

# Fuel Gas Fitter

Fuel Gas Fitters install, repair, alter, service, demolish, or remove pipes, fixtures, fittings, appliances, or apparatus necessary for supplying natural gas or propane for residential or non-residential use from the point of delivery. This includes all gas piping, the installation of all fuel gas fired appliances, the applicable venting of flue gases to the outside atmosphere, and the provisions for air for combustion and ventilation. Fuel Gas Fitters may be known as hearth system installation and service technicians, liquefied propane installation technicians, liquefied propane service technicians, natural gas installation technicians, natural gas service technicians, or piping installers.

## Legislation

Statute: NH RSA 153:27 through 153:358  
Administrative Rules: Chapter Saf-Mec 100-500

## Licensure Requirements

### *Fuel Gas Trainees*

Licensed fuel gas fitters shall sponsor as trainees only those individuals who:

- Work under a licensed NH fuel gas fitter who shall sponsor the trainee and oversee his/her educational and work experience meeting the requirements for fuel gas fitting licensing; and
- Hold a currently valid trainee registration license issued by the board.

The board shall issue trainee registration licenses to those individuals who:

- Enter into an agreement between the employer / licensed fuel gas sponsor to enroll under an approved fuel gas training program meeting the requirements of the board;
- Complete the board's apprentice / trainee registration form; and
- Pay the specified fee

### *Piping Installer Licensure*

- A fuel gas piping installer specialty license shall be provided to individuals who are engaged in the installation of liquefied propane gas or natural gas piping, or who is a New Hampshire licensed plumber, approved by the board through affidavit, experience, and education or training in the use of NFPA 54, national fuel gas code as adopted pursuant to RSA 153:5 in the state fire code, as defined in RSA 153:27, VI, and who shall install propane and natural gas piping from the outlet of the first stage regulator for liquefied propane, or the outlet of the natural gas meter, which shall be the point of delivery, to any and all fuel gas appliance(s) or other gas utilization equipment, including any and all future portions of the gas distribution system located therein.
- To qualify for a fuel gas piping installer license, an individual shall provide the following:
  1. Proof of successful completion of a minimum of 60 hours of educational training which covers the following subject matter:
    - a. Basic gas theory involving a thorough understanding of the physical properties and characteristics of propane and natural gas;
    - b. Reading and interpretation of fuel gas piping plans and drawings;
    - c. Determining proper fuel gas piping systems using appropriate sizing tables and charts;
    - d. Piping installation involving review of gas pipe sizing, gas pipe material selection, proper installation of underground and above ground fuel gas piping supply and distribution systems, placing a fuel gas system in service including purging, initial pressure testing, and leak check of gas distribution piping and appliances;

## Regulatory Agency

### **Mechanical Safety & Licensing Section**

Bureau of Building Safety & Construction  
Division of Fire Safety  
New Hampshire Department of Safety  
110 Smokey Bear Boulevard  
Concord, New Hampshire 03305

*phone* (603) 223-4289

*fax* (603) 223-4294

*web* <[www.nh.gov/safety/divisions/firesafety/building/mechanical/](http://www.nh.gov/safety/divisions/firesafety/building/mechanical/)>

*contact* Chief Jeffrey Cyr

*e-mail* [jeffrey.cyr@dos.nh.gov](mailto:jeffrey.cyr@dos.nh.gov)

## Fuel Gas Fitter (continued)

- e. The documentation of fuel gas piping system pressure testing, leak checking including customer notification as to the safety procedures and recognition of fuel gas odors; and
  - f. The application of laws regulations and adopted codes pertaining to fuel gas piping installation and licensing; and
2. A minimum of 1,000 working hours of on-the-job experience in the trade or its equivalent in an approved educational setting as defined in Saf-Mec 301.18, relevant to the installation of gas piping within 60 consecutive months, 500 hours of which may be applied if the applicant can demonstrate proof of relevant field experience installing, servicing, and repairing heating oil fired equipment.
  3. Notwithstanding any rule to the contrary, a NH licensed plumber who demonstrates that he or she is licensed in good standing, shall be qualified for a fuel gas piping installer license once he or she demonstrates successful completion of (b)(1) above.

### ***Installation Technician***

- A fuel gas installation technician specialty license shall be provided to any individual engaged in the installation of inside and outside piping from the outlet of the gas meter or first stage regulator or residential and non-residential heating equipment systems or water heating systems using liquefied propane gas or natural gas as defined in RSA 153:27, V, which shall also include:
  1. The installation of propane and natural gas piping from the point of delivery to the appliance(s);
  2. The installation of gas appliances and any other gas utilization equipment using liquefied petroleum gas;
  3. The installation of the venting and vent systems for gas appliances and any other gas utilization equipment which shall include the air for combustion and/or dilution; and
  4. The performance of safety checks, equipment conversion to ensure the proper fuel supply, required efficiency and start up procedures to ensure the safe operation of the fuel gas appliances being installed.
- To qualify for a fuel gas installation technician specialty license, an individual shall provide proof of successful completion the following:
  1. A minimum of 100 hours of educational training in the following subject matter:
    - a. Basic gas theory involving a thorough understanding of the physical properties and characteristics of propane and natural gas;
    - b. Reading and interpretation of fuel gas piping plans and drawings;
    - c. Determining proper fuel gas piping systems using appropriate sizing tables and charts;
    - d. Piping installation involving review of gas pipe sizing, gas pipe material selection, proper installation of underground and above ground fuel gas piping supply and distribution systems, placing a fuel gas system in service including purging, initial pressure testing, and leak check of gas distribution piping and appliances;
    - e. The documentation of fuel gas piping system pressure testing, leak checking including customer notification as to the safety procedures and recognition of fuel gas odors;
    - f. Liquefied propane and natural gas appliance installation, including clearance to combustibles, combustion, dilution, and the proper sizing of ventilation air requirements;
    - g. Liquefied propane and natural gas appliance venting including venting categories, selection and use of proper venting materials, vent sizing and clearances and installation;
    - h. Placing propane and natural gas appliances equipment into service while controlling propane/air mixtures for proper combustion;
    - i. Verification for proper operation of safety controls and devices;
    - j. The proper utilization of combustion analyzing equipment with respect to applicable codes and manufacturer's installation instructions; and
    - k. The application of the adopted codes and standards that apply to the requirements of Saf-Mec 305.03 (b)(1); and

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2. A minimum of 1,000 working hours of on-the-job experience in the trade or its equivalent in an approved educational setting as defined in Saf-Mec 301.18, relevant to the installation, service, and repair of gas appliances or equipment within 60 consecutive months, 500 hours of which may be applied if the applicant can demonstrate proof of relevant field experience installing, servicing and repairing heating oil fired appliances or equipment.
- Notwithstanding any rule to the contrary, an individual who is holding a fuel gas piping installer's license pursuant to Saf-Mec 305.02 wishing to ascend to this licensing level shall provide proof of:
    1. Successful completion of a formal educational program of at least 40 hours approved pursuant to the subject matter prescribed by Saf-Mec 305.03(b)(1) f. through k. above; and
    2. A minimum of 1,000 working hours of on-the-job experience in the trade or its equivalent in an approved educational setting as defined in Saf-Mec 301.18, relevant to the installation, service, and repair of gas appliances or equipment within 60 consecutive months, 500 hours of which may be applied if the applicant can provide proof of relevant field experience installing, servicing and repairing heating oil fired appliances or equipment.

### **Service Technician**

- A fuel gas service technician specialty license shall be provided to individuals engaged in the servicing and repair of inside and outside piping from the outlet of the gas meter or first stage regulator or residential and non-residential heating equipment systems or water heating systems using liquefied propane gas or natural gas.
- An individual for the fuel gas service technician specialty license shall provide proof of successful completion of the following:
  1. A minimum of 140 hours of educational training in the following subject matter:
    - a. Basic gas theory involving a thorough understanding of the physical properties and characteristics of propane and natural gas;
    - b. Reading and interpretation of fuel gas piping plans and drawings;
    - c. Determining proper fuel gas piping systems using appropriate sizing tables and charts;
    - d. Piping installation involving review of gas pipe sizing, gas pipe material selection, proper installation of underground and above ground fuel gas piping supply and distribution systems, placing a fuel gas system in service including purging, initial pressure testing, and leak check of gas distribution piping and appliances;
    - e. The documentation of fuel gas piping system pressure testing, leak checking including customer notification as to the safety procedures and recognition of fuel gas odors;
    - f. Liquefied propane and natural gas appliance installation including clearance to combustibles, combustion, dilution, and the proper sizing of ventilation air requirements;
    - g. Liquefied propane and natural gas appliance venting including venting categories, selection and use of proper venting materials, vent sizing and clearances and installation;
    - h. Placing propane and natural gas appliances equipment into service while controlling propane/air mixtures for proper combustion;
    - i. Verification for proper operation of safety controls and devices;
    - j. The proper utilization of combustion analyzing equipment with respect to applicable codes and manufacturer's installation instructions;
    - k. Troubleshooting electrical circuits and control devices while measuring electrical quantities using an electrical meter;
    - l. Identifying operating characteristics and components of common appliance safety and sensing devices including the testing and replacement of operating controls;
    - m. Gas pressure measurements including supply and appliance burner pressure detection;
    - n. Ignition safety systems including the 100 percent pilot safety shut-off and other electronic safety shut-off devices;

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- o. Flue gas analysis and carbon monoxide detection;
  - p. Interpretation of gas appliance equipment wiring diagrams to determine the sequence of operation of any given appliance;
  - q. Fuel gas equipment maintenance and inspection, heat exchanger inspection, and routine service requirements; and
  - r. Application of the adopted codes and standards as it relates to the items above; and
2. A minimum of 2,000 working hours of on-the-job experience in the trade or its equivalent in an approved educational setting as defined in Saf-Mec 301.18, relevant to the installation, service, and repair of gas appliances or equipment within 60 consecutive months, 750 hours of which may be applied if the applicant can demonstrate proof of relevant field experience installing, servicing, and repairing heating oil fired appliances or equipment.
- Notwithstanding any rule to the contrary, an individual holding a fuel gas installation technician license pursuant to Saf-Mec 305.03 and wishing to ascend to this licensing level shall provide proof of:
    1. Successful completion of a formal educational program of at least 40 hours approved pursuant to Saf-Mec 305.04 in the subject matter prescribed by (b)(1) k. through r. above; and
    2. A minimum of 2,000 working hours of on-the-job experience in the trade or its equivalent in an approved educational setting as defined in Saf-Mec 301.18, relevant to the installation, service, and repair of gas appliances or equipment within 60 consecutive months, 750 hours of which may be applied if the applicant can demonstrate proof of relevant field experience installing, servicing and repairing heating oil fired appliances or equipment.

### **Hearth System Installer**

- A hearth system installation and service technician specialty license shall be provided to individuals engaged in the installation, servicing, and repair of liquefied propane gas or natural gas hearth appliances and venting systems.
- An individual for the hearth system installation and service technician specialty license shall provide proof of successful completion of the following:
  1. A minimum of at least 60 hours of educational training which covers the following subject matter:
    - a. Basic gas theory involving a thorough understanding of the physical properties and characteristics of propane and natural gas;
    - b. Piping installation involving review of gas pipe sizing, gas pipe material selection, proper installation of underground and above ground fuel gas piping supply, placing a fuel gas system in service including purging, initial pressure testing, and leak check of gas distribution piping and appliances;
    - c. Placing propane and natural gas equipment into service while controlling propane/air mixtures for proper combustion;
    - d. Liquefied propane and natural gas hearth installation, including clearance to combustibles and the proper sizing of ventilation systems, including the combustion and dilution air requirements;
    - e. Liquefied propane gas and natural gas equipment venting including venting categories, vent materials, vent sizing, and clearances;
    - f. Diagnostics of hearth system appliances;
    - g. Troubleshooting hearth system appliances;
    - h. Gas pressure measurements and detection, flue gas analysis, and leak detection;
    - i. Ignition control systems; and
    - j. The application of the adopted codes and standards as it relates to the items above; and
  2. A minimum of 2,000 hours of field experience relevant to the installation and service of hearth appliances and hearth appliance venting systems within 60 consecutive months.

# Fuel Gas Fitter (continued)

## Examination

Required — all new applicants must pass a written examination with a score of 70 percent or higher relevant to the educational requirements, including NFPA 54, National Fuel Gas Code, as outlined for each specialty license

## Continuing Education

A minimum of eight hours of technical instruction relevant to the gas industry in the last 24 months is required, which must include three hours of code update training and five hours of elective training. Those renewing more than one specialty license are not required to obtain continuing education hours for each specialty license.

## Reciprocity

Permitted, providing that the applicant can demonstrate proof of licensure or certification from the state from which they are transferring

## Active Licenses

4,600

## Related Training

Pipefitting/Pipefitter and Sprinkler Fitter  
Appliance Installation and Repair  
Technology/Technician

## Fees

Gas fitting license, with:

Piping installer endorsement . . . . .	\$190.00
Hearth system installation endorsement . . . . .	\$190.00
Fuel gas installation endorsement . . . . .	\$190.00
Fuel gas service technician endorsement . . . . .	\$190.00
Domestic appliance technician license . . . . .	\$170.00
Renewal fee, domestic appliance technician . . . . .	\$160.00
Renewal fee, all other. . . . .	\$180.00
Reinstatement fee . . . . .	\$350.00

*Licenses expire on the last day of the licensee's month of birth, two years from the date of issuance*

## O\*Net Codes

47-2152.01	Pipefitters and Steamfitters
49-9031.00	Home Appliance Repairers

## Additional Information Sources

National Fire Protection Association  
<[www.nfpa.org](http://www.nfpa.org)>

Certified Employee Training Program (CETP)  
Propane Gas Association of New England  
<[www.pgane.org](http://www.pgane.org)>

North American Technician Excellence (NATE)  
<[www.natex.org](http://www.natex.org)>

Granite State Trade School  
<[www.granitestatetradeschool.com](http://www.granitestatetradeschool.com)>

National Fireplace Institute (NFI)  
<[www.nficertified.org](http://www.nficertified.org)>

New Hampshire School of Mechanical Trades  
<[www.tnhsmt.com](http://www.tnhsmt.com)>

New Hampshire Gasfitters Continuing Education Online  
<[www.nhgfceonline.com](http://www.nhgfceonline.com)>