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Sustainable Energy for All - Building Efficiency Accelerator Partnership

An Introduction to the SE4ALL Building Efficiency Accelerator

What are SE4ALL and the Global Energy Efficiency Accelerator Platform? Sustainable Energy for All (SE4ALL), launched in 2011 and led by the UN Secretary-General Ban Ki-moon and World Bank President Jim Yong Kim, has three interlinked objectives to be achieved by 2030:

1. Ensure universal access to modern energy services
2. Double the global rate of improvement in energy efficiency
3. Double the share of renewable energy in the global energy mix

The Global Energy Efficiency Accelerator Platform is a public-private partnership focused on achieving the energy efficiency goal of SE4ALL. The Platform consists of six individual Accelerators to target buildings, lighting, appliances, district energy systems, industry and transportation, to help scale up energy efficiency policies, activities, and investment worldwide.

Why energy efficiency? Rendering energy use more efficient provides one of the most crucial contributions to tackling climate change and improving energy access. Reducing energy use while maintaining the same productivity has the potential to mitigate global energy-related emissions by 1.5Gt along with generating improved air quality, reduced pollution, and substantial financial savings amounting to US\$250-\$325 billion per year.¹ Energy-efficient technologies also create new jobs and provide for a cleaner, healthier planet.

Why buildings? Accelerating the efficiency improvements in existing and new buildings is critical to achieving global energy and climate protection goals. At the global level, the energy consumed in the buildings comprises:

- more than one-fourth global final energy demand
- 60% of the world's electricity use
- one-third of energy-related CO₂ emissions
- two-thirds of halocarbon
- and 25–33% of black carbon emissions²

The building sector also offers near-term, highly cost-effective opportunities to curb energy-demand growth rates.³ Today's best-practices in technology use and building design demonstrate that up to 90% of energy use can be saved in buildings.

If new policies and business practices deploy these best practices at the global scale, the building sector can reduce global thermal energy use by approximately one-third by 2050, even with the projected rapid growth in its global floor area. If only moderate policy efforts are made, building

¹ SE4ALL (http://www.se4all.org/wp-content/uploads/2014/08/Accelerator_Platform.pdf)

² D. Urge-Vorsatz et al., "Towards Sustainable Energy End-Use: Buildings.," in *Global Energy Assessment*, vol. Chapter 10 (Laxenburg, Austria, Cambridge, United Kingdom and New York, NY, USA.: IIASA and Cambridge University Press, 2012).

³ O Lucon, D. Urge-Vorsatz, and et.al., "Chapter 9: Buildings," in *Climate Change 2014: Mitigation of Climate Change.*, Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge, United Kingdom and New York, NY, USA.: Cambridge University Press, 2014).

energy use is expected to almost double by 2050, locking in high consumption patterns and missing out on about 80% of potential energy savings for decades.⁴

Policies focused on increasing energy efficiency in new and existing buildings can promote innovation, generate economic opportunities, support creation of green jobs, reduce maintenance and operation costs over buildings' lifetimes, raise the overall standard of living, and improve human well-being, comfort and health.⁵

In order for efficiency policies to be effective, governments and multiple private sector stakeholders, ranging from developers, investors, building owners, energy utilities, and equipment suppliers, need to develop a common vision and harmonize their actions in support of more efficient buildings.

What is the Building Efficiency Accelerator (BEA)? The BEA is an international multi-stakeholder partnership and network devoted to helping cities and sub-national governments speed up the process of adoption of best-practice policies and implementation of projects on energy efficiency in buildings. The partnership is built around the idea that by improving collaboration between the private and public sectors both locally and globally we can overcome the barriers that have slowed progress on efficiency in the past.

BEA's goal is to double the rate of energy efficiency improvement by 2030 in the building sector of each participating city or sub-national jurisdiction.

What are cities signing up to do? To catalyse energy efficiency improvement, cities that join the Accelerator are asked to make three specific near-term commitments to be implemented with assistance from the partnership:

1. identify and begin to pursue *one enabling policy* and *one demonstration project* for announcement at COP21 in Paris in December 2015
2. create a baseline of building energy performance
3. track and report annual progress and share experiences and best-practices with other governments

BEA partners (as of June 2015):

Cities: Mexico City (Mexico), Milwaukee (United States), Science City of Muñoz (Philippines), Toyama (Japan), Warsaw (Poland)

NGOs/Associations:

World Resources Institute
Global Buildings Performance Network
Global Green Growth Forum
ICLEI
UN Environment Programme
UN Foundation
US Green Building Council
World Business Council for Sustainable Development
World Green Building Council

Companies:

Accenture
Alstom
China Energy Conservation and Environmental Protection Group
Danfoss
Johnson Controls
Philips
Saint-Gobain
TECNALIA

⁴ D. Urge-Vorsatz et al., *Best Practice Policies for Low Energy and Carbon Buildings. A Scenario Analysis* (Budapest, Hungary: Research report prepared by the Center for Climate Change and Sustainable Policy (3CSEP) for the Global Best Practice Network for Buildings, May 2012), <http://www.globalbuildings.org/global-projects/>.

⁵ B Boza-Kiss, S Moles-Grueso, and K Petrichenko, *Handbook of Sustainable Building Policies. Composing Building Blocks* (United Nations Environment Programme (UNEP), 2013), <http://sustainable-buildings-policy-assessment-tools.net/Content/PolicyPackages/ENG/SPoD-final-ALL.pdf>.

BEA's activities in 2015 include a variety of outreach activities and the establishment of partnerships with a handful of leading cities to act as catalysts for regional action. Outreach efforts will include activities conducted by BEA non-governmental and private sector partners. By COP 21 in December 2015, BEA's regional and city activities will touch 100 cities, launch activities in Asia and Latin America, and initiate "deep dive" engagements with 3 cities, with 30 cities or other subnational jurisdictions signing expressions of interest regarding the partnership.

What does the Building Efficiency Accelerator offer cities? The BEA global partnership is designed to complement existing networks of cities with *a venue for engagement with private sector partners*. The BEA process of engagement in a city includes support for:

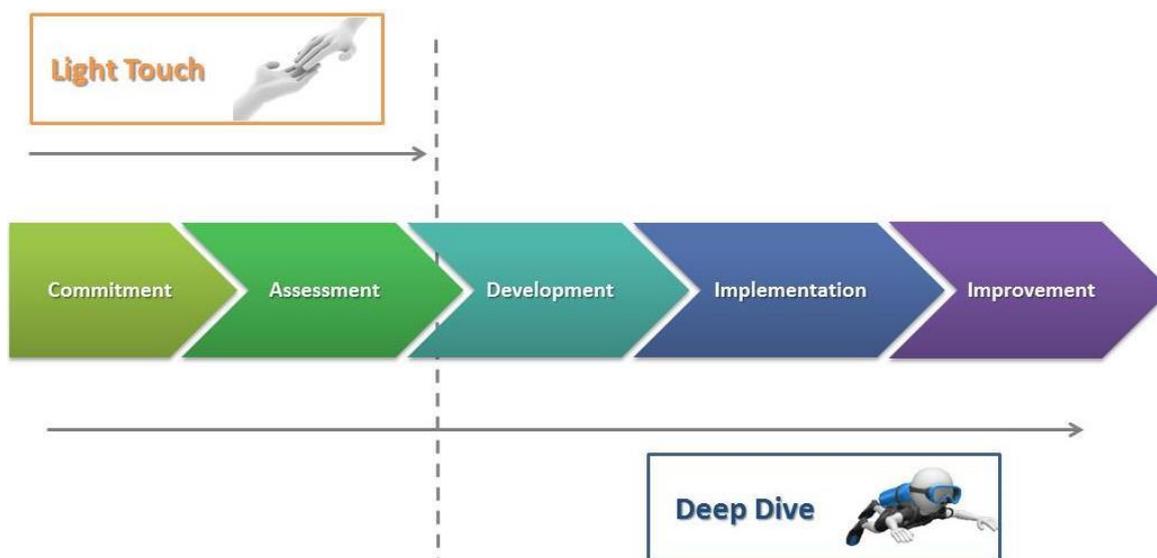
- Assessing and prioritizing locally-appropriate policies and actions
- Implementing actions, through matching needs with expertise, resources and tools
- Tracking action and documenting progress
- Sharing progress & lessons learned

BEA engages with cities through a menu of policy options and key actions. The approach is based on the needs of the city, and specific types of activities that the partnership can provide in each location. Cities will prioritize and select the policies and activities that they seek to implement, and the partnership will connect them to resources and engagement around those priorities.

The Building Efficiency Accelerator local engagement process, in which cities and other BEA partners shape their engagement and take action in a jurisdiction, includes five stages:

1. *Commitment*
 - Expression of interest submitted by the city to the Accelerator
 - Commitments discussed and agreed with the city's authorities
2. *Assessment*
 - A high-level assessment, using available tools and data, to explore local opportunities for energy efficiency improvements through policy and programs.
3. *Development*
 - Organization and facilitation of a multi-stakeholder workshop focused on specific actions and areas of interest.
 - Plan of action for developing and implementing energy efficiency programs or projects
 - Proposals for technical and financial assistance from Accelerator partner organizations.
4. *Implementation*
 - Access to state-of-the-art technical solutions and best practice policy, program and project expertise through SE4ALL Accelerator network partners.
 - Program/project funded and staffed
 - Program/project initiated
5. *Improvement*
 - Establishing an energy efficiency performance baseline and tracking of annual performance improvements.
 - Participation in peer-to-peer, best practice sharing events through virtual meetings and in-person summits.

Based on the overlap of city needs/interests and the partners' local capacity, the partnership will differentiate and develop a strategy with the city, selecting from two tactical approaches – a "Light Touch" to provide resources and tools, or a "Deep Dive" to develop on-the-ground activities based on overlapping priorities and local implementation capacity.



Light Touch

Provides a city with an introduction to, and recommendations on potential policy interventions to increase building energy efficiency. Based on the publically available information, the BEA would help the city select from the menu of policy options for taking actions at the city level. The BEA partners would connect the city to technical organizations, and provide materials and resources taking into account current situation in the jurisdiction and local conditions, which may influence energy efficiency policy development

Deep Dive

Certain cities may be interested in developing a multi-stakeholder process to help implement their goals. Based on the local capacity to engage on the city’s priority policies and activities, 4-5 cities in 2015-2016 could receive “deep dive” support, under which the BEA partners agree to work in collaboration with the Mayor’s office or designated agencies. This approach assists the city and the local partners in development of a shared action plan to support the city’s building energy efficiency goals. The “deep dive” activities could be based on the results from previous steps in the engagement process and focus on one or more of BEA’s offer areas.

Energy Efficiency Policy Assessment and Assistance. The Accelerator team has generated a *menu of policy options*, based on global energy efficiency policy experiences, as well as identified initial *offer areas*, in which partners can provide technical support based on existing expertise.

Menu of policy options

Based on an assessment of local conditions undertaken in cooperation with city leaders, BEA partners will develop recommendations on potential policy interventions on improving energy efficiency in buildings. The recommendations will be based on the menu of policy options and applicability of each option to the local conditions in the city, including current political situation, policy priorities, existing barriers to energy efficiency, market factors, stakeholder interests, available resources, and capacities. The policy instruments included in the assessment are provided in Table 1.

Offer Areas of Accelerator partners

Beginning in the Development stage, Accelerator partners can offer support and technical assistance in several ‘Offer Areas’, in which BEA and its partners have an extensive expertise and competency. Several offer areas, in which technical assistance is available from BEA, are presented in

Table 2. This list is expected to increase, as the number of BEA partners is growing.

Table 1. Building efficiency menu of policy options

Category	Instrument
Codes & Standards	Building codes
	Product standards
Targets	Policy roadmaps and targets
	Energy efficiency obligations/ White Certificates
	Building performance targets
Performance information & certifications	Data collection and baseline development
	Energy audits
	Building certification & rating
	Disclosure of Energy Performance
Finance & incentives	Energy taxes
	Tax exemptions and reductions
	Grants and rebates
	Soft loans/ Revolving loan funds
	Risk mitigation mechanisms
	Preferential mortgages
Government Leadership	Public building and facility energy improvement programs
	Procurement and design regulations
Utility Actions	Public benefits charges
	On-bill repayment
	Revenue decoupling
	Time-based pricing
	Demand response
	Smart metering
Efficiency Industry & Workforce Capacity	Energy performance contract market enablers
	Workforce Technical Training & Education
	Business development for efficiency providers
Building Owner & Occupant Actions	Awareness raising, education and information campaigns
	Competition & awards programs
	Feedback programs

Table 2. 2015-2016 Offer Areas of the Accelerator partners

Offer area	Potential support activities from Building Efficiency Accelerator partners
Building Code adoption and implementation	<ul style="list-style-type: none"> localization of the national building code at the city level improvement of the local compliance with the building code development of the building code enforcement strategy and its implementation tracking of the building code's impact at the city level, etc.
Government Leadership - public building energy retrofits	<ul style="list-style-type: none"> analysis of the energy saving potential for the renovation program design of the energy saving target and roadmap for the renovation program development of the monitoring, evaluation and verification system design of a communication strategy on government actions and results
Government Leadership - energy efficient public procurement	<ul style="list-style-type: none"> identification of procurement processes that need to be regulated set up of respective policy roadmaps, targets and baselines technical assistance in design of the procurement regulation, tendering procedures and criteria training to technical, administrative and financial staff dealing with the new procedures development of the monitoring & evaluation system

Partnership contacts

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