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H.600

Introduced by Representatives Campbell of St. Johnsbury, Anthony of Barre
City, Austin of Colchester, Bartholomew of Hartland, Bos-Lun
of Westminster, Coffey of Guilford, Colburn of Burlington,
Cordes of Lincoln, Dolan of Essex, Elder of Starksboro,
Mrowicki of Putney, Mulvaney-Stanak of Burlington, Ode of
Burlington, Patt of Worcester, Scheu of Middlebury, Sims of
Craftsbury, Vyhovsky of Essex, White of Hartford, and
Yantachka of Charlotte

Referred to Committee on

Date:

Subject: State buildings; energy; renewable heating system

Statement of purpose of bill as introduced: This bill proposes to require the
Department of Buildings and General Services, the Department of Forests,
Parks and Recreation, and the Agency of Transportation to install nonfossil
fuel heating and cooling equipment when installing a heating and cooling
system in any building owned or controlled by the State unless an exemption
applies.

An act relating to heating and cooling systems owned or controlled by the
State

1 It is hereby enacted by the General Assembly of the State of Vermont:

2 Sec. 1. FINDINGS

3 The General Assembly finds:

4 (1) The State has options to use nonfossil fuel space heating for
5 buildings that are owned or controlled by the State that provide an equivalent
6 or better heating and cooling source.

7 (2) In the State of Vermont, there are nonfossil fuel space heating
8 options, including heat pumps, and options that use local fuel, including wood
9 fuels such as cord wood, wood chips, and wood pellets.

10 (3) With 80 percent of funds spent on wood heating coming from the
11 local Vermont economy as compared to only 20 percent when heating oil is
12 used, the use of advanced wood heating systems supports the State's economy
13 at large and specifically the forest products industry.

14 (4) Support for the State's forest products industry is particularly needed
15 due to the slump in the demand for low-grade wood in the Northeast.

16 (5) The installation of wood heating systems will help to build an
17 advanced wood heating industry sector in Vermont and the Northeast.

18 (6) The installation of nonfossil fuel space heating systems will likely
19 save the State money on heating costs as compared to fossil fuels.

1 (7) The installation of nonfossil fuel space heating systems will help to
2 meet the State’s renewable energy goals and greenhouse gas reduction
3 requirements, as required by 10 V.S.A. § 578 and 30 V.S.A. § 202b.

4 Sec. 2. DEFINITIONS

5 As used in this act:

6 (1) “Financially impracticable” means the estimated life-cycle cost of a
7 nonfossil fuel space heating appliance, or a heat pump conditioning appliance,
8 exceeds the life-cycle cost of a fossil fuel space heating appliance by at least
9 20 percent, using the U.S. Department of Energy’s accepted life-cycle cost
10 methodologies. For purposes of calculating the life-cycle cost of a heat pump
11 space conditioning appliance as a heating source, calculations shall include
12 displacement of conventional cooling-only appliances, wherever feasible.

13 (2) “Fossil fuel space heating appliance” means a heating source that
14 derives its heating energy from fossil fuel, natural gas, or liquified petroleum
15 gas.

16 (3) “Heat pump space conditioning appliance” means a unit capable of
17 both heating and cooling, either in a central system or as a stand-alone unit.

18 (4) “Nonfossil fuel space heating appliance” means a heating source in a
19 space heating system that derives its heating energy from nonfossil fuel
20 sources, including biomass, biomass-derived gas or liquid, or electric-powered
21 air- or water-source heat pump.

1 Sec. 3. FISCAL YEAR 2023; DEPARTMENT OF BUILDINGS AND
2 GENERAL SERVICES; HEATING AND COOLING SYSTEMS;
3 REPLACEMENT SCHEDULE; BACKUP POWER

4 (a) Heating and cooling systems. Except as provided in subsections (b) and
5 (c) of this section:

6 (1) Beginning in fiscal year 2023, the Department of Buildings and
7 General Services shall only install a nonfossil fuel space heating appliance or a
8 heat pump conditioning appliance as the primary heating system in buildings
9 owned or controlled by the Department. When installing or replacing a
10 system, the State shall give preference to systems using locally sourced
11 materials, wherever feasible.

12 (2) Beginning in fiscal year 2023, the Department shall only install a
13 heat pump space conditioning appliance as space cooling equipment, either in
14 primary space conditioning systems or secondary to a separate primary heating
15 system.

16 (b) Exemption. The Commissioner may provide a written exemption to the
17 replacement required in subsection (a) of this section if the Commissioner
18 determines that it is financially impracticable to install a nonfossil fuel space
19 heating appliance as either a primary heating and cooling source or primary
20 cooling and secondary heating source.

1 (c) Secondary or backup systems. Notwithstanding subsection (a) of this
2 section:

3 (1) where a nonfossil fuel space heating appliance or a heat pump
4 conditioning appliance is installed as a primary heating source to replace an
5 existing fossil fuel space heating appliance, the Commissioner may retain the
6 existing fossil fuel space heating appliance as a secondary or backup system;
7 and

8 (2) the Department shall replace fossil-fuel generators with battery
9 system generators for emergency backup power in any new construction or
10 renovation, or when an existing backup system is being replaced.

11 Sec. 4. FISCAL YEAR 2023; AGENCY OF TRANSPORTATION;
12 HEATING AND COOLING SYSTEMS; REPLACEMENT
13 SCHEDULE; BACKUP POWER

14 (a) Heating and cooling systems. Except as provided in subsections (b) and
15 (c) of this section:

16 (1) Beginning in fiscal year 2023, the Agency of Transportation shall
17 only install a nonfossil fuel space heating appliance or a heat pump
18 conditioning appliance as the primary heating system in buildings owned or
19 controlled by the Agency. When installing or replacing a system, the State
20 shall give preference to systems using locally sourced materials, wherever
21 feasible.

1 (2) Beginning in fiscal year 2023, the Agency shall only install a heat
2 pump space conditioning appliance as space cooling equipment, either in
3 primary space conditioning systems or secondary to a separate primary heating
4 system.

5 (b) Exemption. The Secretary may provide a written exemption to the
6 replacement required in subsection (a) of this section if the Secretary
7 determines that it is financially impracticable to install a nonfossil fuel space
8 heating appliance as either a primary heating and cooling source or primary
9 cooling and secondary heating source.

10 (c) Secondary or backup systems. Notwithstanding subsection (a) of this
11 section:

12 (1) where a nonfossil fuel space heating appliance or a heat pump
13 conditioning appliance is installed as a primary heating source to replace an
14 existing fossil fuel space heating appliance, the Secretary may retain the
15 existing fossil fuel space heating appliance as a secondary or backup system;

16 and

17 (2) the Agency shall replace fossil-fuel generators with battery system
18 generators for emergency backup power in any new construction or renovation
19 or when an existing backup system is being replaced.

1 Sec. 5. FISCAL YEAR 2023; DEPARTMENT OF FORESTS, PARKS AND
2 RECREATION; HEATING AND COOLING SYSTEMS;
3 REPLACEMENT SCHEDULE; BACKUP POWER

4 (a) Heating and cooling systems. Except as provided in subsections (b) and
5 (c) of this section:

6 (1) Beginning in fiscal year 2023, the Department of Forests, Parks and
7 Recreation shall only install a nonfossil fuel space heating appliance or a heat
8 pump conditioning appliance as the primary heating system in buildings owned
9 or controlled by the Department. When installing or replacing a system, the
10 State shall give preference to systems using locally sourced materials,
11 wherever feasible.

12 (2) Beginning in fiscal year 2023, the Department shall only install a
13 heat pump space conditioning appliance as space cooling equipment, either in
14 primary space conditioning systems or secondary to a separate primary heating
15 system.

16 (b) Exemption. The Commissioner may provide a written exemption to the
17 replacement required in subsection (a) of this section if the Commissioner
18 determines that it is financially impracticable to install a nonfossil fuel space
19 heating appliance as either a primary heating and cooling source or primary
20 cooling and secondary heating source.

1 (c) Secondary or backup systems. Notwithstanding subsection (a) of this
2 section:

3 (1) where a nonfossil fuel space heating appliance or a heat pump
4 conditioning appliance is installed as a primary heating source to replace an
5 existing fossil fuel space heating appliance, the Commissioner may retain the
6 existing fossil fuel space heating appliance as a secondary or backup system;
7 and

8 (2) the Department shall replace fossil-fuel generators with battery
9 system generators for emergency backup power in any new construction or
10 renovation or when an existing backup system is being replaced.

11 Sec. 6. STATE BUILDINGS; CONSTRUCTION AND RENOVATION;

12 USE OF CARBON-STORING MATERIALS

13 Beginning January 1, 2024, the Agency of Transportation, the Department
14 of Buildings and General Services, and the Department of Forests, Parks and
15 Recreation shall require design and material specifications for new
16 construction and renovations in State buildings to give preference to carbon-
17 storing materials. If carbon-storing materials are not available, an assessment
18 shall be made of the embodied-carbon characteristics of conventional materials
19 and preference given to the lowest embodied-carbon materials, wherever
20 feasible.

1 Sec. 7. EFFECTIVE DATE

2 This act shall take effect on passage.