04

Help Eco-Friendliness

2024 Material Topic

4.1 Climate Change Risks and Opportunities

Climate Governance

The Board of J&V Energy is the highest supervisory body for climate change management, responsible for overseeing and reviewing climate risk policies and control systems. To respond to the risks and opportunities brought about by extreme weather, units of different levels actively participate in issue discussions to identify and assess the impacts of climate change, formulate relevant countermeasures, and refer to the Task Force on Climate-related Financial Disclosures (TCFD) to establish climate risk identification and assessment process for the benefit of analyzing climate risks and identify opportunities. Based on the probability and the level of impact identified, the Company makes an assessment through qualitative and quantitative approaches to identify potential operating and financial impacts brought by the operations and businesses of the Company.

The "Sustainable Development Committee" was established under the Board of J&V Energy, with the Chairman as the chairperson and the General Manager as the convener. The Sustainable Development Office has been established under the Committee, with the Chief of Sustainability as the representative. Three ESG teams, including the "environmental sustainability team," "social inclusiveness team," and "corporate governance team," jointly promote risk management plans and operations in terms of operation, market, finance, human resources, climate change, and other different business scope and work with relevant departments of the Company to promote the planning and implementation of sustainability operation. The Sustainable Development Committee convenes meetings at least twice a year, and the operating status and achievements are reported to the Board.

Board of Directors

The Board is the highest supervisory department for climate change management, and it is responsible for supervising and reviewing the climate risk policy and control system to ensure that the system is effectively implemented. It also regularly examines the effects, performance, and strategic targets of ESG at the end of each year.

General Manager's Office

Climate risk assessment for the Company's operational decision-making and implementation of countermeasures.

Sustainable Development Office

The ESG teams compile and collect information, propose climate risk management targets and policies, and regularly report the results to the risk management department. Relevant authority and responsibilities are as follows:

1. Responsible for coordinating the climate risk management operation of the Company, building a comprehensive risk management structure and organizational system, and establishing qualitative and quantitative management standards to systematically identify, assess, and respond to potential risks.
2. Regularly examine and update climate risk management policies and continue to focus on the development of relevant domestic and foreign systems and trends to serve as the basis to adjust and optimize management strategies.
3. Responsible for compiling the climate risk control implementation status and improvement progress of different departments and regularly reporting them to the risk management department to ensure the effective operation of the system.
4. Actively promote cross-department climate risk management cooperation, carry out coordination and integration for risk control plans, and introduce cost-effective control measures to improve the overall climate risk management transparency and implementation efficacy.

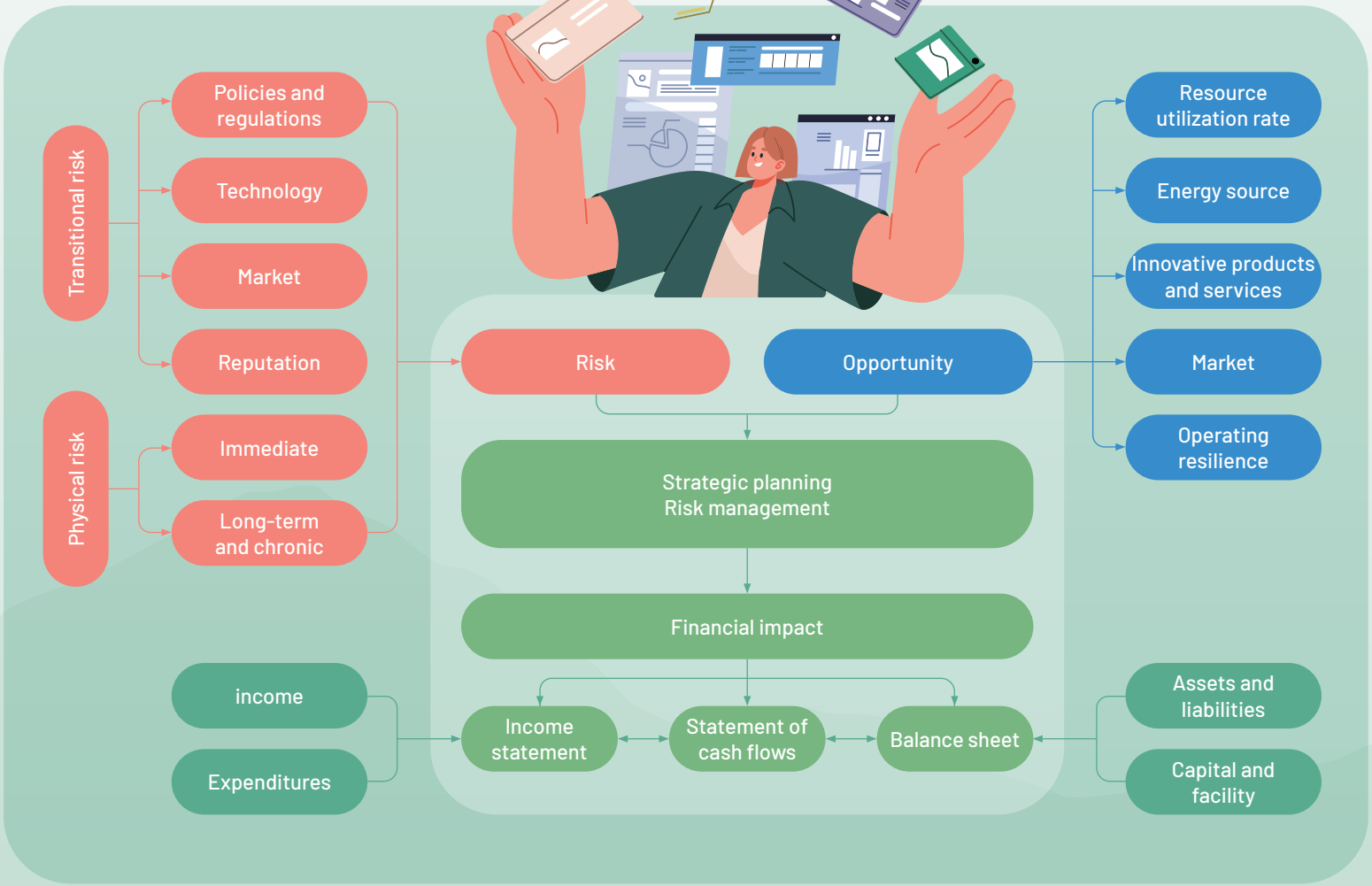
Sustainable Development Committee

1. Examine the effects and efficiency of climate change management regarding the Company's operations and propose improvement recommendations in due course.
2. Monitor risks derived from climate change and formulate response practices to ensure the effectiveness of risk management.

Climate Risk and Opportunity Identification and Management

To respond to the risks and opportunities brought about by long-term climate change and short-term extreme weather, units of different levels actively participate in issue discussions to identify and assess the impacts of climate change, formulate relevant countermeasures, and refer to the Task Force on Climate-related Financial Disclosures (TCFD) to establish climate risk identification and assessment process for the benefit of analyzing climate risks and identify opportunities based on "governance," "response strategies," "risk categories," "indicators and targets," and other disclosure frameworks. Based on this, we identified material climate risks and opportunities and analyzed potential operating and financial impacts brought by the operations and businesses of J&V Energy.

TCFD Structure



The Company developed the analysis of governance, strategy, risk opportunity management, and possible financial impacts in different stages below, based on the TCFD structure.

Climate Change Management Strategies, Indicators, and Targets

Climate Change Governance	The Board is the highest supervising department for climate change management. The Sustainable Development Committee is the implementation department for the management and identification of climate change risks and opportunities, and it reports relevant risks to the Board.
Climate Change Strategy	The Company is in the renewable energy industry, and the main effects of its climate change opportunities and risks are physics, transition, and opportunity. Based on the different aspects below, the Sustainable Development Committee formulated relevant strategies as follows: Physics: The main risks are "immediate and long-term." For fields with high risks, perform an inventory of possible risk patterns and probabilities and evaluate the mitigation of financial impacts through business insurance or preventive measures. Transition: The main risks are "policies and regulations, technology, market, and reputation." For relevant risks, the Sustainable Development Committee formulates corresponding strategies and management policies to address these risks and establishes indicators for regular follow-up. Opportunity: The main opportunities are "resource efficiency, energy source, innovative products and services, market, and operating resilience." The Sustainable Development Committee formulates strategies and management policies to expand competitive strength for opportunities and establish indicators for regular follow-ups. The Sustainable Development Committee identifies short-, mid-, and long-term climate risks and opportunities of different businesses through the Sustainable Development Office, together with relevant departments, formulates reasonable scenario assumptions, assesses the level of impact of climate risks on relevant businesses, and establishes corresponding management practices or countermeasures. When necessary, management indicators and targets are set to enhance the Group's control over specific risks and opportunities. For the established risk and opportunity indicators and targets, please refer to Climate Change Indicators and Targets of the chapter.
Climate Risk Management	J&V Energy has established its Procedures for Risk and Opportunity Management and procedures for hazard identification and risk assessment in accordance with the guidelines under ISO 14001 and ISO 45001 and plans for risk management operations based on the procedures. In addition, it completed the identification and assessments of internal risk issues and implemented risk management measures according to the risk management policy, procedures, and scope of J&V Energy. Risk management aspects and issue identification of J&V Energy are described in the following table.
Indicators and Targets	• J&V Energy established its management targets and indicators for material climate risks and opportunities related to itself. For details, please refer to Climate-Related Indicators and Targets of the chapter. • The Company considers environmental regulations, customers' requirements, expectations of stakeholders, and external initiatives, and senior supervisors examine the achievement status of various climate-related key indicators and targets and continue to amend and set up corporate targets.

According to the risk and opportunity categories recommended by the TCFD, J&V Energy analyzed the possible impact aspects and corresponding issues for itself and its business fields regarding various transition risks, physical risks, and opportunities. Through cross-department and cross-entity in-depth discussions among all personnel of the entire Group, J&V Energy obtained consensus on financial impacts generated from different issues, the affected point in time, and the level of impact. Further, it proposed countermeasures with the Group as the main body to achieve the management target of risk mitigation and opportunity expansion. To duly implement response strategies, J&V Energy also formulated corresponding implementation plans based on the scope of authority and responsibility of different departments and evaluated cost effectiveness to steadily promote the Group's strategy and achieve the targets of climate risk mitigation and climate opportunity control

Transition risk

Risk category	Climate-related issue	Affecting aspect	Scenario description	Factors of potential financial impacts	Impact timing	Level of Impact	Response strategies
Policies and regulations	Electrical industry-related regulations	PV Wind power generation Energy Storage System	In response to the official implementation of the large power user clause under the Renewable Energy Development Act, domestic large power users fulfill their obligations by building renewable energy power generation equipment, purchasing renewable energy and electricity and T-REC, installing energy storage equipment, and paying fees; the demand for the building of renewable energy power plants, energy storage equipment, and green power increased.	Increase in operating costs	Short-term	High	J&V Energy provides customers with one-stop services for the planning, design, construction, maintenance and operation of renewable energy power plants and energy storage equipment construction. Meanwhile, it expanded its investments in renewable energy power plants to provide diverse and stable green power sources to customers and create operating income for the Company.
	Fuel/energy tax-related regulations	Self-operation	In response to the relevant national regulations on energy consumption reduction and equipment energy efficiency, power-saving and carbon reduction measures have been implemented to comply with the regulations, resulting in an increase in operating costs.	Increase in operating costs	Short-term	High	J&V Energy has introduced ISO 14064-1 GHG inventory, ISO 14001 environmental management, and other management systems and has established its short-, mid-, and long-term carbon reduction actions and goals.
Technological risk	Growth in renewable energy technology	PV Wind power generation Energy Storage System	With the increasing maturity of emerging renewable energy power generation technology, existing technologies may lag behind market standards, or production costs may be higher than market costs.	Increase in operating costs	Short-term	High	J&V Energy continued to invest in the development of renewable energy-related technology and expand its business layout to provide optimal solutions for renewable energy-related requirements in the market.
Market risk	Change in customer demand	PV Wind power generation	Major international enterprises have initiated a 100% green power commitment, requiring their supply chains to use green power, with the goal of achieving net-zero carbon emissions.	Increase in operating costs	Mid-term	High	J&V Energy invests in the deployment of various types of renewable energy power plants to create a stable source of power supply. We also replicate our experience in Taiwan overseas to assist customers in building renewable energy power plants, and have capitalized on the opportunities presented by the climate to generate operating income for the Company.
Reputation risk	Change in stakeholders' perception	Green Power Trading	In response to climate change, whether J&V Energy can implement corporate sustainability and assist customers in low-carbon transformation or not, energy conservation and carbon reduction will affect the perception of stakeholders (shareholders, customers, and suppliers) in terms of the Company's image and reputation.	Decrease in Investment willingness	Mid-term	High	In response to international trends, changes in regulations, and market development trends, J&V Energy has carried out internal management regulation adjustments, transparent disclosures, and timely responses to enhance its corporate image of low-carbon and green energy. The Company also performed stakeholder engagement by explaining its business deployment and future planning at investor conferences and external activities.

Physical risk

Risk category	Climate-related issue	Affecting aspect	Scenario description	Factors of potential financial impacts	Impact timing	Level of Impact	Response strategies
Immediate	Typhoons and floods	PV Wind power generation Energy Storage System Supply chain management	Except for equipment damages and the decrease in power generation efficiency, typhoons, floods, and other extreme weather events may also result in supply chain interruption and affect the production and transmission of equipment, which, in turn, results in an increase in production costs. In addition, extreme weather events may force renewable energy power plants to suspend operations, affect the stability of the electricity supply, and may cause economic losses. Furthermore, insurance companies may also increase insurance premiums based on the frequency and severity of extreme climate events, further increasing operating costs.	Decrease in operating income Increase in property losses. Increase in operating costs	Short-term	High	• Continue to carry out climate risk assessments: Adopt the flood risk tool of the "TCCIP" of the Ministry of Science and Technology to evaluate the possibility of triggering floods at solar power project sites, consider and prevent possible power plant disasters upon the occurrence of extreme weather events, and formulate corresponding business continuity plans in a timely manner to mitigate possible risks. • Improve hardware equipment: J&V Energy keeps an eye on the stability of power generating systems during the stages of site selection before project site development, design, and installation and also includes waterproof issues into consideration for wire materials and designs. • Risk transfer first: To minimize the possible impacts of disasters, relevant natural disaster insurance has been purchased for all power plants, and it is estimated that the disaster insurance expenditures for a year are approximately NT$26.28 million. • Deepen supply chain management: Develop alternative raw materials to reduce the impact of rising raw material prices; on the other hand, find suppliers in other regions to avoid price monopoly caused by the concentrated procurement from specific suppliers.
Long-term	Continuous heat and rising sea level	PV Wind power generation Energy Storage System Supply chain management	Heat may result in the overheating of PV equipment, which reduces power generation efficiency and even damages equipment, increasing repair and replacement costs. The rising sea level may result in soil erosion in coastal areas, impact the stability and safety of PV facilities, and may drown or damage infrastructure in coastal areas (i.e., cables and substations), affecting power transmission and supply.	Decrease in operating income Increase in property losses. Increase in operating costs	Mid-to-long-term	High	J&V Energy continues to monitor long-term climate change temperature and sea level changes to rapidly respond to possible risks.

Opportunity for transformation

Risk category	Climate-related issue	Affecting aspect	Scenario description	Factors of potential financial impacts	Impact timing	Level of Impact	Response strategies
Resource Efficiency	Water resources	Water resource treatment	Regarding the issue of insufficient domestic water resources, particularly frequent water rationing in summer, industries with high water consumption (i.e., semiconductor, panel, and iron and steel industries) invest in long-term water resource sustainability management work.	Increase in operating income Decrease in operating costs	Short-term	Low	J&V Energy has invested in Weisheng Envirotech, a water treatment subsidiary, to develop the reuse of industrial wastewater and domestic wastewater, as well as the desalination treatment of seawater, to make full use of water resources and improve the niche for industrial development; the Company has installed water-saving equipment and promotes water consumption reduction.
Energy sources	Renewable energy consumption	Self-operation	Regarding the supply chain and/or value chain, adaptation and mitigation activities, business management, operating costs, and operating income, with policies promoted by the government and the maturity of technology development, using renewable energy with lower costs may reduce the energy expenses of J&V Energy and increase its industry competitiveness.	Increase in operating income	Short-term	High	Continue to pay attention to international energy trends and comply with government policies to establish diverse renewable energy project sites. Increase the consumption rate of green power and set itself as an example to lead Taiwan to energy transition. In the future, our goal is to become an "integrated circular economy service provider," expand to the field of circular economy, and create a low-carbon sustainable living environment.
Products and services	Renewable Energy Increase in demand	PV Wind power generation Energy Storage System	In response to the international RE100 trend and domestic regulations for large power users, the demand for renewable energy services and green power from enterprises has increased significantly.	Increase in operating income	Short-term	High	By investing in the construction of diverse renewable energy power plants, establishing a power sales company, Greenet, and investing in an energy storage subsidiary, Recharge Power, we can provide one-stop services for energy generation, energy storage, and green power trading to satisfy customer demand and increase profit opportunities.
Market changes	Renewable Energy Increase in demand	PV Wind power generation Energy Storage System	Due to international trends, government policies, and other factors, enterprises have a surging demand for renewable energy and low-carbon products, increasing profit opportunities.	Increase in operating income	Long-term	High	In line with government policies, J&V Energy has invested in the deployment of various types of renewable energy power plants, as well as in biomass energy, energy storage equipment, and circular economy projects, to meet market demand.
Operational resilience	Climate disaster	Self-operation	Actively pay attention to climate risks and opportunities to ensure the Company's response capacity in the face of disasters and the sensitivity to climate opportunities.	Increase in operating income	Long-term	High	Identify and grasp climate risks and opportunities through TCFD, establish a systematic governance structure, enhance the Company's response capacity to climate change risks, and enhance financial performance by improving the reliability of products and increasing its market share.

According to the above, J&V Energy plays a crucial part in the low-carbon economy transition worldwide, and it has taken climate change risks and opportunities into consideration for its overall operations and decision-making. When facing diverse risk issues, the Company thoroughly evaluates the potential impacts of climate change, sets carbon reduction targets using a science-based approach through the identification of climate-related risks and opportunities, and implements corresponding management systems to enhance overall climate resilience.

For various climate risks and opportunities identified, we formulated diverse responses and mitigation measures to improve operating adaptation capabilities. In 2024, J&V Energy achieved the stage target for "green energy sustainability" and continued to promote climate actions based on a science-based approach to realize the commitment to net zero transition.

Scenario Analysis of Physical Climate Risks

With the intensified climate change, extreme climate events pose a significant challenge to the stability of corporate operations. J&V Energy is deeply aware that the floods triggered by typhoons and heavy rainfalls may cause damage to the Company's solar power project sites, wind turbines, and other assets and, in turn, increase repair costs or result in the interruption of power generation operations. In addition, changes in rainfall modes may also trigger droughts, affecting the use of water resources and causing pressure on equipment that requires repair or cleaning. Extreme heat or cold not only may increase the safety risks of outdoor operators but also may cause an increase in the malfunction rate of partial equipment, generating additional repair costs. Landslides and slippery slopes may also damage power generation equipment, resulting in operational interruptions and production losses, and additional funds are required to carry out equipment repair or replacement.

To effectively respond to the physical risks brought by the abovementioned climate change, J&V Energy regularly examines climate events that affect the Company's operations, considers the business characteristics of J&V Energy, establishes physical climate risk analysis methods to comprehensively identify, assess, manage, and monitor the potential financial impact caused by climate change on the Company, and includes relevant risks in the overall risk management system to improve J&V Energy's climate resilience.

Risk item	Strong wind	Flood/landslide/slippery slope	Drought	Heat/coldness/PM2.5
Description of risk materiality	Have damages to project site equipment, traffic interruption, or school/work suspension, causing losses from operational interruption.	Have damages to production equipment or transport equipment, causing additional expenditures or risks of operational interruption.	The purchase of water for production gives rise to additional operating costs.	Give rise to safety risks for outdoor staff and also cause the malfunctions of partial equipment or affect power generation efficiency, resulting in difficulties in quality control.

Therefore, J&V Energy regularly examines climate events that affect the operation of its material project site operations and has identified floods, slippery slopes, landslides, droughts, heat, cold, strong winds, and PM2.5 as eight types of risks to carry out scenario analysis of physical climate risks.

As the project sites of J&V Energy at present are all in Taiwan, the climate risk database with high-resolution open weather data established by the Central Weather Administration was adopted, and TCCIP AR6 was further adopted as the climate scenario simulation data. We improved the resolution of data through down-sizing and combined it with historical weather observation, climate scenario estimation data, and the definition of disaster risk[Note] to analyze the short-, mid-, and long-term physical climate risks faced by different project sites by utilizing climate science methods. We calculated and quantitated the likelihood and impact of various disasters through the database and used standardization and other statistical methods to calculate and arrive at the quantitative score with 1 as the lowest mark and 5 as the highest mark based on past data regarding the likelihood and the level of impact, and multiply the two scores to get the risk score with 25 as the highest mark.

For the selection of the climate scenario, J&V Energy referred to the SSP scenario proposed in the IPCC Sixth Assessment Report to serve as the basis to show the level of severity of warming under different social and economic assumptions and radiative forcing. Ultimately, we selected the most stringent "SSP5-8.5 scenario" as the analysis scenario for physical risks.

Under the analysis scenario of the aforementioned physical climate risks, the material project sites of J&V Energy have no high risk (with a risk score of 21 to 25) for different risks and across different periods. In particular, the evaluation results in the partial period for flood and PM2.5 were medium risk (with a risk score from 10 to 15). Mid-to-low risk or low risk was recorded for the remaining risks and periods. The evaluation results show that rainstorms and PM2.5 pose a relatively higher risk to J&V Energy. The Company formulated corresponding risk mitigation measures based on the results, including evaluating the increase in the strength of the base of facilities at project sites, waterproofing and anti-pollution levels, and cleaning methods and frequency. The Company also provided education and training to the relevant personnel to prevent the occurrence of possible occupational safety hazards.

Note: With reference to domestic and foreign official institutions or literature (i.e., referring to the inundation alert level or inundation potential provided by the Water Resources Agency, MOEA).

Short-term (2024-2025)

Analysis venue	Type	Rainstorm	Slippery slope	Landslide	Drought	Heat	Coldness	Strong wind	PM2.5	Average
Beimen District in Tainan City	PV project site	3	1	1	6	1	1	4	15	4
Dafeng Section in Taitung City	PV project site	10	1	1	4	4	1	1	6	3
Bali District in New Taipei City	PV project site	15	1	1	4	2	1	1	8	3
Daya District in Taichung City	PV project site	10	1	1	6	2	1	1	15	4
Xiaogang District in Kaohsiung City	PV project site	10	1	1	9	2	1	1	15	4
	Average	8	1	1	6	2	1	2	13	

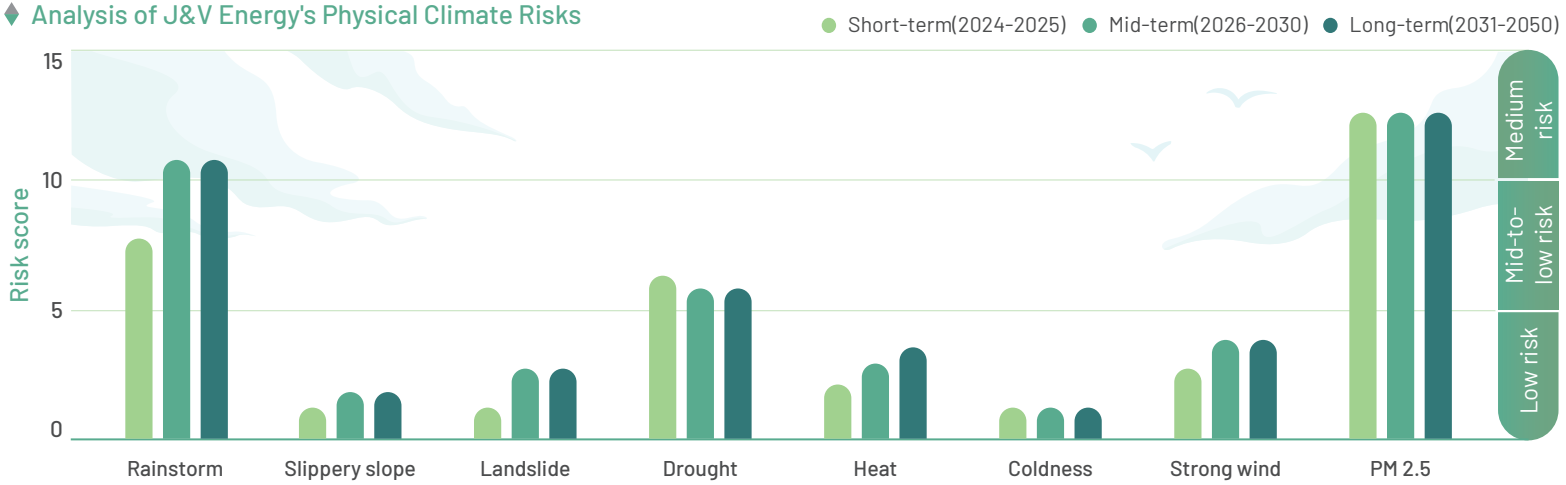
Mid-term (2026-2030)

Analysis venue	Type	Rainstorm	Slippery slope	Landslide	Drought	Heat	Coldness	Strong wind	PM2.5	Average
Beimen District in Tainan City	PV project site	10	1	1	6	2	1	4	15	4
Dafeng Section in Taitung City	PV project site	10	4	10	4	4	1	4	6	5
Bali District in New Taipei City	PV project site	10	1	1	4	4	1	4	8	3
Daya District in Taichung City	PV project site	15	1	1	6	2	1	4	15	4
Xiaogang District in Kaohsiung City	PV project site	10	1	1	6	2	1	4	15	4
	Average	11	1	2	5	3	1	4	13	

Long-term (2031-2050)

Analysis venue	Type	Rainstorm	Slippery slope	Landslide	Drought	Heat	Coldness	Strong wind	PM2.5	Average
Beimen District in Tainan City	PV project site	10	1	1	6	2	1	4	15	4
Dafeng Section in Taitung City	PV project site	10	4	10	4	4	1	4	6	5
Bali District in New Taipei City	PV project site	15	1	1	4	4	1	4	8	3
Daya District in Taichung City	PV project site	10	1	1	6	4	1	4	15	5
Xiaogang District in Kaohsiung City	PV project site	10	1	1	6	4	1	4	15	5
	Average	11	1	2	5	3	1	4	13	

Analysis of J&V Energy's Physical Climate Risks



J&V Energy will continue to assess the potential impact of physical climate risks on the Company's project sites, expanding the assessment scope and improving data accuracy to minimize the impact of physical climate risks on J&V Energy by formulating adequate risk mitigation measures through climate assessments.

Climate-Related Indicators and Targets

1. In response to transition challenges and opportunities brought by the urgent climate situation, J&V Energy actively leads the overall value chain to move toward a low-carbon and green economy transition
2. Based on the assessment results of climate risks and opportunities, formulate concrete green management strategies and stage targets that cover short-, mid-, and long-term action plans.
3. Promote diverse management measures, including energy conservation, carbon reduction, green procurement, renewable energy applications, and other concrete implementation plans, to improve climate resilience and operational stability.
4. Regularly examine and assess the implementation achievements to ensure continuous and effective achievement of climate actions. Engage a third-party institution to perform the external verification to enhance performance transparency and data credibility.
5. Actively disclose the achievements of environmental performance and communicate with external parties through the Sustainability Report, the sustainability section of J&V Energy, and other platforms to exhibit its responsibility and commitment to climate governance.

Indicator	Short-term management measure	Mid-to-long-term management measure
GHG emissions (Category 1 + Category 2)	1. Continue to carry out the environmental management system verification and introduce the ISO 50001 energy management system. 2. Optimize office environments and use energy-saving equipment. 3. Carry out the GHG inventory each year and quantify and track energy conservation and carbon reduction achievements.	1. Continue to carry out ISO system management. 2. Plan for internal carbon pricing. 3. Adopt EVs as company cars.
Consumption Ratio of Renewable Energy	1. 2023 was the first year of green power for J&V Energy, and it continues to increase the consumption ratio of renewable energy. 2. In 2024, the company achieved the interim RE100 "Green and Sustainable" goal for its Taipei headquarters.	The scope of consumption of renewable energy has been expanded to all subsidiaries included in the consolidated financial statements of J&V Energy so as to strengthen the overall green power deployment and low-carbon operating efficacy of the Group.
Carbon emissions per 1,000 working hours (using electricity)	1. Promote energy conservation measures and introduce smart monitoring systems into offices. 2. Enter into renewable energy electricity purchase contracts to supply electricity to Taipei Headquarters and Tainan Office.	All subsidiaries included in the consolidated financial statements have adopted the achievement of RE100 as the target and are promoting relevant green power transition measures based on the plan.
Waste Volume at Project Sites	The waste volume generated at project sites is decreasing on a yearly basis, and the waste recycling ratio continues to increase.	Establish a collaborative model with downstream recycling and reproduction companies and suppliers to transform waste into raw materials, thereby investing in other industries for reuse, and forming a closed resource cycle.

4.2 Energy Management

Material Topic Energy

Corresponding GRI Indicators

GRI 302 Energy

Importance to J&V Energy

With the increasing attention devoted to sustainable development and environmental protection worldwide, energy management has become a key factor in corporate operations. J&V Energy is deeply aware of the importance of energy issues to corporate operations. Effective energy management not only enhances competitiveness but also facilitates sustainable development and long-term economic benefits.

Positive impact

Cost-effectiveness: Effective energy management can significantly reduce operating costs and increase profit.

Environmental responsibility: Actively adopt renewable energy and energy conservation technology to help tahe Company reduce carbon emissions on a yearly basis, indirectly improving corporate image.

Negative impact

Cost fluctuation: Unstable energy may result in a surge in operating costs, affect the Company's financial budget and profit, and increase operating risks.

Environmental impact: If the Company fails to adopt sufficient renewable energy and continues to rely on traditional fossil fuels, it may result in an increase in carbon emissions, causing negative effects on corporate image and the environment.

Policy/strategy

- The office at Taipei Headquarters continues to use 100% green power.
- Regularly organize energy conservation training and promotion activities to improve employees' awareness of energy management and improve the attention given by all employees to energy conservation awareness.
- Provide guidance for business locations at different places to use energy-saving and water-saving equipment year by year.
- Regularly publish the Sustainability Report and carry out the GHG inventory each year for stakeholders and the Company to examine the internal energy consumption.

Short-, mid-, and long-term targets

Short-term target (2-3 years)

- Ensure that the renewable energy supply ratio is maintained at 100%.
- Upgrade smart control system equipment to precisely monitor energy consumption.
- The introduction of the ISO50001 energy management system is estimated to be completed in 2025.

Mid-term target (3-5 years)

- Set up smart energy management systems at all offices.
- Continue to obtain ISO50001 energy management system certification.

Long-term target (above 5 years)

- Realize the 100% consumption of renewable energy by the headquarters office and require other business locations to achieve the same target step by step.
- Continue to improve the positive image of sustainable corporate development and enhance the trust and support of relevant stakeholders.

Performance in 2024

- Achieve the target of consuming 100% green power (RE100).
- Make full replacement with water-saving equipment in the headquarters office to improve water resource efficiency.
- Continue to promote and implement the energy conservation and carbon reduction plans and improve employees' participation and awareness.
- Adjust the indoor temperature for A/Cs in offices based on local temperatures and maintain the temperature within 20 to 26 °C to ensure energy conservation and comfort.

Preventive or Remedial Measures

- Actively introduce ISO50001 energy management system to effectively reduce energy consumption and continue to turn off lights for one hour during lunch break.

Energy Policy

To implement energy management, improve energy efficiency, and reduce unnecessary energy consumption, the General Operation Department is responsible for implementing, promoting, and tracking the promotion status of energy-related affairs. To implement energy awareness in energy management and comply with the purpose of energy conservation and carbon reduction, the Company also formulated relevant energy conservation measures that are applicable to all departments and employees of the Company to effectively improve the energy management efficiency of the Company.

The Company plans to introduce the ISO50001 energy management system in 2025 to help us formulate scientific energy management targets, realize comprehensive monitoring and continuous improvement for energy consumption, and, in turn, achieve the effects of energy conservation and carbon reduction. In addition, we continue to enhance the promotion of internal energy conservation of the Company and organize relevant promotion activities to improve the attention paid by all employees to energy conservation and carbon reduction and their implementation capabilities.

J&V Energy hopes to become a green model. The headquarters of the Company promised to achieve the RE100 target of the Taipei Headquarters in 2024, joined TANZE, and obtained the Green-Tier Net Zero Certification. In the future, we will continue to exert our core profession to adopt net zero emissions as the targets for the Group and its supply chain, provide comprehensive, innovative net zero solutions, and realize environmental sustainability through carbon reduction actions.

Energy consumption

In 2024, the total energy consumption of J&V Energy was 1,481.71GJ, and the energy intensity was 12.05, representing a slight increase compared to 2023, mainly due to the expansion of the operating scale and the growth in the number of employees. Despite the increase in overall energy consumption due to business growth, the Company actively promotes low-carbon transition and energy management strategies and continues to improve resource efficiency to move toward sustainable operations.

Energy consumption item		Energy consumption Note		Energy consumption ratio	
		2023	2024	2023	2024
Purchased renewable energy	Purchased electricity (GJ)	137.85	603.43	11.03%	40.73%
Purchased non-renewable energy	Gasoline consumption (GJ)	688.18	751.14	55.05%	50.69%
	Purchased electricity (GJ)	424.05	127.14	33.92%	8.58%
Total renewable energy consumption (GJ)		137.85	603.43	11.03%	40.73%
Total non-renewable energy consumption (GJ)		1,112.23	878.28	88.97%	59.27%
Total energy consumption (GJ)		1,250.08	1,481.71		
Energy intensity (GJ/number of employees)		10.59	12.05		

Note 1: The heating value of electricity is converted at 1kWh = 0.0036GJ.

Note 2: The conversion coefficients are based on the Environmental Protection Administration's Emission Factor Management Table (version 6.0.4). The fuel heating value is 7,800kcal/L for gasoline, 8,400kcal/L for diesel, 8,000kcal/m 3 for natural gas, and 6,635kcal/L for LPG; 1kcal=4.184KJ.

Note 3: The latest energy product unit thermal value table announced on the website of the Energy Administration, MOEA, was adopted for the thermal value. The energy consumption is calculated by multiplying energy consumption with the thermal value and converting it into GJ.

Energy conservation measures

To effectively manage climate risks and reduce possible impacts that may be caused to the environment during the course of operations, J&V Energy formulated corresponding plans and targets based on the risk management proposed by the Sustainable Development Committee, promised that the headquarters will reach 100% renewable energy consumption (RE100) in 2024, and received the Green-Tier Net Zero Certification from TANZE.

To duly manage energy consumption and reduce energy consumption, we continued to promote office energy conservation management and energy conservation measures through green power consumption. In 2024, the green power supply volume reached 125,060 kWh, and we purchased 43 T-RECs to achieve effective energy conservation benefits for office energy conservation management.

Therefore, in 2024, green power was fully adopted by the Taipei Headquarters to achieve 100% renewable energy for office power consumption, formally meeting the RE100 commitment and demonstrating a high commitment to climate action and substantial practices.

Green Power Consumption of Taipei Headquarters of J&V Energy

Year	Green power supply volume	Purchased RECs	Consumption Ratio of Renewable Energy	Achievement
2023	29,292 kWh	9 certificates (9,000 kWh)	25.07%	Achieve RE25
2024	125,060 kWh	43 certificates (43,000 kWh)	100%	Achieve RE100

The average power consumption per person at the Taipei Headquarters over the most recent three years has continued to decline on a yearly basis. In 2024, the average power consumption per person decreased by 18% compared to that of 2023.

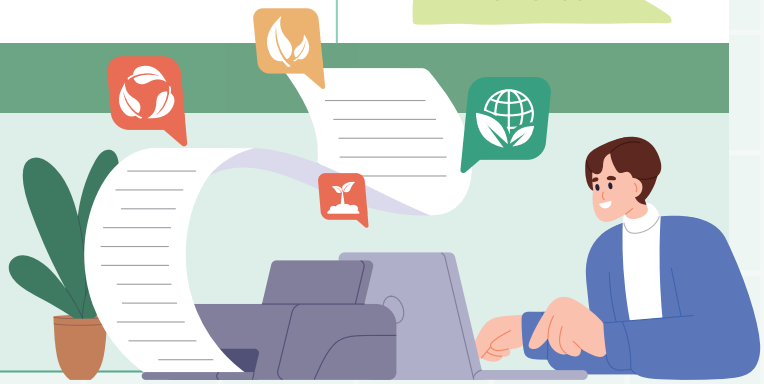
Year	2022	2023	2024
Annual power consumption (kWh/year)	150,480	152,733	167,581
Average power consumption per person (kWh/year)	2,006.40	1,660.14	1,362.45

J&V Energy's energy conservation measures and estimated conservation volume in 2024

Energy conservation measures	Specific actions	Volume saved	Achievement
Office energy-saving management	Turn off the lights for one hour during the lunch break to effectively reduce office energy consumption. We also provide employees with a quiet and comfortable rest space and atmosphere to promote energy conservation and a healthy life.	323,000kWh	Achieved

Other energy conservation measures

- Use energy conservation slogans in the office to promote turning off the lights and saving electricity.
- Set the temperature of A/C in the office to 26° C during summer.
- Provide mugs for employees and visitors to reduce the use of plastic cups.
- Microwaves, electric cookers and other heating equipment are provided in the staff lounge to encourage employees to bring lunch boxes to heat food and use environmentally friendly tableware.



4.3 Emissions Monitoring

Greenhouse Gas Emissions

J&V Energy adopted the business control approach to set the organizational boundary in accordance with ISO 14064-1: 2018 GHG inventory standards, measured the materiality of emissions sources based on the occurrence frequency, level of impact, quantitative method, and level of risk to serve as the standards for whether Categories 3 to 6 are included in the inventory, and engaged a third-party institution to implement the verification in April 2025.

As of 2024, the Company completed the GHG inventory of its main business locations and the majority of its consolidated subsidiaries to progressively build a comprehensive carbon emissions information foundation. However, even though Greenet, Nexus Materials, and Weisheng Envirotech were included in the consolidated financial statements, they were not covered in the scope of inventory, as their relevant data at the current stage is not yet complete. In the future, the Company will continue to expand its scope of inventory, move toward the target of covering all subsidiaries included in the consolidated financial statements, improve the completeness of GHG information and the disclosure consistency, strengthen the carbon management efficacy of the Group level, and accelerate the realization of carbon reduction strategies and SDGs.

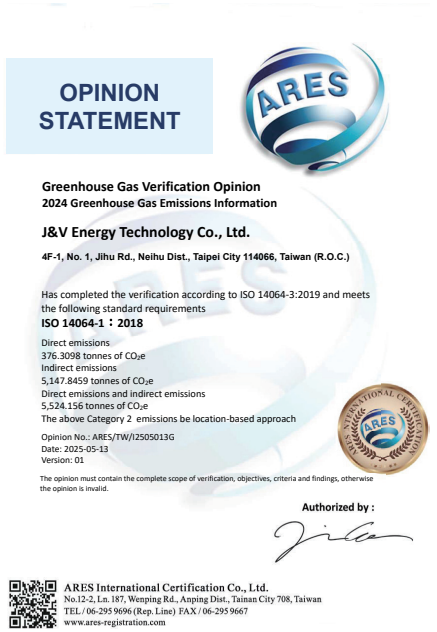
Overview of GHG emissions of J&V Energy in the Most Recent Two Years

GHG emissions	2023	2024
Scope 1: Direct GHG emissions (tCO_2e)	52.9175	54.6819
Scope 2: Indirect GHG emissions (tCO_2e)	78.7417	128.6533
Total Scope 1 and Scope 2 emissions (tCO_2e)	131.6592	183.3352
Scope 1 and Scope 2 emission intensity (tCO_2e/ number of employees)	1.115	1.49
Scope 3: Other indirect emission sources (tCO_2e)	92.1217	2,891.9271
Total GHG emissions (tCO_2e)	223.781	3,075.262

Note 1: Identify the possible source of GHG that is mainly generated within the boundary of the report. GHG categories include CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, and NF_3, a total of seven kinds of GHGs.

Note 2: The source of emission factors is the latest GHG emission factors and thermal value announced by the Ministry of Environment, and the GWP value announced by IPCC (IPCC Sixth Assessment Report) was adopted.

ISO 14064-1: 2018 GHG verification opinion, Scope of Verification: J&V Energy, J&M Power and Storm Power



OPINION STATEMENT

ARES

Greenhouse Gas Verification Opinion
2024 Greenhouse Gas Emissions Information

J&V Energy Technology Co., Ltd.

4F-1, No. 1, Jihu Rd., Neihu Dist., Taipei City 114066, Taiwan (R.O.C.)

Has completed the verification according to ISO 14064-3:2019 and meets the following standard requirements
ISO 14064-1：2018

Direct emissions
376.3098 tonnes of CO_2e
Indirect emissions
5,147.8459 tonnes of CO_2e
Direct emissions and indirect emissions
5,524.156 tonnes of CO_2e
The above Category 2 emissions be location-based approach

Opinion No.: ARES/TW/I2505013G
Date: 2025-05-13
Version: 01

The opinion must contain the complete scope of verification, objectives, criteria and findings, otherwise the opinion is invalid.

Authorized by :

ARES International Certification Co., Ltd.
No.12-2, Ln. 187, Wenping Rd., Anping Dist., Tainan City 708, Taiwan
TEL / 06-295 9696 (Rep. Line) FAX / 06-295 9667
www.ares-registration.com

Overview of GHG emissions of Subsidiaries

GHG emissions	2024
Scope 1: Direct GHG emissions (tCO_2e)	359.8007
Scope 2: Indirect GHG emissions (tCO_2e)	1,824.4149
Total Scope 1 and Scope 2 emissions (tCO_2e)	2,114.0283
Scope 1 and Scope 2 emission intensity (tCO_2e/NT$ million)	2.24
Scope 3: Other indirect emission sources (tCO_2e)	773.6691
Total GHG emissions (tCO_2e)	2,957.885

Note 1: Identify the possible occurrence source of GHG that is mainly generated within the boundary of the report. GHG categories include CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, and NF_3, a total of seven kinds of GHGs.

Note 2: The source of emission factors is the latest GHG emission factors and thermal value announced by the Ministry of Environment, and the GWP value announced by IPCC (IPCC Sixth Assessment Report) was adopted.

Note 3: The data includes J&M Power Development Co., Ltd., Guang Liang Energy Co., Ltd., Xu Xiao Power Co., Ltd., Chen Yu Energy Co., Ltd., Jin Cheng Energy Co., Ltd., Jin Jie Energy Co., Ltd., Diwei Power Co., Ltd., Fu Di Energy Co., Ltd., Storm Power Co., Ltd., and Recharge Power Co., Ltd.

Note 4: The Scope 1 and Scope 2 intensity of GHG emissions is calculated based on subsidiaries' turnover (NT$ million).

ISO 14064-1: 2018 GHG verification opinion, Scope of Verification: Recharge Power


OPINION STATEMENT

ARES

Greenhouse Gas Verification Opinion
2024 Greenhouse Gas Emissions Information

Recharge Power Co., Ltd.

6F., No. 1, Jihu Rd., Neihu Dist., Taipei City 114066, Taiwan (R.O.C.)

Has completed the verification according to ISO 14064-3:2019 and meets the following standard requirements
ISO 14064-1：2018

Direct emissions
38.1728 tonnes of CO_2e
Indirect emissions
130.7069 tonnes of CO_2e
Direct emissions and indirect emissions
168.880 tonnes of CO_2e

Opinion No.: ARES/TW/I2503019G
Date: 2025-03-11
Version: 01

The opinion must contain the complete scope of verification, objectives, criteria and findings, otherwise the opinion is invalid.

Authorized by :

ARES International Certification Co., Ltd.
No.13-2, Ln. 187, Wenping Rd., Anping Dist., Tainan City 708, Taiwan
TEL / 06-295 9696 (Rep. Line) FAX / 06-295 9667
www.ares-registration.com

GHG Reduction

The Company attaches great attention to the impact of climate change on operating activities, and has included it as one of the material risk management items. It implements GHG inventory, carries out water and electricity conservation, electronic administrative operation, and paperless measures, maintains the A/C temperature at 26°C in summer, and adopts other energy conservation, carbon reduction, and GHG reduction measures in workplaces.

Reduce Electricity Consumption	We implement environmental protection concepts and energy conservation measures at all offices and locations. The headquarters achieved 100% green power consumption through the procurement of green power and continued to maintain it in 2024.
Promote Energy Conservation Management Measures	Study energy conservation methods, adopt energy-saving equipment, and implement energy conservation measures for electricity, A/C, lighting, and other systems.

Ozone Depleting Substance (ODS) Inventory

Due to the excessive industrialization and industrial development of modern times, air pollution has become one of the causes of damage to the ecological environment. It will have a negative impact on climate, ecological environment, air quality, other species and human beings. Unfavorable air quality can lead to acid rain, ecosystem deterioration, social injustice, and health impacts. As a green energy and environmental protection enterprise, J&V Energy mainly provides green power supply and power sale services. In 2024, the Company did not emit ozone-depleting substances (ODS), and it did not produce relevant air pollutants that cause impacts on the environment.

4.4 Water Source Management

Facing the increasing requirements for water resources, the intensified climate change, and the increase in the pressure of sustainable development, J&V Energy continues to focus on water source shortage issues and actively commences response actions. Weisheng Envirotech Co., Ltd., the water treatment business invested by the Company, is committed to providing comprehensive sewage and wastewater treatment solutions and professional technical services to customers and assisting industries in improving water resource management efficacy.

Meanwhile, we also continue to optimize internal water consumption management and minimize the impact of operations on the environment through the reduction of water consumption and the improvement in water resource reclamation and reuse efficiency, exhibiting our responsibility and commitment to sustainable water resources.

Water Source Risk Assessment

The Company referred to the Water Risk Atlas of the World Resources Institute (WRI) and identified water resource pressure and the level of various risks at its locations. The identification results were mid-to-low-risk areas. Based on different regions, water resources were mainly from the Taiwan Water Corporation and supplied by the Taipei Water Department.

Water Resource Pressure and Water Resource Risk Value of J&V Energy's Locations and Subsidiaries

Location	J&V Energy	Taipei Headquarters	Xuejia Office in Tainan (including Jiali Dormitory)	Yongkang Office in Tainan	Subsidiary	GREENET	RECHARGE POWER	WEISHENG	NEXUS MATERIALS
Place		Neihu District in Taipei City	Xuejia District in Tainan City	Yongkang District in Tainan		Neihu District in Taipei City	Neihu District in Taipei City	Neihu District in Taipei City	South District in Tainan City
Water resource pressure		Mid-to-low	Mid-to-low	Mid-to-low		Mid-to-low	Mid-to-low	Mid-to-low	Mid-to-low
Physical risk (water volume)		Mid-to-high	Mid-to-high	Mid-to-high		Mid-to-high	Mid-to-high	Mid-to-high	Mid-to-high
Physical risk (water quality)		Mid-to-high	Mid-to-high	Mid-to-high		Mid-to-high	Mid-to-high	Mid-to-high	Mid-to-high
Reputation and transition risks		Low	Low	Low		Low	Low	Low	Low
Overall risk value		Low	Low	Low		Low	Low	Low	Low

Water Consumption by Office Operations

J&V Energy values water resource management and conservation measures. In 2024, the total water consumption of offices and business locations was 1.678 million liters[Note], mainly from the daily use by employees and partially from the use by visitors. The operation of the Company has no production procedures, and there were no wastewater/sewage-related procedures generated. Water sources used by offices were for domestic use, and water was discharged into sewage treatment plants through underground sewers after daily use and had a relatively limited impact on surrounding environments and communities. In the future, J&V Energy will further strengthen its water resource management system and actively provide guidance to subsidiaries to commence water consumption inventory. It will continue to improve water efficiency through systematic data monitoring and analysis to realize the water conservation targets and the commitment to sustainable development.

Note: The data excludes the office in Yongkang District, Tainan. The office is in the nature of a lease, and only 7 persons were appointed. Also, the lease expenses already covered the water withdrawal expenses, and the Company is unable to obtain the certificate for detailed water volume (m3); therefore, the office is not included in the scope of statistics.

Water Consumption by PV Project Sites

For PV project sites invested and held by J&V Energy, including ground-mounted, rooftop, and floatovoltaics, the cleaning for solar panels is arranged quarterly or biannually based on local climate features and weather. The module cleaning is performed using water and a high-pressure water cannon, along with washing tools, to remove surface sundries and dirt from the module; therefore, it does not cause environmental pollution. After cleaning, the water resources will be directly discharged.

Energy Conservation Measures of J&V Energy (including offices and PV project sites)

1. Produce visual slogans, stickers, and posters to enhance the promotion of water conservation for employees at the headquarters and branches.
2. The Taipei Office fully adopted water conservation equipment (i.e., water-saving toilets and sensor faucets), and water conservation measures were fully implemented to maintain the flushing volume of water from toilets and the output volume of water from faucets within the available scope.
3. Encourage employees to propose water conservation measures and plans.
4. Regularly carry out inspections and repair of pipelines to avoid leakage.
5. Introduce aquaculture water resource circulation technology for fishery and electricity symbiosis project sites.
6. Introduce automated water-saving cleaning systems for water consumption of PV project sites.

Water Withdrawal, Water Discharge, and Water Consumption

In response to the business expansion in 2024, J&V Energy recruited more laborers and expanded office spaces; the overall water consumption requirements increased as compared to 2023, exhibiting the continuous growing trend of its operating scale. In the future, we will continue to enhance water conservation management, improve water consumption efficiency, and move toward the targets of green offices and sustainable operation through various energy conservation and carbon reduction measures.

Water Withdrawal by Water Source and Water Quality Indicator

Water source	Water quality indicator	Water withdrawal (unit: million liters)			
		2023		2024	
		All regions	Regions with water resource pressure	All regions	Regions with water resource pressure
Water from third parties	Freshwater	1.228	NA	1.678	NA
	Other water	0	NA	0	NA
Total water withdrawal		1.228	NA	1.678	NA
Ratio of water withdrawn from regions with water resource pressure		0%		0%	

Note 1: Reclamation ratio = volume of water reclaimed ÷ total water withdrawal of all regions

Note 2: The data only includes the scope of the parent company only financial statements of J&V Energy

Water Discharge by Discharge End Point and Water Quality Indicator

Discharge endpoint	Water quality indicator	Water discharge (unit: million liters)			
		2023		2024	
		All regions	Regions with water resource pressure	All regions	Regions with water resource pressure
Water from third parties	Freshwater	1.228	NA	1.678	NA
	Other water	0	NA	0	NA
Total water discharge		1.228	NA	1.678	NA

Water Consumption in the Most Recent Two Years

Item	Water consumption (unit: million liters)			
	2023		2024	
	All regions	Regions with water resource pressure	All regions	Regions with water resource pressure
Total water withdrawal	1.228	NA	1.678	NA
Total water discharge	1.228	NA	1.678	NA
Total water consumption	0	NA	0	NA
Ratio of water consumption in regions with water resource pressure	0%		0%	

4.5 Supplies and Waste Supervision

Procurement of Supplies

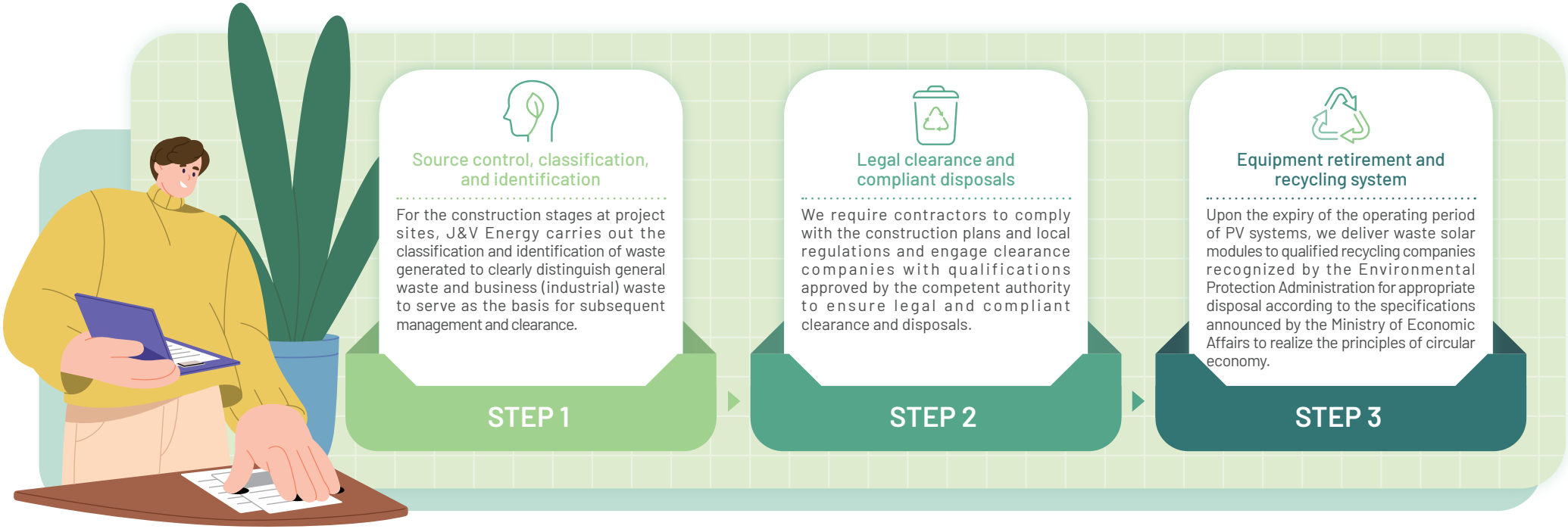
The scope of business of J&V Energy is mainly the installation of PV projects; solar modules and inverters are the main procurement items for the equipment at project sites; supplies used are not renewable raw materials.

Supply Statistics of J&V Energy

Supplies	Unit	Whether it is renewable	2024
Solar module	Piece	Non-renewable	5,653
Solar inverter	Unit	Non-renewable	24

Waste Management

Before engaging a contractor to implement waste clearance, J&V Energy shall perform the following auditing steps to duly fulfill its waste management responsibility. The Company's waste processing methods comply with regulations and its management procedures. In 2024, there was no punishment imposed by the competent authority due to pollution control.



After completing waste clearance and disposal, the Company requires the clearance and disposal companies to provide certifying documents for appropriate disposal, including clearance slips, disposal records, or recycling certificates, to serve as evidence of compliant disposal. This measure not only improves the traceability and transparency of the overall waste management process but also is beneficial for enhancing the internal audit system and sustainability performance follow-ups, exhibiting the implementation of and commitment to environmental responsibility.

Waste Management and Disposal Methods

Stage	Waste	Disposal method
Construction period	General waste Waste wood and paper in the construction stage	It can be placed with domestic waste and recycled like general waste.
	Business waste Metal blocks, supporting parts, waste plastic pipes, PV parts and components, and waste oil	Can evaluate whether to include spare parts or consumables for management or return to the original supplier for recycling/return.
After the expiry of the operating period	PV module	After the expiry of the operating period, the PV systems are handed over to suppliers qualified by the Environmental Protection Administration according to the regulations of the Ministry of Economic Affairs for recycling and disposal.

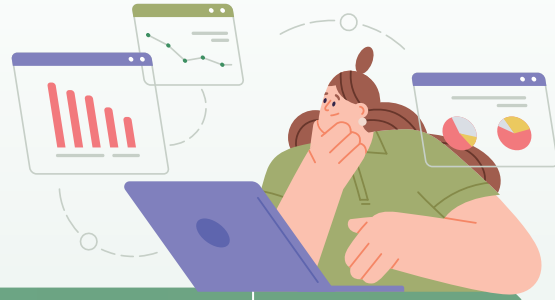
J&V Energy's Waste Management Strategies and Targets

Management strategy	Starting year of the strategy	Management target	Control measure	Future action plan
Waste material consumption control	2023	Control the waste of engineering materials below 1% through systematic engineering management and use the supplies saved as spare parts.	Achieve a construction material consumption of less than 1%, and the supplies saved are planned to be used as spares.	Set up various waste recycling and disposal facilities (i.e., waste placing area).
Waste recycling and disposal measures	2023	Use packaging materials and accessories for transportation or shipping repeatedly.	Duly use pallets for recycling and repeated use.	Can be used as temporary paving in the material storage space.
		Replaced materials may reinforce the existing project sites through restructuring and reformation. The majority of waste is valuable supplies that can be directly recycled by professional companies.	Replaced materials may be used by project sites through restructuring and reformation.	Require contractors to recycle and dispose of 100% of waste.

Waste Clearance and Disposal

The total waste generated by the Company in 2024 was 13.50 tons, which was non-hazardous waste.

The waste generation of the year was reduced by **65%** as compared to 2023, mainly due to **the reduction of waste generation and the recycling** and **reuse of valuable waste**.



Business Waste Volume Generated and Transferred

Year	Item[Note]	Waste classification	Type	Subtotal of generation volume (ton)	Total generation volume (ton)	Disposal volume transferred (ton)
2024	Non-hazardous business waste	General waste	Waste wood	2.16	13.50	13.50
		Business waste	Construction mixture (concrete blocks, waste sand, and waste rocks)	11.34		
2023	Non-hazardous business waste	General waste	Waste wood materials, paper, and general domestic waste	25.50	38.50	38.50
		Business waste	Metal waste, waste plastics, waste PV parts and components, and waste oil	13.00		

Note: The classification method for hazardous and non-hazardous materials is subject to local regulations in different locations.

Waste Transferred from Disposal Based on Recycling Operations

Year	Item	Disposal/transfer method	On-site (ton)	Off-site (ton)	Subtotal (ton)
2024	Non-hazardous business waste	Recycled for reuse	0.00	13.50	13.50

Note: On-site refers to waste that the Company makes in-house, and off-site refers to waste that an external third party is engaged for clearance and disposal.

4.6 Ecological Conservation

Corporate Commitment to Biodiversity

J&V Energy supports global biodiversity conservation covenants. To facilitate sustainable ecological development and realize SDGs (SDG7 Affordable and Clean Energy, SDG13 Climate Action, and SDG15 Life on Land), its natural environment and biodiversity development strategies focus on three major themes of "environmental sustainability, ecological conservation, and local co-prosperity." When developing project sites, we adhere to the principle of not changing the original topography, evaluate the natural environment and biodiversity, and develop renewable energy with multiple uses in one place to allow the co-prosperity of green energy, the environment, and ecology and develop with the local area. Therefore, we published the "biodiversity and zero deforestation policy" to exhibit our determination to invest in natural ecological conservation. The policy was implemented after being approved by the Board and published on the Company's website.

Project Site History and Evaluation System

STEP 1

Planning and design stage: Conduct environmental and social inspections of the proposed project site to be developed, analyze and summarize ecological issues, and develop countermeasures in accordance with PV planning and design to minimize the impact on the surrounding environment and society. The process is as follows:

Data collection for the surrounding area of the project site	On-site investigation to confirm impacts	Development of countermeasures
• Ecological database records • Surrounding investigation report	• Habitat mapping • Animal and plant survey • Clarify ecological and cultural issues	• Ecological standard value evaluation • Set countermeasures • Monitoring the effects of countermeasures

Based on the developed countermeasures, measures including PV design adjustment, increasing monitoring items, and habitat preservation were adopted to reduce the ecological impact of environmental development.

STEP 2

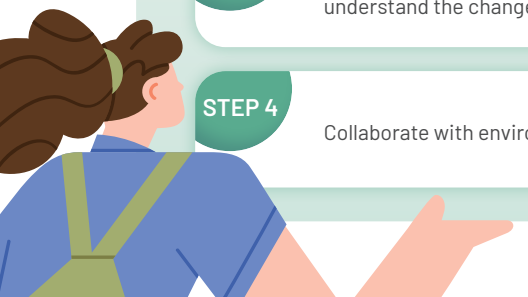
Construction: Monitor the ecology and water quality of areas surrounding the project site to ensure safety and changes in the surrounding environment during the construction period. Accumulate and record data on animal and plant groups and species background values to understand the environmental changes at the project site, and provide this information to relevant units for reference.

STEP 3

Operating period: Continue to monitor the ecology and water quality to ensure the safety of the water environment during the operating period. Continue to understand the changes in bird flocks surrounding the project site and make use of the break of fishery ponds.

STEP 4

Collaborate with environmental groups to plan and select suitable habitats for ecological compensation.



Ecological Monitoring Planning and Survey

Wanggang Fishery and Electricity Symbiosis Field in Chiayi

The project is a project site that J&V Energy developed in 2024, and the environmental and social assessment was introduced in 2023 Q4 in advance to carry out systematic analysis and compilation for ecology-related issues, which were combine with the PV design and planning to formulate concrete mitigation and response measures, striving to minimize the potential impact on the surrounding environment and society.

After the completion of the project site, we will continue to conduct ecological and water quality monitoring to ensure the quality of the water environment and a stable ecosystem during the operating period, demonstrating the Company's active commitment to sustainable development and environmental protection.

I. Bird Ecological Survey

01 Survey Method

The project site is mainly located in Haomei Village, Budai Township, Chiayi County. It is in the coastal area for aquaculture and salt industries and is not in a nationally important wetland. The survey area is approximately 308.44 hectares (including the base of the project site and neighboring fishponds, forests, swamplands, and sparsely vegetated areas). The survey was conducted along the main roads and fishponds to record the birds that appeared in the fishponds one by one. 8x to 10x binoculars were used for observation, together with the identification of bird sounds, so as to record the species and quantity of birds that were seen and heard.

02 Survey Period

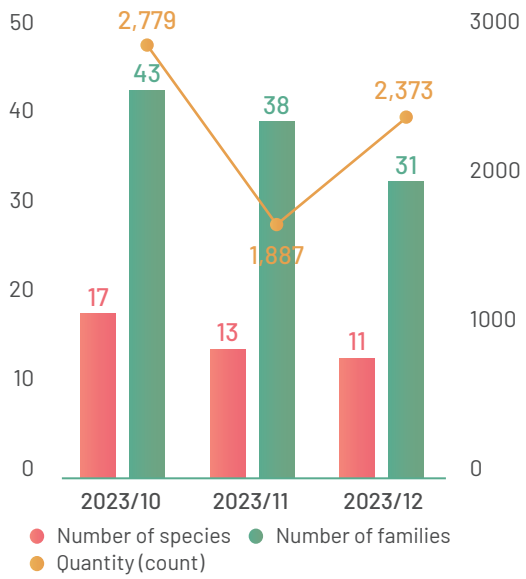
- October 16 to 19, 2023
- November 14 to 16, 2023
- December 12 to 14, 2023

Conduct monthly on-site bird and bat surveys

03 Survey Results

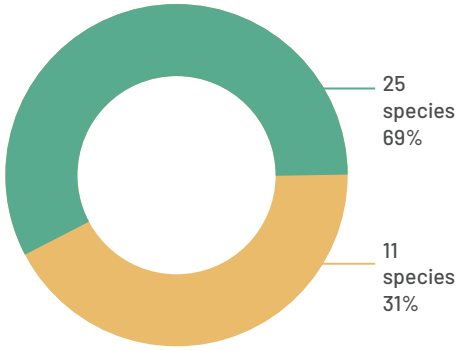
The scope of the survey includes the base of the project site and the neighboring areas, totaling 308.44 hectares. Except for fishponds to be developed, the neighboring areas have less human interference and retain a complete mangrove that comprises avicennia marina and kandelia, as well as brackish grassland or wet grassland (close to natural habitats). The main ecological function of areas within the scope of the survey is to provide temporary habitats and feeding grounds for migratory birds between autumn and spring. During the survey period, a total of 7,039 birds of 55 species in 22 families were recorded within the scope of the survey, and the families with the most quantity were ardeidae, scolopacidae, and recurvirostridae), and the species with the most quantity were little egrets (1,498 counts), black-winged stilt (625 counts), and chlidonias hybrida (599 counts). In terms of bird species composition, there are 11 species of resident birds (including migratory birds with resident individuals) (accounting for 31%) and 25 species of migratory birds (accounting for 69%).

Bird Survey Results



Bird composition

A total of **7,039** birds of **55** species in **22** families were recorded



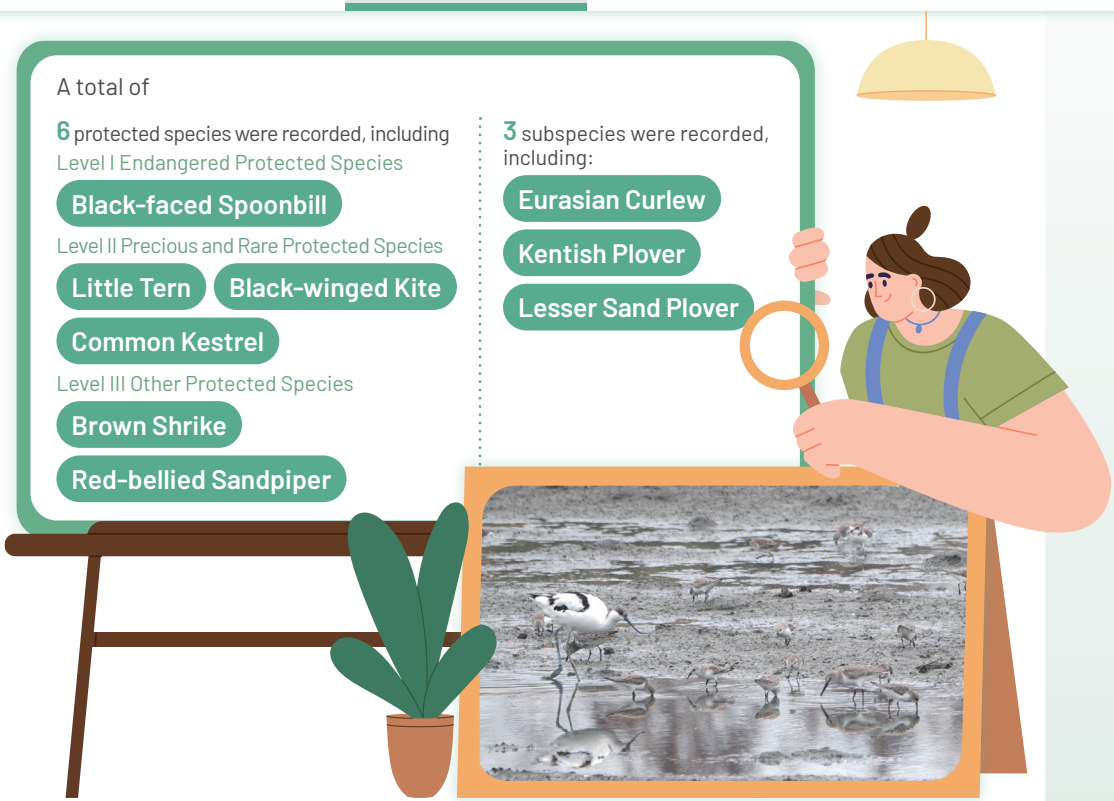
Chlidonias hybrida **625** counts

Black-winged stilt **599** counts

Little egrets **1,498** counts

The survey recorded a total of 6 protected species, including level I endangered protected species, the black-faced spoonbill; level II precious and rare protected species, the black-winged kite, common kestrel, and little tern; and level III protected species requiring conservation, the brown shrike and red-bellied sandpiper. Among the protected species, the black-faced spoonbill recorded the most, with 7 individuals, while all other protected species only recorded one count. In addition, there were 3 endemic subspecies, including the black drongo, Chinese bulbul, and Tawny prinia.

Survey month		2023/10	2023/11	2023/12	Total of the survey
Protected species	Level I (species/count)	0/0	0/0	1/7	1/7
	Level II (species/count)	2/5	3/36	2/12	3/53
	Level III (species/count)	1/4	1/8	0/0	2/12
Endemic subspecies (species/count)		3/8	0/0	0/0	3/8



04 Bird Ecological Analysis

The eBird database only contains data from 2020 onwards, within the scope of the survey, comprising a total of 1,513 observation records. We used the maximum single quantity of each category recorded in the record of each year from 2020 to 2023 and calculated the average after having the sum to calculate the analysis result of the ecological background value of each category.

Category		Platalea leucorodia	Waders	Anatidae	Ardeidae	Laridae	Other waterbirds
	Description of groups	Black-faced spoonbill and platalea leucorodia	Recurvirostridae, scolopacidae, and charadriidae	Anatidae	Ardeidae	Laridae	Haematopodidae, ciconiidae, rallidae, jacanidae, podicipedidae, phalacrocoracidae, and rostratulidae
Ecological background value (count)	Scope of the project site	2.33	53.67	12.00	104.67	32.67	4.33
	Scope of survey	2.33	184.33	12.00	194.33	92.00	7.67
	eBird database Scope of survey of the plan	2.50	42.50	2.75	19.25	12.75	5.00

II. Plant Ecological Survey

01 Survey Method

We conducted an on-site survey of plant ecology within the survey's scope from October 25 to 27, 2023. We walked through the fishpond areas within the scope of the survey and adopted the visual inspection of all fishpond areas that are visible within the scope of the survey to carry out a general survey for the environment of each fishpond and particularly carry out key plant survey for ponds with low maintenance and management, fishponds, small waterways, and other habitats with potential rare plants.

02 Survey Results

During the survey period, a total of 119 species of vascular plants were recorded, and approximately 50% of them were herbaceous plants (57 species). There were a total of 61 indigenous species and endemic species, accounting for approximately 51.3% of the species under survey. One endemic species, the Taiwanese puncture vine, was recorded during the survey.

	Number of families	Number of species	Herbaceous	Arbor	Shrub	Vine	Indigenous	Endemic	Naturalized	Planted	Ratio of Indigenous species
Dicotyledons	34	86	27	22	20	17	42	1	40	3	50%
Monocotyledons	6	33	30	2	1	0	18	0	12	3	54.5%
Total	40	119	57	24	21	17	60	1	52	6	51.3%

03 Key Plants

Five key plants were discovered within the scope of the survey, which were ruppia maritima, avicennia marina, kandelia, Taiwanese puncture vine, and Taiwan chloris. Among them, apart from ruppia maritima, the remaining four species are also national near threatened (NNT) species evaluated in the Red Book. Even though ruppia maritima was evaluated as a national lease concern (NCL) in the Red Book, it prefers to grow in fishponds and salt fields with brackish water and is easily affected by environmental changes (cannot grow without water storage); therefore, it is also included as a key species.

III. Countermeasures for Ecological Maintenance

The project is in the preparation stage, and the construction has not yet commenced. After the survey, it can be judged that the biodiversity richness (birds and others) is high within the scope of the project site base. Apart from avoiding the original natural mangrove scenery, the construction will be conducted in stages to avoid the migration period of migratory birds. The management measures during the operating stage and the aquaculture content are included in the project plan to respond to the effects brought by the installation of PV. If cooperating with aquaculture farmers, we will carry out water level adjustment and control and other ecological gain measures to improve the ecological functions of fishpond areas that are not shielded by solar panels and cooperate with the monitoring plan to continue adjusting and examining the system.

The countermeasures are as follows:

1. Apart from avoiding kandelia, a native plant of the waters, we protect species of key plants through on-site retention of partial vegetation individuals, variety, or surface soil during the course of project site selection.
2. During design and planning, the PV modules shall be concentrated as much as possible to preserve areas available for waterbirds.
3. During the operating period, we negotiate with fishermen to maintain a low water level for 4 to 6 days or longer, allowing waterbirds to feed on small fish and shrimp.
4. We carried out initial communication with the Kaohsiung Wild Bird Society, and the off-site compensation matters are estimated to be discussed in 2025.

Beimen Fishery and Electricity Symbiosis Field in Tainan

The project is a field of joint cooperation between J&V Energy and affiliate Enfinite Capital Taiwan Solar I Co. Ltd.. The ecological conservation project was coordinated and planned for between the representatives of both parties and formally implemented after being reviewed and approved by the board of directors of Enfinite Capital. J&V Energy was responsible for the labor planning and leading the implementation of the project, and Enfinite Capital provided funds and engaged a third party to carry out relevant surveys; both parties jointly participated in the implementation.

The project was completed in 2023. During the operating period, the Company continued to carry out ecological and water quality monitoring to ensure the safety and stability of the water environment. Additionally, we have been observing the changes in the bird flock in the neighborhood of the project site and how they utilize fishponds as habitats. Meanwhile, the Company joined hands with the Qigu-Jiangjun Salt Pan Wetland Restoration Alliance to plan for and select 1,600 hectares of salt pan wetland in Qigu and Jiangjun Districts to implement ecological compensation measures, realizing the SDGs for the co-existence of human beings and nature.

I. Waterbird Ecological Monitoring

The waterbird flock at fishpond areas in Beimen District, Tainan, is the main ecological issue. The ecological monitoring of the project is mainly the bird flock. In 2024, we recorded and analyzed the migration and stay of waterbirds within the operating scope of the PV project site (the "project site") after the completion of construction. After the survey, the activity model of local birds and the operating behaviors of the aquaculture industry are closely related. The birds mainly concentrate at sunbathing pools or fishponds with low management for feeding. The ecological interaction shows the high adaptivity of waterbird flocks to the activity environments of people. The Company also planned for friendly measures for bird activities based on the long-term monitoring results.

II. Monitor Time and Space Changes of Bird Flocking

Waterbird groups mainly move in flocks, and they mainly appear in intertidal zones, offshore wetlands, fishponds, and other environments. These birds move across different habitats and rely on local ecological conditions to feed, breed, or stay temporarily. Particularly for intertidal zones and offshore wetlands, when the full tide comes, waterbirds concentrate at areas that are higher and less likely to be drowned as temporary resting venues (i.e., high riverbanks, fishponds with low water levels or in sunbathing areas, and embankments. According to the scope of the survey of the monitoring plan, the Keliao Section, Baoji Section, Yonglong Section, and Xidiliao Section (Shanliaowan Sub-section) in Tainan City are fishpond environments in the neighborhood of the coast, and such areas become material habitats used by waterbirds. Waterbird flocks in the project site area are easily affected by the fishpond management method and the tides, rather than remaining in fixed areas. Therefore, waterbird flock surveys adopt the line transect method and the counting flocks method.

J&V Energy referred to bird survey lists, migration attributes, and species identification in accordance with the "2023 Checklist of Birds of Taiwan" published by the Taiwan Wild Bird Federation in 2023. In addition, the list of protected species referred to the List of Protected Land Animal Species published by the Council of Agriculture, Executive Yuan, in 2019. In addition to species and quantity statistics, congregation changes were also analyzed by guilds. According to the taxon and habitat preferences of waterbirds, they are mainly divided into six guilds.

Waterbird Ecological Monitoring Targets for Fishpond Areas in Beimen District, Tainan

No.	Monitoring items	Monitoring methods
1	Monitor the differences in bird flocks before construction, during construction, and after construction	Monitor changes in time and space of bird flocks, compare through three sample lines at the project site and three comparison lines, and monitor the impact of construction on bird flocks.
2	Monitor the use of fishponds by waterbirds during high tide	Have static observation of the species and quantity of birds that fly into fishponds from wetlands upon the full tide.
3	Evaluate the relationships between the use of bird habitats and the fishery and electricity symbiosis model, specific structures, and aquaculture operation for examination and adjustment of operating management on a rolling basis	From the fishponds neighboring the project site, compiled 5 types of aquaculture planning models, and we selected 3 fishponds to additionally record bird behaviors and staying locations and re-collected the background data during the construction stage for the benefit of the statistical analysis in the subsequent operating period.

Waterbird group and taxon

No.	Coastal cluster taxon	Taxon included	Preferred habitat
A	Anatidae, podiceps and podicipediformes, and cormorant	Anatidae, podicipedidae, and cormorant	Deeper waters
B	Ardeidae and threskiornithidae	Ardeidae and threskiornithidae	Various habitats, such as forests, wetlands, river courses, banks, and fishponds
C	Rallidae, rostratulidae, jacanidae, and alcedinidae	Rallidae, rostratulidae, jacanidae, and alcedinidae	Various habitats, such as wetlands, river courses, thickets, and fishponds
D	Waders	Recurvirostridae, haematopodidae, haematopodidae, and scolopacidae	Wetlands, river courses, fishponds, and other habitats
E	Laridae	Laridae	Wetlands and fishponds
F	Seabirds	Fregatidae and other seabirds	The ocean outside the seawall, open water wetlands, and fishponds

III. Analysis of Bird Flock Changes

Waterbird surveys provide baseline data for ecological monitoring and before-after comparison. By setting transects inside and outside the project site, recording, and adopting static observation, the Company established the waterbird diversity and flock composition background within the scope of the project site before the PV development; we can make comparisons during and after PV construction. The transect records of waterbirds in the control group outside the scope of the project site can be used as a reference for the fluctuations of wild bird volume in the macro environment to assess whether PV project site development has changed the number or structure of waterbirds in the fishpond.

01 Survey Period

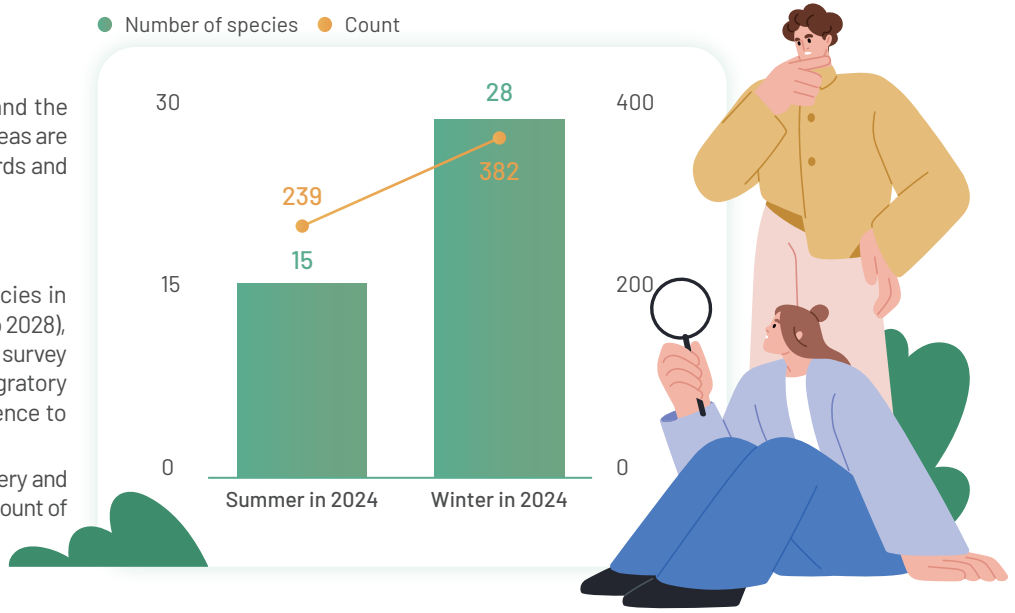
The waterbird survey was performed once each summer and winter in 2024, totaling two times.

The basic information of the waterbird survey results is hereby compiled and presented, and the moving and flocking preferences of migratory waterbirds of concern in the southwest coastal areas are analyzed. Only waterbirds within the fishponds were included in the data analysis, while land birds and survey data not within the scope of the fishponds were excluded.

02 Seasonal Changes of Waterbird Flock Composition

After entering the operating period (2024), we will organize monitoring at different frequencies in different stages. The first stage is waterbird monitoring for winter and summer for 5 years (2024 to 2028), totaling 10 times. The survey in 2024 was conducted twice, in summer and winter. Carry out the survey and record the overall changes in the number of migratory (resident) birds in summer and migratory (resident) birds in Winder within the scope of the project site, flocking preference, and preference to make use of the fishponds of the project site during the power generation operating period.

A total of 621 counts of 31 species in 8 families were recorded at the 6 transects in the Beimen fishery and electricity symbiosis Project site and the surrounding control group in 2024. The average monthly count of waterbird species of winter migratory birds is higher than that of summer migratory birds.



IV. Overall Survey Results

Season	Cycle	Investigation results	Protected species records
Summer in 2024	Summer (June)	The 6 transects set up for the survey of the period recorded **239** counts of **15** waterbird species in **7** families. Scope of the survey: Mainly the environment of abandoned salt fields and various fishponds. • Most fishponds have transitioned to a normal aquaculture operating state with a higher water level, which is quite different from the abandoned fishponds with a long-term low water level that were previously suitable for use by waders before construction. Such fishponds are not environments that general waterbirds can adapt to and are not favorable for use by waterbirds, except for ardeidae.	A total of **one** protected species was recorded in the survey this season, the precious and rare **level II protected** bird **Little Tern in the laridae family**
Winter in 2024	Winter (December)	A total of **382** counts of **28** waterbird species in **8** families were recorded for the period (December). Scope of the survey: The project site mainly includes the environment of abandoned salt fields and fishponds • Partial fishponds with early harvest attracted dunlin and short-legged waterbirds due to the low water levels. • There were witness records of saunders's gull and pandion haliaetus.	A total of **two** protected species were recorded in the survey this season, the precious and rare **level II protected** birds **Saunders's Gull in the laridae family** and **Osprey in the osprey family**

V. Ecological Maintenance and Compensation Practices

01 Waterbird-Friendly Measures

The project site in Beimen, Tainan, has been completed and entered the operating stage. The operating plan maintains the initial aquaculture model, sunbathing pool cycle, and other measures to ensure that fishponds maintain their ecological functions. We cooperated with aquaculture farmers to maintain a low water level (5 to 20 cm) after the harvest in winter and maintain it for 4 to 10 days or above without throwing in tea residue to allow small fish, shrimp and shellfish to live, for the benefit of waterbirds' feeding. The Company witnessed multiple black-faced spoonbills when conducting the regular patrol in December 2024, showing that keeping a low water level can attract waterbirds.

02 Habitat Compensation Plan

The Company cooperated with the Qigu-Jiangjun Salt Pan Wetland Restoration Alliance to implement a habitat compensation plan on 1,600 hectares of salt pan wetland that it signed a contract with the National Property Administration for adoption for at least 20 years to promote the establishment of the basic data of salt fields and wetlands, hydrologic survey, the recovery of the waterway functions in salt fields and tidal channels, and satellite positioning research of migratory birds and organize citizen science activities and environmental education courses in the hope of improving environmental load and biodiversity, promoting environmental education in combination with local communities, and committing to the development of sustainability goals.

Bird and Water Body Survey Achievements in 2024

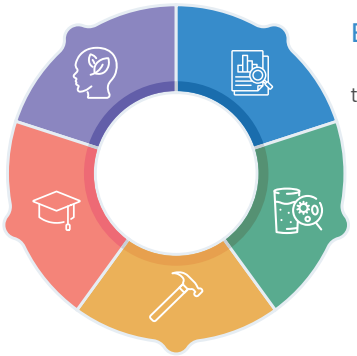
The bird survey (93 sample areas) recorded a total of 94,701 counts of 112 bird species; there were two endangered protected species: black-faced spoonbill and nordmann's greenshank, eight precious and rare species: eurasian spoonbill, crested myna, little tern, osprey, black-winged kite, saunders's gull, eEurasian goshawk, and ring-necked pheasant, and seven other species to be protected: numenius arquata, calidris tenuirostris, lanius cristatus, calidris canutus, black-tailed godwit, oriental pratincole, and numenius madagascariensis. There were six species that are not the protected species above but specified as vulnerable in the Red List of Birds of Taiwan, including anas crecca, calidris ruficollis, limosa lapponica, long-tail shrike, calidris alpina, and mareca falcata. There were three species near threatened, including pluvialis squatarola, gray-tailed tattler, and greater sand-plover.

The water body survey recorded 97 vascular plant species of 84 genera in 37 families and 31 fish, atelocerata, and zoobenthos species of 29 genera in 23 families.

Water quality monitoring was performed once. The water temperature was between 29.5°C and 33°C , the salinity was between 23.9 and 29.5 psu, the conductivity was between 37.2 and 45.2, the pH value was between 7.8 and 8.4, and the dissolved oxygen was between 3.81 and 7.14. The collection and analysis of environmental data will serve as a material reference and basis for the promotion of habitat improvement measures, subsequently to ensure more targeted operations and effects.

The funding of the survey was mainly self-raised by the Qigu-Jiangjun Salt Pan Wetland Restoration Alliance, the implementation department and partial funding support was provided by Enfinite Capital, an affiliate of J&V Energy, to facilitate the survey results.

Promote Conservation, Education, and Sustainable Development through Five Major Fields



Smart use
Investigation of fishing activities and catch surveys.

Ecological survey
Surveys of birds, terrestrial plants, fish.

Education promotion
Citizen science, wetland experience, and ecology courses.

Hydrological management
Water quality survey, monitoring, and management.

Habitat creation
Restoration and creation of breeding grounds for summer migratory birds.

The bird survey recorded a total of **94,701** counts of **112** bird species

2 endangered protected species
- Black-faced Spoonbill
- Nordmann's Greenshank

8 precious and rare species
- Eurasian Spoonbill
- Crested Myna
- Little Tern
- Osprey
- Black-winged Kite
- Saunders's Gull
- Eurasian Goshawk
- Ring-necked Pheasant

03 Ecological Maintenance Plans and Actions

Ecological environment maintenance operations are regularly conducted at development project sites, and short-, mid-, and long-term goals are set:

Short-term: To maintain the protection of the ecological environment, we have established an environmental monitoring system at project sites to regularly inspect the ecological environment around the project sites.

Mid-term: Based on the monitoring results, we optimized the management model during the operating period and created the co-existence and co-prosperity of the fishery industry and waterbirds.

Long-term: Conduct ecological impact assessment and ecological design during the development stage and take active measures (i.e., implementing off-site compensation and establishing environmental protection mechanisms) after completion to strengthen local participation.