

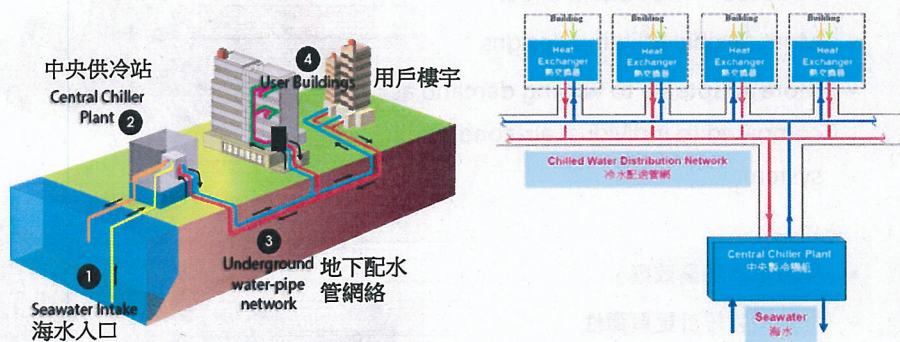
# District Cooling System at the Kai Tak Development 啟德發展區 區域供冷系統



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## District Cooling System 區域供冷系統



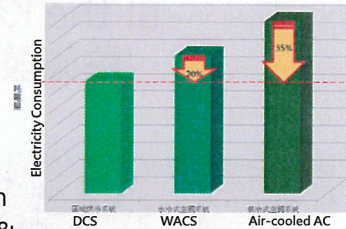
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## Benefits of District Cooling System

### 區域供冷系統的優點

- Energy-efficient & reduced CO<sub>2</sub> emission as compared to traditional AC system  
For example, in Kai Tak, annually:-
  - 85 million kWh saving in electricity consumption;
  - 59,500 tonnes CO<sub>2</sub> emission reduction
- Not required to install user's own chillers & associated electrical equipment
  - Reduced noise, vibration and heat
- 較傳統空調系統節能減排  
以啟德為例，
  - 每年可節省8,500萬度電，
  - 每年可減少59,500噸二氧化碳排放
- 無需安裝製冷機組和相關電氣設備
  - 減少噪音、震動、熱力等



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## Benefits of District Cooling System

### 區域供冷系統的優點

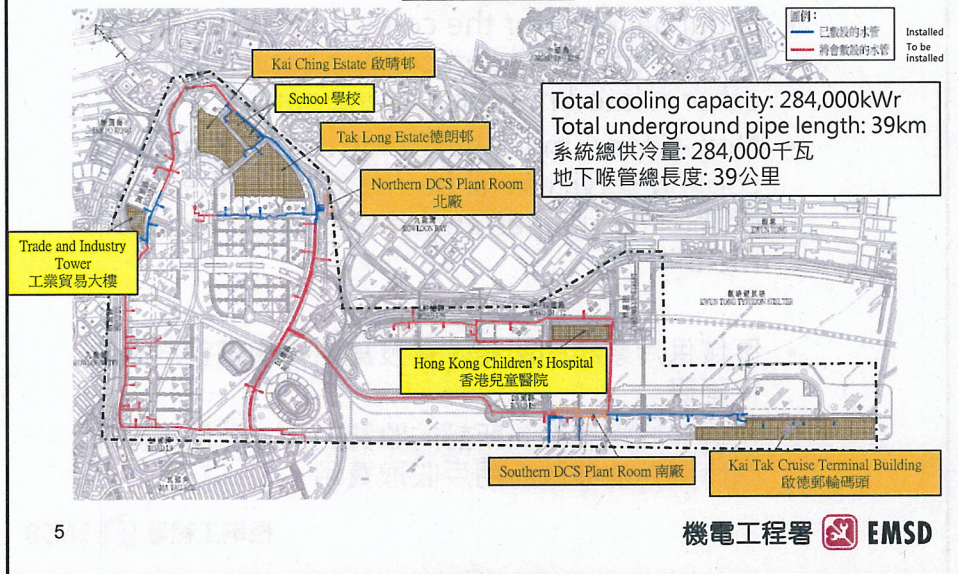
- Reduced "heat island effect"
- More flexible building designs
- More adaptable to varying demand as compared to individual air-conditioning system
- 可減低「熱島效應」
- 令建築物設計更具彈性
- 較獨立空調系統更能配合不同空調需求



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## District Cooling Services Area 覆蓋範圍



## Charging Principles 收費原則


- Cost of district cooling comparable to cost of individual water-cooled air-conditioning system using cooling towers
- To recover both the capital and operating costs over the project life, which is estimated to be 30 years
- 使用區域供冷系統與自行安裝冷卻塔的水冷式空調系統費用相若
- 系統使用期(30年)內收回建造和營運成本

## District Cooling Services Bill

### 區域供冷服務條例草案

- Legal backing for the collection of charges for the use of the district cooling services and other related matters is necessary
- Non-Government buildings using district cooling services will be charged on the basis of the charging arrangements stipulated in the Bill
- 區域供冷系統的服務收費及其他相關事宜均須法律基礎
- 根據《條例草案》所訂的收費安排，向使用區域供冷服務的非政府用戶收取費用

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## Charging Proposal

### 收費建議

- Key tariff components:
  - Capacity charge
  - Consumption charge
- 收費主要組成部份：
  - 製冷量收費
  - 使用量收費

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## Charging Proposal

### 收費建議

- Tariff adjustment mechanism:
  - Capacity charge  
Adjust annually based on the Composite Consumer Price Index
  - Consumption charge  
Adjust annually to take into account the change in electricity tariff rate
- 收費調整機制：
  - 製冷量收費  
按綜合消費物價指數每年作出調整
  - 使用量收費  
參照每年電費的變動作出調整


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## Charging Level 收費水平

- 2014/15 charging level:
  - Capacity charge  
112.11 (\$/kilowatt per month)
  - Consumption charge  
0.19 (\$/kilowatt-hour)
- 二零一四至一五年度收費：
  - 製冷量收費  
112.11 (元 / 每月千瓦)
  - 使用量收費  
0.19 (元 / 千瓦小時)


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## Typical Example 典型例子

Building type 樓宇類型	Office building 辦公室大樓
Gross floor area 建築面積	60,000 (m <sup>2</sup> / 平方米)
Cooling capacity demanded 所需製冷量	7,000 (kW / 千瓦)
Estimated monthly capacity charge 估計每月製冷量收費	800,000 (\$ / 元)
Estimated monthly consumption charge 估計每月使用量收費	400,000 (\$ / 元)
Estimated monthly total charge 估計每月總收費	1,200,000 (\$ / 元)
Estimated monthly charge per m <sup>2</sup> 估計每月每平方米收費	20 (\$ / 元)

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## Timetable 時間表

- Start to collect charges from non-Government users in July 2015
- 二零一五年七月開始向非政府用戶收取費用


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## District Cooling Services Bill 區域供冷服務條例草案

- The main objective is to provide for matters relating to district cooling services provided by the Government, including the imposition of charges for the services; and to provide for other related matters
- The Bill is divided into 6 Parts and contains 2 Schedules
- 主要旨在就關乎由政府提供的區域供冷服務的事宜，包括就該服務收費，以及其他相關事宜，訂定條文
- 本條例草案分為6部，並載有2個附表


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## District Cooling Services Bill 區域供冷服務條例草案

- Part 1 – Preliminary
  - Contains preliminary provisions and sets out short title
  - Contains interpretation of the Bill in which the fundamental and other technical concepts are defined
- 第1部 — 導言
  - 導言及簡稱
  - 定義，以作條例草案的釋義之用。其中包括基本概念及其他技術性的概念的定義


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## District Cooling Services Bill 區域供冷服務條例草案

- Part 2 — Provision of district cooling services
  - Provisions relating to how district cooling services are provided
  - Application and approval of an approved consumer
  - Circumstances for suspension or termination of services
  - Application of resumption by an approved consumer
  - Procedure for cessation of the approval of consumer
- 第2部 — 提供區域供冷服務
  - 訂明如何提供區域供冷服務
  - 申請及批准成為**獲准用戶**
  - 在甚麼情況下，暫停或終止區域供冷服務
  - 恢復遭暫停的服務的申請
  - 申請終止成為獲准用戶的批准的程序

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## District Cooling Services Bill 區域供冷服務條例草案

- Part 3 — Charges for district cooling services
  - Various charges, fee and deposit payable by an approved consumer
  - Methods of calculation of the charges (specified in Schedule 2)
  - Capacity charge rate and consumption charge rate annual adjustment mechanism
- 第3部 — 區域供冷服務的收費
  - 用戶須繳付的各項收費，按金和費用
  - 計算收費的方法（在附表2指明）
  - 製冷量收費額及超額冷量收費額每年調整的機制

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## District Cooling Services Bill 區域供冷服務條例草案

- Part 4 — Administration of district cooling services
  - Issue of an *improvement notice* to an approved consumer
  - Empowers an authorized officer to enter a building for the purposes of inspection and maintenance
  - Provides for the offences of obstructing an authorized officer and of tampering with a facility
- 第4部 — 區域供冷服務的管理
  - 向獲准用戶發出 *敦促改善通知書*
  - 賦權獲授權人員為檢查和保養目的，進入建築物
  - 訂出罪行，凡任何人妨礙獲授權人員，或干擾為提供區域供冷服務而設置的設施，即屬犯罪

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## District Cooling Services Bill 區域供冷服務條例草案

- Part 5 — Appeal
  - Mechanism for appealing to a District Cooling Services Appeal Board
  - Decisions subject to appeal
  - Basic rules and procedure for the proceedings of an appeal board
- 第5部 — 上訴
  - 向區域供冷服務上訴委員會提出上訴的機制
  - 上訴所針對的決定
  - 上訴委員會法律程序的基本規則和程序

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## District Cooling Services Bill 區域供冷服務條例草案

- Part 6 — Miscellaneous matters
  - Evidential matters relating to recovery of an unpaid charge or fee in civil proceedings
  - The Director may delegate any of his/her functions to EMSD officers and may specify a form to be used
  - The Secretary may amend Schedule 1 or 2 by notice published in the Gazette
- 第6部 — 雜項事宜
  - 追討欠繳的收費或費用的民事法律程序中的證據事宜
  - 署長可轉授其職能予機電工程署人員，以及可指明須使用的表格
  - 局長可憲報刊登的公告，修訂附表1或2

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## District Cooling Services Bill 區域供冷服務條例草案

- Schedules 1 and 2 — District cooling systems and charges
  - Schedule 1 specifies the district cooling system(s) in relation to which the Bill applies
  - Schedule 2 provides for the methods of calculation of charges
- 附表1及2 — 區域供冷系統及收費
  - 附表1指明本條例草案適用的區域供冷系統
  - 附表2訂明計算區域供冷服務收費的方法

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Thank you  
多謝

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