Sustainable Energy Technologies

→ **Accredited Workshops**

Get in Touch

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1 Yonge Street, Suite 900, Toronto, Ontario

Your students can expect to:

Gain Purposeful Employment

Manage Energy Projects

Navigate a Two Trillion Dollar Market

Combat Climate Change

blocksEDU

What we do

These workshops provide an introduction to green technologies and demonstrate why energy innovations are necessary for the future. Students will be introduced to different types of clean energy technology such as: wind turbines, solar power, hydroelectricity, geothermal energy, tidal energy, ocean thermal and fuel cells. Students also will learn about how advances in energy storage technologies are making these systems more economical and how advances in electric vehicles are going to increase demand for new energy sources. The implementation of clean energy technologies is also studied to understand how they can work either in conjunction with, or as a replacement for, conventional power sources.

Our objectives

- To train a generation of energy professionals capable of leading the largest industry transformation of the century.
- To illuminate the relationship between energy and the environment.
- To help individuals understand every step required to plan, initiative and grow an energy project.

Why Sustainable Energy

Interest is growing exponentially:

- Global interest in clean energy, green cities and urban innovation is growing year over year.

Companies are hiring:

- The Renewable Energy Sector employed 11 million people in 2018, with employment numbers growing by close to one million this last year alone.

Energy demand is growing:

- Electricity consumption is rapidly increasing, with some continents expected to triple demand by 2050.

It contributes to a sustainable future:

- Renewable energy holds vast potential to cut fuel costs, reduce carbon emissions, conserve water and create jobs.

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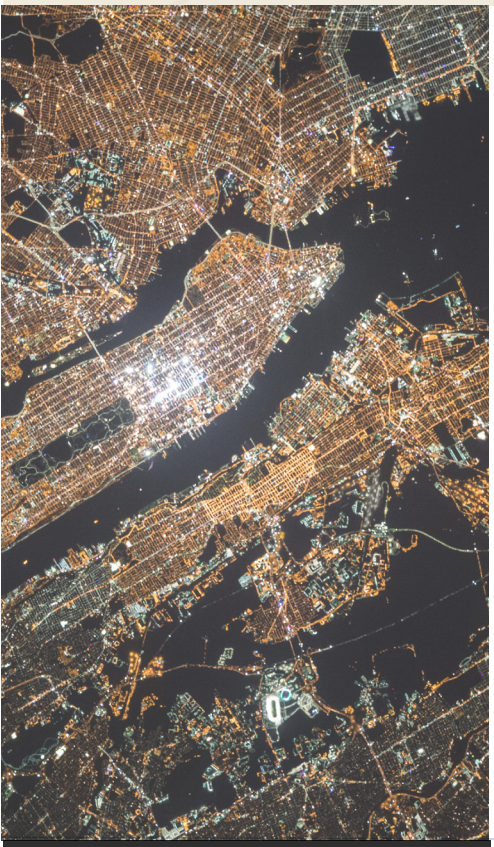
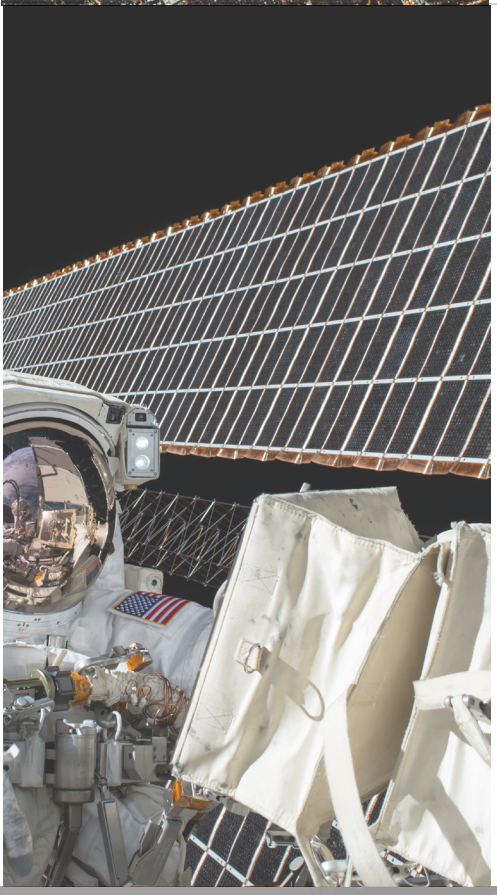


Workshop 1: Energy Fundamentals

- Learn the differences between alternative forms of electricity generation (coal fired power, combined cycle gas turbines, nuclear, hydro, geothermal, solar and wind power).
- Learn the basics of electricity transmission/distribution and the steps required for renewables to achieve grid parity.
- Distinguish between different types of energy storage technology and describe the potential it holds for renewable energy.
- Explore relationships between electricity and the environment, including the breakdown of Greenhouse Gas (GHG) emissions per sector.

LENGTH
5 hours



Workshop 2: Solar Fundamentals

- Learn to plan, design and develop a solar project.
- Understand economics behind solar power generation.
- Learn about the efficiency rise, price reduction and growth trajectory that solar projects are experiencing worldwide.
- Understand the basic mechanics of different solar power systems (CSP, PV power stations, floating solar farms, rooftop installations, etc.).
- Walk through the steps required to build a solar project (i.e. how to assess solar potential, choose the right system, acquire land, acquire permits, and assess economic feasibility).

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Workshop 3: Wind Energy Fundamentals

- Learn how wind energy is captured, converted, and best utilized through different wind power systems.
- Learn the mechanics of different types of wind turbines (horizontal, vertical and ducted).
- Walk through the requirements to build residential or commercial wind energy projects.
- Learn how to assess wind resources, choose the right system for your location, acquire land, acquire permits, and assess economic feasibility.

LENGTH
5 hours

Workshop 4: Emerging Tech and Future Cities

- Learn about energy innovations shaping the future of transport, future of agriculture and future of urban environments.
- Understand the foundational technology behind Hyperloop trains, connected and automated vehicles, and electric cars.
- Learn how developments in biofuel technology, plant-based meat and lab-grown meat alternatives are restructuring the agricultural industry.
- Explore how smart architecture and Internet-of-Things (IoT) devices are reshaping city infrastructure.
- Learn the purpose of green building guidelines (LEED and BREEAM) and why they're increasingly demanded.

LENGTH
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