The views of the Association of Engineering Professionals in Society (AES) on arrangements to cater for new supply sources for the future electricity market in Hong Kong

Support Government Policy Objective

1. We support the existing Government policy objective of ensuring that the public can continue to enjoy **reliable**, **safe** and **efficient energy supplies** at **reasonable price**, and to **minimise the environmental impact** caused by the production and use of energy.

Uphold the existing win-win-win situation

2. The existing Scheme of Control Agreements (SCAs) have been enabling the Government's policy objective to achieve to a very large extent, in term of outstanding supply reliability (up to 99.999%), and reasonable and affordable tariff (<2 % of average household expenditure). Both power companies have also successfully demonstrated environmental performance. Hong Kong enjoys a world-class electricity system. It is highly reliable, tailor-made to meet Hong Kong's high-rise needs and cheap by international standards.

3. Additional to its benefits to the public at large, the existing electricity supply arrangement does not require any revenue from the Government and the taxpayers. The two giant power companies are the major Hang Seng Index constituent stocks, providing stable and regular yield for pensioners, and reliable and steady capital appreciation for investors. It is a very successful case of Public Private Partnership, specifically the privatisation but not without Government monitoring and has long been creating a win-win-win situation for the citizens, the Government and the investors over the past decades. We support the current SCA-type of arrangement or similar bilateral agreements. Many of the arrangements under the existing Scheme of Control are worth retaining. Reform must not be introduced just for the sake of reform, and dismantle the existing ideal arrangements to the detriment of the public.

Rates of return

4. In view of the very long term payback period and long term fuel contracts, the huge investment and many uncertainties of the electricity supply industry, the permitted rate of return should not be set to too low a level, disincentivising long-term investment to the supply system.

5. The implicit comparison between the rate of return used in other countries and what should apply to Hong Kong is not very appropriate. A back-of–the-envelop adaptation of those overseas benchmarks with greater regard to the vertical integration and other nature of the local power supply companies suggests that the Government should provide for a much higher average rate of return than the average 9%-10% in the consultation paper, let alone the lowest bound of 7%.

6. Asset classification will further complicate the return issue, create bureaucracy, and increase administration burdens and costs. Proposing the lowest rate of return for emission reduction facilities contradicts the environmentalist's "user pays" principle.

Duration of the new agreement

7. The proposed duration of 10 + 5 years is too short for certainty, as it fails to recognise the long-term nature of the electricity industry, where fuel supply contract is normally over 20 years and assets last for 30 years or longer. This is not commensurate with investment risks and it may discourage timely investments, which would affect supply reliability. The regulating period should remain 15 years as with the current SCAs.

Supply from the Mainland

8. The current power shortages, supply reliability and environmental performance in Guangdong mean that introducing new supply from the Mainland is not ready. It would be prudent at this stage not to predicate the future development of the electricity market in Hong Kong on supply from the Mainland.

Renewable Energy

9. The Government's proposals for renewable energy (RE) development are not enough to encourage other parties to develop RE projects, except the two existing players or in conjunction with them. Incentives should also be provided to promote the use of RE by individual consumer/user. The differential returns set down for emission reduction and RE would skew the incentives of the power companies.

Open Market

10. Based on overseas experience, market reforms are risky and may result in adverse consequences, e.g. California Crisis. Government need to carefully consider the pros and cons of opening market.

11. There will be an increasing regulatory risk through unclear plans to migrate to a competitive market. It will not be easy for any of the new players to enter the market either in small-scale or large-scale manner, the latter of which requires interconnection with the existing players. On the other hand, they will not have any positive impact on consumers in the short-term and they are likely to complicate existing player's return on SCA and to "cherry-pick" the industrial customers or easily accessible customers.

12. As engineers, we are worried about disorder in the market, with new players being allowed to enter without any clear plan of how this will affect the supply system, and the customers. We are against the introduction of new players at the present immature stage, when the Government has not drawn up or even has not started to draft any rules for it.

13. If Hong Kong decides to have transition to an open market for electricity supply market (note this decision has not been reached yet), then principles suitable to Hong Kong conditions should be established in consultation with a wide range of stakeholders and sectors of the society.

14. Introducing new retail players before a wholesale competitive market is developed is likely to result in inefficient use of resources, create unfairness between customers, blur the line of accountability and compromise supply reliability.

15. In the long run, if competition is introduced, it should be on a level playing field for all the players. It would only be possible when there are compatible legal, commercial, environmental and technical frameworks between HK and the Mainland. This would take time, and progress would depend very much on the electricity development in the Mainland.

Increased interconnection with Mainland

16. Increased interconnection with Guangdong may only be required in the long-term future when there is a regional market in the South China and Hong Kong joins it.

17. It is technically challenging to have perfectly coordinated large-scale interconnected systems, in particular across different jurisdictions.

18. Multiple participants are likely to blur accountability for reliability of supply and responsibility of failures.

19. There were severe consequences demonstrated in the blackouts worldwide, in particular massive one in the US/Canada, including massive social and economic costs.

Increased interconnection between CLP and HEC

20. Currently, the two power companies in HK are already interconnected. Increased interconnection between the two power companies should depend on economic justifications.

21. The marginal benefits associated with interconnector expansion to enhance system efficiency and optimise system resources would probably be small. However, interconnector expansion costs are substantial and likely to be several times the scale of the benefits.

Grid Access

22. Grid access would be vital when there is a competitive electricity market in the long-term future.

23. Comprehensive technical codes and guidelines would be required to ensure compliance with technical standards and supply reliability.

Environmental Improvement

24. The Government's two proposals, of adopting a lowest return rate for environmental improvements on coal-fired units and imposing penalty on all assets against unilaterally and arbitrary set emission targets, are environmental disincentives and unreasonable investment risks.

25. We consider that there should be clear, long term and integrated energy and environmental policies with respect to the fuel mix, security of fuel supply, and role of coal and natural gas in Hong Kong. The Government needs to decide whether coal should be used as a long-term fuel for Hong Kong, or whether more gas generation is needed. Clear answers to these questions will appropriately lead to establishment of consistent environmental regulations which set emission targets with some reference to practicality of fuel mix and overall cost to

the society. At the moment, emission targets are dealt with on an arbitrary basis, which is not in the best interest of the society.

26. Further lowering of the tariff is likely to encourage higher power consumption by members of the public and is against the promotion of environmental protection because it tends to increase emission. On this aspect, we would rather have the approach be set towards energy audits, and public promotion of energy conservation and savings in energy usage.

Some other aspects

27. Both existing power supply companies have thousands of employees and are leading players in world standards. Their success is Hong Kong's pride. If we open up the market relying mainly on electricity supplied from China Mainland, their downturn will adversely affect our economy and the employment market. The Government has a duty to ensure that the new regulatory arrangement will not undermine these Hong Kong enterprises, being detrimental to the very established power industry in Hong Kong and affecting several thousands of employees' employment.

28. Whilst we should not be jealous of the two existing power companies for their recently announced huge profit, the companies should also recognise that they owe to their long time customers, the Hong Kong people. They should undertake more of their corporate social responsibility initiatives to pay back the society in a number of ways, such as self-initiated tariff cut, public education on energy sustainability, research and development on RE, etc.

Conclusions

39. In summary, we do not agree with many of the Government proposals because they could jeopardize the long-term reliability of our electricity supply system, which is vital to our economy, safety etc. The present regulatory model has been working very well – we in Hong Kong have an electricity system that is the envy of the developed world. We should not lose sight of it.

30. The cuts in return and duration, unclear plans for a future competitive market, and environmental proposals result in large increases in risk to the power companies. This will inevitably discourage investment and compromise reliability, which is of paramount importance to Hong Kong as a whole. The Government needs to revise its proposals to ensure sustained excellence in the electricity supply system.

31. We need to be extremely prudent in considering opening the market at this pre-mature stage, when many of important legal, technical, financial and environmental issues are still yet to be thoroughly studied and further assessed.

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