

# PERBADANAN PUTRAJAYA



## Milestones Towards PGC2025: Putrajaya Green City Initiatives

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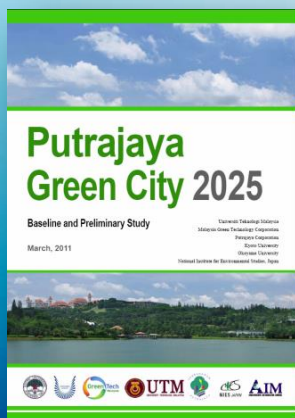


COP20 Japan Pavilion NIES Event "Low Carbon City Design by AIM"

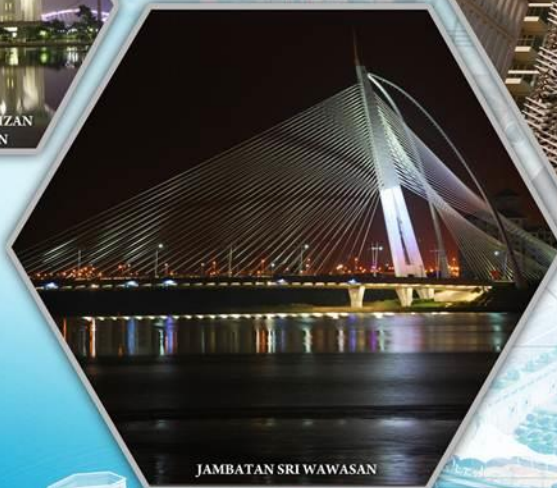
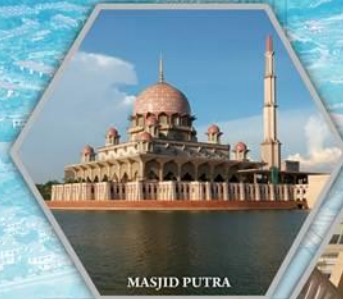
9 December 2014, COP20 Lima, Peru

# Outline of Presentation

1. Introduction
2. Background of Putrajaya
3. Putrajaya's Low Carbon Green City Policy & Initiatives
  - a. **Putrajaya Bikeable City**
  - b. **Inventory of GHG Emissions 2013**
  - c. **Scheme for Reduction of Energy Consumption in Buildings**
4. Way Forward

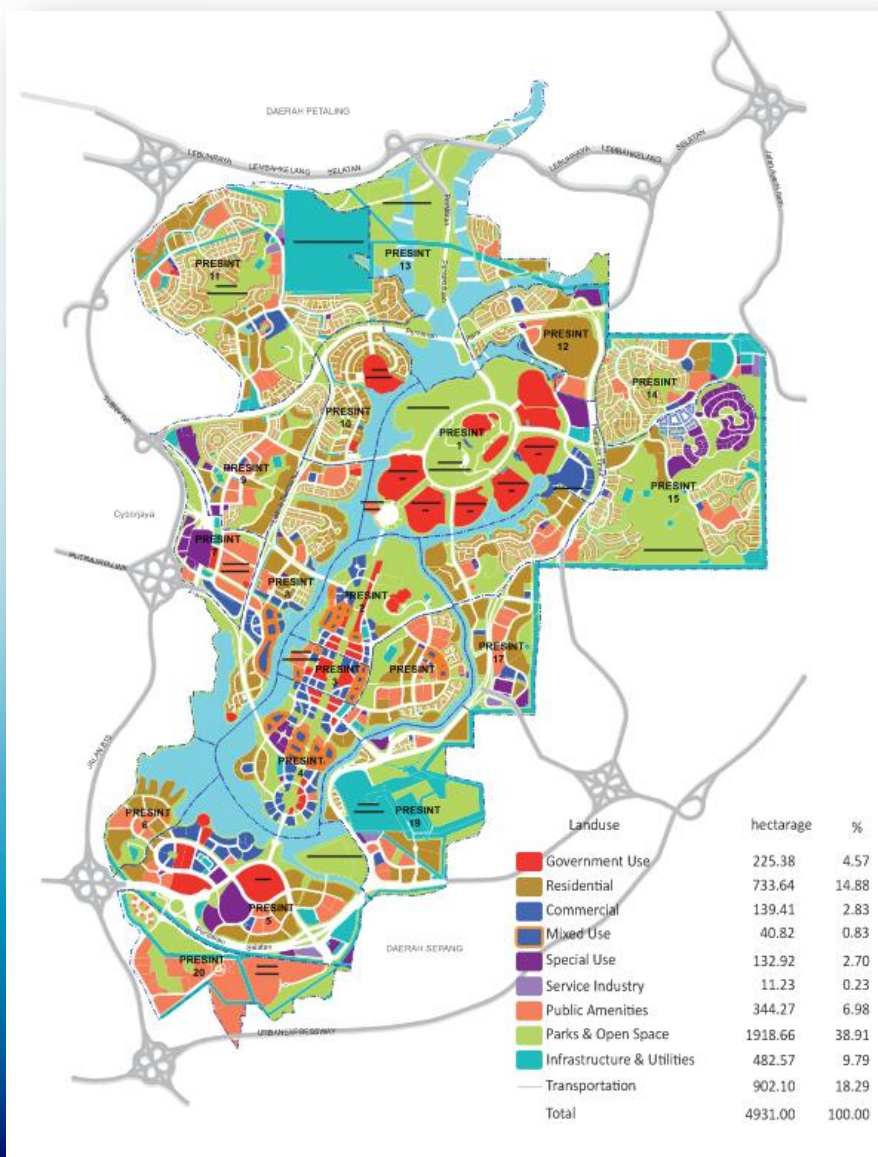


# PERBADANAN PUTRAJAYA



## 2. Background of Putrajaya

# Background of Putrajaya, Malaysia's Federal Government Administrative Centre



Land use	Hectares	%
Government Use	225.38	4.57
Residential	733.64	14.88
Commercial	139.41	2.83
Mixed Use	40.82	0.83
Special Use	132.92	2.70
Service Industry	11.23	0.23
Public Amenities	344.27	6.98
Parks & open Space	1,918.66	38.91
Infrastructure & Utilities	482.57	9.79
Transportation	902.10	18.29
Total	4,931.00	100.00

Land Use Components

Component	Planned (2025)	Current Status
Population	347,700	86,000
Housing	65,000	27,589 units
Government office space	2.75 million sqm	2.37 million sqm
Other government use	1.20 million sqm	214,604 sqm
Commercial space	4.35 million sqm	579,000 sqm

Current Status of Development (2014)

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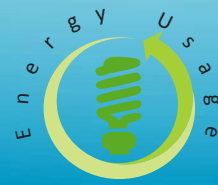


## 3. Putrajaya's Low Carbon Green City Policy & Initiatives

- At the Copenhagen COP15, Malaysia has made a conditional commitment of a reduction of carbon emission intensity of Malaysian GDP, of up to 40% by 2020 from a 2005 baseline.
- In tabling the 2010 Malaysian Budget, the Prime Minister announced to “develop Putrajaya and Cyberjaya as pioneer township in Green Technology as a showcase for the development of other townships” .

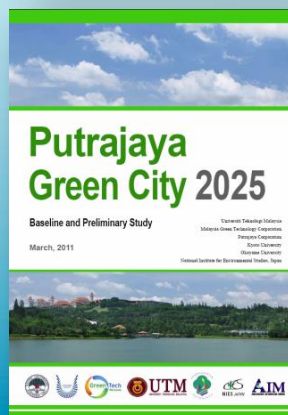
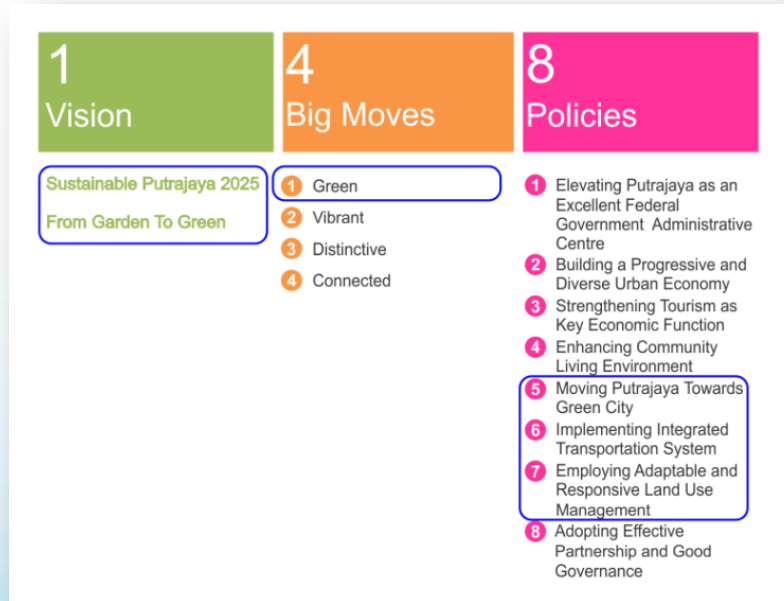
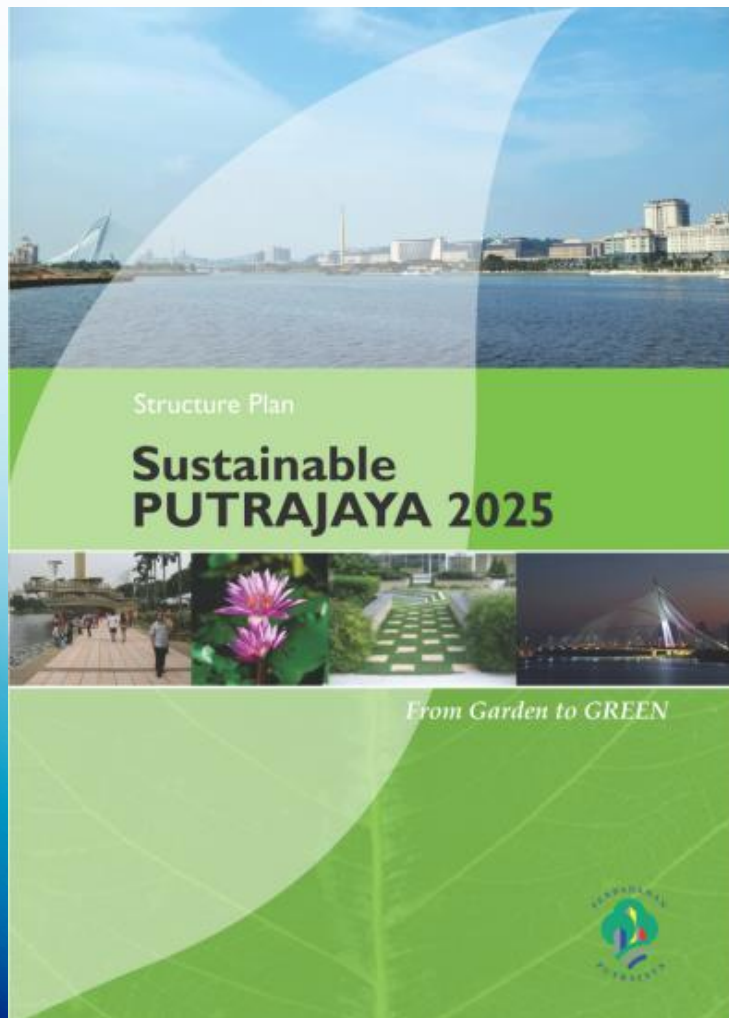


Prime Minister of Malaysia:  
Dato' Sri Mohd Najib Tun Abdul Razak



# Putrajaya Structure Plan: Sustainable Putrajaya 2025

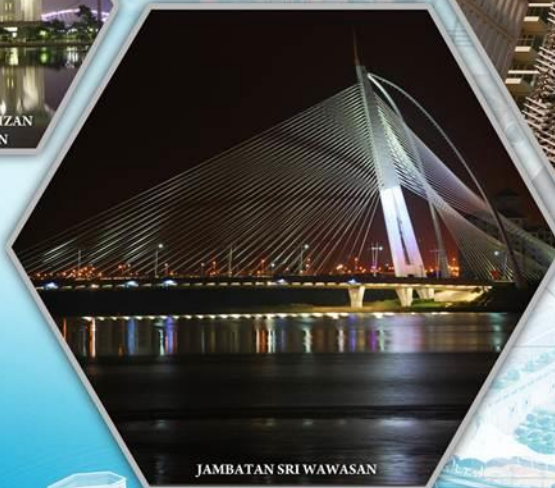
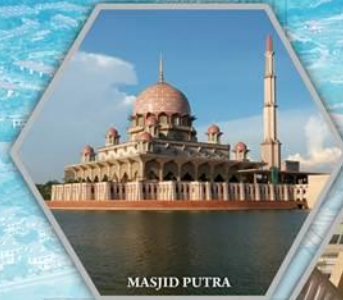
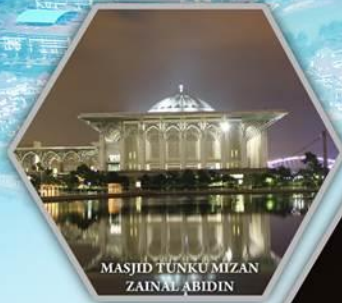
Regulatory Framework that sets policies & initiatives/programmes to turn Putrajaya into a sustainable low carbon green city



PGC2025 has identified initiatives/programmes to be implemented in line with the policies of the structure plan



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a) Putrajaya Bikeable City

## Putrajaya Structure Plan: Sustainable Putrajaya 2025

### Policy 6: Implementing Integrated Transportation System

#### Initiative 6.5:

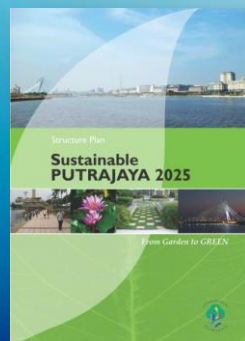
Encourage Walking and Cycling. This is to ensure that walking and cycling will become a preferred transport/movement options complementing the use of public transportation

#### Programmes:

P6.5A: Provision of a seamless, comfortable and safe pedestrian environment

P6.5B: Provision of dedicated routes and

P6.5C: Encouraging bicycle rental services



## PGC2025 : Putrajaya Green City 2025

### Make Putrajaya a Bikeable & Walkable City

#### Programmes

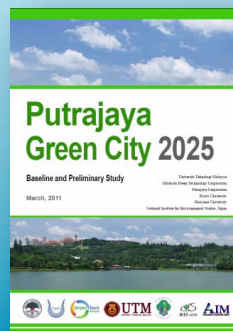
##### 1-1 Make Cycling as preferred transport option:

- provision of separate route for cyclists & pedestrians,
- facilities; cycling parking space and shower facilities,
- improvement of existing cycle lanes
- safer routes to school &
- bicycle rental services.

##### 1-2 Make walking as preferred transport option:

- provision of separate route for cyclists & pedestrians
- pedestrianized streets,
- covered pedestrian walkways
- pedestrian related facilities
- information kiosks & benches

The anticipated contribution in terms of reduction in GHG emission is 53ktCO<sub>2</sub>eq or 3% of the total reduction for 2025.



## Existing Programmes



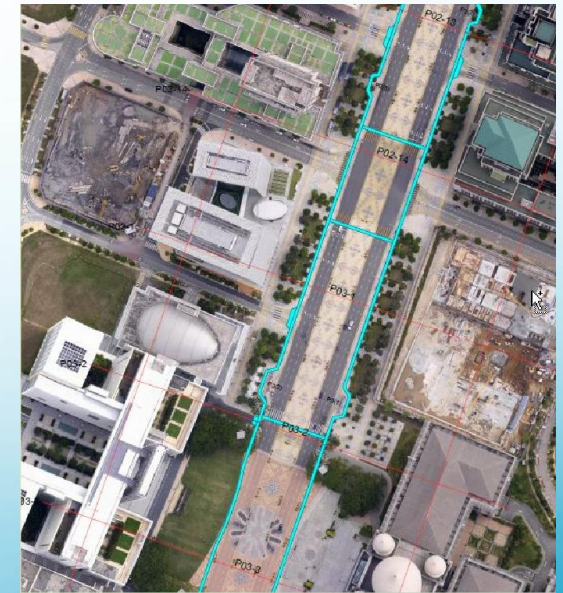
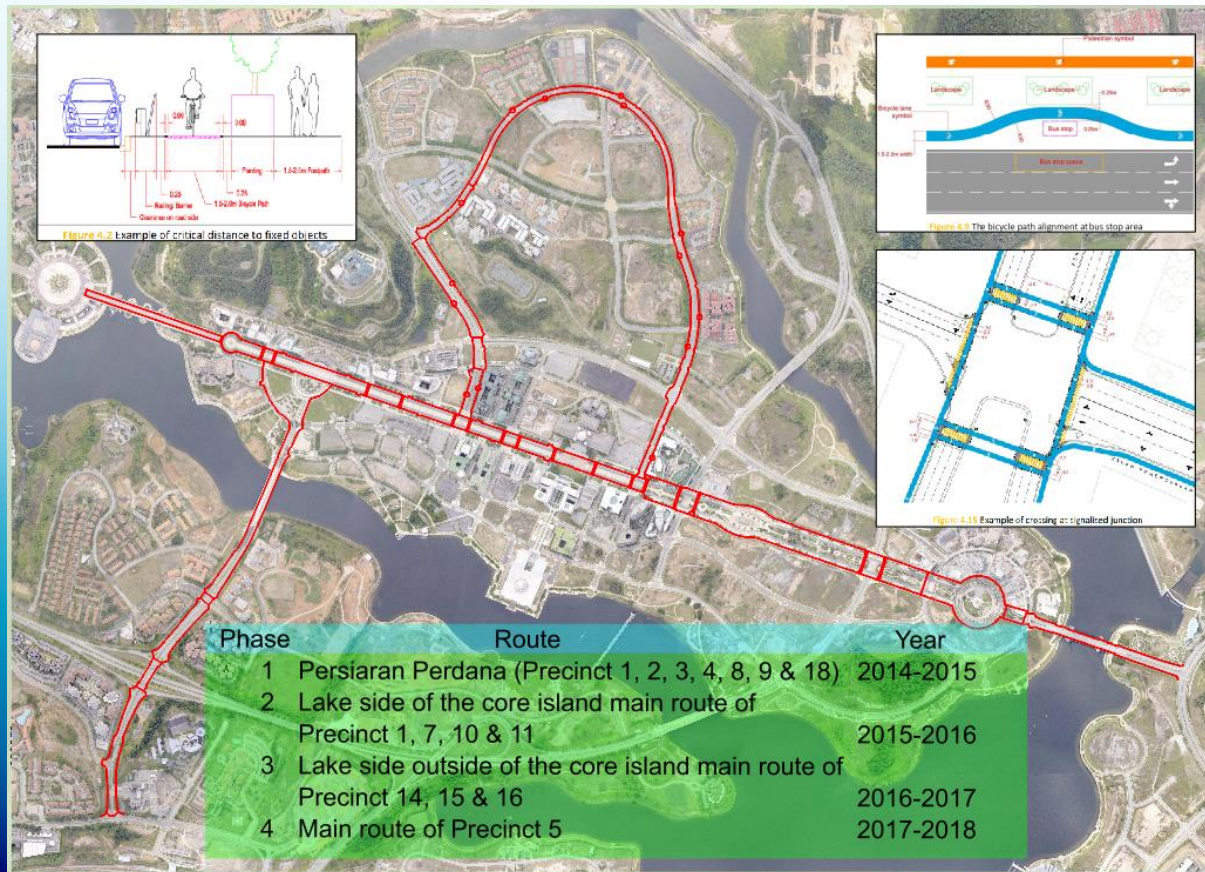
Putrajaya Inter-Parks Rides (Healthy Parks Healthy People)



Kayuhan CERIA @ Putrajaya (Bicycle Fun Ride @ Putrajaya)

## Current Initiative

1. To implement the Putrajaya as a bikeable city action identified in PGC2025
2. To reduce the GHG emission from the transportation sector
3. To support the tourism related activities in Putrajaya especially along the boulevard (Persiaran Perdana) of the city centre



**First Phase : 24 km**

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## b) Inventory of GHG Emissions 2013

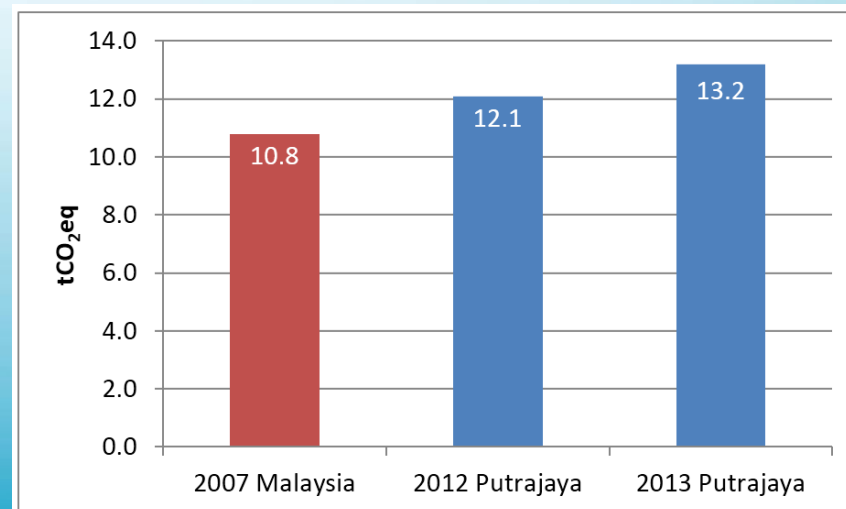
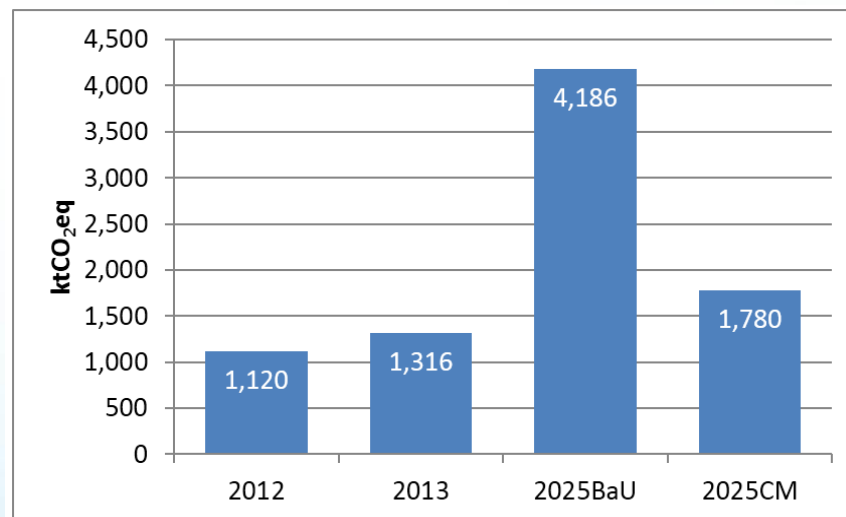
## Inventory of Putrajaya GHG Emission 2013

1. Government buildings
2. Commercial buildings
3. Public amenities and facilities
4. Residential
5. Passenger transport
6. Freight transport &
7. Solid waste

The overall GHG emissions for year 2013 were 1,316ktCO<sub>2</sub>eq as compared to 1,120ktCO<sub>2</sub>eq for year 2012 due to the increase in:

- the completed building floor space
- the number of population
- the number of workers.

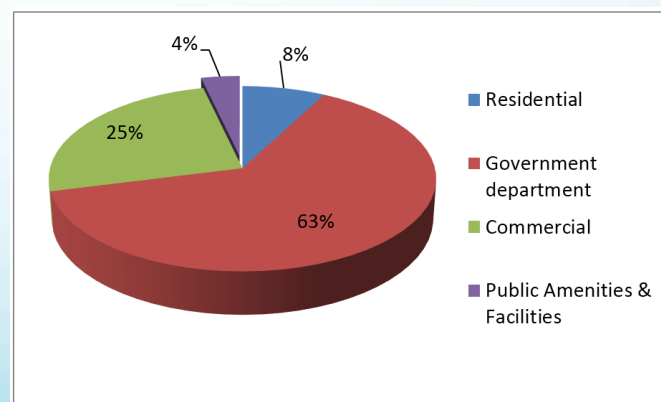
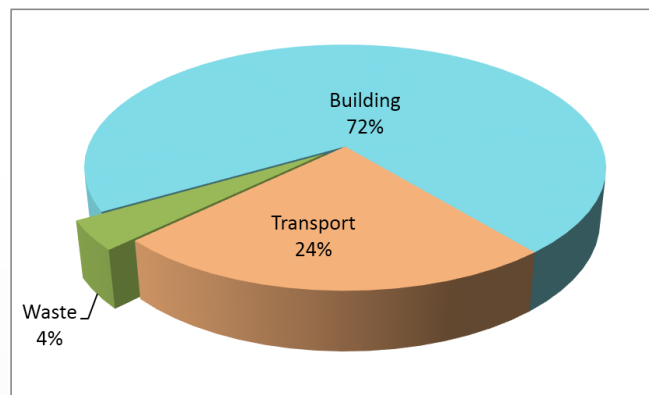
Emissions per capita were 13.2tCO<sub>2</sub>eq.



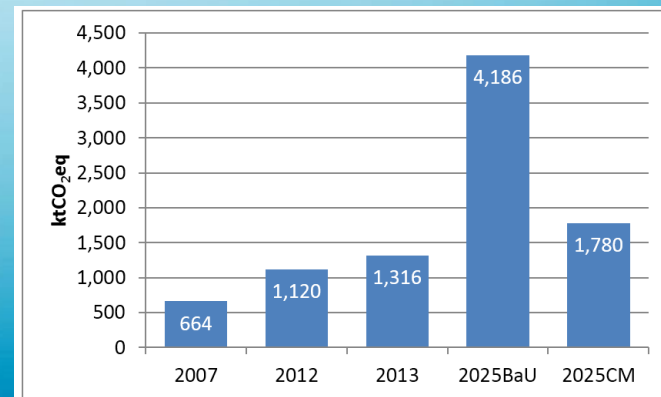
# Greenhouse Gas Emissions

The inventory results indicates that the highest GHG emissions is from the building sector at **72% (953 ktCO<sub>2</sub>eq)**, followed by the transportation sector at 24% (312ktCO<sub>2</sub>eq) and solid waste at 4% (51ktCO<sub>2</sub>eq).

The highest source of GHG emissions is from the use of **electricity at 58% (785ktCO<sub>2</sub>eq)**, followed by petroleum at 22% (288ktCO<sub>2</sub>eq) and natural gas at 16% (214ktCO<sub>2</sub>eq). This indicates that the citywide energy sources are still dependent on non-renewable energy.



Sector	2007	2012	2013	2025BaU	2025CM
Residential	23	59	73	266	150
Government departments	180	461	600	363	139
Commercial	65	207	240	1435	769
Public amenities & facilities	67	21	34	240	112
Passenger transport	161	316	305	1314	368
Freight transport	20	7	7	156	89
Waste	148	49	51	414	189
Total Emissions	664	1,120	1,310	4,188	1,816
carbon sink					35
Net emissions	664	1,120	1,316	4,186	1,780



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c. Scheme for Reduction of Energy Consumption in Buildings

# Scheme for Reduction of Energy Consumption in Buildings

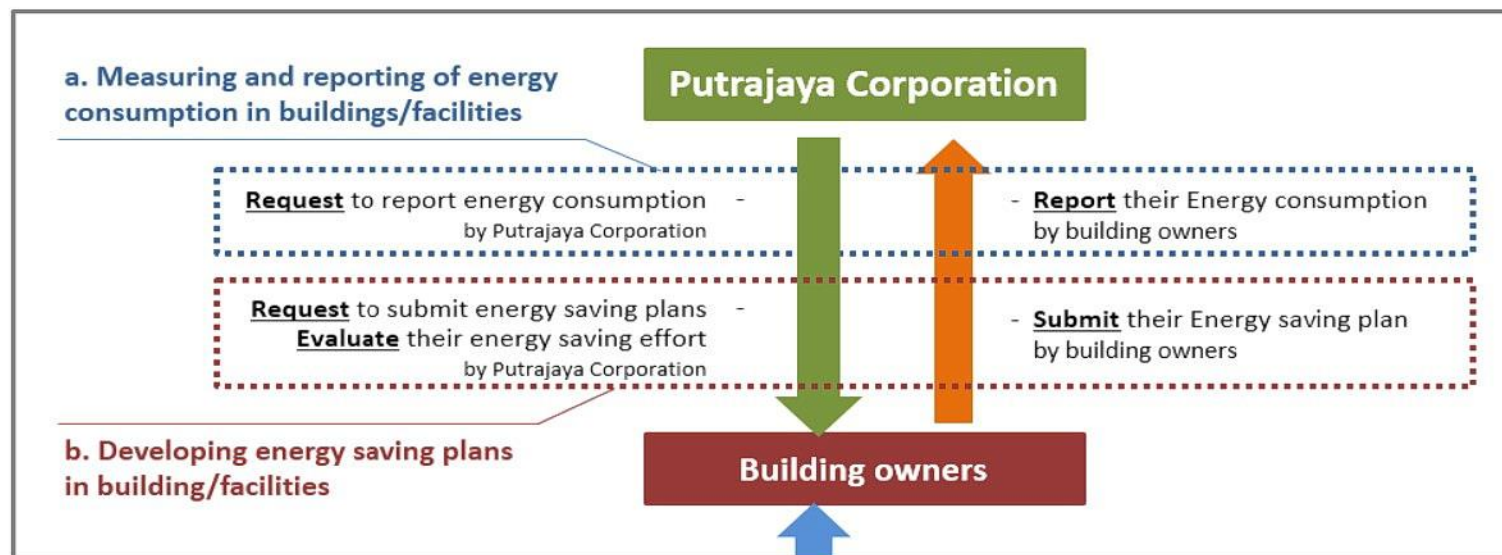
- Programmes and measures targeting at the reduction of energy consumption in buildings.
- The GHG inventory in 2013 indicates that the building sector contributes the highest in terms of city's GHG emissions at 72%
- PPj with the assistance of **AIM & Tokyo Metropolitan Government (TMG)** is proposing a scheme targeting at **reduction of energy consumption in buildings in Putrajaya**

1. Set up **institutional framework** involving various parties and agencies
2. Devise **implementation mechanism** for energy consumption reductions in buildings:
  - **measuring and reporting** of energy consumption in buildings/facilities
  - responsible actors/parties to develop **energy consumption reduction plans** in buildings/facilities & **disclose reports**
3. Formulate **regulatory instrument** & provide **incentives**
4. Prepare **support instrument** to facilitate the scheme



## 2) Devising an implementation mechanism for energy consumption reductions in buildings

Institutions for energy consumption reduction in buildings/facilities

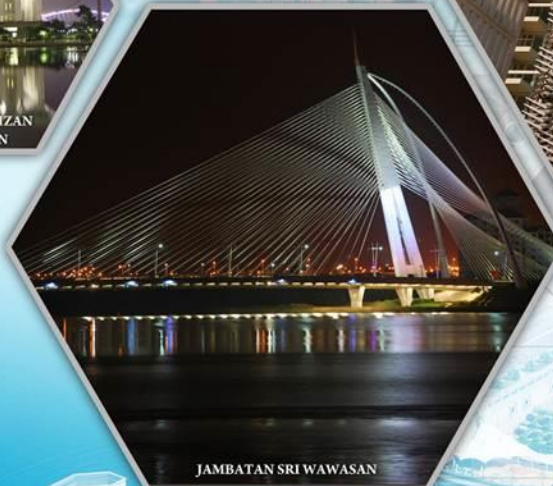
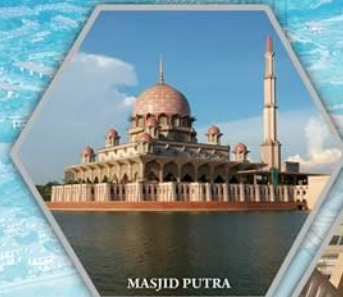


Instruments to enhance implementations by buildings/facilities



1) Institutional framework involving various parties and agencies to participate in the scheme

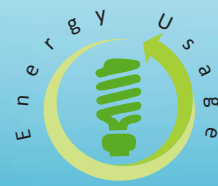
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Way Forward

# Way Forward

- In the years to come, PPj will ensure that cycling as a mode of transport will be realised via promotional and educational programmes targetting at workers, residents and schools
- PPj with the assistance of AIM, NIES and TMG will expedited the implementation of the scheme targetting at reduction of energy consumption in buildings in Putrajaya
- PPj will monitor closely the initiative to reduce GHG emissions by 2025 by intensifying programmes identified in Putrajaya Structure Plan and PGC2025



# THANK YOU



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