

By Hand

30 August 2019

The Honourable Carrie LAM CHENG Yuet Ngor GBM GBS  
The Chief Executive  
c/o Policy Innovation and Co-ordination Office  
26/F, West Wing, Central Government Offices  
2 Tim Mei Avenue, Tamar  
Hong Kong

Dear Mrs LAM

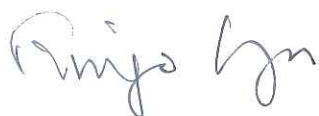
**Views from the Hong Kong Institution of Engineers to the Chief Executive for Formulation of the 2019 Policy Address**

On behalf of the Institution, I am pleased to present to you our views and suggestions as set out in the enclosure for your consideration in the preparation of the 2019 Policy Address.

With our expertise and experience, the Institution welcomes the opportunity to work with the Government on areas of concern for the benefits of the profession and the general public as a whole.

Thank you.

Yours sincerely



Ir Ringo YU Shek Man  
President  
The Hong Kong Institution of Engineers

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**Views from the Hong Kong Institution of Engineers  
to the Chief Executive for Formulation of 2019 Policy Address**

The Hong Kong Institution of Engineers (HKIE) pursues engineering excellence and professional development for the benefit and advancement of the engineering profession as well as the community as a whole. We welcome the Administration in setting out policies with timely, practical and prudent measures in response to the challenges facing Hong Kong. To accomplish our commitment to the society, the HKIE would like to put forth our views on the forthcoming Policy Address to the Administration for consideration.

**Land & Housing**

2. Shortage of land supply is not a cliché, but a pressing issue threatening people’s livelihood and our long-term social and economic development. The HKIE supports the eight land supply options shortlisted by the Task Force on Land Supply which could provide a multi-pronged strategy to increase land of different kinds from various sources for provision at different times. These land supply options could yield a total of some 3,000 hectares of land to break the deadlock of land shortage as well as building a land reserve for development needs in the future. The Institution urges the Administration to take forward these land supply options and conduct early studies on the various options in parallel. Whichever sites under these options could yield land earlier will be the practical options. The Administration is also suggested to consider establishing a high-level committee to oversee and coordinate among relevant bureaux and departments the implementation of the land supply initiatives.

3. The HKIE supports commencing studies for development of the artificial islands in the Central Water, and reclamation projects on the northern side of the Lantau Island as well as the coastal areas of Tuen Mun. The Administration is suggested to implement those in a timely, eco-friendly and cost effective manner by applying modern technology, as well as necessary mitigation and compensation measures. The Institution supports giving priority to near-shore reclamation in identified sites, such as Siu Ho Wan, Sunny Bay and Lung Kwu Tan, which would be easily connected to existing road networks and developed areas without encroaching on environmentally sensitive areas. The Institution suggests to continue pushing ahead the construction of the artificial islands in the Central Waters at full swing since apart from offering the biggest piece of virgin ground for Smart City development. It will also provide the much needed and vital strategic infrastructural support, especially transport infrastructure, on Hong Kong’s future development in the next decades.

4. In view of Hong Kong’s hilly terrain and strong rock formations, the HKIE agrees to continue identifying projects suitable for caverns and underground space development as one of the medium-to-long term options. We support the proposed underground space development scheme in Kowloon Park to improve the pedestrian connectivity amongst the MTR stations and different destination nodes. Regarding the engineering design of the proposed scheme, the Administration is suggested to consider thoughtfully on the respective external structures (e.g. ventilation shafts, ingress/egress buildings, etc.) as well as energy saving and green elements.

5. Shortage of affordable and decent housing is another immediate problem that needs to be addressed. The Institution welcomes the setup of the Task Force on Transitional Housing to provide one-stop support in transitional housing issues and interim/ facilitating measures such as

community-initiated transitional housing projects to alleviate the hardship faced by the families living in poor condition. The Administration is recommended to allow flexibility or exemption under the Buildings Ordinance for eligible transitional housing projects in old domestic buildings with building design constraints, while also supporting the project proponents with compensatory measures to provide residents with a safe and reasonable living space. Meanwhile, the Administration shall take lead in exploring innovative construction technologies to tackle the constraints of modular integrated construction (MiC) technologies to build high-rise modular housing and to extend the use of various precast concrete components (PCCs), such as precast structural walls and corridor slabs, to further enhance buildability and productivity.

6. According to the Projections of Population Distribution 2019-2028 prepared by the Planning Department, it is estimated that the population of all new towns would constitute 47.7% of the total Hong Kong's population in 2028<sup>1</sup>. We support the continuous development of new town extension projects in the New Territories. Besides, to achieve sustainable development in the old public housing, it is suggested to accelerate the redevelopment of aged public rental housing estates and with due consideration to various technical and environmental impact assessments, local master plans, urban design and the development intensity during redevelopment.

7. Urban planning is a valuable force to achieve sustainable development. One of the cost-efficient ways is to make optimal use of vacant government properties and idle lands. The HKIE opines that the Administration shall streamline application and approval procedures for projects involving the use of vacant government sites. Public-private partnership under the basis of fairness and transparency should also be encouraged to realise the potential of private land in the New Territories.

## **Economy & Innovation**

8. The recent release of the Opinions on the Implementation of Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) guides current and future cooperation, as well as development of Hong Kong, Macau and the nine cities in Guangdong's Pearl River Delta from now to 2035. The ample regional and multi-national opportunities ahead allow Hong Kong to leverage and scale its strengths and competitive advantages. Hong Kong, at the forefront of the GBA development, can act as an innovation and technology hub, a modern infrastructure system, and a globally competitive modern industrial system as laid down in the Opinions.

9. With a view to extending Hong Kong's international connections and experiences to the Mainland and helping to bring in foreign investments to the GBA, the HKIE supports hosting more international events and conferences as well as upgrading convention and supporting facilities to promote Hong Kong brands and join hands with Mainland enterprises to develop overseas markets. Different initiatives should also be introduced to facilitate flexible mobility of talents and professionals to practice in the GBA.

10. For the advancement of I&T, Hong Kong should further capitalise its advantages in research and development capabilities, technological infrastructure, legal system and intellectual property to spearhead the industry, and act as a business platform for innovative and start-up companies. The HKIE supports providing subsidies to facilitate young entrepreneurship and employment along with

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<sup>1</sup> The Planning Department of the HKSAR Government (2017), *Projections of Population Distribution 2019-2028*, Retrieved from [https://www.pland.gov.hk/pland\\_tc/info\\_serv/statistic/wgpd19.html](https://www.pland.gov.hk/pland_tc/info_serv/statistic/wgpd19.html)

the development of Shenzhen-Hong Kong Youth Innovation Entrepreneurship Base. To encourage a thriving start-up ecosystem, it is also suggested to expand the scope of Research and Development Cash Rebate Scheme and its tax deduction to include projects on environmental protection and design. Furthermore, the Administration shall continue coordinating with the Mainland authorities in facilitating Hong Kong engineers to obtain the necessary professional qualification earlier and to practice in the GBA.

11. To facilitate innovation development realisation, the Administration is suggested to streamline the application and approval processes to enable the engineering and construction industry to get support from necessary funding in a convenient and orderly manner. Besides, the Administration should continue providing incentives to promote innovations and render better support to the local engineering and manufacturing.

12. A sustainable pace and strong coordination in infrastructure development is important to provide Hong Kong with a foundation for social and economic growth. We consider that efficient vetting of the funding proposals for the capital works projects in a practical manner is therefore very essential. On the other hand, the Administration is suggested to optimise current procurement mechanism by splitting large public works projects into different contracting to encourage participation by contractors of different sizes and expedite implementation. The Institution opines that the Administration should also attempt to impose more tightened policies to discourage and prevent erratic or unreasonable low bids in the public works project procurement process (both consultancies, works and maintenance contracts) in view of the difficulties and risks these will bring on project management, quality control, safety, as well as adherence to project programme, which will not bring benefits to the employer ultimately. In light of the workforce challenge of the construction industry, it is also suggested to consider importing skilled workers as appropriate and providing incentives and support for the local in-service skilled workers to nurture the semi-skilled workers.

## **Education & Research**

13. The Institution supports the implementation of the Life-wide Learning Grant to promote out-of-classroom experiential learning activities in various curriculums including STEM education. Furthermore, the Administration is suggested to provide further support to teachers on professional trainings for the enhancement of teaching in STEM education by devoting sufficient resources and encouraging more university-school partnerships. Through provision of sample teaching plans and related trainings in teaching methods, know-how and underlying concepts, we believe that teachers will be able to better master STEM teaching and this would maximise the learning process and outcomes.

14. The HKIE is pleased to note the setup of Task Force on Promotion of Vocational and Professional Education and Training to review how vocational training and related education can be better promoted. We suggest the Administration to consider providing funding to help self-financing post-secondary education institutions to set up workshops and laboratories for teaching the subjects of engineering and technology in order to supply new blood for the construction, electrical and mechanical, and other related industries that are facing problems with an ageing and dwindling workforce.

15. Noting the importance of providing multiple pathways for students, we concur that the Administration should reinforce applied education in secondary schools to unleash diverse talents since an early age. The HKIE encourages the Administration to develop strategic plan and allocate

sufficient resources to enhance the promotion of vocational education and skills-based professions as alternative career pathways. The Administration may consider strengthening the sub-degree system by making the Higher Diploma as a progression pathway towards applied degrees, further differentiating it from the Associate Degree. Meanwhile, sufficient internship positions and on-the-job training opportunities should also be made available for students to learn practical mindsets and skills. Through extensive industry involvement, the gap between academic education and vocational training can be narrowed and mismatch of knowledge and skills between schools and workplaces can also be eliminated.

16. On the other hand, the Administration is recommended to continue supporting professionals in pursuing continuing professional development by providing subsidies and tax allowance. This facilitates upward social mobility and cultivates a lifelong learning atmosphere in Hong Kong. Furthermore, we suggest the Administration to expand the range of courses covered under the Continuing Education Fund to include courses relating to the engineering and construction industry as well as other new technologies to tackle and prepare for the current and potential shortage of manpower in the field.

### **Quality and Smart City**

17. To build a sustainable quality and smart city, adoption of data sharing policies and smart concepts would be one of the keys. The Administration should take lead in exploring cross-departmental collaboration and public-private partnership in implementing data sharing and smart concepts to reduce the redundancy and speed up the administration process in the delivery of public services and utilities. The Institution suggests the Administration to develop a set of data exchange standards, rules and regulations to ensure efficient implementation of the Common Spatial Data Infrastructure (CSDI) which will fully operate by the end of 2022. Moreover, the Administration should review regularly regulations and legislation on big data usage in response to privacy concerns.

18. The Institution supports the Administration's initiative to enhance walkability in Hong Kong and suggests that sufficient funding should be allocated to relevant studies. The Administration should also continue exploring how to further improve walkability and connectivity between major public transport nodes apart from the provision of improving pedestrian links.

19. In line with the 10-year Hospital Development Plan to provide hardware support to Hong Kong's healthcare system, avoid duplicated medical checkups and seamlessly divert patients from one healthcare system to another, the HKIE urges the Administration to drive for platform integration and data sharing of different e-initiatives (e.g. Electronic Health Record Sharing System) among private professionals and public hospitals. This can also reduce the workload of frontline staff by reducing redundant administration work.

20. Noting the data from the Social Welfare Department, we are pleased to know that applications for the Innovation and Technology Fund for Application in Elderly and Rehabilitation Care from over 100 service units have been approved. The HKIE recommends the Administration to extend the coverage of the Fund to include not only the procurement/ rental/ maintenance of technology products, but also the installation cost to further reduce the burden of service units in upgrading current facilities. The Administration is also recommended to provide resources for collaboration and development of innovation technology for elderly care between services units and local research institutions in order to encourage development and application of innovation for elderly care in Hong Kong.

## Environment

21. The share of renewable energy in power generation in countries of the Organisation for Economic Co-operation and Development reaches about a quarter in 2018, continuing a trend of nearly 10% increase since 2008<sup>2</sup>. We support the Administration's efforts in carbon reduction to help combat climate change and will actively engage in the upcoming consultation relating to the long-term decarbonisation strategy for Hong Kong from the perspective of engineering.

22. The Institution is pleased to note that the Administration is enhancing energy efficiency of existing Government buildings, while we further suggest the Administration to also increase the proportion of renewable energy provision in new Government buildings, educational buildings and open spaces. For the private sector, the Administration is suggested to provide subsidies and set up regulations for property developers on energy saving design of green buildings to enhance energy efficiency in households and offices. We also recommend the Administration to conduct studies on alternative incentive schemes for existing buildings' energy saving projects, such as providing upfront funding for existing buildings to incentivise them to apply for green building labels, etc.

23. Apart from electricity generation, the HKIE suggests the Administration to develop more waste-to-energy facilities, such as T•PARK, for the purposes of operation, recreation and education for engaging the public in waste reduction, as well as Organic Waste Treatment Facilities Phase I development which has been put to use for converting organic waste from commercial and industrial sectors into compost and biogas for power generation. In the long run, the Administration is encouraged to formulate long-term planning for the construction of waste management facilities, including integrated waste management facilities, sewage treatment works and landfills.

24. The waste statistic data show that the municipal solid waste (MSW) disposal rate per capita has progressively increased from 1.27 kg/capita in 2011 to 1.45 kg/capita in 2017 with a yearly averaged increasing rate of 0.03 kg/capita<sup>3</sup>. The HKIE supports the use of MSW charging scheme with the aim to create financial incentives to drive behavioural changes in waste generation in line with the "polluter pays" principle.

25. At the same time, the Administration is suggested to allocate adequate resources to Food Waste Recycling Group, which should particularly focus on formulating new regulatory measures on food waste disposal. Promoting recycling "waste cooking oils" collected from local relevant industries as industrial products (e.g. biodiesel) is also recommended by providing financial and technical support to facilitate business matching between research institutes and companies. To further promote a wide use of biodiesel manufactured from locally made "waste cooking oil", the Administration is suggested to formulate measures to encourage the oil companies to extend retail service of biodiesel to their oil stations in Hong Kong Island.

26. To facilitate the future development of the local recycling industry, the Administration is suggested to conduct a comprehensive circular economy study to examine the potential for closed loop systems in key waste streams in Hong Kong or in conjunction with the wider region.

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<sup>2</sup> International Energy Agency (2019), *Key Electricity Trends 2018*, Retrieved from <https://www.iea.org/newsroom/news/2019/april/key-electricity-trends-2018.html>

<sup>3</sup> Environmental Protection Department of the HKSAR Government (2019), *Monitoring of Solid Waste in Hong Kong - Waste Statistics for 2017*, Retrieved from <https://www.wastereduction.gov.hk/sites/default/files/msw2017.pdf>

Relevant policies and initiatives should then be formulated for different streams of waste recycling, including but not limited to paper, wood, plastics, etc., in the recycling industry, especially for the integration with the GBA. In particular, the Administration should develop outlets for recycled plastics and an overall policy on plastic recycling and deposit scheme.

27. To encourage the replacement of traditional vehicles by electric vehicles (EVs), we note that the Administration has relaxed the application criteria of the “One-for-One Replacement” Scheme, including provision of a higher first registration tax (FRT) concession. The Administration is advised to waive the FRT in order to provide greater financial incentives to the public and to help facilitate the provision of charging facilities in public areas as well as in private property. The Administration is suggested to review the tax system in a way that the purchase of EVs, not just focusing on a specific brand name, could be widely promoted, while at the same time it could curb the growth of new vehicles in Hong Kong. On the other hand, the HKIE is concerned about the disposal of the electric vehicles’ batteries due to the lack of storage area and relevant recycling industry. To address the long-term electric vehicles’ batteries disposal problem, a strategic plan with detailed development of relevant supporting industries is essential for electric vehicles to be more popular for the citizens. The Administration should also address similar concern on the disposal problem of solar panels which are widely used under the feed-in-tariff Scheme in Hong Kong contemporaneously.

28. The HKIE notes that the Administration has introduced an initiative to link up the waterfronts areas on both sides of Victoria Harbour. The Administration is suggested to formulate a comprehensive development plan of future harbourfront enhancement, including improvement of current harbourfront facilities and future matching transport facilities, and to explore the possibility of conversion of the existing seawall into eco-shoreline to enhance marine ecology as well as the public enjoyment along the seafront.

29. On the other hand, we note the odor nuisance caused by discharged wastewater of questionable buildings entering the water body of Tuseen Wan and West Kowloon through the stormwater drainage system. With the growing population along these coastal areas, the Administration is suggested to speed up the proposed works for further improving the performance of the stormwater drainage system, such as constructing dry weather flow interceptors.

30. In view of the growing demand of human capital in the field of environmental management, the Administration should also allocate more resources on nurturing talents with relevant expertise, such as photovoltaics (PV) and green finance. We consider that there is huge room for capacity building related to this field for the Government, business sectors, sustainability practitioners, and green groups, etc.

## **Conclusion**

31. The HKIE hopes that the upcoming Policy Address will formulate policy initiatives to meet the needs of all walks of life to continue developing the Hong Kong economy and improving people’s livelihood. By working together, including the community and the government, the old and the young, the rich and the poor, the HKIE believes the Administration can lead Hong Kong to get out of the local predicament and continue to prosper in the face of global uncertainties.