

Empowering  
**INNOVATION**  
Embracing  
**SUSTAINABILITY**

**2024  
Sustainability  
Report**



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# 10 Years of PacificLight




Over 50,000 GWh of power generated from our power plant since 2013.



Capable of powering over 1,200,000 households 24/7.



First plant in Singapore to achieve over 60% efficiency.



Largest project in Singapore to be certified as a Clean Development Mechanism (CDM) project under United Nations Framework Convention on Climate Change (UNFCCC).



Over 2 million tCO<sub>2</sub>e of carbon credits generated since 2014.



Over 80,000 tonnes of carbon emissions avoided annually due to internal energy efficiency initiatives.



Engaged over 25,000 students under our flagship Crea8 Sustainability community outreach programme.





# 10 Years of PacificLight

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2013

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- Commencement of commercial operations of PacificLight's 800MW power plant on Jurong Island, Singapore's first 100% LNG-fuelled power plant.

- Certified as a Clean Development Mechanism project under the UNFCCC.
- Obtained the Green Mark Award from the Building and Construction Authority (BCA).
- Received the "Asian Power Gas Power Plant of the Year" award.

- One of six founding members of the World Energy Council Singapore Chapter.
- Launch of PacificLight's Crea8 Sustainability community programme.

- A pioneer participant in the Singapore Open Electricity Market.
- Completion of our first solar installation project under our Sustainergy programme with a total capacity of 2.37MW.

- Awarded a conditional import licence by the Energy Market Authority (EMA) as part of the consortium, Pacific Medco Solar Energy (PMSE), for a 100MW pilot solar import project from Indonesia to Singapore.

- Granted a Conditional Approval by EMA for a 600MW solar import project from Bulan Island in Indonesia to Singapore under PMSE.

- PacificLight Power became a 30% shareholder in Sobono Bioenergy, the 50% owner of REXus Bioenergy, who are developing a 13.2MW Wood Waste-to-Energy (WWtE) plant.
- REXus Bioenergy executed a 10-year agreement with Google for the offtake of the renewable energy.
- PacificLight, in partnership with Univers, were appointed by JTC to design, build and operate Singapore's first district-level Smart Grid at Punggol Digital District (PDD).

- Awarded by EMA a 25-year Fast Start contract to build, own and operate a 100MW, hydrogen-ready, gas turbine facility.
- First power plant in Singapore to exceed 60% efficiency with the successful completion of the Advanced Turbine Efficiency Project (ATEP).
- PMSE was granted a Conditional Licence by EMA for the 600MW solar import project from Bulan Island, Indonesia.



## A Decade of Innovation, Sustainability, and Progress

2024 marked a momentous year for PacificLight as we celebrated 10 years of powering Singapore's energy transition. Over the past decade, we have evolved from a reliable and efficient power generator into a leader in sustainable energy solutions, innovation, and community impact. This milestone reflects the dedication of our team, the strength of our partnerships, and the trust placed in us by our stakeholders.

From the commissioning of our state-of-the-art 830MW Combined Cycle Gas Turbine (CCGT) facility to becoming the first plant in Singapore to exceed 60% efficiency through the Advanced Turbine Efficiency Package (ATEP), PacificLight has continually raised the bar for operational excellence. Today, our plant powers over 1.2 million households, meeting Singapore's energy demands with unmatched reliability and sustainability.

As Singapore accelerates its transition toward net-zero emissions by 2050, PacificLight has strengthened its role as a key enabler of this transition. Our ATEP plant upgrade has reduced carbon emissions by over 60,000 tonnes annually, equivalent to taking 9,300 cars off the road. Our renewable energy initiatives, including the 600MW Bulan Solar Import

Project, and development of Singapore's first Waste Wood-to-Energy Plant in collaboration with Google and REXus Bioenergy, exemplify our leadership in sustainable innovation. Additionally, we were honoured to be awarded the development of a new plant, scheduled for completion by December 2028. This cutting-edge facility will feature hydrogen-ready turbines and Battery Energy Storage Systems (BESS), further solidifying PacificLight's role in enhancing grid reliability and supporting Singapore's clean energy ambitions.

We continuously review and enhance our governance processes, and in FY2024 we implemented enhanced cybersecurity measures to safeguard sensitive data.

Our sustainability journey extends beyond operations into meaningful community engagement. The Crea8 Sustainability Programme has empowered over 25,000 students since 2016, inspiring the next generation to tackle pressing environmental challenges. In 2024, our community engagement extended through initiatives like the Charity Cycleathon, raising funds for food aid programs, and the kayak river cleanup, removing waste from Singapore's waterways. These activities highlight how we integrate environmental stewardship with social responsibility, driving positive change within and beyond our organisation.

This report serves as a reflection on our achievements and a blueprint for our future. Looking ahead, PacificLight is energised by the opportunities to drive the transformation of Singapore's energy sector. We will continue to expand our renewable energy portfolio with initiatives like the Bulan Solar Import Project, explore emerging technologies such as hydrogen-ready solutions, and leverage AI and IoT to optimise efficiency. By fostering partnerships aligned with the Singapore Green Plan 2030 and global ESG standards, we aim to accelerate Singapore's transition to a low-carbon future.

This journey would not have been possible without the trust of our stakeholders, the collaboration of our partners, and the unwavering dedication of our team. Together, we have built a strong foundation for the future, and I am confident that PacificLight will continue to lead the way in creating a greener, more resilient energy landscape. Thank you for your continued support as we embark on this next chapter of PacificLight's journey.

**Yu Tat Ming**  
Chief Executive Officer  
PacificLight Power



PacificLight is a Singapore-based power generation and electricity retail company committed to operational excellence, safety, and environmental stewardship. Operating one of the most advanced and reliable Combined Cycle Gas Turbine (CCGT) power plants in the region, PacificLight plays a key role in supporting Singapore's energy needs while advancing the nation's clean energy transition.

With a strong focus on innovation and sustainability, PacificLight integrates cutting-edge technologies to enhance energy efficiency and reduce emissions. Through its retail arm, PacificLight Energy

(PLE) provides businesses and households with tailored energy solutions to support their decarbonisation goals.

Guided by its core values of excellence, energy, and endurance, PacificLight is a trusted partner in the nation's power sector.

PacificLight is jointly owned by First Pacific Company Limited, a Hong Kong-based investment and management firm, and Meralco PowerGen Corporation (MGen), the power generation arm of the Philippines' largest privately-owned electricity distribution utility, MERALCO.

## Memberships and Pledges

- World Energy Council, Singapore Chapter (since 2017)
- Singapore Business Federation (SBF) (since 2012)
- Singapore Manufacturing Federation (SMF) (since 2014)
- Singapore National Employers Federation (SNEF) (since 2012)
- TAFEP Employers' Pledge of Fair Employment Practices
- SBF Sustainable Employment Pledge (in 2021)
- WorkWell Leaders and SNEF Leadership Pledge for World Mental Health Month (in 2024)
- EmpowerHER Programme Pledge (in 2024)
- Adopted Progressive Wage (PW) Mark Plus (in 2024)
- Sustainable Energy Association of Singapore (SEAS) (since 2018)
- Singapore Carbon Market Alliance (SCMA) (since 2024)
- Adopted Tripartite Standards (from 2019-2024)

# Vision, Mission and Values

## Vision

To be a trusted, innovative, and forward-thinking Singapore energy company that embraces a low carbon future.

## Mission

To be a leading energy supplier in Singapore, trusted by our customers and business partners and dedicated to environmental sustainability through the adoption of low carbon technologies.

## Values

### Excellence



We are driven to achieve exceptional standards across all areas of our business.

### Energy



We proactively seize new opportunities and turn them into reality.

### Endurance



We are determined to succeed in all our pursuits, regardless of the obstacles we face.

## Sustainability Drivers

### Improving Energy Efficiency



### Minimising Environmental Impact



### Ensuring Health & Safety



### Reaching Out to The Community





# Leadership Team

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**Leadership  
team**

## Board of Directors

The primary responsibility of the Board of Directors is to provide the management team with guidance and decisions on strategic plans and policies, major investments and corporate governance.

*As of December 2024*

### Ray C. Espinosa

**Non-Executive Director**

Meralco PowerGen Corporation,  
Vice-Chairman

### Emmanuel V. Rubio

**Non-Executive Director**

Meralco PowerGen Corporation,  
President/Chief Executive  
Officer

### Lucky Jasper B. Virola

**Non-Executive Director**

Meralco PowerGen Corporation,  
Chief Financial Officer

### Yari A. Miralao

**Non-Executive Director**

Meralco PowerGen Corporation,  
Chief Executive Officer of MGen  
Gas Energy Holdings Inc.

### Christopher H. Young

**Non-Executive Director**

First Pacific Company Limited,  
Executive Director

### Joseph H. P. Ng

**Non-Executive Director**

First Pacific Company Limited,  
Chief Financial Officer,  
Associate Director

### Stanley H. Yang

**Non-Executive Director**

First Pacific Company Limited,  
Executive Vice President, Head  
of Corporate Development

### Axton Salim

**Non-Executive Director**

First Pacific Company Limited,  
Non-Executive Director

### Yu Tat Ming

**Executive Director**

PacificLight Power Pte Ltd,  
Chief Executive Officer

## Management Team



### Yu Tat Ming **Chief Executive Officer**

Mr Yu was appointed Chief Executive Officer of PacificLight in September 2009 and is responsible for the business strategy and overall direction of the company. He has worked in the electricity industry for over 40 years and has held senior roles managing the Development, Construction, and Operation of Power Plants in both Singapore and Hong Kong.



### Apurva Suresh Jhalani **Chief Financial Officer**

Mr Jhalani was re-appointed Chief Financial Officer in April 2017, having previously held the position of CFO from 2011-2014. He has over 27 years of experience in Accounting & Finance, specialising in Debt Restructuring, Corporate & Project Financing, Structured Finance and Equity Raising, in addition to Mergers & Acquisitions.



### Abu Bakar Bin Isnin **Chief Operating Officer**

Mr Abu Bakar was appointed Chief Operating Officer in March 2022 and is responsible for the efficient and reliable performance of the company's 830MW power plant. He has more than 35 years of experience in Power Plant Generation, with a focus on implementing best practices for Plant Improvement and Cost Optimisation.



### Geraldine Tan **General Manager, Retail**

Ms Tan was appointed General Manager, Retail in July 2012 and is responsible for PacificLight Energy Pte Ltd, the retail arm of PacificLight. She has over 26 years of experience in the Electricity, Gas and Utilities Sector, having held Senior Management roles in Retail Business Operations, Business Development and Sales & Marketing.



### Teo Chin Hau **General Manager, Portfolio Management**

Mr Teo was appointed General Manager, Portfolio Management in April 2020, and has been with PacificLight since October 2012. He has over 15 years of experience in the Singapore Energy Industry, having previously been involved in Wholesale Trading, Retail Pricing, Gas and Electricity Regulatory Tariff Setting, Regulatory Management, and Portfolio Hedging.



# About the Report

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## Forging Trust



## Energising Innovation



## Driving Sustainability



PacificLight Power Pte Ltd (PacificLight) has published this inaugural voluntary Sustainability Report to coincide with PacificLight's 10th anniversary in 2024.

Covering the period from 1 January 2024 to 31 December 2024 (FY2024), this report references selected disclosures from the Global Reporting Initiative (GRI) Standards, a globally recognised framework for sustainability reporting. The report spans across PacificLight's operations and facilities in Singapore which includes the PacificLight Power generation plant (Plant) and the retail licensee PacificLight Energy Pte Ltd (PLE).

The Company has adopted a progressive approach to its sustainability reporting journey. The topics selected for disclosure in this first report have been based on an industry and competitive review of material topics.

We remain steadfast in our commitment to transparency, accountability, and collaboration with all stakeholders. Please share your thoughts and feedback with us at [contact@pacificlight.com.sg](mailto:contact@pacificlight.com.sg).

"PacificLight is dedicated to upholding the highest standards of corporate governance, ensuring transparency, accountability, and ethical operations across all aspects of our business. Our governance framework is designed to support sustainable growth, foster stakeholder trust, and align with global best practices."

Yu Tat Ming  
CEO

## Compliance and Regulatory Framework

PacificLight rigorously adheres to all legal and regulatory requirements, including those under the Singapore Companies Act, the Energy Act, the Employment Act and the Environmental Protection and Management Act.

As the energy landscape evolves, we actively engage with regulators, industry bodies, and stakeholders to ensure our governance practices meet new and emerging standards.



# Internal Governance

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## Board Oversight and Governance Structure

Our governance framework is anchored by the Board of Directors, which provides strategic direction and oversight. The Board convenes quarterly and receives regular updates from the Executive Committee on operational and financial performance. Supporting the Board are specialised committees that ensure comprehensive governance.

## Key Governance Committees at PacificLight



### Audit and Risk Committee

- Reports to the Board of Directors and are responsible for overseeing the controls for internal risk management and governance.
- Ensures there are effective systems for internal control, financial reporting and risk management.
- Reviews the appointment of auditors and ensures the integrity, accuracy and fairness of the financial statements.



### Informational Security Committee

- Ensures the Information Security Policies are reviewed and updated and that the information assets are adequately protected.
- Primary lead in the investigation of any Information Security Breaches.



### Safety Committee

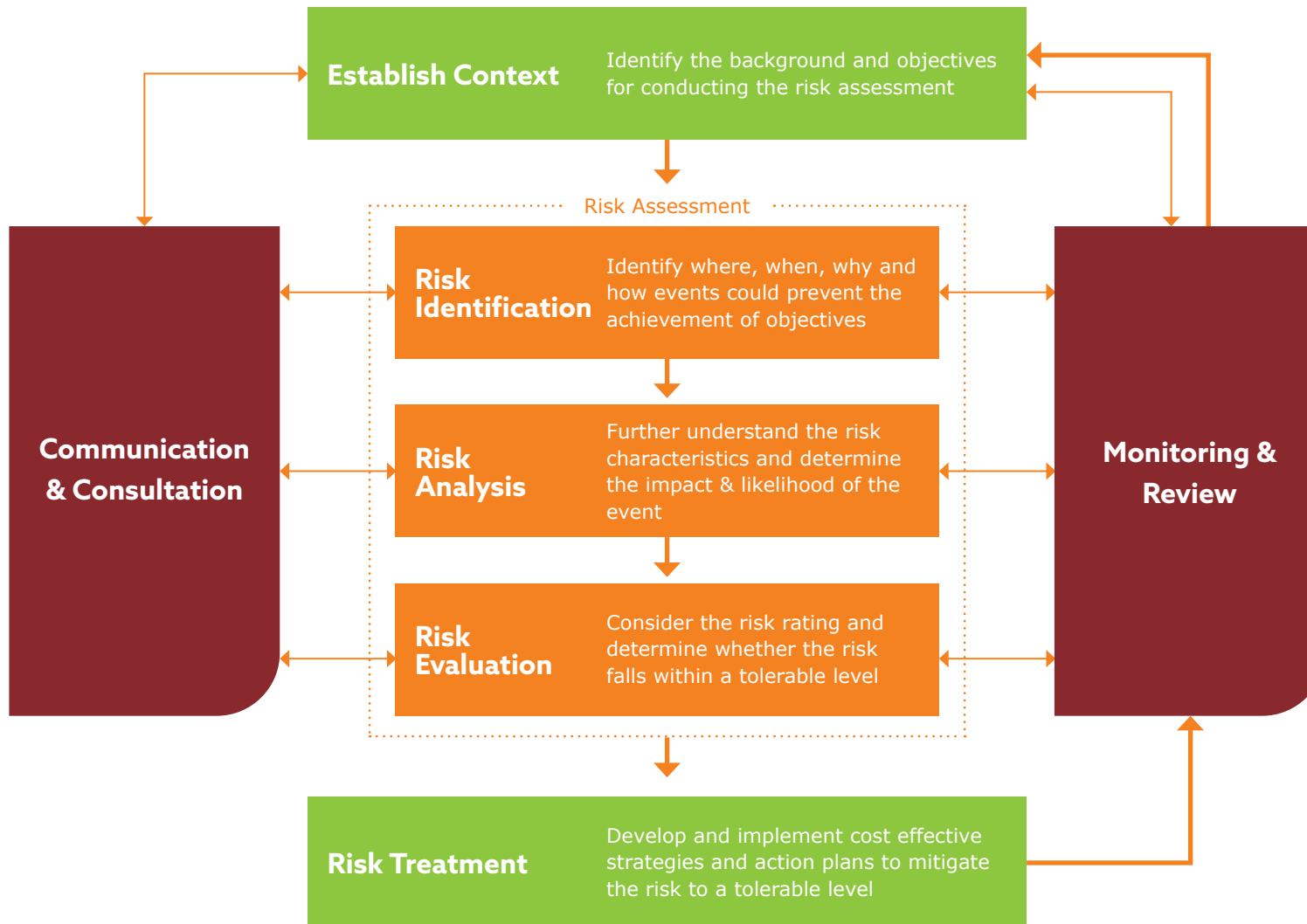
- Chaired by the General Manager, Operations and Maintenance.
- Cultivates a greater sense of safety awareness amongst employees.
- Develops safety education and awareness programmes.
- Discusses safety needs and policies and identifies improvements in work practices.
- The composition, functions and duties of the HSE committee are in accordance with the Workplace Safety and Health Act 2006.



### Sustainability Committee

- Consists of representatives from key departments and operational units; reports directly to the CEO.
- Oversees the development of PacificLight's ESG strategy and performance monitoring for sustainability-related matters.
- Responsible for accelerating the integration of sustainability best practices throughout the company.
- Revises key sustainability metrics for internal and external reporting.

## PacificLight's Risk Management Process



## Enterprise Risk Management

PacificLight and its subsidiaries operate under an enterprise-wide risk management policy and framework to preserve and enhance the organisation's value and assets. We believe that a robust "risk-minded" culture at all levels within the company will ensure the timely identification of potential risks and development of risk mitigation measures.

Reporting directly to the ARC, the Enterprise Risk Management (ERM) team plays a critical role in safeguarding operational resilience, mitigating risks and its impacts on strategy. Company-wide risks are reviewed and analysed by Risk Owners and the ERM team every six months. The ERM team is also responsible for monitoring key risks, and adherence to risk limits. Findings are communicated to ensure that senior management understand the potential impact that might arise in various scenarios. The information additionally strengthens PacificLight's controls and response strategies.





## Whistleblower Policy

PacificLight's Whistleblower Policy and channel provides internal and external stakeholders a platform to report unethical or improper conduct without fear of adverse consequences. Reports can be made in writing to the Receiving Officer at 8 Jurong Town Hall Road, #12-01/06, The JTC Summit, Singapore, 609434; or via email to [whistleblow@pacificlight.com.sg](mailto:whistleblow@pacificlight.com.sg).

All reports are investigated objectively, regardless of the employee's length of service, position, or relationship to the company. The company takes all effort to ensure confidentiality is maintained unless the reporting party is required to make a statement to the relevant law enforcement authorities, or if the company is under legal obligation to disclose the information provided for criminal investigation.

## Policies and Ethical Practices

PacificLight's governance is underpinned by well-defined policies and frameworks, including:

- **Health, Safety, and Environment (HSE) Policy:** Ensures compliance with safety standards and promotes continuous improvement.
- **Energy Policy:** This policy emphasises carbon footprint reduction, energy efficiency, and adherence to environmental regulations in all aspects of business planning and decision-making.
- **Environmental Policy:** Focuses on pollution prevention, resource conservation, and carbon emissions reduction. The policy also promotes stakeholder engagement, employee training, and the integration of sustainable practices in major investments and business decisions.
- **Data Protection and Cybersecurity Policy:** Safeguards customer and organisational data, validated by Data Protection Trustmark certification.
- **Personal Data Protection Policy:** Aligns with Singapore's Personal Data Protection Act, ensuring compliance and safeguarding customer and employee data.
- **Risk Management Framework:** Guides the identification, assessment, and mitigation of risks to ensure operational resilience and sustainability.
- **Contract & Procurement Policy:** Focuses on ethical business practices among vendors and suppliers, covering principles such as integrity, fair competition, and legal compliance.
- **Delegation of Power Policy:** Defines clear accountability and decision-making authority across the organisation to ensure transparency and operational efficiency.
- **Code of Conduct and Business Ethics; Anti-Corruption Policy:** PacificLight's Code details the company's expectations of moral and ethical standards for employees by ensuring that high degree of discretion and astute judgment are made by employees. Training is provided to ensure communication is provided to employees.

All new employees are oriented to PacificLight's policies. To ensure they are effectively communicated to our employees and other onsite personnel, a range of platforms are utilised. These include the employee handbook, onboarding training, the intranet, notice boards and face-to-face briefings.

Over the past decade, PacificLight has been recognised for our efforts in embedding governance into the core of our operations.

PacificLight's commitment to governance excellence is validated by industry leaders through a range of certifications and awards.

## Certifications



### Data Protection Trustmark Certification:

Awarded by the Infocomm Media Development Authority (IMDA), this certification highlights PacificLight's robust personal data protection practices, ensuring transparency and compliance with industry standards.



### SS651:2019 / ISO45001:2018 Certification:

Demonstrating excellence in occupational health and safety, this certification reflects PacificLight's commitment to maintaining the highest safety standards across its operations.

### Progressive Wage Mark (Plus):

Accreditation issued by Singapore's Ministry of Manpower to recognise firms that have adopted progressive wages and implemented enhanced workplace support for lower-wage workers.



### BizSAFE STAR Certification:

The highest level of certification in the BizSAFE programme, affirming PacificLight's dedication to ensuring workplace safety and compliance with Singapore's WSH standards.

### ISO/IEC 27001:2022 Certification:

Demonstrating excellence in the implementation of a systematic and risk-based approach to managing sensitive information, ensuring data confidentiality, integrity, and availability.

## Awards and Recognitions



### Highly Protected Risk Rating:

Assigned by FM Global, this rating acknowledges PacificLight's superior property protection measures, reflecting the company's proactive risk management strategies.



### Eco-Office Champion Award:

Honoured by the Singapore Environment Council (SEC) for implementing environmentally conscious office operations.



### Workplace Safety and Health (WSH) Performance Award (Silver):

Recognised for exemplary safety and health management systems, awarded by the Singapore WSH Council.



### SHRI Bronze Award:

Acknowledged by the Singapore Human Resources Institute (SHRI) for fostering a supportive and inclusive workplace.

### Singapore Energy Achievement Awards:

Awarded by SEC in recognition of its ongoing commitment to environmental excellence.

# FY2024 Highlights

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Renewable  
Energy  
Leadership

Efficiency  
Enhancement

Smart Grid  
Innovation

PacificLight Power's accomplishments in 2024 underscore its dedication to innovation, sustainability, and operational excellence. Reflecting PacificLight's proactive efforts to support Singapore's energy transition and advance its Environmental, Social, and Governance (ESG) goals.

PacificLight made significant progress in renewable energy projects, strengthening its position as a key player in Singapore's clean energy landscape:

## Bulan Solar Import Project:

- Advanced development of the 600MW solar energy import project from Bulan Island, Indonesia.
- Secured a Letter of Conditional Licence from EMA.
- The project is set to commence operations by 2030, contributing to Singapore's goal of achieving 6GW of renewable energy capacity by 2035.



## Renewable Energy Leadership

▲  
Rooftop solar installation at  
Kong Guan Dumpling/Pau  
Manufacturing Pte Ltd



# FY2024 Highlights

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**Renewable Energy Leadership**

Efficiency Enhancement

Smart Grid Innovation

## Google-RExus Collaboration:

- Entered into a 10-year agreement with Google and RExus Bioenergy in July 2024 to supply renewable energy generated from Singapore's first 13.2MW Waste Wood-to-Energy (WWtE) Plant to be developed by RExus Bioenergy.
- The WWtE Plant will feature advanced biomass processing technologies, a pilot-scale carbon capture system. The clean energy generated will support Google's data center and operations in Singapore, and contribute to Google's sustainability goals.
- PacificLight is a 30% shareholder in Sobono Bioenergy, a 50% shareholder in RExus Bioenergy.



## Renewable Energy Leadership

▲ From left to right -  
Mr Srinath Iyer, Senior Commercial Lead, Clean Energy & Power for Asia Pacific, Google, Mr Yu Tat Ming, CEO of PacificLight and Mr Oh Wee Khoon, Chairman of RExus Bioenergy



# FY2024 Highlights

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Renewable Energy Leadership   **Efficiency Enhancement**   Smart Grid Innovation

In 2024, PacificLight successfully completed the ATEP upgrade, delivering transformative improvements:

- **Efficiency Milestone:** Achieved over 60% efficiency, becoming the first power plant in Singapore to reach this benchmark.
- **Increased Capacity:** Boosted generation capacity from 800MW to 830MW.
- **Carbon Reduction:** Total plant emissions reduced by 60,000 tonnes of carbon annually, equivalent to removing 9,300 cars from the road.

These advancements reinforce PacificLight's role as a leader in operational innovation and our commitment to reducing our carbon intensity.



## Efficiency Enhancement

▲ Turbine efficiency upgrade at PacificLight power plant on Jurong Island



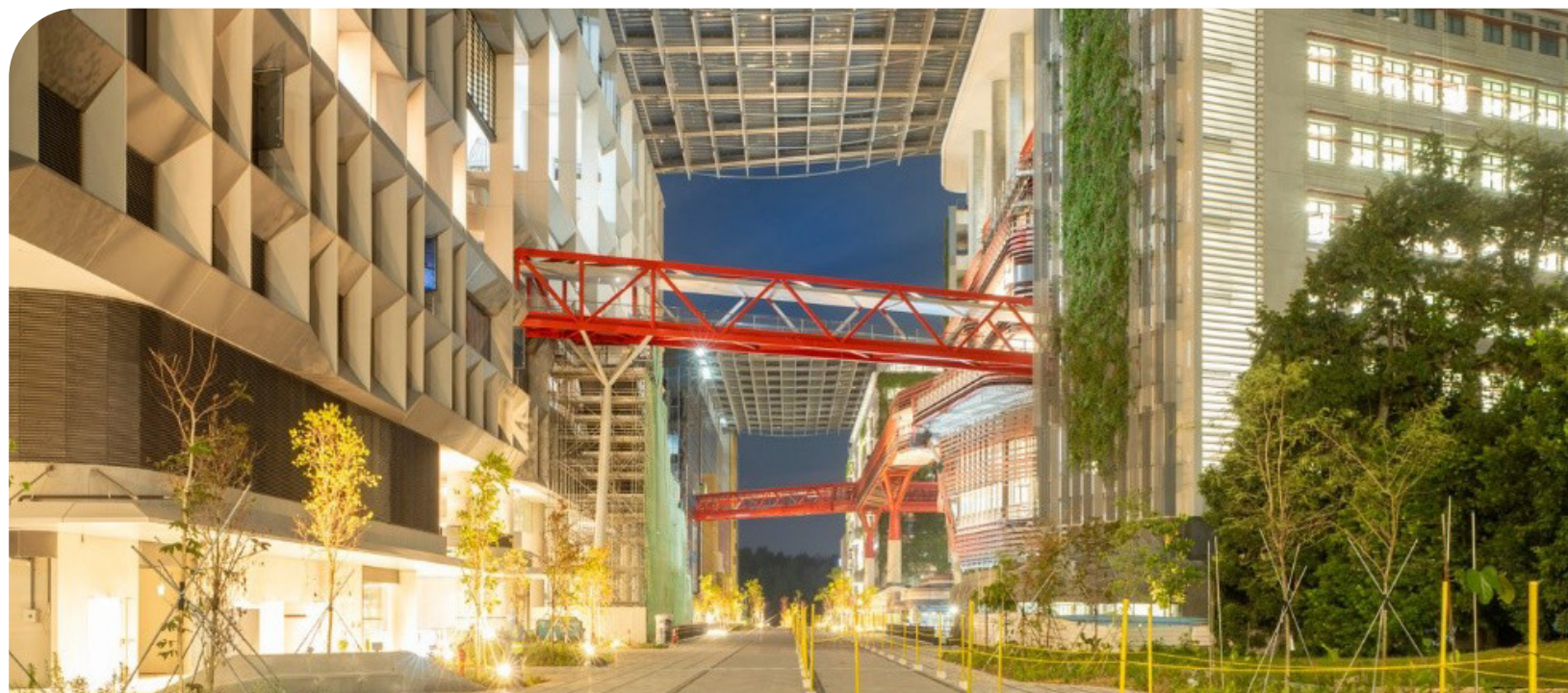
# FY2024 Highlights

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In 2024, PacificLight and our consortium partner Univers were appointed to design, build and operate Singapore's first district-level Smart Grid in JTC's Punggol Digital District (PDD).

Scheduled to be implemented by 2026, it will be a significant step forward in urban energy management:

- **Technology Integration:**  
Combining solar photovoltaics (PV) and a Battery Energy Storage System (BESS). We will utilise AI and IoT technologies to provide seamless integration of the Smart Grid to JTC's new smart city operating system, serving as the digital backbone for the PDD.
- **Energy Optimisation:**  
Enables real-time data management for dynamic load balancing and peak shaving, enhancing grid resilience and efficiency with reliable and continuous energy supply to the PDD.
- **Smart grid installation:**  
Enables consumers to participate in demand response and shift their electricity usage during peak periods in response to time-based rates.
- **Alignment with National Goals:**  
Supports Singapore's Smart Nation vision by demonstrating a scalable model for other sustainable urban energy systems.



## Smart Grid Innovation

▲  
JTC Punggol Digital District  
Image Source: JTC Corporation





# Our Environment



## Approach

PacificLight’s approach to mitigating its impact on the environment and fostering a healthier future for its stakeholders extends to the full scope of its environmental performance. As an energy company, PacificLight plays an instrumental role in facilitating stakeholders’ climate change transition journey by offering greener solutions. This commitment is grounded in the company’s approach towards energy sustainability and efficiency, which is a core part of its operational strategies.

As part of PacificLight’s ethos to be a leader in energy efficiency, the company diligently tracks emissions and actively pursues avenues to reduce and mitigate its carbon footprint. Through its Energy Policy, the company is dedicated to ensuring that its operations maintain the highest levels of energy efficiency and sustainability.

In addition to energy and emissions management, PacificLight adopts stringent measures for water and waste management. These are laid out in the company’s Health, Safety, and Environment (HSE) and Major Accident Prevention Policy and are communicated to all employees.

## Greenhouse gas emissions management

Total greenhouse gas (GHG) emissions from operations were approximately 1,868,391.00 tCO<sub>2</sub>e. Scope 1 direct emissions accounted for 99.97% of the total carbon emissions and Scope 2 was 0.03%. GHG intensity for FY2024 translated to 935.74 tCO<sub>2</sub>e / SGD million revenue.



Since its commercial operations, PacificLight has made significant additional investments through a comprehensive suite of energy efficiency and carbon reduction measures, which translate to a reduction in carbon emissions of over 80,000 tonnes annually, equivalent to taking over 12,000 cars off the road.

The high efficiency of our plant enabled PacificLight to be the first power plant in Singapore to be registered as a CDM project under the UNFCCC as well as the Verified Carbon Standard (VCS) Program of the Verra Registry, establishing it as the most extensive CDM and Verra project based in Singapore of its time.

Since its registration in 2014, PacificLight has generated over 2 million tCO<sub>2</sub>e and provided verified carbon credits to third parties for carbon emissions offsetting.

The ATEP upgrade to the power plant was initiated in FY2023 and completed in 1Q of 2024. The four-stage upgrade of the plant’s turbine blades involved the installation of new hot gas path parts, advanced profiling and aero features, ultra-efficient internal cooling and sealing, optimised stage loading, advanced materials, and manufacturing methods to deliver higher operational efficiency.

Scope 1 GHG Emissions (tCO <sub>2</sub> e) <sup>1</sup>	1,868,391.00
Scope 2 GHG Emissions (tCO <sub>2</sub> ) <sup>2</sup>	594.00
Grand Total (tCO <sub>2</sub> e)	1,868,985.00

1 Emission factors are applied from GHG Protocol’s Emission Factor for Cross Sector Tools V2.0\_0 (March 2024), which references 2006 IPCC Guidelines for National Greenhouse Gas Inventories.  
2 Scope 2 emissions factor references Singapore’s Grid Emission Factor as published by the Energy Market Authority.



## Water Management

As part of responsible corporate citizenry, PacificLight uses two types of municipal water - 1) treated potable water, and 2) reclaimed wastewater produced by Singapore's Public Utilities Board (PUB), known as NEWater. PacificLight has implemented a strict Water Efficiency Management Plan (WEMP) and a range of water management measures, which include daily water leak checks, and the installation of a wastewater reclamation recover skid. Today, water use has been reduced by 70% since PacificLight's first year of operation.

70%

Water use reduced  
since first year of  
operation



Most of the company's water usage relate to cooling of the power plant facility. Seawater is used by the plant in a once-through, closed cooling system. The seawater is closely monitored to ensure it is in accordance with Singapore's stringent Environmental Protection and Management Regulations before discharge back into the sea.

Third party water is purchased from Singapore's national water agency, PUB, which utilises a blend of local catchment water, imported water from Peninsula Malaysia, high-grade reclaimed water (NEWater), and desalinated water. Third party water is largely used in the fire protection system, general washing, domestic use and demineralised for steam generation.

The company consumed a total of 21.08ML of water in FY2024, which was sourced from PUB. During the reporting year, 486,721.44ML of seawater and 59.33ML of third-party water from PUB was withdrawn. A total of 486,721.44ML of regulation-compliant seawater was discharged back into the ecosystem and 38.25ML of spent third-party water was routed back into the national drainage network, where it

is treated by PUB and, where feasible, recycled. Total water consumption rate based on total withdrawal, amounted to 0.004% in FY2024.

PacificLight has not had any non-compliances associated with water or effluent quality.

## Water Performance

Water Source	Category	Withdrawal (ML)	Discharge (ML)	Consumption (ML)
Surface water	Freshwater	0.00	0.00	0.00
	Other Water	0.00	0.00	0.00
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Groundwater	Freshwater	0.00	0.00	0.00
	Other Water	0.00	0.00	0.00
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Seawater	Freshwater	0.00	0.00	0.00
	Other Water	486,721.44	486,721.44	0.00
	<b>Total</b>	<b>486,721.44</b>	<b>486,721.44</b>	<b>0.00</b>
Third-party water	Freshwater	59.33	38.25	21.08
	Other Water	0.00	0.00	0.00
	<b>Total</b>	<b>59.33</b>	<b>38.25</b>	<b>21.08</b>
Produced water	Freshwater	0.00	0.00	0.00
	Other Water	0.00	0.00	0.00
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Grand Total	Freshwater	59.33	38.25	21.08
	Other Water	486,721.44	486,721.44	0.00
	<b>Total</b>	<b>486,780.77</b>	<b>486,759.69</b>	<b>21.08</b>



Waste management

The company’s primary waste is non-hazardous and in FY2024 totalled 35.3 metric tons. 66.62% of the non-hazardous waste was directed away from disposal via recycling or recovery. Hazardous waste consists of mainly diesel and oily residue from equipment operations and oily rags from maintenance.

All of PacificLight’s wastes are collected and processed by nationally-registered waste management companies. Treatment, storage and disposal (typically incineration before landfill) is conducted in full compliance with Singapore’s Environmental Public Health Regulations.

The company has not encountered any instances of non-compliance fines nor sanctions for waste management.

Waste type by composition	Total Waste Generated (Mt)	Waste Diverted from Disposal (Mt)	Waste Directed to Disposal (Mt)
Non-hazardous waste (general)	35.30	23.52	11.78
Hazardous waste (oil)	14.64	0.00	14.64



A close-up, slightly blurred photograph of a person wearing a dark blue uniform. A white tag with the text 'Pacific Light' in red is visible on the sleeve. The background is a bright blue sky with some out-of-focus elements.

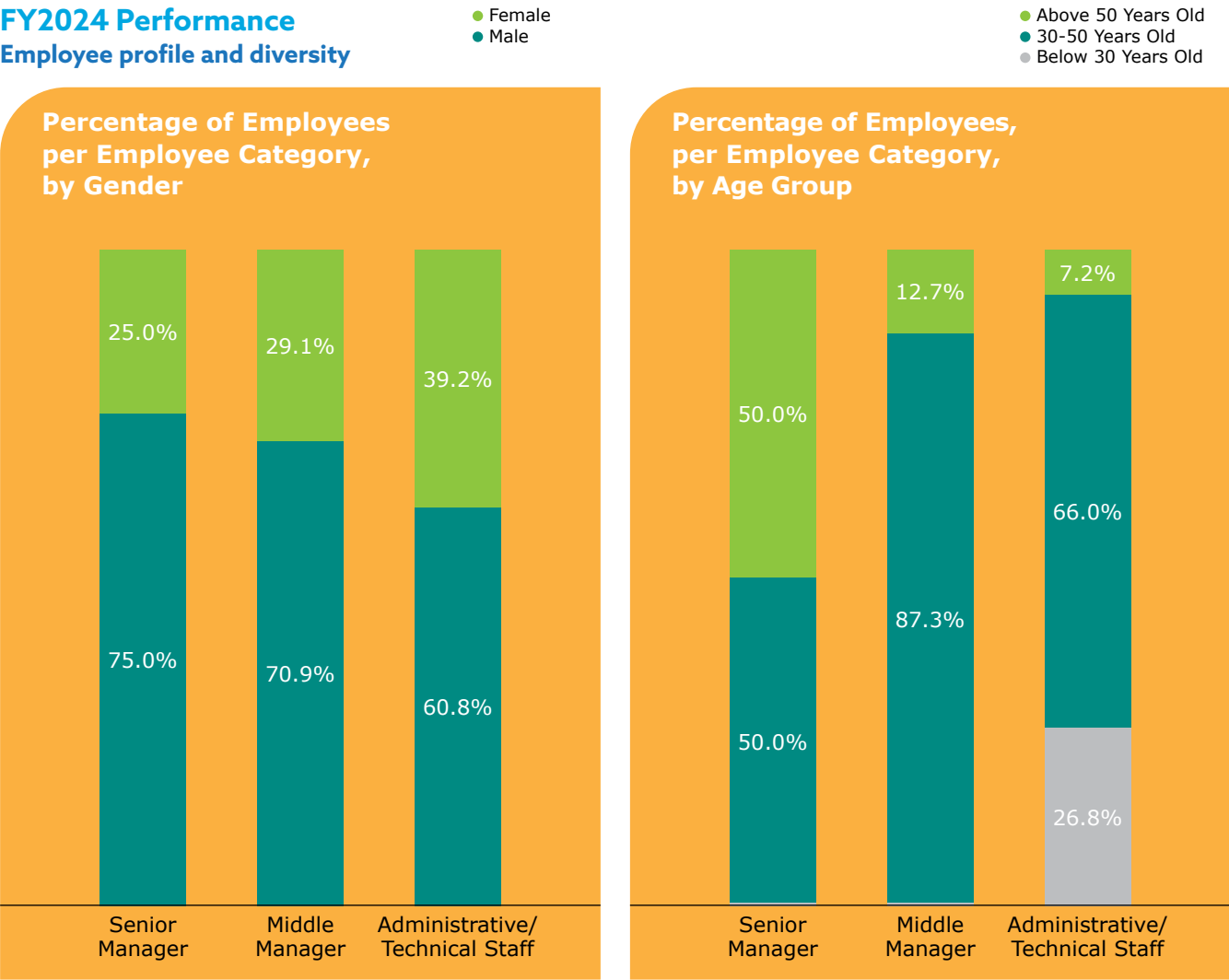
# Our People

## Approach

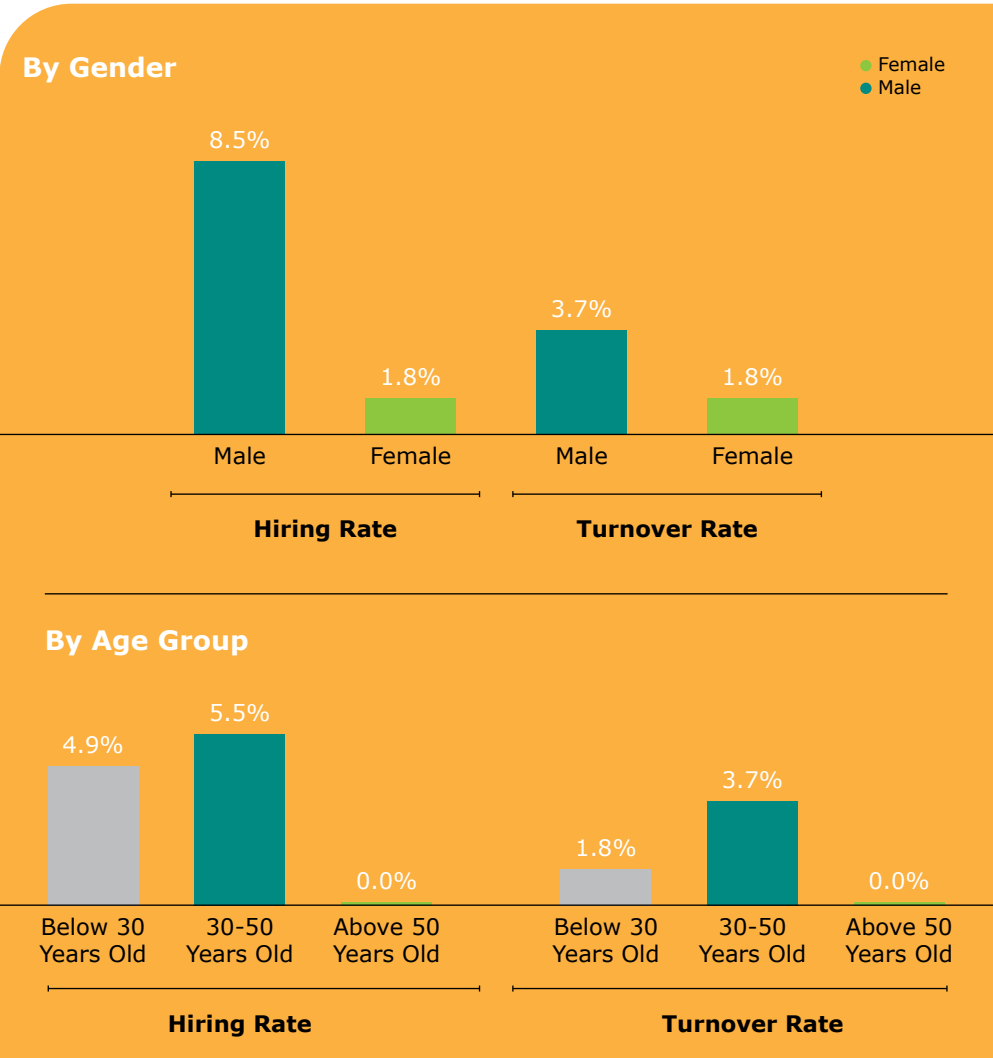
PacificLight is committed to fostering inclusive and equitable practices that benefit its team, stakeholders and the broader community. This approach is integrated into the foundations of the business, guiding its approach to employee relations, community engagement, and supply chain management. PacificLight endeavours to create positive social impacts by fostering meaningful and ethical social partnerships within its team and community.

With over 150 employees, PacificLight’s workplace wellbeing strategy can be broadly classified into two categories – 1) workplace benefits, and 2) team building and employee wellness. The former includes items such as work arrangements and talent management, while the latter includes corporate bonding events and social responsibility efforts.

## FY2024 Performance Employee profile and diversity







 **>25%**  
of PacificLight's team are long-service employees with over 10 years of experience

## Employee welfare and benefits

PacificLight has in place an extensive range of policies on employee welfare and benefits, including access to outpatient medical and specialist claims, term life insurance with disability and invalidity coverage, hospitalisation and surgical insurance, and personal accident insurance. Employees can access regular health checks facilitated by the company. Any data collected remains fully confidential to the employee. All employees have access to a range of leave benefits, including parental leave.

Policies and procedures are in place for employees' probation, confirmation, promotion, resignation, as well as retirement and re-employment after statutory retirement age. Minimum notice periods are observed for each phase of employment, where necessary. Provisions and transition plans for retirement are in place, with an option to extend service after retirement.

Flexible work arrangements are offered to non-shift staff to support work-life balance while achieving organisational goals. Staff can choose a flexi-time work schedule depending on which best suits their work and personal commitments.

A progressive wage model has also been adopted in PacificLight.

Activities conducted in FY2024 include:

- Company-sponsored health & wellness sessions such as badminton, kayaking and cycling.
- Staff bonding events such as Family Day and annual Dinner & Dance.
- PacificLight joined WorkWell Leaders' and SNEF's Leadership to Pledge for World Mental Health Month.

PacificLight places strong emphasis on promoting a healthy lifestyle among its employees. The company's employee health and wellness programme extends to all staff, including temporary employees. The internal Recreation Committee consists of employee representatives across various departments and has the authority to propose and select team bonding and wellness activities, with the company providing the resources needed for their efforts.

## Supporter of Singapore's Tripartite Standards



## Fair employment and representation

As a signatory to Singapore's Tripartite Alliance for Fair & Progressive Employment Practices (TAFEP), PacificLight's human resource policy and management system includes the following considerations:

- Adopting a merit-based approach to recruitment regardless of age, race, gender, religion, marital status and family responsibilities, or disability.
- A reward and remuneration system based fairly and transparently on ability, performance, contribution and experience.
- Always being respectful of employees and providing equal opportunities for training and development.
- Full compliance with the labour laws of Singapore and other relevant national regulations where applicable.

The company's collaboration with collective bargaining arrangements guides PacificLight's overall policies regarding our workforce. In addition to working with union representatives, the company holds annual skip-level meetings to provide employees a feedback platform, give senior management an avenue to assess the efficacy of their directives, as well as an opportunity to examine the ground-level impact of these directives on company employees. These skip-level meetings yield considerable learning points for all parties involved, contributing to synergised growth of employees, management and PacificLight.



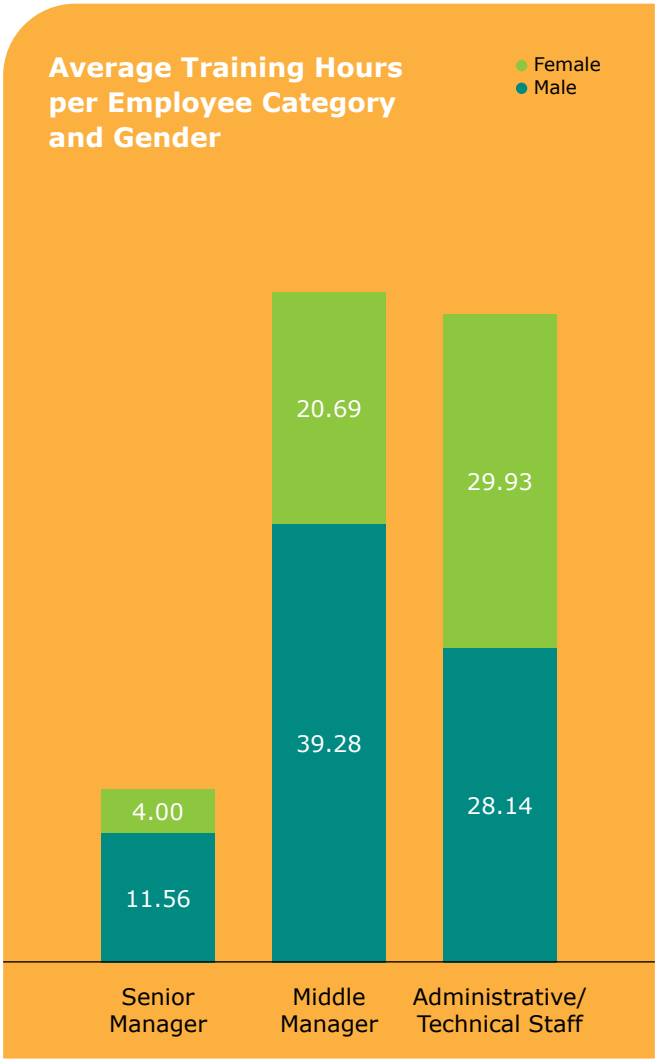
Learning and Development

PacificLight believes in fostering a skilled, engaged, and resilient workforce that can support the company's progress in a dynamic business environment. Learning and Development (L&D) in the company is focused on adding new skill sets and enhancing skills required for business needs.

Employees receive annual performance and career development reviews. Conducted with their supervisors, opportunities for professional growth are identified on an equal opportunity basis.

Training for FY2024 covered a range of areas, including environmental, occupational health & safety awareness training, business-driven programmes, certification programmes and artificial intelligence (AI) programmes.

Average Training Hours by Employee Category	Average Training Hours
Senior Manager	9.38
Middle Manager	27.85
Administrative/Technical Staff	28.84
Average Training Hours per Employee	27.09



PacificLight is committed to ensuring the growth of employees through participation in industry leading leadership programmes.

- HAPUA Leadership Programme organised by the Singapore Institute of Power & Gas (SIPG)**  
A six-day program which equips energy professionals with the skills to lead in the region’s energy transition and navigate the complexities of low-carbon future. During the programme’s finale, Yogesh Vijj from the Maintenance team collaborated with his peers to present on “Innovation in Energy Transition: Electric Vehicle (EV) Battery Swapping”. The work exemplified how innovation and teamwork can drive meaningful change in the energy sector.
- Energy Manager Programme organised by SIPG**  
The programme is designed to cultivate future leaders in the energy sector, equipping them with skills to navigate the evolving energy landscape through workshops, dialogues and hands-on learning experiences. Kelvin Wei from the Operations team along with his team members presented on “Nuclear Energy as a Low Carbon Solution for Singapore’s Net Zero 20250 Goals” which was notably voted as the Best EMP Project Group 2024.

Workplace Health and Safety

All PacificLight’s operations, as well as all on-site personnel (both PacificLight employees and non-employees) are governed by a strictly enforced Health, Safety and Environment (HSE) Policy and Major Accident Prevention Policy, as well as the Occupational Health and Safety Management System. Covering a range of topics which include mandatory personal protective equipment, hazard identification and risk assessment processes, the HSE system effectively identifies, manages, and mitigates workplace risks and hazards to ensure compliance.

PacificLight is externally audited and certified to ISO 45001:2018 occupational health and safety management system as well as Singapore Standard 651:2019 Safety and Health Management System for the generation of electricity scope of activity. The organisation’s robust HSE practices have additionally been awarded with BizSafe Star certification by the Workplace Safety and Health Council.

PacificLight’s HSE management system includes:

- Mandatory workplace safety and health training for all employees, contractors, suppliers and visitors entering the company’s facilities.
- Mandatory hazard identification and risk management training for all plant operations personnel, including contractors.
- Hazard Identification and Risk Assessment which includes the identification of hazards, assessment of associated risks and implementation of appropriate risk control measures.
- A Stop Work Authority protocol is in place to empower all onsite personnel to stop work activities and raise concerns if they observe potential unsafe work conditions.
- A digital platform accessible to all to report any hazardous or non-hazardous concerns.
- Emergency medical and first aid services available to all persons on PacificLight premises.
- Regular emergency and security response drills for employees and contractors.
- Regular review of safety and health performance and process, and improvement system for individuals, facility operations and management.

Plant staff engage in daily safety and health meetings to review previous performance and ensure that the teams continue to embrace a safety-first mindset. A HSE committee oversees PacificLight Power’s HSE policy and management system and includes representatives of safety-trained personnel, worker representatives and facility managers. Monthly reports are provided to the senior management team and shareholders for review. Skip-level meetings are also in place to enable onsite employees to share feedback and suggestions for improvement with senior management. For more information on the skip-level meetings, please refer to page 25.

Training and safety drills are conducted regularly to ensure that the onsite teams are equipped with the necessary knowledge and skills to be competent in their roles as well as ingrained with emergency response procedures that are aligned to best practices. These drills reinforce preparedness for potential hazards, and cover areas such as fire safety and chemical handling procedures.

In FY2024, there were no fatalities and no work-related injuries. The company conducted a total of five emergency drills and tabletop exercises with its stakeholders and surpassed 1 million man-hours without a Lost Time Injury (LTI) in the reporting year.

Safety Performance

	No. of cases	Rate
Fatalities as a result of work-related injury	0	0.00
High-consequence work-related injuries (excluding fatalities)	0	0.00
Recordable work-related injuries (including fatalities, if any)	0	0.00
Total Man hours	208,512.00	
No of lost days	0.00	



>1 million  
man-hours

without a Lost Time Injury  
(LTI) since November 2021.





# Our Community

## Approach

Giving back to the community is integral to PacificLight. By engaging and supporting our local communities, we can help to address critical community and environmental needs through a culture of stewardship, extending support to vulnerable groups, and raising public awareness about sustainable practices. Through targeted programmes and collaborative efforts, PacificLight continues to be dedicated to creating a positive and lasting impact, aligning our actions with broader sustainability goals.

## Educational Outreach and Youth Engagement

We believe it is important to build awareness of environmental issues and inspire change among the next generations to enable real change in our society. PacificLight adopts a wide range of channels to engage youth in the community to understand the importance of individual action and embrace more sustainable practices. Over the years, we have worked with like-minded partners, including private entities, government agencies and educational sectors on our educational outreach and engagements.

### Crea8 Sustainability Programme

The company's flagship initiative Crea8 Sustainability Programme, initiated in 2016, inspires students to take a problem-solving approach on environmental concerns.

The programme empowers the local community to understand and tackle environmental issues. By leveraging educational initiatives and collaborations, the programme aligns with the goals of the Singapore Green Plan 2030, addressing themes like sustainable living and green citizenry. The programme is guided by Professor Leo Tan, Chairman of the Crea8 Sustainability Advisory Committee, whose leadership helps shape the programme's educational impact and strategic direction. More information can be found at <https://www.crea8sustainability.sg/>

### Crea8 Sustainability Competition

Since its inception, the competition has received 2,200 submissions and engaged more than 25,000 students to become advocates for environmental change. Each annual competition focuses on a specific environmental theme, fostering creativity and critical thinking among students while inspiring action.

- In 2024 over 220 students submitted entries from various primary and secondary schools, and tertiary institutions.

- Launched the inaugural Sustainable Cities Challenge for secondary and tertiary students with over 180 students participating.
- Collaborated with Defence Collective Singapore, Frasers Property, NEA, Singapore University of Design and Technology, and Temasek Polytechnic in 2024 for the inaugural Sustainable Cities Challenge.

### PacificLight Learning Journeys

To develop a deeper understanding on power generation, sustainability practices and the nation's energy transition, PacificLight organises immersive site visits. To date we have welcomed over 2,200 students to our facility, from upper primary to tertiary students.

### SIEW Networking Event

PacificLight engaged with 40 students from Institutes of Technical Education (ITE), Polytechnics, and Universities at the EMA-hosted SIEW Networking Lunch. Through interactive discussions, students gained valuable insights into the energy sector and explored potential career opportunities, inspiring many to consider roles in sustainability-related fields.







## Environmental Sustainability and Recycling Initiatives

PacificLight actively promoted environmental stewardship through various sustainability-focused initiatives in FY2024.

These initiatives exemplify PacificLight's proactive approach to integrating sustainability into its operations and community engagement. By inspiring collective action and providing opportunities for environmental contribution, PacificLight continues to lead by example in building a more sustainable future for Singapore.

### ● Kayak River Cleanup

In partnership with the Waterways Watch Society, PacificLight employees participated in a two-hour cleanup of Singapore's waterways. This effort resulted in the collection of over 13 kilograms of waste, highlighting the company's dedication to preserving local aquatic ecosystems.

### ● Angbao Recycling Drive

To encourage sustainable practices during festive celebrations, PacificLight organised a recycling drive that successfully collected over 5,000 used angbao packets. This initiative reduced waste and emphasized the importance of recycling.

### ● Recycling Drive – South-West District

A community-wide recycling drive engaged over 200 residents in collecting recyclable materials such as paper, plastics, and electronics. This event fostered sustainable habits within the community and reinforced the importance of proper waste management practices.

## Supporting Vulnerable Communities

PacificLight's community initiatives in 2024 extended meaningful support to vulnerable groups, focusing on empowerment, and meeting essential needs.

### ● Dignity Mama Donation Drive

PacificLight contributed over 300 used books to Dignity Mama, a social enterprise that empowers young adults with disabilities by equipping them with entrepreneurial skills. This donation supported the project's mission to help participants build confidence and achieve greater independence.

### ● Food from the Heart – Charity Cycleathon

PacificLight organised a Charity Cycleathon at Marina Bay Loop, with 20 team members participating in the event. The initiative successfully raised funds to provide essential food supplies to more than 1,500 vulnerable families. This effort underscored PacificLight's commitment to addressing food insecurity and fostering community well-being.

PacificLight has referenced the GRI 1: Foundation 2021 Standards to share information on a selection of environmental, social and governance topics for the period 1 January 2024 to 31 December 2024.

GRI Standard	Disclosure	Location (Page)
<b>GRI 2: General Disclosures (2021)</b>	2-1 Organisation details	4
	2-2 Entities included in the organisation's sustainability reporting	4 & 7
	2-3 Reporting period, frequency, and contact point	7
	2-4 Restatements of information	NA
	2-5 External assurance	This report has not undergone external assurance.
	2-6 Activities, value chain and other business relationships	4
	2-9 Governance structure and composition	6
	2-11 Chair of the highest governance body	6
	2-12 Role of the highest governance body in overseeing the management of impacts	8-9
	2-13 Delegation of responsibility for managing impacts	8-10
	2-14 Role of the highest governance body in sustainability reporting	9
	2-16 Communication of critical concerns	11
	2-17 Collective knowledge of the highest governance body	6
	2-22 Statement on sustainable development strategy	3
	2-23 Policy commitments	11
	2-24 Embedding policy commitments	11
	2-25 Processes to remediate negative impacts	10
	2-26 Mechanisms for seeking advice and raising concerns	11
	2-27 Compliance with laws and regulations	PacificLight is compliant to regulations in Singapore (primary operations) and Indonesia.
	2-28 Membership associations	4
	2-30 Collective bargaining agreements	25



GRI Standard	Disclosure	Location (Page)
<b>GRI 3: Material Topics (2021)</b>	3-1 Process to determine material topics	7
<b>GRI 303 : Water and Effluents (2018)</b>	303-1 Interactions with water as a shared resource	19
	303-2 Management of water discharge-related impacts	19
	303-3 Water withdrawal	19
	303-4 Water discharge	19
	303-5 Water consumption	19
<b>GRI 305: Emissions (2016)</b>	305-1 Direct (Scope 1) GHG emissions	18
	305-2 Energy indirect (Scope 2) GHG emissions	18
	305-4 GHG emissions intensity	18
<b>GRI 306: Waste (2020)</b>	306-1 Waste generation and significant waste-related impacts	20
	306-2 Management of significant waste-related impacts	20
	306-3 Waste generated	20
	306-4 Waste diverted from disposal	20
	306-5 Waste directed to disposal	20
<b>GRI 401: Employment (2016)</b>	401-1 New employee hires and employee turnover	23
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	24

GRI Standard	Disclosure	Location (Page)
<b>GRI 403: Occupational Health and Safety 2018</b>	403-1 Occupational health and safety management system	27
	403-2 Hazard identification, risk assessment, and incident investigation	27
	403-3 Occupational health services	27
	403-4 Worker participation, consultation, and communication on occupational health and safety	27
	403-5 Worker training on occupational health and safety	27
	403-6 Promotion of worker health	27
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	27
	403-8 Workers covered by an occupational health and safety management system	27
	403-9 Work-related injuries	27
<b>GRI 404: Training and Education (2016)</b>	404-1 Average hours of training per year per employee	26
<b>GRI 405: Diversity and Equal Opportunity (2016)</b>	405-1 Diversity of governance bodies and employees	22