

**The Florida Senate**  
**BILL ANALYSIS AND FISCAL IMPACT STATEMENT**

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

---

Prepared By: The Professional Staff of the Committee on Regulated Industries

---

BILL: CS/SB 692

INTRODUCER: Regulated Industries Committee and Senator Stargel

SUBJECT: Engineers

DATE: March 6, 2014

REVISED: \_\_\_\_\_

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Niles	Imhof	RI	<b>Fav/CS</b>
2.			EE	
3.			GO	

---

**Please see Section IX. for Additional Information:**

COMMITTEE SUBSTITUTE - Substantial Changes

---

**I. Summary:**

CS/SB 692 amends s. 471.007, F.S., revising the qualifications and procedures for the appointment and reappointment of members to the Board of Professional Engineers and providing staggered terms.

The bill amends s. 471.013, F.S., revising the requirements for an applicant who fails more than three times who wishes to retake an examination in order to practice in the state as an engineer, and allowing additional attempts for an applicant delayed in taking the examination due to his or her service in the U.S. Armed Forces.

The bill amends s. 471.017, F.S., revising the requirements for license renewal for engineers by increasing professional development hours needed during a two-year renewal period from eight to eighteen.

The bill amends s. 471.015(5)(a), F.S., by removing options for an applicant to be deemed as having passed an examination substantially equivalent to the fundamentals examination, which along with the principles and practice examination, is required to become a licensed engineer.

The bill provides an effective date of July 1, 2014.

## II. Present Situation:

Section 471.007(1), F.S., creates the Board of Professional Engineers (board) in the Department of Business and Professional Regulation (department). Members of the board are appointed by the Governor for terms of four years each.<sup>1</sup> The board consists of eleven members, nine licensed engineers and two laypersons who have never been engineers or members of a loosely related profession.<sup>2</sup> Of the nine licensed engineers, the following six are required:<sup>3</sup>

- One structural engineer;
- One electrical or electronic engineer;
- One mechanical engineer;
- One industrial engineer;
- One engineering educator; and
- One from any engineering discipline other than civil engineering.

According to Florida Engineering Society (FES), it has been difficult to find individuals to fill these specified roles, and board membership is an extremely technical position with a “steep learning curve.”<sup>4</sup> Currently, the new board members are appointed and begin terms at the same time every four years.

Section 471.013, F.S., sets out the examination prerequisites for a person to take an examination for the purpose of determining whether he or she is qualified to practice in this state as an engineer. The examination, provided by the National Council of Engineers and Surveyors (NCEES), is a two-part exam covering fundamentals (Part I) and principles and practice (Part II).<sup>5</sup> Applicants for licensure by examination must apply to take the examinations and be graduates of a board approved engineering program defined in the rules.<sup>6</sup> The acceptance of the fundamentals exam does not automatically mean acceptance to take the principles and practice examination.<sup>7</sup>

Section 471.013(1)(e), F.S., allows every qualified candidate to take either examination up to three times. Eligibility to take an examination after failing three times is conditioned on an applicant completing twelve additional college-level credit hours with grades of at least “C” or equivalent.<sup>8</sup> For Part I, these additional courses are undergraduate courses in higher mathematics, basic sciences or engineering as described in the rules.<sup>9</sup> For Part II, these additional courses shall be upper level courses in engineering as defined in the rules.<sup>10</sup>

---

<sup>1</sup> Section 471.007(2), F.S.

<sup>2</sup> Section 471.007(1), F.S.

<sup>3</sup> *Id.*

<sup>4</sup> Conversation with Frank Rudd, Florida Engineering Society (FES)(Feb. 6, 2014). (Allowing varying term times allows experienced members to consistently occupy the board and introduce new members to their duties.)

<sup>5</sup> Rule 61G15-21.001(1), F.A.C.

<sup>6</sup> *See* rule 61G15-21.001(2), F.A.C.

<sup>7</sup> *Id.*; *see also* s. 471.013, F.S.

<sup>8</sup> Section 471.013(1)(e), F.S.; *see also* rule 61G15-21.007, F.A.C.

<sup>9</sup> Rule 61G15-21.007, F.A.C.; *see also* 61G15-20.007(1)(a), (b) and (c), F.A.C. for described courses.

<sup>10</sup> *Id.*; *see also* 61G15-20.007(1)(c), F.A.C. for described courses.

Section 471.015(5)(a), F.S., allows applicants who seek licensure by endorsement to be deemed to have passed an examination substantially equivalent to the fundamentals examination when one of three qualifications are met. The fundamentals examination, or an examination substantially equivalent, is one of two examinations required to become a licensed engineer. The fundamentals examination covers material from academic curriculum, knowledge primarily gained through college level courses.<sup>11</sup> An applicant will be deemed as passing this examination when such an applicant has:

- Held a valid license in another state for fifteen years and has had twenty years of continuous professional level experience;
- Received a doctorate degree in engineering from an institution with an undergraduate engineering program accredited by the Accreditation Board for Engineering Technology; or
- Received a doctorate degree in engineering and after receiving that degree has taught engineering full time for at least three years at the baccalaureate level or higher.

According to the Florida Board of Professional Engineers, these exemptions stem from the fact that doctorate degree holders and such professors are required to have additional coursework beyond acquiring a bachelors' degree, and professors especially are exposed to the basic math and science that engineering is based upon, and that is covered in the fundamentals examination, while they are teaching.<sup>12</sup>

Section 471.017, F.S., lays out the biennial renewal requirements for a licensed engineer. Section 471.017(3), F.S., requires a demonstration of continuing professional competency for renewal. Four professional development hours are required each year of the license renewal period for a total of eight hours.<sup>13</sup> Four hours shall relate to chapter 471, F.S., and the remaining four hours shall relate to the licensee's practice area.<sup>14</sup> Section 471.017(3), F.S., authorizes the board to adopt rules consistent with the guidelines of the National Council of Examiners for Engineering and Surveying (Council) for the purpose of avoiding proprietary continuing professional competency requirements<sup>15</sup> and shall allow non-classroom hours to be credited.

The council's model rules section 240.30, Continuing Professional Competency guidelines are set forth for the purpose of providing consistency in those jurisdictions that adopt mandatory requirements and for those that wish to encourage voluntary usage, and to demonstrate a level of competency of professionals.<sup>16</sup>

---

<sup>11</sup> Conversation with Florida Board of Professional Engineers (FBPE) representative (March 4, 2014).

<sup>12</sup> *Id.*

<sup>13</sup> Section 471.017(3), F.S.

<sup>14</sup> *Id.*

<sup>15</sup> National Council of Examiners for Engineering and Surveying, *Continuing Professional Competency Guidelines*, (Aug. 2013) available at <http://ncees.org/about-ncees/publications/> follow hyperlink "continuing professional competency guideline" (Last visited Feb. 6, 2014).

<sup>16</sup> *Id.*

### **III. Effect of Proposed Changes:**

#### **Board of Professional Engineers Membership and Appointment**

CS/SB 692 amends s. 471.007(1), F.S., to remove the requirement that members in specified fields make up the board. The bill adds the requirement that board members who are licensed engineers be appointed based on their qualifications to provide expertise to the board at all times in civil engineering, structural engineering, electrical or electronic engineering, mechanical engineering, or engineering education.

Members are appointed by the Governor. Professional and technical engineering societies may submit a list of qualified nominees to be considered by the Governor for appointment.

Members of the board are appointed for a four-year term. The bill creates staggered terms for board members upon the expiration of members' terms on July 1, 2014. The terms of these immediate successors, as determined by the Governor, shall be as follows: three members will be appointed for two years, four members will be appointed for three years, and four members will be appointed for four years.

The bill permits each member to hold office until the expiration of his or her appointment or until a successor has been appointed.

#### **Conditions to Retake an Examination**

The bill amends s. 471.013, F.S., adding an option for the board, which may now require completion of a relevant examination review course, or the previously mandated additional college-level courses, as a condition of future eligibility to take an examination for an applicant who has failed that examination three times.

The bill allows an applicant who is delayed in taking the examination due to reserve or active duty service in the U.S. Armed Forces or National Guard to have two additional attempts, five altogether, to take the examination before the board will require additional college-level courses or an examination review course.

#### **Licensure by Endorsement**

The bill amends s. 471.015, F.S., deleting the provisions allowing an applicant for licensure by endorsement to be deemed as having passed an examination substantially equivalent to the fundamentals examination who: holds a doctorate degree in engineering from an accredited institution; or holds a doctorate degree in engineering who has also been teaching at least three years since receiving that degree at the baccalaureate level or higher. The bill continues the current law that allows an applicant to be deemed as having passed an examination substantially equivalent to the fundamentals examination if that applicant has held a valid license in another state for fifteen years and has twenty years of continuous professional-level engineering experience.

#### **Professional Development Hours**

The bill amends s. 471.017, F.S., by increasing the required number of professional development hours to nine hours for each year of the license renewal period, for a total of eighteen hours for each two-year renewal period. The bill also provides that one hour must relate to ch. 471, F.S.,

and the rules adopted under that chapter, one hour must relate to professional ethics, four hours must relate to the licensee's area of practice, and the remaining may relate to any topic pertinent to the practice of engineering.

The bill provides that continuing education hours may be earned by presenting or attending seminars, in-house or non-classroom courses, workshops, or professional or technical presentations made at meetings, webinars, conventions, or conferences, including those presented by vendors with specific knowledge related to the licensee's area of practice. Up to four hours may be earned by serving as an officer or actively participating on a committee of a board-recognized professional or technical engineering society. The hours required relating to ch. 471, F.S., the rules adopted pursuant to that chapter, and ethics may be earned by serving as a member of the Legislature or as an elected state or local official. It allows courses already required under s. 471.095, F.S., to apply to these requirements, except the hour relating to ch. 471, F.S., and rules adopted under that chapter.

The bill also amends s. 471.017(3)(b), F.S., to require the board to adopt rules that are substantially consistent with the most recent published Continuing Professional Competency Guidelines of the NCEES.<sup>17</sup>

#### **IV. Constitutional Issues:**

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

#### **V. Fiscal Impact Statement:**

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

The bill increases the hours of professional development, which may increase the cost for renewal applicants and increase revenue for continuing education providers.

---

<sup>17</sup> NCEES, *Continuing Professional Competency Guidelines*, (Aug. 2013) available at <http://ncees.org/about-ncees/publications/> follow hyperlink "continuing professional competency guideline" (Last visited Feb. 6, 2014).

C. **Government Sector Impact:**

The bill will create additional workload related to the review of disclosure materials and possible compliance actions; however, the additional workload should be able to be handled by existing staff.<sup>18</sup>

VI. **Technical Deficiencies:**

The bill provides that the four hours of continuing education related to this chapter, the rule pursuant to this chapter, and ethics may be earned by serving as a member of the Legislature or as an elected state or local official. The bill requires only two hours for these subjects.

VII. **Related Issues:**

According to the Florida Board of Professional Engineers, although service on the board as an officer or on a committee for a qualified society may be rationally related to keeping up professional competence, the bill lacks criteria for the type of service necessary. The board noted that a committee set up to organize social events may be used by members for professional competence hours.<sup>19</sup>

The bill allows examination applicants delayed in taking the examination due to reserve or active duty service in the U.S. Armed Forces or National Guard two additional examination attempts, but offers no definite parameters around what the “delay” may encompass.

VIII. **Statutes Affected:**

This bill substantially amends the following sections of the Florida Statutes: 471.007, 471.013, and 471.017.

IX. **Additional Information:**

A. **Committee Substitute – Statement of Substantial Changes:**  
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

**CS by Regulated Industries on March 06, 2014:**

- The CS removes plumbing engineers and fire protection engineering from the qualifications required to provide expertise and experience by the Florida Board of Professional Engineers members.
- The CS permits the professional and technical engineering societies to provide a list of qualified member candidates, which the governor may consider for his appointments.
- The CS does not include a section allowing a provisional member, and it provides that a board member holds office until expiration of their appointment or until a successor has been appointed.
- The CS does not include a provision for successive terms of board members.

---

<sup>18</sup>2014 Legislative Bill Analysis for SB 692, Florida Board of Professional Engineers (Feb. 18, 2014).

<sup>19</sup> *Id.*

- The CS removes options for licensure by endorsement applicants to be deemed as having passed an examination substantially equivalent to the fundamentals examination, one of the requirements for licensure.
- The CS clarifies that service in the U.S. Armed Forces needed to allow the accommodation of two additional examination attempts must be reserve or active duty service in the U.S. Armed Forces or National Guard.
- The CS requires eighteen instead of twenty continuing education hours per two-year license renewal period, with one hour required relating to this chapter and the rules adopted under this chapter, one related to professional ethics, four relating to the licensee's area of practice, and the remaining relating to any topic pertinent to the practice of engineering.
- The CS allows webinars, non-classroom courses, and serving or actively participating on a committee of a board-recognized professional or technical engineering society to qualify as continuing education hours and it does not limit the list of offerings to 12 hours.

B. Amendments:

None.