

PETALING JAYA INITIATIVES ON DECARBONISATION IN THE CITY

IGES High Level Talks : Towards Smart, Zero Carbon and Climate-Resilient Cities in Malaysia and Japan

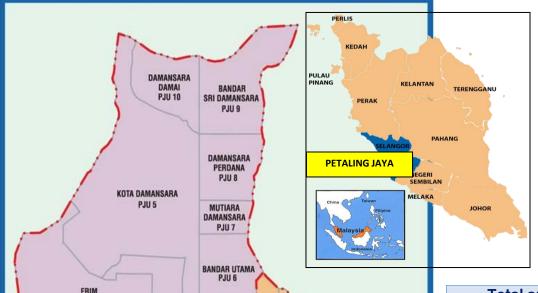




PETALING JAYA CITY PROFILE







PJU 4

PETUNJUK

PEMBAHAGIAN ZON:

KAWASAN PJU KAWASAN SS

KAWASAN PJS

KAWASAN SEKSYEN

PJU 1A

TROPICANA

PJ as A Smart, Sustainable & Resilient City by 2030

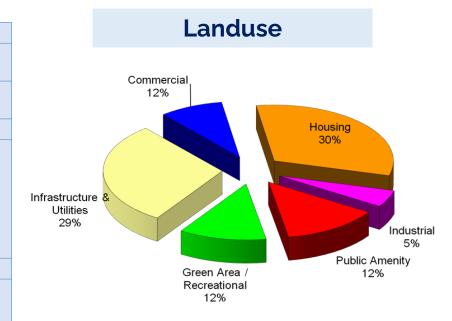
Mission

• To provide quality facilities and services for the prosperity of Petaling Jaya.

Vision

• Petaling Jaya leading towards a dynamic and sustainable City

Tabelana	
l otal area	97.2 kilometers
City centre	22 include 2 sub-regional centres
Administrative zone	4
Population	772,763 (2019)
Household income	■ 1996 (USD 740)
	• 2000 (USD 1270)
	• 2010 (USD 1900)
	■ 2019 (USD 2,500)
Total Properties	254,174
Neighbouring city	Kuala Lumpur (East), Shah Alam (West), Selayang (North) Subang Jaya (South)
	Administrative zone Population Household income Total Properties



LOW CARBON INITIATIVES IN PETALING JAYA





EMERGING MOVEMENT TOWARDS LOW CARBON CITIES

SITE SELECTION (Development within Defined Urban Footprint • Infill Development . Development within Transit Nodes and Corridor . Brownfield and Greyfield Re-development . Hill Slope Development + URBAN FORM Mixed-use Development • Compact Development •

- Roads and Parking .
 - Pedestrian Network •
 - Cycling Network •
- Urban Heat Island (UHI) Effect •

URBAN GREENERY AND ENVIRONMENT QUALITY

- Preserve Natural Ecology •
- Water Bodies and Biodiversity
 - Green Open Space .
 - Number of Trees +

URBAN ENVIRONMENT

URBAN INFRASTRUCTURE

LOW CARBON CITY

BUILDING

URBAN TRANSPORTATION

FOUR MAIN ELEMENTS FOR CO: REDUCTION WITHIN CITIES AND TOWNSHIPS

WATER MANAGEMENT

. Efficient Water Management

WASTE

- Construction and Industrial Waste Management
- Household Solid Waste Management

ENERGY

- . Energy Optimisation
- · Renewable Energy
- . Site-wide District Cooling System

INFRASTRUCTURE PROVISION

- * Land Take for Infrastructure and Utility Services
- . Earthworks Management
- · Urban Storm Water Management and Flood Mitigation

LOW CARBON BUILDINGS

- Operational Energy Emissions •
- Operational Water Emmisions
 - Building Orientation •

COMMUNITY SERVICES (

Shared Facilities and Utilities within Building .

SHIFT OF TRANSPORTATION MODE

Single Occupancy Vehicle (SOV) Dependency

GREEN TRANSPORT INFRASTRUCTURE

- · Public Transportation
- . Walking and Cycling

CLEAN VEHICLES

- . Low Carbon Public Transportation
- . Low Carbon Private Transportation

TRAFFIC MANAGEMENT

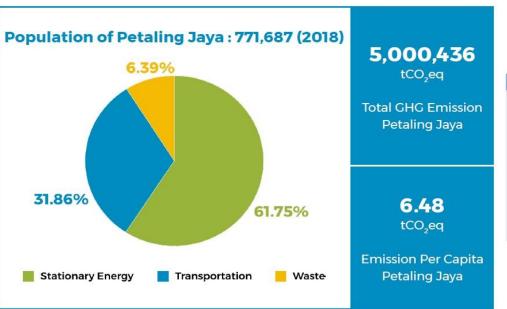
- Vehicle Speed Management
- . Traffic Congestion and Traffic Flow Management

SNAPSHOT OF PJ CLIMATE ACTION PLAN









MITIGATION TARGETS



Figure 16: Baseline emission inventory Petaling Jaya (Source: Petaling Jaya's City Inventory Reporting and Information System (CIRIS))

ADAPTATION GOALS

PETALING JAYA

Decrease Flooding **by Better Protection**

Reduce Number of Dengue Cases

Increase Resilience against Drought

THEMES

PLANNED ACTIONS

PETALING JAYA

- 1. Renewable Sources and Energy Efficiency
- 2. Sustainable Urban Planning and **Building Regulations**
- 3. Pedestrian First and Green **Transportation**
- 4. Green Space Planning and Management
- 5. Social Sustainability and **Empowered Communities**
- 6. Disaster Risk Reduction Management



















Partnering with GCoM and Universiti Teknologi Malaysia for formulation of the new climate actions plan.







PJSSR 2030 as guiding strategic documents



PETALING JAYA SMART, SUSTAINABLE & RESILIENT 2030

#sustainablePJ2030 #PJCityOne #PJKita































10 'THEMATIC PROJECT PJSSR 2030

E-GOVERNANCE CITY

- Digitalisasi Kesemua Sistem Perkhidmatan Majlis Ke Arah Sistem Penyampaian (Delivery System) Yang Lebih Cekap Dan Telus
- Indeks Penarafan Bintang pada Tahap 5 Bintang Setiap Tahun
- Pengiktirafan Antarabangsa Dan Nasional Bagi Amalan Baik (Best Practice)
- Peratusan Kepuasan Penduduk Terhadap Perkhidmatan Majlis melebihi 95%
- Pematuhan ksesemua Pensijilan ISO
- Peratusan Pencapaian Kutipan Hasil Melebihi 90%

SMART CITY

SOCIETY 5.0 CITY

- PJKita Community Dan PJCity One Platform
- NGO, Korporat Dan Individu
- Domain Kebun Komuniti Mampan Di Kawasan Kejiranan (Pusat 3R, Pusat Kompos, SPAH): Kesemua 274 Kejiranan
- Kesemua 274 Kawasan Kejiranan melaksanakan Inisiatif 17 SDG Dan Pelaporan Ke Dashboard Smart City Melalui

ECONOMICAL VIBRANT CITY

- Membangunkan Tapak Pembangunan Baru antara 20 30% di KWASA Damansara
- Urban Regeneration di Seksyen 13 60-70%, Seksyen 51, Seksyen 51A dan Seksyen 19 – 10-20%
- Pembangunan Semula Kawasan-kawasan Perumahan Di Zon Perdagangan Terhad mencapai 60%
- Latihan Keusahawanan Kepada Golongan Belia Termasuk Belia Dari Kumpulan Miskin Bandar Dan B40 meliputi 10 Usahawan / tahun

LOW CARBON CITY

- Pengurangan Pelepasan Karbon
 - Kediaman: 4kilo tCO2 / Tahun
 - Industri Dan Komersil: 33kilo tCO2 / Tahun
 - Pembangunan Baru: 15kilo tCO2 / Tahun
 - Kenderaan Persendirian: 30 kilo tCO2 / Tahun
- 40% Modal Split Bagi Pengangkutan Awam

Pelaksanaan PJ Smart City disemua 12 Jabatan dan 6 Unit MBPJ

- Citizen Domain Dan Penyertaan Komuniti Dan Stakeholder:
- i-SSR Merekodkan Inisiatif Pelaksanaan SDG Oleh Kejiranan,
- Kesemua Dashboard Smart City Mengandungi Citizen
- PJCity2U

09 02

08

THEMATIC **PROJECT**

(e)

#†

03

CIRCULAR ECONOMY CITY

- Pengurangan Sisa Makanan sebanyak 50% Berbanding Tahun 2020
- Kadar Kitar Semula Sampah: 30% / Kenaikan Tahunan Melebihi 2%
- Penjanaan Sisa Pepejal Perkapita Kurang Daripada 10% Berbanding Tahun Sebelumnya

SAFE AND RESILIENT CITY

- Kadar Penurunan Jenayah sebanyak 5% Setiap Tahun
- Nisbah Kes Penyakit Bawaan Air & Vector Kurang 40 Kes / 10.000 Penduduk
- 100% Persekitaran Sekolah Selamat Dan Selesa
- Sifar Peniaia Tanpa Lesen
- Penduduk Terjejas Oleh Banjir Kurang Daripada 3%
- 100% Liputan Pengesanan Amaran Banjir Di Semua Aliran Utama Dan Sungai
- 100% Projek Yang Dikendalikan Oleh Majlis Mematuhi Keperluan OSHE
- Bilangan Penduduk Miskin Kurang daripada 0.6%

INCLUSIVE CITY

- Kesemua 23 Pusat Bandar Utama Aksesibel Kepada PWDs Dan 'UD Compliance Certified'
- Kesemua Pusat Membeli Belah Di Lengkapkan Kemudahan TLK Wanita Dan Bilik Penyusuan
- Program Pemerkasaan Remaja melibatkan 30 Orang Remaja / Tahun
- Memperkasakan Ekonomi Golongan Warga Emas Dan OKU

LEARNING CITY

07

CHILD FRIENDLY CITY

- Mencapai Status "Bandaraya Mesra Kanak-kanak" menjelang Tahun 2023
- Pengurangan Kanak-kanak Miskin: 50% Dari Baseline Data Tahun 2021

Mengekalkan status PJ sebagai Bandaraya Pembelajaran ('Learning City) Pematuhan Prinsip 'Life Learning City' Oleh UNESCO

Green Buildings for New Development







Energy efficiency programs with Sustainable Energy Development Authority (SEDA Malaysia)







KOMPLEKS SUKAN ASTAKA Petaling Jaya

DIAMOND RATING:

ZERO ENERGY BUILDING (Ready for ZEB Category)



Successfully achieved emission reduction of

59.58%

Equivalent to

38.23 tonne CO₂/year 55,084 kWh/ year

Baseline year: 2016 Reporting year: 2019 (absolute reduction) Assessment boundary: Operational Energy (Electrical Energy only) based on Common Carbon Metric & GreenPASS assessment method

(Dato' Hamzah Bin Hussin)



It is hereby awarded to

MENARA MAJLIS BANDARAYA PETALING JAYA

Petaling Jaya, Selangor

DIAMOND RATING:



BEI: 124.25 kWh / m2 / year

Based on Net Floor Area: 27,832.50 m







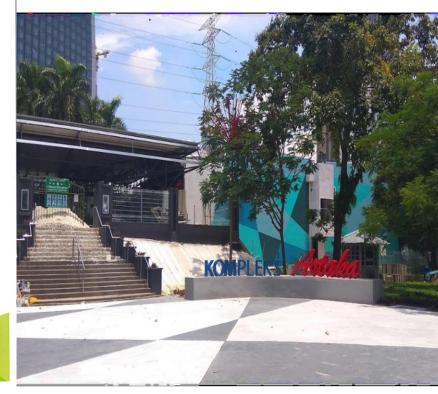
Successfully achieved emission reduction of 10.13%

> Eauivalent to 270.53 tonne CO2 / year 389,812 kWh / year

Baseline year: 2016 Reporting year: 2020 (absolute reduction) Assessment boundary: Operational Energy based on Common Carbon Metric & GreenPASS assessment method

(Dato' Hamzah Bin Hussin) Chief Executive Officer
Sustainable Energy Development Authority *This certificate is a voluntary initiative by SEDA Malaysia to promote energy saving & carbon reduction and does not intended for any other purposes





Free Bus Services

























Renewable Energy (rooftop solar panels) – PJ Innovation Centre

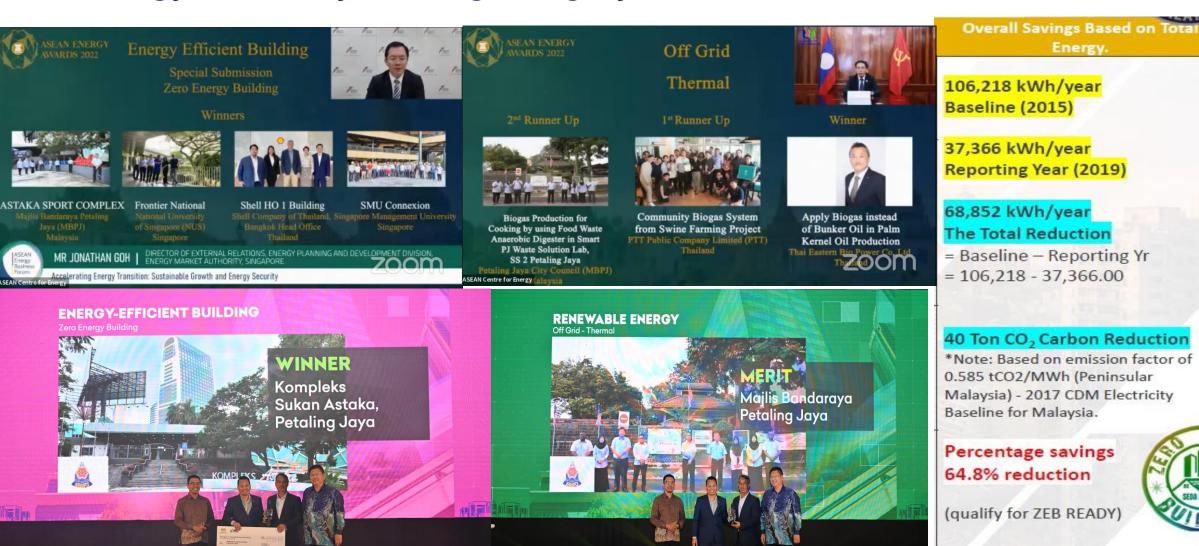


ACHIVEMENTS





Winner of ASEAN Energy Awards 2022 and National Energy Awards 2022 for energy-efficiency building category.



NATIONAL SCROLL OF HONOUR AWARD FOR HUMAN SETTLEMENTS 2021









TEMPAT PERTAMA

MAJLIS BANDARAYA PETALING JAYA



"ASSESSMENT X REPATE FOR ECO-FRIENDLY OUSE VN RS N

National Scroll of Honour for Human Settlement 2021

- Ministry of Housing and Local Government of Malaysia was hosting the National Scroll Of Honor Award For Human Settlements Competition with theme Accelerating Urban Action For A Carbon-Free World.
- 2. Project on Assessment Tax Rebate For Eco-Friendly House Owners was selected as a Winner for 2021



Winners of the 2019 Unesco Learning City Award for exemplary









Petaling Jaya is a CDP A List City 2019







Petaling Jaya is First UNICEF Child Friendly City in Malaysia.







56 PLANNED ACTIONS







THEME 1: RENEWABLE SOURCES AND ENERGY EFFICIENCY

- **B1** Ensure new developments are integrated with rainwater harvesting systems and grey water recycling for non-potable usage
- **B2** Promote installation of photovoltaic (PV) and solar thermal systems on institutional, commercial, industrial and residential buildings
- **B3** Promote solar water heaters in new developments
- **B4** Install energy efficiency (EE) equipment and smart meters for MBPJ assets (government office, community halls, market, stadium etc.)
- **B5** Install energy efficiency (EE) equipment and smart meters on commercial buildings as an energy saving initiative
- **B6** Install energy efficiency (EE) equipment and smart meters on industry operation especially boilers and furnaces
- Install solar powered street lights in urban center and all new developments
- Promote biogas plant from food waste of commercial and residential units (Waste to Energy)



THEME 4: GREEN SPACE PLANNING AND MANAGEMENT

- E4 Protect all existing forests and green spaces through gazette
- E5 Establish and manage new multi-function green spaces in Petaling Jaya
- Promote vertical green spaces or rooftop garden in commercial buildings, schools and government buildings
- E7 Adopt "Sponge City" concept in the new development project
- E8 Improve green linkages that connect pedestrian and bicycle network
- E9 Set target on planting number of trees in Petaling Jaya (1 resident 1 tree)
- **E10** Promote Nature Based Solution (NBS) as sustainable management and the use of nature features to tackle social environmental challenges



THEME 2: SUSTAINABLE URBAN PLANNING AND BUILDING REGULATIONS

- **B7** Promote adoption of passive architecture in new buildings (natural ventilation, shading, and lighting)
- **B8** Promote the use of sustainable materials in construction
- B9 Promote ZEB or NZEB in all new developments with minimum BEI
- **B10** Retrofit existing buildings and amenities to improve energy and resources efficiency
- **B11** Adaptively reuse existing buildings and amenities to reduce construction waste
- **E1** Redesign Petaling Jaya to be more compact in line with the 15 min city concept especially in the CBD and transit station
- **E2** Carry out feasibility study and implementation for industrial symbiosis (including Waste-to-Wealth) for existing industrial area
- E3 Encourage sustainable low carbon urban renewal
- Promote smart and digital technology for community sustainability real time information display



THEME 5: SOCIAL SUSTAINABILITY AND EMPOWERED COMMUNITIES

- **S1** Set up Low Carbon Residential Association involving MBPJ's councilors
- **S2** Implement 'No Single-Use Plastic Bag' in commercial areas and vendors
- S3 Organise 'One Neighbourhood, One Urban Farm' program
- **S4** Promote urban farming in schools and involve the school children
- **S5** Enhance implementation of Petaling Jaya's Assessment Tax Rebate Scheme for green initiative
- **S6** Enhance the Learning Cities Award 2019 by The UNESCO Institute for Lifelong Learning (UIL)
- S7 Uplift and alleviate living standards for Petaling Jaya poor through green economy
- **S8** Encourage Petaling Jaya City Council Food Bank Scheme
- **18** Promote compost from food of commercial and residential units (Waste to Wealth) for reduction of waste to landfills site
- 16 Collaborate with private companies on recycling vending machines
- 17 Establish Smart PJ Waste Solution Lab in Petaling Jaya
- E11 Devise Petaling Jaya City Council's Carbon Management Plan



THEME 3: PEDESTRIAN FIRST AND GREEN TRANSPORTATION

- T1 Introduce the "Cycle to Work" and "Cycle to School" initiatives involving the MBPJ workers, schools' students and community within neighbourhood
- T2 Improve modal interchanges between bikes and public transport
- T3 Improve and connect pedestrian walkways and bicycle lanes to promote active mobility
- T4 Convert MBPJ's vehicle fleet to low carbon vehicles (Bio fuel, hybrid or electric)
- T5 Increase the number of EV buses, routes and bus stops of PJ City
 Bus
- T6 Improve real-time online information application about public bus and locations and arrivals
- 17 Organise monthly or weekly Car Free Day
- T8 Establish Low Emission Zone (LEZ) in CBD and major centres in MRPI area
- T9 Promote hybrid freight transport to the freight operators
- **14** Provide sufficient EV charging infrastructure to promote EV cars usage in Petaling Jaya



THEME 6: DISASTER RISK REDUCTION MANAGEMENT

- Provide smart flood control water level response mechanism that will trigger a warning signal to alert PJ citizen
- D2 Improve flood mapping of Petaling Jaya
- D3 Improve real-time monitoring and development control at flood prone areas
- D4 Improve existing facilities of schools and community halls designated as disaster temporary evacuation centres by providing generator, toilets, dustbin, paper partition and tents
- Promote the use of permeable surfaces materials for new development in Petaling Jaya
- P6 Reduce waste littering in the drainage system to reduce blockages with awareness campaign
- D7 Implement drought management and response plan to reduce the impact of drought
- **D8** Introduce program or initiatives to reduce water consumption in commercial and residential area
- D9 Improve community awareness and participation on prevention of dengue
- D10 Improve enforcement by MBPJ to inspect potential mosquito breeding sites (constructions site, industry buildings, waste management facilities and residential neighborhoods)

WAYFOR







☐ Estimated cost to implement 56 planned actions – RM 200 millions. Financing mechanism required.

Public-Private Partnership (25% - 75%)

Private Sector Contribution

Grants from
External
Agencies and
Government

Internal Fundings

TAMAN EKO RIMBA KOTA DAMANSAR A

TAMAN EKO RIMBA KCTA DAMANSAR A

- ☐ Training and capacity buildings for the officers.
- ☐ High impact CEPA programmes (communication, education and public awareness).
- ☐ To leverage on technologies advancement and data availability to accelerate actions holistically.





Thank you.

TPr. Lee Lih Shyan

Director Development Planning Department, Petaling Jaya City Council

