Sustainable Design and Operational Standards

THE STAR ENTERTAINMENT GROUP

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INTRODUCTION

Our vision is to be Australia's leading integrated resort company.
To achieve this, we aspire to also be a leader in sustainability by creating a responsible business and sustainable destinations for our guests, team members and communities to enjoy. A Summary of our ESG strategy, targets and approach is provided in **Appendix A**.

Who these Standards apply to:

This Sustainable Design and Operational Standard provides a framework for our Property Development and Operations teams, suppliers, contractors and sub-contractors throughout the design, retrofit, construction, restoration and operational phases of projects.

When do these Standards apply:

This Sustainable Design and Operational Standard is applicable for all planning, design, tender, construction, commissioning and operational phases of a project. Major and minor projects (new build to soft refurbishments) must meet the requirements of the Standards where the works include relevant project scope.

GREEN BUILDING CERTIFICATION REQUIREMENTS

1) **All new buildings should be fossil fuel free (non-renewable energy sources e.g. coal, gas), in line with The Star Entertainment Group (TSEG) Decarbonisation Plan and Green Star net zero standards**.

Project sustainability certification must be addressed on all major projects where the tools can be practically applied (or are required under the NSW SEPP). Certifying major projects provides an independently verified sustainability outcome adding to TSEG's objective to expand our green rated space across our portfolio and increase the sustainability performance of its portfolio.

2) **All new buildings must target a minimum 5 Star Green Star Rating through the Green Building Council of Australia's (GBCA) Green Star suite of tools.**

Green Star is Australia's national green building rating system certifying the design, build and operation of green buildings with a star performance rating from one to six stars administered by the GBCA. Ratings can be achieved for all building typologies, for the base building, fit out or operational performance. Ratings can be achieved as follows; **4 Star rated as Best Practice, 5 Star rated as Australian Excellence** and **6 Star rated as World Leader.**

3) **All Hotels must target high standards of efficiency and environmental ratings, such as Green Star Performance, NABERS for Hotels energy rating, and NABERS for Hotels water rating**

The National Australian Built Environment Rating System (NABERS) is a national rating

system that measures the environmental performance of Australian buildings including hotels during operations. NABERS for Hotels utilises measured and verified energy and water information, such as utility bills, over a 12 month period to obtain a star rating of one to six stars. For example, a 6 star rating demonstrates market leading performance whilst a 3 star rating demonstrates the building has considerable scope for improvement. NABERS ratings are requirements under the NSW SEPP from October 2023.

ADDITIONAL REQUIREMENTS

Additional requirements for projects are outlined as follows:

1) Charity partners must be considered within the project planning phase for redundant Furniture, Fixtures and Equipment (FF&E) as a result of refurbishment. Engage the Sustainability team early to support these partnerships.

2) All NSW lighting, plant or equipment replacement projects must be geared, where possible to generate potential Energy Saving Credits (ESCs) under the NSW Government's Energy Saving Scheme where feasible. ESCs generate income therefore all replacements should be like for better, not like for like where a tangible energy saving exists with a 'better' technology.

The PCA Guideline to Sustainable Hotels (version October 2022) was reviewed in developing version 2.8 of the Sustainable Design and Operational Standards and referenced as it aligns to design and operational requirements.

NSW SUSTAINABLE BUILDING STATE ENVIRONMENTAL PLANNING POLICY (SEPP)

The NSW Government released the Sustainable Building State Environmental Planning Policy (SEPP) in August 2022, with the SEPP commencing on 1 October 2023.
The SEPP represents the NSW Government commitment to development of sustainable and resilient homes and buildings. The key purpose of the SEPP is to:

- minimise the consumption of energy and potable water
- reduce greenhouse gas emissions from energy use
- monitor the embodied emissions of building materials
- deliver buildings that are comfortable in summer and winter.

The Sustainable Building SEPP will apply to projects delivered in NSW as a minimum standard, and the principles are encouraged for projects in other jurisdictions.

A summary of the Sustainable Building SEPP requirements is provided in this Sustainable Design and Operations Standard in **Appendix B**.

MANDATORY SUSTAINABILITY REQUIREMENTS

TSEG takes a holistic approach to sustainability, with major projects requiring sustainability certification and smaller projects requiring energy, water, waste and carbon reduction activities.

All projects completed by TSEG (achieving sustainability certification and not) must comply with the following mandatory sustainability requirements. Project teams are expected to include these Standards when tendering projects, implement all initiatives and provide evidence of conformance.

Initiative type	Description	Benefit to organisation	Alignment	Applicability
1, Energy metering (electricity and gas)	Energy (electricity and gas) metering and monitoring. Individual metering, supplying monitoring and integration into the TSEG's smart metering system is mandatory for the following: → Lighting per floor or space use type → General power per floor or space use type → Major equipment (>100kW and where consumption will be greater than 5% for the whole project) → Where a revenue stream may exist either through a proposed or potential tenant supply → New metering must be added to the existing building analytics and optimisation systems onsite. → Meter details and expected loads should be provided to the Property Operations and Sustainability Teams to assess impact on building targets and performance Meters must be commissioned and validated in accordance with Section 8 of NABERS Rules for Collecting and Using Data	Improved problem diagnosis during lifetime of building, enables effective monitoring and energy management of asset, resulting in operational cost savings	Green Star Building Green Star Performance NSW SEPP	Where project scope includes electrical / gas infrastructure*, or changes to consumption *Installation of new gas infrastructure should be avoided in line with The Star's decarbonisation plan and Green Star net zero requirements

Initiative type	Description	Benefit to organisation	Alignment	Applicability
2. Energy metering (thermal)	Energy (Thermal) metering and monitoring. Individual metering, supplying monitoring and integration into the TSEG's smart metering system is mandatory for the following: → Total thermal energy generation for a central energy plant, where the plant serves more than one distinct use / area → Individual metering where the area being served is either a distinctly different space use, a current or potential tenant (for billing purposes) or a different function (e.g., refrigeration system) → Separate metering to ensure a NABERS for Hotels rating can be achieved (in line with the NSW SEPP) → Where a revenue stream may exist either through a proposed or potential tenant supply → Connect into the buildings optimisation and analytics systems Meters must be commissioned and validated in accordance with Section 8 of NABERS Rules for Collecting and Using Data	Improved problem diagnosis during lifetime of building, enables effective monitoring and energy management of asset, resulting in operational cost savings	Green Star Building Green Star Performance	Where project scope includes thermal network infrastructure, or changes to consumption

Initiative type	Description	Benefit to organisation	Alignment	Applicability
3. Construction monitoring	Resource consumption from construction should be metered and where possible provided from third party sources for contractors in the construction phase. Specifically → Electrical, water or gas metering must be installed for construction power and connected to each property's energy metering system and building analytics and optimisation system. Meter details and expected consumption should be provided to the Property Operations and Sustainability Teams to assess impact on building targets and performance	Reduced effect on building resource consumption targets and company performance Reduced impact on cost for resource use Reduced impact on carbon emissions footprint Ability to monitor, report and exclude construction consumption from operational resource consumption	Green Star Building Green Star Performance	Where project scope includes construction of new assets and/or where significant impact to electricity, water or gas* consumption is expected *Installation of new gas infrastructure should be avoided in line with The Star's decarbonisation plan and Green Star net zero requirements

Initiative type	Description	Benefit to organisation	Alignment	Applicability
4. Water metering	Water metering and monitoring. Individual metering, supplying monitoring and integration into the TSEG's smart metering system is mandatory for the following: → Each water use type per floor → Major water usages (kitchens, showers, wash-down bays etc.) → Each water type (potable cold, potable hot water, recycled water) → Where a revenue stream may exist either through a proposed or potential tenant supply → New metering must be added to the existing building analytics and optimisation systems onsite. → Meter details and expected consumption should be provided to the Property Operations and Sustainability Teams to assess impact on building targets and performance Meters must be commissioned and validated in accordance with Section 8 of NABERS Rules for Collecting and Using Data	Improved problem diagnosis during lifetime of building, enables effective monitoring and water management of asset, resulting in operational cost savings	Green Star Building Green Star Performance NSW SEPP (NABERS Water Rating)	Where project scope includes water infrastructure, or significant changes to consumption

5. Construction Waste	The project must contractually require the contractor to achieve a diversion from landfill (recycling) rate of minimum 95% during demolition and construction works. The waste must be reported monthly to TSEG. The project must prepare a waste management plan to address the treatment of refurbishment, construction and demolition waste, the plan, as a minimum, must: → Cover environment impacts as a result of the refurbishment within the building → Identify services available for recycling waste streams, and options for recycling any additional waste streams → Include appropriate signage and instructions (e.g. point out if waste is comingled or recyclable) → Identify and implement operational practices that encourage the reduction of waste generation as well as targets for improved recycling rated Have a review process to assess the success of the waste management plan and identify improvements based on lessons learned	Increased recycling rate, reduced landfill	Green Star Building Green Star Performance	Where project scope includes waste generation through construction phase

Initiative type	Description	Benefit to organisation	Alignment	Applicability
6. Upfront Carbon[1]	The building's upfront carbon emissions are at least 20% less than those of a reference building. The building's upfront carbon emissions reductions must occur through good design and material selection. A simple embodied carbon calculation must be made to determine this outcome.[2]	Reduced upfront carbon impact	Green Star Building Green Star Performance Sustainable Building SEPP (NSW) PCA Guideline to Sustainable Hotels	Where project scope includes new structure or significant structural modifications and/or where SEPP (NSW) apply
7. Energy Use	The building uses 30% less energy compared to a reference building (modelled against National Construction Code minimum compliance)[3]	Reduced operational energy consumption and operational costs	Green Star Building Green Star Performance Sustainable Building SEPP (NSW) PCA Guideline to Sustainable Hotels	Where project scope includes new energy consuming equipment or modifications that will affect energy consumption

[1] Upfront Carbon Emissions: The carbon emissions caused before the building begins to be used, i.e., during manufacture of building products, transport of building products to site and construction of the building ("Greenstar Upfront Carbon Emissions Calculation Guide" Interim Version 1, Dec 2022)
[2] How to calculate upfront carbon emissions reduction – refer to pg.8 Greenstar Upfront Carbon Emissions Calculation Guide" Interim Version 1, Dec 2022
[3] National Construction Code - Section J Energy Efficiency: verification method and guide compares energy efficiency of a proposed building against a reference building (NCC 2019 Volume One Amendment 1)

Initiative type	Description	Benefit to organisation	Alignment	Applicability
8. Energy Source	The building eliminates all fossil fuel consumption from building services where electrification is possible (except for back up generators). This requirement means no gas consumption on the project is allowed for heating or domestic hot water where electrification is possible. Projects are strongly encouraged to electrify all cooking and must provide electrical capacity and infrastructure for future electrification to appliance or equipment. This applies to all operations, tenants and residences. The project may connect to existing central systems that are powered by gas (such as a heating hot water loop), however must not introduce a new gas consuming equipment to the project for heating or domestic hot water, supporting the transition away from fossil fuels and towards 100% renewables.	Enables the project to be powered by renewable electricity with future PPA	Green Star Building Green Star Performance Sustainable Building SEPP (NSW) PCA Guideline to Sustainable Hotels	Where project scope includes new energy consuming equipment or modifications that will affect energy consumption

Initiative type	Description	Benefit to organisation	Alignment	Applicability
9. Water efficiency	The project must install water efficient fixtures and fittings including the following as a minimum where available: → Taps – 5 Star WELS rating → Urinals – Recycled water or 5 Star WELS rating → Toilets – 4 Star WELS rating → Showers – 3 Star WELS rating (<9L/min) where specification allows → Clothes Washing Machine – 6 Star WELS rating → Dishwasher – 6 Star WELS rating Alternatively, the project must demonstrate alignment with 5-star Green Star or NSW SEPP minimum requirements.	Reduced water consumption, reduced discharge to sewer, reduced operational water cost	Green Star Building Green Star Performance Sustainable Building SEPP (NSW) NABERS Water Rating	Where project scope includes new water consuming equipment or modifications that will affect water consumption

Initiative type	Description	Benefit to organisation	Alignment	Applicability
10. Resilience	Assess projects in accordance with the Green Star Adaptation and Resilience Credit, including consideration of: → Climate Adaptation; → Community Resilience. Implement adaptation options to mitigate impacts of extreme heat, extreme rainfall and flooding, including: → Measures to reduce heat transfer into building envelope, e.g. green space/vegetation, green roofs and / or pressurised revolving doors. Measures to reduce operational water consumption, e.g. use of grey water for toilets and / sourcing efficient equipment for HVAC systems.	Improved resilience to extreme heat events. Improved capacity of staff, tenants, patrons, guests and the wider community to respond to extreme heat events. Measures to reduce heat transfer into building envelope, e.g. green space/vegetation and / or pressurised revolving doors More efficient resource consumption of assets and operations	Green Star Building Green Star Performance TCFD Framework	Where project scope includes changes to building fabric, and new resource consumption (energy and water)
11. Electric Vehicle Charging	The project must ensure it meets any Green Star requirements regarding installation or future provision for electric vehicle charging. The project should consider enabling future electric vehicle charging with cable routes, spatial provisions and infrastructure capacity provisions.	Support customers who wish to charge their vehicle on the premises. Remove barrier to future electric vehicle charger roll out.	Green Star Building Green Star Performance	

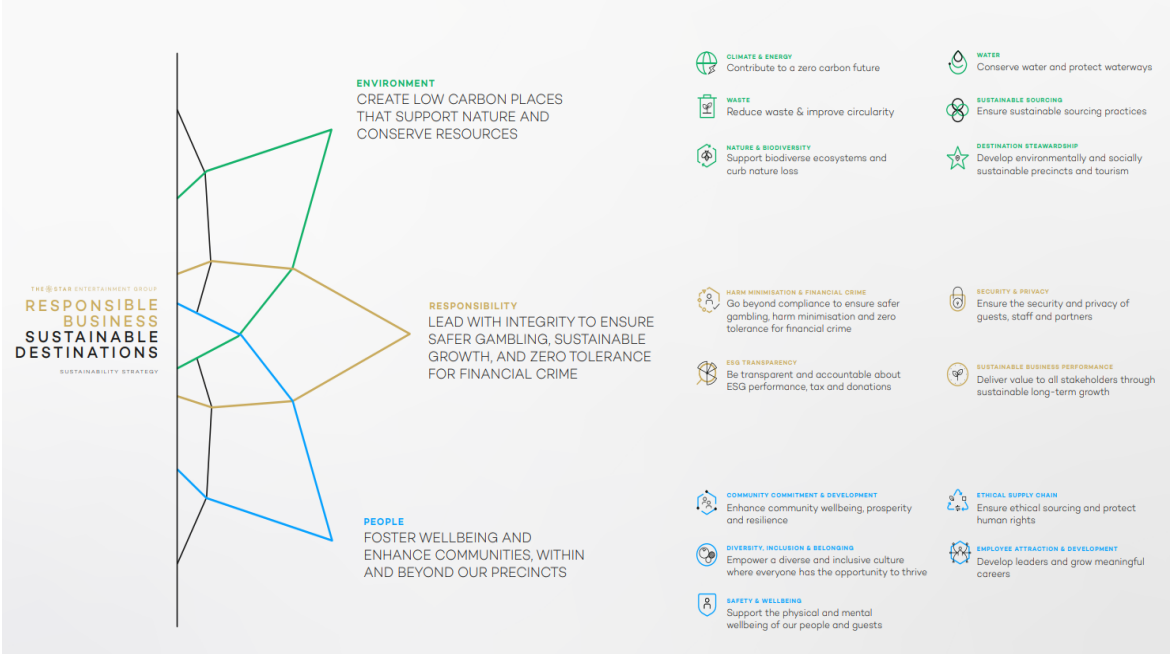
APPENDIX A: ESG STRATEGY, TARGETS AND APPROACH

Responsible Business, Sustainable Destinations

The Star Entertainment Group's Sustainability Strategy, **Responsible Business, Sustainability Destinations** focusses on our three core pillars of Responsibility, Environment and People and sets our path towards 2030 for how we intend to manage our most material issues in alignment with the United Nations Sustainable Development Goals.

We understand that best practice Environmental, Social and Governance (ESG) performance is essential to delivering growth and long term shared value to our customers, our communities and especially our people which are at the heart of our strategy. Through Responsible Business, Sustainable Destinations we will deliver our commitment to:

- Responsibility – by leading with integrity to ensure safer gambling, sustainable growth, and zero tolerance for financial crime
- Environment – Creating low carbon places that support nature and conserve resources
- People – Fostering wellbeing and enhancing communities, within and beyond our precincts



More details of The Star's Sustainability Strategy can be found on the company website

Our Targets

TSEG have committed to the following ambitious targets to support our sustainability journey:

- Zero scope 1 (direct) and scope 2 (indirect from electricity purchased) carbon emissions targeted by 2030 for wholly owned and operated properties
- Reducing our Scope 3 (indirect from supply chain) emissions in line with our category management plans (in varied stages of development)
- All new major developments to be Green Building Certified and:
    - have all electric building services
    - encouraged to have all electric cooking equipment
- All tenants and supply chain encouraged to adopt practices in line with our values

Approach to Sustainability

TSEG makes long term investments into assets, with site leases extending well beyond the normal design life of a commercial building. Therefore, all development and redevelopment work needs to consider a whole-of-life approach to sustainability.

Whilst some sustainability initiatives may incur a capital expenditure premium, project teams must look at the whole lifecycle of the asset and design to achieve asset optimisation and sustainability best practice during design, construction and operations. Initiatives which do incur a capital expenditure premium often result in an operational expenditure decrease, which should be considered in all decision making.

Return on investments will vary greatly depending on initiative type, space use and resource use. Project teams are encouraged to deliver a return on investment for their project to assist in the selection of sustainability initiatives.

Project teams must consider the following issues and future issues when considering design decisions and in the project brief:

- Resource efficiency (electricity, gas and water) including the following:
    - Future resource costs
    - Peak demands on site
    - Future resource availability
    - Redundancy and diversity of supply
    - Climate change risks (impacting availability)
- Return on investment – does the initiative provide a return on investment or a payback period?
- Resilience – does the initiative mean the project will be more resilient to climate change risks?
- Management and monitoring – does the design allow for effective management and monitoring in operation?
- Risk and redundancy – does the initiative reduce the current or future risk of the asset or build redundancy into the assets operation?

Adoption of the above considerations will provide more operationally resilient assets for the organisation and ensure the assets are designed appropriately for future operations and can respond to future climate conditions.

Carbon Policy and Climate Change Statement

TSEG recognises climate change and acknowledges that its properties may be susceptible to climate related impacts in the future. We are committed to continually assessing the risks and opportunities that climate change presents for our business and the impact on our customers and within the communities in which we operate.

To manage these risks, The Star has actively conducted climate change risk assessments in 2017, in 2019 and again in 2021 and implement recommendations from these assessments.

TSEG recognises the recommendations of the Financial Stability Board Task Force on Climate-related Financial Disclosures and the associated framework. TSEG has aligned its reporting with the to the four framework areas including Governance, Strategy, Risk Management and Metrics and Targets over time, and report progress. TSEG has released annual TCFD climate statements and reports since 2020, its third report was released in 2022.

Green Star Net Zero Buildings

The Green Building Council of Australia (https://new.gbca.org.au/) released a new iteration of the Green Star Rating scheme in 2020, which sets a new standard in sustainable and net zero buildings.

The standard outlines a long term vision and expectations for sustainable buildings as increased action is required to combat climate change, in alignment with the Paris Agreement.

The standard for net zero buildings is defined in the Climate Positive Pathway, and is defined as follows:

- **Fossil fuel free**: buildings must eliminate reliance on gas for space heating, hot water and cooking
- **Powered by renewables**: 100% renewable energy through on site and off-site generation
- **Highly efficient**: buildings must exceed minimum building energy efficiency performance by 30%
- **Built with lower upfront emissions**: buildings must reduce upfront carbon by 20% compared to business as usual without the use of offsets
- **Offset with nature**: buildings must offset all residual carbon from refrigerants and fossil fuels in the project with high quality nature based offsets

The above targets represent a conditional requirement for any project to achieve a 5 Star Green Star rating from 2023 onwards. That is to say, if the above is not achieved, a project cannot achieve a 5 Star Green Star Rating.

Electric cooking (fossil free)

The Star is planning for the transition away from gas cooking facilities to electric and understands significant retrofits will be required to move our kitchens, which are primality gas to electric cooking.

Our culinary teams are continuing to explore market options for high heat cooking equipment, and other suitable kitchen infrastructure with the view to replace gas cooking in existing buildings over time. Electric options for kitchens will be utilised in new building developments.

Delivering Climate Positive Buildings - Steps required to decarbonise:

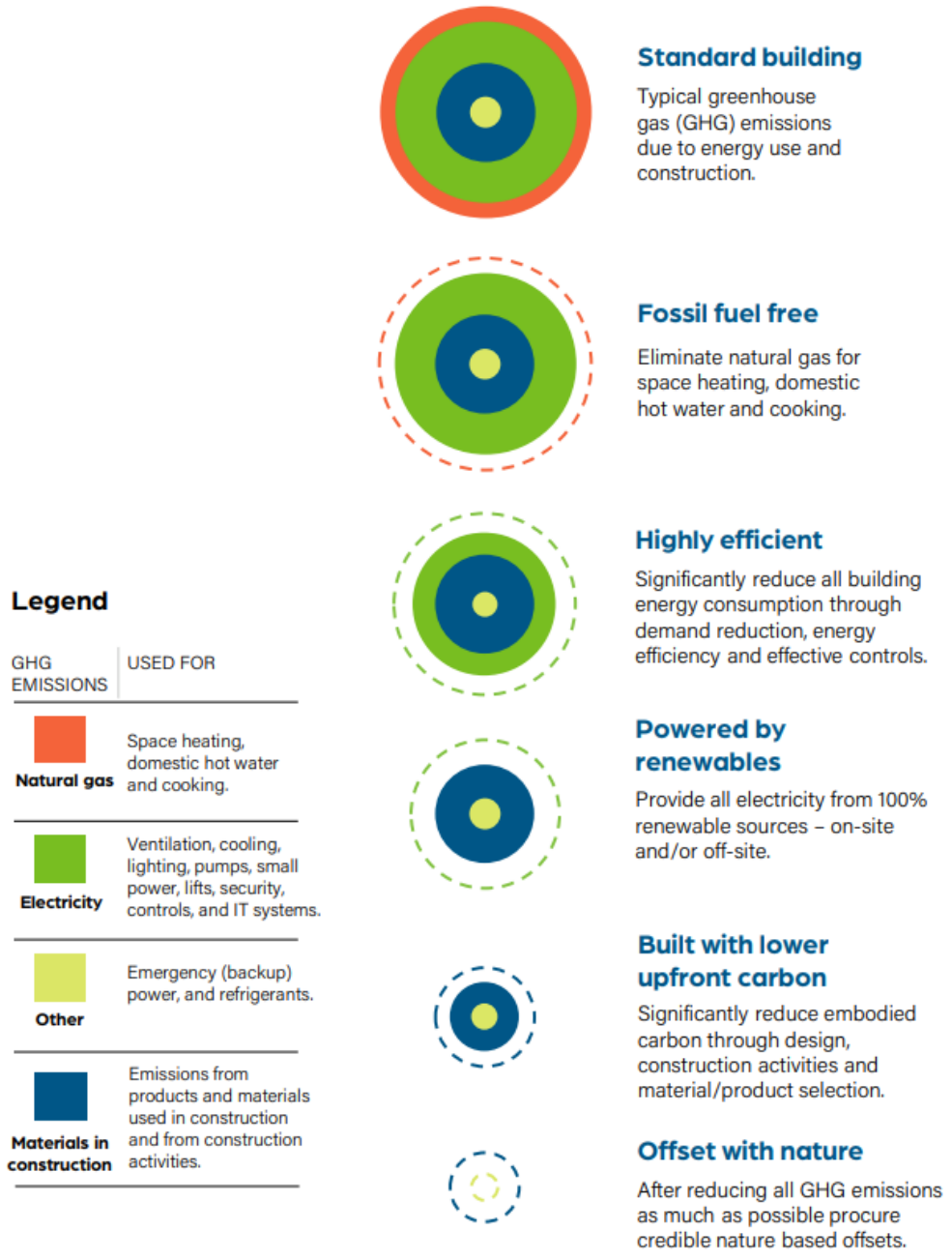


Figure 1: Steps required to decarbonise buildings (courtesy GBCA)

Net zero and delivering our Decarbonisation Plan

In December 2019, The Star set a target to achieve net zero scope 1 and scope 2 emissions by 2030 for wholly owned and operated assets in line with best practice requirements at the time.

In 2021, the Group published its pathway to achieve net zero emissions by 2030.

Our objective is to transition to a low emissions portfolio in line with reductions within the Paris Agreement.

Our pathway to reach net zero by 2030 includes:

- **Energy Efficiency**: Implementation of energy efficiency opportunities identified in site audits and building analytics targeting a minimum of 5% reduction
- **Renewable electricity:** Purchasing 100% renewable energy
- **Electrification:** Electrification strategies to be adopted as standard business practise to reduce volatility to gas prices and reliance on fossil fuels
- **Onsite renewables:** where roof spaces allow
- **Offsets:** For remaining scope 1 emissions, offset through carbon abatement projects that offer environmental and social value.

Our current net zero and Decarbonisation Plan details key strategies to support transition to a low emissions portfolio.
At the time of establishing the Group's target, scope 1 and scope 2 emissions reduction to net zero was considered best practice.
Given the increased pressures on more rapid decarbonisation, the release of new protocols and green building standards and the Group's commitment to leadership in Sustainability across our industry, the Group is taking further steps to plan for net zero (scope 1 & 2) before 2030 and assessing and quantifying material scope 3 emissions.

During the 2022 year, a detailed Scope 3 assessment was conducted to assist in implementing scope 3 category management plans to begin to reduce emissions in the supply chain for our most carbon intensive products and services. We will continue to assess targets and opportunities throughout 2023.

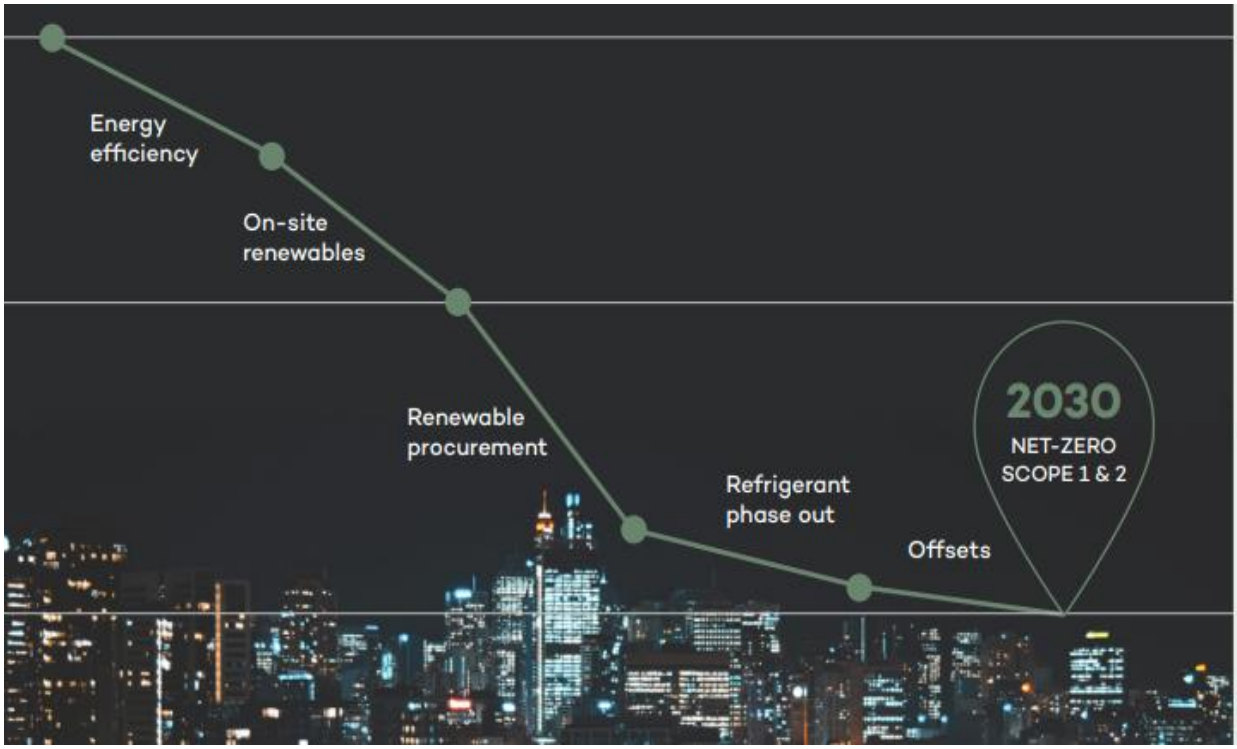


Figure 2: The Star's net zero pathway

APPENDIX B: SUSTAINABLE BUILDING SEPP SUMMARY

NSW Sustainable Building SEPP requirements (Minimum requirements applicable to NSW Projects) are outlined below:

SEPP Clause	SEPP Requirement
B.1 Energy and thermal performance standards	**Residential:** BASIX thermal performance standard 7 Stars average for all new developments, in line with changes to the National Construction Code
B.2 BASIX benefits	**Residential:** Higher BASIX standards applicable – varying depending on project scale and location.
B.3 Materials index	**Residential:** Embodied emissions disclosure through the BASIX material index (under development)
C.1 Application requirements	**Offices, Hotels and Serviced Apartments:** • Net Zero Statement – demonstrate that the development is designed with sufficient space and infrastructure so all energy can be sourced by renewables by 2035 • Verify that the development has met the energy performance required by NCC, through NABERS post occupancy assurance. Purchase offsets for onsite fossil fuel use and to rectify any performance gaps • Verify that the development has met a minimum 3-Star NABERS water rating • Disclose at development application and construction certificate key materials and embodied carbon. Use NABERS framework when available.
C.2 General sustainability requirements	**All non-residential buildings:** To address this, the new Sustainable Buildings SEPP asks consent authorities to consider how the building will: • minimise waste from associated demolition and construction, including choice and reuse of building materials, • reduce in peak demand for electricity, including through the use of energy efficient technology, • generate and store renewable energy, • reduce reliance on artificial lighting and mechanical heating and cooling through passive design • meter and monitor energy consumption,

	• minimise the consumption of potable water.
C.3 Energy standards	**Offices:** • Identify preferred Section J energy reporting pathway and submit NABERS Energy Commitment Agreement with development application • Submit Section J report and any independent review or performance-based solutions at construction certificate stage • Achieve minimum 5.5 Star NABERS rating within 24 months of occupation certificate. • Offset performance gap between standard and operational performance **Hotels and Serviced Apartments:** • Identify preferred Section J energy reporting pathway and submit NABERS Energy Commitment Agreement with development application • Submit Section J report and any independent review or performance-based solutions at construction certificate stage • Achieve minimum 4 Star NABERS rating within 24 months of occupation certificate. • Offset performance gap between standard and operational performance
C.4 Net zero provisions	**State significant development:** Net Zero Statement to include the following: • Estimated scope 1 and 2 emissions up to 2050 • Where fossil-fuel dependent building systems are used, confirm provision of enough physical space, infrastructure, ventilation, and electrical capacity for the development to operate without fossil-fuel by 2035 • Provide information about onsite renewables, passive design and other infrastructure (such as chilled beams) that improve energy performance **Offices, Hotels and Serviced Apartments:** As above and: • Evidence of intent or procurement of offsets where applicable (for a 10 year period)
C.5 Water standards	**Offices, Hotels and Serviced Apartments:** • Consider reducing potable water use and submit NABERS Water Commitment Agreement with development application • Submit progress report (in the form of annotated drawings or written statement) at Construction Certificate • Minimum 3 Star NABERS water rating achieved within 24 months of the Occupation Certificate is issued.

C.6 Embodied emissions	**All non-residential buildings:** Measure and report on embodied emissions through the online form on the NSW Planning portal when available (currently under development).

CONTACT INFORMATION

For more information visit The Star Entertainment Group sustainability pages or contact The Star's sustainability team

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