

ASSEMBLY BILL

No. 1613

**Introduced by Assembly Member Blakeslee
(Coauthors: Assembly Members Adams, Emmerson, Parra, and
Torrico)**

February 23, 2007

An act to add Chapter 8 (commencing with Section 2840) to Part 2 of Division 1 of the Public Utilities Code, relating to energy.

LEGISLATIVE COUNSEL'S DIGEST

AB 1613, as introduced, Blakeslee. Energy: Waste Heat and Carbon Emissions Reduction Act.

(1) Under existing law, the Public Utilities Commission (PUC) has regulatory authority over public utilities, including electrical corporations, as defined. Existing law authorizes the PUC to fix the rates and charges for every public utility, and requires that those rates and charges be just and reasonable. The existing Public Utilities Act requires the PUC to review and adopt a procurement plan for each electrical corporation in accordance with specified elements, incentive mechanisms, and objectives. The act additionally requires the PUC, in consultation with the Independent System Operator, to establish resource adequacy requirements for all load-serving entities, as defined, in accordance with specified objectives.

The existing Warren-Alquist State Energy Resources Conservation and Development Act establishes the State Energy Resources Conservation and Development Commission (Energy Commission) and requires it to undertake a continuing assessment of trends in the consumption of electricity and other forms of energy and to analyze the social, economic, and environmental consequences of those trends

and to collect from electric utilities, gas utilities, and fuel producers and wholesalers and other sources, forecasts of future supplies and consumption of all forms of energy. The PUC and the Energy Commission have jointly adopted an Energy Action Plan II that includes a loading order that describes the priority sequence for actions to address the state's increasing electricity needs, and that identifies energy efficiency and demand response measures as the state's preferred means of meeting growing electricity needs.

This bill would enact the Waste Heat and Carbon Emissions Reduction Act. The bill would provide that it is the policy of the state that the conversion of waste heat to electricity or other useful energy applications be treated as an efficiency measure for purposes of the loading order. The bill would state the intent of the Legislature to obtain 5,000 megawatts of new electrical generation by the year 2015 by achieving improved efficiencies utilizing waste heat through combined heat and power systems, to dramatically advance the efficiency of the state's use of natural gas by capturing unused waste heat, and to reduce wasteful consumption of energy through improved residential, commercial, institutional, industrial, and manufacturer utilization of waste heat whenever it is cost effective, technologically feasible, and environmentally beneficial, particularly when this reduces emissions of carbon dioxide and other carbon-based greenhouse gases.

This bill would require a load-serving entity to purchase, upon terms and at rates that the PUC determines to be just and reasonable, the incidental electricity, as defined, generated by eligible customers, as defined, utilizing distributed generation that employs combined heat and power technology that comply with the regulations, or interim guidelines, adopted by the Energy Commission. The bill would require that the terms and rates determined by the PUC result in a statewide reduction in emissions of greenhouse gases compared to generation of electricity from baseload generation, as defined, and peaking generation units. The bill would additionally require that the rates be time-of-use rates that encourage energy conservation and net generation of electricity during periods of peak system demand, with no separate cost-based time-of-use standby charges, and that the rates provide additional incentives to encourage energy conservation and net generation of electricity in those areas of the transmission grid that are experiencing transmission constraints or congestion. The bill would require the PUC to establish for each electrical corporation, a pay-as-you-save program, meeting certain goals, for eligible customers to finance all of the upfront

costs for the purchase and installation of combined heat and power systems. The bill would require the PUC, in approving an electrical corporation's procurement plan, to require the plan to incorporate combined heat and power solutions to the maximum degree that is cost effective, technologically feasible, and environmentally beneficial, particularly as it pertains to reducing emissions of carbon dioxide and other greenhouse gases.

This bill would require the Energy Commission, by January 1, 2010, to adopt regulations for combined heat and power systems that reduce waste energy, that ensure that a system is properly sized for its intended application, meets minimum efficiency standards, is cost effective, technologically feasible, and environmentally beneficial. The bill would authorize the Energy Commission to adopt temporary guidelines for combined heat and power systems prior to January 1, 2010.

(2) The existing California Global Warming Solutions Act of 2006, requires the State Air Resources Board (state board) to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with the reporting and verification program, as specified, and requires the state board to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020. The act requires the state board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions and authorizes the state board to adopt market-based compliance mechanisms, as defined, meeting specified requirements.

This bill would state the intent of the Legislature to establish for each electrical corporation, a variable rate program that is applicable to eligible customers with a combined heat and power system and who utilize a plug-in hybrid vehicle, that will encourage charging plug-in hybrid vehicles during nonpeak periods of electricity usage, and that results in an overall reduction of greenhouse gases and other air pollutants emitted from both electricity generation and mobile sources.

(3) Existing law permits a private energy producer, as defined, to generate electricity not generated from conventional sources, as defined, solely for his or its own use or the use of its tenants, or generating electricity to or for any electrical corporation, state agency, city, county, district, or an association thereof, but not the public, without becoming a public utility subject to the general jurisdiction of the PUC. Existing law requires a private energy producer to provide and to pay the total

cost of the interconnection as well as any costs associated with providing a transmission capacity sufficient to handle that portion of the energy generated by the private energy producer that is over and above the capacity otherwise required by the public utility to service its utility customers and meet other authorized commitments. Existing law requires the PUC to establish equitable charges to be paid by an electrical corporation for the purchase or sale of electricity or electrical generating capacity from a private energy producer employing other than a conventional power source for the generation of electricity and to approve and establish standby charges and charges for transmission service.

This bill would require the PUC, in consultation with the Energy Commission, to streamline and simplify interconnection rules and tariffs to reduce impediments to the installation and use of combined heat and power systems by small users with systems with a peak generating capacity of one megawatt or less.

(4) Existing law relative to the restructuring of the electrical industry requires that the PUC identify and undertake those actions necessary to reduce or remove constraints on the state's existing electrical transmission and distribution system.

This bill would authorize a load serving entity to receive credit for the portion of any reduction in the emissions of greenhouse gases attributable to the incidental electricity purchased pursuant to the above-described purchase requirements.

(5) This bill would require the PUC to report to the Legislature by December 31, 2008, on a proposed self-generation incentive program funding formula that includes incentives for combined heat and power systems that will result in reduced emissions of greenhouse gases.

(6) Executive Order S-20-04 (Green Building Order) ordered certain state entities, and requested certain other state entities, to undertake measures to reduce state building electricity usage consistent with a Green Building Action Plan, and encouraged commercial building owners, cities, counties, and schools to undertake measures to reduce electricity usage. The Green Building Order ordered that state agencies, departments, and other entities under the direct executive authority of the Governor cooperate in taking measures to reduce grid-based energy purchases for state-owned buildings by 20% by 2015, through cost-effective efficiency measures and distributed generation technologies.

This bill would declare that it is the policy of the state to reduce grid-based energy purchases for state-owned buildings by 20% by December 31, 2015, through cost effective, technologically feasible, and environmentally beneficial efficiency measures and distributed generation technologies. The bill would require state-owned buildings in operation prior to January 1, 2008, to upgrade existing systems to utilize combined heat and power systems to assist in achieving the goal of reducing grid-based energy purchases for state-owned buildings by 20% by December 31, 2015. The bill would require all state-owned buildings that commence operation after December 31, 2007, to incorporate combined heat and power systems to maximize energy efficiency whenever doing so is cost effective, technologically feasible, and environmentally beneficial. The bill would require the Department of General Services, in consultation with the Energy Commission and the PUC, to develop a means for valuing reductions in emissions of carbon dioxide and other greenhouse gases, to be utilized in determining whether employing combined heat and power systems in any particular retrofit or new building application is cost effective, technologically feasible, and environmentally beneficial.

(7) Existing law makes any public utility, as defined, and any corporation other than a public utility, that violates or that fails to comply with any part of any order, decision, rule, direction, demand, or requirement of the commission guilty of a crime.

Because certain provisions of the bill would require commission action to implement and violation or failure to comply with any part of any order, decision, rule, direction, demand, or requirement of the commission would be a crime, the bill would impose a state-mandated local program by creating a new crime.

(8) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: yes.

The people of the State of California do enact as follows:

- 1 SECTION 1. Chapter 8 (commencing with Section 2840) is
- 2 added to Part 2 of Division 1 of the Public Utilities Code, to read:

CHAPTER 8. ENERGY EFFICIENCY SYSTEMS

Article 1. Waste Heat and Carbon Emissions Reduction Act

2840. This article shall be known and may be cited as the Waste Heat and Carbon Emissions Reduction Act.

2840.2. For purposes of this article, the following terms have the following meanings:

(a) "Baseload generation" has the same meaning as defined in Section 8340.

(b) "Combined heat and power system" means a system for the generation of electricity that utilizes heat both for the generation of electricity and for an energy application other than the generation of electricity, that is cost effective, technologically feasible, environmentally beneficial, and meets the sizing and efficiency standards established by the Energy Commission pursuant to Section 2843.

(c) "Eligible customer" includes residential customers, master-meter customers serving users who are tenants of a mobilehome park, apartment building, or similar residential complex, small commercial customers, and entities of state and local government. The commission may order that additional categories of customers are eligible consistent with the intent of the Legislature as stated in this article.

(d) "Energy Commission" means the State Energy Resources Conservation and Development Commission.

(e) "Greenhouse gas" or "greenhouse gases" includes all of the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

(f) "Incidental electricity" means the net electricity exported to the electrical grid, generated by a combined heat and power system that conforms to regulations regarding proper sizing for particular applications and energy efficiency adopted by the Energy Commission pursuant to Section 2843.

(g) "Load-serving entity" has the same meaning as defined in Section 380.

2840.4. The Legislature finds and declares all of the following:

(a) The Energy Action Plan II, adopted by the commission and the Energy Commission, includes a "loading order" that describes

1 the priority sequence for actions to address the state’s increasing
2 electricity needs.

3 (b) The loading order identifies energy efficiency and demand
4 response measures as the state’s preferred means of meeting
5 growing electricity needs. After cost-effective energy efficiency
6 and demand response measures, the state will rely on renewable
7 resources for the generation of electricity and distributed electricity
8 generation, including combined heat and power applications.

9 (c) The loading order provides that to the extent efficiency
10 measures, demand response measures, renewable resources
11 generation, and distributed generation are unable to satisfy the
12 state’s increasing electricity and generational capacity needs, the
13 state will support clean and efficient fossil fuel-fired generation.

14 (d) The loading order places conservation and energy efficiency
15 measures first in the loading order, because these measures are the
16 least expensive and most environmentally protective means to
17 meet growing electricity demand.

18 (e) Combined heat and power systems produce both electricity
19 and thermal energy from a single fuel input, thus achieving much
20 greater efficiency than the usual separate systems for producing
21 these forms of energy.

22 (f) Combined heat and power systems recover heat that would
23 otherwise be wasted in separate energy applications, and use this
24 heat to displace the fuel that otherwise would be used to produce
25 heat.

26 (g) Combined heat and power systems recycle the valuable
27 waste heat produced in electricity generation and use it for heating,
28 cooling, and other useful forms of energy.

29 (h) Gigawatthours of potential useful electricity could be derived
30 from unused waste heat that is currently being vented into the
31 atmosphere.

32 (i) It is the policy of the state that the conversion of waste heat
33 to electricity or other useful energy applications, including heating
34 and cooling, be treated as an efficiency measure for purposes of
35 the loading order.

36 2840.6. (a) It is the intent of the Legislature to obtain 5,000
37 megawatts of new electrical generation by the year 2015, while
38 decreasing emissions of carbon dioxide and other greenhouse
39 gases, by achieving improved efficiencies utilizing excess waste
40 heat through combined heat and power systems.

1 (b) It is the intent of the Legislature that state policies
2 dramatically advance the efficiency of the state’s use of natural
3 gas by capturing unused waste heat, and in so doing, help offset
4 the growing crisis in electricity supply and transmission congestion
5 in the state.

6 (c) It is the intent of the Legislature to reduce wasteful
7 consumption of energy through improved residential, commercial,
8 institutional, industrial, and manufacturer utilization of waste heat
9 whenever it is cost effective, technologically feasible, and
10 environmentally beneficial, particularly when this reduces
11 emissions of carbon dioxide and other carbon-based greenhouse
12 gases.

13 2841. (a) A load-serving entity shall purchase, upon terms and
14 at rates that the commission determines to be just and reasonable,
15 the incidental electricity generated by eligible customers utilizing
16 distributed generation that employs combined heat and power
17 technology that comply with the regulations, or interim guidelines,
18 adopted by the Energy Commission pursuant to Section 2843.

19 (b) A load-serving entity may receive credit for the portion of
20 any reduction in the emissions of greenhouse gases attributable to
21 the incidental electricity purchased pursuant to this chapter.

22 2842. (a) In determining those terms and rates that are just
23 and reasonable pursuant to subdivision (a) of Section 2841, the
24 commission shall do all of the following:

25 (1) Establish terms and rates that result in a statewide reduction
26 in emissions of greenhouse gases compared to generation of
27 electricity from baseload generation and peaking generation units.

28 (2) Establish time-of-use rates that encourage energy
29 conservation and net generation of electricity during periods of
30 peak system demand, with no separate cost-based time-of-use
31 standby charges.

32 (3) Ensure that the time-of-use rates provide additional
33 incentives to encourage energy conservation and net generation
34 of electricity in those areas of the transmission grid that are
35 experiencing transmission constraints or congestion and the
36 attendant costs.

37 (b) The commission, in consultation with the Energy
38 Commission, shall streamline and simplify interconnection rules
39 and tariffs to reduce impediments to the installation and use of

1 combined heat and power systems by small users with systems
2 with a peak generating capacity of one megawatt or less.

3 (c) The commission shall, for each electrical corporation,
4 establish a pay-as-you-save program for combined heat and power
5 system that does all of the following:

6 (1) Enables eligible customers to finance all of the upfront costs
7 for the purchase and installation of a combined heat and power
8 system by repaying those costs over time at the difference between
9 what the customer would have paid for electricity and the actual
10 savings derived by the customer.

11 (2) Limits eligible systems to those that are cost effective,
12 technologically feasible, and environmentally beneficial and that
13 meet the temporary guidelines or regulations adopted by the Energy
14 Commission pursuant to Section 2843.

15 (3) Provides for notice of the contract to be provided to a
16 potential purchaser of the property and for assignment of the
17 financing agreement to a purchaser of the property.

18 (4) Ensures that the reasonable costs of the electrical corporation
19 are recovered.

20 (d) The commission may modify or adjust the requirements of
21 this article for any load-serving entity with less than 100,000
22 service connections, as individual circumstances merit.

23 2842.2. The Public Utilities Commission, in approving a
24 procurement plan for an electrical corporation pursuant to Section
25 454.5, shall require that the electrical corporation's procurement
26 plan incorporate combined heat and power solutions to the
27 maximum degree that is cost effective, technologically feasible,
28 and environmentally beneficial, particularly as it pertains to
29 reducing emissions of carbon dioxide and other greenhouse gases.

30 2842.4. The Public Utilities Commission shall ensure that an
31 electrical corporation utilize long-term planning for upgrades to
32 their transmission and distribution systems and that any upgrades
33 are consistent with promoting distributed generation that is cost
34 effective, technologically feasible, and environmentally beneficial,
35 particularly as it pertains to reducing emissions of greenhouse
36 gases.

37 2843. (a) The Energy Commission shall, by January 1, 2010,
38 adopt regulations for combined heat and power systems that reduce
39 waste energy, that ensure that a system is properly sized for its
40 intended application, meets minimum efficiency standards, is cost

1 effective, technologically feasible, and environmentally beneficial.
2 It is the intent of the Legislature that combined heat and power
3 systems be functionally matched to the customer's location and
4 that the regulations do not permit de facto wholesale generators
5 with guaranteed purchasers for their electricity.

6 (b) Prior to January 1, 2010, the Energy Commission may adopt
7 temporary guidelines for combined heat and power systems that
8 reduce waste energy, that ensure that a system is properly sized
9 for its intended application, meets minimum efficiency standards,
10 is cost effective, technologically feasible, and environmentally
11 beneficial.

12 2844. (a) It is the policy of the state to reduce grid-based
13 energy purchases for state buildings by 20 percent by December
14 31, 2015, through cost effective, technologically feasible, and
15 environmentally beneficial efficiency measures and distributed
16 generation technologies.

17 (b) State buildings in operation prior to January 1, 2008, shall
18 upgrade existing systems to utilize combined heat and power
19 systems to assist in achieving the goal of reducing grid-based
20 energy purchases for state buildings by 20 percent by December
21 31, 2015, whenever doing so is cost effective, technologically
22 feasible, and environmentally beneficial.

23 (c) State buildings that commence operation after December
24 31, 2007, shall incorporate combined heat and power systems to
25 maximize energy efficiency whenever doing so is cost effective,
26 technologically feasible, and environmentally beneficial.

27 (d) The Department of General Services, in consultation with
28 the Energy Commission and the commission, shall develop a means
29 for valuing reductions in emissions of carbon dioxide and other
30 greenhouse gases, to be utilized in determining whether employing
31 combined heat and power systems in any particular retrofit or new
32 building application is cost effective, technologically feasible, and
33 environmentally beneficial.

34 SEC. 2. The Public Utilities Commission shall report to the
35 Legislature by December 31, 2008, on a proposed self-generation
36 incentive program funding formula that includes incentives for
37 combined heat and power systems that will result in reduced
38 emissions of greenhouse gases.

39 SEC. 3. It is the intent of the Legislature to establish for each
40 electrical corporation, a variable rate program that is applicable to

1 eligible customers with a combined heat and power system and
2 who utilize a plug-in hybrid electric vehicle, that will encourage
3 charging of plug-in hybrid electric vehicles during nonpeak periods
4 of electricity usage, and that results in an overall reduction of
5 greenhouse gases and other air pollutants emitted from both
6 electricity generation and mobile sources.

7 SEC. 4. No reimbursement is required by this act pursuant to
8 Section 6 of Article XIII B of the California Constitution because
9 the only costs that may be incurred by a local agency or school
10 district will be incurred because this act creates a new crime or
11 infraction, eliminates a crime or infraction, or changes the penalty
12 for a crime or infraction, within the meaning of Section 17556 of
13 the Government Code, or changes the definition of a crime within
14 the meaning of Section 6 of Article XIII B of the California
15 Constitution.

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