



Policies and Procedures
636G Apprenticeship
Gas Technician Certification

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(under Ontario Regulation 215/01,
Technical Standards and Safety Act, 2000)



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Fuels Safety Training and Certification

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Table of Contents

Introduction	3
Overview	4
Certificate Requirements	6
Gas Technician 2 in Training (G2-T)	7



Policies and Procedures 636G Apprenticeship Gas Technician Certification

Introduction

These Policies and Procedures were developed by the Technical Standards & Safety Authority (TSSA) to explain the administration of the 636G Apprenticeship. These Policies and Procedures have been adopted by Fuels Safety Training and Certification Services, TSSA.

The Policies and Procedures pertaining to Gas Technician certification under the 636G Apprenticeship model and the method of their application and administration are set out in the following pages. The intent is to provide a set of reference points and guidelines for Training Providers, examination bodies and/or administrators involved in this training and certification process and for the Fuels Industry in general.

The Policies and Procedures must be followed by all Training Providers who wish to have their programs recognized/accredited by the Technical Standards and Safety Authority (O. Regulation 215/01, Sect 5).

The Policies and Procedures are subject to enhancement and revision as required.

Administrators shall not alter any of the Policies and Procedures set out in this document without the knowledge and prior **written** approval of the TSSA.



Policies and Procedures 636G Apprenticeship Gas Technician Certification

Overview

TSSA has long supported industry's desire to allow for a parallel stream of the certification process for Gas Technicians, under the current Ministry of Training, Colleges and Universities (MTCU) apprenticeship model by attending and counseling the parties involved in bringing this certification option to fruition.

The results of these meetings, made up of government, industry, unions and training providers, was to create a certificate model known as the 636G, that is acceptable to TSSA, allowing recognition of a Gas Technician in Ontario who has completed the required service and examinations as a 636G apprentice.

The 636G Gas Technician apprenticeship model will be available to any candidate signed under contract to the Ministry of Training, Colleges and Universities apprenticeship program and aligned with a journeyperson.

The training model is divided into three in-school levels, the final of which extends to the scope of certificate for a Gas Technician 2, with the allowance to work on equipment and components up to and including 400,000 Btuh.

Prior to commencing work in the field under the direct supervision of a journeyperson, the 636G candidate must complete a Fuels Safety Workshop and be issued a "Gas Technician in Training" (G2-T) certification by TSSA, or already hold a Gas Technician 3 (G3).

The minimum TSSA requirements for the Supervising Journeyperson shall be a Gas Technician 2.

Upon successful completion of the 636G apprenticeship in-school levels, benchmark 5400 hours on the job and sign-off of all required performances, the candidate must successfully pass the TSSA Gas Technician 2 examination.

TSSA will issue a Gas Technician 2 certificate to those candidates who have been signed-off on all required competencies and completed the in-school training and who have obtained 75% or higher on the TSSA exam.

The following table outlines the subject matter details for the 636G in-school levels.

Note: The following table represents the outline of the three in-school levels and does not reflect any on-the-job benchmark hours.



**Policies and Procedures
636G Apprenticeship
Gas Technician Certification**

Number	Reportable Subjects	Hours Total	Hours Theory	Hours Practical
Level 1				
S1401	Safety and Trade Practices	15	15	0
S1402	Basic Sciences for Gaseous Fuels	15	15	0
S1403	Plan and Prepare for Installation, Service, and Maintenance	12	12	0
S1404	Principles of Electricity	60	30	30
S1405	Interpretation of Codes	15	15	0
S1406	Installation of Gas-Fired Appliances	32	20	12
S1407	Installation of Piping and Tubing Systems	70	30	40
S1408	Basic Maintenance Procedures	21	11	10
Level 2				
S1409	Installation of Appliance Systems	45	25	20
S1410	Venting and Combustion Air Systems	47	27	20
S1411	Hydronic Heating Systems	35	20	15
S1412	Interpretation of Code 2	15	15	0
S1413	Piping System Design and Installation	30	15	15
S1414	Intermediate Electrical and Control Systems	38	23	15
S1415	Service and Troubleshooting of Gas-Fired Appliances	30	15	15
Level 3				
S1416	Gas Burners and Valve Trains	42	30	12
S1417	Flame Detection and Control Systems	44	20	24
S1418	Boilers and Commercial Hydronics	36	24	12
S1419	Start, Test and Adjust Systems	44	24	20
S1420	Distribution Systems and Accessories	32	20	12
S1421	Advanced Electrical/Electronics Control Systems	42	26	16
Total	In-class Training Hours	720		



Policies and Procedures 636G Apprenticeship Gas Technician Certification

Certification Requirements

The following is a guideline of the steps an apprentice must follow if they wish to become a 636G Gas Technician. Please note that this is just a guideline which supports the full legal requirements which can be found in the TSS Act and Regulations.

Remember, it is your responsibility as an apprentice to ensure compliance with the Regulations.

POTENTIAL APPRENTICES MUST:

1. Attend a Safety Workshop conducted by a TSSA approved Training Provider to obtain a G2-T or have a current G3 certificate.
<http://www.tssa.org/>
2. **Prior to working in the gas industry** you must obtain a Gas Technician 2 in Training (G2-T) certificate. In order to do this you must first download and print the Application for Certification which can be found on the TSSA website or accessed via the link below. Complete the application and submit it with a copy of your certificate of completion of the safety workshop and a cheque for \$100 made payable to TSSA. Your qualifying time as an apprentice can start when TSSA processes your G2-T Application: Use the link below and scroll down the page to find the application:
<http://www.tssa.org/CorpLibrary/ArticleFile.asp?Instance=136&ID=93E5A1A2BF7D44DAAB50548828B76327>
Note: Potential apprentices currently holding a Gas Technician 3 will have their TSSA certificate re-issued as a G2-T certificate prior to starting to work as an apprentice. Should the apprentice not complete the apprenticeship then the certificate may be reverted back to the original G3 classification by request.
3. When you find a training sponsor or employer willing to train you as an apprentice, contact the Ministry of Training Colleges and Universities (MTCU) in your area.
To find your local office call 1-800-387-5656 or 416-325-4084 for service for the hearing impaired or
<http://www.findhelp.ca/mtcu/appoff.html>.

An MTCU employment and training consultant (ETC) will arrange a meeting at the workplace to assess the ability of the training sponsor or employer to train and assess the person, prepare the training agreement and initiate the training. This is often called “registration”. You must present **proof of Grade 12 or equivalent**.

4. The MTCU consultant will provide you with an Apprenticeship Training Standard document when you register as an apprentice. The purpose of this document is to record the practical training that you acquire throughout your apprenticeship. This is a **mandatory** document which will follow you throughout your career as a 636G Gas Technician.

IMPORTANT

AFTER YOU REGISTER WITH MTCU (Item 3 and 4 above)

You are eligible to work as a Gas Technician 636G apprentice in the field once you have signed a “Training Agreement” with an employer sponsor. You will select a location for your in-school training. When a seat is determined for your in-school training, you and your employer will receive an Offer of Training.



Policies and Procedures

636G Apprenticeship

Gas Technician Certification

When your Offer of Training for in-school is received from the training provider, you should **immediately** contact the approved training provider to confirm your seat. You must pay the classroom fee to ensure your name is on the class list and to have a seat in the class.

5. Attend and successfully pass the approved MTCU 636G apprenticeship in-school training courses.
6. In addition to the in-school training provided as described in item 5, you must work in the field as a Gas Technician in Training (apprentice) for a period of 5400 hours and be able to provide proof of that training in the form of documentation from your employer(s). This proof of on the job field training must be provided to both TSSA and the MTCU. Once you have completed your in-school and on the job training and have submitted all the required documentation to the MTCU, you will receive a **Certificate of Apprenticeship** from the MTCU.
7. **636G Gas Technician Apprenticeship Training Standard.** Please note that not all sections of the standard are mandatory. The signed off sections should accurately reflect the apprentice's duties throughout his/her four years of training. *Please note that the 636G Apprenticeship Training Standard can only be signed off by a certified supervising technician.*
8. Once items 1 through 7 are complete, submit **originals** of these documents for approval to Training and Certification Services, Fuels Safety Program, TSSA, 14th Floor, Centre Tower, 3300 Bloor Street West, Toronto, ON M8X 2X4. Please include the Application for Certification fee of \$100. All applicants will be contacted with approvals and/or with deficiencies. Please ensure a daytime telephone number is provided with your application (e.g. cell phone number).
9. Upon receipt of approval from TSSA you will have to contact TSSA at 1-877-682-8772 and ask for **Exam Services** to schedule the exam. Examinations are held regularly at the TSSA head office at 3300 Bloor Street West, 16th Floor, Centre Tower (Bloor & Islington) but must be booked in advance. The examination can also be completed in various venues throughout Ontario such as MTCU offices.

REMINDER

It is your responsibility as an apprentice to ensure that all of these items are completed.

Gas Technician 2 in Training (G2-T)

The Gas Technician 2 in Training (G2-T) certification will be issued to an applicant of the 636G Apprenticeship model and upgraded to a Gas Technician 2 (G2) certificate upon successful completion of the apprenticeship program.

Conditions on the G2-T are as follows:

- the G2-T applicant is required to complete the Fuels Safety Workshop and be registered as an apprentice with MTCU
- the G2-T certificate requires direct supervision by a certified technician until such time as the 636G Training Standard is signed off after which the allowable duties may be carried out under general supervision. The minimum TSSA requirements for the Supervising Journeyman shall be a Gas Technician 2
- the G2-T 636G Training Standard document must be readily available for inspection



Policies and Procedures

636G Apprenticeship

Gas Technician Certification

- the G2-T certificate will expire at the end of a four year term if not upgraded to a G2 within that term of issue

The G2-T program (Fuels Safety Workshop) is to be delivered to an applicant prior to entering the workforce in the 636G Apprenticeship Program.

Following successful completion of the Fuels Safety Workshop the candidate will have a basic understanding of safe fuel handling practices, the codes and regulations governing the natural gas and propane industries and the responsibilities of certificate holders in the workplace.

This Fuels Safety Workshop is 30 hours in length and includes the following subject matter*:

Safety and Trade Practices 15 Hours

- 1 Identify safety directives
- 2 Identify applicable regulations under the Occupational Health and Safety Act (OHSA)
- 3 Identify personal protective equipment
- 4 Identify safe working conditions
- 5 Identify procedures for handling hazardous or toxic materials
- 6 Identify fire safety procedures
- 7 Identify procedures for reporting injuries
- 8 Identify procedures to prevent personal injury
- 9 Identify lockout and tagging procedures
- 10 Identify safe work procedures when using hand or power tools
- 11 Identify pertinent Codes, Acts, Regulations, and Legislation

Basic Science for Gaseous Fuels 15 Hours

- 1 Describe the structure of matter, molecular motion, work and energy
- 2 Describe thermal energy and the change of state
- 3 Describe the laws of physics that relate to vapours and gases
- 4 Identify the properties of natural gas and propane
- 5 Identify the characteristics of natural gas and propane
- 6 Identify the odorant added to natural gas and propane
- 7 Identify the requirements of complete combustion of natural gas and propane gas
- 8 Identify the characteristics of complete and incomplete combustion of natural gas and propane gas
- 9 Describe burner combustion air requirements
- 10 Recognize potential sources of ignition
- 11 Determine sources of odours
- 12 Describe how fuel gases migrate through soil and air
- 13 Define carbon monoxide

Total 30 Hours

* as based on the first two modules of Level 1 636G. Candidates would repeat these two modules in their first academic session.