

By: Puente

H.B. No. 3084

A BILL TO BE ENTITLED

AN ACT

1
2 relating to increasing the sustainability of the State's building
3 infrastructure.

4 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

5 SECTION 1. Texas Government Code, TITLE 4, is amended as
6 follows:

7 Sec. 447.004. Design Standards. (a) The state energy
8 conservation office shall adopt and publish energy and water
9 conservation design standards, under Chapter 2001, that all new
10 state buildings and major renovation projects, including buildings
11 and major renovation projects of state-supported institutions of
12 higher education, are required to meet. The office shall define
13 what constitutes a major renovation project under this section and
14 shall review and update the standards biennially.

15 (b) The standards must include performance and procedural
16 standards for the maximum energy and water conservation allowed by
17 the latest and most cost-effective technology that is consistent
18 with the requirements of public health, safety, and economic
19 resources.

20 (c) The standards must be adopted in terms of energy and
21 water consumption levels and must take into consideration the
22 various classes of building uses and must allow for design
23 flexibility. Procedural standards must be directed toward specific
24 design and building practices that produce good thermal resistance

1 and low infiltration and toward requiring practices in the design
2 of mechanical and electrical systems that maximize energy and water
3 efficiency. The procedural standards must concern, as applicable:

4 (1) insulation;

5 (2) lighting;

6 (3) ventilation;

7 (4) climate control;

8 (5) water-conserving fixtures, appliances, and
9 equipment or the substitution of non-water-using fixtures,
10 appliances, and equipment;

11 (6) water-conserving landscape irrigation equipment;

12 (7) landscaping measures that reduce watering demands
13 and capture and hold applied water and rainfall, including:

14 (A) landscape contouring, including the use of
15 berms, swales, and terraces; and

16 (B) the use of soil amendments that increase the
17 water-holding capacity of the soil, including compost;

18 (8) rainwater harvesting equipment and equipment to
19 make use of water collected as part of a storm-water system
20 installed for water quality control;

21 (9) equipment for recycling or reuse of water
22 originating on the premises or from other sources, including
23 treated municipal effluent;

24 (10) equipment needed to capture water from
25 nonconventional, alternate sources, including air conditioning
26 condensate or graywater, for nonpotable uses;

27 (11) metering equipment needed to segregate water use

1 in order to identify water conservation opportunities or verify
2 water savings;

3 (12) special energy and water requirements of
4 health-related facilities of higher education and state agencies;
5 and

6 (13) any other item that the center considers
7 appropriate that is adopted under Chapter 2001.

8 (d) In order to demonstrate compliance with the requirement
9 to adopt and update the conservation design standards, each agency
10 and institution of higher education shall submit a copy of its
11 design and construction manuals to the office on request.

12 (e) Prior to construction, agencies and institutions of
13 higher education shall have the design architect and engineer on
14 the project certify, through presentation of a detailed economic
15 feasibility study and written evaluation to the appropriate
16 authority having jurisdiction (AHJD), [~~agency or institution,~~
17 with a copy to the state energy conservation office, that all new
18 building construction and major building renovation projects
19 comply with the energy and water conservation design standards
20 required under this section~~[-]~~, and with the alternative energy
21 evaluation requirements found under Texas Government Code, Title
22 10, Sec. 2166.401 and Sec. 2166.403.

23 SECTION 2. Section 2166, Title 10, Texas Government Code is
24 amended as follows:

25 Sec. 2166.401. Evaluation of Energy, Architectural and
26 Engineering Design Alternatives. (a) For each project for which
27 a project analysis is prepared under Subchapter D and for which the

1 construction, alteration, or repair involves installing or
2 replacing all or part of an energy system, energy source, or
3 energy-consuming equipment, or for which either architectural or
4 engineering design choices will impact the energy consumption of
5 the building, the commission or the private design professional
6 retained by the commission shall prepare a written evaluation of
7 energy and energy impacting architectural or engineering design
8 alternatives for the project.

9 (b) The evaluation must include information about the
10 economic and environmental impact of various energy and
11 architectural or engineering design alternatives, including an
12 evaluation of economic and environmental costs both initially and
13 over the life of the system, source, [~~or~~] equipment, or
14 architectural or engineering design alternative.

15 (c) The evaluation must identify the best energy and
16 architectural and engineering design alternative for the project
17 considering both economic and environmental costs and benefits.

18 SECTION 3. Section 2166, Title 10, Texas Government Code is
19 amended as follows:

20 Sec. 2166.403. Alternative Energy and Architectural and
21 Engineering Design. (a) This section applies to the construction
22 of a new state building, including a building construction project
23 otherwise exempt from this chapter under Section 2166.003.

24 (b) During the planning phase of the proposed construction,
25 the commission, or the governing body of the appropriate agency or
26 institution that is undertaking a project otherwise exempt from
27 this chapter under Section 2166.003, shall verify in an open

1 meeting, through presentation of a detailed written evaluation the
2 economic feasibility of incorporating into the building's design
3 and proposed energy system alternative energy devices and
4 architectural or engineering design measures [~~for~~] effecting space
5 heating and cooling, water heating, electrical loads, and interior
6 lighting. The detailed written evaluation shall be made available
7 to the public at least 30 days in advance of the open meeting. The
8 commission or governing body shall determine economic feasibility
9 for each function by comparing the estimated cost of providing
10 energy for all or part of the function using conventional
11 architectural or engineering design practices and energy systems
12 with the estimated cost of providing energy for the function using
13 alternative architectural or engineering design practices and
14 energy devices during the economic life of the building.

15 (c) The Texas Comptroller's State Energy Conservation
16 Office (SECO), or its successor, shall approve the methodology and
17 any electronic software used by the commission or governing body,
18 or any entity contracted by the commission or governing body, to
19 make such a comparison and to determine economic feasibility under
20 subsection (d)

21 [~~(c)~~] (d) If the use of alternative energy devices and/or
22 architectural design elements for a particular function is
23 determined to be economically feasible under subsection (b), the
24 commission or governing body shall include the use of alternative
25 energy devices and/or architectural design elements for all or part
26 of that function in the construction plans.

27 ([del](c)] (e)) In this section:

1 (1) "Alternative energy" means a renewable energy
2 resource. The term includes solar energy, geothermal energy,
3 biomass energy, and wind energy.

4 (2) "Alternative energy collector" means an assembly,
5 structure, or design, including passive elements, used to absorb,
6 concentrate, convert, reflect, or otherwise capture or redirect
7 alternative energy for later use as thermal, mechanical, or
8 electrical energy.

9 (3) "Alternative energy device" means an alternative
10 energy collector or alternative energy storage mechanism that
11 collects, stores, or distributes alternative energy.

12 (4) "Alternative energy storage mechanism" means
13 equipment, components, or elements designed and used to store for
14 later use alternative energy captured by an alternative energy
15 collector in the form in which the energy will eventually be used or
16 in an intermediate form. The term includes thermal,
17 electrochemical, chemical, electrical, and mechanical storage
18 mechanisms.

19 (5) "Biomass energy" means energy that is created in
20 living plants through photosynthesis.

21 (6) "Solar energy" means energy from the sun that may
22 be collected and converted into useful thermal, mechanical, or
23 electrical energy.

24 SECTION 4. Section 2166, Title 10, Texas Government Code is
25 amended as follows:

26 2166.153. Contents of Project Analysis. (a) A project
27 analysis consists of:

1 (1) a complete description of the project and a
2 justification of the project prepared by the using agency;

3 (2) a detailed estimate of the amount of space needed
4 to meet the needs of the using agency and to allow for realistic
5 growth;

6 (3) a description of the proposed project prepared by
7 a design professional that:

8 (A) includes schematic plans and outline
9 specifications describing the type of construction and probable
10 materials to be used; and

11 (B) is sufficient to establish the general scope
12 and quality of construction;

13 (4) an estimate of the probable cost of construction;

14 (5) a description of the proposed site of the project
15 and an estimate of the cost of site preparation;

16 (6) an overall estimate of the cost of the project
17 including necessary funding for life-cycle costing, whole building
18 integrated design, commissioning, and post occupancy building
19 performance verification;

20 (7) information prepared under Section 2166.451 about
21 historic structures considered as alternatives to new
22 construction;

23 (8) an evaluation of energy alternatives as required
24 by Section 2166.401, and Section 2166.403; and

25 (9) other information required by the commission.

26 (b) A project analysis may include two or more alternative
27 proposals for meeting the using agency's space needs by:

1 (1) new construction;

2 (2) the acquisition and rehabilitation of an existing
3 or historic structure; or

4 (3) a combination of new and existing structures.

5 (c) If any part of a project involves the construction or
6 rehabilitation of a building that is to be used primarily as a
7 parking garage or for office space for state government, the
8 project analysis also must include:

9 (1) a description of the amount and location of space
10 in the building that can be made available for lease to private
11 tenants under Subchapter E, Chapter 2165; or

12 (2) a statement of the reason that lease of space in
13 the building to private tenants is not feasible.

14 (d) All estimates involved in the preparation of a project
15 analysis shall be carefully and fully documented and incorporated
16 into the project analysis.

17 SECTION 5. This Act takes effect immediately if it receives
18 a vote of two-thirds of all the members elected to each house, as
19 provided by Section 39, Article III, Texas Constitution. If this
20 Act does not receive the vote necessary for immediate effect, this
21 Act takes effect September 1, 2003.