# 港助建氫能跨境認證制度及產業鏈



摘錄自11月7日香港《文匯 報》:機電署正與國家市場監督管 理總局共同探討制定「綠氫及低碳 氫認證制度」,預計2027年正式推 出。

特區政府機電工程署署長潘國英指,此舉將實現 氫氣來源可追溯,並與香港金管局的碳排放標準對 接,為綠色金融投資提供基礎。機電署亦獲邀加入 國家標準 (GB) 專家小組,參與國家有關氫能車輛 及氫能設備的標準草擬,將香港的運營經驗融入國 家標準,對接氫能技術認證、安全監管,建立互認 機制,推動氫能的跨境應用。

特區政府也全力建設跨境應用,機電署計劃於 2027年前在港島及九龍增設公眾加氫站,並與廣東 省探討簽署《氫能合作發展備忘錄》,簡化氫氣通 關流程,形成區域供應網絡。氫能合作不僅是能源 工程,更是推動區域綠色經濟的重要平台。透過共 建「氫能灣區走廊」,香港可充分發揮金融、標準 及監管優勢,與內地城市形成產業互補,推動大灣 區在氫能時代率先起航

早於去年6月發布《香港氫能發展策略》,為鋪 路落實,機電署正主導修訂《氣體安全條例》,並 已發布三份技術指引,同步推動氫能法規、標準、 認證與示範項目落地,為香港實現2050年碳中和目 標奠定堅實基礎。潘國英強調,香港的氫能設施須 結合國際標準與本地高密度城市特點,建立長期監 測機制。

目前,元朗凹頭公眾加氫站已投入運作,另有多 個專用加氫設施獲批,標誌着香港氫能產業從規劃

應用層面方面,香港氫能產業已進入示範應用與 制度構建的關鍵階段。他表示,香港首個公眾加氫 站已於元朗凹頭投運,香港的氫能設施須嚴格進行 風險評估。「我們的技術守則既參照國際標準,也 融合香港本地條件,確保每個項目在安全框架內落 地,並建立長期監察機制。」

特區政府自2022年成立「氫能源跨部門工作小 組」以來,已審批並原則同意28個氫能源試驗項 目,涵蓋氫燃料電池雙層巴士、洗街車、氫能冷鏈 運輸車、氫能發電機等多個領域, 部分項目已投入 日常運作。在基礎設施方面,除現有元朗凹頭公眾 加氫站外,機電署計劃於2027年前在九龍及港島增 設公眾加氫站,逐步完善全港加氫網絡。

潘國英認為,氫能推廣應用面臨的最大挑戰在於 供應鏈與成本。為了開拓綠氫的供應源,香港正積 極推行多種綠氫及低碳氫生產的創新試驗項目,當 中包括「堆填氣體製氫」

長遠而言,政府會考慮從內地及其他國家輸入綠 氫及低碳氫,並研究與大灣區氫能供應網絡銜接, 形成區域協同供應體系。

目前香港使用的氫氣主要屬「灰氫」,即由化石



圖為氫能巴士加氫站。

資料圖片

燃料副產品提取而成,仍存在碳排放問題。潘國英 指出,根據國際可再生能源署(IRENA)的預測 2030年前綠氫成本將接近灰氫水平。隨着內地新 疆、內蒙古等地大規模綠氫生產基地投產,以及氫 氣運輸技術成熟,未來成本將明顯下降。

### HK's hydrogen highway: Connecting to a cleaner GBA

Following the emphasis on "deepening the energy revolution and building a clean, low-carbon system", Hong Kong is now aligning with national plans, using hydrogen energy as a starting point to drive green transformation.

In an exclusive interview, Poon Kwok-ying, Director of the Electrical and Mechanical Services Department (EMSD) of the SAR government, outlined that Hong Kong will promote hydrogen energy development through four key directions: "improving legislation, establishing standards, aligning with the market, and advancing with prudence." EMSD is working with the State Administration for Market Regulation to explore the establishment of a "green and low-carbon hydrogen certification system," slated for official launch in 2027. Poon noted that this initiative will enable traceability of hydrogen sources and align with the carbon emission standards of the Hong Kong Monetary Authority, laying the foundation for green financial investments.

The SAR government is also fully committed to developing cross-border applications. According to the "GBA Hydrogen Corridor" plan proposed in the Policy Address, the public hydrogen refuelling station at Au Tau, Yuen Long will become a key node in the "Foshan-Guangzhou-Dongguan-Shenzhen-Hong hydrogen backbone.

Poon stated that EMSD plans to add public hydrogen refueling stations on Hong Kong Island and in Kowloon by 2027 and is exploring the signing of a Memorandum of Development on hydrogen cooperation with Guangdong Province to streamline customs clearance for hydrogen and form a regional supply network.

Hydrogen cooperation is not just an energy project but a crucial platform for promoting a regional green economy. Through the joint development of the "GBA Hydrogen Corridor," Hong Kong can fully leverage its advantages in finance, standards, and regulation, forming industrial complementarity with mainland cities and propelling the Greater Bay Area to take the lead in the hydrogen era.

As early as June last year, the "Strategy of Hydrogen Development in Hong Kong" was released. To pave the way for implementation, EMSD is leading the revision of the Gas Safety Ordinance and has issued three technical guidelines, simultaneously advancing hydrogen regulations, standards, certification, and demonstration projects, laying a solid foundation for Hong Kong to achieve its 2050 carbon neutrality goal.

Poon emphasized that Hong Kong's hydrogen facilities must integrate international standards with the characteristics of a high-density city, establishing long-term monitoring mechanisms. Currently, the public hydrogen refueling station in Yuen Long is operational, and several dedicated hydrogen refueling facilities have been approved, marking the transition of Hong Kong's hydrogen industry from planning to practice.

In terms of application, Hong Kong's hydrogen industry has entered a critical stage of demonstration applications and institutional building. He stated that Hong Kong's first public hydrogen refueling station is already operating in Yuen Long, and all hydrogen facilities in Hong Kong must undergo rigorous risk assessments. "Our technical code references international standards while also incorporating Hong Kong's local conditions to ensure each project is implemented within a safety framework, with long-term monitoring mechanisms established."

Since the establishment of the Inter-departmental Working Group on Using Hydrogen as Fuel in 2022, the SAR government has reviewed and granted in-principle approval to 28 hydrogen energy pilot projects. These cover various areas, including hydrogen fuel cell double-decker buses, street washing vehicles, hydrogen-powered cold chain transport vehicles, and hydrogen generators, with some projects already in daily operation. Regarding infrastructure, in addition to the existing public hydrogen refueling station, EMSD plans to add public hydrogen refueling stations in Kowloon

and on Hong Kong Island by 2027, gradually improving the citywide hydrogen refueling network.

Poon believes that the biggest challenges in promoting hydrogen energy applications lie in the supply chain and costs. To expand sources of green hydrogen supply, Hong Kong is actively pursuing various innovative pilot projects for green and low-carbon hydrogen production, including "landfill gas-to-hydrogen." In the long term, the government will consider importing green and low-carbon hydrogen from the mainland and other countries, and explore connecting with the GBA hydrogen supply network to form a regionally coordinated supply system.

Currently, the hydrogen used in Hong Kong is primarily "gray hydrogen" extracted from fossil fuel by-products, which still involves carbon emissions. Poon said that according to predictions by the International Renewable Energy Agency (IRENA), the cost of green hydrogen is expected to approach that of gray hydrogen before 2030. With the commissioning of large-scale green hydrogen production bases in Xinjiang, Inner Mongolia, and other regions in the mainland, coupled with advancements in hydrogen transportation technology, costs are expected to decrease significantly in the future.

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#### 「律師」定義需釐清 法律責任有分別

等地都實施普通法,但律師 的法律定義卻不盡相同。香

港的法律制度源目英國,法律執業者(legal practitioner) 主要分為律師(solicitor)和大律師(barrister)。大家可有留 意?我用上了「法律執業者」一詞,因為香港有《法律 執業者條例》(Legal Practitioners Ordinance),當中第2 條界定了何謂律師和大律師。除了 solicitor 和 barrister 外,根據《法律執業者條例》,香港還有一種律師叫外 地律師(foreign lawver)。

説到工作範圍,大家都知道律師和大律師也不盡相 同。很多人都以為律師代表當事人出庭,其出庭發言權 (right of audience)只限於區域法院(District Court)和裁判 法院(Magistrates' Courts)。如果是高等法院,律師是沒 有出庭發言權的。這種説法基本上是對的。

不過,請大家注意:在香港的執業律師當中,有大約 一百位符合某些條件,具有訟辯律師(solicitor advocate) 的資格,他們在高等法院是有出庭發言權的。在大律師 當中,也有大約一百位資深大律師(Senior Counsel,簡 稱SC)。舉例來說,律政司司長林定國便是一位資深 大律師。有些同學做家課的時候沒有做好調查研究,以 為機器翻譯軟件管用,結果把 Senior Counsel 翻作高級

根據《法律執業者條例》,任何人冒認香港的法律執 業者,最高罰款港幣500,000元。我常常跟同學説,法

律翻譯不僅僅是翻譯問題,也是法律問題。 遣詞造句, 一定要弄清某個名詞或者某句説話在法律上是否有精確 定義,光靠翻字典是不夠的,更要有相關背景知識。上 網也不一定管用,因為網上資料不一定準確。上文所 述,只是大致情況,大家想深入了解,當然要請教法律 執業者。

順帶一提,本港有三所大學開設法律學院,但在法律 學院任教的老師卻不一定是香港的法律執業者。

很多年前,筆者在茶餐廳飲咖啡,忽然聽到旁邊的兩 位大叔在爭論。大叔甲説,某人既然是法律學院的教 授,理應是律師,總不會做出違法的事情。大叔乙則 説,這位教授這樣做,總有他的理由……兩位大叔你一 言、我一語, 説得有點激動, 我怕他們大打出手, 唯有 好言相勸:「兩位稍安勿躁,請聽我解釋。我不懂政 治,這位教授有什麼政治立場,I couldn't care less.至於 他是否違法,則要由法院裁決,不是我等普通人説了 算。我只想告訴兩位,他並沒有香港執業律師的資格。 還有,他不是教授,是副教授。」我接着説:「兩位可 以看看法律學院的網頁。」聽到我這麼說,兩位大叔先 是驚訝,看過相關資料後,總算慢慢安靜下來。

他們接着問:「那麼他是如何當上法律學院的副教 授?」我聳聳肩説:「I don't know!」



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#### **英**語世界

觀看英美偵探劇時,常會聽到 fingertip search 一詞。字面上是 「指尖搜查」,實際意指巨細靡 遺、仔細小心的搜查方式。每當罪 案發生,警方都會親赴案發現場進 行徹底搜證,有時甚至需要以手指 觸摸地面或其他表面,檢查是否有 肉眼難以察覺或遺漏的證據。因 此, fingertip search 引申為一種極 度細心、不放過任何細節的搜查方 式,通常由警方或專家執行,類似 於「地毯式搜查」。

The crime scene has been sealed off and the forensic team is conducting a fingertip search of the area.

罪案現場已圍封,鑑證科人員正 在現場進行徹底搜證。

A fingertip search was carried out in the site. It was hoped that some more historical relics could be uncovered.

有關人員在現址進行了仔細搜 尋,希望找出更多歷史遺蹟

指尖 (fingertip) 是手指的末 端,此處神經密布,感覺敏鋭,有 助於精細操作。與「fingertip」相 關的片語,搭配不同介系詞 (prepositions) 會產生不同的意

線

家徴技

藝

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表達命

懸

當 説 某 物 「at one's fingertips」,意指該物近在手邊,隨手 可得,易於取得。此用法不僅適用 於具體物件,也包括服務、設施

等。後來更延伸至描述抽象概念,若説某人 對某些知識、資訊或技能「at one's fingertips」,表示他對此了如指掌,能隨時運用。

You should have your medicines at your fingertips; you may need them anytime. 你應該把藥物放在隨手可得的地方,你可

能隨時用得着。 This is a very convenient community. Resi-

dents here have all kinds of services at their

這是生活十分方便的社區,居民很容易就 可以得到各種服務。 She has the facts and statistics at her finger-

tips. She is an expert in the subject.

她掌握了所有事實和統計資料,她是這方 面的專家。

使用「to one's fingertips」來形容某人,意 味其技藝已達登峰造極之境,或在某方面做 到極致。若稱某專業人士「to his/her fingertips」,即表示他是該領域的頂尖典範,各方 面都表現得完美無缺。

She is a ballerina to her fingertips. Tickets to her performance sold out very quickly. 她是首屈一指的芭蕾舞者,她演出的節

目,門票很快便搶購一空。 Don't worry too much about the operation.

The doctor in charge is a surgeon to his finger-不要太過擔心手術,負責這次手術的是最

頂尖的外科醫生。 He is always polite and generous, a gentle-

man to his fingertips. 他常常禮貌周到,為人慷慨,是無可挑剔 的謙謙君子。

(Hang on) By one's fingertips: 命懸一 線,苦苦支撐。

説某人「hang on by one's fingertips」,可 以想像一個人僅用指尖抓住崖邊、搖搖欲墜 的場景。因此,這個片語意指處於危險邊 緣,命懸一線;亦可引申為遭遇困境,地位

不保,正在掙扎求存、勉強堅持。 The little girl who survived the accident was still in hospital, hanging on by her fingertips.

在意外中倖存的小女孩仍然留醫,命懸一

Many shops have closed down and some are just hanging on by their fingertips.

很多商店都已結業,另一些也只是在苦苦

The manager was hanging on to his job by his fingertips. He could get sacked anytime.

經理的職位難保, 他隨時都會被解僱。 由此衍生的 fingertip hold 雖不常用,但可 比喻在艱難時刻的苦苦堅持,或是生死關頭

的微弱支撐力。 The part-time job was a fingertip hold for

him. At least he didn't have to borrow from the bank 那份兼職是他的救命草,至少他不用向銀

行借貸。

同樣是 fingertip, 卻能帶出截然不同的意 思。fingertip search和fingertip hold的含義大 相逕庭。不同的詞組,如表示某物 at one's fingertips (唾手可得) ,某人is a professional to his/her fingertips(技藝精湛),或某人 is hanging on by his/her fingertips (苦苦支 撐) ,其意義也完全不同。

Lina CHU (linachu88@gmail.com)

## 朗誦中糾正發音



通話教與學

作的拓展,我觀察到 一種可喜現象:在朗

誦中糾正發音,常常成效顯著。因篇幅的關係,在此主 要以古詩詞和童詩的朗誦為例,做一個簡單分享。

第一:朗誦古詩詞,有效改善「吃字」現象。通過教 學實踐,發現朗誦古詩詞能幫助學生把字音把控得更為 準確和飽滿。譬如,蘇軾的《出潁口初見淮山是日至壽 州》裏「江海」的「海」、白石塔的「塔」,如若讓學 生單獨朗讀這些字詞,常常有「吃字」現象,即存在韻 母丢失或發音動程不完整的現象。

具體而言,就是字音在聲母除阻後便戛然而止,聽感 上短促、含混、彷彿被「吃掉」了一半。這是韻腹時值 不足和口腔打開不夠導致的音節殘缺問題。然而,當學 生們誦讀起整首詩歌,「吃字」問題似乎就不再是問 題。無論是「江海」的「海」,還是「白石塔」的 「塔」,發音都趨於精準。因為古詩詞的朗誦,講究韻 調和節奏,通過示範、比較等方法,更易讓學生意識到 自身問題以及理解音節完整的重要性,並能在古詩詞的 優美韻律中,避免「吃字」,進一步完善吐字歸音。

■ ②歡迎反饋。教育版電郵: edu@tkww.com.hk

## 練就飽滿音節

第二:朗誦童詩,便於掌握輕聲和兒化音。受粵語發 音影響,香港小朋友學習普通話的輕聲和兒化音有一定 難度。

先說輕聲,童詩充滿了如「呢」「吧」「了」等須讀 作輕聲的語氣詞,以及「月亮」「雲彩」「故事」等第 二個字作輕聲處理的雙音節詞語。通過理解與誦讀,孩 子們漸漸能將這些字詞説得既輕又美,從而改變字字用 力、刻板生硬的語調,讓普通話的表達更為自然流暢。

第三:優秀文學作品有助激發學習熱情。當學生沉浸 於文字的意境或情節的起伏時,會受其感染,產生共 鳴與共情。這種自主融入可以轉化為一種積極的分享 欲——渴望將這份感動用自己的聲音傳遞出來。為了 更好地再現作品和表達自我,學生亦會更努力地精進 普通話。而當語言技能服務於情感抒發,學習便超越 了語言本身,升華為一種自信和富有感染力的藝術表

普通話朗誦,讓語言教學變得更為生動美好,亦讓 我們在朗誦中情不自禁地愛上普通話!



●繆妍音