to the date
13 of enactment of this Act shall be deemed to be a ref-
14 erence to the date of enactment of that paragraph
15 (20).”.

16 (3) PRIOR STATE ACTIONS.—

17 (A) IN GENERAL.—Section 112 of the
18 Public Utility Regulatory Policies Act of 1978
19 (16 U.S.C. 2622) is amended by adding at the
20 end the following:

21 “(g) PRIOR STATE ACTIONS.—Subsections (b) and
22 (c) shall not apply to a standard established under para-
23 graph (20) of section 111(d) in the case of any electric
24 utility in a State if, before the date of enactment of this
25 subsection—

1 “(1) the State has implemented for the electric
2 utility the standard (or a comparable standard);

3 “(2) the State regulatory authority for the
4 State, or the relevant nonregulated electric utility,
5 has conducted a proceeding after December 31,
6 2013, to consider implementation of the standard
7 (or a comparable standard) for the electric utility; or

8 “(3) the State legislature has voted on the im-
9 plementation of the standard (or a comparable
10 standard) for the electric utility.”.

11 (B) CROSS-REFERENCE.—Section 124 of
12 the Public Utility Regulatory Policies Act of
13 1978 (16 U.S.C. 2634) is amended by adding
14 at the end the following: “In the case of each
15 standard established under paragraph (20) of
16 section 111(d), the reference contained in this
17 subsection to the date of enactment of this Act
18 shall be deemed to be a reference to the date
19 of enactment of that paragraph (20).”.

20 **SEC. 5. SUPPLEMENTAL, BACKUP, AND STANDBY POWER**
21 **FEEES OR RATES.**

22 (a) ADOPTION OF STANDARDS.—Section 111(d) of
23 the Public Utility Regulatory Policies Act of 1978 (16
24 U.S.C. 2621(d)) (as amended by section 4(a)) is amended
25 by adding at the end the following:

1 “(21) SUPPLEMENTAL, BACKUP, AND STANDBY
2 POWER FEES OR RATES.—

3 “(A) IN GENERAL.—Not later than 1 year
4 after the date of enactment of this paragraph,
5 the Secretary, in consultation with the Commis-
6 sion and other appropriate agencies, shall es-
7 tablish model rules and procedures for deter-
8 mining fees or rates for supplementary power,
9 backup or standby power, maintenance power,
10 and interruptible power supplied to facilities
11 that operate combined heat and power tech-
12 nology and waste heat to power technology that
13 appropriately allow for adequate cost recovery
14 by an electric utility but are not excessive.

15 “(B) FACTORS.—In establishing model
16 rules and procedures for determining fees or
17 rates described in subparagraph (A), the Sec-
18 retary shall consider—

19 “(i) the best practices that are used to
20 model outage assumptions and contin-
21 gencies to determine the fees or rates;

22 “(ii) the appropriate duration, mag-
23 nitude, or usage of demand charge ratch-
24 ets;

1 “(iii) the benefits to the utility and
2 ratepayers, such as increased reliability,
3 fuel diversification, enhanced power qual-
4 ity, and reduced electric losses from the
5 use of combined heat and power technology
6 and waste heat to power technology by a
7 qualifying facility; and

8 “(iv) alternative arrangements to the
9 purchase of supplementary, backup, or
10 standby power by the owner of combined
11 heat and power technology and waste heat
12 to power technology generating units if the
13 alternative arrangements—

14 “(I) do not compromise system
15 reliability; and

16 “(II) are nondiscretionary and
17 nonpreferential.”.

18 (b) COMPLIANCE.—

19 (1) TIME LIMITATIONS.—Section 112(b) of the
20 Public Utility Regulatory Policies Act of 1978 (16
21 U.S.C. 2622(b)) (as amended by section 4(b)(1)) is
22 amended by adding at the end the following:

23 “(8)(A) Not later than 90 days after the date
24 on which the Secretary completes the standards re-
25 quired under section 111(d)(21), each State regu-

1 latory authority (with respect to each electric utility
2 for which the authority has ratemaking authority)
3 and each nonregulated electric utility shall com-
4 mence the consideration referred to in that section,
5 or set a hearing date for such consideration, with re-
6 spect to each standard.

7 “(B) Not later than 2 years after the date on
8 which the Secretary completes the standards re-
9 quired under section 111(d)(21), each State regu-
10 latory authority (with respect to each electric utility
11 for which the authority has ratemaking authority)
12 and each nonregulated electric utility shall—

13 “(i) complete the consideration under sub-
14 paragraph (A);

15 “(ii) make the determination referred to in
16 section 111 with respect to each standard es-
17 tablished under section 111(d)(21); and

18 “(iii) submit to the Secretary and the
19 Commission a report detailing the updated
20 plans of the State regulatory authority for sup-
21 plemental, backup, and standby power fees that
22 reflect best practices to encourage the use of
23 distributed generation.”.

24 (2) FAILURE TO COMPLY.—Section 112(c) of
25 the Public Utility Regulatory Policies Act of 1978

1 (16 U.S.C. 2622(c)) (as amended by section 4(b)(2))
2 is amended by adding at the end the following: “In
3 the case of each standard established under para-
4 graph (21) of section 111(d), the reference con-
5 tained in this subsection to the date of enactment of
6 this Act shall be deemed to be a reference to the
7 date of enactment of that paragraph (21).”.

8 (3) PRIOR STATE ACTIONS.—

9 (A) IN GENERAL.—Section 112 of the
10 Public Utility Regulatory Policies Act of 1978
11 (16 U.S.C. 2622) (as amended by section
12 4(b)(3)(A)) is amended by adding at the end
13 the following:

14 “(h) PRIOR STATE ACTIONS.—Subsections (b) and
15 (c) shall not apply to a standard established under para-
16 graph (21) of section 111(d) in the case of any electric
17 utility in a State if, before the date of enactment of this
18 subsection—

19 “(1) the State has implemented for the electric
20 utility the standard (or a comparable standard);

21 “(2) the State regulatory authority for the
22 State, or the relevant nonregulated electric utility,
23 has conducted a proceeding after December 31,
24 2013, to consider implementation of the standard
25 (or a comparable standard) for the electric utility; or

1 “(3) the State legislature has voted on the im-
2 plementation of the standard (or a comparable
3 standard) for the electric utility.”.

4 (B) CROSS-REFERENCE.—Section 124 of
5 the Public Utility Regulatory Policies Act of
6 1978 (16 U.S.C. 2634) (as amended by section
7 4(b)(3)(B)) is amended by adding at the end
8 the following: “In the case of each standard es-
9 tablished under paragraph (21) of section
10 111(d), the reference contained in this sub-
11 section to the date of enactment of this Act
12 shall be deemed to be a reference to the date
13 of enactment of that paragraph (21).”.

14 **SEC. 6. UPDATING OUTPUT-BASED EMISSIONS STANDARDS.**

15 (a) ESTABLISHMENT.—The Administrator of the En-
16 vironmental Protection Agency (referred to in this section
17 as the “Administrator”) shall establish a program under
18 which the Administrator shall provide to each State (as
19 defined in section 302 of the Clean Air Act (42 U.S.C.
20 7602)) that elects to participate and that submits an ap-
21 plication under subsection (b) a grant for use by the State
22 in accordance with subsection (c).

23 (b) APPLICATION.—To be eligible to receive a grant
24 under this section, a State shall submit to the Adminis-
25 trator an application at such time, in such manner, and

1 containing such information as the Administrator may re-
2 quire.

3 (c) USE OF FUNDS.—

4 (1) IN GENERAL.—A State shall use a grant
5 provided under this section—

6 (A) to update any applicable State or local
7 air permitting regulations under this title to in-
8 corporate environmental regulations relating to
9 output-based emissions in accordance with rel-
10 evant guidelines developed by the Administrator
11 under paragraph (2); or

12 (B) if the State has already updated all
13 applicable State and local permitting regula-
14 tions to incorporate those output-based emis-
15 sions environmental regulations, to expedite the
16 processing of relevant power generation permit
17 applications under this title.

18 (2) GUIDELINES.—As soon as practicable after
19 the date of enactment of this Act, the Administrator
20 shall publish guidelines for updating State and local
21 permitting regulations under this Act that—

22 (A) provide credit, in the calculation of the
23 emission rate of the facility, for any thermal en-
24 ergy produced by combined heat and power

1 technology or waste heat to power technology;
2 and

3 (B) apply only to generation units that
4 produce 5 megawatts of electrical energy or
5 less.

6 (d) MAXIMUM AMOUNT.—The amount of a grant pro-
7 vided under this section shall not exceed \$100,000.

8 (e) AUTHORIZATION OF APPROPRIATIONS.—There is
9 authorized to be appropriated to the Administrator to
10 carry out this section \$5,000,000.