

智能 EnergyWits

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Launching of “Energy Saving and
Decarbonisation for All 2023” Campaign

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「全民節能減碳2023」運動啟動

Launching of "Energy Saving and Decarbonisation for All 2023" Campaign

環境及生態局（環境局）和機電工程署（機電署）於6月29日正式啟動「全民節能減碳2023」運動，推動各界攜手節能減碳，爭取在2050年前實現碳中和。

《節能約章2023》及《4T約章》

業界和機構可通過簽署約章，承諾節約能源。截至2023年6月29日，已分別有超過3 200個場所及超過750個場所簽署《節能約章2023》及《4T約章》。

約章網頁: www.energysaving.gov.hk/esc2023/tc/home

The Environment and Ecology Bureau (EEB) and the Electrical and Mechanical Services Department (EMSD) launched the Energy Saving and Decarbonisation for All 2023 Campaign on June 29 to encourage the community to strive for carbon neutrality before 2050 by saving energy and reducing carbon emissions together.

Energy Saving Charter 2023 and 4T Charter

Through signing the Energy Saving Charter, industry practitioners and organisations pledged to practise energy conservation. As at 29 Jun 2023, over 3 200 premises and over 750 premises have signed the Energy Saving Charter 2023 and the 4T Charter respectively.

Dedicated website for the Charters: www.energysaving.gov.hk/esc2023/en/home



■ 各界踴躍參與「全民節能減碳2023」運動，全力支持節能減碳。

Various sectors enthusiastically participated in and supported the Energy Saving and Decarbonisation for All 2023 Campaign.



■ 環境局副局長黃淑嫻女士（左二）及機電署署長彭耀雄先生（右二）與「慳神」及機電署吉祥物「機智啤啤」主持「全民節能減碳2023」運動的啟動禮。

Ms WONG Shuk-han, Under Secretary for the Environment and Ecology (second left) and Mr PANG Yiu-hung, Director of Electrical and Mechanical Services (second right) kicked off the Energy Saving and Decarbonisation for All 2023 Campaign together with Hanson and Witty Bear, the mascot of the EMSD.

「慳神大比拼2023」之「家居節能大比拼」及「新世代慳神大比拼3.0」

在典禮上，「慳神大比拼2023」的「家居節能大比拼」和「新世代慳神大比拼3.0」亦隨即啟動，一同為在2050年前實現碳中和而努力。「家居節能大比拼」鼓勵家居住戶參與「全民節能減碳2023」運動，而「新世代慳神大比拼3.0」則鼓勵學生發揮無限創意和想像空間，通過節能和更廣泛地採用可再生能源。

比賽網頁：www.energysaving.gov.hk/eschampion2023/tc/home

Energy Saving Championship Scheme 2023 - Competition for Household and Competition for Students

Two major competitions under the Energy Saving Championship Scheme 2023 were also launched on the ceremony. The competition for household urges households to participate in the Energy Saving and Decarbonisation for All 2023 Campaign, while the competition for students encourages students to unleash their infinite creativity and imagination to work together for achieving carbon neutrality before 2050 by energy saving and wider adoption of renewable energy.

Dedicated website for the Scheme: www.energysaving.gov.hk/eschampion2023/en/home



■ 《節能約章2023》及《4T約章》的宣傳材料

Leaflet of Energy Saving Charter 2023 and 4T Charter



■ 「家居節能大比拼」及「新世代慳神大比拼3.0」的宣傳材料

Leaflet of Competition for Household and Competition for Students



「全民節能減碳2022」運動 — <<慳神大比拼>>機構組別 - 「重新校驗·智析慳電大比拼」

“Energy Saving and Decarbonisation for All 2022” Campaign – Energy Saving Championship Scheme - Wise Save @ RCx Competition



■ 環境及生態局副局長黃淑嫻女士（中）及《重新校驗·智析慳電大比拼》評審委員會主席立法會議員盧偉國博士工程師（左二）頒發重新校驗·智析慳電金獎予得獎大廈「T Town」團隊。

The Under Secretary for the Environment and Ecology, Ms WONG Shuk Han (Middle) and Judging Panel Chairman of the Energy Saving Championship Scheme 2022 - Competition for Organisations, the Legislative Council member Ir Dr Hon WK LO (Second Left) presented Wise Save @ RCx Gold Award to team of "T Town" building



■ 機電工程署助理署長/電力及能源效益, 朱祺明工程師（前排中）與各得獎大廈團隊於經驗分享會合影留念

Group Photo of Assistant Director / Electricity & Energy Efficiency, Electrical and Mechanical Services Department Ir Barry Chu (Front Middle) with representatives of winning teams at the Experience Sharing Seminar

環境及生態局和機電工程署舉辦的「全民節能減碳2022」<<慳神大比拼>>機構組別之「重新校驗·智析慳電大比拼」，是希望透過比賽活動鼓勵各持份者，包括業主、物業管理公司和重新校驗服務提供者等，利用創新科技去提高既有建築物的能源效益。

是次「大比拼」共有43幢大廈參賽。經過評審後，入圍大廈的參賽團隊於2023年2月13日進行面試，由評審委員選出各獎項的得獎大廈。得獎團隊亦獲邀於2023年6月29日出



Jointly organised by the Environment and Ecology Bureau (EEB) and the Electrical and Mechanical Services Department (EMSD), the Energy Saving and Decarbonisation for All 2022 – Wise Save @ RCx Competition (Competition for Organisations) is to encourage stakeholders, including building owners, property management company and service providers of retro-commissioning (RCx), etc., to enhance energy efficiency of buildings with the application of Innovation and Technology (I&T).

The competition received an encouraging response with a total of 43 entries. With the assessment to the submissions, representatives of the shortlisted buildings were invited to join a finalist interview with the Judging Panel on 13 February 2023. The winning teams were also invited to the Award Presentation Ceremony on 29 June 2023 and a seminar held on 3 July 2023 to share their experience and knowledge for over 200 practitioners. We look forward to the concerted efforts of the Government



■ 超過200位從業員參加7月3日的分享會了解得獎大廈團隊在節能和應用創科技術的經驗

The winning teams shared their experience on application of energy efficiency and renewable energy technologies to over 200 practitioners in the seminar on 3 July 2023.

席頒獎典禮，並於7月3日參與經驗分享會為超過200位從業員分享他們的經驗及知識。期望藉政府及各持份者的共同協作，為香港展開深度減碳之旅，使香港能擁有健康、宜居及可持續發展的環境。

有關更多比賽結果及得獎大廈的經驗分享，可瀏覽以下活動專題網頁：

www.energysaving.gov.hk/eschampion2022/tc/scheme/index.html



and the stakeholders in achieving a healthy, liveable and sustainable environment in Hong Kong, China, as we embark on Hong Kong's deep decarbonisation journey.

For more details, please visit the dedicated website for the Scheme:

www.energysaving.gov.hk/eschampion2022/en/scheme/index.html



粵港澳大灣區建築物重新校驗(再調適)及既有建築節能改造合作備忘錄 - 全體會議及廣州技術考察

Memorandum of Co-operation on Retro-commissioning (RCx) and Energy-saving Retrofit of Existing Buildings in Greater Bay Area (GBA) – Plenary Meeting and Technical Visits in Guangzhou

現時香港約63%的碳排放量來自發電。在達至碳中和的整體策略下，我們必須在2050年前，逐步增加使用零碳能源發電。實現淨零發電需要投入大量資本和資源，會增加發電成本，社會各界和市民免不了要分擔成本。而建築物佔香港總用電量約9成，逾6成的碳排放來自建築物耗電相關的電力生產，所以推動建築物節能有助減少能源轉型的成本。

Currently about 63% of Hong Kong's carbon emissions comes from power generation. Under the overall strategy of achieving carbon neutrality, we must progressively increase the use of zero-carbon energy for electricity generation before 2050. Achieving net-zero electricity generation requires enormous amount of capital and resources, and will increase the cost of electricity generation. Various sectors of the community and members of the public will inevitably have to share the cost. Buildings account for about 90% of Hong Kong's total electricity consumption, and over 60% of our carbon emissions is attributable to generating electricity for our buildings. Therefore, promoting building energy saving can help reduce the cost of the transformation.



■ 粵港澳大灣區建築物重新校驗(再調適)及既有建築節能改造合作備忘錄於廣州的全體會議

The plenary meetings of the "Memorandum of Cooperation for RCx and Retrofit of Existing Buildings in GBA" at Guangzhou

Re-commissioning (RCx) and energy-saving retrofitting for existing buildings can effectively reduce energy consumption and serve as one of the most effective means of offsetting rising energy costs. In order to promote RCx and energy-saving retrofit of buildings, and enhance the experience sharing and collaboration between the Greater Bay Area (GBA), EMSD had signed the "Memorandum of Cooperation (MoC) for RCx in GBA" with other 6 institutions (including the Hong Kong Green Building Council, Building Services Operation and Maintenance Executives Society, the Macao Institution



■ 備忘錄合作機構代表技術考察位於廣州的重新校驗(再調適)及節能改造項目
Representatives from MoC partners visited the RCx and retrofit projects in Guangzhou

對既有建築物進行重新校驗及節能改造能有效減少能源消耗，作為抵消能源成本上升的最有效手段之一。為推廣建築物重新校驗及節能改造，以及加強大灣區技術交流協作，機電工程署已於2018年聯同大灣區6間機構(包括香港綠色建築議會、香港屋宇設備運行及維修行政人員學會、澳門機電工程師學會、廣州華南理工大學廣東省城市空調節能與控制工程技術研究開發中心、北京清華大學建築節能研究中心和上海市建築科學研究院)簽訂了【粵港澳大灣區建築物重新校驗(再調適)合作備忘錄】。於2022年一眾備忘錄合作機構更進一步共同簽訂了【粵港澳大灣區既有建築節能改造合作備忘錄】。

備忘錄合作機構於2023年4月在廣州進行了建築物重新校驗(再調適)和既有建築節能改造的全體會議及技術考察。會議上各成員就重新校驗(再調適)和既有建築節能改造的技術發展、人才培訓以及宣傳推廣三個範疇匯報及分享了過去的工作進程。機電工程署亦分享了於香港政府建築物實施重新校驗的進程和經驗，以及優化網上重新校驗資源中心的計劃。另外，備忘錄合作機構亦技術考察了廣州太古匯及珠江新城的重新校驗及節能改造項目。參觀了包括照明系統調適、熱能回收裝置、二氧化碳感應器鮮風調控、變流冷凍水系統調適以及可再生能源系統等，並交流了有關的節能技術和實施經驗，獲益良多。

展望未來，備忘錄合作機構已計劃在大灣區舉辦有關重新校驗及既有建築節能改造的綜合比賽、研究開放香港綠色建築議會重新校驗培訓課程及從業員註冊計劃至內地和澳門、以及安排更多大灣區考察活動。機電工程署會繼續和備忘錄各合作機構保持溝通協作，積極推動節能綠建，幫助國家和香港實現碳中和。

of Electrical and Mechanical Engineers, the City Air-conditioning Energy Conservation and Control of Guangdong Project Technology Research Exploitation Center of the South China University of Technology, the Building Energy Conservation Research Center of Tsinghua University and the Shanghai Research Institute of Building Sciences) in 2018. The MoC partners further signed the “MoC for Energy-saving Retrofit of Existing Buildings in GBA” in 2022.

In April 2023, the MoC partners held the plenary meetings and conducted technical visit in Guangzhou. At the meetings, the MoC partners shared and reported the work progress on three aspects, including the technical development, capacity buildings and publicity and promotions. The EMSD has also shared the progress and experiences of conducting RCx in government buildings in Hong Kong, and the plan of revamping the on-line RCx Resource Centre. Moreover, the MoC partners had conducted technical visits to the RCx and energy-saving retrofit works of the Taikoo Hui and Zhujiang New Town at Guangzhou. The visits include the lighting system commissioning, energy recovery system, CO2 fresh air control, variable speed chilled water circulation and renewable energy system, etc., and sharing about the energy saving technologies and implementation experience which were very fruitful.

Looking ahead, the MoC partners have planned to organize a competition on RCx and energy-saving retrofit of existing buildings in the GBA; explore to open the HKGBC's RCx Training and Registration Scheme to Marco and Mainland; and organize more technical visits in the GBA. The EMSD will continue to communicate and collaborate with the MoC partners to promote energy saving and green building, and help the Nation and Hong Kong to achieve carbon neutrality.

能源效益及節約簡介會及巡迴展覽 - 攜手改善政府場所的能源表現 Energy Efficiency & Conservation Briefing and Roving Exhibitions - Join Hands to Improve Energy Performance of Government Premises

在2019年施政報告中，行政長官宣布了特區政府的目標是在2024-25年度將政府場所的整體能源表現提升超過6%。為實現此目標，政府已提出了幾項倡議，包括能源審核、重新校驗、節能項目、綠色內務管理措施、可再生能源設施以及創新技術的應用。

為了提升同事對目標的理解，鼓勵他們積極提高場所能源表現，能源效益事務處於2023年初在多個政府合署以及政府總部舉行了「能源效益及節約巡迴展覽」。是次展覽還推廣了實用的綠色內務管理措施，包括適用於辦公室和家居的“節能小貼士”。這些信息不僅有助於各政府決策局及部門的綠色內務管理，對於經過展覽的市民大眾也同樣有正面影響，提高他們的節能意識。

此外，能源效益事務處於2023年2月在政府總部舉行了一次講座，並向多個決策局和部門的環保經理及代表講解政府的目標及其實施的進度。此外，講者還介紹了各種綠色內務管理措施和最佳實務例子，並且鼓勵他們在其所屬決策局和部門推廣這些信息，並盡可能實施這些措施。

憑藉我們的堅定承諾和不懈努力，通過實現種種能源表現提升的倡議，我們有信心在2024-25年度實現此目標。

In the 2019 Policy Address, the Chief Executive announced a goal to improve the overall energy performance of government premises by more than 6% by 2024-25. To attain this goal, the Government has launched several initiatives including energy audits, retro-commissioning, energy saving projects, green housekeeping measures, renewable energy installation and applications of innovation and technologies.

To enhance colleagues' understanding of the goal and encourage them to actively improve energy performance of their venues, the Energy Efficiency Office conducted an "Energy Efficiency and Conservation Roving Exhibition" at various government offices and the Central Government Office in early 2023. The exhibition also promoted practical green housekeeping measures, including "Energy Saving Tips" applicable to offices and homes. This information not only helped the green management of bureaux and departments (B/Ds), but also raised the awareness of energy conservation of the general public passing by the exhibition.

In February 2023, the Energy Efficiency Office organised a briefing session at the Central Government Offices and shared insights on the Government's goal and the progress of its implementation to the B/Ds' green managers and representatives. The speaker also introduced different green housekeeping measures and best practices, and encouraged them to disseminate this information in their respective B/Ds and to implement these measures as far as possible.

With our strong commitment and relentless efforts, through various energy performance improvement initiatives, we are confident that this goal could be achieved by 2024-25.



「《十載節能綠建創能效，全民「築」動邁向碳中和》網上問答比賽」— 推廣建築物能源效益以實現碳中和

Buildings Energy Efficiency Online Quiz Competition - Promoting Building Energy Efficiency to Achieve Carbon Neutrality

《建築物能源效益條例》(《條例》)自2012年全面實施至今，一直負起應對氣候變化的使命。透過每三年與業界進行檢討及修訂，最新2021年版實務守則估計可以在2035年為建築物每年節省大約47億至53億度電(與2015年相比)，相當於大約150萬個家庭全年的用電量，有助香港於2050年前實現《香港氣候行動藍圖2050》所定下的碳中和目標。

為推廣建築物能源效益並推動全民參與深度低碳轉型，機電工程署於2023年初舉辦的《十載節能綠建創能效，全民「築」動邁向碳中和》網上問答比賽，以促進參加者對建築物能源效益的認識及對碳中和的貢獻。比賽吸引接近1,000名學生及公眾參加，當中有接近300位參加者更加提供了實踐建築物能源效益和達致碳中和的創新意念。此外，於2023年3月10日舉行了問答比賽的頒獎典禮暨公眾參與論壇，以表揚得獎者提出的具創意及可行的方案。當日有接近200名學生及公眾參與。

機電工程署署長彭耀雄先生於頒獎典禮致辭時，鼓勵參加者一起從生活中多方面入手，持續地減少碳排放，並承諾與各界一齊合作繼續推動創新科技，提升建築物的能源效益，幫助香港於2050年前邁向碳中和。

透過梁國熙教授工程師及呂琳教授工程師的專題演講及【「築」動碳中和現場問答挑戰賽】，參加者都非常投入，令現場氣氛十分熱鬧。

頒獎典禮結束前，參加者亦就《條例》未來發展方向進行

Since the full implementation in 2012, the Buildings Energy Efficiency Ordinance (the Ordinance) has been taking on the mission of combating the climate change. Through the review once every three years with the trade, the latest 2021 edition of the code of practices is estimated to bring about an annual electricity saving of about 4.7 billion to 5.3 billion kWh from buildings by 2035 as compared with 2015, which is equivalent to the annual electricity consumption of about 1.5 million households, and will help Hong Kong achieve the carbon neutrality target before 2050 as set out in the "Hong Kong's Climate Action Plan 2050".

To promote the energy efficiency of buildings and encourage the public engagement transforming towards deep decarbonisation, EMSD organized the Buildings Energy Efficiency Online Quiz Competition in early 2023 to nurture the participants' awareness of building energy efficiency and their contribution to carbon neutrality. About 1000 students and the public participated in the competition, among which about 300 participants provided their innovative ideas for implementing building energy efficiency and achieving carbon neutrality. In addition, a prize presentation ceremony was held on 10 March 2023 for recognizing the creative and practical proposals of the award winners. Nearly 200 students and the public were present.

During the award ceremony, Mr. PANG Yiu-hung, Director of Electrical and Mechanical Services, gave speech to



■ 頒獎典禮吸引接近200名人士出席。

Around 200 participants attended the prize presentation ceremony.



於頒獎典禮上，機電工程署署長彭耀雄先生致歡迎辭，而梁國熙教授工程師及呂琳教授工程師則作主題分享。

During the prize presentation ceremony, the Director of the Electrical & Mechanical Services, Mr. PANG Yiu Hung, delivered a welcoming speech while Ir Prof. Michael K.H. LEUNG and Ir Prof. Vivien LU shared their presentations.



機電工程署署長彭耀雄先生（前排右五）、機電工程署副署長/規管服務潘國英先生（前排左三）、評審委員會主席梁國熙教授工程師（前排左四）、評審委員會眾成員與公開組得獎者合照

Director of the Electrical & Mechanical Services Department, Mr. PANG Yiu Hung (fifth from the right of the first row), Deputy Director/Regulatory Services, Mr. POON Kwok Ying (third from left of the first row), Chairman of the Judging Panel, Ir Prof. Michael K.H. LEUNG (forth from the left of the first row) pictured with all guests and winners.

了一個問卷調查。結果接近9成參加者認為有須要擴展條例規管範圍至數據中心；有9成參加者認為法例應要求更多建築物類別進行能源審核並有接近8成參加者認為有須要縮短能源審核周期至5年或更短的時間；有9成人認為公開披露建築物的能源相關資訊可以促進節能。這些意見非常珍貴，亦對機電工程署將來檢討修訂《條例》有很重要的參考價值。

詳情可瀏覽活動網頁：

https://www.emsd.gov.hk/beeo/tc/mibec_beeo_NewsandEvents.html?highlight=Y

the participants and encouraged their involvement on reducing carbon emissions in different aspects of their daily life and committed to cooperate with all sectors to promote innovative technologies and improve building energy efficiency to help Hong Kong striving towards carbon neutrality by 2050.

Through the keynote presentations by Ir Prof. Michael K.H. LEUNG and Ir Prof. Vivien LU and the live quiz challenge, the participants were actively involved and the atmosphere was very lively.

Before the end of the ceremony, participants also conducted a survey on future development of the Ordinance. About 90% of respondents considered that it was necessary to extend the scope of regulation to data centers; 90% of respondents considered that the Ordinance should require more

types of building to conduct energy audits and nearly 80% of respondents considered that it was necessary to shorten the energy audit cycle to 5 years or less; 90% of respondents considered that disclosure of energy-related information of buildings could improve energy saving. These comments are valuable and would be of great reference value for the EMSD to review and amend the Ordinance in the future.

For details of the Event, please visit the website:

https://www.emsd.gov.hk/beeo/en/mibec_beeo_NewsandEvents.html?highlight=Y