

Energy Transition

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Wind Tree-Style Small Wind Turbine

In the plaza of Nautilus Bibliotheca, the Wind Tree from France is a vertical-axis wind turbine whose leaves turn the lightest breeze into power. It reflects our care for biodiversity and reminds us that energy comes from nature.



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Cement and Power Integration: New Energy Full Value Chain Layout



*Cement is foundation
— stable, enduring;
Energy is momentum
— fluid, agile.*

*Stillness and motion,
anchor and flow
— Supporting and transforming
within one system.*

2021 was the turning point. Acquiring NHOA Energy launched TCC's green energy transition.

Evolving from a building materials supplier into a key player in the new energy system, TCC embarked on its path of carbon reduction.

In 2022, TCC established Atlante to build an EV charging platform. This marked a defining shift from "strategic investment" to "aggregating and incubating future industries."

Four-Layer Cake Theory of Cement and Power Integration : Cement as the Foundation, Power Flows Within

Energy-as-a-Service Business Model

Developing the Charging and Storage Business with Global Subsidiaries Deploying End-Market Applications

NHOA.TCC

atlante
POWER TO CHANGE

NHOA
ENERGY

CINAPOR

能元
超能

TCCOR

Energy Management System (EMS)

Powered by Edge AI and Cloud AI, it links distributed storage systems, transforming them into regional energy hubs that form virtual power plants (VPPs).

EnergyArk®

Leveraging the fire- and weather-resistant properties of Ultra-High Performance Concrete (UHPC), the EnergyArk® energy storage enclosure effectively prevents battery thermal runaway, ensuring safety across diverse applications. The system dynamically balances loads to enhance grid resilience, supports black-start and islanded operations, and resolves power bottlenecks caused by instantaneous high-power demands at fast-charging stations.

Cement Plant

Spacious grounds allow for utility-scale energy storage, while existing feeders support high-power transmission, facilitating grid connection and participation in power markets.





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3.1 Battery Energy Storage

NHOA.TCC | NHOA Energy | CIMPOR Energy

AI growth drives data center power surges, elevating energy storage from a grid supplement to a critical strategic foundation supporting AI computing and grid stability. To meet the COP28 tripling renewable goal, the IEA projects global storage capacity to sextuple within a decade, with data center power exceeding 800 TWh in 2026 and AI loads driving over 60%.

TCC acquired Europe-based Engie EPS (renamed NHOA Energy) in 2021. Utilizing modular equipment and a proprietary Energy Management System(EMS), NHOA Energy integrates international technology and deployment experience. Positioned as a Virtual Power Plant(VPP) aggregator and operator, it offers solutions covering battery energy storage system deployment and VPP, focusing on urban and distributed scenarios to enable flexible power dispatch, market trading, and data



power dispatch, market trading, and data analytics. In 2025, CIMPOR established CIMPOR Energy, leveraging group resources to expand its storage presence across the Iberian Peninsula. Energy has evolved from mere infrastructure into an operable asset and managed system. For Energy Helper's AI aggregation platform, see [CH 3.3](#).

NHOA is derived from the name NOAH of Noah's Ark, symbolizing hope for emerging from disaster and the creation of a new era. The lines beneath NHOA's logo represent a new horizon, while the O is replaced by the Greek letter Ω , resembling a rising sun. Ω is also the unit of resistance in Ohm's law related to electricity. Facing the horizon of new green energy, NHOA brings a new beginning and mission, revitalizing the energy business brand.

NHOA.TCC | NHOA ENERGY

TCC | Global Energy Storage Presence

USA

NHOA Energy | Wilmington

Utility-scale sites offer potential for grid dispatch and market trading.

Italy

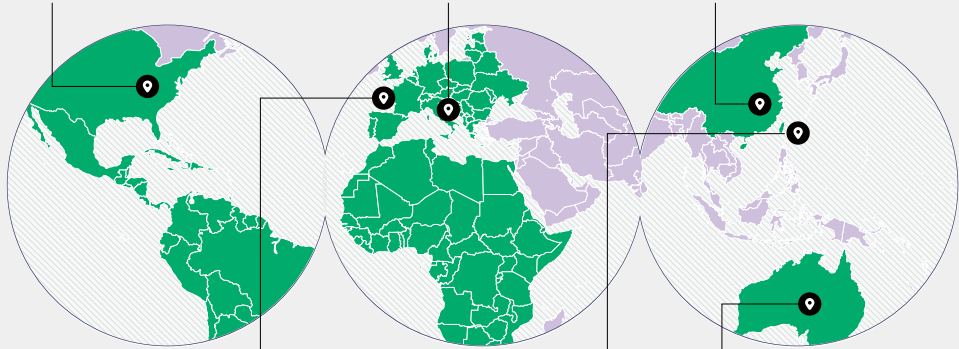
NHOA.TCC+Atlante | Padova

Strategically located at a key highway interchange, offering diverse charging services for both electric passenger vehicles and trucks.

Mainland China

NHOA Energy | Yingde Plant

China's largest energy storage project within the cement industry.



France

NHOA.TCC+Atlante | Oncle Scott Site, Breteville-sur-Odon

Europe's first EnergyArk® 400 integrated charging and energy storage station, combined with a composite restaurant, maintaining stable energy storage system utilization.

Taiwan

NHOA.TCC | Hualien

Established the first co-branded charging and storage station in partnership with Volvo.

Australia

NHOA Energy | Blyth

In collaboration with nearby offshore wind farms, providing 70 MW of baseload renewable power.

~5 GWh

(including those under construction)

28 Countries | as of May 2026

Over 178 EnergyArk® sites planned | by the end of 2026

With the Iberian Peninsula's renewable energy curtailment rate reaching 11%, CIMPOR Energy positions itself as the "Iberian Balancer," converting surplus green electricity from the Portuguese grid into high-efficiency energy. Integrating technologies across business groups, CIMPOR

Energy's operations span residential, commercial, and utility applications, offering an Energy as a Service (EaaS) model. Since 2025, projects have reached an energy storage capacity of 300 MWh.





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2025 TCC GROUP HOLDINGS
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EnergyArk®

TCC cross-sectorally integrates its Cement and Environmental Protection Businesses to launching the patented EnergyArk® energy storage system, enhancing intrinsic safety through material innovation. Balancing safety with urban application flexibility, the system utilizes energy dispatch mechanisms to adjust power loads in real-time, maintaining supply-demand balance and enhancing grid resilience while possessing both black start and islanding capabilities. Where permitted, it can feature black start, including islanding capabilities. By connecting diverse energy applications like power trading services and fast-charging infrastructure, EnergyArk® alleviates peak load pressure, supports microgrid operations, and mitigates the load challenges between fast charging demand and power capacity.

EnergyArk®'s cabinet structure is built with Ultra-High Performance Concrete (UHPC), a material known for its high plasticity, compressive strength, and durability, with a design life of up to 100 years. Addressing the growing safety concerns of lithium-ion battery energy storage systems, EnergyArk® offers two-hour fire resistance at up to 1,050°C. It integrates a rapid thermal runaway suppression system capable of injecting 9,000 liters of water within five minutes, and features a real-time smart monitoring Energy Management System (EMS). This multi-layered safety design seamlessly encompasses material protection, structural reinforcement, and real-time management.

EnergyArk® Features and Certifications

FIREPROOF & EXTINGUISHING GUARANTEE

- /Fireproof
- /Multi-level anomaly detection
- /Fire suppression assurance
- /Flood barrier

TEMPERATURE & WEATHER RESISTANT

- /Suitable for a wide range of environments
- /Low thermal conductivity Low energy consumption
- /Low carbon emissions, high durability

COMPREHENSIVE PROTECTION

- /24/7 EMS system monitoring
- /24/7 comprehensive after-sales service
- /Taiwan's first energy storage cabinet with product liability insurance, offering coverage up to US\$3 million

FLEXIBILITY & TENACITY

- /Single-cabinet modular design
- /Support for flexible, multi-cabinet modular expansion
- /Suitable for a wide range of applications

Patents

The patent portfolio focuses on four key areas: structural design, safety protection, energy management, and battery modules.

EnergyArk® holds 57 granted and pending patents across 14 markets, including US, Japan, EU, Africa, Mainland China, and Taiwan. Notable patents include US 12,533,540 B2, JP 7743490, and TW I813064.

Certifications

EnergyArk® 1000

Transportation: UN38.3
Enclosure: CNS 12514-1 & -8 (2-Hour Fire-Rated)
System Certification: UL 1642, UL 1973, UL 9540, IEC 62619, IEC 62933-5-2
Fire Safety: UL 9540A
Product Carbon Footprint Verification: ISO 14067

EnergyArk® 400

Transportation: UN38.3
Enclosure: CNS 12514-1 & -8 (2-Hour Fire-Rated)
System Certification: IEC 62619, IEC 63056, IEC 62477-1, IEC 62933-5-2, IEC 61000-6-2, IEC 61000-6-4
Fire Safety: UL 9540A

Reviews/Examinations

EU RoHS and REACH: EnergyArk® 400 has issued its Declaration of Conformity(DoC). EnergyArk® 418 is expected to obtain third-party certification by 2026, ensuring no harm to the environment or human health.

UHPC Cabinets: Atomic absorption spectroscopy tests show heavy metal content in UHPC is below 0.2 ppm. The soluble fibers used in the refractory materials comply with the EU protocol for fiber biopersistence testing, confirming they can be metabolized and eliminated by the human body, posing no health risks.

ACTION SPOTLIGHT

EnergyArk® Energy Management System (EMS), the Core of System Safety, Achieves IEC Cybersecurity Certification



TCC Energy Storage's self-developed EMS has received IEC 62443-3-3 Security Level 2 (SL2) certification for industrial control security from Bureau Veritas, meeting international cybersecurity standards for critical power infrastructure. As the "digital brain" of the energy storage system, the EMS monitors battery operation, manages charging and discharging, and maintains real-time grid connections. In a highly connected environment, it mitigates cyber risks through strict identity verification, access control, data encryption, and incident response. This international certification serves as a key passport for this Taiwan-developed storage application to enter European and global grids.



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EnergyArk® Energy Storage System Highlights

Black Start Technology

Seamless power
switching in
under 1 minute

NHOA.TCC introduces a battery energy storage system (ESS) equipped with black-start capability. During power outages or grid trips, the ESS switches to provide power within one minute, minimizing the impact of power anomalies and enhancing national grid resilience. This is highly suitable for emergency operations in critical facilities like hospitals and industrial parks. The ESS utilizes a grid-forming Power Conversion System (PCS) and EMS to proactively create a microgrid for islanded operation, automatically resynchronizing with the grid upon power restoration.

EnergyArk® leverages Edge AI and smart scheduling to deploy self-developed algorithms directly onto edge controllers within the system. Operating independently of the cloud, it integrates local load forecasting and power demand analysis, enhancing data security and response speed to agilely handle sudden peak demands. By analyzing historical consumption data, the system dynamically calculates optimal charge and discharge times to achieve millisecond-level energy dispatch and reduce operating costs. It also ensures autonomous peak shaving and load balancing during network outages. Concurrently, Cloud AI is introduced to integrate big data, weather forecasting, and electricity pricing, enabling precise demand forecasting and price anticipation. Empirical data shows this system reduces on-site demand charges by 15% to 20%.

Edge AI Smart Scheduling

Millisecond-Level
Power Cost
Optimization

Energy as a Service (EaaS)

Lowering the
Barrier to
Energy Storage
Investment

NHOA.TCC offers an innovative Energy-as-a-Service (EaaS) model featuring "0 CAPEX" flexibility, directly addressing the high investment barriers and uncertain returns that businesses face when adopting energy storage systems. This model allows companies to optimize electricity costs through off-peak charging and peak discharging without any upfront capital investment. Concurrently, it enhances energy efficiency and prevents over-contract penalties through demand charge management and peak shaving. Future integration with Virtual Power Plants (VPPs) and electricity market trading will further optimize energy storage asset dispatch, increase ancillary service revenue sharing, and help businesses transform conventional energy expenses into flexible energy value.

ACTION SPOTLIGHT

International Renowned Automaker Charging Stations Install EnergyArk® Energy Storage Systems

NHOA.TCC, in direct collaboration with VOLVO, has deployed an integrated EV charging and storage station in Ji'an Township, Hualien County, featuring the EnergyArk® 400 energy storage system.



Occupying just half of a single parking space and requiring no high-voltage feeder line application, the station delivers up to 720 kW of instantaneous high-power charging, effectively reducing contract capacity fees.

Site owners avoid high capital investments in energy storage while cutting peak electricity

consumption and costs, allowing them to offer more favorable charging rates to all EV owners. Future plans include participation in Taipower's electricity trading market, transforming the charging station from a simple refueling point into a Virtual Power Plant (VPP) that actively enhances grid resilience.

Technical Collaboration with Leading Technology Firms

NHOA.TCC combines RiTdisplay's battery module technology, RiTWIN Technology's UPS (Uninterrupted Power Supply) systems, and NHOA.TCC's proprietary EMS to offer one-stop energy storage solutions for high-tech and heavy industry clients.

TCC KEY FACTS

2025

3MW/3.2MWh
installed



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3.2 Green Energy Supply

NHOA.TCC Charging Services | Atlante

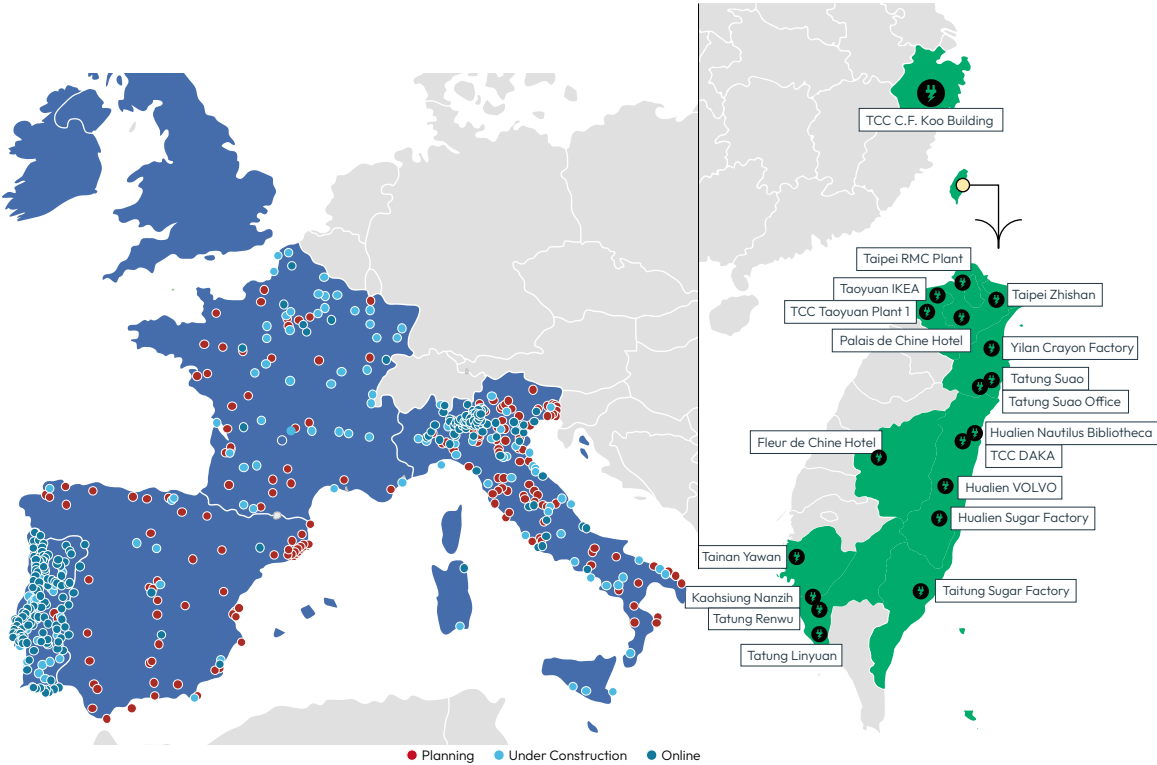
The global transportation sector accounts for approximately one-quarter of global carbon emissions, with land transport contributing 70%. Electrification of transportation is therefore central to achieving net-zero emissions. Europe aims for 30 million electric vehicles and 3 million charging points by 2030. However, by the end of 2025, the actual figures are projected to reach only 8.3 million vehicles and 1.1 million charging points. In 2022, TCC established its European subsidiary, Atlante, to focus on expanding the charging infrastructure required for electric mobility in Southern Europe. In 2025, Atlante further integrated NHOA.TCC's

patented EnergyArk® UHPC Energy Storage Cabinet and its digital energy trading platform, transforming into a technology company with energy trading capabilities.

TCC's international team is promoting integrated charging and storage stations across France, Italy, Portugal, Spain, and Switzerland, assisting in alleviating grid feeder pressure through virtual power plants. This sustainable ecosystem, centered on integrated charging and storage, is poised to become a cornerstone of future smart city development in Europe.

Atlante Partners with European Giants to Launch ChargeLeague, Building Europe's Largest Green Charging Network

In 2025, Atlante co-founded the ChargeLeague alliance (formerly Spark Alliance) with three major European charging service leaders, creating Europe's largest and most extensive EV charging network alliance. This alliance spans 25 European countries, encompassing over 1,700 charging stations and 11,000 high-power charging points, all powered entirely by renewable energy to advance carbon-neutral electric mobility. EV owners can use member apps for cross-border charging and payment, with integrated station data enhancing long-distance travel convenience.



TCC KEY FACTS

Globally
1,000+ charging stations
5,211 charging points

229 EnergyArk®
Charge & Storage Integrated Systems
| As of the end of 2026

Atlante
Supported 429 million km of EV travel.

Avoided Emissions 70,063 tCO_{2e}
2025

GRESB Infrastructure Member
No.1 among peers
EU Taxonomy Alignment
– Climate Change Adaptation
EcoVadis Silver Medal

PLATINUM Top 1%
ecovadis
Sustainability Rating
MAY 2025

Atlante

2028

Deploy over 1,000
energy storage systems

2030

35,000 fast and ultra-
fast charging points installed

TARGET





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Atlante Smile Strategy: Value Creation Through Energy Management

In Europe, large retail outlets with high customer traffic and long dwell time serve as key hubs for EV charging. Some countries even mandate that large parking lots dedicate at least 8% of their spaces to charging points. However, fast charging can cause power load spikes, increasing the risk of power outages. Consequently, businesses prioritize the safety of energy storage equipment.

Featuring exceptional high-temperature resistance, thermal runaway prevention, and material-level fire barriers, the EnergyArk® energy storage system provides Atlante with a decisive advantage in entering the market. This innovation drives a new “Smile Strategy” business model, fostering customer loyalty and accelerating scale growth.

“
*Our core competency
lies not just in charging,
but in energy regulation
services.*”

Smile Strategy Centered on EnergyArk®



Charging Services:

The proprietary myAtlante App and GreenGems enhance user engagement and brand loyalty.



Energy Trading:

As an integrated charging and storage station, EnergyArk® leverages the floating electricity prices of the European power market. Combined with a smart Energy Management System (EMS), the energy storage equipment provides grid ancillary services, such as grid frequency regulation, and generates additional revenues through dynamic pricing and electricity trading.



Smile Strategy Explained:

The Atlante “Charging + BESS” (Battery Energy Storage System) configuration deployed at charging sites integrates EnergyArk®’s charging, energy storage, and power dispatch capabilities within a unified system. Featuring front-end charging and back-end energy storage, the system automatically adjusts based on electricity prices and demand: storing power during

low-price periods and releasing it during peak-price periods to maximize energy value for clients. On one end, energy regulation is enabled by energy storage systems for more efficient power management. On the other, user engagement is fostered through memberships and the myAtlante App, building lasting relationships between people and the energy

landscape. As these ends connect, the station evolves from a single facility into a continuously operating system. As this system takes shape, its value extends outward to reveal a naturally emerging and elegant smile curve that defines the “Smile Strategy.”

Note 1: In the French electricity market, the average daily price spread reached €143/MWh, representing a 15% increase compared to 2025.

ACTION SPOTLIGHT

Yilan Crayon Factory Station: Taiwan's First Bidirectional Charging Station

NHOA.TCC Participates in Taipower's Load Testing Program

The NHOA.TCC Crayon Factory charging station in Yilan joined Taipower's sReg

(supplementing Regulation) ancillary service in April 2025, becoming Taiwan's first EV charging station with reverse power flow capabilities to execute aggregation trading.

In 2025, the station achieved a 100% service execution rate, reliably fulfilling all dispatch commands. Additionally, six other NHOA.TCC stations supported the grid during periods of

high renewable energy penetration by increasing load, effectively mitigating the ramping pressure on traditional power units during evening hours.

According to official test reports, NHOA.TCC's charging stations delivered the most outstanding performance among all participating vendors.



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3.3 Renewable Energy Generation & Solution

TCC Green Energy Corporation | Energy Helper TCC Corporation

According to the latest statistics from the energy think tank Ember, renewable energy's share is projected to reach 33.8% in 2025, surpassing coal for the first time in a century. It is estimated to reach 2.6 times the 2022 level by 2030 (9,529 GW), though still falling short of the COP28 target of tripling global renewable energy installed capacity (11,450 GW).

TCC Green Energy Corporation, established in 2018, is Taiwan's sole comprehensive renewable energy company actively investing in solar, wind, geothermal, and marine energy. Starting with the grid connection of the Changbin wind and solar project, the company has expanded to develop hybrid renewable energy sites, including forward-looking energy research such as the Vakangan geothermal project and the Chiayi aquavoltaics project. Utilizing intelligent operation and maintenance integrated with big data, 100% of site equipment transmits data remotely and automatically. AI analyzes

historical generation and meteorological data for real-time anomaly detection, while automatic alerts assist on-site personnel in taking timely action, thereby enhancing operational efficiency.

TCC has also integrated its proprietary renewable energy resources, establishing Energy Helper TCC Corporation (Energy Helper) in 2022 to provide a green electricity trading platform. It offers one-stop services including green electricity transfer, renewable energy certificate (REC) management, online green electricity consulting, and carbon management.

These services assist enterprises in optimizing green electricity efficiency and reducing carbon costs, while ensuring a stable power supply to support small and medium-sized enterprises (SMEs) in achieving RE100, ultimately accelerating the energy transition and Sustainable Development Goals (SDGs).



TCC Green Energy logo : Composed of three Greek letter symbols Σ Sigma + Θ Theta + Δ Delta, representing the sum of diverse green electricity development, utilizing natural resources for energy creation; drawing energy from nature; and transforming fossil fuels into renewable energy.

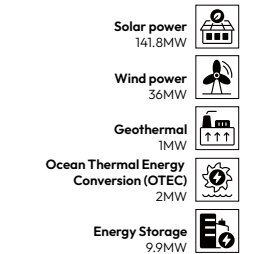


Changbin Wind-Solar Power Plant

The solar power section has created a Nature-based Solution (NbS) through the "eco-friendly grazing" model.

Chiayi Aquavoltaics Power Site

As Taiwan's first aquavoltaics project, this site integrates local revitalization with sustainable tourism. Furthermore, 80% of partnered farmers have obtained traceability certification. For more information, please refer to the [Just Transition Initiatives](#).



Vakangan Geothermal Power Site

The site is expected to fully connect all units to the grid by 2026. For details, please see [CH5.4](#).

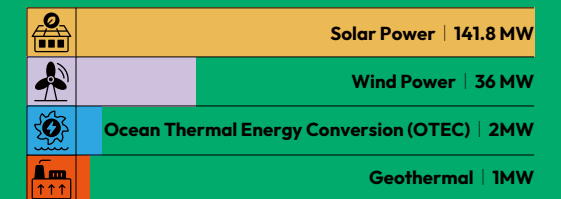
TCC KEY FACTS

2021-2025

21 energy project sites operating or under construction in total

652 million kWh of green electricity generated Equivalent to

585,013 tCO₂e reduction





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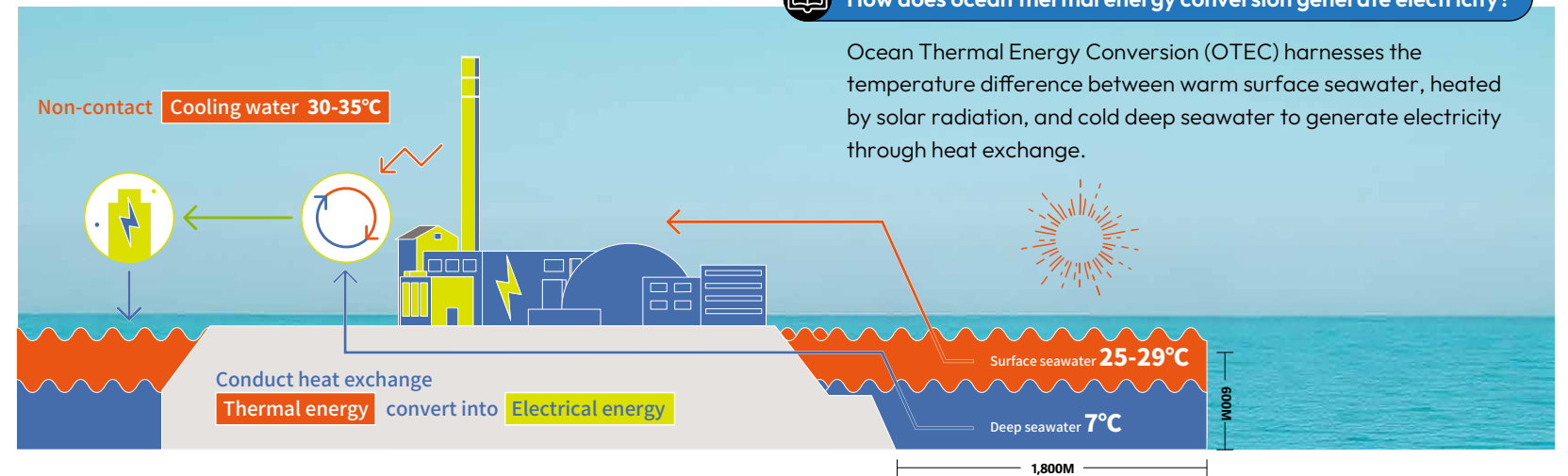


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World's First MW-Scale Ocean Thermal Energy Conversion Power Plant

Ocean energy's stability and 24/7 operation make it a viable baseload power option. The key is accessing deep seawater. Off Taiwan's east coast, water depth reaches 600 meters just 1.6 km offshore, ideal for deep seawater intake. TCC's Ho-Ping Power Plant, part of a three-in-one industrial park in Hualien, is well-positioned to integrate Ocean Thermal Energy Conversion (OTEC). The plant's cooling water, which does not contact the process, can be reused for heat exchange with deep seawater to drive turbines. This cooling water, being 5-6°C warmer than surface seawater, enhances generation efficiency.

Ho-Ping Power Company completed the underwater cultural heritage review in 2024 and will enter the Environmental Impact Assessment review process by Ministry of Environment in 2025. Upon completion, it will be Taiwan's first and the world's first MW-scale commercial Ocean Thermal Energy Conversion plant. The first phase is expected to have an installed capacity of 1-2 MW, providing a stable daily supply of approximately 24,000 kWh, sufficient for about 2,000 households. The goal is grid connection and commercial operation by the end of 2029.



Deep Ocean Water Circulation Aquaculture and Sustainable Applications

According to the "Environmental Assessment Technology for Ocean Thermal Energy Conversion" report published by Taipower in 2012, the deep seawater off Taiwan's east coast has a dissolved salt concentration over 15 times higher than surface water. Rich in nutrients, it holds immense potential for aquaculture, pharmaceuticals, and biotechnology. Ho-Ping Power Company established a pilot ocean ranch in 2024, drawing water from Hoping EcoPort into an aquaculture system to cultivate diverse species, including sea grapes, barred knifejaw, grass shrimp, and local fish species. The company completed its first harvest of grass shrimp and sea grapes in Q4 2025.

This initiative combines sustainability with health promotion, sharing the farming outcomes and

process with employees through low-calorie, high-protein cooking and tasting sessions to enhance their understanding of deep seawater applications and eco-friendly aquaculture. Ho-Ping Power Company has introduced recirculating microfiltration equipment to reduce

turbidity and stabilize water quality. A continuous water quality monitoring system is planned to further refine the eco-friendly aquaculture model and promote the diverse utilization of deep seawater resources.

Future Co-products & Associated Industries of Ho-Ping Power Plant Deep Sea Water



Mineral-Rich

Premium Deep Sea
Drinking Water



Micro-Molecular Structure

Cosmeceuticals, Skincare,
and Wellness SPA Tourism



Nutrient-Dense

High-Value Aquaculture
e.g., White Shrimp,
Giant Grouper



Stable Low- Temperature

Low-Carbon Agriculture
Cultivating Alpine Fruits
& Vegetables
on Lowland



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Energy Helper TCC Corporation

Supporting users with a contract capacity of 5,000 kW or above, clients with RE targets, independent power producers, or users with self-generation facilities.

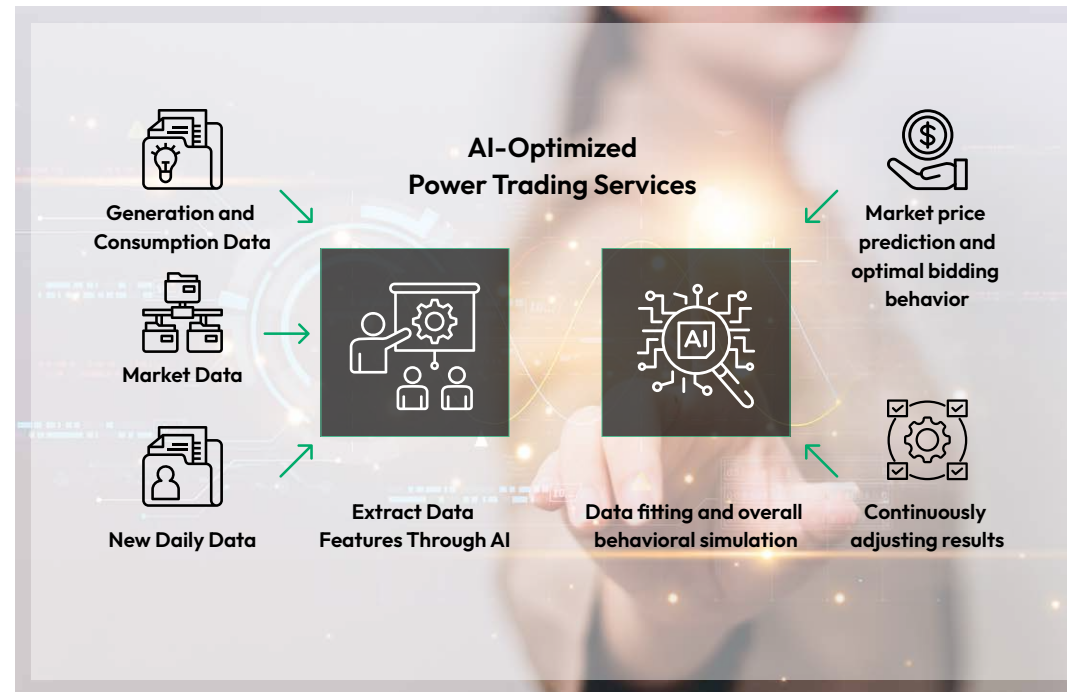
Energy Helper provides large electricity consumers with integrated energy services spanning "renewable power supply - energy storage dispatch - and carbon management," creating a streamlined green energy trading experience akin to a convenience store while allowing power generators to easily list their supplies. The renewable energy trading platform integrates diverse resources, including wind, solar, geothermal, and marine energy, providing real-time supply and demand matching to enhance transaction transparency and efficiency. This offers enterprises more flexible and diverse renewable power procurement options, building a comprehensive ESG green energy integration solution.

Through an AI-driven aggregation platform and cloud-based Energy Management System (EMS), the platform analyzes market price trends in real time to provide clients with optimized renewable power procurement configurations. Simultaneously, it leverages idle power resources to participate in Taipower's electricity trading as a proxy, stabilizing electricity cost structures and creating added value. The "Online Green Power Consultant" and big data matching mechanism integrate diverse renewable energy sources instantly to boost

procurement efficiency. Moving forward, the platform will further integrate green power and carbon management services through mid-to-long-term Power Purchase Agreements (PPAs), assisting clients in reducing electricity

costs, meeting regulatory requirements, lowering carbon fee burdens, and advancing toward RE100.

Furthermore, the AI aggregation platform integrates proprietary and client-owned energy storage sites to participate in all Taipower electricity trading programs, utilizing the advanced EMS to optimize bidding strategies and resource dispatch to balance grid stability and economic efficiency.



TCC KEY FACTS

2023-2025

Over
140 million kWh

of renewable power
wheeled cumulatively

2025

Achieved a 55%

YoY growth rate in renewable power
wheeling volume



The clientele comprises 23 renowned domestic and international enterprises across various sectors, including computer and electronic products, electronic components, IT services, semiconductor equipment, medical devices, finance, hospitality, as well as other manufacturing and chemical industries.

2025

Cumulative
transaction
capacity
reached 253.9 MW

E-dReg market
share reached

20%

with a participating capacity of 195 MW





3.4 Energy Transmission

Molice! ESG Report

E-ONE MOLI ENERGY CORPORATION (Molice) is a global leader in high-power cylindrical lithium-ion batteries, specializing in "Next-Generation High-Performance Ternary Lithium-Ion Batteries." Driven by innovation, its high-power series supports drones, Electric Vertical Takeoff and Landing aircraft (eVTOL), aerospace, heavy-duty tools, and BBU, providing robust support for industrial low-carbon transformation.

Given that geopolitical factors increasingly influence client procurement decisions, strengthening supply chain resilience is essential for high-end cell manufacturers. In 2025, Molicel swiftly relocated its ternary production back to E One Moli Corporation to minimize client supply disruptions, and announced a new Malaysia site to manufacture mature products through overseas contract manufacturers. This model rapidly restored capacity, mitigated single-site risks, offered value-added services, and enhanced competitiveness as a versatile supplier.

Following the 2025 fire at Molie Quantum Energy Corporation, the company activated emergency responses for control and investigation, reviewing safety management to enhance risk prevention. Please see [Chapter 0](#) (Risk Governance Enhancing Operational Resilience), [CH 1.3](#), and the [Molice ESG Report](#).



MoliceL Products and Applications

	AI Data Centers and Battery Backup Units (BBUs)	Energy Storage Systems	High-Performance Electric Mobility & Aerospace
Application Fields	Generative AI Systems, Hyperscale Data Centers, Heavy-duty Tools, and Backup Battery Units (BBUs)	AI Computing Environments, High-voltage DC Energy Storage Systems, and Industrial-grade Energy Storage Applications	High-performance Electric Racing Cars, eVTOLs, Electric Aviation, and Aerospace Vehicles
Technical Support	■ Incorporating Molicel's Ultra-high Power S-series Cells ■ Mass-producing the INR-18650-P22S ■ Featuring patented flame-retardant technology in INR-21700-P50S and INR-18650-P30S ■ Fully complying with the latest OCP rack power specifications	■ Adopting high-power, high-stability cell solutions ■ Addressing the demands of high-voltage DC architectures and prolonged high-load operation	■ Delivering high-performance battery cell solutions that offer both high power output and extreme lightweighting ■ Supports high instantaneous output and demanding dynamic operating conditions
Technological Achievements	■ Supporting the continuous computing needs of generative AI and data centers ■ Providing excellent thermal runaway protection and high-temperature resistance in high-load environments ■ Enhancing BBU system stability and security under high-load conditions	■ Improving space utilization of energy storage systems ■ Reducing the overall carbon footprint ■ Achieving substantial breakthroughs in safety and power stability	■ Setting a new international track record with the McMurtry Spéirling PURE electric race car, achieving the world record as the first car capable of driving completely upside down ■ Supporting Vertical Aerospace's hybrid-electric vertical takeoff and landing (eVTOL) aircraft with a range of 1,000 miles ■ Supported Archer Aviation in reaching a 10,000-foot flight altitude milestone
Future Deployment	■ Collaborating with North American clients to develop next-generation BBU and high-voltage DC energy storage solutions. ■ Enhancing data center energy efficiency and system resilience in high-density computing environments	■ Developing next-generation energy storage systems, focusing on AI computing and data center needs ■ Meeting the high-energy demands of next-generation data centers	■ Expanding applications in electric aviation and advanced electric vehicles ■ Enhancing verification of battery propulsion stability under high-altitude, high-pressure, and extreme environmental conditions



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New Energy Full Value Chain Layout

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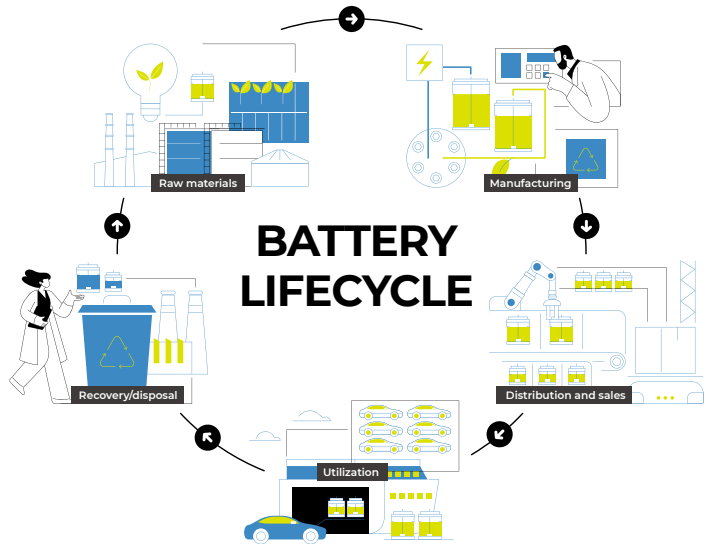
Appendix

Alignment with SDGs



Battery Lifecycle Management

Molice promotes product life cycle management and sustainability strategy, covering product design, process optimization, and recycling. Molice builds local battery recycling systems to fully practice green manufacturing and resource circulation for sustainable operations.



Implementing EPD and ISO 14067

Molice implemented ISO 14067 for product carbon footprint verification since 2023. To meet product lifecycle disclosure requirements starting in 2025, Molice will introduce Environmental Product Declaration (EPD), prioritizing P22S, P45B, and P50B at the Southern Taiwan Science Park to align with EU market regulations, international brand client compliance, and procurement standards.

Progress of ISO 14067 Implementation:

- P42A: Certification obtained; P22S: Inventory process in progress
- P45B/P50B: Inventory processes are underway, with product carbon footprints to be obtained via EPDs

Response to EU Battery Regulation

The EU Battery Regulation mandates that battery products present data through a Digital Product Passport (DPP). The battery passport is the first practical application of the DPP initiative and a prerequisite for battery products entering the European market. Molice is prioritizing the P22S battery for initial implementation, aiming for compliance disclosure by February 2027.

Increasing Recycled Material Proportion

Molice collaborates and engages with suppliers, prioritizing the procurement of recycled materials to steadily increase the recycling rate of all critical materials.

ACTION SPOTLIGHT

Molice Achieves RBA Silver Recognition

E-One Moli Corporation has achieved RBA Silver recognition in 2026. Third-party site audits verified the full implementation of the five core areas of the RBA Code of Conduct: Labor, Health and Safety, Environment, Ethics, and Management Systems, aligning seamlessly with international standards.



TCC KEY FACTS

75%

Cathode scrap recovery rate via chemical extraction

TARGET



Carbon footprint per battery cell
Baseline year: 2023

20% reduction by 2030

Molice Carries Out Conflict Minerals Management

Molice's raw material supply chain complies with international due diligence regulations and responsible sourcing standards.

Molice follows OECD guidelines to manage conflict minerals, avoiding sources linked to illegal mining or armed conflict financing. Internal controls and management systems are strengthened to effectively manage conflict mineral risks. Molice conducts regular due diligence, such as Conflict Minerals Reporting Templates (CMRT) and Extended Minerals Reporting Templates (EMRT), and requires signed declarations from both new and existing suppliers, ensuring regulatory and client compliance while building a responsible and traceable supply chain management system.

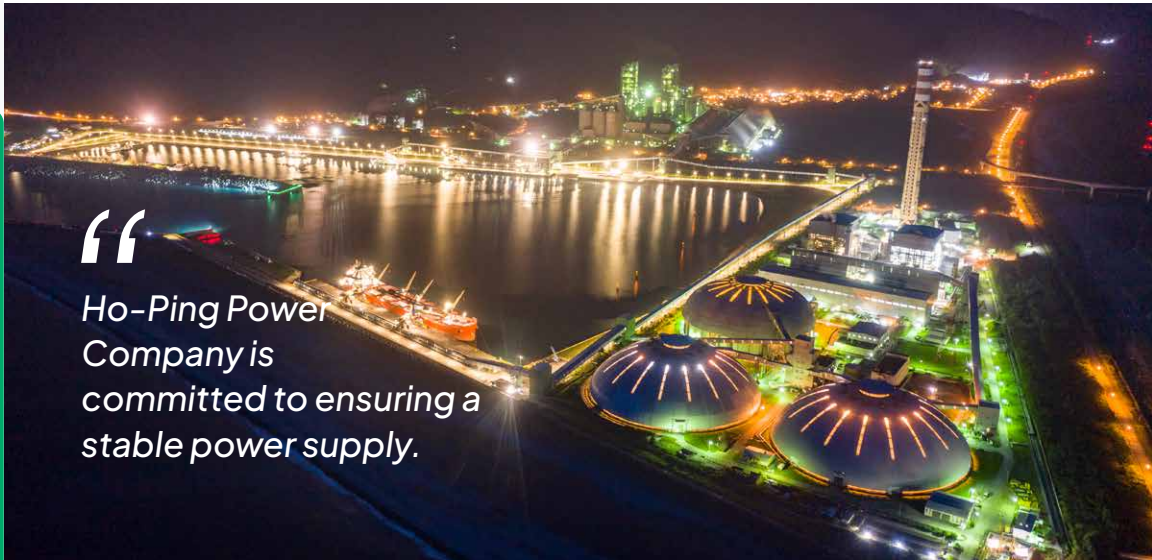


3.5 Social Aspects of the Energy Transition

Ho-Ping Power Company

According to the Ministry of Economic Affairs' "National Electricity Supply and Demand Report," Ho-Ping Power Plant will remain an irreplaceable major power source for the northern and eastern grids until 2033, supplying nearly 4% of Taiwan's total electricity, based on the national plan for thermal power unit transition and decommissioning. Through multiple exchanges with Taipower, TCC and Ho-Ping Power Company have gained a deep understanding of the difficulties and practical progress of energy transition in resource-limited Taiwan. TCC is committed to the net-zero transition and is the enterprise with the most diverse renewable energy projects in Taiwan currently. However, TCC also has a corporate social responsibility to safeguard the electricity

rights of 95% of Yilan residents and 20% of New Taipei City residents. Therefore, following the IEA's Carbon Reduction guidelines and in coordination with Taipower's contract renewal and grid stability needs, Ho-Ping Power Plant plans to operate its coal-fired units until their design life of 2040 at the latest, with unit closure no later than 2040. Ho-Ping Power Plant is simultaneously launching a just transition plan to understand the challenges faced by employees and related stakeholders. Ho-Ping Power Company has initiated an Ocean Thermal Energy Conversion project by the end of 2024, which is also a crucial part of its future transition plan. Please refer to [CH 3.3](#).



“
Ho-Ping Power Company is committed to ensuring a stable power supply.

ACTION SPOTLIGHT

The Only Ash-Lagoo-Free Power Plant In The World

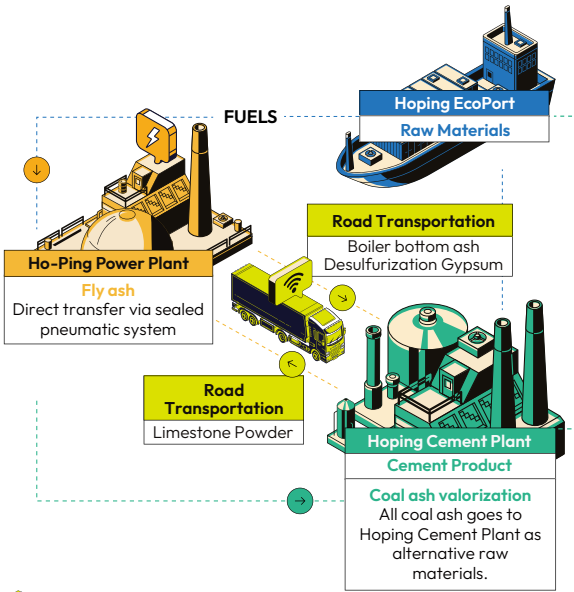
From its inception, the Ho-Ping Power Plant prioritized zero waste and resource recycling. Unlike traditional coal-fired power plants that require ash lagoo for coal ash disposal, the Ho-Ping Power Plant is the world's only coal-fired power plant without one. It partners with the adjacent Hoping Cement Plant and Hoping EcoPort to create a closed-loop material cycle.

SOx Reduction: Hoping Cement Plant provides 60,000 tons of limestone powder annually as absorbent, reducing SOx emissions by 95%.



By-product Reuse: All desulfurized gypsum produced from the power plant's desulfurization process is sent back to the cement plant as a primary raw material.

Electric Truck Transport: Deploying 3 electric trucks in Sept. 2025 for boiler bottom ash, limestone powder, and desulfurized gypsum, achieving 11.5 tons of carbon reduction by Dec. 2025.



Energy Transition Plan

Upgrading Coal-fired Unit to Subcritical Unit

A feasibility study will commence in Q4 2024, with the overall assessment to be completed by Q3 2025. This initiative is projected to enhance unit efficiency by 6.46%, leading to an annual reduction in coal consumption equivalent to approximately 95,700 tons per unit, corresponding to a carbon reduction of 270,700 tons.

Biomass Fuel Feasibility Study

Ho-Ping Power Company initiated a feasibility study on co-firing wood-based fuels and Solid

Recovered Fuel(SRF) in 2024. However, direct co-firing bottom ash cannot be reused in cement manufacturing. To balance carbon reduction and recycling, the second phase shifted to gasification, converting fuels into syngas for boilers to replace an estimated 10% of coal.

Completed in Q3 2025, the study showed a 40% wood chip and 60% SRF mix achieves a 7.9% maximum substitution rate, reducing 300,000 tons of carbon annually. TCC will continue evaluating the fuel supply chain and overall retrofitting feasibility.



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AFFORDABLE AND
CLEAN ENERGY



2025 TCC GROUP HOLDINGS
SUSTAINABILITY REPORT

Comprehensive Environmental Management

Coal-fired power plants are often associated with air pollution concerns. From the outset, Ho-Ping Power Company adopted environmental management standards exceeding regulatory requirements, establishing an environmental management system based on ISO 14001. Ho-Ping Power Company continuously optimizes its air pollution control measures. Since 2022, Ho-Ping Power upgraded its AQCS, GGH, AIG, and denitrification systems. Following ISO 50001, the company audited energy consumption nodes and successfully overhauled the generator's fan system, achieving a 40% reduction in electricity use. In 2025, Ho-Ping Power initiated the construction of a PI big data database system to monitor plant data, review energy-saving efficiency, and visualize data for rapid operational oversight.

Ho-Ping Power Company actively promotes self-generation and consumption of renewable energy by fully utilizing plant rooftops for solar power systems. Additionally, the company plans to introduce a 576 kW in-pipe micro-hydro system. The seawater used for generator cooling does not contact the process, allowing the plant to generate power using the flow and potential energy difference during cooling water discharge. Construction is scheduled to begin in Q2 2026, with grid connection to the plant's high-voltage panel in 2028 Q1, and an estimated annual generation of 3.9 million kWh.

ACTION SPOTLIGHT

Innovative Nanofiltration Technology for Wastewater Treatment and Reuse

Ho-Ping Power Company independently developed wastewater reuse technologies and collaborated with National Ilan University on wastewater resource research. In 2024, the patented "Nanofiltration and Reverse Osmosis Membrane System" (Patent No. I832462) was commissioned. This system utilizes membrane technology to recover process wastewater and separate minerals, reintroducing recovered calcium and magnesium ions into the desulfurization system, thereby reducing limestone powder consumption.

Nanofiltration technology has been implemented in the demineralized water plant, increasing the water recycling rate, reducing overall wastewater generation, and minimizing chemical usage. Ho-Ping Power Company plans to further expand the application of this technology to the wastewater treatment plant, expecting to increase the overall water recycling rate to 30%.



TCC KEY FACTS



Air pollutant
emissions

-38%

Base Year 2016
 $SO_x \leq 0.208 \text{ kg/MWh}$
 $NO_x \leq 0.229 \text{ kg/MWh}$
Total Suspended Particulates
(TSP) $\leq 0.014 \text{ kg/MWh}$



Rainwater
Recovery
77,074 m³

100%

re-utilization rate
Self-developed
nanofiltration membrane
water recovery of 108,348 m³



Waste
Management

General Industrial
Waste Recycling Rate

90.33%

(excluding coal ash and catalysts)

Ho-Ping Power Company
was honored with

🏆 **Top-performing companies
in the Ministry of Environment's 2025
"Clean Water Sustainability Award"**

🏆 **Air Quality Purification Area Special
Contribution Award of Hualien County
in 2025**

