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CITIES



**Building Efficiency**  
Accelerator

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CITIES



## **SUMMARY REPORT**

### **KICK OFF WORKSHOP**

### **BUILDING ENERGY ACCELERATOR**

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**Da Nang Climate Change Coordination Office**

**October 2016**



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## I. Introduction and summary

The SE4ALL Building Energy Efficiency Accelerator (BEA) assists sub-national governments to improve the energy efficiency in their jurisdictions. This multi-sectoral collaboration can help speed actions on efficiency policies and projects. In 2016-2017, Da Nang is selected with 5 other cities to be deep dive partnerships.

Da Nang People's Committee assigns Da Nang Climate Change Coordination Office to lead, coordinate and implement relevant activities within the BEA framework, by the Official document 6448/UBND-TH dated 28/7/2016. On 20/9/2016, Da Nang People's Committee indicates the CCCO to organize Kick off workshop taking place in 28-29/9/2016.

Participants include: representatives of 100RC, WRI, CCCO, state agencies, city departments, universities, mass organization, international organization, businesses, and experts in energy efficiency, environment, and climate change (list of participants in Appendix 1).

### ***1.1. Kick off Workshop***

The workshop includes two sessions:

#### **Session 1: Introduction on the project and relevant information on energy efficiency in city and national level**

Chaired by Mr Dinh Quang Cuong – Director of CCCO, Mr Eric Mackres and Ms Lauren Sorkin, the 1 session has 4 topics:

##### ***1. General information of BEA***

Mr Eric Mackres, Project Manager, WRI present the overall information of SEA4ALL program, BEA, and the necessity of energy efficiency in building. The Sustainable Energy for All Initiative was established by the Secretary General of the United Nations, with its advisory board chaired by the President of the World Bank. It encompasses three objectives by 2030: (1) to ensure a universal access to modern energy services, (2) to double the rate of energy efficiency improvement, and (3) to double the share of renewable energy in the global energy mix.

The BEA process of engagement in a city includes support for: (1) Develop an energy efficiency policy, (2) Pilot a demonstrate project and (3) Establishing an approach for tracking action, documenting progress against policy and project goals. At the same time WRI supports the city in assessing and prioritizing locally-appropriate policies and actions; matching city needs with expertise, resources and tools; and opportunity sharing lessons learned sharing.

Building efficiency is the most cost-effective emissions reduction strategy compared to energy efficiency other sectors such as: Agriculture, industry, transport...



One of the largest benefits of applying energy efficiency is to stabilize the GHG emission, thus reducing the temperature raising of lower than 2oC.

To successfully achieve these objectives, it is important to increase the PPP and stakeholder coordination. This project is also an outstanding opportunity to maximize the supports from international agencies in improving capacity for local staff and efficient management.

## ***2. Vietnam national energy efficiency programme***

According to Mr Le Duy Hung, Vice Director, General Directorate of Energy, Ministry of Industry and Trade, demand on energy in Viet Nam increase significantly over years. In 2012, total energy uses in Viet Nam are equivalent to 35 million tons of oil, 2.07% larger than the demand of 2011. Industry sector shares the largest proportion of 45.7%, followed by transport of 31.7% and residential use of 14.9%. The energy intensity of Viet Nam (583 Kgoe/ USD 1.000) is 6 times higher than Japan and only lower than China. This is because of the low developed technology and process applied in Viet Nam. To deal with the problem, Viet Nam government has launched the National target program on energy saving and efficiency in period 2012-2015.

Energy efficiency has been applied, replacing drawback technologies by high efficient equipments and technologies. New or renovated buildings are required to obey the Viet Nam building code, satisfying the criteria on energy efficiency and environmental friendly. The program has achieved significant results after 4 years of implementation. According to Energy Institute, energy intensity in 2015 has reduced significantly to 480 (Kgoe/ USD 1.000). In 2011-2015 period, 6% of energy use has been cut in the total national energy use.

## ***3. Current status of energy using in buildings in Da Nang***

According to Mr Ho Quoc Son, Da Nang Energy conservation and Technology consultant Center, electricity use in Da Nang has increased significantly over 2010-2015 with a rate of 10-12%. Particularly in 2011-2012, the growth rate reaches its peak of 14.85%. Industry and construction are among the largest consumers sharing 47.3% total electricity use in 2015.

The survey on 40 buildings in 05 sectors showed that market has the largest energy intensity, followed by administrative building, hotels, hospitals, whereas schools has the lowest energy intensity.

High energy loss is because of following reasons: (1) Design: want low investment, propose incorrect power demand, apply the same design without consideration on difference of appliance. (2) Operation: don't recognize the loss, use inappropriate appliances, irrelevant maintenance, and low awareness of operator and users; (3) Management: pay attention to products, ignore the "small expenses", and lack of energy monitoring, and auditing

## ***4. Experience sharing on energy efficiency in buildings in Viet Nam and Da Nang.***



The topic is presented by Mr Nguyen Cong Thinh, Vice Director of Department of Science, Technology and Environment - Ministry of Construction and Ms Nguyen Thi Thu Nhan, IFC.

In the framework of VCEP project, MOC and USAID collaborate with DOC in 5 cities, including Hà Nội, Hải Phòng, Đà Nẵng, Hồ Chí Minh, Cần Thơ to conduct a survey on key buildings which have the total floor area of 2.500m<sup>2</sup> and above and are built within past 10 years. Based on the survey, baseline on energy use of several buildings has been developed. The simulation show that energy intensity of Viet Nam has increased by 400%, to be specific: energy intensity of Ha Noi has increased 200% and that of Ho Chi Minh city has grewed by 300%.

Mr Thinh also suggests several solutions to energy efficiency and green building at Da Nang such as: provide training for application of QCVN 09:2013/BXD; Develop models of energy efficient buildings; Propose incentive mechanism for enegy efficiency; Assess and award green certificates; Condu tenergy audit for buildings; and develop a roadmap for GHG reduction.

Ms Nhan introduces the Green Building Project in Da Nang conducted by IFC. Currently there is one building has been certified the EDGE (FPT complex). Two other buildings have being assessed which are Da Nang hospital and Eco Green Hotel.

She also appreciates the support of WRI to conduct the deep dive research on building energy efficiency in Da Nang. IFC commits to support and colaborate with Da Nang city to implement the project.

## **2<sup>nd</sup> Sesion: Identify the prioritized actions to be implemented in Da Nang**

Da Nang CCCO has conducted several discussions with key departments to filter the prioritized actions on 16 Sep and 23 Sep 2016.

### **Policy**

1. Action on Codes, Standards: Developing the City Action Plan for accelerating the implementation of Regulations No. 09/QCVN (Apply for the new buildings).
2. Action on information and certificates: Developing a policy on encourage efficient energy use in hotels.
3. Action on incentives and finances: Developing a financial incentive policy for energy efficiency of projects.
4. Action on Government leadership: Developing a Regulation on enhancing the coordination, management, monitoring of energy efficiency in buildings in the city.

### **Demnstration**

1. Action on Targets: Developing some baselines (using the models, tools for calculation) on energy consumption for some building groups (hotels,



commercial centers, hospitals, schools) and recommended for building owners on energy targets.

2. Action on incentives and Finances: Developing the feasibility study to improve energy efficiency for a number of public and private buildings (hotels), and proposing solutions on the incentive mechanisms for implementation.
3. Action on Government leadership: Research, survey and develop the Documentation of houses Models at the community level to improve energy efficiency (example apartments and households).
4. Action on Working with Utilities: Mobilize the participation of Program of efficient energy using in the administration building of the People's Committee of the wards (03 units).

Participants are divided into 2 group for discussion the Policy and demonstration to be conducted in Da Nang. Methodology is presented in the preparation plan (Appendix 3)

Results of group discussion and project charter are presented in Session II.

### ***1.2. BEA Technical meetings***

Technical meeting is conducted on 29/9/2016 engaging participants from WRI, CCCO, 100RC, IFC and key technical departments.

Based on the discussion at the Kickoff workshop, CCCO develops a work plan for 2016 (detail in Appendix III)

## **II. Summary on the prioritized actions to be conducted in the BEA**

The preliminary result from discussion at the kick off worksop is as follow:

### ***II.1. Policy***

No	Areas	Proposed action	Priority	Comments
1	<b>Codes, Standards</b>	Developing the City Action Plan for accelerating the implementation of Regulations No. 09/QCVN (Apply for the new buildings).	5/9 vote Very important action Dificult to conduct	Need to clearly identify the type of buildings: residential, industrial, public or complex building  Activities for further research: - Regulation on planning and project management - Regulation on landscaping - Integration of Urban



No	Areas	Proposed action	Priority	Comments
				<p>development with Green building program and energy efficiency</p> <ul style="list-style-type: none"> <li>- Guidance on building architecture</li> <li>- Guidance on EE material and technology</li> </ul>
2	<b>Information and certificates</b>	Developing a policy on encourage efficient energy use in hotels.	10/13 vote : Very important action Somewhat difficult to conduct	<p>The policy should addresses both Design Phase and Operation Phase to encourage and reward the EE buildings</p> <p>The incentives might include: adjust the liscensing process, shorten the liscensing time, financial incentives for ex-import the EE equipments, materials.</p> <p>Incentives for using or producing EE materials or equipments.</p> <p>IFC proposes using EDGE for calculation</p>
	<b>Incentives and Finances</b>	Developing a financial incentive policy for energy efficiency in building	8/10 vote Very important and above Somewhat difficult to conduct	<p>Similar to comments on Action 2</p> <p>Incentives will provide: financial supports for importer or using the EE materials and equipments in term of tax reduction of waive</p>
	<b>Government leadership</b>	Developing a Regulation on enhancing the coordination, management, monitoring of energy efficiency in buildings in the city	8/11 vote Very important and above Somewhat difficult to conduct	<p>Develop a coordinating mechanism between local Departments in Da Nang and Ministries, State Agencies. Propose a particular mechanism for certain activities (scale of buildings, authorized agencies for management)</p>

## II.2. Demonstrations

No	Areas	Proposed action	Priority	Comments
1	<b>Incentives and Finances</b>	Developing the feasibility study to improve energy efficiency for a hotel	To be identified	There are data and information available for some hotels (VCEP)  Philips has experience in conducting EE for lighting system in Saigon Center (ESCO). A similar project can be conducted in a building in Da Nang which replaces all the efficient light by EE equipments.
2	<b>Government leadership</b>	Certify the EDGE certificate for a building in Da Nang	To be identified	IFC has developed the criteria  80 buildings have been audited  IFC provide free service for registration and consultation
3	<b>Building owner and occupant actions</b>	Energy efficiency and improve light intensity in elementary schools.	To be identified	High percentage of elementary student have short eye sight  Light intensity is lower than standard of 300 LUX  There is lack of budget for improvement because the school fee is not allowed to collect.

## III. Next steps

### III.1. Activities

CCCO and technical team of BEA should consider following questions to prioritize the areas and actions:

#### a) Policy:

1. Action 1: Developing the City Action Plan for accelerating the implementation of Regulations No. 09/QCVN





This is an important action however it is difficult to conduct due to the constraint in human resource of the Department of Construction.

2. Action 2: (\*)<sup>1</sup> Developing a policy on encourage efficient energy use in hotels (news or existing):

This action is important and not difficult at all, including non-fiscal incentives (shorten the liscensing time, certification, reward) for new EE buildings or existing buildings which can prove the energy improvement.

Question to consider:

a. *What kind of building will be targeted? New/existing, Residential/Commercial/Public/Private?*

- *There is advandtage of guidance materials (provided by BEA) if new buildings are selected*

- *If energy improvement for existing buildings are targeted, information need to be considered sort of information and transparency-based competition or challenge program*

3. Action 3: incentives and finances

Important but difficult to implement

4. Action 4: \* Developing a Regulation on enhancing the coordination, management, monitoring of energy efficiency in buildings in the city: Very important but difficult to implement

a. *What kind of buildings will be targeted?*

b. *What are the existing building efficiency activities being implemented by different departments?*

c. *How, specifically, will coordination improve efficiency? (Are there existing policies that are not being implemented effectively? Are new policies needed that will require coordination between departments to effectively implement?)*

d. *To develop a more specific proposal, you may want to consider options for public procurement policies that integrate efficiency. You can find many resources on this topic, collected by the BEA technical partners*

**b) Demonstration:**

1. Action 1. Developing the feasibility study to improve energy efficiency for a hotel: Philips may provide support for a pilot

2. Action 2. EDGE (or others certification) for one or more public buildings

3. Action 3 (\*)<sup>2</sup>:Energy efficiency and improve light intensity in elementary schools *or public buildings*

<sup>1</sup> (\*): Highly concerned action, need to discuss further



- a. *Which types of buildings will be targeted by this activity? - Although this was presented as applying to existing primary schools, there was discussion of both new and existing buildings as well as other public buildings beyond schools.*
- b. *How many buildings will be improved? - It was noted that one building is not very ambitious. Also, if you begin the process by considering more than one building you may be able to achieve more with a similar amount of effort.*
- c. *How will the buildings be selected? - What existing data is available on the building types being considered (perhaps existing DECC research can help with this question)? If energy use data is available for many buildings of the same type you may want to select the buildings with the most above average energy intensity to be assessment for specific efficiency actions that can be taken.*
- d. *Other questions, which will need to be answered as part of the implementation of the work plan (but not in 2016): Which efficiency measures will be implemented in which buildings? How will the projects be funded/financed?*
- e. *Some other resources that might be helpful on this topic (BEA provides)*

### **c) Tracking progress**

Da Nang team needs to identify a method to track the progress and impacts of policy and project. The guidance document developed by the BEA partners, which may be a helpful tool in identifying how the progress will be tracked.

## **III.2. Implementation, Resoure and Timeline**

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<sup>2</sup> (\*) Highly concerned, need to develop further.

No	Duties	Expected results	Time	Implement	Support	Partici- pant	Oct				Nov				Dec				Jan/ 2017	
							W 1	W 2	W 3	W 4	W 1	W 2	W 3	W 4	W 1	W 2	W 3	W 4	W 1	W 2
<b>I</b>	<b>Meetings</b>																			
1	Regular meetings of Management Board	Update on project status	Bi-weekly	CCCO	WRI, 100RC, IFC	CVT														
2	Regular meetings of Technical team	Update the implementation	Monthly	CCCO	IFC	All														
<b>II</b>	<b>Assessment and Prioritized actions</b>																			
1	Conduct assessment																			
	<i>Policy</i>	<i>Propose action and activities based on the discussion and analysis</i>	<i>01 month</i>	<i>Technical consultant</i>	<i>CCCO</i>	<i>Technic-al team</i>														
	<i>Demonstration</i>	<i>Propose action and activities based on the discussion and analysis</i>	<i>01 month</i>	<i>Technical consultant</i>	<i>CCCO</i>	<i>Technic-al team</i>														
	<i>Tracking progress</i>	<i>Propose tracking method based on the guidance materials</i>	<i>01 month</i>	<i>Technical consultant</i>	<i>CCCO</i>	<i>Technic-al team</i>														
2	Consultation meeting on the assessment and agreed actions	Scope of the project is approved by stakeholders	01 day	CCCO	WRI, 100RC	All														

No	Duties	Expected results	Time	Implement	Support	Partici- pant	Oct				Nov				Dec				Jan/ 2017	
							W 1	W 2	W 3	W 4	W 1	W 2	W 3	W 4	W 1	W 2	W 3	W 4	W 1	W 2
III	<b>Develop the work plan for 2017</b>																			
1	Develop the work plan																			
	<i>Policy</i>	<i>Propose work plan for 2017</i>	<i>01 month</i>	<i>CVKT</i>	<i>CCCO</i>	<i>Technic-al team</i>														
	<i>Demonstration</i>	<i>Propose work plan for 2017</i>	<i>01 month</i>	<i>CVKT</i>	<i>CCCO</i>	<i>Technic-al team</i>														
	<i>Tracking progress</i>	<i>Propose work plan for 2017</i>	<i>01 month</i>	<i>CVKT</i>	<i>CCCO</i>	<i>Technic-al team</i>														
2	Consultation meeting on the workplan	The workplan is finalized	01 day	CCCO	WRI, 100RC	All														
3	Consult the Steering Committee	Steering Committee approves the workplan	01 day	CCCO	WRI, 100RC	All														



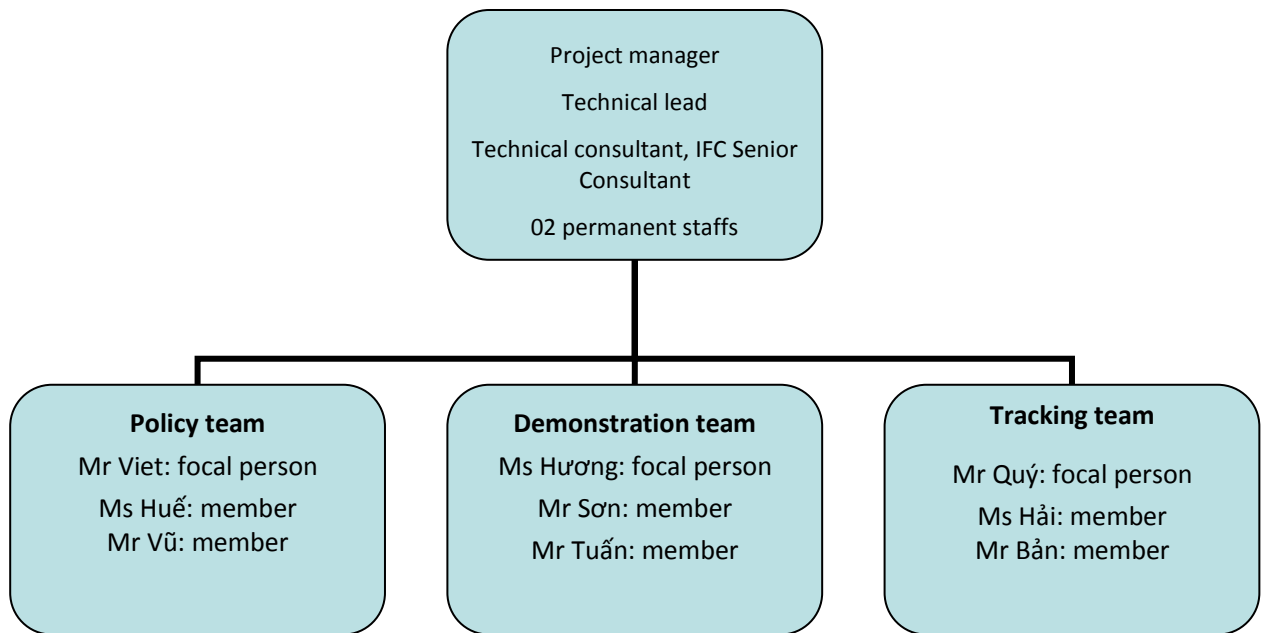
### **III.3. CCCO Staff and technical team**

#### **a) CCCO:**

- Mr Đinh Quang Cường, Director: Project manager
- Ms Nguyễn Thị Kim Hà, Vice Director: Technical lead, member of Policy team.
- Ms Trịnh Thị Minh Hải, Vice Director: Communication manager, member of Tracking team.
- Mr Lê Quang Việt, CCCO staff: technical staff, Focal person of Policy team.
- Ms Vũ Thị Mai Hương, CCCO staff: technical staff, Focal person of Demonstration team.
- Mr Phan Minh Quý, CCCO staff: technical staff, Focal person of Tracking team.
- Mr Phù Chí Thịnh, CCCO staff: Accountant
- Ms Vũ Thùy Linh: CCCO staff: Administrative staff

#### **b) Member of technical team and local experts:**

- 01 technical consultant (partime): Cooperate with technical lead to implement the project
- 01-02 permanent staff (full time): 01 coordinator and 01 cummunication staff
- 01 senior expert from IFC: Consultant
- Ms Trần Thị Kim Huế, Department of Construction: member of Policy team
- Mr Trần Huỳnh Vương Hoài Vũ, Department of Trade and Industry: member of Policy team
- Mr Nguyễn Anh Tuấn, University of Technology: member of Demonstration team
- Mr Hồ Quốc Sơn, Department of Science and Technology: member of Demonstration team
- Mr Dương Hoàng Văn Bản, Department of Science and Technology: member of Tracking team



## Appendix

*Agenda of kick off workshop, 28/9/2016*

*List of participants*

*Presentation*

*Pictures at the workshop*