

立法會
Legislative Council

LC Paper No. CB(2)1808/10-11
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by the Administration)

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Panel on Security

Minutes of special meeting
held on Tuesday, 16 November 2010, at 5:00 pm
in Conference Room A of the Legislative Council Building

- Members present** :
- Hon James TO Kun-sun (Chairman)
 - Hon Albert HO Chun-yan
 - Dr Hon Margaret NG
 - Hon CHEUNG Man-kwong
 - Dr Hon Philip WONG Yu-hong, GBS
 - Hon WONG Yung-kan, SBS, JP
 - Hon Emily LAU Wai-hing, JP
 - Hon Abraham SHEK Lai-him, SBS, JP
 - Hon Audrey EU Yuet-mee, SC, JP
 - Hon Andrew LEUNG Kwan-yuen, GBS, JP
 - Hon CHIM Pui-chung
 - Hon Cyd HO Sau-lan
 - Dr Hon LAM Tai-fai, BBS, JP
 - Hon CHAN Hak-kan
 - Hon WONG Kwok-kin, BBS
 - Hon IP Kwok-him, GBS, JP
 - Hon Paul TSE Wai-chun
 - Hon LEUNG Kwok-hung
 - Hon WONG Yuk-man
- Members attending** :
- Ir Dr Hon Raymond HO Chung-tai, SBS, S.B.St.J., JP
 - Hon WONG Kwok-hing, MH
 - Hon LEE Wing-tat
 - Hon Ronny TONG Ka-wah, SC
 - Hon KAM Nai-wai, MH
 - Hon Tanya CHAN

Members absent : Hon LAU Kong-wah, JP (Deputy Chairman)
Hon Timothy FOK Tsun-ting, GBS, JP
Dr Hon PAN Pey-chyou

Public Officers attending : Item I

Mr LAI Tung-kwok, SBS, IDSM, JP
Under Secretary for Security

Miss Shirley YUNG Pui-man
Deputy Secretary for Security

Miss Vivian LAU Lee-kwan
Deputy Secretary for the Environment

Mr LEUNG Wing-mo
Assistant Director of Hong Kong Observatory

Mr S H CHAN
Managing Director
Hong Kong Nuclear Investment Co. Ltd.

Mr Richard FUNG
Technical Manager
Hong Kong Nuclear Investment Co. Ltd.

Ms Daisy CHAN
Public Affairs Director
CLP Power Hong Kong Limited

Clerk in attendance : Mr Raymond LAM
Chief Council Secretary (2) 1

Staff in attendance : Ms Connie FUNG
Senior Assistant Legal Adviser 1

Miss Josephine SO
Senior Council Secretary (2) 1

Ms Camy YOONG
Clerical Assistant (2) 1

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I. Daya Bay Nuclear Power Station Notification Mechanism
(LC Paper Nos. CB(2)328/10-11(01) and (02))

The Chairman thanked the Administration for attending the meeting, despite the short notice given. He said that there was an urgency to discuss the Daya Bay Nuclear Power Station Notification Mechanism since a nuclear incident had occurred at the Daya Bay Nuclear Power Station ("DBNPS") on 23 October 2010 ("the October event").

2. Under Secretary for Security ("US for S") informed Members that the Government of the Hong Kong Special Administrative Region ("HKSAR") learned from its representatives on the Board of Directors of the Hong Kong Nuclear Investment Company Limited ("HKNIC") of the October event on 2 November 2010. According to HKNIC, a Level-1 Licensing Operational Event ("LOE") was identified during an on-site inspection of the planned maintenance outage of the Unit 1 reactor of DBNPS on 23 October 2010. US for S advised that upon learning the event, the HKSAR Government examined the data collected by the Radiation Monitoring Network of the Hong Kong Observatory ("HKO") immediately to confirm that Hong Kong was not contaminated by any radioactive substances. It had also followed up the matter with CLP Power Hong Kong Company Limited ("CLP") and the Prevention and Emergency Administrative Commission Office of Guangdong Province for Nuclear Accident of Civil Nuclear Facility ("PEACO/GD") in order to have a thorough evaluation and understanding of the issue as well as the impact of the event on the external environment and public safety of Hong Kong. A request had been subsequently raised to HKNIC for consideration of improvements to its mechanism for disclosure of LOEs occurred at DBNPS, with a view to enhancing the timeliness and transparency of information on incidents related to nuclear safety and the safe operation of the nuclear power station.

3. With the aid of powerpoint presentation, Mr S H CHAN, Managing Director of HKNIC, provided background information about the Level-1 LOE which occurred at DBNPS on 23 October 2010. He explained the existing mechanism for the reporting of nuclear-related events, including how nuclear events were classified under the International Nuclear Event Scale ("INES").

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(Post-meeting note: The powerpoint presentation materials and relevant newspaper clippings on the nuclear incident which occurred at DBNPS on 23 October 2010 tabled at the meeting were issued to members vide LC Paper No. CB(2)328/10-11 on 17 November 2010.)

4. Mr S H CHAN advised that ever since the operation of DBNPS in 1994, its operator had adopted the INES's seven-level rating system for classifying nuclear-related events which occurred at the station. INES was drawn up by the United Nations International Atomic Energy Agency ("IAEA") as an internationally recognized standard for facilitating better understanding by the public, media and the nuclear industry of the degree of significance of nuclear events. Classifications ranged from Level 0 to Level 7. Any event that came within the classification of INES was considered a LOE. Levels 4 to 7 events were regarded as "accidents", representing various degrees of radiological impact on the environment. Levels 1 to 3 events were regarded as "incidents", which had no environmental impact. Level 0 was also known as "below scale", which implied that the event had no safety significance. Events falling outside the INES rating (i.e. below Level 0 or "out of scale") were matters which did not have any relevance to safety.

5. Mr S H CHAN informed Members that at present, HKNIC submitted monthly reports on its operation and performance to its Board of Directors. These reports covered any LOEs classified under INES which occurred at the station. HKNIC also uploaded onto its website every month the number of LOEs at DBNPS with a brief description of the events for public reference.

6. Mr S H CHAN advised that -
 - (a) the LOE recently reported by the media was identified during the planned maintenance outage of the Unit 1 reactor of DBNPS on 23 October 2010. During the on-site inspection of the planned outage, a flaw was observed at a water pipe section of the residual heat removal system, the water in which was used to remove the residual heat of the reactor for preparation of regular inspection and maintenance work. As the flaw was sufficiently minute, normal system function was not affected;

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- (b) the concerned water pipe section and the residual heat removal system were installed and completely sealed off within the totally enclosed containment building, which was made up of a 900 millimetre thick pre-stressed reinforced concrete structure with a six millimetre thick inner steel lining. As the flaw was minor, the event on 23 October 2010 was classified as a Level-1 event after being confirmed. The event did not cause any safety, health or environmental consequences to both the safe operation of the power station and the surrounding area;
- (c) the Daya Bay Nuclear Power Operations and Management Company ("DNMC"), the operator of DBNPS, was replacing the affected pipe section. A detailed technical investigation into the cause of the event was being conducted for necessary improvements. In the meantime, in order to enhance the transparency, for general DBNPS operation and for LOEs even without any impact on environmental or public safety and without any actions required from the public, HKNIC would continue to disseminate such information through its website on a monthly basis although there was no standard international timeframe for such disclosure; and
- (d) HKNIC fully understood the public concern over nuclear safety. It would step up its efforts in communication with the public regarding the operation of DBNPS through its website, visit programme as well as other public educational activities.

7. Mr WONG Kwok-hing said that the delay in disclosing information pertinent to the Level-1 LOE discovered on 23 October 2010 had given him an impression that neither CLP nor HKNIC had learned a lesson from the previous event which occurred at DBNPS on 23 May 2010 ("the May event"). Expressing grave dissatisfaction with HKNIC's belated disclosure of LOEs which occurred at DBNPS, Mr WONG strongly requested HKNIC to make a commitment that it would in future notify the Administration without any delay of any operational events occurred in the power stations regardless of their severity. Mr WONG further asked whether the Administration had any specific requirements on HKNIC in the notification of LOEs which occurred at DBNPS.

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8. US for S said that the Administration hoped that HKNIC could strengthen its existing public communication mechanism. In the view of the Administration, information on both emergency and non-emergency LOEs should be disclosed in a more timely and proactive manner so as to achieve greater transparency and to avoid any unnecessary speculation in the community. The Administration had already asked CLP and HKNIC to put in place proper arrangements for the disclosure of information on incidents related to radiation and the safe operation of DBNPS.

9. Mr S H CHAN stressed that HKNIC was aware of the public and Members' concerns over the occurrence of similar events at DBNPS in recent months. HKNIC fully understood that transparency and timely disclosure of information was important for maintaining public confidence in the safe operation of DBNPS. While being open to the principles of timeliness and transparency, HKNIC was working closely with the Administration and the Mainland side on the possible enhancements to the information disclosure mechanism. Mr CHAN pointed out that in case of an operational event, there was a need to conduct detailed analysis of the event to ensure information accuracy before notifying the relevant authorities or disclosing information to the public.

10. Mr CHAN Hak-kan said that members of the public had the right to know. Depriving their right on the pretext of ensuring the accuracy, clarity and completeness of the information disseminated was totally unacceptable. Expressing concern over the frequent occurrence of nuclear events at DBNPS, he asked whether the root cause of the events was due to the aging of the power plant.

11. Mr S H CHAN responded that according to the original design, DBNPS had an expected life span of at least 40 years if properly maintained. He said that DBNPS maintained a world class safety record since its commercial operation in 1994 and only a small number of operational events had occurred over the years. DBNPS ranked in the median or top quartile levels in the performance indices of the World Association of Nuclear Operators, representing an excellent record of plant reliability, performance and safety. Membership of the association covered the operators of all the world's some 400 commercial nuclear power reactors.

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Admin/
HKNIC

12. The Chairman requested HKNIC to provide more detailed information on DBNPS' performance in comparison with other power plants of a similar age in terms of general industrial safety and operating excellence. Mr S H CHAN would make effort to procure the requested information after the meeting.

13. Mr CHAN Hak-kan considered that the HKSAR Government was too passive and failed to discharge its monitoring role, despite the presence of established mechanisms for the relevant parties to notify the HKSAR Government of LOEs at power stations in Daya Bay. Mr CHAN recalled that following the May event, the Administration had undertaken to review the existing arrangement for handling nuclear events and the notification mechanisms agreed with PEACO/GD, CLP and HKNIC with a view to strengthening coordination with all concerned parties. He asked about the progress of the review and whether the Administration was ready to revert to the Panel on the outcome of the review. He strongly considered that HKNIC should strengthen its communication with the public. Reports on nuclear events which occurred at DBNPS should cover all events, including those falling outside the classification of INES (i.e. "out of scale" or below Level 0) and events classified at Level 0 and Level 1 not involving emergency response.

14. US for S responded that the Administration was actively discussing with HKNIC and the Mainland shareholder of DBNPS, namely the China Guangdong Nuclear Power Holding Company Limited ("CGNPC"), on the possible enhancement to the notification mechanism. The review was in progress and was expected to be completed in early 2011.

15. Mr CHAN Hak-kan further said that the Administration should explore with DNMC the possibility of appointing government officials to the Nuclear Safety Consultative Committee of the Daya Bay Nuclear Power Station and the Ling Ao Nuclear Power Station ("NSCC"), so as to increase the participation of the HKSAR Government in the monitoring of the safety situation of DBNPS.

16. In response, US for S and Deputy Secretary for Security advised that NSCC was formed by DNMC in the Mainland with its members invited by DNMC to join the Committee. Since the suggestion of appointing representatives of the HKSAR Government to NSCC had to be considered by DNMC, the Administration had, after the Panel meeting on 6 July 2010, relayed the suggestion through CLP to DNMC for its consideration.

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17. Miss Tanya CHAN and Ms Audrey EU recalled that the May event had already aroused wide concern in the community over nuclear safety. They queried whether the Administration, CLP and HKNIC were aware of the increasing public expectation for transparency and timeliness of information and ventured to disseminate information at an earlier time.

18. US for S and Deputy Secretary for the Environment advised that the HKSAR Government learned from the two government-nominated directors on the Board of HKNIC of the October event on 2 November 2010. As information provided by HKNIC at that point of time was inadequate and no conclusion could be drawn on the impact of the event on the external environment and public safety, the Administration was not in a position to disclose to the public information about the event. Nevertheless, it had immediately made enquiries and followed up the matter with HKNIC and PEACO/GD in order to have a thorough evaluation and understanding of the event.

19. Expressing strong dissatisfaction with HKNIC at its belated disclosure of information to the public about the Level-1 LOE identified on 23 October 2010, Miss Tanya CHAN and Mr KAM Nai-wai asked about the reasons for the long time gap between the occurrence and public notification of the event.

20. In response, Mr S H CHAN advised that it was not always practicable for operators of power plants to report a LOE immediately, as time was needed to assess the situation and ascertain the cause of the LOE. Besides, in the case of DBNPS, the actual classification of an event was subject to confirmation by the on-site inspectors of the National Nuclear Safety Administration ("NNSA"). Regarding the Level-1 LOE identified during the planned maintenance outage of the Unit 1 reactor of DBNPS on 23 October 2010, Mr CHAN stressed that upon discovery, DNMC had reported the matter immediately to the relevant authorities of the Mainland and notified HKNIC. In its most recent monthly report of LOEs to the Board members, HKNIC had duly provided the preliminary assessment conducted by DNMC, together with a brief description and the initial classification of the event. It should also be noted that DNMC was currently replacing the affected pipe section. A detailed technical investigation into the cause of the event was being conducted for necessary improvements. In the meantime, for the purpose of enhancing transparency for events without any impact on environmental or public safety, HKNIC would continue to provide information through its website on the number of LOEs and general operation data of DBNPS on a monthly basis.

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21. Mr S H CHAN stressed that HKNIC fully appreciated the call for greater transparency in the operation of DBNPS and shorter time for public notification. HKNIC was reviewing the current reporting and disclosure arrangements for nuclear-related events, with a view to enhancing the mechanism further particularly for events classified at or below Level 1 not involving emergency response. HKNIC was working closely with the Administration and the Mainland shareholder of the power station, in the hope of finalizing the enhancement measures at the earliest possible time.

22. Responding to Mr Andrew LEUNG's enquiry about the local radiation level after the October event, Assistant Director, HKO advised that the HKSAR Government had set up its own warning system. The system included, amongst other, HKO's Radiation Monitoring Network and the on-line water contamination monitoring systems at Muk Wu of the Water Supplies Department. Assistant Director, HKO informed Members that the data collected by HKO's Radiation Monitoring Network concerning the ambient gamma radiation level in Hong Kong confirmed that there were no abnormal changes in the local radiation level on or after 23 October. For example, according to the data collected at Ping Chau, which was the radiation monitoring station closest to DBNPS, the daily average radiation levels after the event were within the normal range of fluctuation. HKO would continue to monitor the local radiation level round the clock. If any abnormality was detected, it would raise alert immediately.

23. The Chairman, Mr KAM Nai-wai and Mr WONG Kwok-kin sought explanations as to why information on events at Level 2 or above was disclosed immediately, which was much quicker than events at or below Level 1.

24. Mr S H CHAN explained that the classification of an event under INES was the key determinant for activating response actions, including the reporting of the event to the relevant authorities. According to the established emergency plans at Daya Bay, the HKSAR Government and the Guangdong Provincial Government had put in place an effective communication system for unlikely events classified as "accidents" and "incidents" (i.e. events at Level 2 or above with release of radioactive material). In case of an incident or accident, DNMC would, upon declaration of an emergency, promptly inform PEACO/GD and other relevant authorities. PEACO/GD would simultaneously notify the Hong Kong authorities in accordance with the contingency notification

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arrangements agreed between the two sides. DNMC had also developed emergency plans, approved by NNSA and relevant government authorities in Guangdong, for the handling of different situations. DNMC would activate the appropriate emergency plans if certain abnormal situations at the nuclear power station affected nuclear safety.

25. Mr KAM Nai-wai and Dr Margaret NG considered HKNIC's replies far from satisfactory. They sought more details about the October event, in particular how and when the flaw at the water pipe section was identified.

26. In response, Mr S H CHAN summarized the details of the Level-1 LOE identified during the Unit 1 planned maintenance outage on 23 October 2010. He reiterated that the flaw identified was minute. The concerned water pipe section and the residual heat removal system were installed and completely sealed off within the totally enclosed containment building. The preliminary conclusion after discussion with NNSA's inspectors confirmed that the event was only minor in nature without any impact on public safety, public health or the environment. To confirm the nature and classification of the event under INES, more time was taken in the analysis and verification process.

27. The Chairman asked whether any guidelines had been issued to facilitate DNMC staff members or NNSA's inspectors in the assessment of unlikely events at DBNPS, for example, reference/guidance notes on how nuclear events should be rated which set out the observable facts in relation to different classification levels under INES. He requested HKNIC to provide information in this regard, if there were such guidelines or reference notes.

Admin/
HKNIC

28. Mr KAM Nai-wai was concerned whether DNMC had notified HKNIC in a timely manner. He asked when HKNIC was notified of the Level-1 LOE under discussion.

29. Mr S H CHAN replied that HKNIC came to know the event on 27 October 2010 when it was confirmed and classified as a Level-1 LOE.

30. Ms Cyd HO and Mr CHEUNG Man-kwong queried whether it was the intention of HKNIC to downplay the extent of the problem, in making a belated public notification of the October event. Ms HO considered it unacceptable for the event to be disclosed so late, more than three weeks after its occurrence. She strongly requested that HKNIC should notify the HKSAR Government of all emergency and non-emergency LOEs

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which occurred at DBNPS immediately after their occurrence. Besides, the HKSAR Government, CLP and HKNIC should make more concerted efforts to enhance the existing notification and information disclosure mechanisms for handling nuclear events at Daya Bay, regardless of their severity and classification under INES. Her view was echoed by Dr Margaret NG.

31. Mr WONG Yuk-man considered that the two events on 23 May and 23 October 2010 had revealed the passive role of the Administration in the monitoring of nuclear power stations' operation and performance. He opined that there was an urgent need for the Administration to conduct an overall review of the current notification mechanisms with PEACO/GD, CLP and HKNIC as well as the Daya Bay Contingency Plan developed by the HKSAR Government for handling nuclear incidents occurred in power stations at Daya Bay, with a view to identifying the areas for further improvement and facilitating the Administration in making proactive response to nuclear emergencies.

32. Ms Audrey EU expressed concern whether the October event was a result of aging of facilities in DBNPS. Stressing the importance of safe operation and maintenance, she asked whether DNMC had conducted comprehensive and thorough examination of the facilities in DBNPS after the event, including the water pipes a section of which was found to have defects.

33. In reply, Mr S H CHAN advised that DBNPS had conducted checks of all similar pipe sections and confirmed their integrity. DBNPS also had a comprehensive environmental monitoring programme to protect the health of its staff and the general public. Regular checks over the years had indicated that there had been no excessive or undue release of radioactivity that had an adverse effect on health or the environment.

34. Responding to Ms Audrey EU's enquiry about the role and function of NSCC, Mr S H CHAN advised that NSCC was formed some 20 years ago by DNMC. The roles of the committee included communicating to the Hong Kong public on nuclear safety at DBNPS, discussing reports on its nuclear safety matters and providing recommendations on nuclear safety based on national nuclear safety regulations, with reference to nuclear safety information of international nuclear safety organizations and actual DBNPS situations. Committee members were invited by DNMC from professionals and nuclear experts.

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35. Dr LAM Tai-fai expressed reservations about the sincerity of CLP and HKNIC in rendering full cooperation and support to the Administration to enhance the information disclosure mechanism. Knowing that the Administration had already asked CLP and HKNIC to timely disclose to the public any incidents related to radiation and the safe operation of DBNPS, he asked whether the Administration had set a clear and definite timeline regarding the release of information for HKNIC's reference.

36. US for S replied that the HKSAR Government hoped to be informed of all emergency and non-emergency LOEs occurred at DBNPS right after the occurrence of these events. In the meantime, the Administration was holding in-depth discussions with HKNIC and CGNPC on the enhancement to the information disclosure mechanism. The Administration aimed to revert to the Panel on the enhancement measures agreed upon by all sides in early 2011.

37. Responding to Dr LAM Tai-fai's concern about the sincerity of HKNIC in enhancing the timeliness and transparency of the operation of DBNPS, Mr S H CHAN stressed that HKNIC was actively reviewing the disclosure arrangements in conjunction with its Mainland counterparts, with a view to identifying room for improvement. HKNIC looked forward to the early completion of the review and would report the result of the discussions to the Panel.

38. Dr Margaret NG expressed dissatisfaction with the little progress made since the May event by the HKSAR Government in pressing for improvements to the existing notification and information disclosure mechanisms for events occurred at Daya Bay. She considered that the matter should be escalated to a higher level, and that a request should be put to the Chief Executive for his consideration of appropriate follow-up actions with the Mainland authorities. The Chairman echoed her view and suggested that the HKSAR Government should exert pressure through the Central People's Government. US for S said that the Administration would give serious consideration to Members' suggestion.

39. Mr LEUNG Kwok-hung shared the view of Dr Margaret NG that there was a pressing need to review the existing reporting system on nuclear incidents, as any unexpected incidents at Daya Bay could pose significant threat to the safety of Hong Kong residents.

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40. In response, US for S stressed that the stance of the Administration had always been clear and consistent. Sharing the public concern over nuclear safety, the Administration was committed to reviewing the notification system with a view to enhancing timeliness and transparency to the public. The Administration had secured HKNIC's understanding that the joint objective of both sides was to enhance the notification arrangements for the timely disclosure and transparency of any incidents related to safe operation of the nuclear power station. The HKSAR Government had stepped up the discussion with the Guangdong Provincial Government for a review of the established notification mechanism but a consensus had yet to be reached. The Administration would report the result of the discussions to the Panel, once solid progress was made.

(Members agreed to extend the meeting by 20 minutes.)

41. Mr CHEUNG Man-kwong expressed strong dissatisfaction with the failure of HKNIC to fulfill its promise to enhance the transparency of the operation of DBNPS and the information disclosure mechanism for emergency events. He asked whether the request for immediate notification of all nuclear events was not addressed because HKNIC only had a 25% share in the Guangdong Nuclear Power Joint Venture Company Limited ("GNPJVC").

42. Mr S H CHAN responded that the request for transparency and timely disclosure of information had been conveyed to the Mainland side for consideration. He stressed that HKNIC's discussion with its Mainland counterparts was still on-going, and there was no question of the request not being addressed because of HKNIC's percentage of share in GNPJVC.

43. Ir Dr Raymond HO declared that he was the Chairman of NSCC. He assured Members that DBNPS was operated in strict compliance with international safety standards. Regarding the reporting of nuclear-related events, Ir Dr HO advised that there were internationally established requirements for the monitoring, reporting and disclosure of nuclear-related incidents. INES, developed by IAEA, was promulgated as a worldwide tool to consistently communicate to the public the significance of nuclear and radiation-related events. It rated nuclear and radiation-related events on a scale ranging from 0 to 7. At present, there was no disclosure arrangement for events falling outside the INES rating (i.e. below Level 0 or "out of scale"). Ir Dr HO said that NSCC fully acknowledged the increasing aspiration of Hong Kong people for

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enhanced transparency of the operation of DBNPS and a more timely notification mechanism. NSCC had relayed the message to the operator and owners of DBNPS, after the two non-emergency events in May and October 2010.

44. The Chairman shared the view that the public had the right to know at the earliest opportunity and prompt notification of a LOE, whether it was of an emergency or non-emergency nature, which might affect the normal operation of the power stations in Daya Bay should be made once it was discovered and confirmed. He asked the Administration and HKNIC to take note of Members' views and concerns.

45. Concluding the discussion, the Chairman said that he would consider proposing at the next regular meeting on 7 December 2010 the formation of a subcommittee to review the Daya Bay Nuclear Power Station Notification Mechanism.

46. The meeting ended at 7:20 pm.

Council Business Division 2
Legislative Council Secretariat
20 May 2011