

# 1. Laws governing the gas industry and due diligence

## Overview

## Purpose

A number of laws specify who can work on gas equipment, what equipment is acceptable and how equipment is installed. In addition to complying with all the relevant laws, a gas technician is expected to exercise due diligence in carrying out work.

This Chapter outlines the laws governing the natural gas and propane industry in Ontario and identifies the gas technician's responsibility to apply due diligence.

## Objectives

At the end of this Chapter, you will be able to:

- identify the legal documents that govern natural gas and propane installations;
- identify the organizations involved in the development and administration of the Act and Regulations; and
- define due diligence.

## Terminology

Term	Abbreviation (symbol)	Definition
Due diligence		Actions that are reasonable in the circumstances expected from a reasonable person
Ministry of Government and Consumer Services	MGCS	Ontario agency responsible for the administration of over 60 Acts in the province of Ontario, one being the <i>Technical Standards and Safety Act, 2000</i>
Technical Standards and Safety Authority	TSSA	A private, independent, non-government, not-for-profit organization designated by the Ontario government as the authority having jurisdiction (AHJ) regarding the <i>Technical Standards and Safety Act, 2000</i>

2014 national standard for the occupation of Gasfitter – Class B, please review an expanded reference matrix at <https://store.csagroup.org/>.



### CSA Group Gas Trade Training Materials – Red Seal Alignment

Red Seal		CSA Gas Trade Unit	1	2	3	4	4A	5	6	7	8	9
2014 Red Seal Block	2014 Red Seal Task	Title	Safety	Fasteners, Tools and Testing Instruments	Properties, Characteristics, and Safe Handling of Fuel Gases	Utilization Codes, Acts and Regulations	Utilization Codes, Acts, and Regulations – Ontario Supplement	Introduction to Electricity	Technical Manuals, Specifications, Drawings and Graphs	Customer Relations	Introduction to Piping and Tubing Systems	Introduction to Gas Appliances
A - Common Occupational Skills	Task 1	Performs safety-related functions.	✓									
	Task 2	Maintains and uses tools and equipment.	✓	✓	✓							
	Task 3	Plans and prepares for installation, service and maintenance.	✓			✓	✓	✓	✓			
B - Gas Piping Preparation and Assembly	Task 4	Fits tube and tubing for gas piping systems.									✓	
	Task 5	Fits plastic pipe for gas piping systems.									✓	
	Task 6	Fits steel pipe for gas piping systems.									✓	
C - Venting and Air Supply Systems	Task 7	Installs venting.									✓	✓
	Task 8	Installs air supply system.										
	Task 9	Installs draft control systems.										
D - Controls and Electrical Systems	Task 10	Selects and installs electronic components.						✓				
	Task 11	Selects and installs electrical components.										
	Task 12	Installs automation and instrumentation control systems.										
E - Installation of Systems and Equipment	Task 13	Installs gas-fired system piping and equipment.									✓	✓
	Task 14	Installs gas-fired system components.										
	Task 15	Installs propane storage and handling systems.										
F - Testing & Commissioning of Gas-fired Systems	Task 16	Tests gas-fired systems.										
	Task 17	Commissions gas-fired systems.	✓	✓	✓	✓	✓	✓			✓	✓
G - Servicing Gas-fired Systems	Task 18	Maintains gas-fired systems.										✓
	Task 19	Repairs gas-fired systems.		✓	✓	✓	✓	✓			✓	✓
	Task 20	Decommissions gas-fired systems.	✓	✓	✓	✓	✓	✓			✓	✓

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# The legal documents associated with gas and propane installations

Governments strictly regulate natural gas and propane appliances, components, and equipment, together with the installation, servicing, and supplying of gas to those appliances, to ensure that these meet minimum standards and practices to protect the public, the environment, and the economy.

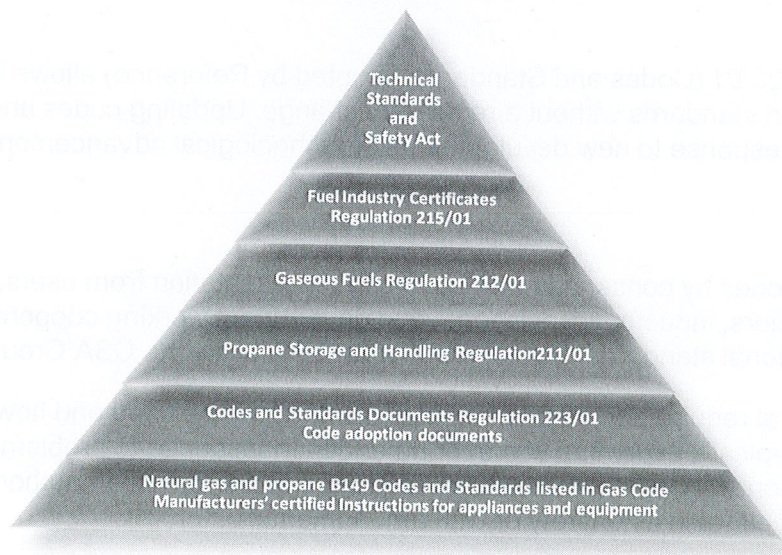
Given the importance of the gas industry to the safety, comfort, and financial well-being of its customers, it is not surprising that a set of legal requirements governs every aspect of the industry.

Imagine the personal and economic costs if even one model of appliance regularly causes a fire due to a design deficiency, or if anyone has permission to install or service appliances without proof of successful training or without following basic safety rules.

The gas industry largely established the laws governing itself to prevent safety problems.

Laws governing an activity or industry are easier to understand and interpret if you view it as a pyramid with three levels. Thus, you can view the laws that apply directly to a gas technician/fitter in Ontario as follows:

**Figure 1-1**  
**Ontario laws pyramid**



As you descend the pyramid, the laws become less general in nature and more instructional in how to achieve the principles that the laws nearer the top of the pyramid established. The following is a brief overview of the creation and reform of each set of laws and the issues addressed at each level. The three levels are interrelated and, together, establish a minimum level of safety from which to build a strong gas industry.

## Act

An Act is the only set of rules that elected representatives debate on and pass in either the national parliament or a provincial legislature after consultation with the public and affected industry. Such is the case with the *Technical Standards and Safety Act, 2000*. Its purpose is to establish general principles, duties, and responsibilities, as well as define the administrative powers for monitoring, enforcing, and creating regulations.

An Act is the least specific but most powerful set of rules affecting us. Acts seldom change.

The Energy Act, which was the predecessor of the current *Technical Standards and Safety Act, 2000*, came into effect in 1974 and served the industry for 27 years with only minor amendments.

## Regulations

The elected government proclaims regulations after consultation with the public and the affected industry, but without debate in the legislature. They are much more specific in nature but still outline principles, duties, responsibilities, and powers.

Regulations commonly change every five to ten years, or are amended more often, in response to changes in the industry or a major revision to a related or referenced code.

The *Technical Standards and Safety Act, 2000* allows TSSA to make changes to the regulations after consulting with the Ontario Ministry of Government and Consumer Services (MGCS) and with stakeholders. Thus, the *Gaseous Fuels Regulation*, *Propane Storage and Handling Regulation*, and *Fuel Industry Certificates Regulation* can be more responsive to the needs of the gas industry.

*Ontario Regulation 223/01* (Codes and Standards Adopted by Reference) allows TSSA to accept and amend codes and standards without a regulatory change. Updating codes and standards can now be quick in response to new developments or technological advancements.

## Codes

Committees create codes by consensus with balanced representation from users, manufacturers, suppliers, industry associations, and government working cooperatively under the structure of a national standards development organization like the CSA Group.

Codes provide general requirements and directions on what can be used and how to use it. Regularly updated (typically every five years) or amended in response to problems or new developments, a national code becomes a legal requirement only when an authority having jurisdiction accepts it either in its entirety or with amendments.

The authority having jurisdiction in Ontario accepted the following CSA B149 series of codes into law in Ontario with a few amendments by means of TSSA's Code Adoption Documents (explained in Chapter 3. *Regulations*).

CSA B149.1-15, *Natural gas and propane installation code*

CSA B149.2-15, *Propane storage and handling code*

TSSA-FA-2012, *Field approval code*

## Standards

Standards are very similar to codes in terms of its creation and reform but are much more technical and specific to a component, appliance, or procedure. They state the materials or components that you can use and how you are to use and test them.

Manufacturers build products to a standard or persons perform activities to a standard to prove to the consuming public that they met the accepted minimum requirements.

Certification organizations confirm compliance with a standard by testing, labelling, and inspecting a product. The regulations accept only some standards and certification organizations.

By means of this process, neither the consumer nor the installer must determine the fundamental safety of a component (e.g., valve), equipment (e.g., burner), or procedure (e.g., installation of a chimney liner).

Meeting a standard that the industry and the governing authority have agreed can largely assure the safety of the component, equipment, or procedure.

Manufacturers of the appliances and equipment normally use standards. In some cases, the code requires gas technicians to comply with a standard.

## Manufacturer's instructions

The manufacturer creates and changes the manufacturer's instructions, but the applicable standard regulates them. The provided information must meet minimum standards and obtain certification from a certification organization to become legal requirements.

Certified instructions are the most technical and specific legal requirements. They are as numerous and varied as the types of components and appliances in the gas industry.

Certified installation instructions usually bear the symbol of the certification organization to prove that they meet a recognized standard just as the appliance does.

## Summary

The preceding overview of the pyramid of rules provides a perspective from which to view the laws that directly apply to the industry.

It is important to understand the process of creating and changing the rules, as well as how they support each other to form a unified body of laws that help achieve, maintain, and protect the high standards that the gas industry has attained.

Keep in mind the concept of a pyramid of laws governing our industry so that you do not focus on one set of laws and forget its role in the overall structure of rules governing our industry.

Only by maintaining a wide perspective can you understand, interpret, and comply with the "mountain of laws" governing the industry.

# Organizations involved in the development and administration of the Acts and Regulations

The following two organizations have responsibility over the development, administration, and enforcement of the Ontario *Technical Standards and Safety Act, 2000* and its corresponding Regulations.

## Ministry of Government and Consumer Services



The Ministry of Government and Consumer Services (MGCS) is ultimately responsible for the administration of over 60 Acts in the province of Ontario, one being the *Technical Standards and Safety Act, 2000*. The MGCS has delegated the administration of this Act to the Technical Standards and Safety Authority.

For more information on MGCS, visit <https://www.ontario.ca/page/ministry-government-and-consumer-services>.

## Technical Standards and Safety Authority



The Ontario government designated private, independent, non-government, not-for-profit organization Technical Standards and Safety Authority (TSSA) as the authority having jurisdiction regarding the *Technical Standards and Safety Act, 2000*. It officially began operations on May 5, 1997, when the government divested the Technical Standards Division of the Ontario MCCR.

For more information on TSSA, visit <https://www.tssa.org/>.

TSSA is a risk-based, prevention-oriented organization that provides safety services to the public, including education, training and certification, engineering design review, inspection, investigation, and prosecution. TSSA regulates safety in:

- boilers, pressure vessels, and operating engineers;
- elevating devices, amusement devices, and ski lifts;
- fuels (gas, propane, butane, hydrogen, digester gas, landfill gas, fuel oil, gasoline, and diesel);
- and



# Due diligence

Due diligence is a term that refers to the manner in which a gas technician is expected to carry out day-to-day activities. It refers to actions that are reasonable in the circumstances expected from a reasonable person.

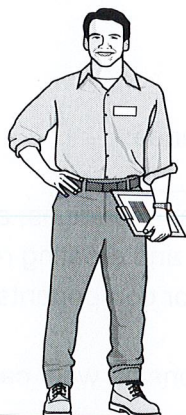
Due diligence entails taking responsibility for one's actions—making decisions and being able to explain logically why the actions were taken.

Logical decisions are ones that take into account all available pertinent facts to determine a final solution that is explainable by those facts.

Others may judge your actions, from time to time, to determine if you follow proper procedures and safe practices. This would not only be based on whether you hold a certificate of qualification, but also whether you are knowledgeable and competent to conduct the specific task before you—i.e., able to make logical decisions.

Due diligence is only possible if the organization and the individual are knowledgeable about the activity they are involved in. Knowing the legal limitations and expectations placed upon employees and employers is the starting point for due diligence. Its end point is a safer workplace and industry.

It is impossible to act reasonably without a sound understanding of what is legally required by the rules governing the industry that you work in.



**SAFETY  
KNOWLEDGE  
RESPONSIBILITY**

# Assignment Questions – Chapter 1

- 1) What do the letters “TSSA” stand for?
  - a) Technical Safety and Standards Authority
  - b) Technical Standards and Safety Association
  - c) Technical Standards and Safety Authority
  - d) Technical Safety and Standards Association
- 2) Name the title (including date) of the Code that deals with propane storage and handling that is currently accepted into law in Ontario.
  - a) CSA B149.2 Propane Storage and Handling Code
  - b) CSA B149.1 Natural Gas and Propane Installation Code
  - c) CSA-B149.3 Code for the Field Approval of Fuel-burning Appliances and Equipment
- 3) What legal document is the least specific but contains the most powerful set of rules?
  - a) A Regulation
  - b) An Act
  - c) A Code
- 4) What regulates Manufacturer’s instructions?
  - a) The Act
  - b) Standards
  - c) Regulations
  - d) Codes
- 5) Correctly complete the following sentence:  
Codes provide\_\_\_\_\_.
  - a) general principles, duties, and responsibilities, as well as define the administrative powers for monitoring, enforcing, and creating regulations.
  - b) specific information on materials or components that you can use and how you are to use and test them.
  - c) general requirements and directions on what can be used and how to use it.
- 6) Does TSSA have regulatory authority over the safety of both natural gas and propane?
  - a) Yes
  - b) No
- 7) Are the appliance manufacturer’s installation instructions legal documents?
  - a) Yes
  - b) No
- 8) Is TSSA a part of the government?
  - a) Yes
  - b) No