



THE STAR

Climate-related Disclosures

THE STAR ENTERTAINMENT GROUP

Fourth Report, May 2023

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1.0 Climate-related Financial Disclosure

1.1 Preamble

The Task Force on Climate-related Financial Disclosures (TCFD) was established in 2015 in response to market and regulatory challenges to produce and obtain information on climate-related risk for financial decision making.

Launched in 2017, the TCFD Recommendations are a set of voluntary, consistent climate-related financial disclosures for use by investors, lenders and insurance underwriters to understand material risks.

The Star Entertainment Group (The Star) recognises the Recommendations of the TCFD, and importantly that our investments may be susceptible to future changes in climate.

The Star is committed to improving the resilience of our business operations, assets and the precincts in which its properties are located which is detailed in the Group Sustainability Strategy. The Star is currently working to align our current and new projects to the TCFD Recommendations through a progressive roadmap.

The Star has committed to a low carbon future by setting a target to achieve net-zero carbon scope 1 and scope 2 emissions for its wholly owned and operated assets by 2030 as a long-term measure. The Group remains committed to immediate action through an interim carbon target to achieve a 30% reduction from 2013 – 2023 on an intensity basis. The Star has measured its scope 3 emissions and continues to determine management strategies for these emissions.

This is our fourth disclosure, which reports on FY22 data and FY23 management practices and builds on our progress to date against the four Recommendations of Governance, Strategy, Risk Management and Metrics and Targets. We released our first disclosure report in 2020¹.

In FY22 we launched our new sustainability strategy, *Responsible Business, Sustainable Destinations*. This strategy is supporting our transition to ensure we look towards the future with close management of our most material environmental, social and governance (ESG) issues, including climate.

¹ The Star's FY20 Climate-related Disclosures progress report can be found on the company website: <https://www.starentertainmentgroup.com.au/wp-content/uploads/2020/12/Climate-Related-Disclosures-2020.pdf>

1.2 Timeline of Progress

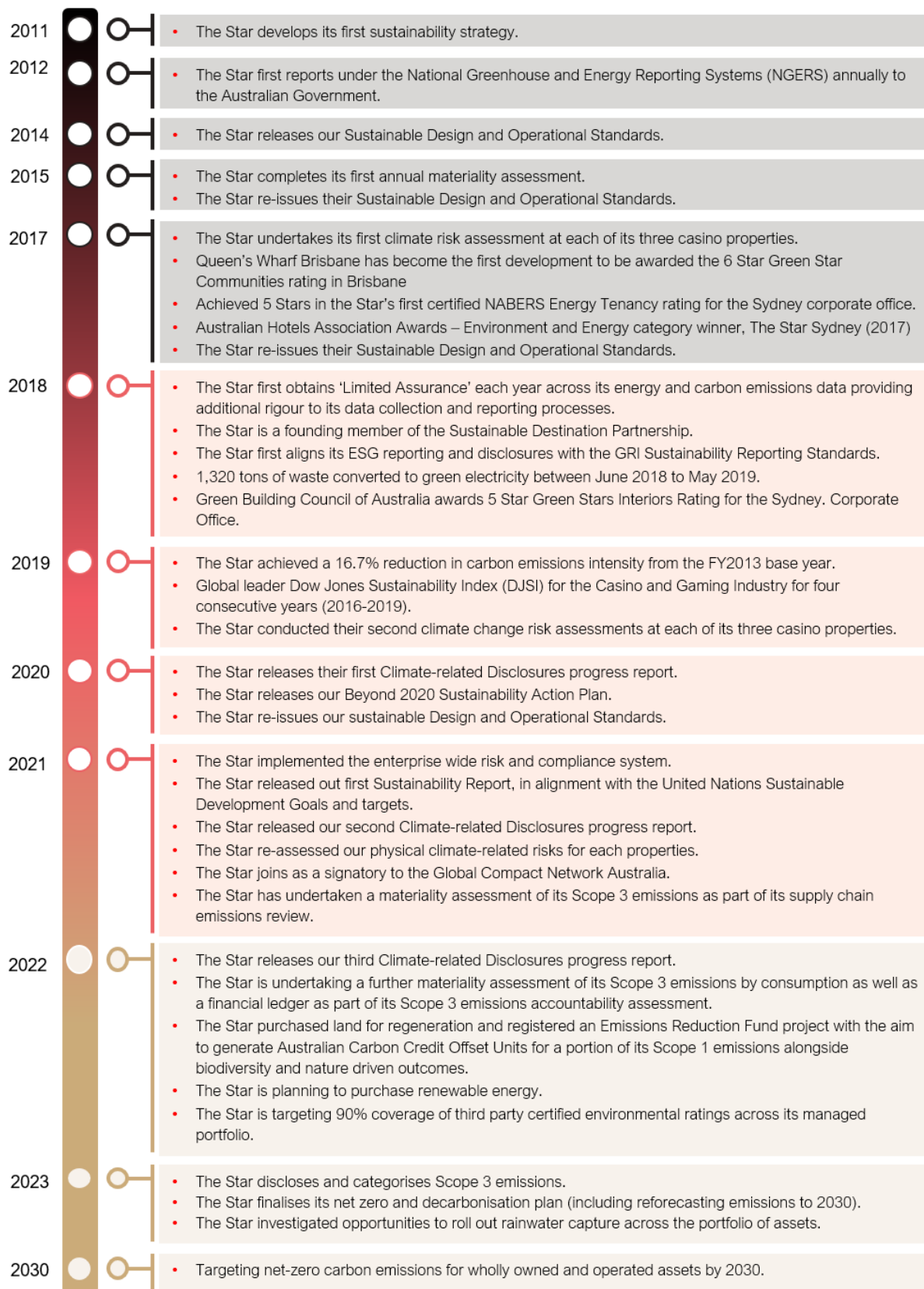


Figure 1: The Star's Sustainability Timeline of progress

1.3 Highlights for FY23

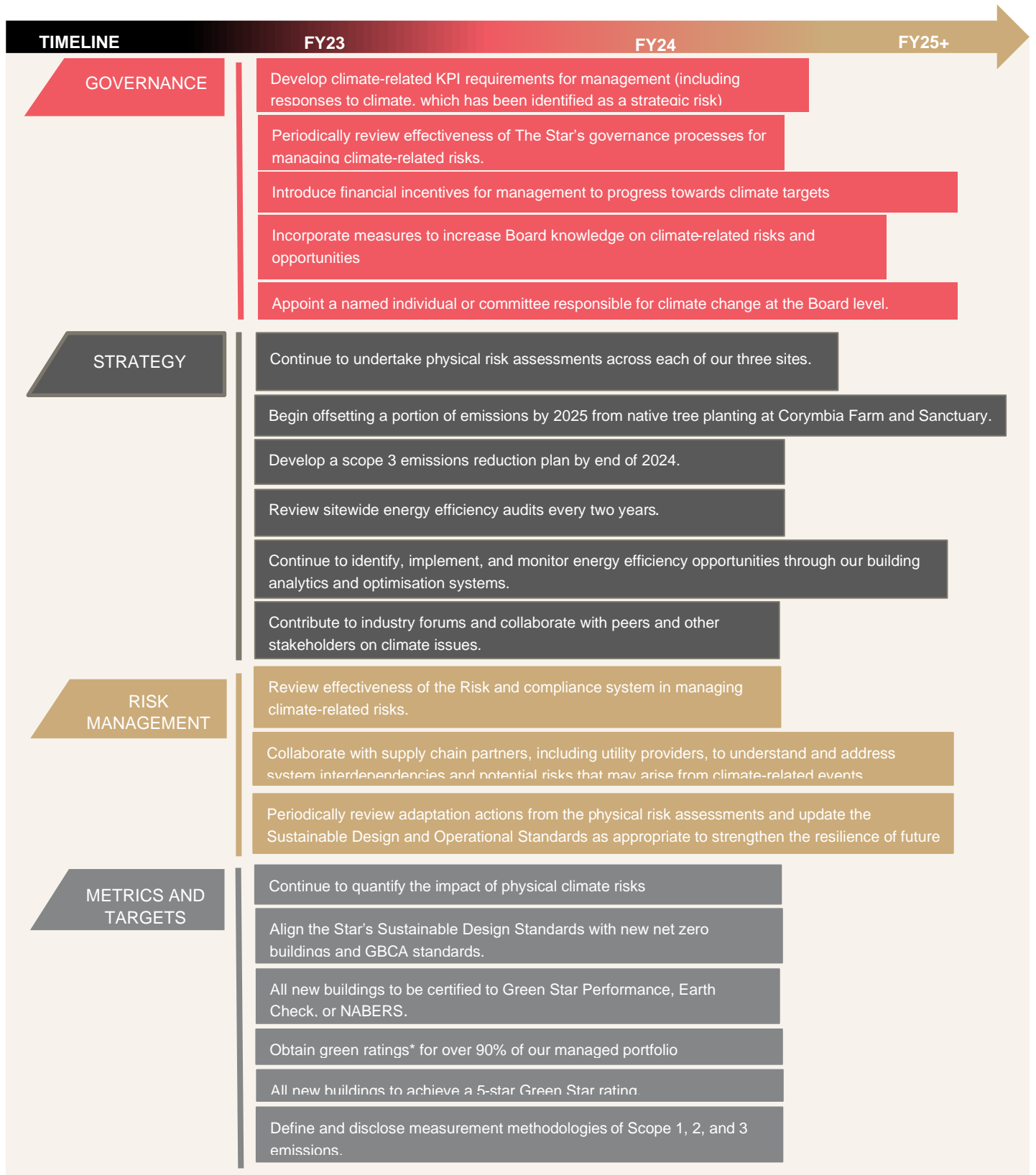
FY23 Highlights
<ul style="list-style-type: none">• The Star has appointed five new Board members. Robbie Cooke was appointed Managing Director and Chief Executive Officer in October 2022. Michael Issenberg, David Foster, Anne Ward, Toni Thornton and Deborah Page joined the Board as non-executive directors. Appointment of new Board members is subject to regulatory approval.
<ul style="list-style-type: none">• The Star implemented its Native Regeneration and Carbon Offsetting Project in the Lower Wonga region in Southern Queensland. This project was registered through the Clean Energy Regulator's Emissions Reduction Fund to generate Australian Carbon Credit Units.
<ul style="list-style-type: none">• The Star undertook a further materiality assessment of its Scope 3 emissions by consumption as well as financial ledger. This formed part of our Scope 3 emissions accountability assessment.
<ul style="list-style-type: none">• The Star achieved a 26% reduction in emissions in FY22 compared to the 2013 baseline year. It is worth noting here that site closures resulting from COVID19 contributed to this reduction. In future years we may see an increase in emissions compared with COVID19 impacted years (FY21 and FY22). The Star will continue to work towards its targets through energy efficiency and building optimisation.

1.4 Updates on FY22 climate roadmap actions

Updates on FY22 roadmap actions	Timeline	Status	Notes	TCFD alignment
Develop climate related KPIs for management	FY23	🟡 Initiated – develop and implement	<i>During FY23 Environmental and Sustainability was added to the Risk Taxonomy under the risk category, Strategic Risk. In FY24 we will begin to develop climate-related KPI requirements. Due to a focus on remediation and business transformation, this action has been delayed from FY23 to FY24-25.</i>	Governance
Periodically review effectiveness of The Star’s governance processes for managing climate-related risks.	Ongoing	🟢 Established – continue and improve	<i>During FY23 Executive and State Risk Committees were created meeting on a monthly basis. These committees meet regularly and provide a platform for risks to be raised on a regular basis.</i>	Governance
Continue to engage with key stakeholders to enhance approach with regards to climate resilience.	FY23	🟢 Established – continue and improve		Strategy
Continue to undertake physical risk assessments across each of our three sites.	FY23	🔴 Not started	<i>Updates to current physical risk assessments (completed in 2017, 2019 and 2021) are scheduled to take place at the end of 2023</i>	Strategy
Develop a framework derived from the physical and transition risk assessments to be applied to business decisions with a value over a certain threshold.	FY23	🔴 Not started		Strategy
Review and update The Star’s Sustainable Design and Operational Standards.	FY23	🟢 Established – continue to improve	<i>Updated</i>	Risk Management
Review effectiveness of the Risk & Compliance system in managing climate-related risks.	FY23	🟡 Initiated – develop and implement	<i>During the reporting year there has been a review of the risk management processes across the business, which includes climate risk. This will continue to be developed as part of the wider remediation plan.</i>	Risk Management
Collaborate with supply chain partners, including utility providers, to understand and address system interdependencies and potential risks from climate-related events.	FY23+	🔴 Not started	<i>We have engaged with supply chain partners on a case-by-case basis (e.g. during the repairs of Will and Flow post 2022 flooding to ensure the building is more flood resilient).</i>	Risk Management

			<i>In FY24 we will look to develop a process for regularly engaging with suppliers to address system interdependencies in relation to climate risk.</i>	
Periodically review adaptation actions from physical risk assessments and update the Sustainable Design and Operational Standards as appropriate to strengthen the resilience of future construction and development projects.	FY23	█ Established – continue to improve	Reviewed as part of the annual update	Risk Management
Engage with key stakeholders and its supply chain to encourage better climate-related disclosure within the tourism and gaming industry, and to improve our internal ability to respond to climate risks.	FY23+	█ Initiated – develop and implement		Risk Management
Disclose The Star’s Scope 3 emissions.	FY23	█ Established – continue to improve	Refer to website	Metrics and targets
Finalise its net zero and decarbonisation plan	FY23	█ Established – continue to improve	Complete, refer to website.	Metrics and targets
Roll out rainwater capture / harvesting across the portfolio of assets to reduce potable water requirements for cooling demand and reduce costs for operations.	FY23	█ Established – continue to improve	Investigations continuing at the property level	Metrics and targets
Continue to investigate ways to quantify and report on the impact of physical climate risks, including how planning measures can reduce recovery costs and lost revenue.	FY23+	█ Initiated – develop and implement		Metrics and targets

1.5 Key next steps for FY24



2.0 Governance

Disclose The Star's governance around climate-related risks and opportunities.

The Board's Safer Gambling, Governance & Ethics Committee and Executive Committee maintain oversight of climate-related risks and opportunities.

Progress on sustainability and climate change initiatives are provided at Committee meetings.

In FY22 the Group's Climate-related Financial Disclosure Report was included as a Board agenda item. Further disclosures made on TCFD, including progress against The Star's pathway to net zero emissions by 2030, are outlined in the 2022 Sustainability Report².

The Board is ultimately responsible for the overall risk management strategy at The Star^{3, 4} and is committed to leading practice in the management of climate change related risks and mitigation and adaption activities as outlined in The Star's Sustainable Design and Operational Standards⁵. The Star's [Risk, Compliance and Regulatory Performance Committee](#) is responsible for approving the risk appetite statement and risk management framework⁶.

Climate-related risks are managed in line with all other business risks and are captured by The Star's enterprise risk management system. Climate risks are monitored and reported against quarterly for compliance. Management and mitigation actions are reflected in The Star's reporting by due date and completion status.

Line management at each business unit are accountable for their climate-related risks and are responsible for reporting their material risks to Group Risk. For detail on the risk management process please refer to Section 4.0 Risk Management.

The Star has an established Sustainability Advisory Board to activate climate-related projects and develop a strategic business approach geared towards sustainability, notably through the reduction of energy use and promoting energy efficiency and using new technology to create 'world class' properties⁷.

The Committee also recommends metrics and targets, which are submitted for approval to the Board committees. Initiatives delivered by the Sustainability Advisory Board and Sustainability Team are overseen by the Executive Management Team with results delivered to the Board and reported externally within The Star's Annual Report, Director's Report and Sustainability Report.

The Star has appointed five new Board members. Robbie Cooke was appointed Managing Director and Chief Executive Officer in October 2022. Michael Issenberg, David Foster, Anne Ward, Toni Thornton and Deborah Page joined the Board as non-executive directors. Appointment of new Board members is subject to regulatory approval. Board and Committee's Terms of Reference can be found on company website [Corporate Governance – The Star Entertainment Group](#).

TCFD RECOMMENDED DISCLOSURE	STATUS
G1. Describe the Board's oversight of climate-related risks and opportunities	● established - continue and improve
G2. Describe management's role in assessing and managing climate-related risks and opportunities	● established - continue and improve

² The Star's Sustainability report can be found on the company website: <https://www.starentertainmentgroup.com.au/wp-content/uploads/2022/10/TSEG-2022-Sustainability-Report.pdf>

³ The Board of Directors continue to have oversight of the Sustainability Strategy as detailed in the Directors Report within the Annual Report page 47 -48: <https://www.starentertainmentgroup.com.au/wp-content/uploads/2021/09/2021-The-Star-Entertainment-Group.pdf>

⁴ The Star's Corporate Governance Statement can be found on the company website: <https://www.starentertainmentgroup.com.au/corporate-governance/>

⁵ The Star's Sustainable Design and Operational Standards can be found on the company website: https://www.starentertainmentgroup.com.au/wp-content/uploads/2020/11/Sustainable_Design_and_Operational_Standards.pdf

⁶ The Star's Risk and Compliance Committee Terms of Reference: <http://www.starentertainmentgroup.com.au/corporate-governance/>

⁷ The Star's Beyond 2020, Sustainability Action Plan' can be found on the company website: <https://www.starentertainmentgroup.com.au/wp-content/uploads/2021/04/Beyond-2020-The-Stars-Sustainability-Action-Plan.pdf>

Roadmap to further alignment to the TCFD Recommended Disclosures

ACTIONS FOR THE STAR TO UNDERTAKE	RELEVANT TCFD DISCLOSURE(S)	TIMELINE
Develop climate-related KPIs for management (including responses to climate, which has been identified as a strategic risk).	G1	FY24-25
Periodically review effectiveness of The Star's governance processes for managing climate-related risks.	G1, G2	Ongoing
Integrate climate risks and opportunities discussion into standard Board agendas.	G1	FY24
Incorporate measures to increase Board knowledge on climate-related risks and opportunities such as compulsory training or use of an expert advisory board.	G1	FY25
Appoint a named individual or committee responsible for climate change at the Board level.	G1	FY24
Introduce financial incentives for executives on progress towards achieving short, medium and long term climate targets.	G2	FY25

3.0 Strategy

Disclose The Star’s actual and potential impacts associated with climate-related risks and opportunities, where such information is material.

Since 2017, The Star has undertaken climate risk assessments of its assets on a bi-annual basis. In 2021, the Star completed its 3rd physical climate risk assessment.

The 2021 assessment identified 12 priority ‘high’ risks for The Star across each of its three sites in 2030. Since the 2019 assessment, it was found that The Star had implemented a number of previously recommended adaptation actions.

The 12 high risk areas fall into the following categories:

- Extreme heat
- Increased rainfall intensity and inland flooding
- Sea level rise and storm surge
- Storm events including cyclones, wind, and hail
- Bushfires

Full disclosures of the priority high risks along with existing controls and future adaptation activities can be found in our FY22 TCFD disclosure report.

The Star will reassess physical risks across its three casino properties during 2023, and these risks will be disclosed in the FY24 TCFD disclosure report.⁸

Details of our 2017, 2019 and 2021 climate risk assessments can be found in our annual TCFD disclosures reports.⁹

Materiality

‘Climate resilience’ is a material issue to The Star. The Star conducts annual materiality assessments to identify prominent issues to its assets and operations. ‘Climate resilience’ encompasses climate risk management, minimising carbon emissions and supporting the transition to a net-zero economy. It is an issue that is expected to have a more strategic focus over a three to five year time horizon.

The Star has embedded ‘climate resilience’ into our business planning through prioritising energy efficiency projects, participation in destination stewardship (working also with the City of Sydney’s Sustainable Destination Partnership) and by having contingency margin on all capital projects (as part of good project governance).

These materiality assessments are aligned to the relevant requirements of Global Reporting Initiative (GRI), AccountAbility AA1000 Principles Standard and the International Integrated Reporting Council Framework. The assessment also considers the United Nations Sustainable Development Goals (SDGs). Refer to The Star Entertainment Group’s Materiality Assessment on the company website. The Star is committed to adopting the International Sustainability Standards Board (ISSB) in future reporting years. During FY24 The Star will consider our readiness for disclosures in line with ISSB.

TCFD RECOMMENDED DISCLOSURE	STATUS
S1. Describe the climate-related risks and opportunities The Star has identified over the short, medium and long term	● <i>established</i> - <i>continue and improve</i>
S2. Describe the impact of climate-related risks and opportunities on the Star’s business, strategy and financial planning	● <i>established</i> - <i>continue and improve</i>
S3. Describe the resilience of The Star’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	● <i>established</i> - <i>continue and improve</i>

⁸ Details of priority high physical risks can be found in the FY22 TCFD report <https://www.starentertainmentgroup.com.au/wp-content/uploads/2022/06/2022-Climate-Related-Disclosures-Report.pdf>

⁹ Details of our 2017, 2019 and 2021 climate risk assessments can be found in our annual TCFD disclosures reports: <https://www.starentertainmentgroup.com.au/environment/>

Case study – Emissions Reduction Fund Project

To support the transition to a low carbon economy, The Star has embarked on an integrated strategy that includes the purchasing of renewable energy and continuing to assess the feasibility of onsite solar, continuing with their energy efficiency program and pursuing a carbon offsetting strategy.

As part of this integrated strategy, The Star has embarked on a native environmental plantings project known as Lower Wonga Native Revegetation Project.

The Project entails establishing environmental plantings of mixed native tree species on a property located in the Gympie region in Queensland, in accordance with local native vegetation communities and proposed co-benefit outcomes.

The Star’s key transition risks and opportunities

In 2019, The Star completed a transition risk assessment. The assessment identified six key drivers (below) which will influence our transition to a low carbon economy:

- Shift in investor and finance sector appetite
- Changing trends in the tourism sector
- Changing policy for the property sector
- Pressure on supply chains
- Technology shift in the energy sector
- Technology shift in the transport sector

Full disclosure of these risks and Star’s response can be found in the FY21 TCFD disclosure report. The Star is considering conducting the next transition risk during FY24.

Roadmap to further alignment to the TCFD Recommended Disclosures

ACTIONS FOR THE STAR TO UNDERTAKE	RELEVANT TCFD DISCLOSURE(S)	TIMELINE
Develop a framework derived from the physical and transition risk assessments to be applied to business decisions with a value over a certain threshold.	S2	FY25
Continue to undertake physical risk assessments across each of our three sites.	S1	FY23 (ongoing)
Continue to engage with key stakeholders to enhance climate resilience across its supply chain. (e.g., annual sustainability survey, provisions within renewal contracts).	S3	Ongoing
Begin offsetting a portion of our emissions by 2025 from native tree planting at Corymbia Farm & Sanctuary.	S2	FY24+
Develop a Scope 3 emissions reduction plan.	S2	FY24+
Review sitewide energy efficiency audits every two years.	S2	Ongoing
Continue to identify, implement and monitor energy efficiency opportunities through our building analytics and optimisation systems	S2	Ongoing
Contribute to industry forums and collaborate with peers and other stakeholders on climate issues	S2	Ongoing

4.0 Risk Management

Disclose how The Star identifies, assesses and manages climate-related risks.

The Star manages climate related risks alongside all other business risks. In 2020, The Star adopted and implemented an enterprise-wide risk management framework and system. A standardised risk management approach across The Star enables risks to be consistently identified, managed and communicated. Risks are rated based on potential for occurrence and business impact.

Climate-related risks are integrated into The Star’s overall risk profile and appetite. The Star is committed to proactively and systematically managing the risks within its business operations and embedding risk management in all business processes.

The risk management framework is consistent with the Australian/New Zealand Standard (AS/NZS ISO31000:2018 Risk management – Principles and guidelines).¹⁰ The Star will review its appetite annually and review the Risk Management Framework every two years. There will be a Risk Management Framework review during FY24.

Details of The Star’s major risks and associated mitigation strategies are set out within the Directors Report of the company’s 2022 Annual Report. The risks identified in The Star’s 2022 Annual Report include climate change, sustainability, and environmental impact.

The mitigation strategies are designed to reduce the likelihood of the risk occurring and/or to minimise the adverse consequences of a potential event. However, some risks are affected by factors external to, and beyond the control of The Star.

The Star’s Climate-related Disclosure Reports can be found on the company website alongside adaptation and mitigation actions which are updated annually and included within The Star’s Sustainable Design and Operational Standards.

In 2021, The Star conducted an assessment of its physical climate risks across its properties.

TCFD RECOMMENDED DISCLOSURE	STATUS
RM1. Describe The Star’s processes for identifying and assessing climate-related risks	<i>/ established - continue and improve</i>
RM2. Describe The Star’s processes for managing climate-related risks	<i>/ established - continue and improve</i>
RM3. Describe how processes for identifying, assessing and managing climate-related risks are integrated into The Star’s overall risk management	<i>/ established - continue and improve</i>

Case study – Rainwater Capture and Greywater Recycling programmes

CAPTURING AND USING RAINWATER

Rainwater harvesting has enabled our Gold Coast and Queen’s Wharf Brisbane sites to reduce potable water requirements. The Dorsett Hotel and The Star Residences tower have a 30,000-litre reclaimed water tank, while Tower 2 has a 60,000-litre reclaimed water tank. Reclaimed water is used for landscaping and topping up our pools.

GREYWATER RECYCLING

The Darling Hotel utilises recycled water in bathroom amenities, and Queen’s Wharf Brisbane has greywater recycling and an automatic monitoring system that records both consumption and demand of water. This system collects data from all meters, automatically alerts our facilities management staff of system failures, records and processes data on energy use and water consumption at user adjustable intervals and raises an alarm when water use has increased beyond certain parameters.

¹⁰ The Australian / New Zealand Standard 3100:2018 Risk Management Principles and Guidelines <https://www.iso.org/standard/65694.html>

Risk Management Framework

The Star’s risk management framework comprises of seven steps:

1. **Establish the context:** The Star considers the full range of underlying assumptions that underpin its business and strategic objectives, to determine the potential risks that might affect The Star’s business and strategic objectives.
2. **Risk identification:** The Star identifies potential sources of risk, areas of impact, events that could happen and the potential causes and consequences of risk events to The Star. This includes any risks associated with not doing something including, for example, not implementing climate change adaptation measures.
3. **Risk analysis:** The Star analyses each risk to understand it, factor the risk into decision-making processes, evaluate it against The Star’s risk appetite and effectively treat the risk. This includes assessing the consequences, likelihood, the effect and reliability of existing controls in place to reduce the risk and identifying potential risk treatments. The Star has developed its consequence, likelihood and control effectiveness criteria.
4. **Risk evaluation:** The risk analysis provides The Star with an overall risk rating for each risk. The rating of each risk is determined using The Star’s risk matrix. The risk ratings are evaluated to assist The Star in determining the priorities for risk treatment and whether a risk is within The Star’s risk appetite.
5. **Risk treatment:** Risks which have a risk rating considered to be unacceptably high are treated to modify the level of risk. Risks are treated by taking steps to reduce the magnitude of the potential consequences of a risk event; and/or likelihood of those consequences occurring. The objective of this step is to reduce risk(s) to a level which is within The Star’s risk appetite.
6. **Risk reporting:** Group Legal & Group Risk are responsible for preparing reports to the Board’s relevant sub-committees. Each business unit is responsible for providing information about its material climate-related risks and related risk treatment plans so that Group Legal & Group Risk can prepare reports. For details on external reporting and governance of The Star’s climate-related risks please refer to Section 2.0 Governance.
7. **Monitoring and review:** All aspects of this Risk Management Framework are continuously monitored and regularly reviewed to ensure that The Star’s risk profile remains current and the controls in place remain current.

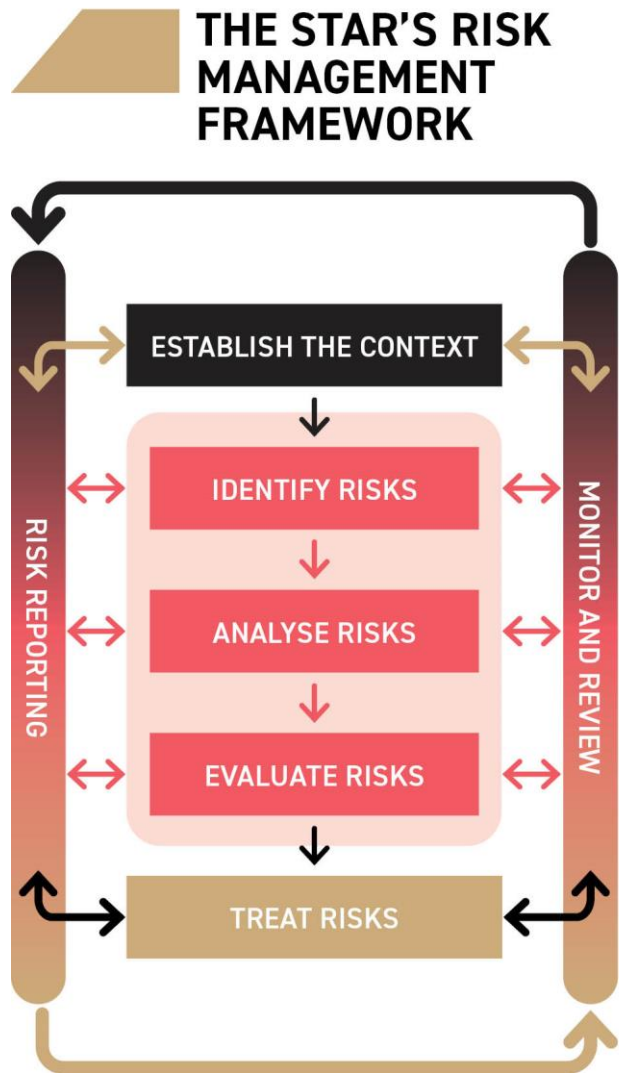


Figure 4 The Star’s risk management framework

The Star’s Risk & Compliance System

The Star has a dedicated system to record all core risk information for the organisation. The system allows The Star to add and modify risks and actions as they arise and provide more flexibility and transparency to senior leaders. It provides the ability to track actions through a central resource accessible to leaders and provide dashboard reporting to risk owners within the organisation.

Each risk has a unique ID and key words, which can be used to search for specific risks. Climate-related risks are tagged with ‘Environment’ as a key word. The risk & compliance system allows users to view risks in varying levels of detail, including user dashboards. A range of risk reports can be generated for governance, monitoring and review purposes.

The organisation is already familiar with the new risk & compliance system, as it used for incident reporting. In FY23 it is planned that The Star will uplift the current system capability to provide a more comprehensive overview of the risks recorded, providing more details on control design and effectiveness.

The Star reviews the Risk Management Framework bi -annually. Where amendments are required, they are presented to the Executive Risk Committee and The Star’s Board. The Star takes a continuous improvement approach to supporting systems and processes as the risk maturity of the organisation progresses. During FY23 two new risk committees were established including Property Risk Committees for Sydney and Queensland.

Our work with insurers

The Star proactively provides its Climate-related disclosure reports and Sustainable Design and Operational Standards to its insurers during insurance renewal. Flood risk management is assessed as part of operations as and proactive discussions are held each year with insurers. This active management of climate related risks supports the underwriters in developing the most commercially viable insurance premium.

Roadmap to further alignment to the TCFD Recommended Disclosures

ACTIONS FOR THE STAR TO UNDERTAKE	RELEVANT TCFD DISCLOSURE(S)	TIMELINE
Review effectiveness of the Risk & Compliance system in managing climate-related risks.	RM3	Ongoing
Collaborate with supply chain partners, including utility providers, to understand and address system interdependencies and potential risks that may arise from climate-related events.	RM1, RM2, RM3	FY24-25
Periodically review adaptation actions from the physical risk assessments and update the Sustainable Design and Operational Standards as appropriate to strengthen the resilience of future construction and development projects.	RM2	FY24
Engage with key stakeholders and our supply chain to encourage better climate-related disclosures	RM3	Ongoing

5.0 Metrics and Targets

Disclose the metrics and targets used to assess and manage The Star’s relevant climate-related risks and opportunities, where such information is material.

The Star has a target of net-zero Scope 1 and Scope 2 carbon emissions by 2030 for its wholly owned and operated assets and is targeting a 30% reduction in carbon emissions by FY23 against a baseline of FY2013. Scope 3 emissions have not been included in this target to date.

To support the net-zero target, The Star has developed its net-zero pathway and Decarbonisation Plan. The plan focusses on implementing energy efficiency initiatives (both plant and equipment upgrades and building optimisation and analytics), increasing renewable energy procurement and electrifying gas-consuming equipment.

The Star continues to monitor its performance quarterly against achieving a 30% reduction of carbon emissions by FY23 and is implementing steps in its net zero pathway. Performance is tracking against the interim target at 26% reduction in FY22 carbon emissions intensity from base year check FY13. It is worth noting that site closures resulting from COVID19 contributed to this reduction. In future years we may see a slight increase in emissions compared with COVID19 impacted years (FY21 and FY22). Star will continue to work towards its targets.

Achieving net-zero carbon emissions by 2030 will reduce energy demand and operational expenditures for The Star. It will also align The Star with the RCP 2.6 scenario, where strong mitigation measures are implemented to limit the increase in global average temperatures and the exacerbation of The Star’s climate hazards.

The Star is committed to improving the resilience of our business operations, our assets, and the precincts in which our properties are located. As part of The Star’s Resilience Strategy, the business has completed modelling on the impact of shut down across its operational areas. The estimated impact of revenue loss is known. Extensive modelling has been done on ceasing operations on a daily basis.

Water

The Star has established water efficiency programs and is tracking towards its target of 30% reduction in water intensity per square metre by 2023. In FY22 there was a 27% reduction in water intensity per square metre from the baseline year of 2013. Covid closures of properties have influenced these results. Water use is expected to increase as properties return to more normal operating levels.

One program involves the Property Operations teams at The Star Sydney receiving training on measuring tap flow rates and advice on how to adjust fittings accordingly.

As part of our improvement plan, The Star Gold Coast commenced a sitewide hydrological audit in FY22 to identify water efficiency opportunities. In addition to the audit completed, a water meter gap analysis is underway that will support effective monitoring and water management across the property.

Our Sustainable Design and Operational Standards are being updated to remain aligned with new Green Star building requirements for net-zero buildings. The Standards outline our requirements for minimum standards in our building design and operation including implementing high WELS rating fixtures, fittings and the utilisation of recycled water and rainwater capture where possible.

TCFD RECOMMENDED DISCLOSURE	STATUS
MT1. Disclose the metrics used by The Star to assess climate-related risks and opportunities in line with its strategy and risk management process	● established - continue and improve
MT2. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 Greenhouse gas (GHG) emissions, and the related risks	● established - continue and improve
MT3. Describe the targets used by The Star to manage climate-related risks and opportunities, and report performance against targets	● initiated – continue and improve

Energy

In early 2022 The Star completed a project to upgrade four of the main gaming floor air handling units. We also progressed several other energy efficiency projects at The Star Sydney and The Star Gold Coast with some closing during the financial year and others rolling over into quarter one of FY22.

The efficiency gains from the upgrade are expected to save 220MWh in energy and 178 tonnes of carbon emissions per annum. Additionally, a refrigeration upgrade program was completed for The Star Sydney’s cool rooms during FY22, and the new refrigeration units are expected to improve energy efficiency in these areas by 15%.

At The Star Gold Coast, our \$1.4 million steam boiler rectification project optimises heat transfer through a unique spiral rib heat exchanger that is fully emerged in water. This technology not only extends boiler longevity, but is highly efficient, transferring the most amount of heat in the most compact space and delivering associated ventilation efficiencies through electronic control fans. This project was completed in FY21 and commissioned in FY22.

Case Study – Efficient Pool Heating saves Energy and Emissions

The Star Sydney’s pool plant room upgrade was completed in FY22. Local pool heaters now eliminate the use of The Darling Sydney’s boiler for pool heating, which was oversized for this application alone. The transition to local pool heaters is expected to reduce The Star Sydney’s electricity consumption by approximately 125MWH of carbon emissions annually.



Figure 5 Carbon reduction pathway

Emissions and Energy Performance

Our FY22 carbon emissions were comprised of 8,761 Scope 1 emissions, 88,077 Scope 2 emissions. On an intensity basis, carbon emissions per square metre decreased -2.2% from 0.32 tonnes of CO2e per square metre in FY21 to 0.31 tonnes of CO2e per square meters in FY22.

METRIC	FY20	FY21	FY22	VARIANCE
Energy (GJ)	555,911	571,370	567,719	-3,651 (GJ) (-0.64%)
Carbon emissions (tonnes)	94,945	98,419	96,838	-1,581 tonnes (-1.7%)

Overall carbon emissions intensity per square metre reduced by 26% in FY22 from FY2013 (base year) contributing positively to our Group target to achieve a 30% reduction in emissions intensity per square metre by FY23 against base year FY2013.

Emissions per visitor increased 1.78% in FY22 compared to FY21 from 8.93KG CO2e to 9.09KG CO2e. This increase can be attributed to the lower visitation rates coupled with building services remaining in operation.

Our total energy consumption from purchased gas and electricity for FY22 was 567,719 gigajoules (GJ), representing a 0.64% decrease from FY21 which was 571,370 GJ and a 6.5% decrease from base year FY2013. On an intensity basis, energy per square metre decreased by 1.2% from 1.85 GJ per square metre in FY2021 to 1.83 GJ per square metre in FY22 and decreased by 21.7% against base year FY2013.

Overall energy consumption per visitor increased from 37.22 MJ per visitor in FY13 to 53.32 MJ per visitor in FY22. Energy consumption per visitor increased 2.87% in FY22 compared to FY21 from 51.85MJ to 53.32MJ. This slight increase is largely due to the impact of COVID during FY20 and FY21 resulting in a lower than usual average energy consumption per visitor.

FY22, both large scale plant upgrades and energy efficiency initiatives in our Energy and Water Project Pipeline continued to be delivered, contributing to energy and carbon emissions reductions within the year.

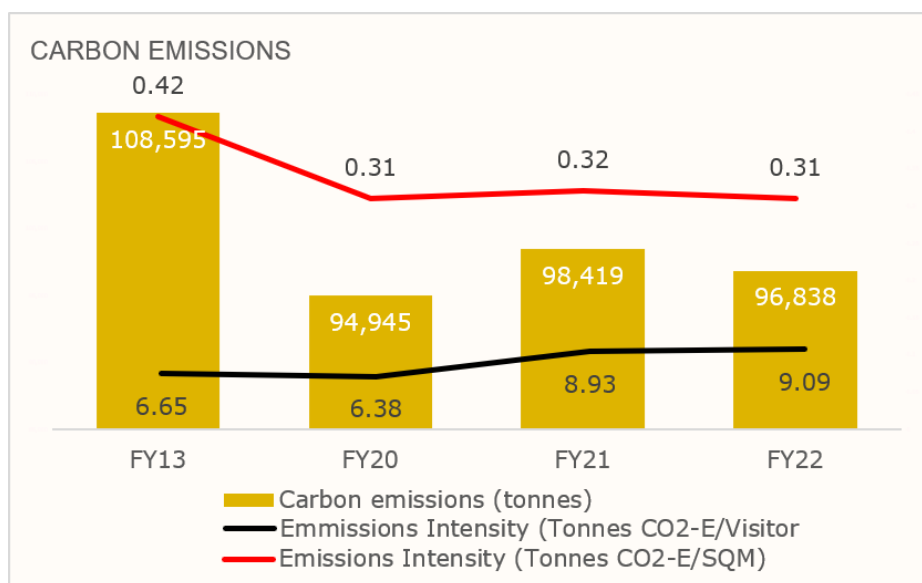


Figure 6 The Star’s FY22 total carbon emissions and intensity, in comparison with the base year (FY2013) and the previous two years.

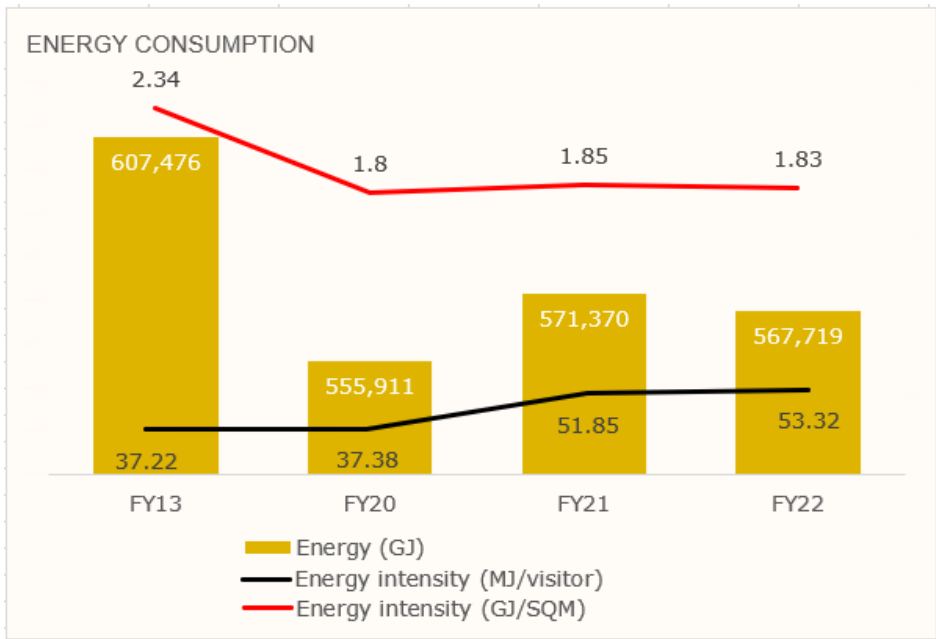


Figure 7 The Star’s FY22 total energy consumption and intensity, in comparison with the base year (FY2013) and the previous two years.

Notes: The Star’s total carbon emissions, as reported, equate to emissions from purchased gas and electricity only, which aligns with group-wide targets that cover our material sources of carbon emissions.

Scope 3 emissions

In FY21, The Star committed to measuring its most material Scope 3 emissions, which are indirect emissions that occur in the value chain, including both upstream and downstream emissions.

In March 2021, The Star completed a Value Chain Emissions Mapping and Materiality Assessment to understand the Group’s most material Scope 3 emissions by spend. The boundary of the assessment included all assets that The Star has operational control over as per the NGER Act. Building on this work, in 2022 a second Scope 3 emissions materiality assessment was conducted which was based more directly on our operations. The assessment considered both future capital projects and our suppliers. It also surveyed team members on how they commute to work, to more accurately model Scope 3 emissions from transport. From this more detailed review, our Scope 3 emissions were 114,525 tonnes.

Conducting a more detailed, operational assessment of our scope 3 emissions has enabled us to understand the likely costs of moving towards a carbon neutral certification and we are taking further steps to understand the gaps and costs should we elect to set industry best practice science-based targets (targets certified to measure reductions in Scope 1, 2 and 3 emissions in line with the Paris Agreement). Further targets will be considered in FY23.

Material Scope 3 emission sources

Our total carbon footprint is estimated as 4% Scope 1 emissions, 41% Scope 2 emissions and 55% Scope 3.

‘Purchased goods and services’ represent the largest portion of Scope 3 emissions (68%), with purchased meat products accounting for the largest portion within this category (12%)

CATEGORY GROUP	% OF SCOPE 3 EMISSIONS
Purchased goods and services	68.3%
Capital goods	9.8%
Fuel and energy related activities: Extraction, production and transportation	12%
Upstream transportation and distribution	0.4%
Waste generated in operations	1.9%
Business travel	0.1%
Employee commuting	6.6%
Downstream leased assets	0.8%
Working from home	0.2%
Waste generated in operations	1.9%
Business travel	0.1%
Employee commuting	6.6%
Downstream leased assets	0.8%
Working from home	0.2%

Table 1 The Star’s material Scope 3 emission source

We continue to examine the highest spends within our key product categories to understand which are the most carbon intensive, and how we can reduce embedded emissions through considered product and service procurement.

In FY22 The Star began refining its Scope 3 inventory using direct source data provided by suppliers where available, as well as incorporating other relevant emission sources such as waste and employee commuting. We will continue to refine this throughout FY23-24.

Case study – Optimising buildings using analytics

Energy metering across The Star’s managed portfolios increases the visibility of our mechanical systems, which are monitored and reported through existing building management systems (BMS).

Tens of thousands of data points are connected to building optimisation and analytics platforms for The Star Sydney and The Star Gold Coast, which actively monitor for efficiencies. These systems deliver energy and carbon savings via tuning and fault detection processes.

In FY2022, The Star Gold Coast implemented several opportunities identified by the BMS including the optimisation of air-conditioning units, implementation of new lighting controls, automation of filtration pumps, replacing faulty CO2 sensors, and set point adjustments across property.

Resource consumption boundary and assurance

The Star reports under the National Greenhouse and Energy Reporting ('NGER') Act 2007 for all facilities within The Star's operational control¹¹. The Star reports on and receives assurance of the following metrics¹², for the year ended 30 June 2022:

- Total Scope 1 GHG emissions (tonnes of carbon dioxide equivalent (tCO2-e))
- Total Scope 2 GHG emissions (tonnes of carbon dioxide equivalent (tCO2-e))
- Total energy consumed for The Star (expressed in gigajoules (GJ))
- Recycling rate (%)
- Water consumption (KL)

Roadmap to further alignment to the TCFD Recommended Disclosures

ACTIONS FOR THE STAR TO UNDERTAKE	RELEVANT TCFD DISCLOSURE(S)	TIMELINE
Continue to quantify the impact of physical climate risks, including how planning measures can reduce recovery costs and lost revenue.	MT3	Ongoing
Align The Star's Sustainable Design Standards with new net zero buildings and GBCA standards.	MT1	FY24
All new buildings to be certified to Green Star Performance, Earth Check or NABERS.	MT1	FY24
Obtain certified green ratings* for over 90% of our managed portfolio	MT1	Ongoing
All new buildings & significant redevelopment works to achieve a 5-star Green Star rating.	MT1	FY24+
Clearly define and disclose measurement methodologies of Scope 1, 2 and 3 emissions.	MT2	FY24

¹¹ The Star's Basis of Preparation can be found on the company website:

¹² The Star's Assurance Report can be found on the company website: [Letter \(starentertainmentgroup.com.au\)](http://starentertainmentgroup.com.au)