

**APEC Expert Group on New and Renewable Energy Technology (EGNRET 46)
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Progress of Low-Carbon Model Town (LCMT) Project

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1) Three Pillars of the APEC LCMT Project

(1) The Concept of APEC Low-Carbon Town

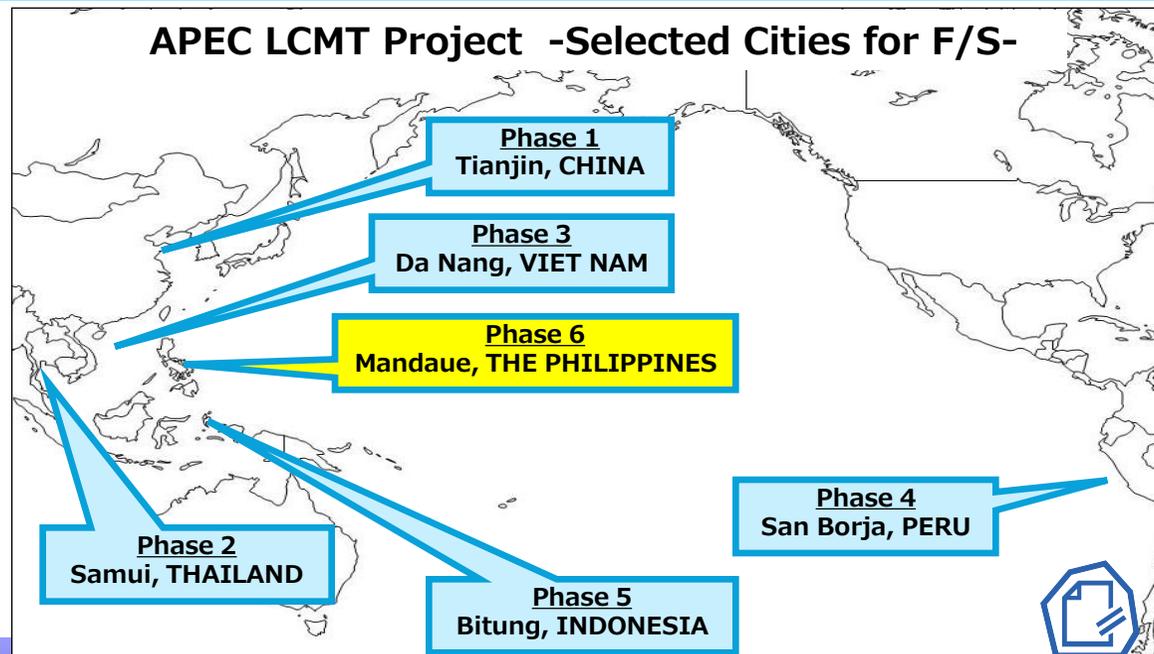
- Define low-carbon town in the APEC region
- Formulate the **Concept of APEC Low-Carbon Town and Low-Carbon Town Indicator (LCT-I)**
- Dispatch an APEC official liaison to **ISO/TC268** in order to input the elements of the Concept wherever possible and adequate

(2) Feasibility Study (F/S)

- **Develop low-carbon strategies** for selected towns

(3) Policy Review

- Policy review to realize low-carbon town development conducted by experts



2) 2015 APEC Energy Ministerial Meeting

- APEC Energy Ministers **commended the significant progress of the APEC Low-Carbon Model Town Project** where the concept and the indicators for APEC Low-Carbon Town are being developed.
- The Ministers instructed **the LCMT-TF to move the current LCMT Project into the next stage** in order to disseminate Low-Carbon Towns in the Asia-Pacific region.



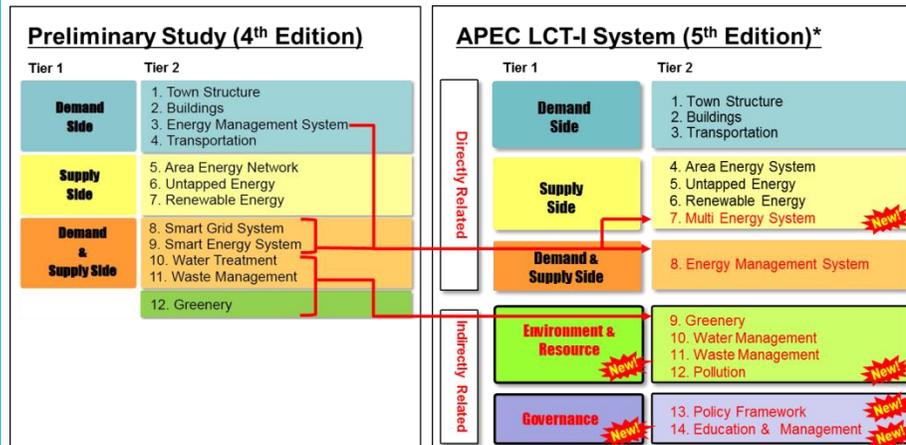
3-1) Concept and LCT-I

(1) Refinement of the Concept

- Basic ideas of a low-carbon town and effective approaches on how to develop it
- The refinement was conducted by Study Group A experts assisted by Task Force Japan and APERC

Key refinement

- ✓ Incorporate the aspects of “**Environment & Resource**” and “**Governance**”



* Details will be explained in the next presentation.

- ✓ Update **low-carbon measures** by reflecting **technological progress**

- ✓ Update **low-carbon targets** for APEC economies based on the Intended Nationally Determined Contributions (INDC) for COP21

- ✓ Add **Multi Energy System** (e.g. combined heating and power (CHP))

3-1) Concept and LCT-I

(2) LCT-I

- A set of indicators which **allows an economy or a municipality to identify the actual situation of a low-carbon town development project** through self-diagnosis
- Guidance as to which low-carbon measures can be taken in order to achieve the low-carbon targets and further develop the low-carbon town

Assessment

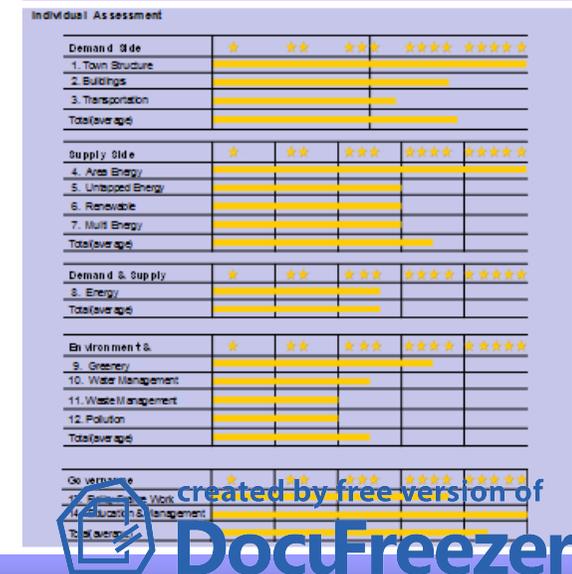
- ✓ Achievement is assessed by a **5 star (★) system**

Advantage

- ✓ Local and/or central governments of the APEC Economies can **monitor the progress of LCT development** regularly
- ✓ Efforts toward the LCT can be visualized and **used as a PR tool** to attract domestic and international developers, investors and companies.

Information exchange with ISO

- ✓ **Liaison status in ISO TC268/WG2** which is working on indicators for city services and quality of life in sustainable cities and communities
- ✓ **Watch the progress** of discussions and, wherever possible and adequate, **input the elements of the Concept**



Category	★	★★	★★★	★★★★	★★★★★
Demand Side	★	★★	★★★	★★★★	★★★★★
1. Town Structure	★	★★	★★★	★★★★	★★★★★
2. Buildings	★	★★	★★★	★★★★	★★★★★
3. Transportation	★	★★	★★★	★★★★	★★★★★
Total (average)	★	★★	★★★	★★★★	★★★★★
Supply Side	★	★★	★★★	★★★★	★★★★★
4. Area Energy	★	★★	★★★	★★★★	★★★★★
5. Unimodal Energy	★	★★	★★★	★★★★	★★★★★
6. Renewables	★	★★	★★★	★★★★	★★★★★
7. Multi Energy	★	★★	★★★	★★★★	★★★★★
Total (average)	★	★★	★★★	★★★★	★★★★★
Demand & Supply	★	★★	★★★	★★★★	★★★★★
8. Energy	★	★★	★★★	★★★★	★★★★★
Total (average)	★	★★	★★★	★★★★	★★★★★
Environment & Resource	★	★★	★★★	★★★★	★★★★★
9. Greenery	★	★★	★★★	★★★★	★★★★★
10. Water Management	★	★★	★★★	★★★★	★★★★★
11. Waste Management	★	★★	★★★	★★★★	★★★★★
12. Pollution	★	★★	★★★	★★★★	★★★★★
Total (average)	★	★★	★★★	★★★★	★★★★★
Go vernance	★	★★	★★★	★★★★	★★★★★
13. Planning & Work	★	★★	★★★	★★★★	★★★★★
14. Finance & Management	★	★★	★★★	★★★★	★★★★★
Total (average)	★	★★	★★★	★★★★	★★★★★

3-2) Feasibility Study (F/S)

(1) Phase 5

- The F/S for **Bitung City**, Indonesia, conducted by South Pole
- **F/S report** was finalized in January 2016

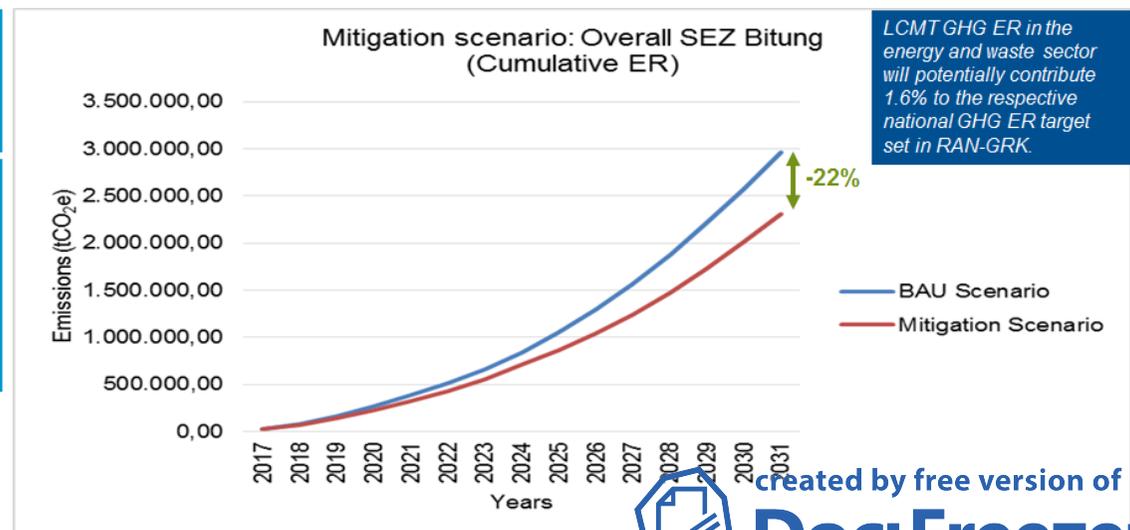
(2) Phase 6

- **Mandaue**, the Philippines, was officially announced to be selected as a case city for the Phase 6 at the EMM12
- The consultant of F/S for the Phase 6 was selected in February 2016

Key results of the F/S for Bitung City

✓ Propose **10 low-carbon measures** (LCMs)

✓ By implementing proposed LCMs, GHG emissions can be reduced **up to 22%** from the SEZ Bitung BAU scenario



3-3) Policy Review

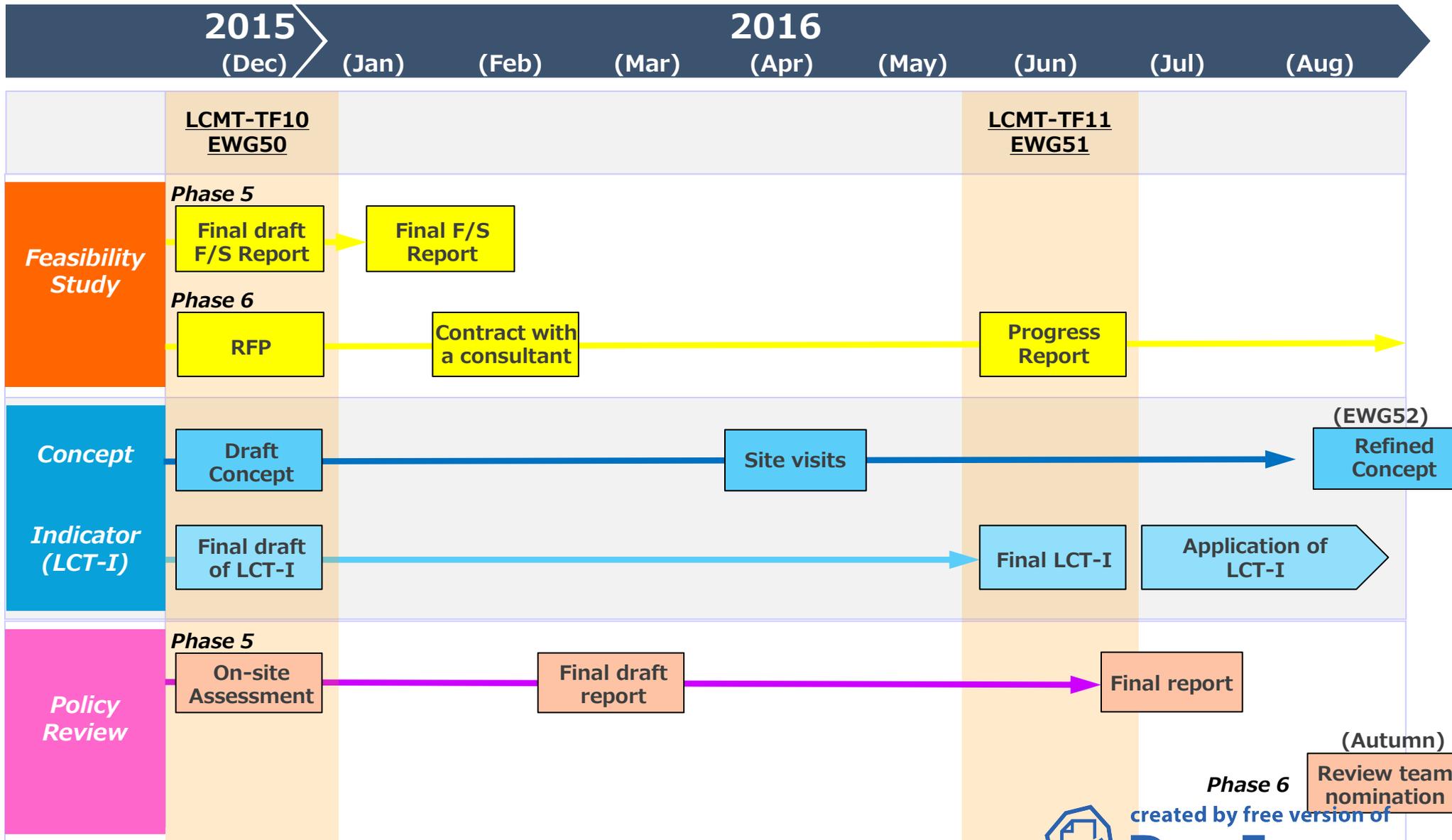
- Policy review for **Bitung City**, Indonesia
- Date: 29 November to 2 December 2015
- Policy review team consisted of **6 experts** and **APERC Secretariat**
- Preparing **draft policy review report** including recommendations

Focused areas of policy review

1. Legal Framework
2. Sustainable Urban Planning
3. Transportation
4. Low-Carbon Buildings
5. Area Energy Management Systems
6. Renewable Energy and Untapped Energy Planning
7. Energy Efficiency and Environmental Planning



4) 2016 Action Plan



5) APEC LCMT Project Phase 7 and beyond

- Japan has submitted the CN of **the APEC LCMT Project Phase 7 in 2016 Session 1**
- Co-sponsor: the Philippines, Chinese Taipei, Thailand, the United States
- Expected start date: **August 2016**
- Main focus of the Phase 7: a low-carbon development plan in **inland region with high demand for heating and cooling system**
- The Concept and the LCT-I System as **a tool to disseminate low-carbon towns** in the APEC region. Study Group A will help volunteering towns evaluate their low-carbon town development by utilizing the LCT-I System
- **The LCMT Task Force will develop concrete plans for disseminating the Low-Carbon Towns by the EWG51 meeting held in Canberra, May 2016**

Thank you for your attention