

香港特別行政區政府
商務及經濟發展局
工商及旅遊科

香港添馬添美道二號
政府總部西翼二十三樓



COMMERCE, INDUSTRY AND TOURISM BRANCH
**COMMERCE AND ECONOMIC
DEVELOPMENT BUREAU**
GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION

23/F, WEST WING
CENTRAL GOVERNMENT OFFICES
2 TIM MEI AVENUE
TAMAR, HONG KONG

本局檔號 OUR REF.: CITB 139/39/4
來函檔號 YOUR REF.:

電話 Tel. No.: 2810 3161
傳真 Fax No.: 2147 3065

21 May 2020

Council Business Division 1
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road
Central
Hong Kong
(Attention: Ms Ada LAU)

Dear Ms LAU,

Legislative Council Finance Committee
Follow-up to the Meeting on 24 April 2020

At the Legislative Council Finance Committee meeting on 24 April 2020, Members requested supplementary information in respect of the FCR(2019-20)10 item (i.e. the item regarding the Hong Kong Observatory's replacement of the storm-detecting weather radar at Tai Mo Shan and procurement of a high performance computer system). The requested information is provided below:

- (a) Cooperation agreements signed between the Hong Kong Observatory and meteorological services in the Mainland of China and overseas are listed at **Annex 1**.

- (b) Based on information provided by the Innovation and Technology Bureau, details of the high performance computer / supercomputer systems currently used by government bureaux / departments are listed at **Annex 2**.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Cindy YU', enclosed within a large, loopy oval shape.

(Cindy YU)

for Secretary for Commerce and Economic Development

c.c.:

Hong Kong Observatory

(Attn: Ms Sharon LAU)

Innovation and Technology Bureau

(Attn: Miss Evelyn CHAN)

附件一
Annex 1

香港天文台與中國內地和海外氣象組織簽訂的合作協議

Cooperation Agreements between the Hong Kong Observatory and Meteorological Services in the Mainland of China and Overseas

有關氣象組織 Relevant Meteorological Service	協議名稱 Title of Agreement	簽訂日期 Signature Date
中國民用航空總局 空中交通管理局 Air Traffic Management Bureau of the Civil Aviation Administration of China	中國民用航空總局空中交通管理局和香港天文台航空氣象服務長期技術合作備忘錄^	1999 年 4 月 21 日 21 April 1999
中國氣象局 China Meteorological Administration	中國氣象局和香港天文台氣象科技長期合作安排^	2001 年 2 月 19 日 19 February 2001
深圳市氣象局 Meteorological Bureau of Shenzhen Municipality	深圳市氣象局和香港天文台數值天氣預報技術長期合作協議^	2011 年 11 月 25 日 25 November 2011
Korea Meteorological Administration*	Memorandum of Understanding on Cooperation between the Hong Kong Observatory of Hong Kong, China and Korea Meteorological Administration of the Republic of Korea*	2012 年 5 月 30 日 30 May 2012
廣東省氣象局 Guangdong Meteorological Service	廣東省氣象局與香港天文台數值天氣預報技術長期合作協議^	2012 年 9 月 14 日 14 September 2012

有關氣象組織 Relevant Meteorological Service	協議名稱 Title of Agreement	簽訂日期 Signature Date
廣東省氣象局 Guangdong Meteorological Service	廣東省氣象局與香港天文台氣象科技合作協議 [^]	2014 年 11 月 6 日 6 November 2014
Meteo-France*	Memorandum of Understanding between Meteo-France of France and the Hong Kong Observatory of Hong Kong, China*	2015 年 3 月 24 日 24 March 2015
Philippine Atmospheric Geophysical and Astronomical Services Administration*	Memorandum of Understanding between the Hong Kong Observatory of Hong Kong, China and the Philippine Atmospheric Geophysical and Astronomical Services Administration of the Republic of the Philippines*	2015 年 11 月 13 日 13 November 2015
中國民用航空局、 中國氣象局 Civil Aviation Administration of China, China Meteorological Administration	中國民用航空局、中國氣象局、中國香港特別行政區政府香港天文台關於聯合建設亞洲航空氣象中心的協議 [^]	2016 年 10 月 28 日 28 October 2016
Thai Meteorological Department*	Memorandum of Understanding on Meteorological Cooperation between Thai Meteorological Department of Thailand and Hong Kong Observatory of Hong Kong, China*	2017 年 9 月 18 日 18 September 2017
Department of Meteorology and Hydrology of Myanmar*	Memorandum of Cooperation between Department of Meteorology and Hydrology of Myanmar and Hong Kong Observatory of Hong Kong, China*	2018 年 7 月 9 日 9 July 2018
State Secretariat of Civil Aviation of Cambodia*	Memorandum of Understanding on Cooperation between State Secretariat of Civil Aviation of Cambodia and Hong Kong Observatory of Hong Kong Special Administrative Region*	2018 年 8 月 7 日 7 August 2018

有關氣象組織 Relevant Meteorological Service	協議名稱 Title of Agreement	簽訂日期 Signature Date
Viet Nam Meteorological and Hydrological Administration*	Memorandum of Understanding on Cooperation between Viet Nam Meteorological and Hydrological Administration of the Socialist Republic of Viet Nam and Hong Kong Observatory of Hong Kong, China*	2018 年 9 月 13 日 13 September 2018
世界氣象組織 World Meteorological Organization	Memorandum of Understanding between the Hong Kong Observatory of the Government of the Hong Kong Special Administrative Region of the People's Republic of China and the World Meteorological Organization on Supporting Global Weather Information Services*	2018 年 10 月 2 日 2 October 2018

*註： 有關組織或協議並沒有正式中文名稱。

^Note: The relevant agreement has no formal English title.

政府各政策局／部門現時使用的高性能／超級電腦系統（每秒 1 兆次浮點運算或以上）
High Performance Computer / Supercomputer Systems (1 trillion floating point operations per second or above)
Currently used by Government Bureaux / Departments

高性能／超級 電腦系統 High Performance Computer / Supercomputer System	政策局／部門 Bureau/Department	運算效能 (每秒兆次浮點運算) Computing Performance (Trillion Floating Point Operations per Second)	作業系統用途及類型 (可擴展／內置) Use and Type of Operating System (Scalable/Built-in)	投入服務時間 Time of Commissioning	計劃更換時間 Planned Time of Replacement
1	環境保護署 Environmental Protection Department	65	<ul style="list-style-type: none"> 用於區域性的空氣質量模擬和預測，及城市峽谷內的風場模擬 可擴展 Used for regional air quality simulation and forecasting, and urban canyon wind field simulation Scalable 	2020 年 4 月 April 2020	沒有 Nil

高性能／超級 電腦系統 High Performance Computer / Supercomputer System	政策局／部門 Bureau/Department	運算效能 (每秒兆次浮點運算) Computing Performance (Trillion Floating Point Operations per Second)	作業系統用途及類型 (可擴展／內置) Use and Type of Operating System (Scalable/Built-in)	投入服務時間 Time of Commissioning	計劃更換時間 Planned Time of Replacement
2	香港天文台 Hong Kong Observatory	26.4	<ul style="list-style-type: none"> • 支援為公眾提供的天氣預報服務 • 可擴展# • Supporting public weather forecast • Scalable# 	2010 年 3 月 March 2010	2022 年 12 月 (將由 FCR(2019-20)10 項目 下的高性能電腦系統 取代) December 2022 (To be replaced by the high performance computer system under the FCR(2019-20)10 item)
3	香港天文台 Hong Kong Observatory	12	<ul style="list-style-type: none"> • 支援航空氣象服務 • 可擴展# • Supporting aviation weather services • Scalable# 	2013 年 7 月 July 2013	預計約一年後由第 5 項的系統取代，現時正 進行系統遷移工作 To be replaced by the system at item 5 in about one year's time after ongoing system migration work

高性能／超級 電腦系統 High Performance Computer / Supercomputer System	政策局／部門 Bureau/Department	運算效能 (每秒兆次浮點運算) Computing Performance (Trillion Floating Point Operations per Second)	作業系統用途及類型 (可擴展／內置) Use and Type of Operating System (Scalable/Built-in)	投入服務時間 Time of Commissioning	計劃更換時間 Planned Time of Replacement
4	香港天文台 Hong Kong Observatory	54.5	<ul style="list-style-type: none"> • 支援氣候變化評估 • 可擴展 • Assessing climate change • Scalable 	2019 年 9 月 September 2019	沒有 Nil
5	香港天文台 Hong Kong Observatory	200	<ul style="list-style-type: none"> • 支援航空氣象服務 • 可擴展 • Supporting aviation weather services • Scalable 	2019 年 12 月 December 2019	沒有 Nil

#註： 雖然系統在設計上可擴展，但由於有關系統運算速度較新系統低，未能追上目前技術要求，香港天文台沒有計劃將舊系統與新系統連接。香港天文台會視乎硬件狀態利用舊系統進行其他研究工作。

#Note: The system is scalable by design. However, since the relevant system has a slower computing speed than the new system and cannot meet latest technical requirements, the Hong Kong Observatory does not plan to cluster the old system with the new system. Depending on the status of the hardware, the Hong Kong Observatory would use the old system for conducting other research work.