

Views of the Hong Kong Institute of Qualified Environmental Professionals Limited
on the Hong Kong's Long-Term Decarbonisation Strategy

The Hong Kong Institute of Qualified Environmental Professionals Limited (HKIQEP) welcomes the public engagement on the Hong Kong's Long-Term Decarbonisation Strategy by the Council for Sustainable Development (CSD) on behalf of the Government of Hong Kong Special Administrative Region (Government) ^[1]. We would like to provide our comments and suggestions from a professional environmental perspective and urge the Government to finalise the strategy as soon as possible to help cope with the threats and consequences brought out by global climate change.

It is beyond doubt that climate change is an urgent global environmental threat that would pose serious risks to health, livelihoods, the supply of food, water and energy, security, and the sustainable economic growth of society. The Intergovernmental Panel on Climate Change (IPCC) warns that some adverse climate impacts may be long-lasting or irreversible if global warming does not gradually stabilize at 1.5°C ^[2].

Being a coastal city, Hong Kong is especially vulnerable to risks related to climate change. Some adverse impacts, including heatwaves, floods, storms and other extreme weather phenomena have already been occurring and are increasing in both frequency and intensity. The recent significant storm surges caused by Super Typhoon Hato in 2017 and Super Typhoon Mangkut in 2018 have caused serious flooding in many coastal and low-lying areas, huge amount of fallen trees, suspension of the public transport, and interruptions of the water and power supply, etc. These real impacts are clear signs reminding us of the need to join international efforts to combat climate change, which will affect both our and future generations.

We appreciate the efforts of the Government on climate change mitigation, including the establishment of a target to reduce Hong Kong's per capita contribution to less than 4.5 tonnes in 2020; and to further reduce it to about 3.3-3.8 tonnes (about 25% to 35% absolute reduction from 2010 level) in 2030 ^[3]. However, as a high-income global city with a generally high level of education, financial resources, and civic consciousness, Hong Kong should have a responsibility to make a substantive and more meaningful contribution. Instead of a carbon intensity reduction target, Hong Kong should adopt an absolute carbon reduction target. The HKIQEP, therefore, urges the Government to tighten the interim target for 2030 to not less than 40% reduction from 2010 carbon emissions ^[4] and commit to an ultimate net-zero target by 2050.

^[1] Council for Sustainable Development, Long-Term Decarbonisation Strategy, Public Engagement, June 2019

^[2] Intergovernmental Panel on Climate Change, Global Warming of 1.5°C, 2018

^[3] Environment Bureau, Hong Kong's Climate Action Plan 2030+, 2017

^[4] IPCC's assessment in its Global Warming of 1.5°C, 2018 shows that global net anthropogenic CO₂ emissions need to decline by about 45% from 2010 levels by 2030 (40–60% interquartile range), reaching net zero around 2050 (2045–2055 interquartile range) to achieve no or limited overshoot of 1.5°C increase of the global temperature.

The HKIQEP considers these targets, albeit aggressive and challenging, are achievable if there is a will to act. We urge the Government to work out a comprehensive Hong Kong Long-Term Decarbonisation Strategy as soon as possible. We share the views of the CSD that Hong Kong needs:

- low carbon lifestyle for all;
- energy saving works (e.g. retrofitting and retro-commissioning) mandatory for all existing large buildings;
- 100% zero carbon energy and very close energy regional cooperation;
- mandatory energy saving measures;
- mandating all new buildings to be net zero carbon emissions;
- mandating zero emission vehicles to replace all conventional fuel-driven vehicles; and
- rigorous technological breakthroughs and advancements to reduce and offset carbon emissions.

The climate change crisis can only be effectively dealt with if the Government, private sector and the general public work together hand-in-hand. The HKIQEP stands ready to offer our professional contributions towards combatting this global environmental threat together with all parties.

Appended is HKIQEP's completed Views Collection Form for CSD's consideration.

Views Collection Form

General Information

Which of the following identities are you using to respond to this views collection form?
(Please select ONE only)

Organisations

- Professional bodies
- Building construction
 - Transportation
 - Engineering
 - Others Environmental Professionals
- Public organisations
- Others

Companies

- Real estate
- Real estate developers
 - Brokerage and agencies
 - Property management companies
- Commercial tenants
- Others

Individuals

Which age group do you belong to?

- Below 18
- 18-30
- 31-60
- Above 60

Are you a private commercial/industrial property owner>

- Yes
- No

Question 1

Carbon emissions by the current generation have serious implications on our future generations – extreme weather, flooding, etc. Decarbonisation is an inter-generation challenge. The key way to reduce carbon emissions is to allocate resources to gradually phase out fossil fuel. Do you support this direction?

Yes No No comment

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

The HKIQEP considers that they are all equally important for a well advanced and developed economy like Hong Kong.

Being a developed economy, Hong Kong has the capability to give priority to environmental performance and respond to climate change without sacrificing existing performance on reliability, security and availability as well as affordability. There are often co-benefits from the use of low or net zero carbon electricity, such as air quality improvement, employment opportunities and to a certain extent, enhancement of energy access and security.

On affordability, the HKIQEP believes it is an imperative that a fair and reasonable electricity tariff system is maintained to ensure the less privileged sub-population and energy-conscious users will not be adversely affected or penalized.

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? Such measures include adopting a low-carbon lifestyle, intensifying energy saving efforts, and increasing the proportion of zero carbon energy in our fuel mix through closer regional cooperation, etc. (See Preamble of this views collection form)

Yes **No** **No comment**

If you support the measures mentioned, which one should be prioritised?

(Please take ONE that applies)

- Adopting a low-carbon lifestyle**
- Intensifying energy saving efforts**
- Increasing the proportion of zero carbon energy in our fuel mix through closer regional cooperation**

The HKIQEP considers that all these measures are necessary and should be implemented as soon as possible for achieving net-zero carbon emissions.

It is not possible to attain the decarbonisation target without a radical reform of the energy sector and significant improvement of energy efficiency. In 2016, about 67% of Hong Kong's carbon emissions came from electricity generation^[5]. Although the gradual phasing out of coal in favour of natural gas for electricity generation being undertaken now helps reduce the carbon emissions of the energy sector, the use of net zero energy or renewable energy (RE) is the long-term sustainable solution.

We are pleased to note that the Government, together with the power companies, introduced in April 2018 a set of generous Feed-in Tariff rates to provide incentives for individuals and non-Government bodies to encourage investments in RE. As more advanced RE technologies and innovations are commercialized at a substantially reduced cost, we urge the Government to continue to facilitate and incentivize wider uses and exploitation of RE, e.g., by maximizing the utilization reservoirs, building roof tops and façades and other open spaces for RE applications.

Although Hong Kong, on its own, may only be able to supply about 3-4% of electricity by RE up to 2030^[6], there is a great potential for regional cooperation to tap into the RE potential available in the Mainland. The HKIQEP urges the Government to seek cooperation with the Greater Bay Area

^[5] HK Environmental Protection Department, Greenhouse Gas Emissions in Hong Kong by Sector 2016

^[6] Environment Bureau, Hong Kong's Climate Action Plan 2030+, 2017

(GBA) cities as soon as possible to conduct joint exploitation of renewable resources in the region, in particular, offshore wind power (and perhaps other forms of offshore RE) in the nearby coastal region of Guangdong.

In addition, Hong Kong must dramatically reduce its energy consumption by fully embracing and implementing ‘efficiency first’ principle. To achieve the net zero carbon target, behaviour change to adopt a low-carbon lifestyle and demand-side management by intensifying energy saving efforts can significantly reduce emissions.

Introduction of carbon taxes on the purchase or use of fossil fuels, according to their respective carbon emissions could also provide incentives for acceleration of the decarbonisation of the energy sector and generate revenues for encouraging new net-zero carbon initiatives. The Government should consider adopting this measure but only after understanding how and when such a measure could be effective in reducing carbon emissions and in consultation with all the relevant stakeholders and the public.

The Government should also consider collaborating with other GBA cities to conduct joint research and explore the feasibility of using carbon capture and storage technologies to reduce the lifecycle carbon emissions of fossil fuel power plants in the GBA. They can also jointly explore the applicability of new technologies such as hydrogen-related technologies. Perhaps working together on a more holistic plan to ‘electrify, digitize and decarbonize’ the entire GBA while developing its circular economies, can help bring more synergies and reduce the total resources needed to achieve a net zero carbon future.

Question 4

What measures would you adopt to reduce your carbon emissions? (Please tick ONE that applies)

For Organisations / Companies

(only applicable to respondents who answer this views collection form in their organization/company’s capacity)

		Very Likely	Likely	Unlikely	Very Unlikely
Procurement	(i) Formulate (or tighten up) green procurement policy and provide training to staff on green procurement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(ii) Purchase energy-efficient electrical	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	office appliances (e.g. those with energy labels), etc.				
Energy Efficiency and Conservation	(iii) Participate in the Energy Saving Charter to practise energy saving measures such as maintaining air-conditioned average room above in summer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(iv) Retrofit office premises to improve energy efficiency, such as installing new lighting and air-conditioning systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(v) Participate in the Government 4T Charter (namely target, timeline, transparency and together) to set a target and timeline to reduce carbon emissions by saving energy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(vi) Carry out energy / carbon audits with a view to identifying and implementing measures to reduce energy consumption and carbon emissions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transportation	(vii) Instead of taking business trips, conduct video conferencing or use emails to reduce carbon footprint from flights	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(viii) Use new energy vehicles (e.g. electric vehicles) as company vehicles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Policy Formulation	(ix) Formulate (or update) waste reduction and recycling policy (e.g. paper and plastic recycling materials)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others	(x) Please specify:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In addition to those mentioned above, the HKIQEP recommends that companies and organisations may also consider taking the following measures to help achieve the net-zero carbon emissions:

(x) annual carbon emissions monitoring and reporting;

(xi) carbon offset of flights, events, activities or even an organization's entire carbon footprint in a year.

For Individuals

(only applicable to respondents who answer this views collection form in their personal capacity)

		Very Likely	Likely	Unlikely	Very Unlikely
Clothing / Waste Reduction	(i) Buy fewer clothes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(ii) Buy products with minimal packaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(iii) Practise waste reduction at source and clean recycling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eating	(iv) Avoid purchasing/ordering more food than needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(v) Buy local/neighbouring areas' food as far as practicable which consumes less energy arising from transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(vi) Eat more vegetables and fruits and less meat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(vii) Avoid buying plastic bottled drinks, etc. and bring your own bottle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accommodation	(viii) Purchase energy-efficient electrical appliances (e.g. those with Grade 1 energy labels), such as inverter type air conditioners and LED light bulbs, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(ix) Use natural ventilation/fans instead of air conditioners as far as possible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(x) Maintain air-conditioned average room temperature between 24°C and 26°C or above in summer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(xi) Switch off power source to the electrical appliances that will not be in use to avoid energy consumption in standby mode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(xii) Turn off the lights when not in use take shorter showers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(xiv) Wait until there is a full laundry load before using the washing machine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Commuting	(xv) Use public transportation as far as possible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(xvi) Walk for short-distance commuting as far as possible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(xvii) Minimise outbound travel via air and cruise trips. Enjoy our local / neighbouring possible, such as country parks, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review Progress	(xviii) Use Environment Bureau's Low-carbon Living Calculator from time to time to assess personal carbon footprint and identify room for carbon reduction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others	(xix) Please specify:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In addition to those mentioned above, the HKIQEP recommends that companies and organisations may also consider taking the following measures to help achieve the net-zero carbon emissions.

(xix) Carbon offset of flights or even an individual's entire carbon footprint in a year;

(xx) Eliminate food waste as far as possible;

(xxi) Purchase good quality products that last longer;

(xii) Purchase products that are locally produced if possible; etc.

Question 5

Beyond measures listed in Question 4, what could you or your sector do to reduce energy consumption in new and existing buildings in Hong Kong? What support measures and information may be useful to further promote energy efficiency in new and existing buildings?

(See P.25 of the PE document)

New buildings:

In Hong Kong, buildings accounted for about 90% of the electricity use and about 60% of total carbon emissions. An effective integrated approach taking into consideration not just the carbon emissions from the daily use of energy for operational needs, but also from the embodied energy and carbon from construction materials, is required.

It would be necessary for the building and construction industry to take into consideration the greenhouse gas emissions, energy efficiency, etc. in their projects for attaining net-zero carbon emissions. The HKIQEP considers that all new buildings should be designed to meet the latest building codes on energy efficiency and facilitate net zero carbon emissions, by maximising the use of natural ventilation, lighting, heating/cooling and other passive energy saving design elements, by auditing and minimizing the embodied emissions associated with building materials, products and construction as well as using on-site RE and emission offset. The existing Carbon Labelling Scheme managed by the Hong Kong Green Building Council should be strengthened to help the building and construction industry move towards net-zero carbon buildings through green design and construction, green procurement and manufacturing, green marketing and packaging, sustainable supply and consumption and resources recycling.

Existing buildings:

The HKIQEP considers that existing buildings have great potential to perform better through energy saving, energy audit, carbon audit, retro-commissioning and retrofitting. There are many opportunities to save energy and cut GHG emissions by effective demand side management (DSM) in Hong Kong. Effective housekeeping and DSM for achieving energy conservation and high energy efficiency are practical ways to help reduce the carbon emissions immediately.

Question 6

The Government has rolled out various measures to promote green buildings. (See Chapter 3 of the PE document) **To help us achieve the decarbonisation target, is there a need for the Government to do more to promote energy efficiency in new and existing buildings? If yes, what further policy instruments and incentives should be implemented?** (See P.26, 45-46 of the PE document)

- There is a need** (Please specify the policy instruments and incentives that should be implemented)
- No need**

New buildings:

The Government must establish a new and effective approach and work plan that will lead to full decarbonisation of buildings as soon as possible. The HKIQEP believes that the Government should consider a regulatory approach to require the compliance with the decarbonisation targets for new buildings, but only after consultation with the building and construction industry and other relevant stakeholders.

Existing buildings:

The Government should consider a regulatory approach to require mandatory auditing and disclosure of carbon emissions from commercial buildings after consultation with the building and construction industry, building management industry and other stakeholders.

Question 7**What are your views on promoting the wider use of green and innovative transport technologies?**

(See P. 30-31 of the PE Document)

The HKIQEP appreciates the Government's efforts to promote the adoption of new energy vehicles, including electric vehicles (EVs). However, the pace of the change is far from desirable and as at the end of June 2019, only 11,942 vehicles are EVs^[7] (less than 2% of total private cars). There is an urgent need to promote the wider use of green and innovative transport technologies.

The HKIQEP urges the Government to make a proactive shift towards facilitating net-zero carbon transport through the enhancement of mass and public transport, provision of good network and infrastructure to facilitate safe cycling and walking, accelerating the roll-out of EVs and other green and energy-efficient vehicles. It is noted that the use of hydrogen as a fuel is also a promising mean for lowering the carbon emissions from heavy duty vehicles. The Government should explore the feasibility of local application as soon as possible.

The HKIQEP considers that the Government should roll out a roadmap for net zero carbon transportation that would also have the co-benefit of roadside air quality improvement, as soon as possible.

Despite the Government's efforts to encourage the introduction of green innovative transport technologies through the Pilot Green Transport Fund, the result has not been too satisfactory. The HKIQEP recommends the Government to understand the root cause of this unsatisfactory outcome and to take an active and aggressive role to give firm and specific direction, as well as provide an enabling environment for the testing of those innovative transport technologies that are suitable for local uses and expedite their application in Hong Kong.

^[7] https://www.epd.gov.hk/epd/english/environmentinhk/air/prob_solutions/promotion_ev.html

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? What other measures would you suggest to further reduce our transport-related carbon emissions? (See P. 30-31 of the PE Document)

The transport sector, especially fossil-fuelled vehicles, accounts for about 18% of Hong Kong's total carbon emissions ^[8]. To substantially reduce the carbon emissions from vehicles, some advanced countries, e.g., UK and EU countries ^[9], have committed to phasing out petrol and diesel vehicles in 2030 or 2040. The HKIQEP considers that Hong Kong should join the international effort to support a radical transformation of the transport sector, including ceasing the registration of non-net zero carbon vehicles in a pace comparable to other advanced countries.

In addition, the Government should also ensure more effective traffic management, including managing private car growth, road pricing and other effective means to reduce the overall level of vehicle transportation activity.

Aviation and shipping are also major sources of carbon emissions. There has also been progress made on fuel efficiency improvement and carbon emissions reduction in aviation and shipping. The HKIQEP considers that the Government should enhance the international and regional cooperation to ensure substantial reduction of carbon emissions from these sectors, and provide potential synergistic opportunities to support economic growth in these sectors in the GBA.

Question 9

What measures would you suggest to (a) the Government / the public sector and (b) private organisations that would motivate you as an individual to practise low-carbon lifestyle?

(See P. 22-24 of the PE Document)

Achieving a net zero carbon emissions target also requires the public to engage more profoundly in the transition. The HKIQEP considers that both educational and regulatory approaches are necessary to help product or service providers/suppliers, clients/consumers and the public move towards low carbon actions to achieve the desired low carbon outcomes.

Knowledge on climate change, its adverse effects and the mitigation options available to the public is undoubtedly an important factor affecting the public's awareness, willingness and

^[8] HK Environmental Protection Department, Greenhouse Gas Emissions in Hong Kong by Sector 2016

^[9] UK Committee on Climate Change, Net Zero – The UK's Contribution to Stopping Global Warming, May 2019

attitude that determines the consumption behavior of the public. The HKIQEP recommends that the Government and the service/product providers or suppliers should implement a carbon labelling programme for consumer products to help the public to make more environmentally sensitive choices for practicing low-carbon lifestyle.

The UN's Food and Agriculture Organization estimated all direct and indirect emissions from livestock amount to about 14.5% of all anthropogenic carbon emissions reported by the IPCC^[10]. A shift to a diet of low meat, low dairy, more vegetables and other sustainably produced food, especially those produced locally, will help not only to reduce carbon emissions, but also facilitate a healthier living to improve public health, foster local farming and free up space for low carbon agriculture activities. The HKIQEP recommends the Government to implement programmes to encourage the public to reduce meat and dairy consumption. Provision of tax concession or other incentives may also be considered for vegetarian restaurants and other sustainably produced food or suppliers.

The use of smart information technology to disseminate climate change and carbon emission information will also be helpful. We recommend the Government to facilitate the development of attractive and intelligent APPs and other real-time systems to facilitate the public to make real-time checking of their carbon emissions and identifying options for carbon emission reduction in their daily life.

Regulatory control, when designed and enforced appropriately, can be a fair and effective means for achieving the goal of zero-carbon emissions. It also has a strong role in changing behaviours of suppliers, consumers and the general public. We recommend the Government to make the necessary rules and regulations to require the supply and sale of consumer products to implement green measures on design, procurement, manufacturing, marketing, packaging, etc. to reduce carbon emissions and facilitate circular economy.

Question 10

Apart from all the decarbonisation measures mentioned in the PE document, do you have any other suggestions to help Hong Kong reduce carbon emissions? (See Chapter 3 of the PE Document)

Hong Kong's low carbon transition requires active participation of business and community. The HKIQEP considers that the Government should encourage the business sector to examine the current carbon footprints created by their business operations, innovate and re-engineer their

^[10] Food and Agriculture Organization, Tackling Climate Change Through Livestock – A Global Assessment of Emissions and Mitigation Opportunities, 2013

businesses with a view to achieving net-zero carbon emission operations. The policy to be adopted needs to be stable and attractive to business with flexibility allowed on delivery of the outcome.

The Government should make the best use of various policy and regulatory tools with appropriate combinations of “carrots & sticks” including regulation, taxation and subsidy, to develop an effective strategy to help reduce carbon emissions. It would also be appropriate for the Government to develop green economic opportunities and flexible mechanisms, including carbon trading, green bonds and other financing mechanisms, to help achieve net-zero carbon emissions. Hong Kong is in a position to be the centre for green finance in the region and should act to establish and consolidate a leading position without delay.

While it is expected that a great opportunity exists for creating green jobs to tackle the climate change crisis, it is possible the existing workforce will face significant changes and challenges as a result of the shift towards a low carbon, renewable-based and circular economy. The Government should ensure a just transition in accordance with the Silesia Declaration on Solidarity and Just Transition adopted in the 24th Conference of the Parties of the UN Framework Convention on Climate Change^[11]. Given the relatively small size of Hong Kong, the topic of job creation would best be tackled from a broader GBA perspective. Working together with the rest of the GBA on a more holistic plan to ‘electrify, digitize and decarbonize’ the entire GBA and ‘making the GBA one of the leading circular economies in Asia’, can help bring more synergies and reduce the total resources needed to achieve a net zero carbon future.

Innovation on technologies, institutions, business models and policy designs, is an essential part of reaching net-zero emissions. The Government should support research and development on innovative solutions and make institutional reform to maximise economic opportunities of decarbonisation and promote investments to deliver on a net-zero carbon target. Policy should also be formulated to drive innovation via deployment to reduce technology costs and costs of capital, and to ensure that policy mechanisms and infrastructure provide opportunities for deployment of novel solutions. The Government should support innovators to conduct research and development on transformational net-zero carbon solutions in areas including renewables, smart networks and batteries, hydrogen, energy storage, etc. The Government should make sure that its budget and public funding is ‘climate-proofed’ and re-oriented towards fast achievement of a net-zero carbon target.

As major infrastructure and development projects are also the causes of carbon emissions, the Government should make efforts to ensure a sustainable development with the associated carbon emissions be kept to the lowest and eventually net-zero as soon as possible. The HKIQEP recommends the Government to revise the Hong Kong Planning and Standards Guidelines and

^[11] https://cop24.gov.pl/fileadmin/user_upload/Solidarity_and_Just_Transition_Silesia_Declaration_2_.pdf

Technical Memorandum on Environmental Impact Assessment to require carbon emission assessments and compliance with the carbon emission standards/caps as part of the criteria for approval.

It is possible that new infrastructures will be required to facilitate new technologies and innovations for achieving net-zero emissions. Examples include the expansion and enhancement of electric charging infrastructure to enable a rapid transition to EVs, strengthening of the electricity networks to accommodate RE, new distribution infrastructure for use of hydrogen, etc. The HKIQEP urges the Government to make an early start to replace or retrofit, if appropriate, existing infrastructure to ensure they can be compatible with decarbonisation objectives.

Apart from carbon emissions, efforts should also be made to minimize other greenhouse gases. Hong Kong should further reduce methane emissions from landfills and take the lead in phasing out the use of HFCs according to the schedules prescribed in the Kigali Amendment (Decision XXVIII/1 and accompanying Decision XXVIII/2) of the Montreal Protocol^[12].

While we pursue a net-zero carbon future, we must be careful to avoid increasing other negative environmental impacts while we are implementing low carbon solutions. As we decarbonize, it is also important to ensure that we are moving towards zero negative environmental impacts over time, while proactively creating quality jobs for our future generations. The HKIQEP believes that job creation will be a critical part of the solution for moving us towards a net-zero carbon future.

The HKIQEP will continue to offer our professional contributions to help ensure the smooth transition towards a decarbonised Hong Kong.

----- END -----

^[12] <https://ozone.unep.org/sites/default/files/2019-04/MOP-28-12E.pdf>