

Achieving Green Growth: Role of Building & Construction Sector

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Outline

- Building Sector: The Context
- Drivers & Opportunities
- Case Study: Korea
- Observations

Context: Building Sector

- Accounts for some 40% of global energy consumption (and subsequent GHG emissions)
- Responsible for other environmental footprint such as water consumption & waste generation
- Generating 5-15% of GDP
- Providing 5-10% of employment
- Spend over 70% of our lives in buildings
- Influences attitudes, productivity and absenteeism



Context: Building Sector (cont'd)

- 4th IPCC Assessment Report showed that globally buildings represent the single biggest opportunity for GHG abatement

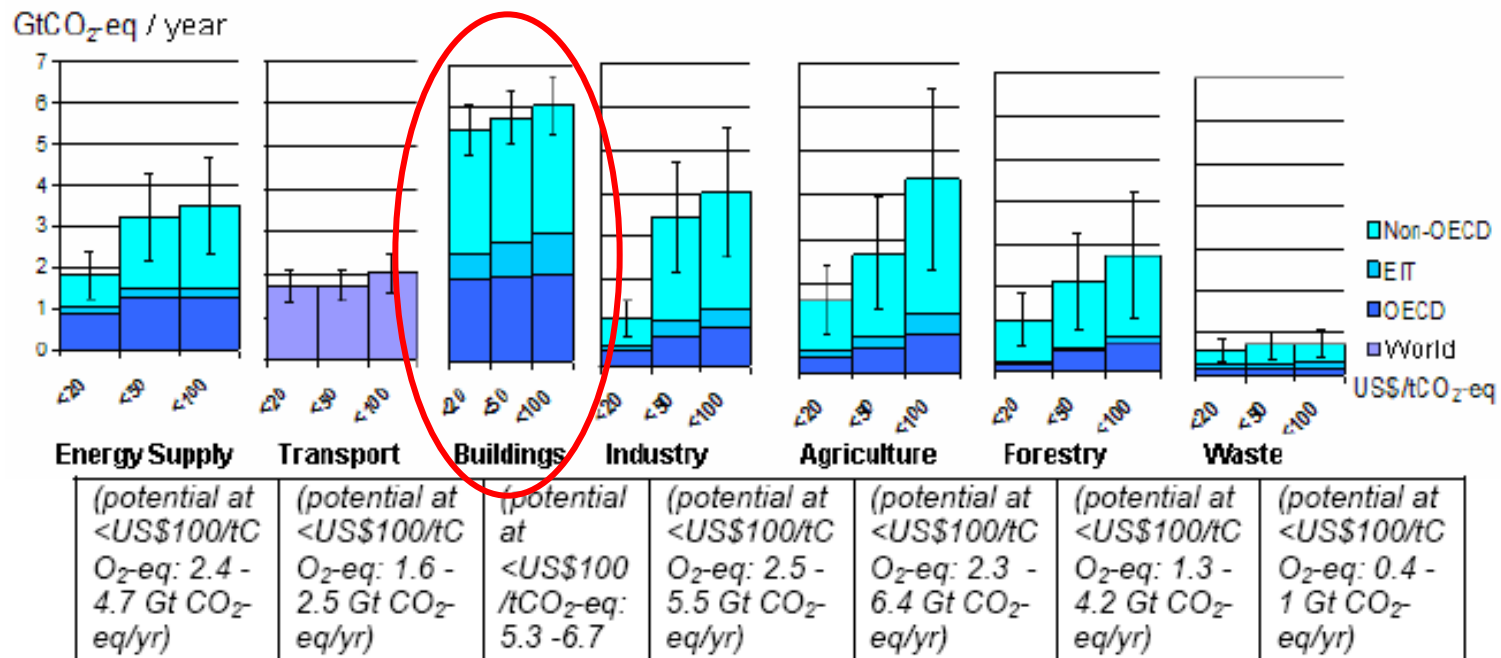
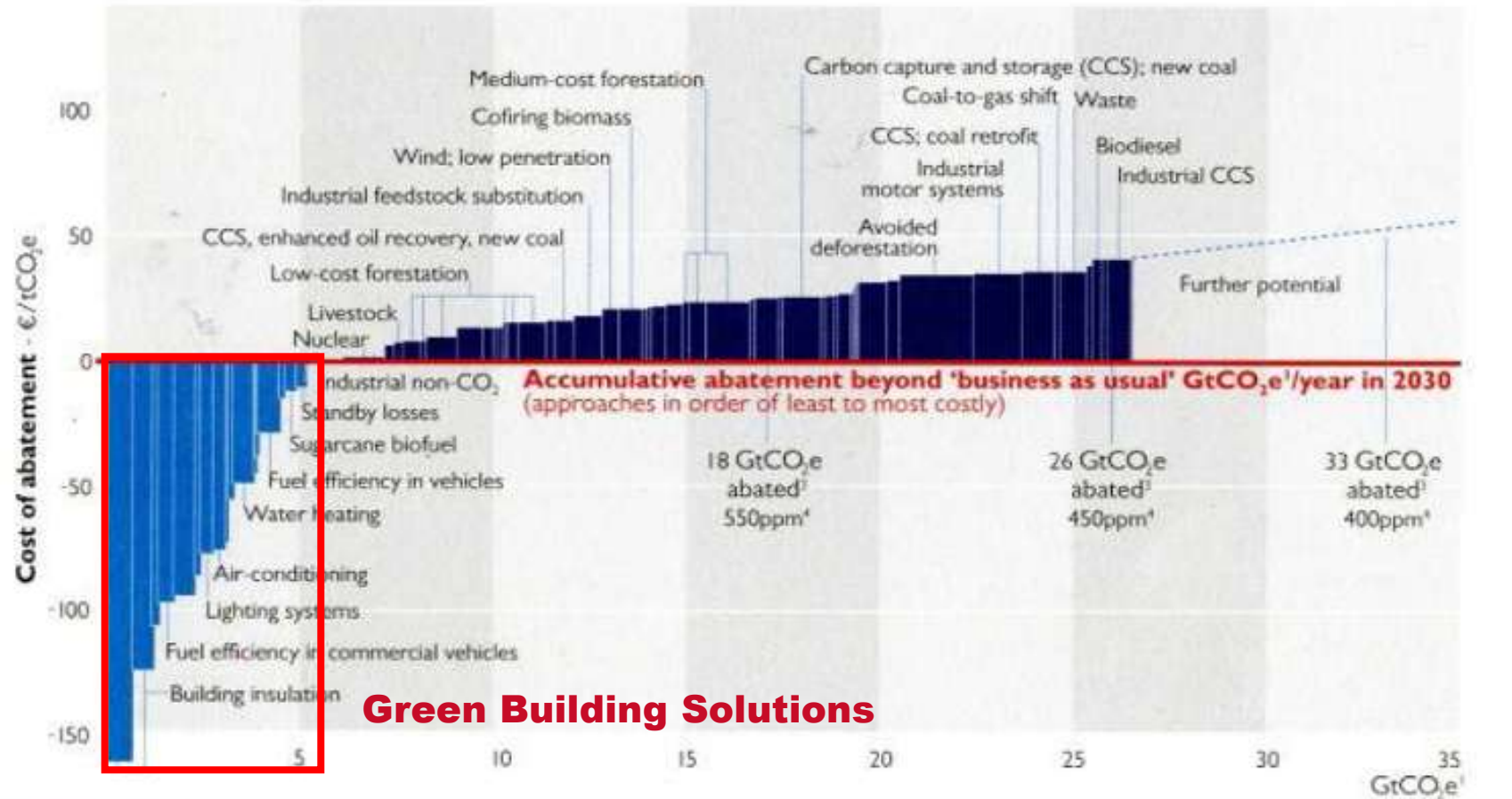


Figure: Greenhouse gas mitigation opportunities by cost (Mitigation of Climate Change, Summary for Policy Makers, Working Group III IPCC, May 2007)

Context: Building Sector (cont'd)

- McKinsey greenhouse gas cost abatement curve



Drivers & Opportunities

Global construction spending growth 2004-05

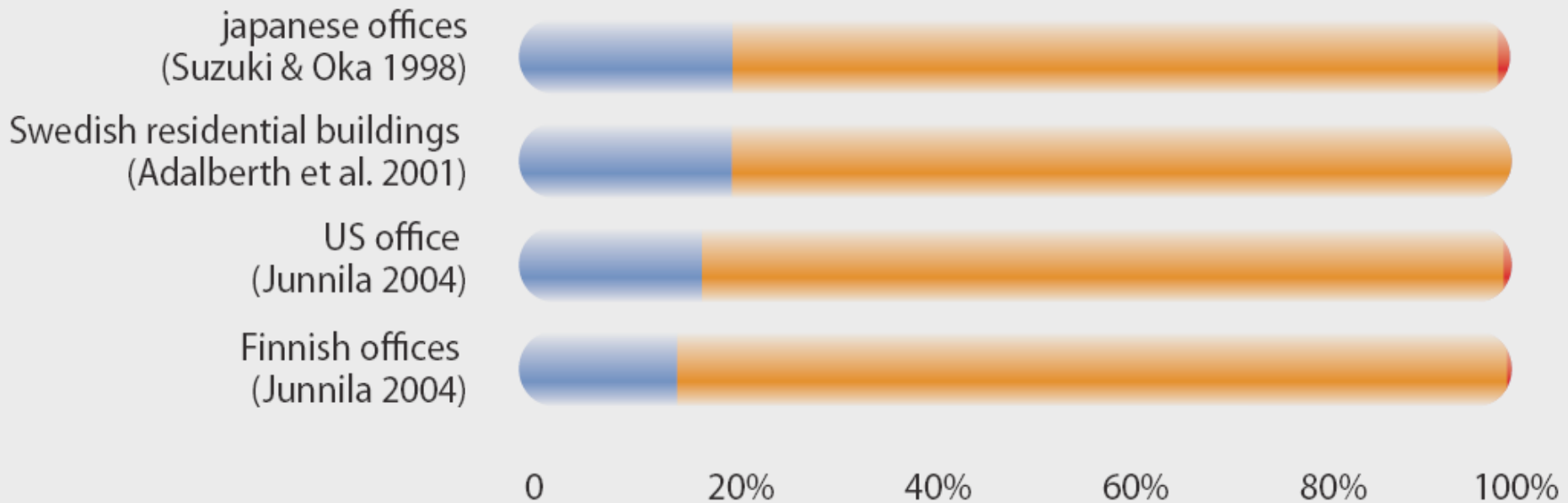


Investment in building is increasing...

rapidly in developing countries

Drivers & Opportunities

- Energy is mainly used during the use of buildings, and only to a smaller part in manufacturing, construction and demolition of buildings



Case Study: Korea

- National Low Carbon Green Growth Strategy:
30% reduction of CO2 by 2020



Korea's Green Growth Strategy

Vision

To Be the World's 7th Green Power by 2020
and the 5th World Green Power by 2050

Three Objectives, Ten Policy Directions

Mitigation of Climate Change and Energy Independence

1. Effective Mitigation of Greenhouse Gas Emissions
2. Reduction of Fossil Fuel Use and Enhancement of Energy Independence
3. Strengthened Capacity to Adapt to Climate Change

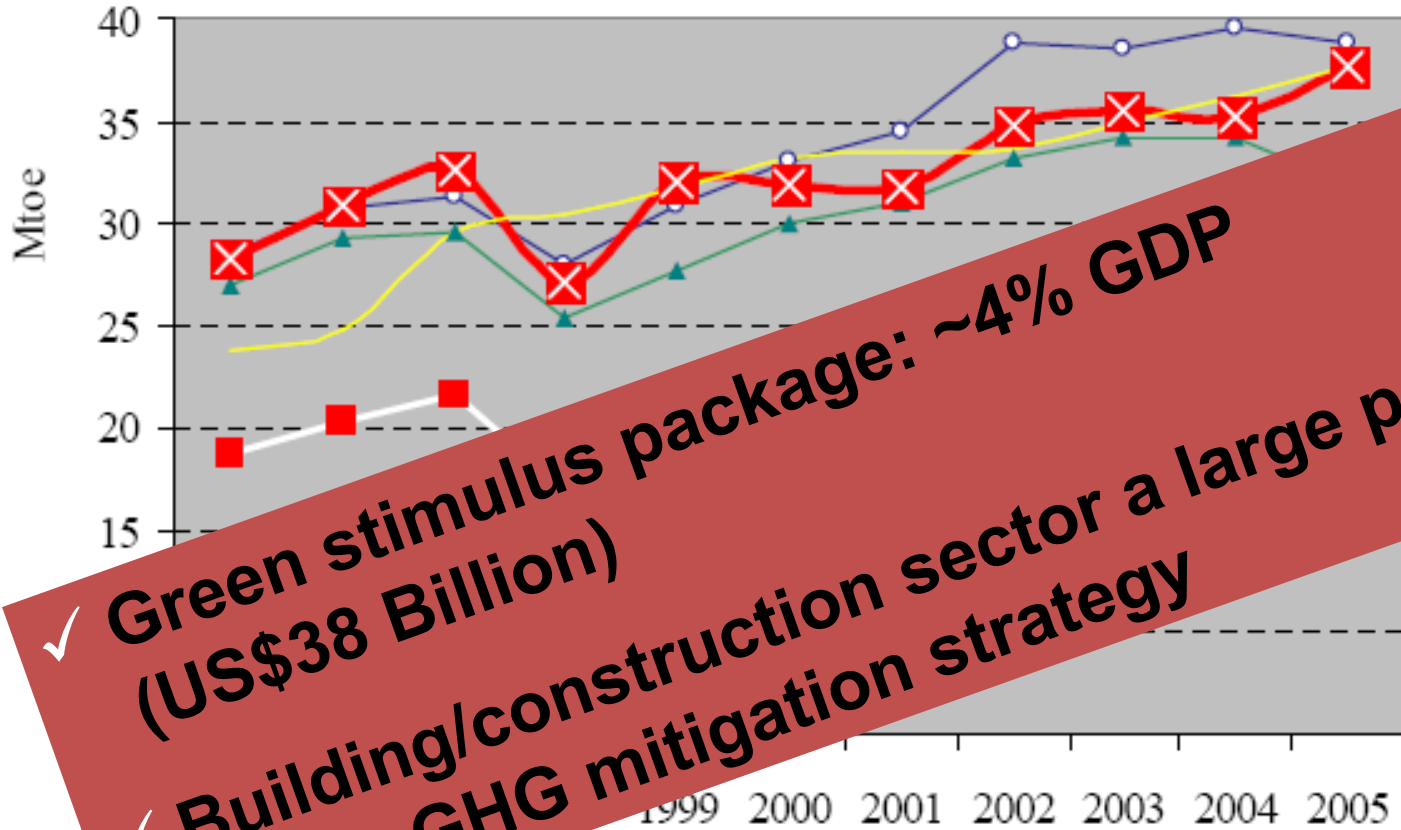
Creation of New Energies for Economic Growth

4. Development of Green Technologies and Industries
5. Greening Existing Industries, Promotion of Green Industry
6. Advancement of Industrial Structure
7. Development of Structural Foundations for a Green Economy

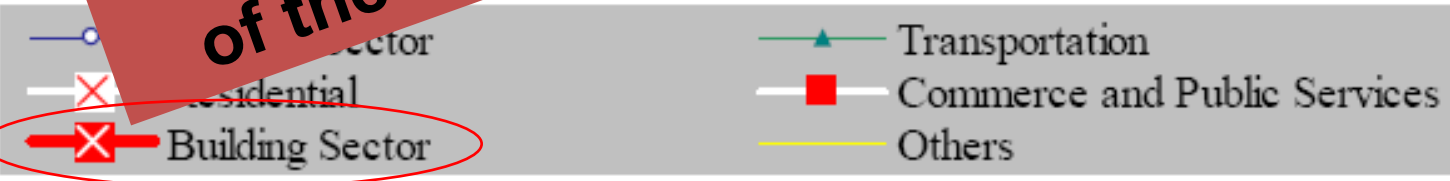
Improvement in Quality of Life and Enhancement of International Standing

8. Greening the Land and Water, Creation of a Green Transport Infrastructure
9. Bringing the Green Revolution into Daily Life
10. Becoming an International Green Growth Role Model

Energy Consumption by Sector in South Korea, 1990-2005



✓ Green stimulus package: ~4% GDP (US\$38 Billion)
✓ Building/construction sector a large part of the GHG mitigation strategy



What is Being Done Now?

- Green & sustainable design

Insulation of building envelope

Window design & placement

Natural lighting

Natural ventilation

Passive cooling

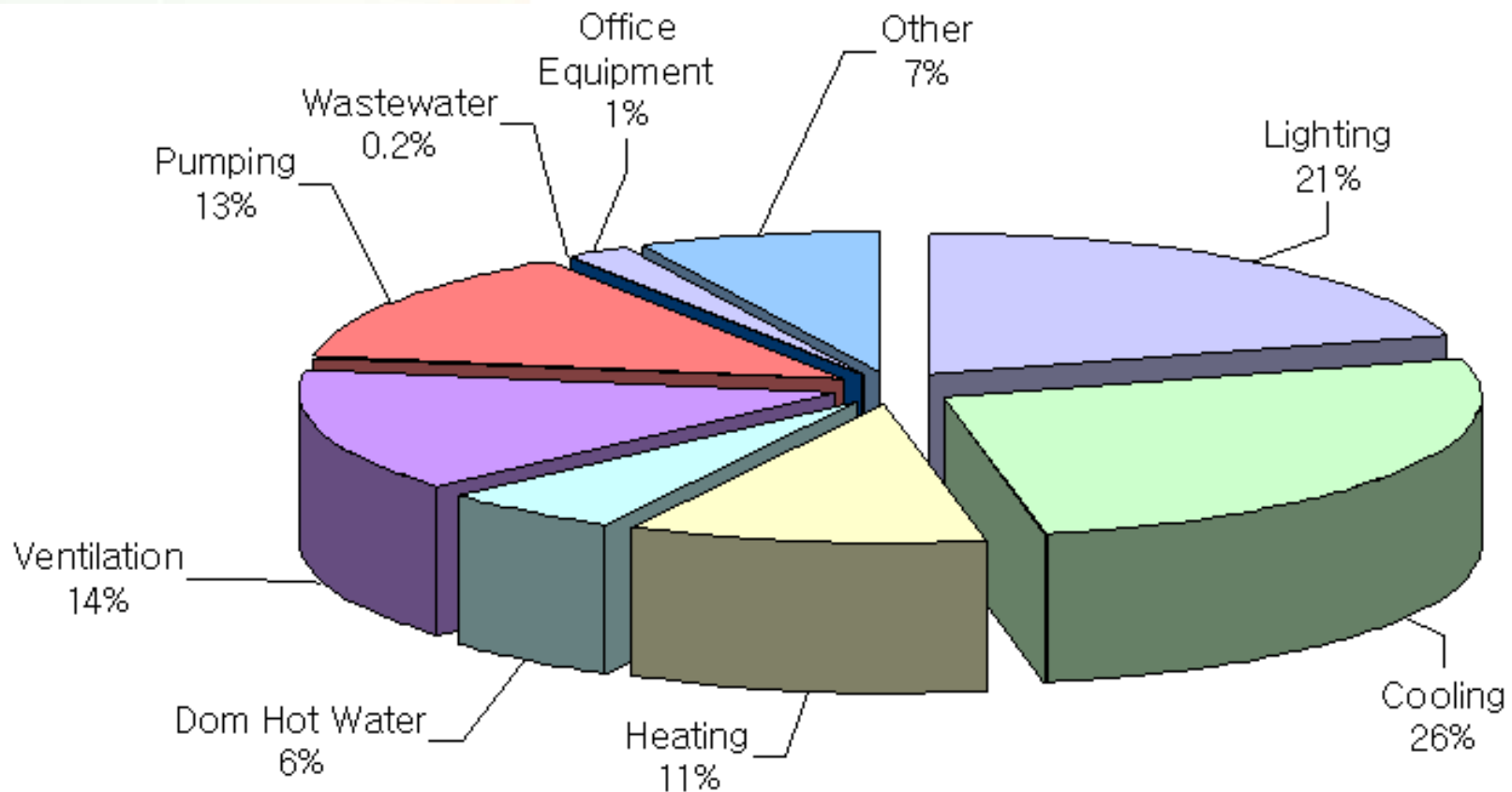


What is Being Done Now?

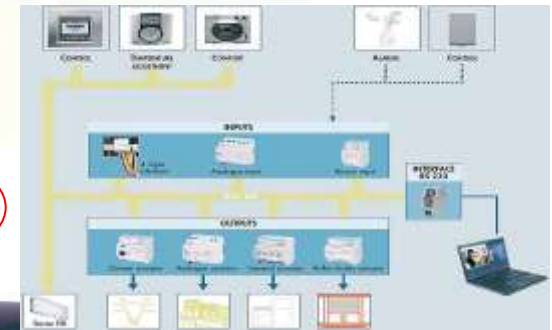
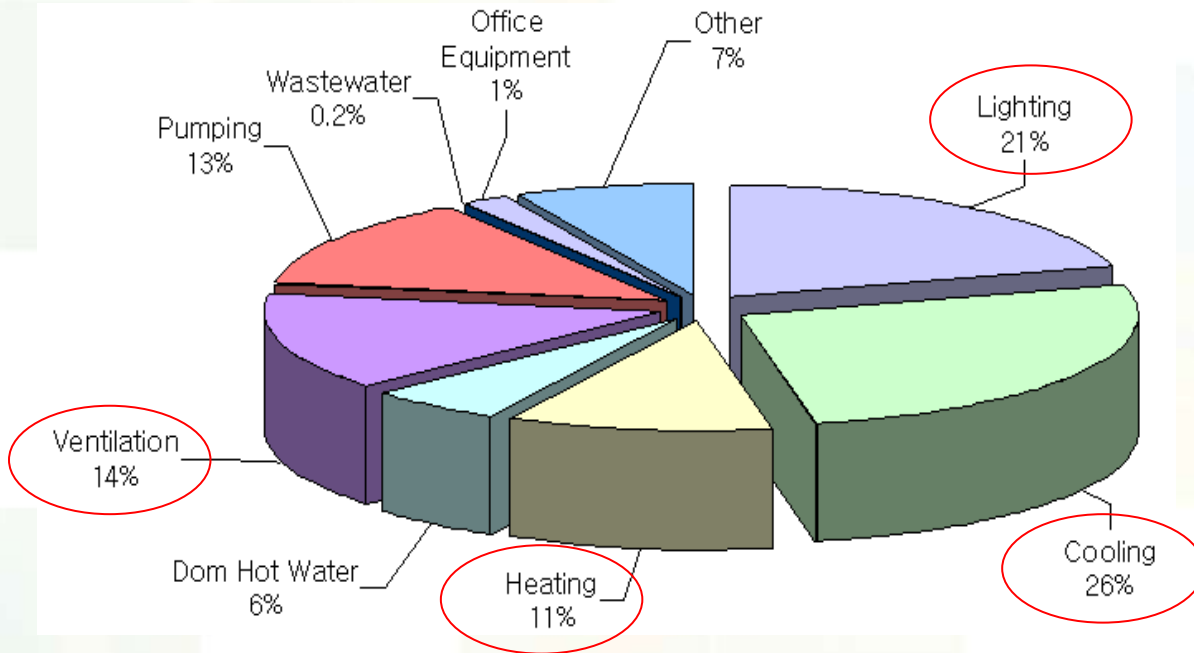
- Remodelling to green building certification standards



Building Energy Use Profile



EU-Asia Cooperation in Action



SIEMENS

Schneider Electric



Observations

- International consensus stimulates development of regional & national strategies, policies & legislative framework (e.g. climate change)
- Proven eco-innovation based on scientific assessment and piloting
- Success stories/ case studies a must!
- Economic incentives (international & national levels)
- Understanding the regional context and local market
- Understanding local stakeholders and how businesses work is key in making things happen

Delivering sustainable
solutions globally



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