

TOWARDS PUTRAJAYA GREEN CITY 2025

Putrajaya Building Sector Carbon Emissions Monitoring & Reporting Programme & PGC2025 updates

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Presentation Outline

- Background of Putrajaya & PGC2025
- Putrajaya Building Sector Carbon Emissions Monitoring & Reporting Programme
- Updates on Putrajaya's initiatives on Transportation & Mobility
- Way Forward



Background of Putrajaya & PGC2025

- **Putrajaya** is the Federal Government Administrative Centre of Malaysia
- The planning and development of the city based on sustainable development principles has set the solid groundwork for the city's transformation towards becoming a **sustainable low carbon green city** by 2025.
- **Putrajaya Green City 2025** (PGC2025) is an action plan for the city towards this target.
- **PGC2025** has set an ambitious target to reduce Putrajaya's citywide GHG emissions by **60%** from its business as usual level in 2025 which corresponds to about 2,400 ktCO₂ by implementing the necessary identified actions.



Putrajaya Building Sector Carbon Emissions Monitoring & Reporting Programme

- Putrajaya's GHG emissions inventory for 2014 indicates that the building sector contributes the highest in terms of city's GHG emissions at **67%** (1,038 ktCO₂eq)
- Huge potential to reduce GHG emissions from this sector has been identified by focusing on implementing **energy conservation** and **energy efficiency** practices in buildings
- For this purpose PJC will be introducing the **Putrajaya Building Sector Carbon Emissions Monitoring & Reporting Programme** specifically targeted to reduce GHG emissions from the building sector.
- A research team consisted of **PJC, Universiti Teknologi Malaysia, Kyoto University, National Institute for Environmental Studies, Tokyo Metropolitan Government, Mizuho Information and Research Institute** was established to design and develop of the programme for Putrajaya.
- The programme is based on the experience of Tokyo Metropolitan Government in implementing **Carbon Reduction Reporting Programme in Tokyo**



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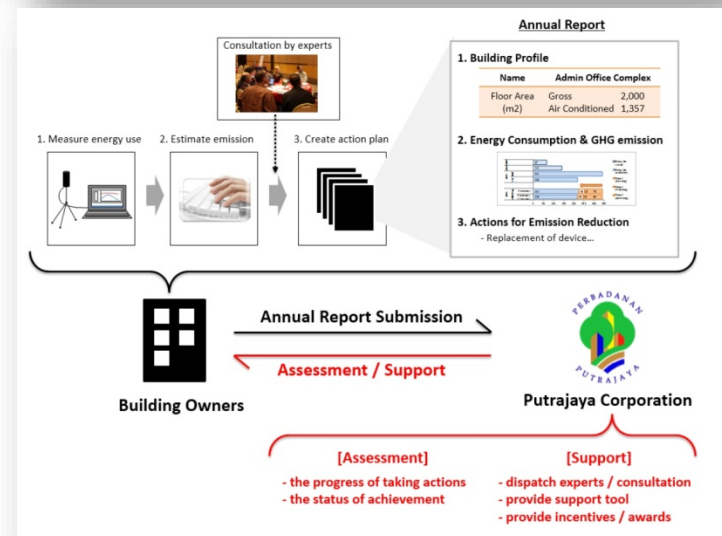


Putrajaya Building Sector Carbon Emissions Monitoring & Reporting Programme

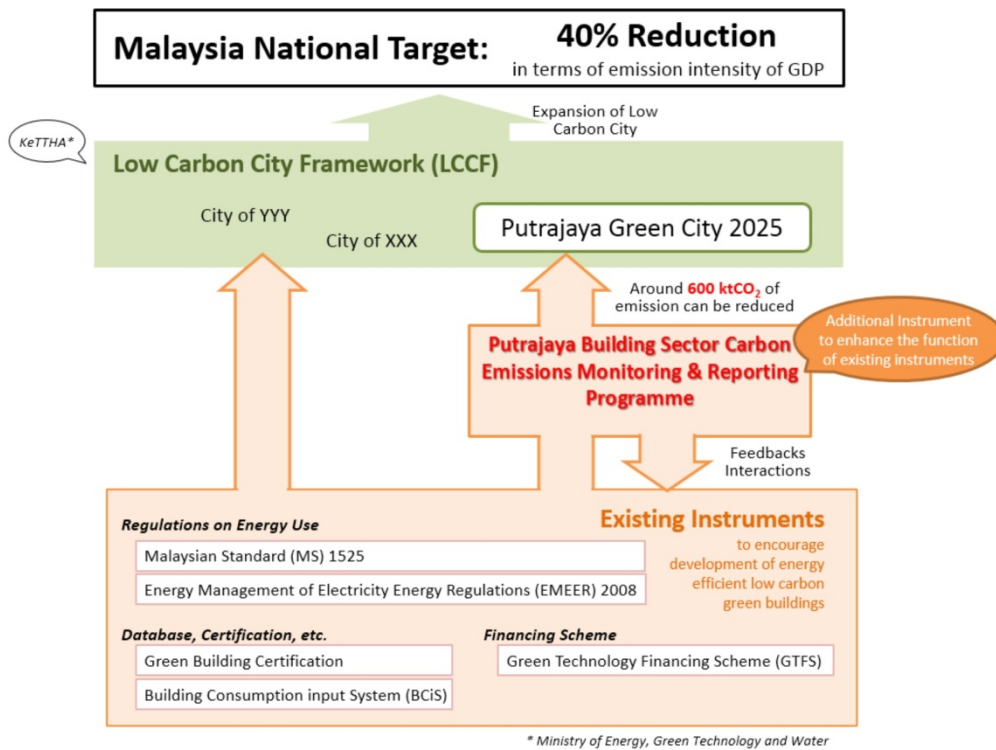
Overview of the Programme:

- The scope of the programme covers **all non residential buildings**, categorised into 2 groups, **mandatory** for **large scale** buildings (GFA over 10,001 m²) and **voluntary** for **medium and small scale** buildings (GFA below 10,000 m²)
- The total number of buildings covered by the programme under the mandatory requirement is expected to reach **67%**, covering **95%** of total planned GFA of buildings.
- The programme will require **building owners to report** their building's profile, energy consumption, GHG emission and action plan to reduce GHG emissions from their building operations **annually to PJC**.
- This programme adopts **Building Energy Index (BEI)** as an indicator and targets a reduction of **28%** of average BEI in 2025 (272 kWh/m²) from the current 2014 BEI (381kWh/m²)
- The programme is anticipated to help reduce the GHG emissions from the building sector by **approximately 600 to 700ktCO₂** by 2025 resulting in **savings** of about **MYR500 million** in terms of **reduction of energy use** in buildings in Putrajaya.

| Building Category | Coverage in number of buildings | | Total planned number of buildings |
|-------------------------------|---|---|-----------------------------------|
| | Large scale buildings (GFA over 10,001 m ²) | Medium & Small scale buildings (GFA below 10,000 m ²) | |
| Government | 98 (91%) | 10 (9%) | 108 |
| Public Amenities & Facilities | 62 (53%) | 54 (47%) | 116 |
| Commercial | 120 (62%) | 73 (38%) | 193 |
| Total | 280 (67%) | 137 (33%) | 417 |

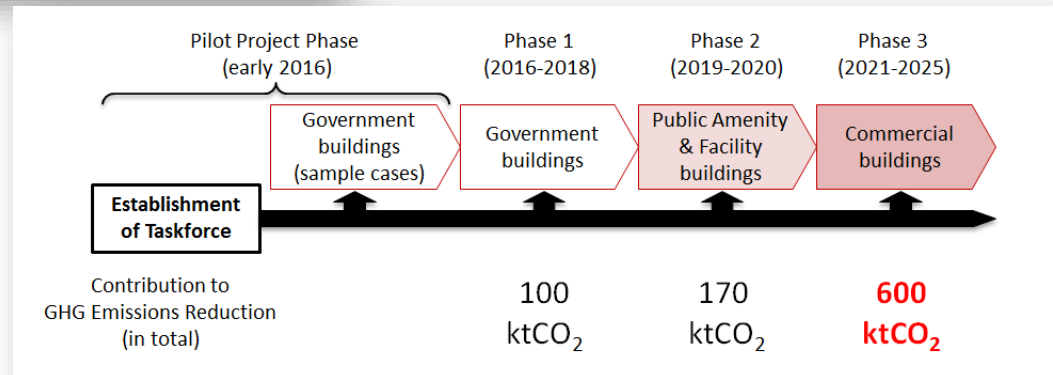


Putrajaya Building Sector Carbon Emissions Monitoring & Reporting Programme



- Implementation in **collaboration with various ministries and agencies**, such as the Ministry of Federal Territories, Ministry of Energy, Federal Territory of Putrajaya Public Works Department, Sustainable Energy Development Authority and others
- The programme plays a major role in achieving the PGC2025 target & will contribute towards the achievement of the national target of 40% reduction in carbon intensity in 2020
- Programme diffusion to other cities in Malaysia through LCCF programme to encourage the development of energy efficient low carbon green buildings in Malaysia

Programme implementation schedule



Updates on Putrajaya's initiatives on Transportation & Mobility

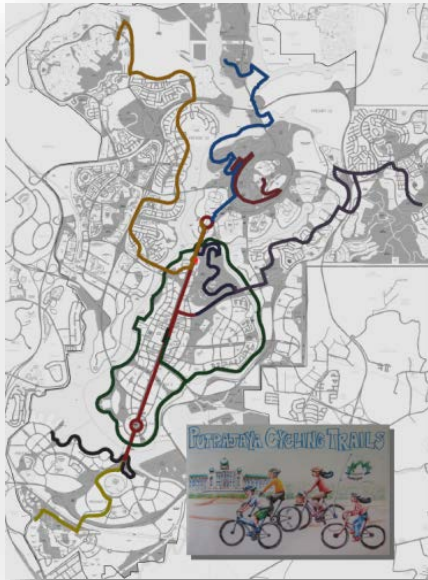
Putrajaya Bikeable City : Status Updates

The upgrading of cycling and walking infrastructure

- The first phase of the programme involves **24km** of existing cycleways and walkways in the city centre and part of the residential precincts.
- Operational in **early 2016**.
- Coverage to be extended in phases to cover the main routes linking other residential precincts to the city centre and along the promenade of Putrajaya lake.

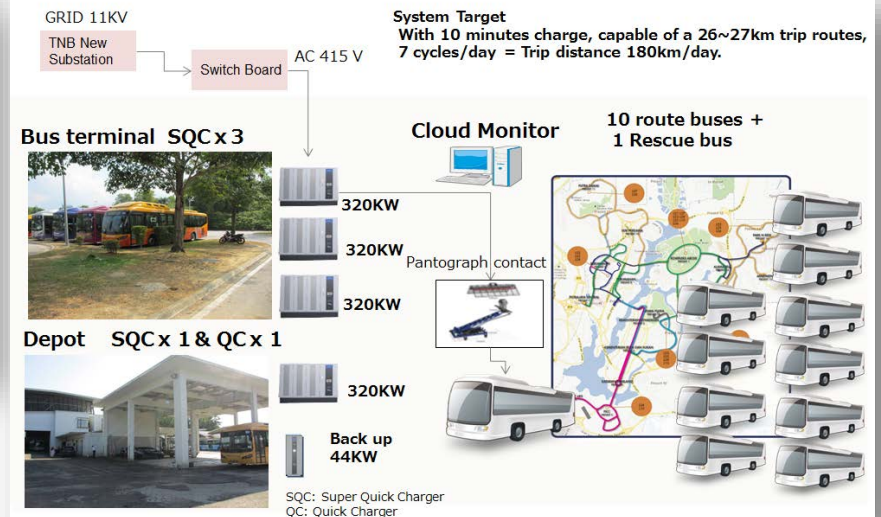
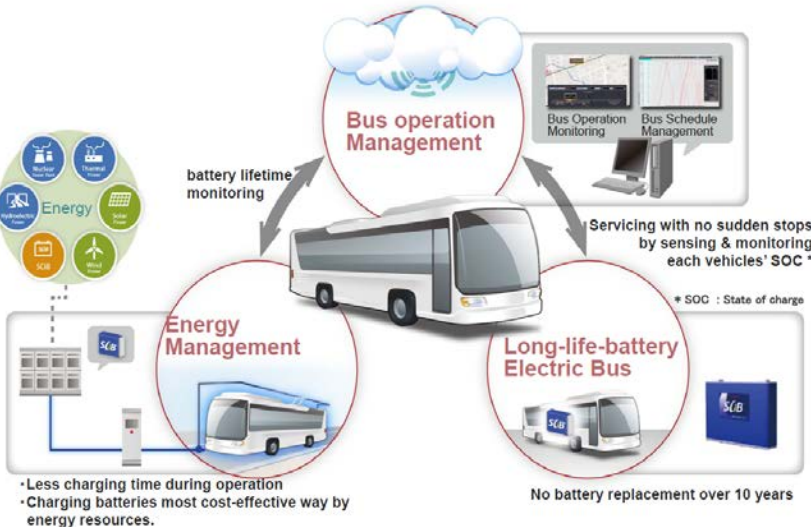
Promotion of Putrajaya Cycling Trails

- To promote cycling as leisure & recreational activity within the city, **9 cycling trails** has been identified and mapped.
- Categorized by their difficulty levels; **easy trails**, **moderate trails** and **challenging trails**.
- PJC hope that cycling for leisure, health and fitness will be encouraged further resulting in a take up in **utility and commuter cycling** in the long term.



International Demonstration Project for EV Buses with Super Quick Charging system in Putrajaya

- A project between PJC & NEDO
- Operational by end of 2016



Way Forward

- With the implementation of PGC2025, the city of Putrajaya is a step ahead in the right direction in its transformation into a **sustainable low carbon green city by 2025**
- **Putrajaya Building Sector Carbon Emissions Monitoring & Reporting Programme** will strengthen efforts to reduce the city's GHG emissions & contribute towards the national target of 40% reduction in CO₂ intensity by 2020
- The programme can be diffused for **implementation in other cities** in Malaysia with the strong support of relevant government ministries and other agencies
- Efforts to reduce GHG emissions from the **transportation sector** needs to be **intensify** via **promotional programmes** and introduction of public bus service using **EV buses** and **non motorised** transportation mode & mobility
- PJC welcomes the support of international organisations & agencies in expediting the implementation of programmes to reduce Putrajaya's GHG emissions and pledge to strengthen our efforts towards **Putrajaya Green City 2025**





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Ministry of the Environment



Ministry of Federal
Territories



Thank you



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