

EKPO Fuel Cell Technologies and YC Synergy agree on accelerating global hydrogen energy deployment

EKPO Fuel Cell Technologies (EKPO), a leading joint venture in the development and large-scale production of fuel cell stacks for CO₂-neutral mobility, and YC Synergy signed a Memorandum of Understanding on November 20, 2023 to jointly promote the applications of hydrogen energy and fuel cells by combining EKPO's fuel cell stack and YC Synergy's fuel cell system development technologies. The scope of cooperation including but not limited to fuel cell power system development using high-performance metal bipolar plate proton exchange membrane fuel cell (PEMFC) stacks from EKPO. YC Synergy will utilize its extensive fuel cell power system R&D experience to develop standardized modules for stationary, marine and automotive markets. The two parties will jointly spearhead the commercialization of hydrogen fuel cells in Taiwan as well as East Asian markets.



Kerry Chang, Head of the Power and Energy Division of YC Synergy, said: "We at YC Synergy have accumulated more than ten years of R&D and end-user applications integration experience and have established long-term partnerships with multiple

stack suppliers around the world. We have many years of expertise in graphite material stacks and believe it is important for us to build up our competencies surrounding metal-based stacks simultaneously. EKPO has one of the world's leading metal bipolar plate PEMFC technology, in terms of performance, cost and durability. Cooperating with the world's top metal stacks supplier such as EKPO, we believe we will be able to quickly penetrate the global markets and to accelerate the commercialization of hydrogen fuel cell by jointly reducing the cost of fuel cell systems. The alliance not only targets Taiwan market, but also plans to expand to broader SEA, creating a win-win partnership."



YC Synergy Fuel Cell Power System

Both parties will intensify their relationship and target on new product development based on the now signed MoU. The aim is to effectively reduce system product costs by standardizing system designs to meet applications ranging from hundreds of kilowatts to megawatts. In response to global customer inquiries from EKPO, YC Synergy will become a collaborative system development partner, jointly providing integrated system solutions to the end customers.



EKPO metal bipolar plate PEMFC stack

EKPO:

EKPO Fuel Cell Technologies (EKPO), headquartered in Dettingen/Erms (Germany), is a leading joint venture in the development and large-scale production of fuel cell stacks for CO₂-neutral mobility. The company is a full-service supplier for fuel cell stacks and components used in passenger cars, light commercial vehicles, trucks, buses, as well as in train and marine applications. Within this context, the company is building on the industrialization expertise of two established international automotive suppliers – ElringKlinger and Plastic Omnium.

The aim of the joint venture is to develop and mass-produce high-performance fuel cell stacks in order to further advance CO₂-neutral mobility - whether on the road, rail, water or off-road.

YC Synergy Co., Ltd.

Established in 2012, YC Synergy possess the complete fuel cell systems development technology and end-use applications integration capabilities. YC Synergy's product line ranges from 10 kW to several hundred kW and is progressing towards the MW market applications. It is one of the few domestic companies in Taiwan that simultaneously possesses independent development experience in heavy-duty vehicle applications, marine system applications, as well as stationary power generation system applications. The company has completed the development, certification, and

deployment of products such as city buses, medium-sized trucks, ferries, yachts, and industrial hydrogen power stations. It has a diverse capability in fuel cell system design, certification, and engineering practices across multiple fields. Simultaneously, YC Synergy provides hydrogen-related peripheral products and engineering services, such as electrolyzer for hydrogen production (green hydrogen), high-pressure hydrogen storage, and hydrogen purification for residual hydrogen.

德國百年車用零部件廠商 ElringKlinger AG 與錫力科技聯手推進全球氫能應用

德國 ElringKlinger AG（EK）旗下燃料電池公司 EKPO 於 11 月 20 日來台參訪錫力科技，雙方並簽訂合作協議，結合彼此金屬燃料電池電堆與系統開發技術，聯手推動氫能與燃料電池應用商業化，合作範圍包括採用德國 ElringKlinger AG 旗下質子交換膜電堆製造公司 EKPO 之高性能金屬電堆進行產品開發，錫力科技結合完整的燃料電池系統開發技術，針對固定式、船用與車用市場進行全方位標準化模組開發，雙方除了共享開發數據之外也將合作共同打開台灣以及全球市場。



錫力科技電力事業部負責人張凱群表示：「我們錫力科技累積超過十年以上的開發與應用經驗，已與全球多家電堆供應商建立長期合作夥伴關係，我們針對碳材電堆已擁有多年的使用經驗，現在計畫同步佈局金屬電堆的技術路線，EKPO 承襲 ElringKlinger 集團擁有百年以上的金屬處理技術與經驗，擁有世界頂尖的金屬雙極板燃料電池技術，在性能、成本和耐久性上都是國際領先，與全球頂尖的金屬電堆供應商 EKPO 合作，有助我們快速切入市場，藉由雙方的合作，共同降低燃料電池系統成本，提高商業化速度，不僅台灣市場，更合作打開東南亞以及歐美市場，是個雙贏的合作模式」



錫力科技燃料電池發電系統

EKPO 以及錫力雙方同為全球少見的獨立電堆與系統開發製造商，彼此定位互補性很高，在技術、產品和市場拓展上有非常大的彈性與合作空間，當前氫能產業應用快速發展，然而終端產品和供應鏈來不及反應，正是雙方聯手推動市場的絕佳機會！

雙方根據本次合作協議簽訂展開詳細技術資料交換以及新產品開發工作，目標大幅度提升產品壽命、提升電堆功率密度，並且有效降低系統產品成本，以標準化系統設計滿足百 KW 至 MW 級以上應用。同時面對 EKPO 於全球的客戶詢問，錫力科技將成為聯合系統開發夥伴，針對終端客戶，錫力科技將與 EKPO 聯手提供系統應用解決方案。



EKPO 金屬板 PEM 燃料電池堆

EKPO:

EKPO 燃料電池科技公司 (EKPO) 總部位於德廷根/埃姆斯（德國），是一家擁有先進燃料電池堆技術的合資企業，致力於開發和大規模生產其為碳中和交通領域所量身打造的金屬板燃料電池電堆。該公司是燃料電池堆和周邊零部件的全方位供應商，其產品適用於乘用車、輕型商用車、卡車、巴士、火車和船舶應用。

EKPO 是由兩家知名國際車用零件供應商 ElringKlinger 和 Plastic Omnium 所合資成立，繼承了二家母公司深厚的工業化專業知識，願景為透過大規模生產其高效能燃料電池電堆，加快全球各式交通載具去碳化的發展進程。

錫力科技股份有限公司：

錫力科技成立於 2012 年，擁有完整燃料電池系統自主開發技術與後端工程整合應用施工能力，產品線從 10kW 至數百 kW 範圍，正邁向 MW 及應用市場，為台灣本土少數同時擁有自主化重型車用系統開發、船用系統開發以及固定式發電系統設置的燃料電池系統製造原廠，已完成市區公車、中型卡車、渡輪、遊艇、工業餘氫發電站等產品開發、認證與部署，具有多領域的燃料電池系統設計、認證和工程實踐能力，同時提供電解製氫（綠氫）、高壓儲氫、餘氫純化等氫能周邊產品與工程服務。

