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

[SDG7] Affordable and Clean Energy 可負擔能源

[SDG7.4.2] Does your university as a body promote a pledge toward 100% renewable energy (petitions, meetings, discussions, events)?

Yes — NCUT has been actively promoting a transition toward renewable energy and carbon neutrality, and this includes pledges, events, and academic–industry–government collaborations that align with a 100% renewable energy vision.

NCUT's Promotion of Renewable Energy Pledges and Events

1. Institutional Commitment

- NCUT established the Carbon Neutrality Center in 2022, which leads campus-wide carbon management and net-zero initiatives.
- Through this center, NCUT promotes renewable energy adoption, carbon inventory training, and carbon reduction education, aligning with national and international pledges toward 100% clean energy.

2. Events and Public Engagement

- **Gaia Day Tree Planting & Net-Zero Pledge Event**: Students, staff, and local residents participate in ecological restoration and renewable energy awareness activities, emphasizing a pledge to support Taiwan's net-zero and renewable energy goals.
- **2025 GTEA Symposium on Green Technology and Engineering Applications**: Hosted by NCUT's College of Engineering, this event focused on green energy, hydrogen power, and carbon cycle technologies. It brought together international researchers, industry leaders, and community stakeholders to discuss pathways toward renewable energy adoption and sustainable development.
- **Green Collar Talent Cultivation Program**: NCUT co-leads this national program with New Taipei City, pledging to develop green professionals with expertise in renewable energy, ESG, and sustainability education.

3. Education and Advocacy

- NCUT integrates renewable energy into curricula and operates solar PV and solar-thermal systems on campus, with real-time data publicly accessible, making the pledge to renewables visible and tangible.

- Participation in competitions and national events such as the *Green Living Creative Design Competition* showcases NCUT's role in cultivating a generation committed to energy conservation, carbon reduction, and renewable solutions.

4. Community and Civic Actions

- Runs Gaia Day tree planting events to restore ecosystems and raise awareness of net-zero commitments.
- Promotes low-carbon mobility by partnering with U-Bike to build a public bicycle station on campus.
- Supports local schools in conducting carbon inventories and designing green curriculum plans.

5. NCUT's Impactful Climate Change Programs: Advancing Hydrogen Energy

Taiwan is advancing its net-zero transformation by prioritizing **hydrogen energy** in its sustainable energy strategies. National Chin-Yi University of Technology (NCUT) plays a central role in this movement, hosting three major national and international hydrogen energy events in 2024.

- **National Student Cup Hydrogen Energy Vehicle Competition (Sept. 14, 2024)**
  - Organized by NCUT's Department of Refrigeration, Air Conditioning, and Energy Engineering, the competition brought together six university teams.
  - NCUT's H2O Racing Team and Hydrogen Wing 2 excelled in dynamic racing, vehicle design, and system integration, winning top awards.
  - The competition nurtured young talent in hydrogen vehicle innovation and system design.
- **2024 Hydrogen Energy and Fuel Cell Technology Forum (Sept. 20, 2024)**
  - Featured leading companies such as Delta Electronics, Hephas Energy Corporation, and Linde LienHwa Group.
  - Discussions focused on hydrogen's role in net-zero strategies, fuel cell applications, and transportation innovations, strengthening industry-academia collaboration.
- **19th National Hydrogen Energy and Fuel Cell Academic Symposium (Sept. 21, 2024)**
  - Gathered experts from Taiwan and abroad, including Prof. Jon Clipsham (University of Strathclyde, UK) and Dr. Lina Troskialina (POLITEKNIK NEGERI BANDUNG, Indonesia).
  - Covered hydrogen production, fuel cell development, and system integration, facilitating global knowledge exchange.
- **NCUT's Role in Climate Action**

- **Talent Development:** Fosters next-generation engineers and researchers in hydrogen energy.
- **Innovation & R&D:** Advances hydrogen vehicle technology and system integration.
- **International Cooperation:** Strengthens Taiwan's role in the global hydrogen economy.

6. 2024 Conference on Green Technology Engineering and Application at NCUT

National Chin-Yi University of Technology (NCUT) hosted the 2024 Green Technology Engineering and Application Seminar, addressing the urgent global challenges of energy scarcity, economic development, and environmental sustainability.

The conference aimed to promote sustainable industrial transformation by integrating green technology into modern industries, fostering solutions that balance economic growth with environmental preservation.

- **Green Technology Integration**
  - Adoption of renewable energy, energy-efficient systems, and eco-friendly manufacturing to minimize environmental impact.
- **Sustainable Industrial Applications**
  - Case studies and innovations on waste reduction, resource recycling, and clean energy technologies as practical pathways for industries.
- **Balancing Economy and Environment**
  - Strategies for aligning policy, technological innovation, and cross-industry collaboration to achieve both sustainability and competitiveness.

Impact and Future Goals

The seminar reinforced NCUT's role as a national leader in green engineering and sustainable development. It served as a catalyst for ongoing R&D in environmentally responsible engineering, while promoting awareness of how industries can adopt sustainable practices without sacrificing growth.

Contribution to SDGs

- **SDG 7 – Affordable and Clean Energy:** Advocates renewable energy adoption.
- **SDG 11 – Sustainable Cities and Communities:** Engages local communities in net-zero pledges.
- **SDG 12 – Responsible Consumption and Production:** Promotes green design and sustainable practices.
- **SDG 13 – Climate Action:** Reinforces national and global 100% renewable energy goals.

- **SDG 17 – Partnerships for the Goals:** Builds alliances with government, industry, and academia.

The 16th National Student Cup Hydrogen Car Competition

Group photo of the 16th National Student Cup Hydrogen Car Competition

The 16th National Student Cup Hydrogen Car Competition is ready to go

The 16th National Student Cup Hydrogen Car Competition starts with the gunshot

Energy Saving Racing Competition

The energy-saving racing process combines the dual energy sources of on-site wind power generation with green energy and green electricity.

H2O Racing team won the dynamic second place and the static second place in the conference competition

CHIN-YI Hydrogen Wing 2 Team
Dynamic masterpiece, static masterpiece, dynamic best spirit award

	
2024 Conference on Green Technology	**nternational Symposium on Diversified Green Energy Creative Inventions**