



**Asia-Pacific
Economic Cooperation**

2017/EWG54/010
Agenda Item: 7b(i)

Completion Report: APEC Low-Carbon Model Town Project Phase 6 (EWG 01 2015A)

Purpose: Information
Submitted by: Japan



**54th Energy Working Group Meeting
Wellington, New Zealand
22-23 November 2017**

Summary of APEC Completion Project

Project profile

Project number & title:	EWG 01 2015A APEC Low-Carbon Model Town (LCMT) Project Phase 6		
Project time period:	1 August 2015 – 30 June 2017	CR Submission Date	30 August 2017
EWG/EG/TF:	Energy Working Group / LCMT-TF		
Project Overseer Name / Organization / Economy:	Masaomi Koyama, Director, Overseas Energy Infrastructure Office, International Affairs Division, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry		

1. Project description:

The LCMT project directly responds to the declaration at the 9th APEC Energy Ministers Meeting (EMM9), held in Fukui, Japan on 19 June 2010, which focused on “Low Carbon Paths to Energy Security”.

The LCMT project seeks to promote low-carbon technologies in city planning in order to manage rapidly growing energy consumption and greenhouse gas emissions especially in urban areas of the APEC region. It consists of three activities, namely, i) refinement of the ‘Concept of the Low-Carbon Town in the APEC Region (Concept)’ including the APEC Low-Carbon Town Indicator (LCT-I) System, ii) Feasibility Study and iii) Policy Review of planned low-carbon town development projects.

Under the LCMT Phase 6, Mandaue City, Cebu Province, the Philippines was selected as the case of low-carbon town development project.

2. Meeting objectives:

The Fifth Edition of the ‘Concept’ was refined through a preparatory study by the team of Japanese low-carbon town experts and the review on the preparatory study by Study Group A. The Study Group A members (six experts from Australia; China; Japan; New Zealand; Thailand and Viet Nam) along with the Asia Pacific Energy Research Centre (APERC) research staff visited Yongin City and Jincheon-gun in Korea, Krasnoyarsk City in Russia, Yokohama City and Kashiwa City in Japan on 28 March–7 April 2016 in order to incorporate the characteristics of energy use in the cold weather regions. The refined ‘Concept’ and the First Edition of the LCT-I System Guideline were endorsed by EWG members in November 2016 and are available on both the APEC and APERC websites.

The Feasibility Study for Mandaue City, Cebu Province, the Philippines was conducted by ALMEC Corporation, a contracted consultant, who was selected through an international tender. The Feasibility Study aimed at checking CO2 emissions reduction goals and verifying how to develop attractive and innovative development plans through the feasibility study. The key results of the Feasibility Study includes combined low-carbon measures for realising ‘sustainable urban life and economic activities in cooperation with neighboring cities’ such as transit oriented development including station plaza, LED street lightening, improvement of road public transport vehicles, waste-to energy facility, green buildings for commercial and tourism use, etc. They completed the Feasibility Study in November 2016 and the final report was published on the APEC website in June 2017.

For the Policy Review of a low-carbon development project for Mandaue, the Study Group B members (six experts from Hong Kong, China; Malaysia; New Zealand; Russia; USA and OECD) along with APERC research staff visited Mandaue on 7-9 December 2016. The review team had comprehensive discussions with officials from the Department of Energy, Mandaue municipality, Cebu provincial government and representatives and experts of related organisations. Based on these discussions, 52 recommendations covering legal and institutional frameworks, sustainable urban planning, low-carbon building, area energy management systems, renewable energy and untapped energy planning, transportation, environmental planning and others were made. The final report of the Policy Review was endorsed by the EWG members and published in May 2017.

The outcomes of these three activities were presented at the 12th and 13th meetings of LCMT Task Force (TF) held in conjunction with the EWG52 meeting in Moscow and EWG53 meeting in Singapore. There were no

problems or obstacles encountered, but the project end date was extended by six months from the end of December 2016 to the end of June 2017 as the Study Group B mission trip was conducted in December 2016 and it was difficult to complete the process of travel undertaking by the end of November 2016 which was required by the APEC Secretariat. As the Study Group B had to wait the completion of the Feasibility Study Report, it was inevitable to extend the project.

3. Output indicators:

Indicators <i>(Edit or Insert rows as needed)</i>	# planned	# actual	Details or notes
# workshops / events	2	2	Survey by Study Group A (SG-A) and Policy Review by Study Group B (SG-B)
# participants (M/F)		52M/29F	36(30M/6F) in the survey of SG-A and 45 (22M/23F) in the Policy Review by SG-B
# economies attending		12	- Australia; China; Japan; Korea; New Zealand; Russia; Thailand and Viet Nam in SG-A - Hong Kong, China; Malaysia; New Zealand; the Philippines, Russia; and USA in SG-B
# speakers engaged		11M/1F	6(6M/0F) in the survey by SG-A and 6 (5M/1F) in the Policy Review by SG-B
# other organizations engaged	2	1	Experts from OECD and EGNRET were invited and OECD joined SG-B.
# publications distributed	4	4	'Concept', LCT-I System Guideline, Feasibility Study Report and Policy Review Report
# recommendations agreed on		52	In Policy Review Report
Other:			

4. Outcomes:

As for the 'Concept', how much towns/cities in the APEC Region utilise it is an indicator to measure its success. The wide spread use of the LCT-I System will accelerate the shift towards low-carbon development. Furthermore, standardising will help increase the number of recognisable low-carbon towns.

As for the feasibility study by ALMEC Corporation, how much the Mandaue municipality uses it will be an indicator to measure its success.

The GHG emission reduction results and the sustainability outcomes by proposed low-carbon measures are expected to spread across the Philippines. This will be an indicator of the success of the policy review.

The development of the LCT-I System was reported at the 40th IAEE International Conference on 21 June 2017.

5. Key findings:

One of the key findings will be the clear CO₂ reduction target specified for Mandaue which is describing a high-level vision of how Mandaue low-carbon development project could best be made a model of low-carbon design. The proposed low-carbon measures will help Mandaue City achieve 30% CO₂ emission reduction compared to its BAU by 2030. The target is supported by a set of concrete low-carbon measures both on energy demand and supply sides based on the comprehensive and systematic evaluation. The 52 policy recommendations are another example of findings, which are helpful to overcome barriers for the success of Mandaue low-carbon development project.

Progress Report of Low-Carbon Model Town Task Force

Tomio HARADA

LCMT-TF Chair

Ministry of Economy, Trade and Industry, Japan

1. Progress Report of the LCMT Project Phase 7

- Mr. Harada, chair of LCMT-TF, presented current situation of LCMT project phase 7.
- LCMT Project is in transition phase, and dissemination activity is highlighted as an important component of this project after establishment of “LCT Concept” and “LCT-Indicator”.
- 3 cities were selected as volunteer towns for in-depth FS and sharing practical experience with “LCT Concept” and “LCT-I” at LCMT symposium.

LCMT-TF_14-2-1

METI
Ministry of Economy, Trade and Industry

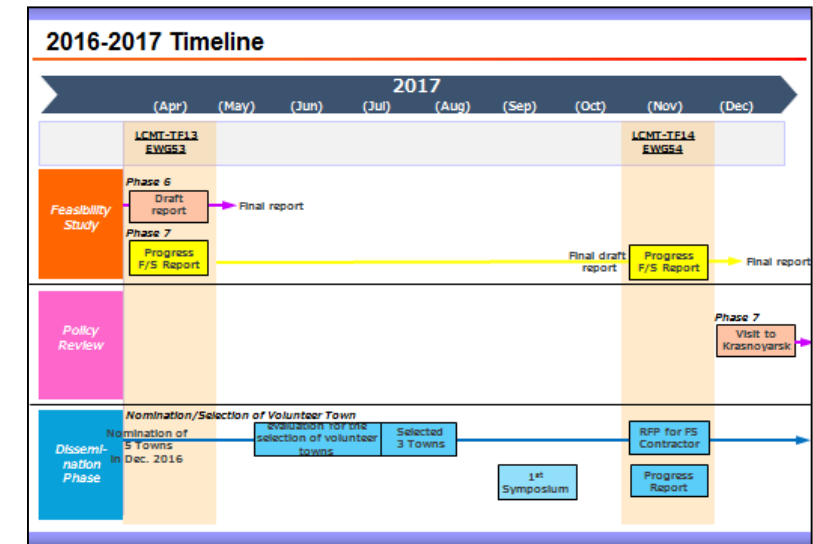
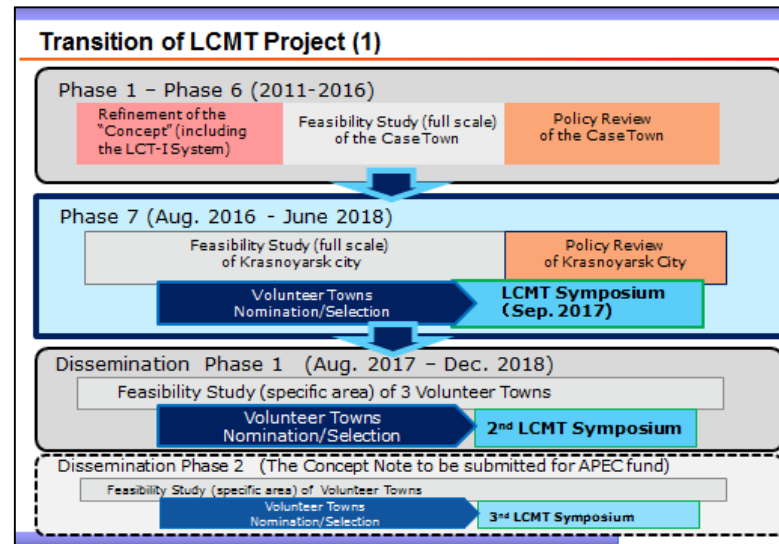
APEC
Energy Working Group

Progress of The APEC LCMT Project Phase 7

November 20, 2017

Agency for Natural Resources and Energy
METI, Japan

1



1. Progress Report of the LCMT Project Phase 7 (Feasibility Study)

- Nikken Sekkei Research Institute, contracted consultant for feasibility study for Krasnoyarsk city, presented the basic information including infrastructure, transportation and energy system, their progress status, and their schedule.
- This feasibility study report will be completed shortly.
- The report will be circulated for the EWG endorsement within 2017.

20 November 2017
APEC/EWISA

APEC Low Carbon Model Town Phase 7 in KRASNOYARSK

NIKKEN
EXPERIENCE. INTEGRATED

Copyright © 2017 NIKKEN All rights reserved

About KRASNOYARSK CITY

More than 60% of the days between November and February are frigid cold.

CLIMATE
The average minimum temperature is minus 26°C and the highest average maximum temperature is minus 17°C. The summer temperature ranges are 12°C~25°C. Most days between March and April, and in October have freezing temperatures; May and September have mostly cold days. Between Jun and August, 60% of the days have cool temperatures and the weather is warm or comfortable for the other days.

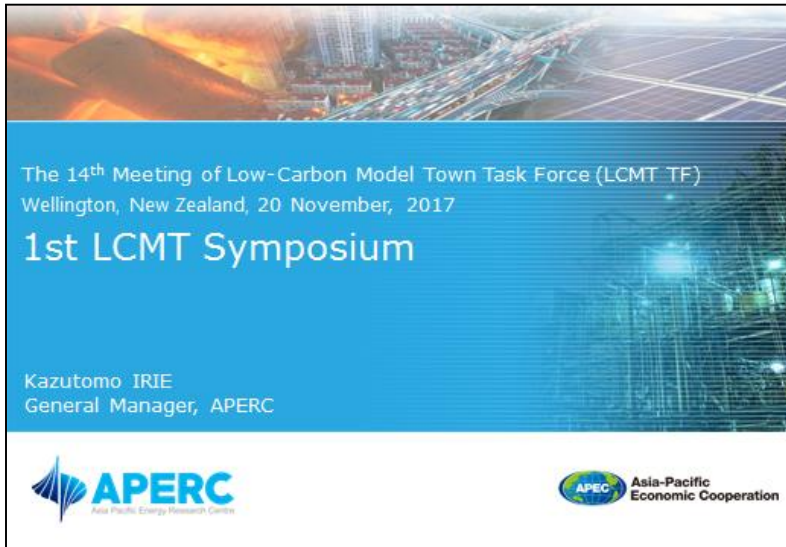
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Freezing	57%											
Cool						64%						
Comfortable						20%	20%					
Warm							20%					
Hot												

Project Schedule

Task	2017											
	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
1. Prepare a Low Carbon Development Strategy	Progress											
2. Analyze CO2 reduction potentials for the selected design scenarios			Progress									
3. Study implementing the Building's C-Action plan				Progress								
4. Report Preparation and Review												
5. EWG Meeting												
Workshop in Krasnoyarsk												
NSRI												
Krasnoyarsk City, Monolith Holding, NSRI, NIKKEN												

1. Progress Report of the LCMT Project Phase 7 (Symposium)

- Dr. Irie, APERC General Manager, presented the summary report of the 1st LCMT Symposium which was held in September, 2017 at Jakarta, Indonesia.
- The main purpose is to disseminate LCT in the APEC region through the utilization of the LCT-Indicator system, sharing information on advanced LCT projects in the world.
- 56 participant from 7 APEC economies, 3 volunteer towns, review experts, IEA, OECD, NEDO, APERC



The 14th Meeting of Low-Carbon Model Town Task Force (LCMT TF)
Wellington, New Zealand, 20 November, 2017

1st LCMT Symposium

Kazutomo IRIE
General Manager, APERC

APERC Asia-Pacific Energy Research Centre

APEC Asia-Pacific Economic Cooperation



1st LCMT Symposium

Date: 14-15 September 2017
Venue: Shangri-La Hotel, Jakarta, Indonesia

APERC

2



Objectives

- Share information on advanced Low-Carbon Town (LCT) projects in the world including the previous LCMT case towns in the APEC region
- Promote the use and recognition of the APEC Low-Carbon Town Indicator (LCT-I) System as a tool to disseminate LCT in the APEC region
- Explore possibility of utilising the LCT-I System to develop bankable low-carbon development project in APEC developing economies
- Gather feedbacks from experts and delegates of LCT projects for the improvement of the LCT-I System




APERC

4

2. Progress Report of the LCMT Project Dissemination Phase 1

- Mr. Harada, chair of LCMT-TF, presented current situation of LCMT project dissemination phase 1 (DP1).
- Selected 3 volunteer cities will be carried out in-depth FS under the DP1.
- Open tendering process for FS consultant
- Invite next volunteer towns to make a good practice of using LCM-Indicator for the improvement of the low-carbon development shortly

LCMT-TF_14-3

 METI
Ministry of Economy, Trade and Industry

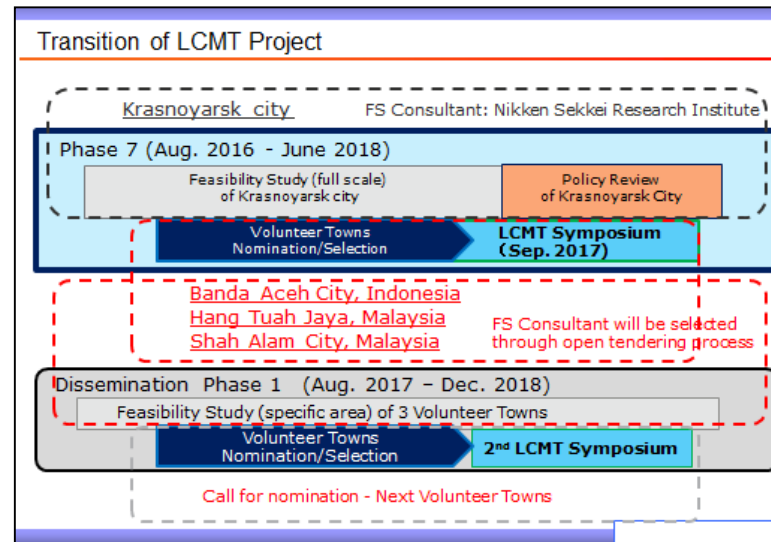
 APEC
Energy Working Group

**Progress of The APEC LCMT Project
Dissemination Phase 1**

November 20, 2017

Agency for Natural Resources and Energy
METI, Japan

1



Current Situation of the Progress of Dissemination

Volunteer Town

- Invite nomination on Dec. 28th, 2016
- 5 cities/towns from 3 economies nominated by Feb. 28th, 2017

Review Team

- Request for Nominations on Feb. 13, 2017

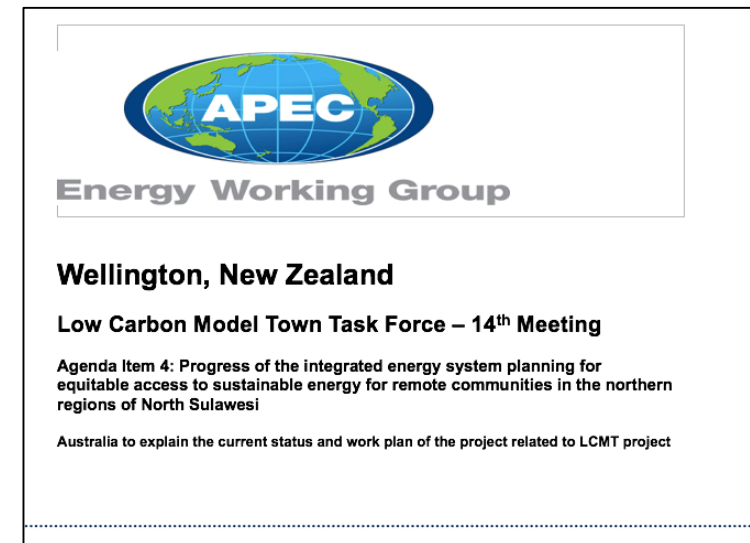
Selection of Volunteer Towns

- Consulted with the Review team to make draft of selection of Volunteer towns
- Selected 3 cities/towns for In-depth FS at the 1st symposium on September 14th, 2017

7

3. Sharing progress of LCMT related project

- Mr. Steven O. Kandouw, the Vice Governor of North Sulawesi province of Indonesia, delivered a short speech on the LCMT Policy for sustainable development in North Sulawesi Province as Promise Land of Renewable Energy in Indonesia.
- Mr. Andrew Scally, Representative of Australia, explained the current status and work plan of the project related to LCMT project.
- The projects builds on the LCMT phase 5 project for Bitung city, Indonesia.



4. Concept Note for 2018 Session 1

- The chair reported that LCMT-TF has a new concept note “APEC Low-Carbon Model Town (LCMT) Project Dissemination Phase 2” from Japan for category 1 project of 2018 session 1, and no adverse comments were received through LCMT-TF members review from 5 October to 25 October.
- Japan explained this project to seek further comments from LCMT-TF members.
- LCMT-TF concluded to support the concept note.