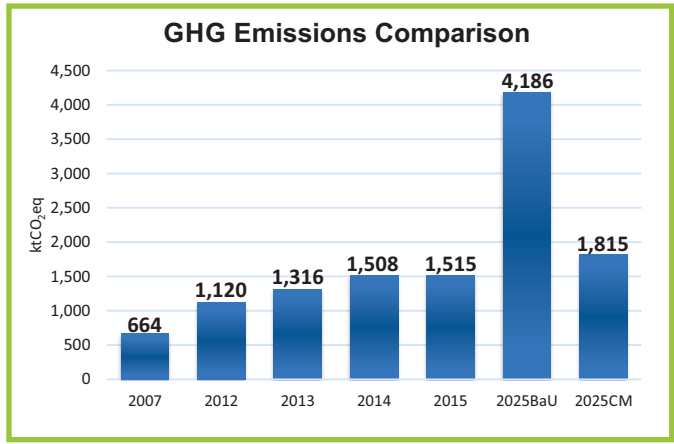


### Inventory of Putrajaya Greenhouse Gas Emissions 2015

- Inventory of Putrajaya Greenhouse Gas Emissions (GHG) for the year 2015 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 for 2015 were 1,515ktCO<sub>2</sub>eq as compared to 1,508ktCO<sub>2</sub>eq in 2014.

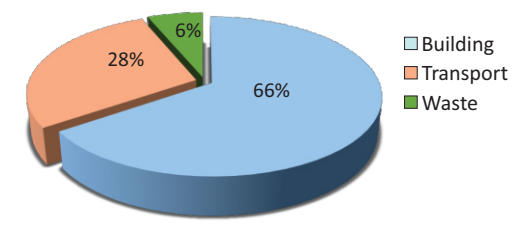


### Comparison of GHG Emissions by Seven Sectors (ktCO<sub>2</sub>eq)

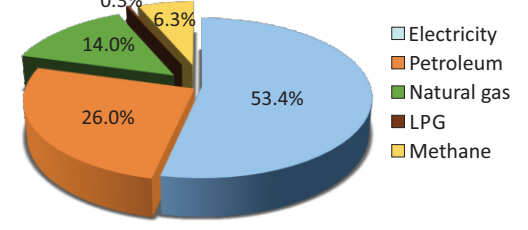
Sector	2007	2012	2013	2014	2015	2025BaU	2025CM
Residential	23	59	79	98	99	266	150
Government building	180	461	600	626	469	363	139
Commercial	65	207	240	277	393	1,435	769
Public amenities & facilities	67	21	34	38	30	240	112
Passenger transport	161	316	305	392	419	1,314	368
Freight transport	20	7	7	7	10	156	89
Waste	148	49	51	72	95	414	189
<b>Total Emissions</b>	<b>664</b>	<b>1,120</b>	<b>1,316</b>	<b>1,508</b>	<b>1,515</b>	<b>4,186</b>	<b>1,815</b>
carbon sink		23.96	24.10	24.10	24.11		35
<b>Net emissions</b>	<b>664</b>	<b>1,096</b>	<b>1,292</b>	<b>1,484</b>	<b>1,491</b>	<b>4,186</b>	<b>1,780</b>

- Emissions per capita for 2015 were 15.2tCO<sub>2</sub>eq as compared to 16.0tCO<sub>2</sub>eq in 2014.
- Inventory result shows that highest greenhouse gas emissions were from the building sector which contributes 66% (991ktCO<sub>2</sub>eq), followed by the transportation 28% (429ktCO<sub>2</sub>eq) and solid waste 6% (95ktCO<sub>2</sub>eq).
- The highest source of GHG emissions about 53.4% (809ktCO<sub>2</sub>eq) is from the use of electricity, followed by petroleum 26.0% (394ktCO<sub>2</sub>eq) natural gas 14.0% (212ktCO<sub>2</sub>eq), methane 6.3% (95ktCO<sub>2</sub>eq) and LPG 0.3% (5ktCO<sub>2</sub>eq).

### GHG Emissions by Three Scopes



### GHG Emissions by Source



# Putrajaya Low Carbon GREEN CITY 2025

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



## 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. Putrajaya is a planned city and its development is based on the 'City in the Garden' concept such as, "green city" has always been ingrained in its development right from its inception stage.

## 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.

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;
- Green Building Design.
- Building sector energy use & carbon reporting programme (BECO<sub>2</sub>R).

### 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;
- Encouraging the use of low carbon emissions vehicles (NGV/EV buses, bicycle)
- Upgrading of pedestrian walkways & cycleways.
- Station free bike-sharing facilities.



### 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 various 3R facilities;
- Food & green waste composting;
- Innovative reuse of waste
- PGC2025 Award - Creativity 3R
- Implementation of 2 bins system



### CITY ADMINISTRATION & MANAGEMENT



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

## Awards & Recognitions:

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

- ASEAN Environmentally Sustainable Cities Award 2011 & 2017.
- Appreciation for the implementation of Green Neighbourhood Initiatives, Ministry of Urban Well Being, Housing and Local Government:
  - Pedestrian Walkways - 2011, 2012
  - Bicycle Lanes - 2011, 2017
  - Solid waste Composting System - 2011
  - Rainwater Harvesting System (SPAHS) - 2013
  - Urban Farming - 2017
- Special Awards - Eco City Initiative in conjunction with National Environment Day 21 Oct 2017.
- Sustainable City Awards MURNInets 2010 - 2013, Ministry of Urban Well Being, Housing and Local Government
- MIP Planning Excellence Awards 2016:
  - Recognition for Sustainable Practices
  - Ecohydrology Management of Lake and Wetland in Putrajaya Urban System
- Malaysia Landscape Architect Awards (MLAA) 2012 Green City Awards for:
  - Putrajaya Healthy Park Healthy People, Putrajaya Inter- Parks Ride (PIRR)
  - Putrajaya Botanical Garden
  - Putrajaya Community Farming
  - Putrajaya Pancarona Park