



**Sustainable
United Nations**



**UNEP SBCI
Sustainable Buildings &
Construction Initiative**



Building Tomorrow

***Thinking Outside the Box
IMO, London,
30 April 2009***

***C
Head, Sustainable UN
UNEP***

Building a Better Tomorrow

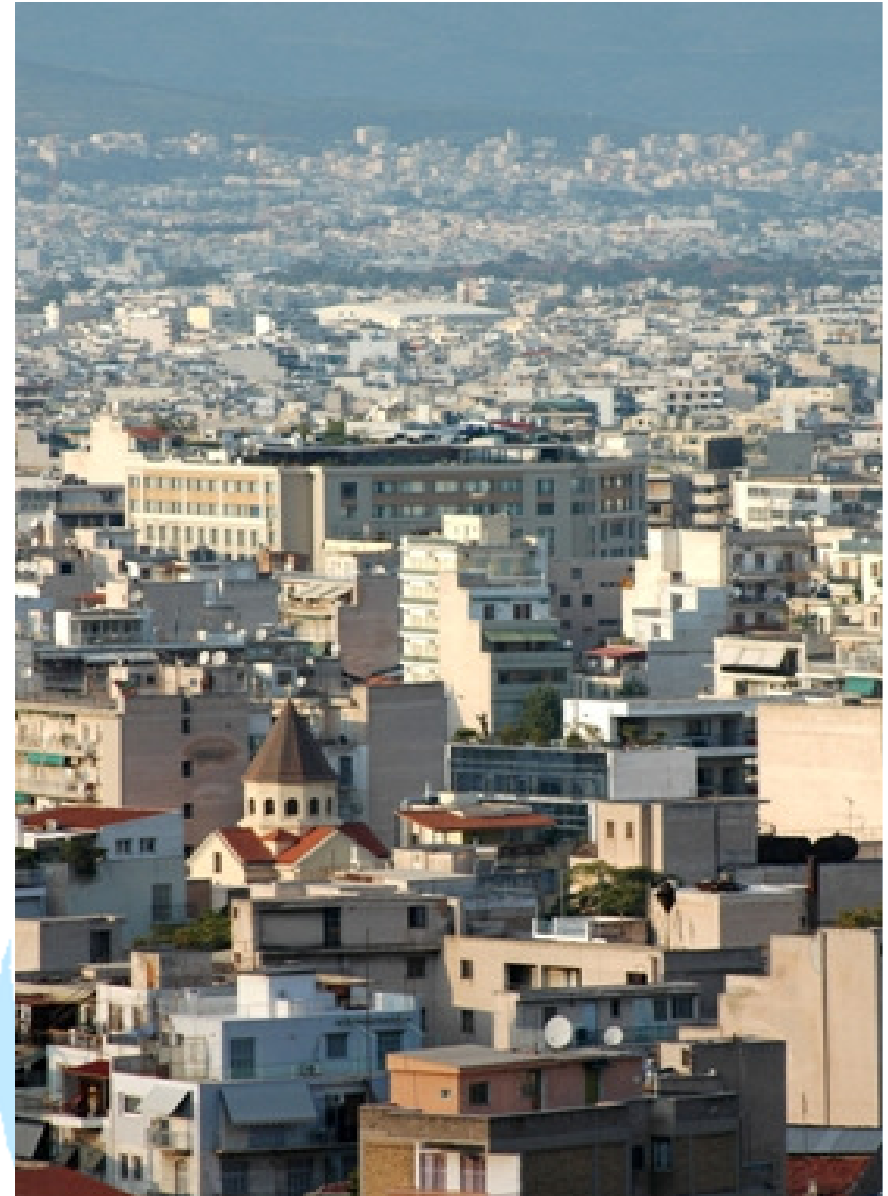
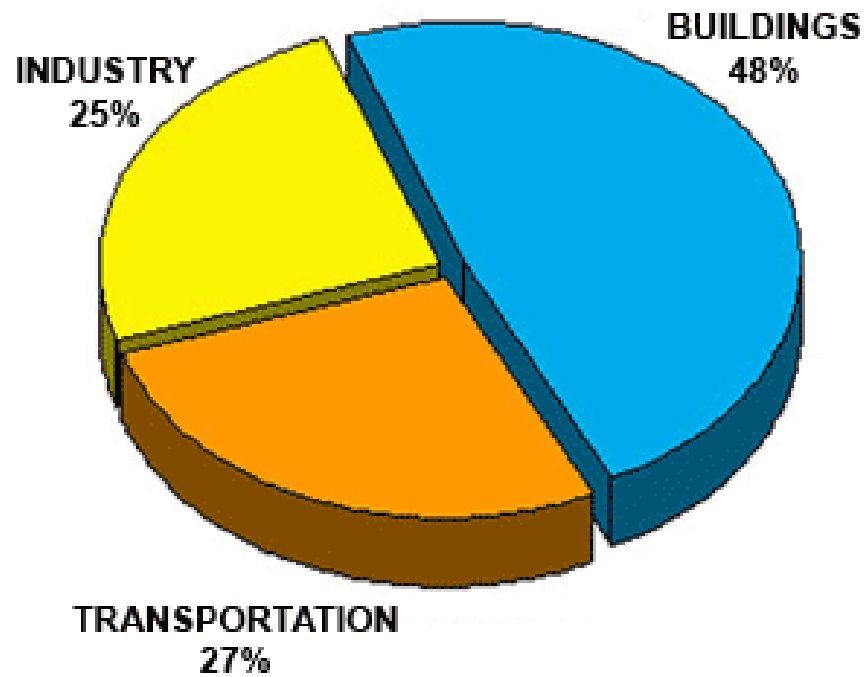


- Buildings? Really??
- The good news
- The bad news
- Thinking outside the box

Primary Energy



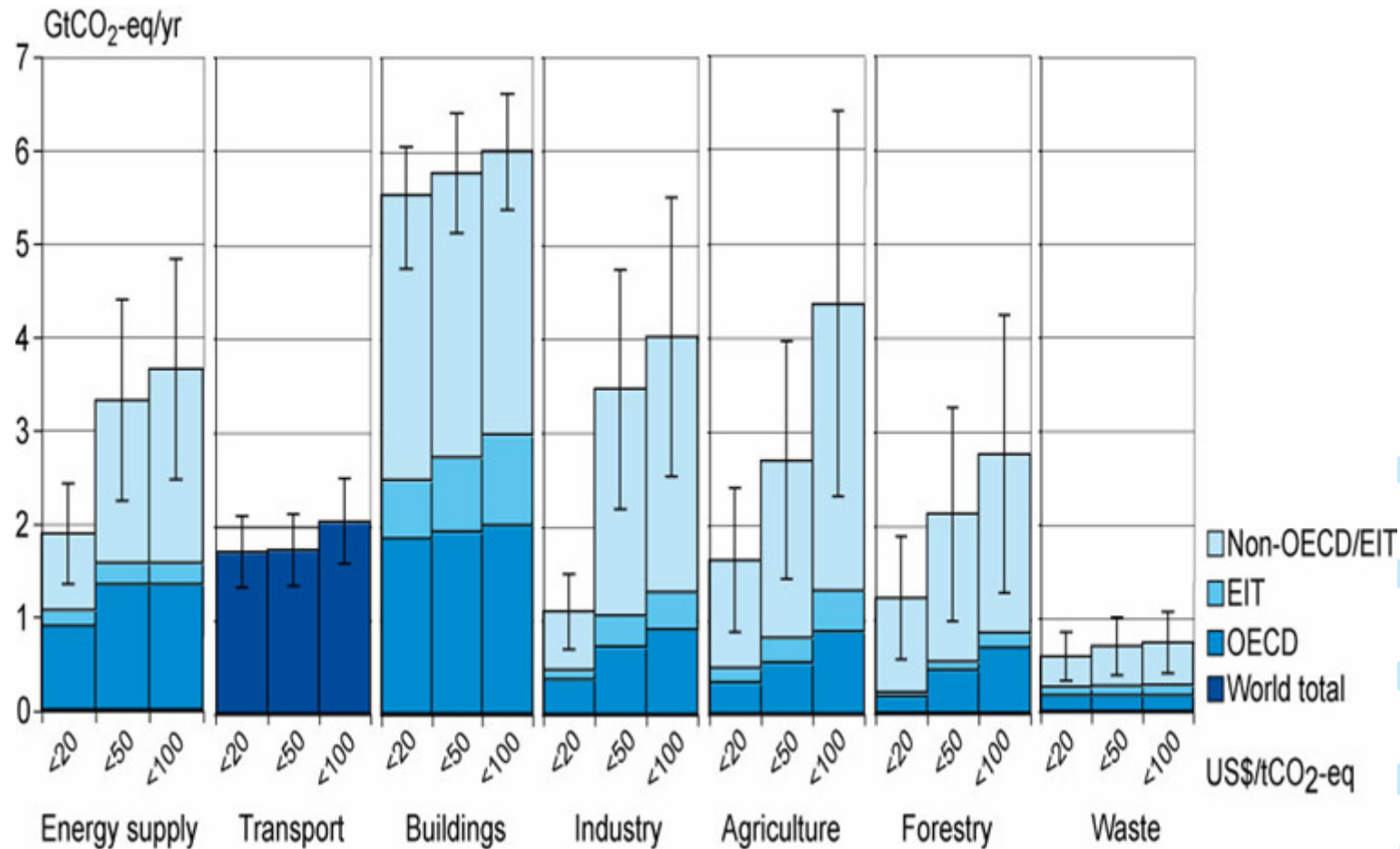
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Climate Change



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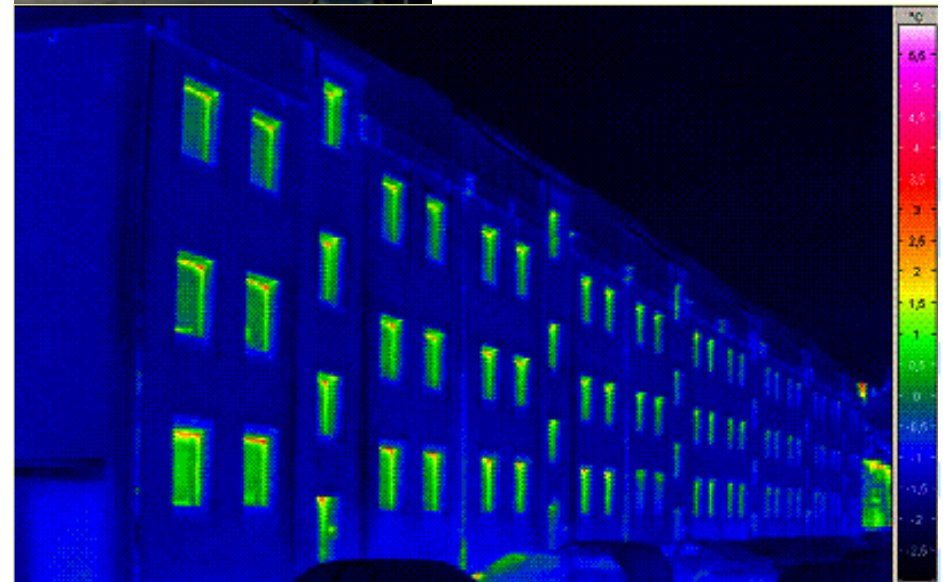
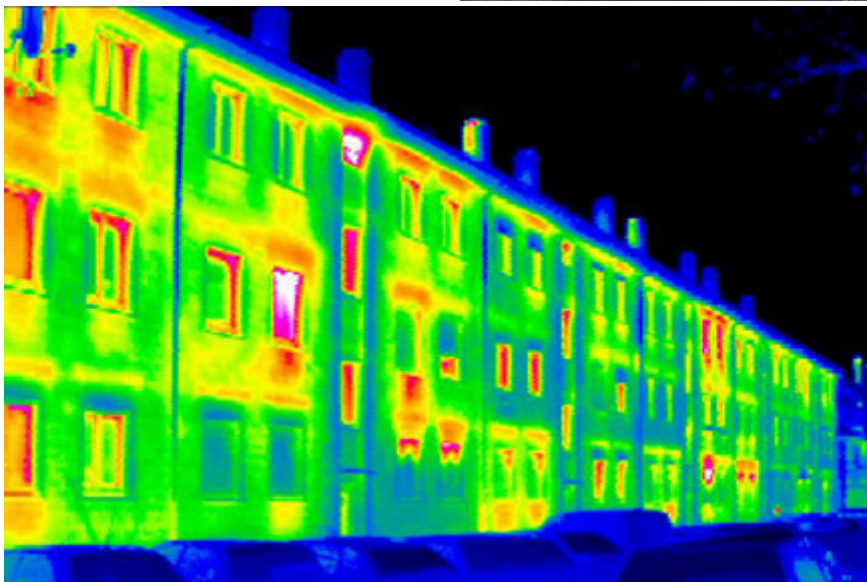


IPCC assessment of emission reduction potential in different sectors depending on the carbon market price

Potential for energy efficiency improvement



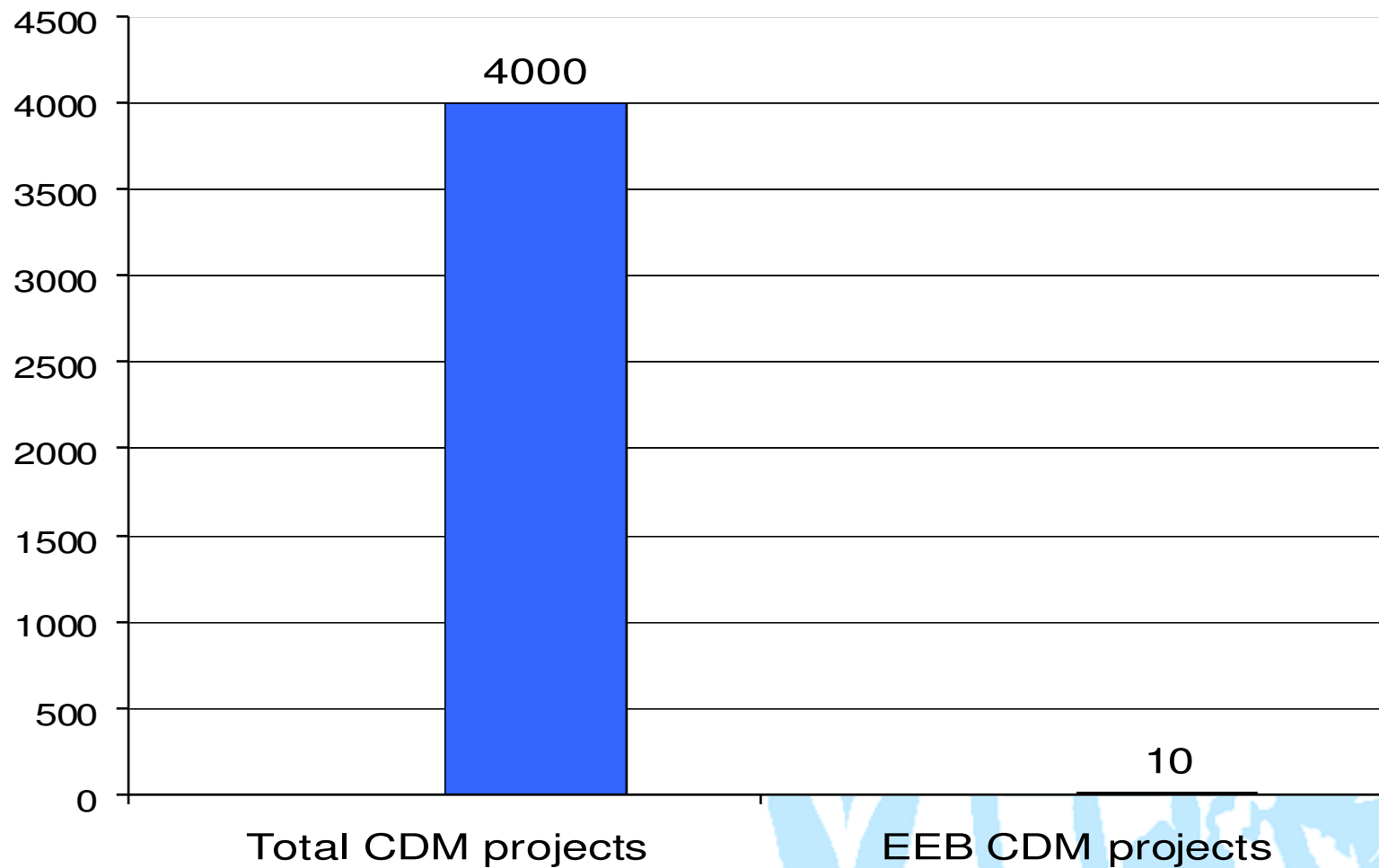
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Frankfurt Refurbishment using Passive House Technology

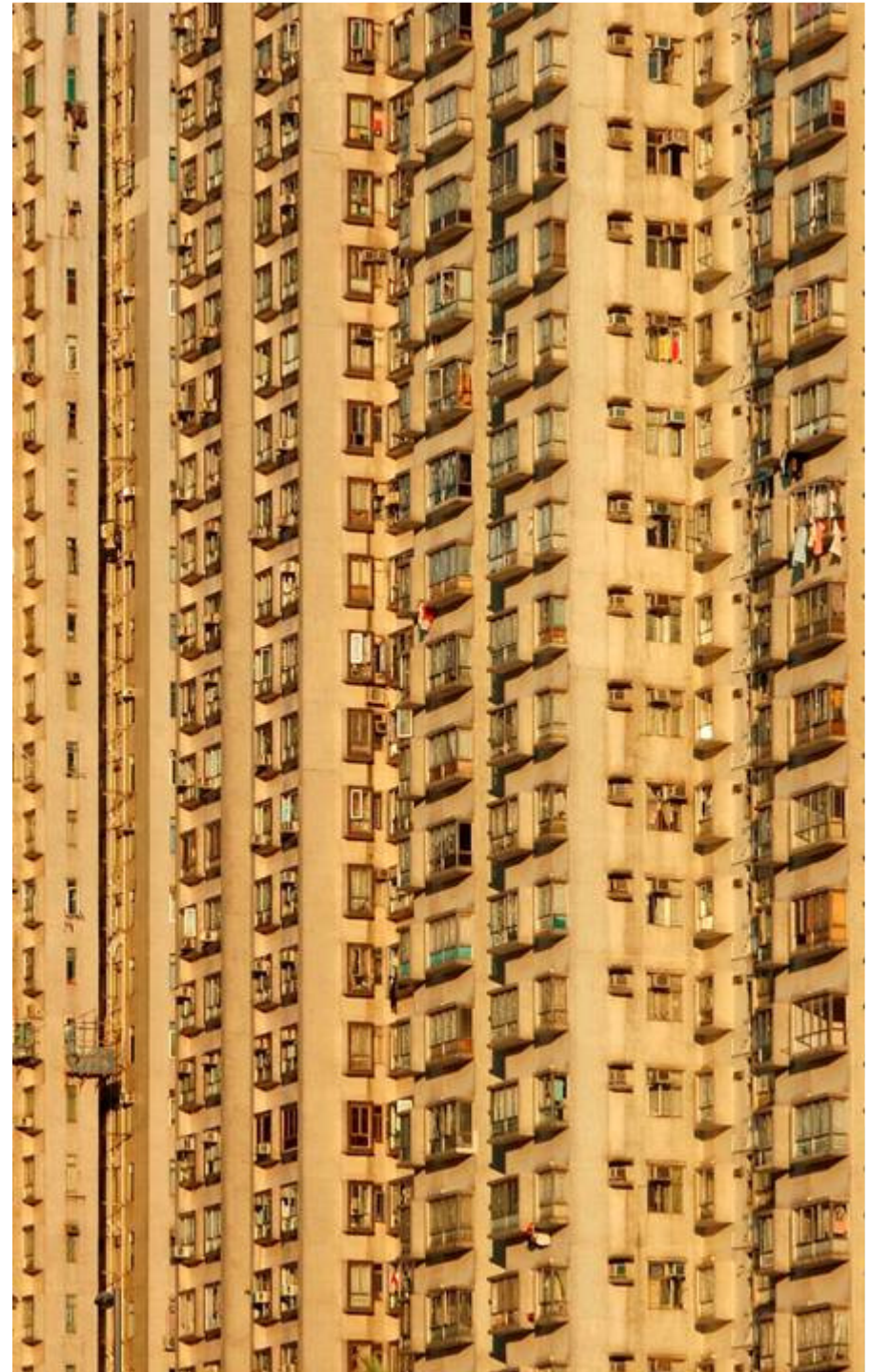
Thanks to Lausten, EIA for making these pictures available

Energy efficiency in buildings supported by CDM



Challenges for change

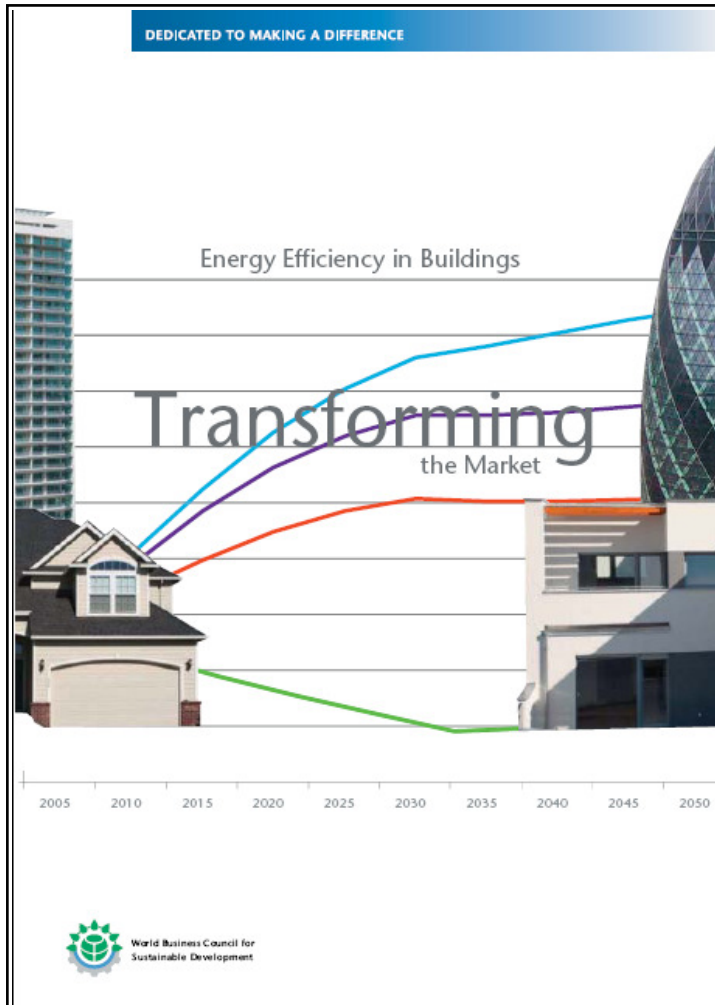
- 1. Very large number of small individual opportunities**
- 2. Economic disconnect – investors do not benefit from energy savings**
- 3. Energy performance is not seen as a problem, but energy efficiency is seen as luxury – lack of information**
- 4. Lack of capacity to realize the opportunities present**



The voice of business



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A mix of measures tailored to specific geographies and building types, serving investments within the constraint of short-term financial returns. This presents an opportunity for building decision makers. Additional approaches include building energy codes, labeling and reporting mechanisms, appropriate energy prices and carbon costs, investment subsidies, increased and trained workforce capacity, and evolving energy-efficient designs and technologies that use passive and active approaches.

SBCI-CEU policy study



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20 policy tools in 4 groups

1. Control & regulatory

- Standards, procurement, EE obligations, DSM, certification...

2. Economic and market-based

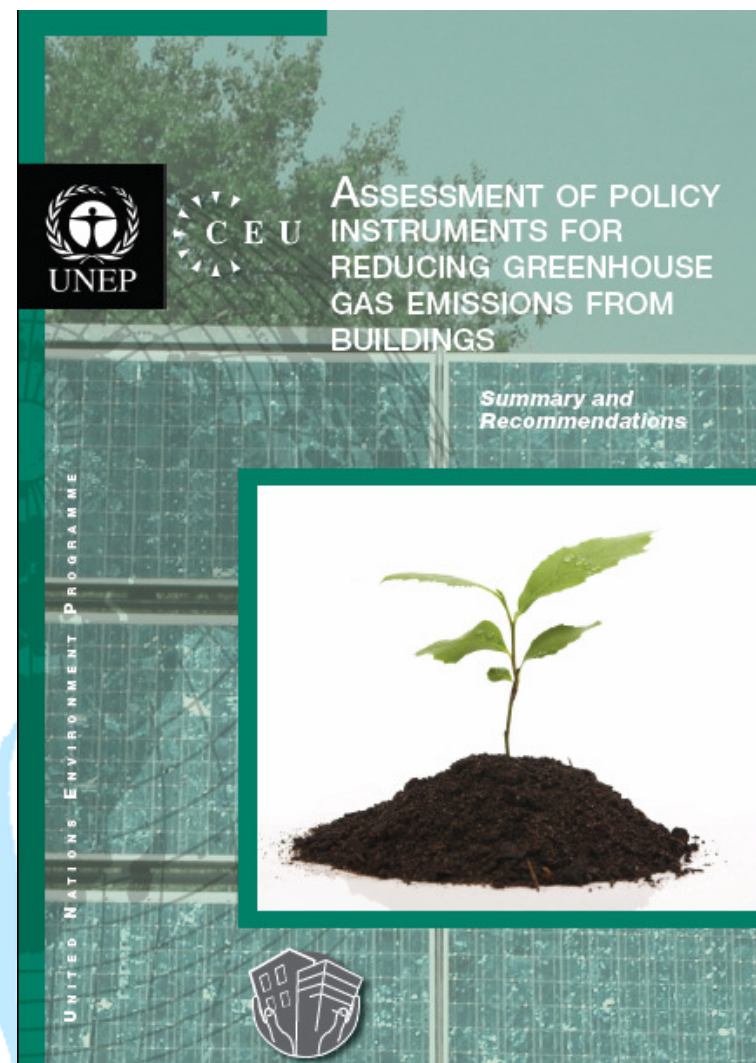
- Energy performance contracting, EE certificate schemes, CDM...

3. Fiscal instruments

- Taxation, tax cuts, subsidies, loans...

4. Information and voluntary

- Voluntary agreements, education campaigns, detailed billing...



Policy Experiences



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- **Policies can be both very efficient and very cost efficient. Costs to society varied between US\$ +66 and US\$ -216 per ton of CO₂ eqv (i.e. a cost saving of US\$ 216 per ton of CO₂ avoided).**
- **Regulatory tools are often both more effective and more cost efficient than economic tools. This is due to the fact that the building market is very fragmented.**
- **Best results are achieved if several tools are applied in combination with each other**
- **The public sector has a strong potential to show leadership by applying sustainable building guidelines to own buildings.**



Thinking outside the box



1. Inside the box: Policies are necessary. Actually!
2. Outside the box: Recognize how carbon lean buildings contribute to other priorities
3. Emission reduction is as much about technologies, as about policies, as about behaviour
4. Cast-back financing can offset large parts of investment costs

”A Crisis is a terrible thing to waste”



Stepping back into the box

- **Hold hands and look out for each other**
- **Help the ones that are smaller than you are**
- **Listen and learn but don't be afraid to explore new ideas**
- **Hot cookies and cold milk are good for you**
- **Pick up your stuff – don't leave a mess**



The background of the slide is a close-up photograph of several leaves. The leaves are in various stages of color, ranging from deep green to bright yellow, suggesting an autumn setting. The lighting is soft, creating a natural and vibrant atmosphere.

THANK YOU

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