



ASIC

Australian Securities &
Investments Commission

EMISSIONS REDUCTION PLAN

Acknowledgement of Country

The Australian Securities & Investments Commission acknowledges the Traditional Custodians of Country throughout Australia and their continuing connection to land, sea, and community. We pay respects to them, their cultures and to their Elders, past, present, and emerging.



DECLARATION AND SIGN OFF

Introduction

Climate change will continue to have significant effects on the environment, society, and economy, with impacts felt across the Government's operations. The Australian Securities & Investments Commission acknowledges that human behaviours, pollution, and consumption patterns have both immediate and future impacts on the climate and environment, and that as a Commonwealth entity it is part of our role to mitigate and manage these impacts on our communities.

This declaration establishes our position and commitment to reduce emissions.

The Australian Securities & Investments Commission supports the environmental, social, and economic benefits of addressing climate change immediately. We see an opportunity to demonstrate leadership in emissions reduction.

Commitment to Achieving Net Zero

The Australian Securities & Investments Commission is committed to achieving net zero emissions by 2030.

The Australian Securities & Investments Commission recognises that climate change is occurring, and that climate change will continue to have a significant effect on the Australian environment, society, and economy.

We acknowledge the central role of Government in driving a successful climate response. Hence, we declare that we are committed to reducing operational emissions, through the implementation of mitigation and adaptation strategies.

Our overall objectives align with the Net Zero in Government Operations Strategy to reduce our operational emissions.

DOCUMENT CONTROL

Document approval

| Rev | Custodian | Position/Job title | Approver | Position/Job title | Date |
|-----|-----------|--------------------|----------|--------------------|------|
| | | | | | |
| | | | | | |

Document review

| Rev | Document reviewed by | Position / Job title | Date of review | Comments / changes made |
|-----|----------------------|----------------------|----------------|-------------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

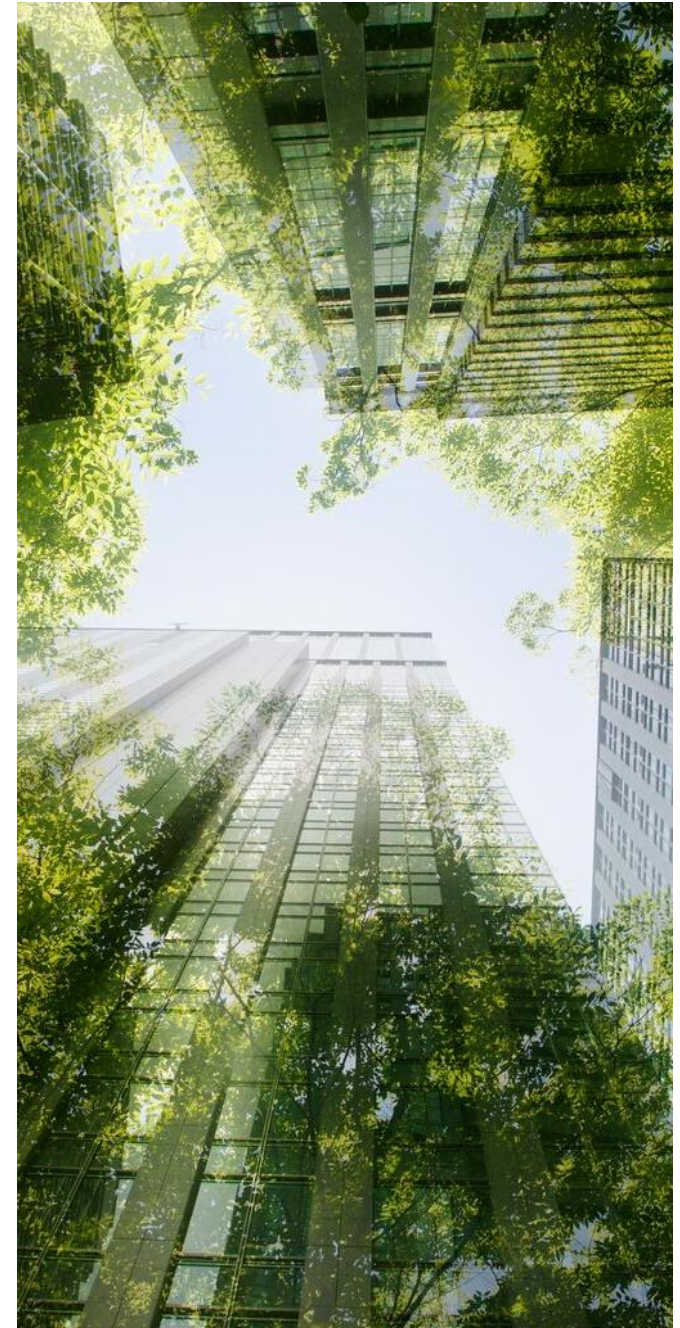
DEFINITIONS & ABBREVIATIONS

| Abbreviation | |
|--------------|--------------------------------------------------------|
| ACCU | Australian Carbon Credit Units |
| ASIC | Australian Securities and Investments Commission |
| BMS | Building Management Systems |
| CAiGO | Climate Action in Government Operations |
| CO2-e | Carbon Dioxide Emissions |
| DESNZ | Department for Energy Security and Net Zero |
| EEGO | Energy Efficiency in Government Operations Policy |
| EV | Electric Vehicle |
| FTE | Full Time Equivalent |
| GHG | Greenhouse Gas |
| HVAC | Heating, Ventilation and Air Conditioning |
| HVACaaS | Heating, Ventilation and Air Conditioning as a Service |
| LaaS | Lighting as a Service |
| LEV | Light Emission Vehicles |
| MJ | Mega Joule |
| NA | Not Applicable |
| NABERS | National Australian Built Environment Rating Scheme |
| NDC | Australia's Nationally Determined Contribution |
| NGA | National Greenhouse Accounts |
| NLA | Net Lettable Area |
| Plan | This Emissions Reduction Plan |
| PSP | Property Service Provider |
| SDG | Sustainable Development Goals |
| Strategy | Net Zero in Government Operations Strategy |
| t CO2-e | Tonnes Carbon Dioxide Emissions |
| WoAG | Whole of Australian Government |

| Definition | Description |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Metro sites | Metro is defined as located on or east of the dividing range in NSW, including Canberra and Queanbeyan, Melbourne, Brisbane, Adelaide, or Perth. |
| Regional sites | Regional (non-metro) are other locations outside the metro site locations. |
| Allocated parking | Parking that is allocated to a sites lease agreement and available for staff use. |

CONTENTS

| | | |
|----------|---------------------------------------------------------------------|-----------|
| 1 | THE AUSTRALIAN SECURITIES & INVESTMENTS COMMISSION | 10 |
| 1.1 | Operating Context..... | 11 |
| 1.2 | Net Zero in Government Operations Strategy | 11 |
| 2 | CLIMATE CHANGE & GUIDING PRINCIPLES | 12 |
| 2.1 | Global Goals to Mitigate Climate Change | 13 |
| 3 | NET ZERO EMISSIONS REDUCTION PLAN | 14 |
| 3.1 | Purpose | 14 |
| 3.2 | Net Zero Greenhouse Gas Emissions | 14 |
| 3.3 | Scope | 14 |
| 3.4 | Governance..... | 15 |
| 4 | ACHIEVEMENTS | 16 |
| 5 | BASELINE EMISSIONS | 17 |
| 6 | EMISSIONS REDUCTION TARGET | 19 |
| 7 | ASIC OPERATIONS & PERFORMANCE | 20 |
| 7.1 | ASIC Buildings | 21 |
| 7.2 | ASIC Electricity | 22 |
| 7.3 | ASIC Fuel | 24 |
| 7.4 | ASIC Travel | 25 |
| 7.5 | Measuring Success | 28 |
| 7.5.1 | Net Zero Buildings..... | 28 |
| 7.5.2 | Net Zero Energy | 29 |
| 7.5.3 | Net Zero Fleet and Travel..... | 30 |
| 8 | PRIORITIES AND ACTIONS | 31 |
| 8.1 | Net Zero Buildings..... | 32 |
| 8.2 | Net Zero Energy | 33 |
| 8.3 | Net Zero Travel | 34 |
| 8.4 | Implementation Plan | 35 |
| 8.4.1 | Priority Area 1: Net Zero Buildings..... | 36 |
| 8.4.2 | Priority Area 2: Net Zero Energy | 43 |
| 8.4.3 | Priority Area 3: Net Zero Travel | 44 |
| 8.4.4 | Net Zero Carbon Abatements | 46 |
| 9 | TYPE-2 ENERGY AUDIT | 47 |
| 9.1 | Energy Saving Opportunities..... | 47 |
| 9.1.1 | Upgrade Lighting to LED..... | 48 |



| | | |
|-----------|----------------------------------------------------------------|-----------|
| 9.1.2 | Integrate Timer Function on Boiling, Chilled Water Units | 51 |
| 9.1.3 | HVAC Optimisation | 52 |
| 9.1.4 | Awareness & Behavioural Changes..... | 53 |
| 9.1.5 | Improving Equipment Efficiency | 53 |
| 9.1.6 | Considered but Not Recommended | 53 |
| 10 | FURTHER INFORMATION | 54 |
| 10.1 | Green Lease Schedules | 54 |
| 10.2 | Office Refurbishments | 54 |
| 10.3 | NABERS Energy Star Ratings | 55 |
| 10.4 | Type-2 Energy Audits | 56 |
| 10.5 | Grants and Funding..... | 57 |
| 10.6 | Lighting as a Service | 58 |
| 10.7 | HVAC as a Service | 58 |
| 10.8 | Hot desk and office optimisation..... | 58 |
| 10.9 | Education and training..... | 59 |
| 10.10 | Whole of Australian Government Electricity Agreement | 60 |
| 10.11 | Air Travel Rationalisation | 61 |
| 10.12 | Australian Carbon Credit Unit..... | 61 |

EXECUTIVE SUMMARY

In response to the Net Zero in Government Operations Strategy, the Australian Securities and Investments Commission (ASIC) has developed a comprehensive Emissions Reduction Plan aimed at mitigating environmental impact, whilst fostering sustainable practices within its operations.

This Plan, in alignment with the Net Zero in Government Operations Strategy, encompasses electricity consumption and air travel across ASIC's operations, establishing financial year 2022-23 as the baseline by which to reduce carbon emissions. This plan takes a multifaceted approach, addressing key areas of emissions reduction, energy efficiency, and sustainability.

The baseline carbon emissions for ASIC is 2,267t CO₂-e, with 1,450t CO₂-e from electricity consumption, 817t CO₂-e from domestic air travel, and 0.19t CO₂-e from a fleet vehicle no longer operated by ASIC. Through collaboration with stakeholders, applying both traditional methodologies, and technological advancements, ASIC aims to achieve significant reductions in its carbon baseline while maintaining operational efficiency and effectiveness.

Key components of the Plan include:

- Energy efficiency initiatives: participate in the whole-of-Australian-Government electricity arrangement that ensures all power supplied is from renewable sources, coupled with landlord negotiations to transition base building to renewable sources
- Transportation strategies: reviewing current air travel requirements, implementing strategies to reduce unnecessary air travel and support the procurement of green travel offsets
- Carbon offsetting and sequestration: where carbon emissions cannot be avoided these may be offset through the purchase of Australian Carbon Credit Units in 2030
- Employee engagement and education: develop and implement education and communication programs that enables employees to support ASIC's net zero journey
- Monitoring and reporting: participate in the Governments annual reporting requirements, measuring and celebrating successes

By implementing these initiatives and working collaboratively with all stakeholders, ASIC predicts that it will reduce its carbon emissions by 72% by 2030, with domestic flights forming the remaining emissions balance. With the purchase of offsets, ASIC will achieve true net zero emissions.

1 THE AUSTRALIAN SECURITIES & INVESTMENTS COMMISSION

The Australian Securities and Investments Commission (ASIC) works to ensure a fair, strong, and efficient financial system for businesses and individuals in Australia. It plays a crucial role in maintaining Australia's reputation as a safe and attractive place to invest. The regulation and supervision ASIC provides function to detect, deter, and act against misconduct, so to maintain trust and integrity in Australia's financial systems.

ASIC's core regulatory purposes are outlined within its Annual Report 2022-23, involves using all available regulatory tools to:

- Change behaviours to drive good consumer and investor outcomes
- Act against misconduct to maintain trust and integrity in Australia's financial systems
- Promote strong and innovative development of the Australian financial system
- Help Australians to be in control of their financial lives

To help achieve these regulatory purposes, ASIC outlines four strategic priorities in their corporate plan 2023-27:

- Product design and distribution - reducing the risk of harm to consumers of financial, investments, and credit or credit-like products, caused by poor product design, distribution, and marketing, with a particular focus on ensuring compliance with design and distribution obligations
- Sustainable Finance - supporting market integrity through supervision and enforcement of governance and disclosure standards, to reduce greenwashing, and ensuring standards align with climate-related financial disclosure requirements
- Retirement outcomes – protecting consumers as they plan and make decisions for retirement with a focus on superannuation products, managed investments, and financial advice
- Technology risks – Focus on the impacts of technology in financial markets and services, driving cyber and operational resilience practices within both markets and financial market infrastructure, as well as acting to address digitally enabled misconduct



1.1 Operating Context

ASIC is the regulatory body responsible for overseeing and regulating Australia's corporate, financial services, and market sectors. Set up under the *Australian Securities and Investments Commission Act 2001*, its role is to:

- Maintain, facilitate, and improve the performance of the financial system and entities within it.
- Promote confident and informed participation by investors and consumers in the financial system.
- Administer the law effectively and with minimal procedural requirements.
- Receive, process and store, efficiently and quickly, received information.
- Make information about companies and other bodies available to the public as soon as practicable.
- Take whatever action, which is necessary and possible, to enforce and give effect to the law.

To support ASIC's operational context and delivery of its core purpose and outcomes it is crucial to understand the impacts of climate change and mitigation methodologies that can be applied to ensure continuity of services and compliance with environmental policy.

1.2 Net Zero in Government Operations Strategy

ASIC portfolio plays a role in the Federal Government's greenhouse gas emissions reduction targets of 43% by 2030 and net zero by 2050. Additionally, it must also meet the requirements of the Net Zero in Government Operations Strategy (Strategy) with a target date of 2030 to which this Plan will be directed.

The Strategy describes the approach for implementing the Australian Government's commitment to achieve net zero in government operations by 2030 as agreed under the Paris Agreement, and supersedes the Energy Efficiency in Government Operations Policy, 2007.

ASIC has already implemented a range of measures to reduce its impact on the environment. These have been detailed in section 4 of this Plan.





2 CLIMATE CHANGE & GUIDING PRINCIPLES

International scientific consensus is that climate change is occurring and that it is driven by anthropogenic causes, with human activities having a profound impact on the concentration of greenhouse gas emissions since the start of the industrial revolution. Ultimately these activities, such as the burning of fossil fuels, land clearing and agriculture, have increased greenhouse gas concentrations in the atmosphere, leading to changes in the climate system.

In June 2022 the Federal Government formally updated Australia's commitment under the Paris Agreement to reduce greenhouse gas emissions by 43% below 2005 levels by 2030, putting Australia on track to achieve net zero emissions by 2050.

ASIC recognise that extreme fluctuation in weather in Australia and around the world will continue to affect Australian communities and the Australian economy. Increasing unpredictable and extreme weather events, leading to environmental damage and disruption to communities will affect supply chains and a wide range of industries and individual wellbeing.

ASIC understands that lowering greenhouse gas emissions is key to limiting the impact of future climate change.

Drawing on ASIC's remit and operational scope, it is predicted climate change may have significant implications for ASIC and its regulatory responsibilities. These impacts include:

- Financial stability risks are posed by both physical factors such as extreme weather events, and transitional risks such as policy and technology shifts.
- Increased demand for climate-related information to be disclosed to investors and stakeholders, increasing ASICs responsibilities.
- Climate related risks can affect asset valuations and market prices, potentially leading to market disruptions or distortions.
- Increased frequency and intensity of extreme weather events, resulting in loss of homes, livelihoods, and communities, directly impacting the wellbeing of ASIC's employees.

2.1 Global Goals to Mitigate Climate Change

Climate Change Protocols

The Kyoto Protocol operationalises the United Nations Framework Convention on Climate Change by committing industrialised countries and economies in transition to limit and reduce GHG emissions in accordance with agreed individual targets. Australia is part of the Kyoto Protocol and released its National Greenhouse Response Strategy in November 1998, providing the framework for advancing Australia's domestic greenhouse response into the next century.

To strengthen the global response to the threat of climate change by keeping a global temperature rise under a certain level, the Paris Agreement was introduced in 2016.

The Paris Agreement is a legally binding international treaty on climate change. Its goal is to limit global warming to well below 2°C, preferably to 1.5°C, which is a critical threshold for preventing the worst impacts of climate change. This Agreement was adopted by 196 Countries and came into force on 4 November 2016.

Australia is an important party to the Paris Agreement and committed to reduce greenhouse emissions through the Climate Change Act (No. 37, 2022).

The Australian Government's landmark Climate Change Act was published and commenced on the Federal Register of Legislation on 14 September 2022, enshrining into law an emissions reduction target of 43 per cent from 2005 levels by 2030 and Net Zero emissions by 2050.

There is now a core responsibility for all levels of the Australian Government to lead by example, proactively working towards this achievable target and strive for greater outcomes.

United Nations Sustainability Development Goals

In 2015, the United Nations General Assembly defined 17 Sustainable Development Goals (SDG's). The SDG's, outlined below, aim to address the world's most pressing global challenges, including poverty, inequality, and climate change. They provide a blueprint for governments, businesses, communities, and the general public to work together to build a better and more sustainable future for all.



FIGURE 1: UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Net Zero in Government Operations Strategy

Net Zero 2030 is the target set by the Australian Government to achieve net zero greenhouse gas emissions from Commonwealth government operations by the year 2030. Net zero is achieved when consumption of resources, such as electricity, is reduced as far as possible, and energy is supplied from renewable sources. Where unavoidable greenhouse gas emissions remain, they are balanced through carbon offsetting.

3 NET ZERO EMISSIONS REDUCTION PLAN

3.1 Purpose

ASIC plays an essential role in the management and implementation of emissions reduction initiatives, as outlined in the Australian Government's Net Zero in Government Operations Strategy (the Strategy), developed by the Department of Finance. The Strategy in its current iteration sets out the first steps for the Australian Government's approach to achieving net zero greenhouse gas emissions in government operations, coupled with annual reporting requirements.

This Plan sets out the steps that ASIC will take to achieve net zero emissions by 2030. This Plan encompasses new and existing initiatives to reduce emissions, contributing to the Net Zero 2030 target.

3.2 Net Zero Greenhouse Gas Emissions

Net zero emissions refers to the balance between the amount of greenhouse gases produced, through resource consumption, and the amount removed from the atmosphere. Achieving net zero emissions means that the total emissions released into the atmosphere from ASIC's operations are offset through various means that remove or sequester an equivalent amount of carbon dioxide, this includes, but is not limited to, the implementation of emissions reduction initiatives, carbon capture, and carbon offsetting.

3.3 Scope

Inclusions

Emissions reduction activities outlined in the Plan will align with the Strategy, with an initial focus on carbon emissions resulting from the consumption of fuels, electricity, and air travel. Future reviews of the Strategy will consider additional inclusions to align with the Australian Government commitment to net zero and organisational activities, aligning to carbon emission reporting requirements.

The following properties in ASIC's portfolio are included in the scope of this Plan:

NSW

- Sydney, 100 Market St – Part Level 5 & 6
 - NLA: 3,506m²
 - Lease exp: March 2030
- Sydney, 100 Market St – Level 7-10
 - NLA: 12,295m²
 - Lease exp: March 2030

QLD

- Brisbane, 240 Queen St
 - NLA: 2,026m²
 - Lease exp: March 2031

SA

- Adelaide, 91 King William St
 - NLA: 526m²
 - Lease exp: August 2028

TAS

- Hobart, 144 Macquarie St
 - NLA: 351m²
 - Lease exp: November 2029

VIC

- Melbourne, 120 Collins St – Part Level 6
 - NLA: 324m²
 - Lease exp: December 2024

- Melbourne, 120 Collins St
 - NLA: 6,897m²
 - Lease exp: June 2029

- Traralgon, 14 Grey Street
 - NLA: 189m²
 - Lease exp: August 2024, and will be transitioned to another Commonwealth entity

WA

- Perth, 11 Mounts Bay Rd
 - NLA: 1,160m²
 - Lease exp: June 2035

In alignment with the Strategy, released in late 2023, this Plan primarily considers emissions related to:

- Scope 1 emissions
 - Fleet fuel
- Scope 2 emissions
 - Electricity
- Scope 3 emissions
 - Domestic travel

As further expansions of the Net Zero Reporting requirement are released this Plan will be updated with these inclusions.

Exclusions

The following properties in ASIC's portfolio are excluded from the scope of this Plan due to sub-leasing arrangements or have been terminated:

- Canberra, 68 Northbourne Ave (Terminated as of August 2024)
- Melbourne, 120 Collins St – Pert Level 6 (Sub tenants)
- Sydney, 100 Market St – Part Level 7 (Sub tenant)
- Traralgon, Eastern Road Storage

In alignment with the Strategy, this Plan does not consider the following emissions related activities:

- Activities that take place outside of Australia or its territories, including international air and marine travel as these are not included in Australia's Nationally Determined Contribution (NCD). The Strategy recommends Entities that undertake these activities will act as appropriate to reduce their emissions in the relevant local context as an aspirational goal for the Australian Government to demonstrate leadership and advance Australia's climate diplomacy objectives.
- Activities undertaken by ASIC outside of its office-based operations.
- Activities undertaken by ASIC at facilities outside of those noted in inclusions.

3.4 Governance

This Plan will be updated annually.

ASIC will, as required under the Strategy, report annually:

- progress against actions identified in the Plan,
- a summary of amendments to the Plan, and
- annual emissions reporting, noting further potential expansions to current reporting requirements.

As part of the Net Zero in Government Operations Annual Progress Report, the Department of Finance will aggregate these measures to provide the Whole of Australian Government (WoAG) a list of emissions reductions activities.

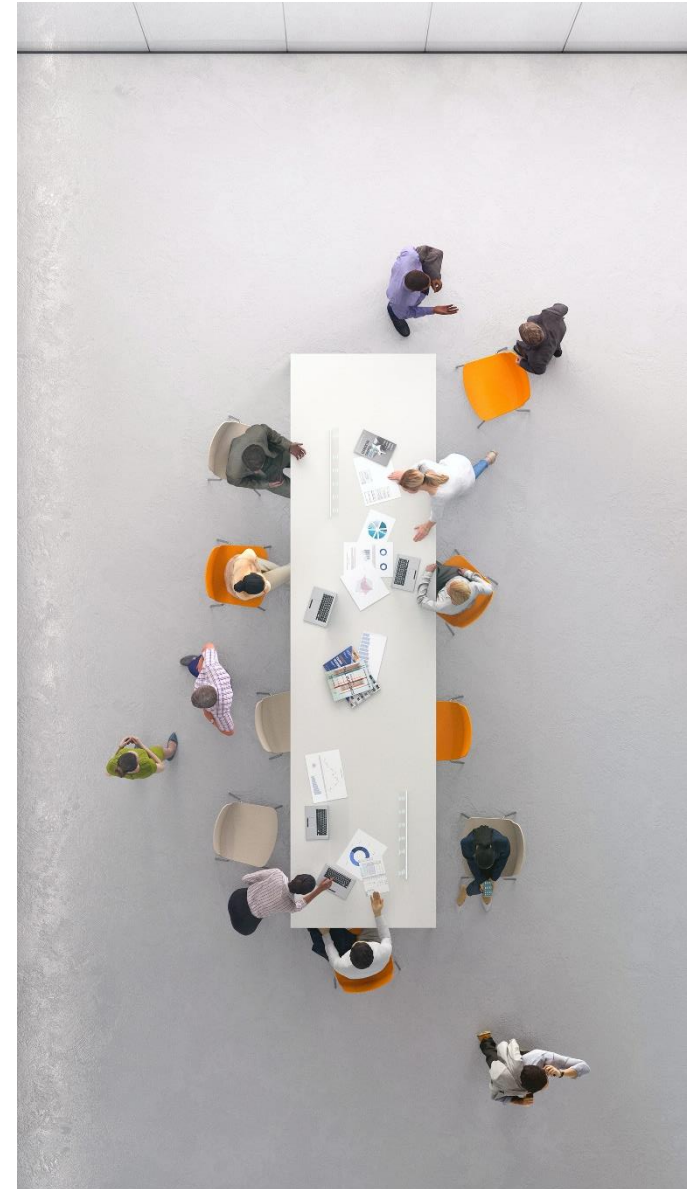
Future iterations of this Plan will align with the Offset Strategy and Commonwealth Climate Disclosure requirements that are currently under-development by the Climate Action in Government Operations (CAiGO) within Department of Finance.

4 ACHIEVEMENTS

ASIC has implemented a range of measures to reduce its impact on the environment. This Plan builds on these key achievements and provides a more holistic approach to achieve sustainability and net zero carbon emissions across all areas and functions of ASIC including its facilities and operations.

Highlights

- Implemented motion sensor-controlled lighting to reduce energy use
- Use of LED lighting as a more energy efficient method of lighting office space
- Making power-saving modes for equipment the default to reduce energy consumption
- Ensuring that copy paper and consumables are supplied from state-based warehouses to minimise the environmental impacts of freight shipping
- Replaced disposable batteries with rechargeable batteries across all offices
- Implemented a desk booking system to identify which desks have been used and need end-of-day cleaning, helping to reduce the use of chemicals
- Subleasing unused space to reduce the footprint of office space
- Limiting travel to strictly essential business purposes to reduce on travel emissions
- Use of technology solutions to minimise the need for travel



5 BASELINE EMISSIONS

Baseline emissions are a record of greenhouse gas emissions that have been produced at a set point in time. For the purposes of this Plan the financial year (FY) 2022-23 has been established as ASIC's baseline and will be a reference point against which emissions reductions can be measured.

In FY 22-23 the Department of Finance CAiGO unit required entities to report their emissions. ASIC has following emissions sources in its portfolio operations which have been used to establish an emissions baseline and to develop a long-term emissions reduction strategy:

- Electricity
- Fuel
- Domestic air travel

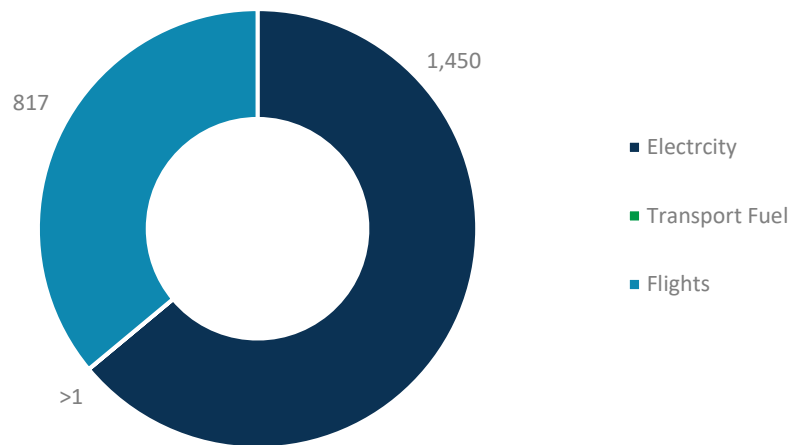


FIGURE 2: BASELINE EMISSIONS TONNES CO2-E, FY 22-23

ASIC's baseline emissions are displayed in Figure 2 and Figure 3 with a total 2,267t CO2-e generated in FY 22-23.

As all facilities are electrified and there was one fleet vehicle in FY 22-23, which is no longer within the operational scope of ASIC. Scope 1 emissions is a result of fleet fuel, Scope 2 emissions relate to electricity consumption and Scope 3 emissions are primarily related to ASIC's domestic air travel.

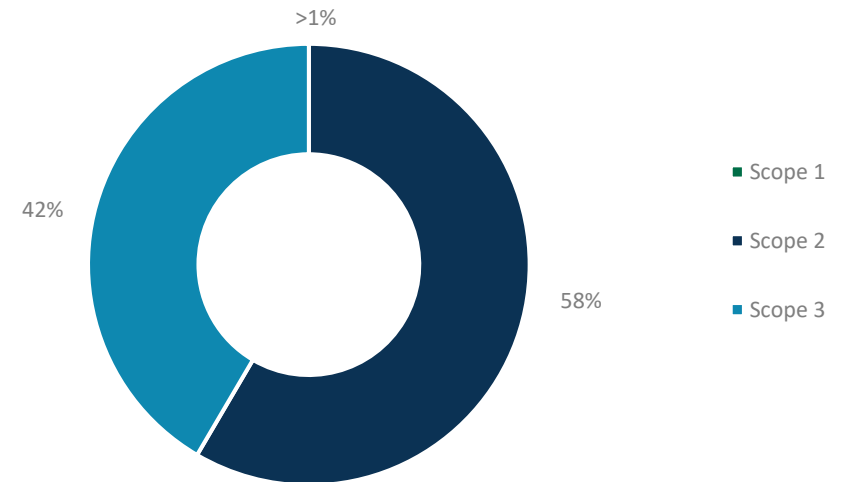


FIGURE 3: PERCENTAGE TONNES CO2-E, FY 22-23



In the development of this Plan, Emissions Factors have been sourced from the National Greenhouse Accounts (NGA) 2023 and Department for Energy Security and Net Zero (DESNZ) UK 2023.

Time series data is a crucial tool for tracking emissions trends and evaluating the effectiveness of emission reduction strategies. To ensure accuracy and consistency, ASIC will endeavour to use the same methodologies and data sources for calculating these trends over time. ASIC recognize that improvements in emissions measurement, data collection, and reporting requirements will continue to evolve, and is committed to adapting its strategies accordingly.

To maintain transparency and ensure confidence in the consistency of ASIC's time series data, ASIC will thoroughly document its approach to emission estimation, including methodologies and data sources, in the Net Zero in Government Operations Annual Progress Reports.

6 EMISSIONS REDUCTION TARGET

To achieve net zero by 2030, ASIC have adopted the following carbon reduction targets.

We project that carbon emissions will decrease over the next six years from 2,267 to 632 tCO₂e by 2030. This is a reduction of 72%.

This Emissions Reduction Plan has been completed in accordance with the Net Zero in Government Operations Strategy, associated guidance, reporting standards for annual emissions reporting.

ASIC's emissions targets have been developed using the following considerations:

- Emissions data for financial year 2022-23 as per the Net Zero Expansion One and Two reporting requirement
- Estimations based on expected emissions reductions through the implementation of programs of works
- Estimation based on the whole portfolio sourcing electricity from the Whole-Of-Australian-Government electricity arrangement, managed by the Department of Finance



7 ASIC OPERATIONS & PERFORMANCE

Currently, ASIC operates across NSW, VIC, QLD, WA, TAS, NT and SA. Its built facilities, managed by Ventia, include eight commercially leased office spaces (at six facilities) with a total net lettable area (NLA) of 27,085m² and one storage facility with an NLA of 189m².

ASIC, as at May 2024, have a total workforce of 2025 personnel, and a total 1,653 work points which equates to a 123% occupancy rate across all its facilities.

ASIC supports remote working opportunities for its employees, further reducing emissions associated with unoccupied office space and staff commute.

ASIC does not have any leased fleet vehicles and will maintain this state of operations into the foreseeable future¹. Where a vehicle is required, ASIC utilise a Go Get car share scheme.

To assist in the development of the Plan, ASIC's operational performance has been analysed in the following sections:

- Buildings
- Energy
- Fuel
- Travel

This is coupled with a Type-2 Energy audit which was completed at Sydney, 100 Market St will assist in the identification of energy efficiency opportunities and is used to inform actions for ASIC to reduce emissions in accordance with the Strategy.



¹ ASIC is excluded from the requirement to develop an EV Charging Plan, as stated in the Strategy.

7.1 ASIC Buildings

Figure 4 represents, on a logarithmic scale ASIC’s total work points against FTE. The majority of ASIC’s facilities are well occupied, five facilities with an occupancy above 100%. Melbourne, 120 Collins St has an occupancy of 136% which is approaching best practice occupancy ratio of 1 work point to 1.5 FTE.

Traralgon, 14 Grey Street has an occupancy rate of 80% and Hobart, 144 Macquarie St has an occupancy rate of 90%.

To assist in reducing emissions, ASIC may consider further office consolidations, aiming for a 1:1.5 work point to FTE ratio.

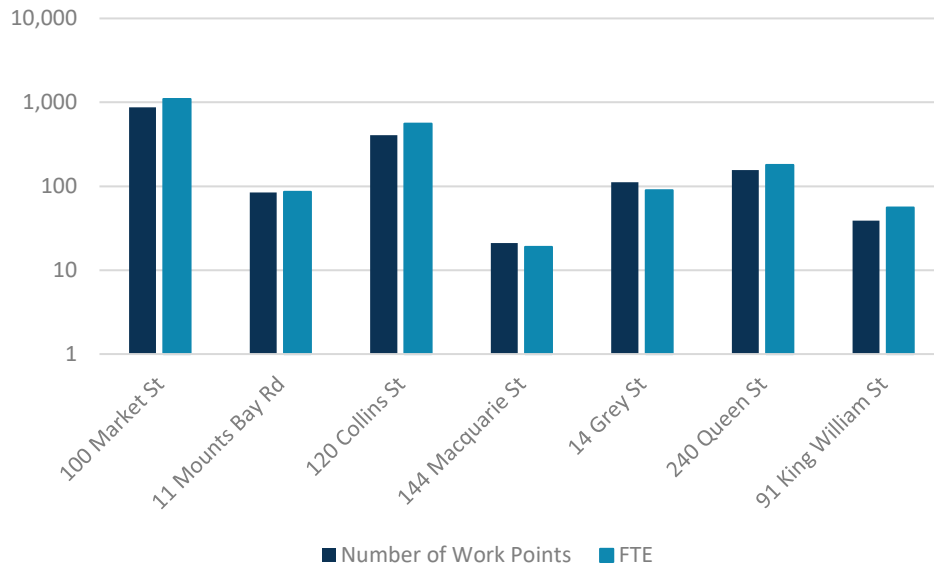


FIGURE 4: WORKPOINTS AND FTE, BY FACILITY

Energy Intensity

Whilst the Strategy supersedes the Energy Efficiency in Government Operations Policy (EEGO), it has been referred too to determine ASIC’s energy intensity calculations.

ASIC, across its whole portfolio has an energy intensity of 3,959MJ/FTE. This is 53% of the energy intensity target of $\leq 7,500$ MJ/FTE/annum, effectively demonstrating an energy efficiency well below the EEGO target. This has been broken down by site in Figure 5.

The above value equates to 0.72t CO₂-e/FTE/annum and sets the baseline target for ASIC to measure change.

Figure 5 demonstrates that all sites are below the EEGO energy intensity target, with Perth, 11 Mounts Bay Rd and Sydney, 100 Market St presenting opportunity to further improve site energy efficiencies.

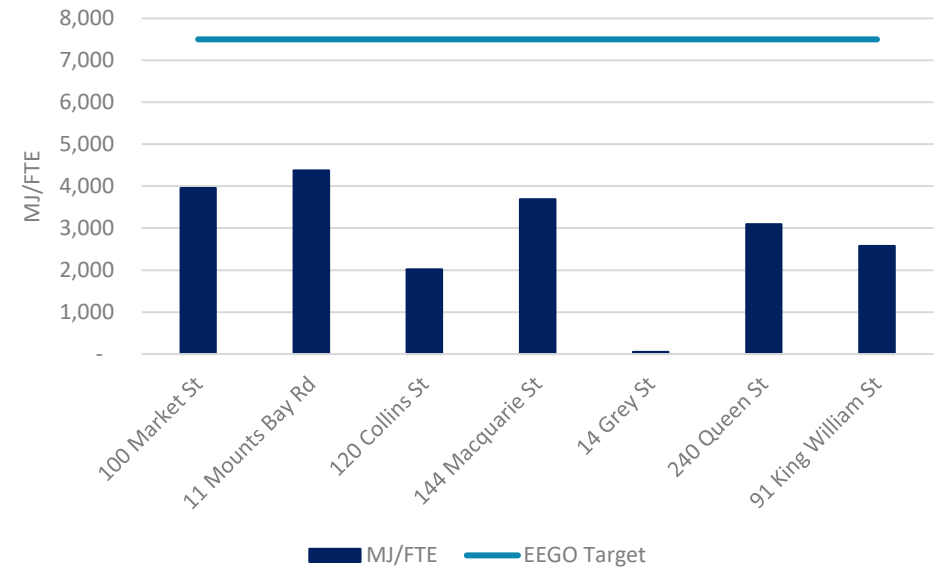


FIGURE 5: MEGAJOULE PER FTE BY FACILITY, FY 22-23

7.2 ASIC Electricity

Figure 6 demonstrates, on a logarithmic scale, tonnes CO₂-e at ASIC’s facilities within the scope of this Plan. Sydney, 100 Market St has the highest carbon emissions (952t CO₂-e) due to its NLA being significantly larger when compared to all other facilities. Melbourne, 120 Collins St has the second highest carbon emissions (287t CO₂-e), followed by Brisbane, 240 Queen St (135t CO₂-e). The lowest emitting facility is Traralgon, 14 Grey Street (1t CO₂-e).

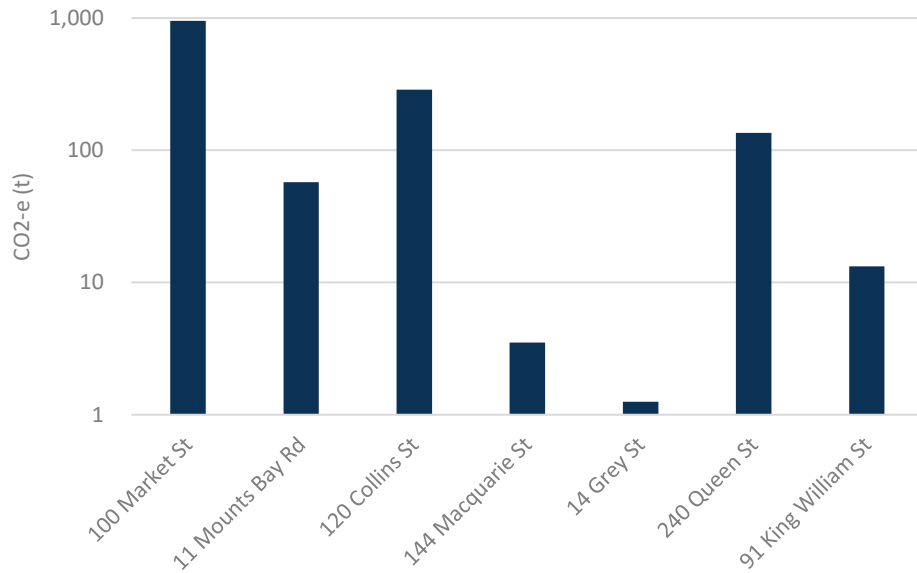


FIGURE 6: TONNES CO₂-E BY FACILITY, FY 22-23

Energy Intensity

Figure 7 shows the energy intensity of the active sites within ASIC’s portfolio, this is a measure of energy consumption for FY 22-23 against the NLA. Perth, 11 Mounts Rd is the most energy intensive site (90 kWh/m²), followed by Sydney, 100 Market St (76 kWh/m²), Brisbane 240 Queen St (76 kWh/m²) and Adelaide, 91 King William St (76 kWh/m²) and should form a key area of investigation to reduce emissions at these sites.

Each sites energy intensity value sets a baseline target for ASIC to measure change.

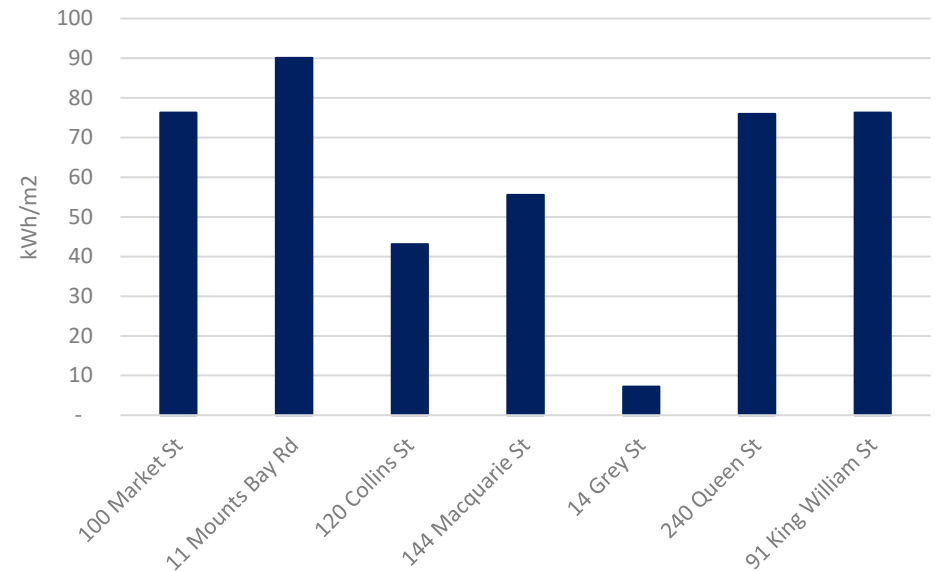


FIGURE 7: ENERGY INTENSITY PER M², ACTIVE FACILITIES ONLY, FY 22-23

When analysed by state (Figure 8), NSW generates 66% of total emissions, due to the energy intensity of Sydney, 100 Market St and 55% of total FTE is NSW based.

VIC contributes 20% of total electricity emissions, with two facilities Melbourne 120 Collins St and Traralgon, 14 Grey St, and have 27% of total FTE. QLD contributes a further 9% of total electricity emissions, followed by WA at 4%, SA at 1% and TAS at less than 1%.

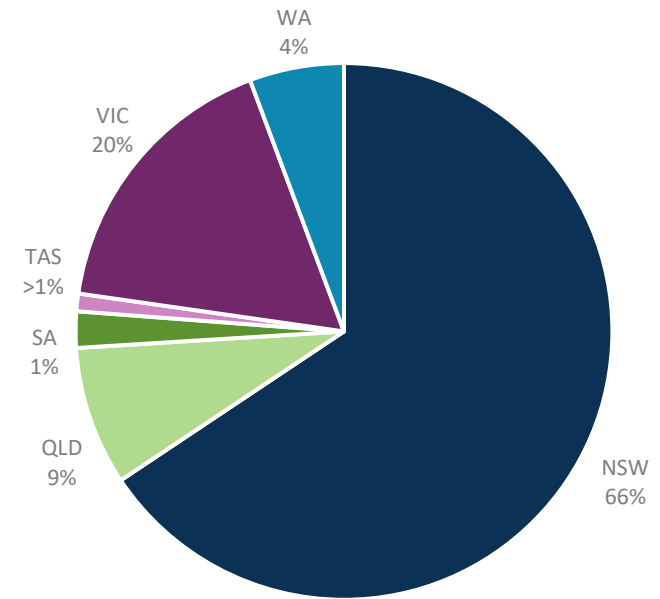


FIGURE 8: PERCENTAGE EMISSIONS BY STATE, FY 22-23

7.3 ASIC Fuel

Figure 9 demonstrates 0.06 kilolitres of diesel was consumed, generating 0.19t CO₂-e for FY 22-23. ASIC no longer has a fleet vehicle however, had a light commercial diesel vehicle within the reporting period.

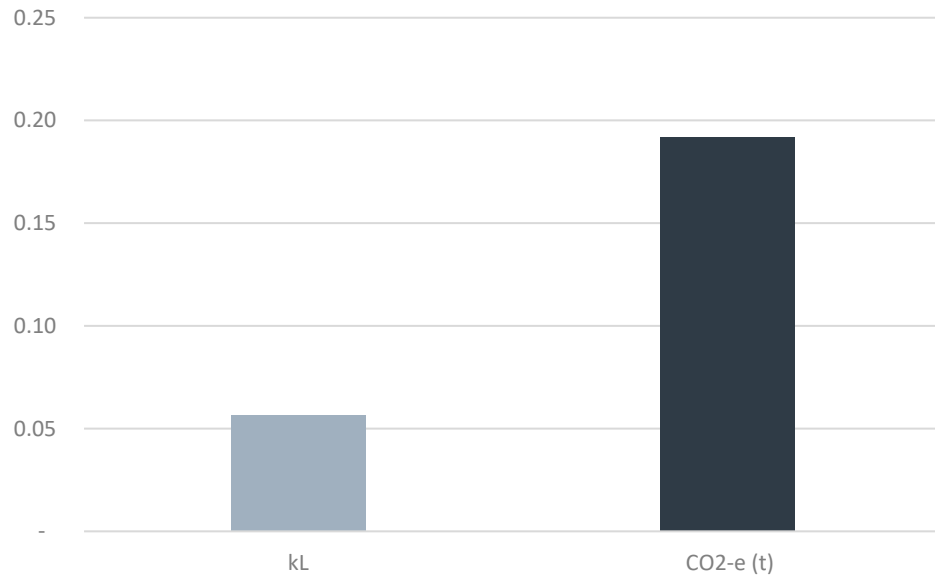


FIGURE 9: VOLUME OF TRANSPORT FUEL & ASSOCIATED CO₂-E (T), FY 22-23

Figure 10 displays the total percentage of CO₂-e by scope for FY 22-23. 0.15t CO₂-e were Scope 1 emissions and 0.04t CO₂-e were Scope 3 emissions. Scope 3 emissions are associated with well to tank losses in the fuel supply market.

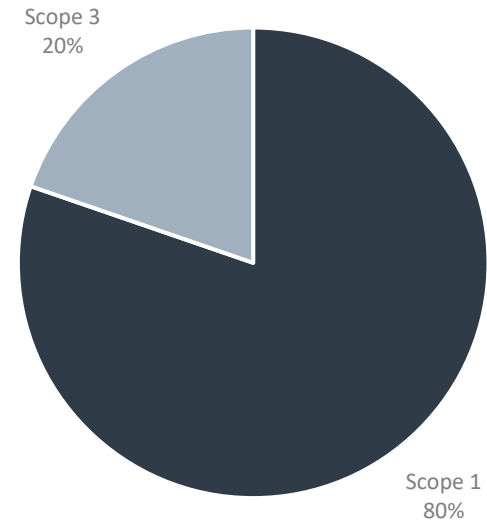


FIGURE 10: PERCENT OF CO₂-E (T) BY SCOPE, FY 22-23

7.4 ASIC Travel

International air travel does not form a part of the emissions profile for ASIC; however, it has been analysed in this section to provide a holistic view of activities undertaken by the entity that contribute to carbon emissions.

Figure 11 demonstrates the number of flights taken in FY 22-23 and the associated tonnes of CO₂-e for domestic and international air travel. The total number of flights taken in the ASIC portfolio in FY 22-23 was 6,173, with 6,050 being domestic and 123 being international flights.

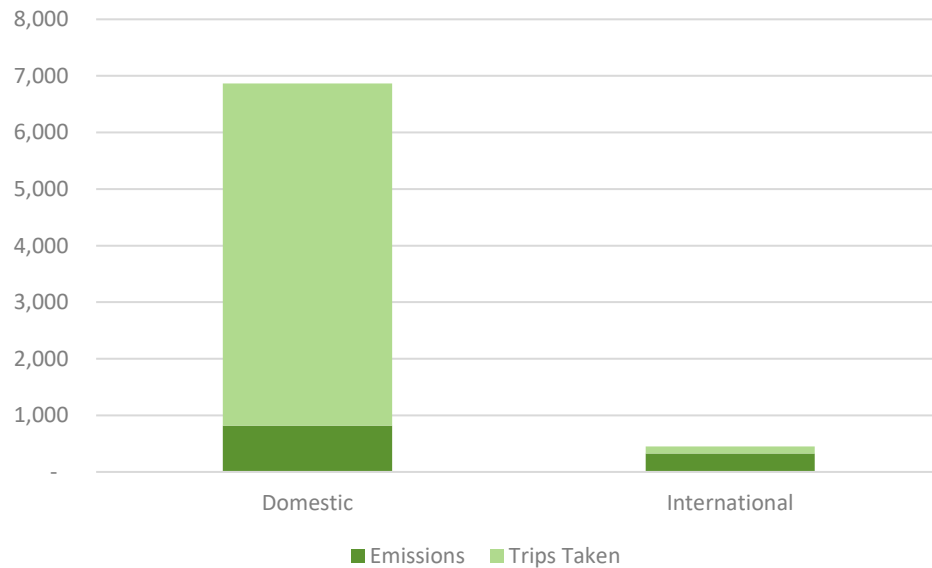


FIGURE 11: CO₂-E (T) GENERATED AND NUMBER OF FLIGHTS TAKEN, FY 22-23

Figure 12 shows international air travel contributed to 29% (326t CO₂-e) of total air travel-based emissions despite only being 2% of total flights booked in FY 22-23. Domestic contributed to 71% (817t CO₂-e) total air-based travel emissions and equated to 98% of all flights booked. The total kilometres travelled by air was 6,391,291km producing a total 1,150t CO₂-e in FY-22-23.

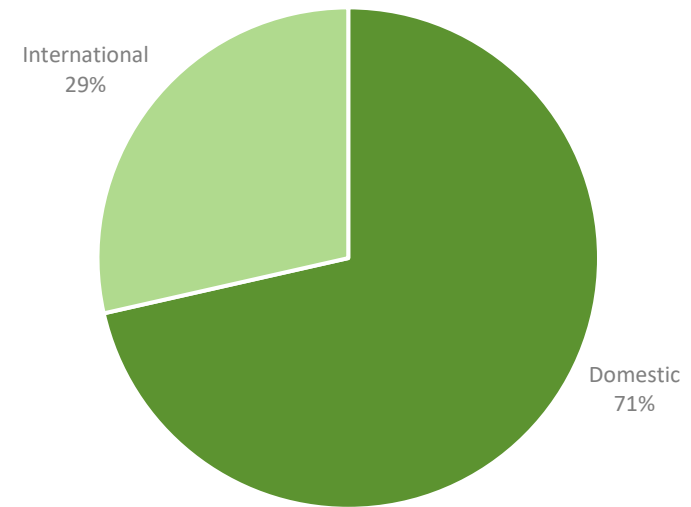


FIGURE 12: PERCENTAGE FLIGHT TYPE, CO₂-E (T), FY 22-23

ASIC's international and domestic air travel indicates 91% of all flights booked utilised economy class seating, 9% business class and less than 1% premium economy (Figure 13).

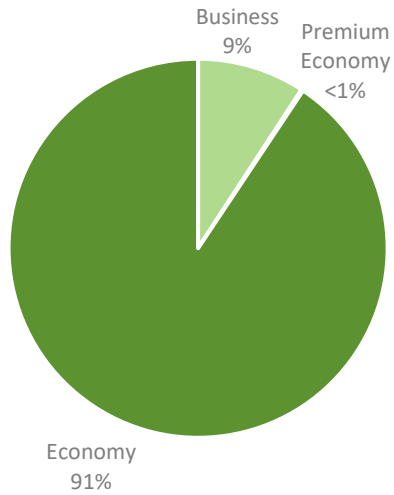


FIGURE 13: CABIN CLASS BOOKED (%), FY 22-23

Figure 14 represents the total carbon emissions for each cabin class travelled in FY 22-23.

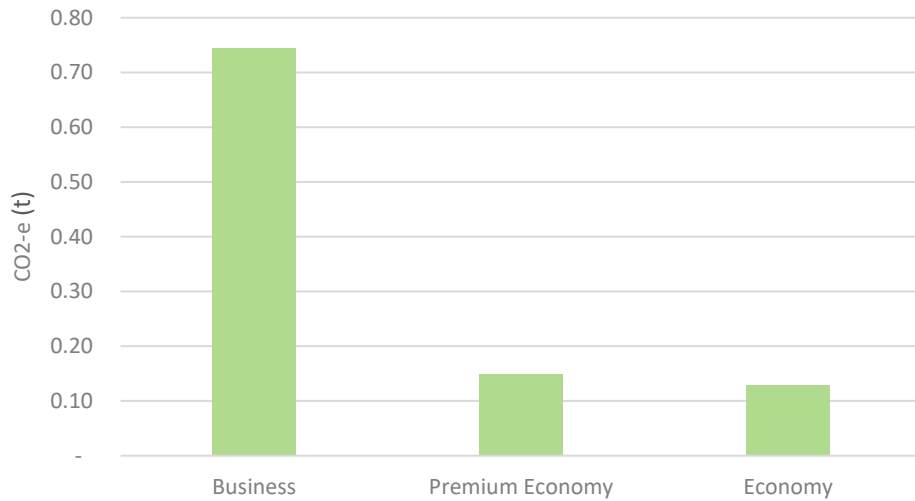


FIGURE 14: TONNES CO₂-E BY CABIN CLASS, FY 22-23

Emissions Intensity – Domestic Air Travel

As per the Strategies position on NDC, domestic travel only has been included in ASIC's baseline carbon emissions, FY 22-23.

The emissions intensity of domestic air travel by cabin class is detailed in the below and provides ASIC a baseline to measure future impact:

- Business class – 0.20kg CO₂-e/km
- Premium economy class – 0.20kg CO₂-e/km
- Economy class – 0.14kg CO₂-e/km

Figure 15 demonstrates the average carbon intensity for each trip by cabin class in FY 22-23.

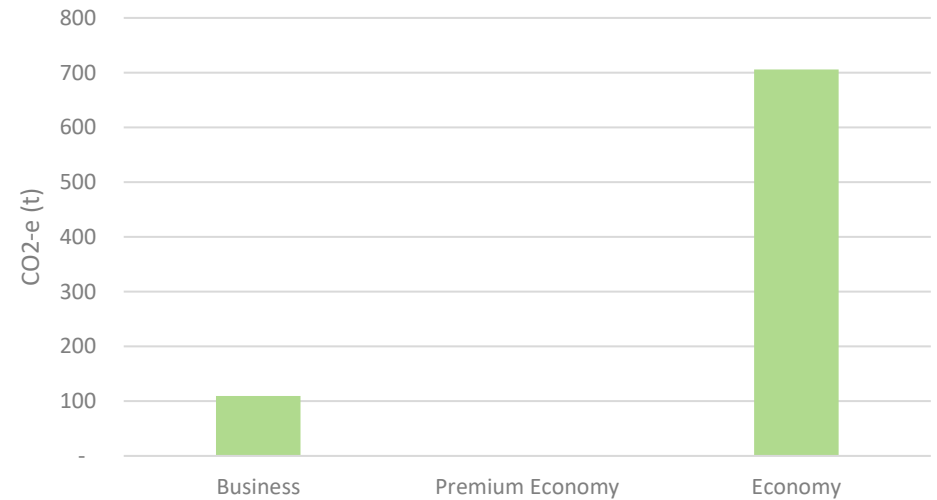


FIGURE 15: CARBON INTENSITY BY CABIN CLASS, FY 22-23

Figure 16 shows 92% of all domestic flights were economy class, 8% business class and less than 1% premium economy.

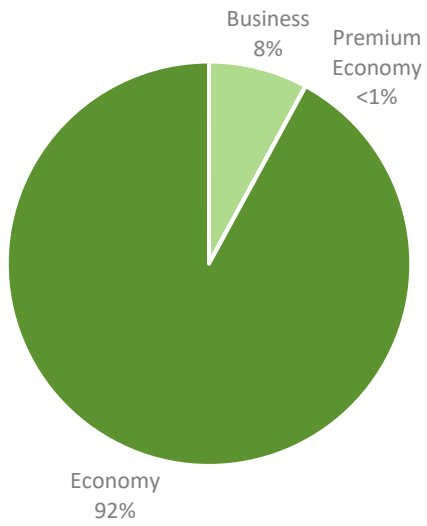


FIGURE 16: DOMESTIC FLIGHT BREAKDOWN BY CABIN CLASS, FY 22-23

Figure 17 shows the emissions associated with each cabin class and demonstrates the carbon intensity of business class when compared to the previous figure.

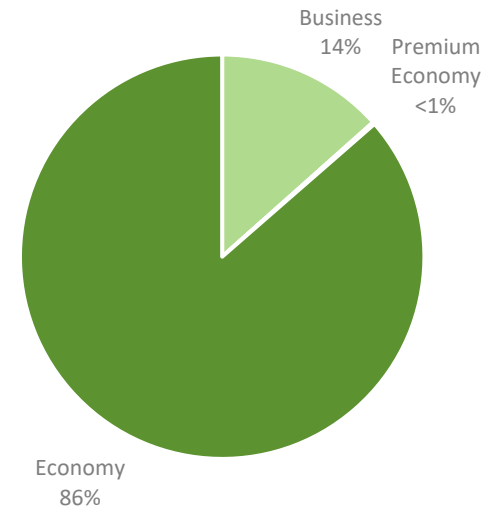


FIGURE 17: DOMESTIC FLIGHT CARBON EMISSIONS BY CABIN CLASS, FY 22-23

7.5 Measuring Success

To assist in driving outcomes ASIC's current operations were measured against each of the targets outlined in the Strategy and will assist to drive priorities and actions that reduce emissions as well as providing an understanding of ASIC's current position and sets a measure for future impact.

7.5.1 Net Zero Buildings

| TARGET | TARGET DATE | MEASURE | BASELINE 2023-24 | NOTE |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Office space leased for greater than four years, with an NLA >1000m2 achieve 5.5-star NABERS Energy rating (metro only) or 4.5-star rating in all other areas | 1 Jul 2025 | Percentage leased office space that meets this target | 0% | Four facilities exceed 1000m2, none currently hold a NABERS Energy rating |
| Refurbished office space with an NLA over 1000m2 achieves a 5.5-star NABERS Energy rating | 1 Jul 2026 | Percentage of leased office space that meets the target | NA | ASIC does not have any planned office refurbishments at the time of developing this plan |
| Office space for purchase or construction, with a contract value of over \$15M will achieve a 4-star Green Star certification and maintain a 6-star NABERS Energy rating | 1 Jul 2026 | Percentage of applicable office space that meets the target | NA | ASIC will maintain a leasing approach to all property and will not be undertaking major purchases or construction programs with its property portfolio |
| All new leases should prefer fully electric buildings, and where buildings have gas should have a long-term asset replacement program to electrify this excludes back-up generation | 1 Jul 2024 | Percentage of office space that meets the target | 100% | All facilities are fully electric. |
| Office space leased for greater than four years, with an NLA of >1000m2 contain a Green Lease Schedule | 1 Jul 2025 | Percentage of office space that meets the target | 75% | Three of the four sites have a GLS in place |
| New office space >1000m2, purchased, leased, constructed, or refurbished to be separately metered (where practical), or install separate digital revenue metering where the Commonwealth occupies over 50% of the total building | 1 Jul 2025 | Percentage of office space that meets the target | 50% | Two of the four facilities are separately metered with electricity managed by the PSP Two facilities have electricity managed and apportioned by the landlord due to sub-leasing arrangements ASIC will factor this into all new tenancies when assessing the market |

| TARGET | TARGET DATE | MEASURE | BASELINE 2023-24 | NOTE |
|---------------------------------------------------------------------------------------|-------------|--------------------------------------------------|------------------|-------------------------------------------------------------------------------|
| Develop an Electric Vehicle Plan for all offices that have allocated parking or fleet | 1 Jul 2024 | Electric Vehicle Plan developed | NA | ASIC does not maintain a commercial fleet and is exempt from this requirement |
| All office space with allocated parking or fleet have EV charging facilities | 1 Jul 2025 | Percentage of office space that meets the target | NA | ASIC does not maintain a commercial fleet and is exempt from this requirement |

7.5.2 Net Zero Energy

| TARGET | TARGET DATE | MEASURE | BASELINE 2023-24 | NOTE |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------|
| 80% of electricity procured by ASIC, that is generated offsite, from renewable sources (where available) | 1 Jul 2028 | Percentage of electricity purchased from renewable sources | 0%, | The current WoAG electricity contract does not offer green power purchase options. |
| 100% of electricity procured by ASIC, that is generated offsite, from renewable sources (where available) | 1 Jul 2030 | Percentage of electricity purchased from renewable sources | NA until target date | |
| ASIC will participate in the Whole-of-Australian-Government electricity agreement as it becomes available | As per agreement rollout | Percentage of office space that is participating in the agreement | NA until arrangement is released | |
| ASIC may consider behind the meter energy solutions, including solar installations or Power Purchase Agreements with solar contractors | NA | Percentage of facilities with behind the meter energy solutions | NA | A desktop assessment of sites was undertaken, with no suitable sites identified |
| ASIC to develop a long-term asset replacement program for all non-essential gas or LPG assets | NA | Percentage of gas or LPG assets with a long-term asset replacement program in place | NA | All ASIC facilities are fully electric |

7.5.3 Net Zero Fleet and Travel

| TARGET | TARGET DATE | MEASURE | BASELINE 2023-24 | NOTE |
|-----------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------|
| 50% of new passenger fleet orders to be low emissions vehicles (LEVs) | 1 Jul 2024 | Percentage of new passenger vehicles that are LEVs | NA | ASIC does not maintain a commercial fleet and is exempt from this requirement |
| 75% of new passenger fleet orders to be LEVs | 1 Jul 2025 | Percentage of new passenger vehicles that are LEVs | NA | ASIC does not maintain a commercial fleet and is exempt from this requirement |
| Increase uptake and usage of the NABERS Energy tool within accommodation provider | NA | Number of providers within the travel booking system that disclose a NABERS Energy rating | Nil data available | |

8 PRIORITIES AND ACTIONS

ASIC's current sustainability measures are not sufficient to achieve net zero by 2030. To achieve net zero, targeted action on existing measures and the introduction of further or new measures is required.

To support a pathway to net zero the Plan has divided emissions related activities into the following three categories:

- Net Zero Buildings
- Net Zero Energy
- Net Zero Fleet and Travel

Emissions reduction activities related to each of these categories and in alignment with the Net Zero Government in Operations Strategy will be identified in the following sections, with further detail in sections 9 and 10.



8.1 Net Zero Buildings

The highest source of carbon emissions identified in the baseline of ASIC's operations is associated with building electricity consumption. Reducing these emissions by improving energy efficiency and electrification represents the most achievable and cost-effective approach for ASIC.

To assist this approach, the Net Zero in Government Operations Strategy identifies rating systems as an effective means to understand and reduce property-related emissions. To support this, entities are required to rate their properties over 1,000m² using the National Australian Built Environment Rating Scheme (NABERS) achieving set target rating based on either metropolitan or regional locations. Similarly new builds must meet a minimum 4-star Green Star rating.

To further support ongoing reporting and emissions reduction targets ASIC will ensure all projects and programs of works support a transition to low emissions assets and infrastructure, new buildings over 1000m² are separately metered.

Actions over the next five years:

1. Undertake all required NABERS ratings for buildings over 1000m² as a means of benchmarking and improving energy performance.
2. Drive improved energy efficiency across the asset portfolio through improved data gathering and building analytics in line with the Net Zero in Government Operations Strategy.
3. Encourage emissions reductions actions in ASIC's facilities by providing information and education to guide the behaviour of staff and contractors.
4. Drive sustainable, low emissions projects and programs of works across ASIC's portfolio, reducing or eliminating associated operational emissions.
5. Continue office consolidation processes to drive efficiencies.

8.2 Net Zero Energy

Reducing energy consumption through energy management strategies and improving energy efficiency is recognised as the most effective way for ASIC to reduce its emissions.

The Net Zero in Government Operations Strategy has set a renewable electricity target of 80% of electricity procured is from renewable sources (where available) by 2028 and 100% by 2030. To achieve this target, the Department of Finance will establish a whole-of-Australian-Government arrangement for electricity procurement for use by entities. ASIC commits to participate in this arrangement as it is rolled out nationally.

Additional to this, ASIC commits to pursue energy efficiency projects that optimise a facilities energy consumption.

ASIC's property portfolio is fully electric, with all future leases or builds needing to meet this requirement.

Actions over the next five years:

1. Participate in the Whole-of-Australian-Government electricity supply arrangement as it becomes available across the various states of Australia.
2. Utilise NABERS ratings and data to pursue energy efficiency projects.

8.3 Net Zero Travel

The Australian Government has committed to reducing emissions by setting a target of 75% of new passenger vehicle purchases and leases to be low emissions vehicles by 2025. ASIC is committed to supporting this target in the transition of its fleet.

Air travel undertaken by ASIC makes up 42% of baseline emissions and represents the second highest source of emissions for ASIC based on FY 2022-23, presenting a significant opportunity to reduce Scope 3 emissions.

Actions over the next five years:

1. Increase utilisation of NABERS Energy rating disclosed by accommodation providers.
2. Embed air travel rationalisation across the business.

8.4 Implementation Plan

The following section identifies 31 actions and delivery timeframe for the Emissions Reduction Plan to 2030. The implementation of the Emissions Reduction Plan will be subject to future annual budget and service priorities.

This is the inaugural Emissions Reduction Plan for ASIC and will focus on actions with the highest emissions reduction impact to assist in meeting the 2030 target date.

In the implementation plan, each action has been categorised as to whether it directly reduces ASIC's carbon emissions, influences other action, or innovates by enabling the integration of new or emerging technologies.



IMPACT

An actions that directly results in reduction of ASIC's carbon emissions.



INFLUENCE




An action that seeks to influence or encourage emissions reduction of contractors, suppliers, staff or subsidiary business.











INNOVATE

An action that enables the use or implementation of technologies that drive net zero outcomes.

8.4.1 Priority Area 1: Net Zero Buildings





| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------|------|------|------|------|------|
| 1.1 | <p>Establish a Net Zero Working Group with ASIC key stakeholders, leased property managers and leased property owners to establish strategies and boundaries for initiatives that can be undertaken by ASIC and garner support from landlords to support and implement net zero initiatives that improve a facilities emissions performance.</p> <p>Commencement year and ongoing: 2024</p> <p>Working group schedule: Biannually at a minimum</p> | <p>Influence</p>  | <p>ASIC Property</p> <p>PSP Leasing Services team</p> <p>Landlord(s)</p> | → | → | | | | |
| 1.2 | <p>Implement Green Lease Schedules (GLS) for all leased properties with an NLA of >1000m² and minimum 4-year lease term.</p> <p>Facilities that require a GLS include:</p> <ul style="list-style-type: none"> Perth, 11 Mounts Bay Road <p>The GLS will create a legal and management framework under which both parties, lessor, and lessee, are required to achieve and maintain the building environmental performance throughout the term of the lease. A mutually agreed GLS will assist ASIC overcome barriers more effectively by allocating incentives and responsibilities for improved emissions reduction management across its leased portfolio.</p> <p>Commencement year and ongoing: 1 July 2025 and ongoing</p> <p>Refer Section 10.1 for further information</p> | <p>Influence</p>  | <p>ASIC Property</p> <p>PSP Leasing Services team</p> <p>Landlord(s)</p> | | → | → | | | |
| 1.3 | <p>Review existing GLS's to ensure they align to the Strategy and net zero 2030 target.</p> <p>Facilities that have existing GLS's in place include:</p> <ul style="list-style-type: none"> Brisbane, 240 Queen St Melbourne, 120 Collins St Perth, 11 Mounts Bay Rd Sydney, 100 Market St <p>Commencement year and ongoing: 2024</p> <p>Refer Section 10.1 for further information.</p> | <p>Influence</p>  | <p>ASIC Property</p> <p>PSP Leasing Services team</p> <p>Landlord(s)</p> | → | → | | | | |











| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------|------|------|------|------|------|
| 1.4 | Maintain an all-electric building portfolio, with all new leases needing to be fully electric. Commencement year and ongoing: 1 July 2024 | Impact  | ASIC Property PSP Leasing Services team | → | → | | | | |
| 1.5 | Ensure all office refurbishments with an office space of >1000m ² and leased for a minimum of four years will achieve 5.5-star NABERS Energy rating. As of 2024 there is no planned office fit outs. ASIC will ensure that this requirement, in collaboration with its PSP Project Management team integrate all requirements of the Strategy in future works Commencement year and ongoing: 1 July 2026 Refer Section 10.2 for further information | Impact  | ASIC Property PSP Sustainability team PSP Project Management team | | | → | | | |
| 1.6 | Undertake annual NABERS Energy ratings for leased properties with an NLA of >1000m ² , achieving a minimum 5.5-star rating for metropolitan sites and 4.5-star rating for regional sites. These facilities include: <ul style="list-style-type: none"> • Brisbane, 240 Queen St • Melbourne, 120 Collins St • Perth, 11 Mounts Bay Rd • Sydney, 100 Market St Commencement year and ongoing annually: 2025 Predicted emissions reduction if all facilities are 5.5-Star NABERS rated: 4,074t CO ₂ -e p.a. Predicted energy reduction: 514,950kWh p.a. by meeting a 5.5-star NABERS Energy rating at all facilities. Refer Section 10.3 for further information. | Impact  | ASIC Property PSP Sustainability team | | → | → | | | |






| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|------|------|
| 1.7 | <p>Undertake Type-2 Energy Audits at facilities that are identified as having high energy intensity or that do not meet the required NABERS Energy rating, with the audits used to identify energy efficiency solutions for implementation.</p> <p>Facilities that do not meet the NABERS Energy rating include:</p> <ul style="list-style-type: none"> Adelaide, 92 King William St Brisbane, 240 Queen St Perth, 11 Mounts Bay Rd <p>Estimated investment: up to \$6,000 per facility², plus project implementation costs</p> <p>Predicted ongoing emissions reduction (at 10% total reduction³): 21t CO₂-e p.a.</p> <p>Predicted energy reduction: 29,849kWh p.a.</p> <p>Refer Section 10.4 for further information.</p> | Influence  | ASIC Property PSP Sustainability team | |  |  | | | |
| 1.8 | <p>Upgrade lighting to LED</p> <p>This is a recommendation from the Type-2 Energy audit conducted in 2024 at:</p> <ul style="list-style-type: none"> Sydney, 100 Market St <p>Estimated investment: \$153,990</p> <p>ROI: 11.3 years</p> <p>Estimated cost savings: \$13,638 p.a.</p> <p>Ongoing emissions reduction: 40.5t CO₂-e p.a.</p> <p>Ongoing energy reduction: 155,436kWh p.a.</p> <p>Refer to Section 9 for detail resulting from the Type-2 Energy audit</p> <p>Refer Section 10.5 for potential rebates available to ACAIR to support this program of works or Section 10.6 for information relating to Lighting as a Service to offset capital expenditure</p> | Impact  | ASIC Property PSP Sustainability team PSP Project Management team | |  | | | | |






² Cost is dependent on location (travel requirements), size, and facility complexity.

³ This is a conservative value. Energy audits typically identify energy reduction opportunities that reduce overall consumption by up to 20%.


| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|------|------|------|
| 1.9 | <p>Integrate time function on boiling/ chilled water units</p> <p>This is a recommendation from the Type-2 Energy audit conducted in 2024 at:</p> <ul style="list-style-type: none"> Sydney, 100 Market St <p>Estimated investment: \$3,825</p> <p>ROI: 0.8 years</p> <p>Estimated cost savings: \$4,642 p.a.</p> <p>Ongoing emissions reduction: 13.8t CO2-e p.a.</p> <p>Ongoing energy reduction: 18,870kWh p.a.</p> <p>Refer to Section 9 for detail resulting from the Type-2 Energy audit</p> <p>Refer Section 10.5 for potential rebates available to ASIC to support this program of works</p> | <p>Impact</p>  | <p>ASIC Property</p> <p>PSP Sustainability team</p> <p>PSP Project Management team</p> | |  | | | | |
| 1.10 | <p>HVAC optimisation of scheduling and temperature setpoints</p> <p>This is a recommendation from the Type-2 Energy audit conducted in 2024 at:</p> <ul style="list-style-type: none"> Sydney, 100 Market St <p>Estimated investment: \$11,965</p> <p>ROI: 6.4 years</p> <p>Estimated cost savings: \$3,905 p.a.</p> <p>Ongoing emissions reduction: 11.6t CO2-e p.a.</p> <p>Ongoing energy reduction: 15,874kWh p.a.</p> <p>Refer to Section 9 for detail resulting from the Type-2 Energy audit</p> | <p>Impact</p>  | <p>ASIC Property</p> <p>PSP Sustainability team</p> <p>PSP Project Management team</p> | |  | | | | |

| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|------|------|
| 1.11 | <p>Upgrade lighting to LED</p> <p>Recommendation:</p> <ul style="list-style-type: none"> Upgrade lighting at all facilities before end of lease Upgrade lighting to high efficiency LED during major facility refurbishments Consider the integration of high efficiency lighting controls (occupancy sensors and daylight sensors) to reduce emissions and ongoing operational costs <p>Commencement year and ongoing: 2025</p> <p>Refer to Section 10.5 for potential funding opportunities that can be used to support these works.</p> | Innovate  | ASIC Property PSP Sustainability team PSP Project Management team | |  |  | | | |
| 1.12 | <p>Investigate, where appropriate Lighting as a Service or HVAC as a Service options to reduce capital expenditure.</p> <p>See Section 9 for further details</p> <p>Commencement year: as required by ASIC</p> <p>Refer to Section 10.6 and 10.7 for further information.</p> | Innovate  | ASIC Property |  | | | | | |
| 1.13 | <p>Replace low efficiency kitchen appliances with high efficiency appliances, supporting reuse, recycling, and donation schemes to keep items from being sent to landfill.</p> <p>Commencement year: as required and in accordance with asset replacement policy</p> <p>Refer to Section 10.5 for potential funding opportunities that can be used to support these works.</p> | Impact  | ASIC Property |  | | | | | |
| 1.14 | <p>Install block out blinds on north and west facing windows to reduce heat loss and gain.</p> <p>Blinds can reduce heat transference by up to 40% and decrease energy consumption by up to 10%.</p> <p>To further enhance the functionality of the blinds sensors can be linked to the BMS systems to automate the blinds to close at set LUX or temperature points.</p> <p>Facilities, emission reductions and return on investment will be determined through Type-2 Energy audits.</p> <p>Commencement year and ongoing: 2025</p> | Impact  | ASIC Property PSP Leasing Services team Landlord(s) | |  |  | | | |







| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------|------|------|------|------|------|------|--|
| 1.15 | <p>Implement hot desk systems with a staff to work point ratio of 1:1.5. Hot desk system to be supported by an online desk booking system.</p> <p>Commencement year: 2025</p> <p>Refer Section 10.8 for further information</p> | <p>Influence</p>  | <p>ASIC Property</p> <p>ASIC ICT</p> | | → | | | | | |
| 1.16 | <p>Retire old ICT equipment and replace with new high efficiency systems at end of life.</p> <p>Investigate the option to transition dual monitors to single curved monitors with an ultra-wide aspect ratio to reduce energy consumption.</p> <p>Commencement year: as required and in accordance with ICT policy</p> | <p>Impact</p>  | <p>ASIC Property</p> <p>ASIC ICT</p> | → | | | | | | |
| 1.17 | <p>Where applicable, transition to cloud-based servers to reduce energy consumption associated with server rooms.</p> <p>Commencement year: as required and in accordance with ICT and privacy policies</p> | <p>Impact</p>  | <p>ASIC Property</p> <p>ASIC ICT</p> | → | | | | | | |
| 1.18 | <p>Maintain existing end of journey facilities for cyclists and investigate opportunities to improve end of journey facilities to support low/no emissions staff commute.</p> <p>Note: guidelines should be implemented in accordance with building insurance requirements to mitigate any fire risks associated with E-bikes or E-scooters.</p> <p>Commencement year and ongoing: 2024</p> | <p>Influence</p>  | <p>ASIC Property</p> <p>PSP WoAG FM team</p> | → | → | | | | | |
| 1.19 | <p>Integrate sustainability education programs for all ASIC employees through a range of mediums including:</p> <ul style="list-style-type: none"> • Induction training • Internal newsletters • Good news stories <p>Embedding sustainability KPIs into performance plans will also be investigated to further support the achievement of net zero for ASIC.</p> <p>Commencement year and ongoing: 2025</p> <p>Refer Section 10.9 for further information.</p> | <p>Influence</p>  | <p>ASIC People and Culture</p> | | → | → | | | | |


| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|------|------|------|
| 1.20 | Participate in Earth Hour to show ASIC's support for net zero and climate action. Commencement year and ongoing: 2025 (March) and ongoing | Influence  | ASIC Property PSP WoAG FM team | |  | | | | |
| 1.21 | Investigate new and emerging technologies that support ASIC's transition to net zero buildings, as they become available and viable. Commencement year and ongoing: 2024 | Innovate  | ASIC Property PSP Projects team PSP Sustainability team | |  | | | | |
| 1.22 | Seek finding to support net zero programs of works across ASIC's property portfolio when made available through the Department of Finance. Commencement year: as released by the Department of Finance | Influence  | ASIC Property Department of Finance | | | | | | |

8.4.2 Priority Area 2: Net Zero Energy

| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------|------|------|------|------|------|------|
| 2.1 | <p>Participate on the Whole-of-Australian-Government electricity agreement as available based on the below timeframe:</p> <ul style="list-style-type: none"> • 1 Sep 2024 – Northern Territory • 1 Dec 2024 – Western Australia • 1 Jan 2025 – Tasmania • 1 July 2025 – New South Wales, Australian Capital Territory, & Victoria • 1 Oct 2026 – South Australia • 1 Jan 2029 – Queensland <p>All ASIC properties will participate in this Green Power purchase scheme to ensure all electricity consumed is from renewable sources.</p> <p>Emissions reduction: 1,450 t CO₂-e p.a. by 2030</p> <p>Commencement year: as detailed above and released by the Department of Finance</p> <p>Refer to Section 10.10 further information.</p> | <p>Impact</p>  | <p>ASIC Property</p> <p>Ventia Sustainability</p> | | | | | | |

8.4.3 Priority Area 3: Net Zero Travel

| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|------|------|
| 3.1 | <p>Promote the benefits of public transport, walking, and cycling to new staff during induction programs and familiarise them with end of journey facilities at their workplace.</p> <p>Use internal communications to program active and public transport for business related travel.</p> <p>Commencement year and ongoing: 2024</p> | <p>Influence</p>  | <p>ASIC Property</p> <p>ASIC Training</p> |  |  | | | | |
| 3.2 | <p>Develop a Sustainable Travel Policy that prioritises sustainable travel and low emissions travel. Sustainable travel and low emissions travel may include rail, shared ride services, electing low emissions travel options and purchase of travel offsets.</p> <p>The travel policy will support the reduction of domestic travel by 5% year-on-year as noted in action item 3.3.</p> <p>Commencement year: 2025 for ongoing implementation</p> | <p>Influence</p>  | <p>ASIC Travel</p> | |  |  | | | |

| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | | | | | | | | | | | | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------|-------------------|------|----------------------|-------------------------------------------|-----------------|----------|----------|----------------------|----------|----------|---------------------------------------------------------------------------------------------------|------------------------------------------|--|--|--|--|--|--|
| 3.3 | <p>Air travel rationalisation and guidelines to support reduced travel needs, utilising online meeting platforms where possible.</p> <p>Where air travel is unavoidable, purchase offsets at the point of ticket purchase to reduce ASIC's travel emissions or offset via ACCU's.</p> <p>Pricing has been detailed below:</p> <table border="1"> <thead> <tr> <th></th> <th>Qantas offset price</th> <th>ACCU offset price</th> </tr> </thead> <tbody> <tr> <td></td> <td>1.8c/km⁴</td> <td>\$35.85/t CO₂-e⁵</td> </tr> <tr> <td>Domestic</td> <td>\$99,407</td> <td>\$29,287</td> </tr> <tr> <td>International</td> <td>\$15,636</td> <td>\$11,695</td> </tr> </tbody> </table> <p>ASIC will aim to reduce air travel by 5% year-on-year to 2030</p> <p>Estimated emissions reduction: 184t CO₂-e (domestic air)</p> <p>Commencement year: by consideration</p> <p>Refer Section 10.11 for further information.</p> | | Qantas offset price | ACCU offset price | | 1.8c/km ⁴ | \$35.85/t CO ₂ -e ⁵ | Domestic | \$99,407 | \$29,287 | International | \$15,636 | \$11,695 | <p>Impact</p>  | <p>ASIC Travel</p> <p>ASIC employees</p> | | | | | | |
| | Qantas offset price | ACCU offset price | | | | | | | | | | | | | | | | | | | |
| | 1.8c/km ⁴ | \$35.85/t CO ₂ -e ⁵ | | | | | | | | | | | | | | | | | | | |
| Domestic | \$99,407 | \$29,287 | | | | | | | | | | | | | | | | | | | |
| International | \$15,636 | \$11,695 | | | | | | | | | | | | | | | | | | | |



⁴ Qantas has a published price of 1.8c/km price for all flights, irrespective of cabin class and use to form the basis of this calculation.

⁵ Spot price as of March 2024 and subject to market fluctuations

8.4.4 Net Zero Carbon Abatements

ASIC recognise that some business operation activities are unavoidable and cannot be reduced through means identified in the previous three tables. As such abatements will need to be purchased on an ongoing annual basis. As these costs apply annually, this highlights the importance the focus on reducing emissions across all of ASIC's operations and property portfolio.

The abatements are managed through the Australian Carbon Credit Unit (ACCU), operating on a market spot price, which was positioned at \$35.85 on 21 Mar 2024 and used to calculate the below estimated abatement costs. Further detail can be referenced in section 10.12 of this Plan.

| ACTION # | ACTION DETAIL | ACTION TYPE | INVOLVED PARTICIPANTS | 2030 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------|
| 4.1 | <p>Abatements for Net Zero buildings will apply to all data sources that are reported in the Net Zero Carbon Reporting Tool and will only apply after from 2030.</p> <p>Commencement year and ongoing: 2030</p> <p>Estimated total emissions abatement: 632 t CO₂-e</p> <p>Estimated total abatement cost: \$22,657 p.a.</p> | <p>Impact</p>  | <p>ASIC Property</p> <p>ASIC Finance</p> |  |

| EMISSIONS SOURCE | CURRENT EMISSIONS (t CO ₂ -e) | ESTIMATED EMISSIONS 2030 (t CO ₂ -e) | COST (\$) | NOTE |
|-------------------------|------------------------------------------|-------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electricity | 1,450 | 0 | \$0 | <p>Electricity, when connected to the whole-of-Australian-Government electricity agreement will be from GreenPower, abating all carbon emissions.</p> <p>The Type-2 Energy audit identified 65.8t CO₂-e reduction initiatives for Sydney 100 Market St.</p> <p>Additional Type-2 Energy audits may deliver a further 21t CO₂-e reductions.</p> <p>If ASIC were to achieve a 5.5-Star Energy NABERS rating across all rated facilities it would reduce its total emissions by 407t CO₂-e.</p> |
| Fuel (fleet vehicle) | 0.19 | 0 | \$0 | ASIC no longer have a fleet vehicle |
| Flights (domestic only) | 817 | 632 | \$22,657 | Figure based on 5% year-on-year reduction |

9 TYPE-2 ENERGY AUDIT

A Type-2 Energy Audit was completed for ASIC in May 2024 for the purposes of identifying energy efficiency programs of works that ASIC could undertake to support the implementation of the Plan and achievement of net zero, whilst also realising savings through the reduction of energy consumption.

The Type-2 Energy Audit is done in compliance with AS/NZS 3598:2014. As a part of the Audit Ventia Sustainability undertook the following activities:

- **Data Collation and Desktop Review**
 - Analysis of historical energy data trends at the facility (inc. utility invoices)
 - Liaison with facility management to gain insight into the facilities operations (i.e. management, equipment, and environmental use/management).
- **Facility Assessment**
 - Conducted a facility inspection on 9th May 2024, to investigate the facilities operations and energy performance down to an asset level.
 - Verified findings from desktop review, identified areas for improvement, and resultant energy saving initiatives.
- **Analysis and Identification of Opportunities**
 - Findings from the facility assessment and desktop review used to establish a baseline in energy performance for which improvements can be measured.
 - Energy saving potential analysis conducted and used to identify energy efficiency opportunities, including cost of implementation and payback periods.
- **Energy Audit Report**
 - Includes a detailed range of energy saving recommendations (inc. estimated investment costs, savings, and return on investment)
 - The identification and development of capital investment or maintenance initiatives that consider the facilities structure, materials, and operations.
 - The identification and recommendation of energy management opportunities which could be supported through staff or supplier engagement programs.

9.1 Energy Saving Opportunities

This section covers energy saving opportunities aimed at reducing energy consumption, emissions, and/or expenditure by offering operational improvements and/or capital works. The main emissions saving opportunities identified at ASIC Levels 5-10, 100 Market Street, Sydney are geared towards operational improvements, as summarised below.

| ENERGY OPPORTUNITY | ENERGY SAVINGS (KWH PA) | GHG SAVINGS (TCO ₂ -E PA) | SAVINGS (\$ PA) | COST (\$) | PAYBACK PERIOD (YEARS) |
|----------------------------------------------------|-------------------------|--------------------------------------|-----------------|------------------|------------------------|
| Upgrade T5 Fluorescent Lighting to LED | 55,436 | 40.5 | \$13,638 | \$153,990 | 11.3 |
| Utilise timer modes on Boiling Chilled Water units | 18,870 | 13.8 | \$4,642 | \$3,825 | 0.8 |
| Refine HVAC Scheduling | 3,622 | 2.6 | \$891 | \$3,040 | 3.4 |
| Optimise Thermostat Setpoints in ICT Room | 12,252 | 8.9 | \$3,014 | \$8,925 | 3.0 |
| Total | 90,180 | 65.8 | \$22,186 | \$169,780 | 18.5 |

Implementing the recommended measures outlined in the report will reduce the greenhouse gas (GHG) emissions by 65.8 tCO₂-e, which equates to over 7.4% reduction in the overall GHG emissions for the facility. It is evident that optimising the controls for the hot water appliances and upgrading to LED lighting throughout will have the largest emissions reduction impact at the facility over the coming years.

The cost savings account for both energy and maintenance cost savings that will be realised through reduced replacement costs, energy efficiency, and labour. Energy savings estimates are based on the average delivered electricity in 2023 (obtained from invoices provided by ASIC): 0.26 \$/kWh for electricity.

The greenhouse gas emissions (GHG) savings is based on scope 2 and 3 GHG factors from the Australian National Greenhouse Accounts Factors - August 2023 respectively. In New South Wales, this is 0.73 kg CO₂-e/kWh for electricity⁶.

Implementation cost estimates associated with the recommendations allow for the provision of contractor services including the purchase, supply, installation, and commissioning of equipment (excluding GST). Cost estimates do not include associated

⁶ <https://www.dceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors-2023>

building works, electrical upgrades, consulting, and project management fees, where applicable.

Whilst every effort has been made to provide accurate budget cost estimates, Ventia has no control over the cost of labour, materials, equipment, or contractor’s methods for determining prices. As actual project costs will depend on the method of procurement and market conditions at the time of implementation, Ventia cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its cost estimates.

9.1.1 Upgrade Lighting to LED

The majority of the lighting systems noted during the facility visit were T5 fluorescent tubes installed throughout the tenancy (~1540 light fittings recorded). The remaining included already upgraded T5 to LED (~171), LED downlights (~1065) and LED strip lighting (~493m). Upgrading the existing fluorescent to LED lighting presented a significant energy saving opportunity for the facility. There is a vast range of LED upgrade options in the market which could be selected to replace the T5 fluorescent tubes (Figure 18 and Figure 19).

| ENERGY OPPORTUNITY | ENERGY SAVINGS (KWH PA) | GHG SAVINGS (TCO ₂ -E PA) | COST SAVINGS (\$ PA) | COST (\$) | PAYBACK PERIOD (YEARS) |
|----------------------------------------------------------------|-------------------------|--------------------------------------|----------------------|-----------|------------------------|
| Upgrade T5 Fluorescent Lighting to LED (~1540 fittings) | 55,436 | 40.5 | \$13,638 | \$153,990 | 11.3 |
| Subtotal | 55,436 | 40.5 | \$13,638 | \$153,990 | 11.3 |

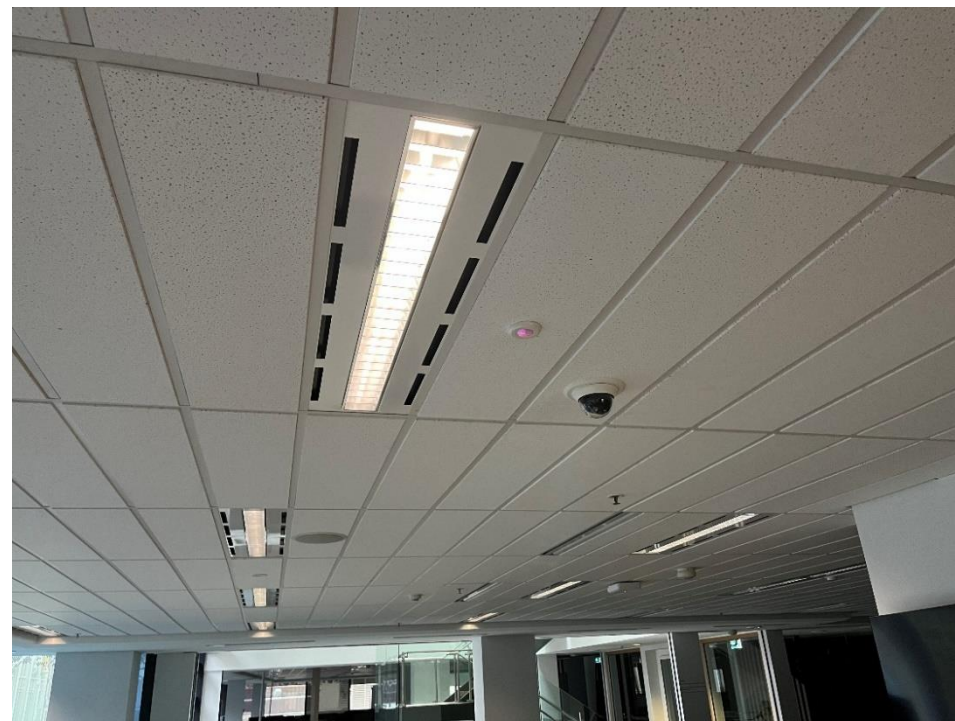


FIGURE 18: SUSPENDED T45 INCANDESCENT BULBS (LOCATED IN THE COMMON AREA/KITCHEN)

The key benefits of installing LED lighting through the facility are as follows:

- **Asset resilience**
 - LED light fittings have a long operational lifetime expectation of up to 30,000 hours.
 - LED lights are ideal for operation in extreme temperatures settings, unlike their incandescent bulbs whose operation could be affected by varying temperatures.
- **Reduced maintenance costs**
 - Reduced 'Reactive Maintenance' spend associated with replacing all non-LED lighting.
 - Reduced 'Planned Maintenance' spend for inspection frequency.
- **Energy Efficiency**
 - LED light fittings have with an estimated energy efficiency of 70-80% when compared to traditional lighting and conventional light bulbs.
 - Reduced energy costs.
- **Emission Reductions**
 - It's expected the installation of LEDs more will improve ASIC's emission profile.



FIGURE 19: SUSPENDED LED LIGHT FITTING AND EXISTING RECESSED T5 FLUORESCENT FITTINGS (LOCATED ON LEVEL 10.)

Lighting Controls

As offices are becoming more intermittently occupied with the rise of employees working remotely, utilising occupancy-driven lighting controls can be a cost-effective solution to combat increasing energy costs. Energy savings can be made through optimising the lighting controls at this facility by integrating timer controls with the existing occupancy sensors noted during the facility visit (see Figure 20).

Timer controls automate lighting based on preset schedules, combining timer controls with the existing occupancy sensors ensures lights are turned off within 20-30 minutes of the area becoming unoccupied, which will reduce energy consumption. Additionally, the timers can be programmed to operate within specific hours, ensuring lights are off during non-working hours. It is recommended that this control is incorporated with the LED lighting upgrade as it can be integrated into the building management control system (BMCS) system.

Given the office's extensive window area, daylight-responsive controls can significantly reduce the need for artificial lighting specifically for workstations located near the window area. Photoelectric (PE) sensors monitor ambient light and adjust indoor light accordingly by dimming or switching off lights when sufficient daylight is available in the area. This measure will reduce energy consumption but also enhance employee well-being. Natural light presents a more pleasant working environment compared to artificial light. Integrating the advanced controls with the recommended LED lighting upgrades will optimise the efficiency of the lighting system throughout the office space. It is recommended that a feasibility assessment is undertaken by a technician when undertaking the LED lighting upgrades.



FIGURE 20: EXISTING OCCUPANCY SENSOR LOCATED ON THE CEILING.

9.1.2 Building Thermal Efficiency

Building thermal efficiency refers to a building's capacity to limit the transfer of heat between its indoor and outdoor environments. Enhancing the thermal efficiency of a building means taking in less heat from the outdoor environment during summer and minimising heat losses during winter. During the site visit we identified an opportunity to enhance the building thermal efficiency through installing blackout blinds on the north and west-facing windows of the facility. The benefits of installing blackout blinds include:

- **Reduce heat loss** by providing an additional layer of insulation during the colder months. This will help maintain a more consistent indoor temperature and reduce the heating demand on the HVAC system.
- **Reduce heat gain** by effectively blocking out the solar gain from sunlight during the warmer months. This will help keep indoor spaces cooler and reduce the cooling load on the HVAC system.

Blackout blinds can achieve a more stable indoor climate, improve comfort for occupants and contribute to reducing energy consumption required for the HVAC system. Blinds can reduce heat transference by up to 40% and decrease energy consumption by up to 10%.

9.1.3 Integrate Timer Function on Boiling, Chilled Water Units

| ENERGY OPPORTUNITY | ENERGY SAVINGS (KWH PA) | GHG SAVINGS (TCO ₂ -E PA) | SAVINGS (\$ PA) | COST (\$) | PAYBACK (YEARS) |
|----------------------------------------------------------------|-------------------------|--------------------------------------|-----------------|----------------|-----------------|
| Utilise timer modes on Boiling Chilled Water units (~18 units) | 18,870 | 13.8 | \$4,642 | \$3,825* | 0.8 |
| Subtotal | 18,870 | 13.8 | \$4,642 | \$3,825 | 0.8 |

* Includes allowance for additional inspections to be carried out quarterly throughout the year.

A low-cost opportunity was identified with the existing Billi and Zip HydroTap boiling, chilled water units (BCWU) (see Figure 21). Utilising the inbuilt energy saving features within the BCWU units will help reduce heating loads when the facility is unoccupied, each Billi unit has a self-learning timer (EcoIntelligence) and a standby mode. This timer learns the user’s behaviour over a period of time (up to one month) and pre-empts the need for water throughout each 24-hour period over a week. When the self-learning timer is enabled, the unit will enter standby if no water is expected to be used for a 3 hour or more period. The unit will shut down completely if no water is expected to be used for a 6 hour or more period. The Zip HydroTaps also have a similar smart-energy saving feature that incorporates an auto-sleep function and a programmable timer control⁷.

An estimated 1.5% reduction on annual electrical consumption for the facility is expected if a timer mode is implemented on the hot water appliances (assuming no timer modes are currently in place). It is recommended that a competent technician is tasked with setting up the appropriate timer modes on all BCWU’s throughout the office, and scheduled to revisit after a period of time to confirm the timer function is working effectively.



FIGURE 21: UNDER SINK ZIP HYDROTAP (LEFT) & BILLI (RIGHT) BOILING, CHILLED WATER UNITS

⁷ <https://www.zipwater.com/products/archived/zip-hydrotap-g4-bc-10075-ht1764>

9.1.4 HVAC Optimisation

Optimising the heating, ventilation, and air conditioning (HVAC) system means studying the existing controls and setpoints and investigating if they still meet the demands and requirements of the building areas served. As some settings become outdated over time, this often leads to HVAC plant equipment consuming energy inefficiently.

The HVAC optimisation process is split into three phases:

| 1 - SITE AUDIT | 2 - OPTIMISATION | 3 - CONTINUOUS MONITORING & IMPROVEMENT |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Inspection of current HVAC system. • Interviews with site management. • Access to existing BMCS control strategies and technical write-ups. | <ul style="list-style-type: none"> • Develop new control strategies. • Modification of setpoints and operation sequences. • Engineering programming works. | <ul style="list-style-type: none"> • Document new control strategies. • Workshop with stakeholders to explain new operation. • Monitoring of operation. |

Altering the setpoints and control strategies of these systems (and in some cases, installing additional sensor and control technologies) can equate to huge energy savings. Besides the emission reduction and cost savings, other benefits of HVAC optimisation include:

- Meeting indoor comfort requirements
- Stabilising building operations
- Prolonging equipment lifespan

Two HVAC optimisation opportunities were identified during the facility energy audit process as summarised below.

| ENERGY OPPORTUNITY | ENERGY SAVINGS (KWH PA) | GHG SAVINGS (TCO2-E PA) | SAVINGS (\$ PA) | COST (\$) | PAYBACK (YEARS) |
|-------------------------------------------|-------------------------|-------------------------|-----------------|-----------------|-----------------|
| Refine HVAC Scheduling | 3,622 | 2.6 | \$891 | \$3,040 | 3.4 |
| Optimise Thermostat Setpoints in ICT Room | 12,252 | 8.9 | \$3,014 | \$8,925* | 3.0 |
| Subtotal | 15,874 | 11.6 | \$3,905 | \$11,965 | 6.4 |

* Includes allowance for additional inspections to be carried out quarterly throughout the year.

⁸ https://www.ashrae.org/File%20Library/Technical%20Resources/Bookstore/ASHRAE_TC0909_Power_White_Paper_22_June_2016_REVISED.pdf

By implementing adaptive scheduling through altering the BMCS configurations, the HVAC system can respond to meet the occupancy patterns and ambient conditions. The opening hours for the ASIC site was noted as 8:00am to 5:30pm on weekdays and closed on weekends. It is recommended that a technician is employed to refine the HVAC operating schedule by adjusting the plant start-up time through the BMCS to align with the facilities opening hours (i.e. 2 hours before the site is open).

The thermostat setpoint range in office buildings impacts both occupant thermal comfort and energy consumption. With a specific focus on the ICT server rooms, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) guidelines recommend that server room temperatures can be safely set between 18-27 degrees Celsius (°C), with allowable temperatures at the air inlet of up to 32°C under certain conditions⁸. Adjusting the thermostat setpoints in comms/server rooms is a highly effective energy saving initiative that can significantly reduce the overall energy usage within an office space. The temperature setpoint within the server rooms was not noted during the facility visit, but it is assumed to be set at 22°C.

By incrementally raising the server intake temperature to 25°C, while adhering to ASHRAE guidelines which will allow up to 27°C, the cooling load will be substantially reduced which will reduce the power consumption of the cooling system. It is advised a technician is employed to adjust the temperature setpoints and an allowance made for a review through the year.

Benefits of higher temperature set points:

- Reduce the cooling load and lead to significant energy savings as the cooling system will consume less electricity, lowering energy usage and costs.
- Operating the ICT equipment within the recommended temperature range will enhance the operational efficiency of IT equipment and help prevent any overheating.
- Reducing the energy usage of the cooling system will contribute to reducing the facilities emissions, supporting sustainability and decarbonization goals.

It is important to note that Relative Humidity (RH) levels are maintained within the recommended, which is between 40- 60%. This will avoid any excessive cooling, but also prevent any of the IT equipment experiencing corrosion.

9.1.5 Awareness & Behavioural Changes

Increasing the awareness of energy management and sustainability practices to staff throughout the office can make a significant impact on reducing operational energy costs. This can be achieved by:

- Hosting seminars, workshops, or presentations to educate employees about energy saving practices such as turning off lights and equipment when not in use, adjusting thermostats responsibly, and using energy efficiency equipment.
- Assigning an energy officer to take responsibility for implementing signage and reminders throughout the office space to encourage energy-saving behaviours will ensure that measures are rolled out onsite.
- Developing an energy policy that outlines the office/company's commitment to reduction in energy & emissions and sets out specific goals for improvement. This can be a useful tool to motivate employees with implementing measures and achieving reduction targets.

9.1.6 Improving Equipment Efficiency

Plug loads, computer monitors, printers, and laptops etc, account for a significant amount of energy consumption within office tenancies. Implementing some of the following low-cost measures can help reduce this demand:

- Configure computers and office equipment (e.g. printers) to enter sleep or low-power modes when not used for a period of time.
- To prevent standby power consumption, encourage employees to unplug unused equipment. Use power strips for office equipment, which can be easily turned off at the end of the day.
- Establish a procurement policy that priorities energy efficient equipment and products towards the end of asset life, e.g. replacement 6 star rated dishwasher. It was noted that the existing 4-star rated fridge at the facility, see Figure 22.



FIGURE 22: 4-STAR ENERGY RATED DISHWASHER LOCATED IN THE KITCHEN AREA.

9.1.7 Considered but Not Recommended

The following initiative was identified, investigated, and considered through the energy audit process but are not yet recommended for implementation:

- **Solar photovoltaic (PV) system** implementation is not currently viable at the site given the limited roof space availability and overshadowing from surrounding structures (as per Figure 23). However, the deployment of new innovative solar solutions such as 'smart solar glass' may become more technically and economically viable over the next decade. At present, this technology is in its infancy stage of development and offers a low return on investment. As such, solar PV is not a viable solution for the tenancy at this time.



FIGURE 23: ROOF SPACE AVAILABILITY FOR SOLAR PV AT 100 MARKET STREET

10 FURTHER INFORMATION

10.1 Green Lease Schedules

Green Lease Schedules (GLS) were introduced by the Energy Efficiency in Government Operations (EEGO) policy as a means of establishing mutual obligations for tenants and owners to achieve efficiency targets.

Each GLS will vary according to the size and nature of the lease, with more comprehensive requirements for larger tenancies due to the emissions value associated with these facilities.

The GLS should establish a mechanism that is functional and capable of delivering positive environmental outcomes. To assist these outcomes the following five elements should be included:

- Targeted environmental performance standards
- Metering and data reporting requirements
- Sustainable management plan
- Building management committee
- Remedial action/ dispute resolution regime

Further information is available here:

<https://www.energy.gov.au/sites/default/files/tenants-guide-to-green-leases-2012.pdf>

10.2 Office Refurbishments

To achieve 5.5-star NABERS Energy ratings upon completion of an office refurbishment, it is imperative that sustainable outcomes are integrated into the design through the engagement of suitably qualified architects.

ASIC notes that it will endeavour to embed sustainable energy efficient design into its projects, however where it has no operational control of energy intense infrastructure, this must be considered in the NABERS Energy rating process.

Where practicable the following will be embedded:

- LED lighting
- Lighting controls including daylight and occupancy sensors
- Window furnishing to reduce heat loss/gain
- BMS upgrades/optimisation to improve office energy consumption
- Airconditioning lock out controls to system from operating outside of optimal range
- Install energy efficient IT equipment
- Where feasible, implement hot desk systems with a minimum ratio of 1.5:1 employee: desk, coupled with a desk booking system
- Implement best waste management systems in kitchens and print areas
- Zero waste fit out, requiring the fit out to reuse and recycle equipment within the fit out, donate where items are in good condition, and recycle all other waste materials

Further to reducing energy, ASIC will implement best practice waste management infrastructure and minimum 5-Star WELS rated water fixtures within the refurbishment.

Where ASIC is a tenant within a facility, it will work with the landlord to further improve the facility energy efficiency through upgrades of base building equipment, including chillers, boilers, and air handling units.

10.3 NABERS Energy Star Ratings

NABERS Energy ratings are a requirement under the Net Zero in Government Operations Strategy and apply to all buildings with an NLA of 1,000m² or greater. These ratings are one of the most efficient means for entities to benchmark and reduce property related emissions. The ratings create a consistent and transparent building performance standard to compare outcomes and provide a structured framework for improving energy efficiency and transition toward net zero buildings.

The National Australian Built Environment Rating Scheme (NABERS) is an accepted industry standard which will be used to compare an entities property portfolio and identify opportunities to improve energy efficiency and performance.

The NABERS Energy measures the efficiency of an office building, comparing the energy consumption of a facility against a set of benchmarks that have been developed using actual data.

Various ASIC facilities meet the new NABERS threshold for facilities over 1,000m², as highlighted by the APS Net Zero in Government Operations Strategy, ASIC will prioritise this NABERS assessment in accordance with the Strategy

To further drive savings, Ventia are able to conduct NABERS Water ratings alongside the energy rating. Similarly, to the energy rating, these identify high level water efficiency opportunities.

Cost

The cost of the NABERS assessment can be provided to ASIC for consideration.

10.4 Type-2 Energy Audits

A Type-2 Energy audit is a comprehensive assessment of a building's energy use and potential areas for improvement, conducted by a certified energy auditor and are a recommended first step to improving a facilities energy efficiency.

Type-2 Energy audits include:

- Data analysis of facility energy bills and consumption data over a three-year period.
- Investigation of building envelop, including walls, windows, doors, and insulation.
- Examination of HVAC systems, lighting, and other energy consuming equipment to assess efficiency and condition.
- Complete energy modelling to evaluate potential energy saving measure and their impact on energy consumption.
- Identification of energy efficiency measures, inclusive of the estimation of cost and ROI.

Once completed a detailed report is provided to ASIC outlining the findings, recommendations, and ROI for all energy initiatives.

Type-2 Energy audits can assist in developing strategic asset replacement programs for large plant and equipment, allowing sufficient time to investigate emerging low energy/ low emissions technologies.

Examples of recommendations can include (but not limited to):

- **HVAC system optimisation** – HVAC systems typically account for a significant portion of energy use in office buildings. The audit may recommend a full or partial upgrade to energy- efficient HVAC systems or optimisation of heating and cooling controls and operating parameters.
- **Lighting upgrade** – replace all inefficient lighting fixtures with energy efficient LEDs. Implement occupancy sensors, daylight harvesting controls, and timers to reduce unnecessary energy consumption.
- **Building envelope improvements** – improvement of the building envelope by sealing air leaks, adding insulation, upgrade windows to reduce heating and cooling loads.
- **Building Management Systems (BMS)** –optimisation of BMS controls to reduce overall building energy consumption.
- **Solar power integration** – where appropriate, solar may be recommended for integration to offset energy consumption.

10.5 Grants and Funding

Research was completed to identify funding options which would assist in the capital investment of the proposed initiatives in this Plan. The table below explores the various funding mechanisms available to Commonwealth entities to support emissions reduction initiatives in Australia. By strategically leveraging grants, subsidies, rebates, and partnerships, Government entities can drive innovation, incentivise sustainable practices, and propel meaningful progress.

| STATE | FUNDING PROGRAM | OVERVIEW | FURTHER INFORMATION |
|-----------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NATIONAL | Advancing Renewables Program | Financed by the Australian Renewable Energy Agency, this program aims to facilitate the progress of transition to renewable energy. The available funding covers advanced renewable energy projects and relevant desktop studies/analysis. | https://arena.gov.au/funding/advancing-renewables-program/ |
| VICTORIA | Energy Services Agreement | An Energy Services Agreement (ESA) entails an arrangement where an energy services company (ESCO) oversees the deployment of energy-efficient equipment for a business. In certain instances, the ESCO can pledge savings resulting from the implemented equipment. | https://www.sustainability.vic.gov.au/energy-efficiency-and-reducing-emissions/in-a-business/finance-energy-upgrades-in-your-business/energy-services-agreement-for-business |
| VICTORIA | Victorian Energy Upgrades | Victorian Energy Upgrades represents a government-led initiative focused on enhancing energy efficiency. Through this program, households and businesses are eligible for rebates or discounts on energy-saving products, fostering reductions in electricity expenses and greenhouse gas emissions. | https://www.energy.vic.gov.au/households/victorian-energy-upgrades-for-households/about-the-veu-program#:~:text=Every%20upgrade%20allows%20businesses%20under,these%20certificates%20to%20energy%20retailers. |
| QUEENSLAND | Energex & PeakSmart Air Conditioning Rewards Program | The PeakSmart program is a solution designed by Energex, to help manage peak demand on the electricity network. Cashback can be claimed when installing a PeakSmart air conditioner or converting an existing air conditioner to a PeakSmart. | https://www.energex.com.au/manage-your-energy/cashback-rewards-program/peaksmart-air-conditioning |
| SOUTH AUSTRALIA | REPS - Retailer Energy Productivity Scheme | The REPS, a scheme initiated by the South Australian Government, aims to enhance energy productivity by offering incentives to households and businesses in South Australia for energy conservation efforts. The administration of the REPS is mandated by the Electricity (General) Regulations 2012 and the Gas Regulations 2012, designating the Essential Services Commission (the Commission) as its administrator. | https://www.escosa.sa.gov.au/industry/reps/faqs/reps-faqs |
| NEW SOUTH WALES | Net Zero Manufacturing Fund | Renewable Manufacturing Fund (NSW only). Administered by the Department of Environment and Heritage NSW, this fund focuses on developing components for the renewable energy and electric vehicle sectors. Projects eligible for this fund include components for renewable energy (i.e. wind towers, solar, batteries), electrification equipment to support switching from fossil fuels to electricity, electric vehicle components and assembly as well as hydrogen electrolyzers. | https://www.energy.nsw.gov.au/business-and-industry/programs-grants-and-schemes/net-zero-manufacturing |

10.6 Lighting as a Service

To reduce the initial cost of retrofitting LED lighting in offices and commercial spaces, Lighting as a Service (LaaS) is an emerging industry in Australia. Lighting is installed by a third-party provider who also provides ongoing maintenance, with payments made in regular instalments that are typically offset by savings in electricity consumption. This results in immediate improvements in energy efficiency at the facility, with effectively zero capital expenditure. At the end of the agreement there is typically an option to purchase the lighting from the LaaS provider, or to renew the agreement with either existing or upgraded lighting. Providers of this service, as well as additional information is readily available online.

10.7 HVAC as a Service

HVAC systems account for close to 40% of energy usage in most commercial buildings and offices. As such upgrading HVAC systems to more energy efficient systems can have dramatic improvements to the sustainability of the building. However, HVAC often requires significant expenditure to maintain and upgrade.

HVAC as a Service (HVACaaS) providers lease out their HVAC equipment to customers and provide preventative maintenance and servicing as part of the agreement. As the customer only pays for the use of the equipment, there is no upfront purchase or installation cost, and customers can use more energy efficient equipment that may otherwise be too expensive to purchase outright, reducing their energy consumption while still meeting operational needs.

More information on this service model, along with service providers can be obtained online.

10.8 Hot desk and office optimisation

A hot desk is a flexible workspace concept where desks or workstations are not assigned to specific individuals. In a hot desking environment employees can choose any available desk, typically supported through an online booking system.

Hot desking is fast becoming the new normal in office-based environments with employers support a high level of mobility or remote work arrangements. This allows entities to optimise the use of their office space by accommodating a larger number of employees with fewer desks.

A hot desk should include essential items such as power outlets, internet connectivity, docking station, monitor, keyboard, mouse, and disinfection wipes. To maintain connectivity of teams, zones or ecosystems can be allocated to specific teams within the organisation. Adequate lockers should also be made available to all employees for the storage of personal items.

The benefit to hot desking includes increased flexibility for employees, reduced real estate costs for employers, and opportunities for greater collaboration and interaction among team members.

10.9 Education and training

Designing a net zero training package for employees involves creating a comprehensive program that educates and empowers participants to understand, support, and implement sustainable practices within their respective roles. Below is an outline of what such a training package could include:

- Introduction to net zero concepts
- Government's role in achieving net zero
- Overview of the Strategy and findings from the two reporting periods
- Energy conservation measures undertaken by ASIC and practical tips for reducing energy waste and optimising office environments
- Travel optimisation and practical tips on choosing green alternatives
- Waste reduction and recycling and strategies to reduce waste generation, promoting recycling within the office environment
- Strategies that foster a culture of sustainability and environmental stewardship, including events that ASIC may participate such as Earth Hour or Clean Up Australia Day as an example
- Establish forums, workshops, and online platforms for sharing best practices, successes and lessons learned

10.10 Whole of Australian Government Electricity Agreement

In accordance with the Federal Government commitment to Net Zero by 2030 the Department of Finance, Procurement division have agreed to enter a competitive tender process for the Whole of Australian Government Electricity Agreement. This Agreement is an expansion of the current contract for the Department of Defence, mandating that all on-corporate Commonwealth entities are signed to the Agreement. Corporate Commonwealth entities, Government business enterprise and the High Court may choose to elect to participate in the Agreement.

This Agreement will source electricity from renewable energy sources, including, but not exclusively, solar, wind, hydropower. This approach provides entities with contract consistency, it reduces entity procurement and contract management requirements, achieves best value for money, and is the single most significant action to assist entities to reduce their greenhouse gas emissions.

The approach the Department of Finance is proposing is to:

- Go to market in each state.
- Each state procurement (with the exception of TAS, NT, and WA) will have both a small market and large market contract.
- Large market contracts will initially purchase and surrender large-scale generation certificates (LGCs), this ensures energy procured is from renewable sources.

Provides entities assurance that all power purchased and consumed is from renewable sources or offset using LGCs.

The proposed timeline for each states electricity contracts to be in place are as follows:

- Northern Territory 1 September 2024
- Western Australia 1 December 2024
- Tasmania 1 January 2025
- NSW, VIC, ACT 1 July 2025
- South Australia 1 October 2026
- Queensland 1 January 2029

Note this Agreement does not extend to properties where the Federal Government is not responsible for electricity (i.e. leased facilities).

Cost

There is the cost of energy consumption and other utility provider pass through costs associated with the Whole of Australian Government Electricity Arrangement, however it is expected that due to significant buying power the Department of Finance will deliver highly competitive rates.

Emissions reduction by 2030

By signing up to the Whole of Australian Government Electricity Agreement, ASIC is assured that all electricity supplied will be via renewable sources such as wind, solar and hydro power, offsetting all electricity related emissions.

10.11 Air Travel Rationalisation

Domestic air travel forms approximately one third of ASIC's total emissions profile, and a significant opportunity.

ASIC can reduce these emissions through a rationalisation of needs to travel and review of the travel policy. To create a holistic approach to sustainable travel ASIC should consider the following:

- **Limit travel** – support essential trips that are days long.
- **Travel less** – provide guidance on how to replace short trips with virtual meetings.
- **Travel better** – include 'stay or go' guidelines/ decision tree for sustainable options in the decision-making process.
- **Use sustainable suppliers** – integrate sustainability messaging in your employee communication strategy.

10.12 Australian Carbon Credit Unit

The Australian Carbon Credit Unit (ACCU) scheme was established in 2011 as an effort to incentivise projects that remove carbon from the atmosphere. The current ACCU spot price reflects the ongoing efforts of Australian organisations to mitigate carbon emissions and transition towards a more sustainable future. As of 21 March 2024, the ACCU spot price stands at \$35.85 per tonne of carbon sequestered, influenced by factors such as market demand, government policy, and global environmental trends.

Historically, the ACCU spot price has seen steady overall growth with the largest market fluctuation occurring in 2022 after the Australian Clean Energy Regulator changed requirements for holders of ERF contracts. This change introduced many ACCUs into the market, increasing supply and reducing the spot price. Despite this change as more businesses and industries have begun to prioritise sustainability, demand for ACCUs continues to rise. This upward trend underscores the growing recognition of the importance of carbon offsetting in combating climate change.

Looking ahead, as Australian organisations intensify their efforts to achieve net zero emissions by 2030 the ACCU spot price is likely to continue its upward momentum. As of April 2023, the Safeguard Mechanism Amendment Act is requiring Australia's largest emitting facilities to reduce their emissions. This act is just one of many that the Australian government has set in place to achieve their ambitious targets for carbon neutrality, incentivising carbon offset projects and driving up the demand for ACCUs.

Q1 of 2023 saw a new record of ACCU trading, up 61% compared to the same period of the year prior. On top of government policy, an increased awareness of climate-related risks and the growing influence of environmental, social, and governance (ESG) factors in