



Net Zero Tech

International Contest @ Taiwan
2025 淨零排放科技國際競賽



國立臺灣大學
National Taiwan University



財團法人東元科技文教基金會
TECO Technology Foundation

Objectives

The “**Net Zero Tech International Contest**” initiative aims to cultivate talent, enhance industry-academia collaboration, promote global exchanges in net zero technologies, and improve the dissemination of net zero knowledge. It plans to establish professional prestige and international influence through the following measures:



Objectives

1. Provide substantial competition prizes to support university professors' research in net zero and negative emission technologies, encouraging young scholars to engage in research and technology development.
2. Establish a "Net Zero" platform to facilitate technical exchanges and knowledge sharing among industry, government, academia, and research sectors.
3. Disseminate net zero knowledge to foster societal consensus and encourage concrete actions in energy conservation and environmental protection.
4. Implement the four key transformation strategies—energy, industry, lifestyle, and society—to advance toward the vision of sustainable development.



Organizers

- **National Taiwan University**
- **TECO Technology Foundation**



Chairman

Dr. Wen-Chang Chen

(President of National Taiwan University)



Advisory Committee

- Ministry of Education
- Ministry of Environment
- Ministry of Economic Affairs
- Ministry of Foreign Affairs (Inviting)



Co-organizers

- **Association of Pacific Rim Universities (APRU)**
- **Taiwan University Alliance for Sustainable Governance**
- **National Taiwan University System**



Sponsors

Main Sponsor

- **Paujar Charity Foundation**

Sponsors

- **Fubon Financial Holding Co., Ltd.**
- **Chen-Yung Foundation**
- **Lite-On Technology Corporation**
- **CPC Corporation, Taiwan**
- **Shiny Chemical Industrial Co., Ltd.**
- **NTU Industry & Academia Development Association**
- **Hua Nan Bank**
- **Nan Pao Resins Chemical Co., Ltd.**
- **NTU Advanced Research Center of Green Materials Science and Technology**



Advisory
committee



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Main
Sponsor



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—光寶科技—



台灣中油股份有限公司
CPC Corporation, Taiwan



勝一化工
Shiny Chemical



台大產協會
AIAD
Association for Industry-Academia Development



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NTU ARC-GMST
前瞻綠色材料高值化研究中心
Advanced Research Center for Green Materials Science and Technology

Co-organizers



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大學聯盟
Taiwan University Alliance for
Sustainable Governance



NTU SYSTEM
國立臺灣大學系統

Award Mechanism

International Contest			Taiwan Contest		
Awards	Prize (USD)	Sponsors	Awards	Prize (NTD)	Sponsors
Champion	30,300	Lite-On Technology Corporation	Champion	1,000,000	Fubon Financial Holding Co., Ltd.
First Runner-Up	18,200	Paujar Charity Foundation	First Runner-Up	600,000	Chen-Yung Foundation
Second Runner-Up	12,100	Paujar Charity Foundation	Second Runner-Up	400,000	Chen-Yung Foundation
CPC Corporation, Taiwan Smart Energy Award	6,100	CPC Corporation, Taiwan	4th Place	200,000	CPC Corporation, Taiwan
NTU-AIAD, Advanced Net Zero Emission Technology Award	6,100	NTU AIAD	5th Place	200,000	Shiny Chemical Industrial Co., Ltd.
Advanced Green Energy Award	3,000	NTU ARC-GMST	6th Place	100,000	Paujar Charity Foundation
Nan Pao Resins Zero Carbon Vanguard Award	3,000	NAN PAO Resins Chemical Factory Co., Ltd.	7th Place	100,000	Hua Nan Bank
Excellence (13 teams)	1,500 / team	Paujar Charity Foundation	Excellence (13 teams)	50,000 / team	Paujar Charity Foundation
Total	98,600		3,250,000		

Note : The prize for the International Contest matches that of the Taiwan Contest, with the exchange rate based on the remittance date in September 2025.



Schematic diagram of Net Zero Tech International Contest



Contest Theme

Net Zero Tech covering the following technological domains:

1. Renewable Energy

(Wind Power, Solar Power, Marine Energy, Geothermal
Hydrogen Energy, Forward-looking Energy...)

2. Advanced Energy Storage Systems, High Efficiency, Low Energy Consumption, Low Carbon Emissions

3. Negative Carbon, Carbon Capture, Storage, and Reutilization Technologies



Contest Theme

4. **Electric Vehicles, Energy-saving Motors, Green Transportation**
5. **Waste Treatment and Purification Technologies, Resource Circulation and Zero Waste, Green Building**
6. **Energy-saving Technologies**
(Production, Manufacturing, Residential and Commercial Buildings, Green Building Design, Life...)



Eligibility

International Contest

Open to undergraduate and graduate students from universities worldwide, including Taiwan.

Taiwan Contest

Open to undergraduate and graduate students from universities in Taiwan.



Eligibility

Important Notice :

- Each team should consist of at least 3 students and 1 advisor.
- Participants can be from different departments or universities.
- Each person is limited to joining one team (advisors are not subject to this restriction).



Contest Requirements (Submission)

1. **Project title, names of team members, student identification, and other personal information**
2. **Motivation and process of creation**
3. **Research objectives**
4. **Brief project introduction**
5. **Problem-solving and technical value**
6. **Technical creativity**
7. **Technical content and feasibility**
8. **Expected benefits**
9. **Project proposal and attachments submitted in PDF format**

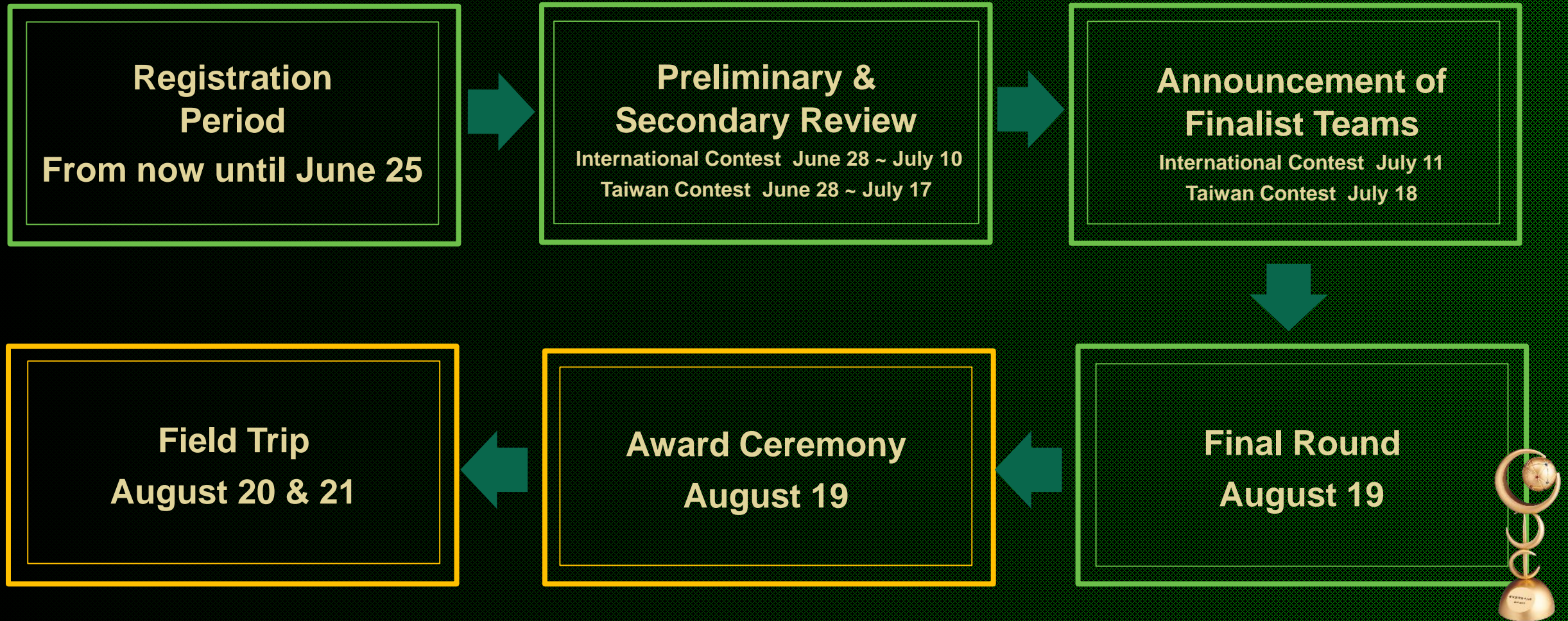


Evaluation Method

1. **Problem-solving and Technical Value: 40%**
2. **Creativity: 25%**
3. **Technical Content and Feasibility: 25%**
4. **Completeness of the Project: 10%**



Contest Schedules



Agenda of Final Round Agenda

Timetable	Events
07:40-08:50	Registration
08:50-09:05	Announcement
09:05-14:40	Presentation & Demonstration
14:40-15:00	Viewing of Works & Interaction
15:00-15:20	Opening
15:20-15:40	Net Zero Keynote Speech
15:40-16:40	Awards Ceremony
16:40-16:50	Address by VIPs
16:50-16:55	Photo shoot / Interview
16:55-17:00	Lottery / Interview
17:00-17:20	Press / Interview



Information for Foreign Finalist Teams

1. All finalist teams must attend the final competition in Taiwan. The attending members must include at least 2 students and 1 advisor.
2. Teams that attend the final competition will receive the following financial support:
 - (1) Travel subsidy of approximately USD 1,500.
 - (2) Minimum prize money of USD 1,500.
3. The organizing committee provides the following services:
 - (1) Consultation on accommodation, meals, and transportation.
 - (2) Full insurance coverage throughout the event.
 - (3) Arranged visits to Taiwan's leading net-zero technology institutions or enterprises.



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Registration

[https://www.tecofound.org.t
w/nz/2025/login.php](https://www.tecofound.org.tw/nz/2025/login.php)



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Advanced Research Center for Green Materials Science and Technology

Highlights :

2024 Net Zero Tech International Contest @Taiwan

















分數		分數
主隊	罰球	客隊
	節數	
紀錄狀		紀錄狀
得分		得分

促進
Promoting
青年師生 投入淨零排放技術的研究發展
Youth and academics in net-zero research
社會各界 力行淨零排放科技的人才培育
Society in cultivating net-zero talent
國際學者專家 交流合作
Global collaboration among experts
淨零排放科技知識普及
Spreading net-zero knowledge

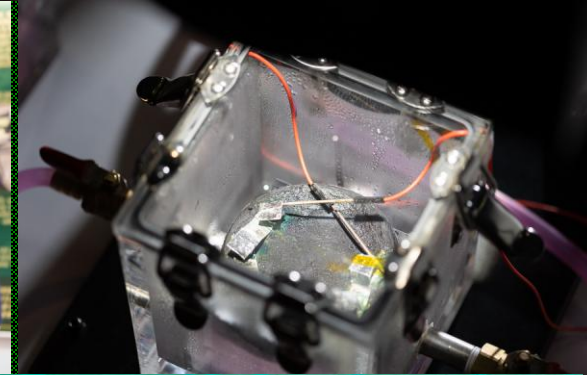
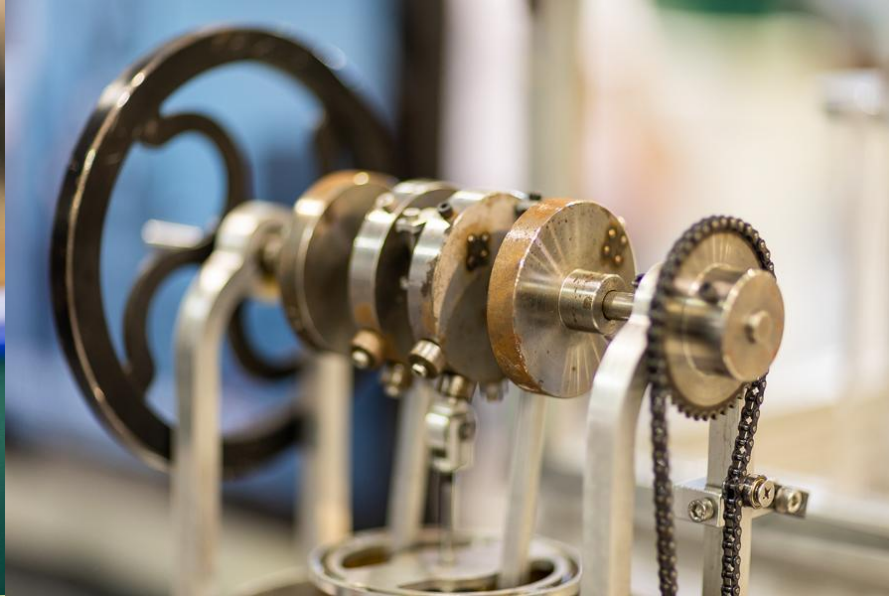




2024 Net Zero Tech International Contest @Taiwan(International Teams) Final Results

Awards		No.	Work Title	Position	Name		School	Department
1	Champion	INTL 15	Ultrahigh Efficiency Bidirectional DC-DC Converter for Energy Storage and Super Charger Applications	Advisor	Jih-Sheng	Lai	Virginia Polytechnic Institute and State University	Electrical and Computer Engineering
				Advisor	Hsin-Che	Hsieh		
				Leader	Bryan	Gutierrez		Mechanical Engineering
				Student	Ching-Yao	Liu		Electrical and Computer Engineering
				Student	Ganesh	Rai		
2	First Runner-Up	INTL 10	A novel up-scaling process of a photoelectrochemical system with H2 generation for real saline sewage treatment: taking pioneering steps towards net zero wastewater treatment technology	Advisor	Irene Man Chi	Lo	The Hong Kong University of Science and Technology	Department of Civil and Environmental Engineering
				Advisor	Zexiao	Zheng		
				Leader	Taoran	Dong		
				Student	Hoi Kit Justin	Man		
				Student	Cheuk Wai	Lung		
3	Second Runner-Up	INTL 08	Novel process design and validation for decreasing CO2 emission from cement production decarbonization	Advisor	吳	煒	National Cheng Kung University	化學工程學系
				Advisor	賴	啟銘		
				Leader	吳	紀昀		
				Student	張	宸語		
				Student	Mazumdar	Debayan		
				Student	曾	慶豪		
4	CPC Corporation, Taiwan Smart Energy Award	INTL 03	Advanced Carbon Capture and Elimination Process Technology using Membrane Engineering (ACCEPT-ME)	Advisor	康	敦彥	National Taiwan University	化學工程學系 (Department of Chemical Engineering)
				Leader	吳	柏均		
				Student	李	雪菱		
				Student	游	元禎		
				Student	張	守豐		

Awards		No.	Work Title	Position	Name		School	Department
5	NTU-AIAD, Advanced Net Zero Emission Technology Award	INTL 04	Low-Cost Energy-Efficient Atmospheric-Pressure Plasma Jet Processed NiCo-Metalorganic Framework Electrocatalyst in Anion Exchange Membrane Water Electrolysis Module	Advisor	陳	建彰	National Taiwan University	應用力學研究所
				Advisor	陳	奕君		光電工程學研究所
				Advisor	王	孟菊	國立台灣科技大學	化學工程系
				Leader	普	智暉	National Taiwan University	應用力學研究所
				Student	余	碩恩		重點科技研究學院
				Student	闕	振宸		奈米工程與科學
				Student	陳	奇松		應用力學研究所
				Student	洪	柏彥		
				Student	吳	幸真		
				Student	謝	尚霖	國立台灣科技大學	化學工程學系
				Student	董	芮妤		
6	Advanced Green Energy Award	INTL 09	Next-Generation Redox-Mediated Bipolar Membrane Electrodialysis: Simultaneous Seawater Desalination and Carbon Capture	Advisor	侯	嘉洪	National Taiwan University	環境工程學研究所
				Leader	吳	旻臻		
				Student	張	睿耀		
				Student	高	毓蓁		
				Student	王	柏硯		
				Student	陳	怡瑋		
7	Nan Pao Resins Zero Carbon Vanguard Award	INTL 20	Nanomaterial-driven 'green-heat' generation for CO2-free space-heating and water-desalination	Advisor	Sandip Kumar	Saha	Indian Institute of Technology Bombay	Mechanical Engineering
				Advisor	Chandramouli	Subramaniam		Chemistry
				Leader	Anuj	Bangad		Energy Science and Engineering
				Student	Nikita Vasudev	Chitre		Chemistry
				Student	Dipin	Thacharakkal		





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International Contest Jury

陳志臣
Jyh-Chen Chen







冠軍





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主競賽

亞 軍

勇源淨零科技獎

Tech | International Contest @ Taiwan
2024 淨零排放科技國際賽

季 軍

勇源永續發展獎



Champion



First Runner-Up

亞軍



Second Runner-Up

季軍





Champion







Net Zero Tech | International Contest @ Taiwan
淨零排放科技國際競

NCHU

Hsin-Pei Business, Zero Carbon Vanguard Award

Champion
冠軍

Advanced Green Energy
前瞻綠能獎

季軍
勇源永續發展獎

亞軍
萬源淨零科技獎

華南銀行
零碳希望獎





Field Trip (2024 Net Zero Tech International Contest @Taiwan)

Schedule		Time	
		Group A	Group B
8/22	07:30	Start from Howard Civil Service International House	
	07:30-09:00	to TSMC Museum of Innovation	to ITRI
	09:00-10:20	Visit TSMC Museum of Innovation	Visit ITRI
	10:30-11:50	Visit ITRI	Visit TSMC Museum of Innovation
	11:50-14:00	Lunch (Lakeshore Hotel Hsinchu)	
	14:00-15:30	To the Highway Rest Area	
	15:30-18:00	To Howard Resort Xitou	
	18:30-20:30	Dinner (Howard Resort Xitou)	
8/23	06:00-14:00	Free time activities (Xitou)	
	14:00	Back to Taipei	







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