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# KL's climate actions and contribution of KL-TMG-Saitama Collaboration

The Japan-ASEAN Environmental Week Session 4.  
“How can national governments contribute to subnational climate action in the ASEAN region?”

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22/Aug/2023

# Tokyo to Kuala Lumpur Low Carbon System (T2KLLCS): knowledge transfer on low carbon building systems



**Tokyo Metropolitan Govt (TMG):** The capital of Japan and the inventor of the first city based **Cap-and-Trade Program** for emissions from **buildings**

+

**Kuala Lumpur City Hall (KL):** The capital of Malaysia; announced **low carbon plan to reduce by 2030** carbon emission intensity of GDP by **70%** (national target **45%**)

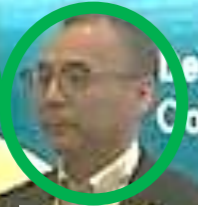
Supported by IGES and Malaysian institutions

TOKYO TO KUALA LUMPUR  
**LOW CARBON SYSTEM**  
( T2KLLCS )

Aug. 2019  
Kickoff mtg @  
KL City Hall



Datuk Mahadi  
**Mayor** of KL  
since Oct 2020,



Mr. Ogawa  
Senior Director,  
TMG

TMG's know-how on **energy efficiency and renewable energy** in around **4200 public buildings** is transferred to KL for around **2000 public buildings**. KL has decided to prepare her own budget to **retrofit several main public buildings** in FY2021 based on **data analysis**. The city has announced its target to become **carbon neutral by 2050**.

MOEJ City to city collaboration for a zero-carbon society

## Targets stated in the proposal for 3years (2019-2021) [Phase1]



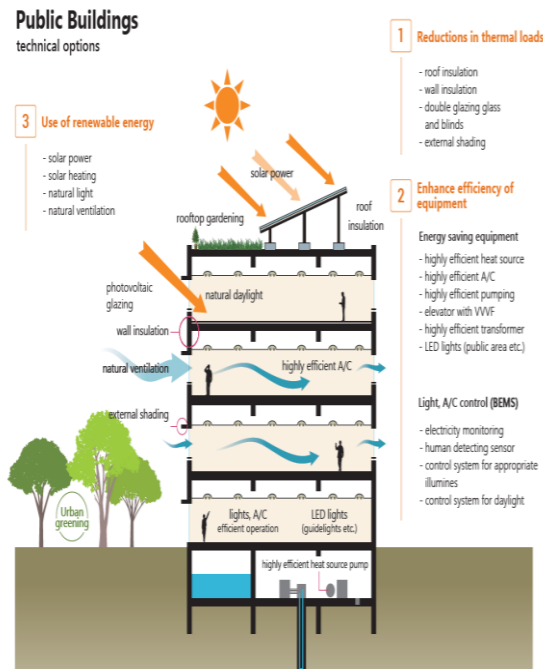
- TMG officials will provide KL City officials and others with information on the outline of TMG's energy efficiency measures and actual operation for buildings via local workshops and training visits to Japan. As a result, KL will accumulate knowledge in planning and formulation, improve implementation capabilities.
- The KL LCSBP 2030 (Kuala Lumpur Low Carbon Society Blueprint 2030: Roadmap to a Low Carbon Society 2030), which KL City Hall aims to achieve by 2030, will be brought closer to realization of its goals and strategies.
- The energy conservation and CO2 emission reduction potential of relevant technologies and priorities for policy implementation will be identified.
- The proposed zero-emission scenario for KL City Hall will be clarified.
- TMG's low-carbon building policies and experiences will be transferred to KL City.

# KL's edition of a list of measures to be taken when building new or renewing public buildings, and energy management guidelines



- Knowledge transfer of TMG's building specification for energy efficiency and renewable energy in metropolitan-owned facilities, etc. ⇒ Guidelines.
- The guidelines will be used as reference when upgrading equipment in KL's municipality owned facilities

## Guideline with a list of measures to be applied to new construction



## Establishing guidelines for energy management of municipal facilities.

### PDCA cycle 1: New installment, retrofit of facilities

- ① The Building Maintenance Department shall determine a building with the need for a new installment or a retrofit to achieve the targets shown in the next section (see 5. Target)
- ② The Building Maintenance Department shall observe the “Low Carbon Building Specification (retrofits) for technical options and calculate the energy / GHG emission reduction potential.
- ③ The Building Maintenance Department shall set the target for the building's energy performance level. (Level 1, 2 or 3)
- ④ The Building Maintenance Department shall budget and install the selected equipment. If the investment cost exceeds 100,000 RM receive approval from the energy management committee.
- ⑤ Check the energy performance level set in action ③ for the overall building after installation.
- ⑥ If not, fine-tune the equipment. Using a BEMS or a meter, monitor the actual energy consumption level of the installed equipment and compare with those before installment in cooperation with the appliance manufacturer.
- ⑦ The Building Maintenance Department will report to the energy management

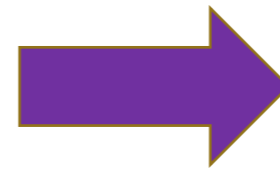
To upgrade equipment to those of the highest energy efficiency level in Malaysia, etc.

Guidance on using the PDCA cycle to sustainably improve energy efficiency in organisations.

# Progress in developing a low carbon building system for public buildings in Kuala Lumpur City



**Prepared a five-year plan for the renovation of municipal facilities with high-efficiency equipment and photovoltaic installations. The budget was partially secured**



**led to the idea of a carbon neutral growth center and a multi-year budget**



Proposed budget for 2021-2025 building retrofits

DBKL RE AND EE PROJECTS BUDGETTING AND IMPLEMENTATION STATUS (2021-2025)					
No.	Proposed Projects	Implementation Year	Project Status	Estimated Cost (MYR)	Budget Status
<b>A. Solar PV Installation</b>					
1	Sentul Perdana Community Centre	2022/2023	Tentatively planned to go under SELCO schemes	200,000	To be advised
2	Ampang Hilir Hall and Community Centre			200,000	
3	Kuala Lumpur Wholesale Market			200,000	
4	Bandar Tun Razak Commercial Centre			200,000	
5	Kuala Lumpur City Hall Training Centre (IDB)			200,000	
6	Kuala Lumpur Public Library			200,000	
7	Titivangsa Takraw Stadium			200,000	
8	Pudu Ulu Recreational Park			200,000	
9	Jalan Jujur Hawker Centre	2021	Project commenced in 2021	106,800	
10	TTDI Public Library	2021	TNB SARE (Supply Agreement with Renewable Energy - 21 years' agreement)	Zero CAPEX	No budget required
11	TTDI Community Centre				
12	Bangsar Sports Complex				
13	Selayang Daily Market				
14	Kg Baru Salak Selatan Market and Hawker Centre				
15	TTDI Market				
16	Keramat Mall Commercial Building				
17	Taman Botani Multistorey Parking (TBC)				
18	Taman Metropolitan Kepong Multistorey Parking (TBC)				
<b>B. M&amp;E Projects</b>					
19	AHU Menara 1	2021	Tendering process (Sep-Oct 2021) Project Kick-off scheduled for Nov/Dec 2021	8,000,000	Additional budget request approved
20	VRV for Air-conditioning System @ IDB Bandar Tun Razak	2021	Tendering process (Sep-Oct 2021) Project Kick-off scheduled for Nov/Dec 2021	2,400,000	Additional budget request approved
	Chiller, Pump, Cooling Tower & AHU for Menara 1-		Tendering process		

# Plans for installation of solar PV on public buildings



## Plans to install solar PV on public Buildings

➤ **Installation completed for 4 locations**

- PUDU ULU RECREATIONAL PARK
- TAMAN BOTANI PERDANA
- HAWKER CENTRE JALAN JUJUR
- SKY ARENA SPORT CENTRE





C40 Bloomberg  
Philanthropy Award



C40 Bloomberg Philanthropy Award Ceremony  
@ Buenos Aires

## Cleaning the Air We Breathe

Winners: Beijing, Pune

## Accelerating Immediate Action in Critical Sectors

Winners: Addis Ababa, Amsterdam

## Building Climate Resilience

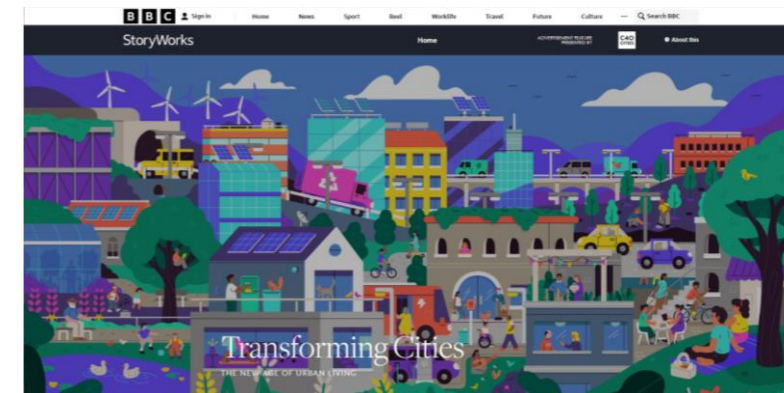
Winners: Dhaka North, Metropolitan Area of Guadalajara

## Innovative Climate Solutions

Winners: Freetown, São Paulo

## Building a Climate Movement

Winners: Seattle, Tokyo / Kuala Lumpur



BBC Storyworks – Transforming Cities

# Discussions on the “Wangsa Maju Carbon Neutral Growth Center”



## The private sector in the district also participated in the discussions on specific initiatives.

- (1) Solar on Infrastructure
  - 1a. Rooftop Solar PV
  - 1b. Solar for Pedestrian Mist
- (2) Floating Solar PV
- (3) District Energy System



Energy

- (4) Anaerobic Digester
- (5) Waste Composting Plant
- (6) Waste Recycling Points



Waste

- (7) Open Space and Forest Protection
- (8) Vertical/Roof Garden
- (9) Linear Urban Parks
- (10) River Cleaning



Green & Open Space



Mobility

- (11) Pedestrian Cycling Network
- (12) Public Transportation Improvement
- (13) Station Area Planning



Community

- (14) Eco Park
- (15) Community Farming
- (16) Introduce Community Water and Energy Saving Program
- (17) Transforming the Existing Resident Association into Carbon Neutral Community
- (18) Zero Waste Community
- (19) Carbon Neutral Challenge Program in Schools
- (20) Strengthen School Community through Concentrated Efforts



# Developing an Institutional Framework Towards Kuala Lumpur Zero Carbon City and Neighbourhood in Collaboration with Tokyo Metropolitan Government and Saitama City



## Tokyo Metropolitan Government (TMG)

Support KL for sustainable policies and buildings ("Zero emission Tokyo Strategy" (by 2050), "Carbon Half" (by 2030) at whole city level

## Saitama City Hall (Saitama)

Support KL for sustainable energy management (Misono "Smart Home Community"), sustainable mobility ("Shared Multi-Mobility") at neighbourhood level

**Takasago, Open Street**  
Private sector

**IGES:**  
Main coordinator

## Wangsa Maju Carbon Neutral Growth Centre



Fig. Map of Kuala Lumpur City

## Kuala Lumpur City Hall (KL)

Streamline and enhance zero emission policies, ways to develop a zero emission neighborhood

KL city mayor declared carbon neutral city by 2050 and "Wangsa Maju Carbon Neutral Growth Centre" inside KL through "Phase1 (FY2019-2021)" activities between KL and TMG with IGES, UTM, SEDA

**SEDA (Sustainable Energy Development Authority):**  
Public sector: energy management and policies

**Universiti Teknologi Malaysia:**  
Local coordinator

MOEJ city-to-city collaboration project towards zero carbon during 2021-2023 [Phase 2]

- 1 year: Introduce CN measures of TMG (city-wide) and Saitama (neighborhood etc.), early implementation with KL City Hall's budget.
- 2 year: Support localization of the introduced policies, mechanisms, of which some will be tested in the "Wangsa Maju Carbon Neutral Growth Center"
- 3 year: Action plan for "Wangsa Maju Carbon Neutral Growth Center" will be incorporated into concrete project proposals and support is offered for KL city wide decarbonization and to other cities.

# E-Kizuna Global Summit (Nov 22-24<sup>th</sup>, 2022)

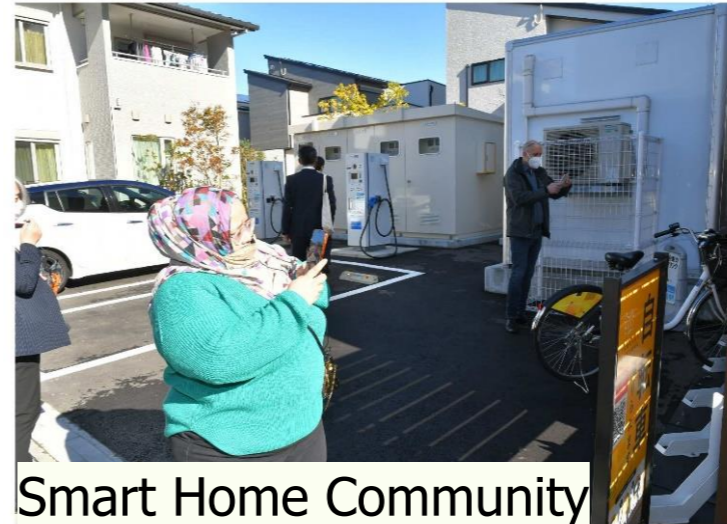


Two officials from KL visited Saitama to participate in the E-Kizuna Global Summit.

And also to visit the site of the smart home community and see for themselves how they can adapt to KL.



With the Saitama Mayor@ E-Kizuna Global Summit



Smart Home Community



Fuel cell bus



Networking with ICLEI HQ



Bonsai garden

# High level talks Seminar (Aug 8<sup>th</sup>, 2023)



This webinar was held in a hybrid format connecting the venue in the Kuala Lumpur City Hall and online participants. Approximately 250 participants in total attended the seminar. In the session, KL City, TMG, Saitama City, SEDA, Japanese Embassy, JICA Malaysia, JETRO Kuala Lumpur, JACTIM talked about the high commitment for carbon neutrality and opportunities for collaboration.



High level talks seminar

New KL Mayor and Mayor Shimizu in KL

All presentations: <https://www.iges.or.jp/en/events/20230808>

JETRO News: <https://www.jetro.go.jp/biznews/2023/08/1421c4acb04dab2d.html> (in Japanese)