



Experiences and Lessons Learnt in the Development of Low Carbon Cities *- The experience of Petaling Jaya City Council (MBPJ)*

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Recognitions

- 1st Earth Hour Capital City for Malaysia in 2015 organised by WWF
- Earth Hour Capital City for Malaysia, 2016



Low Carbon City of PJ

LA 21 Stage

LCCF Stage

Carbon
Management
Plan Stage

Voluntarisme
and
partnership

**Components
of LCCF and
MBPJ Leads**

Baseline data
and CER
Target
setting

1996-

2010-

2015-

PJ Sustainable 2030

LEGAL INSTRUMENT GREEN INFRASTRUCTURE

APPROVAL OF DEVELOPMENT PROJECTS WITH "GREEN" ELEMENTS

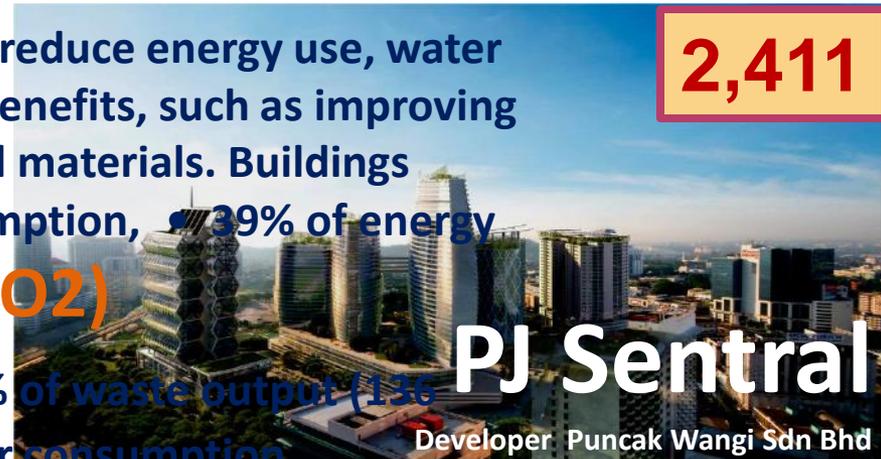
No.	Conditions Imposed	2010 - 11	2012	2013	2014-16 (up to 29 Feb)
1	Rain Water Harvesting System (SPAH)	418	117	93	232
2	Green Building Index (GBI) or other Schemes	61	16	13	66
3	Sustainable Drainage System (MASMA)	500	148	111	293
4	Planning Best Practice 2 Hect : 1000 people	10	2	4	5
5	Landscape Area 10% - 15%	62	26	24	66
6	LED Lighting (per scheme)	30	27	23	64
Total		1081	336	268	726

Design Futures :

Green buildings and infrastructure – potential to reduce energy use, water use and storm water runoff, and produce other benefits, such as improving Indoor Air Quality and supporting locally-sourced materials. Buildings typically account for:

- 72% of electricity consumption,
- 39% of energy use
- **38% of all carbon dioxide (CO2) emissions**
- 40% of raw materials use
- 30% of waste output (136 million tons annually), and
- 14% of potable water consumption.

2,411



PJ Sentral

Developer Puncak Wangi Sdn Bhd

Property Tax Rebate Scheme for Environmental Friendly House Owners in Petaling Jaya

1ST LA IN ASIA

Actions

- Application is opened to 100,000 house owners in Petaling Jaya
- Rebate is evaluated by independent assessors based on 6 major criteria, namely energy, water, transportation, biodiversity, waste management and other initiatives



Achievements

- Incepted in Year 2011, and up to 2016, 649 house owners received a total rebate of RM 200,000.
- The First Local Authority in Asia and Second in the World having similar scheme
- Economic incentive rewarding green residents and to spur more local action
- Introduced criteria on **Behaviourior Change** in Year 2012
- Higher weightage on **Efficiency and Sustainable Lifestyle**



Household Waste Composting



Rain Water harvesting System

Transportation & Eco-Mobility



NEW SUNDAY TIMES
CARS BIKES TRUCKS TRUCK AND TRANSPORT GUIDE

Free bus rides for PJ residents

BY FATIMAH RASHID

THE Petaling Jaya City Council (MBPJ), in collaboration with RapidBus, aims to encourage city dwellers to leave their private cars at home and shift to public transport in their daily traveling with the PJ CityBus.

Similar to the Go KL CityBus, the free bus can help elevate the status of Petaling Jaya to be at par with the Kuala Lumpur Central Business District which is visited by many tourists and locals alike.

MBPJ said it believes an increase in the usage of public transport will help reduce the problem of traffic congestion in Petaling Jaya, especially during peak hours, and less commuters will be using private vehicles.

It is estimated that the service will cost MBPJ around RM2.5 million annually, and RM1 million has been allocated under Budget 2014 for the project.

The bus travels a 28.2km route which starts from the bus terminal in Jalan PJS 3/11. The operational hours are from 6am to 9pm daily.

With 10 buses allocated for the service, it is expected to run on a five-minute frequency during peak hours and 10 minute frequency during off peak hours.

The buses in use are designed with wheelchair ramps as well as priority seating for those in wheelchair, access and LED monitors for on-entertainment.

The buses are non-operational on weekends in order to cut advertising panels will be talked on the buses to generate revenue.

MBPJ also said it has chosen Section S2 commercial centre pilot project for the route of the service to support the PJ Livable



PETA LALUAN PERKHIDMATAN BAS PERCUMA

WAKTU PERKHIDMATAN

- 6.00 pagi hingga 9.00 malam
- Kekerapan 15 Minit

PETUNJUK

- ▲ Laluan Pergi
- ▲ Laluan Balik
- ▲ Laluan Pusingan

URBAN PARK DAMANSARA DAMAI 'CYCLEWAY'

KOTA DAMANSARA COMMUNITY FOREST CYCLEWAY NETWORK

AMANSARA DAMAI URBAN PARK

HUTAN KOMUNITI KOTA DAMANSARA

ARA DAMANSARA COMMUNITY CYCLEWAYS

TAMAN JAYA 'CYCLEWAY'

TAMAN BANDARAN KELANA JAYA

PALIN JAYA 'CYCLEWAY'

BUKIT GADING GREEN BELT

TAMAN AWAM PJS 10

TAMAN MEDAN 'CYCLEWAY'

NOTA

- RANGKAIAN LALUAN BASIKAL YANG BERKESIH DAN BERKUALITI
- RANGKAIAN LALUAN BASIKAL YANG BERKESIH DAN BERKUALITI
- RANGKAIAN LALUAN BASIKAL YANG TELAH DI AKHIRKAN
- LALUAN BASIKAL YANG TELAH DI AKHIRKAN
- LALUAN BASIKAL DALAM PROSES PELAKSANAAN

RANGKAIAN LALUAN BASIKAL **TAMAN AWAM UTAMA**

IMPLEMENTED PROGRAMMES



PJCITY FOOD BANK

We Care We Share



A pilot project between Dept of Solid Waste Management and MBPJ to reduce the *food waste*. Funding of RM 55,000 from JPSPN

A shop unit at Section 8 of PJ was used as operation centre and for storage.

A van transporting the goods was donated by private sector



MODUS OPERANDI



ACHIEVEMENTS

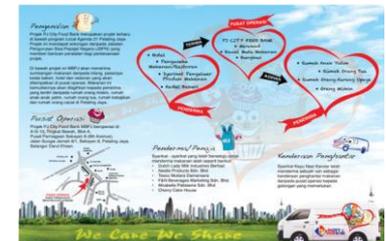
Wastage of Food

1. Estimation of food waste in PJ at 275 tonnes per day
2. PJ City Food Bank project managed to redirect approximately 14.5 tonnes of food potentially to go for waste disposal

Assistance to the needy

1. Receiving of food for each registered organisation: 2X per month
2. 87 organisations as beneficiary, 2012-2013.

DONORS



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5 year carbon reduction strategies of MBPJ



Reduction of 25% 2015-2020



CARBON MANAGEMENT PLAN 2015-2020

– CURRENT PROJECT

Finish Projects	Electricity Bill 2014	Electricity Bill 2015	Difference
STREET LIGHTING	USD 821,914.83	USD 700,004.06	USD 121,910.77

Finish Projects	Carbon Emissions 2014	Carbon Emissions 2015	Difference	% Difference Achieved
STREET LIGHTING	13,470.50 tCO2/year	11,472.50 tCO2/year	2,361.71	20.59

ONGOING PROJECTS	TARGET YEAR
Upgrading HQ mechanical and electrical system	2016
Upgrading floodlighting of MBPJ Stadium	2017
Installing PV solar panel in HQ building	2016

www.lccftrack.greentownship.my

Energy Saving Program

Energy Management Activities

- Switch off power supply (13A) after office hour for Desktop PC
- Switch off power supply (13A) after office hour for office equipment
- Switch off lighting during lunch hour or out of office

Retrofitting

- Installation of sub-meters
- Monitoring equipment
- Lighting retrofit
- New central conditioning
- Installation of new main switch board
- Investment on pump system

**Saving of 5.79% kWh/yr
or RM 34,000/yr**

Capacity Building

- Awareness and publicity
- Training

**Potential Saving of 20% kWh/yr
with investment of RM 2m**

Plan for 2015-2016 on electricity usage

Goal One: Buildings and Energy

Objective 1
Residential Emissions: reduce by 4 kilo tCO₂/yr

Action: property tax rebate scheme

Objective 2
Industrial & Commercial: reduce emissions by 33 kilo tCO₂/yr

Action: energy management and monitoring & targeting
Action: LED lighting
Action: energy efficient motors & drives

Objective 3
New Development: reduce emissions by 15 kilo tCO₂/yr

Action: continue to support and promote Green building Index lead reductions

Objective 4
Renewable Energy: target 10% generation against 2030 BAU forecast

Action: install Solar PV to generate 10% of 2030 forecasted requirements

Goal Two: Transportation

Objective 1
Private Vehicle Emissions: reduce by 30 kilo tCO₂/yr

Action: increase the size of our bus fleet
Action: encourage public transport use through better links and scaled up Park N Ride scheme

Objective 2
Hybrid Vehicles

Action: encourage uptake through free parking scheme

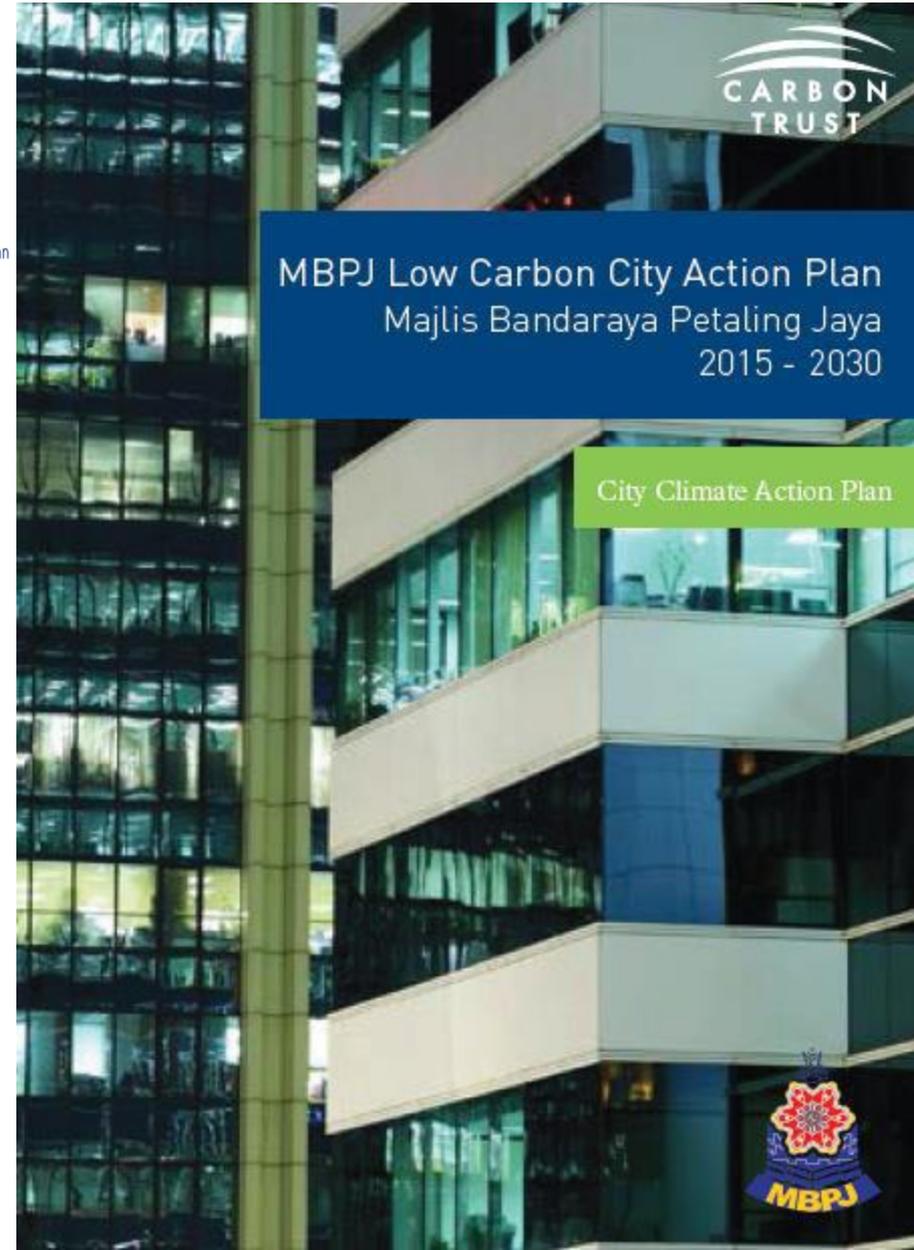
Objective 3
Electric Vehicles

Action: install supporting infrastructure via government assistance and target 1000 EVs by 2020

Objective 4
Cycling & Pedestrians

Action: master plan for main lane PJ cycling project

MBPJ Low Carbon City Action Plan





LOW CARBON CITY ACTION PLAN – CURRENT PROJECT

Target Goals	CURRENT PROJECTS / PROGRAMMES
Goal One: <i>Buildings and Energy</i>	<ol style="list-style-type: none">1. Property tax rebate 2016 = 123 applications.2. GBI Certified buildings 2016 = 17 (April '16)
Goal Two: <i>Transportation</i>	<ol style="list-style-type: none">1. 22 free bus services including 2 electric buses.2. 20 electric motorcycles.3. 7 electric charging stations.
Goal Three: <i>Waste Management</i>	<ol style="list-style-type: none">1. Food waste treatment system facility with capacity of 2 tonnes per day.2. Waste separation project involving 745 household. Total recycle until Sept = 5.4 tonnes.
Goal Four: <i>Urban Forestry</i>	-
Goal Five: <i>Climate Change Adaptation</i>	-
Goal Six: <i>Local Government Operations</i>	Current projects under CMP.
Other projects	Installation of rain water harvesting system in HQ building.

Lessons Learnt

Think

Global

Strategically

Out of the
Box

Capacity &
Resources

Act

Local

Cumulative
individual actions

Stakeholders
engagement

Multi-agencies
collaboration

Review

Periodically

Guided

Rewards

Challenges



Role of Cities

Leader

Adoption of Green Guidelines

Greening Actions

Facilitator

Stakeholders Engagement

Provide Tax Incentives

Promoter

Top-Down communication

Enforcer

Compliance of requirements

Way Forwards

- **Mainstreaming sustainability in Local Authorities planning and development programmes**
- **Creating networking and greater cooperation amongst stakeholders for inclusiveness**
- **Sharing and Learning of experiences**
- **Building capacity e.g. knowhow, resources**
- **Promoting and acknowledging local initiatives**

PJ SUSTAINABLE 2030
PJ: LOW CARBON GREEN CITY



THANK YOU

