



University : National Chin-Yi University of Technology
Country : Taiwan
Web Address : <https://www.ncut.edu.tw>

[SDGs 7] Affordable and Clean Energy

[7.4.3] Does your university as a body provide direct services to local industry aimed at improving energy efficiency and clean energy (energy efficiency assessments, workshops, research renewable energy options)

Taiwan's 2050 Net Zero Emissions and Carbon Neutrality

In response to the escalating threat of climate change and the increasing frequency of natural disasters, the global community has recognized the urgent need to combat climate change. Countries worldwide are actively engaged in green technology research and development, promoting the development of green energy, and fostering green industries as part of a broader strategy for sustainable economic development that addresses climate change. In alignment with these goals, NCUT participated in the "Carbon Neutrality" international development trends seminar organized by the ASHRAE Taiwan Chapter on March 16, 2022.

Through this seminar, NCUT gained insights into the latest international trends related to carbon issues and explored strategies for integrating them into industrial practices to enhance the effectiveness of carbon reduction measures domestically. To further advance these efforts, the establishment of the "Carbon Neutral Center" in August 2022 is underway, aiming to actively collaborate with national policies to promote carbon neutrality and energy-saving initiatives.

Moreover, the inauguration of the "ESG Sustainable Development Center" in January 2023 is planned. In addition to supporting the Carbon Neutral Center in conducting carbon inventory and reduction activities, this center will focus on international certification of carbon rights trading and the cultivation of talents specialized in international net-zero carbon emissions. These efforts aim to guide corporate ESG sustainable development practices.

Furthermore, on April 10, 2023, NCUT entered into a sustainable cooperation memorandum with France's Bell International Inspection and Certification Group and Bangtai Group. This partnership intends to launch international certification courses for talent development, fostering a skilled workforce capable of guiding companies towards net-zero transformation. Figure illustrates these collaborative endeavors.





Carbon inventory talent development course

The 2024 Manufacturing Transformation Promotion Plan, led by the Industrial Development Agency of the Ministry of Economic Affairs, has yielded positive outcomes for NCUT. A total of **24** cases submitted by NCUT under the "**Carbon Inventory Value-Added Application Proposal Plan**" have successfully passed the review process. This achievement reflects the university's commitment to advancing sustainable practices and supporting the manufacturing sector in its transition toward more environmentally responsible operations. Through these approved proposals, NCUT will contribute significantly to the industry's efforts in carbon management and value-added applications, aligning with broader goals of sustainability and economic growth.

- 一、 經濟部產業發展署【113年度製造業轉型推動計畫-碳盤查加值應用】提案計畫審查結果，經113年1月29日及1月30日審查會決議，貴單位共24案通過審查，同意核定產業發展署經費每案160,000元，自籌款不得調降。
- 二、 「提案計畫審查通過名單」詳如下方表格所示：

序號	執行單位系所	計畫主持人	計畫名稱	企業名稱
1	工業工程與管理系	陳水淶	中騰融通有限公司升級轉型診斷輔導服務計畫	中騰融通有限公司
2	工業工程與管理系	何境峰	手工具鍛造業組織性碳盤查及低碳化輔導計畫	穩陞工業股份有限公司
3	工業工程與管理系	張嘉寶	金屬製品製造業碳盤查加值應用服務計畫	台灣鍛造有限公司
4	工業工程與管理系	張嘉寶	機械設備製造業碳盤查加值應用服務計畫	太和環境企業股份有限公司
5	化工與材料工程系	錢玉樹	電解廠碳盤查服務計畫	財德企業社
6	流通管理系	李達嘉	金屬扣件業碳盤查推動服務計畫	鋒泉螺釘股份有限公司
7	流通管理系	李達嘉	金屬製品業碳盤查推動服務計畫	同順精密工業股份有限公司
8	智慧自動化工程系	李坤穎	集全特殊金屬-特殊金屬產業發展之碳盤查暨減量服務計畫	集全特殊金屬有限公司
9	智慧自動化工程系	李坤穎	金禾昌-金屬手工具製造產業發展之碳盤查暨減量服務計畫	金禾昌有限公司



Innovative program(s) in Energy and Climate Change:

I. 2023 Industrial Park Interregional Low-Carbon Transformation Integration Promotion Plan

Project name: Industrial Park Carbon Management and Sustainable Development Plan

文稿頁面

文號：112005516

112 年度「產業園區跨區低碳轉型整合推動計畫」 學校協助產業園區低碳專案計畫 審查核定表

輔導單位	勤益科技大學	園區分區	台中軟體潭子/全興
計畫名稱	產業園區碳管理暨永續發展計畫		
核定結果	修正後通過	核定經費	90 萬元整
執行期程	112 年 5 月 5 日起至 112 年 10 月 31 日止		
審查意見：	<ol style="list-style-type: none"> 1. 節能技術輔導廠商明確，請持續建立相關機制，供其他廠商據以參考。 2. 潭子園區產學合作行之有年，後續學生參與可與之結合。 3. 團隊具製程低碳節能技術與實績，與潭子科技園區廠商具建教合作基礎，適合擴大合作。 4. 實務參與成效佳，期許再增加廠商參與學生時數。 5. 輔導團隊 6 位皆有相關經驗，但須強化學生參與的具體規劃。 6. KPI 節能技術輔導可提高到 3 家。 7. 團隊組成堅實，於產業已有實績；惟駐點服務需更具體規劃。 8. 英鼎與和桐之專案申請，宜再強化數位化與可視化之內涵，並整合國內 SI 公司加入 Sensors 及自主設備，聚焦在 CITD 之申請。 9. 潭子科技產業園區計畫內著墨較少，相關輔導對象亦請含括台中軟體潭子園區廠商。 		



II. 2023 Digital Manufacturing Management Value-added Plan--Optimizing the Industrial Digital Manufacturing Management Environment---Carbon Inventory Application Service Plan

112 年度「數位製造管理增值計畫-優化產業數位製造管理環境分項」
碳盤查應用服務計畫 審查意見表

執行單位	國立勤益科技大學碳中和中心	編號	125
合作單位	台姿記工業股份有限公司		
計畫名稱	台姿記工業-碳盤查輔導服務計畫		
審查委員意見			
<ol style="list-style-type: none">1. 減碳規劃項目宜至少 3 項以上，以利協助合作單位加速綠色生產之腳步。2. 減碳量需有具體減碳量數值，非僅以百分比呈現，且目標值須至少 500 公斤以上。3. 本案合作單位外銷比例偏低宜再評估碳盤查推動時程。4. 低碳工作圈為須協助合作單位成立低碳工作小組，並擬定合作單位減碳路徑及降低碳排之可行作法，且須明確針對(製程改善、能源使用、運輸及相關設備使用)提出減少能源浪費及相關改善作法，以利合作單位邁向綠色營運商業模式，非僅以成立碳盤查工作小組，無助合作單位淨零轉型效益。5. 經費編列合理性尚可，後續執行計畫須落實計畫核銷合理性及遵守執行單位核銷程序，避免會計查核風險。6. 本案請依上述建議調整計畫書後送專案計畫確認後，得以執行。7. 本案結案前將安排委員進行訪視。8. 合作單位為高熱源產業。			



III. 2023 Digital Manufacturing Management Value-added Plan--Optimizing the Industrial Digital Manufacturing Management Environment---Carbon Inventory Application Service Plan

112 年度「數位製造管理增值計畫-優化產業數位製造管理環境分項」
碳盤查應用服務計畫 審查意見表

執行單位	國立勤益科技大學碳中和中心	編號	109
合作單位	葉盟工業股份有限公司		
計畫名稱	葉盟工業表面處理溫室氣體盤查服務計畫		
審查委員意見			
<ol style="list-style-type: none"> 1. 減碳規劃項目宜至少 3 項以上，以利協助合作單位加速綠色生產之腳步。 2. 本案規劃技能傳承課程須由執行單位計畫主持人及協同主持人作為授課講師，並藉由盤查過程中採實務演練方式，傳承碳盤查技能給予合作單位種子人員，落實導訓合一及合作單位碳盤查能力提升。 3. 經費編列合理性尚可，後續執行計畫須落實計畫核銷合理性及遵守執行單位核銷程序，避免會計查核風險。 4. 本案請依上述建議調整計畫書後送專案計畫確認後，得以執行。 5. 本案結案前將安排委員進行訪視。 6. 合作單位為高熱源產業。 			



The goal of NCUT's carbon neutrality center To achieve energy saving and carbon reduction

NCUT's **Carbon Neutrality Center**, established in **July 2022**, is dedicated to achieving energy savings and carbon reduction, aligning with global efforts toward **carbon neutrality** and **sustainable development**. The center plays a crucial role in helping **small and medium-sized enterprises (SMEs)** manage carbon emissions and navigate the complex landscape of carbon management, including emissions reduction and sustainability efforts.

Global Context and the Role of Carbon Neutrality

As the world grapples with the adverse effects of **global warming** and **extreme weather events** linked to greenhouse gas emissions, achieving carbon neutrality has become an urgent priority. Carbon neutrality involves balancing carbon emissions by reducing greenhouse gas outputs and offsetting remaining emissions through external reduction quotas, ensuring no net increase in atmospheric carbon. This approach is a key component in combating **climate change**.

Taiwan's Commitment to Carbon Neutrality

The **Taiwanese government** has taken a proactive stance by adopting the **Sustainable Energy Policy Framework**, which emphasizes:

- **Quantifying and reducing carbon footprints**
- **Integrating carbon management into policy planning**
- **Addressing internal emissions reduction**, followed by offsetting remaining emissions through external mechanisms

This policy aims to achieve carbon neutrality, making carbon reduction a national priority.

NCUT's Carbon Neutrality Center

NCUT's **Carbon Neutrality Center** is designed to support SMEs in:

- Building **greenhouse gas inventories**
- Creating **product carbon footprint inventories**
- Enhancing **carbon reduction capabilities**

The center assists SMEs in meeting evolving international carbon reduction trends, adapting to **supply chain requirements**, and complying with the **national carbon border adjustment mechanisms**. This is particularly important as businesses face increasing pressure to meet carbon reduction standards imposed by both national policies and global supply chains.

Mission and Vision



The center's mission is not only to support businesses but also to contribute to Taiwan's national and global carbon reduction goals. By providing expertise in **carbon management**, it enables SMEs to adopt **sustainable practices**, thereby enhancing their competitiveness in a global market that increasingly values environmental responsibility.

In summary, NCUT's Carbon Neutrality Center is at the forefront of promoting sustainability, energy savings, and carbon reduction in Taiwan, especially among SMEs, positioning itself as a critical player in the fight against climate change.

