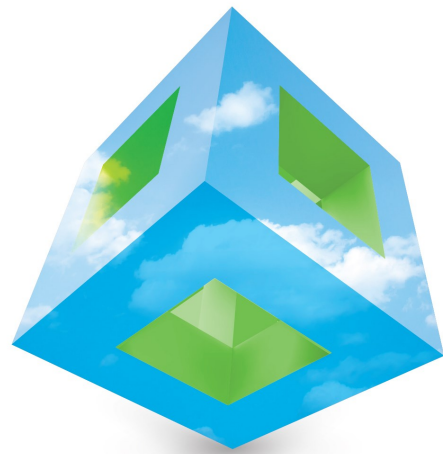


MANIFESTO FOR **ENERGY EFFICIENCY IN BUILDINGS**

IMPLEMENTATION GUIDE

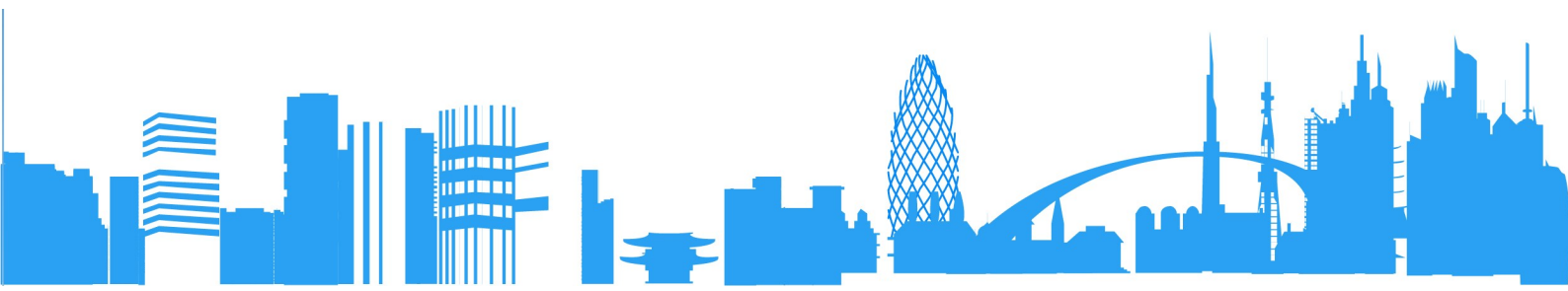
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About the World Business Council for Sustainable Development

The World Business Council for Sustainable Development (WBCSD), a CEO-led organization of some 200 forward-thinking global companies, is committed to galvanizing the global business community to create a sustainable future for business, society and the environment. Together with its members, the council applies its respected thought leadership and effective advocacy to generate constructive solutions and take shared action. Leveraging its strong relationships with stakeholders as the leading advocate for business, the council helps drive debate and policy change in favor of sustainable development solutions.

The WBCSD provides a forum for its member companies — who represent all business sectors, all continents and a combined revenue of more than US\$8.5 trillion, 19 million employees — to share best practices on sustainable development issues and to develop innovative tools that change the status quo. The council also benefits from a network of 70 national and regional business councils and partner organizations, a majority of which are based in developing countries.



Introduction

The Manifesto for Energy Efficiency in Buildings Implementation Guide is intended to provide general guidance to organizations who have signed the WBCSD Manifesto for Energy Efficiency in Buildings (EEB Manifesto).

Signatories may choose to operate within the general framework defined in this implementation guide. However, this guide is not intended to replace or reinvent pre-existing policies or practices, or an energy reporting system already in place. Rather, it is suggested that organizations who have not yet developed their own building energy policy or reporting systems use this implementation guide as a starting point.

Further, as there is no existing internationally recognized reporting standard for EEB, this guide will be periodically reviewed and updated by the WBCSD.

This implementation guide suggests a framework under which the EEB Manifesto's five actions could be implemented, with the aim of reducing energy use and CO₂ emissions from commercial buildings that organizations use, own or manage.

Definition: Commercial Buildings

The term “commercial buildings” means non-residential buildings and includes not only buildings used for commercial purposes (outlets, stores), but also offices, laboratories, computer centers, training centers, manufacturing sites, etc.

Guidance on the Manifesto's Five Actions

Action 1: Establish a baseline

Establish a baseline of energy use in the buildings' an organization controls and set time-based energy and/or CO₂ reduction targets in line with transformative change.

Organizations need to collect information about their “**building stock**” (offices, outlets, laboratories, computer centers, training centers, office) in order to create a comprehensive baseline against which progress can be measured over time.

The scope of the baseline is an organizations “**building universe**”. A building universe could be defined progressively over time; that is, it may start with a selected type or set of building sizes and increase to the full set of commercial buildings over time to allow best practices and policies to develop.

There is no rule or guideline that delineates how much building area must be represented in terms of percentage of square footage or percentage of energy used by the organization. It is recommended that the lowest performing buildings be addressed in the first phase of implementation.

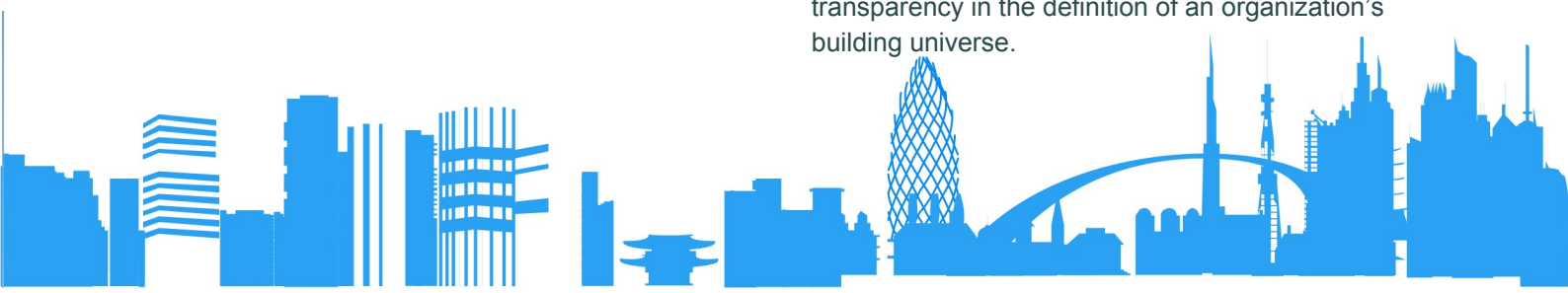
The following types of commercial buildings should be included in the baseline:

- The organization is an owner-occupier
- The organization is renting or leasing
- The organization is an owner but rents out to a tenant
- The organization is managing commercial space on behalf of the owner.

This implementation guide covers only commercial buildings (See the definition of “commercial” in the above).

Mixed-use buildings

For mixed-use buildings, it is recommended that the organizations use their best judgment when deciding whether to include or exclude all or part of the commercial space. However, in the spirit of the EEB Manifesto, there should be consistency and transparency in the definition of an organization's building universe.



Climate Conditions

To take into account different climate conditions, building regulations, local building tradition and end-user behaviors, it is suggested that the organization defines its building stock by country or region.

Baseline data

Detailed baseline data should include the following:

Measure	Data
Building Location	Address
Building type and age	e.g. Office, shop, hotel, training center
Size	Gross and net floor area, number of floors, shape
Equipment	Shared equipment such as HVAC systems, dedicated equipment
Type of use	Permanent, intermittent, high frequency, 24/7, occupancy rate
Final energy use	From energy bills, surveys, or other means best from the last 5 years
CO ₂ emissions	Calculated with nationally recognized conversion rates and following the GHG protocol.

The proposed six baseline metrics are the following:

Baseline Metrics

- kWh/year, kWh/m² and kWh/occupancy rate
- tCO₂/year, tCO₂/m² and tCO₂/occupancy rate.

Organizations should choose the metrics that are the most pertinent for them, be they listed above or not.

Data collection should be consistent over time and across countries and regions.

Establishing time-based reduction targets

After establishing the baseline, the organization should

set targets for the energy and CO₂ reductions of its building universe. The organization is free to define its level of reduction targets and its associated time line.

To be in line with the Transforming the Market report, we recommend a range of 10% to 20% per decade energy and CO₂ reduction compared to the baseline across the buildings universe.

Action 2: Publish a policy for minimum energy performance levels in the organization's commercial buildings.

Organizations should define energy performance standards depending on the type of commercial space and the habitation status. These may be one of the following:

- The organization is an owner-occupier
- The organization is renting or leasing
- The organization is an owner but rents out to a tenant
- The organization is managing commercial space on behalf of the owner
- The organization is about to begin a new lease
- The organization is specifying a new building.

These policies should be introduced at the organizational level and tailored to various countries to take into account local market conditions, costs, codes, labels and supply capabilities.

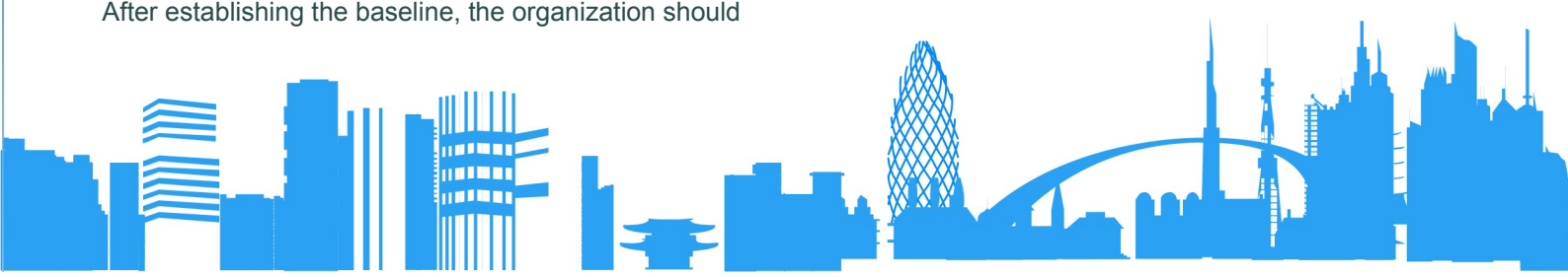
Organizations should consider demonstrating leadership by setting ambitious policies to create the market pull that is needed for a real market transformation.

Action 3: Define and carry out an audit program and implementation a strategy to meet energy targets for its buildings.

For existing buildings, robust energy audits need to be carried out to define cost effective strategies to reduce energy use in buildings.

The strategies need to be formulated in accordance with the six types of commercial space defined above.

We recommend using internal trained professionals or third party auditing.



Action 4: Report on Progress

Annually publish buildings' energy use, CO2 emissions and progress against reduction targets annually in the annual report or other publicly available documents

Within three years of signing and committing to the Manifesto, the organization should publish each year, in their annual report or in any other publicly available documents, the following:

1. Company's "commercial building universe" baseline, ideally including the proposed metrics
2. Company's self-imposed time-based reduction targets on energy use and CO2 emissions
3. Company's progress compared to this target
4. Company's policy for energy use and CO2 emissions in existing and new buildings .

Action 5: Advocacy

Further promote energy efficiency among employees and other stakeholders through advocacy, R&D, education and training.

Behavior change is the underlying premise of this action – brought about by reinforcing promotional efforts from the organizations participating in this Manifesto.

There are 5 key principles to this promotional premise, with underlying responsibility of the organizations to raise these aspects externally among suppliers, employees and other stakeholders.

1. Advocacy

demonstrate to government and non-governmental organizations that you support the energy efficiency in buildings (EEB) cause

participate in campaigns that seek to change the status quo/business as usual mindset; and

recommend/shape policy and regulatory actions that affect how people choose to be more energy efficient;

2. Marketing activity

Increase campaigns and literature about energy efficiency in products/services;

show linkages to choices and their impact on energy use;

raise awareness of the role / responsibility of buildings in cost-effective energy reduction and climate change;

3. Research and development

Demonstrate your company's commitment to a market for technological edge and to leadership on investing in future advancement;

signal / entice the market with forthcoming energy-efficient products and services;

work with governments to increase R&D investments and collaborative efforts in the EEB space;

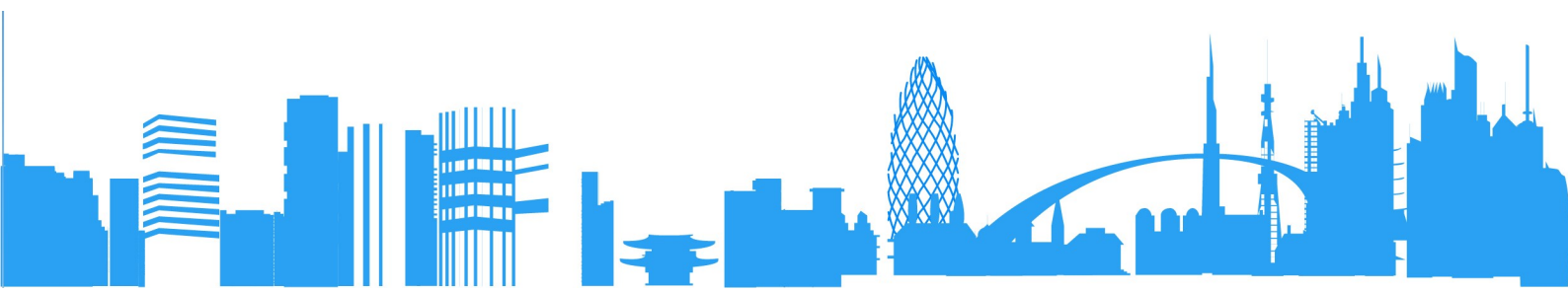
4. Education

Raise awareness and enhance capacity building towards changing the mindset for increased energy-efficiency outcomes

5. Training

Provide skills and know-how to stakeholders so that they are armed with the right know-how and capability to reduce energy and carbon footprints.

The organization should define metrics and report on measures taken to promote energy efficiency in buildings, and metrics and measures to change stakeholder behaviour and mind-set.



Manifesto for Energy Efficiency in Buildings Signatories

ABB	BNP Paribas*	Ernst & Young LLP	Novozymes	The Yokohama Rubber Co., Ltd.
Acciona	Borusan Holding A.Ş. ***	Eskom Holdings Limited	Philips	TNT
Actelios / Falck Group	Boyner Holding A.Ş. ***	Fook Tin group**	Public Power Corporation (PPC S.A.)	TNT Express ***
Adidas	BP Turkey ***	Fortum	RATP*	Toyo Rubber
AECOM Asia**	Bridgestone	Gammon Construction **	Rideau Recognition Corporation	Toyota
AGC	BursaGaz A.Ş. ***	GDF SUEZ*	Roche	Tüpraş ***
Air France *	Caisse des Depots*	GHD Pty Ltd	S.C Johnson & Son, Inc	Turkco İnşaat Enerji Ltd. Şti. ***
Akçansa Çimento Sanayi ve Ticaret A.Ş. ***	Cathay Pacific**	Goodyear	Saint Gobain*	Türkiye Garanti Bankası A.Ş. ***
Akzo Nobel	CEMEX	Greif, Inc	Schneider Electric	Unilever
American Electric Power	Chubu Electric Power	Grundfos	Şekerbank T.A.Ş. ***	Unilever Türkiye ***
Anadolu Efes Biracılık ve Malt Sanayi A.Ş. ***	Chunghwa Telecom Co., Ltd.	GS Caltex Corporation	SGS	UTC
Axa *	Cimento Liz	GS Engineering & Construction	Shell Türkiye ***	Ven ESCO Bina Enerji Yün. Dan. San. ve Tic. A.Ş. ***
Aygaz A.Ş. ***	CIMPOR	H.S.E. Hitit Solar Enerji A.Ş. ***	Siemens **	Vestas
BASF**	Çimsa Çimento Sanayi ve Ticaret A.Ş. ***	Hactl**	Sika Group	Vodafone Türkiye ***
BC Hydro	CLP Holdings Limited	Hang Lung Properties**	Sino Group**	Votorantim Cimentos
BCSD Austria (RespAct)	Codelco	Heidelberg Cement	Skanska	WBCSD
BCSD China (CBCSD)	CPC Corporation	Hitachi Chemical	Societe Generale*	Yeşil Enerjili Sistemler Enerji İnş. Mad. Tarım Gıda İşletmeleri ***
BCSD Colombia (CECODES)	Dassault Systemes	Hong Kong Airport Authority**	Solvay*	
BCSD Ecuador (CEMDES)	Dekon, Congress & Tourism, Kongre ve Turizm Hizm A.Ş. ***	HongKong Electric**	Sonae Sierra	
BCSD France (EpE)	DENSO Corporation	HongKong International Terminals**	Store Brand	
BCSD Honduras	Deutsche Bank	Infosys	Sumitomo Chemicals	
BCSD Hong Kong (Business Environment Council)	DnB NOR ASA	Italcementi	Sumitomo Rubber Industries	
BCSD Korea	Dong Energy	ITT	Suncor	
BCSD Philippines (PBE)	Duke Energy	Kansai	SVS Strateji, Değerlendirme ve Danışmanlık Ltd. Şti. ***	
BCSD Spain (Fundacion Entorno)	Dupont	La Poste	Swire Pacific**	
BCSD Sri Lanka	Eczacıbaşı Holding A.Ş. ***	Lafarge	Swire Properties and **	
BCSD Taiwan	EDF *	Masisa	TAV Grubu ***	
BCSD Turkey	Eiffage *	Metsaliitto	Telecom Italia	
BCSD US (USBCSD)	Enerjisa Enerji A.Ş. ***	MTR**	TEPCO	* Signed through BCSD Hong Kong
BeCitizen*	ERM (Environmental Resources Management Group)	Nissan	The Link Management LTD **	** Signed through EpE
		Novartis		*** Signed through BCSD Turkey

This publication is part of the EEB 2.0 project

