



Contest Description

# Electrical Installations

Secondary

**Date:** April 16, 2026, 8:00 A.M.

**Location:** Yukon University, Gym

**Duration of contest:** 6 Hours

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## **1. SKILLS FOR SUCCESS FOR CAREERS IN SKILLED TRADES AND TECHNOLOGY**

The Government of Canada has updated the previous Essential Skills framework to the new Skills for Success model in response to the evolving labour market and changing skill requirements. This model outlines nine fundamental skills Canadians need to thrive in work, education, training, and daily life.

Skills/Compétences Canada aims to highlight the importance of these skills, vital for success in trade and technology careers. Competitors can see how Skills for Success are integrated into contest descriptions, projects, and project documents. Recognizing these skills during the competition helps competitors match tasks with specific skills necessary for success and understand how these skills apply within their trade or technology programs and future careers.

The nine key Skills for Success, validated for workplace success, are:

1. Numeracy
2. Communication
3. Collaboration
4. Adaptability
5. Reading
6. Writing
7. Problem Solving
8. Creativity and Innovation
9. Digital

## **2. CONTEST INTRODUCTION**

### **2.1. Description of the associated work role(s) or occupation(s):**

[https://www.skillscompetencescanada.com/en/skill\\_area/electrical-installations/](https://www.skillscompetencescanada.com/en/skill_area/electrical-installations/)

### **2.2. Purpose of the Challenge**

Assess the contestant's skills and abilities performing various installation tasks in the field of residential, commercial and industrial electrical wiring.

### **2.3. Duration of Contest**

6 Hours. Competitors will begin at 9:00AM and have until 4:00PM to complete all of their tasks, including tidying their work station.

### **2.4. Skills and Knowledge to be Tested**

Throughout the final contest, contestants can expect to be evaluated in one, two, three or all of the following areas:

- Installing residential, commercial wiring and control systems;
- Installing branch circuit components;
- Installing heating equipment and controls;
- Installing motor control systems;

- Installing communications systems, wiring devices and various types of detectors;
- Install and program an intelligent relay using the relay faceplate or laptop;
- Troubleshooting using test instruments;

**2.5. Tasks that may be performed during the competition:**

- Measuring and marking dimensions on a work surface using scale plans and drawings based on the metric or imperial measuring system;
- Measuring and accurately marking the location of outlets and drilling holes on control panels;
- Installing electrical equipment, cables, conduit, tubing and raceways;
- Measuring and bending tubing and conduit
- Measuring, sawing, drilling, deburring metals and plastics
- Assembling components using screws, staples and bolts;
- Linking lines and equipment to control panels and their components
- Wiring and connecting electrical components;
- Wiring and programming of an intelligent relay;
- Identifying and marking conductors according to plans and drawings;
- During the competition, competitors will be required to complete a troubleshooting exercise using provided test equipment. The competitor will be assigned a time to complete this task;

**2.6. Contestants must demonstrate mastery of the following theoretical skills:**

- Reading, interpreting and executing plans, drawings, diagrams and schematics in compliance with standards;
- Reading, interpreting and executing manufacturer's technical specifications for the electrical components to be installed;
- Knowledge of electrical materials and construction work methods;
- Knowledge of basic electrical circuits;
- Knowledge of basic electrical devices and equipment;
- Knowledge of occupational health and safety regulations;
- Knowledge and application of electrical code requirements in Canada and installation to comply with the current edition of the Canadian electrical code book (CEC current enforced edition)

**3. EQUIPMENT, MATERIAL, CLOTHING**

**3.1. Equipment and material provided by Skills Canada Yukon:**

- Work bench
- Ladder
- Access to a 120-volt 15A (5-15R) receptacle;
- Manual pipe bender EMT 1/2
- 3/4" x 6" total length self feeding ship auger
- Cordless drill - Impact combo pack

- Driver Bit – #2 x 6 inch Robertson
- Driver Bit – #1 x 6 inch Robertson
- Smart relay pack

### **3.2. Required Equipment and Clothing Provided by the Competitor**

- Supplies for drawing and writing, i.e., pencil, eraser, etc.
- Metric tape measure (or metric/sae combination)
- Set of screwdrivers (Robertson, flat, termination and Philips)
- Electrician's pliers (lineman pliers)
- Electrical digital multimeter
- Tri square
- Cutting pliers (side cutters)
- Knife (no utility knives, box cutters etc. Nothing with a replaceable blade)  
Must be a lockable or fixed blade type.
- Hammer
- Needle-nose pliers
- Adjustable wrench (crescent wrench)
- Fish tape
- Unibit metal bit, capable of 7/8" hole and/or 1 set manual hole punches for 1/2" knock-outs
- Tapping screwdriver (6/32 - 8/32 – 10/32)
- Metal hack saw
- EMT reaming tool
- Wire stripper
- Torpedo level
- Drywall saw
- Multi-purpose pliers
- Adjustable pliers (water pump pliers)
- Set of metal drill bits
- Canadian Electrical Code Book (Current Enforced Edition)
- Laptop – (optional for programming smart relay)
- Heat gun or heating blanket for bending PVC conduit

### **3.3. Required Clothing Provided by the Competitor**

- Proper clothing. Competition is indoors.
- Hearing protection
- Safety shoes
- Safety gloves
- Hard Hat
- Safety Glasses

## **4. HEALTH & SAFETY**

### **4.1. Safety Orientation**

During orientation, Competitors will participate in a Safety workshop and they will be expected to work and maintain a safe working area during the competition.

List of required personal protective equipment (PPE) provided by Skills Canada Yukon:

- Safety glasses
- Hearing protection

**NOTE:** Competitors who do not have the required protective equipment/clothing will not be allowed to participate in the competition

#### **4.2. Field Level Risk Assessment**

SCY will complete a Field Level Risk Assessment for every competition area in addition to a full walkthrough with a representative from Yukon Workers Safety and Compensation Board to identify potential hazards and create solutions. The primary goal of an FLRA is to identify and mitigate potential risks to ensure the safety of competitors.

### **5. ASSESSMENT**

#### **5.1. Point Breakdown**

<b>TASK</b>	<b>/100</b>
Operation	<b>/30</b>
Equipment and component installation	<b>/10</b>
Intelligent relay operation	<b>/7.5</b>
Measurement	<b>/10</b>
Cable installation	<b>/10</b>
Tubing and conduit installation	<b>/10</b>
Connection of conductor to components and equipment	<b>/10</b>
Compliance with health and safety rules	<b>/5</b>
Fault finding	<b>/7.5</b>

#### **5.2. Qualifying for the Skills Canada National Competition**

Competitors can secure a win in their specific competitions by demonstrating exceptional skills and abilities, and meeting or exceeding established evaluation criteria. However, qualification for the Skills Canada National Competition is not solely determined by winning at the territorial level.

The decision to advance further depends on additional factors, such as the National Technical Committee's (NTC) assessment and/or the judges' discretion, which may take into account specific criteria beyond just event performance. These additional criteria could encompass a competitor's adherence to safety protocols, ethical conduct, teamwork, or overall professionalism, ensuring that those who represent the Territory at the national level not only excel in their technical skills but also embody the values and standards upheld by Skills Canada.

**\*Please note:** Not all territorial contest areas are eligible for the Skills Canada National Competition. Please refer to the SCNC website to determine if your skill area/level is eligible to compete.

## **6. ADDITIONAL INFORMATION**

### **6.1. Competition Rules**

Refer to the competition rules of the Skills Canada Yukon Territorial Competition which can be found on our website.

### **6.2. Ties**

Tiebreaker #1: In the event of a tie, the candidate with the highest safety score will be declared the winner.

Tiebreaker #2: If a tie still remains, the competitor with the highest score in the Operation will be declared the winner.

### **6.3. Accessibility & Accommodations**

Skills Canada Yukon is committed to providing a barrier-free environment which allows everyone to participate in our programs and competitions. We strive to be fully inclusive to all manner of disabilities and identities. SCY provides the opportunity for any competitor to disclose a disability on our competition registration form. Requests for accommodations must be made at least 3 weeks prior to the competition date.

## **7. NATIONAL & TERRITORIAL TECHNICAL COMMITTEES**

7.1. The Yukon National Technical Committee member for Electrical Installations is Aaron France. Email: [afrance347@icloud.com](mailto:afrance347@icloud.com)

7.2. Please contact [yukon@skillscanada.com](mailto:yukon@skillscanada.com) with questions or concerns related to the competition.