Asia-Pacific
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Second APEC Low-Carbon Model Town (LCMT) Symposium
Summary Report

Da Nang, Viet Nam | 20-21 September 2018

APEC Energy Working Group

October 2020

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1. Background

The APEC Low-Carbon Model Town (LCMT) Project was launched in response to the declaration at the 9th APEC Energy Ministers Meeting (EMM9), held in Fukui, Japan on 19 June 2010, where Ministers discussed low-carbon pathways to energy security through cooperative energy solutions for a sustainable APEC as well as growth strategies. Among several messages, they noted that introducing low-carbon technologies in city planning to boost energy efficiency and reduce fossil energy use is vital to managing rapidly growing energy consumption in urban areas of the Asia-Pacific region.

The Concept of Low-Carbon Town in the APEC Region (Concept) was developed under the LCMT Phase 1 and refined in the Phase 2-6. The First Edition of the Guideline and the Evaluation Sheet of the APEC Low-Carbon Town Indicator (LCT-I) System were developed in tandem with the Concept since the LCMT Phase 3 and published in November 2016. From Phase 7, the Concept and the LCT-I System will be utilised as a tool to disseminate low-carbon towns (LCT) in the APEC region.

2. Objective

The purpose of this symposium is to further promote the development of low-carbon towns in the APEC region by disseminating the LCT-I System, sharing information on various types of LCT projects in the world and exploring the possibility of using the LCT-I System to develop bankable low-carbon development projects in APEC developing economies.

3. Symposium Description

The 2nd APEC LCMT Symposium was held on 20-21 September 2018 in Da Nang, Viet Nam. The agenda of the symposium on the Day One consisted of four parts:

i) Opening: Welcome remarks of the hosts and the organizers, followed by the review presentations on low carbon town development in Viet Nam and in Da Nang
ii) International stories: Presentations of guest speakers about promoting low carbon model in various contexts and the possibility of obtaining financial support from international institutions
iii) Applying LCT-I: Two presentations from volunteer towns who applied the LCT-I, coupled with designated expert reviewer's evaluation, after opening presentations on framing a LCT project with stakeholders' roles and on the structure of LCT-I system
iv) Closing: Overall comments and discussion on LCT in general and on specific presentations, certificate giving ceremony and closing remarks.

A site visit to FPT Complex was scheduled for the Day Two, which was recommended by Da Nang City. This is a new building complex being constructed by FPT Software Company with an image of a green office space, located in the same district (Ngu Hanh Son) that was conducted LCMT feasibility study in 2013.

The agenda is in Appendix. Presentations are uploaded on APERC website at https://aperc.ieej.or.jp/publications/reports/lcmt_detail.php?article_info__id=344.

4. Symposium Sessions Summary

4.1 Welcoming and Opening Remarks

Ms Le Thi Thu Hanh, the Vice Director of Foreign Affairs Department on behalf of the Vice Chairman of Da Nang People's Committee, delivered welcome remarks and showed Da Nang's willingness to host this event. The Chair of the APEC-LCMT Taskforce, **Mr Tomio Harada**, Director for Natural Resources and Energy Research, International Affairs Division, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry (METI), Japan, on his opening remarks briefly introduced about the event's background and expressed the organizers' gratitude to the host and participants. Representative from Ministry of Industry and Trade (MOIT), the focal point of all energy related matter in Viet Nam, **Mr Nguyen Viet Dung,** Deputy Head of Department of Energy Efficiency and Sustainable Development also sent Viet Nam's welcome message to events like this, as Viet Nam is also building an image of a green sustainable economy.

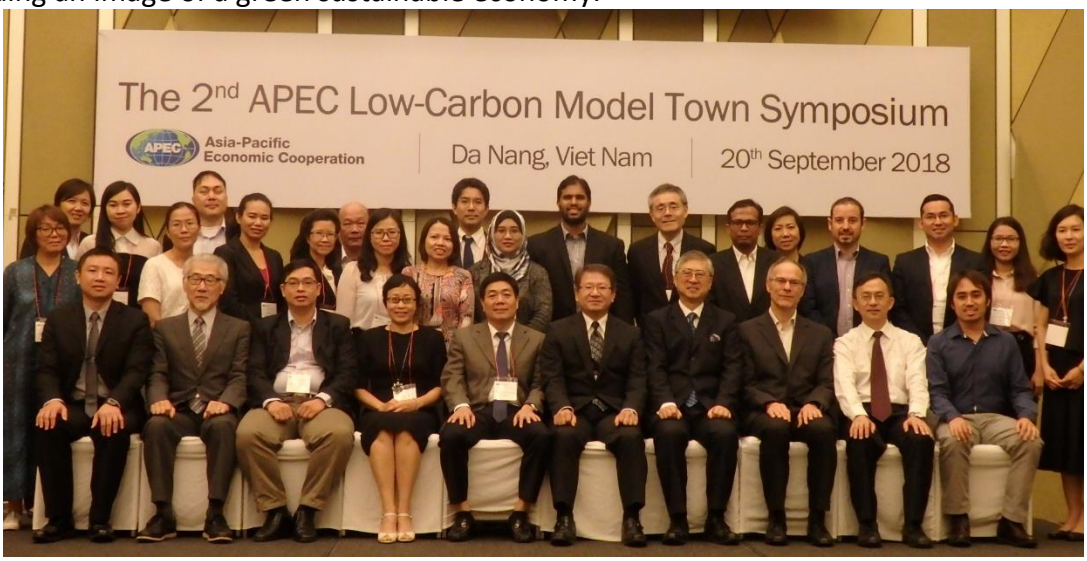

Figure 1 Group photo, Day 1 of the Symposium

4.2 Presentations by guest speakers

Speaker 1: **Ms Bui Thi Hien**, Official, Department of Energy Efficiency and Sustainable Development, MOIT

Topic: Opportunities for LCMT Development in Viet Nam

Viet Nam is a populous developing economy (100 million by 2025) with high urbanization rate (2.8%). GDP grew at 5.91%, energy demand at 11% during 2011-2015 and power demand would increase as high as 8.7% per year on average. Greenhouse gas emission from energy sector accounted for 63% of total GHG emission in 2010 in Viet Nam and will account for 83% and 86% in 2020 and 2030, respectively.

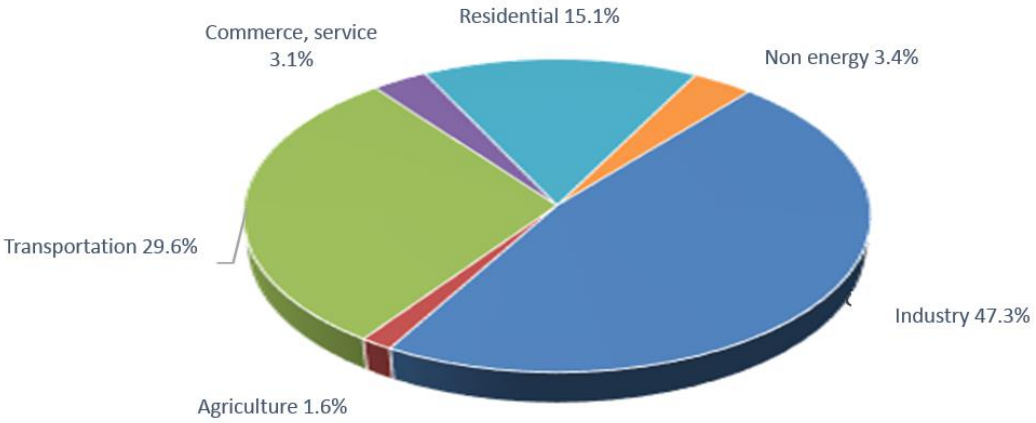

Figure 2 Energy consumption by sector in Viet Nam, 2015

Policies for Low-carbon development include the Party's Central Committee Resolution (June 2013), National Green Growth Strategy (2012), National Green Growth Action Plan (2014), National Climate Change Strategy (2011) and those integrated in renewables and power plans. The National Targeted Program on Energy Efficiency (VNEEP, since 2006) is the special program for conserving energy in various sectors. Two phases were conducted with 3.4% and 5.6% of energy saving and Phase 3 is being proposed (2019-2030). Although there are some challenges of investment, it is still expected that Phase 3 will contribute to the implementation of National Energy Policy, slow down the growth of commercial energy source by average 0.8%/year for 2020 - 2030; reduce greenhouse gas emission by 10-15 million tons of CO2 equivalent; and achieve energy saving of 55-60 million TOE.

Speaker 2: **Ms Nguyen Thi Kim Ha,** Vice Head of Da Nang Climate Change Coordination Office (CCCO)
Topic: Sharing the project "Building efficiency accelerator (BEA)" in Da Nang city

The Building Efficiency Accelerator (BEA) is one of six initiatives of Sustainable Energy for All of United Nations and World Bank and Da Nang is one of six deep dive partnership city to implement BEA with the target of doubling the rate of building energy efficiency to 2030 in targeted sector within the jurisdiction.

Figure 3 The Building Efficiency Accelerator (BEA) initiative

The project results in the issuance of Directive "strengthening the saving and efficiency energy using in the buildings in Da Nang" (2017) that brings 8% - 12% energy saved, 30 tasks and requirements identified and involves all stakeholders in implementing it. The plan on communication and training on energy saving and efficiency in buildings is also set, followed by series of demonstration in 12 hotels of two-three stars in the city under a set of 15 indicators. Assessing of energy use status and related current policies, implementing propaganda programs on energy efficiency in the city; mobilizing resources are among the next actions of Da Nang.

Speaker 3: **Prof. Iain MacGill**, Centre for Energy and Environmental Markets (CEEM), University of New South Wales
Topic: Australian insights on possible roles for Universities in LCMT

Australian cities are the key in a highly urbanized economy including carbon transition. Universities, in collaboration with government and industry, play important role on improving the quality of lives in cities through real world research. Open data and open source tool is crucial in facilitating collaboration between universities/academic institutes with other stakeholders "this allows the community to advance the research frontier and gain the highest benefit from energy modelling for society". Open process with transparent and responsible governmental actions is highly recommended for any decision making.

Speaker 4: **Dr Xuedu LU**, Lead Climate Change Specialist, East Asia Department, Asian Development Bank (ADB)
Topic: Support Scheme of Financial Institution

ADB has been committing in financing for climate change through ADB Climate Change Operational Framework with the establishment of more than 20 funds. Mitigation initiatives include for clean energy, sustainable transport, land use and forest management while adaptation initiatives are for mainstreaming climate resilience in core development planning, climate proofing vulnerable projects and knowledge support. ADB is supporting developing member countries to develop low carbon and resilient city to address climate change and

pollution while maintaining economy development through technical assistance, loans or knowledge partnership/support; and Tiwi and MakBan Geothermal Power is among the first climate bond projects.

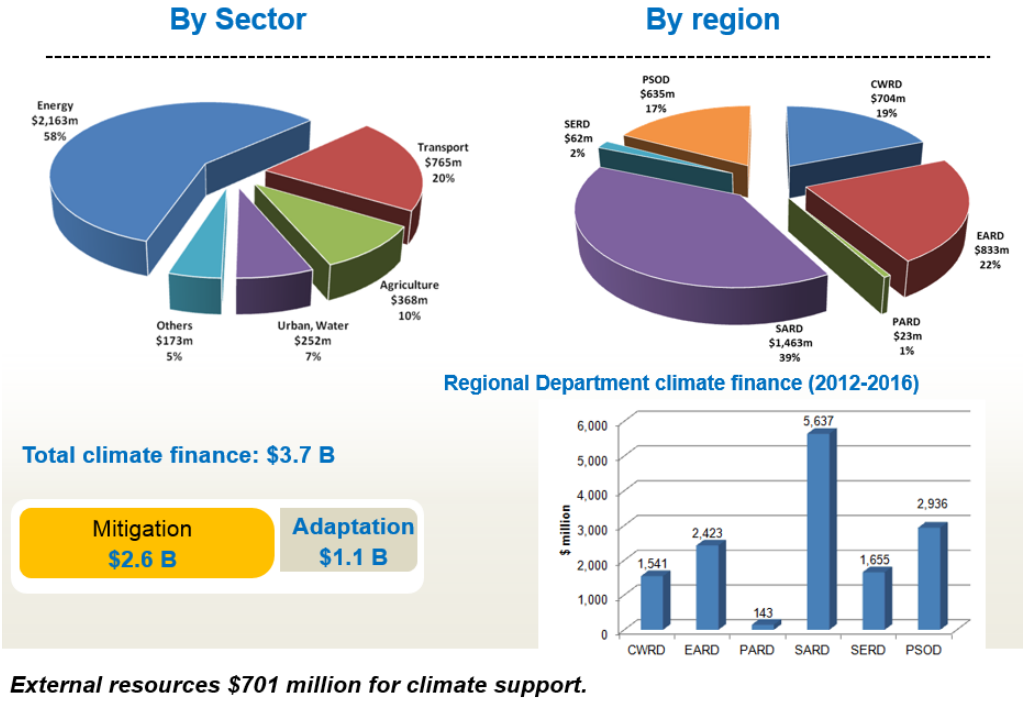

Figure 4 ADB financial support for climate change in 2016

To seek ADB loan and TA, projects should consult with counterpart of governments then governments would propose projects to be supported. For non-sovereign loan, TA or for knowledge partnership, clients/partners/institute can work directly with ADB while keeping governments informed. Taking this opportunity, Dr Lu also mentioned the Asia-Pacific Forum on Low Carbon Technology as part of the promotion program of Climate Technology Transfer and Investment to be held in late October in China.

Speaker 5: **Mr Ranell Dedicatoria**, Program Manager of ICLEI Southeast Asia
Topic: Catalyzing Low Carbon Development in Southeast Asian Cities

ICLEI, an international council for sustainability based in Germany, is introduced as the leading global network of 1,500+ cities, towns and regions committed to building a sustainable future and has offices around the world. The low emission development pathways, one of the five important missions of ICLEI, curbs climate change, creates new economic opportunities and improves the health of human and natural systems. Greenclimatecities, Greenhouse Gas Protocol and Carbon Climate Registry are their main tools and platforms to support the low emission pathway.

Figure 5 Activities that ICLEI involves in

Currently ICLEI is conducting 'ambitious city promises' which aims to support large developing cities (in Indonesia; the Philippines; Viet Nam) to establish strong GHG reduction commitments and 'urban LEDS' which defines a pathway to transition a city to a low-emission, green and inclusive urban economy, through its integration into city development plans and processes. As part of the activities to disseminate low carbon concepts in the APEC region, ICLEI has been publishing almost all case studies online, conducting regional fora for networking and exchange and using websites and social media for those purposes.

Speaker 6: **Mr Nguyen Quang Huy**, Secretary of Climate Change and Green Growth Office, Department of Energy Efficiency and Sustainable Development (MOIT)
Topic: The role of various stakeholders in developing a sustainable low carbon town

Mr Huy, as a review expert, pointed out five parties that involve in the development of low carbon town in APEC. (1) APEC/APERC would design the technical assistance of LCMT for specific town/city, support resources to strengthen the capacity of all parties and set up a network to update information, share experiences through forums, conferences, workshops and document development. (2) Local Government of the town/city should formulate a research group to applying solutions of LCMT with participation of relevant agencies; arrange proper budgets; call enterprises for investment and solution implementation; have policies to support and encourage solution implementation; be willing to share experiences with other town and international organizations. (3) National focal point for LCMT would introduce, designate and support research and training units to participate and implement the LCMT project; develop and implement a plan to advertise and replicate the model into other cities/towns within appropriate resources and develop documents and guidelines for applying LCMT in their language. (4) Consultants, research, and training agencies would involve in all related knowledge and capacity training and be willing to participate in guiding, sharing information, knowledge and experience of applying LCMT to other cities. (5) Enterprises who invest or provide services LCMT should participate in the process of proposing technical solutions in developing of LCMT, commit to support city/town to implement solutions with incentive cost and quality assurance, willingness to share good experiences and participate in communication activities, training programs, or site visits organized by local / central government or APERC. From the comments of the participants, Mr Huy said that he would add "communities/local people" as another important stakeholder in this scheme.

4.3 Applying LCT-I in volunteer towns

4.3.1 Introduction to the LCT-I system

Mr Munehisa Yamashiro, APERC Vice President, introduced the LCT-I System which has been developed by the APEC-LCMT Taskforce and APERC since 2011 through seven phases. LCT-I System (Figure 6) is a self-assessment tool to assess and monitor the progress of each LCT development project. The concept aims to promote the development of LCT in the APEC region by providing a basic principle that can assist the central and local government officials in planning effective low-carbon policies and in formulating an appropriate combination of low-carbon measures while taking socio-economic conditions and city-specific characteristics into consideration. The tool is designed to be simple and user-friendly so that it can be easily used by central and local governments. Publications of the sixth edition (two volumes) were distributed to each participant on one's table.

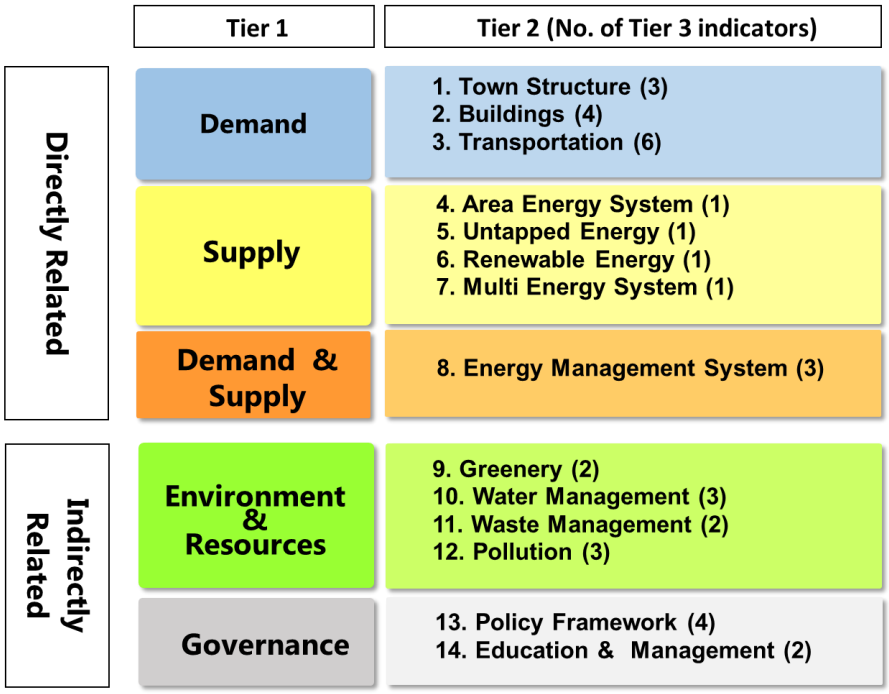

Figure 6 Assessment Framework of APEC LCT-I System

The assessment areas of the LCT-I System are comprehensive and uses a five-point scale evaluation. As the low-carbon measures addressed in the Concept were originally designed from the energy perspective, the assessment area of the LCT-I System is first categorised into two main categories: measures 'directly related' to energy usage; and measures 'indirectly related' to energy usage. The assessment targets are comprised of five major items (Tier I), 14 mid-level items (Tier II), and 36 lower-level items (Tier III). In directly related measures, low-carbon measures concerning 'Demand', 'Supply' and both 'Demand & Supply' were included as Tier I items. In indirectly related low-carbon measures, aspects of 'Environment and Resources', and 'Governance' were included. These are not directly related to energy usage, but they are very important elements in LCT development. In some indicators, evaluation standards in existing assessment indicators, such as CASBEE (Comprehensive Assessment System for Built Environment Efficiency) and LEED (Leadership in Energy and Environmental Design), are referenced and included. Calculation for CO_2 emission is according to the calculation criteria of each economy, but for economies that do not have a regulated calculation method, IPCC or ISO14064 guidelines can be used as an example.

4.3.2 LCT-I System Self-Evaluation Result of Davao City, The Philippines

Davao is a 1.7-million-people urbanized city in the south island of the Philippines, a largest city in terms of area. Different from Da Lat, it is a typical tropical city with quite high temperature and humidity all year round and famous for beautiful beaches. Only 5.4% of the land is for urban use, others purposes include grassland/pasture (46%), agriculture (37%) or forest (11%). Agriculture and tourism are the main economic drivers. The city has 10 key priority areas for poverty alleviation, environment and health improvement and other social aspects, to be implemented through 30 doable projects in three years. **Mr Ivan C. Cortez**,

officer-in-charge of the City Planning and Development Coordinator showed Davao's self-evaluation results and future plans as in the following figures.

Demand Side - Development Planning focus must shift to address high energy use.

Supply Side - Need to enhance and tap other energy sources.

Demand and Supply - Need to monitor energy usage and manage/harmonize systems for optimal energy use.

Environment & Resource - Environmental Protection is top priority through proper implementation.

Governance - Policies in place

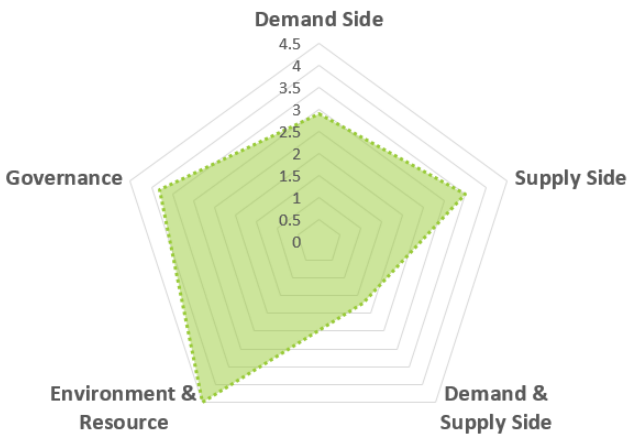

Figure 7 LCT-I Self-Evaluation Results of Davao City

Demand Side
- Comprehensive Land Use Plan (CLUP)
- Transit Oriented Development (TOD)
- Implementation of Green Buildings (GB)
- Implement project in pipelines.

Supply Side
- Explore and research potentials in area energy.

Demand and Supply
- Establish/formulation/ Management System.

Environment & Resource
- Sustain implementation of programs to protect and enhance environment.

Governance
- Review and update policies to attune to the times.

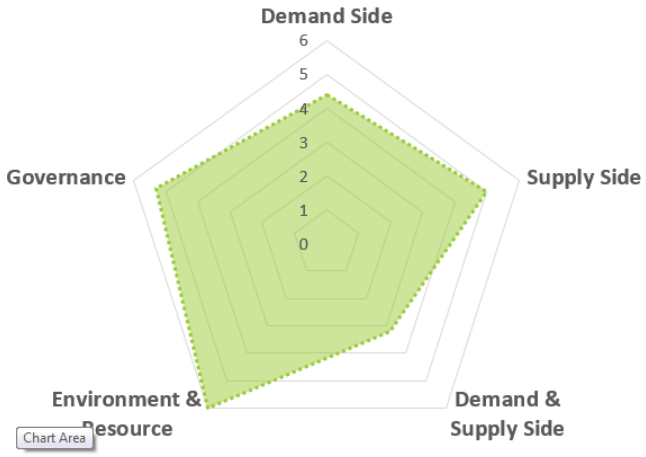

Figure 8 Future plan of Davao to improve the evaluation

Mr Michinaga Kohno, President and Chief Executive Officer of the Michi Creative City Designers Inc., as a review expert delivered a review presentation on the LCT-I System application in Davao City.

The highest self-evaluated score is for "Environment and Resource" but not so many evidences/comments were previously given to verify. Although "Supply Side" are relatively high, there are rooms for improvement such as to explore the untapped energy as well as improvement of sanitary and independence from land fill practices. Score for "Demand and Supply" is rather low mostly because the evaluation indicators does not fit well with developing regions.

Mr Kohno suggested to promote the use of public transportation including railways, which should be aligned with the forecast of population growth and current traffic congestions, to reduce the fossil fuel energy demand. Regarding waste management, it was recommended that Davao took advantage of the waste to energy plants, under cooperation with Kita-Kyushu, Japan, and accelerated the implementation to be a model in this segment in ASEAN Smart City Network. The root of changing town's development model is lying under changes in lifestyles of travel and waste management; therefore, we should approach LCT from the aspects close and friendly to the people.

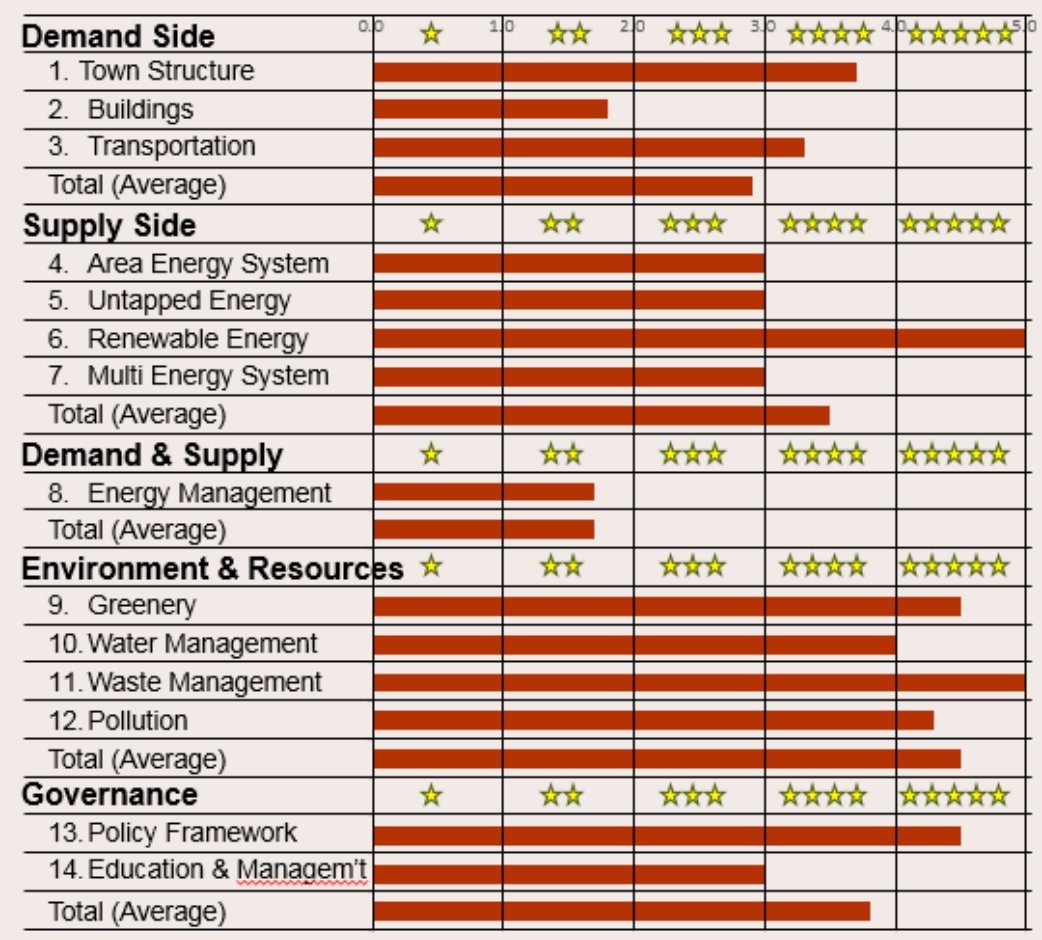

Figure 9 Expert Review of the LCT-I System Application to Davao City, the Philippines

4.3.3 LCT-I System Self-Evaluation of Da Lat City, Viet Nam

Da Lat, which is famous with the name “city of thousand flowers”, is a small municipal of more than 200 thousand people in the highland of Viet Nam, famous for cooler weather than most parts of Viet Nam and beautiful green scenery the whole year round. In the presentation, **Mr Tran Ngoc Duy Quang**, the Division Head for Natural Resources and Environment in Da Lat People’s Committee, introduced the city concept “City within forest, forest within city” with 49% forestation rate. Da Lat is also known for the only urban without traffic lights.

Figure 10 Illustration for "city within the forest, forest within the city"

Da Lat aims at services, tourism, and hi-tech agriculture for its development. In the recent years, due to rapid urbanization and increasing number of tourists and also residents, carbon emission as well as air quality shows some degrading signs. Da Lat is especially concerning about environmental conservation and natural/historical landscape protection, hence has been issuing quite a few plans and programs related to pollution management for buildings and transport.

In the presentation, Mr Quang did not show the self-evaluation results (although templates were given beforehand) due to assumption that it was submitted before.

Dr Hung-Wen Lin, Project Manager, Industrial Technology Research Institute of Chinese Taipei, conducted a review on the low-carbon development plan of Da Lat. He pointed out some gaps that needed reassessment, as shown in Figure 11, that reduced total average point from 2.6 to 2.3 (shrinking in demand side due to not clear enough system and criteria in place and rising in greenery and water management).

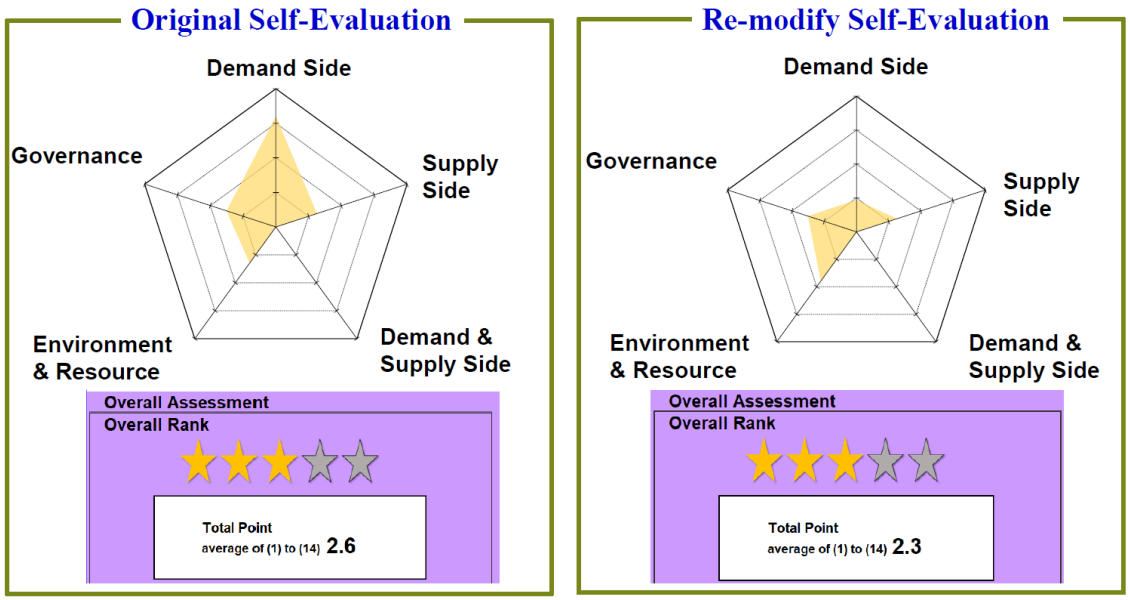

Figure 11 Output of Da Lat's self-evaluation and remodified version by the reviewer

He suggested the establishment of Green building rating system and MEPS to reduce energy consumption by Lam Dong Province and the development of the Transportation Demand Management, Intelligent Transportation system or TOD to reduce carbon emission regarding demand side; and the multi energy system such as district heating and cooling, cogeneration, energy storage for supply side management. Forming performance measure standard and conducting regular performance verification are good methods to maintain the low carbon city. Finally, Dr Lin showed the ITRI Green campus and Peng-Hu low carbon island as examples of utilizing IoT (Internet of Things) in developing LCT.

4.4 Discussion

Mr Munehisa Yamashiro facilitated the discussion on the future of LCMT, LCT-I application and other related topics. Participants were also requested to take this opportunity to make clarification questions to any previously-made presentations.

Regarding reviewing and commenting on volunteer town's self-evaluation, reviewers reported in their presentation that some data necessary for the evaluation were still lacking and explanation or evidences provided for the self-evaluation were not sufficient enough. Information was however much better delivered through presentations from the city's representative on the Symposium day. Prof Macgill of UNSW thought that the process of self-assessment should be improved, and community consensus should also be incorporated into the development plan and evaluation. Mr Dedicatoria of ICLEI commented that in order to promote LCMT, instead of promoting the reduction of emission, we should refer more to the aspects of creating more jobs, or other development benefit, especially in the case of lower income economies. Dr Lin added that, in parallel with such incentives, government's strict regulation is a prerequisite. In case of Chinese Taipei, who gave up nuclear plan in 2025, low carbon targets associated with promoting green buildings, otherwise suffering from various sanctions. Mr Kohno, based on his experience in reviewing seven volunteer towns so far, mentioned about several points that the LCT-I system should improve in the future (for example on the scoring of sub-categories, the applications of indicators "floor-area ratio", "efficient land use", "adjacent workplace and residence", or "securing green space" that led

to misunderstanding in self-evaluation) and compiled in a file submitted after the Symposium.[1]

Thailand raised the question about how to sufficiently collect the solar panels after retirement and Dr Irie suggested to refer to Tainan city (Great Tainan—The Solar City) as a case about renewable energy initiatives recognized by APEC. Dr Irie also mentioned that we had better avoid attaching "model" to any town because no case is ideal and representative enough to be a role model to all economies. Malaysia showed concerns about the gaps between central and local regulations in implementing low carbon policies: sometimes the government propose a target (for example: 5% emission reduction by 2030) but this does not reflect in the city's calculation. The linkage between two levels are still weak in some economies, therefore there are opportunities for collaboration between economies and institutions across APEC. Dr Lu of ADB said it would be interesting to see LCT-I be applied at different types of cities based on different situations and there should be cooperation dialog between stakeholders.

Mr Yamashiro triggered the discussion by asking each economy about their plans for LCMT. All attending representatives, especially Mexico and the Philippines, confirmed that they have plans to meet energy efficiency goals and always welcome such projects (LCMT) to promote a low carbon scenario in urban planning.

4.5 Certificate Giving Ceremony and Closing

After four presentations about LCT-I in volunteer towns, the certificate giving ceremony was held to show the organizers' appreciation to two towns and the host. **Mr Harada** presented a certificate to Da Lat and then Davao, certifying that they were selected as the LCT-I volunteer town of the LCMT Phase 8. As a result of being successfully identified through the self-evaluation review process of the LCT-I System, a feasibility study could be conducted to support their ongoing efforts in LCT development in the next phase, if it is approved by APEC-EWG. Memento was also presented to MOIT and Da Nang.

Dr Kazutomo Irie, APERC's President, concluded the Symposium with success and confirmed that we had a fruitful discussion during an intensive day. He thanked the organisers and pre-announced that the 3rd Symposium will be held in San Borja, Peru in September 2019.

5. Site Visit to FPT Complex in Ngu Hanh Son District

On the 2nd day of the symposium, the Department of Foreign Affairs under Da Nang People's Committee organised a site visit to the office buildings of FPT Software Company in Ngu Hanh Son, the district where feasibility study was conducted before under LCMT project 2013.

[1] Please refer to a separate file for more information

Figure 12 Group photo, in front of the FPT complex

FPT Software, a strategic unit of FPT Corporation, a largest IT company in Viet Nam that specializes in software outsourcing to foreign markets. It has three major big branches in Ha Noi, Ho Chi Minh City and Da Nang.

The complex is located inside FPT City Da Nang, a comprehensive development plan for a green city that is still under construction. In early 2016, one third of the complex was commenced where can host about 3000 employees. By 2020 when the whole complex is completed, up to ten thousand people can work and study in this area including spaces for office, cafeteria, entertainment, and sport.

Figure 13 An angle of the FPT complex, insider view

Inside the area of 5.9 ha, FPT provides users with surrounding green spaces irrigated by treated wastewater, LED lighting system and appropriate ventilation system that is said to save 20% of power and 30% of water.

However, at the current stage, the building has not been equipped with any renewable energy or advanced waste management system.

6. Symposium Analysis

Including the organizers, 30 individuals (and two interpreters) participated in the 2nd APEC LCMT Symposium, coming from Australia; China; Indonesia; Japan; Malaysia; Mexico; the Philippines; Russia; Chinese Taipei; Thailand; and Viet Nam (11 economies). Aside from governmental officials, participants also represented University of New South Wales (UNSW), International Council for Local Environmental Initiatives (ICLEI), Asian Development Bank (ADB), Industrial Technology Research Institute (ITRI) and Michi Creative City Designers. Regarding gender balance, the 2nd APEC LCMT Symposium achieved more than 40% of female, which is a very high ratio for an APEC event. Please also refer to the appendices for the ratio in each category of experts and participants.

According to the evaluation surveys, the symposium objectives were clearly defined and had been achieved through relevant coverage of symposium agenda and topics, and adequate preparation of experts and facilitators. The survey respondents all agreed that the 2nd APEC LCMT symposium was well organised and delivered effectively at a reasonable pace. Participants also liked the idea of "going paperless"; with limited hand-outs provided per prior request.

Extra comments include
"Because the LCMT project show a basic idea of a low-carbon town with guidance, which can support our […] planning low carbon policies"
"Via symposium, all the economies can share their […] experience for low-carbon city plan. It's the project's achievements"
"I gain new knowledge regarding to the LCMT from Australia and ADB. It's a very nice event."
"knowledge gained from this event can be applied for our further works concerning LCMT project"
"we can use the example (pilot) projects and experiences to explore another way of cooperation."

It was also commented that the information of volunteer towns supplied before the symposium is not enough compared to what is presented and the evaluation could have been better. Information from the presentations are more comprehensive than what were provided before.

Recommendations include that all volunteer towns, cities of previous phases in LCMT and other should be in touch for a closer collaboration on low carbon measures and practices. APEC should collect experiences and results in their members to share among each others.

7. Appendix: Agenda

Thursday, 20 September 2018 *Meeting*	
8:30- 8:55	Registration
9:00- 9:10	Welcome Remarks of the host city: **Ms Le Thi Thu Hanh**, on behalf of the Vice Chairman of the Da Nang People's Committee
9:10- 9:20	Opening Remarks: **Mr Tomio Harada**, Director for Natural Resources and Energy Research, International Affairs Division, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry (METI), Japan and Chair of APEC; Low-Carbon Model Town Taskforce (LCMT-TF)
9:20- 9:40	Welcome Remarks of the host economy: **Mr Nguyen Viet Dung**, Deputy Director General, Department of Energy Efficiency and Sustainable Development, Ministry of Industry and Trade (MOIT) Presentation on the LCT Development in Viet Nam: **Ms Bui Thi Hien,** Official, Department of Energy Efficiency and Sustainable Development, MOIT
9:40-10:00	Presentation on the LCT projects in Da Nang and the LCT-I System application: **Ms Nguyen Thi Kim Ha,** Official of Da Nang Climate Change Coordination Office (CCCO)
10:00-10:30	Photo Session and Coffee Break
10:30-11:00	Presentation on the LCT Development in Cooperation with Local University in Australia: **Prof Iain MacGill**, Associate Professor in the School of Electrical Engineering and Telecommunications at the University of New South Wales, and Joint Director (Engineering) for the University's Centre for Energy and Environmental Markets (CEEM), Australia
11:00-11:30	Presentation on the Support Scheme of Financial Institution: **Dr Xuedu Lu**, Lead Climate Change Specialist, East Asia Department, Asian Development Bank (ADB)
11:30-12:00	Presentation on the activities of International Council for Local Environmental Initiatives (ICLEI): **Mr Ranell Dedicatoria**, Program Manager of ICLEI Southeast Asia
12:00-13:15	Lunch
13:15-13:45	Presentation on the Role of Various Stakeholders in Developing a Sustainable LCT **Mr Nguyen Quang Huy**, Secretary of Climate Change and Green Growth Office, Department of Energy Efficiency and Sustainable Development (MOIT)
13:45-14:05	Presentation on the APEC Low-Carbon Town Indicator (LCT-I) System: **Mr Munehisa Yamashiro**, Vice President, Asia Pacific Energy Research Centre (APERC)
14:05-14:35	Presentation on the LCT-I System Application by Davao City, the Philippines (Background information and self-evaluation results): **Mr Ivan C. Cortez**, Coordinator, Office of the City Planning and Development, Representative of Davao City
14:35-15:05	Presentation on Evaluation of the LCT-I System Application of Davao City, the Philippines: **Mr Michinaga Kohno**, President and Chief Executive Officer, Michi Creative City Designers Inc.
15:05-15:25	Coffee Break

15:25-16:10	Presentation on the LCT-I System Application by Da Lat City, Viet Nam (Background information and self-evaluation results): **Mr Tran Ngoc Duy Quang,** Representative of Da Lat City **A consecutive interpreter will be provided**
16:10-16:40	Presentation on Evaluation of the LCT-I System Application of Da Lat City, Viet Nam: **Dr Hung-Wen Lin**, Manager, Building Energy Saving Department, Intelligent Energy-Saving System Division, Green Energy and Environment Research Laboratories, Industrial Technology Research Institute
16:40-16:55	Certificate Giving Ceremony for the LCT-I System Application to the Volunteer Towns **Mr Tomio Harada**, Chair of LCMT-TF
16:55-17:25	Discussion on the way forward Facilitator: **Mr Munehisa Yamashiro**, Vice President, APERC
17:25-17:30	Closing Remarks **Dr Kazutomo Irie**, President, APERC
18:00-20:00	Welcome Reception

Friday, 21 September 2018 *Site visit*	
9:00-12:00	Site visit to FPT Complex of FPT Software