



PRIME MINISTER'S DEPARTMENT



ISKANDAR
MALAYSIA
SINCE 2006



ISKANDAR
REGIONAL
DEVELOPMENT
AUTHORITY



ISKANDAR MALAYSIA LOW CARBON DEVELOPMENT

JICA CLEAN CITY INITIATIVE SEMINAR

Kamisah Mohd Ghazali

Lead, Resilient Environment

19 January 2022



www.iskandarmalaysia.com.my

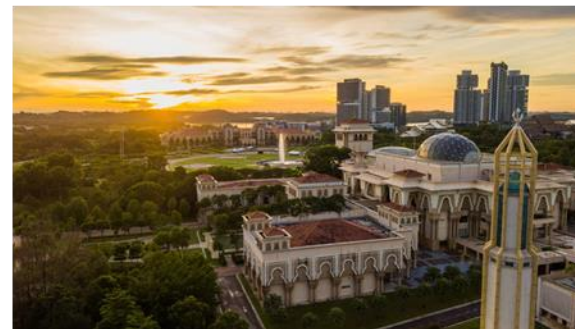


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ABOUT ISKANDAR MALAYSIA

- Established in 2006. Iskandar Malaysia (IM) is an **Economic Development Corridor** booming in the Southern Johor, Malaysia.
- Strategically located at the cross road of East-West Trade lanes, centrally located in the heart of East Asia.
- Current development encompasses an area of 2,217 sqkm. In 2019, federal government has extended the **development area** to **4,749 sqkm**.
- Iskandar Malaysia has been recognized by as CDP Global Ranking **Cities A List in 2019 & 2020** due to our **leadership & transparency on climate action** especially in our effort on reduce Greenhouse gas (GHG) emissions and build resilience against the impacts of climate change.
- Our Vision is : **To be a strong sustainable Metropolis of International Standing.**



CO-CHAIRMAN



Prime Minister of
Malaysia

Chief Minister of
Johor



Advisory Council
(AC)

Member of
Authority (MoA)

Approval &
Implementation
Committee (AIC)

Executive
Committee (EXCO)

Chief Executive of
IRDA

Management of
IRDA

Identify, monitor, and co-ordinate the roles and activities of all relevant Government entities to expedite the implementation of major or strategic development and investments.

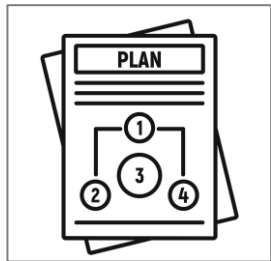
JOINT MINISTERIAL
COMMITTEE FOR
ISKANDAR MALAYSIA
(JMCIM)

Government to Government (Malaysia – Singapore) platform to identify and facilitate collaboration in the development of Iskandar Malaysia



DELIVERING VALUE THROUGH GOVERNANCE

IRDA, a Federal Statutory body was established through an Act of Parliament to provide **direction, policies and strategies** in relation to the development of Iskandar Malaysia



Blueprints



Brand guardian
of IM



Investment
Service Centre



Incentives

9 Promoted
Sectors



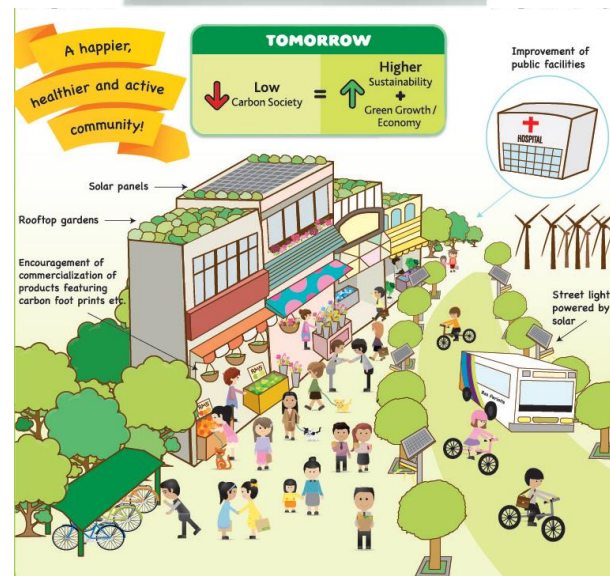
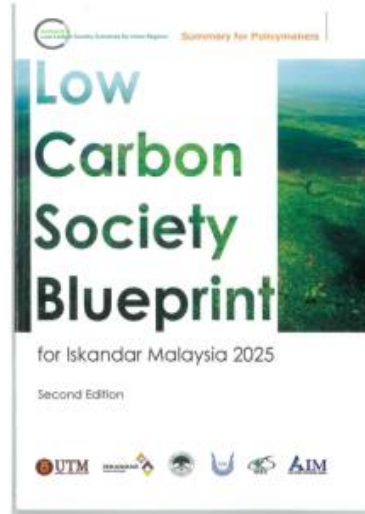
LOW CARBON SOCIETY



PRIME MINISTER'S DEPARTMENT



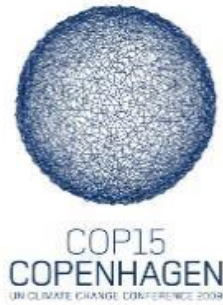
JOURNEY TOWARDS LOW CARBON REGION



❖ The LCSBPIM 2025 is a research output of Japan’s Science and Technology Research Partnership for Sustainable Development (SATREPS) project called “The Development of Low Carbon Society Scenarios for Asian Region” funded by Japan International Cooperation Agency (JICA) and the Japan Science and Technology Agency (JST) (2011-2015).

❖ The Partners of this major study were IRDA, Universiti Teknologi Malaysia, Kyoto University, Okayama University, and the National Institute of Environmental Studies, Japan.

JOURNEY TOWARDS LOW CARBON REGION



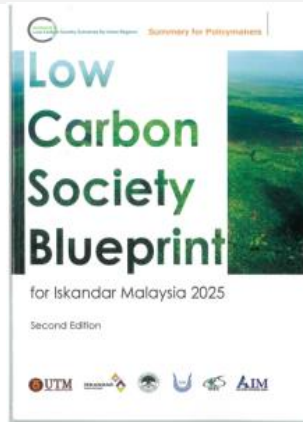
On 17 Dec 2009, Malaysian 6th Prime Minister committed to a **voluntary reduction of up-to-40%** in terms of emission intensity of GDP by the year 2020 compared to 2005 levels.



At COP 19 Doha – Iskandar Malaysia launched **Low Carbon Society Blueprint for Iskandar Malaysia 2025**. The Blueprint was subsequently **endorsed by the Prime Minister of Malaysia in December 2012**



At COP 21 Paris – The commitment is renewed to a **reduction of up to 45% in terms of emission intensity of GDP by 2030** compared to 2005 levels.



2025 goal: Reduction of GHG emission intensity



2025 goal: Emission reduction from BaU (Business as usual)



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UNFCCC : UN CLIMATE CHANGE CONFERENCE (COP)

We share our experiences, learn from others experts and obtain collaboration on climate change.

2010

COP16 Cancun, Mexico

Low Carbon Society (LCS)
Project started as a JICA/ JST
funded SATREPS research
study focusing on Iskandar
Malaysia

2012

COP18 Doha, Qatar

Launching of Low Carbon
Society Blueprint for
Iskandar Malaysia
(LCSBPIM) 2025



2013

COP19 Warsaw, Poland

Launching of LCSBPIM
Roadmap and "Action Plan for
a Low Carbon Future" Book



2014

COP20 Lima, Peru

Launching of LCS Brochures
for the 5 Local Councils in
Iskandar Malaysia



2015

COP21 Paris, France

LCSAP 2025 for the 5 Local
Councils in Iskandar
Malaysia
Lima Paris Action Agenda

2016

COP22 Marrackech, Morocco

Iskandar Malaysia Greenhouse
Gas Inventory 2015 &
Iskandar Malaysia Partnership
for Interdisciplinary Studies on
Shoreline Ecosystems (PESISIR)

2017

COP23 Fiji in Bonn, Germany

Iskandar Malaysia Greenhouse
Gas Inventory 2016 & Low
Carbon Society Report Card 2017

2018&19

COP24 Katowice, Poland COP 25 Madrid, Spain

IRDA invited to present and
share at various platform on
IM's as case study for LCS
implementation

2021

COP26, Glasgow

Launched of Iskandar
Malaysia Greenhouse Gas
Inventory 2019



CHARTING ISKANDAR MALAYSIA'S LOW CARBON AND SUSTAINABLE ENVIRONMENT

- Iskandar Malaysia is the **pioneer city** in Malaysia to drive low carbon initiative **since 2009** and established the Low Carbon City Blueprint for Iskandar Malaysia 2025 (LCSBPIM 2025) in **November 2012**.
- Iskandar Malaysia is **the FIRST region in Malaysia** to use and comply an international recognised standard – **the Global Protocol for Community-scale Greenhouse Gas Emission Inventory (GPC)** – to account for the Greenhouse gas emissions (GHG) within the IM boundary, which covers five local authorities.
- In less than 10 years, Iskandar Malaysia managed to **complete the LCS Development Cycle** from Science to Policy, Action and Monitoring.





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ISKANDAR REGIONAL DEVELOPMENT AUTHORITY



LOW CARBON AGENDA IN STATE AND LOCAL AUTHORITIES' POLICY



TERAS PPMJ 2030

PPMJ 2030 mempunyai lapan teras yang terangkum menerusi tiga kluster utama kemampanan iaitu mampan ekonomi, mampan fizikal dan mampan sosial. Ketiga-tiganya dirancang dan perlu dilaksanakan serta dipantau menerusi pendekatan dinamik, komprehensif dan inklusif.

MAMPAN EKONOMI		MAMPAN FIZIKAL		MAMPAN SOSIAL			
TERAS 01	TERAS 02	TERAS 03	TERAS 04	TERAS 05	TERAS 06	TERAS 07	TERAS 08
PEMERKASAN EKONOMI	PELARIHAN DAN EKONOMI DIGITAL	PENGANGKUTAN DAN INFRASTRUKTUR MEKA	KELESTARIAN ALAM SEKITAR	TADBIR URUS CECAK BERSIYOKHTI DAN DINAMIK	KESEJAHTERAAN SOSIAL	MEMPERKASA PENGUNJUNG BILAL, PEMBANGUNAN MOKA, MELAK DAN WARISAN BUDAYA	PESONA WANITA DAN ADAPTIF ISKALU ANAK MODA

Johor Sustainable Development Plan (PPMJ) 2030



Iskandar Malaysia Comprehensive Development Plan II- CDP II



CIRCLE OF SUSTAINABILITY



Johor Structure Plan (RSN) 2030

Teras-Teras Perancangan Negeri Johor



Terdapat 5 objektif yang dibentuk dalam merangka halatujau pembangunan daerah sepertimana berikut:



District Local Plan (RTD) Johor Bahru and Kulai 2025 (Replacement)



KEY INITIATIVES & PROGRAMMES

Iskandar Malaysia started LCS programme since 2013, more than 60 programmes completed and there are 214 programmes are currently on-going.

Green community



ISKANDAR
MALAYSIA
ECOLIFE
CHALLENGE

Waste management



ICLEI
Local Governments
for Sustainability
SOUTHEAST ASIA

Smart healthy city



Low Carbon Lifestyle
GLAM
GREEN LIVING & ACTIONS
SHORT MOVIE CHALLENGE
KAWAN
ISKANDAR MALAYSIA

Natural assets & Biodiversity



Sungai Pulai
Forest Reserve:
Management
Plan
Tanjung Piai
Revetment &
Breakwater
Project
Pulau Kukup
National Park:
Infrastructure

Low Carbon mobility - electrical bus



IMBRT
1st Phase Pilot Test
Iskandar Malaysia

Carbon monitoring



CASBEE / Comprehensive Assessment
System for Built Environment
Efficiency
BEMRS
BUILDING ENERGY MONITORING AND REPORTING SYSTEM

Blueprints / Policies / Guidelines



LOW CARBON SOCIETY
BLUEPRINT
LOW CARBON SOCIETY
INVENTORY 2016
ISKANDAR MALAYSIA
GREENHOUSE GAS
INVENTORY 2016
ISKANDAR MALAYSIA
GREENHOUSE GAS INVENTORY
2015
Renewable Energy &
Energy Efficiency
Blueprint for Iskandar Malaysia
Shoreline Management Plan
Blueprint for Iskandar Malaysia

Programmes



First Public House Rumah
Iskandar Malaysia with
Energy & Water Saving



Responsible Tourism
Dev. & Biodiversity
Conservation



Tree Planting
Programmes



Low Carbon Village
Felda Taib Andak



River
monitoring



Project
Sungai Segget
Johor Bahru



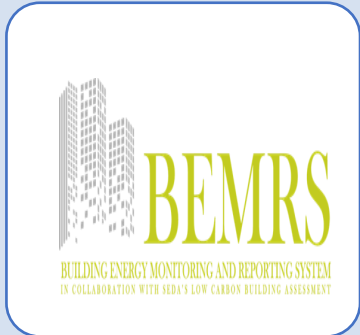
Integrated Water
Treatment Plant



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PROJECTS OUTCOME ACHIEVEMENT FOR 2021



Building Energy Monitoring & Reporting System (BEMRS)

Reduction of **287,936 kwh** or 11.39% of energy data has been reduced compared to the base-year (6 Buildings)



CASBEE Iskandar

11 showcase projects. Turn it into GAIA assessment criteria with **15 submission certified**



Green Community Carbon Reduction (GCCR) Programme

Total carbon saved 146,907.44 kgco2 from GCCR programme consists of saving of 36,000 kwh of electricity, 3,597m2 of water, 43,288 kg of recyclables.



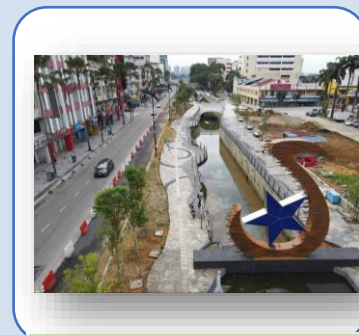
Iskandar Malaysia Ecolife Challenge

Involved 906 schools. The **total carbon reduction** by participating schools and families in IMELC 2021 is **534,561.30 kgCO2** from electricity saving, water saving and recycling



Iskandar Malaysia GHG Inventory 2019

Iskandar Malaysia BASIC+ emissions intensity by GDP in 2019 was 0.2320 ktCO2e/RM million respectively. A reduction of **19.7% from its base year 2010.**



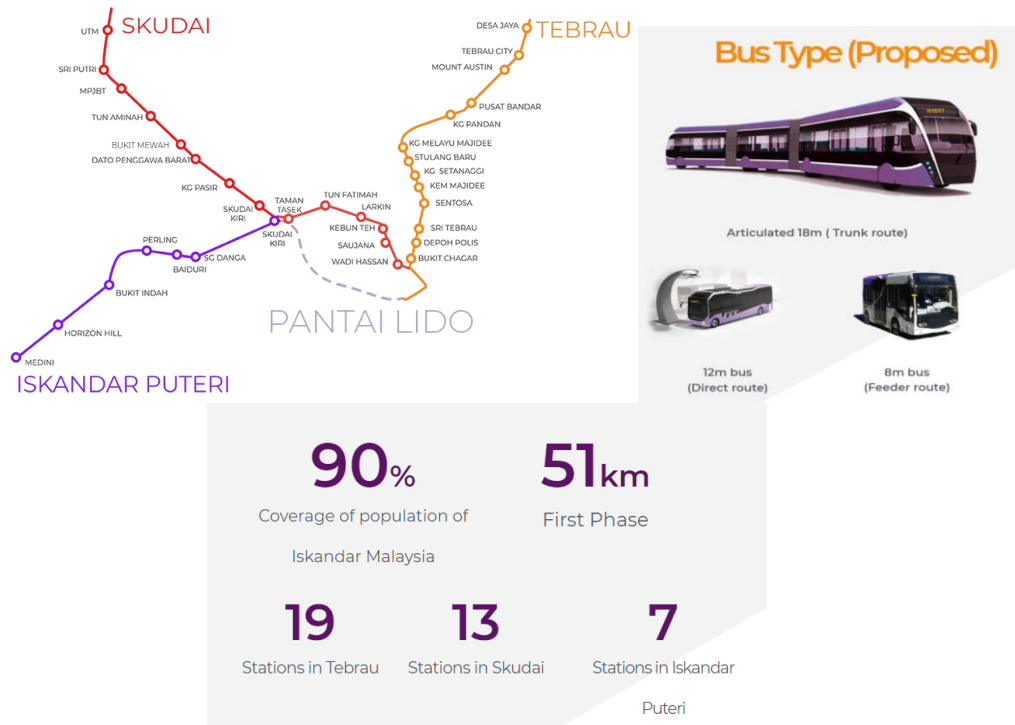
Water quality of Sg Segget

Average WQI for 2021 **base year** . Class III 63.3

KEY INITIATIVES & PROGRAMMES

Iskandar Rapid Transit

-The BRT network envisioned to significantly enhance public transportation coverage within the Iskandar Malaysia region from 39% to 90% and increase public transportation modal share from 15% to 40% by 2025.



Segget River Revitalization Project

1. Centralised Sewerage Treatment Plant (Package 1)
2. Flood Mitigation System, Sewerage Network & New River Channel (Package 2)
3. Landscape Sungai Segget & Upgrading Jalan Wong Ah Fook (Package 3)





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KEY INITIATIVES & PROGRAMMES

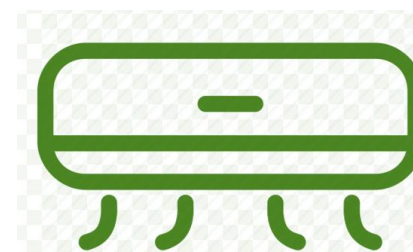
Renewable Energy

1st Floating Mini Hydro Hybrid Project in Asia – Toyama & Iskandar Malaysia



Partnership & Technical Assistance

都市の理想を、富山から。



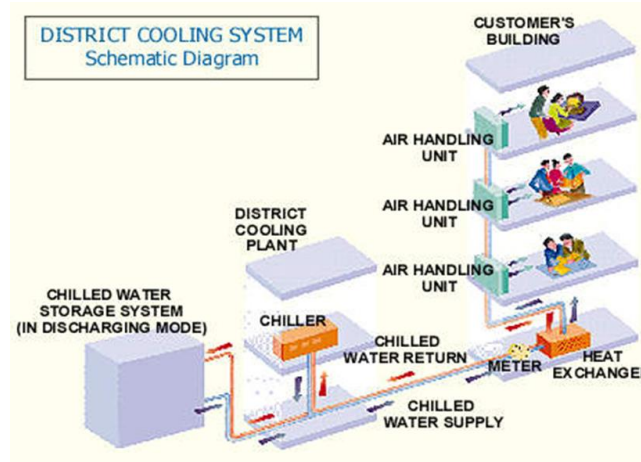
1kwh supplying for ticket booth office (including aircon, pc, lighting and fan) for 8 hours

KEY INITIATIVES & PROGRAMMES

Accelerating District Energy

COMPLETED

- National workshop on district cooling system to identify major barriers for cities, developers, operators, and regions and their solutions.
- Completion of Pre-feasibility study of district energy for Medini Township
- Johor Bahru district energy mapping and master planning
- Awareness and capacity building on DC at the regional level, and ongoing
- Policy and regulatory **barrier analysis and recommendations** for Iskandar and Malaysia



ON GOING

- To escalate the district energy programme at national level
- Matching district cooling services providers with potential developers and building owners
- Korea District Heating Corporation exploring the potential project in Iskandar Malaysia.

Barriers

- Cities not considering district energy throughout planning process
- Innovative technologies not being incorporated into District Cooling projects
- Significant risk of customers not connecting.

Recommendations

- Create a centralised coordination body
- Establish national district cooling policies
- Developing national district cooling standards

Partnership & Technical Assistance



KEY INITIATIVES & PROGRAMMES

Building Energy Monitoring and Reporting System (BEMRS)



A Joint template developed with Tokyo Metropolitan Government Japan through City-to-City Collaboration programme.



- ❖ Increase awareness of stakeholders in BEMRS through promotions and workshop- More than 50 participants
- ❖ Increase number in BEMRS submission – 14 submissions
- ❖ Reduction of 539t CO2 through BEMRS programme



KEY INITIATIVES & PROGRAMMES

CASBEE Iskandar

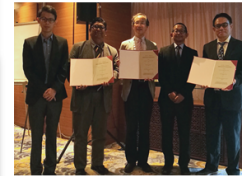


- ❖ CASBEE Iskandar - 11 showcase projects
- ❖ Turn it into GAIA assessment criteria with 15 submission certified
- ❖ On going promotion in IM and expand into Johor level

Phase 1 CIC



- Completed the High-level proposal for Setting Up CASBEE Iskandar Center
- Customized and incorporated CASBEE Iskandar into GAIA assessment criteria



- Signed the new Memorandum of Understanding (MoU) - Expanding CASBEE Activities

I. The CASBEE Iskandar module is adopted under the GEF-funded Green Technology Application for the Development of Low Carbon Cities (GTALCC) initiative for the cities showcase in 2019; 60pax @ Holiday Villa Hotel

Phase 2 CIC

2021

- Developing new CASBEE (Urban Development)
- Preparing modules under funding GTALCC 2021 (70 pax)

2020

Developed 1st CASBEE Accredited Professional Course (AP) module (Building Category)

2019

II. Successfully conducted 2 new building assessments & certification under CASBEE Iskandar Under funding Johor State Government

2018

II. Conducted 2nd CASBEE Introductory modules expanded to all local authorities (80pax) @ Jen Hotel

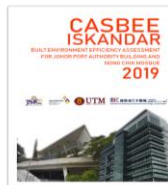
2017



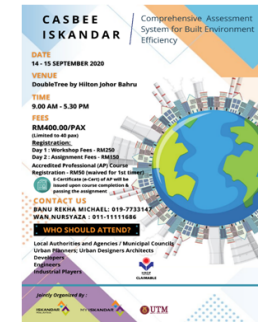
III. Conducted the first CASBEE Introductory capacity-building workshop@ KSL Resort Hotel (50pax)

2016

- 3 CASBEE Iskandar Manuals published -Building -Urban Development -Cities
- Endorsement of CASBEE Iskandar by MOA, IRDA



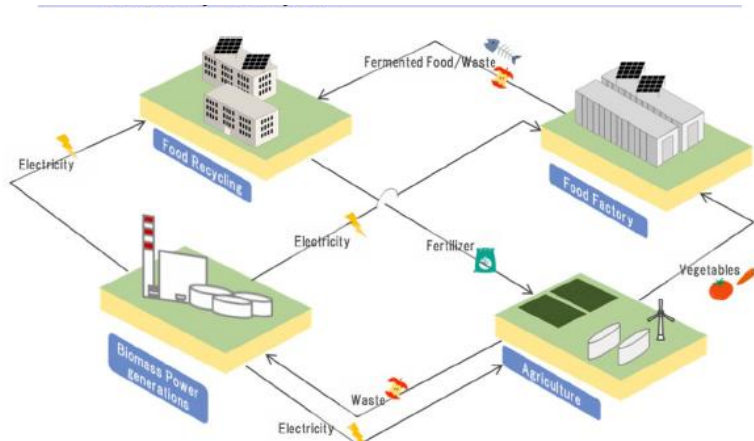
Category	Buildings/Cities	Scoring
(4) Four Buildings	1. J.S.T. Connectors (M) 2. Heng Hiap Industries 3. JBCC Komtar JBCC 4. Molek Pine 4	★★★★★ ★★★★★ ★★★★★ ★★★★★
	Total GFA Building certified : 304,323sqm	
(2) Urban Development	1. The Seed, Timn Sutera Utama 2. Bandar Dato' Onn, Johor Bahru	★★★★★ ★★★★★
	Total area certified : 6,155,000sqm	
(3) Cities	1. Johor Bahru 2. Iskandar Puteri 3. Kulai	B+ B+ B-



KEY INITIATIVES & PROGRAMMES

Collaboration with Kitakyushu

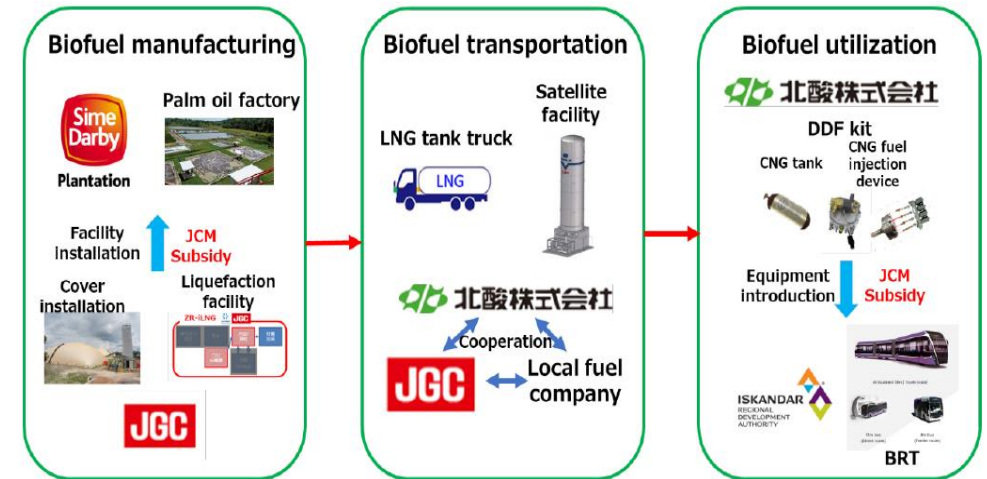
- Increase awareness of stakeholders in City to City Collaboration between City of Kitakyushu and Iskandar Malaysia



- ❖ Activity 1 - Realizing Industrial Symbiosis with CO2 Free Energy
- ❖ Next action is to match activities between industries for realising Industrial Symbiosis.

Collaboration with Toyama

-Urban Development Project through Decarbonized Transportation using Bio-fuel



- ❖ Identified sources of biofuel and its capacities. Proposed Diesel Dual Fuel (DDF) and natural gas (CNG) technology
- ❖ 2021 and 2022 explore on new technology and collaboration between Japan and Neuto



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KEY INITIATIVES & PROGRAMMES

Smart City supported by Japan ASEAN Mutual Partnership

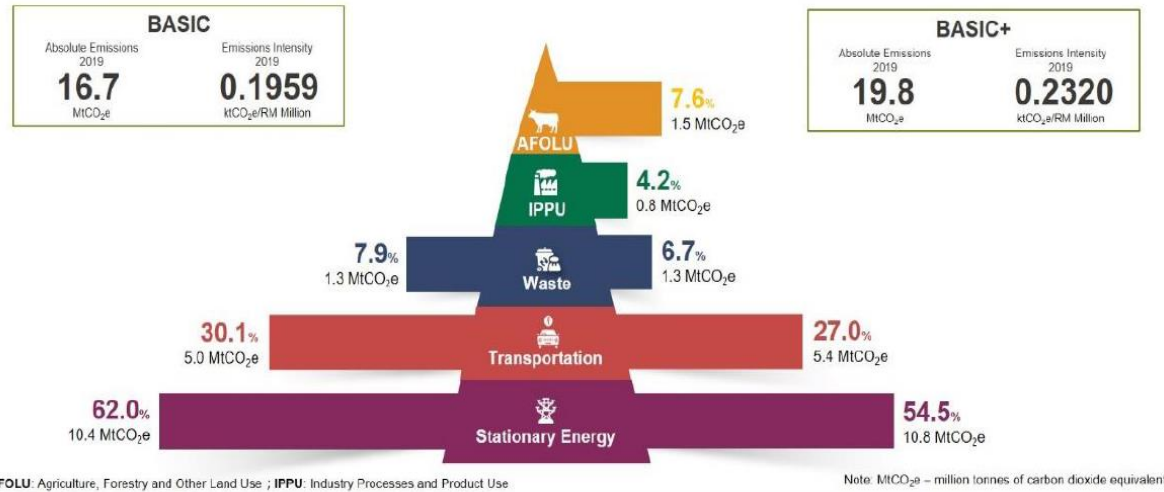
Iskandar Malaysia has selected to formulate three (3) studies as follow:

- Feasibility Study and Pilot Project for Enhancement of Sungai Skudai River Monitoring and Management Tool (RMMT)
- Feasibility Study and Pilot Project for Sungai Johor Disaster Risk Management
- Study for replanning Bandar Cyberport to become Smart Healthcare Hub

- ❖ Project Duration: June 2021 to March 2022
- ❖ Appointment of Consultant by Ministry of Land, Infrastructure, Transport and Tourism of Japan



ISKANDAR MALAYSIA GHG INVENTORY 2018 AND 2019



- ❖ Iskandar Malaysia BASIC+ emissions intensity by GDP in 2019 was 0.2320 ktCO₂e/RM million respectively. **A reduction of 19.7% from its base year 2010.**
- ❖ Prioritise improvement for carbon reduction in following:
 - i. Energy: Renewable Energy
 - ii. Transportation: Biofuel
 - iii. Waste: Circular economy, solid waste and wastewater treatment systems
 - iv. Sustainable management and conservation of forest land or biomass stocks



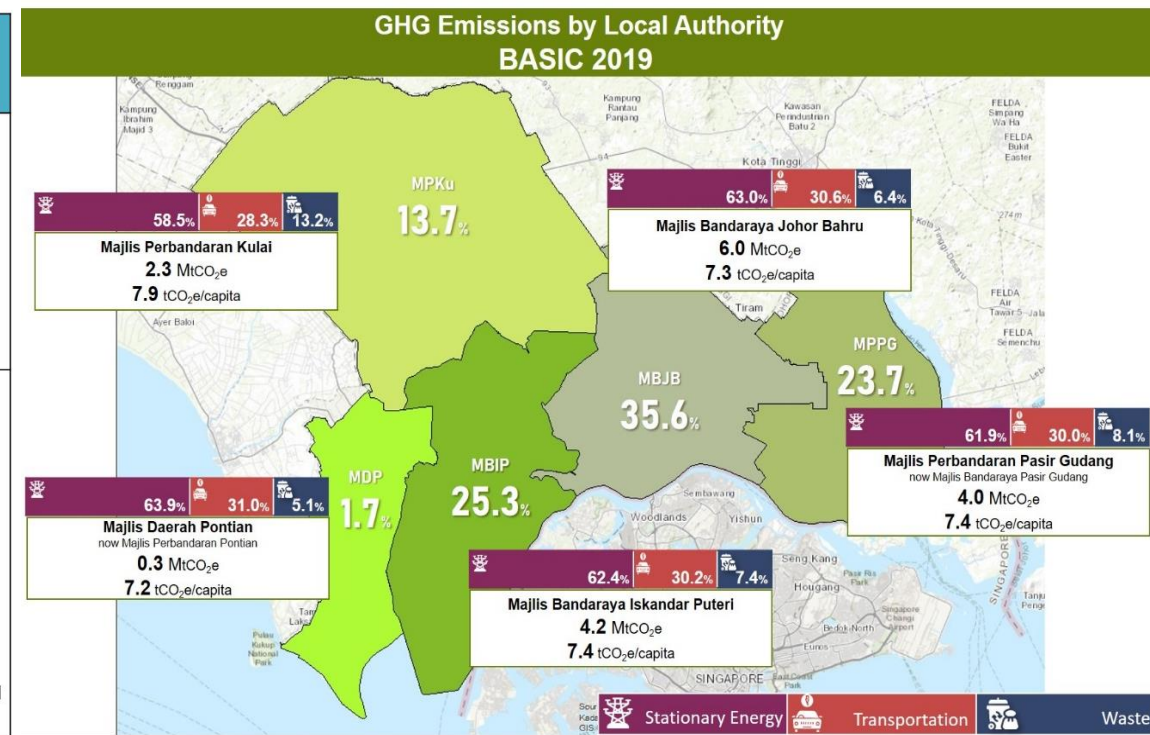


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LOW CARBON PROGRAMME IMPLEMENTATION BY LOCAL AUTHORITIES

Majlis Bandaraya Johor Bahru	Majlis Bandaraya Iskandar Puteri	Majlis Bandaraya Pasir Gudang	Majlis Perbandaran Kulai	Majlis Daerah Pontian
<p>■ Not-started ■ On-going ■ Completed</p>	<p>■ Not-started ■ On-going ■ Completed</p>	<p>■ Not-started ■ On-going ■ Completed</p>	<p>■ Not-started ■ On-going ■ Completed</p>	<p>■ Not-started ■ On-going ■ Completed</p>
<p>Solar Project in MBBJ</p> <p>Menara MBBJ Green Building Index (GBI) Certified</p>	<p>Community Farming Project</p> <p>RCE Iskandar Schools Exhibitions</p>	<p>National Scroll Award 2018</p> <p>Green World Award</p>	<p>Waste Compost Project</p> <p>Green Accord Initiatives Award</p>	<p>Floating Hybrid Mini Hydro- Toyama City Japan</p> <p>Green toilet with solar and RWH system</p>



ACHIEVEMENT FOR 2021 - AWARDS AND RECOGNITION



CDP SNAPSHOT REPORT 2021

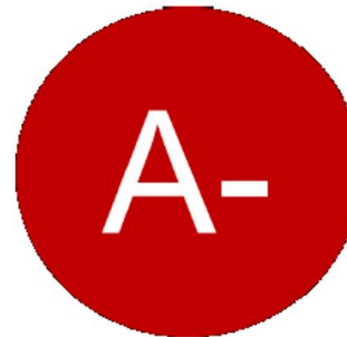


Iskandar Regional Development Authority

Your region Southeast Asia and Oceania
Country Malaysia
Final score A-

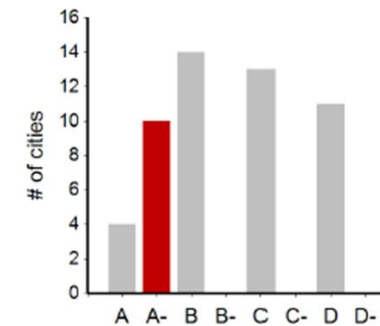
This snapshot report presents the score that Iskandar Regional Development Authority received for its response to the Cities 2021 Questionnaire. CDP's scoring methodology has been developed to incentivize and better enable cities to measure and manage their environmental risks, impacts, and action. This report acts as a tool for gaining an overview of environmental performance and how the city's response can be improved in the future. Responses are scored using the [2021 CDP Cities Scoring Methodology](#). Scores are private to cities, although CDP will recognize and reward the highest scoring cities.

YOUR CDP FINAL SCORE



[Click here](#) for a detailed explanation of your score, along with recommendations and resources for cities who receive a Leadership band score

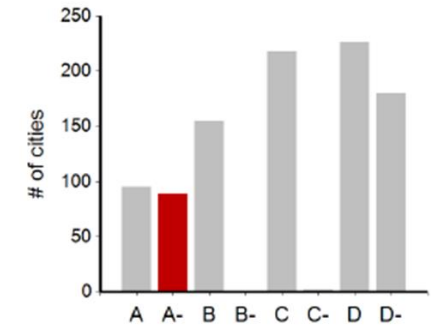
REGIONAL DISTRIBUTION



The bar chart above shows the count of scores achieved by cities in your region.

The score for Iskandar Regional Development Authority is shown in red.

GLOBAL DISTRIBUTION



The bar chart above shows the count of scores achieved by cities globally.

The score for Iskandar Regional Development Authority is shown in red.

INTERNATIONAL RECOGNITIONS & COLLABORATIONS



SE4ALL – Sustainable Energy for All (under Global Energy Efficiency Program)
Iskandar Malaysia selected as 1 of 10 cities & regions globally, at the Climate Summit 23 Sept 2014 at the United Nations.



IM is the member for GCOM -Global Covenant of Mayors for Climate & Energy
Largest, global coalition of mayors and local officials; membership of 10,000 cities and district around the world.



The LCSBPIM template has been replicated by other cities: **Kuala Lumpur, Putrajaya and Pengerang; and Semarang, Indonesia**



Joint study under the **Urban Green Growth** in Dynamic Asia (Green Cities programme), together with Bangkok, Hai Phong, & Bandung.



IM is one of the 5 selected cities under the UNDP-GEF funded **Green Technology Application for Low Carbon Cities (GTALCC)** programme.



AEPW+ICLEI Developing Plastic Waste-Free Cities in Iskandar Malaysia



UK Foreign Commonwealth Office – Prosperity Fund
Smart integrated mobility management system for Iskandar Malaysia Capacity building on data analytics.



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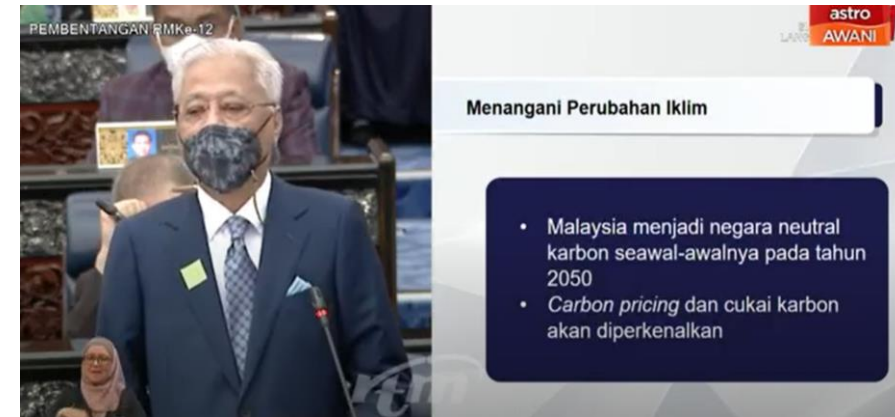
WAY FORWARD

12TH MALAYSIA PLAN : MALAYSIA AIMS TO BECOMING A CARBON-NEUTRAL NATION BY 2050

Malaysia intends to reduce its economy-wide carbon intensity (against GDP) of 45% in 2030 compared to 2005 level.

National Determined Contributions include:

1. The 45% of carbon intensity reduction is unconditional
 2. This target is an increase of 10% from the earlier submission.
- **Long-Term Low Emissions Development Strategy (LT-LEDS)** that will be finalized by end of 2022 – federal gov
 - **Stop building new coal-fired power plants**
 - Economic instruments such as **carbon pricing** and the carbon tax will be introduced to support this effort.
 - Government aims **more participation of private sectors** in realizing the zero GHG target as part of companies sustainable operation agenda



12th Malaysia Plan: Propel the initiatives towards achieving GHG Reduction in Iskandar Malaysia

<https://www.nst.com.my/news/nation/2021/10/735618/msia-intenas-reduce-greenhouse-gas-emission-45-pct-2030>



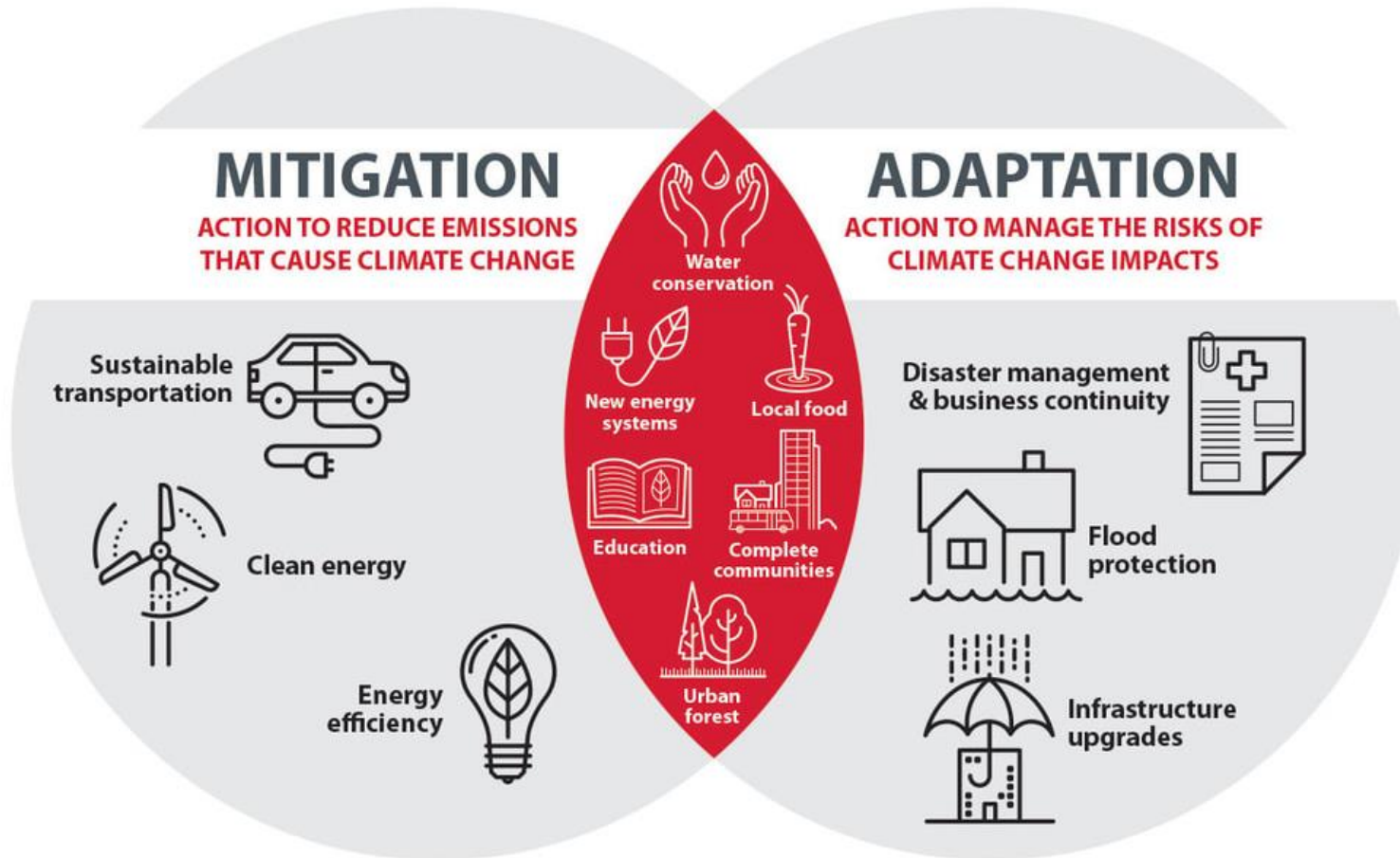
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LATEST PLAN :

LOW CARBON SOCIETY BLUEPRINT ISKANDAR MALAYSIA 2030 – CLIMATE ACTION PLAN



OBJECTIVES

- ❖ To formulate a Climate Action Plan and roadmap for Iskandar Malaysia that covers both climate mitigation and adaptation;
- ❖ Apply a scientific approach to the carbon emission baseline and future scenarios study;
- ❖ Promote awareness among the State government, regional authority, local authorities, industries, businesses, and the community at large of climate change and its mitigation and adaptation; and
- ❖ Lead to the materialization of Iskandar Malaysia Climate Action Plan by 2030.

OUR COMMITMENT

1. Continue our commitment and effort to reduce our emission intensity by 58%, by 2025. Focus on 4 areas of GHG reduction:
 - i. Energy: Renewable Energy
 - ii. Transportation: Biofuel
 - iii. Waste: Circular economy, solid waste and wastewater treatment systems
 - iv. Sustainable management and conservation of forest land or biomass stocks
2. Serves as Low Carbon Hub, offers a platform for green programmes, implementation, and collaboration.
3. Continue to build climate awareness and provide resources for all stakeholders, i.e. government agencies, businesses, community, to walk in concert with policies and measures to mitigate climate change.
4. Continue to contribute to international efforts to strengthen collaboration and action on climate change.





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THANK YOU



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www.iskandarmalaysia.com.my