CAGBC's Low Carbon Training Foundations Course

Modes of delivery

Participants may choose to complete CAGBC's Low Carbon Training Foundations course in one of three modes of delivery:

1. In-person, one-day workshop events;
2. Live, one-day webinar events, and;
3. An online, on-demand course that can be completed at your own pace.

The Low Carbon Training Foundations course creates baseline knowledge for a variety of key professions in the building sector and equips them with the knowledge needed to adopt low-carbon concepts in their roles.

Learning objectives

All three modes of delivery cover the same five (5) modules of content with the following learning objectives.

1. **Environmental, Social, and Governance (ESG):**

   An overview of ESG, which is an approach to measuring and evaluating the sustainability and ethical impact of businesses based on their environmental practices, social responsibility, and corporate governance.

   Learning Objectives:

   - Explain key concepts, growth drivers, and the business case for ESG.
   - Define environmental, social, and governance themes as they relate to businesses.
   - Understand the concepts of opportunity analysis and risks avoidance as they relate to environmental performance in buildings.

2. **Integrated Design Process (IDP):**

   An introduction to IDP, which is a collaborative approach that involves multiple stakeholders in the design and decision-making process to create sustainable and efficient building designs.

   Learning Objectives:

   - Describe IDP including its key steps, attributes, and roles of key professionals.
   - Contrast the conventional design process and the integrated design process.
   - Identify the benefits and challenges of IDP and some lessons learned.

3. **Operational Carbon:**

   Distinguishes and defines the greenhouse gas emissions produced during the day-to-day operations of a building, including energy consumption, transportation, waste management, etc.

   Learning Objectives:

   - Explain the sources of carbon emissions, including the differences between operational and embodied carbon, energy end uses and types, and the link between energy use and carbon emissions.
   - Understand how operational carbon refers to the total greenhouse gas emissions associated with building energy consumption (heating, cooling, ventilation, lighting, and power).
   - Define how and when energy modelling, management, benchmarking, and reporting are leveraged to improve building performance.

4. **Embodied Carbon:**

   Provides an overview of carbon emissions associated with the extraction, manufacturing, transportation, and construction of materials used in buildings or infrastructure projects.

   Learning Objectives:

   - Understand embodied carbon emissions in buildings.
   - Describe whole building Life Cycle Assessments (LCAs) and Environmental Product Declarations (EPDs).
   - Calculate and reduce embodied carbon.
   - Identify standards and considerations for embodied carbon in the market.

5. **Transition Planning:**

   An introduction to a Zero Carbon Transition Plan, which is a costed plan that outlines how a building will adapt over time to remove combustion from building operations. Effective transition planning leverages the natural intervention points in a building's capital plan when retrofits would normally be required.

   Learning Objectives:

   - Understanding of why buildings need a transition plan and how it helps.
   - Explain the components of a transition plan including energy use assessment, mechanical system review, opportunity analysis, adaptation measures, and financial assessment.
   - Practice formulating a transition plan for buildings and asset portfolios.