

# 重新校驗(RCx)的發展里程碑

## Development Milestone of Retro-commissioning

機電工程署早於2016年已制定了重新校驗技術指引草稿供業主、大廈運行人員及其他持份者參考。多所不同規模、用途、樓齡及能源年耗量的政府建築物被選為試點項目以試行《重新校驗技術指引》草稿。隨著《重新校驗技術指引》於2017年推出初版後，機電署獲得了各方專業團體及持份者的意見及資訊，更新了重新校驗技術指引，並於2018年12月發布《重新校驗技術指引2018》(TG-RCx 2018)。

TG-RCx 2018 中引入了新的部分和主題，其中包括重新校驗事前準備、數據管理和中央控制管理系統(CCMS)要求，以及用於持續校驗的關鍵效能指標(KPI)。另外，執行測量和驗證(M&V)方法的內容也得變得更詳細豐富，而且亦發布了關於RCx補充信息的新單獨小冊子。補充小冊子提供了各方面的實用背景信息，包括選擇合適的RCx服務供應商，屋宇設備系統的問題診斷技術指導說明和中央控制管理系統(CCMS)數據範本。

TG-RCx 2018 可以從新的RCx資源中心網站(<https://www.rcxrc.emsd.gov.hk>)下載，該網站於2018年11月推出。新的RCx資源中心將會是香港RCx的新焦點，它是RCx持份者分享經驗和知識的平台，大廈業主和公眾可以從資源中心找到節能機會(ESO)提示，有用的鏈接和RCx服務提供商。RCx從業者可以從RCx網站獲取最新的技術指南，培訓和研討會信息以及成功案例的資料。

本年亦有另一個RCx發展里程碑，機電署更進一步於2018年11月15日與多個來自本港、澳門、大灣區及其他內地城市的機構，簽署《粵港澳大灣區建築物重新校驗(再調適)合作備忘錄》，以推廣重新校驗至大灣區。

環境局局長黃錦星先生在備忘錄的簽署儀式上致辭時表示，對抗極端天氣，節能及減碳刻不容緩，事在必行。中年大廈(25年以上樓齡)佔全香港的建築物超過六成，樓宇的屋宇設備系統，未必維持在最節能的運作狀態。重新校驗是為樓宇「驗身」的措施，既符合成本效益，又可讓物業管理人員以至業主知道節能妙法。根據機電署就六座不同樓齡的政府建築物進行的

As early as 2016, the Electrical and Mechanical Services Department has developed a draft retro-commissioning (RCx) technical guide for buildings' owners, operators and other stakeholders. A number of government buildings of different sizes, uses, ages and energy consumption were selected as pilot projects and reference for the draft Retro-commissioning Technical Guidelines (TG-RCx). Following the launch of the first edition in the TG-RCx in 2017, the EMSD received feedback and information from various professional bodies and stakeholders, updated the TG-RCx and issued the Retro-commissioning Technical Guideline 2018 (TG-RCx 2018) in December 2018. New topics were added in the TG-RCx 2018.

New sections and topics are introduced in the TG-RCx 2018, which include the preparation of RCx, data management and CCMS requirements on RCx and KPIs for continuous monitoring. The content in the M&V methodology is also enriched. Furthermore, a new separated booklet on the RCx supplementary information is issued. The supplementary booklet provide practical background information to facilitate the RCx from the service provider engagement, technical guidance note for building services system diagnosis and Central Control Management System (CCMS) data sample.

The TG-RCx 2018 can be downloaded from the new RCx Resource Centre website (<https://www.rcxrc.emsd.gov.hk>), which was launched in November 2018. The new RCx Resource Centre is a focal point on the RCx in Hong Kong. It is a platform for RCx stakeholders to share their experiences and knowledge. Building owners and public can find the Energy Saving Opportunity (ESO) tips, useful links and RCx service providers from the resource center. RCx practitioner can obtain latest technical guidelines, training & seminar information and successful cases from the RCx website.

We also have another milestone for the RCx development in this year. EMSD signed a Memorandum of Co-operation on Retro-commissioning (RCx) of Buildings in the Guangdong-Hong Kong-Macao Greater Bay Area with various RCx organizations in Hong Kong, Macau and Mainland at the "Co-creating a Smart Future" Symposium on 15 November 2018 to promote the development and application of retro-commissioning (RCx) of buildings in the Guangdong-Hong Kong-Macao Greater Bay Area.

Addressing the signing ceremony of the memorandum, the Secretary for Environment, Mr. WONG Kam-sing said that it is imperative to fight against extreme weather by energy conservation and carbon reduction. The "Middle-aged Building" (more than 25 years old) accounts for over 60% of all buildings in Hong Kong. The building services system may not be maintained in the most energy efficient operation. RCx is a cost effective way to periodically check an existing building's energy performance in order to identify areas for operational improvement that can save energy. With this "health checkup", building owners make known their building systems and equipment so that they can operate at optimal efficiency. According



先導計劃及香港綠色建築議會的ACT-SHOP多個實戰經驗,重新校驗可為樓宇慳電約5%至6%。

合作備忘錄的簽署,標誌多個來自本港、澳門、大灣區及其他內地城市的機構進一步合作,把重新校驗推廣為提升建築物能源效益的務實新方案。此合作備忘錄亦提供堅實基礎,讓各簽署機構分享知識、經驗和專長,以至培養相關能力。在知識及應用方面積累更多經驗後,機電署便會積極聯同各簽署機構研究把重新校驗這個方案推廣至內地其他城市。有關TG-RCx 2018 的技術指引可於以下網站下載: <https://www.energysaving.gov.hk/file-manager/template/common/pdf/rcx/EMSD-TG-RCx-Main-Content-Chi.pdf>



to the 6 RCx pilot projects lead by EMSD and experience from "ACT-Shop" Programme by Hong Kong Green Building Council, RCx can save up to 5% to 6% building energy.

The signing of the MOC embodies further collaboration between various organizations in Hong Kong, Macau, the Greater Bay Area and other Mainland cities to promote RCx as a pragmatic new solution for achieving higher building energy efficiency. The MOC also offers a solid foundation for the parties to build capacity through sharing their knowledge, experience and expertise. With a wider experience gained in applications, EMSD will actively work with all signing parties to share and promote RCx knowledge and practices to other cities in the Mainland. The technical guidelines of TG-RCx 2018 can be downloaded from the website at <https://www.energysaving.gov.hk/filemanager/template/common/pdf/rcx/EMSD-TG-RCx-Main-Content-Eng.pdf>

