



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:

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.

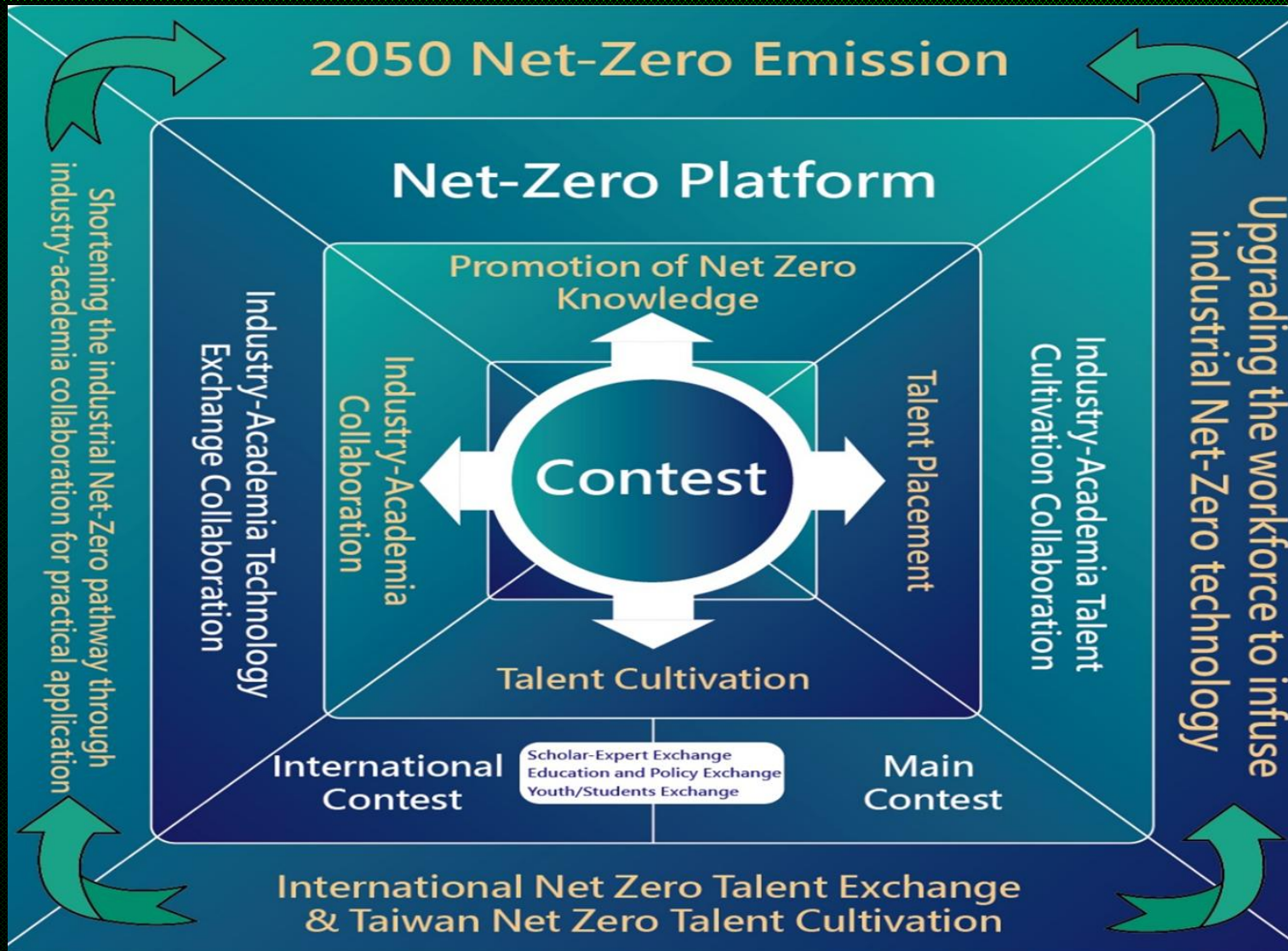


Objectives

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.



Schematic diagram of Net Zero International Contest



Organizers

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



Co-organizers

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



Sponsors

(Inviting)

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



Chairman

Dr. Wen-Chang Chen

(President of National Taiwan University)



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...etc.)**



Award Mechanism

Place	International Contest	
	Teams	Prize (USD)
Champion	1	≅30,326
First Runner-up	1	≅18,196
Second Runner-up	1	≅12,130
4th Place, 5th Place	2	≅6,065/team
6th Place, 7th Place	2	≅3,033/team
Excellence	13	≅1,516/team
Total	20	≅98,560

Cash Rate: 1 USD=32.975 NTD (Quoted Date: 2024/12/24, Bank of Taiwan)



Contest Requirements

International Contest

Open to undergraduate and graduate students (including Master's and Ph.D. programs) from universities worldwide, including Taiwan, along with their advisors.

- Each team should consist of at least **4** members (including an 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**

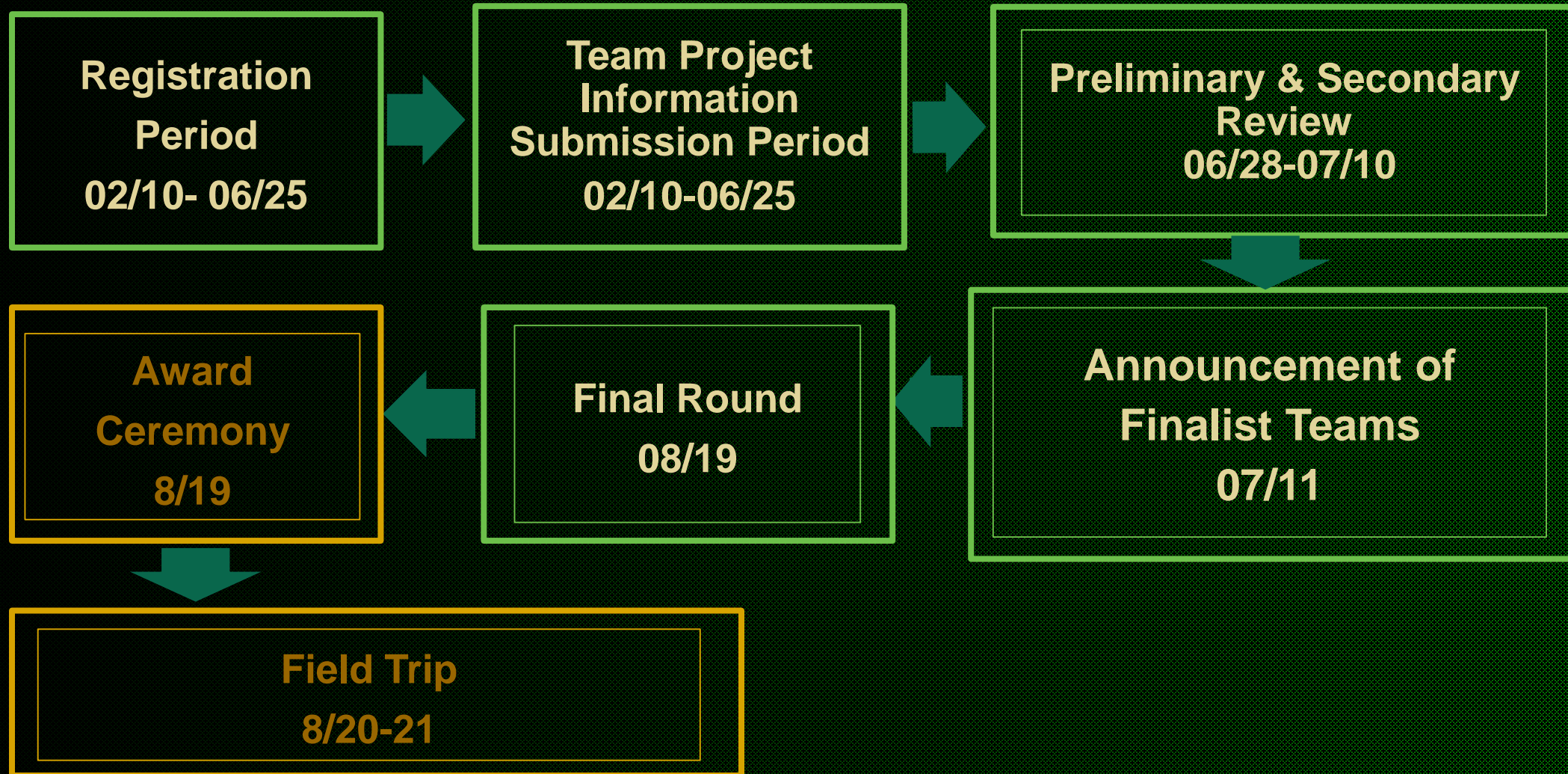


Evaluation Method

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



Important Dates



Agenda of Final Round

07:40-08:20	Registration
08:50-09:10	Announcement
09:10-15:00	Presentation & Demonstration
14:50-15:30	Interaction
15:10-15:40	Viewing of Works
15:40-16:00	Opening
16:00-16:45	Awards Ceremony
16:45-16:50	Photoshoot / Interview
16:50-16:55	Lottery / Interview
16:55-17:20	Press / Interview



Album of 2024 Net Zero Tech International Contest @Taiwan

















分數		分數
主隊	罰球	客隊
	節數	
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

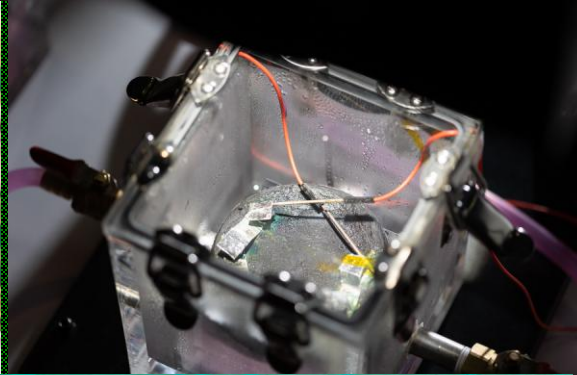




2024 Net Zero Tech International Contest @Taiwan(International Teams) Final Results

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		
				Student	Ching-Yao	Liu		
				Student	Ganesh	Rai		Electrical and Computer Engineering
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	昱臻		
				Student	張	睿耀		
				Student	高	毓慧		
				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

Net Zero Tech | International Contest @ Taiwan
2024 淨零排放科技國際競賽

決賽
評審作業學期

財團法人樂元科技
財團法人樂元科技







冠軍



Net Zero Tech International Contest in Taiwan 2024 淨零科技國際研討會

主競賽

冠軍

富邦淨零科技獎

學
SITY



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主競賽

亞 軍

勇源淨零科技獎

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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

Champion
冠軍

主銀獎
季軍
勇源永續發展獎

亞軍
勇源淨零科技獎

主銀獎
華南銀行
零碳希望獎





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

Schedule		Group A	Group B
Time			
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	







Contest announcements and inquiries are supported in over 50 languages by the "Intelligent Service."



Official Website

<http://teco.tecofound.org.tw/zh-tw/pages/41>



Registration

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



Intelligent Service

<https://lin.ee/FbSaezX>



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