



Energy Efficiency Training Week Introductory Roundtable

Buildings

*Buildings energy
efficiency sessions
in partnership with:*



**INDO-SWISS BUILDING
ENERGY EFFICIENCY PROJECT**

**UCL ENERGY
INSTITUTE**



1. **Where to start:** Understanding energy use in buildings
2. **Where to start:** Energy efficiency potential in buildings
3. **Toolkit:** Energy efficient building design
4. **Toolkit:** Energy efficient building technologies

Where do I get help? IEA's Technology Collaboration Programmes

5. **Toolkit:** Enabling investment with energy efficiency policies
6. **What are the steps :** Building energy codes and standards

Site Visit: Schneider Electric

7. **What are the steps:** Set targets and develop policies
8. **Did it work:** Evaluating the multiple benefits of energy efficiency
9. **Did it work:** Tracking progress with energy efficiency indicators

Where do I get help? International and regional energy efficiency initiatives

10. **Energy Efficiency Quiz:** Understanding energy efficiency in buildings

- **Brian Dean:** International Energy Agency
- **John Dulac:** International Energy Agency
- **Pierre Jaboyedoff:** Building Energy Efficiency Project (BEEP), India
- **Ian Hamilton:** UCL Energy Institute
- **Thibaut Abergel:** International Energy Agency



- **Introduce yourself:**

- Name
- Organization
- Country
- What do you want out of this week?

- **The next 3 days:**

- Speak up and engage with others
- Ask questions, give answers

1. Where to start: Understanding energy use in buildings

Trainers: Brian Dean and Ian Hamilton

Purpose: To teach the fundamentals of how and why buildings use energy.

Scenario: An influential NGO is urging for all new construction to be zero emission or net zero energy buildings. *What factors are key to achieving zero emission or net zero energy buildings?*

2. Where to start: Energy efficiency potential in buildings

Trainers: John Dulac and Ian Hamilton

Purpose: To teach the fundamentals of the energy efficiency potential in buildings. This includes information on IEA's scenarios analysis modelling to determine potential impacts.

Scenario: You have been asked to create new policies for energy efficient buildings. *How do you determine where to start?*

3. Toolkit: Energy efficient building design

Trainers: Brian Dean and Pierre Jaboyedoff

Purpose: To teach the fundamentals of how building design can reduce energy use in buildings. This course will also describe how an integrated design process and the use of simulation tools can achieve cost effective and energy efficient buildings.

Scenario: Builders are saying that construction timelines are short and it is not possible to design more efficient buildings because it is too complicated. *What changes in building design can enable more energy efficiency in buildings?*

4. Toolkit: Energy efficient building technologies

Trainers: John Dulac and Brian Dean

Purpose: To teach the fundamentals of building technologies and energy efficiency products that can reduce energy use in buildings. This course will discuss building technologies including building envelope, HVAC systems, lighting and controls.

Scenario: Stakeholders are saying that new policies are not possible because the technology is not available that enables increased energy efficiency. *What technologies could change your market for energy efficiency?*

Where do I get help: IEA's Technology Collaboration Programmes

Trainers: Brian Dean and John Dulac

Purpose: To discuss the international network of experts working on research projects, including Energy in Buildings and Communities (EBC), District Heating and Cooling (DHC), Heat pump technology (HPT), and Energy Efficient End-Use Equipment (4E) TCPs.

5. Toolkit: Enabling investment with energy efficiency policies

Trainers: Brian Dean

Purpose: To teach the fundamentals of energy efficiency policies that can be used to reduce energy use in buildings and how energy efficiency policies can enable effective investment and finance for energy efficiency in buildings.

Scenario: You continue to hear from stakeholders that all they need is money and then they will consider doing energy efficiency in buildings. *What policy approaches can be used to enable energy efficiency investment?*

6. What are the steps: Building energy codes and standards

Trainers: Brian Dean and Pierre Jaboyedoff

Purpose: To teach the fundamentals of building energy codes and standards. This course will include discussions of regulation types (e.g. mandatory, voluntary and stretch codes) and compliance paths (e.g. prescriptive, performance and outcome-based).

Scenario: A respected industry association claims that the building energy codes are out of date. *How do you go about testing this claim, and what do you do if this information is correct?*

Site Visit: Schneider Electric: The Hive building tour

Purpose: To see energy efficiency in action and to learn how a company made their building energy efficient.

What to look out for: Try to identify how the building uses energy, what are the opportunities for energy efficiency, what technologies were used to make the building efficient, what are the financial impact of energy efficiency and what benefits are achieved?

7. What are the steps: Set targets and develop policies

Trainers: Brian Dean and John Dulac

Purpose: To teach the fundamentals of how energy efficiency targets and policies can be used in tandem to reduce energy use in buildings and meet energy and development goals.

Scenario: There has been a change of government and the incoming government wants a range of options for interventions to rapidly increase energy efficiency. *How do you identify, prioritise and quantify these policy options?*

8. Did it work: Evaluating the multiple benefits of energy efficiency

Trainers: Brian Dean and John Dulac

Purpose: To teach the fundamentals of how to evaluate both energy and non-energy benefits (the multiple benefits) of energy efficiency for buildings. This course will use work that has been completed to evaluate the monetised value of energy efficiency measures using numerous categories for multiple benefits.

Scenario: You understand that there are more benefits to energy efficiency beyond just the energy savings. *How do you determine the benefits of your policies and programmes?*

9. Did it work: Tracking progress with energy efficiency indicators

Trainers: John Dulac

Purpose: To teach the fundamentals of tracking progress with energy efficiency indicators that are applicable to the buildings sectors. The course will include a discussion of IEA's methodologies and how to collect or model data that can be used to estimate progress from energy efficiency efforts.

Scenario: The Minister wants to know how effective the building energy efficiency policies have been. *How do you go about answering this?*

Where do I get help: International and regional initiatives

Trainers: Brian Dean and Pierre Jaboyedoff

Purpose: To discuss the Building Efficiency Accelerator (BEA), the Global Alliance for Buildings and Construction (GABC), World GBC, BEEP India, PEEB, and other international and regional initiatives.

10. Energy Efficiency Quiz: Understanding energy efficiency in buildings

Trainers: Brian Dean and John Dulac

Purpose: To test knowledge and discuss the fundamentals of energy efficiency in buildings that were learned throughout this week's 3-day buildings course.



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