世界自然基金會
香港分會

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Chairman and Members of Panel on Environmental Affairs, Legislative Council
(c/o Clerk to Panel on Environmental Affairs)
Legislative Council Complex,
1 Legislative Council Road, Central, Hong Kong

13 January 2020
(By post and e-mail)

Dear Sir/Madam,

Re: Panel on Environmental Affairs Meeting on 22 January 2020, agenda item #VI "Receiving public views on promoting the use of electric vehicles"

We understand the above captioned will be discussed during the meeting of the Panel on Environmental Affairs on 22 January 2020. WWF-Hong Kong (WWF) believes promoting the use of electric vehicles is in line with our call for a low carbon city. The urgency of the climate crisis compels WWF to suggest a bolder transportation decarbonisation roadmap for government to consider:

1. **Phase out all sales of fossil fuel-based private vehicles by 2030 and transit to all EV by 2050**
   To align with international long-term decarbonisation trends, WWF suggests the Government to phase out all sales of fossil fuel-based private vehicles by 2030 and transit to all EV by 2050 for a carbon-neutral transport goal. This will enable Hong Kong to remain competitive internationally on sustainability, as other countries and cities have already set out concrete timeline in phasing out the sales of private vehicles powered by fossil fuel in the coming decades, for example, UK, Denmark, France, Los Angeles, Seattle, Vancouver etc. China, the largest automobile market in the world, has also announced in 2017 its plan on a future ban on sales of traditional fuel vehicles. To ensure a smooth transition to all EV by 2050, the government can impose high private car license fee collected every 10 years for each license and provide discounts on energy efficient EV vehicles.

2. **Realise 10% renewable energy target by 2030**
   Currently in Hong Kong, less than 1 per cent of the electricity is generated by renewable energy. For electrification of vehicles to help more to solve the climate crisis, the city's electricity needs to be generated from renewable resource such as solar energy. WWF suggests a 10% renewable energy target by 2030. To reach the needed 10% renewable energy goal, one of the solutions will be for Hong Kong to

diversify and magnify solar photovoltaic (PV) technology by placing solar PV systems on government and community buildings, in open spaces, along vertical faces of buildings, and on highway infrastructure with large surface areas, such as noise enclosures. The government can leverage solar energy innovations in vertical solar panels and curtain walls that suit the unique skyscraper city design in Hong Kong. The government should study the feasibility of floating PV system in the ocean environment. To promote Hong Kong's renewable energy development, the government can also implement low-carbon pilot villages in local communities powered by solar energy to showcase a sustainable and liveable Hong Kong.

3. **Transform to a walkable city and promote low carbon transportation lifestyle**
   Sustainable transportation requires a paradigm shift from private cars and trucking to different modes of public transport, including bicycle and pedestrian lanes, electric vehicles, car sharing, and rail freight. WWF believes that the government should improve the city's walkability by enhancing the cycling paths and pedestrian lanes. Sufficient investment should be allocated for the development of electric mobility alternatives, bike-sharing systems, infrastructure, protected bike lanes, signposting, traffic lighting, installation of bike parking stations, road safety upgrades, and an urban cyclists' manual. To promote a low carbon transportation lifestyle, introduce "Zero Emission Zone" and "no-car-day" in urban area. During the "no-car-day", private cars are not allowed on the road of the listed area. To promote the use of public transport system, enhance connectivity between passengers and the station.

We believe that the above recommendations are necessary if Hong Kong is working towards a net zero emission goal. We hope to see Hong Kong being Asia's most sustainable and liveable city which we will all be proud of.

Yours faithfully,

David Olson, PhD
Director of Conservation
WWF-Hong Kong

Encl. WWF-Hong Kong's View on Long-term Decarbonisation Strategy

c.c. Secretary for the Environment, Wong Kam-sing, GBS, JP

WWF-Hong Kong's view on

Long-term Decarbonisation Strategy

SUMMARY

This paper sets out WWF-Hong Kong's (WWF) views on an all-rounded and feasible long-term decarbonisation strategy for Hong Kong. In order to achieve the goal of limiting global heating to 1.5°C, all 7 key elements below should be adopted and implemented by policymakers:

1. **HKSAR Government to show strong leadership and determination to limit global heating to 1.5°C through setting a legally-bound, science-based target by 2022**
   The Chief Executive should lead all government departments, public bodies, and agencies to develop and commit to legally-bound, science-based targets aimed at limiting global heating to 1.5°C.

2. **Meet 10% renewable energy (RE) target by 2030, achieve net zero emission by 2048 through global and regional cooperation**
   It is necessary to innovate, diversify, and magnify the application of solar PV technology. In the long-term, explore global and regional cooperation for RE trade and avoid trade-offs. The Government should not construct new additional gas-fired generating units in the next Scheme of Control agreement. Avoid further sourcing of nuclear energy. Stricter rules should be applied to the application of bioenergy.

3. **Realise a 50% energy saving improvement roadmap to 2050**
   It is essential to establish a mandatory climate change mitigation and adaptation building scheme to all new building and introduce a carbon budgeting mechanism for existing buildings.

4. **Introduce decarbonisation financing scheme and put a true cost on carbon**
   Replicate energy efficiency and renewable energy projects within government properties to open spaces and privately-owned buildings. Open for public acquisition and allocate complementary shares to the public. Conduct studies on the economic, social, and financial implications of the climate crisis, and design a progressive carbon charging system.

5. **Establish a global extensive native-species reforestation program for extant grassland areas**
   Reforestation can contribute to carbon sequestration and make Hong Kong more carbon neutral. Subtropical forests can sequester 10 to 30 metric tonnes of carbon per hectare. It can also reduce erosion and bolster freshwater supplies.

6. **Rethink urban planning and transform Hong Kong into one of Asia's most walkable cities**
   Mandate district cooling systems in the urban planning process. Develop underground pedestrian commute paths to promote a low carbon lifestyle. Phase out sales of petrol and diesel cars by 2030. Roll out a "no-car-day" in city centers. Provide incentives for electric vehicle acquisition and operation.

7. **Healthy and wealthy, people-centric strategy**
   It is essential to put people at the heart of the decarbonisation policies. Set up a public engagement team to regularly collect public feedback on long-term strategy. Introduce a compulsory climate crisis course for kindergarten, primary and secondary school. Promote home office, community working center and community-based job creation to avoid long distance commute. Avoid inequalities when forming a new scheme.

The climate crisis is a challenge unprecedented in human history. Science has shown the current rate of global heating that has not been documented in human history. Under the Paris Agreement, Hong Kong has the obligation to formulate a long-term decarbonisation strategy up to 2050 to limit the global average temperature to well-below 2°C above pre-industrial levels. In October 2018, The Intergovernmental Panel on Climate Change (IPCC) launched a Special Report on Global Warming of 1.5°C provided scientific evidence that limiting warming to 1.5°C could further reduce climate risks compared with limiting it to 2°C.

If HKSAR government does not take immediate action, the city will face the consequence of losing Hong Kong airport, West Kowloon Cultural District, Mai Po Ramsar site from rising seas. The costs of exceeding 1.5°C could be overwhelming in terms of financial losses due to natural disasters, health problems, death, and infrastructure destruction. Staying below 1.5°C is still possible, and the window of doing so is closing rapidly. IPCC estimates are probably now below 66%. This means that urgent action at an unparalleled scale is now essential. Traditional understanding of what is politically impossible must be re-examined. WWF believes that the Hong Kong's new long-term decarbonisation strategy should:

1. **Show a strong leadership to limit global heating to 1.5°C through setting a legally-bound, science-based target by 2022**

   The Chief Executive is responsible to lead all government departments, public bodies, and agencies to develop and commit to science-based targets in line with limiting global heating to 1.5°C. These targets have to be reviewed and, if necessary, revalidated every five years from the date of the original target approval.

   It is essential to set up a legally-binding framework followed by legislation to tackle climate change for a paradigm shift towards a zero carbon economy. Once a legal framework is set for a scientific-based target, carbon emission reduction target will be taken into account during the tightening of existing energy efficiency policy, such as Building Energy Efficiency Ordinance (BEEO) and Mandatory Energy Efficiency Labelling Scheme (MEELS). Such legally-binding legislation will favour the formulation process of climate action related bills in the legislative council.

   In order to promote a low carbon spending culture, Hong Kong should set up a central procurement policy aligned to science-based targets under the new decarbonisation legal framework. For example, phase out foods with a high

carbon footprint, such as beef in the government canteen and banquet menu by 2020.

2. **Meet 10% renewable energy (RE) target by 2030, achieve net zero emission by 2048 through global and regional cooperation**

To reach the ambitious 10% renewable energy goal by 2030, one of the solutions will be for Hong Kong to diversify and magnify solar photovoltaic (PV) technology by placing solar PV systems on government and community buildings, in open spaces, along vertical faces of buildings, and on highway infrastructure with large surface areas, such as noise enclosures. The Government can leverage solar energy innovations in vertical solar panels and curtain walls that suit the unique skyscraper city design in Hong Kong. HKSAR Government should study the feasibility of floating PV system in the ocean environment.

For the long-term, explore global and regional cooperation for RE trade through a certificate scheme to help phase out fossil fuel energy during the transition period. Expanding the power grid capacity and technology should be mandatory. Avoiding trade-offs from different forms of energy sources is important. Stricter rules are needed to ensure that bioenergy used in the city delivers genuine climate benefits over the fossil alternative. Careful study of the potential impact of offshore wind farms on migratory birds and marine mammals has to be carried out and high impact localities avoided. The Government should reduce reliance on nuclear energy due to its inherent operational risk and challenges in managing the nuclear waste.

Use natural gas as a supplement to fill the gap on electricity generation during transition. As gas-fired generating unit has about 30 years of lifetime, if we want to meet a net zero emission goal by 2050, power companies and the Government have to commit not to construct new additional gas-fired generating unit in the 2024 development plan under Scheme of Control Agreement. A robust transition plan that supports regional development and leads to new jobs for workers leaving polluting and outdated industries is required to be ready by 2024.

3. **Realise a 50% energy saving improvement roadmap to 2050**

Under the legally-binding framework, establish a mandatory climate change mitigation and adaptation building scheme to all new buildings, incorporating criteria such as phase out gas supplies, mandatory building integrated photovoltaic (BIPV) and rooftop PV, and tighten BEEO to reduce energy use by 50%. Tighten the grading of MEELS. All compulsory electricity appliances in new buildings must be MEELS grade 1 label.

For existing buildings, adopt a carbon budgeting mechanism Cap-and-Trade Program and start with conducting a city-wide energy audit in order to benchmark the buildings. By adopting this system, building owners and property management companies take the opportunity to improve operational practices and to continuously optimise building energy performance. Our recommended targets are: (1) by 2025, Government properties, large housing estates, and Grade A commercial building reach the 50% reduction target through the tightening of BEEO and (2) Grade B commercial and industrial building achieving the same reduction by 2030. The program can provide incentives for tenants to replace existing appliances with high energy efficiency appliances. Introduce mandatory close door policy for all commercial refrigeration appliance and store front.

It is critical for the Government to extend the regulation of electrical appliances under the MEELS from domestic to commercial appliances. In addition, the Scheme should have a broader spectrum of coverage and put priority on high energy consumption commercial appliances like refrigerating appliances, air-conditioning units, heaters and stoves. The Government should provide supportive measures to improve energy performance, mitigate the climate crisis, and meet the city's long-term decarbonisation targets. These transparent guidelines and legal regulations should be backed up by regular on-site investigation at retail spots to ensure comprehensive implementation.

4. **Introduce decarbonisation financing scheme and put a true cost on carbon**

Replicate energy efficiency and renewable energy projects within government properties to open spaces and privately-owned buildings by setting up a decarbonisation financing scheme. Such a scheme is open for public acquisition and complementary shares are allocated to qualified public at the launch of the scheme. Shareowners are empowered to decide how their shares are utilised in a range of global, regional, and local climate actions. Pilot low carbon villages in

local communities by setting up a team of solar PV installation specialist to provide step by step installation guidance for village house units in local communities. The installation fee could be funded by the decarbonisation financing scheme.

Capital markets can advance the green economy, but stronger regulation also needs to be in place. Government should ensure an immediate switch to a green economy by putting in place strict sustainable investment regulations under the decarbonisation legal framework.

Conduct studies to assess the economic, social and financial implications of climate change, and design a progressive carbon charging system by 2025. The system should be tested within the context of high carbon products, electricity bills, and aviation emissions. Charges received will be allocated to the funding pool of the decarbonisation financing scheme. Progressive pricing should be designed to reduce the burden of underprivileged during transition period. Through this scheme, showcase the economic cost and benefit for decarbonisation practice to incentivise business sector and individual to further decarbonise.

5. **Establish a global extensive native-species reforestation program for extant grassland areas**

Increase carbon removals by sinks, using environmentally sustainable approaches such as reforestation. Reforestation can contribute to carbon sequestration and make Hong Kong more carbon neutral. This should include implementing policies and incentives that reduce global, regional, and local deforestation or increase sinks and phasing out policies that are counterproductive in climate terms, namely incentivising the use of land for purpose-grown biofuel or energy crops and incentivising the burning of tree trunks and stumps for energy.

6. **Rethink urban planning and transform Hong Kong into one of Asia's most walkable cities**

Implement mandatory district cooling system in urban planning process. Improve walkability and introduce "Zero Emission Zone" in urban area. Develop underground pedestrian walkways and commute paths to promote a low carbon lifestyle. Enhance connectivity to promote cycling and other lightweight commute options. Foster bicycle-friendly environment by planning or upon urban renewal.

Under the decarbonisation legal framework, relax law restrictions on electric bike. Connect current railway system into a loop with extra capacity for both cargo and passengers.

Our recommended targets for road transport are: By 2020, launch a pilot “no-car-day” in city centers such as Central, Tsim Sha Tsui, Mong Kok and Causeway Bay to promote “Zero Emission Zone”. During the “no-car-day”, private cars are not allowed on the road of the listed area. By 2022, launch “no-car-day” in city centers every Sunday. Replace road public transport with tram or light rail system in core urban area. Impose high private car license fee collected every 10 years for each license and provide discount on energy efficiency EV vehicles. Phase out any sales of petrol- and diesel-based private vehicles by 2030. Transit to all EV by 2050 with a carbon neutral transport goal. Government should consider existing major technological advances and rethink the decarbonised road use pattern during town planning processes.

Our recommended targets for marine navigation are: local ferries should upgrade to electric propulsion by 2050. By 2030, mandate all marine navigations use fuels with sulphur content not exceeding 0.1% in Hong Kong waters. By 2035, 50% of the ports include onshore power supply options.

7. Healthy and wealthy, people-centric strategy

It is essential to put people at the heart of the decarbonisation policies. Set up a public engagement team to continuously conduct dialogues with public on long-term decarbonisation strategy. Introduce a compulsory climate change and sustainability curriculum for kindergarten, primary and secondary school. Promote home office, community working center and community-based job creation to avoid long distance commute. Avoid inequalities when forming a new scheme.

Participate in global movement such as WWF One Planet City Challenge and showcase the success and celebrate with our society.