



FORGING AHEAD

Sustainability Bridging Report
2021/2022



YTL PowerSeraya
YTL GROUP

About This Report



The Company produces a yearly sustainability report in accordance with the 'GRI Standards: Core Option' reporting framework and which is audited every two years.

This is a bridging sustainability report for the financial year starting 1 July 2021 to 30 June 2022. It covers the business operations of the Company and continues from previous year's externally assured report for the reporting period of 1 July 2020 to 30 June 2021. The definition of 'the Company' is found on the next page.

This report attempts to include SASB¹ and TFCF² elements for financial institutions to better appreciate the Company's sustainability performance and its future plans to meet its climate change goals.

Figures presented in this report exclude contributions from the Tuaspring Power Plant unless otherwise stated.

For questions on this report, please contact corpcomm@pseraya.com.sg.

Getting the Most Out of this Report

It is recommended that this report be read together with the previous FY's report to have a holistic appreciation of the Company's sustainability strategy, its climate targets and its performance. In particular, do peruse the Company's '[60-30 Vision](#)' and [materiality](#) before proceeding with the rest of this report.

The governance aspects of the Company are not covered in this report as there were no significant changes since the previous reporting period. For an understanding of the Company's governance structures and mechanisms, do refer to the [previous FY's report](#) and the [Governance](#) section on the YTL PowerSeraya website.

¹ Sustainability Accounting Standards Board

² Taskforce on Climate-Related Financial Disclosures

Significant Changes

YTL PowerSeraya Pte. Limited completed the acquisition of Tuaspring Power Plant in Singapore under its wholly-owned subsidiary Taser Power Pte. Ltd.

There were no other significant changes to the organisation and its supply chains.

Restatements

There are some minor changes to the figures presented in the previous report and which are listed below. As the changes are minor in nature, we do not envisage any material impact to assessments made on our company's sustainability performance by external parties.

- **GRI 302 -1** : Energy Consumed Within the Organisation (non-renewable sources)

Total Electricity Sold (in GJ) in FY20/21 = 25,490,273 (previously reported as 25,490,372)

Total Steam Sold (in GJ) in FY20/21 = 3,766,352 (previously reported as 3,756,900)

Total Energy Consumption (in GJ) in FY20/21 = 27,512,423 (previously reported as 27,521,775)

- **GRI 302-3** : Energy Intensity (Electricity & Steam) in FY19/20 and FY20/21 = 24.1 and 26.9 respectively (previously reported as 24.8 and 27.0)
- **GRI 305-1** : Scope 1 GHG Emissions in tCO₂e in FY19/20 and FY20/21 = 3,507,152 and 3,187,521 respectively (previously reported as 3,506,752 and 3,188,552)

About YTL PowerSeraya



Location of HQ, Operations and Markets Served
Singapore

Externally-developed charters and other subscribed or endorsed initiatives
Signatory to the 5 Principles of Fair Employment Practices subscribed by the Tripartite Alliance of Fair & Progressive Employment Practices, Singapore

Founding member of World Energy Council, Singapore Chapter activities.

Memberships
Sustainable Energy Association of Singapore



YTL PowerSeraya Pte. Limited (YTL PowerSeraya) is a wholly-owned subsidiary of YTL Power International Berhad, which is listed on the Bursa Malaysia Berhad (previously known as the Kuala Lumpur Stock Exchange).

The YTL PowerSeraya Group has three wholly-owned subsidiaries: PetroSeraya Pte. Ltd (PetroSeraya), Seraya Energy Pte. Ltd (Seraya Energy) and Taser Power Pte. Ltd. (Taser) – all four entities are collectively referred to as “the Group” or “the Company” in this report.



PetroSeraya
YTL GROUP

PetroSeraya is the fuel management, oil storage and tank leasing arm of YTL PowerSeraya. It owns and manages the oil terminal and oil tank farm assets on Jurong Island, Singapore. In addition, it sources and secures fuel supplies for the power generation business of YTL PowerSeraya. Its main revenue stream consists of tank leasing activities.



Seraya Energy
YTL GROUP

Seraya Energy is the electricity retail arm of YTL PowerSeraya. With the liberalisation of the electricity market, YTL PowerSeraya consolidated its business and retail portfolio under its consumer-facing brand, Geneco. Its main revenue stream is the sale of electricity to commercial, industrial and residential customers.



Taser Power
YTL GROUP

Taser owns and operates the Taser Power Plant (formerly known as Tuaspring Power Plant prior to its acquisition in June 2022).

FY21/22 Highlights

This past FY, YTL PowerSeraya achieved many milestones that are well-worth celebrating.

October 2021

Appointed as importer for a **100MW low-carbon electricity import trial from Peninsular Malaysia** by the Energy Market Authority, Singapore.



December 2021

Announced the **'60-30 Vision'** as the Group's decarbonisation path.



April 2022

Embarked on a **multi-national partnership** to establish **Southeast Asia's first e-methanol plant** to decarbonise the maritime industry.



June 2022

Partnered with Linde, ST Telemedia Global Data Centers and YTL Data Centers to **explore the feasibility of hydrogen-generated power** for Singapore's data centre industry



June 2022

Acquired the 396MW Tuaspring Power Plant, one of the **most technologically-advanced assets** in the Singapore power system.

Chairman Message

Year in Review

For FY21/22, we sold 8,913 GWh of electricity, an increase of 1.7% from the previous financial year. Our generation market share remains at 17.2%* in FY21/22.

Since September 2021, the world has been facing an energy crunch. Global gas prices have increased significantly due to high demand and tight gas supply. With Singapore relying on imported natural gas to generate around 95% of its electricity, Singapore observed high volatility in the wholesale electricity market with the protracted conflict in Ukraine coupled with the seasonal increase in energy demand during the winter months. To mitigate our exposure to the wholesale market, Geneco, our retail arm, which serves residential, commercial and industrial clients, reduced the number of retail contracts and achieved a slightly lower retail market share of 12.2% in FY20/21**.

Positioning Ourselves for the Future

Last year, I spoke of the expected increase in power demand and the need for us to proactively improve the efficiency and sustainability of our power generation methods. I am very proud to share that our acquisition of Tuaspring, a highly technologically-advanced power generation unit, will be a game-changer for production efficiency.

These milestones bring us confidently closer to our '60-30' vision of reducing our 2010 GHG emissions by 60% by the year 2030, in line with Singapore's vision of reaching net-zero emissions by 2050.

Appreciation

It has been a year of re-emerging from the pandemic stronger and we are now forging ahead. I would like to convey my utmost appreciation and affirmation to all the leaders and staff at YTL PowerSeraya for their tireless hard work and agility. I am confident that as long as we stay committed, we will be able to spearhead reliable, dynamic and industry-leading innovations in the coming years.

Finally, thank you to all our customers, business partners and the Union of Power and Gas Employees (UPAGE) for their valuable partnership and support towards the Board and Management.

Thank you and God bless all of you.



TAN SRI (SIR) FRANCIS YEOH SOCK PING
PSM, KBE
Executive Chairman
YTL PowerSeraya

* These figures include gas tolling arrangements involving the Tuaspring Power Plant.

** Calculated based on retail volume as a percentage over total system demand.

CEO Message

Journeying towards being green

For FY21/22, we saw an increase in our Scope 1 GHG Emissions by 14.7% to 3.66 million tCO₂e and our GHG Emissions Intensity by 4.2% as compared to the previous financial year.* The increase is largely attributed to the use of fuel oil to generate electricity during a temporary gas pressure supply disruption observed during October to December 2021.

In considering potential decarbonisation pathways to fulfill the 60-30 Vision, we are evaluating the use of internationally-recognised carbon credits to offset our emissions from 2024 onwards. In addition, we have entered into two Memorandums of Understanding – supplying green energy for the production of e-methanol for Singapore’s maritime sector, and generating low-carbon power for data centres in Singapore using hydrogen.

One major milestone to celebrate this year is our acquisition of the 396MW Tuaspring Power Plant. Its advanced operation technology is a stable baseload that will improve efficiency by lowering emissions intensity overall and even allow us to decommission our old plants. It is an exciting step in our transition to lower-carbon energy sources.

Workplace Safety & Health (WSH)

Two minor work-related accidents were reported in the last FY. Business operations were not impacted, but we do not take this lightly. We are more proactively encouraging safety habits and conversations to ingrain a culture that vigilantly safeguards the safety of each employee.

Adjusting to a post-COVID environment

We are home-bound by COVID no more! I would like to thank everyone for playing their part to stay responsible and safe during this global pandemic, both physical and mentally. A government-developed iWorkHealth survey conducted by Human Capital indicated that we are coping well to work environment adaptations. With that, I was thrilled that this FY, I finally got

* GHG emissions figures include contributions from the Tuaspring Power Plant.

to welcome everyone back to our still new Alexandra office. We will stay committed to nurturing a supportive and productive workplace.

Truly powering the change

In collaboration with NParks’ #OneMillionTrees movement, Geneco, our retail arm, engaged customer and stakeholders to plant 50 trees at Punggol Park, and recently another 150 trees at Pasir Ris Park – small but significant steps to increase the country’s carbon sink, enhance biodiversity and create sustainable living spaces within Singapore’s highly-urbanised landscapes.

Geneco launched an innovative Power Eco Add-On for its residential electricity price plan in August 2021. It is Singapore’s first and only customisable green add-on for residential electricity price plans which gives the cost- and yet eco-conscious customers the option of purchasing a partial or full blend of green energy. This is our conscious move to ease and encourage more Singaporean households to adopt a greener lifestyle.

Appreciation

My heartfelt gratitude to each of our staff whose grit and resilience achieved multiple milestones this year; much appreciation to our Board of Directors and Senior Management Team for holding fast to our vision; and many thanks to our business partners and the Union of Power and Gas Employees (UPAGE) for another year of empowering collaboration.

This year has been demanding, and the coming FY will no doubt bring its own set and speed of challenges. But I am confident that as long as our employees, customers and partners stay strongly united, YTL PowerSeraya is poised to be a solid front-runner and trailblazer in this transition to an energy future that enables this and coming generations to thrive.

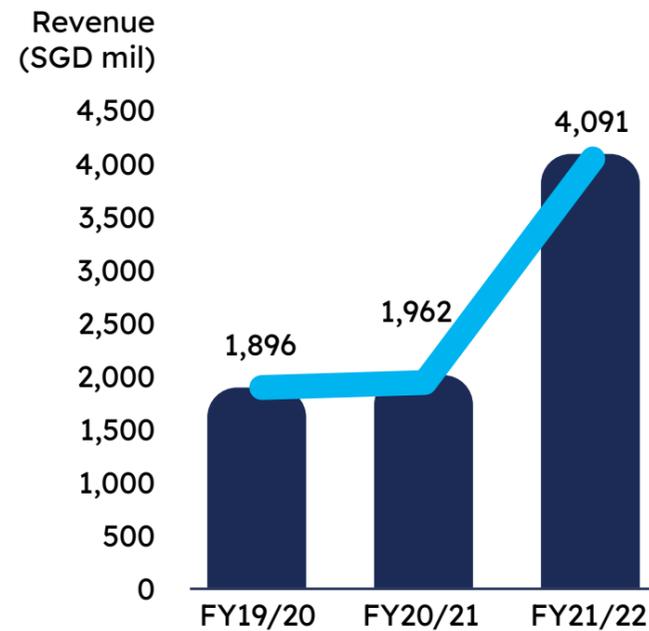


JOHN NG
Chief Executive Officer
YTL PowerSeraya

Key ESG Performance for FY21/22

The Company's financial position strengthened in FY21/22

Net profit after tax (NPAT) increased 47.7% over the previous year on the back of a strong demand for electricity and a consistent focus on securing margins. ESG performance was inevitably impacted by the ongoing effects of the COVID-19 pandemic and Russia-Ukraine war. However, sustainability-driven partnerships secured the company an optimistic footing and trajectory moving forward.

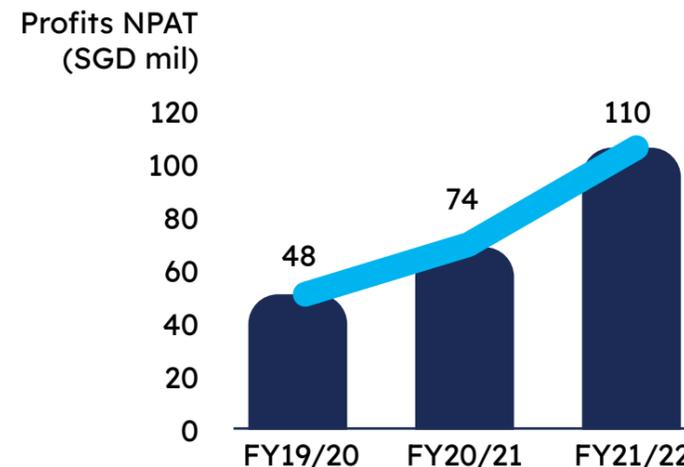


Wholesale Electricity Sales Consistent with Previous FY

FY21/22 ended with YTL PowerSeraya retaining its wholesale market share position. Electricity generated and sold to the wholesale electricity registered 8,913 GWh*, similar to previous FY volumes.

Geneco, The #1 Residential Electricity Retailer

By the close of FY21/22, Geneco's Power Eco Add-On had garnered the sign-on of some 2,546 residential customers. With their new total of over 160,000 clients, they became Singapore's #1 residential electricity retailer by 1 July 2022. In the electricity retail market (comprising residential, commercial and industrial sectors) Geneco ended FY21/22 with a market share of 12.2%** . Geneco also introduced three electricity



plans tailored to meet the growing needs of commercial and industrial customers for green electricity, namely:

- **Go Green Plan** - helps customers offset 100% of their carbon emissions arising from their electricity consumption via carbon credits.
- **Go Clean Plan** - helps customers reduce the carbon emissions associated with the electricity consumption they consume via internationally recognised Renewable Energy Certificates (RECs).
- **Biz Sunny Plan** - provides customers with the flexibility to choose the proportion of solar energy in their total electricity mix via RECs originating from YTL PowerSeraya-owned and operated solar photovoltaic (PV) installations.

* Figures include gas tolling arrangements involving the Tuaspring Power Plant.
 ** Calculated based on retail volume as a percentage over total system demand.

Key ESG Performance for FY21/22

Sustainability Thrust



Reduce GHG Emissions & Resources

FY 21/22 Performance

2030 Target

Reductions in Absolute GHG Emissions (Scope 1) from 2010 levels

47.0%*

60.0%

Reductions in GHG Emissions Intensity (Scope 1) from 2005 levels

32.1%*

36%

(aligned to Singapore's 2030 Nationally Determined Contributions)

Water Consumption

1.8% drop
from previous FY

Water Withdrawal

70.0% Seawater
28.8% Reclaimed/Recycled Water
1.2% Freshwater

* GHG emissions figures include contributions from the Tuaspring Power Plant.

Key ESG Performance for FY21/22

Sustainability Thrust



Nurture an Engaged & Inclusive Workforce

FY 21/22 Performance

Staff Turnover

10%

2030 Target

< 14%

(Singapore Manufacturing Industry Turnover Benchmark)

% Ratio of Basic Salary
Male : Female

1 : 0.83

> 0.805

(Singapore's Wage Equality Score from World Economic Forum's Global Gender Gap Report 2022)

% Employees Covered under
Collective Bargaining

40.8%

Safety Training Hours Per
Employee

20.4%

increase from previous FY

Training Hours Per Employee

28.5%

decrease from previous FY

Work-Related Accidents

Fatalities - **Zero**

Major Injuries - **Zero**

Minor Injuries - **2**

Employee Engagements
(Learning & Development,
Foster Bonding)

29
initiatives

Key ESG Performance for FY21/22

Sustainability Thrust

FY 21/22 Performance



Empower Customers & Communities

Customer GHG Emissions Offsetted

48,542 tCO2e

(from carbon credits bundled in product offerings)

Renewable Energy Sold to Customers

5,155 MWh

(from Renewable Energy Certificates bundled in product offerings)

Customer Engagements on Sustainability

6
initiatives



Strengthen Resilience

Data Security & Privacy Breaches

Zero

Incidence of Corruption

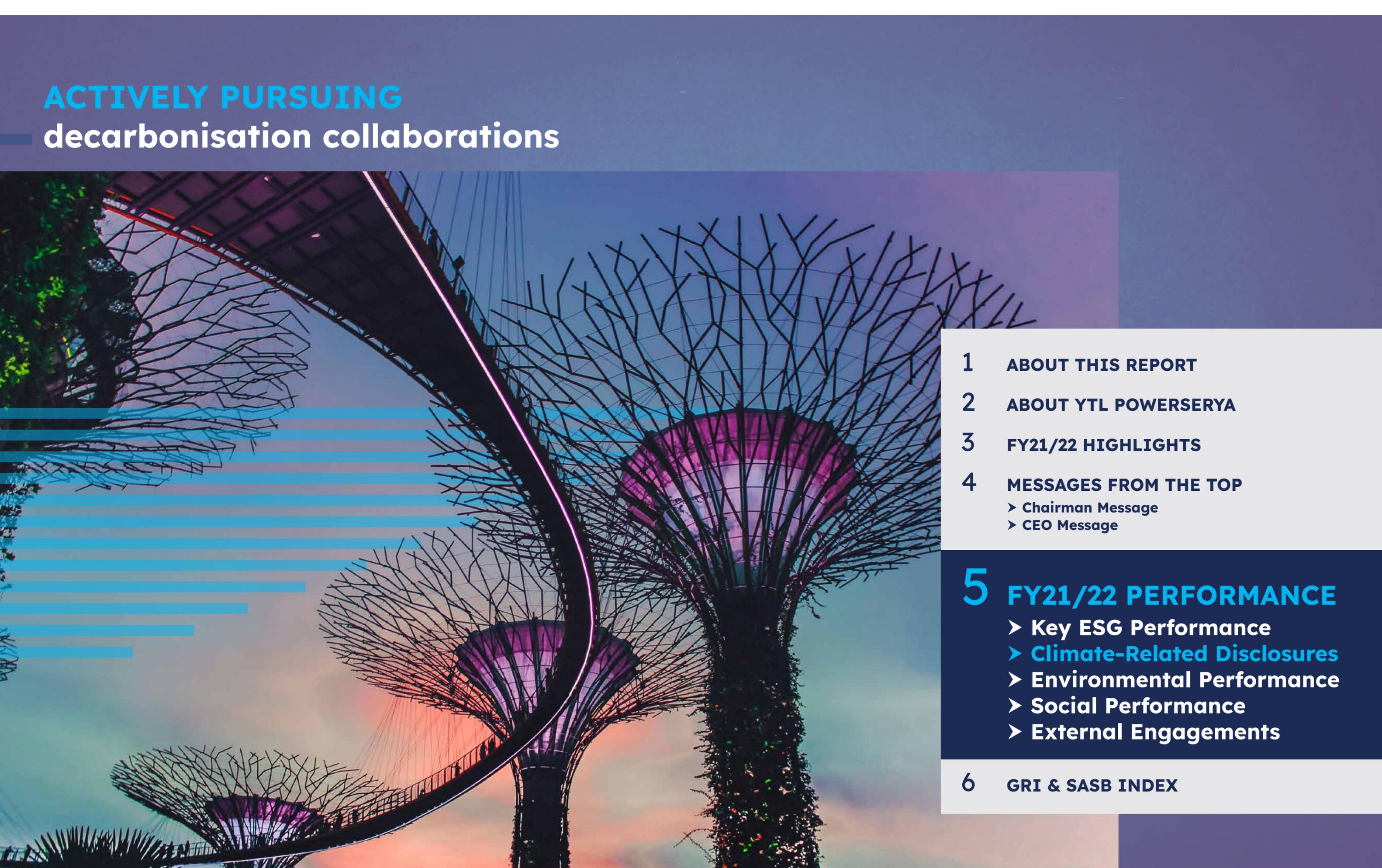
Zero

Environmental Non-Compliance

Zero

Cybersecurity Breaches

Zero



ACTIVELY PURSUING decarbonisation collaborations

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Climate-Related Disclosures

Preamble

YTL PowerSeraya is in the early stages of identifying climate-related risks pertinent to its business operations and has a plan to progressively determine such risks in greater depth and breadth in the coming years. Even though it is not a listed company nor subject to any compliance requirements on climate-related disclosures, this report section (done in alignment with the framework recommended by the TCFD - Taskforce on Climate Related Financial Disclosures) seeks to give financial institutions a better understanding of the company's climate-related risks.



Strategy

Please refer to [the Group's 60-30 Vision](#) which articulates how the company intends to meet its climate change targets by this decade.



Metrics

Beyond reporting Scope 1 & 2 GHG Emissions and power station efficiencies (refer to the [Environmental Performance](#) section of this report), the Group will periodically evaluate the need for additional metrics in the future to adequately inform financial institutions of its decarbonisation progress.



Governance & Risk Management

The Sustainability Department and Enterprise Risk Management (ERM) Department report directly to the CEO. They are in the early stages of identifying the Group's climate-related risks and impacts for integration into the existing ERM framework. Table 1 shares the climate-related risks and opportunities (transition & physical) which are deemed relevant to the company's businesses thus far:



Climate-Related Disclosures

Table 1: Climate-Related Risks & Opportunities [IF-EU-110a.3](#)

Transition Risks	A1) Policy and Legal	Risks	Opportunities
	Increased Pricing of GHG Emissions	<p>Singapore carbon tax rate currently at S\$5/tCO₂e is set to rise progressively till 2030:</p> <p>2024 - 2025 : S\$25/tCO₂e 2026 - 2027 : S\$45/tCO₂e 2028 - 2030 : S\$50 - S\$80/tCO₂e</p> <p>Singapore government has taken the approach of imposing carbon taxes on upstream direct emitters with the intention that the price signal be taken down the value chain to end consumers.</p> <p>The higher carbon tax will reduce the competitiveness of the Company's natural gas-fired generating assets when less carbon intensive electricity is available in Singapore.</p>	<p>Rising carbon taxes could provide a business case to expedite investments in renewables or low-carbon technologies in the future.</p>
Enhanced Emissions Reporting Obligations	No changes to the current reporting requirements for GHG emissions		
Regulation on existing products and services	<p>There are no regulations in the Singapore power sector that requires electricity retailers to offer green product/service offerings.</p>	<p>Singapore announced in February 2022 the use of international carbon credits of high quality to offset 5% of a taxable emissions from 2024 onwards, subject to specific eligibility criteria in alignment with Article 6, Paris Agreement.</p> <p>This presents an opportunity for the Company to reduce its carbon tax burden.</p>	
Exposure to Litigation	<p>No significant risks are foreseen in terms of compliance to the Singapore Carbon Pricing Act at the present moment.</p> <p>The 60-30 Vision charts the Company's decarbonisation initiatives aimed at contributing to Singapore's GHG emissions reductions goal. This seeks to align with societal's expectation of a power producer's active role in addressing climate change.</p>		

Transition Risks	A2) Technology	Risks	Opportunities
	Substitution of existing products and services with lower emissions options	<p>Beyond developing renewables locally and importing them from the region, the strategy under the company's 60-30 Vision is to deploy low emissions technologies such as blended H₂-natural gas-fired power plants or 100% hydrogen-fired power plants.</p> <p>Land-scarce and highly urbanised Singapore presents limited scope for utility-scale renewable energy plants to be developed locally in the country. The importation of renewable/low carbon energy from the region is subject to geo-political and energy security concerns.</p> <p>Green/Low Carbon Hydrogen (H₂) imports as a future fuel for power generation brings with it feedstock supply risks and high landing costs in Singapore. Developing hydrogen production facilities locally in Singapore is also costly and comes with a carbon footprint that may result in a net increase in carbon emissions.</p>	<p>The development of the ASEAN Power Grid holds promise for a future on the importation of renewables/low carbon energy into Singapore.</p> <p>H₂ power generation technology may take time to mature and be commercially viable in the medium to long term horizon. By then, H₂-fired power plants could replace the existing natural-gas fired power plants when they reach their service life and phase out in batches over the next few decades till 2050.</p> <p>In FY21/22, the Company entered into partnerships with other companies to explore renewables and Green/Low Carbon H₂. Details of these partnerships are covered after this table under sub-section 'New Ventures Enabling the Energy Transition'</p>
Unsuccessful investment in new technologies	The company is currently at a juncture where it is evaluating suitable technologies to transition to a low carbon model. No investments in new technologies were considered in FY21/22.		
Costs to transition to lower emissions technology	The company is in the nascent stages of exploring low-carbon technologies such as hydrogen. Greater clarity on the costs to transition to low emissions technology will depend on technology maturity and commercial feasibility for implementation in Singapore.		

Climate-Related Disclosures

Table 1: Climate-Related Risks & Opportunities (Cont.) [IF-EU-110a.3](#)

Transition Risks	A3) Market	Risks	Opportunities
	<p>Changing customer behavior</p>	<p>With increasing focus to integrate ESG by businesses and the growing eco-consciousness of the Singapore younger population, the demand for greener products & services is expected to increase in the future. The Company risks being uncompetitive if it does not keep up.</p>	<p>The Company currently offers green electricity options (e.g. Power Eco Add-On) to cater to growing demand of eco-conscious consumers. Growing interest and demand on sustainability will present more opportunities for the company to create new, eco product offerings.</p>
<p>Uncertainty in market signals</p>	<p>The cost of carbon is projected to increase in the long term as momentum by governments and businesses intensifies to meet 2030 and 2050 climate goals.</p> <p>The tension between what needs to be done by a certain time and what can be done realistically to address climate change is expected to present uncertainty in markets from time to time.</p>	<p>Timely and effective energy policies can help provide certainty to markets. As a significant player in the power industry, the Company can influence policy-making through discussions with policy-makers and regulators to enable an orderly energy transition over time.</p>	



Climate-Related Disclosures

Table 1: Climate-Related Risks & Opportunities (Cont.) [IF-EU-110a.3](#)

Physical Risks	B1) Acute	Risks	Opportunities
		<p>Increased severity of extreme weather events such as cyclones and floods</p> <p>The findings from the latest climate risk report* by FM Global (the insurer of the Company's power plant assets located in Singapore), revealed a climate risk score that is 92% higher than other climate exposed clients. The high climate risk score is a strong endorsement on the climate resilience of the Company's power plant assets against near-term, event-driven perils such as flood, wind and wildfires.</p> <p>There were no climate-related recommendations from FM Global arising from the climate risk report findings.</p> <p><i>*FM Global's climate risk report identifies event-driven climate risks through the use of advanced analytics and proprietary account-specific data, providing a view of the Group's actionable climate risks and captures the potential for property loss and associated business interruption from climate-related events. FM Global's climate risk report boundary does not include the Tuaspring power plant.</i></p>	<p>The strong climate risk score by insurer FM Global provides assurance and confidence to key stakeholders (e.g. shareholders, customers, banks, regulators) on the Group's continued performance against future climate risks. The Group could leverage on this to engage banks for better financing terms.</p>

B2) Chronic	Risks	Opportunities
<p>Changes in precipitation patterns and extreme variability in weather patterns</p>	<p>Singapore, where all power plant assets owned and operated by Group are located, is projected to experience a 1.4°C to 4.7°C temperature rise and a sea level rise of about 1 m by the end of the century.</p>	<p>FM Global, the insurer of Company's power plant assets, is currently developing capabilities to understand the long-term impacts of sea-level rise and temperature rise on Singapore. This will provide greater insights on the risk exposures to the Company's power plant assets.</p>
<p>Rising mean temperatures</p>	<p>To address these long-term climate change effects, the Singapore government has a resilience framework for the country's adaptation efforts. For details, please refer to Singapore's National Climate Change Secretariat web-site.</p>	<p>The Company will continue to engage FM Global to better appreciate the risk exposures to its power plant assets in order to develop climate adaptation mitigation plans for the future if need be.</p>
<p>Rising sea levels</p>		

Climate-Related Disclosures

New Ventures Enabling the Energy Transition

The Company has kickstarted its 60-30 journey by exploring new energy transition technologies and solutions, and will continue to do more.



100 MW Singapore-Malaysia Electricity Import Trial

Since YTL PowerSeraya's appointment in October 2021 as the 'electricity importer' by the Energy Market Authority for a 2-year trial to bring 100MW of electricity from Malaysia into Singapore, the company has been in discussions with a power producer in Malaysia and the Energy Market Authority, Singapore on the technical and regulatory arrangements to actualise the trial. This power import initiative adds to the development of the ASEAN power grid and results in a lower carbon footprint for the same amount of energy generated locally in Singapore.



Memorandum of Understanding (MOU) - Hydrogen Generated Power in S'pore

In June 2022, YTL PowerSeraya took early steps in exploring hydrogen as a carbon-free energy fuel with its partnership with Linde and YTL Data Centre Holdings Pte Ltd and STT Telemedia Global Data Centres. Under the MOU, a study will be conducted to assess the feasibility of generating power from clean hydrogen for data center consumption. Though in its exploratory stage, this MOU is a positive step towards Singapore's energy transition to low-carbon alternatives.



Memorandum of Understanding (MOU) - First e-methanol plant in Southeast Asia

Since the MOU was inked in April 2022, YTL PowerSeraya has been exploring ways with its partners to provide renewable energy to generate green hydrogen feedstock for further processing with biogenic carbon to produce green e-methanol. Under the MOU, YTL PowerSeraya with its partners PTT Exploration and Production Public Company Limited (PTTEP), Air Liquide, Oiltanking Asia Pacific Pte. Ltd., Kenoil Marine Services Pte Ltd, and A.P. Moller - Maersk A/S will explore the feasibility of establishing a 50,000 TPA (tons per annum) green e-methanol pilot plant. This MOU seeks to leverage on YTL PowerSeraya's commitment of reducing 60% of its GHG emissions by 2030 (from 2010 levels) as well as the sustainability aspirations of its partners to bolster Singapore as a sustainable hub port.

Climate-Related Disclosures IF-EU-110a.3



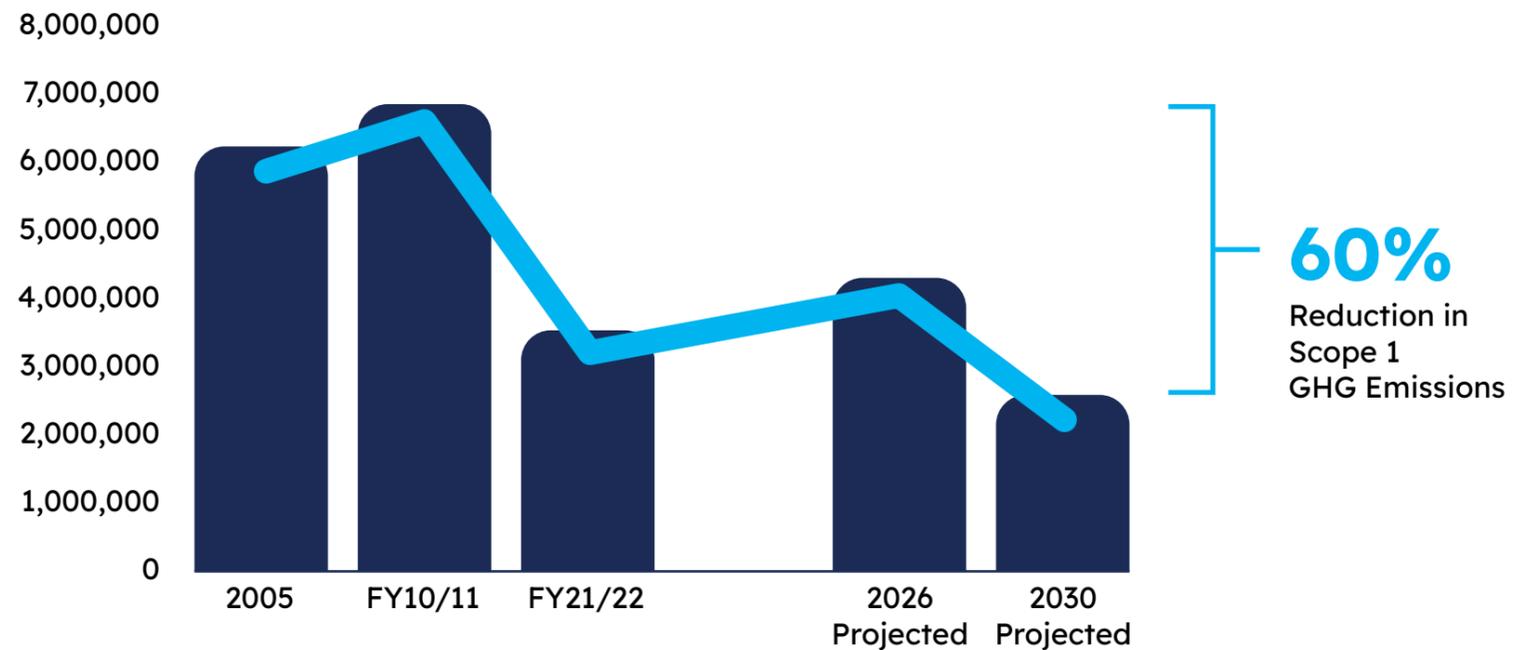
Progress Update on '60-30 Vision'

Scope 1 GHG emissions registered in FY21/22 (i.e. 3.66 mil tCO₂e) falls within the projected emissions trajectory set out under the 60-30 Vision that was revealed during the last reporting period. No envisaged change to the emissions trajectory is expected as at the time of this report. See the chart below.

The risks of USA and Europe economies going into recession this FY and the period thereafter may, however, materialise and slow down the rate of emissions increase for the coming years.

Arising from the recently concluded acquisition of the 396 MW Tuaspring Power Plant (TPP) in June 2022, a progressive increase in Scope 1 GHG emissions is projected till around 2026/2027. TPP being one of the most advanced and efficient combined cycled power plants in Singapore power system not only helps to lower the overall emissions intensity profile but also provides an orderly transition for the company when the opportunity arises to replace aging power plant units sometime in the second half of this decade.

Scope 1 GHG Emissions Projection (in tCO₂e)



COMMITTED to our 60-30 vision of reducing 2010 GHG emissions by 60% by 2030



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Environmental Performance

Energy & GHG Emissions

Natural gas shortage issues and the onset of the Ukraine war presented energy security challenges for Singapore in FY21/22. Against the backdrop of the fuel supply shortage situation, Singapore's energy demand increased as its economy started re-opening from Q2 2022 onwards as part of the country's 'living with covid-19' strategy. This necessitated government interventions which resulted in the company's standby oil-fired power plants being called to run more frequently in the FY to meet the increased energy demand in Singapore. With a greater proportion of electricity generated from less efficient, oil-fired

power plants, the overall power station efficiency dropped slightly to 52.0% from 53.2% in the previous FY. The end result is direct GHG emissions (Scope 1) slightly surpassing pre covid-19 levels for FY21/22 to register at 3.66 mil tCO₂e. Similarly, reductions in GHG Emissions Intensity (Scope 1) from 2005 levels registered lower at 32.1% (versus 36% target consistent with Singapore's 2030 NDC³). The expectation is that the GHG Emissions Intensity will normalise to a lower figure when the fuel supply shortage situation (sparked by the war on Ukraine) subsides or comes to some meaningful conclusion.

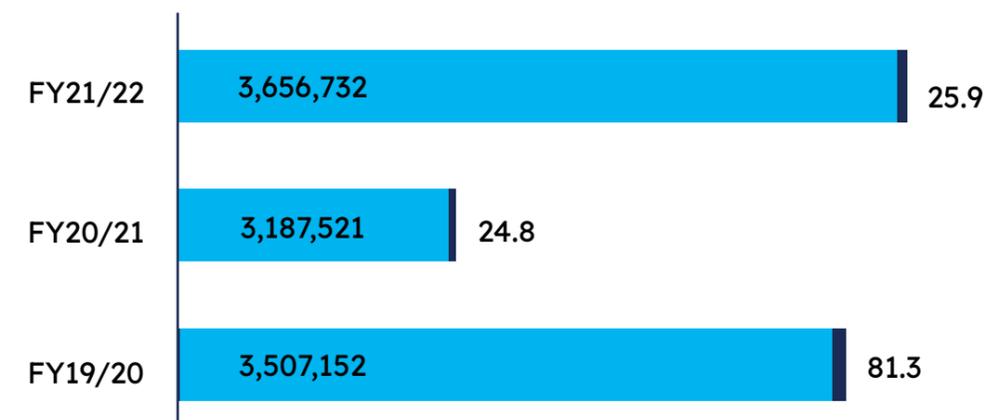
GRI Index / SASB Code	Environmental Performance Indicator	FY 19/20	FY 20/21	FY 21/22	
GRI 305-1 / IF-EU-110a.1	Direct GHG Emissions (Scope 1) in tCO ₂ e	3,507,152	3,187,521	3,656,732	
GRI 305-2	Indirect GHG Emissions (Scope 2) in tCO ₂ e	81.3	24.8	25.9	
GRI 305-3	Other Indirect GHG Emission (Scope 3) in tCO ₂ e	Priorities are given to the measurement & reporting of Scope 1 & 2 until such time there is greater clarity on relevance of Scope 3 emissions to stakeholders*			
GRI 305-5	Reductions in GHG Emissions (from base year FY12/13) in tCO ₂ e	Scope 1	2,040,198	2,359,829	1,890,618
		Scope 2	114.7	170.8	169.7
IF-EU-110a.2	Scope 1 (in tCO ₂ e) GHG emissions associated with Power Deliveries** (i.e. GHG emissions associated with electric power delivered to retail customers, resulting from owned power generation and purchase power)	2,767,969	2,914,239	2,737,680	

* The Greenhouse Gas Protocol is silent on the classification of the emissions (Scope 1, 2 or 3) resulting from electricity purchased from the electricity pool or other gencos (but not consumed by YTL PowerSeraya) even though it was captured as Scope 3 emissions in previous company reports. Moving forward, Scope 3 emissions will be omitted to avoid confusion and for practical reasons.

** GHG emissions are calculated using the Singapore Electricity Grid Emission Factor.

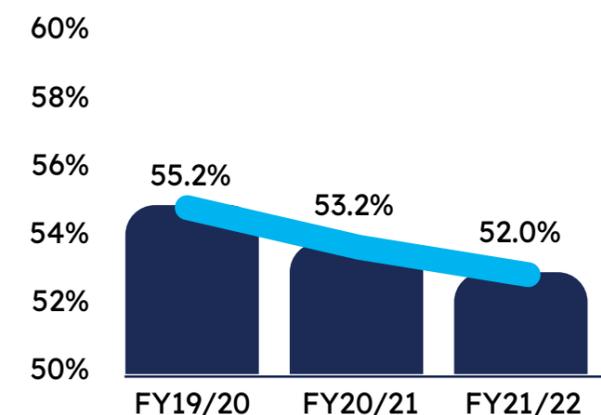
³ Nationally Determined Contributions (NDC)

Direct & Indirect GHG Emissions (in tCO₂e)



■ Scope 1 (Direct Emissions from Power Plant Operations)
 ■ Scope 2 (Indirect Emissions) – Electricity consumed at Corporate Office

Overall Power Station Efficiency (includes Tuaspring powerplant)



Environmental Performance

Improving the Efficiency of Boiler Feedwater Pumps with Variable Speed Drives

A significant energy efficiency improvement being implemented at one of the power plant units in FY21/22 is the installation of variable speed drives to existing boiler feedwater pumps. This initiative is projected to reduce energy consumption for

the feedwater pumps and reduce about 1,400 tCO₂e of GHG emissions on an annual basis. A similar energy efficiency improvement will be executed in the coming FY22/23, a further contribution to the company's 60-30 vision.



Heat exchanger for cooling the Variable Speed Drive (VSD)



VSD for the feedwater pump of Cogen 40, one of the power plant units



Fire protection system for individual VSD

Environmental Performance

Energy Consumption & Intensity

The progressive re-opening of Singapore's economy resulted in a rise of energy demand and consumption. Energy intensity improved by 7.2% from the previous FY with greater electricity and steam generation output despite the increase in energy consumption.

Solar Generation

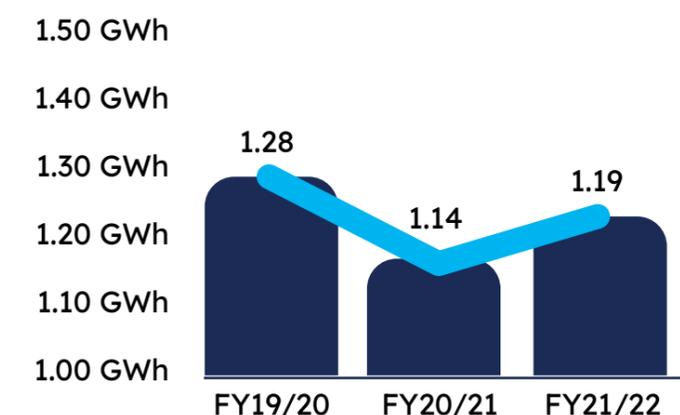
Total solar energy generation volumes to meet customers' green energy needs* increased by 4.4% to stand at around 1.19 GWh for FY21/22. Higher efficiency achieved (measured in terms of performance ratio) for the solar PV system contributed to higher solar generation volumes compare to the previous FY. Solar

energy generation for the next FY is expected to register at around the same output levels with continuous solar performance monitoring and adequate maintenance.

GRI Index	Environmental Performance Indicator		FY 19/20	FY 20/21	FY 21/22
GRI 302-1	Energy Consumption Within The Organisation	Total Fuel Consumption (Non-Renewable Sources) in GJ	Natural Gas 62,375,777	Natural Gas 56,716,874	Natural Gas 60,291,062
			Heavy Fuel Oil & Diesel 68,023	Heavy Fuel Oil & Diesel 52,174	Heavy Fuel Oil & Diesel 3,587,887
		Total Fuel Consumption (Renewable Sources) in GJ	Nil	Nil	Nil
		Total Energy Consumption (in GJ)	29,781,117	27,512,423	31,416,093
		Total Electricity Sold (in GJ)	28,911,170	25,490,273	28,742,667
	Total Steam Sold (in GJ)	3,751,512	3,766,352	3,720,189	
GRI 302-3	Energy Intensity for Electricity & steam from non-renewable and renewable sources (defined as energy consumed for electricity and steam generation operations (i.e. house load in MWh) divided by energy output (i.e. electricity and steam generated in GWh)		24.11	26.86	24.93
GRI 302-4	Reduction in Energy Consumption (i.e. house-load consumption) versus base year FY12/13 for Electricity & Steam	in MWh	254,508	259,844	254,956
		In TJ	916.23	935.44	917.84

* In form of Renewable Energy Certificates (RECs) to customers. The RECs originate from solar PV rooftop system at Pulau Seraya Power Station owned by YTL PowerSeraya.

Solar Generation Sold as Renewable Energy Certificates



Environmental Performance

Water Management

Water withdrawn for power plant operations dipped by about 0.4% due to slightly lower steam demand compared to the previous FY.

98.8% of total water withdrawn is used for power plant operations with the remaining 1.2% for domestic use (toilets, canteens). The latter water source is from freshwater reservoirs.

Total water withdrawn for power plant operations are all from non-freshwater sources, comprising 70.8 % desalinated water and 29.2% reclaimed water (NEWater⁴).

Water losses as a percentage of total water withdrawn saw an increase to 10.5% (from 9.9% in previous FY). A program to minimise evaporative losses from boiler processes as well

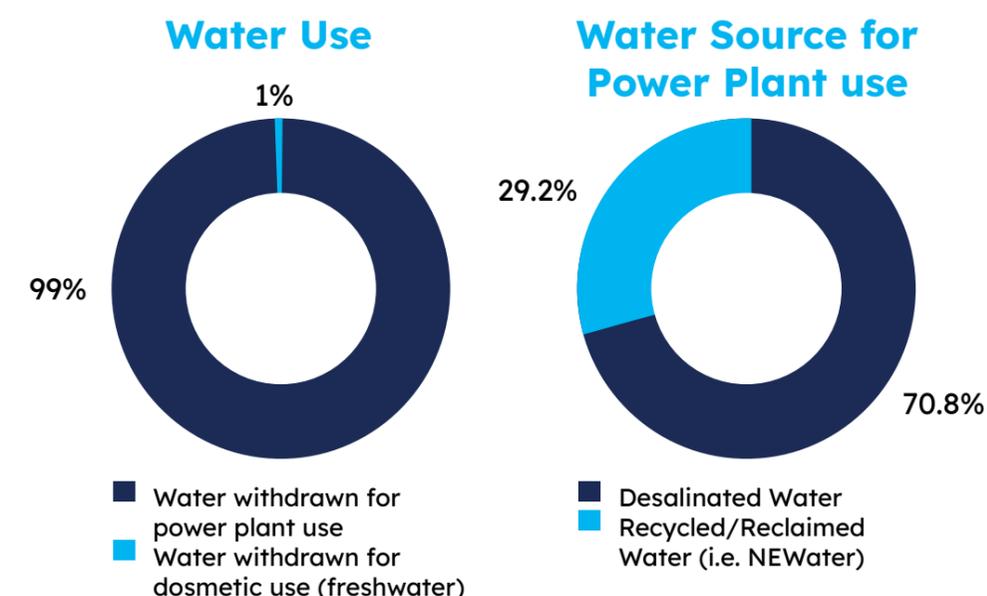
as water leakages for the rest of the water network is being developed to improve water efficiency. To have an appreciation of the company's water management practices in the context of water stress Singapore, please refer to [pg 18 of last FY's SR](#).

GRI Index / SASB Code	Environmental Performance Indicator	FY 19/20	FY 20/21	FY 21/22	
GRI 303-3 / IF-EU-140a.1	Water Withdrawn (in megalitres)	Surface Water			
		Ground Water			
		Seawater* (> 1,000 mg/L Total Dissolved Solids)	1658.4	1916.4	1488.2
		Produced Water			
		Third-Party Water (> 1,000 mg/L Total Dissolved Solids)	347.4	219.8	639.9
GRI 303-4 / IF-EU-140a.1	Water Discharge (in megalitres)	Surface Water			
		Ground Water			
		Seawater (> 1,000 mg/L Total Dissolved Solids)	571.6	589.3	608.7
		Produced Water			
		Third-Party Water			
GRI 303-5 / IF-EU-140a.1	Water Consumption** (in megalitres)	1434.2	1546.8	1519.4	
	% Water Losses (of Water Withdrawal)	5.4%	9.9%	10.5%	

* Excludes: a) seawater that is drawn into the condenser does not involve water consumption and is passed through the condenser (for cooling purposes) and subsequently discharged into the open sea, b) the portion of seawater that is drawn into desalination plant and subsequently rejected as brine (after undergoing reverse osmosis process) into the open sea.

** The two main water sources used for power plant operations is desalinated water (from seawater) and treated water from the state water utility PUB (third-party water). The water consumed is primarily the process steam which is sold to nearby chemical plants with a small proportion being evaporative losses.

⁴ NEWater is high-grade reclaimed water produced from treated used water that is further purified using advanced membrane technologies and ultra-violet disinfection. (Source : PUB, Singapore).



Environmental Performance

Air & Water Quality & Other Environmental

Air emissions from power plant operations were all well within the Singapore regulatory limits for FY21/22. All water discharges to the sea met stipulated environmental limits set out in Singapore's regulations on trade effluent for watercourses.

GRI Index / SASB Code	Environmental Performance Indicator	FY 19/20	FY 20/21	FY 21/22
Air Quality				
GRI 305-7 / IF-EU-120a.1.	Sulphur Dioxide (SO ₂) [^] in MT/MWh	2.50E-03	1.21E-06	5.92E-05
	Nitrogen Oxides (NO _x) [*] in mg/Nm ³	25 - 45	10 - 42	12 - 46
	Particulate Matter (PM) in mg/Nm ³	0 - 2	0 - 2	0 - 3
	Carbon Monoxide (CO) in mg/Nm ³	0 - 3	0 - 53	0 - 4
	Other Significant Air Emissions ^{**}	Nil	Nil	Nil
Water Management				
GRI 306-1	Total water discharge by quality and destination (includes thermal discharge) in m³	44,110	44,540	40,569
		Water is discharged to the open sea and is within the environmental limits of Singapore's Trade Effluent Regulations for Watercourse Discharge.		
	BOD (Biological Oxygen Demand)	< 50 mg/L		
	COD (Chemical Oxygen Demand)	< 100 mg/L		
	TSS (Total Suspended Solids)	< 50 mg/L		
	Total Metals	< 1mg/L		
	Oil & Grease	< 10 mg/l		
Temperature	< 45°C			

[^] SO₂ emissions is controlled at fuel source.

^{*} NO_x figures are taken from reports by external laboratories engaged to analyse flue air samples taken from different power plant units in the Company.

^{**} Volatile organic compounds, Particulate Matter are air emissions that are not material as the power generation business of the Company comprises predominantly natural gas-fired combined cycle and co-generation power plant units.

Environmental Performance

Environmental Compliance

There were no fines, non-monetary sanctions nor dispute cases related to environmental compliance in FY21/22. There was also no significant oil spills in the same period.

GRI Index / SASB Code	Environmental Performance Indicator	FY 19/20	FY 20/21	FY 21/22
Compliance to Environmental Laws and Regulations				
IF-EU-140a.2	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	0	0	0
GRI 307-1	Total monetary value of significant fines	0	0	0
	Total number of non-monetary sanctions	0	0	0
	Cases brought through dispute resolution mechanisms	0	0	0
Oil Spills				
GRI 306-3	Significant spills (Tier 2 & above) Note: Tier 2 spills (as per International Petroleum Industry Environmental Conservation Association's three-tier framework)	0	0	0

Solid & Liquid Wastes

Industrial waste are hazardous substances and saw a decrease to 13.4% in FY21/22. Such waste was disposed responsibly in accordance with Singapore's Environmental Public Health (Toxic Industrial Waste) Regulations. About 57 metric tons of waste fuel oil & diesel were sold to waste oil recycling companies.

GRI Index	Sustainability Performance Indicator	FY 19/20	FY 20/21	FY 21/22	
GRI 306-2	Total weight of waste by type and disposal method				
	For Disposal	a) Total Industrial Waste (Toxic) in metric tons	18.86	52.4	45.34
		b) Gypsum Waste in metric tons	0	0	0
		c) General Waste in metric tons	162.31	146.94	150.04
	For Recycling	d) Recyclable Waste in metric tons	49.54	0	57.06

DEVELOPING & ENERGISING our employees to keep them healthy & thriving



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 - Chairman Message
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- 5 **FY21/22 PERFORMANCE**
 - Key ESG Performance
 - Climate-Related Disclosures
 - Environmental Performance
 - **Social Performance**
 - External Engagements

- 6 GRI & SASB INDEX

Social Performance

Engaging Employees In Their Well-Being & Development

Investing in the learning and development of employees was a continuing focus in FY21/22 despite the on-going covid-19 pandemic. The Leadership Development Programme which kickstarted the previous FY continued into its second year with the rollout of the OMNI (Operations Mgmt. Innovation Programme) aimed at equipping leaders and management with operations management methodologies for continuous improvement. To enable people managers to be effective coaches capable of conducting meaningful career conversations

with their charges, Buddy Coaching and Career Conversation trainings were also rolled out in the year to support their leadership journey.

To ensure that working from home during the pandemic did not affect collaboration and productivity negatively, online teambuilding events were organised to keep staff morale and motivation high. When Singapore started to relax covid-19 restrictions in 2H 2021 and progressively re-opened its borders

in 1H2022, the company also ramped up its in-person staff engagement activities in tandem. These in-person activities helped reconnect employees, fostering social bonds and strengthened sense of belonging to the organisation.



17 **Employee Engagement Initiatives**
(bonding, team-building, contributes to organisational effectiveness/development/strategy)

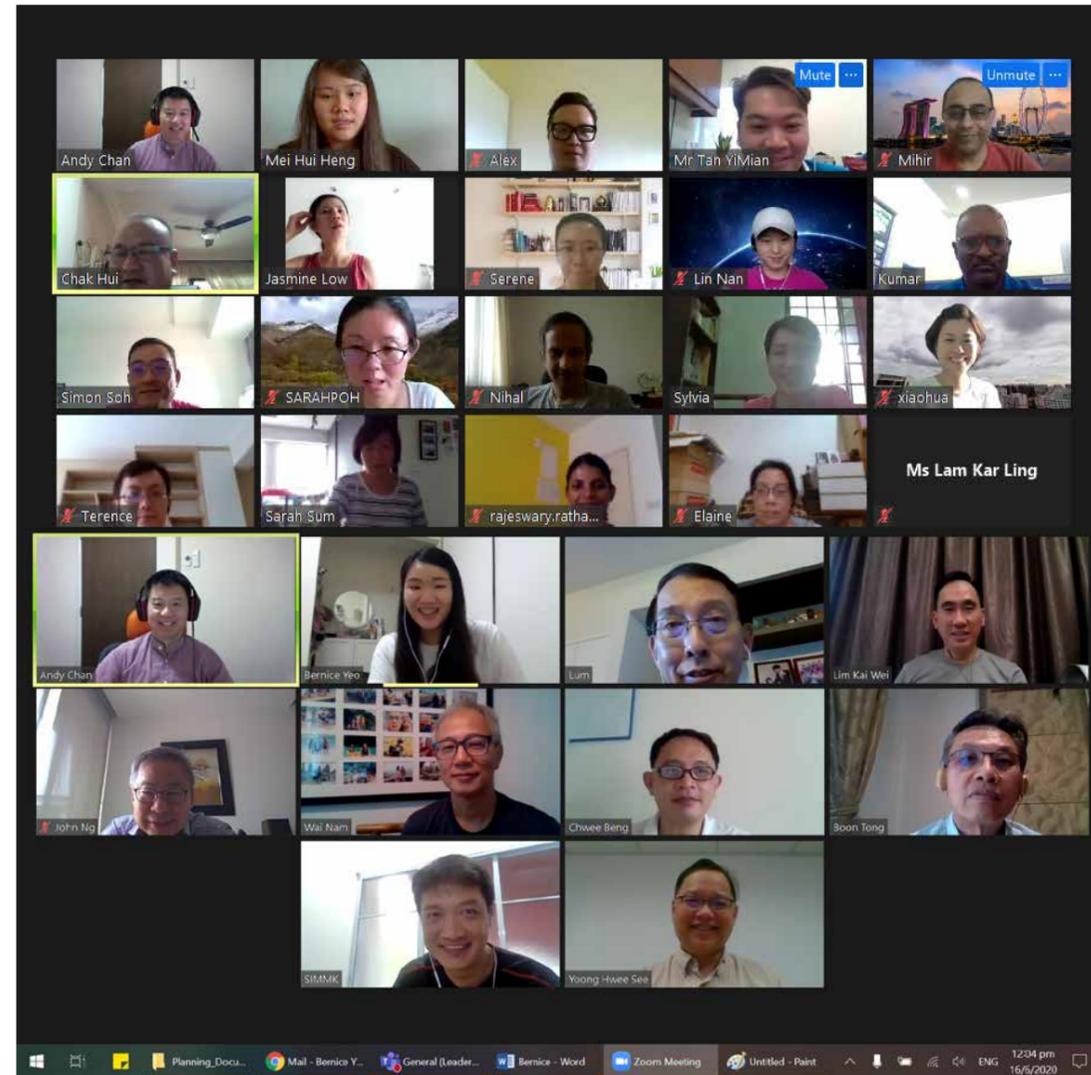
12 **Employee Learning & Development Initiatives**
(training, learning, coaching, personal development)

Social Performance

Fair Employment GRI 405-2

The company is a signatory to the Tripartite Alliance for Fair & Progressive Employment Practices (TAFEP) and works closely with the union to develop fair, responsible and progressive employment practices in the organisation. Under a merit-based compensation system where employees are rewarded and recognised regardless of race and gender, the company is able to nurture an inclusive workforce that strives for the company.

As at 30 June 2022, about 40.8% of the workforce are under collective bargaining. Several dialogue sessions between the management and the UPAGE (Union of Power & Gas Employees) were organised in the FY to discuss matters pertaining to staff compensation, benefits, training and welfare. Negotiations are also underway for a new Collective Agreement to be in place for the next 3 years effective from the next FY.



* Base Salary is the average salary of men and women excluding benefits, bonuses, allowances and any variable wage component. Singapore's Wage Equality Score is 0.805 (Source : Global Gender Gap Report 2022, World Economic Forum)

Social Performance

Training [GRI 404-1, 404-2, 404-3](#)

Training hours and expenditure (per employee) saw a decrease in FY21/22 (vs FY20/21) but still higher than pre-covid 19 levels. The significantly higher training expenditure and training hours in FY20/21 is due to the Leadership Development Program (LDP) which was mainly delivered in FY20/21 with some remaining

program components executed in FY21/22. The company's safety training hours per employee experienced year-on-year increase for the past 3 years, reflecting the company's continued importance on workplace safety.

	FY19/20		FY20/21		FY21/22	
	Average Training Hours		Average Training Hours		Average Training Hour	
	Male/Female	Ttl	Male/Female	Ttl	Male/Female	Ttl
Senior Mgmt	33.9/0	33.9	106.9/0	106.9	32.2/0	32.2
Middle Mgmt	20.6/27.3	22.9	66.9/85.4	74.1	34.7/36.1	35.2
Executive	22.3/15.9	19.7	37.1/32.6	35.3	26.3/29.5	27.5
Non-executive	10.0/10.1	10.0	8.5/5.4	8.1	12/10.0	11.8
Overall	16.3/17.2	16.5	29.1/36.3	31.2	20.5/27.2	22.3

	FY19/20	FY20/21	FY21/22
Safety Training Hours Per Employee (power plant employees only)	3.8	4.4	5.3



Social Performance

Succession Planning [GRI 401-1](#)

Over the years, the proportion of older employees (above 50 years) has declined while the proportion of younger employees (50 years & below) has increased. This outcome is the result of the company's on-going succession and renewal / retirement replacement planning efforts to address the aging workforce

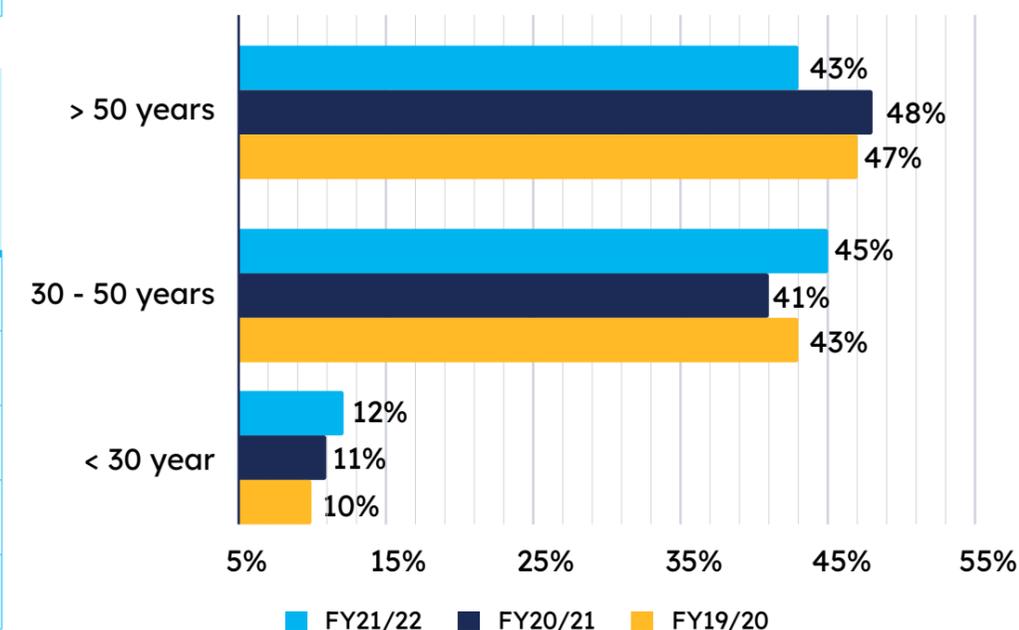
profile. The company has been consciously recruiting new employees to replace retiring ones ahead of time. This is to allow sufficient time for new employees to learn on job and to facilitate a smooth handover of job responsibilities between the outgoing and incoming employees.

Staff Age Group	FY19/20		FY20/21		FY21/22	
	Headcount	% (of Ttl)	Headcount	% (of Ttl)	Headcount	% (of Ttl)
< 30 years	31	10%	35	11%	44	12%
30 - 50 years	132	43%	129	41%	159	45%
> 50 years	147	47%	150	48%	150	43%
Total	310	100%	314	100%	353	100%

Age Group	FY21/22 New Hire Numbers (by Gender, by Age Group)			FY21/22 New Hires Distribution (by Age Group)
	Male	Female	Total	
< 30 years	9	3	12	26%
30 - 50 years	27	6	33	72%
> 50 years	1	0	1	2%
Total	37	9	46	100%
'% New Hires (by Gender)	80%	20%	100%	



Staff Profile by Age Groups



Social Performance

Staff Turnover [GRI 401-1](#)

Voluntary resignations has seen an increase in FY21/22 compared to the last FY but still lower than pre-covid 19 levels. This compares well with the manufacturing industry staff turnover benchmark in Singapore. The progressive opening up of the

Singapore economy, especially in 1H2022, and the tightening of foreign labour supply (through control of work passes) presented more external opportunities for employees in FY21/22, thus contributing to the uptick in staff turnover.

Staff Turnover Rate		FY19/20	FY20/21	FY21/22
YTL PowerSeraya	Voluntary resignations, dismissal, medical board out, retirement & death in service	16.7%	9.5%	12%
	Voluntary resignations only	13.8%	6.4%	10%
Manufacturing Industry [^]	Voluntary resignations only	16.8%	14.4%	14%

Safety & Health [GRI 403-1](#), [GRI 403-2](#), [SASB IF-EU-320a.1](#)

The FY registered two work-related, minor accidents which resulted in 11 man-days lost. Internal investigations were initiated to find out the root cause of the accidents and which resulted in preventive measures being taken to minimise a recurrence.

Close to 40% of the workforce participated in company-subsidised annual health screening exercise. Depending on the health screening package, employees are minimally screened for obesity and chronic illnesses such as diabetes and hypertension.

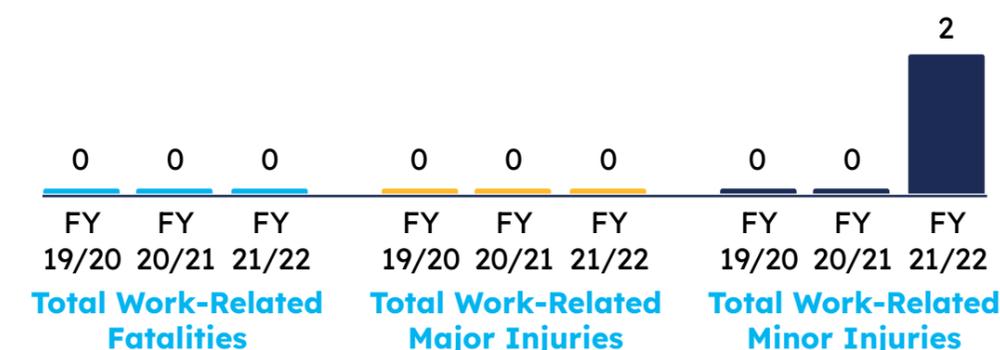
Staff & 3 rd Parties	FY19/20	FY20/21	FY21/22
1. Worker representation in formal management-worker health and safety committees (expressed as a percentage of employees stationed at the power plant whose work activities are exposed to safety & health risks)	Not previously reported	17.0%	13.9%
2. Total Man-Hours Worked*	1,078,136	1,049,370	1,431,145
3. Total Work-Related Incidents	0	0	2
4. Lost Time Injury in Man-Days	0	0	11
5. Lost Time Injury Frequency Rate (LTIFR)**	0	0	1.4

Note : Safety statistics captured in the table above includes Tuaspring power plant

[^] Source : Singapore Yearbook of Manpower Statistics 2021, Ministry of Manpower

* Total Man-Hours Worked covers all workplaces under the company's operational control (including the corporate office).

** LTIFR = (Number of Lost Time Injuries x 1,000,000) div Total Man-Hours Worked.



External Engagements

Empowering Customers & Communities



Supported BYO Singapore movement by contributing Geneco reusable tote bag to REFASH at their retail stores during Plastic Free July.

Partners:
REFASH

During Plastic Free July 2021 in tandem with BYO Singapore movement, Geneco launched the initiative with our ChangeMakers SG partner, REFASH, that gave complimentary reusable Geneco tote bags to REFASH customers when they purchased preloved clothing item at a REFASH retail store. This initiative is to reduce the distribution of plastic bags and encourage customersto BYO reusable bags for their future purchases at any retail shops.

Contributed
1,000 tote bags
to REFASH



Encouraged our customers to embark on an eco-lifestyle starting from a simple Micro-Green activity.

Partners:
Cultivate Central

In Geneco's #JollyGreen festive campaign, Geneco collaborated with its ChangeMakers SG partner, Cultivate Central, to give away 500 Micro-Green kits to customers who successfully registered their interest via an email blast in November and December.

Provided micro-green
kits to **500 Geneco**
customers

External Engagements

Launched Power Eco Add-on - Singapore's First & Only customisable green add-on for an electricity plan on 9 August 2021, Singapore's 56th National Day.



**GO GREEN.
YOUR WAY.**

Only with Power Eco Add-on

Power Eco Add-on is Geneco's strategic approach towards its goal of easing and encouraging Singaporeans to adopt a greener lifestyle, and the innovative add-on was conceptualised with five key considerations - Flexibility, Affordability, Impact to the environment, Simplicity and Authenticity.

The Power Eco Add-on will continue the brand's momentum as one of the key enablers of sustainability in Singapore.

Customers are empowered to go green their way from as low as \$1 more per month by choosing the level of green contribution at 25/50/75/100% when they sign up or renew with Geneco's electricity plan.

**Partners:
National Parks Board (NParks) /
Garden City Fund**

Encouraged Singaporeans to step out of their usual activities, appreciate the green spaces in our nation and donate to the Garden City Fund by NParks.



As part of Geneco's Chinese New Year campaign in January 2022, #ChangeBringsProsperity, Geneco distributed 688 sets of red packets (8pcs/set) to our customers who had successfully registered their interests.

Printed on 100% recycled paper and specially designed with 4 native flora meticulously selected together with NParks, the messages on the red packets encouraged recipients to explore Singapore's green spaces where the featured flora can be found.

Through this initiative, we hope to cultivate an appreciation for nature's beauty, and in turn inspire them to #PowerTheChange and preserve these greeneries for the future generations by going green in their own ways.

Gave out 688 sets of red packets or 5,504 red packets with an inspiring green message to Geneco customers.

External Engagements



Rallied Singaporeans to drop off their used and excess red packets at our recycling bins.

Partners:
CRU, REFASH, IUIGA, Wisma Atria Shopping Centre, Tay Paper Recycling

As a follow-up to #ChangeBringsProsperity campaign, Geneco partnered with CRU, REFASH, IUIGA, Wisma Atria and Tay Paper Recycling and provided 26 recycling bins for the public to drop off their used and excess red packets conveniently located islandwide.

Collected 1,050kg worth of used red packets to be recycled into other paper products by Tay Paper Recycling.

Partners:
National Parks Board (NParks) / Garden City Fund

Contributed 50 trees, as part of Geneco's 250 trees over 5 years, under NParks' OneMillionTree Movement, towards the Singapore Green Plan 2030.



Aligning with the Singapore Green Plan 2030, Geneco has been supporting NParks' #OneMillionTrees movement through Garden City Fund's Plant-A-Tree Programme.

We have pledged 250 trees for five years, starting 2021 with the second 50 trees planted in Punggol Park (2022) with our bank partners, Maybank, OCBC and UOB.

Planted the second batch of 50 trees on Earth Day 22 April 2022, out of 250 trees over 5 years.

GRI & SASB Index

GRI Index

GRI Standard	Disclosure	Page Number and/or URL	Omission
GRI 102: General Disclosures 2016			
102-1	Name of the organisation	Pg 3	
102-2	Activities, brands, products, and services		
102-3	Location of headquarters		
102-4	Location of operations		
102-5	Ownership and legal form		
102-6	Markets served		
102-7	Scale of the organisation	Pg 7	Partial Disclosure Explanation: Net sales comprise a component of a company's revenue figure and is not reflective of a company's scale. Revenue figures is disclosed instead.
102-8	Information on employees and other workers	Pg 27	Partial Disclosure. Information on temporary employees are omitted as their numbers are small relative to the total number of full-time employees
102-9	Supply chain	Refer to Pg 42 of Sustainability Report for FY20/21	
102-10	Significant changes to the organisation and its supply chain	Pg 2	The Tuasping power plant was acquired by YTL PowerSeraya Pte Ltd on 1 June 2022.
102-11	Precautionary Principle or approach	Refer to Pg 36 - 42 of Sustainability Report for FY20/21	
102-12	External initiatives	Pg 3	
102-13	Membership of associations		
102-14	Statement from senior decision-maker	Pg 5 - 6	
102-16	Values, principles, standards, and norms of behavior	Refer to https://ytlpowerseraya.com.sg/about-us/our-business-principles/	
102-17	Mechanisms for advice and concerns about ethics	Refer to https://ytlpowerseraya.com.sg/about-us/governance/	
102-18	Governance structure		
102-22	Composition of the highest governance body and its committees		
102-23	Chair of the highest governance body		

GRI & SASB Index

GRI Index

GRI Standard	Disclosure	Page Number and/or URL	Omission
102-25	Conflicts of interest	Refer to Governance section of Sustainability Report for FY20/21	
102-30	Effectiveness of risk management processes		
102-31	Review of economic, environmental, and social topics	Refer to Governance section of Sustainability Report for FY20/21	
102-32	Highest governance body’s role in sustainability reporting		
102-40	List of stakeholder groups	Refer to Pg 30 of Sustainability Report for FY20/21 for Stakeholder Engagements	
102-41	Collective bargaining agreements	Pg 27	
102-42	Identifying and selecting stakeholders	Refer to Pg 30 of Sustainability Report for FY20/21 for the Materiality Review	
102-43	Approach to stakeholder engagement		
102-44	Key topics and concerns raised		
102-45	Entities included in the consolidated financial statements	Pg 3	
102-46	Defining report content and topic Boundaries	Pg 2	
102-47	List of material topics	Refer to Pg 43 of Sustainability Report for FY20/21 for the Materiality Review	
102-48	Restatements of information	Pg 2	
102-49	Changes in reporting		
102-50	Reporting period		
102-51	Date of most recent report	Pg 2	
102-52	Reporting cycle		
102-53	Contact point for questions regarding the report		
102-54	Claims of reporting in accordance with the GRI Standards		
102-55	GRI content index		
102-56	External assurance	The Company’s sustainability reports are audited every 2 years. The most recent external assurance report is found on pg 46 of Sustainability Report for FY20/21	

GRI & SASB Index

GRI Index

GRI Standard	Disclosure	Page Number and/or URL	Omission
Material Topic Disclosures			
GRI 201 : Economic Performance 2016			
GRI 103: Management Approach 2016			
103-1	Explanation of material topic and its boundary	Pg 7	
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
201-1	Direct Economic value generated and distributed		
Climate Change (Energy)			
GRI 302 : Energy 2016			
GRI 103: Management Approach 2016			
103-1	Explanation of material topic and its boundary	Pg 12 - 17	
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
302-1	Energy consumption within the organisation	Pg 21	
302-3	Energy intensity		
302-4	Reduction of energy consumption		
Climate Change (GHG Emissions)			
GRI 305 : Emissions 2016			
GRI 103: Management Approach 2016			
103-1	Explanation of material topic and its boundary	Pg 12 - 17	
103-2	The management approach and its components		
103-3	Evaluation of the management approach		

GRI & SASB Index

GRI Index

GRI Standard	Disclosure	Page Number and/or URL	Omission
305-1	Direct (Scope 1) GHG emissions	Pg 19	
305-2	Energy indirect (Scope 2) GHG emissions		
305-3	Other indirect (Scope 3) GHG emissions		
305-4	GHG emissions intensity		
305-5	Reduction of GHG emissions		
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Pg 23	
Climate Change (Water)			
GRI 303 : Water & Effluents 2018			
GRI 103: Management Approach 2016			
103-1	Explanation of material topic and its boundary	Refer to Pg 18 of Sustainability Report for FY20/21	
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
303-1	Interactions with water as a shared resource	Pg 22	
303-2	Management of water discharge-related impacts		
303-3	Water withdrawal by source		
303-4	Water discharge		
303-5	Water consumption		
GRI 307 : Environmental Compliance 2016			
GRI 103: Management Approach 2016			
103-1	Explanation of material topic and its boundary	Refer to Pg 18 of Sustainability Report for FY20/21	
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
307-1	Non-compliance with environmental laws and regulations	Pg 24	

GRI & SASB Index

GRI Index

GRI Standard	Disclosure	Page Number and/or URL	Omission
Talent Management & Retention			
GRI 401 : Employment 2016			
GRI 103: Management Approach 2016			
103-1	Explanation of material topic and its boundary	Pg 26	
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
401-1	New employee hires and employee turnover	Pg 29	Partial Disclosure Explanation: New hire information is not readily available in level of details required under the GRI reporting standard.
GRI 404 : Training & Education 2016			
GRI 103: Management Approach 2016			
103-1	Explanation of material topic and its boundary	Pg 26	
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
404-1	Average hours of training per year per employee	Pg 28	
404-2	Programs for upgrading employee skills and transition assistance programs		
404-3	Percentage of employees receiving regular performance and career development reviews		
Fair Employment			
GRI 405 : Diversity & Equal Opportunity 2016			
GRI 103: Management Approach 2016			
103-1	Explanation of material topic and its boundary	Pg 27	
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
405-2	Ratio of basic salary and remuneration of women to men		

GRI & SASB Index

GRI Index

GRI Standard	Disclosure	Page Number and/or URL	Omission
Health & Safety			
GRI 403 : Occupational Health & Safety 2018			
GRI 103: Management Approach 2016			
103-1	Explanation of material topic and its boundary	Pg 28 -29 of Sustainability Report for FY20/21	
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
403-1	Workers representation in formal joint management-worker health and safety committees	Pg 30	
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities		
403-3	Workers with high incidence or high risk of diseases related to their occupation		

GRI & SASB Index

SASB Index

Topic	Accounting Metric	SASB Code	Page Reference
Greenhouse Gas Emissions & Energy Resource Planning	Gross global Scope 1 emissions	IF-EU-110a.1	Pg 19
	Scope 1 (in tCO2e) GHG emissions associated with Power Deliveries	IF-EU-110a.2	Pg 19
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions	IF-EU-110a.3	Pg 12 - 19
	Emissions reduction targets	IF-EU-110a.3	Pg 17, 19
	Analysis of performance against the above targets	IF-EU-110a.3	
Water Management	Total water withdrawn	IF-EU-140a.1	Pg 22
	Total water consumed Percentage of each in regions with High or Extremely High Baseline Water Stress	IF-EU-140a.1	
	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	IF-EU-140a.2	Pg 24
	Description of water management risks and discussion of strategies and practices to mitigate those risks	IF-EU-140a.3	Refer to Pg 18 of Sustainability Report for FY20/21
Air Quality	Air emissions of the following pollutants:		
	(1) NO _x (excluding N ₂ O)	IF-EU-120a.1	Pg 23
	(2) SO _x	IF-EU-120a.1	
	(3) (Particulate matter (PM10))	IF-EU-120a.1	
	(4) Lead (Pb)	IF-EU-120a.1	
	(5) Mercury (Hg) Percentage of each of these in or near areas of dense population	IF-EU-120a.1	
Workforce Health & Safety	Total recordable incident rate ((statistic count × 200,000) / hours worked)	IF-EU-320a.1	Pg 30
	Fatality rate (number of cases)	IF-EU-320a.1	
	Near miss frequency rate ((statistic count × 200,000) / hours worked)	IF-EU-320a.1	