**Grow with Nature** 

**Empower Society** 

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**MOLICEL 2024 ESG Report** 







MOLICEL ESG SECTION

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#### Reporting Period-

Molicel publishes ESG Report on an annual basis.

This Report covers the reporting period from January 1 to December 31, 2024, in English and Chinese version.

Publication date of the previous issue: September 2024

Publication date of the current issue: July 2025

Publication date of the next issue: July 2026

#### The scope of disclosure –

E-One Moli Energy Corporation(Tainan Plant) Molie Quantum Energy Corporation(Kaoshiung Plant)

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# 2025 Crisis and Response: Resilience Through Adversity – Molie Quantum Energy Corporation Fire Incident

At 5:04 a.m. on July 14, 2025, a fire broke out in the ambient resting area for semi-finished products at Molie Quantum Energy Corporation. The Company immediately activated its emergency response mechanism, promptly notified the fire department, and initiated full-site evacuation procedures to ensure the safety of all personnel. The fire brigade arrived on-site at 5:20 a.m. and conducted continuous cooling operations to prevent the fire from spreading. The blaze was brought under control later that afternoon and was fully extinguished by 8:00 a.m. on July 15.

A total of 15 individuals were injured, including 12 employees, 1 contractor, and 3 firefighters. All injuries were minor; most were treated and discharged the same day, with only two requiring brief hospitalization for observation before full recovery. According to real-time monitoring conducted by the Kaohsiung City Environmental Protection Bureau, no toxic gases were detected outside the plant. Firefighting water was treated before discharge, ensuring no sustained environmental impact.

While the fire significantly affected production facilities and operations, the Company chose to respond with transparency, accountability, and concrete actions. This incident has become a catalyst for strengthening operational resilience, enhancing safety management, and deepening community engagement.



# **Ensuring Operational Continuity, Upholding Customer Commitments, and Planning for the Future**

Corporation and Southeast Asia OEM partners to secure uninterrupted cell supply. A financial assessment estimated a loss of approximately TWD11 billion. In response, the Chairman and senior management team voluntarily reduced their compensation, demonstrating leadership and responsibility. Concurrently, internal and supply chain investigations were initiated to clarify the root cause, strengthen process safety, and reinforce quality control.

As customer orders for the Molie Quantum Energy Corporation and E-ONE Moli Energy Corporation for the second half of 2025 through 2026 have already exceeded the combined production capacity of the two Taiwan facilities, Molicel had previously begun exploring contingency plans.

The fire has accelerated these plans, and the Company will adopt a multi-pronged strategy to ensure supply chain stability:

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Flexible Support from E-ONE Moli Energy Corporation:

Production capacity will be strategically allocated from the E-ONE Moli Energy Corporation to meet part of the Molie Quantum Energy Corporation customer demand.

Accelerating OEM Partnerships:

To meet international customer needs and expand capacity, the Company will expedite collaboration with overseas OEM partners to produce Molicel's first-generation high-performance NMC lithium-ion battery products.

Reinitiating Overseas Plant Evaluations: Many key customers have expressed continued and firm support following the fire and have encouraged Molicel to establish overseas facilities to secure a stable cell supply. This support has become a driving force for the Company, which is now reassessing and expanding its overseas plant investment plans.



# Stakeholder Engagement: Rebuilding Trust and Strengthening Community Ties

On the day of the incident, Molicel's senior management led the "Neighborhood Affairs Taskforce" to proactively visit local community leaders, elected representatives, and nearby residents to provide timely updates on the incident, firefighting progress, and environmental monitoring results, while directly addressing community concerns. By July 19, multiple inspections conducted by government authorities confirmed that air quality outside the plant remained normal. Firefighting water, after pH and temperature verification, was discharged through the wastewater treatment system. All monitoring results were disclosed transparently on the Company's website and posted on community bulletin boards.

To provide long-term assurance, Molicel has committed to conducting third-party environmental monitoring from August through December, covering air, water, and soil quality, with monthly public disclosure of results. At the same time, psychological counseling and workplace safety retraining have been provided for employees and contractors to ensure a safe and reassuring environment for their return to work.

These efforts go beyond crisis response; they represent a renewed connection with the community. Molicel is not only part of the global industrial supply chain but also a member of the local community. True sustainability requires sharing safety and peace of mind with our neighbors, building trust, and advancing together toward a resilient and sustainable future.

For further details and ongoing updates regarding the Molie Quantum Energy Corporation fire on July 14, 2025, please refer to the Taiwan Stock Exchange, TCC holding group official website, and the Molicel official website.

### **OVERVIEW** AND BRAND STORY

#### **Corporate History and Brand Creation**

Since its founding in 1998, E-One Moli Energy Corporation (hereinafter referred to as "Molicel") has utilized over 40 years of experience in the research and development of rechargeable lithium-ion battery technology. The company is dedicated to providing high-performance, high-quality lithium battery products to global markets. Operating under its proprietary brand, Molicel has gradually established itself as a global leader in the cylindrical battery sector. Its products are widely utilized across numerous fields, including high-end electric racing cars, drones, electric vertical take-off and landing aircraft (eVTOL), aerospace, heavy-duty tools, and backup battery units (BBUs).

#### Technological Legacy and Innovation

Molicel's strong technological foundation, supported by continuous research and development efforts, has enabled the company to evolve from the basic technologies of lithium batteries to a product line characterized by high power, high energy density, and fast charge/discharge capabilities. Through constant innovation and breakthroughs in design and process, Molicel has not only earned industry recognition for its product performance but has also positioned itself at the forefront of global battery technology development, shaping the future of the industry with its pioneering mindset.

#### Mission and Vision

Molicel's corporate mission is to propel energy transformation through advanced lithium battery technology, creating a low-carbon, environmentally sustainable, and socially responsible future. Guided by the core values of "Innovation. Environmental Protection, and Mutual Benefit," the company seeks to strike the optimal balance between technological advancement and sustainable development, ultimately delivering superior energy solutions to its global customer base. As a leading lithium



battery manufacturer, Molicel places a strong emphasis on both technological innovation and social and environmental responsibility. The company has established a comprehensive set of policies related to corporate governance, social welfare, and environmental protection, underscoring its commitment to giving back to society and supporting the global green transformation.

#### **Core Values and Corporate Culture**

Throughout its product development and market expansion, Molicel consistently upholds quality, innovation, and environmental protection as its three core values. The company continues to make significant advancements in research and development while actively promoting corporate social responsibility. Through a variety of social engagement initiatives and educational support programs, Molicel fosters the growth of future technological talent. These efforts reflect the company's unwavering commitment to achieving excellence in technology while promoting sustainability in both social and environmental realms.

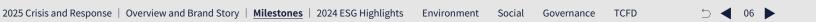
### MILESTONES

- 1977 Molicel was founded in 1977
- 1998 E-One Moli Energy founded
- **2000** E-One Energy Corp. acquired NEC Moli Energy (Canada) Limited
- **2001** E-One Moli Energy Corp. obtained ISO 9001:2000 certification
- 2004 Cooperated with Japanese power tool maker to announce world's first power tool Li-ion battery pack Launched the first 18650 Li-ion cell for power tool application in the world
- **2005** Sole battery provider of CTO in Asia
- **2006** E-One Moli Energy Corp. obtained ISO 14001:2004 certification
- **2013** Cooperated with ITRI to successfully develop Taiwan's first made-in-Taiwan electric car
- **2016** Teamed up with ITRI Green Energy Department for 1MWh Solar Energy Storage System
- 2017 Power cell approved by leading cordless vacuum cleaner maker

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- 2018 Collaborated with Uber Elevate for eVTOL battery pack development
  Taiwan's first public tender for 1MWh ESS Longjing Project for ITRI
- **2019** 1500kWh BESS system deployed in E-One Moli Energy Corp. (Taiwan)
- 2020 Collaborated with NHOA.TCC to obtain Taipower's first ESS Automatic Frequency Control (AFC) contract, and became the only facility that won the highest 5MW service capacity, as the same level as TESLA Selected by the British supercar brand McMurtry and limited to 130 units of production
- Collaborated with Williams Advanced Engineering to develop electrification of heavy-duty trucks
   New generation 4.5Ah P45B launched, highest capacity in the high-power cell market, and full fast charging in 12 minutes
   Selected by the Croatian supercar brand Rimac Automobili and limited to 150 units of production
- Technically collaborated with McMurtry, and set a new all-time record at Goodwood, Festival of Speed, UK
  Selected by eVTOL manufacturer Vertical Aerospace to develop and supply V4 into service
  Partnering with KULR for battery safety and thermal management solutions
- Partner- McMurtry revealed Spéirling PURE for street legal version, using 21700 series batteries
  INR-18650-P30B, the market-leading ultra-high power cells launched
  Partner- Archer Aviation's Midnight eVTOL receives FAA Special Airworthiness Certificate
  - Molie Quantum Energy Corporation started mass production operations

    Molicel and the PM of Canada jointly announced the construction of the world's largest high-performance torgan lithium battony cell factors in Vancouver. (In November 2024, the decision was made to defer the
- ternary lithium battery cell factory in Vancouver. (In November 2024, the decision was made to defer the new plant project in consideration of prevailing market demand)
- 2024 INR-21700-P50B Ultra-High Power Battery Mass Production and Market Launch
  The high-safety S series has been utilized in 5KW BBUs, which have been shipped to major global cloud service providers.
  - New Super Battery Factory Kaohsiung Plant has achieved LEED and EEWH Gold Certifications.
  - INR-21700-P50B powers the FlyingBasket FB3 cargo drone for customers, providing a payload capacity of up to 100 kilograms.
  - INR-21700-P45B powers the VARG for Stark Future, enabling it to win races against fuel-powered vehicles.
     The road-legal VARG EX also uses Molicel batteries.



### 2024 ESG HIGHLIGHTS

### **SUSTAINABLE PRODUCTS**



To meet the diverse and high-performance demands of the global lithium battery market, Molicel has launched multiple product series tailored to specific application scenarios:

P Series: Designed for ultra-high power applications, featuring fast charging (3C+) and ultra-low internal resistance, aimed at achieving the highest possible energy density.

**S Series:** Focuses on safety and high-temperature performance, suitable for cloud services, large-scale data centers, and generative AI applications.

X Series: Emphasizes extremely high discharge rates to meet the needs of extreme sports and high-load applications.

PX Series: Utilizes Omni-tab technology to achieve 30C+ discharge rates and high energy density, ideal for cutting-edge technology applications.



#### **Product Roadmap and Technological Objectives**

Molicel has set a target to increase energy density and power density by 10% annually, achieved through continuous technological innovation and the progressive evolution of product performance. The specific plans include:

#### Short-term (1–2 years)

Optimize existing product series, rapidly improve technologies based on market feedback, and ensure products reach new heights in safety, charge/discharge efficiency, and high-temperature performance.

#### Mid-term (3–5 years)

Launch next-generation battery products, integrating Al-powered manufacturing technologies to achieve full-process automation control and precise data monitoring, ensuring energy-efficient and high-performance production.

#### Long-term (5+ years)

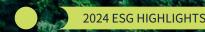
Establish a global leading innovation system, positioning Molicel as a benchmark in new energy technologies and a promoter of cross-industry applications, such as super electric vehicles, intelligent unmanned systems, electric aircraft, and new energy storage backup systems.

#### **Application Cases and Technological Achievements**

Molicel's innovative technologies have been successfully applied in various fields. Below are some representative cases: The following table summarizes the core performance parameters and primary application areas for each product series:

	ies/Core Features	Primary Application Areas	Technological Indicators & Innovation Highlights
P Series	Ultra-high power, fast charging (3C+), ultra-low impedance	High-end electric racing cars, drones, heavy-duty tools	High energy density, optimized discharge curve
S Series	Enhanced safety, high discharge current, high-temperature resistance	Cloud services, large-scale data centers, generative AI applications	Discharge capability up to 75A, designed for high-load environments
X Series	Extremely high discharge rate	Super electric vehicles, extreme sports equipment	Rapid energy release, meeting extreme performance needs
PX Series	Omni-tab design, 30C+ discharge rate, high energy density	Cutting-edge technologies, new energy storage systems	Innovative structural design, enabling diverse application scenarios





### ENVIRONMENT

### **Commitment: Carbon footprint** per battery

**REDUCTION OF** BY 2025

**BY 2030** (BASELINE YEAR 2023)

#### **E-ONE MOLI ENERGY CORPORATION**

**◎** -0.59%

Improvement in power management 8.14%

Share of renewable energy usage

**₩** -76%

Reduction in hazardous waste 2024: 12.928 / 2023: 53.73 75.2%

Recovery rate of black powder from battery cathode scrap using chemical extraction technology



-3.76%

Reduction in water consumption



-8.99%

Reduction in wastewater generation





ISO





50001 Third-Party Verification - Passed



48%

Waste recycling rate

**軸** 1.7MW

**Energy storage system** capacity(+42%)



-26.86%

Reduction in greenhouse gas emissions intensity 2024: 1.182 / 2023: 1.6161

#### **MOLIE QUANTUM ENERGY CORPORATION**

**●** -7.76%

Improvement in power management



8MW

Energy storage system capacity



-3%

Waste recycling rate



**£** x2.25

Increase in manufacturing capacity through smart manufacturing

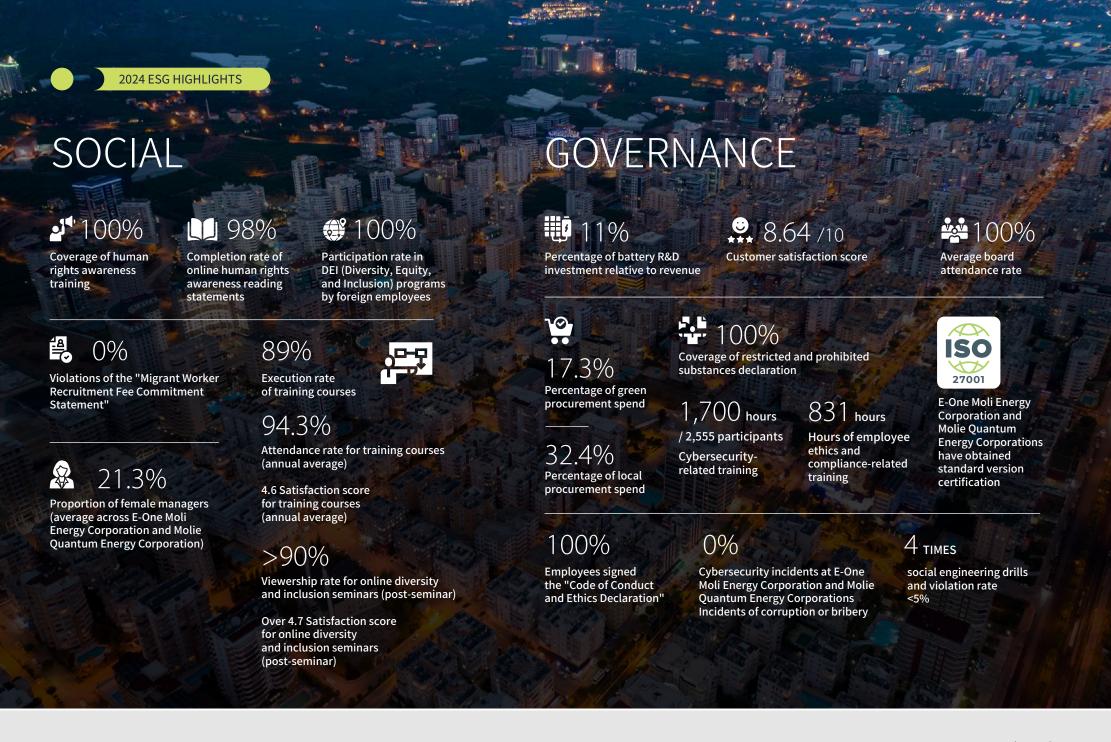
Third-Party Verification

Passed



Reduction in labor costs through smart manufacturing

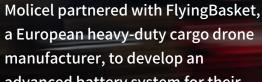
/COMPARED TO 2023/





# **PARTNERS** AND ACHIEVEMENTS

### **Heavy Duty Cargo Drone**



advanced battery system for their next-generation FB3 cargo drone.

This collaboration enhanced the drone's range by

with a payload capacity of up to

100kg

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### **Electric Off-Road Motorcycles**

Molicel supplied the battery system for Stark Future's VARG electric motorcycle, enabling it to outperform traditional internal combustion engine models for the first time in the 2024 UK Indoor **Enduro Championship.** 

Pre-orders for the VARG have surpassed

+18,500 units

### Track Performance Breakthroughs

In collaboration with McMurtry Automotive, Molicel provided the high-performance INR-21700-P50B battery, which powered the Spéirling PURE to set multiple track records across international circuits:

Hockenheim:

Completed the race in 1:24.43, beating the previous record by 14.1 seconds.

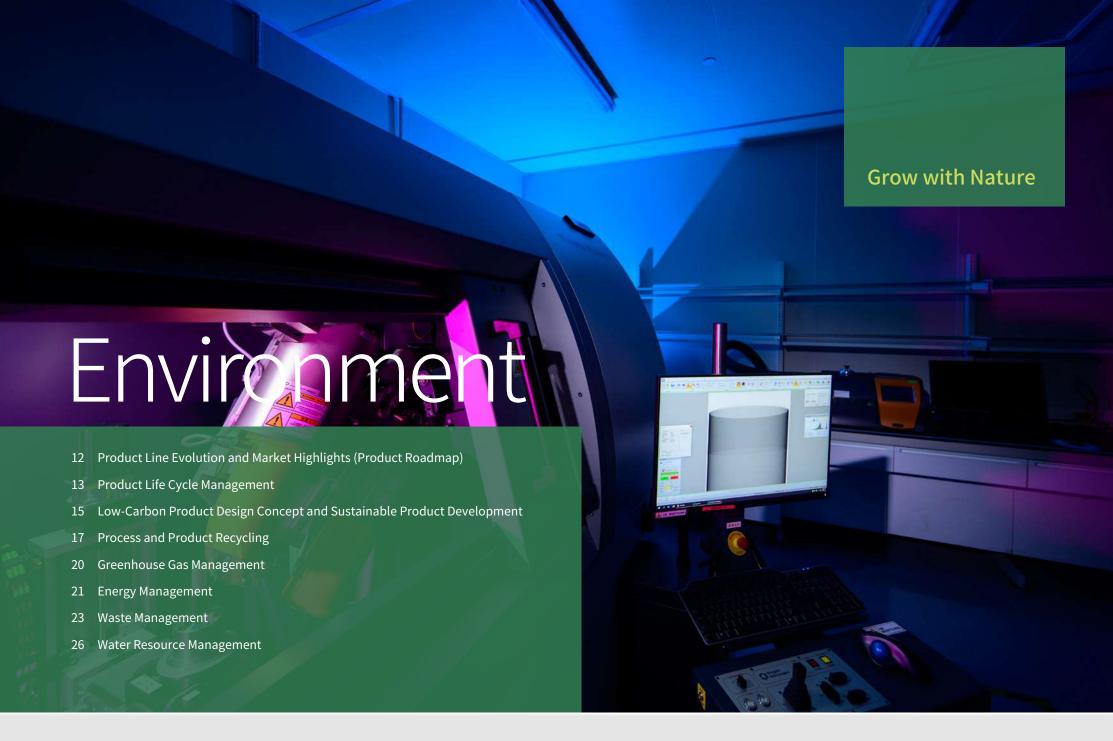
Castle Combe:

Set the fastest lap time ever at 54.559 seconds, improving the previous record by 4.037 seconds.

Laguna Seca:

Environment Social

Achieved a record of 28.6 seconds in a reverse hill climb race, surpassing the previous record by 6 seconds.



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# Product Line Evolution and Market Highlights



**Product Roadmap** 

### **Key Products and Technological Advantages**

Molicel's product portfolio encompasses multiple series tailored to meet diverse market demands and application scenarios. Below is a summary of the key technical features and market strengths of our major product offerings:

P22S	As Molicel's first cell to penetrate the BBU (Battery Backup Unit) market, the P22S demonstrated exceptional performance in fire resistance testing, maintaining combustion resistance for over 10 minutes. Its safety and stability are on par with leading competitors, establishing a solid foundation of market trust.
P30B	Compared to its predecessor P28A, the P30B offers a 7% increase in energy density and an 87% boost in power density. The discharge power has been upgraded from 80 W/hr to 150 W/hr, making it a strong performer in high-load applications.
P30S	Representing the next generation of BBU battery cells, the P30S provides a significant power upgrade—from 85 W/hr to 150 W/hr—and has been certified by the UL9540A fire safety test, ensuring reliable performance under extreme conditions.
P42A / P45B	These products address the need for stable raw material supply chains and cost control. Both have undergone secondary sourcing experiments to incorporate diversified and flexible suppliers, thereby reducing costs and mitigating material shortage risks.
P50B / P50S	The P50B highlights high capacity and high power capability within the 21700 cell format, increasing discharge power from 200 W/hr to 250 W/hr and capacity from 4.5Ah to 5.0Ah. The P50S, meanwhile, emphasizes safety enhancements and has passed UL9540A certification, representing next-generation standards for BBU battery cells.
P60B	A breakthrough within the 21700 series, the P60B achieves a discharge power of 300 W/hr per kilogram—approximately 15% higher than the P50B—positioning it as a highly competitive option in high-performance applications.



### Product Life Cycle Management

In response to the growing global demand for environmental sustainability and low-carbon development, Molicel, as a leading lithium battery manufacturer, actively implements comprehensive product life cycle management and sustainability strategies. From product design and manufacturing processes to end-of-life recycling and reuse, every stage is aligned with green production principles and resource circularity. By continuously enhancing battery performance and extending product lifespan, alongside effective process control and the efficient reuse of recycled materials, Molicel not only drives technological innovation but also achieves its goals of reducing carbon emissions and promoting resource regeneration.

This section outlines the company's achievements and future plans in areas such as product performance optimization, raw material recycling, and the establishment of a robust recovery system. The content is based on internal data collected through our reporting framework and is illustrated with quantitative results and case examples to demonstrate Molicel's commitment to sustainable development in both production and market applications.

#### **Product Life Cycle Management Strategy and Performance Enhancement**

#### **Technological Innovation** and Performance Improvement

In the area of product design and life cycle management, Molicel continues to drive technological innovation guided by both market demands and environmental considerations. For example, through multi-phase technical upgrades of its P45B, P50B, and P60B product series, Molicel has successfully

increased energy density by 20% and doubled the cycle life of its batteries, ensuring long-term stability and reliability in usage. Additionally, cell capacity has been enhanced from 5.0Ah to 6.0Ah, resulting in more than a 15% performance improvement within the same size and weight. These advancements not only reinforce Molicel's competitive edge in the market but also deliver greater value and sustainability benefits to end users.



#### **Summary of Product Performance Data**

P-series product performance technical indicators: energy density, cycle life, and product capacity

Product Series	Energy Density	Cycle Life (100W Discharge Cycles)	Product Capacity	Other Highlights
P45B	Baseline data	Baseline data	4.5 ± 0.2Ah	Core technology
P50B	13% higher energy density compared to P45B	20% longer cycle life than P45B	Increased from 4.5 $\pm$ 0.2Ah to 5.0 $\pm$ 0.15Ah (11% increase)	Enhanced battery performance and lifespan
P60B	37% higher energy density compared to P45B	30% longer cycle life than P45B	Increased from 4.5 $\pm$ 0.2Ah to 6.0 $\pm$ 0.15Ah, offering higher energy density within the same volume (33% increase)	15% increase in discharge power, enabling higher performance.

S-series product performance technical indicators: energy density, battery performance, and product capacity

Product Series	Energy Density	Battery Performance	Product Capacity	Other Highlights
P22S	Specially designed S-series cell for BBU; the first product in the S-series	Maintains nearly 80% performance after 500 cycles under high-current (— 10A) and high-power (—55W) discharge tests (internal resistance: 10 mΩ)	First product in the S-series, 2.0 Ah	Focus on cycle life and high-power pulse discharge performance. Storage performance is also a key development priority.
P30S	42% higher energy density compared to P22S	Discharge cut-off temperature increased to 90°C; max. charging C-rate increased from 2C to 3C (35% reduction in internal resistance)	2.85–3.0 Ah	+5% in —10A cycle test, +2% in — 20A cycle test, +6% in —85W cycle test
P50S	142% higher energy density compared to P22S	Discharge cut-off temperature increased to 90°C; max. charging C-rate increased from 2C to 5C (20% reduction in internal resistance)	4.85–5.0 Ah	-85W cycle test performance improved by 4% compared to P22S

# Low-Carbon Product Design Concept and Sustainable Product Development

#### **Carbon Reduction Achievements in Current Products**

Molicel consistently integrates carbon reduction principles into every stage of technological innovation. Taking the P60 series as an example, compared to the P50 series and under identical manufacturing conditions, the P60 demonstrates approximately a 10% improvement in cycle life, reflecting notable advancements in durability and environmental performance. Furthermore, the energy density within the same volume has increased by 20%, enabling greater energy storage capacity while maintaining stable overall performance—effectively addressing the market demand for high efficiency and low carbon emissions.



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#### **Future Product Design and Technical Objectives**

Looking ahead, Molicel has set more ambitious targets for carbon reduction and performance enhancement, including:

- Energy and Power Density Improvement: Achieve an energy density of 265 Wh/kg and increase power density from 5,600 W/kg to 6,440 W/kg to meet the rising demand for high-performance battery solutions.
- Enhanced Accuracy of Life Cycle Prediction: Improve the precision of battery life estimations by reducing prediction error from 3% to 1.5% through advanced testing and data analytics, significantly increasing reliability and safety.
- Utilization of Low-Carbon Materials: Promote the use of low-carbon raw materials, such as anode materials derived from steel industry by-products, ensuring that all stages—from raw material sourcing to manufacturing—adhere to low-carbon standards.

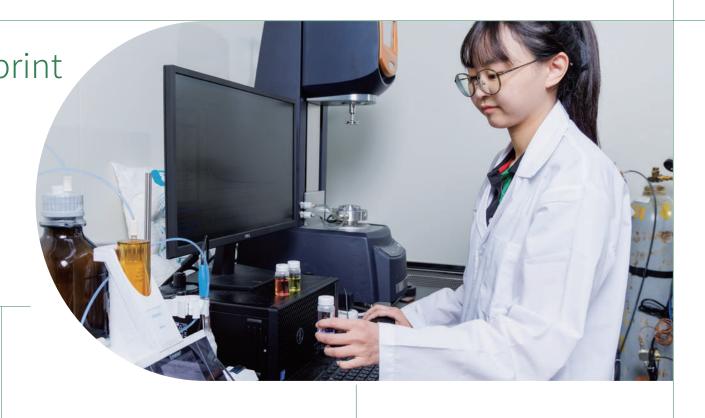
These initiatives not only enhance the overall performance of Molicel's products but also contribute to reduced carbon emissions in the production process, achieving a balance between environmental sustainability and business value.

Environment

Product Carbon Footprint (PCF) Inventory and Environmental **Product Declaration** (EPD)

Since the implementation of ISO 14064-1 in 2023, Molicel's E-One Moli Energy Corporation plant has continuously conducted greenhouse gas (GHG) inventories in conjunction with energy management data. The inventory results have been used to formulate targeted improvement plans aimed at progressively reducing carbon intensity. In particular, ongoing technological upgrades and process optimizations in electricity usage and equipment operation have contributed to enhanced energy efficiency.

To ensure scientific integrity and transparency in GHG accounting and product carbon footprint disclosures, both plants follow international standards:



In 2023, the plant fully adopted the ISO 14064-1:2018 standard, establishing a comprehensive system for GHG emissions accounting and third-party verification. To

• E-One Moli Energy Corporation

support sustainable supply chain management, a full life cycle carbon footprint assessment was conducted for the P42A cell, which has obtained ISO 14067 certification. The plant plans to extend verification to the P22S model and the entire product line by 2025, building a robust and comprehensive carbon emissions database.

Molie Quantum Energy Corporation: In alignment with facility licensing and commissioning requirements, the Molie Quantum Energy Corporation obtained its GHG inventory certificate in 2024. It is on track to pursue ISO 14067 certification in 2025, focusing on core products such as the P45B and P50B. The plant continues to enhance transparency and traceability in GHG data management through systematic improvements and standardization.

# Process and Product Recycling

Recycling Strategies and Sustainable Use of Raw Materials

Molicel has demonstrated significant achievements in product life cycle management, raw material and product recycling strategies, and carbon-reduction-oriented design. Through continuous technological innovation and cross-functional collaboration, the company not only enhances product performance but also achieves notable progress in green manufacturing and resource circularity. Looking forward, Molicel will remain focused on the following key areas:

1/

#### Innovation and Optimization:

Continued advancement in energy density, power density, and cycle life, with improved accuracy in lifespan prediction and safety assessments to meet the demands of high-performance markets.

2/

#### **Enhanced Resource Reutilization:**

Development of a comprehensive domestic closed-loop recycling system and integration of upstream supply chain resources to enable low-carbon production across the entire process. Transparent data management will be leveraged to improve resource efficiency.

3/

#### Global Market Expansion:

Active participation in international exhibitions and standards-setting initiatives to increase brand recognition and market competitiveness, thereby facilitating global adoption of Molicel products and technologies.

### Raw Material Recycling and Reuse Rates

As part of its green manufacturing strategy, Molicel rigorously monitors the recycling and reuse rates of raw materials. Through close cooperation with key suppliers, the company ensures that the recycling rates for critical materials consistently meet high standards. Based on supplier-reported data, the recycling and reuse rates for key raw materials are summarized as follows:

Material Category	Recycled Content Utilization Rate	Remarks
Cathode Material	Approximately 30% (Precursor)	Based on supplier data; consistent with previous year levels
Anode Material	Use of low-carbon byproducts	Made from steelmaking byproducts; classified as reused low-carbon materials
Wooden Pallets	Increased to 70% reuse	Enhancing circular use in the logistics process
Electrolyte Packaging Drums	100% reuse	Fully recycled and reused
Copper Foil	Approximately 80%	High recycling rate ensures effective utilization of metal resources
Aluminum Foil	Approximately 17.5%	Ongoing tracking and performance improvement in place
Steel Cans / Pallets	Approximately 10%	Partial use of recycled materials for structural support

#### **Recycling Performance of Manufacturing Materials**

Beginning in 2024, Molicel has implemented in-process material recycling measures across its production lines, with a particular focus on the recovery of cathode sheet offcuts. These offcuts are now effectively converted into black mass through an established recycling process. The detailed performance metrics are as follows:

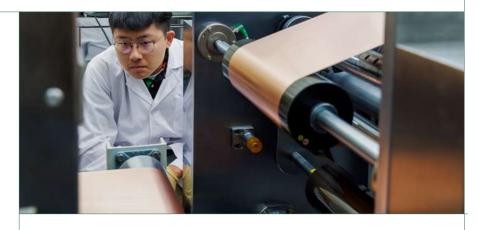
Item / Cathode Sheet Offcuts

Total volume of recycled cathode sheet offcuts

Output Material Black mass output Approximately

126.344

metric tons  $\frac{95}{75.2\%}$ 



This achievement has not only contributed to reducing the cost of waste treatment but also elevated the efficiency of in-plant resource circularity. Molicel will continue to enhance this recycling technology, striving for further improvements in recovery rate and reutilization efficiency.

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### **Product Recycling Initiatives and Closed-Loop Supply Chain Development**

#### **Recycling Mechanisms and Collaboration Models**

To further implement sustainable development principles, Molicel is not only focused on the recycling of raw materials in manufacturing processes but is also proactively promoting product-level recycling mechanisms. Currently, a portion of decommissioned batteries is being repurposed for use in energy storage systems, thereby extending their total life cycle. However, due to existing technical and regulatory constraints, the specific operational practices are still being refined in collaboration with customers and recycling partners. In terms of process material recovery, Molicel has established partnerships with several local recycling companies in Taiwan and is piloting the following strategies:

# Cathode offcut recycling process

Recovered cathode offcuts from production lines are processed into black mass. This black mass is further refined into precursor materials by Taiwanese material manufacturers and sent to cathode material suppliers for testing and certification, before being reintegrated into cathode production.

# Anode material processing

Due to the high cost and limited economic value of anode carbon recycling, it is generally subject to harmless disposal. Molicel is currently working with the TCC Low Carbon R&D Center to explore incorporating anode residues into cement production, effectively reducing carbon emissions.

# Domestic circular supply chain

In accordance with both local and international regulations, all production scrap and rejected battery cells must be treated domestically. Molicel thus prioritizes building a closed-loop recycling system within Taiwan, integrating domestic supply chain resources to enhance resource reutilization and carbon reduction efficiency.

#### **Collaboration Framework and Future Outlook**

To facilitate the full implementation of a circular supply chain, Molicel's future plans include:

- Establishing a nationwide recycling network: Creating a comprehensive closed-loop supply chain by partnering with major recycling operators, material suppliers, and remanufacturers—from production sites to reprocessing facilities.
- Data tracking and transparent management: Leveraging digital systems to monitor recycling metrics and ensure transparency and traceability in recovery rates and resource reutilization.
- © Cross-functional collaboration: Aligning R&D, production, and commercial teams to jointly develop product recycling plans, regularly review operational effectiveness, and continuously improve recycling mechanisms and business models.

Through these strategic partnerships and integrated efforts, Molicel aims to significantly increase product recovery rates and strengthen Taiwan's domestic resource circularity system, thereby laying a solid foundation for long-term sustainable growth.

### Greenhouse Gas Management

### **Current GHG Management Status and Implementation Strategy**

In response to global climate change and increasing environmental regulations, Molicel's E-One Moli Energy Corporation and Molie Quantum Energy Corporations have adopted the international standard ISO 14064-1 as the basis for greenhouse gas (GHG) inventory and verification.

At the E-One Moli Energy Corporation, a comprehensive GHG inventory and verification system has been in place since 2023, with 2022 designated as the base year for all emissions benchmarking. The plant conducts regular data verification to monitor emissions performance and guide emission reduction actions. At the Molie Quantum Energy Corporation, after obtaining its operating permit and trial run approval, the plant achieved GHG inventory certification in 2024. In line with the requirements of competent authorities, annual audits and verifications are conducted to ensure ongoing compliance.

The greenhouse gas emissions status for the year 2024 is summarized in the following table:



#### Plant | E-One Moli Energy Corporation

4,797.1064 ton CO<sub>2</sub>e | 23,164.2528 ton CO<sub>2</sub>e | 33,670.9178 ton CO<sub>2</sub>e

**Emission Intensity** 

 $1.181\,ton\,\text{CO}_2\text{e/ku}$ 

Note - Scope 3 Emission Categories

- Emissions from Upstream Transportation and Distribution
- Emissions from Downstream Transportation and Distribution
- Emissions from Business Travel
- Emissions from Waste Transportation / Emissions from Purchased Goods
- Emissions from Solid and Liquid Waste Treatment

#### Plant | Molie Quantum Energy Corporation

3,021.0408 ton CO2e

Scope 2

29,638.0596 ton CO2e

Scope 3 104.1899 ton CO2e

**Emission Intensity** 

1.365 ton CO2e/ku

Note - Scope 3 Emission Categories

Social

• Emissions from Upstream Transportation and Distribution

Emission Intensity Calculation method: (Scope 1 + Scope 2 +) ÷ Production volume

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# Energy Management

# **Current Status and Improvement Measures of Energy Use Management**

E-One Moli Energy Corporation has currently installed a 496.62 kW solar power generation system, and the energy storage system has been successfully expanded from 1.2 MW to 1.7 MW. Additionally, a power auxiliary service agreement with Taiwan Power Company (Taipower) has been signed to ensure stable power supply and grid frequency regulation while operating the plant. To strengthen energy management, the company officially introduced the ISO 50001 Energy Management System in April 2024 and obtained ISO 50001 certification through third-party verification on December 1, 2024. This ensures that the management system remains compliant with regulations and international standards. Furthermore, a dedicated energy-saving team has been established to develop and implement energy-saving management plans for process equipment, aiming to enhance overall energy use efficiency.

In 2024, the energy consumption intensity was reduced by 0.59% compared to 2023. The goal for 2025 is to achieve a 7.5% reduction in energy consumption. The contracted capacity was reduced from 7,000 kW to 6,500 kW in December 2024 and further reduced to 6,100 kW in February 2024. These measures have led to significant ongoing energy savings in the plant.

# Renewable Energy Usage Goals and Future Plans

In promoting the green energy transformation, Molicel focuses on reducing electricity consumption through energy management programs while increasing the proportion of renewable energy used. Based on current data and future plans, the renewable energy usage is as follows:

#### 2023

the solar power system at the NSC plant contributed to approximately

7% Renewable energy usage

Through the auxiliary service agreement with Taipower, it also helped stabilize the power supply.

#### 2024

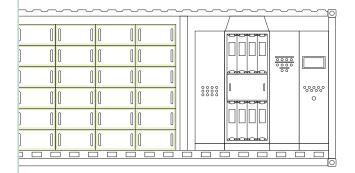
the renewable energy usage rate increased from

7.19% to 8.14%

#### 2025

the goal is to further increase the renewable energy share from

8.14% to 8.56%



Additionally, certain areas within the plant still have potential to expand the solar power generation system. Future upgrades and expansions will be carried out according to the company's overall plans to ensure continued increases in renewable energy generation.

# Energy Management

### **Energy-Saving Project Results and Future Plans**

To further reduce energy consumption and electricity intensity, several energy-saving projects were initiated in 2024. The following outlines the results of project execution and tracking:



**E-One Moli Energy Corporation** 

Project Count: 7 projects in total, with 3 spanning multiple years.

**Execution Results:** 

A total electricity savings of approximately 285,644 kWh representing an energy savings rate of 0.59%.

Future Energy-Saving Plans (2025 Outlook)

Planned Projects: Increase to 9 projects (including 3 cross-year projects from 2024).

**Estimated Execution Results:** 

Total savings of approximately 3,613,010 kWh improving the energy savings rate to 7.54%.

Molie Quantum Energy Corporation

By optimizing factory equipment parameters and system adjustments, monthly savings of approximately 392,040 kWh can be achieved, with an overall energy savings rate of 7.76%. In 2025, further savings of an additional 1.17% are expected through optimized operation of cooling water pumps and air conditioning systems. The company plans to introduce the ISO 50001 Energy Management System in 2026 to further refine and achieve energy-saving goals. Molie Quantum Energy Corporation has formulated detailed energy-saving projects and evaluation plans for equipment operation efficiency, to be implemented and evaluated in 2024 and 2025. The results are as follows:

Project Count: 5 projects in total.

Execution Results: A total electricity savings of approximately  $392,\!040~\text{kWh}$ 

with an energy savings rate of 7.76%.

Future Energy-Saving Plans (2025 Outlook)

Planned Projects: 2 projects

Estimated Execution Results: Total savings of approximately 59,040 kWh, with an energy savings rate of 1.17%.

### Waste Management

Waste management is a critical issue for sustainable operations in the lithium battery manufacturing industry, as battery production generates waste containing various valuable metals and chemicals. To reduce environmental impact and promote resource reuse, Molicel prioritizes waste reduction and has developed detailed waste classification, recycling, and reuse plans.

# Resource Circular Management and Supply Chain Resilience Enhancement

With the rapid expansion of the global electric vehicle market, the demand for strategic metals such as cobalt, lithium, nickel, manganese, and copper in lithium batteries has surged, leading to increased resource extraction pressure and waste generation. In response to the potential risks of resource depletion and unstable raw material supply, Molicel adheres to the principles of effective resource utilization and circular economy, actively promoting waste reduction and reuse efforts. This strategy aims to reduce collection and disposal costs while minimizing environmental impact and strengthening supply chain resilience and sustainability. Molicel is committed to reducing the dependency on key materials by implementing source reduction, scientific classification, and recycling mechanisms, thereby reducing risks associated with supply chain disruptions due to resource shortages and ensuring operational stability and long-term competitiveness. The key implementation points at each plant are as follows:

■ Molicel 2024 ESG Report



#### **E-One Moli Energy Corporation**

- Compliance with environmental regulations and customer environmental requirements, setting guidelines for the classification and disposal of recyclable waste to ensure the management processes meet regulations and standard operating procedures.
- A dual strategy of "source reduction" and "increasing recycling rates," using data and scientific tools to analyze waste flow and characteristics, strengthening classification efficiency, and promoting the recycling and reuse of high-value resources.



#### **Molie Quantum Energy Corporation**

- Setting specific waste reduction targets, continuously tracking and optimizing production and daily waste management to reduce the annual waste disposal by 3%.
- Strengthening waste classification, crushing, and resource recovery processes to ensure that reusable materials return to the production process or recycling systems, achieving closed-loop circular management.

Molicel will continue to strengthen its resource recycling management system, improving resource efficiency through innovative management and cross-departmental collaboration, responding to global concerns about the stability of key material supplies, and fulfilling the company's commitment to environmental protection and sustainable development.



### **Waste Reduction** and Recycling Projects

Both plants have established comprehensive waste recording and handling systems for general and hazardous waste. All data is updated in real-time using electronic worksheets, and the waste is classified, crushed, incinerated, or reused according to government standards, ensuring that waste disposal complies with environmental regulations and continuously reduces energy consumption and environmental impact during the disposal process.

Several waste reduction and recycling projects have been implemented in the production process, and the main cases and results are outlined as follows:

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#### (—) E-One Moli Energy Corporation Major Waste Reduction and Recycling Projects









#### **Reclassification of Waste Slurry**



Previously, waste slurry was outsourced for treatment at a cost of 66 TWD/kg due to solid slurry sedimentation, which led to high treatment costs and limited receiving capacity at the treatment plant. The new dewatering and solid-liquid separation technology reduces waste slurry by 40%.



On average, 8,124 kg of liquid waste slurry is reduced per month. The recovery of carbon from physical processing is 64.99 tons, and the disposal cost was reduced from 66 TWD/kg to 17 TWD/kg.



Evaluate the recovery of precious metals from conductive slurry to further increase resource utilization rates.

#### Separation and Treatment of Waste Aluminum Foil Bags and Carbon Powder Packaging Bags



Traditional packaging materials (multi-layered aluminum foil bags and composite carbon powder bags) needed to be lightproof, moisture-proof, and anti-static. Mixed treatment led to high costs and low recycling rates; the plant now separates and reclassifies them for treatment.



An average of 1,243 kg of waste bags is produced per month, successfully reducing the amount of mixed waste plastic by 40%. The disposal cost was reduced from 46 TWD/kg to 15 TWD/kg.



Plan to separate aluminum and plastic for reuse, producing recycled aluminum and plastic for the recycling market.

#### **Reusing Battery Cathode Sheet Off-Cuts**



Chemical extraction technology is used to extract black powder from cathode sheet off-cuts, which is partially used to supplement cathode raw materials, reducing the use of primary materials.



In 2024, 126.5 tons of off-cuts were recycled, and 95 tons of black powder was extracted, achieving a recovery rate of 75.2%.



Further promote low-carbon footprint battery production in response to the European Union's new battery law.

#### **Recycling of Waste Space Bags**



Waste space bags used for packaging raw materials are collected. shredded, and remanufactured into secondary materials.



Approximately 816 kg of fiber bags are recycled per month, totaling 9,800 kg annually. The disposal cost was reduced from 46 TWD/kg to 5 TWD/kg.



Continuously optimize the remanufacturing process to improve the quality and market acceptance of recycled products.

#### **Recycling of Waste Wood**



Waste wooden crates and pallets generated in the plant are converted into electricity for use in the industrial zone through gasification power generation technology. The carbon black produced from gasification is remanufactured into recycled fuel.



Approximately 4,788 kg of waste wood is generated per month, with an estimated annual power generation of 71,812.5 kW, achieving zero-waste resource circulation.

#### (二) Molie Quantum Energy Corporation Waste Reduction Projects

Molie Quantum Energy Corporation focuses on effective waste classification and resource recovery and uses quantitative targets to measure reduction effectiveness.

The main data is as follows: In 2024



**Recycling of Waste Wood** the recycling volume reached  $40.07\,tons\,/\,\mathsf{per}\,\mathsf{year}$ 



**Plastic Waste Processing** the recycling volume reached  $6.04\,tons$  / per year.

#### The combined reduction and recycling measures at both plants are shown in the table below:

PROJECT	DESCRIPTION	2024 DATA	EXECUTION RESULTS	FUTURE PLANS
Waste Slurry Reclassification	Dewatering solid-liquid separation, coagulation sedimentation treatment	Reduced by 40%, 8,124 kg of liquid waste slurry per month	Carbon recovery of 64.99 tons; Disposal cost reduced from 66 TWD to 17 TWD/kg	Evaluation of precious metal recovery
Waste Aluminum Foil and Carbon Powder Bag Treatment	Separation, collection, and classification to reduce mixed plastic waste	1,243 kg per month	Disposal cost reduced from 46 TWD to 15 TWD/kg	Aluminum and plastic separation for reuse
Reusing Battery Cathode Sheet Off-Cuts	Chemical extraction to recover black powder, reducing primary material needs	126.5 tons processed, 95 tons of off-cuts recovered	Recovery rate of 75.2%	Production of low-carbon batteries
Recycling Waste Space Bags	Physical shredding to recycle fiber bags, converted into secondary materials	About 816 kg per month, 9,800 kg annually	Disposal cost reduced from 46 TWD to 5 TWD/kg	Improvement of recycled product quality
Waste Wood Recycling and Reuse	Gasification power generation and carbon black remanufacture for circular reuse	4,788 kg per month; 71,812.5 kW of power generated annually	Significant reduction in fuel usage	Expansion of gasification treatment capacity
Waste Reduction Projects	Classification, crushing, and recycling of production waste	40.07 tons of waste wood/year; 6.04 tons of waste plastic/year	Total disposal reduced by 3% compared to 2022	Continued strengthening of waste recycling systems

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# Water Resource Management

### **Water Resource Management** and Wastewater Strategy

Molicel adheres to the management philosophy of "Resource Recycling, Reduction, and Reuse" in water resource management and implements several management measures, including:

#### **Water Resource Recycling and Reuse:**

- Improve steam leakage to enhance water recycling rates.
- Promote wastewater resource utilization in processes, converting reusable wastewater for secondary uses, reducing dependence on tap water.

#### **Wastewater Management and Environmental Commitment:**

- **b** Develop the possibility of introducing process cleaning water into cooling towers for reuse.
- Continuously monitor and optimize water usage data to meet energy-saving, carbon reduction, and environmental goals.

### Water Resource Reduction and **Wastewater Discharge Project Results**

The data from various water resource management projects in 2024 show that, based on existing improvements, the recovery efficiency has been maintained and slightly enhanced. In the future, Molicel will explore more automated monitoring and water-saving technologies to further reduce water consumption. Molicel has implemented the following projects in recent years for water resource and wastewater management:

#### **Water Resource Reduction Project**

PROJECT DETAILS Improved steam pipeline layout to enhance condensate recovery efficiency.

**EXECUTION RESULTS** 

Water consumption reduced by approx. 3. 6% compared to 2023

#### **Wastewater Reduction Project**

PROJECT DETAILS Increased recovery rate through condensate recovery system, reducing discharge.

**EXECUTION RESULTS** 

Discharge by approx. 8.99% reduced

compared to 2023

### Water Withdrawal and Usage **Goals and Future Plans**

According to annual monitoring data, total water usage and water resource recovery rates have remained within the target range, and wastewater discharge has continued to decrease, showing significant improvement compared to 2023. Molicel has set clear water-saving goals and improvement plans for water withdrawal and usage, including:



#### 2024 Goals

- ✓ Continue implementing water resource recycling systems and strengthen water-saving measures.
- ✓ Maintain the cooling tower conductivity control parameter at 1,750 us/cm to ensure water quality stability and operational efficiency.



- Adjust the cooling tower conductivity control parameter to 4,000 us/cm to achieve a 5% reduction in water usage and a 10% reduction in wastewater discharge compared to 2024.
- Continue to improve the water exchange cycle in processes and plan to install additional water recycling equipment to further promote resource circulation and reuse.



In response to the increasingly fierce market competition and environmental changes, Molicel continues to strengthen communication with various internal and external stakeholders on key issues:



#### **Deepening Human Rights** and Safety Management:

Continuously improving policies and internal audit mechanisms, aligning with international human rights issues, and reducing workplace injuries and safety hazards.



#### **Expanding Diverse Talent Recruitment:**

Strengthening cooperation with domestic and international universities, research institutions, and professional headhunting firms, promoting alternative military service for research and development and cross-disciplinary talent development programs.



#### **Enhancing Internal and External Communication:**

Continuing to promote DEI strategies, regularly organizing cross-cultural, cross-department, and cross-sector exchange activities, and fostering a company culture with an international perspective.



#### **Refining Performance Evaluation:**

Including sustainability development indicators in senior management performance assessments and utilizing big data technology to dynamically manage employee performance, driving overall management effectiveness improvements.





## Human Rights Protection and Policy Commitment

Molicel regards "human rights" as the cornerstone of its corporate sustainability and insists on implementing widely recognized human rights protection principles. In accordance with international conventions such as the United Nations Global Compact, Universal Declaration of Human Rights, and the International Labour Organization's Core Labour Standards, Molicel has established and continuously improved internal documents like the Human Rights Policy, Code of Conduct, and Anti-Sexual Harassment Statement. In 2025, Molicel will further integrate the RBA (Responsible Business Alliance) Code of Conduct to ensure that the work environment in the entire supply chain and contractors is safe, each employee is respected and treated with dignity, and business operations are environmentally friendly and adhere to ethical standards. In addition to continuous self-assessment of labor, health and safety, environmental, and ethical aspects, Molicel will also undergo third-party audits and proactively encourage suppliers to adopt RBA tools and standards to collectively fulfill this commitment and create a sustainable development business environment.



#### **Policy Content and Commitment**

To create a harmonious, friendly, and healthy working environment, Molicel clearly commits to:

- Prohibiting child labor, forced labor, and all forms of discrimination, ensuring fairness in recruitment, promotion, compensation, and training opportunities.
- Protecting employees' rights to freedom of association, assembly, and maintaining their physical and mental health and work-life balance.
- Promoting the Responsible Business Alliance (RBA) and other international standards for external partners and suppliers to ensure the entire supply chain adheres to human rights protection principles.

#### Policy Implementation and Advocacy

Both plants incorporate human rights policies into the new employee orientation program and conduct annual advocacy. At the E-One Moli Energy Corporation Factory, new employees participate in human rights advocacy courses upon onboarding, achieving a 100% annual advocacy rate and a 98% online reading statement submission rate. Similarly, the Molie Quantum Energy Corporation Factory integrates policy highlights into practical cases during new employee training and implements the policy spirit through measures like a sexual harassment hotline and complaint channels.



#### **International Standards** and Internal Audits

International customers regularly audit Molicel to ensure the proper implementation of all policies. Besides periodic policy reviews, improvements are made based on employee surveys and site inspection results, striving to achieve the best balance between human rights protection and corporate sustainability.



#### **Human Rights Issue Management** and Risk Mitigation

To mitigate various human rights risks, Molicel has established a comprehensive management mechanism covering risk assessment, internal communication, and incident handling.



#### **Risk Identification and Assessment**

Both E-One Moli Energy Corporation and Molie Quantum Energy Corporation plants assess the following key risk areas:

- Employment discrimination and diversity inclusion.
- Sexual harassment and workplace misconduct.
- Excessive working hours and labor relations issues.
- Employee health and safety concerns, and workplace environment issues.

Assessment methods include interviews, anonymous employee feedback channels, regular sexual harassment hotline checks, and records from labor-management meetings.

#### **Risk Mitigation Measures**

Molicel has implemented the following specific measures based on assessment results:

- Strict control of gender, age, and disabilities during recruitment and interviews to ensure no form of discrimination.
- Clear work regulations, internal grievance channels, and the establishment of a dedicated grievance handling committee to ensure independent investigations of reported cases.
- Regular health checks, health seminars, and counseling services to improve employees' physical and mental health.
- Accurate attendance and overtime. records based on Labor Standards Act and internal work hour management regulations to prevent overtime work.

#### **Internal Communication** and Continuous Improvement

Apart from system building, both plants hold regular labor-management meetings, TOWN HALL meetings, and performance interviews with supervisors. Internal documents, emails, and announcements are also used to communicate the latest policies and improvement directions, ensuring all employees understand and comply with company regulations.



# Workplace Health and Safety Management

In terms of employee safety and health, Molicel strictly follows national laws and establishes comprehensive safety management mechanisms to ensure the health and safety of employees and contractors. Both E-One Moli Energy Corporation and Molie Quantum Energy Corporation plants fully adhere to ISO 45001 Occupational Health and Safety Management Systems and use the PDCA cycle management model to implement safety and health measures. Main strategies include:

### Hazard Identification and Risk Assessment:

Regularly inspecting work processes and equipment to ensure all potential hazards are identified and effectively assessed.

#### Occupational Health Checks & Health Promotion:

Conducting annual health checks for all employees (with over 98% attendance rate) and regularly inviting occupational health experts to perform on-site health assessments and counseling.

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### Safety and Health Training & Emergency Drills:

Organizing regular safety education, emergency response, and evacuation drills to improve employees' ability to respond.

### Organizational Structure and Responsibility Division:

A dedicated occupational safety and health management unit and an Environmental and Occupational Safety and Health Committee, ensuring that labor representatives account for over 35% of the committee, far exceeding legal requirements, to strengthen internal supervision and continuous improvement.

#### **Safety Management Systems and Awareness Training**

Both E-One Moli Energy Corporation and Molie Quantum Energy Corporation plants have established safety production management departments, regularly holding safety seminars, drills, and emergency exercises. These are aligned with ISO 45001 requirements to achieve comprehensive and cornerless safety management. Employees are educated on safety knowledge during onboarding and continuously re-educated and skill-enhanced throughout their careers. Risk Assessment Process involves identifying operations or engineering tasks, assessing hazard consequences, confirming existing protective measures, and setting improvement goals based on risk levels.



#### **Mitigation Measures:**

1.Conducting general and contractor safety and health training and chemical hazard awareness seminars.

2.Regularly holding emergency evacuation drills and fire safety exercises, with at least 4 fire drills held at the factory each year.

3.Managing personal protective equipment, health checks, and on-site inspections to reduce accidents and occupational disease incidents.



#### Follow-up Mechanisms:

1.Monitoring through regular operational inspections, health check tracking, internal audits, and automatic inspection systems to ensure the implementation of control measures.

2. Working with occupational health experts to establish health risk tracking indicators for nighttime and middle-aged and elderly workers, with quarterly evaluations and adjustments.

#### **Occupational Safety Management Promotion and Results:**

#### **E-One Moli Energy Corporation Factory**

Achieved a

### 98% attendance rate

for health checks and held 111 health counseling sessions and 4 health promotion activities.

- 182 new employees and 79 contractors completed safety training.
- ☑ Implemented numerous on-site safety inspections and toolbox meetings to continuously improve the work environment and reduce workplace accidents.

#### **Molie Quantum Energy Corporation Factory**

In addition to regular health checks and safety education, organized

external certification training sessions

new employee training sessions

emergency evacuation drills

Provided free rapid test kits, held contractor safety meetings, and conducted health anomaly tracking and health education counseling.

#### **Work Injury Statistics and Cause Analysis**

Work injury causes include public transport accidents and in-factory accidents. According to data from the E-One Moli Energy Corporation Factory, there were 17 work injuries in 2024, resulting in 1,579.5 hours of lost work time; the Molie Quantum Energy Corporation Factory recorded 24 work injuries, leading to 501 hours of lost work time.

To reduce the occurrence of work injuries,

#### Molicel plans to:

- Introduce more advanced safety monitoring and early warning systems.
- Enhance cross-departmental safety coordination drills.
- Implement targeted safety improvement plans for high-risk areas.
- Continuously update and improve emergency plans to ensure swift and effective response to incidents.





# Talent Recruitment Strategy and Diverse Talent Pipeline

As a key player in the lithium battery industry, Molicel highly values the source and diversity of its talent, considering it a key driver of continuous innovation.

#### **Recruitment Strategy Overview**

Molicel adopts a recruitment strategy focusing on both technical expertise and cross-disciplinary capabilities. Specific measures include:



#### **Campus Recruitment:**

Establishing strong partnerships with universities specializing in battery technology and materials science, offering internships, graduate training programs, and corporate seminars to increase corporate visibility and appeal.



#### Social Media and **Online Recruitment:**

Utilizing digital media and social platforms to promote the corporate brand and future development plans.



#### **Internal Transfers** and Employee Referrals:

Building a comprehensive internal talent mobility system and using internal referral incentives to promote efficient resource allocation.

Professional Technology and Alternative Service Recruitment: Launching the "R&D Alternative Service" program for core technical positions in R&D and production, providing a balanced growth platform for young talent.



#### **Implementation of Diverse Talent Acquisition Channels**

Molicel continues to expand its diverse talent acquisition strategy to meet the evolving needs of the high-performance lithium battery industry. In 2024, both the E-One Moli Energy Corporationand Molie Quantum Energy Corporations implemented the following concrete measures:

#### Campus Recruitment and Internship Programs:

Molicel actively collaborates with universities and colleges to foster industry-academia engagement. In 2024 more than

### 30 students

were placed in internship positions across our facilities.

These programs not only inject fresh perspectives into the company but also allow students to gain practical exposure to the battery manufacturing industry.

#### Recruitment and Protection of **Foreign Talent:**

A total of

### 182 foreign employees

were recruited across the STSP and Molie Quantum Energy Corporations. Throughout the recruitment process, Molicel strictly adhered to the principle of zero recruitment fees, ensuring a fair and equitable employment environment for all candidates.

#### Professional and Cross-Disciplinary Development:

In response to growing global demand for high-specification lithium batteries, Molicel has proactively promoted professional certification programs, cross-disciplinary skill development, and managerial competency training. These initiatives aim to cultivate both technical and leadership talent, thereby reinforcing the company's innovation capabilities and sustainable growth.

#### **Comparison of Recruitment Channels**

Looking ahead to 2025, the Company will continue to strengthen collaborations with academic and research institutions both domestically and internationally, while expanding more diversified talent development channels. In particular, targeted training programs will be launched for alternative military service personnel in R&D and for cross-disciplinary talent development, with the aim of building a world-class team for high-performance lithium battery research, development, and manufacturing.



#### Major Recruitment Channels – E-One Moli Energy Corporation

JOB CATEGORY

**Managerial Positions** Internal transfer, headhunting, online job banks, employee referrals

JOB CATEGORY

#### **General/Entry-Level Positions**

Internal transfer, staffing agencies, online job banks, campus recruitment, social media platforms, Evaluation-Based Student Program



#### Major Recruitment Channels - Molie Quantum Energy Corporation

JOB CATEGORY

**Managerial Positions** Internal transfer, headhunting, online job banks, employee referrals

JOB CATEGORY

#### **General/Entry-Level Positions**

Internal transfer, staffing agencies, online job banks, recruitment events, campus and local collaborative recruitment, migrant worker recruitment



### Employee Development and Linkage to Senior Management Sustainability Performance

Talent development is a key source of Molicel's core competitiveness.

Both the E-One Moli Energy

Corporation and the Molie

Quantum Energy Corporation

uphold the philosophy that



employees are the most valuable asset for the company's future

and are committed to establishing a comprehensive talent development system. This system closely links employees' professional growth with the company's sustainability performance.

#### **Talent Development Philosophy and Practices**

At the E-One Moli Energy Corporation, employees are seen not only as lithium battery producers but also as key drivers of new energy development. Accordingly, the plant has established a full-stage training program that spans from foundational knowledge training to advanced professional certification. This is integrated with AI technologies, interdisciplinary courses, and managerial competency development, enabling employees to continuously innovate through practical experience.

The Molie Quantum Energy Corporation focuses on personal development and the recruitment of diverse talents. Through industry-academia collaboration, on-the-job training, and professional certification programs, the plant ensures employees receive well-rounded development in technical skills, management capabilities, and cross-functional collaboration.



Environment

#### **Training Outcomes and Data Presentation**

In 2024, the total number of internal training hours for employees at the E-One Moli Energy Corporation reached 21,950 hours, including 3,920 hours for managerial staff and 18,030 hours for non-managerial staff. At the Molie Quantum Energy Corporation, internal employee training totaled 4,201 hours, with 984 hours for managerial staff and 3,217 hours for non-managerial staff.

		NO. OF	NO. OF NON-	TOTAL	MANAGER TRAINING	NON-MANAGER TRAINING	TOTAL TRAINING
PLANT	CATEGORY	MANAGERS	MANAGERS	<b>EMPLOYEES</b>	HOURS	HOURS	HOURS
E-One	Female	21	244	265	840	7,320	8,160
Moli Energy	Male	77	357	434	3,080	10,710	13,790
Corporation	Total	98	601	699	3,920	18,030	21,950
Molie Quantum	Female	17	96	113	80	751	831
Energy	Male	157	239	396	904	2,467	3,379
Corporation	Total	174	335	509	984	3,217	4,201



#### **Linking Senior Management Performance to Sustainability**

As key drivers of corporate sustainable development, senior executives at Molicel are evaluated not only on traditional managerial competencies but also on their performance in sustainability-related areas. These include environmental protection and emissions reduction, water resource reuse, carbon footprint management, information security, and supply chain sustainability.

In 2024

### over 90%

of senior executives achieved their assigned sustainability performance targets with cumulative participation in sustainability and circular economy training

### exceeding 200 hours

Moving forward, Molicel will further expand the scope of training content and incorporate more environmental and social responsibility indicators into performance evaluations to ensure that sustainability is a core consideration in executive decision-making.

## **Employee Welfare** and Workplace **Environment Improvements**

Molicel views employee welfare and health care as a key manifestation of its corporate social responsibility. Through comprehensive benefit programs, rest facilities, and healthcare systems, the company strives to provide a comfortable, safe, and caring work environment for all employees.

## **Overview of Employee Welfare Programs**

Molicel's welfare framework offers a wide range of support and care measures. In addition to covering compensation, subsidies, and insurance, the company also provides tailored support for foreign migrant workers, such as the establishment of prayer rooms in dormitories, regular one-on-one interviews, and gift distributions during cultural holidays. At the Molie Quantum Energy Corporation, additional initiatives include flexible leave systems and in-service training programs. A labor union and internal communication mechanisms are also in place to ensure that employee feedback is promptly received and addressed.

- Living Support: Financial assistance for weddings and funerals, maternity subsidies, emergency loans, group meal subsidies, holiday bonuses, employee stock ownership trust and stock purchase plans.
- Healthcare Services: Health checkups exceeding statutory standards, group insurance, hospitalization subsidies, free vaccination programs, paid personal and sick leave, and access to professional nursing services.
- Workplace Environment: Employee lounges, free parking, lactation rooms, suggestion boxes, and regular health seminars.

## **Living Support**

✓ Financial assistance for weddings, funerals, and celebratory events √ Maternity subsidies ✓ Subsidies for electric scooter purchases √ Housing rental subsidies ✓ Emergency financial assistance (loans) √ Group meal subsidies √ Employee club and recreational activities

## **Medical Care**

- √ Group insurance coverage
- √ Year-round occupational health services
- √ Health checkup subsidies
- √ Hospitalization subsidies
- √ Free vaccination programs

## **Compensation and Benefits**

√ Holiday bonuses (Lunar New Year, Dragon Boat Festival, Mid-Autumn Festival) √ Employee stock ownership trust √ Employee stock purchase plans ✓ Perfect attendance bonuses



## Leave and Attendance

- ✓ Enhanced overtime pay during Lunar New Year holidays
- ✓ Paid personal and sick leave
- ✓ Paid caregiver leave
- ✓ Paid public leave for vaccination

Social



## **Molicel Employee Cafeterias**

Molicel's employee cafeterias at E-One Moli Energy Corporation and Molie Quantum Energy Corporation have fully implemented sustainable dining practices. Disposable tableware is not provided for dine-in meals, and employees are required to bring their own containers for takeout, effectively reducing waste generation. Meals must be pre-ordered through an online system and paid for via cashless methods, which not only minimizes paper usage but also enables more accurate meal preparation, thereby reducing food waste.

To ensure meal quality and meet diverse dietary needs, Molicel conducts an annual selection process for qualified catering vendors. Employees from various departments participate in tasting sessions and vote to choose the most suitable provider. To safeguard food safety and hygiene, the dining environment, kitchen equipment, and tableware are subject to both regular and ad-hoc inspections. These efforts reflect Molicel's commitment to creating a safe, reliable, and sustainable dining experience for all employees.







Social

Environment



# Diversity, Equity, and Inclusion (DEI) and Stakeholder Engagement

In the context of globalization and increasing cultural diversity, Molicel remains committed to advancing its Diversity, Equity, and Inclusion (DEI) strategy. This approach aims to cultivate a workplace environment that respects individual differences, fosters innovation, and strengthens organizational cohesion.

## **Current Workforce Composition**

As of 2024, Molicel's total workforce across its E-One Moli Energy Corporation and Molie Quantum Energy Corporations reached

1,299 employees

with a male-to-female ratio of approximately

Among the 150 employees in management positions across both plants, female representation accounted for 21.3%, reflecting our ongoing efforts to promote gender diversity in leadership roles.



Plant & Job Level		Male		Female		Total	
Plant &	Job reset	No.	Rate	No.	Rate	No.	Rate
E-One Moli Energy	Management	84	19.4%	26	9.8%	110	15.7%
Corporation	Non-Management	350	80.6%	239	90.2%	589	84.3%
	Total	434	100%	265	100%	699	100%
Molie Quantum	Management	34	7.6%	6	4%	40	6.7%
Energy Corporation	Non-Management	415	92.4%	145	96%	560	93.3%
	Total	449	100%	151	100%	600	100%
Overall	Total	883	68%	416	32%	1299	100%

## **Employee Diversity Composition**

Based on the talent composition at the E-One Moli Energy Corporation and Molie Quantum Energy Corporations, the workforce shows a trend of increasing diversity. Molicel not only values the development of domestic talent but also actively recruits foreign nationals to foster cross-cultural exchange and drive innovative development.

Category	Ene	E-One Moli rgy Corporation	Molie Quantum Energy Corporation	Total
Total Employees		694	600	1,294
Persons with Disabilities		7(1%)	-	7(0.5%)
Foreign Migrant Workers		111 (16%)	71 (11.8%)	182 (14%)
Domestic Nationals (ROC)		565 (81.4%)	526 (87.7%)	1,091(84.4%)
New Immigrants/Indigenous Pec	ples	11(1.6%)	3 (0.5%)	14 (1.1%)

## **DEI Strategy and Actions**

Molicel has planned a series of diversity, equity, and inclusion (DEI) activities:

## © Cultural Exchange Activities:

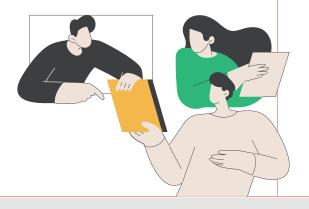
Such as Taiwan-Philippines cultural exchange events, language learning courses, and cultural experience workshops, to help employees from diverse backgrounds better understand each other and strengthen team cohesion.

#### Internal Communication Platforms:

The establishment of dedicated suggestion boxes, hosting employee forums, and regularly organizing cross-departmental exchange events to ensure that employees at all levels have opportunities to participate and voice their opinions.

## External Public Welfare Activities:

Including Christmas charity sales and second-hand charity sales, which not only demonstrate corporate social responsibility but also allow employees to reflect their personal values and sense of belonging through participation in charitable initiatives.





# Interactive Experience Workshop

■ Molicel 2024 ESG Report

To enhance colleagues' understanding and tolerance of multiculturalism, Molicel organized a "Cultural Experience Seminar" inviting colleagues from the Philippines and Vietnam to share their hometown culture and distinctive cuisine. During the event, Filipino colleagues introduced local customs and traditions, and together, they made the classic dessert Halo-halo. Vietnamese colleagues shared insights into Vietnam's cultural background and guided everyone through the fun of making Vietnamese spring rolls. This cultural exchange allowed colleagues to taste authentic international dishes while deepening their understanding and respect for different cultural backgrounds. After the event, many colleagues reported that such interactions brought them closer to their colleagues from different nationalities and deepened their understanding of DEI (Diversity, Equity, and Inclusion) issues.

## Cultural Promotion Interactive Wall

An interactive "Diversity and Inclusion Wall" was created within the company, featuring an artistic interactive installation to promote the DEI concept. The wall helped colleagues understand what DEI means and showcased the background information of Molicel's employees from different nationalities. This initiative aimed to strengthen the relationships within the organization. Nearly 200 colleagues left their handprints on the DEI Commitment Tree to express their support for the initiative.



Healing with Succulents

A total of 20 foreign employees and 20 local employees participated together in a succulent plant DIY workshop, using pots made with cement produced by TCC (Taiwan Cement Corporation). The workshop provided a platform for both local and foreign colleagues to engage in meaningful interactions through shared discussions and collaboration, fostering cross-cultural exchange and enhancing aesthetic appreciation.



Molie Quantum Energy Corporation 2024 Special Activities

# We are Family

## Taiwan-Philippines Cultural **Exchange Event**

**Strategy:** To create a workplace environment based on mutual understanding and respect, and promote integration and teamwork among employees from different nationalities through cultural exchange and language learning.



Action Plan: The "We are Family (菲美麗)"

Taiwan-Philippines cultural exchange event was held to introduce the geographic location of Filipino colleagues' hometowns, taste local Filipino snacks, and present popular tourist spots in Kaohsiung. The event also provided an opportunity for both Taiwanese and Filipino employees to practice commonly used life and work-related phrases in Chinese and English.

**Nearly 100 Colleagues** Participated: 49 foreign colleagues and around 60 Taiwanese colleagues from the factory joined the event.

Local Cultural Experience: A Filipino chef based in Taiwan introduced and made local Filipino snacks for Taiwanese employees to taste.

**Learning Life and Work Phrases in Chinese** and English: Colleagues learned vocabulary and short phrases in Chinese and English related to personal units, titles for supervisors, and phrases like "Can I help?"

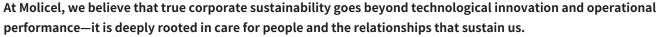
#### **Stakeholder Communication**

The labor union, labor-management meetings, and supervisor interviews serve as effective communication channels. At the E-One Moli Energy Corporation in 2024, the company conducts labor-management meetings every quarter to discuss employee matters, with four meetings held annually. Currently, there are five representatives from both labor and management, totaling 10 members, who engage in discussions to improve employee welfare within the company. At the Molie Quantum Energy Corporation, labor-management meetings are held quarterly in 2024 as well. In addition, a union members' general meeting was organized, attended by 67 members, and gift vouchers were distributed to employees on Labor Day (May 1st). In the 2024 Employee Engagement Survey, an anonymous survey was conducted by a third-party management consulting company to gather employee opinions. This feedback serves as a reference for improving the overall work environment and employee experience, with an overall participation rate of 98.49% across the entire factory.



## **Employee Relations Activities**





In alignment with this belief, Molicel held its first "MOLICEL Sustainable Forest Conservation Family Day" at Zhongxing Forest in Xinhua, Tainan. Over 200 employees and their families from our E-One Moli Energy Corporation and Molie Quantum Energy Corporation gathered together to engage in a meaningful day of environmental education, family bonding, and corporate responsibility in a natural setting.



The event was themed "This Is What We Call 'MORI'", a phrase that cleverly blends the Japanese word for "forest" (もり, mori) with our brand name "MOLI." The theme reflected our vision as a leading lithium battery company—not just to power the future, but to act as a bridge between people and nature, between cutting-edge technology and environmental stewardship.



## **Employee Relations Activities**



The event featured a diverse range of interactive educational activities designed to help employees and their families naturally understand Molicel's ESG values while having fun. Three major interactive zones were set up:

The SDGs Block
Wall, where
participants
learned about
the United
Nations
Sustainable
Development
Goals through
hands-on
games;







Inclusion (DEI), and full life cycle battery management;

All participants wore custom-designed Family Day T-shirts printed with a battery life cycle diagram on the back—illustrating Molicel's commitment to every phase of product responsibility, from design and production to use and recycling. This graphic served not only as a visual representation of our technical management system but also as a shared symbol of our collective environmental commitment.



And "Knock Down Carbon" Bowling, a playful activity designed to introduce low-carbon concepts to children in an

## **Employee Relations Activities**

One of the most meaningful components of the day was the tree planting activity. Each employee and their family had the opportunity to plant native tree seedlings by hand. With personalized "MOLI Family" name tags attached, every tree served as a living record of the individuals who planted it—symbolizing both a personal responsibility to nature and a legacy of sustainability for future generations.

The event concluded with guided forest walks and hands-on eco-activities, where participants learned about Taiwan's native plant species, ecological diversity, and the vital role of forests in carbon sequestration. Employees and family



members actively took part in soil replenishment and trail restoration, transforming sustainability from an abstract concept into a tangible, experiential journey—something they could see, touch, and carry forward.

This Family Day event not only deepened employees' sense of participation and belonging but also helped their families better understand the broader environmental and social responsibilities Molicel embraces as a company. We believe that when a company chooses to learn, plant, and make pledges together with its employees' families, it builds a culture of sustainability that is not only authentic—but powerful enough to drive lasting change.





Social

Molicel regularly organizes cross-cultural seminars, dragon boat races, badminton competitions, mountain cleaning activities, and Christmas dinners, among other events. These activities not only enhance the cohesion among employees but also demonstrate to the broader community the active participation of

our colleagues in company employee relations events, further strengthening internal unity.



## **Badminton Competition & Club Activities**

Employee participation was enthusiastic, with the number of participants growing from fifty to about eighty. In addition to the regular competitions and fun games, the 2024 edition introduced a parent-child competition, encouraging employees and their families to participate together, strengthening family bonds. This not only enhanced collaboration and team spirit but also fostered a friendly and harmonious atmosphere.

In 2024, the second edition of the Metaverse Badminton Cup was held jointly with the Molie Quantum Energy Corporation. In addition to several E-One Moli Energy Corporation colleagues and their families, dozens of Molie Quantum Energy Corporation colleagues joined, bringing the total participation to nearly one hundred.

## **Dragon Boat Activity**

In its second year, E-One Moli Energy Corporation participated in the Tainan City Dragon Boat Championship, reaching the finals alongside Chungwa Technology, Sunny Enterprise, and Corning Inc. The team won third place. The dragon boat race aimed to promote teamwork, enhance cross-departmental collaboration, and focus on employee health, showcasing the company's organizational capability. Compared to the previous year, 2024 saw an increase in participation, training hours, and equipment, reflecting the company's growing commitment to the dragon boat team.

## **Mountain Cleanup Activity**

Molicel has been organizing beach and mountain cleanup and tree planting activities for years, encouraging employees and their families to get outdoors, relieve stress, and enhance environmental awareness. In September 2024, in collaboration with the Greater Tainan Mountaineering Association, the company organized a mountain cleanup activity on the Dagingshan Trail to promote the "Leave No Trace" philosophy. More than 100 employees, family members, and event organizers participated, collecting approximately 40 kilograms of trash. The event not only raised environmental awareness but also strengthened employee loyalty. Participation in such events is highly enthusiastic, with over seventy employees actively engaging in 2024, demonstrating a strong passion for nature conservation.



Environment



## **Christmas Dinner & Charity Activities**

The Christmas Dinner is the company's largest annual employee gathering, with nearly hundreds of people participating in 2024. The event fostered interaction among employees and received heartfelt thanks and blessings, proving the success of the event in enhancing employee belonging.

## For the charity event

## Molicel invited four charitable organizations: Eden Social Welfare Foundation, Tainan City Reed

Brain Rehabilitation Center, Huashan Foundation, and the Orphaned Children Welfare Foundation. Dozens of volunteers participated in the charity sale, which raised nearly hundreds of thousands in donations. The event not only strengthened internal culture but also enhanced the company's brand image.

## Molie Quantum Energy Corporation

#### **Christmas Dinner & Activities**

Through the Christmas gratitude dinner, Molicel thanked employees for their hard work and contributions throughout the year, fostering a sense of unity. A total of 92 people participated.

## **Christmas Charity Sale**

## The company invited the Hsi-Huan Children Foundation to host a

Christmas cookie and bread sale. All proceeds were donated to support vocational training for special groups. During the lunch break, employees participated in the sale of bread and pastries, contributing to charity. The total sales amount reached

### **Christmas Second-Hand Sale**

Under the theme "Cherish Goods, Second-Hand Sale," employees donated good second-hand items to be sold for TWD100 each. The sale's proceeds were donated to the Kaohsiung Zhenai Angel Children's Care Association to support their "Vital Breakfast Donation Project," assisting underprivileged schoolchildren. The sale raised TWD20,000, which was entirely donated to the association.

#### **Huashan Foundation Volunteer Activity**

Employees participated in the Winter Volunteer Activity organized by the group, providing companionship and care services to elderly people in remote areas. Eight employees visited elderly people's homes to chat, listen to their daily lives, and provide assistance with light housework,



Social



# Global Market Strategy and Customer Collaboration



## International Market Layout and Cooperation Strategy

In the global shift towards green and low-carbon transformation, the demand for electrification and new energy is surging. Molicel aims to target high-end application markets and actively collaborates with internationally renowned companies to promote the internationalization of its products. The company focuses on the following strategic directions:

## **Expanding High-End Application Markets:**

This includes high-performance electric racing cars, drones, electric motorcycles, and eVTOLs, in order to meet customers' demands for high energy density, fast charge/discharge, and high safety.

## **Entering the AI Supply Chain:**

From Q4 2024 onwards, Molicel officially began shipping 5kW backup battery modules (BBU) to global leading cloud service providers and is collaborating with three other customers to develop next-generation battery technologies.

## **International Brand Partnerships:**

Establishing strategic partnerships with leading companies in Europe, the Americas, and Asia, leveraging both technology and market-driven growth to enhance global competitiveness.



## **Major Cooperation Cases**

## **Heavy Freight Drone Project**

Partner: European leading heavy cargo drone manufacturer, FlyingBasket

Technical Support: Supplied INR-21700-P45B and INR-21700-P50B batteries, significantly improving the flight range and payload capacity of the FB3 drone

Performance Outcome: Flight range increased by 9%, with the ability to carry 100kg payload Future Plan: Further optimize battery energy density to expand drone applications in offshore energy and last-mile logistics.

■ Molicel 2024 ESG Report

## **Electric Off-Road Motorcycle Race Support**

Partner: Stark Future electric off-road motorcycle team Technical Support: Supplied INR-21700-P45B batteries to achieve high-power energy output

<u>Performance Outcome:</u> Helped the VARG win the 2024 UK Indoor Off-Road Championship and set new records for traditional motorcycle races

<u>Market Response:</u> Following the race success, pre-orders exceeded 18,500 units

<u>Future Outlook:</u> Continue sponsorship and expand electric motorcycle applications to drive both race and market growth.

## **Track Performance Innovation Plan**

Partner: McMurtry Automotive

<u>Technical Support:</u> Supplied INR-21700-P50B batteries for fast charging and high energy output

<u>Performance Outcome</u>: The Spéirling PURE broke records at tracks like Hockenheim, Castle Combe, and Laguna Seca, setting historic data

<u>Future Plan:</u> As the vehicle is set to commercialize, with deliveries expected in 2025, Molicel plans to further expand its presence in the global super electric vehicle market.

## **Summary of Key Performance and Future Outlook for Major International Cooperation Projects:**

Cooperation Project Heavy Freight Drone Project	<b>Partner</b> FlyingBasket	Key Technical Highlights Supplied INR-21700-P45B/P50B dual-series batteries	Current Achievements and Future Plans Flight range increased by 9%, with 100kg payload capacity. Future plans to improve energy density and power.	
Electric Off-Road Motorcycle Race Support	Stark Future	High power, low internal resistance INR-21700-P45B battery	Won UK Championship, pre-orders exceed 18,500 units. Ongoing expansion of electric motorcycle applications.	
Track Performance Innovation Plan	McMurtry Automotive	High-performance INR-21700-P50B battery	Broke records across multiple tracks. Deliveries expected in 2025, aiming to lead the super electric vehicle market.	
Al Backup Battery Supply Program	Leading global cloud service providers	5kW BBU battery module & next-gen battery development	Official shipments began in Q4 2024, aiming for expansion in AI and data center market applications.	

## **Global Market Strategy Summary**

As the global demand for batteries continues to surge, Molicel leverages technological innovation as the core driver of its strategy. The company is actively engaging in international partnerships and continuously optimizing its product lineup to maintain a leadership position in the high-end market. Looking ahead, Molicel plans to tailor its products and services to meet the diverse needs of customers across different regions and sectors. By understanding the unique characteristics of each market, the company aims to offer customized solutions that align with the specific demands of various industries, ensuring sustained growth and competitiveness in the evolving global landscape.



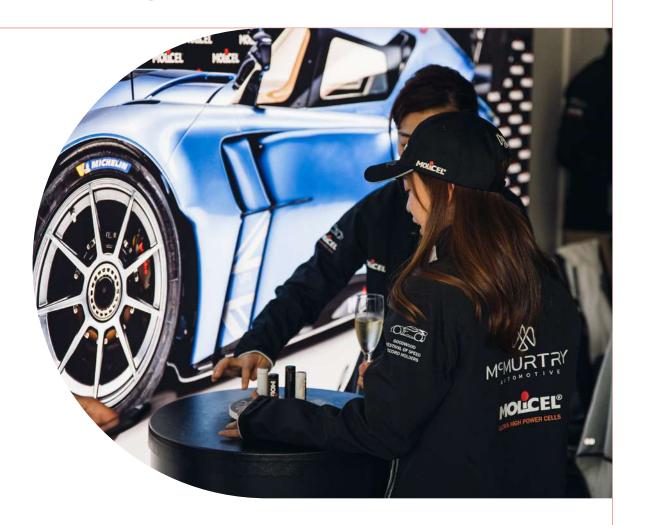
# Customer Relationship Management

Meeting customer needs is one of Molicel's core goals. Molicel is committed to building long-term partnerships with customers by actively engaging in two-way communication and feedback mechanisms to gain a deep understanding of their expectations, while continuously optimizing product and service quality. Molicel regularly conducts customer satisfaction surveys to gather valuable feedback on various aspects, including business services, on-time delivery, product quality, performance and safety, after-sales service, and pricing, which serve as the basis for continuous improvement.

The 2024 customer satisfaction survey covered major customers from the electric vehicle (EV), machine tool, eVTOL, and energy storage sectors, with 10 responses collected.

The survey results show that the overall satisfaction score for 2024 is which is consistent with the 8.68 score in 2023.

Particularly in terms of product quality, performance, and safety, the company received high praise from customers, reflecting that Molicel's efforts in research, development, and manufacturing are yielding positive results.



2025 Crisis and Response | Overview and Brand Story | Milestones | 2024 ESG Highlights

Environment

## **Survey Results Summary:**

## **Product Quality** 1. Product quality and safety satisfaction scores were 8.7 and 9.1, and Performance respectively, indicating that customers have high trust in Molicel's manufacturing quality and safety. 2.Long lifespan and low-temperature charge/discharge characteristics remain Molicel's competitive advantages in the market, helping to develop new markets and secure orders. **Business** 1. Customer satisfaction with business communication skills, response speed, and technical support services all exceeded 8.9, indicating that and Technical Support Molicel's business and technical teams can quickly respond to customer needs and provide timely support. 2.Through more frequent video conferences (Con-calls) and in-person visits, Molicel continues to strengthen relationships with customers and build trust. **Delivery and Supply Chain** 1. The delivery adherence score was 8.5, slightly lower than 2023, Management indicating that there is still room for optimization in production capacity and scheduling. 2. Molicel will continue to improve production capacity planning to ensure stable delivery times and meet customer demands. Price 1. The price satisfaction score was 6.8, showing a certain gap compared Competitiveness to competitors, reflecting challenges Molicel faces in scale and cost structure. 2.To address price competitiveness, Molicel will continue to improve production efficiency and develop new materials to reduce costs and enhance market competitiveness.

#### **Future Plans**

## for Improving Customer Satisfaction:

## **Deepening Customer Relationships:**

Continue to strengthen the professional skills and communication abilities of the sales team, and improve the timeliness of technical support.

## **Optimizing Supply Chain Management:**

Enhance production capacity control and scheduling to improve delivery adherence.

## **Enhancing Product Quality and R&D:**

Accelerate the development of new products, maintain competitive advantages in the market, and improve manufacturing yield while reducing costs.

## **Improving After-Sales Service:**

Establish a more comprehensive technical support and customer complaint handling mechanism, and expedite the resolution of RMA issues.



Social



## The New Era of Al Innovative Measures and Al Integration

## **Cybersecurity Management Innovation Measures**

To further strengthen information security management, both the E-One Moli Energy Corporation and Molie Quantum Energy Corporations have adopted several innovative measures, including:



## **Private 3C Mobile**

Management Solution
Introduction of
security mobile phones
without cameras,
restricting personal
smartphones from
being brought onto the
production line to
prevent data leakage
or unauthorized
photography.



## Physical Area Security Control

Implementing
two-factor
authentication in
sensitive areas such as
data centers, production
lines, and laboratories,
and optimizing the
plant's traffic flow and
access control
monitoring systems.





## Behavior Monitoring of Personnel Who Have Left

Establishing a record of abnormal behavior analysis for personnel who have left the company, with no incidents of data theft occurring in 2024.

Additionally, Molicel is planning to optimize the physical security layout of its plants, with plans to upgrade the access control and surveillance systems in early 2025.



## **AI Application Status and Future Plans -**

E-One Moli Energy Corporation

## **2024 Current Application Status**

In the E-One Moli Energy Corporation, the focus for 2024 has been on the implementation of equipment health warning systems for winding machines. The goal is to use Al models combined with real-time abnormal signals from various machine models, performing calculations every 10 minutes to detect data anomalies in advance. This allows for the early replacement of tools due to quality issues before they reach their expiration, further improving product quality.

## **Future Plans**

In 2025, the E-One Moli **Energy Corporation** will continue to maintain the existing equipment health warning systems for winding machines. The focus will be on ensuring the stability and continuous optimization of the current systems, further extending and expanding the achieved results.





## **AI Application Status and Future Plans -**

## Molie Quantum Energy Corporation



## **2024 Current Application Status**

In 2024, the Molie Quantum Energy Corporation actively promoted multifaceted AI integration across several areas, including manufacturing processes, inspection, research and development, and warehousing. The main initiatives include:

## **Coating Section Applications:**

- Coating Key Parameter Analysis: Utilizing machine learning and explainable AI to identify critical factors affecting process quality and provide reasonable parameter ranges.
- Coating Parameter Correlation: Developing correlation models for parameters to reduce setup time and waste costs, simulating the relationship between parameter adjustments at different line speeds.
- AutoRPM AI Integration: Replacing traditional interpolation methods with AI models to achieve more accurate speed control, with RPM prediction errors for side A and B of 0.405% and 0.135%, respectively.
- Coating Roll Press Cross-Station Correlation: Using coating results to predict rolling press setting parameters and reduce process variation.

## **Tab and Formation Applications:**

- Slitting AOI: Improving AOI visual inspection using AI and automatically adjusting thresholds to achieve defect detection accuracy over 95%.
- Overkill Issue: Using AI classification models to identify overkill batteries, achieving a prediction accuracy of 91.8%.

#### **R&D Applications:**

- Out-of-Line Measurement Data Recognition: Using AI image recognition technology to read data and automatically upload records, with 98% accuracy after the implementation of 16 out-of-line measurement devices.
- Battery Health Prediction: Simulating battery life under different usage scenarios to shorten experimental time and costs, with prediction errors of 1.03% for Customer A and 1.60% for Customer B.
- Failure Root Cause Analysis: Using AI models to identify battery failure causes and anomalous data, simulating various scenarios, currently in development.
- Extending Aircraft Battery Life: Providing aircraft scheduling suggestions to extend the battery module's health, currently under development.
- Battery Health and Supercar Speed Impact: Assisting in analyzing the effect of different battery health statuses on supercar speed during charge and discharge, currently under development.

## **Warehousing Applications:**

• Hazardous Material Quick Search Retrieval System: Integrating ChatGPT to consolidate various information and rapidly query hazardous material-related data. The first phase of testing has been completed, with future plans to expand functionalities, including SDS expiration notifications and AI hazardous material handling information.

## 2025 Future Plans

Looking ahead, the Molie Quantum Energy Corporation plans to further expand certain Al applications in 2025, including:

# Self-Discharge Cause Analysis – Electrode Powder Loss:

Identifying key factors causing electrode powder loss and providing real-time alerts, with the goal of reducing SD defects from 3.5% to 2%.

## Self-Discharge Cause Analysis – Metal Dust:

Conducting in-depth data analysis and model building on metal dust-related issues, with specific targets to be further clarified in the future.



## Supply Chain Management

In response to the rapidly changing global market environment and policies, Molicel faces challenges related to supply chain stability, technological and management innovation pressures, and increasingly stringent environmental and regulatory requirements.

To address these challenges, the company is deepening collaboration with key suppliers, promoting green and low-carbon procurement, strengthening internal and external training, and leveraging big data and IoT technologies to establish smart monitoring mechanisms to swiftly respond to market and regulatory changes. Looking forward, Molicel will continue to innovate and improve its supply chain management model, striving to establish an internationally leading sustainable supply chain system that achieves low-carbon, green, and responsible procurement, and collaborates with suppliers to promote a global green industry ecosystem, creating a new era of win-win solutions for both society and the environment.



## **Supply Chain Management Policy and Sustainability Goals**

To ensure that products meet high standards of environmental and social responsibility from raw material procurement to manufacturing processes, Molicel collaborates with various levels of its supply chain and adopts a framework based on technology, quality, cost, delivery, and service, while integrating ESG sustainability concepts. This includes not only signing supplier codes of conduct and green product procurement but also implementing CMRT/EMRT due diligence, supplier self-assessments, performance management, regular audits and improvement counseling, as well as internal and external education and training.

The procurement department works closely with R&D, quality management, and other departments to establish a comprehensive and robust supplier management system.

## The main objectives include:



**Collaborative Coexistence:** Ensuring all supply chain parties achieve common goals in sustainable development.



#### **Risk and Performance Control:**

Implementing risk assessments, performance evaluations, regular audits, and improvement guidance to enforce sustainability requirements in daily supply chain management.



## **Supply Chain Sustainability Vision:**

Continuously enhancing the sustainability competitiveness of suppliers and internal personnel, jointly constructing a supply chain ecosystem that integrates low-carbon, green, and social responsibility principles.

Looking ahead, Molicel will focus on four main management areas:

Climate Action

**Environmental Sustainability** 

Upholding Human Rights and Ethical Standards

Risk Management

to continue strengthening supply chain sustainability management.

#### Key plans include:



**Enhancing conflict mineral** management and hazardous substance control



Promoting carbon reduction measures and human rights/environmental due diligence among suppliers



Further refining supplier classification and evaluation mechanisms to ensure sustainability requirements are integrated into every procurement process.



## **Supply Chain Information and Supplier Classification Analysis**

Molicel has systematically categorized and graded its supply chain management. Suppliers are divided into two major categories based on procurement types:

## **Raw Material Suppliers:**

Including cathode powder, anode powder, electrolytes, steel cans, end cap assemblies, etc.

## **Non-Raw Material Suppliers:**

Including equipment, engineering, spare parts, consumables, etc.

Additionally, suppliers are geographically distributed across Taiwan (TW), China (CN), Japan (JP), and Korea (KR), reflecting the company's strategy to integrate global supply chain resources.

Based on the suppliers' impact on product quality, delivery schedules, and procurement amounts, Molicel performs graded management. First-tier suppliers are those that have a significant impact on product manufacturing quality and delivery or whose procurement amount reaches a certain proportion. By the end of 2024, there were 331 first-tier suppliers, of which 50 are key suppliers, accounting for 89% of the procurement amount.

## **New and Existing Supplier Management Measures**

## **New Supplier Management Practices**

To ensure that new suppliers meet Molicel's sustainable supply chain standards, the company adopts the following measures:

Molicel has systematically categorized and graded its supply chain management. Suppliers are divided into two major categories based on procurement types:

Raw Material Suppliers: Including cathode powder, anode powder, electrolytes, steel cans, end cap assemblies, etc.

Non-Raw Material Suppliers: Including equipment, engineering, spare parts, consumables, etc.

- Additionally, suppliers are geographically distributed across Taiwan (TW), China (CN), Japan (JP), and Korea (KR), reflecting the company's strategy to integrate global supply chain resources.
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## **Existing Supplier Management Practices**

For suppliers already integrated into the supply chain, Molicel has established a regular evaluation and counseling mechanism:

- Regular Performance Evaluation: A quarterly and annual performance evaluation system is implemented, with evaluation criteria covering quality, technology, cooperation, supply capability, price, environmental safety (ESH), and corporate social responsibility (CSR).
- Grading and Counseling Mechanism: Based on the evaluation results, suppliers are classified into grades A (above 85 points), B, and C (below 69 points); for C-level suppliers, specific improvement measures are required, and an audit and evaluation mechanism is initiated.
- Education and Training: Regular sustainability management education and training for supply chain personnel and suppliers are held to enhance the overall sustainable competitiveness of the supply chain.
- 2024 Execution Results: The 2024 performance evaluation results for raw material suppliers show that a total of 51 trading partners reached A-level standards, with no C-level suppliers or those needing counseling/elimination.
- 2025 Execution Plan: Further promotion of key suppliers to implement environmental carbon reduction and human rights due diligence, ensuring they implement sustainability measures in their operations.

## **Localization Procurement** and Green Procurement Strategies

#### **Localization Procurement Benefits**

Through a localized supply chain strategy, Molicel not only improves supplier service efficiency and shortens lead times but also reduces transportation distances and carbon emissions. Additionally, it creates more local employment opportunities and promotes regional economic development. The amount of localized procurement was approximately

TWD850 million accounting for about

of the total procurement

## **Green Procurement Principles and Results**

The principle of green procurement prioritizes the selection of products and services that meet criteria such as low energy consumption, low pollution, and recyclability.

## **Specific Measures for Green Procurement:**

- Strictly audit the environmental performance and product certifications of suppliers
- Promote the application of green products in the supply chain

2024 Green Procurement Data:

- Green procurement amounted to approximately TWD450 million
- It accounted for about 17.3% of the total procurement for the year

The table below comprehensively displays the 2024 procurement data and their proportions.

Procurement Item	Amount (TWD Billion)	Percentage	Remarks
Localized Procurement	8.5	32.40%	Enhances local employment and reduces carbon
			emissions
Green Procurement	4.5	17.30%	Sourcing of energy-efficient and low-pollution products
Low-Carbon Raw Material	7.2	30%	Establishes carbon reduction measures for raw
Procurement			material sourcing

## **Low-Carbon Raw Material Procurement Strategy**

## **Low-Carbon Raw Material Procurement Principles**

Molicel integrates "sustainable development" into all operational aspects, with a particular focus on raw material procurement for battery cells, emphasizing low-carbon benefits. For key materials such as positive and negative electrode powders, as well as other essential raw materials, suppliers must meet the following requirements:

- Use of Renewable Energy: Some suppliers purchase I-REC (International Renewable Energy Certificates) green certificates (hydropower), increasing the use of renewable energy by approximately 7.8%.
- Carbon Reduction Requirements: Suppliers pass on carbon reduction demands to upstream sources, reducing carbon emissions in lithium salts and precursors by about 13.6%.
- Equipment and Process Upgrades: Through equipment upgrades and process optimization, Molicel substitutes externally purchased liquid oxygen with self-produced liquid oxygen, reducing carbon emissions by approximately 14% and further lowering product consumption.

## 2024 Low-Carbon Raw Material Procurement Results

In 2024, low-carbon raw material procurement amounted to approximately TWD7.2 billion, accounting for about 30% of the total procurement. This strategy not only enhances the environmental performance of products but also drives the entire supply chain toward low-carbon operations.

## **Conflict Minerals and Hazardous Substances Management**

## **Conflict Minerals Management**

To ensure the procurement of mineral raw materials complies with regulations and customer requirements, Molicel has implemented a strict conflict mineral policy, which includes:

- Policy Commitment: Molicel commits to avoiding conflict minerals from illegal operations in the procurement process, referencing OECD guidelines on 3TGs (Tin, Tantalum, Tungsten, and Gold), Cobalt (Co), Mica, and other minerals.
- Supplier Due Diligence: During the introduction of new suppliers, Molicel conducts CMRT/EMRT surveys, requiring suppliers to sign a statement of non-use of conflict minerals or a self-declaration form to ensure 100% compliance with regulations and customer requirements.



#### **Hazardous Substance Control Measures**

Molicel is committed to green product management, strictly controlling hazardous substances through the following measures:

- Document Review: Suppliers must submit hazardous substance test reports, Safety Data Sheets (SDS), material declarations, and third-party testing reports or compliance statements.
- Prohibition and Restriction Declaration: All suppliers must sign a "Prohibition and Restriction of Substances Declaration" to ensure that raw materials and packaging materials comply with RoHS and REACH regulations 100%.
- Continuous Improvement: Molicel works with internal teams and suppliers to continuously improve substance management processes, reduce hazardous substance content in products, and contribute to environmental protection.

## **Conflict Mineral Management Implementation**

To ensure the effective implementation of conflict mineral management measures, Molicel adopts the following practices:

- Due Diligence: Strict due diligence is conducted on both new and existing suppliers to verify the legality and compliance of material sources.
- Third-Party Audits: Molicel regularly invites third-party inspection and auditing organizations to conduct on-site audits of suppliers to ensure policy adherence.
- Ongoing Monitoring: Molicel has established internal monitoring mechanisms to regularly review the management of conflict minerals and hazardous substances within the supply chain. Strategies are adjusted according to the latest regulations and market demands.



## Sustainability Governance Strengthening:

## Establishment and Functional Structure of the Sustainability and Environment Department

In response to global sustainability trends and supply chain responsibility demands, Molicel officially established the "Sustainability and Environment Department" in 2025. This department serves as the core unit for coordinating the company's sustainability strategy and promoting environmental governance. It is responsible for

planning and executing the company's ESG development blueprint and committed to adopting international standards, coordinating cross-departmental actions, and ensuring that sustainability principles are implemented across all operational levels, thus strengthening corporate resilience and external trust.

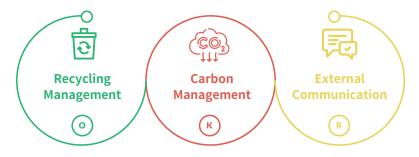
The Sustainability and Environment Department is divided into three main functional areas based on its core missions:

## Recycling Management, Carbon Management, and **External Communication.**

The overall responsibilities of the department are as follows:

Building a Closed-Loop System for Materials

The department is responsible for evaluating the life cycle of battery products and establishing a closed-loop system that includes raw material recycling, waste classification, and regeneration. This initiative aims to improve resource efficiency and reduce dependence on primary raw materials. In addition to mitigating environmental impacts, it helps minimize supply chain disruption risks, ensuring the stable supply of raw materials.



Planning Carbon Reduction Goals and Scientific Assessment The Sustainability and Environment Department assists in setting the company's mid- and long-term carbon reduction targets. It establishes systems for carbon footprint tracking (ISO 14067) and Life Cycle Assessment (LCA) at the product level, continuously advancing scientific carbon management pathways. The department also oversees carbon data tracking and disclosure (ISO 14064), strengthening internal carbon data management to support real carbon reduction actions and external climate commitments.

Promoting ESG Transparent Governance and Stakeholder Engagement The department integrates the company's external sustainability information disclosure and communication efforts, which include preparing sustainability reports, managing the ESG section of the official website, introducing the Responsible Business Alliance (RBA) guidelines, promoting Diversity, Equity, and Inclusion (DEI) initiatives, and engaging in regular dialogues with internal and external stakeholders. The department also coordinates audits, certifications, and evaluations related to sustainability (e.g., EcoVadis), ensuring that corporate performance is transparently presented and aligns with international standards.



## Information Security

With the global industry's digital transformation and the growing threats to information security, Molicel continues to use international standards (such as ISO 27001 / ISO 27001:2022) as the foundation, employing the PDCA (Plan-Do-Check-Act) cycle to continuously improve its information security mechanisms. The company actively introduces artificial intelligence technology to enhance process quality and operational efficiency. This section outlines the strategies, implementation, and future outlook regarding information security management, risk control, awareness training, and Al innovation applications.







## **Information Security Management Strategy and Objectives**

## Information Security Management Strategy -



## **E-One Moli Energy Corporation**

Since 2021, Molicel has actively constructed an information security framework at the plant level, fully implementing ISO 27001 security standards and continuously optimizing protective measures through the PDCA cycle. Key measures include:

## Risk Assessment and Policy Development

Conduct regular risk assessments and formulate information security policies and KPIs to quantify the effectiveness of information security management.

## Technical Protection and Monitoring

Deploy information security tools (such as firewalls, two-factor authentication, and anomaly detection systems) and establish comprehensive monitoring mechanisms to ensure stable operation of production and information systems.

## Raising Personnel Awareness

Conduct regular information security education and training activities to strengthen staff awareness and prevention practices.

#### Internal and External Audits and Drills

Regular internal and external information security audits and drills ensure that protective measures are properly implemented.

In 2024, the E-One Moli Energy Corporation maintained zero information security incidents and launched the ISO 27001:2022 standard transition project in September, with certification expected by June 2025.



## **Molie Quantum Energy Corporation**

In 2024, the Molie Quantum Energy Corporation actively began constructing an information security management system in compliance with ISO 27001:2022 international standards. Key measures include:

## System Establishment and Documentation

Develop early-warning, reporting, and response plans for information security events and establish comprehensive information security management documentation.

## System Impact Analysis and Drills

Conduct operational continuity analysis and drills for information systems, performing regular internal and external audits to ensure systems can remain operational in the event of an anomaly.

## Certification Planning

In December 2024, the Molie Quantum Energy Corporation initiated the implementation of the ISO 27001:2022 information security management system and plans to obtain external certification by June 2025 to enhance overall security management efficiency and trust.

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## **Objective and Performance Indicator Table**

Objective	E-One Moli Energy Corporation	Molie Quantum Energy Corporation
Prevent Leakage of Sensitive Data	Established sensitive data zones with firewalls and jump-box login; zero data leaks in 2024	Set up data access monitoring system; zero security incidents in 2024
System Operation Uninterrupted Prevent Hacker Attacks (Ransomware, Phishing, etc.)	Perform MES and AD system backup restoration drills annually to ensure system availability	Plan for similar drills in 2025 to ensure stable system operation
Certification and ContinuousImprovement	Implement anomaly detection and two-factor authentication; no hacking incidents Transitioned to ISO 27001 latest version; planned certification by 2025	Introduce similar security controls and continuously monitor external threats Expected to obtain ISO 27001:2022 certification in 2025

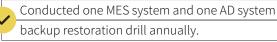
## **Information Security Drills and Risk Management**

## **Drill Implementation and Results**

Information security drills are a crucial part of ensuring the stable operation of information systems, validating the effectiveness of protective mechanisms and response plans.



## E-One Moli Energy Corporation



In 2024, the MES restoration drill took 1 hour 25 minutes, significantly below the recovery time objective (RTO) of 2 hours.



The AD system backup restoration drill took just 33 minutes, well below the RTO target of 8 hours.



## **Molie Quantum Energy Corporation**

Currently planning the 2025 information security drills, which will follow the same frequency as those at the

E-One Moli Energy Corporation, to validate the newly established information security management system.



## **Information Security Awareness and Education Training**

## **Training Content and Methods**

To respond to increasingly complex security threats, both the E-One Moli Energy Corporation and Molie Quantum Energy Corporations have actively promoted information security training and awareness activities, including:



## **ISO 27001-related Training**

Professional explanations on information security awareness, personal data protection, and related topics to strengthen core information personnel capabilities.



## **AI-based Hacking Techniques and Defense Measures**

Educating on attack methods such as social engineering, ransomware, and deepfake scams, and introducing preventive mechanisms.



## **Security Policy and Awareness Campaigns**

Distributing security bulletins and conducting internal awareness campaigns to enhance

overall staff awareness and avoid human errors that could lead to security risks.



## **2024 Training Results**

The company plans to continue increasing investment in security awareness and training, including the introduction of more interactive online courses to further enhance employees' security protection awareness.



## **E-One Moli Energy Corporation**

Conducted 4 information security awareness training sessions, uploaded to the Taiwan Cement Academy for online learning across the group.

The total number of participants reached

with a total of approximately 1,700 hours Conducted 2

ISO 27001 professional training sessions (3

hours), providing in-depth training for core information personnel (totaling 26 participants and 40 hours).



## **Molie Quantum Energy Corporation**

Conducted 2

ISO 27001 professional training sessions (3.5 hours), for core information personnel (32 participants, totaling 56 hours).

**Distributed 11 security bulletins** throughout the year, including one dedicated announcement to strengthen security risk reminders.



# Future Plans and Outlook for E-One Moli Energy (Canada) Ltd

## North America and Canada Market **Strategy Adjustment**

In 2023, with strong support from the Canadian government for expansion plans, Molicel had initially planned to build Canada's largest high-performance ternary lithium battery cell factory in Vancouver, with a projected annual production capacity of 130 million battery cells. However, due to a combination of factors such as global economic downturns, market volatility, a lack of major customers, shrinking automobile sales, tariffs, and price wars, this expansion project was eventually put on hold.

#### • Current Status:

The construction of new plants in Canada has been temporarily suspended. The company is focusing on consolidating existing production capacity, further enhancing product quality and technological competitiveness.

#### Future Outlook:

Molicel will continue to monitor the North American electric vehicle market and related policy changes. The company is prepared to adjust its strategic direction based on market conditions.

## Status and Future Development of **Taiwan Plant**

The new production lines at the Molie Quantum Energy Corporation (including the E-One Moli Energy Corporation and Molie Quantum Energy Corporations) in Taiwan have demonstrated a yield rate of up to 90%. The stability of the technology and production efficiency has gradually become apparent. Starting in the fourth quarter of 2024, Molicel entered the Al supply chain, officially shipping 5kW backup battery modules (BBUs) to renowned global cloud service providers, while also collaborating with multiple customers to develop next-generation battery technologies.

#### • Current Status:

The company has established mature technology and stable production processes, with strong product quality and positive market feedback.

#### Future Outlook:

Molicel will continue to push for smart manufacturing and automation upgrades, expand its domestic and international market footprint, and leverage data-driven approaches to continually optimize production line operations and product performance.

## Challenges and Strategic Responses

As Molicel moves forward with its development, the company faces the following challenges:

## • Global Market Volatility:

The company must strengthen market forecasting and risk management in response to international economic, trade policy, and market demand fluctuations.

## Technological Competition:

In the rapidly changing battery technology sector, Molicel will continue to invest in research and development to improve product performance and maintain a competitive edge.

## Policy and Tariff Risks:

With ongoing international policy changes, Molicel must be flexible in adjusting its supply chain and market strategies to address external challenges. Molicel plans to tackle these challenges through cross-departmental collaboration, strengthening international partnerships, refining production management, and ongoing research and development investments. These efforts will ensure that the company remains at the forefront of both technological and market developments in a dynamic global landscape.





Environment

Social

**TCFD** 



# TCFD Risk Management

## **Energy Supply Risk Response under Earthquake Scenario**

In light of a potential magnitude 6.1 earthquake in southern Taiwan, which could damage the Taiwan Power Company's (Taipower) base-load power infrastructure, Taipower has announced a scheduled electricity supply adjustment for industrial users over the next three months. Power will be supplied during non-continuous time periods: Mondays, Wednesdays, and Fridays from 08:00 to 12:00; Tuesdays, Thursdays, and Saturdays from 18:00 to 22:00; and all day on Sundays. This will directly impact Molicel's production schedule.

Although the company currently has emergency power generation equipment, the existing generators lack synchronization panels, making it impossible to switch power supply under load conditions or support non-critical circuits. To ensure production continuity and in alignment with the Task Force on Climate-related Financial Disclosures (TCFD) framework, Molicel has outlined the following response strategies and classified "opportunities," "risks," and "response measures" as follows:

## **Power Supply Continuity**

In response to the potential power interruptions under this scenario, the company will first invest approximately TWD 10 million to upgrade the existing emergency power circuit and improve the overall power infrastructure. In parallel, energy load adjustments will be implemented for air-conditioning and other non-critical equipment, with projected savings of TWD 20 million. Additionally, the company plans to install a gas-powered generator, requiring an investment of approximately TWD 50 million, to provide stable backup power during Taipower supply shortages.

Given the limitations of the current infrastructure in performing load transfers, grid power will be used exclusively to charge energy storage systems when available, while the generators will remain operational to minimize production disruptions caused by switch-over delays.

## **Equipment Upgrades and Automation**

The identified technical shortcoming—lack of synchronization panels—presents an opportunity for equipment upgrades. By introducing synchronization panel technology or replacing the generators with newer models, the company aims to improve power switching efficiency and reduce long-term operating and maintenance costs. These upgrades may also attract governmental subsidies or partnership opportunities, further accelerating the company's energy transition efforts.

## **Financial and Risk Management**

While the estimated upfront investment in emergency power response measures totals approximately TWD80 million, long-term benefits include enhanced system resilience and reduced financial losses due to production downtime. Regular use of the TCFD framework to assess risks and financial impacts will enable timely investment adjustments and ensure effective capital allocation, thereby strengthening the company's overall business resilience.

Environment



Category	Opportunity	Risk	Response Measures
Power Supply Continuity	Drive system upgrades by installing gas generators and auto-switching systems to enhance power reliability.  Potential for government subsidies and technical partnerships.	Taipower's scheduled power supply restrictions may interrupt production and hinder energy storage operations.  Existing generators cannot meet non-critical load demand due to lack of synchronization.	Modify emergency power circuits with a TWD 10M investment to enhance system design. Implement non-essential power-saving measures (e.g., A/C optimization) with estimated savings of TWD 20M. Install gas generators (TWD 50M) to support critical operations. Ensure generators run continuously and grid power is reserved for energy storage only.
Equipment Upgrade & Automation	Upgrade to synchronization panels and advanced generators to enhance power management and reduce long-term costs.	Current equipment cannot switch under load, increasing wear and risk of instability.	Introduce or replace existing units with synchronization-enabled generators. Redesign the distribution and switching system to enable safe power transfers under load.
Financial & Risk Management	Proactive investment in energy resilience diversifies power supply risks and strengthens investor confidence through enhanced disclosure.	High short-term capital expenditures related to circuit upgrades, load adjustment, and generator installation.	Conduct periodic TCFD-aligned risk assessments and financial impact analyses. Adjust investment plans based on market and technology trends; monitor performance to ensure return on investment.

# Water Shortage Scenario – Water Conservation and Emergency Response Strategy

In the event of a prolonged water shortage (e.g., supply interruption lasting three months), the company will adapt its water management practices in compliance with regulatory, customer, and internal requirements. Molicel also proactively seeks to improve water efficiency and strengthen supply flexibility to mitigate operational disruptions. Based on different phases of the scenario, the associated TCFD-related opportunities, risks, and response measures are summarized as follows:

## Early Phase - Voluntary Water Reduction

When water availability is reduced but not yet critical, the company will implement internal water-saving measures in coordination with industrial park policies. Actions include increasing the conductivity threshold of cooling towers and modifying usage patterns for both domestic and process water. These measures help maintain operational continuity and generate data for further water management optimization.

## **Escalated Phase** – Rotational Water Supply

If the shortage intensifies, Molicel will activate a rotational water supply plan. A site-wide water storage system will provide approximately five days of reserve capacity, enabling priority-based water allocation to critical production areas. This enhances water resource efficiency and operational resilience.

## **Extreme Phase** – Emergency Water Tanker Supply

In the case of a total water supply shutdown, the company will procure water via tanker trucks. While this method incurs high costs (approximately TWD 20,000 per 10-ton delivery), it ensures stable supply during extreme scenarios. Pre-negotiated contracts with suppliers are in place to minimize disruption and facilitate rapid response.

Category	Opportunity	Risk	Response Measures
Early Phase – Voluntary Reduction	Identify internal water-saving potential and strengthen long-term water management culture. Educate employees and promote responsible water use.	Initial water-saving efforts may not fully offset supply shortages, potentially affecting production.	Implement immediate reduction in cooling tower usage via conductivity adjustments; extend water change cycles for process use; reduce domestic water use (e.g., irrigation, cleaning, boxed meals). Monitor consumption and adjust strategy accordingly.
Escalated Phase – Rotational Supply	Enables precise water allocation and efficient resource use. On-site storage tanks ensure continued operations in priority areas.	Imbalanced production output due to uneven supply between zones; potential efficiency loss.	Establish rotational water supply protocol based on production priority. Install tanks for five-day water reserves. Enhance internal coordination and dynamically adjust water allocation.
Extreme Phase – Emergency Tanker Supply	Opportunity to build long-term partnerships with local authorities and suppliers. Advance contracting reduces emergency response time.	Total shutdown may severely disrupt production. High costs associated with water delivery by tanker.	Pre-sign contracts with emergency suppliers; allocate contingency funding. Prepare and regularly test emergency water supply plans to ensure rapid deployment and secure critical operations. Seek ongoing cost and efficiency improvements.

