



SUSTAINABLE  
ENERGY FOR ALL



GLOBAL ENERGY EFFICIENCY  
ACCELERATOR PLATFORM

# Tools for Building Energy Efficiency: Resources for Policy Design

March 31, 2016

*Building Efficiency Accelerator Webinar Series*



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I.C.L.E.I  
Local  
Governments  
for Sustainability



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COPENHAGEN CENTRE  
ON ENERGY EFFICIENCY  
SE4ALL EE HUB



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# Introduction to the Building Efficiency Accelerator

Eric Mackres  
March 31, 2016



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# UN Sustainable Energy for All

One Goal:

Achieving  
Sustainable Energy  
for All by 2030

Three Objectives:



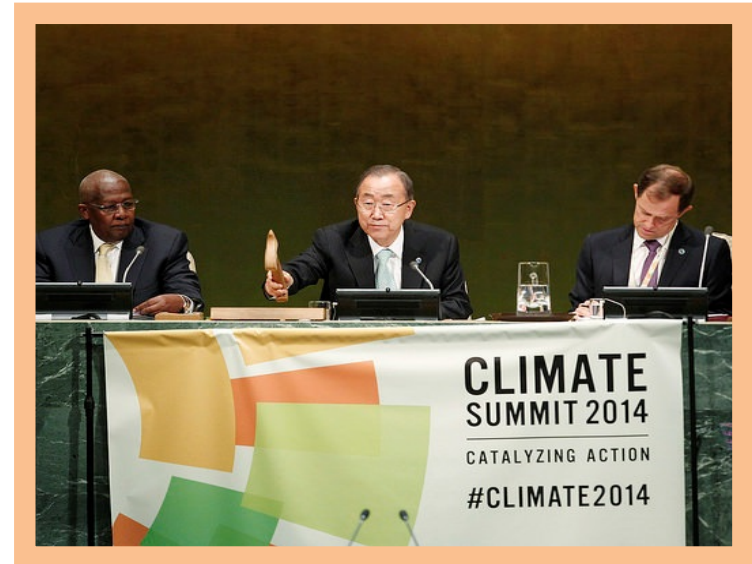
ENSURING  
*universal access*  
TO MODERN ENERGY  
SERVICES.



DOUBLING THE GLOBAL  
RATE OF IMPROVEMENT IN  
*energy efficiency.*



DOUBLING THE SHARE OF  
*renewable energy*  
IN THE GLOBAL  
ENERGY MIX.





# Energy Efficiency Accelerators

The Global Energy Efficiency Accelerator Platform was established to support specific sector-based energy efficiency accelerators

## Lighting

Global market transformation to efficient lighting



## Appliances & Equipment

Global market transformation to efficient appliances & equipment



## Vehicle Fuel Efficiency

Improve the fuel economy capacity of the global car fleet



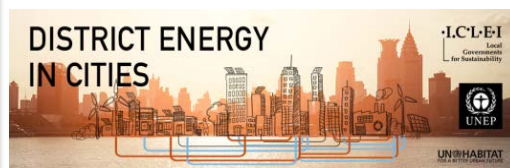
## Buildings

Promote sustainable building policies & practices worldwide



## District Energy

Support national & municipal governments to develop or scale-up district energy systems



## Industry

Implementing Energy Management Systems, technologies & practices



Power Sector Accelerator is under development

# Building Efficiency Accelerator (BEA) partnership

Coordinating partner:



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WRI ROSS CENTER FOR  
SUSTAINABLE  
CITIES

Subnational Jurisdictions:



Service Providers/Companies:



NGOs/Associations/Multilaterals:



# Why is building efficiency important?

## Large impact:

- Buildings consume nearly **40% of energy demand** and account for about one third of GHG emissions globally

## Large potential:

- Global building energy **demand can be reduced by one-third by 2050**, if known EE best-practices are implemented on a large scale across regions

## Long-lasting implications:

- Buildings **last for 30-50 years or more**. Poor choices today can **lock-in** high costs, carbon emissions, and poor urban services

## Multiple benefits:

### Economic

Cost-effective opportunities : each additional \$1 spent on EE avoids more than \$2, on average, in energy supply investments

### Social

Energy access, Reliability, Security of energy supply, Health & productivity improvement, Job creation

### Environmental

GHG emissions reduction, Sustainable building materials, Water conservation, Climate resilience

# Acceleration of building efficiency policy efforts

New partnerships enable implementation of ambitious projects and policy packages to address barriers, bridge efficiency gap, and avoid lock-in of inefficient building stock.



Source: Institute for Building Efficiency, Johnson Controls Inc.(2011)

# What are cities signing up to do?

## Overarching commitment:

double the rate of building energy efficiency by 2030 in targeted sector within the jurisdiction

Implement one  
enabling **policy**

**Policy**

Implement one  
demonstration **project**

**Project**

Create a baseline, **track  
and report** annual  
progress, and **share  
experiences** with other  
governments

**Tracking &  
communication**



# What does the BEA provide?

**Local action  
prioritization process**



Collaborative, multi-stakeholder assessments and workshops to define and prioritize policies and projects

**Tools, expertise and  
solutions**



Technical support through trainings, tools. Access to network of subject matter experts and service providers.

**Funding opportunities**



Connect projects in need to financial partners who can provide funding to efficiency actions

**International  
recognition and  
collaboration**



Recognition of efficiency actions at international events. Knowledge sharing through a global network of peers.

# Building Efficiency Accelerator Partner Organizations





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## GLOBAL ENERGY EFFICIENCY ACCELERATOR PLATFORM

# Building Efficiency Accelerator: *How does the BEA help with policy design?*

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# BEA City Engagement Process

Light Touch

Light Touch

Deep Dive

Commitment

Assessment

Development

Implementation

Improvement

- Expression of interest submitted by the city to the Accelerator
- Commitments discussed and agreed with the city's authorities
- A high-level assessment, using available tools and data, to explore local opportunities for energy efficiency improvements through policy and programs
- Organization of multi-stakeholder workshop on specific actions and areas of interest
- Review/update action plans for energy efficiency programs or projects
- Introductions to financial organizations
- Access state-of-the-art technical solutions and best practice policy, program and project expertise through SE4ALL Accelerator network partners
- Program/project initiated
- Funding approach identified
- Establishing an energy efficiency performance baseline and tracking of annual performance improvement
- Participation in peer-to-peer, best practice sharing events through virtual meetings and in-person summits

# Menu of city-level actions to improve building efficiency

## Cross-sector Mechanisms

### Codes & Standards

- Building energy codes and product standards establish minimum requirements for energy performance.

### Targets

- Targets to align interests and spur action to improve efficiency in the building sector.

### Performance Info & Certifications

- Data, baselines, disclosure and certifications for market differentiation of building performance or attributes.

### Finance & Incentives

- Programs and incentives to provide funding to building efficiency improvements.

## Stakeholder Strategies

### Government Leadership Programs

- Programs to support government efficiency, including public building retrofits and innovative procurement.

### Building Owner & Occupant Actions

- Building operations, occupant behavior.

### Technical & Financial Services Capacity

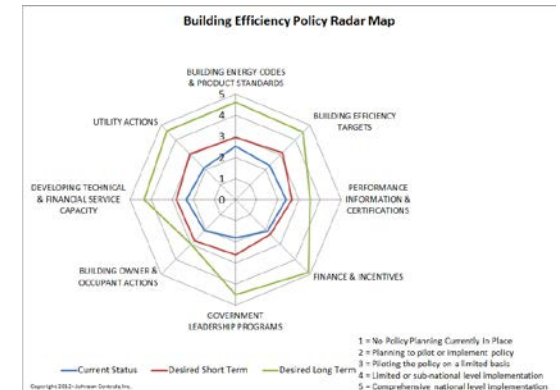
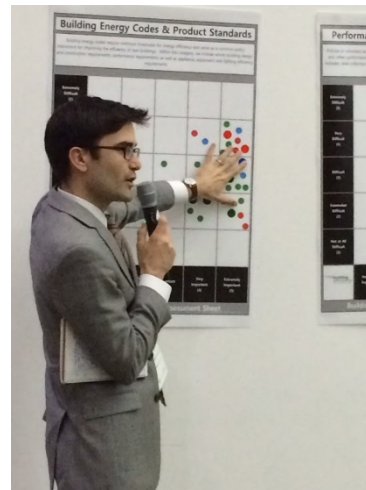
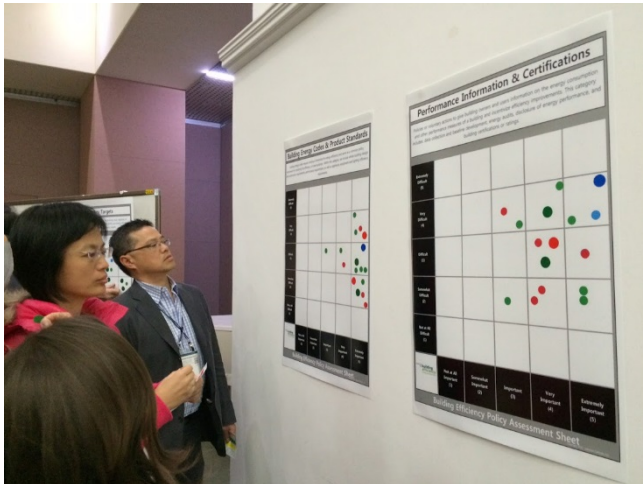
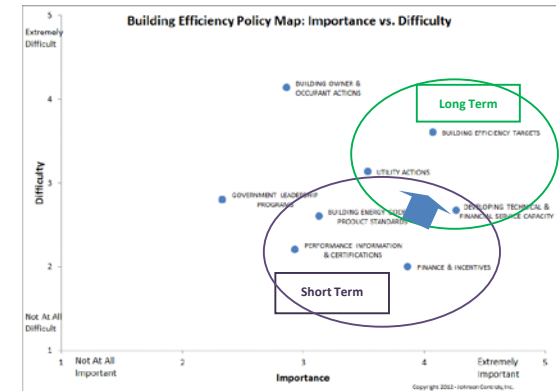
- Market development and skilled workforce for private providers of building construction, services & equipment

### Utility Actions

- Planning and programs by utility companies for energy efficiency improvement.

# Building Efficiency Policy Assessment Tool

- Workshop tools to obtain stakeholder input for prioritizing and sequencing actions
- Part of *Driving Transformation*, and forthcoming WRI update
- Available for download at <http://bit.ly/1RP3wLa>





# Case Study: Mexico City

- September 2014 commitment from Mexico City government to:
  - Implement a building energy code
  - Retrofit public buildings
- Launch event and workshop for common vision – March 2015
  - 100 multi-stakeholder participants – including city government, federal government, businesses, finance, civil society and consulting
- Action plan now underway: 4 workgroups chaired by Mexico City government staff and an SE4All partner, project managed by WRI/CTS EMBARQ
  - Technical workshop on building retrofits and finance
  - Recommendations on action by government and stakeholders delivered in October; Actions announced at COP 21 in December
  - Program implementation: January 2015-October 2016



*Tanya Muller, Secretary of the Environment, discussing Mexico City's leadership actions*



*Mayor Mancera at COP21 Buildings Day*



# Case Study: Mexico City

March - May 2015

June - August

Sept. - Nov.

Dec. '15 - Nov. '16

Exploration

Examination

Evaluation

Implementation

Launch Workshop

Taking stock and developing a vision

- Where are we today?
- What do we want to accomplish?

Working Group meetings and technical workshop

What are the barriers?

- Political
- Economic
- Technical
- Administrative

Recommendations developed and presented to Mexico City government:

- Code implementation
- Building retrofits
- Financing program
- Administrative/procurement

Work plan leveraging partner competencies

Activities:

- Code adoption
- Code implementation
- Building audits
- Building retrofits
- Financing
- Administrative changes

**We welcome new national and sub-national partners!**

### **Upcoming Commitment and Recognition Opportunities**

- Climate Action 2016 Summit – Washington May 2016
- Energy Efficiency Global Forum – Washington May 2016
- International Sustainable Building Conf. – Costa Rica May 2016
- Global Green Growth Forum – Copenhagen June 2016

**For more information or to join as a partner, contact:**

*World Resources Institute, WRI Ross Center for Sustainable Cities*

Jennifer Layke, Director, Building Efficiency Initiative, [JLayke@wri.org](mailto:JLayke@wri.org)

Eric Mackres, Manager, Building Efficiency Initiative, [EMackres@wri.org](mailto:EMackres@wri.org)

[www.se4all.org/energyefficiencyplatform/building-efficiency/](http://www.se4all.org/energyefficiencyplatform/building-efficiency/)



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