Climate Change Report

2024

Incitec Pivot Limited
INNOVATION ON THE GROUND

DYNO NOBEL

Incitec Pivot Fertilisers

Incitec Pivot Limited (IPL) has two industry-leading businesses, Dyno Nobel and Incitec Pivot Fertilisers (IPF), supplying the resources and agricultural sectors. Serving customers across six continents, including Australia, North America, Europe, Asia, South America and Africa, we manufacture ammonium nitrate-based explosives and initiating systems, nitrogen and phosphorus fertilisers, and nitrogen-related industrial and specialty chemicals with 60 manufacturing facilities and joint ventures.

Forward-Looking Statements

This Report contains forward looking statements, including, but not limited to: statements regarding trends in commodity prices and supply and demand for commodities; assumed long-term scenarios; potential global responses to climate change; regulatory and policy developments; the development of certain technologies; the potential effect of possible future events on IPL and the plans, strategies and objectives of the organisation.

Forward looking statements may be identified by the use of terminology, including, but not limited to, 'intend', 'aim', 'project', 'see', 'anticipate', 'expect', 'estimate', 'plan', 'objective', 'believe', 'may', 'should', 'will', 'would', 'continue', or similar words. These statements refer to future results, asset conditions or financial conditions, or provide other forward looking information. The forward looking statements in this Report are based on the information available as at the date of this Report and/or the date of the Group's planning processes or scenario analysis processes.

There are inherent limitations with the use of forward looking statements and in particular where they relate to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenarios do not constitute definitive outcomes for IPL. Scenario analysis relies on a range of assumptions that may or may not be, or prove to be, correct and may or may not eventuate, and scenarios may be impacted by additional factors to the assumptions disclosed. Additionally, forward looking statements are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this Report. IPL cautions against reliance on any forward looking statements or guidance.

To the extent permissible by law, IPL disclaims all liability to any third party who uses or relies on any forward looking statements or guidance in this report. For example, future decarbonisation opportunities identified and described in this Report will be based, in part, upon the availability and reliability of alternative and developing technologies, and incentives and support from government bodies and the industry, which may differ from assumptions, estimates and forecasts. These variations may affect the timing or the feasibility of the development of a particular technology or project, and their subsequent adoption and use by IPL or the broader industry more generally.

Except as required by applicable regulations or by law, IPL does not undertake any obligation to publicly update or review any forward looking statements, whether as a result of new information or future events. Forward looking statements are current only as at the earlier of the date of this Report or the date the planning process assumptions or scenario analysis assumptions were adopted, as relevant and applicable. Past performance cannot be relied on as a guide to future performance.

The views expressed in this Report contain information that has been derived from publicly available sources that have not been independently verified. No representation or warranty is made as to the accuracy, completeness or reliability of the information. This Report should not be relied upon as a recommendation or forecast by IPL.

INCITEC PIVOT LIMITED
ABN 42 004 080 264

Level 8, 28 Freshwater Place
Southbank, Victoria 3006
Australia

T +61 3 8695 4400
F +61 3 8695 4419

www.incitecpivot.com.au

We acknowledge the Traditional Owners of the lands upon which we operate and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.

About this report

This report provides an overview of IPL's governance around climate-related risks and opportunities; outlines how we identify and assess potential climate-related impacts on our businesses; describes our approach to climate-related risks/opportunities management and integration; and provides additional information regarding climate-related metrics and targets. The report covers IPL's performance for the 2024 IPL financial year, 1 October 2023 to 30 September 2024, for operations owned and managed by IPL. This period is referred to throughout the report as '2024'.

The following reporting frameworks were considered in developing this report: the Australian Accounting Standards Board (AASB) Exposure Draft ED S1 and S2 Australian Sustainability Reporting Standards (ASRS) – Disclosure of Climate-related Financial Information, as well as the International Sustainability Standards Board (ISSB) International Financial Reporting Standards (IFRS) Sustainability Disclosure Standards. These standards supersede the Financial Stability Board's TCFD Guidelines, which IPL has reported against since 2018.

This document is interactive.

Click any heading in the navigation (top of the left-hand page) to be taken to that page.

CONTENTS

About us

We have two customer facing businesses: Dyno Nobel, based in the Americas, Europe, Middle East, Africa (EMEA) and Asia Pacific; and the largest fertiliser business on the east coast of Australia, Incitec Pivot Fertilisers.

Through these two businesses, we make people's lives better by unlocking the world's natural resources through innovation on the ground. In addition to the increased yields of sugar cane, cotton, grains, beef, lamb, milk and vegetables grown using our fertiliser products, our explosives products and services unlock iron ore, copper and quarry and construction materials used to build electric vehicles, wind turbines and critical infrastructure.

Our advanced and premium technology, manufacturing excellence and world class services are focused on the diverse needs and aspirations of our customers, ensuring IPL's continuing key role in developing the efficiency and sustainability of the world's resource and agricultural sectors.

Dyno Nobel

Dyno Nobel is IPL's global explosives business. It is the largest industrial explosives distributor (by earnings) in North America and the second-largest industrial explosives provider in Australia.

Americas: Dyno Nobel Americas (DNA) provides ammonium nitrate, initiating systems and technical services to the Quarry and Construction sector primarily in the Southern US, Northeast US and Canada; the Base and Precious Metals sector in the US mid-West, US West and Canada; and the Coal sector in the Powder River Basin, Illinois Basin and Appalachia.

Asia Pacific: Dyno Nobel Asia Pacific (DNAP) provides ammonium nitrate based industrial explosives, initiating systems and services to the Metallurgical (MET) Coal and Base and Precious Metals sectors in Australia, and internationally to a number of countries including Indonesia, Papua New Guinea and Turkey through its subsidiaries and joint ventures.

Europe: With the purchase of Titanobel in 2022, Dyno Nobel entered the French quarry and construction market and gained access to New Caledonian and West African markets with future facing mineral opportunities. When combined with the existing Nitromak business in Turkey, this provides a compelling foundation to grow the business across Europe, the Middle East and Africa.

Global Manufacturing: In North America, Dyno Nobel manufactures ammonium nitrate (AN) at its Cheyenne, Wyoming and Louisiana, Missouri plants. The Cheyenne, Wyoming plant is adjacent to the Powder River Basin, strategically placed for both the Base and Precious Metals sector and North America's most competitive thermal coal mining region. The Louisiana, Missouri plant has a competitive logistic footprint from which to support the Quarry and Construction sector throughout south-eastern US, and mining in both the Illinois Basin and Appalachia. Initiating Systems are manufactured at Dyno Nobel's facilities in Connecticut, Kentucky, Illinois, Missouri, Chile and Mexico, and are also sourced from DetNet South Africa (Pty) Ltd (DetNet), an IPL electronics joint venture.

In Australia, Dyno Nobel manufactures AN at its Moranbah plant in the Bowen Basin, the world's premier MET coal region. It also has a 50% interest in the fully integrated, state of the art AN facility near Moura in Central Queensland. Initiating Systems are manufactured at Dyno Nobel's Helidon facility in Queensland and are also sourced from IPL facilities in the Americas and its joint ventures.

The business continued to operate its state of the art ammonia plant in Waggaman, Louisiana, for part of this reporting period, until the completion of its sale in December 2023. In addition, the business wholesales agricultural products produced at its St Helens facility and its Cheyenne facility.

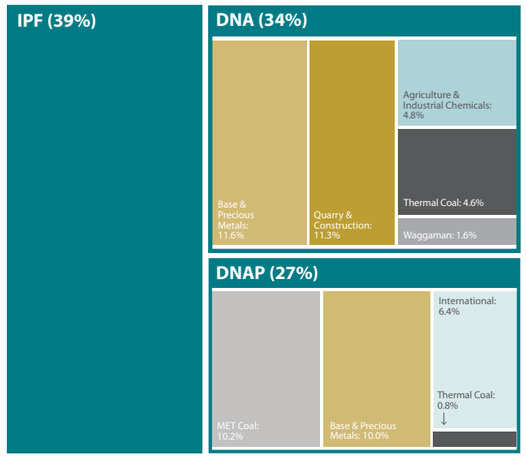
Incitec Pivot Fertilisers

Incitec Pivot Fertilisers (IPF) is IPL's fertilisers business. With an extensive owned and operated distribution network across Eastern Australia, it is one of the largest domestic manufacturers and suppliers of fertilisers by volume produced from its strategically positioned manufacturing facilities, including the ammonium phosphate fertiliser plant at Phosphate Hill, Queensland, complemented by the world scale sulphuric acid plant at Mt Isa, Queensland; the Gibson Island, Queensland facility, where conversion to green ammonia is being investigated; and the Geelong, Victoria Single Super Phosphate (SSP) manufacturing plant.

IPF's distribution network includes more than 20 Primary Distribution Centres and stretches from Cairns in North Queensland down the eastern and southern Australian coasts to Port Lincoln in South Australia. These include three EASY Liquids sites based in Boundary Bend, Victoria, and Moree and Whitton in New South Wales, providing a wide range of liquid fertilisers to key agricultural markets close to these distribution points.

Internationally, IPF sells to major offshore agricultural markets in Asia Pacific, the Indian subcontinent, Brazil and the US. IPF also procures fertilisers from overseas manufacturers to meet domestic seasonal peaks for its customers' diversified crops.

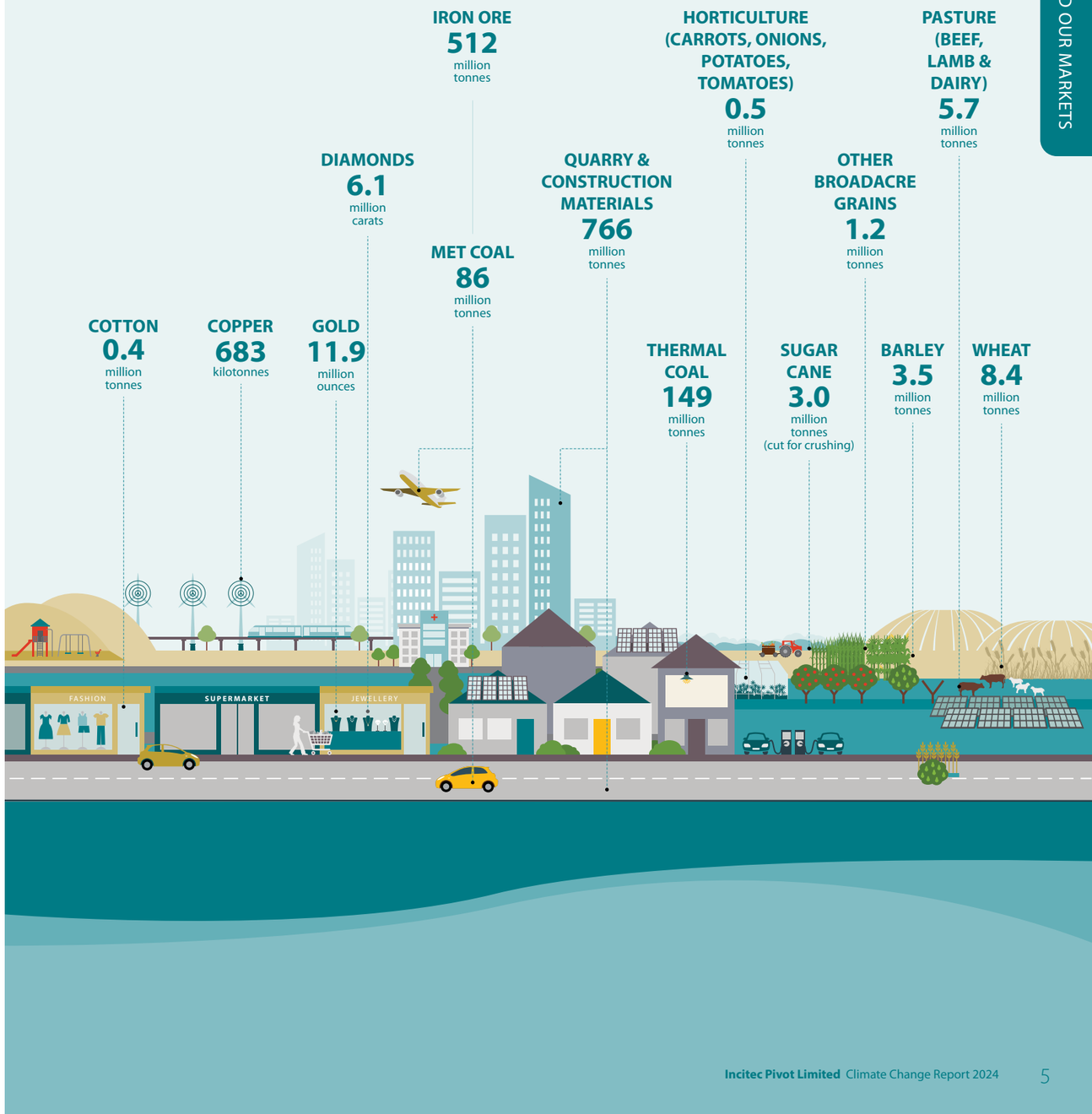
Graph of our revenues by business and sector



Our business and our markets

The natural resources our products unlock are central to modern life and essential nutrition.

We are committed to unlocking the potential in the Earth to help people grow, by sustainably delivering these products to our mining, quarry and construction, and farming customers into the future. During 2024, our explosives and fertiliser products were used by our customers to unlock approximately:



Chief Executive Officer & Managing Director Report

I am pleased to present this, our fourth standalone Taskforce on Climate-related Financial Disclosures (TCFD) aligned Climate Change Report, outlining the significant progress made in prioritising and addressing the challenge of climate change over the past 12 months.

With the increasing interest in our integrated Net Zero Strategy, and the passing of mandatory TCFD aligned climate-related financial disclosures legislation in September this year, we remain committed to transparently communicating our challenges, strategy and progress. Operating in a hard-to-abate manufacturing sector means that we face unique challenges on our decarbonisation journey. This demands creativity and commitment, and we continue to put into practice our mantra that new challenges require new solutions.

During 2024 we completed the installation of the Moranbah N_2O Tertiary Abatement Project, the first of several major capital projects that will significantly reduce our GHG emissions against our 2020 baseline. While this facility was built in 2012 with secondary abatement in place, marking us as an early mover in GHG abatement, in 2020 we reset our baseline to achieve even greater reductions. Our $20m investment in adapting tertiary abatement technologies to suit the nitric acid plant at this site has increased the abatement of N_2O from around 60% to more than 95%, an extra 200,000 tonnes of CO_2e each year.

Having successfully completed this project, we will deliver a similar project at our Louisiana, Missouri (LOMO) facility, and have committed to completing this installation in 2025. These are long lead time projects which require plant shutdowns and significant investment to install but the benefits are great – together these two projects will reduce Dyno Nobel's global GHG emissions by 41% against our 2020 baseline.

We also continued work during the year to bring forward new technologies to reduce GHG emissions from our manufacture of ammonia, the other major component of our explosives and fertiliser products. The Gladstone Green Ammonia Project made significant progress, with Marubeni Corporation welcomed to the consortium in March 2024 and pre-FEED works for a 400,000 tonne per annum ammonia plant being currently finalised. Our scenarios estimate that this technology will be commercially competitive with natural gas based technologies for ammonia manufacturing by 2040. While we know that the transition will take time, and the reality is that not all green hydrogen/ammonia projects will be commercially successful in the short term, we continue to pursue these solutions and advocate for supportive policies to bring them forward. IPL has completed the Gibson Island Green Ammonia Project FEED stage and awaits final investment decision. Responsibility for the completion of the Waggaman, Louisiana (WALA) CCS project was passed to the purchaser on completion of the sale of the asset during the year.

I am pleased to report that significant progress has also been made by our business units (BUs) on our target to have systems in place by 2025 to track and manage Scope 3 as effectively as we track and manage other supplier and customer information. We have engaged with our major global suppliers using scope 3 GHG questionnaires and are assisting some of them with resources to calculate their GHG emissions for the first time; we have invested in a global platform that will assist us in providing high quality scope 3 information to our customers; and we have mapped the BU level procurement and value chain processes which require the integration of scope 3 information to allow us to integrate scope 3 into decision making.

In addition, we are focused on providing our customers with low carbon solutions. This year we completed building our very first electric Mobile Processing Unit (eMPU), which is a heavy vehicle that delivers explosives to boreholes on our customers' mine sites, and is complete with its own solar charging station. Our DeltaE technology reduces our customers' energy use, GHG, NOx and dust while improving their productivity, and we continued testing and development of the use of biodiesel and renewable diesel in our explosives products across the Americas and Asia Pacific. Combined with our high quality upstream GHG scope 3 data, and our global technology strategy, our innovative approach gives us a unique advantage in assisting our customers with value added solutions.

IPF's Enhanced Efficiency Fertilisers (EEFs) range, which includes nitrification inhibitors, has been shown to reduce our farming customers' GHG from fertiliser use, in one instance, by up to 76%[1]. EEFs work by keeping nitrogen in stable forms in the soil for longer, optimising their uptake by plants and reducing the risk of nutrient run-off and losses to the air as N_2O. We continued to promote these to our agricultural customers during 2024, and registered an Expression of Interest with the Federal Government's Department of Climate Change, Energy, the Environment and Water to collaborate on the development of an Australian Carbon Credit Unit (ACCU) method to recognise the GHG reductions associated with them.

Most importantly, we recognise that to ensure long-term sustainable returns, and ongoing success, the management of the risks and opportunities associated with climate change must be fully integrated into our business strategies and risk management processes. Our governance of climate-related financial risks and opportunities was reviewed against the new ASRS requirements in 2024. This has further informed our management strategies and showed that we are managing those risks and opportunities identified in the short to medium term.

In addition to the decarbonisation projects, value chain measures and product innovations I have already described, I am excited to have the privilege of leading Dyno Nobel in its journey to become a truly global player and partner for our mining customers. As the energy transition progresses, this includes strategic growth into expanding copper and future facing minerals markets to ensure the availability of these essential commodities for new technologies and sustainable returns for our shareholders.

I welcome your interest in our 2024 Climate Change Report and invite your feedback as we embark on the challenges and opportunities ahead with transparency and in collaboration with our customers and stakeholders.

Mauro Neves
IPL Chief Executive Officer and Managing Director

1 Meng, Y., et al (2021) *Geoderma*, Nitrification inhibitors reduce nitrogen losses and improve soil health in a subtropical pastureland (388) at **https://www.sciencedirect.com/science/article/abs/pii/S0016706121000215**.

Highlights on our journey

DYNO NOBEL

2010

IPL Leadership conducts an initial assessment of the risks and opportunities associated with climate change.

IPL joins the Australian Industry Greenhouse Network.

2014

Setting of our first global greenhouse gas reduction target linked to executive remuneration: a 2% global reduction in tCO_2e/t ammonia produced by 2017.

2015

Creation of IPL specific 2° and 4° future climate-related scenarios and completion of our second climate specific risk and opportunity assessment with TCFD reporting adopted in our 2018 Sustainability Report.

2016

Completion of the $2.7m Moranbah Solar Hydrogen Feasibility Study, supported by $0.9m from the Australian Renewable Energy Agency (ARENA).

Setting of our first absolute GHG reduction target of 5% by 2026 against our 2020 baseline.

IPL becomes a founding member of the Australian Climate Leaders Coalition (CLC), a group of cross-sectoral Australian corporate CEOs supporting the Paris Agreement commitments and setting public decarbonisation targets.

2018

Pathway established to >42% reduction in Scope 1 and 2 GHG by 2030 for current portfolio.

Development of Transition Plans to 2030 by business, supported by specific projects.

Establishment of Sustainability Capex to fund 2030 Transition Plans.

Design of Scope 3 management strategies for integration at business unit level.

Investigation of Science Based Targets.

2019

Three-year update of climate scenarios, and comprehensive risk and opportunity assessment completed.

$24m in Sustainability Capital invested in decarbonisation projects.

$20m Moranbah Tertiary N_2O Abatement Project completed, reducing Scope 1 GHG by 200,000 tCO_2e per year.

Progression of Louisiana, Missouri (LOMO) Tertiary N_2O Abatement Project, with installation confirmed for 2025.

Continued work to move GI Green Ammonia Project toward final investment decision.

Sale of the Waggaman, Louisiana ammonia plant to CF Industries, with handover of CCS[2] Project at FEED stage.

Scope 3 GHG supplier questionnaires developed, including GHG calculator.

Implementation of new global GHG data management platform.

Internal quantification of risks and opportunities completed.

2020

INCITEC PIVOT FERTILISERS

2014

Setting of our first GHG intensity reduction target: a 1.5% reduction in GHG emissions per tonne of Australian manufactured product by 2015.

2015

Completion of the Waggaman, Louisiana Ammonia Plant, which uses the industry's leading technology and is among the most efficient plants of its kind in the world. This increases our production, and therefore our global operational GHG emissions, but reduces our global emissions per tonne of ammonia.

2016

The IPL Climate Change Policy is adopted by the Board. The IPL Board Charter and the Audit and Risk Management Committee Charter are updated to formally enshrine Directors' roles in relation to the strategic management and oversight of climate change related issues.

IPL joins the Carbon Market Institute.

2018

5% absolute GHG reduction target brought forward to 2025.

25% medium-term target set for 2030.

Long-term Net Zero Ambition set for 2050.

Formation of the IPL Decarbonisation and Energy Transition Steering Committee, chaired by our CEO, to develop our Net Zero Pathway and oversee the incorporation of climate-related risks and opportunities into Company strategy.

Updating of IPL specific 1.5°C, 2°C, 3°+C and Delayed Action (Inevitable Policy Response) scenarios.

2019

Release of the IPL Energy Policy.

$50m in Sustainability Capital invested in decarbonisation projects.

$5.6m Capex invested towards 2024 installation of Moranbah Tertiary N_2O Abatement.

The GI Green Ammonia Project passed through Front End Engineering Design (FEED) stage[1].

Completion of FEED stage for the Waggaman, Louisiana CCS[2] Project.

Approval of Tertiary N_2O Abatement Project at Louisiana, Missouri (LOMO) with installation targeted for 2025.

Scope 3 GHG sources fully mapped by business throughout our value chains, using cradle-to-gate scope 3 emission factors.

High level Just Transition Risk Assessment completed for employees across our major manufacturing facilities.

2020

GHG REDUCTION PATHWAY ❯

5% by 2025

Pathway to >42% by 2030

Net Zero Ambition by 2050

NEXT STEPS ❯

Progress our decarbonisation projects, including:

19% absolute reduction – Install Louisiana, Missouri N_2O Tertiary Abatement Project in 2025.

Progress Gladstone Green Ammonia Project.

Continue to prepare for ASRS disclosures and audits beginning in IPL FY26.

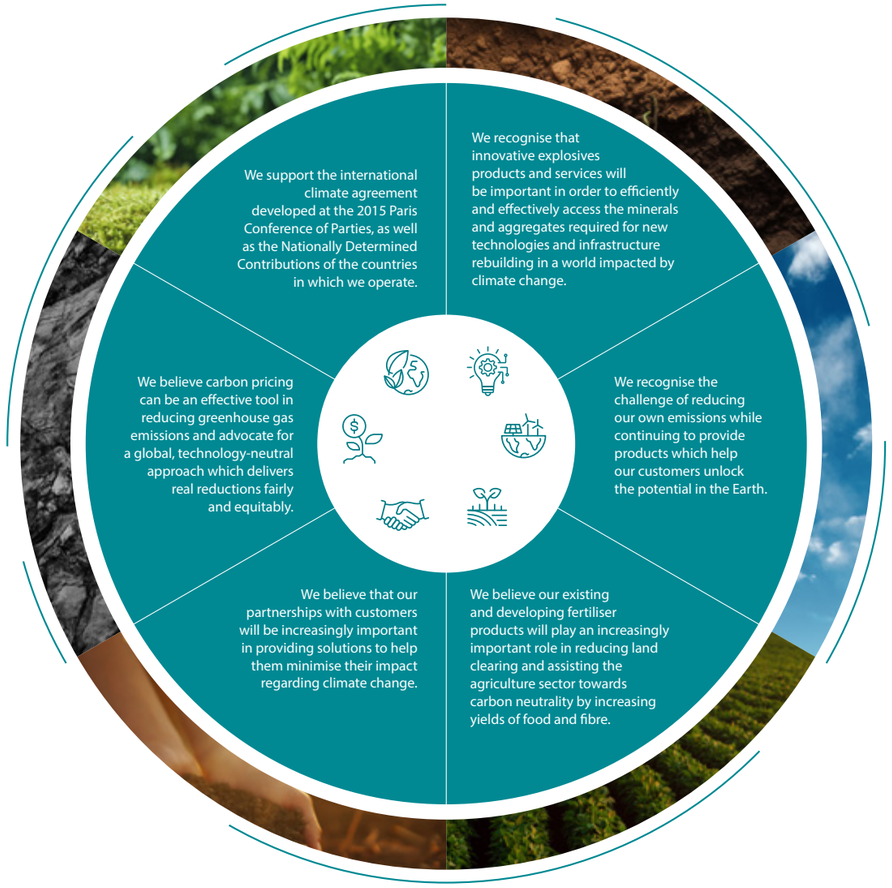
Continued investigation of SBTs[3] using draft Chemicals Sector Methodology released in 2024, with final methodology expected in 2025.

Continue to engage with individual suppliers on their decarbonisation plans to 2030 and, where required, assist them in calculating their GHG.

Continue to promote Enhanced Efficiency Fertilisers and incentives for farming customers to adopt these.

1. A final investment decision (FID) is yet to be made by our partner, FFI.
2. Carbon Capture and Storage – see page 47.
3. Science Based Targets.

Our position on climate change



Our approach

Advocating for global cooperation on climate change for an equitable global transition to a sustainable future.

- Our CEO & MD is a member of the Australian Climate Leaders Coalition.
- IPL is a member of the Australian Industry Greenhouse Network (AIGN) and the Carbon Market Institute (CMI).

Reducing our contribution to climate change through manufacturing excellence, energy efficiencies and abatement opportunities.

- 5% absolute reduction by 2025.
- 25% absolute reduction by 2030, with pathway to more than 42% for our current portfolio.
- Net Zero by 2050 ambition.

Monitoring and partnering in the development of new technologies which bring climate change solutions.

- 2020 completion of the $2.7m Moranbah Solar Hydrogen Feasibility Study, supported by $0.9m from ARENA.
- Completing a FEED study in partnership with FFI to investigate green ammonia at Gibson Island, supported by $13.7m from ARENA.
- Progressing the Gladstone Green Ammonia Project with the aim of producing green ammonia using green H^2 from the CQ-H^2 Project.
- Collaborating on a methodology to quantify GHG reductions of EEFs.

Working with our customers to develop leading technology solutions which reduce their greenhouse gas emissions.

- Our Enhanced Efficiency Fertiliser (EEF) range.
- Our DeltaE explosives technology, with a customer partnership to quantify the GHG reductions completed in 2022 and independent Limited Assurance completed in 2023.
- Design, building and delivery of our first eMPU and solar charging station for mining customers.

Strategically managing the risks and opportunities associated with climate change to deliver sustainable value.

- 2018 – 2°C and 4°C risk assessment.
- 2021 – Refresh of 2018 scenarios and risk assessment with 1.5°C and Inevitable Policy Response scenarios added.
- 2024 – 1.5°C, 1.8°C, 2.7°C and 4+°C scenario updates and comprehensive risk and opportunity assessment.

Overview of our Climate Change Strategy

We recognise the challenge of reducing our own emissions while continuing to provide products which help our customers unlock the potential in the Earth.

We believe that innovative fertiliser and explosives products and services will play an increasingly important role in reducing GHG while increasing yields of food and fibre, and efficiently and effectively accessing the minerals and aggregates required for new technologies and infrastructure rebuilding in a world impacted by climate change.

Our Climate Change Policy describes how the management of the risks, opportunities and impacts associated with climate change is integrated into our six strategic drivers, on which the success of the Company is built. Together with our policy commitments, these strategic driver components form the four pillars of our Climate Change Strategy.

Our climate strategy pillars

Ensuring strong governance

Reducing operational emissions

Delivering products and strategies to reduce scope 3 emissions

Managing strategic business risks and opportunities

IPL's six strategic drivers

Talented and Engaged People: The right people in the right roles, within a culture of innovation, with climate change management roles, responsibilities and accountabilities clearly defined.

Manufacturing Excellence: Reduce emissions, increase efficiencies and explore new technology.

Leading Technology Solutions: Develop and deliver products and services which reduce customer GHG.

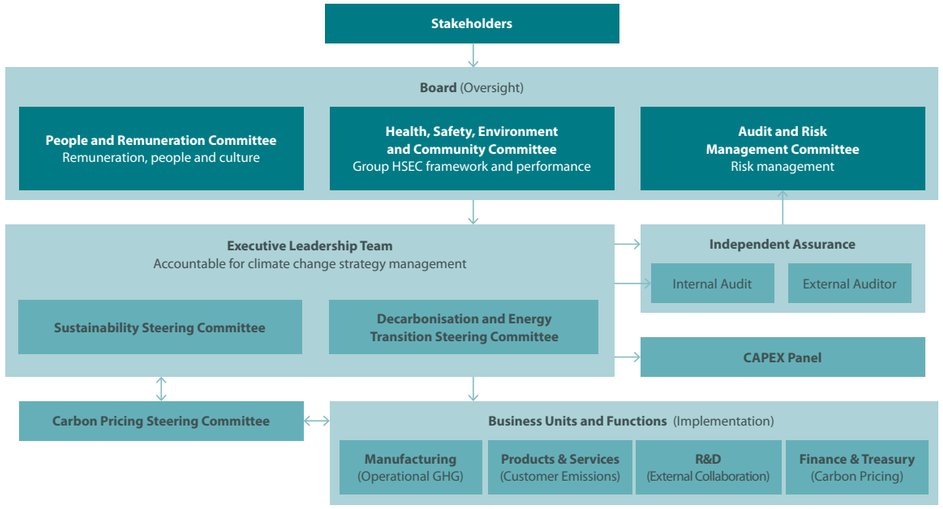
Customer Focus: Partner strategically for customer solutions and sustainable product use.

Profitable Growth: Manage climate-related financial risks and opportunities strategically.

Zero Harm: Build resilience to physical climate change risks and advocate for a just transition.

1. Ensuring Strong Governance

Our climate change governance



Climate change is a material and strategic issue for our businesses and is part of ongoing discussion and analysis at the most senior levels of management and the Board. Climate change considerations are included in strategy discussions, investment decisions and risk management oversight, and monitoring is assessed by the Board. We assess our performance against our climate change commitments, which are also reflected in the remuneration outcomes.

We recognise that the demand for disclosures on companies' governance and management of sustainability and climate-related issues is increasing. The creation of the International Sustainability Standards Board (ISSB) by the International Financial Reporting Standards (IFRS) Foundation in 2021, the release of its IFRS S1 and S2 standards in 2023, and the adoption of S2 by the Australian Accounting Standards Board for mandatory climate disclosures as of 2025 all indicate growing awareness of the financial risks associated with climate change, and a step-change in expectations regarding public reporting on the identification and management of climate change-related risks and opportunities.

IPL was an early adopter of the risk assessment and reporting guidelines of the Financial Stability Board's Taskforce on Climate-related Financial Disclosures (TCFD) in 2018, also commencing the use of future climate-related scenarios in our risk and opportunity assessments in that year. Our TCFD aligned disclosures were included in our annual Sustainability Reports from 2018 to 2020, with a stand-alone TCFD-aligned Climate Change Report released annually since 2021.

We continue to monitor, and to respond to, increasing expectations and regulations on climate reporting and investor demands for information. During 2024 we reviewed our reporting against the new ISSB standards and upcoming ASRS mandatory disclosures. This section covers our governance of climate change-related issues and our plans to further develop our understanding, management and oversight of these issues. While this Report does not meet every individual requirement of the IFRS S2 and the ASRS standards, it includes many of these, as well as disclosures on work done this year, and plans for next year, to ensure our readiness to fully comply with these once they apply.

1.1 Role of Board and Executive Committee

The Board acknowledges the risks and opportunities presented by climate change and is committed to addressing these issues through strategic oversight and comprehensive governance. The IPL Board oversees the Company's climate change strategy, performance, and governance responsibilities. The IPL Climate Change Policy was adopted by the Board in 2019, and the IPL Board Charter along with the Audit and Risk Management Committee Charter formalise Directors' roles in managing and overseeing climate change-related issues.

Many climate-related issues, including those relating to specific risks and opportunities, are integrated into the Board's review and guidance of business strategy, major plans of action, major capital expenditures and acquisition and divestiture decisions. In 2024, as in previous years, the Board's annual review of our Business Unit (BU), Product Technology and Sustainability strategies included their review of each BU and function's strategic response to manage the following risks and opportunities related to climate change:

- The transition away from thermal coal mining customers in the US to metals markets and quarry and construction.
- Increasing demand for new world minerals and copper (which are required for renewables technologies). In addition to its annual BU strategy review, the Board oversaw the acquisition of Titanobel in 2022, allowing Dyno Nobel to enter the French quarry and construction market and gain access to New Caledonian and West African markets with future facing mineral opportunities – a strategic decision made to manage this risk at a global level.

- The development and marketing strategies for new and existing products which lower our customers GHG, including our DeltaE explosives technology; the incorporation of biodiesel and renewable diesel into our explosive emulsions; the building of our first electric MPU complete with its own solar charging station; and our strategies to increase sales of our Enhanced Efficiency Fertilisers (EEFs).
- The allocation of 'Sustainability Capital' within the Capital Allocation Frameworks for our explosives and fertilisers businesses, in order to progress a range of major projects required to decarbonise our operations.
- Carbon pricing risks and our decarbonisation strategy to manage these. In addition to the annual strategy review, the Board approval of funding for our Moranbah and Louisiana, Missouri (LOMO) Tertiary N2O Abatement Projects during 2023 and 2024.
- Opportunities relating to the development of green hydrogen and green ammonia. IPL has a core capability in the manufacturing and handling of ammonia, and is well placed to play a role in the development of green ammonia. In addition to the annual strategy review, the Board has separately approved funding for strategic projects related to green hydrogen and ammonia, including our Gibson Island Green Ammonia partnership with FFI and our partnership with Keppel on the Gladstone Green Ammonia Project.
- BU based Scope 3 strategies.

While the management of these risks and opportunities is implicitly built into the Board's review and guidance of business strategy, major action plans, risk management policies, capital expenditures, and acquisition and divestiture decisions, the 2024 review of our governance and internal reporting processes against ASRS identified that this could be documented more explicitly. This will inform work in 2025 to more formally document the Board's oversight of climate-related risks and their management, and how climate considerations are built into decision making.

A description of reporting to the Board on climate-specific risks and opportunities is included below under '1.1.2 Board and Executive Committee climate risk management.'

1.1.1 Training and skill enhancement for Board and Executive Leadership Team

The Board has taken a number of measures to ensure that its decisions are informed by climate change science and by expert advisors. This includes individual Directors attending climate change-related briefing sessions led by experts, including sessions on the changes to climate reporting requirements; undertaking climate change-related training programs; partaking in climate change-related delegations and roundtables, and undertaking self-education by reading climate change-related material and attending webinars.

During 2024, the Executive Leadership Team completed an education session presented by the specialist third party who created our 2024 bespoke 1.5°C, 1.8°C, 2.7°C and 4+°C climate scenarios and assisted us with our Company-wide risk and opportunity assessment. The sessions included understanding climate scenarios and updates on the most recent climate science which was used to inform the scenarios.

During 2025/26, we plan to consider the development of an enhanced training program to further bolster the Board and Executive Leadership Team's climate risk management skills.

1.1.2 Board and Executive Leadership Team climate risk management

As described at 1.1, reporting on the management of many strategic climate-related risks and opportunities is integrated into the Board's review and guidance of business strategy, including its annual review of BU and function strategies. **The Audit and Risk Management Committee (ARMC)** of the Board oversees risk management more broadly, including climate-related risks, with the Board retaining overall accountability for IPL's risk profile. The ARMC reviews IPL's climate-related risk scenarios and risk and opportunity assessment, and its charter requires these to be updated and reviewed every three years. The results of our 2024 climate-related scenario update and risk assessment will be presented to the ARMC in early 2025, including the full suite of material and non-material climate risks identified, along with an education session as described in the previous section (1.1.1).

The ARMC also received reporting twice a year during 2023 and 2024 on a subset of current and short-term climate-related risks, including an update on the effectiveness of management strategies and controls for those risks. The ARMC provides guidance and feedback regarding management strategies.

In addition, the annual Risk Review process with the Executive Leadership Team informs the ARMC on the Group's strategic risks and mitigation plans. As noted in section 1.1, while this implicitly includes a number of climate-related risks, we began work in 2024 to make reporting to the ARMC on climate-related risks more explicit and detailed. This work included cross-referencing risks and opportunities identified in the 2024 updated climate risk assessment with existing risks in our risk registers to identify where existing risks may have climate change as an additional cause. This will allow us to create a more complete, climate-specific risk register for regular reporting.

The CEO & MD and his Executive Leadership Team develop IPL's business strategy, including planning, investment decisions, and risk management processes, including in response to specific climate-related risks. The CEO & MD is responsible for delivering the Board-approved climate strategy. The Chief Financial Officer (CFO) manages financial aspects related to climate change, including the Capital Allocation Framework and internal carbon pricing model, while the Chief Development and Sustainability Officer (CDSO) oversees the IPL Net Zero Pathway and the integration of climate-related issues into Company strategy.

1.1.3 Scenario analysis and strategy development

The results of IPL's comprehensive climate scenario risk assessments are integrated into business strategy development in several ways. The identified risks and opportunities have been classified internally as 'strategic' or 'operational' risks and opportunities, and are managed accordingly.

As described in section 1.1, strategic risks and opportunities relating to the transition away from thermal coal, increasing demand for new world minerals and copper, increasing demand for low GHG products and the development of BU based Scope 3 management strategies were included in Executive Leadership Team development and Board review of BU and Technology strategies in 2023 and 2024. In the same way, the Strategy and Sustainability function strategy included Net Zero Pathway strategies and those related to the emerging production of green ammonia, while the Finance strategy included the allocation of first order capital to decarbonisation projects.

While the management of these risks and opportunities has been implicitly included in the development and annual review of strategy for the past several years, this has been achieved through the oversight of the Chief Strategy and Sustainability Officer and the Decarbonisation and Energy Transition Steering Committee, which included most Executive Leadership Team members and has been absorbed into the Executive Leadership Team during 2024.

During 2025, we aim to formally document the specific links between identified climate-related risks and opportunities and the development of business strategy in the annual strategy development and review process. We will also continue to integrate climate risks into our risk management processes through regular assessments and updates.

1.1.4 Targets, remuneration and incentives

The People and Remuneration Committee of the Board provides oversight and advice in relation to the determination of remuneration policy and its application for senior executives, performance evaluation, the adoption of incentive plans, and various governance responsibilities related to remuneration. The Board has linked delivery of certain aspects of IPL's climate change strategy, and other environmental, social and governance (ESG) objectives relating to safety, energy efficiency and GHG emissions reduction, to Executive Key Management Personnel (KMP) remuneration outcomes for several years now. The specific incentives for the 2024 IPL financial year are described under 4.2.3. Executive accountability and performance metrics.

1.2 Management-level oversight of climate risks and opportunities

As described at 1.1.2, the CEO & MD is responsible for delivering the Board-approved climate strategy and his Executive Leadership Team develop IPL's business strategy, including planning, investment decisions, and risk management processes, including in response to specific climate-related risks.

Key responsibilities allocation

To address climate-related risks and opportunities effectively, key responsibilities are assigned to Executive Leadership Team members by the CEO in line with their existing leadership responsibilities. This ensures that the management of climate-related risks and opportunities is integrated into BU and functional strategies and risk management processes along with other strategic and operational risks and opportunities, and they are handed to their relevant team members with the knowledge, capability and experience to manage them. This approach is described in more detail below.

IPL's Decarbonisation and Energy Transition Steering Committee (DETSC) was absorbed into the Executive Leadership Team as a standing agenda committee meeting in 2024. This allows updates on climate-related risks and management strategies across the business to be monitored at the Executive Leadership Team level, including the incorporation of opportunities and key trends into business strategy.

The Chief Financial Officer (CFO) is responsible for the management of the financial aspects of climate change. The CFO is the Executive Leadership Team member with oversight of the management and mitigation of principal risks, including the assessment and management of climate-related financial risks, that could materially impact the Group's business objectives and exceed its risk tolerance. During 2024, the Chief Risk Officer reported to the CFO.

The CFO is responsible for IPL's Capital Allocation Framework which prioritises 'Sustainability Capital' as part of the order 1, or 'first taker' of capital, as shown in the diagram on page 42. This capital is allocated to progress a range of major projects related to decarbonisation of our operations, required to strategically manage risks and opportunities related to carbon pricing, emerging regulatory risks, customer demand for products with reduced upstream scope 3 GHG, and the investigation of green ammonia opportunities. The CFO also oversees the use of internal carbon pricing, which is described under '4.2.2 Internal carbon price.'

During 2024, the position of Chief Strategy and Sustainability Officer (CSSO) was responsible for the integration of climate-related risks and opportunities into Company strategy. This position, along with the CFO, oversaw the development of BU and Technology function strategies, ensuring they included management strategies for the relevant strategic climate-related risks. Team members reporting to the CSSO and CFO (specifically, the Corporate Sustainability Manager and Chief Risk Officer) collaborate to conduct Group-wide climate-related scenario-based risk assessment process.

The President Dyno Nobel Asia Pacific (DNAP) and the President Dyno Nobel Americas (DNA) are responsible for managing the strategic and operational climate-related risks and opportunities relevant to their BUs. These include, but are not limited to, the transitional risks and opportunities associated with shift in mining customer markets away from thermal coal towards metals and copper, and potential physical impacts on supply chains, logistics, operations and employees.

The Chief Technology Officer is responsible for the management of risks and opportunities related to the development of low carbon explosives products and services, and is responsible for the management of transitional risks and opportunities relating to increased customer demand for products and services that reduce customer GHG and IPL's downstream scope 3 GHG.

The President IPF and his Executive Leadership Team are responsible for the management of the strategic and operational climate-related risks and opportunities relevant to IPF. These include, but are not limited to, the transitional risks and opportunities associated with increased customer demand for specialist fertilisers, including EEFs that reduce farming customer GHG, and potential physical impacts associated with baseline water stress and extreme weather events on supply chains, logistics, operations and employees.

Climate risk assessment and key decision sign-off

The Corporate Sustainability Manager and Chief Risk Officer collaborate to conduct Group-wide climate-related scenario-based risk assessment as described in section 3 under 3.2 Assessment of climate-related risks. These positions report to the CSSO and CFO respectively. The results of the assessment are presented to, and validated by, the Executive Leadership Team in a workshop which, in 2024, included an education session from the specialist third party who developed our bespoke climate-related scenarios. Key decisions are discussed at the Executive Leadership Team level and recorded in the minutes of the Executive Leadership Team meetings.

2. Strategy

Our strategy

As stated in the 'Our position on climate change' and 'Overview of our Climate Change Strategy' in the 'About us' section of this report, we recognise the challenges associated with climate change and the need to reduce our own GHG emissions while continuing to provide products which help our customers unlock the natural resources society relies on.

To ensure continued business success and sustainable returns, we do this through the four pillars of our Climate Change Strategy:

1. Ensuring strong governance of climate-related issues
2. Reducing our operational emissions (scope 1 and 2 GHG)
3. Delivering products and strategies to reduce our scope 3 GHG (our upstream and downstream value chain GHG)
4. Managing strategic risks and opportunities

To enact these four pillars, we continue to update our climate-related risk and opportunity assessments, in line with leading practice, to identify and manage those risks and opportunities most material for our businesses. In 2024, our updated scenario risk assessments identified 12 material transitional climate-related risks and opportunities and 9 material physical climate risks. These are described in section 2.2 IPL climate risks and opportunities.

Transition risks

Transitioning to a lower-carbon economy may entail extensive policy, legal, technology, reputational and market changes that vary in type and occur at different rates of change across different geographical regions. These changes can arise from efforts to slow climate change, to mitigate its impacts or as a result of changes in consumer or customer demand in response to climate change. We have assessed the transitional risks and opportunities which may impact our businesses and consider these, along with other changing external factors, in our internal strategy discussions and long-term planning.

Physical risks

These risks include changes in the frequency and intensity of acute weather events and chronic changes in long-term weather patterns that may impact our operations, associated site logistics, customers and suppliers. Acute physical risks generally arise from weather events such as cyclones, floods, storms, and bushfires. Chronic physical risks are associated with longer-term shifts in weather patterns, such as sustained higher temperatures which may lead to heatwaves and creeping sea-level rise, and changes to rainfall patterns which may cause increasing periods of drought or longer and more intense wet seasons.

2.1 IPL climate scenarios

Global progress on reducing GHG emissions depends on a range of factors and policies, making the future rate and magnitude of global temperature rise, and the resulting impacts, difficult to predict. For this reason, and as recommended by the Financial Stability Board's Taskforce on Climate-related Financial Disclosures (TCFD) and the International Financial Reporting Standards (IFRS) Foundation, we make use of a diverse range of future climate-related scenarios to analyse potential risks and opportunities that may arise from different pathways and impact on our operations and business strategy.

- We conducted our first climate scenario risk and opportunity assessment in 2018, using bespoke 2°C and 4°C scenarios created specifically for IPL.
- In 2021, we reviewed and updated our 2°C and 4°C climate scenarios, and created two new scenarios: a 1.5°C and an Inevitable Policy Response (IPR) scenario, and reassessed our existing climate-related risks and opportunities against these.
- In 2024, we used four updated bespoke scenarios as described below, and performed an updated assessment to identify material transitional and physical risks and opportunities.

These scenarios aligned with global IPCC climate scenarios: SSP1-1.9, SSP2-2.6, SSP2-4.5 and SSP5-8.5 each representing different global temperature increases, and were named as follows;

- Scenario A: Fast Action (1.5°C)
- Scenario B: Forecast Policy (1.8°C),
- Scenario C: Current Trajectory (2.7°C), and
- Scenario D: Disrupted State (4+°C).

Using these four scenarios allows us to assess risks and opportunities associated with a broad range of potential futures, from a fast transition to renewable energy, new technology adoption and demand for low carbon products, to a potential future in which insufficient global action is taken to reduce warming and significant physical impacts occur. Therefore, a wide range of potential risks and opportunities have been considered in developing of our strategic response to climate change.

The bespoke climate scenarios developed for our business include the relevant jurisdictions in which we operate across Australia, the Americas and Europe, and the relevant key macroeconomic trends and key regional level variables across the following sectors: Agriculture, Energy and Power, Mining, Industry, Social, and Carbon Markets (see pages 20-27). The implications for IPL and its businesses are described on the following page.

IPL context and implications of Scenario A: Fast Action (1.5°C)

Scenario A is aligned with the latest international agreement on climate change. This scenario describes financially material transitional risks for IPL which fall into four main categories: policy and legal, technology, market, and reputation. This scenario also describes multiple financial opportunities for IPL.

Regulatory requirements and reputation: The increased regulatory requirements and investor expectations described in this scenario increase reputational risks and penalties in case of non-compliance. On the other hand, it presents an opportunity for IPF and Dyno Nobel to offer low carbon products and services to assist customers wanting to reduce their Scope 3 emissions.

Technology: There are significant opportunities for improved efficiencies in IPL operational activities and investments in abatement technologies. There are funding opportunities for new technologies through financial incentives associated with carbon pricing schemes, grants, and policies in support of decarbonisation.

Market: The global change in demand for explosives and fertilisers described in this Fast Action scenario, which relate to a reduced demand for thermal coal mining and meat consumption, may impact Dyno Nobel and IPF operations that rely on regional economic activities to generate revenue.

IPL context and implications of Scenario B: Forecast Policy (1.8°C)

As for Scenario A, Scenario B describes the main risk and opportunity areas for IPL's businesses as transitional, and related to the regulatory, technology and market and reputation areas. However, unlike the 1.5°C scenario, some of the significant physical climate-related impacts also begin to materialise.

Regulatory requirements and reputational risks: If this scenario were to occur, IPL's reputation may be negatively impacted if it fails to demonstrate sufficient climate action, impacting its ability to raise capital. While not as high as in the 1.5° scenario, the drive from investors to decarbonise described in this scenario would put pressure on IPL, which may impact on its share price.

Operations: The climate-related physical impacts described in this scenario are less severe than those described in the 2.7°C or 4+°C scenarios. However, changes in long-term weather patterns are described as impacting agricultural growing regions and harvesting times, which may lead to changes in fertiliser demand and the volume of IPF products sold.

Market and Technology: This scenario describes a significant increase in demand for mining of 'new world minerals,' and copper which are required for new low-carbon technologies. This would provide an increased opportunity for Dyno Nobel to expand into new markets. Additionally, the growing demand for hydrogen as an energy fuel, coupled with the government incentives described in this scenario, would create increased opportunities for IPL to produce green ammonia.

IPL context and implications of Scenario C: Current Trajectory (2.7°C)

This scenario describes IPL's businesses experiencing a significant number of material transition risks due to a lack of coordination between government policies and action. The physical impacts of climate change also become a substantial risk for IPL's operations and customers, resulting from climate-related events such as extreme weather (e.g. heatwaves, storms, cyclones, flooding and drought). Were this scenario to occur, these events could disrupt IPL's operations, supply chains, or demand for its products. The transition risks associated with this scenario are largely attributed to the absence of government regulation and policy to support companies who are seeking to decarbonise their operations. This would reduce the number of financial opportunities for IPL's businesses, compared to the lower warming scenarios. Due to the lack of timely government action described, warming surpasses the 2°C threshold in this scenario.

Operations: Due to the changing climate described in this scenario, there is an increase in the frequency and intensity of extreme weather events, which may impact some of IPL's assets and operations if this scenario were to occur. Additionally, the locations of growing regions, which are target markets for IPF products, may change due to climate impacts on land used for crops.

Regulatory requirements and reputational risks: This scenario describes a higher degree of warming due to a lack of government incentives to reduce GHG. This results in diminished growth in technological advancements for decarbonisation. If this scenario were to occur, this would impact IPL's ability to decarbonise its operations and supply chains and reduce the proportion of opportunities that could be materialised.

IPL context and implications of Scenario D: Disrupted State (4+°C)

Scenario D describes no increase in current government ambitions to reduce global warming. As a result, countries fail to reach their existing targets by 2050, which results in global warming exceeding 4°C by the end of this century. Consequently, this scenario, should it occur, is considered to result in severe impacts in affected regions. While our businesses currently operate primarily in Australia and the US, which are wealthy countries with good governance which may be more resilient than most, the long-term future described in this 4+°C scenario would not be conducive to operating a business regionally and/or globally.

Operations: The increase in frequency and intensity of extreme weather events described in this scenario would impact IPL's assets, operations, customers and global supply chains if this scenario were to occur. These impacts would result in additional repair costs, operational delays, reduced customer demand and supply chain disruption.

Reputational risks: If this high warming scenario were to occur, there would be potential for public backlash to arise towards high emitting companies. This may be increased for Dyno Nobel due to a perception that companies associated with mining are contributing significantly to global warming. This public sentiment could lead to reputational damage and may lead to reduced business growth.

Market demand: This high warming scenario describes severe physical impacts from extreme weather events, flood and drought having significant impacts on IPL customers and supply chains globally. These result in regional food and water shortages, geopolitical conflict, mass migrations and significant disruptions to global trade.

2. STRATEGY IPL CLIMATE SCENARIOS

Table 1 – **Scenario A: Fast Action (1.5°C)**

GLOBAL SCENARIO ANALYSIS

SSP1-1.9

GLOBAL GHG IN 2050

2.4 Gt CO_2-e/yr

GLOBAL TEMP. INCREASE BY 2100

1.0-1.8°C

KEY CHARACTERISTICS

- **Global coordinated action, strong government policies and incentives**
- **Complete reliance on renewable energy and the phasing out of fossil fuels by 2050**
- **Customer preference shift and stakeholder pressure**

GLOBAL TRENDS

This Fast Action scenario describes rapid and immediate climate action and a shift to cleaner industrial processes and renewable energy sources. A shift away from fossil fuels, including coal mining, and more sustainable customer and supplier behaviour and global policies to reduce GHG results in global warming limited to just 1.5°C above pre-industrial levels, thereby mitigating the most severe physical impacts of climate change. Nevertheless, the frequency of climate-related natural disasters is anticipated to slightly increase, especially in areas affected by extreme weather patterns that have implications for agriculture and aspects of IPL's supply chains[1].

MACRO-ECONOMIC TRENDS

In line with limiting warming to 1.5°C, this scenario describes coal production - Australia's main source of economic activity – being - reduced significantly which, in turn, impacts the Gross Domestic Product (GDP). The GDP of Australia falls by 4.4%[20]. Due to a slight increase in frequency and intensity of extreme weather events there is also a slight increase in the annual average cost of natural disasters on the Australian economy rising to $61 bn by 2050[21]. In the US, similar economic decline is described in this scenario, with US GDP decreasing to US$22.89 trillion by 2050[20].

US TRENDS

This 1.5°C scenario describes the US successfully fulfilling its net zero policy commitment through shifting towards renewable energy, increased energy efficiency, and the adoption of sustainable practices in industries such as agriculture and manufacturing. The US' net zero commitments are achieved by reducing emissions from existing facilities, decarbonising transport, shifting from coal to natural gas for electricity generation forand the increased uptake of wind generation[3,74].

In the 1.5°C trajectory, US businesses are supported to transition by favourable policies which assist them in remaining globally competitive, and they improve climate-related reporting to comply with current and emerging disclosure requirements[4].

AUSTRALIAN TRENDS

The 1.5°C scenario describes Australia achieving its net zero policy commitments by 2050, driven by its commitment to the goals of the Paris Agreement and policies that support a rapid, early transition from fossil fuels to renewable energy sources.

Whilst less than in other scenarios, the nation still anticipates notable shifts in climate patterns, including an escalation in the duration, frequency, and intensity of heatwaves across terrestrial and aquatic environments.

This scenario describes Australia continuing to experience a decrease in the overall number of tropical cyclones. However, rising ocean surface temperatures and a warmer, wetter atmosphere provide a larger source of energy for cyclones once they form, indicating that those that do occur are expected to result in higher-intensity events, with significant variability from year to year[2]. Short-duration heavy rainfall events increase, amplifying the risks associated with flooding and erosion in affected regions[2].

AGRICULTURE

This scenario describes an increased focus on sustainable land management, biodiversity, and sustainable intensive farming, resulting in a reduced need for agricultural land clearing. Cropland land cover will decrease by 0.1% by 2050 from the 2023 baseline due to increased food productivity and a focus on reducing food waste. In this scenario, improved cropland management[8] results in a 12% increase in crop yields by 2050 compared to 2024[58]. Land use is strongly regulated, however global forest area is described as declining by 4% by 2050 from 4.06bn ha[40]. This scenario also describes more efficient farming processes resulting in a decline in total applied nitrogen by 2030[9]. GHG emissions from the agricultural sector are expected to decrease by 17% by 2050 on 2024 levels[58]. In this scenario the demand for plant-based products increases as the world shifts away from meat consumption[30].

ENERGY AND POWER

This scenario describes global renewable energy uptake growing very quicky and almost replacing fossil fuels by 2050[10]. In Australia, the percentage of renewable energy for electricity generation increases to 99% by 2050, compared to the current renewable market share of 32%[14]. The US renewable energy percentage increases to 80% by 2050 from the current 21% renewable market share[10], with other currently used low GHG technologies, such as nuclear, continuing to contribute their share of grid decarbonisation. Concurrently, annual global bioenergy generation is described as increasing, rising to 3,056 TWh by 2050, while natural gas supply declines by 83% by 2050[11].

Electric vehicle sales in Australia rise to 100% of market share by 2050[7]. Under this scenario, the widespread adoption of decarbonisation technologies drives low-carbon innovations.

MINING

This Fast Action scenario describes the global use of thermal coal for electricity generation decreasing from 10,427 TWh in 2024 to zero by 2050[11] due to coordinated action to limit warming to 1.5°C. The global production of both thermal coal and metallurgical (MET) coal are significantly reduced, by 92% and 90% respectively, by 2050[19]. The entire coal-powered fleet in the Australian National Electricity Market (NEM) is retired by 2035[14]. In this scenario, an early and orderly transition to a clean energy system increases demand for minerals, including lithium, copper, cobalt, nickel and neodymium. In this scenario, lithium mineral has the greatest demand for use in clean technologies, increasing by 1,514% by 2050 from 73kt in 2024[12].

CARBON MARKETS

This scenario describes carbon credit prices in Australia meeting the price ceiling set by the Australian Government from 2024 to 2031, beginning at $75 in 2024 and reaching approximately $100 in 2031. In the US, carbon prices meet the cost containment price ceiling set by the California ETS every year to 2031, reaching approximately US$150 in 2031.

Post 2031 in this scenario, prices continue to grow, in order to meet net zero commitments, until they align with global carbon pricing by 2050. The global carbon price established in this 1.5°C scenario by 2050 is US$750-900[37].

SOCIAL

This scenario describes the limiting of global warming to 1.5°C, resulting in the proportion of the world population exposed to climate-induced physical risks being significantly less than that described in other scenarios. While the global population in this scenario grows to 8.53 bn by 2050 (compared to 9.17bn under Scenario B), systemic transitioning of economies and employment across urban and rural areas supports a stable economy. Coupled with strengthened governance, and changes to both human behaviour and lifestyles, this enables a faster, more orderly transition to net zero with effective adaptation and adoption of new technologies.

INDUSTRY

Under the 1.5°C scenario, industries that continue to rely on fossil fuels for their revenue are at risk as the energy sector diversifies into renewable energy. This scenario describes global demand for MET coal reducing by 85% by 2050 against 1530 million tonnes of coal in 2024[19]. Conversely, the annual global demand for hydrogen increases substantially by 237% to 214m tH_2 by 2050[27].

In this scenario, policies, and funding to develop new, low emitting gaseous fuels such as hydrogen increases, resulting in annual production exceeding 30 million tonnes by the year 2030. While a considerable portion of this is produced close to its point of use, there is increasing government support for hydrogen and hydrogen-based fuels[38] and by 2050 there are hydrogen trade links established around the globe.

Table 1 – **Scenario B: Forecast Policy (1.8°C)**

GLOBAL SCENARIO ANALYSIS

SSP2-2.6

GLOBAL GHG IN 2050

10.6 Gt CO_2-e/yr

GLOBAL TEMP. INCREASE BY 2100

1.3-2.5°C

KEY CHARACTERISTICS

- **Continued ambition for strong government policies and incentives**
- **High renewable energy uptake, significant impacts on energy & mining sectors**
- **Customer preference shift and stakeholder pressure**

GLOBAL TRENDS

This scenario is based on less aggressive and more reasonable forecasts of climate policy than the 1.5°C scenario to drive more foreseeable pathway for investors called the Forecast Policy Scenario (FPS)[31]. This scenario describes decarbonisation efforts being predominantly propelled by government policies and industry standards on a global scale.

The climate-related physical impacts under this trajectory are less severe when compared to higher-warming scenarios. However, there is an increased likelihood of a range of extreme weather events occurring more frequently. For example, heavy one-day-precipitation events and droughts are expected to occur at slightly higher rates compared to the IPCC's 2°C scenario[2].

MACRO-ECONOMIC TRENDS

This scenario describes a greater rise (than the 1.5°C scenario) in the frequency and intensity of extreme weather events, which poses a threat to infrastructure and imposes costs to the economy. This, in turn, increases the annual average cost of climate change on the Australian economy to US$63 bn by 2050[21]. In the US, the annual damage estimate due to climate change is described as US$110 bn by 2050[31].

From 2030, the economy experiences rapid changes in energy and transport systems in this scenario. This delayed but rapid change results in a discrepancy between industrial companies, with those who are reacting slowly to the low-carbon trajectory facing a greater risk of owning stranded assets. Hence, this scenario describes those who cannot operate under carbon constraints being forced to close.

US TRENDS

Like the 1.5°C scenario, this 1.8°C scenario also describes the US implementing more ambitious strategic planning, technology implementation, and policy changes than the higher warming scenarios, in response to rising climate impacts.

In order to limit global warming to 1.8°C, this scenario describes, the US establishing a $3.5 trillion Build Better Act (US Budget Reconciliation bill) and Inevitable Policy Response-aligned climate policies, including a target of 100% clean power by 2040, 100% ZEV sales from 2040, and zero emissions production processes by 2040[70]. Federal and state regulations, coupled with tax incentives for low carbon technologies assist in meeting targets to limit warming to 1.8°C.

Due to this, the physical climate impacts described for the US are less severe than those described in warmer scenarios. However, the US is still impacted by an increase in the number of heatwaves and major climate events such as flooding and hurricanes in this scenario.

AUSTRALIAN TRENDS

The 1.8°C scenario describes Australia progressing along a decarbonization trajectory characterized by a more measured pace than the 1.5°C scenario. This is primarily driven by a transition away from fossil fuels to renewable electricity sources and the widescale electrification of various industrial sectors.

However, this scenario also describes Australia experiencing a greater frequency of heatwaves, and increased aridity across southern regions due to reduced seasonal rainfall coupled with elevated rates of potential evapotranspiration[2].

Moreover, there is a sustained rise in the frequency of dangerous fire weather days, coupled with an extended fire season, particularly impacting southern and eastern regions of Australia[19].

Extreme rainfall events continue to increase across northern Australia, increasing the risk of flooding[47,74].

AGRICULTURE

This scenario describes a 14% increase in crop yields by 2050[58] driven by sustainable intensification of food production, which is required to feed a growing population[8]. However, cropland cover in this scenario decreases by 9% by 2050 from 2023 due to land degradation and desertification[8]. Under this scenario, there is no change in global forested areas from 2024 to 2050. This is due to afforestation and avoided deforestation related to the adoption of climate mitigation policies by countries across the globe[40,42].

This scenario also describes US and Australian Governments introducing comprehensive GHG mitigation policies aimed at reducing GHG emissions from crop production and livestock farming by 2025[28].

ENERGY AND POWER

Under this scenario renewables grow quicky, replacing most fossil fuels by 2050. In Australia, the percentage of renewable energy for electricity generation increases to 97% by 2050, compared to the current renewable market share of 32%[14]. In comparison, the US percentage of renewable energy share increases to 78% by 2050[10], with other currently used low GHG technologies, such as nuclear, continuing to contribute their share of grid decarbonisation. Global bioenergy generation increases by 132% from 2024 values[21].

Electric vehicle sales share reaches 99% of all vehicles by 2050 in Australia, and 70% by 2050 in the US[7,36]. Natural gas continues to be used as a transition fuel globally but is gradually replaced by zero-carbon electricity and hydrogen from 2040. In this scenario, the global demand for metallurgical coal will fall by 58% by 2050[19].

MINING

Under this scenario, 'first mover' countries progress with coal phase-out by 2030, with thermal coal use being virtually non-existent in developed countries by 2040. As a result, the mining sector shifts toward the extraction of the metals required for clean technologies. This scenario describes the total cumulative demand for lithium increasing by 1392%[12] against 73kt in 2024. Demand for cobalt, nickel and neodymium also significantly increases, by approximately 335%, 750% and 550%, respectively[12]. Thermal and MET coal are still produced globally, however this is significantly reduced by 77% and 65% respectively by 2050, from 4888 and 988 million tonnes of coal 2024[19].

CARBON MARKETS

Like the 1.5°C scenario, this 1.8°C scenario also describes carbon credit prices in Australia meeting the price ceiling set by the Australian Government from 2024 to 2031, beginning at $75 in 2024 and reaching approximately $100 in 2031. In the US, carbon prices also meet the cost containment price ceiling set by the California ETS every year to 2031, reaching approximately US$150 in 2031.

Post 2031 the prices will continue to grow to meet net zero commitments and align with global carbon pricing by 2050. However, the global carbon price described under this scenario is lower than the 1.5°C scenario price, at US$260-750 by 2050.

SOCIAL

This scenario describes substantial global population growth, from 8.04 bn in 2024 to 9.17 bn by 2050[23].

From 2030, significant socio-economic challenges occur due to rapid and unprecedented changes to government policy and the economy in response to the physical impacts of climate change, with increased pressure from society, financial markets and regulators in support of climate action and a just transition, particularly in the traditional energy and energy-intensive sectors[32].

INDUSTRY

This scenario describes carbon emissions decreasing by almost half by 2050 in relation to 2024 levels. The demand for hydrogen grows substantially, reaching 128m tH2 by 2050[27]. In this scenario, green hydrogen is the largest proportion of total global hydrogen production (at 65%), followed by blue hydrogen (produced using natural gas but with carbon capture and storage) at 35%.

The total demand for coal has a clear downward trend in this scenario, with global demand for thermal coal described as decreasing 82% by 2050 from 3642 million tonnes of coal in 2024 and global demand for MET coal decreasing 58% by 2050 from 1,629 million tonnes of coal in 2024[19].

Table 1 – **Scenario C: Current Trajectory (2.7°C)**

GLOBAL SCENARIO ANALYSIS

SSP2-4.5

GLOBAL GHG IN 2050

43.9 Gt CO_2-e/yr

GLOBAL TEMP. INCREASE BY 2100

2.1-3.5°C

KEY CHARACTERISTICS

- **Delayed government support required for decarbonisation**
- **Slower transition to low-carbon technologies**
- **Mitigation efforts may face obstacles such as technological constraints**

GLOBAL TRENDS

This scenario is characterised by a lack of coordinated global action and timely government support for the transition. This results in the Paris Agreement's target of limiting global warming to well below 2°C not being achieved. This scenario describes a delayed shift away from fossil fuels due to a lack of government policy to drive the transition to renewable energy sources, implement energy efficiency, or implement carbon capture and storage technologies. This results in global temperatures rising by 2-3°C above pre-industrial levels by 2100.Under these conditions, the frequency and intensity of extreme weather events are significantly heightened, which results in physical impacts on IPL operations, and customers in the mining and agricultural sectors and supply chains[1].

MACRO-ECONOMIC TRENDS

The frequency and intensity of extreme weather events described in this scenario poses a threat to infrastructure, costing the Australian economy up to US$66 bn by 2050[21]. The annual damage estimate in the US due to climate change in this scenario is US$273bn by 2050.

Australian GDP decreases by 27% by 2050 from US$2 trillion dollars in 2024[20]. GDP in the US decreases by 32% by 2050 from US$32 bn in 2024[20].

US TRENDS

This scenario describes shifts to renewable energy and improved energy efficiency stalling, and the US failing to decarbonise the electricity grid by 2050. The US's current policies remain unchanged and there is no increased ambition to achieve the country's net zero targets. Insufficient policies[40] result in a lack of investment in low carbon technologies from the private sector.

The US is projected to experience higher average temperatures under this scenario. Climate change is expected to intensify existing regional rainfall patterns with the Southeast US becoming wetter and the Northwest drier[56]. Total annual precipitation is expected to decrease, however there will be an increase in heavy precipitation events. These changes will have significant impact on the average crop yield in the US[33]. This scenario describes a significant increase in winter flood hazards across the southwest region. While the northwest is projected to have more frequent droughts[60].

AUSTRALIAN TRENDS

In this scenario, Australia does not reach net zero by 2050. While this scenario describes some efforts to decarbonise the electricity grid, the shift from fossil fuels to renewables progresses slowly due to a lack of substantial government policies and inadequate private-sector funding.

Under this scenario, Australia experiences an increase in the frequency and intensity of heatwaves, an increase in rainfall variability and heightened periods of drought across Australia, leading to diminished water resources, increasing baseline water stress and increased water restrictions[47]. Agricultural areas which depend on surface waters for irrigation are also impacted.

There is a sustained rise in the occurrence of hazardous fire weather conditions and an extended fire season, particularly affecting regions in southern and eastern Australia[2].

By 2090, there will be increases in the intensity of 1-in-20-year extreme rainfall events in most regions, particularly Northern Australia[2].

AGRICULTURE

In this scenario, crop yields increase to some degree, although this is not sufficient to meet growing food demand, due to expected population growth[23]. As a result, agricultural land is expanded at the expense of forests and other natural assets[42]. Due to the impacts of increasingly severe weather events and chronic adverse weather conditions on agricultural yields, greater cropland area is required to maintain agricultural outputs[3], resulting in an increase of 8% in global land area under crops by 2050 against a 2023 baseline[8]. As a result, global forested areas decrease by 5% by 2050 from 4.06 bn Ha in 2024[40].

ENERGY AND POWER

This scenario describes the decarbonisation of electricity grids occurring at a slower rate relative to scenarios A and B. However, there is a large shift to bioenergy with the global supply increasing by 35% from 2024 to 2050[19], while coal powered electricity generation decreases by 53% from 2024 to 2050[12]. Under this scenario, by 2050 the percentage of renewable energy in Australia and the US climbs to 92% and 71%, respectively. Additionally, electric vehicles account for 69% and 65% of fleet share by 2050 in Australia and the US, respectively[7].

MINING

This 2.7°C Current Trajectory scenario describes a slow and disrupted transition from fossil fuels to renewable energy sources, resulting in warming of 2.7°C. Under this scenario, global production of thermal and MET still occurs, but declines 45% and 30% respectively by 2050[12,19]. The gradual shift to renewable energy technologies leads to a slower but growing demand for 'new world minerals' than in the 1.8°C scenario, including neodymium and lithium. Lithium demand is described as increasing by 571% by 2050 from 73 kt in 2024[12].

CARBON MARKETS

This scenario describes the demand for carbon credits to address a significant portion of unabated emissions growing more rapidly than supply from 2024 to 2031. This drives growth in Australian carbon credit prices, but not enough to meet the carbon price ceiling set by the Australian Government. In the US, carbon prices continue to fluctuate between California's regulated floor and ceiling price.

Post 2031 in this scenario, there is no global carbon price established. However, by 2050 Australian carbon credit prices are described as reaching $390. In the US, prices track in alignment with a 3°C trajectory, reaching $71 by 2050[43].

SOCIAL

There is also substantial growth in population described in this 2.7°C scenario, with the global population described as increasing by 14% by 2050 from 8.04 bn in 2024[23].

Societal development remains steady, with general improvement in living standards, education, and healthcare. However, progress will be uneven across regions, leading to social inequalities, and the implementation of polices to promote social equity.

The physical impacts of climate change create unfavourable living conditions and impact the ability to grow crops in some regions, leading to some population migration.

INDUSTRY

This Current Trajectory scenario describes companies facing increasing pressure from investors to decarbonise but without coordinated government support. This results in significant challenges for businesses with a lack of investment also resulting in a delayed transition to low carbon energy, and therefore, manufacturing.

In this scenario, hydrogen production will increase by 101% by 2050 from 64 mtH_2t in 2024[27]. A large proportion of this hydrogen is still produced using natural gas, with blue and green hydrogen accounting for less than 50%.

Table 1 – **Scenario D: Disrupted State (4+°C)**

GLOBAL SCENARIO ANALYSIS

SSP5-8.5

GLOBAL GHG IN 2050

84.7 Gt CO_2-e/yr

GLOBAL TEMP. INCREASE BY 2100

4.0-5.7°C

KEY CHARACTERISTICS

- **Significant severe weather events, sea-level rise, and ecosystem degradation**
- **Continued reliance on fossil fuels, particularly coal, oil and natural gas**
- **Mitigation and adaptation efforts face significant challenges**

GLOBAL TRENDS

In this scenario, uncoordinated international efforts, along with several nations not fulfilling their pledges for net zero emissions, drives GHG emissions to 84.4bn tonnes of CO_2e by 2050, a 129% rise from 2005 levels. This leads to substantial and irreversible changes in the Earth's climate system, causing widespread extreme weather events, poverty, food disaster, geopolitical conflict and economic damage. These changes impact developing countries the most, resulting in a large number of refugees and high global migration rates. GDP is described as significantly declining in all regions by 2050[20].

Globally, the frequency and intensity of one-in-10-year extreme weather events increases by 2100. Extreme temperature events such as heatwaves and bushfires are 9.4 times more probable than in 2024, and heavy precipitation events such as those associated with hurricanes and cyclones are twice as likely. Agriculture and ecological drought events are four times more likely to occur[25].

MACRO-ECONOMIC TRENDS

Due to the high degree of warming, this scenario describes widespread economic losses due to supply chain disruptions and infrastructure damage globally, resulting from extreme weather events.

In Australia GDP declines from US$2 trillion in 2024 to US$1.19 trillion by 2050. The frequency and intensity of extreme weather events damages infrastructure and imposes costs on the Australian economy, reaching $71.35bn per year by 2050.

Similarly, this scenario describes US GDP decreasing from US$32 trillion in 2024 to US$21 trillion by 2050.

US TRENDS

This scenario describes the US experiencing an increase in the number of the strongest (Category 4 and 5) hurricanes, and associated increased rainfall rates[5]. The frequency of days with high temperatures above 32°C is expected to increase throughout the US[5]. This increase in extreme temperatures reduces the average yields for several of the US' major crops[33], which results in farmers needing to adapt their crops and move into new areas[34].

There is significant degradation of natural ecosystems and loss of biodiversity, reduced surface water availability and reduced water quality. There are widespread physical impacts on infrastructure, businesses, supply chains, farming regions, cities, and people's wellbeing from direct extreme weather events, mental health impacts, as well as nutritional security due to changes to agriculture and livestock.

AUSTRALIAN TRENDS

In this scenario, Australia experiences significant damage to its infrastructure, supply chains, businesses and ecological systems, by 2050. This is accompanied by a depletion of natural resources such as water, timber, natural gas and minerals. This scenario describes a significant decline in livelihoods and incomes due to declining agricultural production and food price inflation.

This heightened warming scenario describes increasingly severe bushfire risks across south-eastern Australia, with a projected increase of 100-300% in the occurrence of extreme fire days by 2050[75]. Fire seasons continue to commence earlier and extend later under this scenario[18].

Heatwaves are described as occurring as frequently as seven times a year by 2050, lasting an average of 16 days per event[2] and resulting in an increase in heat-related mortality and morbidity.

AGRICULTURE

This scenario describes a global expansion of cropland by 14% from a 2010 baseline by 2050[8,41] due to unsustainable land management practices and increased pressure on land and water resources to meet a rising demand for food from a growing population. Total crop yields are required to increase by 11% between 2024 and 2050[58].

This scenario also describes unregulated land use, and expansion of timber plantations decreases natural forest areas by 3% globally by 2050 from 4.06bn ha in 2024[40,41].

ENERGY AND POWER

This 4+°C scenario describes a future in which the energy sector decarbonises slowly. Electricity generation from bioenergy in this scenario remains the same as current levels, with an annual generation of 687 TWh[19]. Natural gas supplies are described as increasing by 56% by 2050 from 2024[11].

Under this scenario, there is no significant investment in low-carbon technologies; this leads to few technological advancements and no significant adoption of innovations in the energy sector.

This scenario also describes a lack of economic incentives for the adoption of electric vehicles, resulting in sales of EVs stalling.

MINING

This scenario describes significant amounts of thermal and MET coal continuing to be used across the world. Coal usage is expected to double by 2050 against 2024 use[40].
In this scenario, the demand for minerals for clean technologies also increases slightly but is limited due to much lower investment in decarbonisation and low-carbon technologies compared to other scenarios[12].

CARBON MARKETS

This scenario describes demand for carbon credits in Australia from 2024 to 2031 as lower than supply, resulting in slower carbon price growth than in the other scenarios. In the US, carbon prices fall to the regulated floor price of the California ETS between 2024 to 2031.

Post 2031 in this scenario, there is low demand for credits, which negatively impacts prices in Australia. In the US, carbon prices in this scenario continue to increase, but do not reach prices high enough to drive decarbonisation, resulting in emission reduction targets not being reached.

There is no linking between regional carbon pricing schemes in this scenario and a global carbon price is not established.

SOCIAL

This scenario describes the global population growing to 8.58bn globally by 2050. There is increasing risk of global conflicts due to resource depletion, crop failure and growing inequalities[23].

The physical impacts of climate change described in this high warming scenario include an increased incidence of extreme weather events, floods, and increased periods of chronic drought, which cause damage to infrastructure, interrupt global trade and result in water and food shortages. As a result, this scenario describes mass migrations and increasing geopolitical instability, with the probability of global conflicts increasing to 26%[57].

INDUSTRY

In this scenario, a lack of policies and investment results in global GHG emissions doubling between 2024 and 2050[31]. Thermal and MET coal production remains similar to the present day until 2050, and no further transition towards low carbon energy, manufacturing, products or technology is made[19]. Innovation within industries is described as limited in this scenario due to a lack of incentives to decarbonise operations.

2.2 IPL climate risks and opportunities

During 2024, all four scenarios were used in assessing transitional climate risks and opportunities in the near (2030) and mid-term future (2050). To assess physical climate risks, Scenarios C and D were used to represent 'worst-case' physical climate impacts in the near (2024-2040) and mid-term future (2050-2070).

Climate risks and opportunities were assessed for our IPF and Dyno Nobel business units individually, including across multiple business functions (Finance, regional sales and customer relations, strategy, procurement, investor relations, technology, legal and asset managers, supply chain, logistics, HSEC and DETSC) and included specific assessments for eight Australian sites and seven US sites.

The outcomes of the climate risk and opportunity assessment identified 15 material climate risks (six transitional risks and nine physical risks) and six material climate opportunities for IPL globally with some of these applying to both IPF and Dyno Nobel. A summary of the material climate risks and opportunities for each of our businesses is provided in Tables 2-7. These tables also include a summary of our management strategy, a residual risk assessment and KPIs where they are currently used to monitor either the success of our management strategy or the likelihood of the risk occurring, depending on the timeframe assessed for each risk.

2.2.1 Quantification of climate risks and opportunities

The IPL Risk Matrix determines a financially material risk as one which, should it be realised, would result in an EBIT impact of $20m or more. To more closely assess the potential financial impacts associated with our identified material risks and opportunities, a quantitative climate risk and opportunity assessment was conducted in 2024. This has allowed priority risk and opportunity areas to be identified based on the magnitude of the financial impacts were the risk or opportunity to be released and the timeframe identified for each.

Workshops were conducted with internal Dyno Nobel and IPF risk and opportunity stakeholders to develop an appropriate quantification methodology for each risk and opportunity, and to agree on assumptions aligned with three climate scenarios: our bespoke 1.5°C, 1.8°C and 4+°C. The financial impacts associated with selected material climate risks were quantified for 2030 and considered two cases – unmitigated impact and mitigated impact (with risk controls in place). Opportunities were quantified at two horizons: 2030 and 2050. The outcomes of our climate risk and opportunity quantification are included in the summary tables of material climate risks and opportunities below using Low, Medium and High classifications.

Table keys

CLIMATE SCENARIOS	1.5°	Fast Action	1.8°	Forecast Policy	2.7°	Current Trajectory	4+°	Disrupted State
UNMITIGATED IMPACT/POTENTIAL OPPORTUNITY	L	Low	M	Medium	H	High		

Table 2 – Material transitional climate risks for Dyno Nobel (DN)

RISK NAME	RISK STRATEGY AND MITIGATING ACTIONS	RESIDUAL RISK ASSESSMENT AND KPIS
DN Transitional Climate Risk 1: Market Risk **Changing market demands for explosives** Dyno Nobel's revenues may be impacted by a reduced demand for thermal coal mining. Thermal coal markets comprised 27% of Dyno Nobel Americas revenues and 4% of Dyno Nobel Australian revenues in 2024. **Scenarios:** 1.5° 1.8° 2.7° **Time frame:** Current, 2030 and 2050 **Unmitigated Impact (2030):** L **M** H **Unmitigated Impact (2050):** L M **H**	» The management of this risk has been built into Dyno Nobel's global business strategy along with opportunities 2, 3 and 4 which describe growth in other markets. Strategic action has been taken to shift operations and supply into emerging new world mineral markets in both South America and western US, and to increase revenues from the quarry and construction sector. » Dyno Nobel monitors the global environment, conducts detailed assessments of markets and regularly updates supply and demand forecasts to quickly respond to change. We seek to maintain competitive cost positions in our chosen markets, whilst maintaining quality product and service offerings. This focus on cost and quality positions our business units to compete over the medium to longer term; in changing and competitive environments we prefer to engage in long-term customer and supply contractual relationships.	Considered an ongoing business risk. The business has been able to remain resilient through shifting supply to other sectors (quarrying and construction and metals) and maintaining a competitive advantage over peers across both manufacturing and supply chain. **KPI: Annual % revenues from thermal coal mining vs other sectors over time in our Dyno Nobel Americas and Dyno Nobel Asia Pacific businesses.**
DN Transition Climate Risk 2: Policy and Legal Risk **Regulatory GHG limits or carbon pricing create a competition risk** Emerging regulations, such as the Safeguard Mechanism, which impose restrictions or costs on Dyno Nobel's GHG intensive manufacturing operations may increase operating costs. If these costs cannot be passed on to customers, these facilities may become less competitive than those in countries with less strict regulations. **Scenarios:** 1.5° 1.8° **Time frame:** Current, 2030 and 2050 **Unmitigated Impact (2030):** L **M** H **Unmitigated Impact (2050):** L M **H**	» Dyno Nobel's Net Zero Pathway has been developed and a range of projects which seek to progressively reduce Dyno Nobel's exposure to carbon pricing are being implemented. For example, the installation of the Moranbah Tertiary N_2O Abatement Project during 2024 has reduced the facility's GHG emissions below its Safeguard Emissions Intensity Baseline by approximately 200,000 tCO_2e. » Dyno Nobel customer agreements may provide for the pass-through of carbon pricing where products are not commodities whose price is set by the global market.	Considered a material risk requiring ongoing management. **KPI: Proportion of operational (scope 1 and 2) emissions covered by carbon pricing schemes vs proportion of operational (scope 1 and 2) emissions for which a liability was incurred.**

RISK NAME	RISK STRATEGY AND MITIGATING ACTIONS	RESIDUAL RISK ASSESSMENT AND KPIS
DN Transition Climate Risk 3: Policy and Legal Risk **Carbon pricing impact on upstream supply chain increases costs** The introduction of regional carbon pricing may impact the cost of purchased goods and services and increase Dyno Nobel's costs. If these costs cannot be passed on to customers, they may make Dyno Nobel less competitive than companies sourcing from regions with less strict regulations. **Scenarios:** 1.5° 1.8° **Time frame:** Current, 2030 and 2050 **Unmitigated Impact (2030, 2050):** L M H	» Dyno Nobel has a large, diverse supplier group, which may allow for the purchase of some products from regions where carbon pricing is lower, to avoid competition risks until such time as an equal, global carbon price removes this risk. » Domestic co-location of critical products will reduce carbon costs associated with transport. Diversification away from single source suppliers, already being managed, will also assist in managing the potentially volatile/variable costs associated with increased regional regulation, including carbon pricing.	Considered a material risk requiring ongoing management. **KPI: BU Scope 3 GHG management plans developed and in place by 2025.**
DN Transition Climate Risk 4: Market Risk **Reduced demand for metallurgical (MET) coal** An increase in the use of recycled scrap iron and a potential move towards electric arc or hydrogen-based steel manufacturing may reduce demand for metallurgical coal mining, impacting the demand for the products and services, and therefore revenues, from Dyno Nobel Moranbah. **Scenarios:** 1.5° 1.8° **Time frame:** 2030 and 2050 **Unmitigated Impact (2030, 2050):** L M H	» IPL's Moranbah manufacturing plant supplies explosives for mines in Queensland's Bowen Basin. This region produces some of the world's highest quality MET coal, with low ash content and low/medium volatile matter. These hard-coking coals are recognised by steelworks as prime coking coals used in steel manufacture, and Australian hard-coking coals are regarded as the industry benchmark. Queensland has 3.75bn tonnes MET coal with volatile matter less than 25%, which is enough to sustain production for many years. As Dyno Nobel's competitors are likely to see demand drop in line with thermal coal decline, the Moranbah facility will retain the unique competitive advantage of being located close to these MET coal mines.	Considered a potential future material risk which requires ongoing monitoring and may require management strategies to be deployed in the future. **Monitoring metric: MET coal demand forecasts; number of green steel production facilities (0).**
DN Transition Climate Risk 5: Market Risk **Stranded asset or long-term contract risk due to late, sudden transition** A late and sudden transition to a low carbon economy may result in some high carbon-emitting operations becoming stranded assets, with our Cheyenne site being the only site assessed to be vulnerable to this risk. This may also impact long-term contracts or offtake agreements. **Scenarios:** 1.8° 2.7° **Time frame:** 2030 and 2050 **Unmitigated Impact (2030, 2050):** L M H	» IPL's DET Steering Committee has developed Dyno Nobel's Net Zero Pathway, which will progressively reduce Dyno Nobel's exposure to the risk of stranded assets, should a late, sudden transition eventuate. » Dyno Nobel uses an internal carbon price to test capital investments in assets against a range of scenarios. » Dyno Nobel is developing a management strategy for long-term contracts, including a review of contracts which extend towards 2030, in order to assess exposure to transition risks. » Dyno Nobel is developing a process to consider climate risks within any new long-term contracts.	Due to Dyno Nobel's management strategies, the residual risk in the long term is considered to be greatly reduced. **KPI: Proportion of long-term contracts reviewed.**

Table 3 – **Material transitional climate opportunities for Dyno Nobel**

OPPORTUNITY NAME	STRATEGY TO MAXIMISE OPPORTUNITY	ONGOING OPPORTUNITY ASSESSMENT AND KPIS
DN Transition Climate Opportunity 1: Markets Opportunity **Access to funding and grants to implement decarbonisation measures** The transition to a low carbon economy may create opportunities for Dyno Nobel related to increased funding for new or renewable technologies that reduce GHG emissions. **Scenarios:** 1.5° 1.8° **Time frame:** Current, 2030 and 2050 **Potential opportunity (2030, 2050):** L M H	Dyno Nobel has allocated resources, and assigned responsibility to specific roles and steering committees, to track and manage applications for funding and grants associated with the transition. This has resulted in the following: » Successful registration of two projects to earn Australian Carbon Credit Units (ACCUs) under the current Australian Federal Government Emissions Reduction Fund. » An ARENA grant of $0.9m to investigate renewable hydrogen and green ammonia. » A grant under the Powering the Regions Fund of $9m for decarbonisation projects.	Considered an ongoing opportunity. Dyno Nobel continues to monitor opportunities and partnerships which may financially assist us and our customers to decarbonise.
DN Transition Climate Opportunity 2: Markets Opportunity **Increased demand for new world minerals and potential decreased demand for base metals** The 1.5°C, 1.8°C and 2.7°C scenarios describe a significant increase in demand for mining of 'new world minerals' required for new low-carbon technologies. This provides an opportunity for Dyno Nobel to expand into new markets and offset lowered demand for thermal coal. **Scenarios:** 1.5° 1.8° 2.7° **Time frame:** Current, 2030 and 2050 **Potential opportunity (2030, 2050):** L M H	» Strategic action continues to be taken by Dyno Nobel Americas to shift explosives operations and supply into emerging new world mineral markets in both South America and western US, and to increase revenues from the quarry and construction sector. » With the purchase of Titanobel in 2022, Dyno Nobel entered the French quarry and construction market and gained access to New Caledonian and West African markets with future facing mineral opportunities.	Considered an ongoing opportunity. When combined with the existing Nitromak business in Turkey, strategic actions taken to date provide a compelling foundation to grow the business across Europe, the Middle East and Africa to take advantage of the expected growth in new world minerals mining.
DN Transition Climate Opportunity 3: Markets Opportunity **Increased demand for copper** The 1.5°C, 1.8°C and 2.7°C scenarios describe a significant increase in demand for copper as it is required for new low-carbon technologies. This provides an opportunity for Dyno Nobel to expand into a growing global copper market. **Scenarios:** 1.5° 1.8° 2.7° **Time frame:** Current, 2030 and 2050 **Potential opportunity (2030, 2050):** L M H	» Strategic action continues to be taken by Dyno Nobel Americas to shift explosives operations and supply into growing copper markets, including in South America.	Considered an ongoing opportunity. We continue to strategically evaluate growing copper mining markets globally.

OPPORTUNITY NAME	STRATEGY TO MAXIMISE OPPORTUNITY	ONGOING OPPORTUNITY ASSESSMENT AND KPIS
DN Transition Climate Opportunity 4: Markets Opportunity **Quarrying and Construction sector growth** Higher warming scenarios describe impacts on cities, towns and infrastructure from extreme weather events coupled with rising sea levels. An immense quantity of aggregate and other quarried materials will be required to rebuild damaged infrastructure and/or build new climate-resilient port and coastal infrastructure increasing demand for explosives from this sector. **Scenarios:** 1.5° 1.8° 2.7° 4+° **Time frame:** 2030 and 2050 **Potential opportunity (2030):** L M H **Potential opportunity (2050):** L M H	» Our DNA business is the second-largest industrial explosives distributor in North America by volume, providing ammonium nitrate, initiating systems and services to the quarry and construction sector in the southern US, northeast Midwest US and Canada. More than 40% of DNA revenues are from the quarry and construction sector, and this is growing. » We have a leading position in this end market, which benefits from a favourable mix of our high grade explosives, proprietary initiating systems and services. We continue to leverage our premium technology platform throughout and beyond the sector, including our proprietary Differential Energy (DeltaE) offering. DeltaE has been in operation across the US over the last five years and is well established in the quarry and construction and hard rock segments where customers value its safety, environmental and efficiency benefits, including reduced GHG.	Considered an ongoing opportunity. Dyno Nobel monitors the global environment, conducts detailed assessments of our markets and regularly updates our supply and demand forecasts so that we can quickly respond to change. DNA also operates a Quarry Academy training centre for stone quarry operators. **KPI: % Revenues – supply of explosives to Quarry and Construction sector: Americas.**
DN Transition Climate Opportunity 5: Markets Opportunity **Demand for low GHG explosives** The 1.5°C Fast Action and 2°C Required Action scenarios describe increased demand for low carbon explosives. Bulk products, such as ammonium nitrate (AN) that are manufactured with reduced carbon emissions, or which reduce our customers' scope 3 GHG, would have a significant competitive advantage in this scenario. **Scenarios:** 1.5° 1.8° **Time frame:** 2030 and 2050 **Potential opportunity (2030):** L M H **Potential opportunity (2050):** L M H	» Dyno Nobel's decarbonisation strategy is described under '2.4.2.2 Our operational GHG transition plan'. Our strategy is to provide leading technology solutions to meet our customers' needs. Our DeltaE proprietary explosives method reduces both energy use and GHG emissions associated with blasting for our mining and quarry and customers and we have developed and built the first electric MPU (mine explosives delivery truck). See page 54 for more details on DeltaE and our eMPU.	Considered an ongoing opportunity. Dyno Nobel continues to progress projects to decarbonise its manufacturing assets, which will provide products with lower GHG footprints. We also continue to investigate the use of biodiesel and renewable diesel in our explosives products, as described in our 2024 Sustainability Report.

Table 4 – Material physical climate risks for Dyno Nobel

RISK NAME	RISK STRATEGY AND MITIGATING ACTIONS	RESIDUAL RISK ASSESSMENT AND KPIS
DN Physical Climate Risk 1: Acute **Extreme weather events impact employee access to site at Simsbury, Connecticut** The ability for employees to attend work at our Simsbury operations may be impacted more frequently due to increasing periods of extreme weather. In addition, accommodation relief for employees on- or near-site may be required more often. **Scenarios:** 1.5° 1.8° 2.7° 4+° **Time frame:** Current, 2030 and 2050 **Unmitigated Impact (2030, 2050):** L M H	» Our Simsbury operations have been managing the impacts of employee access to site due to localised flooding for some years, with temporary accommodation for employees necessary in some instances in the past. » We monitor the annual financial impact of these events. Should their frequency and impact increase, existing strategies will be reviewed for their effectiveness.	Considered a potentially material risk requiring ongoing management. **KPI: Annual impacts on EBIT at Simsbury due to the cost of mitigations to manage impacts of localised flooding.**
DN Physical Climate Risk 2: Chronic **Increased maximum temperatures result in fatigue – Moranbah, Queensland** Higher maximum temperatures can result in lower personnel productivity, heat exhaustion and, if incorrectly identified and managed, serious injury or death. Fatigue management issues may also result in poor task turnaround during daytime workable hours outdoors; thus, may result in operational delays. Fatigue and mental stress can also indirectly lead to other serious accidents, injury, and fatality. **Scenarios:** 2.7° 4+° **Time frame:** 2060 **Unmitigated Impact:** Rated as a material risk due to its potential to result in a fatality.	» Dyno Nobel currently manages worker health and safety in a range of extreme environments, from polar mining in the DNA business to very hot environments in Australia and Indonesia. » A new fatigue management procedure was implemented across the Americas in 2022; and in 2023, regional fatigue management procedures were implemented across the global business. This will assist in monitoring and managing the impacts of chronic changes in temperature on employee health and safety.	Because this risk has the potential to result in a fatality, it is rated as a material risk on the IPL risk matrix and requires ongoing monitoring and management. Dyno Nobel is committed to the ongoing management of worker health and safety through our Zero Harm strategic driver. We continue to monitor our processes to manage heat stress and fatigue. **KPI: Number of days above 35°C annually.**
DN physical climate risk 3: Acute **Heavy rain and snow event leads to structural failure – Simsbury, Connecticut** Additional weight due to snow accumulation on B200 (Shock Tube) roof could cause roof collapse resulting in multiple fatalities and loss of six months' production. **Scenarios:** 2.7° 4+° **Time frame:** 2030, 2060 **Unmitigated Impact (2030, 2060):** L M H	» Dyno Nobel has a comprehensive inspection, structural maintenance and risk management program in place across our global sites – how do we manage for risk of extra weight?	Considered a material risk requiring ongoing management. **KPI: Regular maintenance inspections.**

Table 5 – Material transitional climate risks for IPF

RISK NAME	RISK STRATEGY AND MITIGATING ACTIONS	RESIDUAL RISK ASSESSMENT AND KPIS
IPF Transition Climate Risk 1: Policy and Legal Risk **Regulatory GHG limits or carbon pricing create a competition risk** Emerging regulations, such as the Safeguard Mechanism, which impose restrictions or costs on IPF's GHG intensive manufacturing operations may increase operating costs. If these costs cannot be passed on to customers, these facilities may become less competitive than those in countries with less strict regulations. **Scenarios:** 1.5° 1.8° **Time frame:** Current, 2030 and 2050 **Unmitigated Impact (2030, 2050):** L M H	» IPF's Net Zero Pathway has been developed and a range of projects which seek to progressively reduce exposure to carbon pricing are being implemented. » IPF customer agreements may provide for the pass-through of carbon pricing where products are not commodities whose price is set by the global market.	Considered a material risk requiring ongoing management. **KPI: Proportion of operational (scope 1 and 2) emissions covered by carbon pricing schemes vs proportion of operational (scope 1 and 2) emissions for which a liability was incurred.**
IPF Transition Climate Risk 2: Policy and Legal Risk **Carbon pricing impact on upstream supply chain increases costs** The introduction of regional carbon pricing may impact the cost of purchased goods and services and increase IPF's costs. If these costs cannot be passed on to customers, they may make IPF less competitive than companies sourcing from regions with less strict regulations. **Scenarios:** 1.5° 1.8° **Time frame:** Current, 2030 and 2050 **Unmitigated Impact (2030, 2050):** L M H	» IPF has a large, diverse supplier group, which may allow for the purchase of some products from regions where carbon pricing is lower, to avoid competition risks until such time as an equal, global carbon price removes this risk. » Domestic co-location of critical products will reduce carbon costs associated with transport. Diversification away from single source suppliers, already being managed, will also assist in managing the potentially volatile/variable costs associated with increased regional regulation, including carbon pricing.	Considered a material risk requiring ongoing management. **KPI: BU Scope 3 GHG management plans developed and in place by 2025.**
IPF Transition Climate Risk 3: Technology Risk **New technologies or products could displace current IPF products** The development of seed traits, biological products and/or advancements in precision agriculture that materially improve nutrient use efficiency may have the potential to adversely affect demand for traditional fertilisers and services, impacting revenues and potentially manufacturing asset values. **Scenarios:** 1.5° **Time frame:** 2050 **Unmitigated Impact (2050):** L M H	» IPF tracks trends in agricultural markets including high efficiency, low GHG fertilisers, soil carbon solutions, precision agriculture and the growing broader focus on more sustainable growing practices and soil health. » We promote our soils testing services to support precision application of nutrients and in 2022 our NA laboratory became the exclusive supplier of laboratory services to Precision Agriculture. Our Soil Health Test Package enables analysis of the varying characteristics of soils across a paddock, further supporting precision application of nutrients. » We are also consulting with a range of institutions to find additional, innovative solutions for sustainable nutrient solutions.	Considered a material risk requiring ongoing monitoring and management.
IPF Transition Climate Risk 4: Market Risk **Stranded asset or long-term contract risk due to late, sudden transition** A late and sudden transition to a low carbon economy may result in our Phosphate Hill, Queensland operation becoming a stranded asset. This may also impact long-term contracts or offtake agreements. **Scenarios:** 1.8° 2.7° **Time frame:** 2030 and 2050 **Unmitigated Impact (2050):** L M H	» IPL's DET Steering Committee has developed IPF's Net Zero Pathway, which will progressively reduce IPF's exposure to the risk of stranded assets, should a late sudden transition eventuate. » IPF uses an internal carbon price to test capital investments in assets against a range of scenarios. » IPF is developing a management strategy for long-term contracts, including a review of contracts which extend towards 2030 in order to assess exposure to transition risks. » IPF is developing a process to consider climate risks within any new long-term contracts.	Due to IPF's management strategies, the residual risk in the long term is considered to be greatly reduced. **KPI: Proportion of long-term contracts reviewed.**

Table 6 – Material transitional opportunities for IPF

OPPORTUNITY NAME	STRATEGY TO MAXIMISE OPPORTUNITY	ONGOING OPPORTUNITY ASSESSMENT AND KPIS
IPF Transition Climate Opportunity 1: Markets Opportunity **Access to funding and grants to implement decarbonisation measures** The transition to a low carbon economy may create opportunities for IPF related to increased funding for new or renewable technologies that reduce GHG emissions. **Scenarios:** 1.5° 1.8° **Time frame:** Current, 2030 and 2050 **Opportunity Potential (2030, 2050):** L M H	IPF has allocated resources, and assigned responsibility to specific roles and steering committees, to track and manage applications for funding and grants associated with the transition. This has resulted in the following: » An ARENA grant of $13.7m to investigate renewable hydrogen and green ammonia at Gibson Island in partnership with FFI. » A grant under the Powering the Regions Fund totalling $28m for decarbonisation projects.	Considered an ongoing opportunity. IPF continues to monitor opportunities and partnerships which may financially assist us and our customers to decarbonise.
IPF Transition Climate Opportunity 2: Markets Opportunity **Offtake agreement for domestically produced urea increases IPF competitiveness from 2027** The higher warming scenarios describe a global decrease in the trade and availability of urea. This is due to physical impacts damaging port infrastructure; crop failure resulting in countries ceasing to export urea to feed their populations; and increasing geopolitical conflict, which further impacts trade. As of 2027, IPF will be major provider of urea via the Perdaman offtake agreement. **Scenarios:** 2.7° 4+° **Time frame:** 2030 and 2050 **Unmitigated Impact (2030, 2050):** L M H	» In 2021, IPL announced that our IPF business had entered into a 20-year off-take agreement with Perdaman Chemicals and Fertilisers Pty Ltd (Perdaman) to take up to 2.3m tonnes per year of urea from Perdaman's proposed urea plant at Karratha in Western Australia. The construction of this plant marks a significant milestone for Australia's future food security, with it's expected 2.3m tonne capacity helping to address the growing demand for high-quality urea, reducing Australia's reliance on imports and enhancing national resilience. This will provide IPF with a significant competitive advantage, particularly if the global decrease in trade and availability of urea described in the higher warming scenarios eventuates.	Considered an ongoing opportunity.

OPPORTUNITY NAME	STRATEGY TO MAXIMISE OPPORTUNITY	ONGOING OPPORTUNITY ASSESSMENT AND KPIS
IPF Transition Climate Opportunity 3: Products/services opportunity **Increased demand for low-GHG emitting fertilisers including EEFs** Demand for EEFS will increase more rapidly if mandatory GHG reporting covers, or is extended to cover, the agricultural sector, as this would likely drive decarbonisation of the sector. This may also accelerate the wider adoption of sustainable agronomic best practices, providing an opportunity for IPF to increase its revenues from soil and plant testing, precision agriculture and other sustainable plant nutrition solutions. **Scenarios:** 1.5° 1.8° 2.7° **Time frame:** Current, 2030 and 2050 **Demand for low carbon fertilisers Opportunity Potential (2030, 2050):** L **M** H	» IPF continues to monitor the development of mandatory GHG reporting mechanisms such as ASRS, which will apply to some large growers as of 2026 and NGERS in Australia, which may be extended to the agricultural sector in the future. » As a member, we supported Fertiliser Australia during 2023 in the development of its White Paper on 'Nitrogen Fertiliser Use and Greenhouse Gases – An Australian Assessment' and in 2024 we submitted a formal 'Expression of Interest' to collaborate on the development of an ACCU method to quantify the GHG reductions associated with our nitrogen inhibited EEF products, which would allow farmer incentives for their use. » We continue to develop our soil and plant testing capabilities.	Considered an ongoing opportunity requiring continued management. **KPI: Revenues from EEFs.**

Table 7 – **Material physical climate risks for IPF**

RISK NAME	RISK STRATEGY AND MITIGATING ACTIONS	RESIDUAL RISK ASSESSMENT AND KPIS
IPF Physical Climate Risk 1: Acute **Extreme rainfall events lead to overflow of water retention infrastructure at Mt Isa and Gibson Island, in Queensland** An increase in the intensity of extreme rainfall events may present an increased risk of overflows of site evaporation ponds, leading to EPA licence non-compliance events and contamination of water catchments. **Scenarios:** 2.7° 4+° **Time frame:** 2060 **Unmitigated Impact (2060):** **L** M H	» Ongoing and long-term water management strategies are in place to ensure overflows of storm water ponds due to higher intensity rainfall events are avoided.	This risk is being actively managed by IPL operations. **KPI: Monitoring of dam levels.**
IPF Physical Climate Risk 2: Chronic **High baseline water stress leads to water restrictions or shortages, impacting production at Mt Isa** Increasing rainfall variability and periods of drought may result in increased baseline water stress at Mt Isa, leading to water restrictions or shortages which could impact on production. Additional water storage and/or alternative water sources which require treatment may be required, which could result in additional costs for IPF. **Scenarios:** 2.7° 4+° **Time frame:** 2060 **Unmitigated Impact (2060):** **L** M H	» IPF uses the World Resources Institute (WRI) Aqueduct Tool analysis annually as part of its water risk analysis. » Ongoing and long-term water management strategies are in place to ensure continued water availability for manufacturing at Mt Isa.	Considered a potentially material risk requiring ongoing monitoring and management. **KPI: Monitoring of water stress.**
IPF Physical Climate Risk 3: Acute **Extreme weather events impact site logistics in Northern Queensland – Phosphate Hill and Townsville Port** Wet season flood and cyclone events, which currently impact IPF's Phosphate Hill and Townsville sites, may become more frequent or severe. This may cause more frequent or extended disruptions to usage of the single Phosphate Hill rail line which connects these sites, resulting in financial losses if finished product cannot be transferred off-site due to site storage reaching capacity. Townsville Port is a key part of IPF's supply chain infrastructure and logistics. Limited access or damage due to flooding and/or cyclones would impact IPF's ability to export and import products and materials, resulting in financial losses. **Scenarios:** 2.7° 4+° **Time frame:** Current, 2030, 2060 **Unmitigated Impact:** L **M** H	» The COVID-19 pandemic tested the ability of IPF's supply chain function to respond to a global crisis, showing a high degree of resilience. » Physical impacts (wet season flooding) have impacted Phosphate Hill logistics in the past five years. A one-in-100-year flooding event during 2019 damaged third-party rail infrastructure and interrupted rail services to the site for an extended period, resulting in a material impact. Seasonal contingency plans have been put in place at this site to mitigate potential future impacts, including an investment of $3.6m in additional storage and procedures to allow a rapid shift from rail to road transport for products if required. In addition, weather conditions are monitored with decision making responsibilities pre-assigned for action in the event that monitoring triggers are identified in weather monitoring. » IPF supplies products to customers across a range of geographic locations and agricultural sectors and can source products from international suppliers to meet customer demand should Townsville Port be impacted.	Considered a material risk requiring ongoing monitoring and management. The residual risk has been greatly reduced due to contingencies put in place following the one-in-100-year flood event. **KPI: Trigger weather monitoring KPIs result in action plans being enacted if thresholds are met.**

RISK NAME	RISK STRATEGY AND MITIGATING ACTIONS	RESIDUAL RISK ASSESSMENT AND KPIS
IPF Physical Climate Risk 4: Acute and chronic **Extreme weather events and extended periods of drought impact farming customers, reducing demand for fertilisers** An increase in the severity and/or frequency of floods, cyclones, storms or extended periods of drought may impact on farming customers, which would result in decreased product demand for periods of time. **Scenarios:** 1.5° 1.8° 2.7° 4+° **Time frame:** Current, 2030, 2060 **Unmitigated Impact (2060):** L **M** H	» IPF supplies products to customers across a range of geographic locations and agricultural sectors, reducing the potential impact of extreme weather events on customer demand.	Considered a material risk requiring ongoing monitoring and management. **KPI: Financial impacts each year from such events.**
IPF Physical Climate Risk 5: Chronic **Increased maximum temperatures result in fatigue – IPF sites across Queensland, Australia** Higher maximum temperatures can result in lower personnel productivity, heat exhaustion and, if incorrectly identified and managed, serious injury or death. Fatigue management issues may also result in poor task turnaround during daytime workable hours outdoors; thus, may result in operational delays. Fatigue and mental stress can also indirectly lead to other serious accidents, injury, and fatality. **Scenarios:** 2.7° 4+° **Time frame:** 2060 **Unmitigated Impact:** Rated as a material risk due to its potential to result in a fatality.	» IPF currently manages worker health and safety in a range of environments across Australia, including Queensland, where temperatures and humidity are high in the summer months. » A new fatigue management procedure was implemented across the Americas in 2022; and in 2023, regional fatigue management procedures were implemented across the global business. This will assist in monitoring and managing the impacts of chronic changes in temperature on employee health and safety.	Because this risk has the potential to result in a fatality, it is rated as a material risk on the IPL risk matrix and requires ongoing monitoring and management. IPF is committed to the ongoing management of worker health and safety through our Zero Harm strategic driver. We continue to monitor our processes to manage heat stress and fatigue. **KPI: Number of days above 35°C annually.**

RISK NAME	RISK STRATEGY AND MITIGATING ACTIONS	RESIDUAL RISK ASSESSMENT AND KPIS
IPF Physical Climate Risk 6: Acute **Extreme rainfall events lead to Gypsum dam overflow – Phosphate Hill[1], Queensland** An increase in the intensity of extreme rainfall events at the Phosphate Hill site may lead to a higher risk of damage to gypsum dams, resulting in accidental release of gypsum and/or contaminated water to soils or into waterways, leading to extensive remediation requirements, fines and potential legal actions. **Scenarios:** 2.7° 4+° **Time frame:** 2060 **Unmitigated Impact (2060):** L M **H**	» Ongoing and long-term water management strategies are in place to ensure overflows of storm water ponds due to higher intensity rainfall events are avoided.	Considered a material risk requiring ongoing management. This risk is being actively managed by our Phosphate Hill operations. The cost of increasing stormwater pond capacity, should it be required, is not expected to be material. **KPI: Monitoring of dam levels.**
IPF Physical Climate Risk 7: Chronic **Ongoing weakening of structures during increasingly severe weather events may lead to eventual structural collapse** Weakening of portal frame and connection bolts during increasingly severe weather events may eventually result in structural collapse causing injuries or fatalities, as well as business interruption, to the product distribution facility at Gibson Island[2], Queensland. **Scenarios:** 4+° **Time frame:** 2060 **Unmitigated Impact (2060):** L **M** H	» IPF has a comprehensive inspection, structural maintenance and risk management program in place across our global sites.	Considered a material risk requiring ongoing management. **KPI: Regular maintenance inspections.**

1. The risk of dam overflow at other sites was assessed and was found to have a potential impact that was not financially material.
2. This risk has only been identified as a separate climate-related risk at Gibson Island due to its coastal location in a region which may, should a 4+°C rise be realised, experience cyclonic conditions for the first time.

2.3 Implications of identified risks and opportunities

For our explosives business, Dyno Nobel, the material strategic risks identified, as shown in Tables 2-4, are associated with shifts in demand across customer markets from coal mining towards metals, carbon pricing risks and the risk of stranded manufacturing assets if a late or sudden transition were to occur. Strategic opportunities were also associated with shifts in demand across customer markets, with growth opportunities associated with new world metals and copper markets, increased demand from quarry and construction (Q&C) markets, increased demand for low carbon explosives, and grants and funding available under emerging carbon regulation. While there are uncertainties associated with projected demand from various markets over time, the rate and magnitude of impacts from various carbon pricing policies, and the rate at which demand for low carbon products increases, these risks and opportunities have implications for our business growth strategy and product technology strategies, as discussed in section 2.4.1 Our Climate Resilience Strategy.

Opportunities for Dyno Nobel associated with green ammonia production fell just below financial materiality when assessed for 2030 and 2050 and there are uncertainties associated with both its adoption as an energy source and the timing in which it will become commercially viable. However, the opportunities associated with green ammonia have implications for our Decarbonisation Strategy and Net Zero Pathway as well as for our portfolio valuation, and we continue to monitor, and in some cases actively pursue, these opportunities.

As seen in Table 4, the physical risks identified for Dyno Nobel in our 2024 assessment are not completely new, but relate to an increase in the severity, frequency or likelihood of operational risks already being managed at the site level. This has implications for the review of our existing risk management processes for these risks.

For our fertiliser business, IPF, the material strategic risks identified, as shown in tables 5-7, are associated with carbon pricing, potentially disruptive new fertiliser technologies and the risk of stranded manufacturing assets if a late or sudden transition were to occur. Strategic opportunities are associated with grants and funding available under emerging carbon regulation, the development of new products and services, such as our EEF products which reduce customer GHG, and access to domestically manufactured urea. These have implications for IPF's core business strategy, product technology and R&D strategies: on the risk side, the development of seed traits, biological products and/or advancements in precision agriculture that materially improve nutrient use efficiency may have the potential to adversely affect demand for traditional fertilisers. As an opportunity, domestically manufactured urea will be in high demand should global urea trade and availability be restricted.

There are uncertainties associated with the introduction and impact of carbon pricing regulations, the development of potentially disruptive new fertiliser technologies, the rate of farmer adoption of new products such as our low carbon EEFs and the impact, if any, of the physical impacts of climate change on the global trade and availability of urea. Our management strategies for these risks and opportunities are listed in column 2 of Tables 4-7 and further discussed in section 2.4.1 Our Climate Resilience Strategy.

As seen in Table 7, the physical risks identified for IPF are not completely new, but relate to an increase in the severity, frequency or likelihood of operational and customer-related risks already being managed. This has implications for the review of the relevant existing risks to ensure that the monitoring of any increased likelihood of these risks being realised is incorporated into existing risks management processes. During 2024 we began a review of these risks, cross-referencing climate-related risks against existing risks to identify where climate change may be an additional cause in exiting risk bow ties, and to create a climate-specific set of risks in our risk register to allow more comprehensive review and reporting.

2.4 Our Climate Change Action Strategy

We recognise that the strategic management of risks and opportunities associated with climate change, and their integration into business strategy, is essential to the long-term success of our businesses. We are committed to ensuring the resilience of our businesses to continue to create sustainable economic returns and value creation for our shareholders, customers and employees, while driving measures to reduce our contribution to climate change and other impacts on the environment.

As a manufacturer and distributor of explosives and fertilisers for the mining, Q&C and agriculture industries, we supply products and services which will continue to be in demand throughout the transition and into the future. Our Climate Change Action Strategy has two key components: our Climate Resilience Strategy, which is focused on the integration of material transition risks and opportunities into our business strategies and the management of physical risks; and our Decarbonisation Strategy, which is focused on decarbonising our manufacturing and distribution assets to ensure we can continue to provide products and services to our customers in a lower carbon economy.

Working to ensure a just transition

First used in the 1970s, the term 'just transition' refers to the need to ensure workers' rights and livelihoods are given the same priority as environmental and economic imperatives when companies and broader economies are changing production practices to become more sustainable.

The challenge of climate change has raised the importance of a just transition for workforces and communities, as it is increasingly recognised that the global transition towards a low-carbon economy will have both positive and negative impacts on employment. For this reason, IPL recognises that ensuring a just transition is integral to reaching the goals of the Paris Agreement and is working to align our decarbonisation strategy with the principles of a just transition.

For IPL, a 'just transition' means decarbonising our operations and supply chains in a way that is orderly and timely, fair and equitable, and meets the goals of the Paris Agreement. Our approach seeks to protect and sustain the employment opportunities we provide, and therefore the communities which depend on these, for a just transition; and we commit to retain, retrain, redeploy and/or compensate workers affected by our decarbonisation projects.

As a manufacturer of explosives and fertilisers for the mining, quarry and construction, and fertiliser industries, we manufacture and supply products and services which will continue to be in demand throughout the transition and into the future. All but the most extreme of our future climate-related scenarios describe increasing demand for fertilisers to maximise food production and, in the 1.5°C and 1.8°C scenarios, for biofuels, the mining of metals and new world minerals for new technologies will be required, and demand for explosives from the quarry and construction sector is expected to increase where physical impacts occur. For these reasons, unlike some other industries, our ambition is not orderly closure, but successful decarbonisation of our manufacturing assets to continue to provide our products and services in a decarbonised economy, and to maintain the employment opportunities we provide.

Further, the energy transition is providing new opportunities for our business to grow as the demand for low carbon hydrogen in the form of green ammonia increases. Our Green Ammonia projects at Gibson Island and Gladstone, should they proceed, will assist us in creating and supporting access to 'green and decent' jobs and upskilling workers, and our Net Zero Pathway will allow us to transition our assets and retain our workers.

Assessment of risks regarding a just transition

Due to our 'retain and decarbonise' strategy described above, a high-level assessment indicates that our portfolio is resilient in terms of just transition risks, with just one facility, employing 174 personnel, identified during the assessment. While our exposure to thermal coal markets made up less than 6% of our revenues in 2024, this exposure is almost entirely associated with this single identified Dyno Nobel manufacturing asset in Cheyenne, Wyoming which currently supplies ammonium nitrate explosives to the nearby Powder River Basin. As described in Table 2 on page 29, demand from this market has already declined and this is being managed through further expansion into the quarry and construction and metals markets. As a second strategy, the Cheyenne facility is expanding into the manufacture of Diesel Exhaust Fluid (DEF), a urea-based additive which reduces NOx emissions from diesel vehicles. This has further reduced the facility's reliance on thermal coal markets through the creation of another income stream in the short term.

For the medium to long term, we are investigating future options to manufacture this product at Cheyenne by converting the facility from natural gas to green hydrogen for ammonia, and reacting this with CO_2 purchased by pipeline, which would become available as the carbon capture facilities currently being investigated for power plants in this region become more common.

> **" A just transition works to ensure that the transition to net-zero emissions and climate resilience is orderly, inclusive and just, creates decent work opportunities and leaves no-one behind. This depends on a fair process built on social dialogue, stakeholder engagement and a universal respect for fundamental labour rights and other human rights. Just Transition is not an independent practice; it is a principles-based approach for climate change mitigation and adaptation activities, relevant for all countries and sectors."**
>
> United Nations Global Compact, Introduction to Just Transition: a business brief

Finally, the nature of the manufacturing facility means that it could potentially be repurposed to produce ammonia-based fertilisers should the region transition away from thermal coal to farming, as is being progressed by the Reclaiming Appalachia Coalition, supported by the US Just Transition Fund.

Should any of our sites become uncompetitive for any reason, our approach is to actively engage with those affected, ensure their feedback is incorporated and offer redeployment where possible, retraining, assistance through locally-based outplacement services, and retirement and retrenchment packages where employees choose these options.

Assisting employees at Gibson Island

During 2023, 193 employees who were affected by the cessation of natural gas-based manufacturing at our Gibson Island site in Queensland, Australia were referred to outplacement services, with 75% engaging the services and 58% known successful transitions made. In this case, natural gas could not be secured at a competitive price to continue ammonia manufacturing until the facility could be converted to green ammonia. Services were provided to affected employees depending on their stage of life, with IPL providing financial planning with outside resources, career planning, review of resumes with professional assistance to update them, workshops for assistance on job seeking, retraining packages and redeployment to other sites where roles were available and this option was preferred by the employee.

Engaging with policy makers for a just transition

IPL continues to engage with Australian policy makers to advocate for a level playing field between domestic manufacturers and imported products to maintain Australian employment opportunities and domestic supply chains.

We also advocate for access to natural gas at a competitive price for Australian manufacturers that allows manufacturing facilities and jobs to be maintained until decarbonisation of these assets can occur, for an orderly economic and just transition.

Further, this advocacy also aims to avoid carbon leakage associated with the closure of Australian manufacturing facilities and their replacement with imported overseas products.

2.4.1 Our Climate Resilience Strategy

We consider Dyno Nobel's current business model and portfolio to be resilient in the context of the identified material climate-related risks and opportunities. Since our products and services will continue to be in demand throughout the transition, and we have a plan to retain and decarbonise those assets which align with our core business strategy, we do not anticipate that major changes to our business model will be required.

The shifts in customer markets described in our scenarios are already being reflected in market forecasts. As summarised in the second column of Tables 2-4, Dyno Nobel's core business strategy has incorporated, and is managing, the shift away from supplying thermal coal markets in the US towards metals and Q&C, as well as an overall strategic shift towards these markets for our global business. Our product technology strategy continues to develop our capability to supply technology based solutions with higher margins for these markets, with the aim of reducing our reliance on bulk AN sales, which are required for the mining of bulk ores such as coal. Our R&D function is resourced to meet this aim and continues to test and incorporate biodiesel and renewable diesel into our products and services. In 2023 and 2024 we have developed and built our first electric MPU for the on-customer-mine-site delivery of our explosives products direct to boreholes, complete with its own solar changing station.

The business recognises the implications of emerging carbon pricing and carbon markets for Dyno Nobel and has also allocated internal resources with the responsibility to monitor and strategically manage the associated risks and opportunities.

Opportunities associated with green ammonia production continue to be considered and, in some cases, are actively being pursued. Specific resources have also been allocated to manage these opportunities, which are discussed in more detail in section 2.4.2 Our Decarbonisation Strategy.

Our IPF business also demonstrates resilience to climate-related risks and opportunities. IPF has a dedicated R&D Team which monitors the external development of new fertiliser technologies, has active partnerships with research institutions and has allocated resources to monitor and manage risks and opportunities associated with emerging carbon regulation. IPF's business strategy is reviewed annually and aligned with key trends in agricultural markets which present opportunities aligned with our capabilities. We have expanded our capabilities in precision agriculture through a strategic partnership for our Nutrient Advantage Laboratory to supply Precision Ag with plant and soil testing, and purchased a liquids fertilisers business in 2022 to increase our ability to deliver precision application of nutrients where requirements vary across customer fields.

IPF's exclusive 20-year urea offtake agreement with Perdaman's Karratha plant, expected to commence from mid-2027, is expected to add an estimated incremental EBIT of approximately $45m per annum to the IPF business and will provide IPF with access to significant volumes of competitively priced urea to grow the business. It will also provide a platform to increase the level of recurring earnings in line with IPF's strategy and will become especially important should the global trade and availability of urea be restricted as described in the 2.7°C and 4+°C scenarios.

Investment in decarbonisation projects to manage carbon pricing risks

In 2022, the DET Steering Committee established 'Sustainability Capital' within the Capital Allocation Frameworks for its explosives and fertilisers businesses, in order to progress a range of major projects required to decarbonise our operations.

1. Includes spend on the WALA CCS project prior to sale of the facility and spend incurred to date on the Gibson Island Green Ammonia Project. Does not in include anticipated future spend on the Gibson Island Green Ammonia Project given final investment decision is yet to be made.
2. Does not in include anticipated future spend on the Gibson Island Green Ammonia Project given final investment decision is yet to be made.

Our portfolio values are also considered to be resilient to climate change. While we have not yet quantified our portfolio at different time horizons under different future scenarios, a discussion of the potential impacts on asset values under a range of climate scenarios was presented in IPL's 2023 Climate Change Report. IPL's Net Zero Pathway includes decarbonisation plans for each of its assets in order to transition them and maintain their viability. A late and sudden transition, as described in the 1.8°C and 2.7°C scenarios, presents the greatest risk to several of our manufacturing assets, as this is associated with a late and rapid transition away from thermal, and potentially MET coal, mining, in the Cheyenne and Moranbah local regions respectively.

However, the expansion of the Cheyenne site into the manufacture of DEF for the short term, and potential conversion to green ammonia in the medium to long term, provide opportunities to maintain this asset's value as thermal coal markets decline. The location of the Moranbah site close to very high-quality MET coal means that this site would also likely maintain its viability in the medium to long term, or for the life of the asset, should this late and sudden transition occur.

Investment in adaptation to manage identified physical risks may be required for both of our businesses in the medium to long term. However, as described in Tables 2-7, there are no risks which require immediate significant investment. Rather, existing risk management, mitigation and contingency procedures are in place, and the increasing likelihood of the identified physical risks being realised is being monitored until such time as capex investment may be required to manage these – for example, replacement of structures with those designed and built to withstand increasing extreme weather events, or larger or additional water retention structures.

2.4.2 Our Decarbonisation Strategy

As described in the previous section, IPL does not anticipate that major changes to our Dyno Nobel or IPF business models will be required to decarbonise, as our operations manufacture and supply products and services that will continue to be in demand throughout the transition.

We diligently measure our global greenhouse gas (GHG) emissions across scope 1, scope 2, and scope 3 categories. Our Australian Scope 1 and 2 emissions are calculated and reported as per the National Greenhouse and Energy Reporting (NGER) submission guidelines, while our scope 1 and 2 GHG outside of Australia, and our global Scope 3 GHG calculations adhere to Greenhouse Gas Protocol Standards (see Appendix 3 for Scope 3 calculation methodologies).

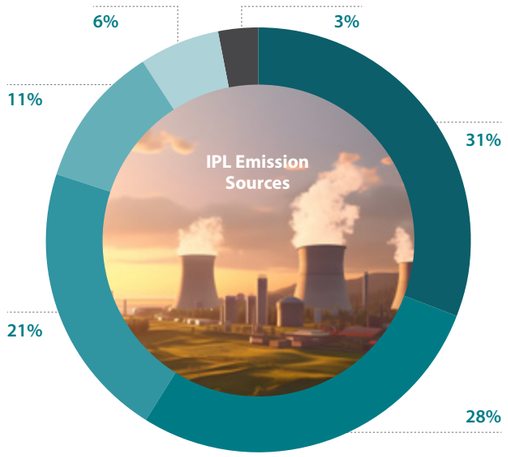
Our Australian scope 1 and 2 GHG are currently assured to limited assurance annually. To ensure credibility and to meet the requirements of the upcoming ASRS, we implemented a new global GHG management platform in 2024 and are planning third-party validation of our global GHG emissions as below.

IPL FINANCIAL YEAR ENDING 30 SEPT	2025	2026	2027
Scope 1 and 2 auditing	Limited Assurance	Reasonable Assurance	Reasonable Assurance
Scope 3 auditing	–	Limited Assurance	Reasonable Assurance

Our operational GHG profile and transition plan are described in the following sections.

2.4.2.1 Our operational GHG emissions profile

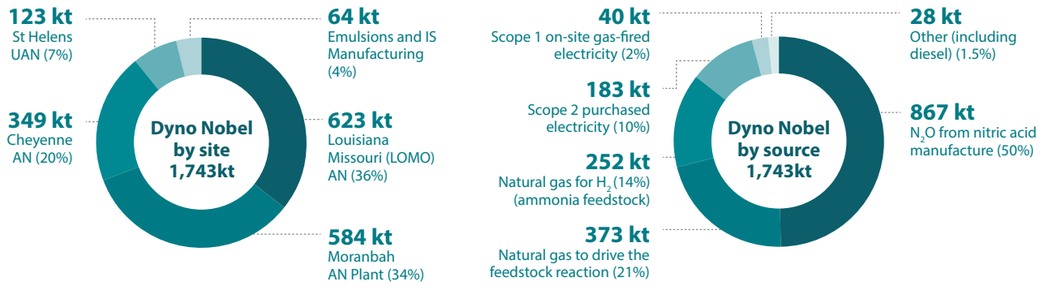
Our Baseline Year (2020)[1] operational GHG emissions by source (%)



GHG EMISSION SOURCE	TECHNOLOGY AND KEY ENABLERS TO REDUCE	% OF GHG
Nitric Acid N_2O Process Emission	N_2O abatement technologies	31
Natural Gas to drive the ammonia feedstock reaction[2]	CCS to permanently sequester; conversion to green hydrogen production; other alternative feedstocks	28
Natural Gas for H_2 (ammonia feedstock)	CCS to permanently sequester; conversion to green hydrogen production; other alternative feedstocks	21
Scope 2: Purchased Electricity	Rooftop solar installations, PPA's, grid decarbonisation	11
Scope 1: On-site gas-fired electricity	Industrial scale solar installation with batteries; grid connection to access PPA's	6
Other	Electric on-road vehicles and excavators; offsets	3

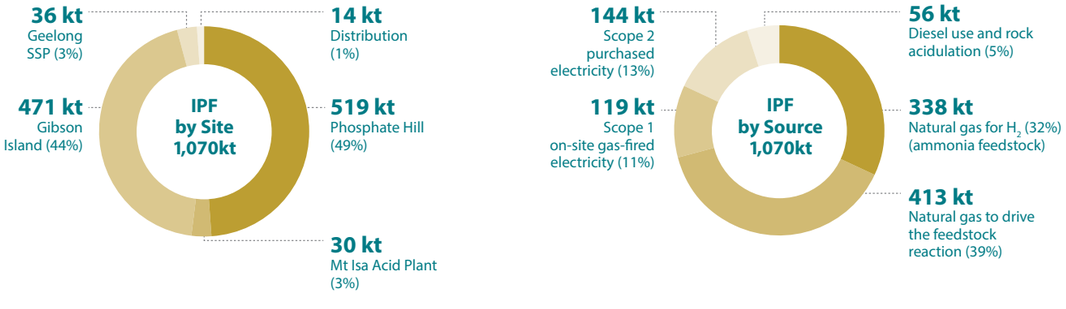
1. Our 2020 baseline has been adjusted for the sale of the Waggaman, Louisiana plant, to 2,813,273 tCO_2e.
2. 99% of our 'natural gas for energy' use is to drive the reaction to convert methane, CH_4 to H_2 for ammonia making in our ammonia plant reformers.

Baseline year (2020) operational GHG emissions for our explosives business (kt CO_2e)



1. Our 2020 baseline has been adjusted for the sale of the Waggaman, Louisiana plant, to 2,813,273 tCO_2e.

Baseline year (2020) operational GHG emissions for our fertilisers business (kt CO_2e)



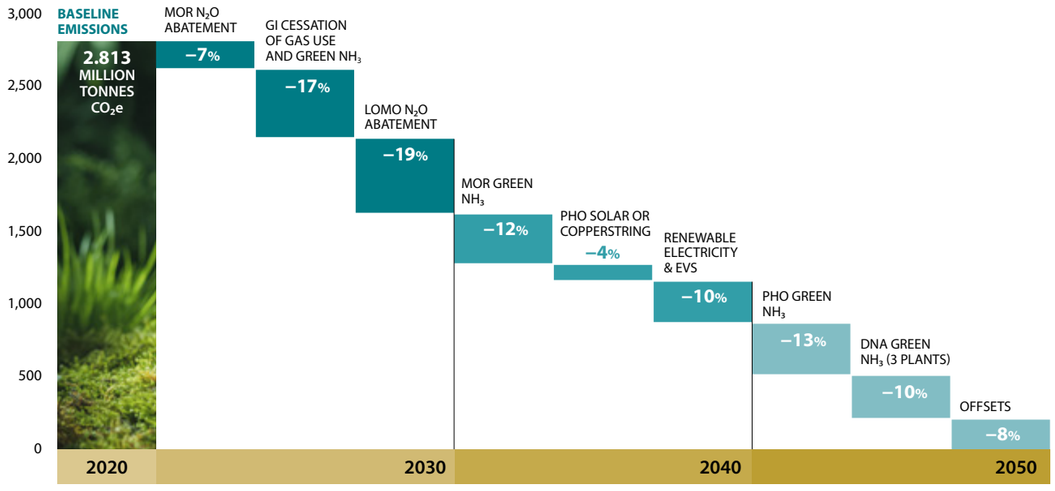
2.4.2.2 Our operational GHG transition plan

During 2024, we continued to progress a range of operational (scope 1 and 2) GHG reduction projects which provide a pathway to a Paris-aligned 42% reduction by 2030 against our 2020 baseline[1]. Our potential Transition Pathway to 2050 is taking shape, supported by these projects.

Potential Transition Pathways to Net Zero operational GHG by 2050 for IPL, and for our fertiliser and explosives businesses, are shown below with projects to 2030 well progressed. These projects are described on the following pages. While we continued to progress the Waggaman, Louisiana (WALA) CCS project until the sale of WALA in December 2023, early in this financial year, our baselines and pathways are shown without the WALA facility, as the sale of this asset is now complete, with its GHG emissions passing to the new owner.

The timing of the potential projects which may be required in our Transition Pathway after 2030 has been estimated using our climate-related scenarios. While the uptake of renewable electricity and electric vehicles is expected to occur progressively, for simplicity we have inserted the reductions associated with these as a single block at the time horizons our scenarios predict their uptake to be mostly complete.

Potential IPL operational GHG transition Pathway[1]



Key Enablers for the technologies required to decarbonise our operations are summarised below:

N_2O Abatement

- Policy incentives.
- Implementation of N_2O abatement requires plant shutdowns at specific sites, which are only available in certain years due to 3-4 year plant maintenance schedules.

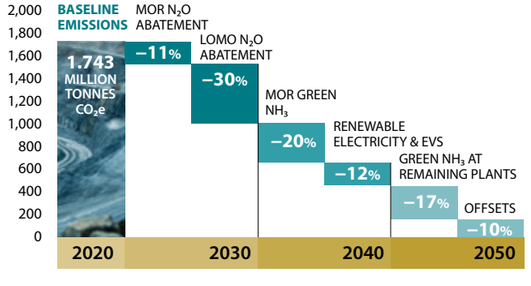
Green Ammonia (renewable hydrogen)

- Reductions in electrolyser capital costs through increased R&D spend and value manufacturing at scale.
- Large amounts of low-cost solar and wind supplied from the grid, or from behind-the-meter renewable energy installations where grid connectivity is limited.
- Well designed policy incentives.

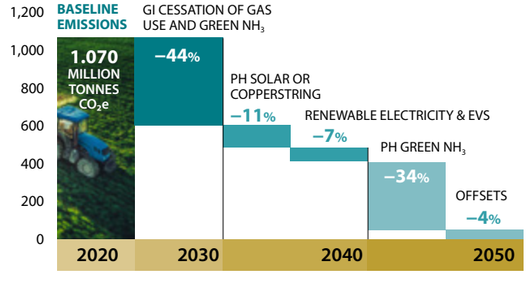
CCS

- Policy incentives.
- Well mapped and suitable geological formations located close to ammonia manufacturing sites (primarily in the US).
- Securing CCS offtake contracts.

Potential Dyno Nobel Transition Pathway



Potential IPF Transition Pathway



1. IPL's and Dyno Nobel's 2020 operational (scope 1 and 2) baselines have been adjusted for the sale of the Waggaman, Louisiana plant during this IPL financial year, in December 2023.

2.4.2.3 Our explosives business 2030 transition plan

Moranbah Tertiary N_2O Abatement Installation

11% **Reduction against Dyno Nobel 2020 baseline[1]**

The Dyno Nobel Moranbah nitric acid plant was built in Queensland in 2012 as part of the Moranbah ammonium nitrate manufacturing facility. The plant was built with secondary abatement installed, which reduces potential N_2O emissions by 50-60%, and has abated an estimated ~400,000 tCO_2e each year for the past nine years. Since these reductions were being achieved well before our 2020 baseline was set, further reductions require technology less commonly applied to nitric acid plants.

After investigation in 2021, IPL approved the installation of tertiary N_2O abatement at Moranbah and we are pleased to report that this was installed in March 2024 with an investment of $20m. This demonstrates the long lead times required for our major decarbonisation projects. Since its installation, the unit has been performing well and is abating up to 99% of N_2O process emissions, which are created during nitric acid manufacture, by removing them from the tail gas stream through catalytic conversion to naturally occurring nitrogen and oxygen. We estimate more than 200,000 tCO_2e will be abated annually at Moranbah. This will equate to a 7% reduction against IPL's 2020 baseline and an 11% reduction for the Dyno Nobel business against its 2020 baseline[1].

This project will underpin achievement of IPL's short-term absolute scope 1 and 2 reduction target of 5% by 2025.

LOMO Tertiary N_2O Abatement

30% **Reduction against Dyno Nobel 2020 baseline[1]**

Dyno Nobel's Louisiana, Missouri (LOMO) AN manufacturing facility has the Company's only nitric acid plant without some form of abatement already installed. For this reason, abatement of N_2O at LOMO has been under investigation for some time. Last year, the LOMO Tertiary N_2O Abatement Project passed through Front End Loading (FEL) stage, with $2.8m invested. During 2024, the project was approved for installation in 2025 and is expected to reduce scope 1 GHG by ~520,000 tCO_2e annually. This will decrease Dyno Nobel's global operational GHG by 30%, and IPL's by 19%, against their 2020 baseline[1]. It will also reduce the scope 3 GHG for customers who buy AN from this plant.

Gladstone Green Ammonia Project

Like our fertilisers business, our explosives business has a core competency in the manufacture, storage and transportation of ammonia and is well placed to play a role in developing green ammonia for a low carbon economy. Green ammonia is produced using hydrogen from water electrolysed using renewable energy, rather than hydrogen made from natural gas. This eliminates the need for natural gas as both a feedstock and an energy source, greatly reducing GHG.

Because the ammonia molecule is a carrier of hydrogen, green ammonia can potentially be used as a feedstock/fuel for green energy generation, or to provide green hydrogen solutions for other industries, and it is generally considered safer and more economic to handle and transport than hydrogen gas.

The last year has seen significant progress by IPL and our partners, Keppel Infrastructure and Marubeni Corporation, on the development of a green ammonia project at Gladstone in Central Queensland. Following early engineering studies with Keppel from 2021 to 2023, the consortium welcomed Marubeni Corporation in March 2024 and is currently finalising pre-front end engineering design (FEED) works for a 400,000 tonnes per annum ammonia plant with Thyssenkrupp Uhde. The Queensland Government and the Gladstone Ports Corporation have made land available in the Fisherman's Landing Precinct, where a new ammonia plant is proposed to be constructed and supplied by 200 tonnes per day of green hydrogen from the Central Queensland Hydrogen Project (CQ-H2).

Our collaborative efforts with CQ-H2 over the last two years have resulted in ammonia being submitted as the preferred offtake case for CQ-H2 in the Hydrogen Headstart application, with CQ-H2 being shortlisted for Headstart funding in late 2023. Ongoing activities to integrate the projects have resulted in the signing of a new MOU in September 2024, which will transition the ammonia project into the CQ-H2 project FEED program and create a top-tier international consortium comprising Stanwell Corporation, Iwatani Corporation, Marubeni Corporation, Keppel and IPL.

Subject to the required approvals, the project is on track to reach Final Investment Decision (FID) in late 2025, with our domestic offtake of green ammonia potentially supporting ammonium nitrate production at a greatly reduced GHG intensity. This, in turn, would provide us with an opportunity to support our mining customers' emerging demand for lower GHG products and services.

IPL's involvement with CQ-H2 also creates another opportunity associated with the energy transition. In addition to the introduction of a low GHG hydrogen feedstock into our supply chain, ammonia is being increasingly used for direct fuel applications such as ammonia engines, creating prospects for potential involvement in the energy sector in the future.

1. 2020 baselines have been adjusted for the sale of the Waggaman, Louisiana plant in line with best practice.

Sale of the Waggaman ammonia plant and CCS

In December 2023, early in our 2024 financial year, IPL completed the sale of our Waggaman, Louisiana (WALA) ammonia manufacturing facility to CF Industries Holdings, Inc. (CF). About 80% of WALA's ammonia is sold to other customers, with 20% used by Dyno Nobel's LOMO facility to manufacture AN explosives for the US market. To secure this supply and retain the asset's strategic value, a 25-year ammonia supply agreement was secured with CF for up to 200,000 short tons of ammonia a year.

Until the sale was completed, we continued to progress work towards implementation of a Carbon Capture Facility (CCF) designed to capture the pure stream of CO_2 created during the ammonia manufacturing process. Due to its high concentration, this CO_2 stream is much more economic to process than many other industries' CO_2 streams, with only drying and compression required before transport via pipeline to a permanent geological sequestration site.

Louisiana is an ideal site for CCS due to its geology, its existing CO_2 pipeline infrastructure, and a range of potential local partners with experience in using proven technology and management techniques to meet the very stringent regulatory requirements set by the US EPA for Class VI wells.

Following Memorandums of Understanding (MOUs) established in 2022 with several shortlisted parties to work through options for transport and deep well injection of the CO_2, internal selection of a preferred partner was made before the sale of WALA. Once confirmed, the chosen partner will need to work through the approval process for the Class VI injection well operation.

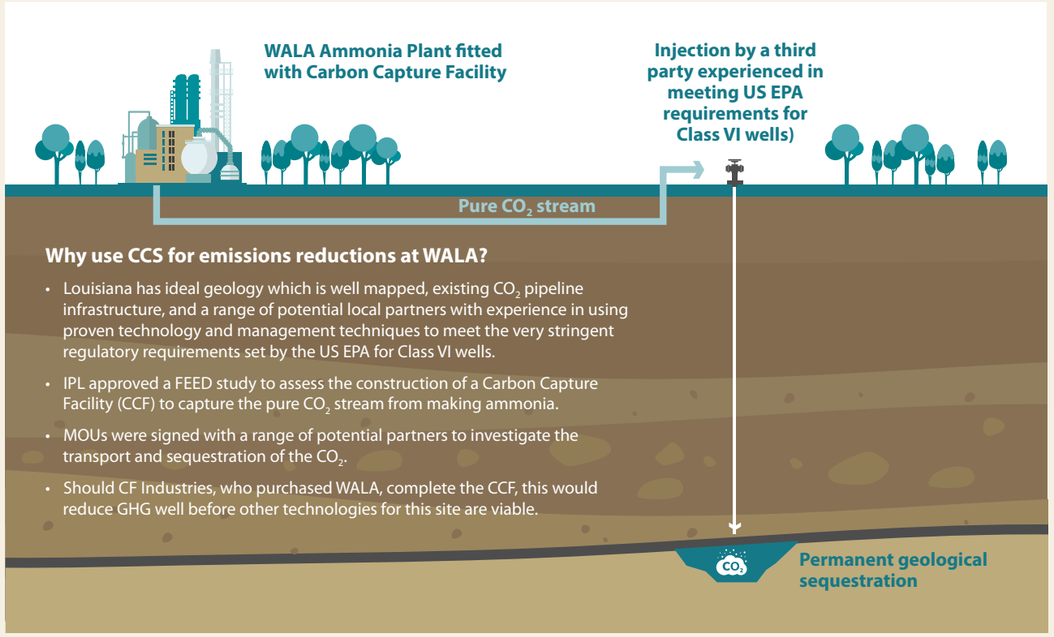
This CCS project would reduce CO_2 emissions from the plant by ~800,000 tCO_2 per annum and the targeted commissioning date of the CCF facility was 2026 at the time of the sale. Also at this time, **CF stated** that its mission is to provide clean energy to feed and fuel the world sustainably, and announced that it anticipates implementing CCS at the site on an accelerated timeline, increasing its network's low-carbon ammonia production capability and supporting Louisiana's and the US climate goals.

Impact on IPL's and Dyno Nobel's baseline GHG emissions

As a result of the sale agreement with CF, and in line with best practice, both IPL's and Dyno Nobel's 2020 baselines were reduced by the tonnes of CO_2e that the WALA facility contributed to our operational GHG in 2020. This is because the management of the ongoing scope 1 and 2 GHG from the plant was passed to CF's portfolio.

Because Dyno Nobel will be purchasing only a portion of the ammonia that WALA manufactures, our upstream scope 3 GHG will increase only marginally while our downstream scope 3 GHG will decrease by a much greater amount. The implementation of the CCS project by CF will further reduce our upstream scope 3 GHG from the manufacture of the tonnes we purchase.

WALA Carbon Capture and Permanent Sequestration



2.4.2.4 Our fertiliser business 2030 transition plan

Cessation of natural gas-based manufacturing and GI Green Ammonia project

44% Reduction against IPF 2020 baseline

This year, for the first time since 1969, there was no natural gas-based manufacturing at IPF's Gibson Island facility. The cessation of the use of natural gas to obtain hydrogen for ammonia production has already reduced IPL's GHG by approximately 450,000tCO2e or 44% against IPF's operational 2020 GHG baseline, which is 17% against IPL's global operational 2020 GHG baseline. Unlike the sale of WALA to a new owner, these GHG have permanently ceased to be emitted, which is recognised as a reduction against our baseline in line with best practice.

The Gibson Island Green Ammonia project is a partnership between IPL and Fortescue Future Industries (FFI) to investigate green ammonia production at the Gibson Island site.

Should it proceed, it would be Australia's first industrial scale green ammonia production facility, demonstrating existing infrastructure can be retrofitted to utilise zero-emissions energy sources.

Investigating the decarbonisation of electricity at our Phosphate Hill plant

11% Reduction against IPF 2020 baseline

The gas-fired power plant at our remotely located Phosphate Hill ammonia manufacturing plant makes up 11% of IPF's operational GHG. We continue to investigate options to decarbonise this aspect of our operations, including potential connection to **CopperString** 2032 for renewable electricity, or an on-site solar installation.

2.4.2.5 Our Scope 3 GHG and reduction strategy

Scope 3 emissions are indirect emissions which arise from facilities owned and operated by third parties associated with our value chain activities both upstream and downstream of our business. These GHG emissions are beyond a company's operating perimeter and operational control, making them more difficult to calculate and to influence.

For example, our upstream scope 3 GHGs include not only the emissions which arise from the manufacture of the products we buy, but also the emissions released by our suppliers, right back up the value chain to the GHG emissions arising from the extraction of the raw materials purchased by their suppliers to make the products that we buy, including the GHG arising from the transport used to deliver them to our gate. These are called 'cradle-to-gate' GHG emissions.

Our downstream scope 3 GHG emissions include the GHG arising from transport to deliver our products to customers, as well as the GHG emissions released when our customers use our products. We have several products designed to reduce customer GHG and continue to increase our product range. See the case studies on DeltaE and our Enhanced Efficiency Fertilisers (EEFs) on pages 54-55.

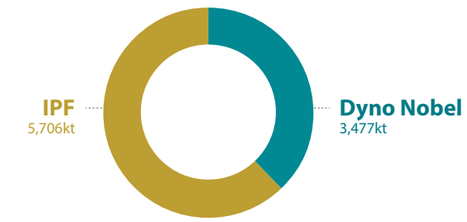
During 2024, our business units continued to integrate scope 3 GHG emissions management into their business strategies, making significant progress in our target to have systems in place by 2025 to track and manage Scope 3 as effectively as we track and manage other supplier and customer information. Key highlights this year include the following:

- Commencement of the mapping of business unit procurement and value chain processes which require integration of scope 3 information for purchasing decisions, in order to update these.
- Sending and receiving of supplier scope 3 GHG questionnaires to major global suppliers, with a redesign to include a GHG calculation template for suppliers who are calculating their GHG for the first time.
- The selection and on-boarding of a global GHG data management platform with a specific scope 3 module to assist our business units in tracking their scope 3 and modelling future impacts of various reduction strategies.
- Building of the very first electric Mobile Processing Unit (eMPU) complete with its own solar charging station. See page 54 for more details.
- Continued testing and development of the use of biodiesel and renewable diesel in our explosives products across the Americas and Asia Pacific.
- Formally registering an Expression of Interest with the Federal Government's Department of Climate Change, Energy, the Environment and Water to collaborate on the development of a method under the Australian Carbon Credit Unit (ACCU) Scheme to recognise the GHG reductions associated with the use of nitrogen inhibited fertiliser products, such as our EEFs.

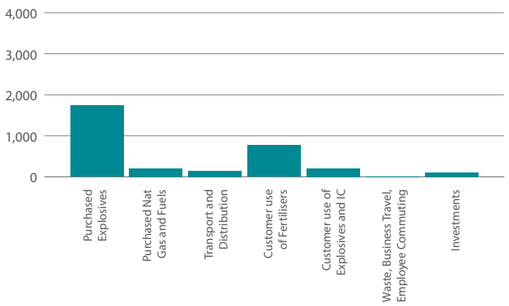
Our ability to set quantified, time-bound reduction targets for our scope 3 emissions depends on their source (i.e. where they arise in our value chain), the development of the technologies required to reduce them, the policy settings required to incentivise the adoption of these technologies, and in some cases, the development of recognised methodologies to measure the reductions.

Our scope 3 GHG sources throughout the value chain are presented on the following pages for each of our businesses, along with the reduction strategy for each source.

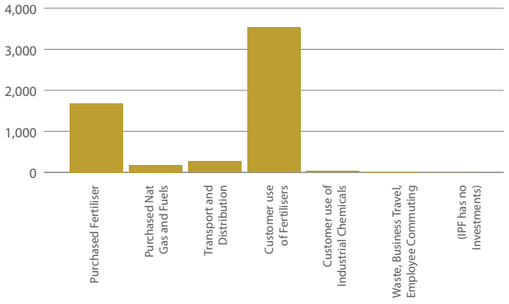
IPL Scope 3 by Business (kt CO_2e)



Dyno Nobel 2020 Scope 3 Baseline (kt CO_2e)



IPF Scope 3 2020 Baseline (kt CO_2e)



Dyno Nobel value chain scope 3 and reduction strategies

CATEGORY 1
PURCHASED GOODS: 1,738kt CO_2e

Strategy: Source explosives from low GHG manufacturers: WALA sale and offtake agreement will lower scope 3.

Next steps: Engage with suppliers to replace average cradle-to-gate Life Cycle Assessment (LCA) emission factors (EFs) with supplier-specific EFs and determine supplier decarbonisation plans.

Key enablers: The adoption of low GHG technologies, including green hydrogen, CCS and alternative feedstocks, by our suppliers will be required to reduce this source of scope 3.

CATEGORY 3
FUEL AND ENERGY: 209kt CO_2e

Strategy: Transition away from natural gas, petrol and diesel fuels, which have upstream scope 3 associated with their extraction, processing and transport to us. Switch to renewable electricity to eliminate upstream scope 3 from the extraction and processing of fossil fuels for power plants.

Next steps: Progress our green ammonia projects to reduce natural gas purchases. Switch to renewable electricity and EVs as they become available.

Key enablers: Grid decarbonisation, PPAs, EVs (including heavy vehicle fleet for Dyno Nobel Transport International).

CATEGORY 4
TRANSPORTATION: 141kt CO_2e

Strategy: Continuing to reduce our shipping GHG by selecting more efficient ships and decarbonised vessels through Rightship, working with road transport suppliers to reduce distances travelled and switching to EV powered contractor fleets as they become available.

Next steps: Engaging with transport contractors to obtain their specific emission factors and decarbonisation plans.

Key enablers: Electrification of contractor road and rail transport. LNG and green ammonia fuels for shipping.

CATEGORY 5, 6, 7
WASTE, BUSINESS TRAVEL AND EMPLOYEE COMMUTING: 9kt CO_2e

Strategy: Continue to reduce, reuse, recycle waste, and to promote EV novated leases to employees.

Key enablers: Incentives for EV adoption.

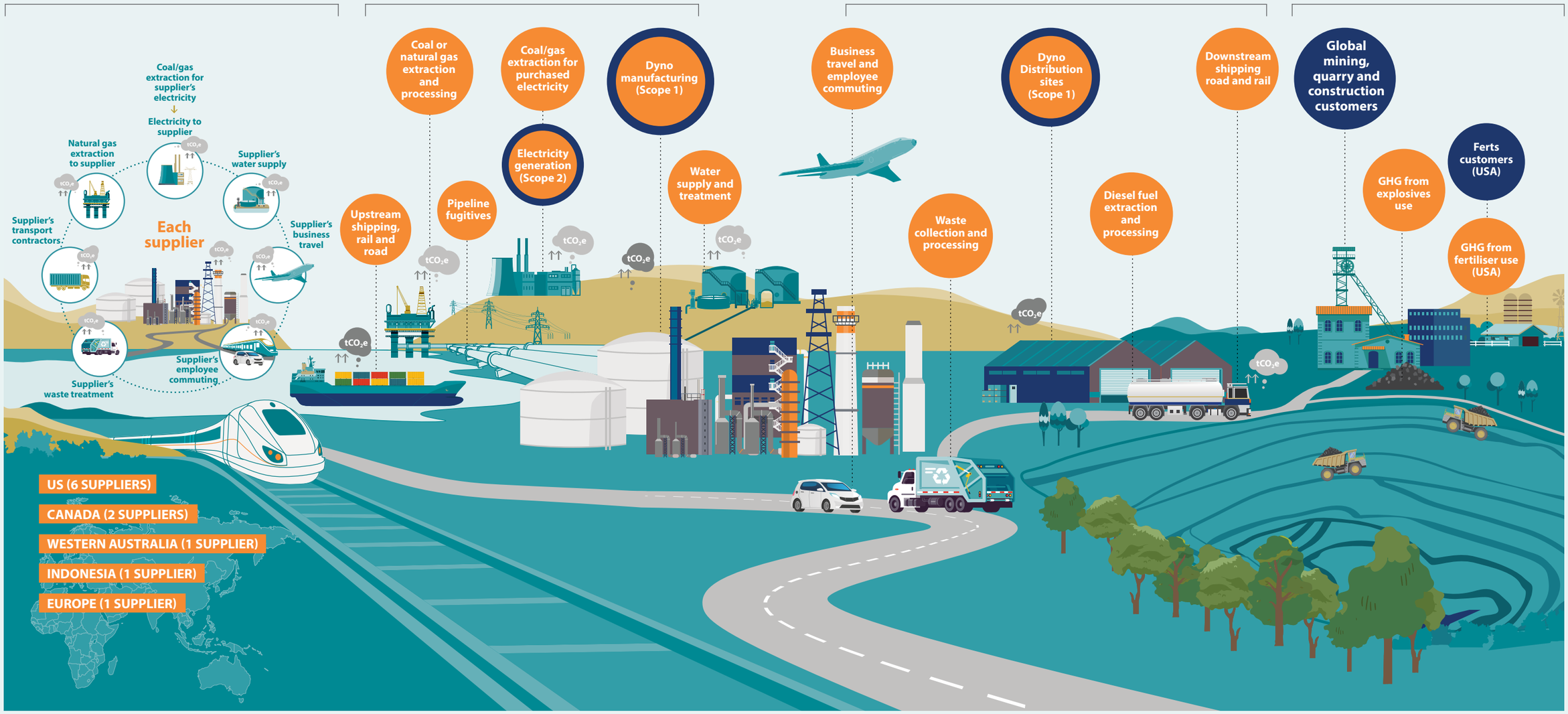
CATEGORY 11
USE OF SOLD PRODUCTS: 1,275kt CO_2e

Strategy: Our DeltaE explosives technology can be used in hard rock applications and is estimated to reduce CO_2e emissions in a typical blast by between 5% and 30%. A recent trial conducted in partnership with a mining customer achieved a 7% reduction, with a 25% reduction calculated against standard ANFO explosives, had they been used in the pre-trial period.

Next steps: Expanding our customer use of DeltaE. Completing build of our prototype electric MPU and solar charging station – see the case studies on page 54. Investigate EEF potential for US-based fertiliser customers.

CATEGORY 15
INVESTMENTS: 110kt CO_2e

Strategy: Share our knowledge in developing green ammonia and N_2O abatement projects with our GHG intensive JV partners.



Incitec Pivot Fertilisers value chain scope 3 and reduction strategies

CATEGORY 1
PURCHASED GOODS: 1,738kt CO_2e

Strategy: Source fertilisers from low GHG manufacturers.

Next steps: Engage with suppliers to replace average cradle-to-gate LCA EFs with supplier-specific EFs and determine supplier decarbonisation plans.

Key enablers: The adoption of low GHG technologies, including green hydrogen, CCS and alternative feedstocks, by our suppliers. We are proud to be demonstrating progress at our own facility at Gibson Island in Australia.

CATEGORY 3
FUEL AND ENERGY: 209kt CO_2e

Strategy: Transition away from natural gas, petrol and diesel fuels, which have upstream scope 3 associated with their extraction, processing and transport to us. Switch to renewable electricity to eliminate upstream scope 3 from the extraction and processing of fossil fuels for power plants.

Next steps: Progress our green ammonia projects. Switch to renewable electricity and EVs as they become available.

Key enablers: Grid decarbonisation, Copper String (northern Queensland), PPAs, EVs (excavators, front end loaders).

CATEGORY 4
TRANSPORTATION: 272kt CO_2e

Strategy: Continuing to reduce our shipping GHG by selecting more efficient ships and decarbonised vessels through Rightship, working with road transport suppliers to reduce distances travelled and switching to EV powered contractor fleets as they become available.

Next steps: Engaging with transport contractors to obtain their specific emission factors and decarbonisation plans.

Key enablers: Electrification of contractor road and rail transport. LNG and green ammonia fuels for shipping.

CATEGORY 5, 6, 7
WASTE, BUSINESS TRAVEL AND EMPLOYEE COMMUTING: 2kt CO_2e

Strategy: Continue to reduce, reuse, recycle waste and promote EV novated leases to employees.

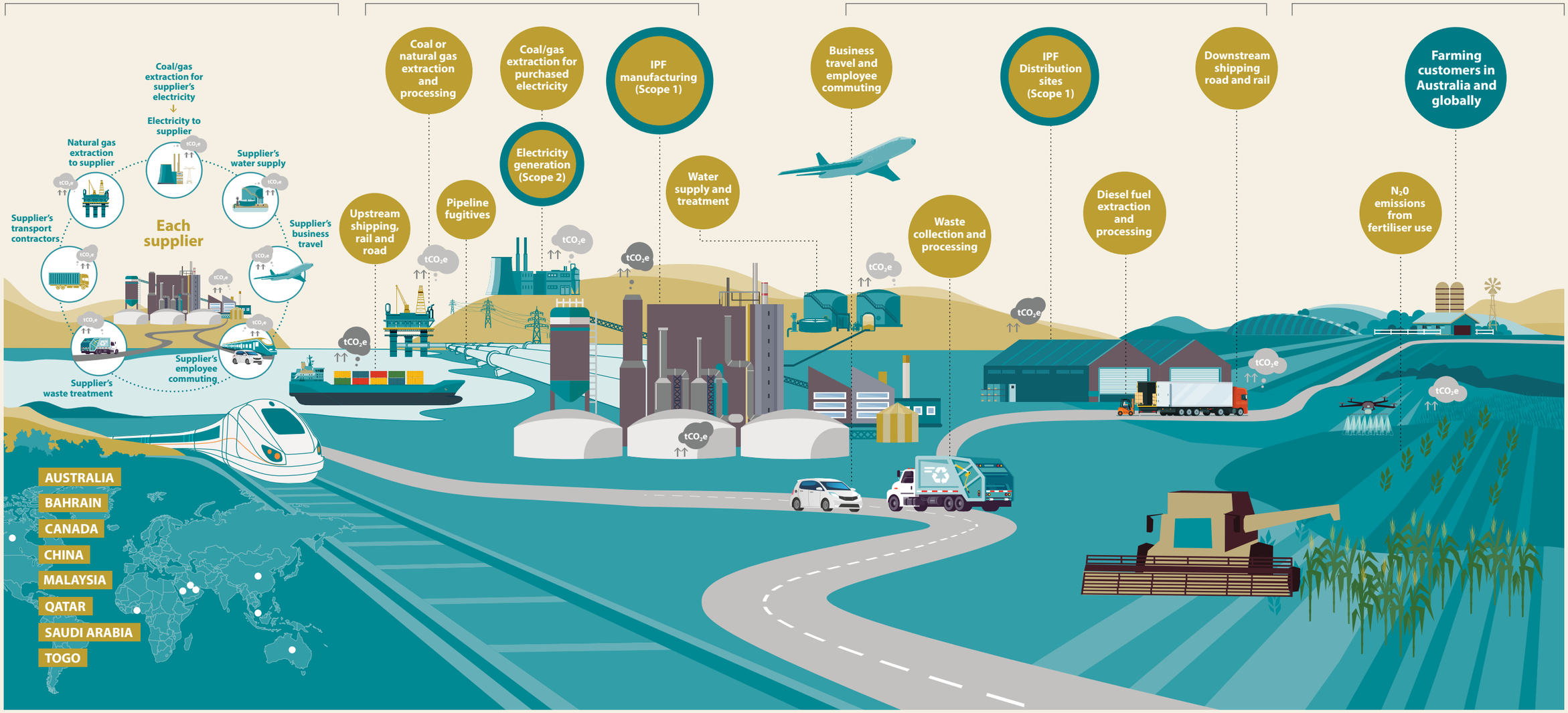
Key enablers: Incentives for EV adoption.

CATEGORY 11
USE OF SOLD PRODUCTS: 3,532kt CO_2e

Strategy: Enhanced Efficiency Fertilisers (EEFs) and promotion of the sustainable application of fertilisers. See the case study on page 55.

Next steps: Increase sales of EEFs. Continue research and collaboration for a recognised methodology to quantify the reductions associated with EEF use.

Key enablers: Incentives for farmers to adopt EEFs.



CASE STUDIES

Reducing the impacts of blasting with DeltaE

Our technology strategy is focused on working in partnership with our customers and innovating in ways that help them achieve their goals. To do this, we focus on delivering explosives products and services that:

- Improve the safety of mining and quarry operations;
- Increase our customers' sustainability through reducing environmental and social impacts; and
- Increase customer productivity and efficiency.

Differential Energy (DeltaE) is a proprietary explosives method which allows blasters to accurately vary the density of chemically gassed emulsion as it is being loaded into the blast hole, enabling the operator to load multiple densities of gassed emulsion throughout the same hole in order to match the unique geological characteristics present in the ground. Because the explosives energy is precisely targeted to match the rock properties, the energy loaded into the blast hole will match only what is required for an optimal blast, reducing total energy and therefore vertical movement at the surface, air overpressure and noise from the blast event. The formulation also contains a biofuel, further reducing GHG.

The use of DeltaE continues to result in reduced NOx emissions, reduced energy use and GHG, less dust, noise and ground vibration and increased productivity while reducing overall costs for our mining customers.

Designing and building the first electric MPU for our mining customers

Mobile Processing Units (MPUs) are used in mining operations across Australia to manufacture or blend bulk explosives at customer blast holes. Given Dyno Nobel's technology strategy is focused on safety, sustainability and productivity, this is not only applied to our products, but also to optimise their delivery.

Our DYNOBULK Flex MPU was released last year. Due to its larger carrying capacity and dual-purpose bins, miners need fewer trips to carry product to the blast hole. The Flex has three bins, compared to two in a standard MPU. One of these bins is for ammonium nitrate. Operators can choose to use the other two bins in a way that suits the mine's needs – either for more ammonium nitrate or, alternatively, for TITAN emulsion.

The lower number of turnarounds needed to achieve the same volumes of explosives loading not only reduces diesel fuel use, but also provides an additional safety benefit, as the user's interaction with heavy mining equipment is also reduced.

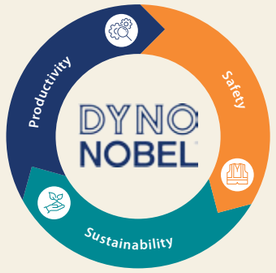
The DYNOBULK Flex MPU also minimises the assets and time traditionally needed to load a blast, further improving the safety of a site, with fewer trips between storage and bench.

The next step was to design and build our very first electric MPU, complete with its own solar charging station. Out prototype eMPU was assembled last year and is designed to carry DeltaE.

It has a 350kWh battery on-board, and is recharged using a 650kWh battery charging station which can draw power from solar and wind generation at the customer mine site. Power is optimised by regenerative braking, which uses the onboard motor as a generator as the fully loaded truck descends to the mine and uses the brakes, with just a 45 minute recharge time. Once the explosive product is loaded from truck to boreholes, the truck is lighter and uses less power to return uphill for reloading.

After road testing, the eMPU had the chemical processing unit fitted to the back in 2024 and will be ready for delivery and use in 2025.

We are proud to have designed and built our first electric MPU as part of helping our customers to decarbonise their mining operations.



Greenhouse Gas Reduction Assurance on DeltaE customer trial

During the 2022 calendar year, data was collected at a customer mine site following a switch from a standard bulk product (T5060) to using DeltaE. Data collected from 1 January to 31 December 2022, along with data from the 12-month period before the switch was initiated, allowed us to quantify and independently assure the GHG reduction associated with the use of DeltaE at this site, in comparison with the T5060 product that had previously been used.

The data showing the use of T5060 during the 12 months before the switch was initiated was used to inform the calculation of GHG emissions had the switch to DeltaE not been made, thereby establishing a baseline.

The emissions for DeltaE were 810 tCO_2e and would have been 873 tCO_2e had T5060 continued to be used. This is a reduction of 63 tCO_2e which has been subject to **Limited Assurance.** This is a reduction of 7%. See our calculations explained **here.**

Note: The GHG reduction was expected to be 25% as calculated by Dyno Nobel using the standard formulation of ANFO for the 12 months prior to the switch to DeltaE. However, it was discovered that 50% less diesel than the standard ANFO blend had been used for the 12 months prior to the use of DeltaE at this site, which reduced the baseline GHG. Had the standard ANFO blend been used in the period before the switch to DeltaE, the reduction in GHG would have been 25%. See our calculations explained **here.**

Reducing customer GHG as N_2O from nitrogen fertilisers

Climate change presents all businesses with significant challenges. For our farming customers, these include finding ways to feed a growing population by increasing yields of food and fibre on less cleared land while reducing GHG emissions and nutrient losses to waterways.

After applying nitrogen fertilisers, some of the nutrients can be lost from the soil under high moisture conditions where bacteria use nitrate nitrogen as an oxygen source. This process is termed denitrification and can produce N_2O, a greenhouse gas (GHG). Aside from contributing to global warming, denitrification also means that crops and pastures lose valuable nitrogen, potentially impacting farm production and quality.

IPF has developed a range of Enhanced Efficiency Fertilisers (EEFs) which keep nitrogen (N) in a stable form for longer, maximising N uptake by crops and reducing losses to the air as GHG and to waterways through leaching. We also promote soils testing to support precision application of nutrients, so that only what is needed to maximise each crop is applied.

Soils Testing and Precision Agriculture: Applying only what is needed at the right time, and in the right place

Soil health starts with building a strong base of soil, crop and nutrient knowledge. IPF's Nutrient Advantage Laboratory has been widely regarded as one of Australia's leading nutrient testing laboratories for over 60 years and has a broad range of National Association of Testing Authorities (NATA) accredited nutrient tests available.

Precision agriculture allows growers to grow more while using less fertiliser, and soil testing is the key – soil sampling allows productivity differences within a field to be considered and a variable rate application designed for optimising seeding and fertiliser applications. Less fertiliser application means less GHG emissions and less nutrient losses to waterways.

Nitrification inhibitor usage slashes on-farm GHG emissions

Research continues to demonstrate the ability for grain growers, graziers and horticulturalists to reduce GHG from fertilisers using EEFs. One project studied the impacts of using a combination of eNpower®, a proprietary nitrification inhibitor formulation containing dimethyl pyrazole glycolate (DMP-G) and EasyN®, a urea ammonium nitrate solution.

Results showed N_2O equivalent GHG emissions (kg/ha) more than halved over 36 days as a result of applying eNpower on EasyN applied soil, compared to just using EasyN.

IPF Vice President, Agronomy and Innovation, Charlie Walker, said IPF was at the frontier of helping farmers to minimise GHG emissions through good agronomy and Enhanced Efficiency Fertiliser (EEF) technology, and research into DMP-G was just one aspect of this work.

"DMP-G works by inhibiting nitrifying bacteria in the soil, slowing down the conversion of ammonium N to nitrate which is more prone to losses like denitrification and leaching," Mr Walker said.

"Where nitrogen losses are minimised, there is the potential for growers to have a positive return on investment on the use of inhibitors such as DMP-G.

"Alternatively, growers may be able to reduce nitrogen inputs under some circumstances.

"eNpower is commercially available now and we are optimistic that we will have more technology in the future that will help growers reduce their GHG footprint.

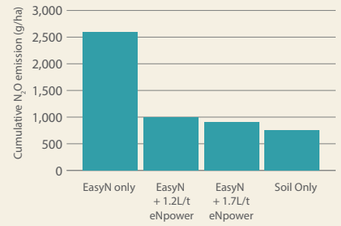
"IPF is continuing to invest in research to drive productivity and environmental outcomes for growers. **The ARC Research Hub for Smart Fertilisers** is a key investment to address the environmental and economic challenges created by the inefficiencies of traditional N fertilisers."

Several other field trials have also showed substantial reductions in GHG with the use of inhibitors. In partnership with Latrobe University, we tested a blend of organo-mineral fertilisers applied to celery crops. A 2023 trial demonstrated that the use of organo-mineral products treated with dimethylpyrazole reduced GHG as N_2O by between 55% and 82%, compared with the standard practice of applying chicken manure and inorganic fertiliser during the cropping cycle.

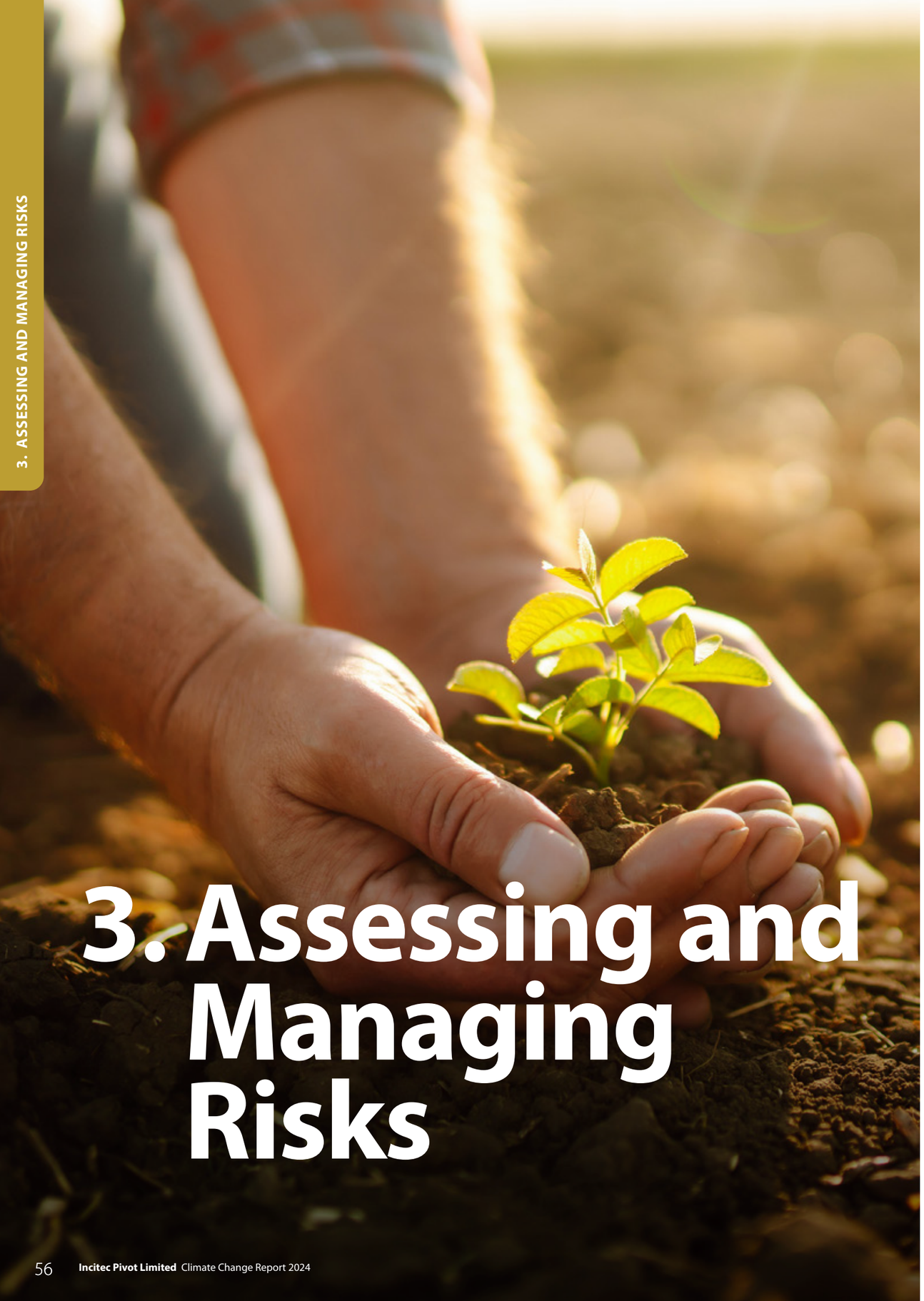
A separate trial aimed to quantify the effect of our Trigger humic acid granule when applied with NPKS fertiliser at a cabbage field in Bacchus Marsh. GHG emissions were sampled at pre-determined intervals using static chambers and analysed, with the results showing significant reductions in GHG with the use of Trigger.

EasyN + eNpower®

GHG over 36 days



Treatments	% reduction in GHG
EasyN only	0%
EasyN + 1.2L/t eNpower	41%
EasyN + 1.7L/t eNpower	64%



3. Assessing and Managing Risks

Assessing and managing risks

Climate change presents significant risks and opportunities for IPL's businesses, both from a transitional and physical risk perspective.

Transitional risks include those associated with carbon pricing, market shifts and other aspects associated with the decarbonisation and energy transition, and are described in section 2 of this report, along with physical risks, which are risks associated with extreme weather events or changes in temperature and rainfall patterns.

Effective management of climate-related risks involves not only identifying and quantifying the risks, but also integrating them into our overall corporate strategy and decision-making processes.

The IPL Group Risk Policy and Risk Management Framework ensures that all risks are addressed using a comprehensive risk management process consistent with the Australian/New Zealand Standard for Risk Management (AS/NZS ISO 31000:2018).

The Company's processes for assessing, identifying and managing material risks from climate change are in alignment with our overall Risk Management Framework.

3.1 Scenario analysis to inform identification of climate risks

Our climate scenarios align with five key TCFD scenario principles: plausible, distinctive, consistent, relevant and challenging.

The four bespoke scenarios developed and used in our 2024 climate-related risk assessment were as follows:

- **Scenario A: Fast Action (+1.5°C)**
- **Scenario B: Forecast Policy (+1.8°C)**
- **Scenario C: Current Trajectory (+2.7°C)**
- **Scenario D: Disrupted State (+>4°C)**

These climate scenarios were developed using the most recent information from the Intergovernmental Panel on Climate Change (IPCC), regulations, and global climate-related trends in the explosives and fertiliser industry, with a focus on Australia and the US, where most of our business operations are located. For each scenario a set of quantified metrics were developed including energy mix, key commodity and energy prices, developments in technology and renewable energy uptake to provide a stronger basis for climate risk assessment.

It should be noted that there are inherent limitations associated with scenario-based risk analysis, that each scenario relies on a range of assumptions, and that scenarios are not forecasts or predictions – all four scenarios cannot come to pass. Rather, a range of scenarios have been used in our assessment to understand a range of possible futures and associated risks.

For more details on the developed scenarios, refer to Strategy section 2.1. IPL Climate Scenarios, Table 1(Regional trends described in our scenarios) and Appendix 1 (Scenario references).

3.2 Assessment of climate-related risks

Climate risks and opportunities for our Dyno Nobel and IPF businesses were assessed against our developed scenarios using a comprehensive assessment process including interviews, workshops and validation sessions across our global businesses.

During the assessment, the scenarios were used as follows: the likelihood of an identified risk occurring depends on the future described in each scenario. The consequences of each risk, if it were to occur as described in a particular scenario, were then assessed using the IPL Risk Matrix. Each risk was assigned a consequence category – Health and Safety, Environment and Regulatory Compliance, Customer Service and Business Interruption, Reputation and/or Financial.

Material risks were identified using the IPL materiality criteria: any risk with a consequence category of 5 (an impact on EBIT of more than $20m or a fatality) or a risk rating above 27.

3.2.1 Assessment of transitional risks

Our 2024 quantitative climate change transitional risk assessment was supported by third-party experts who assessed our transitional risks against the regional trends in Table 1 (pages 20-27). This review served as the foundation for understanding the current and future risk landscape, identifying any potential changes to the risks identified in our 2021 assessment, and identifying any new risks or opportunities that may have emerged since the 2021 assessment.

Each of the developed scenarios include a set of quantitative and qualitative metrics to assess whether the respective climate risks and opportunities could materialise across two time periods: near future (2030) and mid-future (2050), to determine the consequence, and impact area to IPL's business.

3.2.2 Assessment of physical risks

Our 2024 quantitative climate change physical risk assessment was supported by the same specialist third-party experts as our transitional risk assessment, who considered a detailed analysis of climate hazards on IPL's operations. These used both daily and hourly climate projection data, specific to each geolocation of 15 assets. The climate projection scope included eight Australian assets located at Moranbah, Phosphate Hill, Mt Isa, Portland, Geelong, Gibson Island, Townsville Port and Helidon, and seven assets located in the US at Graham, Wolf Lake, LOMO, Cheyenne, St Helens, Simsbury and Carthage. Impacts from a range of future climate-related hazards[1] on our business operations and logistics were considered, including bushfire, rainfall and flooding, sea level rise and storm surges, temperature and humidity and wind. We also considered the risks associated with physical impacts on our agricultural customers.

The development of our 2024 climate risk scenarios and our assessment methodology relied on data drawn from both Global Climate Models (GCMs) and Regional Climate Models (RCMs) and focused on assessment of the physical climate hazards that may impact our assets, operations and logistics. For Australia the climate projection data were sourced from NARCliM1.5 (a set of IPCC-aligned global climate models downscaled using Australian regional models). For the US we utilised climate projection data sourced from two global data sources: the IPCC Climate Atlas and Climate Change Knowledge Portal.

Our physical risk assessment utilised two of the four IPL developed scenarios: Scenario C: Current Trajectory (+2.7°C) (RCP 4.5) and Scenario D: Disrupted state (+>4°C) (RCP 8.5). These were chosen for physical risk assessment due to greater physical risks being associated with greater degrees of warming. We assessed climate hazards over two different time horizons: 2030 (near future) and 2060 (mid-future) in alignment with the asset lifetime for the selected locations. To create each bespoke IPL scenario, we prioritised selecting the model that yields the highest projected value for near future and mid-future projections. Consequently, different models from NARCliM1.5 may be chosen for RCP4.5 and RCP8.5 scenarios, projecting varying degrees of dryness, wetness, or temperature. Because two different scenarios may have slightly different baseline values, we used an average between two scenarios to develop one baseline value. For the US the baseline period covered 1995-2014 according to the available data and the baseline for Australia covered 1960-1981.

Our responses to manage the identified risks and opportunities are included in Tables 4 and 7.

1 A climate hazard refers to any physical event or phenomenon that is caused or exacerbated by climate conditions and that has the potential to cause harm or damage to human communities, ecosystems, infrastructure, or other elements of the natural or built environment.

3.3 Climate risk management and monitoring

For the identified risks and opportunities, action steps were developed which included:

- The assigning of each strategic/transitional climate-related risk to an Executive Leadership Team level risk owner for management, and to ensure effective monitoring and prioritisation within that leader's team.
- The assigning of each physical/operational risk to a risk owner at the operations level, usually, the Operations Manager, to ensure effective monitoring and prioritisation of each risk at the applicable site. This will include ensuring that new risks are included in the site's risk register in 2025 to ensure each risk is being managed and reviewed annually along with other risks.
- Cross-referencing the identified climate-related risks with existing risks on the IPL risk register to identify if climate is a cause in changing the likelihood of an existing risk of occurring.
- An action to create a climate-change-specific risk category in 2025 to enable more effective reporting on the management of climate-related risks. These have previously been integrated into the existing IPL Risk Matrix categories of Health and Safety, Environment and Regulatory Compliance, Customer Service and Business Interruption, Reputation and/or Financial.
- An action to formally document the integration of strategic transitional risks into the strategy process in 2025. While these have been implicitly integrated into the strategy development and review process previously as described in Tables 2 and 5, formal documentation will ensure their annual review and continued inclusion in future years.

Climate-related risks are currently prioritised in the same way as any other risk in our risk register: according to likely timeframe, magnitude of impact and risk rating, and with the time required to implement the mitigation strategy also taken into account.

For key mitigation strategies and actions for each risk, see Tables 2-7 and the case studies in the following section.

3.4 Building our resilience to physical climate risk

As warming of the Earth's atmosphere and oceans is causing changes to regional climates, or permanent shifts in local weather conditions that are not uniform across the globe, the physical impacts will be different at different locations. For this reason, our scenario-based risk assessments considered the physical impacts on IPL's customer markets, and on 15 of our major operations on an individual and detailed basis.

The case studies below detail some of our responses to manage some of the identified physical risks. Other management strategies are summarised in Table 2.

CASE STUDIES

Developing silicon fertilisers for a warming climate

During 2024, we continued testing, with a view to commercialising, silicon fertilisers which have been shown to increase stress resistance in crops and replace silicon lost from soils through certain crops. Although silicon is generally not considered as an essential element in agriculture, the use of natural silicates may improve use efficiency of a range of nutrients including phosphorus for maintaining sustainable agriculture, especially if drought stress begins to impact crop production due to climate change.

Natural silicates have been shown to increase biomass yield and/or grain yields where water is scarce and, in the case of rice, have increased resistance to damage from typhoons[1]. Research to date indicates that crop tolerance of abiotic stresses, such as those related to drought conditions, can be increased and we continue to investigate the ways in which silicon may help future-proof agriculture in a world impacted by climate change.

1. Guntzer, F., Keller, C. and Meunier, J. (2012) Benefits of plant silicon for crops: a review. Agronomy for Sustainable Development, Springer Verlag/EDP Sciences/INRA, 2012, 32. (1), pp.201-213. ff10.1007/s13593-011-0039-8ff. ffhal-00930510.

Future-proofing water supplies in Brisbane and Geelong, Australia

Our scenarios describe long-term changes to rainfall patterns as a result of climate change in some geographies. For this reason, we complete an annual review of our manufacturing sites, using the World Resources Institute (WRI) Aqueduct Tool, to identify those at high risk in relation to water use. The WRI water tool has identified our Gibson Island and Geelong sites as being located in catchments currently subject to high (40-80%) baseline water stress and high 'Physical risk – Water Quantity' due to relatively large local populations and high interannual variability in rainfall. The Tool also predicts that baseline water stress in both catchments will likely double by 2030 due to climate change and population growth.

At Gibson Island, IPL worked with Seqwater, the Queensland Bulk Water Supply Authority, and Urban Utilities to enable the supply of recycled water to the IPL Gibson Island site. During 2021, we invested $4m in infrastructure, including a dedicated pipeline, to ultimately enable around 6,000kL per day of recycled water to be delivered to site for use. During 2022, 799,674kL of recycled water was used, replacing 32% of the site's municipal water use, and in 2023 this was 371,762kL. The site ceased natural gas based ammonia manufacture last year, greatly reducing the use of cooling water. However, should the GI Green Ammonia project proceed, recycled water will be used for electrolysis to produce hydrogen for green ammonia.

A similar recycled water project is under investigation for our Geelong site. These projects will assist in providing uninterrupted water supplies in the event that municipal water supplies become restricted; and will leave more water in municipal water supply dams for our communities.

CASE STUDIES (CONTINUED)

ARC research hub for smart fertilisers

With society facing the triple challenges of food security, environmental degradation and climate change, we recognise the need for research to develop next-generation fertiliser products that will improve nitrogen use efficiency to feed a growing population, while reducing nitrogen losses from food production systems to the environment, especially as greenhouse gases (N_2O).

The ARC Hub for Smart Fertilisers (funded as the Hub for Innovative Nitrogen Fertilisers and Inhibitors) is funded by the Australian Research Council under the Industrial Transformation Research Program (ITRP), in partnership with industry – IPL and Elders Rural Services – and two universities, The University of Melbourne and La Trobe University.

During 2024, the Hub has continued to work on improvements to the design and development of Enhanced Efficiency Fertilisers (EEFs). Taking a multidisciplinary approach, the research integrates agronomy and soil science with synthetic chemistry, chemical engineering, plant physiology, plant biochemistry and economics.

A primary research focus is engineering new fertiliser coatings for the controlled release of nutrients and inhibitors in a range of soil types, climatic conditions and diverse agroecosystems and land uses.

Granular urea is the most widely used form of nitrogen (N) fertiliser in agriculture. Urea is rapidly converted to ammonia through a reaction with water in the soil, and then to nitrate, which plants can then take up. However, if the conversion to ammonia occurs before urea is fully dissolved in the soil, ammonia can be lost to the atmosphere before plants can use it.

Metal-Phenolic Networks (MPNs) can provide a physical barrier against water, controlling the dissolution of urea and its release into soil reducing the risk of N losses. In 2024, this work continued with a focus on the incorporation of beneficial metals and inhibitors into metal phenolic networks.

Another research focus is on the development of a new suite of inhibitors, which are small synthetic molecules that slow the conversion of urea to ammonia by inhibiting the activity of the enzyme urease (urease inhibitors) or slowing the microbial autotrophic oxidation of ammonia to nitrite and nitrate (nitrification inhibitors). As of 2024, a range of new molecules are under evaluation.

The aim is to retain desirable forms of N in the soil for the plant, and limit N losses. These new inhibitors are intended to be tailored to different soils, climates and cropping systems, at the same time ensuring that their eventual degradation in the soil is environmentally benign.

The soil immediately around plant roots – the rhizosphere – is an especially active zone populated by billions of fungi, bacteria and other microbes. These microorganisms break down organic matter in the soil to produce nutrients that plants can use for growth and help plants to improve immunity and promote resistance to drought, salinity and N stresses.

Research shows that plants can influence how fungi and bacteria behave by sending chemical signals like sugars, organic acids, lipids and proteins, especially when lacking a specific nutrient or under stress. The research focuses on the identification and incorporation of these messengers into the coating of fertiliser beads. Beneficial microbes are then attracted by these messengers to the plant root, improving the absorption of N and promoting the resistance of a crop to environmental stresses.

EEF coatings may also be designed to include sensors that respond to the signalling molecules released by plants suffering from N stress. When the sensors detect these stress molecules in the soil, the fertiliser is then released via the coating.

By measuring the N loss pathways and yield benefits of existing and newly developed products in field trials, the agronomic, environmental and social benefits of the new fertiliser technologies developed by the Hub can then be evaluated.

The Hub will develop indicators of N losses to allow farmers to understand the full impact of their fertiliser management practices on their production and on the environment.

IPL is proud to be partnering in this important research to support food security into the future.

CASE STUDIES (CONTINUED)

Mitigating the risk of flooding at LOMO and Wolf Lake

Our Louisiana, Missouri (LOMO) ammonium nitrate manufacturing facility supplies explosives to the iron range in the US northern mid-west, up into Canada (Ontario and Quebec) and periodically into eastern US Pennsylvania and the Appalachian area. This site was identified by our scenario risk assessment as being at risk of supply chain interruptions due to an increased incidence of flooding, beginning in the short term.

This risk is closely monitored by site personnel from February to April each year with site monitoring processes ensuring 7 to 10 days' notice of heavy rainfall in the north that will come down the river, or blockages downstream which will cause local flooding. Once triggered, significant cross-functional collaboration between our supply chain, finance, manufacturing, nitrogen sales, logistics and environmental teams is set in motion, with twice-weekly meetings to implement the site's risk mitigation plan.

In 2019, when this site experienced a Mississippi high-water event, damage to the rail line interrupted rail services, which are used to transport product out of the site, from mid-March to the end of June. The risk mitigation plan was triggered in early March and product from the site was transferred to trucks. Arrangements with third-party transloading facilities along the rail line were put in place to transfer the product from truck to rail beyond the flood-damaged section. Although a brief plant outage did occur, the mitigation response was extremely successful, with a total EBIT impact of less than $US10m and no customers left short of product. Learnings from this event have further prepared the site for any future events.

During 2023 a flood specialist was engaged to re-evaluate the flood exposure at our Wolf Lake site in Illinois. Due to the previous assessment being based on an older survey map, the flood specialist used a GPS survey tool to more accurately measure levels, which highlighted that many were significantly lower than previously thought. This resulted in a number of recommendations in the final report to help mitigate the potential risk associated with future floods.

Mitigating supply chain risks associated with flooding events at Phosphate Hill

Our Phosphate Hill ammonium phosphate fertiliser manufacturing site is located in remote northern Australia, near a natural phosphate deposit. The site manufactures ammonium phosphate fertilisers for use along the eastern Australian coast and internationally. All of IPL's future climate-related scenarios describe hotter, wetter weather conditions in the short term, with an increase in the incidence and magnitude of flooding events due to climate change. While the site itself is not located in the flood zone, a single third-party operated rail line is used for supply into, and product transport out of, the site.

Disruptions to this rail line have increased in recent years due to flooding associated with the summer monsoon. In 2016, flood waters caused a derailment of sulphuric acid supply to the site, resulting in an $10m impact on EBIT; and in 2019, a 1-in-100-year flooding event damaged third-party rail infrastructure, interrupting rail services to the site for three months. This rail outage required a change from rail to road transport of product for the three months. Production was also halted once product storage was at capacity, with a total EBIT impact of $115m.

Following this event, a detailed review of contingency plans for rail interruptions at the site was completed. As a result, $3.6m was invested in building additional on-site and contingency storage so that future events will not lead to production interruptions. A dry truck unloading chute-conveyor and telehandler are hired for wet seasons, and a number of other process changes have been implemented which will allow IPL to better prepare for, manage and mitigate the risks associated with future rail interruptions, both minor and major. Had these contingencies been in place before the 2019 flooding event, it is estimated that the impact would have been reduced from $115m to approximately $30m (at 2019 pricing).

During the 2024 wet season, flooding associated with Cyclone Kirrily interrupted rail line services for the entire month of February. Due to the mitigation plans in place, the site responded quickly to transfer product load-out from rail to road and production at the site was reduced in line with contingency planning. The total impact of $18.7m was mostly due to lost margin and costs associated with the switch from rail to road.

3. RISK CASE STUDIES

4. Metrics and Targets

4. Metrics and targets

4.1 GHG reduction targets and progress

Our ambition is to achieve Net Zero by 2050. To ensure our strategy aligns with this long-term objective, we have also established short- and medium-term targets. These are set out below in Table 8.

Table 8: **IPL's operational GHG targets**

	SHORT-TERM TARGET	MEDIUM-TERM TARGET	NET ZERO AMBITION
Target name	**5% by 2025**	**25% by 2030**	**Net Zero by 2050 Ambition**
Metric used	Scope 1 and 2	Scope 1 and 2	Scope 1 and 2
Objective	5% absolute reduction by 2025 against 2020 baseline	25% absolute reduction by 2030 against 2020 baseline	Net Zero Ambition by 2050
Coverage	IPL's global Scope 1 and 2	IPL's global Scope 1 and 2	IPL's global Scope 1 and 2
2020 Baseline GHG (tCO_2e)[1]	2,813,273	2,813,273	2,813,273
Targeted GHG	2,667,356	2,105,807	0
2024 GHG (tCO_2e)	2,467,461	2,467,461	2,467,461
Milestones toward target	Installation of Moranbah Tertiary N_2O abatement in 2024 (7%)	Installation of Moranbah Tertiary N_2O abatement in 2024 (7%) and installation of LOMO Tertiary N_2O abatement in 2025 (19%)	See our Net Zero Pathway in section 2.4.2.2 Our operational GHG transition plan
Absolute or intensity base target	Absolute reduction target	Absolute reduction target	Ambition
Alignment	Not Paris aligned	Not Paris aligned	Paris aligned (1.5°C)

1 Our 2020 baseline has been restated due to the divestment of the Waggaman, Louisiana (WALA) ammonia facility, in line with best practice, as the GHG emissions from that facility have passed to the new owner.

4.1.1 Carbon credits

As shown in our Net Zero Pathway, IPL is focused on implementing the major capital projects required to reduce our operational GHG, rather than using credits to offset emissions. We estimate that credits will be required for 8% of residual GHG to reach Net Zero as we approach 2050.

In the June year-end 2024, IPL's Moranbah facility earned 63,529 Safeguard Mechanism Credits (SMCs) for emissions below its Emissions Intensity Baseline. Our Phosphate Hill site exceeded its Baseline by 40,841 tCO_2e and will apply for a Trade Exposed Baseline Adjustment, which, if successful, will reduce this exceedance.

It is planned that SMCs earned at Moranbah will be surrendered to settle the Phosphate Hill liability when it becomes due in the 2025 IPL financial year.

4.2 Metrics

4.2.1 Climate risk exposure metrics

METRIC	DESCRIPTION	2024
Climate-related transition risks	Number of assets identified as vulnerable to identified material climate-related transition	3[1]
	Percentage of assets identified as vulnerable to identified material climate-related transition risks	20%[2]
Climate-related physical risks	Number of assets identified as vulnerable to identified material climate-related physical risks	6
	Percentage of assets identified as vulnerable to identified material climate-related physical risks	40%[2]
Climate-related opportunities	Number of business units aligned with identified material climate-related opportunities	3
	Percentage of business units aligned with identified material climate-related opportunities	100%
Capital deployment	Amount of capital expenditure, financing or investment deployed towards managing identified material climate-related risks and opportunities	$27m

1. Includes assets vulnerable to potentially significant market shifts and assets currently impacted by carbon pricing. Does not include assets which could potentially be impacted by carbon pricing in the future, since different scenarios indicate that this may include either no assets or, potentially, all assets.
2. The number of assets identified divided by the number of assets assessed (expressed as a percentage) in our 2024 updated scenario based risk and opportunity assessment, as described on page 28 under '2.2 IPL climate risks and opportunities'.

4.2.2 Internal carbon price

An internal shadow carbon price has been included in capital expenditure assessments for projects at our major manufacturing sites in Australia since Australian Carbon Credit Units (ACCUs) were introduced in 2012, with the price reflecting the market price of ACCUs. In 2021, the Board formally approved the application of this carbon price to all future growth capital and investment decisions. We are continuing to embed this into our processes. The price is currently $34, and is projected to increase to $41 by 2026, $91 by 2030, $224 by 2040 and $347 by 2050. A range of carbon prices are also included in our scenario analyses.

4.2.3 Executive accountability and performance metrics

The People and Remuneration Committee of the Board provides oversight and advice in relation to the determination of remuneration policy and its application for senior executives, performance evaluation, the adoption of incentive plans, and various governance responsibilities related to remuneration. The Board has linked delivery of certain aspects of IPL's climate change strategy, and other environmental, social and governance (ESG) objectives relating to safety, energy efficiency and GHG emissions reduction, to Executive Key Management Personnel (KMP) remuneration outcomes for several years.

Short-term incentive (STI) plan

For 2024, key performance indicators (KPIs) relating to the management of carbon pricing risks, and other transitional risks and opportunities, were incorporated under a separate Sustainability and Climate Change component (10%) of 'at risk' STI objectives for all Executive KMP. These objectives were designed to align with IPL's climate change action, resilience, risk management and decarbonisation strategies, and to focus each executive on the key short-term objectives within their area of influence that contribute towards these.

To address the risks and opportunities associated with climate change, and specifically, carbon pricing risks; risks and opportunities associated with emerging customer demand for products manufactured with a lower carbon impact; risks and opportunities associated with Scope 3 GHG; and opportunities related to green ammonia, the 2024 STI for executives included performance conditions relating to the progression of operational GHG reduction projects, further development of pathways to Net Zero, Scope 3 GHG management strategies and opportunities associated with green ammonia. These included:

- KPIs related to the progression of the Gladstone Green Ammonia Project: During 2024, a new MOU was signed which will transition this project into the CQ-H2 project front end engineering design program and create a top-tier international consortium comprising Stanwell Corporation, Iwatani Corporation, Marubeni Corporation, Keppel and IPL. Subject to the required approvals, the project is on track to reach final investment decision in late 2025. This is a significant project that will both progress Australia's green hydrogen industry, and offer opportunities for IPL to further decarbonise our Moranbah ammonia plant.
- KPIs related to the Moranbah, Queensland tertiary N_2O GHG abatement project: This project was completed in 2024, reducing GHG by ~200,000 tCO_2e per year, eliminating the current risk of carbon pricing liabilities under the Safeguard Mechanism and reducing future risk. As a result of this project, the facility will be under its GHG baseline and will be eligible to earn Safeguard Mechanism Credits.
- KPIs related to the Louisiana, Missouri (LOMO) tertiary N_2O abatement project: A final investment decision was approved by the Board in August 2023, with work to meet 2025 installation continuing throughout 2024.
- KPIs related to progress on technology solutions to reduce GHG emissions: During 2024, these included completing the build of an electric MPU and solar charging station for mining customers, and the use of renewable fuels in bulk explosives products.
- KPIs related to progressing scope 3 GHG management strategies: these related to the integration of key suppliers and customers in the scope 3 strategies of our business units.

Long-term incentive (LTI) plan

With the practical and technological challenges related to managing our identified climate-related risks and opportunities in the longer term, a climate change related performance condition (10%) was introduced in the LTI Performance Rights Plan 2021/24 (LTI 2021/24) as an additional 'at risk' metric. This performance condition measures the Company's organisational performance against aspects of its climate change action strategy, resilience strategy, climate risk management strategy, and operational decarbonisation strategy and associated targets (announced in 2021). Key success will be driven by material progress against longer-term objectives attached to the Moranbah N_2O GHG abatement project and the Waggaman CO_2 sequestration project.

The climate change performance condition within the LTI 2022/25 is focused on demonstrating material progress towards IPL's GHG reduction targets (and identified pathway) and scope 3 emission reduction strategy. Progress is focused on the following areas:

- Moranbah N_2O Tertiary Abatement Project
- Waggaman CCS permanent geological CO_2 sequestration project
- Louisiana, Missouri Tertiary N_2O Abatement Project
- Gibson Island Green Ammonia Project in partnership with FFI

The performance period for the LTI 2021/24 Plan is 1 October 2021 to 30 September 2024 and is 1 October 2022 to 30 September 2025 for the LTI 2022/25 Plan. After expiry of the relevant performance period, the Board determines whether the performance conditions of the LTI Plan are satisfied based on testing of the performance measures at the end of the relevant performance period. To the extent that the performance conditions are satisfied during the performance period, the performance rights will vest or lapse.

Further information on the executive remuneration incentives and the STI performance outcomes for 2024 can be found in the Remuneration Report contained in **IPL's 2024 Annual Report**.

5. Appendices

1. Scenario references

1, IPCC: *Summary for Policy Makers,* **ht+C3:C38tps://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf**

2, Australian Academy of Science: *The risks to Australia of a 3 degree world*, **https://www.science.org.au/files/userfiles/support/reports-and-plans/2021/risks-australia-three-deg-warmer-world-report.pdf**

3, Mckinsey: *Navigating America's net-zero frontier – A guide for business leaders*, **https://www.mckinsey.com/capabilities/sustainability/our-insights/navigating-americas-net-zero-frontier-a-guide-for-business-leaders**

4, Decarbonising the U.S economy by 2050, **https://www.energy.gov/eere/articles/decarbonizing-us-economy-2050**

5, EPA: *Future of Climate change US*, **https://climatechange.chicago.gov/climate-change-science/future-climate-change#:~:text=Key%20U.S.%20projections,emissions%20scenario%20and%20climate%20model**

6, IPCC: *Summary for Policymakers – 1.5 degrees*, **https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SPM_version_report_LR.pdf**

7, CSIRO: *Electric vehicle projection 2023: update to the 2022 projections report*, **Microsoft Word - CSIROEVreport_20231219.docx (aemo.com.au)**

8, IPCC: Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty,* **SRCCL_Technical-Summary.pdf (ipcc.ch)**

9, Department of Industry Science and Resources: *Australian Agricultural Emissions Projections to 2050,* **Australian Agricultural Emissions Projections to 2050.pdf (climatechangeauthority.gov.au)**

10, NREL: *Standard Scenarios 2023*, **https://scenarioviewer.nrel.gov/?project=03ad535d-f0ed-4a6b-8323-c582a606e92c&mode=view&layout=Default**

11, IEA: *World Energy Outlook 2023 Tables for Scenario Projections,* **WEO2023_Free_Dataset.xlsx**

12, IEA: *Critical Minerals Market Review 2023,* **https://www.iea.org/reports/critical-minerals-market-review-2023**

13, Nature: *Crop switching reduces agricultural losses from climate change in the United States by half under RCP 8.5,* **Crop switching reduces agricultural losses from climate change in the United States by half under RCP 8.5 | Nature Communications**

14, AEMO: *Draft 2024 Integrated System Plan,* **draft-2024-isp.pdf (aemo.com.au)**

15, USDA: *Climate Change, Global Food Security, and the U.S. Food System,* **FullAssessment.pdf (usda.gov)**

16, NIH: *Current guidance underestimates risk of global environmental change to food security,* **Food Security, Climate Change, and Health : Current guidance underestimates risk of global environmental change to food security - PMC (nih.gov)**

17, IPR: *Preparing financial markets for climate-related policy and regulatory risks December 2021*, **IPR FPS 2021: Energy and Land use System Results Summary [download (unpri.org)**

18, BOM: *State of Climate 2022,* **State of the Climate 2022: Bureau of Meteorology (bom.gov.au)**

19, World Energy Outlook 2023, **World Energy Outlook 2023 (windows.net)**

20, Swiss Re Institute: *The economics of climate change: no action not an option,* **swiss-re-institute-expertise-publication-economics-of-climate-change.pdf (swissre.com)**

21, Deloitte: *Update to the economic costs of natural disasters in Australia Australian Business Roundtable for Disaster Resilience & Safer Communities,* **deloitte-au-economics-abr-natural-disasters-061021.pdf**

22, IPR: *Quarterly Forecast Tracker Update of energy and land use policy developments July 2023 to March 2024,* **Content breakdown of IPR QFT Slides (transitionmonitor.com)**

23, IPCC: Our world in data: *World population,* **IPCC Scenarios Data Explorer - Our World in Data**

24, IPCC: Our world in data: *Global carbon dioxide emissions,* **Our world in data ipcc scenarios**

25, IPCC: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change,* **Summary for Policymakers (ipcc.ch)**

26, McKinsey: *What a 1.5-degree pathway would take,* **How global business could mitigate climate change | McKinsey**

27, Deloitte: *Australian and Global Hydrogen Demand Growth Scenario Analysis,* **Australian and Global Hydrogen Demand Growth Scenario Analysis COAG Energy Council – National Hydrogen Strategy Taskforce 2019**

28, Principles of Responsible Investment: IPR, **What is the Inevitable Policy Response? | Thought leadership | PRI (unpri.org)**

29, IPCC: Our World in data: *Global crop demand,* **IPCC Scenarios Data Explorer - Our World in Data**

30, IPCC: *Special Report Chapter 5: Food Security,* **IPCC: Special report Climate Change and Land**

31, Moody's Analytic: *The Economic Implications of Climate Change,* **The Economic Implications of Climate Change**

32, IPR: *2023 Policy Forecast and Forecast Policy Scenario Summary Results,* **IPR_Summary_2023.pdf (transitionmonitor.com)**

33, Climate Impacts on Agriculture and Food Supply, **Climate Impacts on Agriculture and Food Supply | Climate Change Impacts | US EPA (chicago.gov)**

34, RCP4.5: a pathway for stabilization of radiative forcing by 2100, **RCP4.5: a pathway for stabilization of radiative forcing by 2100 | Climatic Change (springer.com)**

35, SSP Public Database, **SSP Database (iiasa.ac.at)**

36, The Equation, **https://blog.ucsusa.org/elliott-negin/ask-a-scientist-its-getting-easier-for-us-car-owners-to-go-electric/**

37, SPP Data Base, **https://tntcat.iiasa.ac.at/SspDb/dsd?Action=htmlpage&page=40**

38, World Energy Outlook 2022, **World Energy Outlook 2022**

39, ScienceDirect: *A watershed-scale assessment of climate change impacts on crop yields in Atlantic Canada,* **A watershed-scale assessment of climate change impacts on crop yields in Atlantic Canada - ScienceDirect**

40, Shared Socioeconomic Pathways Database, **SSP Database (iiasa.ac.at)**

41, ScienceDirect: Fossil-fuelled development (SSP5): *An energy and resource intensive scenario for the 21st century*, **Fossil-fuelled development (SSP5): An energy and resource intensive scenario for the 21st century - ScienceDirect**

42, Developing Detailed Shared Socioeconomic Pathway (SSP) Narratives for the Global Forest Sector, **ja_2019_prestemon_003.pdf (usda.gov)**

43, International Energy Agency: *Global Energy Climate Model,* **https://iea.blob.core.windows.net/assets/ff3a195d-762d-4284-8bb5-bd062d260cc5/GlobalEnergyandClimateModelDocumentation2023.pdf**

44, CSIR: *Carbon emissions at a record high, new report finds,* **Carbon emissions at a record high, new report finds - CSIRO**

45, 2023: A historic year of U.S. billion-dollar weather and climate disasters, **https://www.climate.gov/news-features/blogs/beyond-data/2023-historic-year-us-billion-dollar-weather-and-climate-disasters**

46, Deloitte: *Climate scenarios and consumer business,* **https://www2.deloitte.com/uk/en/pages/consumer-business/articles/climate-scenarios.html**

47, Chapter Eight: *Projections (And Recent Trends): Marine And Coasts (Climate Change in Australia Report),* **Climate change in Australia | Regional report**

48, Deloitte: *Australian and Global Hydrogen Demand Growth Scenario Analysis,* **https://www.dcceew.gov.au/sites/default/files/documents/erratum-coag-report.pdf**

49, Australian Baseline Sea Level Monitoring Project (BOM.gov.au), **Australian Baseline Sea Level Monitoring Project Hourly Sea Level and Meteorological Data (bom.gov.au)**

50, NSW Department of Climate Change, Energy, the Environment and Water: *NARCliM climate projections,* **Other climate projections available for NSW | AdaptNSW**

51, Our World in Data, **https://ourworldindata.org/land-use**

52, Nitrogen Use Efficiency as an Agro-Environmental Indicator, **OCED Nitrogen Use Efficiency**

53, United Nations, **https://press.un.org/en/2023/sc15318.doc.htm**

54, Bowles DC, Butler CD, Morisetti N. *Climate change, conflict and health*. J R Soc Med. 2015 Oct;108(10):390-5., **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4622275/#:~:text=Many%20analysts%20link%20climate%20change,failure%3B%20and%20major%20regional%20conflicts.**

55, Sulfur: A potential resource crisis that could stifle green technology and threaten food security as the world decarbonises, **https://rgs-ibg.onlinelibrary.wiley.com/doi/pdf/10.1111/geoj.12475**

56, Yale Climate Connections, **How climate change is affecting every U.S. region**

57, Stanford Report: *How much climate change affects the risk of armed conflict,* **Does climate change cause armed conflict? | Stanford Report**

58, Food and agriculture organisation for the United Nations, **Food and agriculture projections to 2050 | Global Perspectives Studies | Food and Agriculture Organization of the United Nations (fao.org)**

59, TCFD: *Recommendations of the Task Force on Climate-related Financial Disclosures,* **https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf)**

60, National Climate Assessment: Southwest Global Change, **https://nca2018.globalchange.gov/chapter/25/**

61, Picard, C.J., Winter, J.M., Cockburn, C. et al. *Twenty-first century increases in total and extreme precipitation across the Northeastern USA,* **Twenty-first century increases in total and extreme precipitation across the Northeastern USA | Climatic Change (springer.com)**

62, CDP: *Technical Note on the TCFD,* **CDP-TCFD-technical-note.pdf**

63, ABS: *National Population 2023,* **National, state and territory population, September 2023 | Australian Bureau of Statistics (abs.gov.au)**

64, U.S and Global Population Clock, **https://www.census.gov/popclock/**

65, Energy Information Association, **Frequently Asked Questions (FAQs) - U.S. Energy Information Administration (EIA)**

66, International Monetary Fund, **https://www.imf.org/external/datamapper/NGDPD@WEO/AZQ**

67, IEA, **Ammonia Technology Roadmap – Analysis - IEA**

68, Science Direct, **https://www.sciencedirect.com/science/article/pii/S0959378016303399#sec0050**

69, Australian Energy Market Regulator, **https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-inputs-assumptions-and-scenarios-report.pdf**

70, Inevitable Policy Response Forecast Policy Scenario 2021 (IPR FPS 2021): *Energy and Land Use System Results Summary,* **download (unpri.org)**

71, IPCC Synthesis Report (2023), **IPCC_AR6_SYR_FullVolume.pdf**

72, IAG Limited, **https://www.iag.com.au/natural-disaster-costs-reach-39-billion-year-2050**

73, Carbon Brief: Clear on Climate, **https://www.carbonbrief.org/analysis-why-us-carbon-emissions-have-fallen-14-since-2005/**

74, Climate Change in Australia: *Technical Report*, **Climate change in Australia | Regional Report**

75, Bushfire Weather in Southeast Australia: Recent Trends and Projected Climate Change Impacts, **https://www.researchgate.net/publication/228681928_Bushfire_Weather_in_Southeast_Australia_Recent_Trends_and_Projected_Climate_Change_Impacts**

2. Risk management KPIs

METRICS USED TO ASSESS AND MANAGE CLIMATE-RELATED RISKS AND OPPORTUNITIES				
PHYSICAL RISKS	**2020**	**2022**	**2023**	**2024**
Financial impact due to weather-related events	$0	$4m (Flood impacts – Australia)	$0	$18.7m (Cyclone Flood Impact – Australia)
Percentage of freshwater withdrawn in regions with high or extremely high baseline water stress	4.8%	3.1%	1.0%[1]	0.2%[1]
Percentage of withdrawals where water management is considered to be a material issue	23%	25.1%	21.6%[2]	23.7%
Water withdrawal intensity (kL/t product manufactured for sale)	11.5	13.0	14.9	22.1[3]
Net water use intensity (kL/t product manufactured for sale)	3.8	5.1	5.9	9.1[3]
PHYSICAL OPPORTUNITIES	**2020**	**2022**	**2023**	**2024**
Increasing demand for climate adaptation products – Revenues from high efficiency fertilisers (Green Urea and eNpower)	$17.6m	$27.8m	$33.5m	$30.7m
TRANSITION RISKS	**2020**	**2022**	**2023**	**2024**
GHG intensity per tonne ammonia produced (tCO_2e per t ammonia)[1]	1.99	1.97	1.91	2.09[3]
% reduction in GHG intensity per tonne ammonia produced since 2015	10%	11%	11%	2%[3]
Proportion of operational (scope 1 and 2) emissions covered by carbon pricing schemes	41%	43%	36%	38%
Number of major manufacturing facilities included in regional or national carbon pricing schemes	3	3	4	3
Number of major manufacturing facilities financially impacted by regional or national carbon pricing schemes	1	1	1	1
% Revenues – supply of explosives to thermal coal mining: Americas	21%	21%	12%	14%
% Revenues – supply of explosives to thermal coal mining: Asia Pacific	5%	3%	2%	3%
TRANSITION OPPORTUNITIES	**2020**	**2022**	**2023**	**2024**
Number of climate-related research projects funded	3	4	4	4
Number of patents held for reduced carbon products/technologies	10	10	10	10

1 Reductions are mostly due to the Gibson Island Recycled Water project, with the cessation of natural gas based manufacturing at this site during 2023 also a contributing factor.

2 Restated due to a typographical error in 2023.

3 Increase in intensity is due to the sale of the very efficient Waggaman, Louisiana ammonia manufacturing facility.

3. Energy and GHG data

ENERGY USE (GJ)				
	2020	2022	2023	2024
Energy Use (GJ)	70,071,149	67,223,544	61,580,676	34,811,846
OPERATIONAL GHG EMISSIONS (tCO_2e)	**2020**	**2022**	**2023**	**2024**
Scope 1 emissions (tCO_2e)	3,646,215	3,550,961	3,595,407	2,247,427
Scope 2 emissions (tCO_2e)	345,181	338,223	242,798	220,033
Operational GHG Emissions	**3,991,396**	**3,889,184**	**3,838,204**	**2,467,461**
VALUE CHAIN GHG EMISSIONS (kt CO_2e)	**2020**	**2022**	**2023**	**2024**
Total scope 3 emissions (kt CO_2e)	**9,994**	**9,156**	**8,154**	**8,460**
Category 1. Purchased goods and services	3,151	2,759	2,916	3,448
Category 2. Capital goods	Not material. Not calculated.			
Category 3. Fuel and energy-related activities	657	606	732	320
Category 4. Upstream transportation and distribution	413	339	349	340
Category 5. Waste generated in operations	6	6	5	7
Category 6. Business travel	7	7	7	8
Category 7. Employee commuting	0.7	0.7	0.7	0.7
Category 8. Upstream leased assets	Not applicable.			
Category 9. Downstream transportation and distribution	Included in Category 4.			
Category 10. Processing of sold products	Not material. Not calculated.			
Category 11. Use of sold products				
Fertilisers	5,204	4,852	3,636	3,802
Explosives	303	313	316	305
Industrial Chemicals	142	164	96	131
Category 12. End of life treatment of sold products	Not applicable.			
Category 13. Downstream leased assets	Not applicable.			
Category 14. Franchises	Not applicable.			
Category 15. Investments	110	110	97	100

4. Scope 3 GHG calculation methodology

'Scope 3' is the term used to describe the indirect GHG emissions resulting from activities in our value chain but outside of our operational control. They include 'upstream' emissions related, for example, to the extraction of the natural gas we use and the production of the materials we purchase for use at our operations, and 'downstream' emissions which arise from customer use of the products we supply.

They also include the emissions arising from operations in which IPL owns an interest but does not have operational control (see category 15 in the table below). The GHG Protocol Corporate Value Chain (scope 3) Accounting and Reporting Standard further categorises scope 3 emissions into 15 distinct categories. We have calculated scope 3 emissions for our business according to these categories.

The table below describes the calculation boundaries (including any exclusions of particular emissions sources within a category), methodologies, assumptions and references used to calculate the emissions estimate for each relevant scope 3 category for the years 2020, 2021, 2022 and 2023. In categories where scope 3 emissions have not been calculated, the basis for excluding the category is provided under 'Explanation'.

SCOPE 3 STANDARD EMISSIONS CALCULATION ASPECT	IPL METHODOLOGY
CATEGORY 1: PURCHASED GOODS AND SERVICES (EXCLUDING CAPITAL GOODS)	
Category description	Upstream (i.e. cradle-to-gate) GHG emissions from goods and services purchased or acquired by the reporting company in the reporting year, where not otherwise included in categories 2-8.
Calculation status	Material. Calculated.
Calculation boundary	This category covers emissions generated upstream of IPL's operations associated with the manufacture of purchased fertilisers, explosives and chemical products, from the moment resources are mined, extracted, or grown to make these products, through all processing, manufacturing and transport to the exit at our suppliers' gates. The manufacture of many of these products, such as ammonia-based fertilisers and explosives, are classified as Emissions Intensive Trade Exposed (EITE) activities under the Australian National Greenhouse and Energy Reporting (NGER) system and are the most material contributors to this category.
Exclusions	Only the emissions associated with purchased chemical products (and the proportion of expenditure and volume they represent) are included. Due to the high emissions intensity of these products, these sources are estimated to include the majority of IPL's scope 3 emissions in this category.
Calculation methodology	Total tonnes purchased of each material is extracted from IPL's internal purchasing system for each financial year period. A scope 3 emissions factor specific to each material was then applied per tonne (see 'References' below).
Data sources	'Annual tonnes purchased' data is extracted from the IPL internal system that tracks all external spend.
Emissions factor references	» GHG Protocol Technical Guidance for Calculating scope 3 Emissions (v1): Supplement to the Corporate Value Chain scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013; **https://ghgprotocol.org/scope-3-technical-calculation-guidance** » National Greenhouse Accounts Factors: Australian National Greenhouse Accounts, October 2020; Australian Government Department of Industry, Science, Energy and Resources; 2020; **https://www.industry.gov.au/sites/default/files/2020-10/national-greenhouse-accounts-factors-2020.pdf** » EcoInvent (licensed database) **ecoinvent.org** » Wood, S. & Cowie, Annette. (2004). A Review of Greenhouse Gas Emission Factors for Fertiliser Production; **https://www.researchgate.net/figure/Greenhouse-Gas-Emission-Factors-for-Phosphate-Fertilisers_tbl4_235704822**

SCOPE 3 STANDARD EMISSIONS CALCULATION ASPECT	IPL METHODOLOGY
CATEGORY 2: CAPITAL GOODS	
Category description	Upstream (i.e. cradle-to-gate) emissions from the extraction, production and transportation of capital goods purchased or acquired by the reporting company in the reporting year.
Calculation status	Not material. Not calculated.
Explanation	Based on industry intensity factors applied to IPL's annual capital goods expenditure, emissions from this category are not considered to be material.
CATEGORY 3: FUEL AND ENERGY RELATED ACTIVITIES	
Category description	Emissions related to the extraction, production and transportation of fuels and energy purchased or acquired by the reporting company in the reporting year, not already accounted for in scope 1 or scope 2.
Calculation status	Material. Calculated.
Calculation boundary	This category covers emissions arising from the extraction, production and delivery of fuels, including diesel, gasoline, LPG, greases, oils and lubricants, and electricity purchased by the operations over which IPL has operational control. Due to IPL's use of natural gas as both an energy source and a feedstock for hydrogen to make ammonia, the emissions associated with the upstream extraction, processing and pipeline delivery of natural and coal seam gas, including fugitive emissions, are material contributors to this category.
Exclusions	None.
Calculation methodology	Total energy and fuels purchased (volumes) have been multiplied by a scope 3 emission factor specific to each fuel.
Data sources	For natural gas (GJ) and electricity (kWh) purchased, data is collected from invoices. For all other fuels, 'annual volumes purchased' data is extracted from the IPL internal system that tracks all external spend.
Emissions factor references	» GHG Protocol Technical Guidance for Calculating scope 3 Emissions (v1): Supplement to the Corporate Value Chain (scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013; **https://ghgprotocol.org/scope-3-technical-calculation-guidance** » National Greenhouse Accounts Factors: Australian National Greenhouse Accounts, October 2020; Australian Government Department of Industry, Science, Energy and Resources; 2020; **https://www.dcceew.gov.au/sites/default/files/documents/national-greenhouse-accounts-factors-2020.pdf** » National Inventory Report 2018, Volume 1; Australian Government Department of Industry, Science, Energy and Resources; 2020; **https://www.industry.gov.au/sites/default/files/2020-05/nga-national-inventory-report-2018-volume-1.pdf** » eGRID Summary Tables, Table 1 'Non-baseload output emission rates'. USEPA; **https://www.epa.gov/sites/default/files/2021-02/documents/egrid2019_summary_tables.pdf** » The Emissions and generation Resource Integrated Data Base eGRID Technical Guide, USEPA; **https://www.epa.gov/system/files/documents/2022-01/egrid2020_technical_guide.pdf** » BEIS Greenhouse gas reporting: Conversion factors 2021: full set (for advanced users) – revised January 2022, Tab WTT-Fuels; Department for Business, Energy & Industrial Strategy, UK Government. **https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021**
CATEGORY 4: UPSTREAM TRANSPORTATION AND DISTRIBUTION	
Category description	Emissions from the transportation and distribution of products purchased by the reporting company in the reporting year between a company's Tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company); transportation and distribution services purchased by the reporting company in the reporting year, including inbound logistics, outbound logistics (e.g. of sold products); and transportation and distribution between a company's own facilities (in vehicles and facilities not owned or controlled by the reporting company).
Calculation status	Not material. Calculated.
Calculation boundary	This category includes the scope 3 emissions associated with the shipping, rail and trucking of our purchased goods from Tier 1 suppliers by third parties. It should be noted that natural gas used as feedstock for the chemical manufacture of ammonia is delivered via pipeline – scope 3 emissions associated with the delivery of this raw material are reported under Category 3.
Exclusions	None.
Calculation methodology	For marine cargoes to and around Australia, RightShip – a leading maritime risk management and environmental assessment organisation – provided an accurate scope 3 emissions estimate based on its EN16258:2012 certified methodology. For marine cargoes associated with our subsidiary Quantum Fertilisers, and for road and rail freight, the 'distance-based' method as described in the scope 3 Guidance was used: emissions were calculated by applying the appropriate emissions factor to the 'mass x distance' multiplier for each mode of transport.
Data sources	Tonnes shipped and transported by road and rail were collected from a range of sources including the IPL internal system that tracks all external spend, internal logistics support software and third-party reports from logistics suppliers such as RightShip and several road transport contractors. Activity data from external service providers are converted to net tonne kilometres for rail, road and shipping, and the appropriate emissions factor was applied (see references below).
Emissions factor references	» RightShip Carbon Accounting; **https://www.rightship.com/solutions/shipowner/ghg-rating/** » GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013; **https://ghgprotocol.org/scope-3-technical-calculation-guidance** » BEIS Greenhouse gas reporting: Conversion factors 2021: full set (for advanced users) – revised January 2022, Tab Freighting goods + WTT delivery vehs & freight; Department for Business, Energy & Industrial Strategy, UK Government. **https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021**
CATEGORY 5: WASTE GENERATED IN OPERATIONS	
Category description	Emissions from third-party disposal and treatment (in facilities not owned or controlled by the reporting company) of waste generated in the reporting company's operations in the reporting year.
Calculation status	Not material. Calculated.
Calculation boundary	This category includes scope 3 emissions associated with all of the waste generated by the operations over which IPL has operational control.
Exclusions	None.
Calculation methodology	For wastes generated by our Australian sites, the supplier-specific method was used, whereby a national waste contractor supplied waste-specific emissions factors. For wastes in Australia disposed of by other waste contractors, and for sites outside of Australia, the average-data method was used. This involves estimating emissions based on total tonnes waste going to each disposal method (e.g. landfill) multiplied by an average emission factor for each disposal method.
Data sources	Annual reports from Australian waste management provider; the internal SAI Global data base used by IPL to collect and manage data associated with monthly site reports on energy use, water use and waste; relevant emissions factors (see references below).
Emissions factor references	» GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013; **https://ghgprotocol.org/scope-3-technical-calculation-guidance** » National Greenhouse Accounts Factors: Australian National Greenhouse Accounts, October 2020; Australian Government Department of Industry, Science, Energy and Resources; 2020; **https://www.dcceew.gov.au/sites/default/files/documents/national-greenhouse-accounts-factors-2020.pdf** » BEIS Greenhouse gas reporting: Conversion factors 2021: full set (for advanced users) – revised January 2022, Tab Waste Disposal; Department for Business, Energy & Industrial Strategy, UK Government. **https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021** » EcoInvent (licenced database) **ecoinvent.org**
CATEGORY 6: BUSINESS TRAVEL	
Category description	Emissions from the transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the reporting company).
Calculation status	Not material. Calculated.
Calculation boundary	This category includes flights and accommodation taken by employees for business-related activities, and travel outside of Australia in vehicles not owned or operated by IPL. Emissions associated with employee travel by hire car within Australia are defined as being under IPL employee operational control under Australian National Greenhouse and Energy Reporting legislation, and are therefore calculated and reported as scope 1 emissions.
Calculation methodology	Estimate based on peer extrapolation. The methodology for Business Travel was developed by assessing these scope 3 categories from three of IPL's peers. Emissions figures were extracted from sustainability reports and/or CDP reporting. The average was determined for tCO_2e/employee for each category across these peers. This was then multiplied by IPL's employee numbers for the relevant years.
Data sources	Peer Sustainability reports/CDP responses.
Emissions factor references	No emissions factors were used to derive the GHG in this category. Rather, the total GHG were estimated based on peer extrapolation.

SCOPE 3 STANDARD EMISSIONS CALCULATION ASPECT	IPL METHODOLOGY
CATEGORY 7: EMPLOYEE COMMUTING	
Category description	Emissions from the transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the reporting company).
Calculation status	Not material. Calculated.
Calculation methodology	Estimate based on peer extrapolation. The methodology for Employee Commuting was developed by assessing these scope 3 categories from three of IPL's peers. Emissions figures were extracted from sustainability reports and/or CDP reporting. The average was determined for tCO_2e/employee for each category across these peers. This was then multiplied by IPL's employee numbers for the relevant years.
Data sources	Peer Sustainability reports/CDP responses.
Emissions factor references	No emissions factors were used to drive the GHG in this category. Rather, the total GHG were estimated based on peer extrapolation.
CATEGORY 8: UPSTREAM LEASED ASSETS	
Category description	Emissions from the operation of assets leased by the reporting company (lessee) in the reporting year and not included in scope 1 and scope 2 reported by lessee.
Calculation status	Not relevant. Not calculated.
Explanation	IPL has very few upstream leased assets. In Australia, where properties are leased and electricity use is included in the lease (rather than invoiced directly to IPL), an estimate of electricity use is made in accordance with the National Greenhouse and Energy Reporting legislation, ensuring that this energy use is included in IPL's scope 2 emissions.
CATEGORY 9: DOWNSTREAM TRANSPORTATION AND DISTRIBUTION	
Category description	Emissions from transportation and distribution of products sold by the reporting company in the reporting year between the reporting company's operations and the end consumer (if not paid for by the reporting company), including retail and storage (in vehicles and facilities not owned or controlled by the reporting company).
Calculation status	Not material. Calculated – included in Category 4.
Calculation boundary	This category includes emissions associated with the transport of products sold by IPL in vehicles not owned or controlled by IPL. Due to the nature of shipping, in which a single voyage may include delivery of a supplier's product to a port for unloading to an IPL facility, then also loading product manufactured by IPL for distribution to ports further along the voyage in addition to purchased product, Category 9 emissions are included in Category 4 calculations.
Exclusions	» Emissions associated with third-party road delivery of fertilisers (from ports and IPL distribution facilities to third-party distributors and farming customers) have not been included due to unavailability of data. » Emissions associated with storage at third-party distributors have not been included due unavailability of data.
CATEGORY 10: PROCESSING OF SOLD PRODUCTS	
Category description	Emissions from the processing of intermediate products sold in the reporting year by downstream companies (e.g. manufacturers) subsequent to sale by the reporting company.
Calculation status	Not material. Not calculated.
Explanation	IPL primarily manufactures and supplies fertilisers and explosives which are typically consumed during their use by the customer.
Exclusions	» IPL sells some industrial chemicals which may be used in the manufacture of other products, however data has not been obtained to calculate any emissions which may arise if, and where, this occurs. » IPL sells approximately 27% of its manufactured ammonia for 'industrial use'. This may be used in the manufacture of other products; however data has not been obtained to calculate any emissions which may arise if, and where, this occurs.

SCOPE 3 STANDARD EMISSIONS CALCULATION ASPECT	IPL METHODOLOGY
CATEGORY 11: USE OF SOLD PRODUCTS	
Category description	Emissions from the end use of goods and services sold by the reporting company in the reporting year.
Calculation status	Material. Calculated.
Calculation boundary	This category includes the calculation of scope 3 emissions associated with the end use of fertilisers, explosives and industrial chemicals sold by IPL, whether the end user is a direct customer or, in the case of some fertilisers, the customer of a third party distributor. This category is a material source of emissions in IPL's value chain.
Calculation methodology	The scope 3 emissions associated with customer use of IPL's products are Direct Use-Phase Emissions: products that contain or form greenhouse gases that are emitted during use, as defined in the scope 3 Guidance. Tonnes sold of each product were obtained and a product-specific scope 3 emissions factor was applied (see 'References' below).
Data sources	Tonnes sold are sourced from the IPL internal system that tracks IPL's sales. Fertiliser application volumes are estimated by end market and geography, based on IPL sales data.
Emissions factor references	» GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013; **https://ghgprotocol.org/scope-3-technical-calculation-guidance** » National Inventory Report 2018, Volume 1; Australian Government Department of Industry, Science, Energy & Resources; 2020; **https://www.industry.gov.au/sites/default/files/2020-05/nga-national-inventory-report-2018-volume-1.pdf** » 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4: Agriculture, Forestry and Other Land Use, Chapter 11: N_2O Emissions From Managed Soils, and CO_2 Emissions From Lime And Urea Application; **https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/4_Volume4/19R_V4_Ch11_Soils_N2O_CO2.pdf** » Gokul Prasad Mathivanan, et al. 'New N_2o Emission Factors for Crop Residues and Fertiliser Inputs to Agricultural Soils In Germany'. Agriculture, ecosystems & environment, v. 322 ,. pp. 107640. doi: 10.1016/j.agee.2021.107640107640; **https://pubag.nal.usda.gov/catalog/7499559**
CATEGORY 12: END-OF-LIFE TREATMENT OF SOLD PRODUCTS	
Category description	Emissions from the waste disposal and treatment of products sold by the reporting company in the reporting year at the end of their life.
Calculation status	Not relevant.
Explanation	IPL manufactures and sells fertilisers and explosives which are typically consumed during their use by the customer.
CATEGORY 13: DOWNSTREAM LEASED ASSETS	
Category description	Emissions from the operation of assets owned by the reporting company (lessor) and leased to other entities in the reporting year, not included in scope 1 and scope 2 reported by lessor.
Calculation status	Not relevant.
Explanation	Leasing of downstream assets is not a material part of IPL's business.
CATEGORY 14: FRANCHISES	
Category description	Emissions from the operation of franchises in the reporting year, not included in scope 1 and 2 reported by franchisor.
Calculation status	Not relevant.
Explanation	IPL does not have franchised operations.

SCOPE 3 STANDARD EMISSIONS CALCULATION ASPECT	IPL METHODOLOGY
CATEGORY 15: INVESTMENT	
Category description	Emissions associated with the operation of the reporting company's investments (including equity and debt investments and project finance) in the reporting year, not already included in scope 1 or scope 2.
Calculation status	Not material. Calculated.
Calculation boundary	This category includes the scope 1 and 2 emissions (on an equity basis) from our assets that are owned as a joint venture but not operated by IPL. The scope 3 Standard categorises this as a downstream category as the provision of capital or financing is framed as a service provided by IPL.
Exclusions	Only joint ventures engaged in emissions-intensive manufacturing activities have been included in the calculation of emissions from this category.
Calculation methodology	The accounting approach for 'equity investments' as described in the scope 3 Guidance is used to calculate these emissions.
Data sources	Estimates of scope 1 and 2 emissions for each investment (which form the basis of scope 3 emissions in IPL's value chain) are sourced from publicly available information, including the most recently available government-published data from mandatory or voluntary reporting programs in place in the country, state or region; the most recent reports published by the operating entity e.g. sustainability and annual reports; and other sources if identified through desktop research.
Emissions factor references	» GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (v1): Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; WRI/WBCSD; 2013; **https://ghgprotocol.org/scope-3-technical-calculation-guidance**

5. Membership and climate review of industry associations

IPL is a member of a range of industry associations, both at the Group level and through our industry-leading businesses Incitec Pivot Fertilisers and Dyno Nobel. Industry associations provide the opportunity to collaborate with other companies and organisations to share best practice across the sectors in which our businesses operate. Sharing knowledge on issues such as technical standards, industry-wide regulations and our number-one priority – safety, helps us to become better informed on a wide range of issues that directly impact our businesses, our employees and our customers.

Since industry associations represent a collective group, an industry association's position on a given topic will incorporate a range of members' views. In some cases, this may result in associations holding no position on that topic, or holding a position which may differ to the position held by IPL. For this reason, we communicate our own views through our policies and public statements, including those made in published submissions and executive speeches.

Each year IPL commissions an independent review of the alignment between our climate change policies and those of the industry associations of which we are a member. These annual reviews form part of our ongoing industry association monitoring activities.

As part of the 2023 review, IPL updated the method of review and formalised a framework for governance of our memberships of associations, including guidance where a difference in publicly stated climate change policy has been identified. This enables further engagement with industry associations as appropriate.

In 2024, the review assessed the alignment between IPL and the energy and climate change positions of 19 Member Associations in the following areas:

- **The Paris Agreement**
- **Climate Change Policy** including:
  1. A Net Zero target and interim emissions reduction targets;
  2. An understanding that climate change may impact on core business offerings (including product portfolio);
  3. A stated commitment to partner with stakeholders (including regulators) to promote climate action;
  4. Programs to engender 'resilience' or 'adaptation' to climate impacts for its business and stakeholders; and
  5. Consideration of climate risk in policy or position statements.
- **Energy Policy,** including supportive statements for renewable energy deployment and investment into the expansion of renewable and reliable energy sources.

ASSOCIATIONS WERE RATED AS FOLLOWS:

● The association's position is in line with IPL's, or is more progressive than IPL's. The association has publicly disclosed climate-related positions in line with expectations of leading practice organisations.	◕ The association has a climate change policy and the disclosures made by the association align with IPL's on most key topics. The association's position does not fully align with IPL's but is also not contrary to IPL's stated position, or IPL's position is more progressive than the association.	◑ The association does not have a climate change policy, but its disclosures align with IPL's on most key topics. The association's position does not fully align with IPL's but is also not contrary to IPL's stated position, or IPL's position is more progressive than the association's.
◔ Disclosures made by the association demonstrate only a high-level climate change risk acknowledgment, however the position does not contradict that of IPL's.	○ The association does not have a publicly disclosed position or policy in relation to climate change or energy use.	□ Disclosures made by the association are supportive of the continued use of coal. While sub-disclosures may align to IPL's, there is a misalignment to IPL's overarching climate change policy.

INDUSTRY ASSOCIATION	DESCRIPTION	ALIGNMENT WITH IPL ON CLIMATE CHANGE	
Ammonium Nitrate Nitric Acid Producers Group (ANNA)	ANNA is an informal international organisation of manufacturers of ammonium nitrate and nitric acid with the goal of promoting networking within the industry through sharing knowledge, technology and experience. Dyno Nobel is a member.	ANNA does not have a publicly disclosed position or policy in relation to climate change. This position has not changed in 2024.	○
Australian Explosives Industry and Safety Group (AEISG)	AEISG aims to continuously improve the level of safety in the manufacture, transport, storage, handling and use of precursors and explosives in commercial blasting throughout Australia. Dyno Nobel is a member.	AEISG does not have a publicly disclosed position or policy in relation to climate change. This position has not changed in 2024.	○
Australian Industry Greenhouse Network (AIGN)	AIGN is a network of industry associations and individual businesses which contribute to the climate change policy debate and see value in joint industry action on climate change in order to promote sustainable industry development. The network is committed to industry collaboration on equitable global action to reduce greenhouse gas emissions.	AIGN is aligned with IPL in its commitments to address climate change. AIGN acknowledges climate change and supports policies to help Australia adapt to it. AIGN and its members are actively involved in monitoring and participating in climate change policy discussions, with the goal of promoting the development of Australia's industrial resources. AIGN serves as a focal point for cooperative industry policy responses to key greenhouse issues, and it plays a facilitating and coordinating role in industry contributions to key greenhouse policy and abatement measures.	●
B-team Climate Leaders Coalition (CLC)	The CLC is a cross-sectoral group of Australian corporate CEOs supporting the Paris Agreement commitments and setting public decarbonisation targets. The CLC website states that its members are action orientated and commit their organisations to take voluntary action on climate change.	B-team Climate Leaders Coalition has remained closely aligned with IPL in its energy and climate change positioning during 2023. The CLC publicly supports the Paris Agreement and Australia's commitment to it, including the objective to keep global warming to well below 2 degrees above pre-industrial levels. The CLC is also advocating for policies that support the transition to a low carbon economy. The CLC's members are united in their commitment to reducing GHG emissions and are working together to develop and implement plans to achieve their GHG reduction targets.	●
Business Council of Australia (BCA)	The BCA provides a forum for Australian business leaders to contribute directly to public policy debates. Members determine the work program and policy positions of the Council through their participation in policy committees, special-issue taskforces and the BCA Board.	BCA's position on climate change and energy is closely aligned with IPL's. In 2021, BCA publicly committed to supporting Australia's commitments under the Paris Agreement. It publicly calls for stronger policy commitments relating to both GHG reduction and greenhouse and energy reporting. In April 2024, BCA placed a submission to the National Adaptation Plan advocating its strong support to respond to climate change risks and the need to minimise the potential economic, environmental and social costs.	●
Canadian Explosives Industry Association (CEAEC)	CEAEC is an industry association concerned with the promotion of high standards in the manufacturing, use, transportation and handling of explosives in the interest of worker and public safety. Dyno Nobel is a member.	CEAEC does not have a public position on energy policy and climate change. This position has not changed in 2024.	○
Carbon Market Institute (CMI)	CMI is an independent industry body seeking to: share knowledge, build capacity and catalyse opportunities for businesses leading the transition to a Net Zero emissions economy; steward Australia's carbon markets and related policies; and champion the UNFCCC Paris Agreement and TCFD framework of climate and Net Zero emission goals.	CMI's position on climate change and energy is closely aligned with IPL's. CMI is publicly supportive of the Paris Agreement and the emerging framework of climate and net-zero emissions goals and mechanisms for increasing ambition, internal cooperation and investment. The CMI Policy Positions paper published in November 2023 outlines six policy pillars which illustrate CMI's strong position on climate change. The CMI's 2025 Strategy paper further documents the association's values, mission and objectives to support members to make urgent, credible climate strategies and transformative investments.	●

INDUSTRY ASSOCIATION	DESCRIPTION	ALIGNMENT WITH IPL ON CLIMATE CHANGE	
Chemistry Australia	The national body representing Australia's chemistry industry, CA aims to foster a dynamic, globally competitive and highly valued Australian chemistry industry through exceptional advocacy, fostering innovative collaborations and supporting continuous improvement.	CA's policy positions are generally in line with IPL's. Chemistry Australia supports coordinated global action to mitigate the impacts of climate change. In its 2020 Policy Priorities, Chemistry Australia takes the stance that climate change policy should strike the right balance between meeting Australia's Paris Agreement commitments and ensuring continued industry investment and jobs growth to underpin our sovereign capability. It also advocates for Australia to prioritise emissions reduction in the built environment by building more energy-efficient dwellings and buildings.	◕
Energy Users Association of Australia (EUAA)	The Energy Users Association of Australia plays a critical role in helping companies navigate uncertainty in energy markets and participate in driving changes in market rules and the way the network is managed, to ensure better outcomes and reduced costs for energy users. It seeks a competitive, reliable and sustainable energy supply for all users.	EUAA's climate change policy positions remain in line with those of IPL. The EUAA's Net Zero Position supports the Paris Agreement, specifically in limiting global temperature rise this century to below 2°C, and thus action towards a Net Zero target by 2050. It advocates for policies that support innovation of new technologies and quality offsets where abatement is not possible. The EUAA publicly supports a market-based mechanism that puts a price on carbon and maintains its position on the Australian Federal Renewable Energy Target (RET). It calls for opportunities for low emissions manufacturing, acceleration of clean fuel such as green hydrogen and support for other clean energy innovation and support services for hard-to-abate sectors. This position has not changed since the 2023 review.	●
Fertilizer Australia	The industry association representing manufacturers, importers and distributors of fertiliser in Australia, and associated service industries. Fertilizer Australia members supply over 95% of the fertilisers used in Australia. IPL holds a Board position.	Fertilizer Australia does not promote a policy which contradicts that of IPL. Within its Sustainability and Stewardship report published in 2020, it acknowledges fertilisers' contribution to global warming through GHG released during the manufacturing process, transport and logistics, and also that the role of fertilisers in crop growth can assist carbon storage. Fertilizer Australia does not have a strong public position on energy or climate policy. This position has not changed in 2024.	◕
Institute of Makers of Explosives (IME)	An association concerned with the safety and security of the commercial explosives industry in the United States and Canada. Dyno Nobel is a member.	IME's views are considered less progressive than those of IPL due to the support of coal. The IME supports an 'all-of-the-above' energy policy, which includes traditional sources of energy like coal, oil and natural gas as well as renewable sources such as wind and geothermal energy.	◔
International Fertilizer Association (IFA)	A not-for-profit organisation that represents the global fertiliser industry. IFA member companies represent all activities related to the production, trade, transport and distribution of the nutrients required to help farmers worldwide address the growing need for food, feed, fibre and bio energy. IPL holds a Board position.	IFA does not promote a policy which contradicts that of IPL. IFA considers reducing GHG an essential part of its overall mission to help feed the world sustainably. In its report 'Reducing Emissions From Fertilizer Use', published in September 2022, IFA states that failing to reduce GHG in a timely manner carries significant risks and may destabilise food production systems. IFA does not have a clear Energy Policy position however it is a strong advocate for the role that Carbon Sequestration can play in mitigating climate impacts. IFA focuses on sustainable fertiliser production and has formed a new sustainability working group with a mission to accelerate sustainable fertiliser manufacturing.	◑
International Society of Explosives Engineers (ISEE)	A professional society dedicated to promoting the safety, security and controlled use of explosives. Dyno Nobel is a member.	The ISEE does not have a publicly disclosed position or policy in relation to climate change. This position has not changed in 2024.	○

INDUSTRY ASSOCIATION	DESCRIPTION	ALIGNMENT WITH IPL ON CLIMATE CHANGE	
Manufacturing Australia (MA)	A CEO-led coalition of some of Australia's largest manufacturers that work with governments, businesses and communities to promote Australia's manufacturing sector to make a significant and sustainable contribution to the nation's economy. IPL holds a Board position.	MA's policy positions do not typically contradict IPL's. However, MA does not have an energy policy but one of its listed priorities is to 'Regain Australia's competitive advantage of reliable, affordable and sustainable energy resources, and ensuring Australia meets its international emissions obligations while remaining globally competitive in trade exposed industries'. In 2023, MA welcomed the Federal Government's Safeguard Mechanism reforms to promote electrification using clean energy sources. Therefore, the association's views on climate policy have progressed since the 2023 assessment.	
Minerals Council of Australia (MCA)	Represents Australia's exploration, mining and minerals processing industry, nationally and internationally, in its contribution to sustainable development and society. MCA member companies produce more than 85% of Australia's annual mineral output. Dyno Nobel is a member.	MCA publishes an annual progress report to their Climate Action Plan released in 2020. In its 2023 Progress Report, MCA reported its continued commitment to the Paris Agreement and its goal of Net Zero emissions by 2050. However, it continues to advocate for coal and its role in Australia's economy, indicating its views are less progressive than IPL's. This has not changed since the 2023 assessment.	
National Mining Association (NMA)	The voice of the American mining industry in Washington, D.C., NMA is the only national trade organisation which represents the interests of mining before Congress, the Administration, federal agencies, the judiciary and the media. Dyno Nobel is a member.	The NMA recognises that mining is an energy-intensive industry, and that global action is needed to reduce GHG and help mitigate the adverse effects of human impacts on climate change. The NMA published a position on climate change in 2023 but has no stand-alone climate change policy and continues to support the use of thermal coal. Its stance on climate change continues to be less progressive than IPL's.	
The National Sand, Stone and Gravel Association (NSSGA)	An association for the aggregates industry in the US, concerned with supporting policies and regulation that promote the safe and environmentally responsible use of aggregates. Dyno Nobel is a member.	The NSSGA's policy positions do not typically contradict IPL's; however, it does not have a standing climate policy or position. The NSSGA supports investment into the expansion of renewable and reliable energy sources. It encourages GHG emissions reduction for NSSGA members and provides them with a GHG emissions calculator in order to reduce their footprint. This position has not changed in 2024.	
Queensland Resources Council (QRC)	An independent not-for-profit peak industry association representing the commercial developers of Queensland's mineral and energy resources. The QRC works to secure an environment conducive to the long-term sustainability of the minerals and energy sectors in Queensland, Australia. Dyno Nobel is a member.	QRC's policy positions do not typically contradict those of IPL. QRC supports the Paris Agreement and its GHG reduction goals to limit global warming to well below 2, preferably to 1.5 degrees Celsius. QRC also publicly supports the Minerals Council of Australia's industry ambition to achieve Net Zero emissions by 2050. In its 2022 Energy and Climate Policy, QRC outlines support for the diversification of Queensland's energy mix and supports a technology-driven approach to reach GHG reduction targets. This position has not changed in 2024.	
Future Coal (formerly World Coal Association (WCA))	A global industry association comprising the major international coal producers and stakeholders.	Previous assessments of the then World Coal Association were made against a publicly available climate change policy which recognised the objective of the Paris Agreement and supported global efforts to reduce GHG emissions. Under the newly named FutureCoal, a climate policy is not publicly available and thus the rating has been downgraded since the 2023 analysis. IPL has ceased being a member of FutureCoal.	
The Australian Mines and Metals Association Resources and Energy Group	The Australian Mines and Metals Association Resources and Energy Group is the representative association for Australia's resources, energy and supply industry employers, assisting with human resources, industrial relations, training, policy and industry networking. Dyno Nobel is a member.	Not included in review.	

INDUSTRY ASSOCIATION	DESCRIPTION	ALIGNMENT WITH IPL ON CLIMATE CHANGE
American Chamber of Commerce in Australia (AmCham)	AmCham gives members exclusive access to thought leadership, communities of interest, policy advice, business advocacy, information, and relationships with business and government. With roots in America, AmCham serves the business community across Australia and the entire Asia Pacific, providing assistance to companies in the USA and Australia and promoting trade, commerce and investment to and from Australia.	Not included in review.
American Australian Business Council (AABC)	The AABC aims to strengthen the dynamic economic bond between Australia and the United States, founded on a commitment to commerce through the flow of capital, people and ideas, by highlighting the businesses and their leaders who are key to this relationship.	Not included in review.
Chief Executive Women (CEW)	Representing over 500 of Australia's most senior and distinguished women leaders, CEW strives to educate and influence all levels of Australian business and government on the importance of gender balance through advocacy, targeted programs and scholarships.	Not included in review.
National Association of Women in Operations (NAWO)	NAWO is the peak Australian body championing women in operations. An incorporated not-for-profit association, NAWO aims to inspire and support women to reach their full potential and achieve their chosen career goals, and to inspire and support organisations to create inclusive workplaces.	Not included in review.
Resource Industry Network	A peak industry association representing companies engaged in the resource sector and those allied to the sector. It seeks to facilitate effective member-to-member connections, develop and promote innovation and capability, and promote members to the commercial decision makers, peak bodies and government representatives in the resource sector. Dyno Nobel is a member.	Not included in review.
The Fertilizer Institute	The trade association representing the public policy, communication and statistical needs of producers, manufacturers, retailers and transporters of fertiliser in the US. Issues of interest include security, international trade, energy, transportation, the environment, worker health and safety and farm bill and conservation programs to promote the use of enhanced efficiency fertiliser. Dyno Nobel Americas is a member.	Not included in review.
Global Explosives Safety Group (SAFEX)	A non-profit organisation of manufacturers of explosives and pyrotechnics which aims to protect people and property against dangers and damage by the sharing of experience in the explosives industry. Dyno Nobel is a member.	Not included in review.