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**Report of the Panel on Environmental Affairs**
**for submission to the Legislative Council**

## Purpose

This report gives an account of the work of the Panel on Environmental Affairs ("the Panel") during the 2025 session of the Legislative Council ("LegCo") and will be tabled at the Council meeting of 15 October 2025 in accordance with Rule 77(14) of the Rules of Procedure of the Council.

## The Panel

2. The Panel was formed by a resolution passed by the Council on 8 July 1998 and as amended on 20 December 2000, 9 October 2002, 11 July 2007, 2 July 2008 and 26 October 2022 for the purpose of monitoring and examining Government policies and issues of public concern relating to environmental matters, energy matters (including energy supply and safety), conservation, sustainable development and weather information services. The terms of reference of the Panel are given in **Appendix 1**.

3. The Panel comprises 20 members, with Hon LAU Kwok-fan and Hon Judy CHAN Kapui elected as Chairman and Deputy Chairman respectively. The membership list of the Panel is in **Appendix 2**.

## Major work

Hydrogen Development

4. On 20 January 2025, the Panel received a briefing by the Administration on the proposed amendments to the Gas Safety Ordinance

(Cap. 51)[1] to include hydrogen as fuel in the safety regulatory framework under the Gas Safety Ordinance; and to make new subsidiary legislation to cover the entire supply chain of hydrogen as fuel ("the new subsidiary legislation"). On 26 May 2025, the Panel was further briefed on the progress made in implementing the Strategy of Hydrogen Development in Hong Kong, including devising more codes of practice and technical guidelines related to hydrogen fuel safety, as well as formulating the approach of green hydrogen standard certification; strengthening regional cooperation on the relevant technological studies as well as capacity building, and at the same time continuing to promote local trial projects to demonstrate technological innovation and industrial application of hydrogen energy.

*Hydrogen supply*

5. Members pointed out that the Administration's current trial projects on hydrogen energy technology mainly covered four segments of the hydrogen industry chain (i.e. supply, storage, transportation and utilization) while the hydrogen production component had yet to be addressed. Members urged the Administration to be more proactive in conducting technological research and development ("R&D") on local hydrogen production (including larger-scale hydrogen production systems) to address environmental and technical constraints on local hydrogen production, with a view to establishing Hong Kong as the demonstration base for hydrogen technologies more comprehensively; and to enable Hong Kong to produce green hydrogen, thereby aligning with the direction of promoting green hydrogen certification and fostering green finance.

6. The Administration advised that as hydrogen technology and markets were still at the early stage of development with a number of technological and commercial challenges, it was still uncertain if the cost of hydrogen would become competitive in the international markets. Against this background, it had launched trial projects across the segments of the hydrogen industry chain, i.e. production, storage, transportation, and utilization, in a proactive and orderly manner, with an aim to promote Hong Kong as a demonstration base for hydrogen technologies while laying a holistic foundation for the city's future hydrogen industry development. On the other hand, the Administration continued to explore the feasibility of producing green hydrogen locally through innovative technologies. The

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[1] The Gas Safety (Amendment) Bill 2025 was subsequently introduced into the LegCo on 16 April 2025. A Bills Committee was formed by LegCo to scrutinize the Bill. The Bill was passed with amendments at the Council meeting of 23 July 2025. The Amendment Ordinance will come into operation on a date to be appointed by the Secretary for the Environment and Ecology by notice published in the Gazette.

trial projects to be commissioned included the production of hydrogen using landfill gas at the South East New Territories Landfill Extension (expected to commence operation in the second half of 2025) as well as the production of hydrogen using solar energy at the restored Pillar Point Valley Landfill in Tuen Mun (expected to commence operation in mid-2026). Preliminary estimates suggested that the daily hydrogen output of each project would be sufficient to support the operation of 10 hydrogen-powered vehicles. The Administration would review the outcomes of the trial projects to identify hydrogen production solutions that aligned with policy objectives while remaining cost-effective.

*Hydrogen energy application and regional cooperation*

7. Members stressed that in addition to demonstrating the application of hydrogen energy through trial projects and identifying suitable local hydrogen application scenarios, the Administration should also consider in a holistic manner how to develop the local hydrogen energy industry in line with the needs of the Guangdong-Hong Kong-Macao Greater Bay Area ("GBA") and actively examine the feasibility of trial projects for wider implementation, including following up on R&D projects on hydrogen technologies funded by the Green Tech Fund ("GTF") to assess the commercialization potential and effectiveness of the projects.

8. The Administration advised that in promoting local hydrogen energy development, the authorities would focus on the overall development of the GBA. Through implementing hydrogen energy trial projects and fostering cross-regional cooperation with the Mainland, effective solutions would be explored to expand the scale of hydrogen energy application and reduce costs, thereby enhancing market competitiveness and promoting the popularization of its application where appropriate. Among the projects currently approved by GTF, 10 involved R&D of hydrogen energy technologies, including hydrogen production and storage, hydrogen fuel cell development, etc. The authorities had maintained close liaison with the relevant research institutions and obtained relevant project data. Upon reviewing the R&D outcomes of these projects, the authorities would facilitate the commercialization of technologies with development potential.

*Hydrogen standard certification*

9. Members enquired about the progress made by the Administration in establishing hydrogen energy standards and certification system, particularly how to ensure that the relevant standards would align with the relevant requirements set by the country and international bodies.

10. The Administration advised that the Electrical and Mechanical Services Department ("EMSD") signed a cooperation arrangement with the State Administration for Market Regulation. Both parties were in close communication regarding the exchanges and collaboration between the two places across the entire hydrogen energy industrial chain, including production, storage, transportation, and use, with a view to exploring the alignment of safety monitoring and quality testing standards in Hong Kong and the Mainland, and jointly participating in the formulation of international standards. At the same time, the authorities would take into account the relevant technical specifications established by some countries and organizations (such as the International Organization for Standardization) and closely monitor the development of hydrogen certification standards in the Mainland and overseas, with a view to formulating a hydrogen standard certification approach by 2027 that was suitable for Hong Kong and aligned with those of the country and the international community. Since there was currently no common approach to certify green hydrogen internationally, if Hong Kong and the Mainland could take the lead in developing such a standard certification approach, this would play an important role in promoting Hong Kong-developed hydrogen products in the international market in the future.

Fast Charger Incentive Scheme

11. At the meeting on 20 January 2025, the Panel was briefed by the Administration on the allocation of $300 million to implement the Fast Charger Incentive Scheme ("the Charger Scheme"). Given that the Charger Scheme targeted commercial organizations as subsidy recipients, members considered it essential for the Administration to clearly explain the purpose of the Scheme, and explore the feasibility of installing an extra of 3 000 fast chargers ahead of the proposed target of 2030, so as to better align with the objective of expediting the market provision of fast charging facilities.

12. The Administration advised that the proposed subsidy for each newly-installed fast charger was $100,000, which was only sufficient to cover part of the installation cost borne by commercial establishments. Based on its assessment, the cost of each fast charger was estimated at around $300,000, with the most significant expenses being rental fees, electricity charges and installation works. Depending on the scale of works, power supply conditions, and complexity of the works, the installation costs could exceed $1,000,000. In its supplementary information provided to members, the Administration stated that having considered members' views, a two-year application period would be set for the Scheme, with the target to start accepting applications from mid-2025 until the closing date in mid-2027 or the exhaustion of the $300 million subsidy, whichever was earlier. It was estimated that all subsidized fast chargers could be commissioned

progressively from 2026 to the end of 2028, which was two years ahead of the original target of 2030.

*Implementation details*

13. Members indicated that the Administration should impose restrictions/conditions in the application or vetting mechanism of the Charger Scheme to ensure a fair distribution of resources among commercial establishments of different sizes, so as to prevent a few large commercial establishments (including their affiliates) from obtaining a substantial portion of the funding. In addition, the Administration should enhance the monitoring of the Scheme's effectiveness to ensure that the public could benefit from it. The measures proposed by members included: (a) extending the period for which applicants were required to make an undertaking to operate and maintain the service of subsidized fast chargers; (b) drawing up requirements and guidelines in relation to the fee-charging mode and transparency of the funded fast chargers; and (c) formulating monitoring measures to ensure that subsidized establishments would still operate and maintain the service of the subsidized fast chargers for the public throughout the period as required under the Scheme after receiving the subsidy in full.

14. Having considered members' views, the Administration subsequently revised the implementation details of the Charger Scheme as follows:

(a) to enable more local commercial establishments to participate in the Scheme, in addition to accepting applications from local commercial establishments with a track record of providing fast charging services (i.e. chargers with a rated power output of 100 kilowatts or above), local commercial establishments with a track record of providing quick charging services (i.e. chargers with a rated power output of more than 20 kilowatts and less than 100 kilowatts) would also be eligible to apply for the subsidy. The applicant was required to provide at least five fast chargers or quick chargers in Hong Kong; or at least 20 fast chargers in places outside Hong Kong within the last two years before 20 January 2025, supplemented with proof. In other words, applicants who only started to install the above number of chargers in the next few months through their affiliates were not eligible to apply for the subsidy;

(b) taking into account that the sites identified by the applicants might only be available for short-term tenancy (e.g. three years), subsidized establishments would be required to operate

and maintain the service of subsidized fast chargers for public use for at least 30 months, which was six months longer than the original 24 months. The minimum hours of the parking/charging spaces open for public use would be increased from 12 to 14 per day;

(c) apart from requiring subsidized establishments to provide the Environmental Protection Department ("EPD") and other online platforms with information on charging, relevant fees and real-time availability, additional conditions would be imposed requiring subsidized establishments to adopt an energy-based fee-charging mode; and

(d) adjusting the time for disbursing the remaining 50% of the subsidy of the Scheme from six months after their operation of the subsidized fast chargers to 15 months.

Furthermore, the Administration advised that it would put in place a monitoring mechanism to check the subsidized establishments' compliance with the requirements of the charging services set under the Scheme. Relevant follow-up actions would be taken upon receipt of complaints, and proactive and regular inspections would also be conducted.

District cooling systems

15. At the meeting on 28 April 2025, the Panel was briefed by the Administration on the latest positions of developing district cooling systems ("DCS") in various New Development Areas ("NDAs") and the review results of their way forward, as well as the proposed amendments to the Schedules to the District Cooling Services Ordinance (Cap. 624). The proposed amendments sought to revise the service scope of the DCS project at Kai Tak and facilitate the commencement of operation of the DCS at Kwu Tung North and the DCS at Tung Chung East. The Panel supported the Administration's introduction of the subsidiary legislation into LegCo, with a view to implementing the amended provisions within 2025.[2]

*Encouraging market participation*

16. Members expressed great concern about how the Administration would encourage and promote the participation of non-governmental

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[2] The District Cooling Services Ordinance (Amendment of Schedules 1 and 2) Notice 2025 was subsequently tabled at LegCo on 25 June 2025 for negative vetting. No subcommittee was formed by LegCo to study the subsidiary legislation. The Notice had come into operation since 5 September 2025.

organizations ("NGOs")/private developers in developing and operating DCS (including smaller-scale DCS/centralized multi-building cooling systems) ("private DCS"). They suggested that the Administration should:

(a) formulate measures such that the financial risks faced by NGOs/private developers would be more manageable, e.g. by imposing certain requirements to ensure that there was a basic number of users connecting to and using the system within the service area of the private DCS;

(b) impose no restrictions on the technology to be adopted by private DCS to promote the application of innovative technologies and enhance cost-effectiveness;

(c) provide more specific information (such as the mode of implementation, service scope and support measures) to enable NGOs/private developers to effectively assess the financial viability and risks; and

(d) invite the market to submit expressions of interest for the development of DCS so that more comprehensive consideration could be given to market views when finalizing the implementation details.

17. The Administration advised that to increase the attractiveness of developing and operating DCS projects, the floor area occupied by DCS and associated facilities would be exempted in full, and there was no upper limit on the floor area that can be exempted, which was more relaxed than the 5% upper limit on the floor area that can be exempted for traditional air-conditioning systems. The Environment and Ecology Bureau ("EEB") would explore with the Financial Services and Treasury Bureau to enhance the relevant preferential tax arrangements. The Administration further advised that DCS enhanced cooling efficiency and cost-effectiveness through economies of scale, and it held an open attitude towards the technologies to be adopted. The Administration undertook to report to the Panel on the specific proposals for incentive measures.

*Implementation modes of district cooling systems*

18. Members noted that DCSs was implemented in different modes around the world depending on factors such as local policies and market demand. Members enquired about the Administration's specific ideas on the implementation modes for private DCS in various NDAs, as well as the

initial response of the private market in relation to participating and investing in DCS projects.

19. The Administration advised that the private market had responded positively to its proposal to adopt a more flexible approach in developing and operating the DCS in NDAs. The Administration had held meetings with certain enterprises that had expressed interest in participating in such projects in order to understand their concerns and relevant experience. EMSD had also conducted a consultancy study to explore modes of private participation in implementing DCS in various places. The Administration would refer to market opinions and the outcomes of the consultancy study, and consider adopting diversified modes, such as public-private partnerships, private development, etc. The overall direction was for NGOs/private developers to fund the development and operation of smaller-scale DCS projects/centralized multi-building cooling systems, while the Government would coordinate the overall planning, provide technical support and formulate incentive measures.

*Charges of district cooling services*

20. Considering that the service charges for private DCS should be comparable to those of government-operated DCS, members advised that the Administration should consider how the charging levels for private DCS should be monitored to prevent overcharging or monopolization.

21. The Administration advised that under the free market mechanism, the charging level of private DCS would be competitive. However, the project costs of different DCS would be affected by multiple factors, and it was difficult to predict the levels of service charge at this stage. Nevertheless, the Administration would study the feasibility of regulating the charging levels of private DCS projects.

Improving air quality

*Regional air pollution issues*

22. At the meeting on 31 March 2025, the Administration reported to the Panel the improvement in Hong Kong's environmental quality in recent years, including improvement in the air quality. Members enquired how the authorities would, through strengthening Guangdong-Hong Kong cooperation, set higher emission reduction targets for both places regarding regional emissions and reducing ozone ($O_3$) levels. Some members were of the view that, to further reduce roadside air pollution, the authorities should draw up a timetable for phasing out Euro V diesel commercial vehicles as soon as possible.

23. The Administration explained that $O_3$ was a complex regional air pollution issue, which was not directly emitted from any source. Rather, it was formed by photochemical reactions of nitrogen oxides ("NOx") and volatile organic compounds ("VOCs") under sunlight. The governments of Guangdong and Hong Kong had been working closely together to address the regional $O_3$ problem. After taking various factors (including the overall economic activities and the emission levels of air pollutants) into consideration, both governments had jointly set emission reduction targets and were taking forward emissions reduction initiatives on the regional air pollutants as planned, aiming to gradually resolve the $O_3$ problem. In addition, many existing decarbonization measures (such as promoting the use of electric vehicles and increasing the share of green energy in the fuel mix for electricity generation) could help reduce emissions of these two types of air pollutants, thereby achieving the dual effects of decarbonization and pollution reduction.

24. The Administration advised that various measures were being implemented to further reduce roadside pollution, such as phasing out pre-Euro IV diesel commercial vehicles, tightening vehicle emission standards to Euro VI (which reduced NOx emissions by 80% when compared to Euro V), and promoting the popularization of electric vehicles. Taking into account that NOx emissions from Euro V diesel commercial vehicles were already 40% less than those from Euro IV vehicles, the authorities had no plans at this stage to phase out Euro V diesel commercial vehicles or implement relevant ex-gratia payment scheme.

*Persistent organic pollutants*

25. At the meeting on 31 March 2025, the Administration briefed the Panel on the latest developments on the control of Persistent Organic Pollutants ("POPs") in Hong Kong and the updating of the Hong Kong Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants. According to the data provided by the Administration on the concentrations/contamination levels of POPs in 2014, 2018 and 2022, the average concentrations of hexachlorobenzene and pentachlorobenzene in ambient air in Hong Kong had been on the rise. Members enquired about the reasons.

26. The Administration explained that, after taking appropriate control measures and implementing continuous environmental monitoring, the concentrations/contamination levels of various regulated POPs in ambient air in Hong Kong had been maintained at a safe and acceptable level. Hexachlorobenzene and pentachlorobenzene were industrial chemicals, and Hong Kong had prohibited their import, export, trade and manufacture;

hence, local production activities would not generate these pollutants. As the unit of detection for POPs was picogram (i.e. $10^{-12}$ gram), very advanced instruments and highly technical requirements were needed. The relevant fluctuations were extremely minute and normal, with the values remaining at safe low levels and lower than those reported by Japan. The Administration would continue to monitor the relevant trends and ensure that interpretation and assessment of potential environmental risks were conducted through rigorous scientific methods and objective evaluation.

*Implementation of the Hong Kong Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants*

27. Members enquired whether, apart from EEB and EPD, other government departments were involved in the implementation of the Hong Kong Implementation Plan ("HKIP"), and what specific plans the Administration had for phasing out old cremation units with a view to reducing emissions of unintentionally produced POPs.

28. The Administration advised that EEB and EPD had all along been working with other relevant departments (including the Agriculture, Fisheries and Conservation Department ("AFCD"), the Water Supplies Department, the Centre for Food Safety of the Food and Environmental Hygiene Department, the Department of Health, and the Government Laboratory) in implementing and following up HKIP within their respective purviews. As regards certain unintentionally produced POPs (e.g. dioxins/furans) from human activities (e.g. incineration processes), the Administration would continue to adopt the best available techniques and best environmental practices to control and reduce emissions of dioxins/furans from stationary sources to the local environment. As regards crematorium facilities, their operation must comply with the requirements of relevant environmental permits and the Guidance Notes on Best Practicable Means for Specified Processes. The Administration had already tightened the Air Quality Objectives in 2015 through amendments to the Air Pollution Control Ordinance (Cap. 311), such that new crematoria in future must comply with more stringent emission standards.

<u>Review of the Ninth Technical Memorandum for Allocation of Emission Allowances for Power Plants</u>

29. At the meeting on 28 April 2025, the Panel was briefed by the Administration on the outcome of the Review of the Ninth Technical Memorandum for Allocation of Emission Allowances for Power Plants, which proposed reducing emission allowances for specified pollutants (i.e. sulphur dioxide, NOx and respirable suspended particulates) ("emission allowances") for power plants for each emission year starting from

1 January 2030 by way of issuing a new Technical Memorandum (i.e. the Tenth TM) under section 26G of the Air Pollution Control Ordinance. The Panel supported the Administration's submission of the Tenth TM to LegCo.[3]

*"Net-zero electricity generation"*

30. During the discussion on the Tenth TM, members enquired about the Administration's review of the Climate Action Plan 2050 ("the Action Plan"), the progress in achieving the relevant targets, and the possible impact on promoting renewable energy and tightening emission allowances anticipated upon the end of the Feed-in Tariff Scheme in 2033. Members urged the Administration to expedite regional cooperation so as to introduce more clean energy into Hong Kong at the earliest opportunity.

31. The Administration advised that:

(a) electricity generation was Hong Kong's major source of carbon emissions (accounting for about 61% of Hong Kong's total carbon emissions in 2023). In formulating the Tenth TM, the Administration had made reference to the targets on electricity generation fuel mix set out in the Action Plan and the approved development plans of the power companies;

(b) it was anticipated that after the completion of the reinforcement project of the clean energy transmission system, the proportion of zero-carbon energy (including nuclear energy and renewable energy) in Hong Kong's electricity generation fuel mix could progressively increase to about 35%; by around 2035, upon the commissioning of the power facilities in Area 132 of Tseung Kwan O, the proportion of zero-carbon energy could further increase to about 60% to 70%;

(c) it was estimated that the proportion of net sent-out electricity output from renewable energy in the electricity output from the overall fuel mix of the power companies could increase from about 1% at present to about 2% in 2030. Drawing reference from the practices in the Mainland or other places, the Administration would progressively reduce and cease subsidies for renewable energy; hence, the likelihood of extending the Feed-in Tariff Scheme beyond 2033 would be

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[3] The Tenth TM was subsequently tabled at LegCo on 4 June 2025 for positive vetting. No subcommittee was formed by LegCo to study the Tenth TM. The new emission allowances will come into effect starting from 1 January 2030.

slim. Nevertheless, the Feed-in Tariff Scheme was only one of the measures to promote renewable energy, and the Administration would continue to take forward various other initiatives in this regard; and

(d) the Administration had been maintaining close liaison with the National Energy Administration and other Mainland authorities to promote regional cooperation in energy.

32. Members stressed that reliability of power supply, environmental performance and price were important factors for sustainable electricity supply. They urged the Administration to assess as early as possible the potential impact on electricity tariffs arising from the relevant targets and measures such as "net-zero electricity generation" and tightening electricity allowances, manage expectations properly, and let the public understand the aforesaid impact and cultivate energy-saving habits. The Administration advised that it would report to the Panel annually on the tariff reviews, as well as continue to encourage the public to save energy and respond to and support the Government's policies and measures on energy conservation and emission reduction.

Buildings energy efficiency

*Amendments to Buildings Energy Efficiency Ordinance*

33. At the meeting on 20 January 2025, the Panel was briefed by the Administration on the proposed amendments to the Buildings Energy Efficiency Ordinance (Cap. 610) ("the Ordinance") and its subsidiary legislation to enhance the energy efficiency management regime ("the regime"), and further enhance energy efficiency in buildings. The Panel supported the Administration's submission of a bill to LegCo, with the target of bringing the amended provisions into full operation within 2026.[4] Members were of the view that to take full advantage of building energy audits, in addition to shortening the audit cycle and expanding the scope of regulation through legislative amendments, the Administration should:

(a) explore the introduction of other measures (e.g. establishing an incentive and penalty mechanism) to further motivate building owners ("owners") to improve the energy performance of their buildings, and implement the energy-saving measures

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[4] The Buildings Energy Efficiency (Amendment) Bill 2025 was subsequently introduced into LegCo on 26 March 2025. LegCo formed a bills committee to study the bill. The bill, as amended, was passed at the Council meeting of 11 June 2025.

recommended in energy audit reports; and

(b) step up efforts in promoting retro-commissioning of buildings.

34. The Administration advised that energy audits enabled owners to regularly review the building services installations and energy use of their buildings, thereby identifying potential energy management opportunities and feasible energy saving options. The electricity cost savings arising from implementing the energy saving measures recommended in energy audit reports constituted the most effective incentive for owners to implement such measures. In addition, the proposed mandatory disclosure of technical information in energy audit reports, together with the relevant disclosure requirements under the environmental, social and governance (i.e. ESG) reporting framework of Hong Kong Exchanges and Clearing Limited ("HKEX"), would also help promote a positive corporate image. The Administration considered it more appropriate for owners to consider on their own whether to implement the recommendations in energy audit reports, having regard to their business scale, financial resources and other factors.

35. The Administration further advised that energy saving measures did not necessarily involve the upgrading or addition of building services installations; continuous improvement in the energy efficiency performance of buildings could also be achieved through system customization. Having formulated the Technical Guidelines on Retro-commissioning, EMSD had implemented retro-commissioning for more than 200 government buildings since 2019 and shared the relevant experience and technical development with stakeholders through various channels.

*Implementation of the Buildings Energy Efficiency (Amendment) Bill 2025*

36. At the meeting on 28 July 2025, the Administration briefed members on the energy saving measures in buildings set out in the Action Plan. Members suggested that, with the implementation of the Buildings Energy Efficiency (Amendment) Bill 2025 passed by LegCo in June 2025, the Administration should be in a position to set more ambitious targets for the energy saving performance in government buildings and facilities. Members also requested the Administration to monitor the effectiveness in implementing the energy saving measures introduced in the designs of new government buildings.

37. The Administration advised that the amended Ordinance would come into full effect in September 2026, when most government buildings would be required to conduct regular energy audits in accordance with the statutory requirements. In addition, the Ordinance would also mandate the

disclosure of technical information in energy audit reports. In future, having regard to the implementation of the Ordinance and making reference to the relevant data, the Administration would work jointly with the industry to identify further opportunities for energy saving, with a view to setting pragmatic targets for enhancing the energy conservation and emission reduction performance of government departments. In terms of building design, the Administration required new government buildings to achieve an energy efficiency performance of 10% better than statutory building energy efficiency standards; in practice, some new government buildings had attained levels exceeding the statutory standards by 15% to 20% under the assessment and certification by BEAM Plus of the Hong Kong Green Building Council.

38. Members considered that the Administration should continue to step up measures to promote energy saving in buildings, and put forward the following suggestions:

(a) explore regulating the power usage effectiveness of data centres;

(b) make good use of advanced and innovative technologies, including actively promoting building materials that help enhance energy efficiency and leveraging artificial intelligence to enhance energy management;

(c) expedite research on the introduction of a building energy efficiency labelling scheme; and

(d) support buildings for educational purposes (particularly schools) in conducting energy audits.

39. The Administration responded as follows:

(a) the amended Ordinance had fully included data centres in the scope of regulation of building energy efficiency standards, and it was believed that the relevant requirements could indirectly enhance the performance of power usage effectiveness of data centres. The Administration would review the latest developments in implementing the Ordinance and continue to communicate with the data centre industry to explore the feasibility of imposing further regulation;

(b) in promoting innovative technologies, the Administration, through the E&M InnoPortal, assisted in matching the technological needs of government departments, public

organizations and the electrical and mechanical trade with innovative technological solutions from the innovation and technology sector and promoting such solutions. Projects related to energy saving included the adoption of artificial intelligence to optimize energy management of buildings and the use of radiant cooling technologies;

(c) the Administration had commissioned a consultant to conduct a study on the establishment of a building energy efficiency labelling scheme, and would take forward the relevant work based on the study findings; and

(d) EEB would liaise with the Education Bureau to enhance promotion on energy audits, so as to raise the awareness of relevant educational bodies on the relevant requirements.

Hong Kong's Climate Action Plan 2050

40. At the meeting on 30 June 2025, the Panel was briefed by the Administration on the latest progress of the key measures set out in the Action Plan, as well as how to promote Hong Kong's development in green and sustainable finance, green economy and low-carbon transformation.

41. Members enquired whether, given the current progress of implementing the measures set out in the Action Plan, the Administration expected to achieve the relevant decarbonization targets as scheduled. Pointing out that some measures under the decarbonization strategies (e.g. promotion of construction materials and technologies conducive to "Energy Saving and Green Buildings", and promotion of green transport) involved various policy areas, members suggested strengthening coordination among government bureaux/departments to enhance the effectiveness of the relevant work.

42. The Administration responded that, with its commitment to implementing the decarbonization strategies under the Action Plan, Hong Kong's total greenhouse gas emissions in 2023 had decreased by about 25% compared to the peak in 2014, and Hong Kong was steadily progressing towards the decarbonization target of reducing carbon emissions by half from the 2005 levels by 2035. On the other hand, EEB coordinated cross-sectoral decarbonization measures. For example, EEB had established an interdepartmental working group to coordinate efforts in addressing difficulties encountered in setting up electric vehicle charging facilities, with a view to expanding Hong Kong's electric vehicle charging network as soon as possible. The Administration had also worked closely with the

Construction Industry Council and the Hong Kong Green Building Council to explore the promotion of green building materials.

*Green finance*

43. Members enquired how the Administration would strengthen alignment with the Mainland to expand the scale of the international carbon marketplace Core Climate. The Administration responded that HKEX had launched Core Climate in October 2022 and the number of participants had increased from about 20 to over 100 by mid-2025, among which included Cathay Pacific Airways Limited, which settled 50 000 tonnes of voluntary carbon credits through Core Climate in December 2024. In addition, the Administration would continue to support HKEX in deepening cooperation with Mainland partners, and HKEX had signed memorandums of understanding with a number of exchanges in Chinese Mainland (including the Beijing Green Exchange and Shenzhen Green Exchange) to share expertise and support cross-border trading, settlement and cooperation, including collaboration on capabilities building for ESG standards and information disclosure.

Generalized Green Framework for the Planning of New Development Areas

44. As stated in the Action Plan, the Government would further optimize NDAs to develop them into carbon-neutral communities in the medium and long run. At the meeting on 28 July 2025, the Administration briefed the Panel on the Generalized Green Framework for the Planning of New Development Areas ("Green Framework"), which provided guidance for the planning of all NDAs with a view to progressing towards carbon neutrality. Members were of the view that the effective implementation of the Green Framework required EEB and the Development Bureau ("DEVB") to, wherever practicable, formulate specific and practical indicators for assessing the relevant work performance of various bureaux and departments. The Administration should provide appropriate guidance on how to tie in with the Green Framework in the fields of green finance and application of innovative technologies, and explore how to create a win-win situation for private enterprises to participate in implementing various decarbonization measures, so as to achieve economic and environmental development in tandem. In addition, the Government should consider leading the cross-bureau work related to the Green Framework at a higher level (e.g. by Deputy Secretary of Department).

45. The Administration advised that:

(a) the Administration had set up different indicators in other areas. The purpose of formulating the Green Framework was to

provide guidance for the planning of NDAs, and the development process of NDAs might span decades, with each NDA having its unique characteristics in terms of location, environment, scale and planning uses. EEB and DEVB would study whether it was necessary to set up other appropriate indicators in the Green Framework to effectively assist bureaux and departments in appropriately incorporating smart, green and resilient elements and corresponding initiatives in the planning of NDAs, taking into account whether the indicators would bring benefits, while also providing the necessary flexibility for the long-term development of the development areas;

(b) the Administration already had various measures (including tax concessions) in place to assist enterprises in accelerating green transformation. On the other hand, Hong Kong's development in green and sustainable finance (e.g. the relevant disclosure requirements under HKEX's ESG reporting framework) also brought other benefits to enterprises' green transformation, including enhancing competitiveness, establishing a positive corporate image and obtaining green loans. The introduction of the Green Framework would further enable enterprises interested in participating in the construction of NDAs to clearly understand the planning direction of NDAs, so as to appropriately plan their business development. The Green Framework proposed that the planning of NDAs should incorporate not only green elements, but also smart and resilient aspects, in which many new technologies could be applied and demonstrated; and

(c) the Administration had always adopted a holistic approach in formulating Hong Kong's environmental protection strategies, and had launched corresponding long-term strategy blueprints and specific measures for major areas. As for the Green Framework, it focused on providing guidance in the area of urban planning to promote the implementation of various green and decarbonization strategies in NDAs. EEB and DEVB would consult other relevant bureaux and departments in implementing the Green Framework, and continue to refine and deepen the Green Framework in light of the views collected.

Waste management

*Landfills and Integrated Waste Management Facilities*

46. On 31 March 2025, the Administration briefed the Panel on the latest position of the waste management facilities, and proposed making legislative amendments to the Waste Disposal (Designated Waste Disposal Facility) Regulation (Cap. 354L) and the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N) in preparation for the commissioning of the Integrated Waste Management Facilities Phase 1 (I·PARK1), the North East New Territories ("NENT") Landfill Extension and the West New Territories ("WENT") Landfill Extensions ("the two landfill extensions").[5] The Administration also proposed to stipulate that designated waste disposal facilities would no longer accept and handle the disposal of vehicle tyre waste. The Panel supported the Administration's proposal.

47. Members enquired about the Administration's estimated reduction in the amount of waste to be delivered to the NENT Landfill after I·PARK1 commenced its operation in 2025. They were also concerned about the operation of pig farms near the NENT Landfill and the odour and other pollution problems caused by the disposed waste to the surrounding environment. Members also asked about the timetable for the WENT Landfill to stop receiving waste.

48. The Administration advised that following the commissioning of I·PARK1, it would review the waste flow patterns at the NENT and WENT Landfills. Overall speaking, the Administration had formulated strategies to achieve the vision of moving away from the reliance on landfills for disposal of municipal solid waste ("MSW") by around 2035. After the completion of I·PARK1 and the Integrated Waste Management Facilities Phase 2 (I·PARK2), the NENT Landfill would completely cease MSW reception and it would be transformed to receiving construction waste only. With reference to the experience of implementing enhancement measures at

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[5] The Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Amendment of Schedule 1) Notice 2025 and the Waste Disposal (Designated Waste Disposal Facility) Regulation (Amendment of Schedule 1) Notice were subsequently tabled at LegCo on 11 June 2025 for negative vetting. No bills committee was formed by LegCo to study these two pieces of subsidiary legislation. The amendments regarding the inclusion of I·PARK1 into the Waste Disposal (Designated Waste Disposal Facilities) Regulation took effect on 1 August 2025. As regards the amendments to include the additional land involved in the extensions of NENT and WENT into the Waste Disposal (Designated Waste Disposal Facilities) Regulation and the Waste Disposal (Charges for Disposal of Construction Waste) Regulation, they would take effect on 5 January 2026.

the NENT Landfill in recent years, the Administration would appropriately apply the relevant environmental and odour management measures to the two landfill extensions, with a view to minimizing the odour impact on nearby residents. On the other hand, EPD would follow up with AFCD on the problem of fly-tipping of waste materials by pig farms near the NENT Landfill.

49. Members were concerned about the progress of building a "Zero Waste Bay Area" by Hong Kong and the Mainland cities of GBA. The Administration advised that the Hong Kong Guangdong Joint Working Group on Environmental Protection and Combating Climate Change met with the Department of Ecology and Environment of Guangdong Province in January 2025, and they had endorsed the establishment of the Special Panel for Building "Zero Waste Bay Area", with a view to exploring the development of GBA's capacity of regional circular economy as well as the specific proposals. Hong Kong and Guangdong would tackle waste management issues through regional strategies and enhance regional recycling of recyclable materials in GBA by leveraging each other's competitive advantages and complementing strengths.

Producer Responsibility Scheme

*Producer Responsibility Scheme for Plastic Beverage Containers and Cartons*

50. On 24 February 2025, the Administration briefed the Panel on the proposal to amend the Product Eco-responsibility Ordinance (Cap. 603) to establish a common legislative framework for Producer Responsibility Schemes ("PRSs"); and the preliminary proposal on the PRS on Plastic Beverage Containers and Beverage Cartons ("the proposed scheme") which would be implemented under the common legislative framework. In addition, the Administration proposed amending the Waste Disposal Ordinance (Cap. 354) to introduce a licensing scheme to ensure proper treatment of relevant regulated products. The Panel supported the Administration's submission of the relevant bill to LegCo,[6] and made the following enquiries or suggestions:

(a) the Administration should implement the proposed scheme as soon as possible and consider the trades' suggestion of setting

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[6] The Promotion of Recycling and Proper Disposal of Products (Miscellaneous Amendments) Bill 2025 was subsequently introduced into LegCo on 28 March 2025. A bills committee was set up by LegCo to study the Bill, which was passed with amendments at the Council meeting of 23 July 2025. Except for specified provisions, the Amendment Ordinance shall come into operation on 1 August 2025 (i.e. the date of gazettal).

the adaptation period at two years;

(b) given that the Administration intended to progressively increase the statutory recovery targets under the proposed scheme in four phases, it should provide a timetable for achieving each target;

(c) the mechanism to be put in place by the Administration to monitor the implementation of the proposed scheme; and

(d) whether the minimum rebate of not less than $0.1 per plastic beverage container/beverage carton proposed by the Administration could create sufficient incentive for the public to return used plastic beverage containers/beverage cartons.

51. The Administration advised that having considered the views of the trade, the recovery targets for the first phase of the proposed scheme had been set at a more pragmatic level, i.e. 30% for beverage containers (the current recovery rate of plastics was about 14%); and 10% for beverage cartons (the current recovery rate was below 1%). This would facilitate the trade's adaptation and establishment of collection network in the early stages of the scheme. These targets would be gradually increased based on the actual recovery situation. The recovery targets of Phase 4 was expected to be achieved within six to eight years of the proposed scheme's implementation, i.e. 75% for beverage containers and 50% for beverage cartons. The Administration would establish a working group to regularly review the progress of the proposed scheme and would provide an adequate adaptation period.

52. Building on the success of the Reverse Vending Machine Pilot Scheme, the Administration suggested requiring designated return points to provide a rebate of no less than $0.10 per beverage container/carton under the proposed scheme. This would provide sufficient incentive to encourage the public to recycle these two types of containers. Coupled with the phased increase in the statutory recovery targets under the proposed scheme, the trade could gradually expand its recovery network or consider increasing the rebate amount based on the actual recovery rate in order to achieve these recovery targets.

*Impact on stakeholders*

53. Members considered that should beverage suppliers or the scheme operators they engaged fail to meet the statutory recovery targets, a recycling payment should be collected for the shortfall in recovery quantity. The recycling payment should be set at an appropriate level to provide sufficient economic incentive for suppliers and scheme operators to achieve the recovery targets, while taking into account their affordability.

54. The Administration advised that it would continue to discuss the implementation details of the proposed scheme with the trade. The preliminary idea was that the shortfall payments for recovery targets not met should exceed the recovery costs. As regards exemption arrangements, suppliers distributing regulated beverage products below a certain level would be defined as small suppliers and exempted from certain statutory requirements. The Administration would work out the distribution volume threshold for exemption in due course and consult with the trade on whether additional exemption arrangements should be provided.

55. Members enquired whether the Administration had assessed the impact of implementing the proposed scheme on the recycling industry and beverage product prices. The Administration stated that the recycling industry generally supported the proposed scheme, as it would help increase recovery volumes. The "market-driven approach" adopted would also help reduce recovery costs. When deciding whether to pass these costs on to consumers, suppliers would also need to consider factors such as the market competitiveness of the prices of their beverage products. The Administration would closely monitor market conditions when rolling out the proposed scheme.

<u>Implementation progress and update of the Hong Kong Biodiversity Strategy and Action Plan</u>

56. On 26 May 2025, the Administration provided the Panel with an overview of progress made under the Hong Kong Biodiversity Strategy and Action Plan ("BSAP") since its implementation in 2016, new global and national developments in biodiversity conservation; and the proposed direction for the updating of the BSAP and the next phase of work. The Administration planned to publish an updated BSAP within 2025 for implementation in the coming decade.

57. Members noted that Hong Kong's first city-level BSAP had guided the local biodiversity conservation efforts from 2016 to 2021. In January 2024, the country's Ministry of Ecology and Environment also released the China National Biodiversity Conservation Strategy and Action

Plan (2023-2030) ("NBSAP"). However, the Administration only commenced public consultation on the updated BSAP in May 2025. Members enquired about the factors considered by the Administration in setting the relevant work schedule.

58. The Administration explained that it had originally intended to update BSAP in 2021 in response to the latest biodiversity initiatives adopted at the 15th meeting of the Conference of the Parties ("COP") to the United Nations Convention on Biological Diversity. However, due to the epidemic, the adoption of the Kunming-Montreal Global Biodiversity Framework at COP was postponed until December 2022. Taking into account the timing of the publication of NBSAP, the Administration decided to propose updates to BSAP in 2025, thereby considering both national and global developments.

59. Members enquired about the progress of the Administration's work on compiling an inventory of invasive alien species ("IAS") and a list of threatened species under BSAP. The Administration advised that risk assessments had been conducted for target IAS species. First, it would compile an inventory of IAS that posed greater potential impact on local ecosystems, while also initiating studies to improve the management and control of such species. The Administration noted that assessing the distribution, population status and trends, and the threats faced by species under a rigorous scientific approach was technically complex. Consolidating the conservation status evaluations of Hong Kong's species across relevant professional bodies to ensure consistent assessment criteria would also take time. The Administration anticipated completing the first phase of assessments by 2025 and publishing the list of threatened species in phases. During the update to BSAP, the Administration would also review the need to formulate conservation action plans for additional endangered species.

*Mainstreaming biodiversity issues*

60. Members suggested enhancing cross-bureau/departmental collaboration to capitalize on biodiversity-related opportunities in various sectors such as tourism and finance. This would allow the economy to develop alongside the conservation of natural ecology, while safeguarding the interests of relevant property owners. Members were particularly concerned about how EEB would enhance communication with the Development Bureau to ensure that land and infrastructure development in various districts of Hong Kong (such as Lau Fau Shan) leveraged biodiversity value reasonably and enhanced the economic benefits of development projects (such as the large-scale land disposal for the building of new tourism and recreation areas at Tsim Bei Tsui and Pak Nai

Eco-tourism Nodes, as well as the South Lantau Eco-recreation Corridor). On the other hand, the Administration should also consider offering stronger incentives to promote the use of private resources for nature conservation.

61. The Administration advised that relevant bureaux and departments had maintained close liaison and incorporated biodiversity considerations into their respective work, thus complementing each other's efforts. Examples of work in different areas were as follows:

(a) biodiversity was incorporated as one of the factors in the environmental impact assessment of development planning and the implementation of various engineering projects, with eco-friendly designs adopted wherever possible to mitigate ecological impacts;

(b) the inter-departmental Working Group on Developing Tourism Hotspots, led by the Deputy Chief Secretary for Administration, was examining how to leverage Hong Kong's natural resources to create additional tourism hotspots;

(c) in addition to promoting "environmental, social and corporate governance" as a corporate strategy, "climate change adaptation" and "nature conservation/biodiversity" would be incorporated into the eligible funding categories covered by the Green Bond Framework to facilitate the flow of resources and capital towards nature conservation and environmental protection projects; and

(d) implementing management agreement schemes and public-private partnership schemes to conserve sites of high ecological value owned by private parties through cooperation with NGOs and rural communities. In addition, the Administration would set up community gardens and urban farms in suitable communities or NDAs to promote community involvement.

<u>Implementation of the Wild Animals Protection (Amendment) Ordinance 2024</u>

62. On 30 June 2025, the Panel received a briefing from the Administration on the implementation of the feeding ban under the Wild Animals Protection (Amendment) Ordinance 2024 since its commencement on 1 August 2024, as well as other related measures. Members urged the Administration to continuously review and enhance the measures relating to the implementation of the feeding ban, and put forward a number of

suggestions, including the use of drones to assist with enforcement, installation of voice warning devices at illegal feeding blackspots, etc., with a view to preventing and combating illegal feeding activities more effectively.

63. The Administration advised that it was reviewing the feeding ban strategy for wild animals and would explore feasible enhancement measures as appropriate. Meanwhile, the Administration was actively studying ways to use technology to enhance the effectiveness of enforcement. Relevant work included:

(a) installing over 100 infrared cameras at blackspots for illegal feeding of wild pigs to aid surveillance;

(b) installing a closed-circuit television system equipped with artificial intelligence technology at a car park in Kam Shan Country Park, which was a location with frequent activities of illegal feeding of monkeys. The system could issue real-time alerts to enforcement officers upon detecting suspected illegal feeding activities;

(c) conducting a preliminary study on the feasibility of using mobile closed-circuit television system at specific locations for monitoring illegal feeding of feral pigeons; and

(d) exploring the feasibility of trialling the use of artificial intelligence-powered patrol robots with broadcast capabilities to assist in reminding the public not to feed wild animals and feral pigeons.

*Enforcement situation*

64. According to the information provided by the Administration, the number of feral pigeons and wild pigs had declined following the implementation of the Wild Animals Protection (Amendment) Ordinance 2024. However, members pointed out that as reflected by some members of the public, there still seemed to be quite a lot of feral pigeons and wild pigs in certain districts. Members expressed particular concern about the illegal feeding of feral pigeons in private places, and considered that the Administration should strengthen its evidence-gathering capabilities. Members also enquired about how the Administration ensured the accuracy of the wild pig population figures, and what criteria were used to include individual locations in the list of wild pig nuisance blackspots.

65. The Administration responded that in handling cases involving illegal feeding of feral pigeons in private premises, enforcement officers would seek the assistance of relevant property management offices if necessary, and would explore the feasibility of planning enforcement actions at suitable locations in the premises concerned. Based on past experience, property management offices were generally highly cooperative with investigations and would provide appropriate assistance. In addition, enforcement officers might meet with individuals who had reported the cases to gather more information to aid enforcement. If necessary, enforcement officers would also seek consent to use individuals' units to monitor the relevant feeding activities. The Administration was also exploring the use of small drones to assist with evidence collection. An interdepartmental working group on feeding ban enforcement, comprising AFCD, the Food and Environmental Hygiene Department, the Leisure and Cultural Services Department and the Housing Department, closely monitored the latest situation regarding illegal feeding activities across Hong Kong. The working group shared intelligence and conducted joint enforcement operations as necessary.

66. The Administration further advised that since 2019, AFCD had set up infrared automatic cameras at different locations in Hong Kong's rural areas to collect data, which were then sent to experts in New Zealand for analysis and estimation of the population density of wild pigs using ecological statistical models, thereby extrapolating the overall wild pig population in the territory. Wild pig nuisance blackspots were determined based on indicators such as wild pig gatherings resulting from illegal feeding activities and cases of human injury. For example, a location would be listed as a blackspot if an injury case occurred or if AFCD identified gatherings of over five wild pigs causing nuisance upon receiving complaints and conducting inspections.

Meetings held

67. From 20 January to September 2025, the Panel held a total of 9 meetings.[7]

[7] As the item originally planned for discussion at the regular meeting on 13 October 2025 (i.e. Charging network for electric vehicles) has been discussed at the policy briefing-cum-meeting on 29 September 2025, the regular meeting in October 2025 has been cancelled.

Visit

68. On 3 June 2025, the Panel visited CLP Power Hong Kong Limited Shatin Centre and viewed its innovative technology projects.

Council Business Divisions
Legislative Council Secretariat
30 September 2025

**Appendix 1**

# Legislative Council

## Panel on Environmental Affairs

## Terms of Reference

1. To monitor and examine Government policies and issues of public concern relating to environmental matters, energy matters (including energy supply and safety), conservation, sustainable development and weather information services.

2. To provide a forum for the exchange and dissemination of views on the above policy matters.

3. To receive briefings and to formulate views on any major legislative or financial proposals in respect of the above policy areas prior to their formal introduction to the Council or Finance Committee.

4. To monitor and examine, to the extent it considers necessary, the above policy matters referred to it by a member of the Panel or by the House Committee.

5. To make reports to the Council or to the House Committee as required by the Rules of Procedure.

**Appendix 2**

## Panel on Environmental Affairs

## Membership list for 2025 session

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|---|---|
| **Chairman** | Hon LAU Kwok-fan, MH, JP |
| **Deputy Chairman** | Hon Judy CHAN Kapui, MH, JP |
| **Members** | Hon CHAN Hak-kan, SBS, JP<br>Hon Steven HO Chun-yin, BBS, JP<br>Hon Frankie YICK Chi-ming, GBS, JP<br>Hon KWOK Wai-keung, BBS, JP<br>Hon Elizabeth QUAT, SBS, JP<br>Ir Dr Hon LO Wai-kwok, GBS, MH, JP<br>Dr Hon Junius HO Kwan-yiu, BBS, JP<br>Hon LUK Chung-hung, JP<br>Hon Kenneth LAU Ip-keung, SBS, MH, JP<br>Hon Tony TSE Wai-chuen, SBS, JP<br>Hon CHU Kwok-keung<br>Dr Hon Hoey Simon LEE, MH, JP<br>Hon Robert LEE Wai-wang, JP<br>Hon Dominic LEE Tsz-king<br>Hon CHAN Yuet-ming, MH<br>Ir Hon CHAN Siu-hung, BBS, JP<br>Prof Hon LAU Chi-pang, BBS, JP<br>Hon Carmen KAN Wai-mun, JP<br><br>(Total: 20 members) |
| **Clerk** | Ms Angel SHEK |
| **Legal Adviser** | Mr Alvin CHUI |