

# EUWP and the BCG:

WORKING PARTY ON END-USE TECHNOLOGIES

BUILDING CO-ORDINATION GROUP



MINISTRY OF  
INDUSTRY AND TRADE

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Ministry of Industry and Trade  
of the Czech Republic



# „From Energy Efficient Buildings to Smart Cities“

March 26<sup>th</sup> 2012

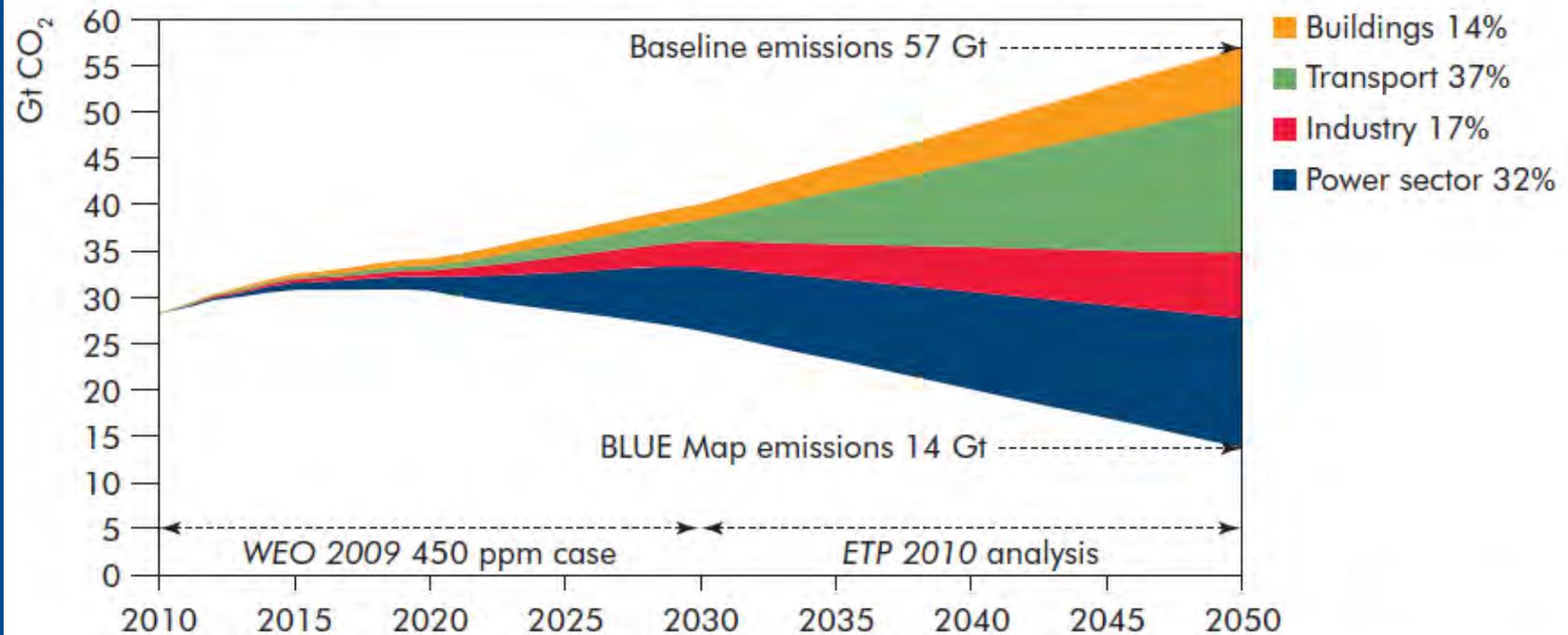


- ➔ INTRODUCTION
- ➔ BUILDING SECTOR
- ➔ IEA NETWORK
- ➔ EUWP
- ➔ BCG
- ➔ CLOSING REMARKS



# Role of Building sector

**Figure 2.3** ► CO<sub>2</sub> emissions reductions in the BLUE Map scenario by sector



Note: CO<sub>2</sub> emission savings from fuel transformation have been allocated to the transport sector and the CO<sub>2</sub> reductions from electricity savings are allocated to end-use sectors.

## Key point

*The share of end-use sectors in emissions reductions increases between 2030 and 2050.*

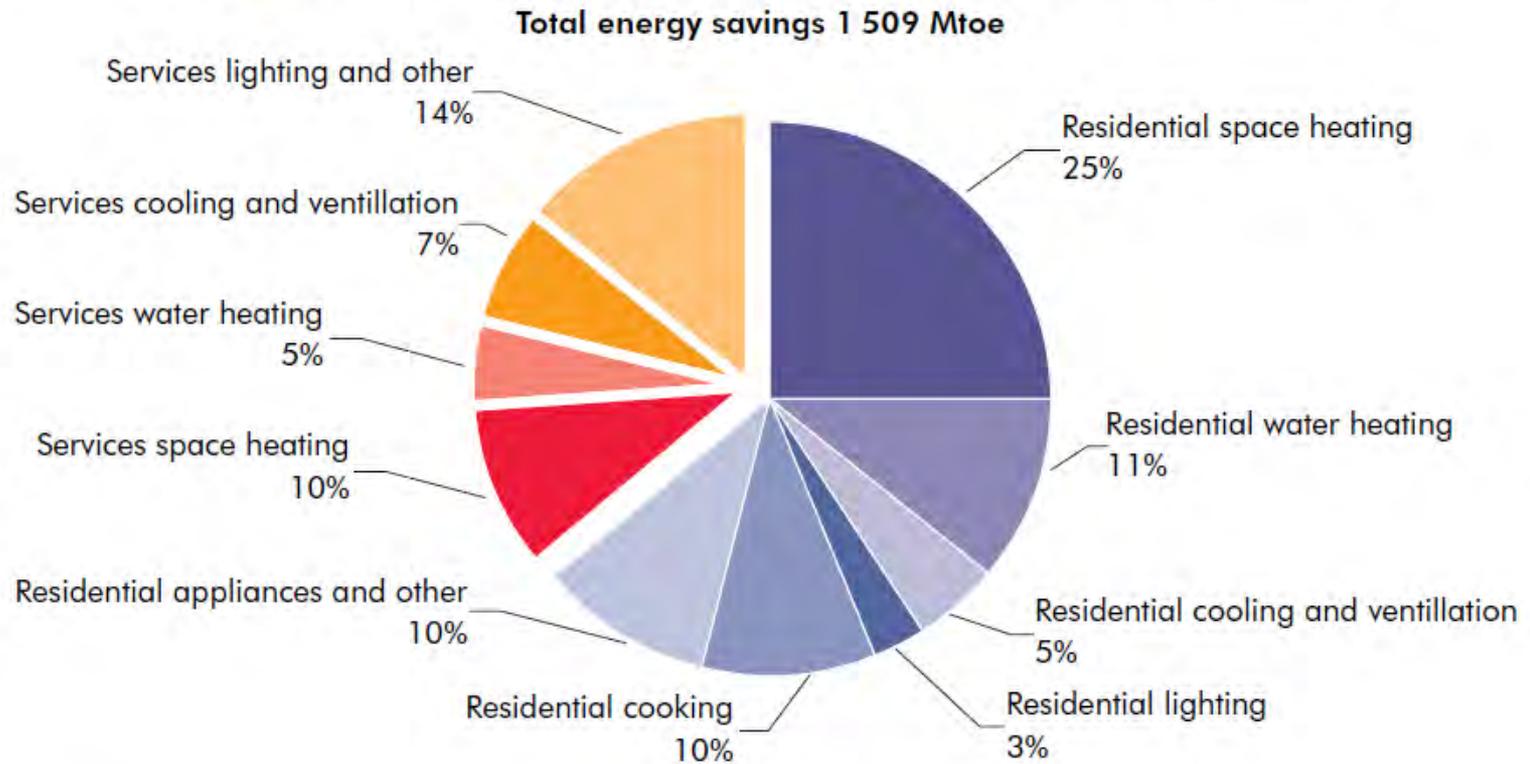
# Buildings share of primary energy consumption

Country	Share of PE	Country	Share of PE
Australia	17%	Austria	34%
Canada	33%	Denmark	45%
Finland	33%	France	45%
Germany	45%	Italy	35%
Japan	41%	Netherlands	36%
Norway	26%	Spain	32%
Sweden	40%	Switzerland	49%
UK	44%	US	42%



# Energy savings in residential and service sector until 2050

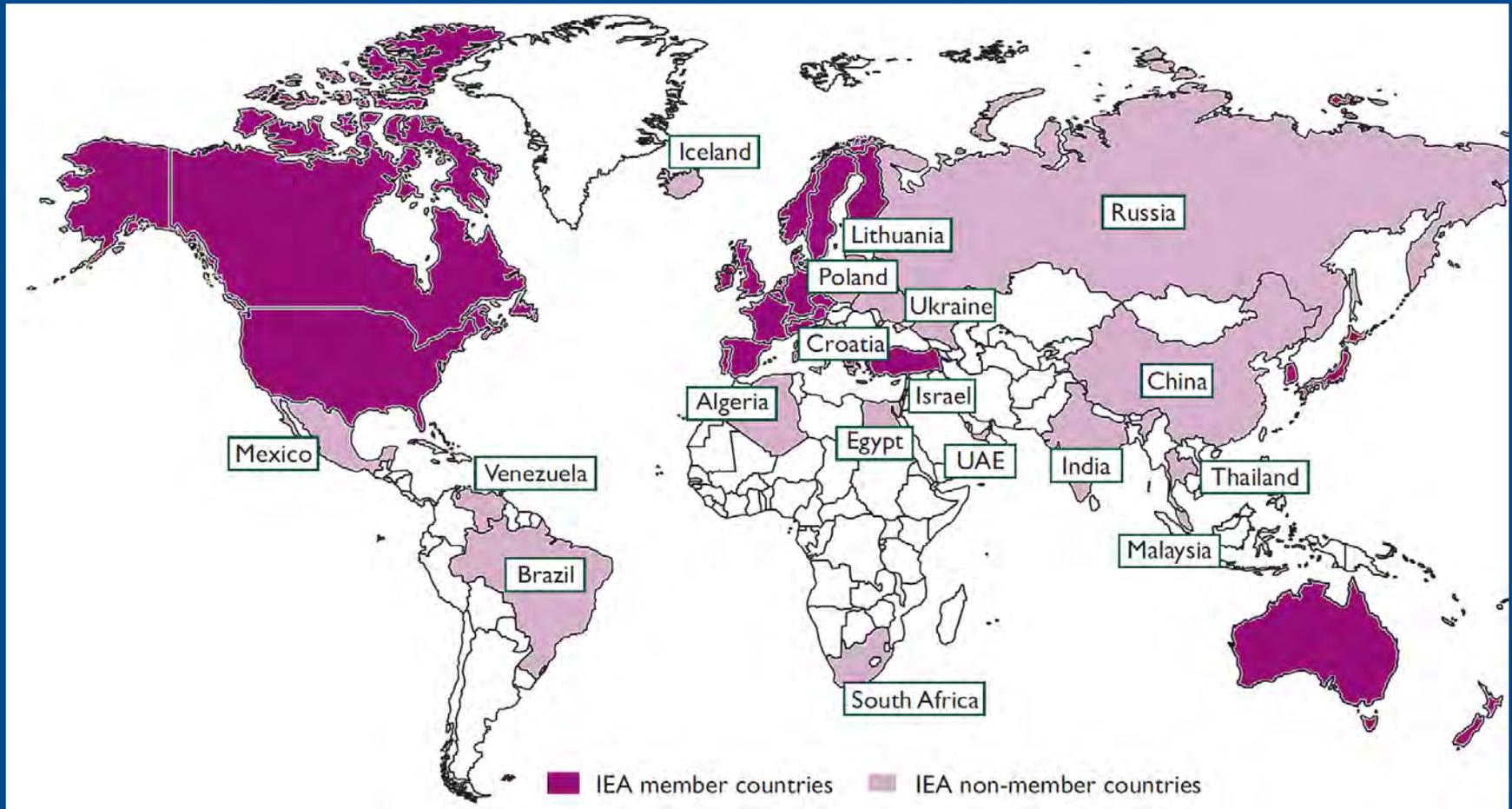
**Figure 6.14** ▶ Buildings sector energy savings by sector and by end use, 2050



## Key point

*Two-thirds of the energy savings in the BLUE Map scenario come from the residential sector.*

# IEA Network



6,000 scientists, experts, researchers, consultants  
500 universities, labs, government offices companies, consultants

Source: IEA

# EUWP

## *Mission, Vision, Objectives*

The EUWP is focused on the IEA's extensive international network of RD&D technologies to increase the efficiency of energy end-use technologies.

The network is comprised of 17 **Implementing Agreements** - for cooperative research, development and demonstration in buildings, industry, transport and electricity network technologies.

The network has more than 150 contracting parties from more than 30 countries to guide the work. Under their leadership the national experts collaborate on joint research projects. Outreach to industry and other experts involve thousands of research activities.



# EUWP



EUWP Chair - Carlos Lòpez Lòpez (Spain)

2012 meetings:

- Spring - Vienna:
  - Workshop on 26<sup>th</sup> March: „From Buildings to Smart Cities“
  - EUWP Meeting on 27 – 28th March
- Fall - Paris

2012 Business:

- New Strategy Plan 2013-2016

BCG

# BUILDING CO-ORDINATION GROUP

- ➔ BRIAS - Building Related IAs
- ➔ Other co-operation

**Paris 15<sup>ème</sup> Métro Lourmel**  
**458 000 Euros**  
Honoraires compris



Paris 15<sup>e</sup> Lecourbe Maison de ville R+1 de **3 pièces** de 57 m<sup>2</sup> en bon état avec terrasse privative de 30 m<sup>2</sup> comprenant : entrée, salle à manger, séjour avec cheminée, cuisine indépendante, salle de bains avec wc, à l'étage une chambre + mezzanine pour 2<sup>e</sup> chambre.

Consommations énergétiques

Logement économe	Logement
10 à 20 A	
21 à 30 B	
31 à 50 C	
51 à 70 D	
71 à 100 E	
101 à 150 F	
151 à 210 G	
211 à 330 H	
331 à 450 I	
451 à 600 J	
601 à 800 K	
801 à 1000 L	
	333 kWh/m <sup>2</sup> an

Emissions de gaz à effet de serre

Faible émission de GES	Logement
5 A	
6 à 10 B	
11 à 20 C	
21 à 35 D	
36 à 55 E	
56 à 80 F	
81 à 110 G	
111 à 150 H	
151 à 200 I	
201 à 250 J	
251 à 300 K	
301 à 350 L	
351 à 400 M	
401 à 450 N	
451 à 500 O	
501 à 550 P	
551 à 600 Q	
601 à 650 R	
651 à 700 S	
701 à 750 T	
751 à 800 U	
801 à 850 V	
851 à 900 W	
901 à 950 X	
951 à 1000 Y	
	18 kgCO <sub>2</sub> /m <sup>2</sup> an



# BRIAS

IEA WP	SECTOR	IAs
EUWP	BUILDINGS	Heat Pumping Programmes
EUWP	BUILDINGS	Energy Efficient Electrical Equipment
EUWP	BUILDINGS	Buildings and Community Systems
EUWP	BUILDINGS	District Heating & Cooling
EUWP	BUILDINGS	Energy Storage

The following IAs also provide bi-annual progress reports to the EUWP vice chairs and participate in the BCG meeting:

EUWP	ELECTRICITY	Demand Side Management
REWP		Photovoltaic Power Systems
REWP		Solar Heating and Cooling
REWP		ISGAN



# BRIAs – Building Related IAs



# BCG – OTHER CO-OPERATION

- ➔ LCTP - International Low-Carbon Energy Technology Platform
- ➔ NEET Initiative (Networks of Expertise in Energy Technology)
- ➔ Energy Efficiency - in buildings and industry
  - ➔ BRIAs
  - ➔ SBN
  - ➔ IETS IA
  - ➔ IPEEC



# BCG Meeting

## Objective

The aim of this meeting was:

- ➔ To provide an update on relevant topics, including highlights of new, potential and proposed tasks or annexes.
- ➔ To discuss and share lessons learned and short and medium term Implementing Agreement (IA) gaps and RD&D needs.
- ➔ To discover opportunities for collaborative IA activities
- ➔ To give an overview of new and ongoing IEA secretariat initiatives and the opportunity to provide input on those for the IAs.



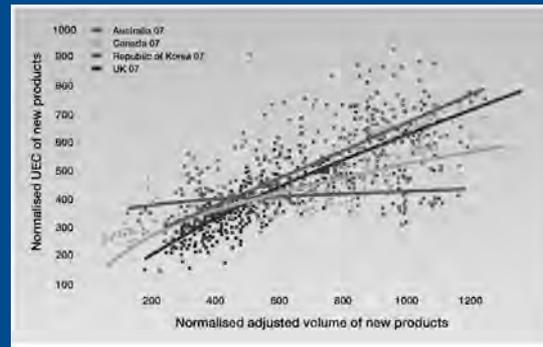
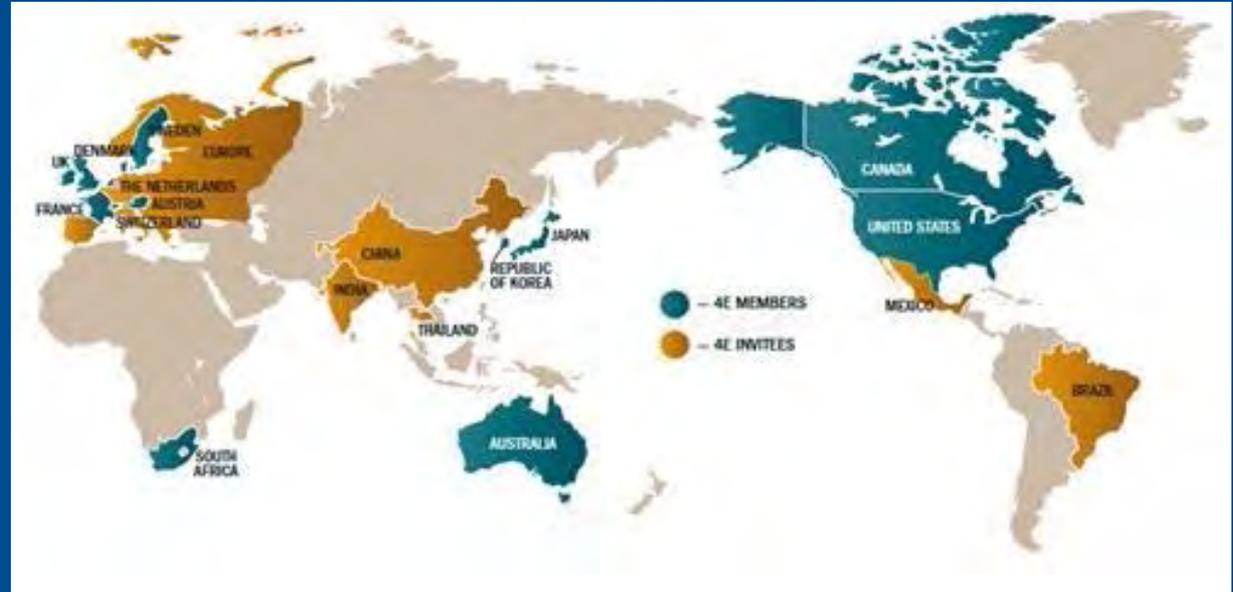
# The IEA Heat Pump Programme

- Austria
- Canada
- Finland
- France
- Germany
- Italy
- Japan
- Netherlands
- Norway
- South Korea
- Sweden
- Switzerland
- The United States
- The United Kingdom



[www.heatpumpcentre.org](http://www.heatpumpcentre.org)

# EFFICIENT ELECTRICAL END-USE EQUIPMENT



## Potential for Improvement

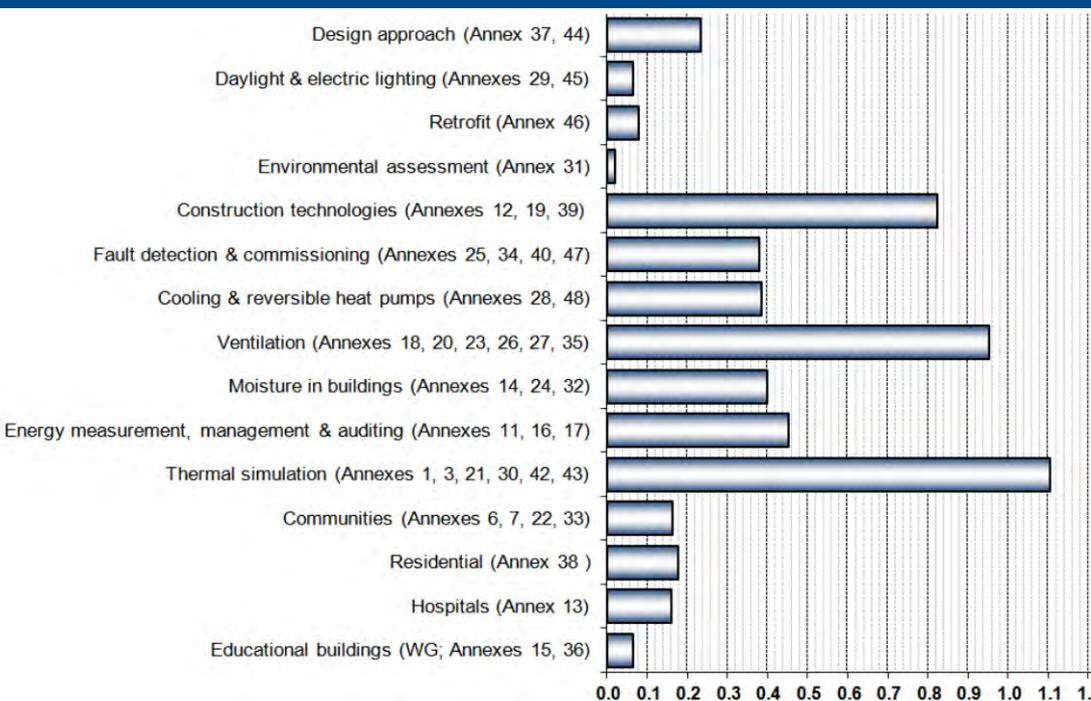
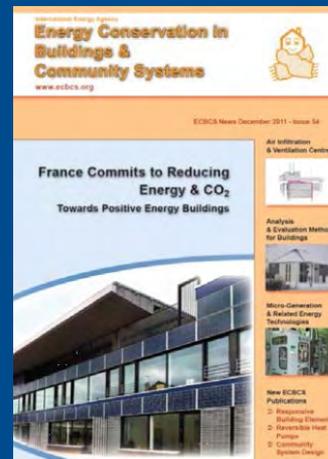
The energy consumption of similar sized products varies considerably indicating significant scope for improvement.

The UK has the most efficient smaller units, whereas the Republic of Korea has the most efficient larger units. If the four countries shown matched these average efficiencies, a typical fridge-freezer would use 20% less energy.

[www.iea-4e.org](http://www.iea-4e.org)

# ENERGY CONSERVATION IN BUILDINGS & COMMUNITY SYSTEMS PROGRAMME

[www.ecbcs.org](http://www.ecbcs.org)



- Australia
- Germany
- Poland
- Austria
- Greece
- Portugal
- Belgium
- Ireland (new)
- Spain
- Canada
- Italy
- Sweden
- P.R. China
- Japan
- Switzerland
- Czech Republic
- Republic of Korea
- Turkey
- Denmark
- Netherlands
- UK
- Finland
- New Zealand
- USA
- France
- Norway

[www.iea-4e.org](http://www.iea-4e.org) Approximately 1.7 million report downloads in

# DISTRICT HEATING AND COOLING

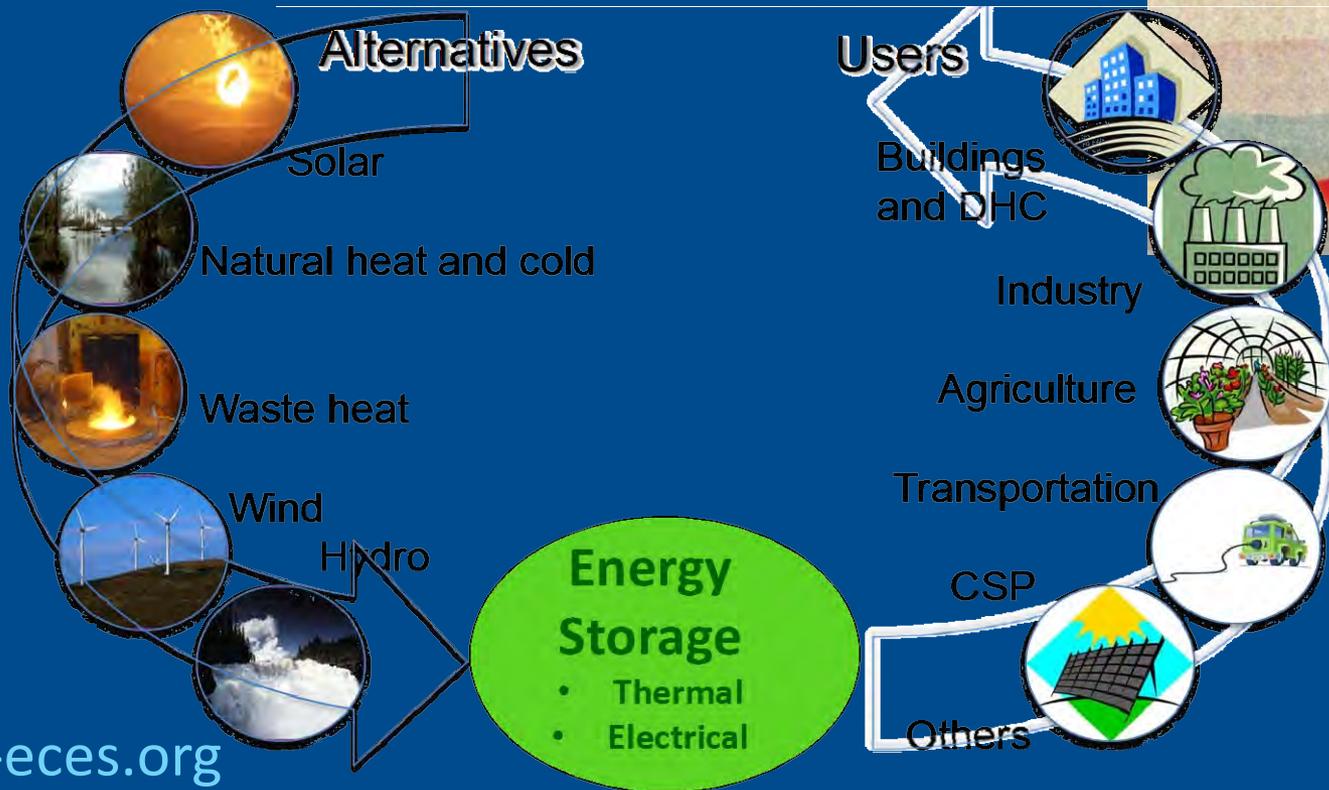
- ➔ Canada
- ➔ Denmark
- ➔ Finland
- ➔ Republic of Korea
- ➔ Germany
- ➔ Norway
- ➔ Sweden
- ➔ United Kingdom
- ➔ United States of America



[www.iea-dhc.org](http://www.iea-dhc.org)

# ENERGY CONSERVATION THROUGH ENERGY STORAGE PROGRAMME

- ➔ Belgium
- ➔ Canada
- ➔ China
- ➔ Finland
- ➔ France
- ➔ Germany
- ➔ Italy
- ➔ Japan
- ➔ Korea
- ➔ Norway
- ➔ Sweden
- ➔ Turkey
- ➔ USA



[www.iea-eces.org](http://www.iea-eces.org)

# DEMAND-SIDE MANAGEMENT

- ➔ Austria
- ➔ Canada
- ➔ Finland
- ➔ France
- ➔ Greece
- ➔ India
- ➔ Italy
- ➔ Republic of Korea
- ➔ Netherlands
- ➔ Norway
- ➔ Spain
- ➔ Sweden
- ➔ Switzerland
- ➔ United Kingdom
- ➔ United States

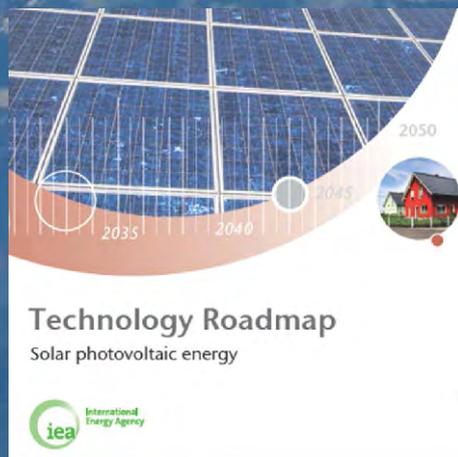


[www.ieadsm.org](http://www.ieadsm.org)

# PHOTOVOLTAIC POWER SYSTEMS PROGRAMME

26 members

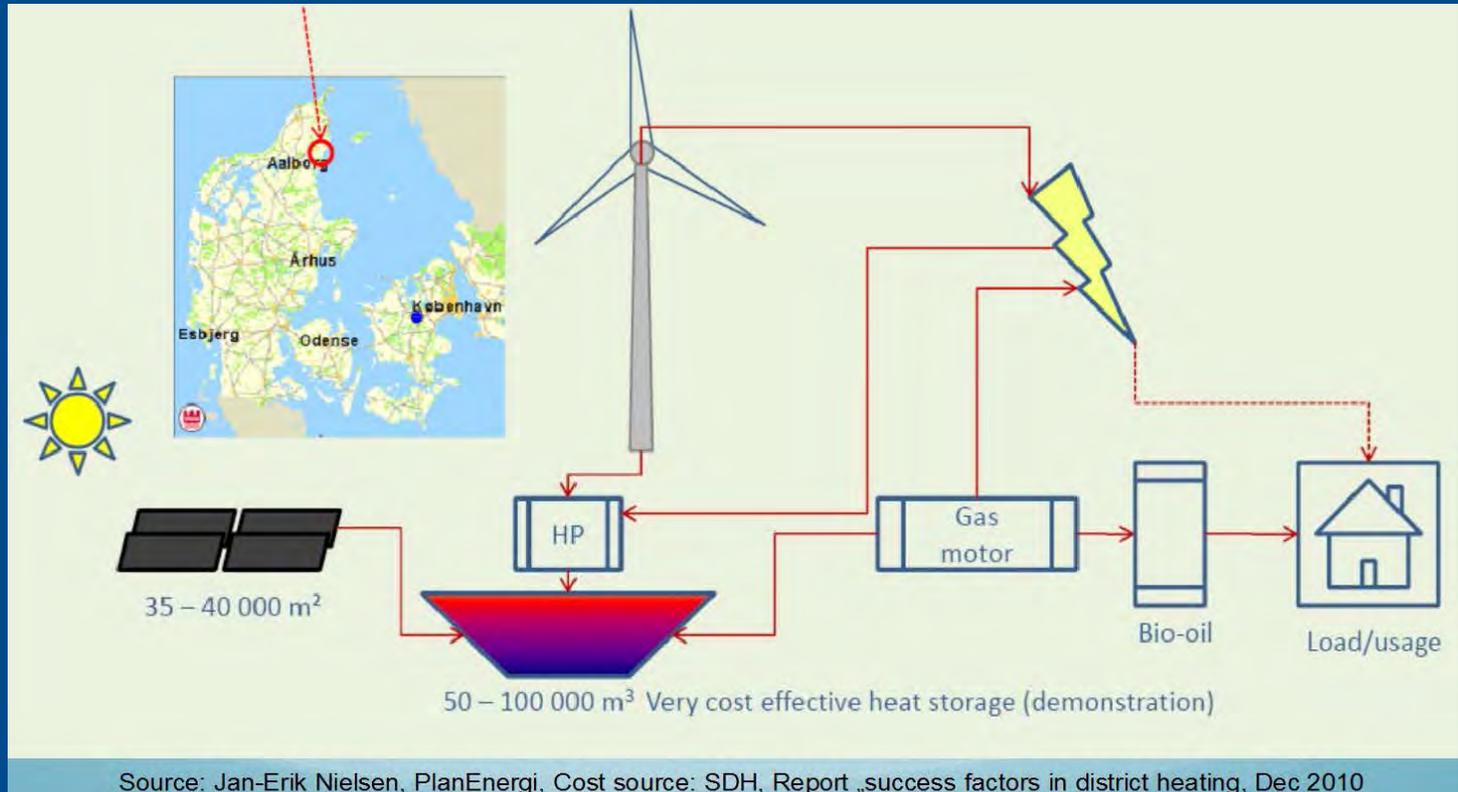
7 Tasks



[www.iea-pvps.org](http://www.iea-pvps.org)

# SOLAR HEATING & COOLING PROGRAMME

20 countries



Source: Jan-Erik Nielsen, PlanEnergi, Cost source: SDH, Report „success factors in district heating, Dec 2010

[www.iea-shc.org](http://www.iea-shc.org)

# INTERNATIONAL SMART GRID ACTION NETWORK

21 countries

## Foundational Annexes



## Emphases



[www.iea-iskan.org](http://www.iea-iskan.org)

# RE-thinking 2050

Source: EC



EUWP Workshop  
March 26<sup>th</sup>, 2012  
AIT, Vienna



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# Thank you for your attention

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