
HK Public Engagement on Long Term Decarbonisation Strategy

Submission from CarbonCare InnoLab

A: General Comments

On the stated goals of the public engagement

We concur with the foreword to the SDC engagement document which notes: “Time is running out for combatting climate change” as well as the subsequent statement “The costs of inaction are terrifying”

The creation of a long-term decarbonisation plan is an essential strategic issue for Hong Kong and as such is much welcomed.

On the stated goals of the engagement stage of the exercise, we would note:

1. The goal of **raising public awareness** of the issues is important, provided if it is framed in terms of raising the appetite for government climate action policy and expectations about the responsibility of business and does not overly focus on personal behaviour;
2. An important part of public awareness is to inform people that **Hong Kong is subject to the Paris Climate Agreement**. This carries non-negotiable responsibilities;
3. **Seeking public views on mitigation actions and behavioural change**. As stated above, this process should not lead to the impression that climate action is principally about behaviour change and lifestyle choices; and
4. **Identifying stakeholder roles** is an important part of creating an effective strategy, although public engagement may not be the principal way of identifying all stakeholders.

With regard to raising public awareness, we welcome the honest and hard-hitting background information on the impact of climate change set out in the public engagement document, as well as identification of the areas for action that logically follow from this, placed alongside examples of effective actions and targets adopted by other cities.

To this we would add:

“Pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems (high confidence). These systems transitions are unprecedented in terms of scale, but not necessarily in terms of speed, and imply deep

emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options (medium confidence).

Source: Intergovernmental Panel on Climate Change (IPCC). 2018. Global Warming of 1.5°C.

We would expect the final decarbonisation strategy produced by the Hong Kong Government to align with the urgency and need for far-reaching action made clear in the information included in this engagement document.

B: Four Key Points

Point 1: Climate action leadership means the Government

- The government should make it clear that they will lead progress to a low-carbon future, and **create enabling conditions** for business and individuals to contribute and to benefit.
- It would be wrong to suggest that a long-term decarbonisation strategy can be based upon **easily-digested incremental changes built on compromise and elective lifestyle changes**.
- Government led dialog on long-term decarbonisation should be one of innovation and initiative **matching Paris Climate Agreement ambition levels, exceeding China's national climate targets, and utilizing science-based measurements**. Please see the supplementary CCIL submission to the public engagement on Science-based targets for Hong Kong.

Point 2: Start with strong governance and institutions – a climate emergency task force or a climate Tsar

- The Engagement Document **says little about the creation of high-level decision-making structures, powerful institutions** within the government. Such measures form the essential foundation of any decarbonisation strategy.
- **Hong Kong's climate emergency task force** must be equipped with ample financial resources and technical skills to drive the transition.
- **Hong Kong's climate emergency task force or climate Tsar** must be able to lead on technology development and capacity-building.
- The **systemic change** required to reverse carbon emissions cannot be left to the market. The transition to a low carbon future requires political leadership able to present a vision which inspires and ensures action by all other economic and social sectors.
- **Market forces** come into play in relation to mobilization of resources and technical innovation, not in terms of territory-wide strategic planning on climate mitigation and adaptation.

Point 3: Energy Supply – Two questions underlie Hong Kong’s entire decarbonisation debate

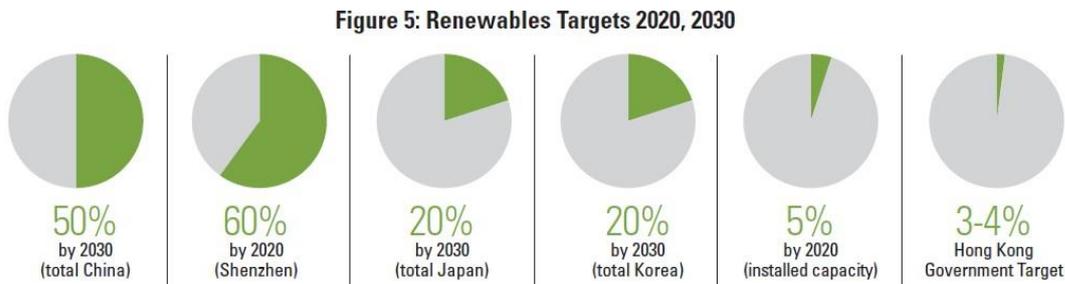
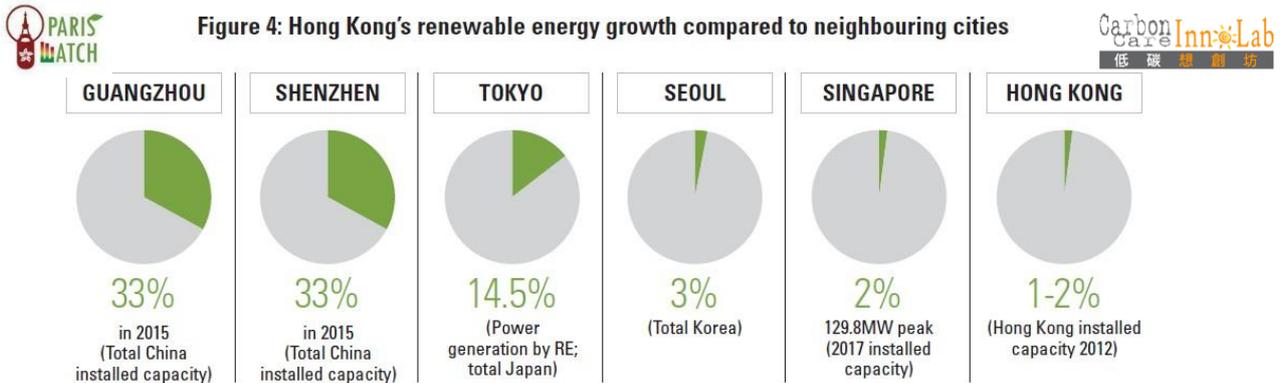
If the long term decarbonisation strategy does not fully address the following two questions, the rest of the debate on reducing GHG emissions in Hong Kong is secondary:

1. How much “regional” renewable energy is Hong Kong willing to rely upon?
2. Is Hong Kong’s clean energy future best served by investment in nuclear technology or the same levels of investment renewable energy and storage?

It also follows that we need to be clear by what we mean by “regional.”

Current renewable energy targets are inadequate in absolute terms, and in comparison to neighbouring cities, as CCIL’s Paris Watch study has shown:

Exhibit One: Hong Kong’s renewable energy growth compared to neighbouring cities



*3-4% potential local (2030) p. 24 Climate Change Action Plan 2030+, 2017

Source: Paris Watch Climate Action Report 2018. CarbonCare InnoLab

In a similar manner, Hong Kong is not performing well regarding the carbon intensity of current electricity generation. The transition from coal to gas will improve this situation, but will not set the city onto a pathway towards zero carbon emissions by 2050.

Exhibit Two: Carbon Intensity of Electricity Generation in Hong Kong and Nearby Cities



Figure 1: Carbon Intensity Of Electricity Generation

Size of the bubbles are varied by the amount of carbon intensity; Dotted line bubbles refer to static emission factor due to no further updates of emission factor



Source: Paris Watch Climate Action Report 2018. CarbonCare Innolab

Point 4: The decarbonization strategy should link to adaptation and resilience

- The introduction to the engagement document makes very clear the effect of climate change on the **safety and wellbeing of the people of Hong Kong and the health of their children.**
- Adaptation and resilience measures demonstrate the more immediate and **personal impact of climate change on people’s daily lives in Hong Kong.** This issue helps connect personal concerns to the larger goal of raising public awareness about the need to reduce emissions.

C: Comments on the nature of the public engagement

Public Engagement must be framed in a fair and realistic way

The public engagement process is welcomed but:

- The government should avoid the temptation of encouraging **vested interests and sectoral lobbies;**
- Vested interests benefit from business-as-usual and oppose change, as a pretext for inaction and temporary deferment from the urgent decisions that science and international agreements make clear are necessary; and

- The **choice of questions and the type of language** used in parts of the views collection form appear less-than-helpful in raising public awareness and seeking views on the mitigation options.

Ranking implies a trade-off

The engagement documents include the question:

“Question 2. *How would you rank the importance of different considerations (reliability, security and availability, affordability, and environmental performance and response to climate change) when considering the long-term fuel mix for Hong Kong? (Please rank the following in order of importance: 1 – most important; 4 – least important) (See P. 27-29; 48-50 of the PE Document)*

- Reliability*
- Security and availability*
- Affordability*
- Environmental Performance and Response to Climate Change “*

Phrased as it is, question 2 suggests: **“do you want higher electricity bills or climate action?”**

This is a dangerous simplification of the challenges ahead. The question should not be posed in a way that reinforces the idea that fossil fuels are reliable and cheap while renewables are unreliable and expensive. This is inaccurate. **Reliability of electricity supply should take account of the impact of rising sea levels and increased severity of typhoons if emissions continue to rise.**

The government should not propagate the idea that there is a trade-off between climate action and economic wellbeing, and that climate action is expensive and involves individual sacrifice and lower living standards.

Evidence from the UN, the OECD, World Meteorological Office, the World Bank and many other respected global institutions shows that the reverse is true - **if we don't hit climate targets, we face lower living standards and more threats to current lifestyles.**

The government should make clear the economic risks and social costs of **inaction** on climate issues. It should also explain the economic and social **opportunities** presented by transition to a low-carbon economy.

Is our compliance with the Paris Agreement up to the public to decide?

“Question 3: *Do you support the measures mentioned in the preamble for deep decarbonisation with a view to complying with the target of the Paris Agreement?”*

As the document below shows, the central government considers Hong Kong and Macau subject to the Paris Climate Agreement. As such, this is not a realistic question to put to the people of Hong Kong in a consultation. Asking such a question is no more realistic or

advisable than asking the Hong Kong public if they believe we should comply with the Basic Law.

Exhibit Three: Letter deposited with UNFCCC as China ratified the Paris Agreement

A-54113	
<p>No. 54113. Multilateral</p> <p>PARIS AGREEMENT. 12 DECEMBER 2015</p> <p>RATIFICATION (WITH DECLARATION)*</p> <p>China <i>Deposit of instrument with the Secretary-General of the United Nations: 3 September 2016</i> <i>Date of effect: 4 November 2016</i> <i>Registration with the Secretariat of the United Nations: ex officio, 4 November 2016</i></p> <p><i>*No UNTS volume number has yet been determined for this record.</i></p> <p>Declaration:</p> <p><i>*The texts reproduced below are the action attachments as submitted for registration and publication to the Secretariat. For ease of reference they were sequentially paginated. Translations, if attached, are not final and are provided for information only.</i></p>	<p>N° 54113. Multilatéral</p> <p>ACCORD DE PARIS. PARIS, 12 DÉCEMBRE 2015</p> <p>RATIFICATION (AVEC DÉCLARATION)*</p> <p>Chine <i>Dépôt de l'instrument auprès du Secrétaire général de l'Organisation des Nations Unies : 3 septembre 2016</i> <i>Date de prise d'effet : 4 novembre 2016</i> <i>Enregistrement auprès du Secrétariat des Nations Unies : d'office, 4 novembre 2016</i></p> <p><i>*Le numéro de volume RINU n'a pas encore été établi pour ce dossier.</i></p> <p>Déclaration :</p> <p><i>*Les textes reproduits ci-dessous sont les textes authentiques de la pièce jointe de l'action telle que soumise pour enregistrement et publication au Secrétariat. Par souci de clarté, leurs pages ont été numérotées de manière séquentielle. Les traductions, si elles sont incluses, ne sont pas sous forme finale et sont fournies uniquement à titre d'information.</i></p> <p style="text-align: center;">[CHINESE TEXT – TEXTE CHINOIS]</p> <p style="text-align: center;">根据《中华人民共和国香港特别行政区基本法》和《中华人民共和国澳门特别行政区基本法》，中华人民共和国政府决定，本协定适用于中华人民共和国香港特别行政区和澳门特别行政区。</p> <p style="text-align: center;">[TRANSLATION – TRADUCTION]¹</p> <p>In accordance with the Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China and the Basic Law of the Macao Special Administrative Region of the People's Republic of China, the Government of the People's Republic of China decides that the Agreement applies to the Hong Kong Special Administrative Region and the Macao Special Administrative Region of the People's Republic of China.</p>
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Arousing the transport lobby

“Question 8: *There are calls for a ban on fossil fuel powered (e.g. petrol and diesel) vehicles around the world. Some countries have announced that they will ban the sale of fossil fuel vehicles from 2030 onwards. What are your views on **banning fossil fuel vehicles in Hong Kong?**”*

Framing of any question affects the response. Would the government, for example, be willing to engage the public with the question: **“Do you want your children to experience a heightened risk of premature death from lung diseases or should we phase out fossil fuel vehicles in Hong Kong?”** Perhaps this is the opposite extreme in terms of framing questions.

A more neutral and constructive question on the issue of lowering emissions from transport might be: **“would you support an incentivised transition to 100% zero-emission vehicles in Hong Kong beyond 2030?”**

Calls for public behaviour change without government facilitation are unfair

Typical Hong Kong individuals don't control:

- The energy used in lifts, cooling & lighting in the common & recreational areas of their residence or place of work
- The opportunity to improve the thermal efficiency of the buildings where they live and work
- The emissions from the public transport they use to get to work
- The effectiveness with which their home or office waste is recycled
- The energy efficiency of the equipment used in their place of work
- The choice to pay a premium to receive guaranteed renewable energy from the grid
- The opportunity to place their pension (MPF) in a climate-positive fund
- Information on the carbon footprint and carbon miles of the food they eat or the garments they purchase

We believe there is already an unmet demand for more environmental behaviour by many individuals in Hong Kong, illustrated by the overflowing recycling bins, and people leaving separated garbage, separate used batteries, electronic waste etc. in rubbish collection sites, demonstrating the public's concern, effort and knowledge even where the government has yet to provide adequate procedures and facilities for recycling and disposal.

Education on awareness should be realistic about relative climate impact of different actions.

Public education is not about spreading feel-good and sometime token sense of satisfaction. It is about explaining the most effective ways individuals can reduce their carbon emissions. From the graphic below we can see that air travel, car use and reduced meat consumption

are more important than recycling and changing lightbulbs. This type of information should be given prominence in public education.

Exhibit Four: Comparison of emissions reduction from individual actions

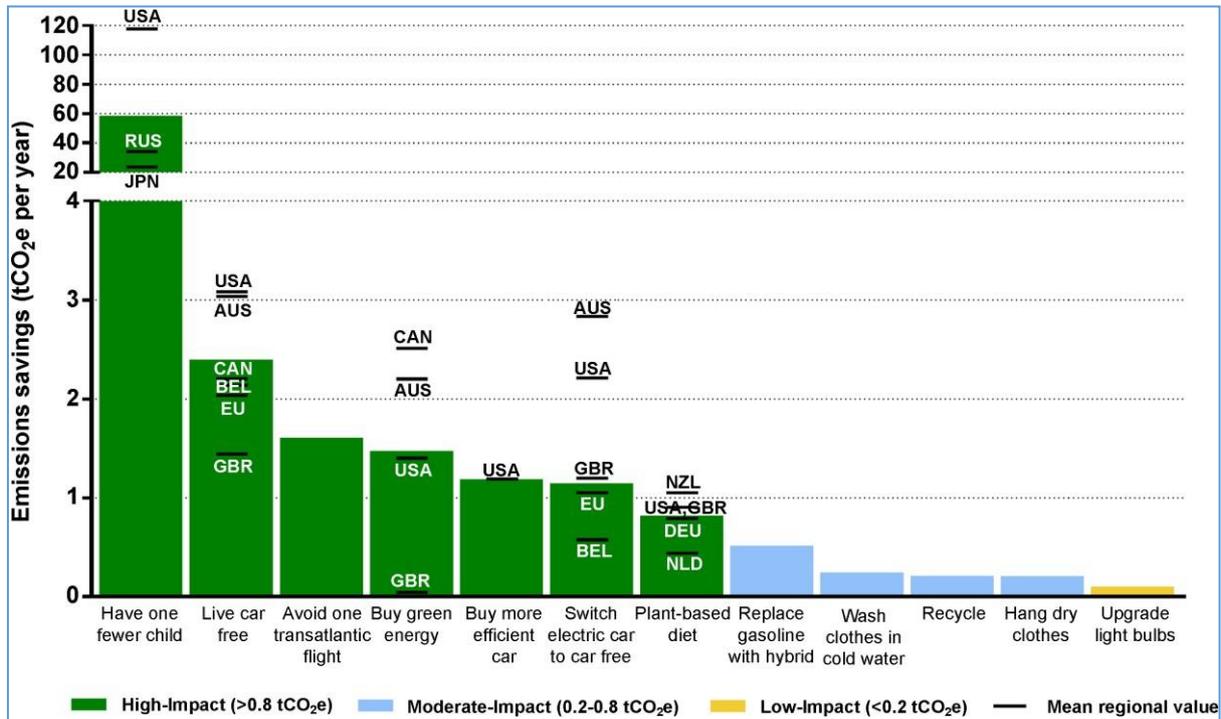


Figure 1 A comparison of the emissions reductions from various individual actions. The height of the bar represents the mean of all studies identified in developed nations, while black lines indicate mean values for selected countries or regions (identified by ISO codes) where data were available from specific studies. Actions classified as high (green), moderate (blue), and low (yellow) impact in terms of greenhouse gas emissions reductions. Note the break in the y-axis.

Source: Seth Wynes, Kimberly A Nicholas. **The climate mitigation gap: education and government recommendations miss the most effective individual actions.** *Environmental Research Letters*, 2017; 12 (7)

Some individual changes make a big difference

Analysis by Nordea, the largest financial services group in the Nordic region, has found that moving one’s savings to sustainable funds can be 27 times more efficient with regard to improving one’s personal carbon footprint than eating less meat, using public transport, reducing water use, and flying less . . . combined.

Source: <https://www.corporateknights.com/channels/responsible-investing/investor-power-15492868/>

D. Targets and recommendations

1. Energy generation

- a. **Maximise the potential of locally-generated renewable energy.**
- b. Incentivise the use of all available space for clean energy with next-stage feed-in tariff programme with **no upper limits on the capacity of energy generation.**
- c. Set up a scheme for **Hong Kong investment in renewable energy in the region**, with links into the Hong Kong grids and appropriate smart energy storage systems
- d. **END ALL FOSSIL-FUEL-GENERATED ELECTRICITY IN HONG KONG WELL BEFORE 2050.**
This target should include addressing ways to remove technical, financial and political obstacles.

We believe official estimates of solar and wind power potential are unnecessarily conservative and based on a static view of technical, economic and planning options. Other studies (e.g. Poly U study of roof space) are more optimistic.

Include better investment incentives including a long-term purchase contracts de-linked from the scheme of control.

2. Buildings: Cutting energy use in buildings is the overarching priority for reducing energy demand

- a. The required policy on improving building energy efficiency can be expressed in three words: **ambitious, comprehensive and binding**
- b. Comparisons with Singapore with regard to green building policy are currently an embarrassment. Singapore uses its Green Mark building standard to constantly improve both the standard and the regulations which strengthen the use of the standards in a mutually-reinforcing way.
- c. Regulations setting energy efficiency trajectories for all Hong Kong buildings – new and old – must be brought up to date as **this work is already dangerously behind schedule**

Exhibit Five: Energy Efficiency in Hong Kong Commercial and Residential Buildings: comparisons with neighbouring cities



Figure 7: Energy Efficiency in Commercial Buildings

Energy use per unit of gross floor area (TJ / 10,000 sq.m)
Year 2015-2016

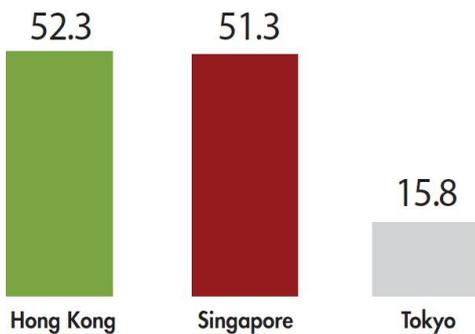
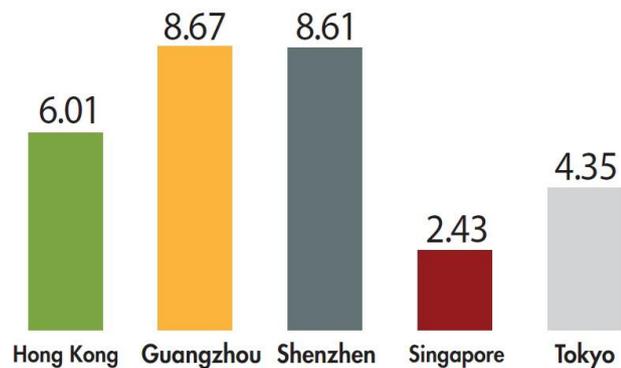


Figure 8: Energy Efficiency in Residential Buildings

Energy use per unit of gross floor area (TJ / 10,000 sq.m) Year 2015-2016



Source: Paris Watch Climate Action Report 2018. CarbonCare Innolab

Recommendations on buildings

- All newly-constructed buildings** designed to achieve efficiency standards comparable to EU 'Near Zero Energy Buildings' standards, from 2020 onwards.
- A subsidy scheme for retrofitting existing buildings.** Old residential premises would receive the biggest subsidies, with energy efficiency standards combined with 'decent minimum living space' standards, thereby addressing environmental and social issues within the same urban regeneration programme
- Smart policy for retrofitting commercial premises.** Ensure most support to the older, less profitable buildings. Subsidies and incentives for improvement can include reduction in building charges and taxes rather than simple payments from the government to building owners
- All Hong Kong commercial premises to meet efficiency standards comparable to EU 'Near Zero Energy Buildings' standards EU energy efficiency standards by 2050.**

3. Transport

- Ban the import of all fossil-fuel vehicles into Hong Kong by 2030**, including buses.
- Set a target date for the removal of all fossil-fuelled vehicles from Hong Kong's roads and fossil-fuelled ferries within HK's harbours.**
- Develop a comprehensive plan for **congestion charging** for private vehicles in combination with a programme of **pedestrianisation**

- d. Decarbonisation of the transport sector should include a date by which the city will **end fossil-based fuels in all forms of transport**
- e. **Electrification of buses** is a priority that will be felt by us all – in all or our five senses. At a stroke, this measure would include the quality of life on Hong Kong streets as well as public health. Talk of ‘cleaner diesel’ buses is retrogressive.

Exhibit ##: Hong Kong does not line up well on climate-smart transport policy

Exhibit Six: Examples of climate-smart transport policy in several cities

- Madrid, Paris, Athens, and Mexico City plan to take diesel cars off their roads entirely by 2025.
- Amsterdam will ban petrol and diesel cars and motorbikes in the city by 2030
- Brussels will ban diesel vehicles in the city by 2030
- Milan has already banned older diesel vehicles from entering 3 days a week and plans to be diesel free by 2030.
- Frankfurt and Berlin received court rulings to ban pre-2015 diesel vehicles from entering the cities this year.
- Mexico City and Bogota, Colombia already have car-free Sundays in the city centre

Source: <https://www.businessinsider.com/cities-going-car-free-ban-2018-12;>
[https://matadornetwork.com/read/cities-banning-cars-city-centers/;](https://matadornetwork.com/read/cities-banning-cars-city-centers/)
<https://www.bloomberg.com/opinion/articles/2019-05-28/ban-cars-for-cities-it-s-an-idea-worth-studying;>
<https://www.outsideonline.com/2376966/rest-world-done-cars-were-not>

Exhibit Seven: Introduction of electric buses in developing world cities

- In Santiago [Chile], some 200 battery-powered buses now circulate in the capital city, with 200 more slated to arrive later this year. The Chilean government aims to fully electrify public transport systems nationwide by 2040.
- Medellin, Colombia: Metroplús launched its first electric bus in April 2018. Another 64 battery-powered buses will hit the streets later this year, having recently arrived on a ship from Shanghai. The other 77 buses in the city's bus rapid transit system, called Metroplús, run on natural gas.
- In Colombia, the nation's Green Growth Commission has called for electric buses to comprise 100 percent of future municipal purchases. Bogotá's mayor recently announced plans to buy nearly 600 electric buses for its bus rapid transit system, and the city of Cali recently purchased 26 units. Guayaquil, Ecuador's largest city, has bought 20 battery-powered buses.
- In São Paulo, contractors operate all of the city's nearly 14,500 buses, which make some 10 million trips a day. The city recently adopted a law to make all these privately owned buses zero-emission by 2037.
- Worldwide, nearly 425,000 electric buses were on the roads last year — 99 percent of them in China, where government policies to improve air quality and support manufacturers are accelerating the industry.
- European cities deployed some 2,245 battery-powered buses in 2018.

Source: YaleEnvironment 360

<https://e360.yale.edu/features/an-increasingly-urbanized-latin-america-turns-to-electric-buses>

4. Infrastructure and construction

- All infrastructure besides buildings – including roads, bridges, tunnels, recreational facilities, shoreline structures, water & electricity systems, slope stabilisation and reclamation – should **reduce carbon intensity in design and operation 50% by 2030 and near-zero by 2050**
- This strategy should include mandatory use of low-carbon construction materials and techniques, reduced waste during the construction phase, and a design enabling **near-zero operating emissions by 2050**

5. Consumption

- By 2025, **all food products and garments should contain carbon rating labels** along with the current nutrition and ingredient information
- Tax incentives** should favour low carbon food, garments and other consumer goods, to include carbon contained in both their manufacturing and their means of transportation to Hong Kong

- c. Hong Kong to **measure and publish consumption-based emissions statistics and set reduction targets** in line with its long-term decarbonisation plan.

6. Climate finance

- a. An **early-stage climate investment fund** derived from green bond issuance should be implemented to help develop local green business in areas such as renewable energy, energy efficiency and recycling. Experience from the Carbon Care Open Innovation Lab (COIL) which incubated environmental initiatives, reveals that potential environmental start-ups in Hong Kong suffer from a scarcity of suitable early-stage financing.
- b. **Regional investment in green energy** should be a key financial policy of the Hong Kong government
- c. **Climate-positive and other green investment options for individuals**, supported and promoted by the government, should provide opportunities for Hong Kong savers to place their savings more easily readily in environmentally positive funds. **This should include the MPF options** offered by all MPF providers.

7. Green Government

- a. The Hong Kong government, as the territory's biggest employer, should act as both a **model and a stimulus** to promote decarbonisation of the economy.
- b. The government should adopt a **green purchasing policy** in line with ambitious targets on emissions reduction.
- c. **Intensifying building efficiency and emissions standards** should apply not only to government premises but also to schools, hospitals, subvented and statutory organizations. Policy should ensure that government meetings and events should only take place in venues which meet the highest green standards.

E. Last word

- Some past government public engagement and consultation exercises have been associated with indecision and delay or as a prelude to watered-down action or even inaction.
- We hope this public engagement on long-term decarbonization strategy will be just one part of a **bold, timely, ambitious and unambiguous** strategy.
- A bold policy to boost Hong Kong's ambition level on climate action can build both public support and the city's international reputation.

We thank the Council for Sustainable Development and the Environment Bureau for creating the opportunity for engagement on a subject of primary importance to the future of Hong Kong.

If you require any clarification or elaboration on this submission, please contact:

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