

## Background:

- To further promote green technology activities in Malaysia, the Prime Minister, in the 2010 Budget Speech has announced to develop Putrajaya and Cyberjaya as pioneer townships in Green Technology as a showcase for the development of other townships.

## Definition:

- Cities with programs and initiatives to conserve the natural environment and resources which serve to minimize and reduce the negative impact of human activities onto the environment.

## Our Aims:

- to minimise negative environmental impacts and degradation.
- to encourage human interaction back with nature.
- to reduce the carbon emissions from human activities.

## What have been done so far?

- Putrajaya is a planned city and its development is based on the 'City in the Garden' concept. Sustainable development has always been in the core of the concept, as such, "green city" has always been ingrained in its development right from its inception stage. The initiatives in transforming Putrajaya into a Green City are implemented through seven focus areas:

### CITY PLANNING & BUILDING

- Planning principles that contributes towards reduction of carbon emissions;
- Innovative reuse of local resources for construction;
- Green Building Design.

### INTEGRATING NATURE INTO THE URBAN FABRIC

- Land use planning of open spaces (40% designated as parks & open space);
- Creation of lakes and wetlands;
- Greening of Putrajaya through tree planting programme
- Putrajaya Urban Farming Programme



### TRANSPORTATION & MOBILITY



- Integrated planning of transportation network with the rail based transport as the back bone supported by park & ride facilities;
- Provision of environmental friendly public buses (NGV NADI PUTRA buses);
- Upgrading of pedestrian walkways & cycleways.



### ENERGY USAGE

- Encouraging the use of Solar Photovoltaics for power generation
- Improvement of energy efficiency.
- More and more renewable energy



Installation of solar PV for selected government buildings

Encouraging the use of energy efficient lighting fixtures for offices and public facilities



### WATER USAGE

- City wide rain water harvesting programme;
- Implementation of rain water harvesting system for residential development
- Centralised sewerage treatment plant.



### SOLID WASTE MANAGEMENT

- Provision of 3R facilities;
- food & green waste composting;
- waste separation at source.
- innovative reuse of waste



### CITY ADMINISTRATION & MANAGEMENT

- Extensive use of online services to reduce usage of paper and the need to travel.
- Healthy life style by leadership

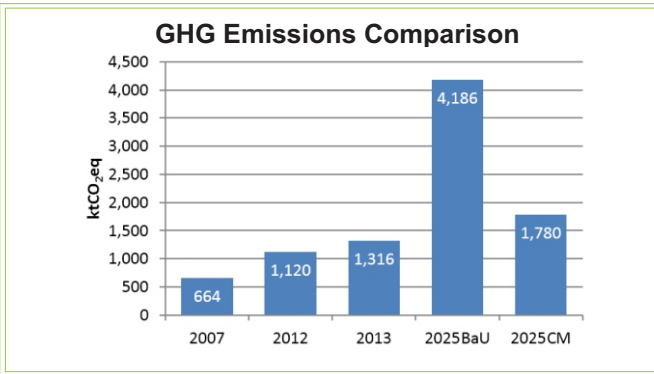
## Awards & Recognitions:

Putrajaya's collaborative efforts in the implementation of these initiatives have received various awards & recognitions:

- Sustainable City Awards 2012 through MURNInets Programme, Ministry of Urban Wellbeing, Housing and Local Government.
- Sustainable City Awards 2013 through MURNInets Programme, Ministry of Urban Wellbeing, Housing and Local Government.
- Appreciation for the Implementation of Green Neighbourhood Initiatives, for the category of rainwater harvesting and reuse system (SPA), Ministry of Urban Wellbeing, Housing and Local Government (2013)
- Malaysia Landscape Architect Awards (MLAA) 2012 Green City Awards: Excellence Award for Ecohydrology Management of Lake and Wetland in Putrajaya Urban Ecosystem.
- Malaysia Landscape Architect Awards (MLAA) 2012 Green City Awards: Honorary Awards for:
  - Putrajaya Inter-parks Ride (PIRR).
  - Putrajaya Botanical Garden.
  - Putrajaya Community Farming.
  - Putrajaya Pancarona Park.
- MIP Excellence Awards 2014 (Special Mention), Community Based Planning Award (Putrajaya Sustainable Recycling Practice Through Community Participations)
- Participation in the 19th Conference of the Parties (COP19), United Nation Framework Convention of Climate Change (UNFCCC) Side Events, 15 November 2013.
- Participation in the 20th Conference of the Parties (COP20), United Nation Framework Convention of Climate Change (UNFCCC) Side Events, 6 December 2014.

## Inventory of Putrajaya Greenhouse Gas Emissions 2013

- Inventory of Putrajaya Greenhouse Gas Emissions (GHG) for the year 2013 were calculated based on seven sectors namely residential, government departments, commercial, public amenities and facilities, passenger transport, freight transport and solid waste.
- The city's overall greenhouse gas emissions were about 1.7 times higher in 2013 as compared to 2007. The total emissions for 2013 were 1,316ktCO<sub>2</sub>eq as compared to 664ktCO<sub>2</sub>eq in 2007.

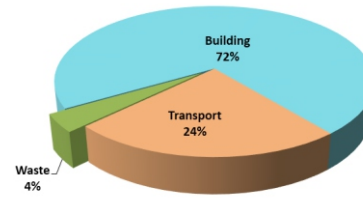


## Comparison of GHG Emissions by Seven Sectors (ktCO<sub>2</sub>eq)

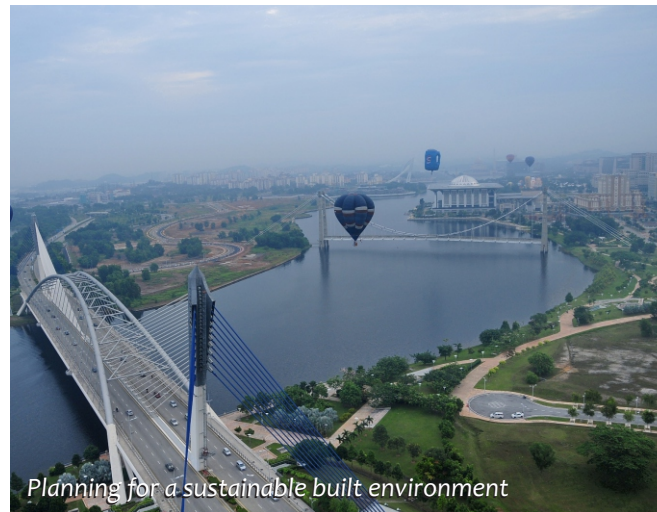
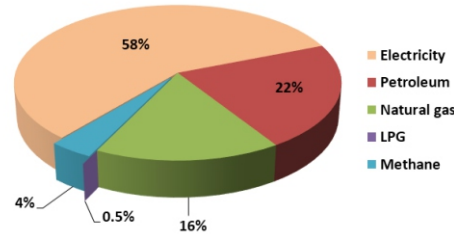
Sector	2007	2012	2013	2025BaU	2025CMU
Residential	23	59	79	266	150
Government departments	180	461	600	363	139
Commercial	65	207	240	1,435	769
Public amenities & facilities	67	21	34	240	112
Passenger transport	161	316	305	1,314	368
Freight transport	20	7	7	156	89
Waste	148	49	51	414	189
<b>Total emissions</b>	<b>664</b>	<b>1,120</b>	<b>1,316</b>	<b>4,186</b>	<b>1,815</b>
Carbon sink					35
<b>Net emissions</b>	<b>664</b>	<b>1,120</b>	<b>1,316</b>	<b>4,186</b>	<b>1,780</b>

- Emissions per capita for 2013 were 13.2tCO<sub>2</sub>eq as compared to 12.6tCO<sub>2</sub>eq in 2007.
- Inventory result shows that highest greenhouse gas emissions were from the building sector which contributes 72% (953ktCO<sub>2</sub>eq), followed by the transportation 24% (312ktCO<sub>2</sub>eq) and solid waste 4% (51ktCO<sub>2</sub>eq).
- The highest source of GHG emissions about 58% (785ktCO<sub>2</sub>eq) is from the use of electricity, followed by petroleum 22% (288ktCO<sub>2</sub>eq) and natural gas 16% (214ktCO<sub>2</sub>eq).

## GHG Emissions by Three Scopes



## GHG Emissions by Source



For further information, please contact:

Perbadanan Putrajaya,  
 24, Persiaran Perdana, Presint 3,  
 Pusat Pentadbiran Kerajaan Persekutuan  
 62675 Putrajaya  
 (Sustainable Development Division)  
 Tel : 03-8887 7000, Fax : 03-8887 5003  
 www.ppj.gov.my  
<http://www.facebook.com/putrajaya>

# Putrajaya Sustainable Low Carbon Green City 2025



3<sup>rd</sup> Edition