

**立法會**  
***Legislative Council***

LC Paper No. PWSC76/20-21  
(These minutes have been seen  
by the Administration)

Ref: CB1/F/2/1(8)B

**Public Works Subcommittee of the Finance Committee  
of the Legislative Council**

**Minutes of the 8<sup>th</sup> meeting  
held in Conference Room 1 of the Legislative Council Complex  
on Wednesday, 13 January 2021, at 8:30 am**

**Members present:**

Hon Tony TSE Wai-chuen, BBS, JP (Chairman)  
Ir Dr Hon LO Wai-kwok, SBS, MH, JP (Deputy Chairman)  
Hon Abraham SHEK Lai-him, GBS, JP  
Hon Tommy CHEUNG Yu-yan, GBS, JP  
Dr Hon Priscilla LEUNG Mei-fun, SBS, JP  
Hon Michael TIEN Puk-sun, BBS, JP  
Hon Frankie YICK Chi-ming, SBS, JP  
Hon MA Fung-kwok, GBS, JP  
Hon CHAN Han-pan, BBS, JP  
Hon LEUNG Che-cheung, SBS, MH, JP  
Hon Alice MAK Mei-kuen, BBS, JP  
Dr Hon Junius HO Kwan-yiu, JP  
Hon Holden CHOW Ho-ding  
Hon Wilson OR Chong-shing, MH  
Hon LUK Chung-hung, JP  
Hon LAU Kwok-fan, MH  
Dr Hon CHENG Chung-tai  
Hon Vincent CHENG Wing-shun, MH, JP

**Member attending:**

Hon SHIU Ka-fai, JP

**Member absent:**

Hon CHEUNG Kwok-kwan, JP

**Public officers attending:**

Mr Howard LEE Man-sing	Deputy Secretary for Financial Services and the Treasury (Treasury)3
Mr LAM Sai-hung, JP	Permanent Secretary for Development (Works)
Ms Bernadette LINN, JP	Permanent Secretary for Development (Planning and Lands)
Dr Samuel CHUI Ho-kwong, JP	Deputy Director of Environmental Protection (1)
Ms Margaret HSIA Mai-chi	Principal Assistant Secretary for Financial Services and the Treasury (Treasury)(Works)
Ms Doris HO Pui-ling, JP	Deputy Secretary for Development (Planning and Lands)1
Mr Jacky WU Kwok-yuen, JP	Principal Assistant Secretary for Development (Works)5
Mr José YAM Ho-san	Principal Assistant Secretary for the Environment (Energy)
Mr Ricky LAU Chun-kit, JP	Director of Civil Engineering and Development
Mr Michael FONG Hok-shing, JP	Head of the Sustainable Lantau Office Civil Engineering and Development Department

Mr Raymond IP Wai-man	Deputy Head of the Sustainable Lantau Office (Works) (Acting) Civil Engineering and Development Department
Mr Alfred WONG Kwok-fai	Chief Engineer (Lantau)1 Civil Engineering and Development Department
Mr Raymond POON Kwok-ying, JP	Deputy Director of Electrical and Mechanical Services (Regulatory Services) (Acting)
Mr Ken YEUNG Chor-kee	Chief Engineer (Energy Efficiency C) Electrical and Mechanical Services Department
Ms Donna TAM Yin-ping	District Planning Officer (Sai Kung and Islands) Planning Department
Mr Peter MAK Chi-kwong	Principal Assistant Secretary for Transport and Housing (Transport)7
Dr CHOI Yuk-lin, JP	Under Secretary for Education
Mr Derek LAI Chi-kin	Principal Assistant Secretary for Education (Higher Education)
Mr Louis LEUNG Sze-ho	Deputy Secretary-General (1) University Grants Committee Secretariat
Mr Stephen IP Shing-tak	Chief Technical Adviser (Subvented Projects) Architectural Services Department

**Attendance by invitation:**

Mr Eric NG Shu-pui	Vice-President (Administration) and University Secretary The Chinese University of Hong Kong
--------------------	---

Professor WONG Kam-bo	Director School of Life Sciences The Chinese University of Hong Kong
Mr FUNG Siu-man	Director Campus Development Office The Chinese University of Hong Kong
Mr LI Sing-cheung	Deputy Director Campus Development Office The Chinese University of Hong Kong
Professor Alfonso NGAN	Senior Advisor The University of Hong Kong
Ms Jeannie TSANG	Registrar The University of Hong Kong
Mr Eddie YIU	Senior Assistant Director Estates Office The University of Hong Kong
Mr Albert CHAN	Director (Architect) Wong & Ouyang (HK) Limited

**Clerk in attendance:**

Ms Anita SIT	Assistant Secretary General 1
--------------	-------------------------------

**Staff in attendance:**

Mr Keith WONG	Council Secretary (1)2
Ms Christy YAU	Legislative Assistant (1)8
Ms Clara LO	Legislative Assistant (1)9
Miss Joey LAW	Clerical Assistant (1)2

---

Action

The Chairman advised that as at the last meeting, the Subcommittee had completed the scrutiny of 10 items in the 2020-2021 legislative session, with a total funding allocation of \$62,627.4 million. There were four papers for discussion on the agenda for the meeting, all of which were funding proposals carried over from the last meeting held on 6 January 2021. The

four funding proposals involved a total funding allocation of \$32,013 million. He reminded members that in accordance with Rule 83A of the Rules of Procedure ("RoP") of the Legislative Council ("LegCo"), they should disclose the nature of any direct or indirect pecuniary interests relating to the funding proposals under discussion at the meeting before they spoke on the proposals. He also drew members' attention to Rule 84 of RoP on voting in case of direct pecuniary interest.

2. The Chairman said that at the meeting of the Finance Committee ("FC") held on 8 January 2021, some members had raised enquiries about the arrangement for relevant government officials to attend the meetings of FC to respond to members' questions about public works projects. In this connection, the Chairman pointed out that after a funding proposal had been examined and endorsed by the Subcommittee, he would, as a usual practice, consult members on whether the item concerned would require separate voting at the relevant meeting of FC. Moreover, a member of FC might send his or her request for a public officer to be invited to attend a meeting to the Clerk to FC by 5 pm on the working day before the FC meeting scheduled to consider the item concerned.

3. Mr LEUNG Che-cheung pointed out that during the Subcommittee's examination of PWSC(2020-21)18 (i.e. 776CL — Site formation and infrastructure works for public housing developments at Kam Tin South, Yuen Long—Phase 1 ("the KTS project") and 811CL — Site formation and infrastructure works for public housing developments at Tuen Mun Central—Phase 1 ("the TMC project")) at its meeting held on 9 December 2020, Mr Holden CHOW had requested that the item be voted on separately at the relevant meeting of FC. However, no relevant government officials were present at the FC meeting on 8 January 2021 to answer members' questions on the TMC project.

4. The Chairman advised that Mr Holden CHOW had subsequently notified the Secretariat that he only requested to have the KTS project voted on separately at the relevant FC meeting, and no separate voting was required for the TMC project at that meeting. Members were informed of the above vide LC Paper No. PWSC50/20-21 issued on 23 December 2020.

**Head 707 — New Towns and Urban Area Development**

**PWSC(2020-21)24 786CL Tung Chung New Town Extension**

**Head 705 — Civil Engineering**

**782CL Engineering Study on Road P1 (Tai Ho—Sunny Bay Section)**

**49CG The District Cooling System for Tung Chung New Town Extension (East)**

5. The Chairman advised that the proposal (i.e. [PWSC\(2020-21\)24](#)) sought to upgrade part of 786CL, 782CL and 49CG to Category A at the respective estimated costs of \$19,332.9 million, \$130.2 million and \$3,918.2 million in money-of-the-day ("MOD") prices for carrying out the site formation and infrastructure works for the Tung Chung New Town Extension ("TCNTE"), engaging consultants to conduct the engineering study on Road P1 (Tai Ho—Sunny Bay Section) and the associated site investigation works ("the engineering study on Road P1"), and implementing a District Cooling System ("DCS") in the Tung Chung New Town Extension (East) ("TCNTE(East)") respectively. The Government had consulted the Panel on Development on 786CL and 49CG on 24 November 2020, and on 782CL on 20 January 2020. A report on the gist of the Panel's discussion was tabled at the meeting.

786CL — Tung Chung New Town Extension

*Transport support facilities in Tung Chung*

6. Mr Holden CHOW, Ms Alice MAK and Dr CHENG Chung-tai pointed out that population intake in TCNTE was expected to commence from 2024. They were concerned whether the associated road network could be completed in time for commissioning by the time of the population intake to meet the transport needs of the residents.

7. Deputy Secretary for Development (Planning and Lands)1 ("DS(PL)1/DEVB") and Director of Civil Engineering and Development ("DCED") said that the Government would strive to ensure that the nearby roads connecting to the housing developments in TCNTE (including Roads L3 and L4 connecting to Tung Chung Areas 99 and 100) and the associated public transport interchanges would have been completed for commissioning before the population intake. The existing roads in Tung Chung Town (including the junction of Ying Tung Road and Ying Hei Road and the junction of Yi Tung Road and Tung Chung Waterfront Road) would also be improved to meet the road transport needs of new residents commuting to and from TCNTE, MTR Tung Chung Station and North Lantau Highway ("NLH"). According to the traffic impact assessment ("TIA") report, NLH, Road P1 after its full

commissioning, and Tung Chung Line Extension which was expected to be completed for commissioning in 2029, would suffice to meet the additional transport demand of the increased population in Tung Chung in the long run. After residents started moving into TCNTE from 2024, the Government would closely monitor the traffic conditions in Tung Chung and provide more transport facilities in the area when necessary. As for Road P1 (Tung Chung—Tai Ho Section), it was expected to be completed for commissioning in 2026. Before that, residents could still commute to and from the urban areas via Tung Chung Eastern Interchange and NLH using the existing roads and the new roads mentioned above.

8. Ms Alice MAK pointed out that the vehicular volume in Tung Chung had increased sharply in recent years and traffic congestion often occurred in the area. The congestion was exacerbated even further after the commissioning of Tuen Mun—Chek Lap Kok Link ("TM-CLKL"). She requested the Administration to provide supplementary information on how it would improve the traffic and road facilities in Tung Chung, so as to alleviate the current traffic congestion in the area and provide a timely solution to address the additional traffic demand arising from the increased population in TCNTE. Mr Holden CHOW also requested the Administration to explore the feasibility of widening the existing major roads in the area and re-planning the roads outside MTR Tung Chung Station to increase their capacity. Dr CHENG Chung-tai also suggested that the Administration should make use of technologies to monitor the road traffic conditions in Tung Chung and provide residents with real-time traffic information.

*(Post-meeting note: The supplementary information provided by the Administration was circulated to members vide [LC Paper No. PWSC73/20-21\(01\)](#) on 3 February 2021.)*

9. DCED said that the Government would closely monitor the traffic conditions in Tung Chung and implement timely improvement measures where necessary. Principal Assistant Secretary for Transport and Housing (Transport)7 ("PAS(T)7/THB") supplemented that some motorists who test-drove on the new TM-CLKL on the first day of its opening might have driven into Tung Chung and used the parking facilities there, resulting in the additional traffic in the district. The Government had called on the public to use public transport as far as possible and advised motorists to consider parking their vehicles in the car park at the Hong Kong—Zhuhai—Macao Bridge Hong Kong Port and refrain from entering Tung Chung.

10. Mr CHAN Han-pan noted from the Government's paper that a massive interchange would be built to connect the proposed Road P1 (Tung Chung—

Tai Ho Section) and the existing NLH. He was concerned that the said interchange would become a bottleneck of traffic, leading to traffic congestion.

11. DS(PL)1/DEVB said that after its full commissioning, Road P1 would run parallel to NLH, which would help divert the urban area-bound traffic of Tung Chung. The Government would focus on how to enhance the design of the adjoining road sections when designing Road P1 (Tai Ho—Sunny Bay Section), so as to further improve the connection between Road P1 and NLH.

12. Dr CHENG Chung-tai was concerned that when carrying out the planning of TCNTE, the Administration might come up with an inaccurate estimation of the future vehicular volumes of NLH and Road P1 if it underestimated the use of private cars by local residents.

13. DCED said that the Government would conduct planning in accordance with the guidelines under the Hong Kong Planning Standards and Guidelines. In addition, the Government would conduct TIAs to examine the extra traffic demand that would be put on nearby roads upon the completion of new development areas.

*Other developments in Tung Chung New Town Extension*

14. The Deputy Chairman expressed support for the proposed TCNTE project and considered the extension of new towns useful in addressing the housing shortage in Hong Kong.

15. Mr Holden CHOW enquired when the Administration would implement the proposed development of a town park in Tung Chung. The Chairman also suggested that the town park could be constructed in phases to make available its facilities to the public as soon as possible if the whole park would take more time to complete.

16. DCED said that the proposed TCNTE project would include an open space in Tung Chung Area 29A. In addition to preserving the natural environment, the open space would also provide many facilities for public enjoyment, including, among others, the enhanced walking trails and multi-purpose activity areas. The construction works were expected to be completed in 2025. He added that consideration would be given to the suggestion of constructing the open space in Area 29A and opening it for public use in phases.

17. Dr CHENG Chung-tai noted from the Government's paper that the proposed TCNTE project would include the construction of a number of



pumping stations and sewage pumping stations. He enquired whether the works would affect coastal ecology and whether mitigation measures specific to these works were proposed in the environmental impact assessment ("EIA") report.

18. DCED replied that the proposed TCNTE project was a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499), for which the Government was required to apply for an Environmental Permit ("EP"). The EP for the works was issued by the Environmental Protection Department after the EIA report was approved in 2016. The EIA report had concluded that with the implementation of the proposed mitigation measures, the works would not cause adverse environmental impacts.

19. The Chairman noted from the Government's paper that the proposed TCNTE project would include construction of the sustainable urban drainage system ("SUDS") in Tung Chung West. He enquired how the SUDS worked.

20. DCED replied that the SUDS would include facilities such as stormwater attenuation and treatment ponds, bioswales and permeable pavements. The surface runoff collected would flow through the stormwater attenuation and treatment ponds, where sedimentation and purification of impurities would take place. As the processed stormwater would be discharged into Tung Chung Stream, the Government expected that the SUDS would help protect the water quality of Tung Chung Stream.

782CL — Engineering study on Road P1 (Tai Ho—Sunny Bay Section)

21. The Deputy Chairman and Mr Holden CHOW supported the conduct of the proposed engineering study on Road P1 and considered the study useful in expediting the finalization of alignment of Road P1 (Tai Ho—Sunny Bay Section) and ensuring that the works would not cause adverse impacts on the ecology of North Lantau.

22. DS(PL)1/DEVB said that the proposed engineering study on Road P1 would determine the road alignment, general layout, initial design options and land requirements of Road P1 (Tai Ho—Sunny Bay Section). The Government would also conduct the relevant impact assessments (including EIA) under the study to ascertain the impacts associated with the works and the mitigation measures required. She added that the Government would review the construction schedule of Road P1 (Tai Ho—Sunny Bay Section) through conducting the engineering study on Road P1 with a view to completing the construction of the road as soon as possible.

23. Mr Michael TIEN pointed out that the Administration's plan was to explore the connection of the proposed Road P1 (Tai Ho—Sunny Bay Section) to the existing NLH, Sunny Bay and the planned Route 11 (between North Lantau and Yuen Long) separately and access to the urban areas via Lantau Link. He opined that an additional trunk road connecting Lantau to the urban areas must be built in the future to cope with the heavy vehicular flow from NLH, Road P1 (Tai Ho—Sunny Bay Section) and Route 11 (between North Lantau and Yuen Long). In this connection, he enquired about the Administration's plans to build additional trunk roads connecting Lantau to the urban areas and the timetable of the related construction projects.

24. PAS(T)7/THB said that Road P1 (Tai Ho—Sunny Bay Section), which served a number of purposes including enhancing the resilience of NLH by providing another route running parallel to it, should be completed as soon as possible. According to the TIA findings, NLH would be able to accommodate the vehicular volume in 2031, as well as the traffic flow in 2036 by which time the proposed Route 11 and Tsing Yi—Lantau Link would have been completed. DS(PL)1/DEVB supplemented that the Government would embark on the Studies Related to Artificial Island in the Central Waters, which would include studies exploring the construction of new trunk roads connecting Lantau and the urban areas via the artificial islands in the Central Waters. If constructed eventually, such new trunk roads would help ease the traffic between New Territories West and Lantau.

25. Mr Michael TIEN requested the Administration to provide supplementary information on the traffic conditions of Lantau Link after the completion of the proposed Road P1 in 2030 and before the completion of the proposed Tsing Yi—Lantau Link in 2036, and the mitigation plans in place. He took the view that NLH and Lantau Link would have difficulties accommodating the heavy vehicular flow between 2030 and 2036, and that would result in severe traffic congestion. He therefore opposed the conduct of the proposed engineering study on Road P1. Moreover, he requested that the proposed "782CL — Engineering study on Road P1 (Tai Ho—Sunny Bay Section)" be voted on separately at the relevant meeting of FC should it be endorsed by the Subcommittee.

*(Post-meeting note: The supplementary information provided by the Administration was circulated to members vide [LC Paper No. PWSC73/20-21\(01\)](#) on 3 February 2021.)*

26. PAS(T)7/THB said that more trains would be deployed on Tung Chung Line Extension to support the commissioning of the new Tung Chung East and Tung Chung West Stations in 2029. Meanwhile, the Airport Railway Extended Overrun Tunnel (Remaining Section) was expected to be completed

in 2032. Together, they would increase the carrying capacity of Tung Chung Line. This was expected to help spread out the pressure on both the railway and the roads, ease the traffic flow arising from the new resident population in TCNTE and reduce the stress on road traffic.

49CG — The District Cooling System for Tung Chung New Town Extension (East)

27. The Deputy Chairman expressed support for the proposed construction of the DCS at TCNTE(East). He pointed out that the DCS at Kai Tak Development ("KTD") had been in operation for many years. He enquired about the energy efficiency achieved by the system so far since its implementation.

28. Principal Assistant Secretary for the Environment (Energy) ("PAS(E)/ENB") said that the DCS at KTD commenced operation in 2013. As at 2019-2020, the DCS had achieved total electricity saving of about 20.3 million kWh for its users, which was equivalent to an electricity cost saving of around \$24 million and an about 14 210-tonne reduction in carbon emission. The Government considered the operation data of the DCS at KTD spoke for the positive effect of the system.

29. Dr CHENG Chung-tai and Mr CHAN Han-pan enquired whether the proposed DCS at TCNTE(East) could provide heating for users and whether the system would operate in winter.

30. PAS(E)/ENB and Deputy Director of Electrical and Mechanical Services (Regulatory Services) (Acting) ("DD(RS)(Atg)/EMSD") said that the proposed DCS would only provide cooling service for users in TCNTE(East). In winter, when user demand for air-conditioning was low, the cooling capacity of the system would be adjusted downward correspondingly. Buildings in Hong Kong did not have sustainable and stable demand for heating. It would not be cost-effective to develop a district-wide system to provide continuous heating for a given area.

31. Mr CHAN Han-pan enquired how the Government would ensure that the revenue of the DCS could cover its expenses on repair and maintenance in the long run. The Deputy Chairman also enquired if the Administration was required to amend the District Cooling Services Ordinance (Cap. 624) ("DCSO") to stipulate the tariff level of the proposed DCS at TCNTE(East).

32. DD(RS)(Atg)/EMSD pointed out that DCS users were subject to payment of capacity charge and consumption charge based respectively on the contract capacity and the actual cooling energy consumption of the building in

the month. The tariff level would be set on the basis of recovering the capital and operating costs of the DCS over its 30-year project life. PAS(E)/ENB supplemented that the tariff calculation of DCS was provided for through the enactment of DCSO. The Electrical and Mechanical Services Department ("EMSD") planned to propose amendments to DCSO in due course to promulgate the tariff level of the proposed DCS at TCNTE(East).

33. Mr LEUNG Che-cheung expressed support for the provision of energy efficient district cooling services in new development areas ("NDAs"). However, he opined that the Administration should first conduct trials of providing DCS in a handful of NDAs and extend the system to other NDAs only after the operation of the system had gained traction. The Chairman also enquired whether the Administration had plans to extend DCS to other NDAs.

34. PAS(E)/ENB said that in determining whether DCS should be provided in NDAs, the Government would assess the cost-effectiveness of such provision by evaluating the total air-conditioned floor area that would use the district cooling services in the area concerned. The cost-effectiveness of providing the DCS at TCNTE(East) was more evident given the estimated total air-conditioned floor area of about 700 000 square metres in the area. In addition to TCNTE(East) and Kwu Tung North NDA, the Government also planned to provide DCS at Hung Shui Kiu NDA. DS(PL)1/DEVB supplemented that NDAs were more suitable for DCS development because the provision of such system would require laying of extensive underground pipework for distributing chilled water to buildings in the area.

35. Mr CHAN Han-pan mentioned that seawater would be used for carrying out heat exchange in the proposed DCS. He was concerned about the adverse impact on water quality caused by the hot water discharged from the system to the sea. Mr LEUNG Che-cheung was also concerned that the system might generate noises when it started to age, causing nuisance to nearby residents.

36. PAS(E)/ENB said that the Government's studies found that the impact on the water temperature caused by the hot water discharged from the proposed DCS to the sea was compliant with the relevant environmental protection standards. Moreover, the plant equipment of the proposed DCS would be located relatively far from residential dwellings to prevent causing noise nuisance to the residents.

#### Voting on PWSC(2020-21)24

37. There being no further questions from members on the item, the Chairman put [PWSC\(2020-21\)24](#) to vote. At the request of members,

the Chairman ordered a division. Thirteen members voted for the proposal, one member voted against it and no member abstained. The votes of individual members were as follows:

*For:*

Ir Dr LO Wai-Kwok (Deputy Chairman)	Mr Tommy CHEUNG
Dr Priscilla LEUNG	Mr Frankie YICK
Mr MA Fung-kwok	Mr CHAN Han-pan
Mr LEUNG Che-cheung	Ms Alice MAK
Mr Holden CHOW	Mr Wilson OR
Mr LUK Chung-hung	Mr LAU Kwok-fan
Mr Vincent CHENG	
(13 members)	

*Against:*

Dr CHENG Chung-tai  
(1 member)

*Abstained:*

(0 member)

38. The Chairman declared that the item was endorsed by the Subcommittee. The Chairman advised that Mr Michael TIEN, while speaking, had requested that "782CL — Engineering study on Road P1 (Tai Ho—Sunny Bay Section)" be voted on separately at the relevant meeting of FC. He then consulted members on whether the remaining projects under the item would require separate voting at the relevant meeting of FC. Mr SHIU Ka-fai requested that the remaining projects under the item also be voted on separately.

**Head 705 — Civil Engineering**

**PWSC(2020-21)25 51CG District Cooling System at the Kwu Tung North New Development Area**

39. The Chairman advised that the proposal (i.e. [PWSC\(2020-21\)25](#)) sought to upgrade 51CG to Category A at an estimated cost of \$5,787.7 million in MOD prices for implementing DCS at the Kwu Tung North New Development Area ("KTN NDA"). The Government consulted the Panel on Development on the proposed works on 24 November 2020. Panel members supported the submission of the funding proposal to the Subcommittee for consideration. A report on the gist of the Panel's discussion was tabled at the meeting.

Operation of the proposed District Cooling System

40. The Deputy Chairman expressed support for the proposed project. As KTN NDA was located far from the sea, fresh water cooling towers would be used for carrying out the heat exchange process in the proposed DCS. He was concerned about the location for installing the cooling towers and the measures to prevent the effects of the hot air discharged from the cooling towers on nearby residents.

41. PAS(E)/ENB said that as shown in the layout plan at Enclosure 1 to the Government's paper, the proposed Phase 1 and Phase 2 DCS plants would be located on the edge of KTN NDA and built as far from residential dwellings as possible. Thus, the effects of the hot air discharged from the plants on nearby residents could be minimized.

42. Mr LAU Kwok-fan expressed support for the proposed project. He pointed out that the Administration had proposed that reclaimed water (i.e. effluent water that was purified with treatment processes and disinfection and sterilization procedures) be used extensively in New Territories North for toilet flushing or street cleansing. He enquired whether the Administration would consider using reclaimed water for heat exchange in the proposed DCS in order to reduce water consumption.

43. PAS(E)/ENB replied that stable water supply for use in the heat exchange process was essential to ensuring the smooth operation of the DCS. Due to the unstable volume of treated effluent in New Territories North, it was difficult to ensure the sufficient supply of reclaimed water from sewage treatment works ("STW") for use in the DCS. Furthermore, the STW located closest to KTN NDA was three kilometres away from the proposed DCS plants. Additional pipework had to be installed over a long distance if the reclaimed water from STW was to be used in the DCS, and the additional cost incurred would undermine the cost-effectiveness of the proposed DCS. Having considered the above factors, the Government took the view that reclaimed water was not a suitable water source for use in the heat exchange process of the proposed DCS. He added that fresh water was used as circulating water in the proposed DCS for carrying out the heat exchange. Make-up water was required only when the water in the system ran low due to evaporation. Therefore, the water consumption of the system would be of a limited level.

44. The Chairman enquired about the requirements (e.g. water quality requirements) specific to using fresh water cooling towers or seawater for heat exchange and how the maintenance of the fresh water cooling towers would be carried out.

45. PAS(E)/ENB said that the use of fresh water cooling towers and seawater for heat exchange had their respective pros and cons. If seawater was used for the heat exchange process, the seawater suction pipes must be built of rust-resistant materials, and filtering facilities must be installed to filter out the impurities in the seawater. However, seawater was usually more stable in temperature, so the effects of weather on the system were relatively small. On the other hand, if fresh water cooling towers were used in DCS, rust-resistant pipes and filtering facilities were not necessary. That said, the temperature of fresh water from the water supply system was usually more susceptible to weather influence. Deputy Director of Electrical and Mechanical Services (Regulatory Services) (Acting) supplemented that EMSD would conduct regular cleaning and maintenance work and take water samples from the water towers for quality tests in accordance with the Code of Practice for Fresh Water Cooling Towers.

#### Cost-effectiveness of the proposed District Cooling System

46. Mr LUK Chung-hung enquired about the reduction in electricity cost for users in KTN NDA if they used district cooling services as opposed to using individual water-cooled air conditioning systems ("WACS") with cooling towers. He also enquired whether setting the air-conditioning temperature at a higher level would help reduce users' expenses on using district cooling services.

47. PAS(E)/ENB said that the Government expected that the district cooling services provided in KTN NDA could achieve an electricity saving of about 42 million kWh annually, which was equivalent to an emission reduction of 29 400 tonnes of carbon dioxide. Moreover, there was an estimated reduction by 5% to 10% in the cost of the advance construction works of user buildings as construction of individual air-conditioning systems was no longer required. As users were subject to payment of capacity charge and consumption charge based respectively on the contract capacity and the actual cooling energy consumption of the building in the month, they would have the incentive to minimize the use of air-conditioning in order to reduce the expenses on consumption charge. He added that EMSD would also encourage users to set air-conditioning temperature at a suitable level through publicity effort.

48. The Chairman and Mr LAU Kwok-fan enquired whether the DCSs provided respectively at KTN NDA, KTD and TCNTE(East) differed from one another in terms of construction cost and unit cost of air-conditioning given their use of different technologies for heat exchange and the difference in their scale of service.

49. PAS(E)/ENB replied that the three aforesaid DCSs varied in project cost. He explained that the project cost of a DCS was subject to its development scale, construction time and the returned tender prices. In addition, the average project cost of the DCS at TCE might be on the high side as it was built in a reclaimed area and required founding of piles at greater depths. He added that the Government expected that the unit costs of air-conditioning of the three DCSs would be similar despite their difference in project cost.

50. The Chairman noted that the Government would determine the tariff level of a DCS on the basis of recovering the capital and operating costs of the system from users over its 30-year project life. He enquired whether the tariff of the aforesaid three DCSs would be set at different levels given their difference in capital cost.

51. PAS(E)/ENB replied that the Government expected that the air-conditioning unit costs of the DCSs concerned would be similar despite their difference in construction cost. Therefore, the difference in tariff level would be small. He added that the tariff calculation of DCS was provided for through the enactment of DCSO. EMSD planned to propose amendments to DCSO in due course to promulgate the tariff level of the proposed DCS at KTN NDA.

52. The Chairman and Mr LAU Kwok-fan were concerned that users might feel being treated unfairly and have lower incentives to use district cooling services if the tariff level varied among different DCSs.

53. PAS(E)/ENB said that in determining the tariff level of the proposed DCS at KTN NDA, the Government would ensure that the tariff was set at a competitive level comparable to the cost of using individual WACS that used cooling towers. The Government would also give due consideration to the views of LegCo on the tariff level of DCS when proposing amendments to DCSO.

#### Voting on PWSC(2020-21)25

54. There being no further questions from members on the item, the Chairman put [PWSC\(2020-21\)25](#) to vote.

55. The item was voted on and endorsed. The Chairman consulted members on whether the item would require separate voting at the relevant meeting of FC. No member raised such a request.



**Head 708 — Capital Subventions and Major Systems and Equipment**

<b>PWSC(2020-21)26</b>	<b>56EF</b>	<b>Centralised General Research Laboratory Complex (Block 2)</b>
	<b>56EG</b>	<b>Redevelopment of No. 2 University Drive (Building 1)</b>
	<b>64EG</b>	<b>Information Technology Building at University Drive</b>

56. The Chairman advised that the proposal (i.e. [PWSC\(2020-21\)26](#)) sought to upgrade 56EF, 56EG and 64EG to Category A at the estimated costs of \$1,416.1 million, \$599.9 million and \$486.9 million in MOD prices respectively for constructing a research laboratory building at the northern side of the campus (i.e. Area 39, Tai Po) of the Chinese University of Hong Kong ("CUHK"), a research laboratory building at University Drive on the main campus of the University of Hong Kong ("HKU"), and the Information Technology Building at University Drive on the main campus of HKU. The Government consulted the Panel on Education on the three projects on 6 November 2020. Panel members supported the submission of the three funding proposals to the Subcommittee for consideration. A report on the gist of the Panel's discussion was tabled at the meeting.

Comparison of the construction unit costs per square metre ("m<sup>2</sup>") of the three projects

57. Mr SHIU Ka-fai enquired why the construction unit cost of the proposed research laboratory building of CUHK was on the high side (in the region of \$30,000 per m<sup>2</sup>) and why the construction unit costs per m<sup>2</sup> of the three projects differed by relatively large margins.

58. Under Secretary for Education ("USED") said that most of the floor area of the proposed research laboratory building of CUHK was used for laboratory facilities. As the construction works of laboratory facilities were usually more complicated and costly, the construction unit cost per m<sup>2</sup> of the building was higher than that of the other two proposed buildings. Furthermore, the construction unit costs per m<sup>2</sup> of the three proposed buildings varied also because of the difference in floor area occupied by the laboratories, offices and other facilities. She added that the construction unit costs per m<sup>2</sup> of all the three buildings were considered reasonable according to the assessment by the Architectural Services Department.

Existing governance mechanism of universities and formulation of security measures for campuses

59. Mr LUK Chung-hung said that he supported in principle the provision of new teaching and learning facilities at universities to enhance their teaching and learning environment. He pointed out that serious incidents of violence had occurred in a number of universities in recent years. Some security guards were also harassed while on duty at CUHK earlier. He enquired whether the Administration would consider unifying the campus security systems of different universities, including imposing the requirement that the identity documents of persons entering and leaving the campuses be checked by the university management, so as to prevent lawbreakers from entering the campuses.

60. USED said that at present, universities had put in place relevant security measures and campus management mechanisms with respect to the environment and characteristics of their own campuses. Furthermore, universities were sufficiently experienced in handling various kinds of incidents occurring on the campuses. Regarding the incidents of violence on the campuses, the Education Bureau had stated repeatedly that university campuses were not above the law. While vested with autonomy, universities were also expected to have good governance and be accountable to the public. She added that the Government would continue to exchange views with universities on their management and development through the University Grants Committee.

61. The meeting ended at 10:29 am.