



PART 4. TEXAS DEPARTMENT OF LICENSING AND REGULATION

CHAPTER 65. BOILERS

The Texas Department of Licensing and Regulation (Department) proposes amendments to existing rules at 16 Texas Administrative Code (TAC), Chapter 65, Subchapter A, §65.2; Subchapter C, §65.13; Subchapter N, §65.206 and §65.214; Subchapter O, §65.300; and Subchapter R, §65.603 and §65.607, regarding the Boilers Program. These proposed changes are referred to as "proposed rules."

EXPLANATION OF AND JUSTIFICATION FOR THE RULES

The rules under 16 TAC Chapter 65 implement Texas Health and Safety Code, Chapter 755, Boilers.

The proposed rules are the product of analysis and discussion among the staff and with the Board of Boiler Rules. The primary focus and goal are the protection of public health, safety, and welfare. All participants agreed that it is necessary to that protection to implement a simple method to prevent additional deaths and injuries to Texans. Other unrelated changes are included in the proposal relating to administrative matters and overall clarity in the rules.

The proposed rules include three components. First, a carbon monoxide (CO) detector and interlock system is newly required for boilers installed in boiler rooms on or after June 1, 2020, which will significantly reduce deaths and injuries resulting from CO poisoning. This requirement is necessary to protect public health, safety, and welfare. Second, the proposed rules provide the Department the opportunity to address public comments received during the most recent four-year review of the boiler rules. Finally, the proposed rules make edits and clarifications for consistency and understandability.

The proposed rules were presented to and discussed by the Board of Boiler Rules at its meeting on November 7, 2019. The Board did not make any changes to the proposed rules. The Board voted and recommended that the proposed rules be published in the *Texas Register* for public comment.

SECTION-BY-SECTION SUMMARY

The amendments to §65.2 update the Modular Boiler definition and clarify the Authorized Inspector definition.

The amendments to §65.13 add clarifying wording for temporary boiler operating permits.

The amendments to §65.206 update the name of the section to reflect its increased scope and add the requirement for a CO detector and interlock system to disable the burners of any CO-producing boiler if the concentration of CO in the boiler room reaches a dangerous level. The amendments also specify applicability and update citations. The section is renumbered accordingly.

The amendments to §65.214 update wording for a modular boiler requirement consistent with the revised definition of Modular Boiler, and update a citation.

Amendments to §65.300 make clarifying wording changes.

The amendments to §65.603 reword existing boiler room ventilation requirements to more clearly describe both applicability and the ventilation options.

The amendment to §65.607 corrects a citation.

Texas Government Code, §2001.039 requires state agencies to review their rules every four years to determine if the reasons for initially adopting the rules continue to exist. The Notice of Intent to Review the boiler rules was published in the *Texas Register* on August 24, 2018 (43 TexReg 5545). During the subsequent public comment period two comments were submitted. The content of the comments and the conclusion of the review process appeared in the *Texas Register* on February 8, 2019 (44 TexReg 594). No changes to the boiler rules were made during the rule review process and none are being proposed in this rulemaking that are related to the rule review. However, the Department is taking this opportunity to address those comments as part of the response to the comments received for this proposed rule.

FISCAL IMPACT ON STATE AND LOCAL GOVERNMENT

Tony Couvillon, Policy Research and Budget Analyst, has determined that for each year of the first five years the proposed rules are in effect, there are no estimated additional costs or reductions in costs to state or local government as a result of enforcing or administering the proposed rules. Mr. Couvillon has also determined that there will be no increase or loss of revenue to local governments or to the state.

LOCAL EMPLOYMENT IMPACT STATEMENT

Mr. Couvillon has determined that the proposed rules will not affect any local economies, so the agency is not required to prepare a local employment impact statement under Government Code §2001.022.

PUBLIC BENEFITS

Mr. Couvillon has determined that for each year of the first five-year period the proposed rule requiring the CO detector and interlock system is in effect, the public benefit will be lives saved and illnesses avoided, a significant benefit to public health, safety, and welfare. In the last six years the Department has completed 13 carbon monoxide accident investigations related to boiler rooms. Each accident resulted in either multiple injuries, fatalities, or both. Three of these incidents occurred at schools where several hundred children and teachers were treated for CO exposure either at the school or were transported to a local hospital for care. Five of the incidents occurred at hotels in which exposure resulted in the injured being transported to the hospital. Five of the incidents occurred at apartment complexes. Two of these incidents involved three fatalities and multiple tenants were injured. Most or all of these incidents could have been prevented had CO detection and interlock systems been in place. In addition to saving lives and preventing injuries from

CO poisoning, the benefits to the public of the new interlock requirement will include reduced hospitalizations and medical expenses, and reduced need for emergency response services.

Multiple edits in the amended sections including updates, corrections, and improved word choices make the boiler rules more understandable and easier to use. These improvements and the increased clarity of the updated boiler room ventilation requirements will facilitate easier compliance with these requirements by the affected regulated entities.

PROBABLE ECONOMIC COSTS TO PERSONS REQUIRED TO COMPLY WITH PROPOSAL

Mr. Couvillon has determined that for each year of the first five-year period the proposed rules are in effect, there will be additional costs to persons who are required to comply with portions of the proposed rules. For those entities affected, the anticipated cost to purchase and install a CO detector and interlock system is estimated to be approximately \$750 to buy the system and approximately \$250 for installation, totaling approximately \$1,000 per boiler room. The cost to buy and install the system is not expected to be significantly higher for boiler rooms with multiple boilers. The cost to calibrate the system periodically following installation is not anticipated to add to the routine costs of boiler maintenance.

FISCAL IMPACT ON SMALL BUSINESSES, MICRO-BUSINESSES, AND RURAL COMMUNITIES

With the exception of the rule requiring CO detectors and interlock systems to be installed in boiler rooms, there will be no adverse effect on small businesses, micro-businesses, or rural communities as a result of the proposed rules. Because the agency has determined that this requirement will have an adverse economic effect on small businesses and micro-businesses the agency has prepared an Economic Impact Statement and a Regulatory Flexibility Analysis, as detailed and required under Texas Government Code §2006.002.

Economic Impact Statement

The requirement to install a CO detector and interlock system applies to all new and existing boiler rooms in Texas containing boilers installed or reinstalled after June 1, 2020 that are regulated by the Department and that can produce CO. Virtually any entity that uses hot water, including entities such as apartment complexes, hospitals, and nursing homes, uses boilers to heat water. Other affected entities include public and private schools, government buildings, warehouses, restaurants, hotels, fitness centers, and breweries. Currently about 53,500 boilers regulated by the Department are installed in Texas. Approximately 3,000 boilers are installed outside (industrial boilers) and are not affected by the proposed CO detector and interlock requirement. Approximately 5% of existing boiler rooms are already required by their design to have a CO detector and interlock system. Approximately 2,000 new and existing boiler rooms have a boiler installed each year. Existing boiler rooms that do not have boilers added are not affected by the proposed requirement.

Approximately 20% of boiler installations annually take place at small or micro-businesses so approximately 400 small and micro-businesses will be subject to the proposed CO detector and interlock system requirement when they install CO-producing boilers each year over the next five years. The CO detector and interlock system needs to be installed only once in each affected boiler room. Among the small and micro-business types affected are dry cleaners, hotels, apartment complexes,

and breweries. Implementation of the proposed rules would require all boiler rooms with new or reinstalled CO-producing boilers to be equipped with a CO detector that will shut off all CO-producing boilers in the room if the concentration of CO in the boiler room exceeds 50 parts per million (the Occupational Health and Safety Administration permissible exposure limit).

The anticipated cost to purchase and install a CO detector interlock system is estimated to be approximately \$1,000 per boiler room (approximately \$750 to buy the system and approximately \$250 for installation). The cost to buy and install the system is not expected to be significantly higher for boiler rooms with multiple boilers. The cost to calibrate the system periodically following installation is not expected to add to the routine costs of boiler maintenance. The requirement to install the CO detector and interlock system is a one-time cost and any subsequent activities related to calibrating the detector are expected to be part of routine maintenance. Additional cost for calibration in the years following installation should be none to insignificant.

No alternative methods exist that would achieve the purpose of the proposed rule. The CO detector and interlock system functions to immediately disable the burners of the boiler(s) in the boiler room when the CO concentration exceeds 50 ppm, effectively shutting the boiler(s) down and preventing further emissions of CO. The increase of CO concentration in the boiler room inevitably results from a malfunction requiring professional attention to restore proper operability.

Some boiler rooms have an interlock system that shuts the boiler(s) down in the event of a fire, but such a system does not provide protection against dangerous levels of CO and therefore cannot substitute for it. Likewise, an alarm-only system is insufficient because any response to address the problem would not result in immediate shutdown, and thus would not prevent further accumulation of CO and would not provide protection of the health and safety of nearby occupants or repair personnel prior to eventual response to the alarm. Further, the length of time necessary to respond to an alarm could and would vary widely and would not invariably result in halting the continued buildup of CO before disastrous consequences could occur.

Regulatory Flexibility Analysis

As discussed in the Economic Impact Statement, the purpose of the proposed rules is to protect the health, safety, and welfare of the public, and there are no alternative regulatory methods available to achieve that purpose. An alarm system would not offer the immediate and absolute protection of health and safety that the CO detector and interlock system provides, and therefore it is not a reasonable or suitable alternative.

The Department considered imposing the new requirement on existing facilities but decided that requiring retrofitting would be unduly burdensome, especially on small and micro-businesses. Because the new requirement will apply to boilers installed and reinstalled after June 1, 2020, owners will have reasonable time to design the CO detector and interlock system into the boiler installation plan and complete it at installation, thus avoiding retrofitting and additional visits by installation personnel. This will help to minimize the adverse impacts on small and micro-businesses.

ONE-FOR-ONE REQUIREMENT FOR RULES WITH A FISCAL IMPACT

The proposed rules have a fiscal note that imposes a cost on regulated persons who must install a CO detector and interlock sys-

tem. However, the proposed rules falls under the exception for rules that are necessary to protect the health, safety, and welfare of the residents of this state under §2001.0045(c)(6). Because of the applicable exception the agency is not required to take any further action under Government Code §2001.0045.

GOVERNMENT GROWTH IMPACT STATEMENT

Pursuant to Government Code §2001.0221, the agency provides the following Government Growth Impact Statement for the proposed rules. For each year of the first five years the proposed rules will be in effect, the agency has determined the following:

1. The proposed rules do not create or eliminate a government program.
2. Implementation of the proposed rules does not require the creation of new employee positions or the elimination of existing employee positions.
3. Implementation of the proposed rules does not require an increase or decrease in future legislative appropriations to the agency.
4. The proposed rules do not require an increase or decrease in fees paid to the agency.
5. The proposed rules do not create a new regulation.
6. The proposed rules expand, limit, or repeal an existing regulation.
7. The proposed rules increase or decrease the number of individuals subject to the rule's applicability.
8. The proposed rules do not positively or adversely affect this state's economy.

Approximately 2,000 new and existing boiler rooms have a boiler installed each year. Existing boiler rooms that do not have boilers added are not affected by the proposed requirement. Roughly 5% of existing boiler rooms are already required by their design to have a CO detector and interlock system. Approximately 20% of boiler installations annually take place at small or micro-businesses so about 400 small and micro-businesses will now be subject to the proposed CO detector and interlock system requirement when they install CO-producing boilers each year over the next five years.

TAKINGS IMPACT ASSESSMENT

The Department has determined that no private real property interests are affected by the proposed rules and the proposed rules do not restrict, limit, or impose a burden on an owner's rights to his or her private real property that would otherwise exist in the absence of government action. As a result, the proposed rules do not constitute a taking or require a takings impact assessment under Government Code §2007.043.

PUBLIC COMMENTS

Comments on the proposed rules may be submitted to Dalma Sotero, Assistant General Counsel, Texas Department of Licensing and Regulation, PO Box 12157, Austin, Texas 78711, or facsimile (512) 475-3032, or electronically: erule.comments@tdlr.texas.gov. The deadline for comments is 30 days after publication in the *Texas Register*.

SUBCHAPTER A. GENERAL PROVISIONS

16 TAC §65.2

STATUTORY AUTHORITY

The proposed rules are proposed under Texas Occupations Code, Chapter 51, and Texas Health and Safety Code, Chapter 755, which authorize the Texas Commission of Licensing and Regulation, the Department's governing body, to adopt rules as necessary to implement these chapters and any other law establishing a program regulated by the Department.

The statutory provisions affected by the proposed rules are those set forth in Texas Occupations Code, Chapters 51 and Texas Health and Safety Code, Chapter 755. No other statutes, articles, or codes are affected by the proposed rules.

§65.2. Definitions.

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) - (6) (No change.)

(7) Authorized Inspector--An inspector employed by an Authorized Inspection Agency who holds [authorized inspection agency holding] a commission issued by the executive director.

(8) - (40) (No change.)

(41) Modular Boiler--A [~~steam or hot water~~] heating boiler assembly consisting of a group of individual boilers called modules, intended to be installed as a unit, with a single inlet and single outlet. Modules may be under one jacket or may be individually jacketed.

(42) - (69) (No change.)

The agency certifies that legal counsel has reviewed the proposal and found it to be within the state agency's legal authority to adopt.

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Brad Bowman

General Counsel

Texas Department of Licensing and Regulation

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For further information, please call: (512) 463-8179



SUBCHAPTER C. BOILER REGISTRATION AND CERTIFICATE OF OPERATION-- REQUIREMENTS

16 TAC §65.13

The proposed rules are proposed under Texas Occupations Code, Chapter 51, and Texas Health and Safety Code, Chapter 755, which authorize the Texas Commission of Licensing and Regulation, the Department's governing body, to adopt rules as necessary to implement these chapters and any other law establishing a program regulated by the Department.

The statutory provisions affected by the proposed rules are those set forth in Texas Occupations Code, Chapters 51 and Texas Health and Safety Code, Chapter 755. No other statutes, articles, or codes are affected by the proposed rules.

§65.13. Boiler Installation.

(a) - (b) (No change.)

(c) Temporary Boiler Operating Permit.

(1) The owner or operator may request a Temporary Boiler Operating Permit on a department-approved form.

(2) The owner or operator must pay the applicable fee provided ~~[required]~~ under §65.300.

(3) Upon approval of the Temporary Boiler Operating Permit from the department, the boiler may be operated prior to the required initial inspection for up to thirty (30) days.

The agency certifies that legal counsel has reviewed the proposal and found it to be within the state agency's legal authority to adopt.

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SUBCHAPTER N. RESPONSIBILITIES OF THE OWNER AND OPERATOR

16 TAC §65.206, §65.214

The proposed rules are proposed under Texas Occupations Code, Chapter 51, and Texas Health and Safety Code, Chapter 755, which authorize the Texas Commission of Licensing and Regulation, the Department's governing body, to adopt rules as necessary to implement these chapters and any other law establishing a program regulated by the Department.

The statutory provisions affected by the proposed rules are those set forth in Texas Occupations Code, Chapters 51 and Texas Health and Safety Code, Chapter 755. No other statutes, articles, or codes are affected by the proposed rules.

§65.206. ~~[Care of]~~ *Boiler Room.*

(a) Each boiler room containing one or more boilers from which carbon monoxide can be produced shall be equipped with a carbon monoxide detector with a manual reset.

(1) The carbon monoxide detector and boiler(s) shall be interlocked to disable the burners when the measured level of CO rises above 50 ppm.

(2) The carbon monoxide detector shall disable the burners upon loss of power to the detector.

(3) The carbon monoxide detector shall be calibrated in accordance with the manufacturer's recommendations or every eighteen months after installation of the detector. A record of calibration shall be posted at or near the boiler, or be readily accessible to an inspector.

(4) The requirements in this subsection apply to boiler rooms in which new installations or reinstallations of one or more boilers are completed on or after June 1, 2020.

(b) ~~[(a)]~~ The boiler room shall be free from accumulation of rubbish and materials that obstruct access to the boiler, its setting, or firing equipment.

(c) ~~[(b)]~~ The storage of flammable material or gasoline-powered equipment in the boiler room is prohibited.

(d) ~~[(e)]~~ The roof over boilers designed for indoor installations, shall be free from leaks and maintained in good condition.

(e) ~~[(d)]~~ Adequate drainage shall be provided.

(f) ~~[(e)]~~ All exit doors shall open outward.

(g) ~~[(f)]~~ It is recommended that the ASME Code, Section VI, Care and Operation of Heating Boilers, ~~[covering the care and operation of heating boilers]~~ be used as a guide for proper and safe operating practices.

(h) ~~[(g)]~~ It is recommended that the ASME Code, Section VII, Care and Operation of Power Boilers ~~[care and operation of power boilers]~~, be used as a guide for proper and safe operating practices.

§65.214. *Modular Boilers.*

All modular ~~[steam heating and hot water]~~ heating boilers that meet all of the requirements of ASME Code, Section IV, ~~[HG-716;]~~ shall be registered with a single Texas boiler number.

The agency certifies that legal counsel has reviewed the proposal and found it to be within the state agency's legal authority to adopt.

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SUBCHAPTER O. FEES

16 TAC §65.300

The proposed rules are proposed under Texas Occupations Code, Chapter 51, and Texas Health and Safety Code, Chapter 755, which authorize the Texas Commission of Licensing and Regulation, the Department's governing body, to adopt rules as necessary to implement these chapters and any other law establishing a program regulated by the Department.

The statutory provisions affected by the proposed rules are those set forth in Texas Occupations Code, Chapters 51 and Texas Health and Safety Code, Chapter 755. No other statutes, articles, or codes are affected by the proposed rules.

§65.300. *Fees.*

(a) - (c) (No change.)

(d) Commission Fees. The Authorized Inspector seeking or holding the Commission shall make payment for the following fees:

(1) New commission--\$50

(2) Reinstatement of commission--\$50

(3) Renewal of commission--\$50

(4) Duplicate card--\$25

(5) Reissuance of card after re-employment--\$50

(6) Late renewal fees for commissions issued under this chapter are provided under §60.83 of this title (relating to Late Renewal Fees).

(e) Authorized Inspection Agency~~[/]~~Letter of Recognition. The Authorized ~~[authorized]~~ Inspection Agency shall make payment for the following fees:

(1) Initial ~~[Original]~~ Application--\$100

(2) (No change.)

(f) - (j) (No change.)

(k) Temporary Boiler Operating Permit Fee. The owner or operator shall make a \$50 fee payment.

The agency certifies that legal counsel has reviewed the proposal and found it to be within the state agency's legal authority to adopt.

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SUBCHAPTER R. TECHNICAL REQUIREMENTS

16 TAC §65.603, §65.607

The proposed rules are proposed under Texas Occupations Code, Chapter 51, and Texas Health and Safety Code, Chapter 755, which authorize the Texas Commission of Licensing and Regulation, the Department's governing body, to adopt rules as necessary to implement these chapters and any other law establishing a program regulated by the Department.

The statutory provisions affected by the proposed rules are those set forth in Texas Occupations Code, Chapters 51 and Texas Health and Safety Code, Chapter 755. No other statutes, articles, or codes are affected by the proposed rules.

§65.603. Boiler Room Ventilation.

(a) Each boiler room containing one or more boilers from which carbon monoxide can be produced shall ~~[The boiler room must]~~ have an adequate and uninterrupted air supply to assure proper combustion and ventilation.

(b) The combustion and ventilation air may be supplied by either an unobstructed opening or by power ventilators or fans as provided below.

(1) For a single unobstructed opening, the opening shall be sized on the basis of one square inch (645 square millimeters) of free area for each 2,000 Btu/hour (.586 kilowatts) input of the combined burners located in the boiler room.

(2) For two unobstructed openings, one commencing not more than 12 inches (304.8 millimeters) from the ceiling of the room and one commencing not more than 12 inches (304.8 millimeters) from the floor of the room, the opening shall be sized on the basis of one square inch (645 square millimeters) of free area for each 3,000 Btu/hour (.879 kilowatts) input per opening of the combined burners located in the boiler room.

(3) ~~[(2)]~~ The power ventilator or fans shall be sized on the basis of 0.2 cfm. (5.6 liters per minute) for each 1,000 Btu/hour (.29 kilowatts) fuel input for the combined burners located in the boiler room. The boiler and the fans shall be interlocked to disable ~~[so that]~~ the burners ~~[will not operate]~~ unless a supply of combustion, ventilation, and dilution air in accordance with ~~[as required by]~~ the boiler manufacturer's recommendations is maintained.

(4) Power ventilators or fans designed to maintain pressure in the boiler room shall be sized on the basis of 0.2 cfm. (5.6 liters per minute) for each 1,000 Btu/hour (.29 kilowatts) fuel input for the combined burners located in the boiler room. The boiler and the fan control shall be interlocked to disable the burners unless a supply of combustion, ventilation and dilution air in accordance with the boiler manufacturer's recommendations is maintained.

(c) Boilers of a sealed combustion design by the manufacturer ~~[manufacture]~~.

(1) When a boiler(s) in the boiler room is of a sealed combustion design by the manufacturer ~~[manufacture]~~ of the boiler and pulls air for combustion from outside of the building, ventilation of the boiler room is not required ~~[the required ventilation opening is not provided, the boiler room shall be equipped with a manual reset type Carbon Monoxide Detector. The Carbon Monoxide Detector and boiler shall be interlocked so that the burners will not operate when the measured level of CO rises above 100ppm. The Carbon Monoxide detector shall disable the appliance burners upon loss of power to the detector]~~.

(2) When the boiler room is configured to include both designs, i.e. a boiler(s) of a sealed combustion design by the manufacturer ~~[manufacture]~~ of the boiler that pulls air for combustion from outside of the building and a boiler(s) that is not of a sealed combustion design by the manufacturer ~~[manufacture]~~ of the boiler, the boiler room shall meet the ventilation requirements in subsection (b) only for the boiler(s) that are not of the sealed combustion design that pull air from outside of the building ~~[requirements in A or B below shall be met]~~.

~~[(A) The boiler room shall be in compliance with subsection (b)(1) or (b)(2)].~~

~~[(B) The boiler(s) that is not of the sealed combustion design is required to meet the ventilation requirement of subsection (b)(1) or (b)(2). The boiler(s) that are of the sealed combustion design are required to meet the ventilation requirement of subsection (c)(1).]~~

~~[(d) Carbon Monoxide Detectors shall be calibrated every eighteen months and a record of calibration shall be posted at or near the boiler, or readily accessible to an inspector.]~~

§65.607. Power Boilers, Excluding Unfired Steam Boilers and Process Steam Generators.

(a) Safety valves and pressure relief valves.

(1) - (4) (No change.)

(5) Except for changeover valves as defined in §65.2(14) ~~[§65.4(13)]~~, other valve(s) shall not be placed:

(A) - (B) (No change.)

(6) - (14) (No change.)

(b) - (i) (No change.)

The agency certifies that legal counsel has reviewed the proposal and found it to be within the state agency's legal authority to adopt.

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