



zero

Our vision
A world where buildings
consume zero net energy

Energy Efficiency in Buildings



World Business Council for
Sustainable Development

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Buildings use about one-third of the world's energy. That must stop; and business is developing a **roadmap** showing how to make it happen.

We want to start cutting energy use now. Buildings should put back into the system at least as much energy as they take out. Reduced energy use in buildings will lead to lower CO₂ emissions and help to stabilize climate change.

Leading companies in the building, equipment and energy industries launched Energy Efficiency in Buildings (EEB) with the World Business Council for Sustainable Development (WBCSD) in March 2006. The project brings together companies worldwide which are determined to **remove barriers** to energy-efficient concepts in new and existing buildings.

facts & trends



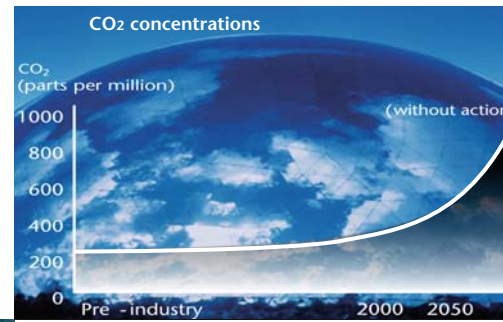
roadmap



We need to start changing attitudes to energy now

A key part of the project will be frequent communication and events around the world, engaging opinion leaders and stimulating debate.

call to action



The graph shows the likely dramatic build-up of CO₂ and other greenhouse gases in the atmosphere, threatening to produce global warming and climate change. Such change can be limited by a more efficient use of energy, as well as by switching to different sources such as wind and solar.

Changing the business climate

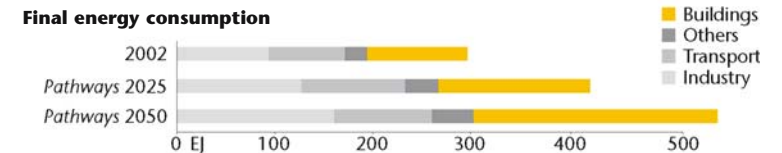
Efficient energy use matters because fossil fuels are limited, countries need energy security, and carbon dioxide (CO₂) produced by burning fossil fuels appears to be changing our climate. Most of the energy used in buildings is generated by fossil fuels.

Everyone concerned with buildings has

Buildings should consume zero net energy

Already one of the main users of energy, buildings are expected to consume more and more as populations grow and economies develop. The chart below (based on projections in the WBCSD's publication *Pathways to 2050: Energy and Climate Change*) suggests that if energy consumption in buildings rises at projected rates, buildings will use almost as much energy as industry and transport combined by 2050.

But the technology exists today to prevent this from happening. There are already residential buildings around the world that generate as much energy as they use. The main obstacles to achieving our vision are market structures and practices, more than technical difficulties.



The project's scope

- **Residential and commercial buildings** – but not industrial processes
- **The entire life cycle** - but focus on the operation of buildings, which accounts for the vast majority of their lifetime energy use
- **Retrofitting** as well as new builds
- **Developing** as well as developed countries, with a focus on Brazil, China, India, Japan, the European Union and the United States
- **Other sustainability aspects** such as water, health and safety

What we will do

We will work for three years to map how to **transform** the building industry, using a business perspective, from finance and design to operation. We will gather information to understand the barriers to change. We will identify what needs to change at each stage of the value chain and how to make change happen. In 2009 we will issue a **call to action** to everyone involved with energy consumption in buildings.



Our target is all buildings, everywhere

The EEB project will map out the transition to a 2050 world in which buildings use **zero net energy**. They must also be aesthetically pleasing and meet other sustainability criteria, especially for air quality, water use and economic viability.

We will identify immediate steps that will begin to change the business climate that influences everyone in the buildings value chain.



to change the way they think about energy



Other initiatives

This project is one of several around the world focusing on this important aspect of climate change. Others include work by the International Energy Agency (IEA), the UN Environment Programme's (UNEP) Sustainable Building & Construction Initiative, and the European Union. We aim to complement such initiatives, contributing our particular focus on the building business climate, using the market to bring about change.

How we will work

This project will run for three years. Workshops and conferences will be held in Brazil, China, Europe, India, Japan and the US.

- First** we will gather facts and key trends.
- Then** we will identify what needs to change.
- Next** we will develop a roadmap.
- Finally** in 2009 we will deliver a call for action to achieve a world where buildings consume zero net energy.

Throughout the process we will engage with stakeholders, seeking ideas and opinions, using market research to understand the barriers and how to overcome them.

An assurance group will be appointed to provide high-level advice and validation. It will be chaired by former UNEP Executive Director Klaus Töpfer and will consist of six to eight members who are leaders in their fields and come from government, academia and non-governmental organizations. They will provide oversight to ensure the project's legitimacy and objectivity.



“We have to act on climate change. Buildings are key energy users. They must play their part in cutting emissions, and the technology exists to do that.”

Björn Stigson, President, WBCSD



*The EEB project is also financially supported by Arcelor, BP and Rio Tinto.

Who we are

The project's core group currently consists of the WBCSD members above with Lafarge and United Technologies Corporation as co-chairs.

The World Business Council for Sustainable Development (WBCSD) is a coalition of some 180 international companies from more than 30 countries sharing a commitment to sustainable development. Much of its work is carried out through Focus Areas and projects developing sustainability themes and actions. Energy Efficiency in Buildings is one of those projects.

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