

By Senator Benacquisto

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1 A bill to be entitled
2 An act relating to thermal efficiency standards;
3 amending s. 403.814, F.S.; requiring that the
4 Department of Environmental Protection and the
5 applicable water management district grant a general
6 permit for the construction, alteration, and
7 maintenance of certain surface water management
8 systems; authorizing the construction of certain
9 surface water management systems to proceed without
10 further action by the department or the water
11 management district; reordering and amending s.
12 553.902, F.S.; providing definitions for the terms
13 "ballasted roof," "hardscape," "heat island effect,"
14 "low-sloped roof," "solar reflectance" or
15 "reflectance," and "steeped-sloped roof"; creating s.
16 553.9045, F.S.; providing standards for a thermal-
17 efficient roof; requiring that roof exterior surfaces
18 and roofing material of a thermal-efficient roof have
19 a minimum solar reflectance; providing testing
20 standards; providing exceptions; creating s. 553.9046,
21 F.S.; defining thermal-efficient hardscapes; providing
22 default reflectance values for certain paving
23 materials; providing an effective date.

24
25 Be It Enacted by the Legislature of the State of Florida:

26
27 Section 1. Subsection (12) is added to section 403.814,
28 Florida Statutes, to read:

29 403.814 General permits; delegation.—

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30 (12) The department and the applicable water management
31 district shall grant a general permit for the construction,
32 alteration, and maintenance of a surface water management system
33 serving a total project area of up to 10 acres. The
34 construction, alteration, and maintenance of such a system may
35 proceed without any further agency action by the department or
36 water management district if:

37 (a) The total project area is less than 15 acres;

38 (b) The total project area involves less than 2 acres of
39 impervious surface or no more than 5 acres of impervious surface
40 if that surface is a thermal-efficient hardscape as provided in
41 s. 553.9046;

42 (c) The activities do not impact wetlands or other surface
43 waters;

44 (d) The activities are not conducted in, on, or over
45 wetlands or other surface waters;

46 (e) The drainage facilities do not include pipes having
47 diameters greater than 24 inches, or the hydraulic equivalent,
48 and do not use a pump in any manner;

49 (f) The project is not part of a larger common plan,
50 development, or sale;

51 (g) The project does not cause:

52 1. Adverse water quantity impacts or flooding to receiving
53 water and adjacent lands;

54 2. Adverse impacts to existing surface water storage and
55 conveyance capabilities;

56 3. A violation of state water quality standards; or

57 4. Adverse impacts to the maintenance of surface or ground
58 water levels or surface water flows established pursuant to s.

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59 373.042 or to a work of the district conducted pursuant to s.
60 373.086; and

61 (h) The design plans for the surface water management
62 system are signed and sealed by a Florida-registered
63 professional who attests that the system will perform and
64 function as proposed and that it has been designed in accordance
65 with appropriate, generally accepted performance standards and
66 scientific principles.

67 Section 2. Section 553.902, Florida Statutes, is reordered
68 and amended to read:

69 553.902 Definitions.—As used in this part, the term ~~For the~~
70 ~~purposes of this part:~~

71 (3)~~(1)~~ "Exempted building" means:

72 (a) A ~~Any~~ building or portion thereof whose peak design
73 rate of energy usage for all purposes is less than 1 watt (3.4
74 Btu per hour) per square foot of floor area for all purposes.

75 (b) A ~~Any~~ building that ~~which~~ is neither heated nor cooled
76 by a mechanical system designed to control or modify the indoor
77 temperature and powered by electricity or fossil fuels.

78 (c) A ~~Any~~ building for which federal mandatory standards
79 preempt state energy codes.

80 (d) An ~~Any~~ historical building as described in s.
81 267.021(3).

82
83 The Florida Building Commission may recommend to the Legislature
84 additional types of buildings which should be exempted from
85 compliance with the Florida Energy Efficiency Code for Building
86 Construction.

87 (7)~~(2)~~ "HVAC" means a system of heating, ventilating, and

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88 air-conditioning.

89 ~~(10)-(3)~~ "Renovated building" means a residential or
90 nonresidential building undergoing alteration that varies or
91 changes insulation, HVAC systems, water heating systems, or
92 exterior envelope conditions, if provided the estimated cost of
93 renovation exceeds 30 percent of the assessed value of the
94 structure.

95 ~~(8)-(4)~~ "Local enforcement agency" means the agency of local
96 government which has the authority to make inspections of
97 buildings and to enforce the Florida Building Code. It includes
98 any agency within the definition of s. 553.71(5).

99 ~~(4)-(5)~~ "Exterior envelope physical characteristics" means
100 the physical nature of those elements of a building which
101 enclose conditioned spaces through which energy may be
102 transferred to or from the exterior.

103 ~~(2)-(6)~~ "Energy performance level" means the indicator of
104 the energy-related performance of a building, including, but not
105 limited to, the levels of insulation, the amount and type of
106 glass, and the HVAC and water heating system efficiencies.

107 (1) "Ballasted roof" means a roof having a minimum of 15
108 pounds per square foot of ballast for the purpose of weighing
109 down a roofing membrane over a substrate to resist wind uplift.
110 For purposes of this subsection, ballast includes, but is not
111 limited to, river rock aggregate and pavers.

112 (5) "Hardscape" means the impervious, nonliving portions of
113 a property's landscaping, including, but not limited to, roads,
114 sidewalks, courtyards, and parking lots.

115 (6) "Heat island effect" means an elevated temperature over
116 an urban area compared to rural areas, typically caused by the

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117 increased presence of dark, heat-absorbing materials.

118 (9) "Low-sloped roof" means a roof having a slope of rise
119 of 0 units in a horizontal length, up to and including, a roof
120 having a slope of rise of 2 units in a horizontal length of 12
121 units.

122 (11) "Solar reflectance" or "reflectance" means the amount
123 of solar energy reflected by a material.

124 (12) "Steep-sloped roof" means a roof having a slope of
125 rise greater than 2 units in a horizontal length of 12 units.

126 Section 3. Section 553.9045, Florida Statutes, is created
127 to read:

128 553.9045 Thermal-efficient roofs.-

129 (1) Standards for a thermal-efficient roof:

130 (a) A low-sloped roof must have a minimum initial
131 reflectance of 0.72 or a 3-year installed reflectance of 0.5 as
132 determined by the Cool Roof Rating Council or the Energy Star
133 program of the United States Environmental Protection Agency and
134 the United States Department of Energy. If more than 50 percent
135 of the total gross area of the roof is covered with vegetation
136 associated with an extensive or intensive green roof as defined
137 by the United States Environmental Protection Agency for the
138 purpose of reducing the heat island effect, the remainder of the
139 roof must have a minimum reflectance of 0.30.

140 (b) A ballasted roof must have a minimum initial
141 reflectance of 0.30.

142 (c) A steep-sloped roof must have a minimum initial
143 reflectance of 0.15.

144 (d) A roof that has multiple slopes is subject to the
145 standards applicable to the slope that covers the largest area

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146 of the building's footprint.

147 (2) All roof exterior surfaces and roofing materials of a
148 thermal-efficient roof must have a minimum reflectance as
149 certified by one of the following:

150 (a) The American Society for Testing and Materials ASTM
151 E903 or ASTM E1918 standard.

152 (b) A test using a portable reflectometer at near-ambient
153 conditions.

154 (c) The Cool Roof Rating Council.

155 (d) The Energy Star program of the United States
156 Environmental Protection Agency and the United States Department
157 of Energy.

158 (3) This section does not apply to:

159 (a) The portion of a roof acting as a substructure for and
160 covered by a rooftop deck.

161 (b) The portion of a roof covered with vegetation
162 associated with an extensive or intensive green roof as defined
163 by the United States Environmental Protection Agency for the
164 purpose of reducing the heat island effect.

165 (c) A rooftop deck covering a maximum of one-third of the
166 rooftop total gross area.

167 (d) An area of the roof covered by photovoltaic and solar
168 equipment.

169 Section 4. Section 553.9046, Florida Statutes, is created
170 to read:

171 553.9046 Thermal-efficient hardscapes.—A thermal-efficient
172 hardscape is the portion of impervious, nonliving improvements
173 of a property's landscaping, including, but not limited to,
174 roads, sidewalks, courtyards, and parking lots which has a

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175 minimum initial reflectance of 0.30 as certified by the American
176 Society for Testing and Materials ASTM E903 or ASTM E1918
177 standard or a test using a portable reflectometer at near-
178 ambient conditions. When measuring the minimum initial
179 reflectance, one of the following reflectance values for paving
180 materials may be used:

- 181 (1) Typical new gray concrete, 0.35.
182 (2) Typical weathered concrete, 0.20.
183 (3) Typical new white concrete, 0.70.
184 (4) Typical weathered white concrete, 0.40.
185 (5) New asphalt, 0.05.
186 (6) Weathered asphalt, 0.10.

187 Section 5. This act shall take effect July 1, 2012.