Green buildings and the achievement of global low-carbon goals

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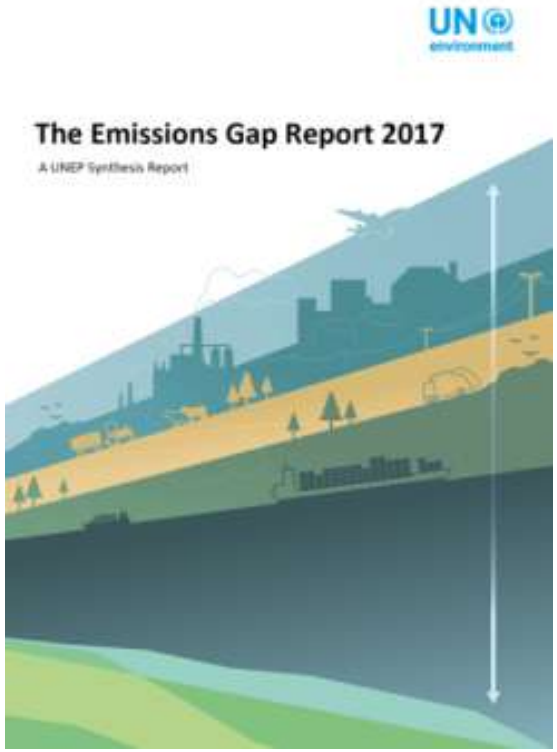
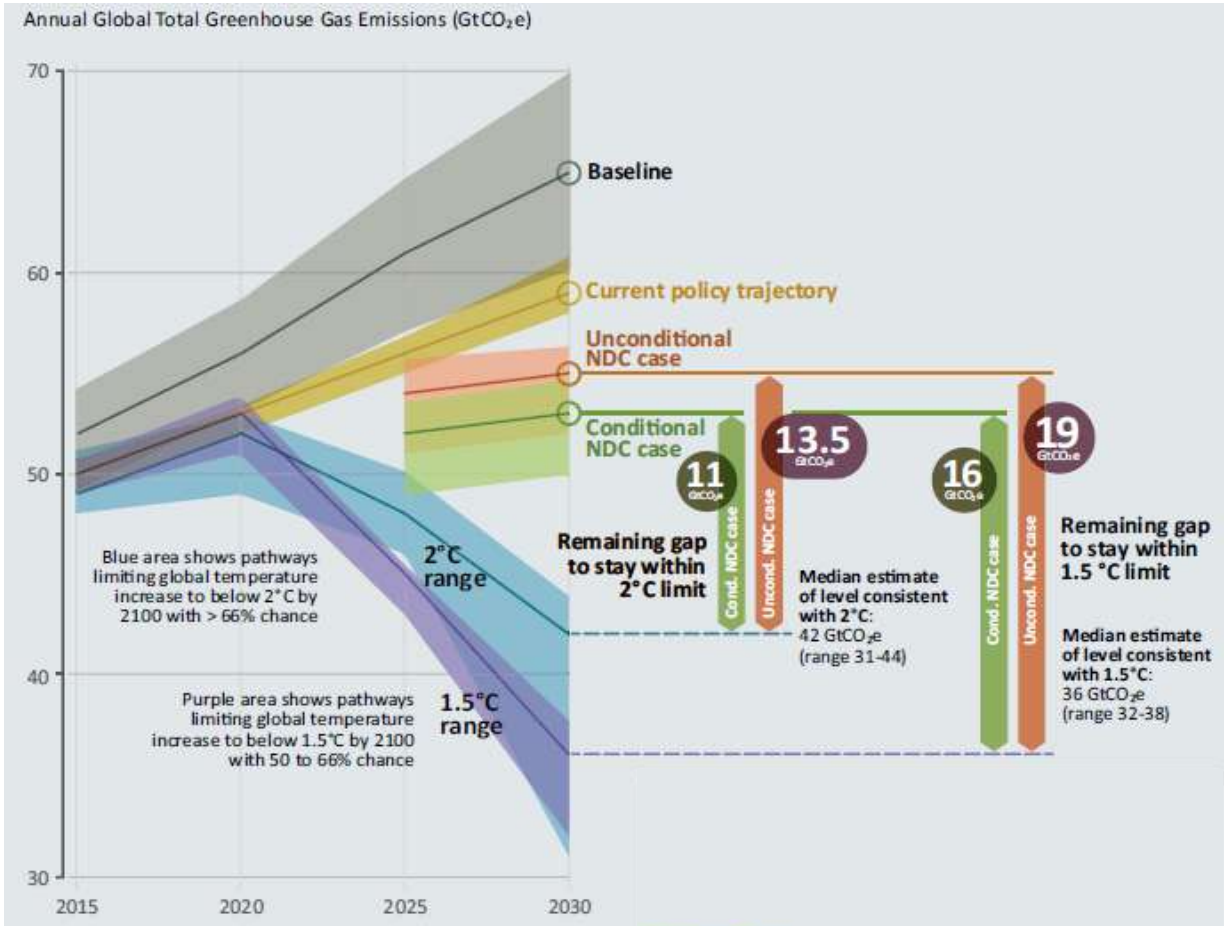
Asia Pacific Forum on Low-Carbon Technology
24 October 2018
Changsha, Hunan

Green buildings and NDC achievement





Cost-effective EE potential in **buildings: ~6 $GtCO_2e$**
industry: ~5 $GtCO_2e$
transport: ~5 $GtCO_2e$

Addressing barriers to efficient and green buildings

A policy 'package' is needed to drive the change

There is no single policy, which can address all existing barriers
→ an **EFFECTIVE POLICY PACKAGE** is needed

Targets, roadmaps

Analysis of barriers

Codes, standards, regulations, etc.

Green loans, Rebates, Taxes, etc

Voluntary schemes, Capacity building, Awareness

Sticks

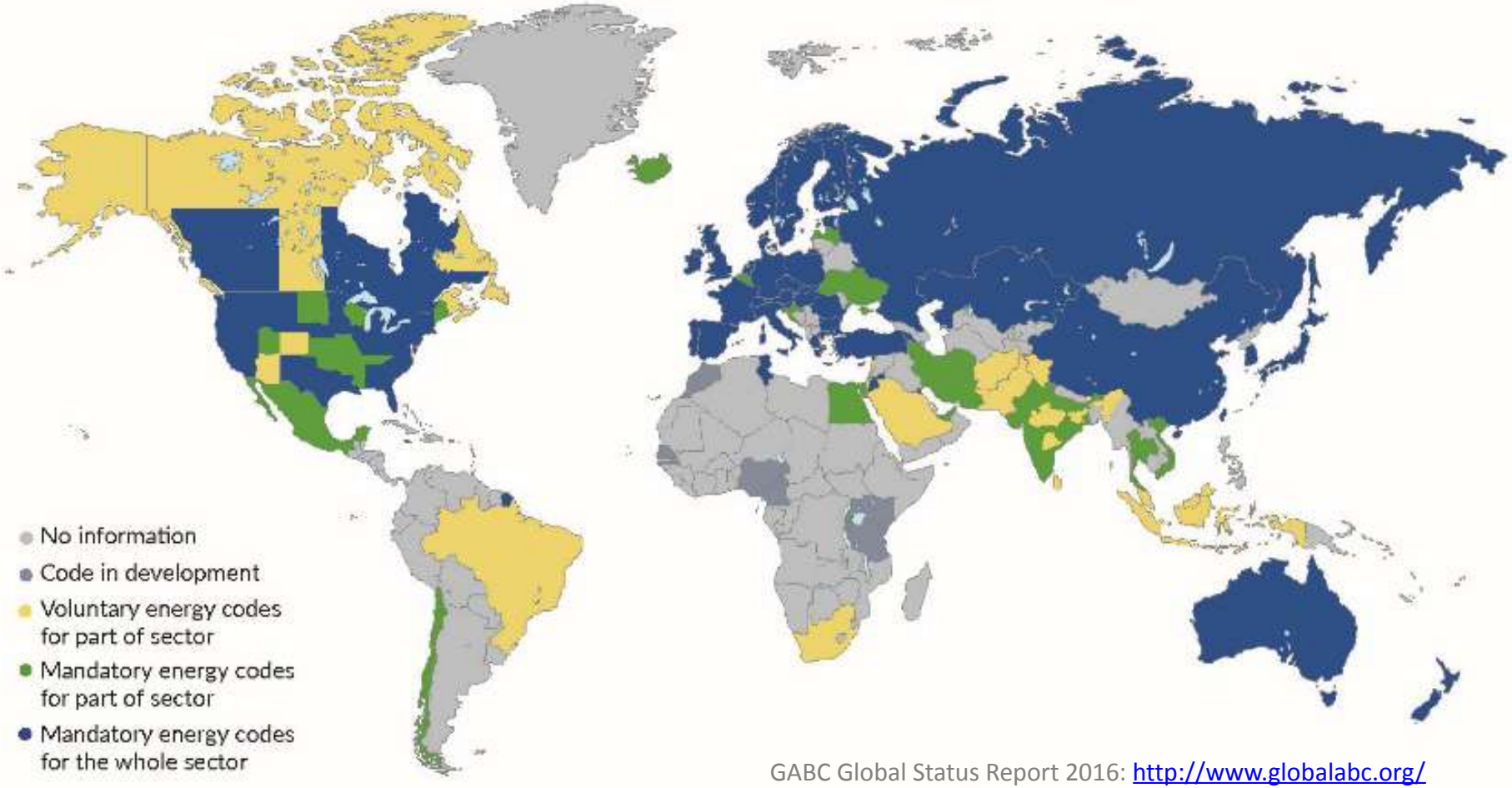
Carrots

Tambourines

Business models, private sector engagement

Global Map of Building Energy Codes

Policy development of building energy codes is continuing to become more prevalent globally

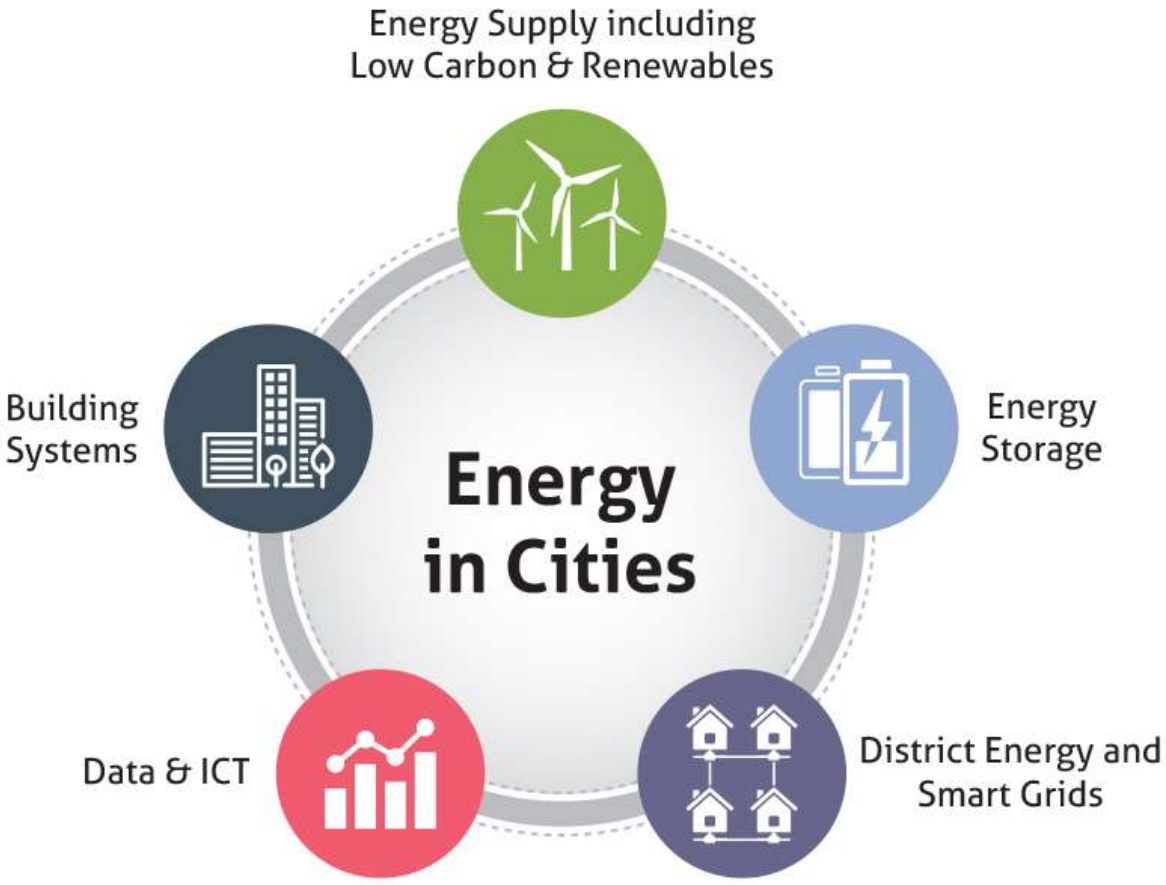


GABC Global Status Report 2016: http://www.globalabc.org/

The importance of actual vs designed energy use

Prescriptive	Trade-off	Performance-based	Outcome-based
• Requirements on individual building components	• Specific rules on overall performance values typically to allow trade-offs between elements of the building envelope	• Energy performance requirement for the whole building such as kWh/m2	• Energy performance requirements for the actual energy use of a building demonstrated through the operation

Need a higher level of ambition: green buildings and 'urban energy'



Source: APUEA (2018)

Need for implementation at scale

Small scale fragmented projects
Insufficient local project capacity
Issues with access to finance

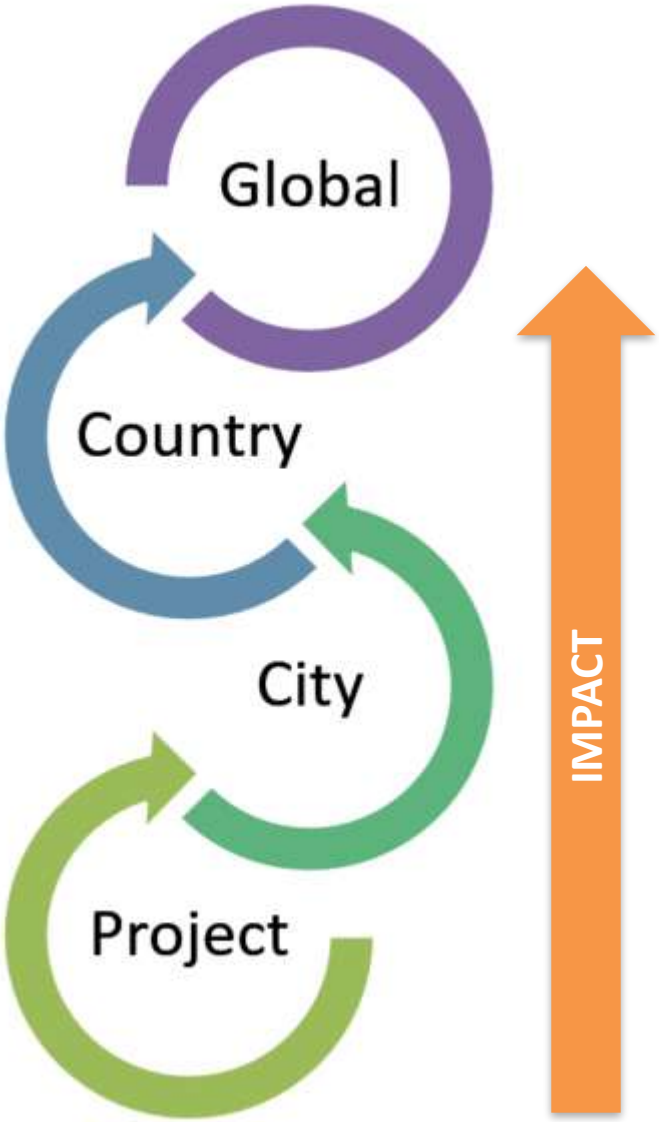
A 'Project Bundle' can be defined as:
A structure, which brings together several relatively small-scale energy efficiency projects or activities, to form a single thematic portfolio (i.e. 'bundle') above a certain investment threshold, which can be procured, administered and financed under the same structural framework

Standardisation

Aggregation

Facilitation

Aim: to provide streamlined, structured and aggregated expertise on technical, financial, legal aspects related to energy efficiency investment project development



Aggregation: creating larger EE projects for Existing Public Buildings

1. Cities, towns, villages

2. Standardised data collection & analysis

3. Bundling of projects

4. Financing & Procurement

5. Investment & installation

6.

SUSTAINABLE DEVELOPMENT GOALS

1. Buildings in Municipality A
2. Buildings in Municipality B
3. Buildings in Municipality C
4. Buildings in Municipality D
5. Buildings in Municipality E
6. Buildings in Municipality F
7. Buildings in Municipality G
8. Buildings in Municipality H
9. Buildings in Municipality I
10. Buildings in Municipality J

n Municipalities  **~ x million inhabitants**

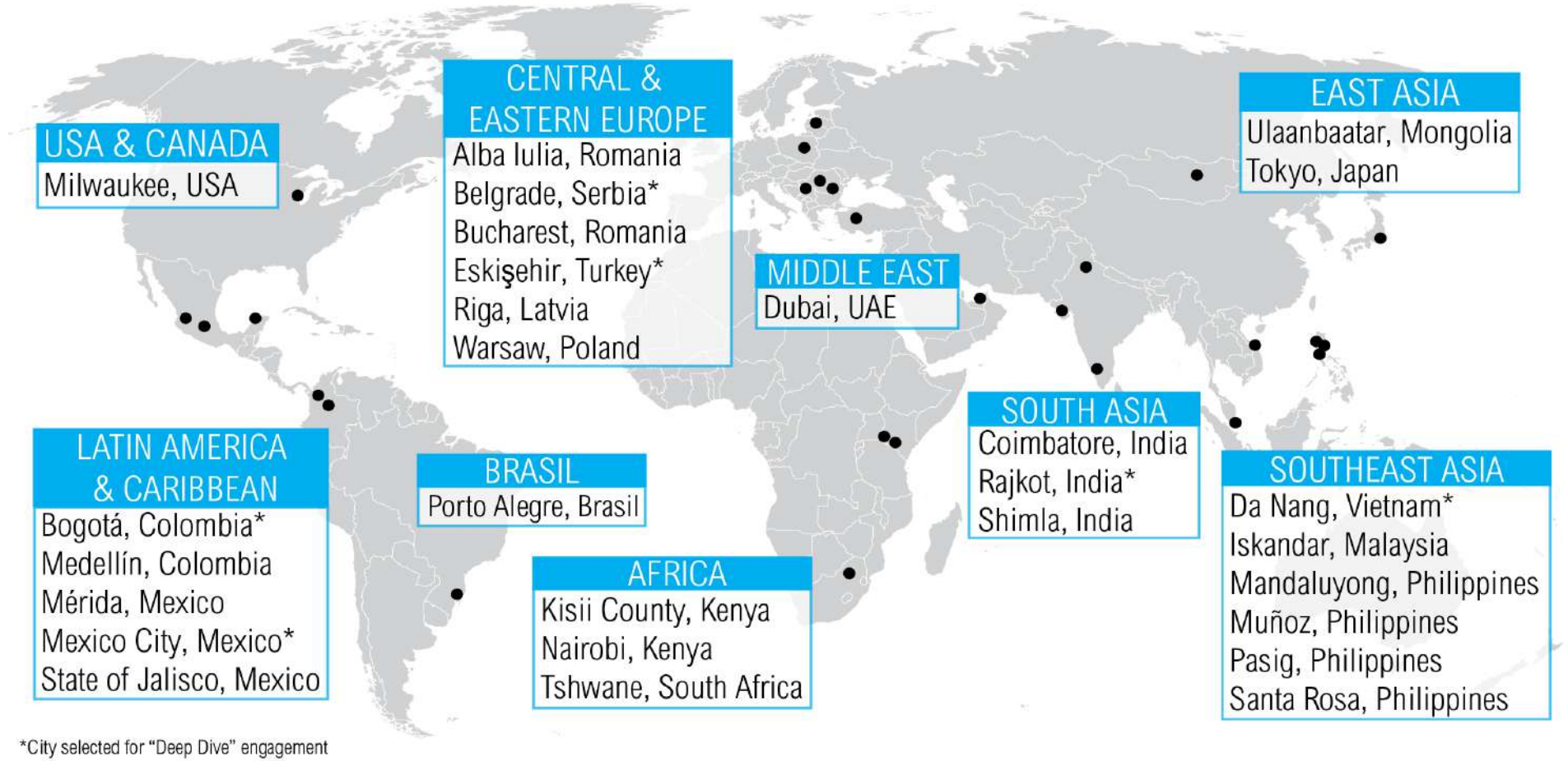
Interactive depositary for bundles development

Typical public buildings: schools, & sports centres, hospitals, etc..

On-going work:

- Data collection for technical assessment
- Active engagement with local offices
- High potential for replication across typical buildings

Building Efficiency Accelerator



*City selected for "Deep Dive" engagement

http://buildingefficiencyaccelerator.org/

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Knowledge Management Syst

The Copenhagen Centre's Knowledge Management System (KMS) engages stakeholders in energy efficiency initiatives through knowledge sharing and outreach. The KMS provides users with access to selected information, reports, publications, and databases on energy efficiency. The KMS is linked to many other energy efficiency initiatives.

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http://kms.energyefficiencycentre.org/

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