

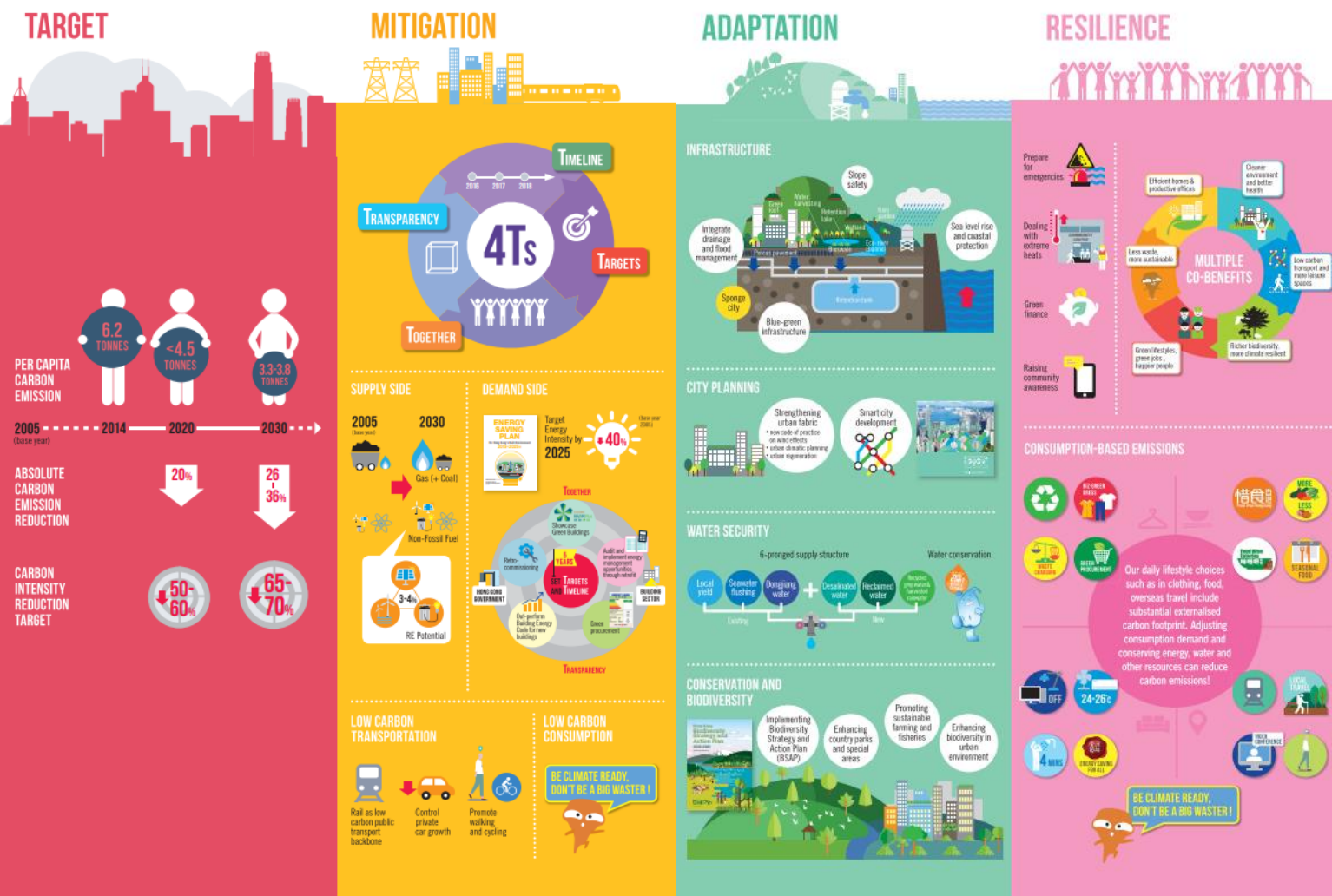
# K S Wong, Secretary for the Environment Hong Kong SAR Towards Carbon Neutrality 邁向碳中和



Hong Kong Exchanges and Clearing Limited (HKEX) :  
ESG Academy Webinar : Path to Decarbonisation with Climate Transparency  
2021.11.10



2017.01.20



# HONG KONG'S CLIMATE ACTION PLAN 2030+



January 2017

www.climateready.gov.hk



October 2021

2021.10.08

Hong Kong's

# CLIMATE ACTION PLAN 2050

齊心同行 開創未來  
Building a Bright Future Together

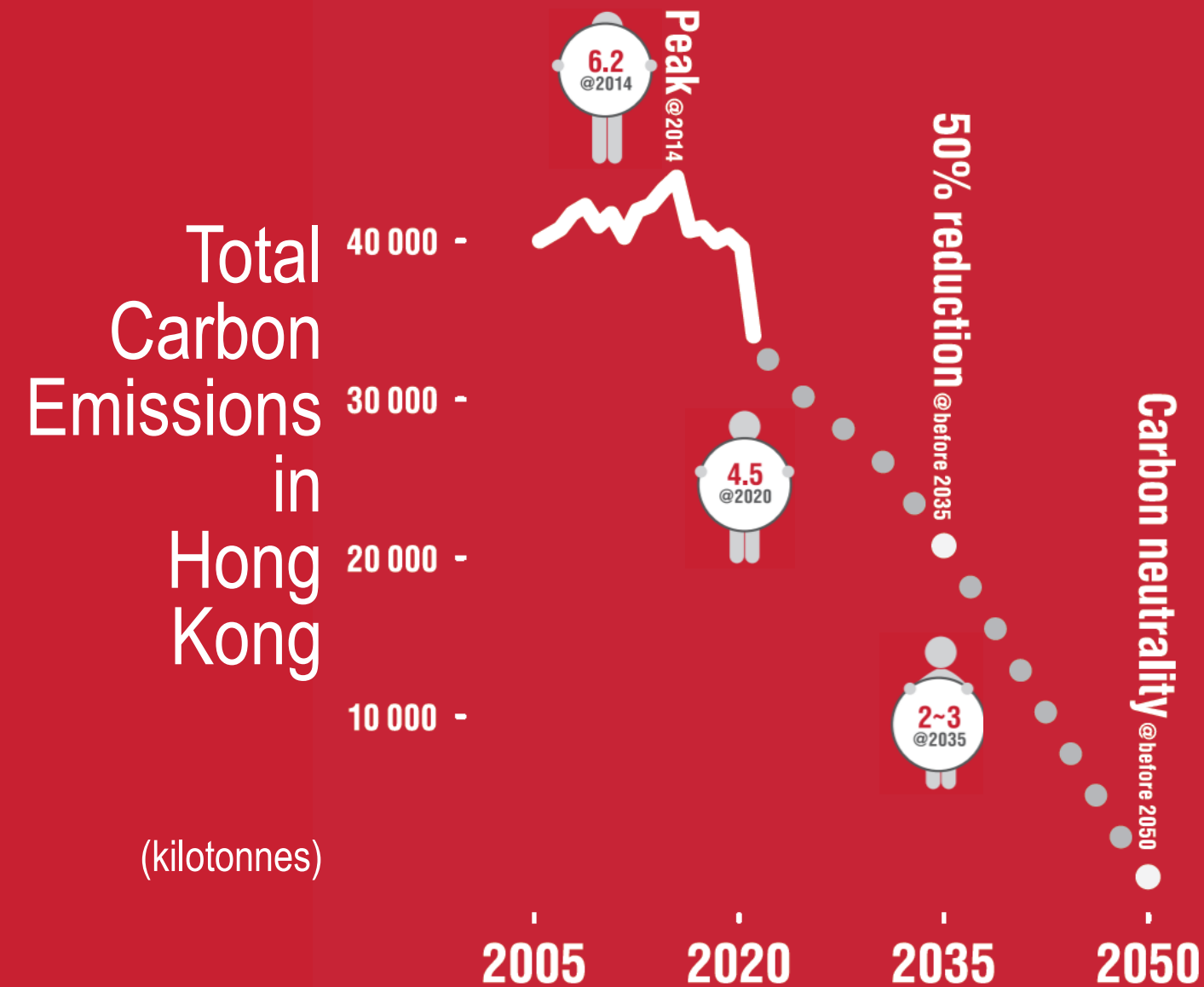


*Carbon Neutrality before 2050*



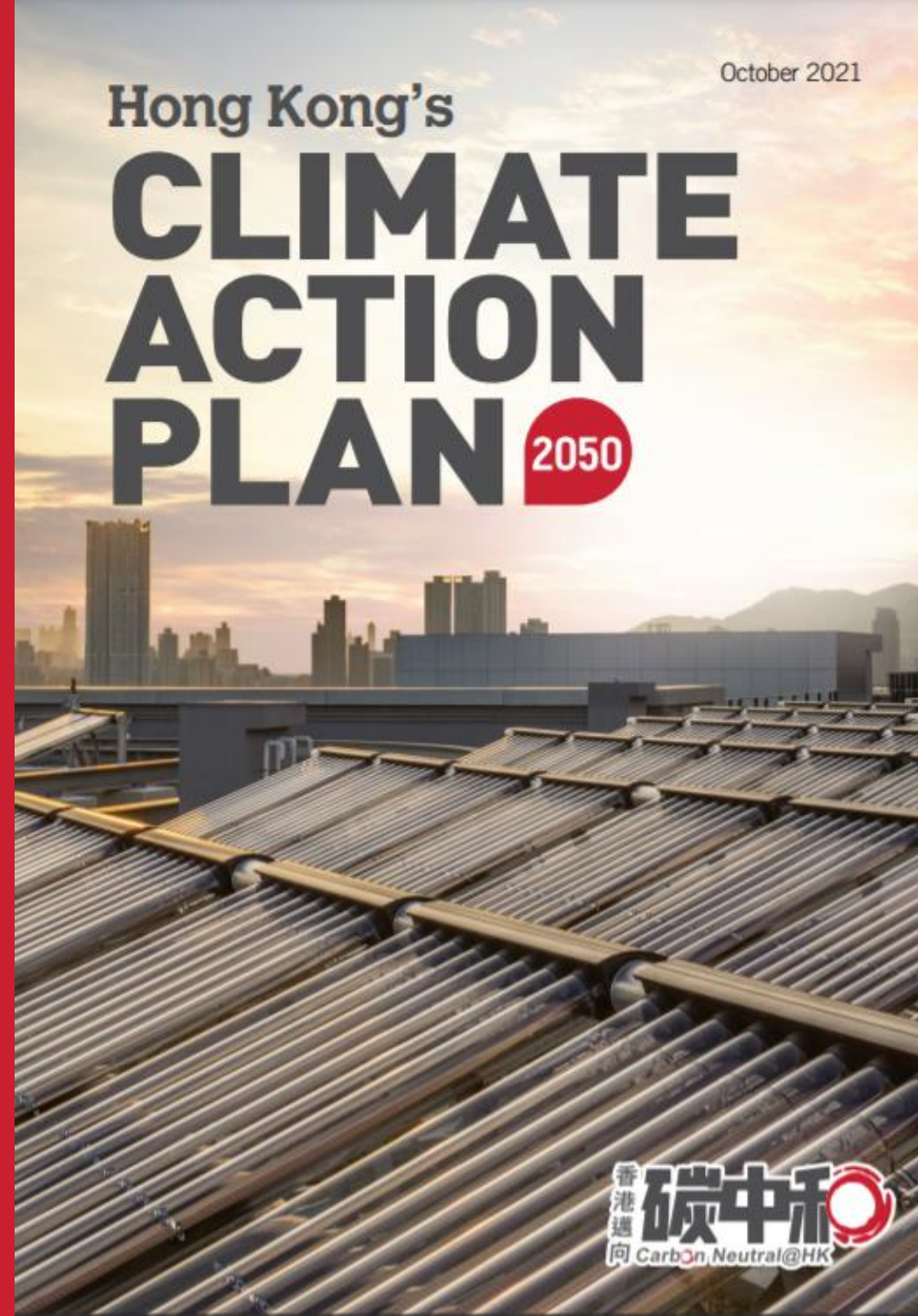


# From Peak to Net-Zero



October 2021

## Hong Kong's **CLIMATE ACTION PLAN** 2050



# Sources of Carbon Emissions in HK

~90%  
Buildings



66%  
Electricity  
Generation



18%  
Transport



Waste  
and  
Others



@2019



# 4 Blueprints

February 2021

## WASTE BLUEPRINT for Hong Kong 2035



## Hong Kong ROADMAP ON POPULARISATION OF ELECTRIC VEHICLES

March 2021



June 2021

## CLEAN AIR PLAN for Hong Kong 2035



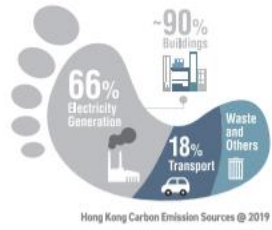
## Hong Kong's CLIMATE ACTION PLAN 2050



# @2021



# Hong Kong's Climate Action Plan



## Retrofit and Prospect



### Decarbonisation

Over the past decade, the Government has allocated over \$47 billion to implement various carbon reduction measures. The two power companies have also allocated about \$39 billion to decarbonisation projects.

#### Reduce Coal for Electricity Generation

Reduce the share of coal in the fuel mix for electricity generation from around half in 2015 to less than a quarter.

#### Energy Saving and Green Buildings

About 2.1 billion kWh of electricity was saved in 2020 as compared with 2015 (-4.7%).



#### Electric Vehicles (EVs)

In the first half of 2021, one out of every five newly registered private cars is EV.



### Adaptation and Resilience

#### The Climate Change Working Group on Infrastructure: Major Studies

##### Strengthening Infrastructure

- Study on resilience of Government critical infrastructure in Hong Kong under extreme weather
- Sensitivity study under direct hit by super typhoons
- Frequency analysis of extreme sea levels

##### Tropical Cyclones

- Projection of extreme winds

##### Extreme Temperatures

- Study on potential impacts on Government infrastructure under extreme temperatures

#### Reduce Flood Risk

Eliminated 127 flooding blackspots, improvement works for the remaining 4 black spots will be completed in phases.

#### Contingency Plan for Transport System

Update contingency plans to handle emergency situations at major transport infrastructure.

#### Contingency Plan for Natural Disasters

Inter-departmental Steering Committee chaired by the Chief Secretary for Administration to handle natural disasters of a substantial scale.

#### Emergency Alert System

Disseminate messages to mobile users during emergency situations to remind the public to adopt contingency measures.



Zero-carbon Emissions • Liveable City • Sustainable Development

## Roadmap to Carbon Neutrality

### Strategies • Opportunities

Moving towards carbon neutrality can bring ample and diverse development opportunities, enhance Hong Kong's competitiveness and support sustainable development.

#### Steering and Coordination

The Steering Committee on Climate Change and Carbon Neutrality under the chairmanship of the Chief Executive to formulate the overall strategy.

#### Climate Budget

Allocate **\$240 billion** to combat climate change in the next 15 to 20 years.

#### Office of Climate Change and Carbon Neutrality

Set up a new office to strengthen coordination and promote decarbonisation.

#### Advisory Committee

Establish a dedicated advisory committee to encourage public participation, including young people.

#### Public Engagement

Government to work together with different sectors to promote low-carbon lifestyle.

#### Green Finance

Accelerate the development of green and sustainable finance, develop Hong Kong into a green financial hub in the region.

#### Green Economy

Facilitate the development of green industries, create investment and job opportunities.

#### Technology and Innovation

Promote ICT development and re-industrialisation, facilitate the application of decarbonisation technologies and green R&D.

#### Capacity Building

Climate change-related content to be incorporated into the curricula of tertiary institutions.

#### Carbon-neutral Communities

Develop strategic growth areas into carbon-neutral communities.

### Net-zero Electricity Generation • Energy Saving and Green Buildings

In 2019, electricity generation accounted for about 66% of total carbon emissions. Hong Kong will gradually reduce the use of fossil fuel and expedite the use of clean zero-carbon energy.

#### No Coal for Electricity Generation

**2035**  
Cease using coal for daily electricity generation, to be replaced by low to zero-carbon energy.

#### Zero-carbon Energy

**2035 60-70%**  
Trial of new energy and closer cooperation with neighbouring areas to increase the supply of zero-carbon electricity.

#### Renewable Energy (RE)

**2035 7.5-10%**  
(Increase to 15% subsequently)  
Public and private sectors to develop RE proactively to increase its share in the fuel mix for electricity generation.

#### Cooperation and Innovation

Seek investment and development opportunities, participate in and operate zero-carbon energy projects near Hong Kong.

#### Electricity Saving in Buildings

**2035**  
Electricity consumption (Compared with 2015)  
**COMMERCIAL BUILDINGS 15-20%**  
(Reduce by 30-40% subsequently)  
**RESIDENTIAL BUILDINGS 10-15%**  
(Reduce by 20-30% subsequently)

#### Strengthening Regulation

- Continuous enhancement of energy performance of buildings
- Expand the scope of regulation to cover all buildings with high energy consumption
- Conduct more frequent energy audits
- Implement the identified energy management opportunities
- Strengthen the promotion of retro-commissioning

Explore setting a minimum energy efficiency requirement for specified appliances

#### Smart Management

- Use smart technologies to enhance energy saving management and energy efficiency of buildings and infrastructure

Incorporate district cooling systems in development projects

### Green Transport

Transport constituted about 18% of total carbon emissions in 2019. Popularisation of EVs and other new energy transport can help the transport sector achieve zero carbon emissions.

#### Clean Air Plan for Hong Kong 2035

##### Hong Kong Roadmap on Popularisation of Electric Vehicles



#### Hydrogen Fuel Cell Vehicles

**2035 3 years**  
Test out hydrogen fuel cell electric buses and heavy vehicles.

#### Electric Private Cars

**2035**  
Cease the new registration of fuel-propelled and hybrid private cars in 2035 or earlier.

#### New Energy Transport

**2035**  
Progressively adopt new energy ferries.

### Waste Reduction

Waste accounted for about 7% of total carbon emissions in 2019. Developing waste-to-energy facilities and promoting waste reduction and recycling will enable us to move away from reliance on landfills for municipal waste disposal.

#### Waste Blueprint for Hong Kong 2035

**2035**  
Implement the Waste Blueprint for Hong Kong 2035 to realise the vision of "Waste Reduction • Resource Circulation • Zero Landfill".

#### Municipal Solid Waste Charging

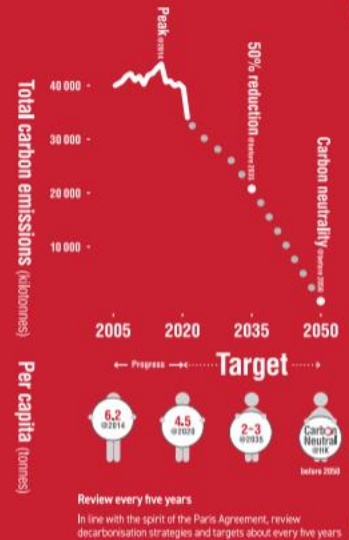
**2023**  
Prepare for implementation of waste charging, encourage waste reduction and recycling, and strengthen community facilities and support.

#### Regulation of Disposable Plastic Tableware

**2025**  
Regulate disposable plastic tableware, etc. in phases, reduce plastic at source.

#### Waste-to-energy

**2035**  
Develop adequate waste-to-energy facilities, move away from reliance on landfills for municipal waste disposal.



# Carbon Neutrality before 2050

# Retrospect



## Decarbonisation

Over the past decade, the Government has allocated over \$47 billion to implement various carbon reduction measures. The two power companies have also allocated about \$39 billion to decarbonisation projects

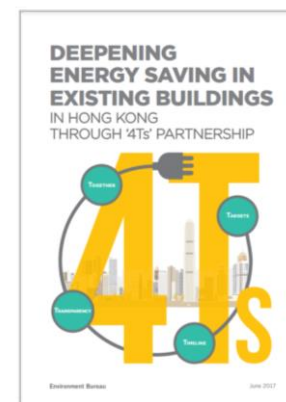
## Reduce Coal for Electricity Generation

Reduce the share of coal in the fuel mix for electricity generation from around half in 2015 to less than a quarter



## Energy Saving and Green Buildings

About 2.1 billion kWh of electricity was saved in 2020 as compared with 2015 (-4.7%)



## Electric Vehicles (EVs)

In the first half of 2021, one out of every five newly registered private cars is EV



**Net-zero Electricity Generation • Energy Saving and Green Buildings**

*~4.7% electricity was saved in 5 years*



# HK's Roadmap to Carbon Neutrality

## Net-zero Electricity Generation • Energy Saving and Green Buildings

In 2019, electricity generation accounted for about 66% of total carbon emissions. Hong Kong will gradually reduce the use of fossil fuel and expedite the use of clean zero-carbon energy

Decarbonisation comes at a price. Buildings account for about 90% of Hong Kong's total electricity consumption. Promoting energy conservation and improving energy efficiency can help reduce the cost of transformation

### No Coal for Electricity Generation



Cease using coal for daily electricity generation, to be replaced by low to zero-carbon energy

### Zero-carbon Energy



**60-70%**

Trial of new energy and closer cooperation with neighbouring areas to increase the supply of zero-carbon electricity

### Electricity Saving in Buildings



Electricity consumption (Compared with 2015)



(Reduce by 30-40% subsequently)



(Reduce by 20-30% subsequently)

### Renewable Energy (RE)



**7.5-10%**  
(Increase to 15% subsequently)

Public and private sectors to develop RE proactively to increase its share in the fuel mix for electricity generation

### Cooperation and Innovation

Seek investment and development opportunities, participate in and operate zero-carbon energy projects near Hong Kong



### Strengthening Regulation

Continuous enhancement of energy performance of buildings

- Expand the scope of regulation to cover all buildings with high energy consumption
- Conduct more frequent energy audits
- Implement the identified energy management opportunities
- Strengthen the promotion of retro-commissioning

Explore setting a minimum energy efficiency requirement for specified appliances



### Smart Management

Use smart technologies to enhance energy saving management and energy efficiency of buildings and infrastructure



Incorporate district cooling systems in development projects



## Net-zero Power Generation • Energy Saving & Green Building



# HK's Roadmap to Carbon Neutrality

## Green Transport

Transport constituted about 18% of total carbon emissions in 2019. Popularisation of EVs and other new energy transport can help the transport sector achieve zero carbon emissions

### Clean Air Plan for Hong Kong 2035

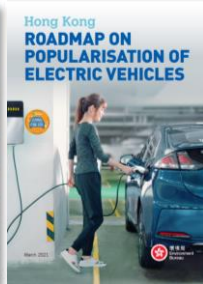
#### Hong Kong Roadmap on Popularisation of Electric Vehicles



Implement strategies in the Clean Air Plan to promote adoption of new energy transport to expedite low-carbon transformation



Take forward measures set forth in the EV Roadmap to attain zero vehicular emissions before 2050



#### Hydrogen Fuel Cell Vehicles



Test out hydrogen fuel cell electric buses and heavy vehicles

#### Electric Private Cars



Cease the new registration of fuel-propelled and hybrid private cars in 2035 or earlier

#### New Energy Transport



Progressively adopt new energy ferries



## Waste Reduction

Waste accounted for about 7% of total carbon emissions in 2019. Developing waste-to-energy facilities and promoting waste reduction and recycling will enable us to move away from reliance on landfills for municipal waste disposal

### Waste Blueprint for Hong Kong 2035



Implement the Waste Blueprint for Hong Kong 2035 to realise the vision of "Waste Reduction • Resources Circulation • Zero Landfill"

#### Municipal Solid Waste Charging



Prepare for implementation of waste charging, encourage waste reduction and recycling, and strengthen community facilities and support

#### Regulation of Disposable Plastic Tableware



Regulate disposable plastic tableware, etc. in phases, reduce plastic at source

#### Waste-to-energy



Develop adequate waste-to-energy facilities, move away from reliance on landfills for municipal waste disposal

# Green Transport • Waste Reduction



# HK's Climate Action 2050 Opportunities

## Green Finance

Develop Hong Kong into a green financial hub in the region

## Green Economy

Develop green industries, create investment and job opportunities

## Technology & Innovation

Promote decarbonisation technologies and green R&D

## Capacity Building

Climate change-related content in the curricula of tertiary institutions

## Carbon-Neutral Communities

Develop strategic growth areas into carbon-neutral communities

e.g. Northern Metropolis





# HK's Climate Action 2050 Strategy

**Steering Committee + New Office**  
on Climate Change and Carbon Neutrality

**HK\$240 billion Climate Budget**  
in the next 15 to 20 years

**Advisory Committee + Public Engagement**  
(e.g. Green & Sustainable Finance  
Cross-Agency Steering Group)





# HK's Green & Sustainable Finance

**The Green and Sustainable Finance Cross-Agency Steering Group** was set up in May 2020 and is co-chaired by **the Hong Kong Monetary Authority** and **the Securities and Futures Commission**, with members comprising :

- Environment Bureau
- Financial Services and the Treasury Bureau
- Hong Kong Exchanges and Clearing Limited
- Insurance Authority
- Mandatory Provident Fund Schemes Authority





# HK's Green & Sustainable Finance

It aims to co-ordinate the management of climate and environmental risks to the financial sector, accelerate the growth of green and sustainable finance in HK and support the Government's climate strategies



## Risk Management

Strengthen the management of climate-related financial risks to consolidate Hong Kong's position as a global risk management centre



## Disclosure

Promote the flow of climate-related information at all levels to facilitate risk management, capital allocation and investor protection



## Capacity Building

Enhance capabilities of market participants and raise awareness among the general public



## Innovation

Encourage innovation and explore initiatives to facilitate capital flows towards green and sustainable causes



## Mainland Opportunities

Capitalise on the opportunities presented by the Mainland to develop Hong Kong into a green finance centre in the Guangdong-Hong Kong-Macao Greater Bay Area



## Collaboration

Strengthen regional and international collaboration



# “Carbon Neutrality” Partnership 2021



Launching Ceremony@2021.10.29



An aerial photograph of a city park in Hong Kong. The park features a large green lawn, several trees, and a curved path. In the background, there are numerous high-rise buildings and a mountain. The park has several solar panels installed on its roof. The text "VISION:" is overlaid in a red box on the left side of the image.

**VISION :**

**Zero-  
Carbon  
Emissions**

**·  
Livable City**

**·  
Sustainable  
Development**

香港邁向 **碳中和**  
Carbon Neutral@HK