



Training Programs & Certifications

Here is a list of training programs relevant to working in hydrogen production and wind turbine construction, including specific courses available in Newfoundland & Labrador:



Engineering Programs

→ **Relevance:** Engineers are essential for designing and constructing hydrogen production facilities and wind turbines.

Example in Newfoundland & Labrador:

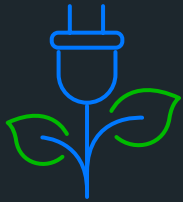
Memorial University:

Faculty of Engineering and Applied Science:

Offers undergraduate and graduate programs in Mechanical, Electrical, Process and Civil Engineering. These programs include courses in renewable energy systems and related fields, such as energy sustainability and power systems.

2

Renewable Energy Technology Programs



- **Relevance:** These programs focus on the technology and practical aspects of renewable energy, including wind turbines and hydrogen production.

Example in Newfoundland & Labrador:

College of the North Atlantic (CNA):

Electro-Mechanical Engineering Technology (Power and Energy Systems) Diploma:

This program covers renewable energy technologies such as wind, solar, and energy management systems.

3

Environmental and Safety Training



- **Relevance:** Understanding environmental impact and safety protocols is crucial in both hydrogen production and wind turbine construction.

Example in Newfoundland & Labrador:

Marine Institute of Memorial University:

Safety and Environmental Management Programs:

Offers courses in safety management and environmental protection, relevant for working in renewable energy industries.

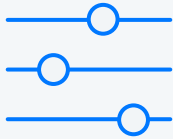
Memorial University:

Major in Biology (Applied ecology and conservation):

Prepares students with ecological knowledge, field experience, and analytical skills, which can enable graduates to assess potential environmental impacts and mitigate potential effects on wildlife, such as avian species, in renewable energy projects.

4

Industrial Instrumentation and Control Programs



- **Relevance:** These programs teach skills for maintaining and controlling the complex systems in hydrogen production facilities.
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Example in Newfoundland & Labrador:

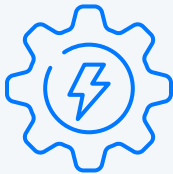
College of the North Atlantic (CNA):

Instrumentation and Controls Technician Program:

Focuses on the installation, maintenance, and calibration of industrial control systems, including those used in energy production.

5

Electrical and Power Systems Programs



- **Relevance:** Training in electrical systems and power generation is crucial for both wind turbine construction and hydrogen facility operations.
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Example in Newfoundland & Labrador:

College of the North Atlantic (CNA):

Industrial Electrical Engineering Technology Program:

Focuses on training students in electrical systems, including industrial and renewable energy applications.

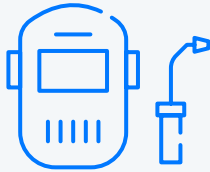
Academy Canada:

Construction/Industrial Electrician (Pre-Employment) Program:

Provides students with a wide range of skills that are needed to work as a certified first-year apprentice in either the construction or industrial sector, which is beneficial for renewable energy and infrastructure projects.

6

Welding and Metal Fabrication



- **Relevance:** Welding and metal fabrication are essential skills in constructing the infrastructure for wind turbines and hydrogen facilities.

Example in Newfoundland & Labrador:

College of the North Atlantic (CNA):

Welding Engineering Technology Diploma:

Provides comprehensive training in welding, focusing on industrial and specialized welding techniques for sectors such as renewable energy and infrastructure projects.

Academy Canada:

Welder (Pre-Employment) Program:

Provides students with a wide range of skills that are needed to work as a first-year apprentice, including those related to safety, blueprint reading, plasma arc cutting/gouging, fuel brazing, shielded metal arc welding, gas tungsten arc welding, flux-cored arc welding and fabrication as well as many others. These skills are useful building blocks for later work in renewable energy and infrastructure projects.

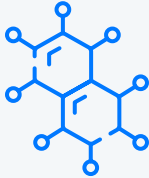
Academy Canada:

Sheet Metal Worker (Pre-Employment) Program:

This pre-employment apprenticeship program provides students with training requirements to become a first-year apprentice. Sheet Metal Workers fabricate, assemble, install and repair sheet metal products, which are useful skills for later work in renewable energy and infrastructure projects.

7

Process Technology Programs



- **Relevance:** Process technology programs focus on the operation and management of chemical processes, which are central to hydrogen production.
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Example in Newfoundland & Labrador:

College of the North Atlantic (CNA):

Chemical Process Engineering Technology Program:

This program provides training on the processes involved in chemical production, relevant for working in hydrogen facilities.

8

Wind Turbine Technician Programs



- **Relevance:** These programs specifically train individuals to work on the maintenance and operation of wind turbines.
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Example in Newfoundland & Labrador:

College of the North Atlantic (CNA):

Wind Turbine Technician Program:

The Wind Turbine Technician program prepares students for the energy industry by developing skills in mechanical, electrical, and hydraulic systems. Students apply classroom theory in a wind turbine facility and receive critical safety training, including working at heights and inside nacelles, with a focus on industry safety protocols.

9

Project Management in Renewable Energy



- **Relevance:** Project management skills are essential for overseeing the construction and operation of large-scale renewable energy projects.

Example in Newfoundland & Labrador:

Memorial University:

Certificate in Project Management:

This program offers courses in project management that are applicable to various industries, including renewable energy. It is designed for those looking to manage projects in engineering and sustainability sectors.

10

Information Technology Programs



- **Relevance:** By combining technical IT skills with an understanding of renewable energy infrastructure, graduates can contribute to the installation, maintenance, and optimization of digital systems in wind and hydrogen energy projects.

Example in Newfoundland & Labrador:

Keyin College:

Computer Service Technician Program:

Provides students with the theory of computer systems and operating systems while developing practical skills through hands-on application software to gain a level of expertise with the most commonly used office programs. Combining skills such as hardware installation and configuration, operating systems, and systems optimization, graduates could pursue roles in installation, maintenance, network setup, or monitoring in various renewable energy projects.



11

Maritime Training for Offshore Wind



- **Relevance:** Training for working offshore is critical for wind turbine projects located at sea.

Example in Newfoundland & Labrador:

Marine Institute of Memorial University:

Offshore Safety and Survival Training:

Provides specialized training for working safely in offshore environments, relevant for offshore wind projects.

12

Hydrogen Technician Programs



- **Relevance:** A hydrogen technician specializes in producing, handling, and maintaining hydrogen systems and infrastructure.

Example in Newfoundland & Labrador:

College of the North Atlantic (CNA):

Hydrogen Technician Program:

With training as a Hydrogen Technician, students will gain strong technical skills and be on the cutting edge of a revolutionary change in the sustainable energy economy.



These programs and courses provide a strong foundation for individuals interested in pursuing careers in hydrogen production and wind turbine construction, with a focus on the specific needs of the renewable energy sector in Newfoundland & Labrador.