IPL CLIMATE CHANGE REPORT **2022**

Incitec Pivot Limited
INNOVATION ON THE GROUND

DYNO
Dyno Nobel

Incitec Pivot Fertilisers

ABOUT US 2

MESSAGE FROM MANAGING DIRECTOR & CEO 3
OUR BUSINESS AND OUR MARKETS 4
HIGHLIGHTS ON OUR JOURNEY 4
OUR POSITION ON CLIMATE CHANGE 6

OUR CLIMATE CHANGE STRATEGY: 7

1 ENSURING STRONG GOVERNANCE 8

OUR CLIMATE CHANGE GOVERNANCE 9
MANAGEMENT ROLES AND RESPONSIBILITIES 10

2 REDUCING OPERATIONAL EMISSIONS 12

OUR OPERATIONAL GHG EMISSIONS PROFILE 14
OUR OPERATIONAL GHG TRANSITION PLAN 15
OUR EXPLOSIVES BUSINESS 2030 TRANSITION PLAN 16
OUR FERTILISERS BUSINESS 2030 TRANSITION PLAN 18

3 DELIVERING PRODUCTS AND STRATEGIES T0 REDUCE SCOPE 3 GHG 20

REVIEWING OUR SCOPE 3 EMISSIONS INVENTORY 21
OUR SCOPE 3 EMISSIONS REDUCTIONS OPPORTUNITIES 22

4 MANAGING STRATEGIC BUSINESS RISKS AND OPPORTUNITIES 24

OUR SCENARIOS 26
RISKS AND OPPORTUNITIES 30
BUILDING OUR RESILIENCE TO PHYSICAL CLIMATE RISK 42

APPENDICES 46

1. SCENARIO REFERENCES 47
2. TCFD DISCLOSURES TABLE 49
3. ENERGY AND GHG EMISSIONS DATA 51
4. SCOPE 3 EMISSIONS CALCULATION METHODOLOGY 52
5. MEMBERSHIP AND CLIMATE REVIEW OF INDUSTRY ASSOCIATIONS 58
6. FORWARD LOOKING STATEMENTS 61

Incitec Pivot Limited (IPL) is a recognised leader in 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.

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

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 & 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 second largest industrial explosives distributor 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 & Construction sector primarily in the Southern US, Northeast US and Canada; the Base & 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 & 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: In 2022, IPL purchased Titanobel, entering the French quarry and construction market and providing 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 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 & 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 & 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 ammonium nitrate 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 ammonium nitrate 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.

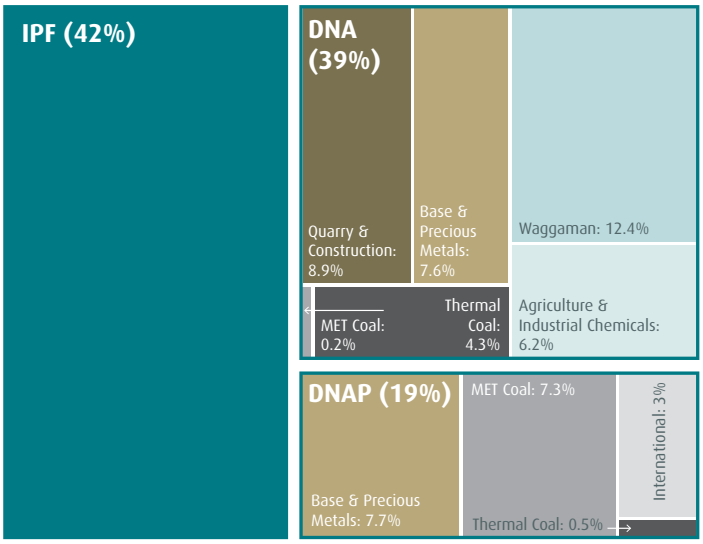
The business operates its state of the art ammonia plant in Waggaman, Louisana. In addition, the business wholesales agricultural products produced at its St Helens facility and its Cheyenne facility.

INCITEC PIVOT FERTILISERS

Incitec Pivot Fertilisers (IPF) is IPL's fertilisers business. With an unrivalled position 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, complemented by the world scale sulphuric acid plant at Mount Isa, the Gibson Island ammonia manufacturing plant, where conversion to green ammonia is being investigated, and the Geelong Single Super Phosphate (SSP) manufacturing plant. Its distribution network includes more than 17 Primary Distribution Centres and stretches from Cairns in North Queensland down the eastern and southern Australian coasts to Port Lincoln in South Australia.

During 2022, IPF acquired the Easy Liquids (formerly Yara Nipro) liquid fertiliser business and invested in Australian Bio Fert Pty Ltd (ABF). Internationally, IPF sells to major offshore agricultural markets in Asia Pacific, the Indian subcontinent, Brazil and the United States. 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



MESSAGE FROM MANAGING DIRECTOR & CEO

New challenges require new solutions. This year has seen exciting progress on our journey to Net Zero, with a range of projects advanced to decarbonise our operations, including one which aims to build Australia's first industrial scale green ammonia production facility.

As a chemicals manufacturer operating essential, but hard-to-abate industrial scale processes, addressing this most urgent challenge of climate change has remained a leading priority in 2022. Our products and services are vital to providing food for the world's growing population, along with the raw materials required to shape our cities and create renewable energy infrastructure critical to a decarbonised future. The challenge for us at IPL is to continue to unlock the world's natural resources while reducing our environmental footprint and working towards a long-term Net Zero future.

We are committed to achieving Net Zero operational emissions by 2050, or as soon as practicable, and in this - our second stand-alone IPL Climate Change Report – I am pleased to provide you with information on what we have achieved to date as well as our future strategy.

On our journey, we set a medium-term target last year of 25% operational greenhouse gas (GHG) emissions reduction by 2030 and have now identified and progressed four significant projects to achieve this – Moranbah tertiary nitrous oxide abatement, Waggaman geological sequestration, the conversion of our Gibson Island manufacturing facility to green ammonia, and nitrous oxide abatement for our Louisiana, Missouri, facility. I am pleased that these four projects aim to deliver more than 42% operational GHG emission reductions by 2030 against our 2020 baseline, which would be a Paris-aligned reduction, for our current portfolio.(1)

Net Zero, of course, will not be possible without finding new technologies to reduce the GHG emissions from our ammonia production facilities, which we are continuing to actively pursue. While there are options to adapt abatement technologies to reduce our emissions of nitrous oxide from nitric acid making, we also operate six ammonia production facilities globally, and there is currently no existing reduction technology for these. Hence, we have worked hard to bring forward solutions through both our partnership on green ammonia with Fortescue Future Industries (FFI) at Gibson Island, and our investigation of carbon capture and sequestration (CCS) of process CO_2 generated at our Waggaman, Louisiana plant. These are ground-breaking projects globally for ammonia production decarbonisation, and I am proud to present our contributions, not only to decarbonise our own operations, but to lead the way in producing green ammonia for use in other industries' Net Zero journeys.

We will revisit our targets when the Science Based Targets Initiative releases its methodology for chemicals sector Paris-aligned target setting in 2023, which is expected to outline a specific science-based reduction trajectory and methodology for ammonia production. In preparation, we investigated Science Based Targets more deeply this year, engaging an expert third party to assist us. Part of this work included a review of our global scope 1,2 and 3 GHG inventory to ensure alignment with the GHG Protocol calculation methodology. We are pleased to report that our operational emissions required very little adjustment. Our scope 3 GHG have been restated due to our adoption of full life cycle 'cradle-to-gate' emissions factors this year, and the inclusion of all relevant scope 3 categories. We have also progressed our scope 3 management strategies, with the integration of scope 3 considerations at the business unit level and plans to deliver a management framework in the near future.

In addition to reducing emissions as quickly as possible, we recognise the need to manage the risks and opportunities we face, including the physical risks associated with climate change. As these are different for our explosives and fertiliser businesses, we have assessed these for each of our businesses this year to set each up for future success.

For our Dyno Nobel explosives business, our products and services will be crucial in providing our customers with efficient access to the minerals and resources necessary for renewable energy infrastructure and new technologies, and our premium technology solutions aim to help our customers reduce their carbon footprints. In collaboration with a mining customer, a three month trial showed a GHG reduction of 25% with the use of our premium technology DeltaE, with the results currently being verified by an independent third party.

Incitec Pivot Fertilisers' focus on soil health and precision agriculture aims to help farmers increase yields of food and fibre on their existing cleared land. This includes our Enhanced Efficiency Fertiliser (EEF) range, which has been shown to reduce GHG emissions from their use by up to 70%(2) dependent upon the application, for our farming customers.

And , of course, we're also excited by the opportunities presented by renewable hydrogen for our businesses and our customers. Given our world class hydrogen and ammonia handling expertise and our six ammonia assets all potentially being capable of converting to renewable hydrogen in the future, there's many opportunities for us and our customers in the medium term.

As we move towards Net Zero, it is crucial that we take our people and our communities with us. As we transition, our plan to decarbonise our manufacturing assets over time seeks to protect and sustain the employment opportunities we provide, along with the communities we work and operate in.

I welcome your interest in our second Climate Change Report and invite your feedback as we continue to provide transparent reporting on our progress and work with our customers and all our stakeholders to better care for our people, our communities and the environment.

Jeanne Johns
Managing Director & CEO
Incitec Pivot Limited

(1) See page 5 for the status of each of these projects.

(2) Results from a field trial conducted in a ryegrass pasture system in south–western Victoria show the application of EEF with the inhibitor DMPP reduced N_2O emissions by 73 per cent when compared to urea application alone. See the Australian Government Department of Agriculture, Water and the Environment Climate Research Program: Reducing Nitrous Oxide Emissions, p.5

See also: Suter, H., Lam, S. K., Walker, C., & Chen, D. (2020). Enhanced efficiency fertilisers reduce nitrous oxide emissions and improve fertiliser 15N recovery in a Southern Australian pasture. The Science of the total environment, 699, 134147. https://doi.org/10.1016/j.scitotenv.2019.134147

OUR BUSINESSES 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 by sustainably delivering these products to our mining, quarry & construction, and farming customers into the future. During 2022, our explosives and fertiliser products were used by our customers to help them unlock approximately:

QUARRY & CONSTRUCTION MATERIALS
748 million tonnes

THERMAL COAL
174 million tonnes

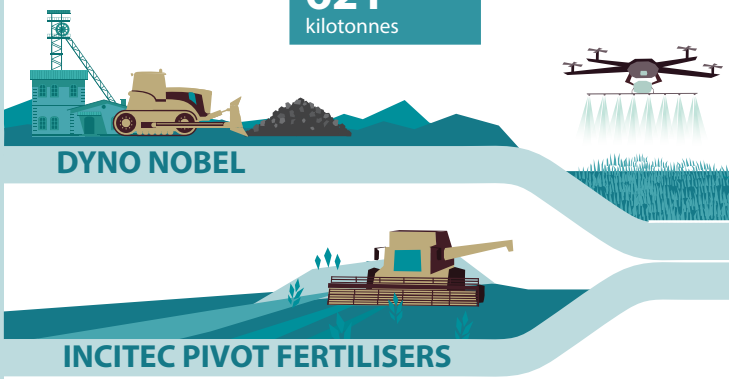
DIAMONDS
10.6 million carats

METALLURGICAL COAL
116 million tonnes

IRON ORE
506 million tonnes

GOLD
10.5 million ounces

COPPER
621 kilotonnes



DYNO NOBEL

INCITEC PIVOT FERTILISERS

OTHER BROADACRE GRAINS
1.5 million tonnes

HORTICULTURE
0.9 million tonnes

COTTON
0.2 million tonnes

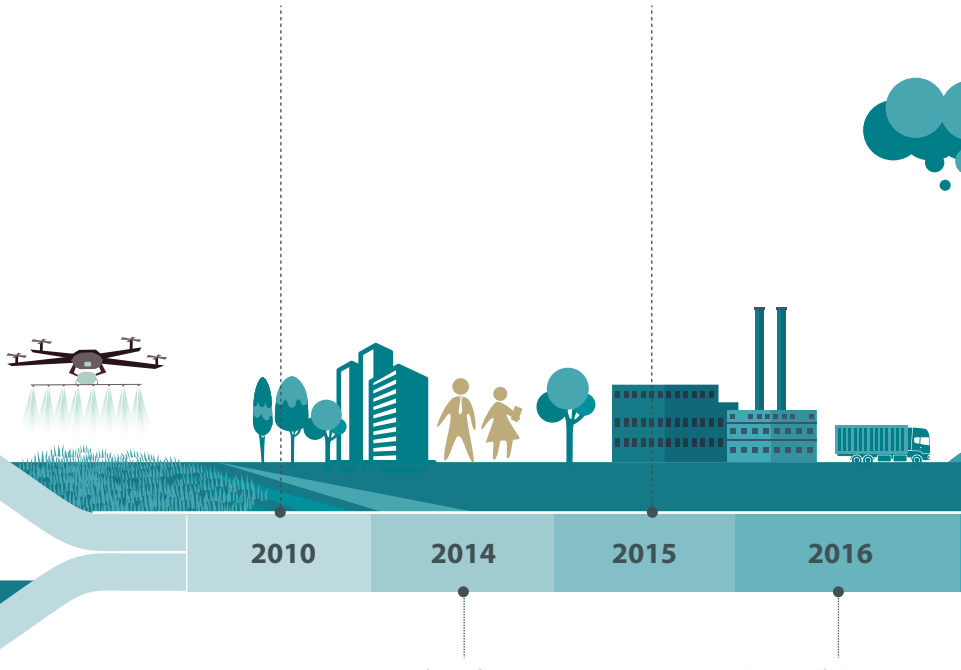
SUGAR CANE
21 million tonnes cut for crushing

BARLEY
4.8 million tonnes

PASTURE
5.8 million tonnes

WHEAT
10.5 million tonnes

HIGHLIGHTS ON OUR JOURNEY



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

2015

- 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.

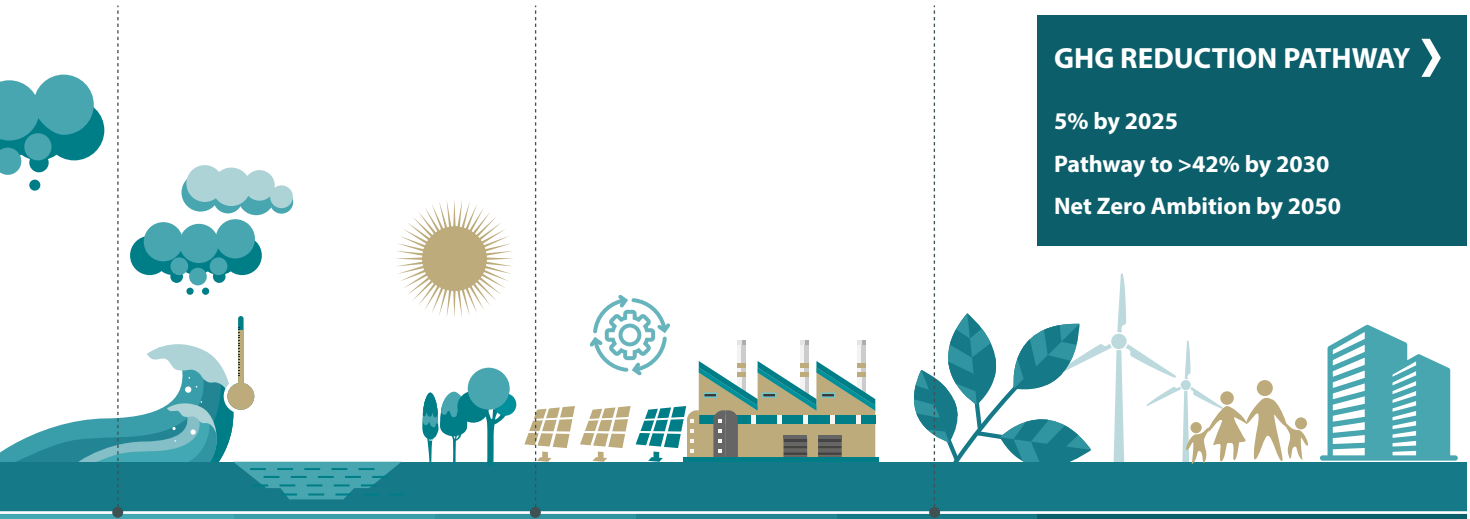
2016

- 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.

- Creation of IPL specific 2°C and 4°C future climate-related scenarios and completion of our second climate specific risk and opportunity assessment with Taskforce on Climate-related Financial Disclosure (TCFD) guidelines adopted in our 2018 Sustainability Report.

- Completion of the AU$2.7m Moranbah Solar Hydrogen Feasibility Study, supported by AU$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.

- IPL 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
- Executive Remuneration aligned with progress of projects which support our 2030 GHG reduction targets.



GHG REDUCTION PATHWAY ❯

5% by 2025

Pathway to >42% by 2030

Net Zero Ambition by 2050

2018 | **2019** | **2020** | **2021** | **2022**

- 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.

- **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 Net Zero Pathway and oversee climate-related risks and opportunities
- Appointment of Chief Strategy and Sustainability Officer to the Executive Leadership Team
- Updating of IPL specific 1.5°C, 2°C, 3°+C and Delayed Action scenarios.

NEXT STEPS ❯

Progress our decarbonisation projects, including:

- **5% – Moranbah N_2O abatement project – Capital approved for installation in 2024**
- **12% – Gibson Island Green Ammonia conversion – Partnership with FFI at Front End Engineering Design stage (FEED) (1)**
- **22% – Waggaman, Louisiana CCS – FEED Study underway for Carbon Capture Facility, with construction anticipated to begin in 2023 subject to FEED outcome, and MOU's established for CO_2 transport and geological sequestration (1)**
- **11% – Louisiana, Missouri N_2O abatement project – under investigation, with baseline confirmed from CEM installed in continuous emissions monitoring**

(1) Remains subject to final investment decision.

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 is a founding 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%.
- Net Zero by 2050 ambition.

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

- 2020 completion of the AU$2.7m Moranbah Solar Hydrogen Feasibility Study, supported by AU$0.9m from ARENA.
- 2022 FEED study announced, in partnership with FFI, to investigate green ammonia at Gibson Island, supported by $13.7m from ARENA.

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 verification underway.

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

- 2018 2°C and 4°C scenarios refreshed in 2021 with 1.5°C and Inevitable Policy Response scenarios added.

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 THAT 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.

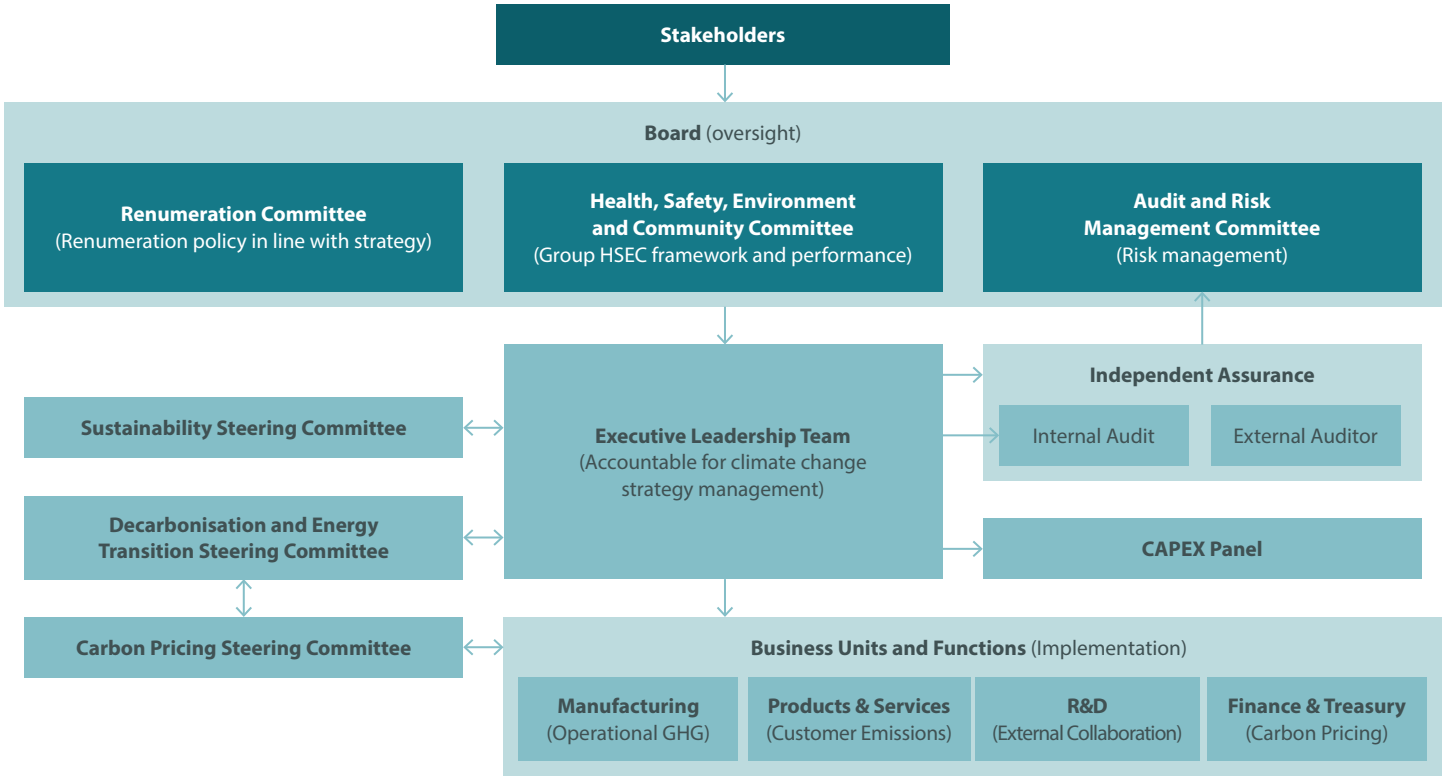
Profitable Growth: Manage climate-related financial risks and opportunities strategically.

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

1 ENSURING STRONG GOVERNANCE

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 is also reflected in remuneration outcomes.

OUR CLIMATE CHANGE GOVERNANCE



The **IPL Board** oversees IPL's climate change strategy, performance and governance responsibilities. The IPL Climate Change Policy was adopted by the Board during 2019, and the IPL Board Charter and the Audit and Risk Management Committee Charter formally enshrine Directors' roles in relation to the strategic management and oversight of climate change-related issues. Climate-related issues are integrated into the Board's review and guidance of business strategy, major plans of action, risk management policies, major capital expenditures and acquisition and divestiture decisions. This includes oversight of the application and use of IPL's internal carbon pricing model.

The Board has taken a number of measures to ensure that its decisions are informed by climate change science and by expert advisers. The Board is also committed to transparency in reporting progress on IPL's climate change strategy, and intends to put IPL's 2022 progress on its Transition Plan, as provided in this report, to a non-binding, advisory vote to shareholders at its 2022 Annual General Meeting.

This non-binding, advisory vote will complement IPL's continued engagement with shareholders and other stakeholders about the risks and opportunities climate change presents for IPL's business.

The **Audit and Risk Management Committee (ARMC)** of the Board has oversight of climate-related risk management, although the Board retains overall accountability for IPL's risk profile. The ARMC reviews risk scenarios, risk analyses and mitigation strategies, as well as how climate change-related risks are integrated into IPL's risk management processes. There are three key ways that the ARMC receives reporting on climate change-related risks and opportunities:

1. Via standard risk reporting, which is undertaken at each of the five ARMC meetings per year;
2. The annual Risk Review process with the Executive Team (ET) that informs the ARMC on the Group's strategic risks and mitigation plans; and
3. By exception, other significant events and progress related to the management of climate change-related risks are reported to the ARMC as required.

In addition, the Charter of the ARMC requires IPL's future climate related scenarios to be updated every three years and reported to the ARMC. The most recent scenario update took place in 2021 and the scenarios are described in Chapter 4.

The **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 Sustainability Strategy, including environmental, social and governance (ESG) objectives relating to safety, diversity, energy efficiency and GHG emissions reduction, to Executive KMP remuneration outcomes for several years now.

*Short-term incentive (**STI**) plan*

For FY22, KPI's relating to the progress towards IPL's short and medium term strategic GHG reduction objectives were incorporated under a separate Sustainability component (10%) of 'at risk' STI objectives for all Executive key management personnel, including the MD&CEO. These objectives were designed to align with IPL's overall sustainability and climate change strategies, and focuses an executive on the key short-term objectives within their area of influence that contribute towards IPL's longer term milestones. To address the challenges and opportunities associated with climate change, and specifically, GHG emission reductions, the FY22 STI for Executives included performance conditions relating to the progression of operational GHG reduction projects and the further development of pathways to Net Zero, including:

→ Continued integration of sustainability objectives into IPL's business strategy.

→ Advancement of a green ammonia opportunity at Gibson Island, Queensland in partnership with Fortescue Future Industries (**FFI**): during FY22 this project progressed to Front End Engineering (**FEED**) stage and secured a $13.7m Australian Renewable Energy Agency (**ARENA**) grant from the Australian Federal Government.

→ Moranbah, Queensland tertiary N_2O GHG abatement project: during FY22 the IPL Board approved capital for the abatement project, which is expected to be completed in 2024.
→ Progress on permanent geological carbon dioxide (CO_2) sequestration at Waggaman, Louisiana: during FY22 non-binding Memorandums of Understanding were signed with various parties in relation to the transport and sequestration of CO_2, and a FEED study commenced.
→ Progress on technology solutions to reduce GHG emissions: during FY22, a trial in partnership with a mining customer has showed a potential 25% GHG emissions reduction using Dyno Nobel's Delta E technology, with independent verification underway.
→ Progress on scope 3 emissions reduction strategies.

*Long-term incentive (**LTI**) plan*

With the practical and technological challenges related to reducing GHG emissions in the longer term, a Sustainability performance condition (10%) was introduced in the LTI Performance Rights Plan 2021/24 (**LTI 2021/24**) as an additional 'at risk' metric. This Sustainability performance condition measures the Company's organisational performance against its climate change strategy, progress towards IPL's operational GHG emission reduction targets (announced in 2021), and its development of a scope 3 GHG emissions reduction strategy. 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 Sustainability performance condition within the LTI 2022/25 Plan will focus on demonstrating material progress towards IPL's GHG reduction targets (and identified pathway) and scope 3 emission reduction strategy. Progress will focus on the following areas:

→ Moranbah N_2O tertiary abatement project
→ Waggaman permanent geological CO_2 sequestration project
→ Louisiana, Missouri N_2O abatement project
→ Gibson Island Green Ammonia Project in partnership with Fortescue Future Industries (FFI)

The performance period for the LTI 2021/24 Plan is 1 October 2021 to 30 September 2024, and 1 October 22 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 the performance conditions are not satisfied during the performance period, the performance rights will lapse.

Further information on the executive remuneration incentives and the STI performance outcomes for FY22 can be found in the Remuneration Report contained in IPL's 2022 Annual Report.

The **Health, Safety, Environment and Community (HSEC)** Committee of the Board assists the Board in overseeing the Group's health, safety, environment and community (HSEC) performance and governance responsibilities, and the adequacy of the Group's HSEC framework. This includes the management and governance of climate change issues relating to employee health and safety, such as heat stress and risks to our people associated with extreme weather events; emergency planning and response procedures for our operations relating to extreme weather events; and the management of risks to the environment which are likely to be exacerbated by climate change, such as procedures to monitor and plan for an increasing risk of pond overflows and other releases to the environment due to increasing or shifting rainfall patterns over time. Below the level of the Board, key management decisions are made by the MD&CEO, her Executive Team and management, in accordance with their delegated authority. The HSEC Committee also assists the Board in its review and approval of IPL's annual Sustainability Report.

MANAGEMENT ROLES AND RESPONSIBILITIES

The MD&CEO and her Executive Team develop the Group's business strategy, planning, investment decisions and risk management processes. The MD&CEO is responsible for delivering the climate change strategy approved by the Board.

The **Decarbonisation and Energy Transition (DET) Steering Committee** The MD&CEO is Chair of the IPL Decarbonisation and Energy Transition (DET) Steering Committee, which comprises selected executives and other senior management. The MD&CEO and the DET Steering Committee are responsible for the development of IPL's Transition Pathway and the strategic management of business risks and opportunities related to climate change, including the incorporation of opportunities and key trends into business strategy.

The DET Steering Committee provides ongoing focus and executive sponsorship of projects and strategic opportunities as we seek to leverage key decarbonisation megatrends to exploit new profitable markets in our core geographies. We recognise that the global energy transition associated with climate change is increasingly impacting on our two customer facing businesses. For example, long term growth trends in the mining sector are shifting away from thermal coal towards the metals required for the transition and this is reflected in industry forecasts of commodities demand. These trends have been incorporated into our business strategy through aligning our explosives business growth with predicted customer demand profiles by segment and the delivery of technology solutions to leverage these.

Trends in agricultural markets include not only high efficiency, low GHG fertilisers and soil carbon solutions, but a broader focus on more sustainable growing practices, precision agriculture and soil health. Following the strategic review of the fertilisers business undertaken in 2020, our long term strategy is to grow our IPF business from a leading fertiliser company, manufacturing and distributing a range of domestic fertilisers, to a sustainable soil health company providing sustainable plant nutrition solutions to improve soil health. This strategy will be leveraged through our expansive distribution footprint to drive new growth products and services towards soil health.

The energy transition also presents new opportunities for business growth for IPL. Australia's abundant renewable resources make it a prime location for the rapid development of renewable hydrogen. IPL has a core competency in the manufacture, storage and transportation of ammonia and is well placed to play a role in 'green hydrogen', and green ammonia for a low-carbon economy. We aim to be an early participant in these new industry opportunities, and we will achieve this by proactively identifying projects, products and partnerships that seek to align with our existing competencies and enhance our core business. We recognise that the development of these growth opportunities is unpredictable due to direct linkages with government carbon policy and international trade, and see opportunities to build partnerships throughout the supply chain with credible counterparties a key to success.

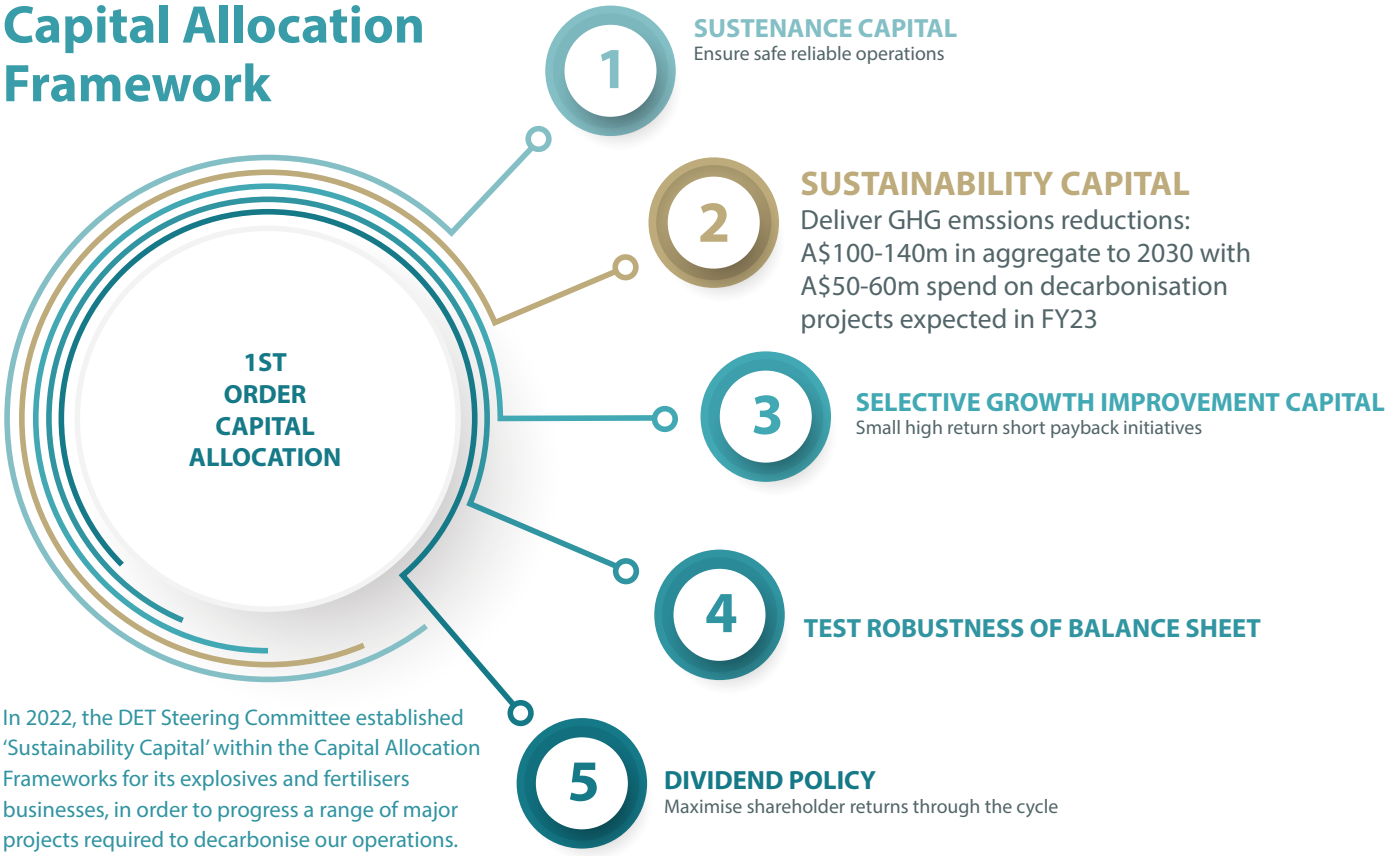
In addition to the MD&CEO, the DET Steering Committee comprises:

The **Chief Financial Officer (CFO)** is responsible for the management of the financial aspects of climate change. The CFO is the Executive 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. The Chief Risk Officer reports to the CFO.

The CFO is also responsible for IPL's Capital Allocation Framework and IPL's internal carbon pricing model. The updated Capital Allocation Framework was presented to our investors in September. It prioritises 'Sustainability Capital' as part of the order 1, or 'first taker' of capital, as shown in the diagram on the previous page. This capital is allocated to progress a range of major projects required to decarbonise our operations.

Internal carbon pricing 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. During 2021, the

Capital Allocation Framework



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.

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, with the objective of applying the carbon price to all capital projects, consistent with the Capital Allocation Framework, during 2023. The price is currently AU$38, and is projected to increase to AU$50 by 2026, AU$65 by 2030, AU$130 by 2040 and AU$258 by 2050. A range of carbon prices are also included in our scenario analyses (see section 4).

The **Chief Strategy and Sustainability Officer (CSSO)** has significant experience in strategy and sustainability, and is tasked with overseeing the development of the IPL Net Zero Pathway and the integration of climate-related issues into Company strategy. This role is also responsible for the evaluation and prioritisation of developing technologies to decarbonise IPL's manufacturing operations, and has responsibility for progressing IPL's partnership with FFI to investigate green ammonia production at Gibson Island. The CSSO's team includes:

- → The **VP Strategic Project Development** has significant experience in IPL's global manufacturing facilities and CAPEX approval process and is tasked with the assessment of the technical and commercial readiness of emerging technologies required for IPL's decarbonisation. The VP Strategic Project Development also works with operations based project teams to provide the DET Steering Committee with an additional level of oversight regarding the progress of specific projects related to IPL's Net Zero Pathway.
- → The **Corporate Sustainability Manager (CSM)** is an Environmental Geoscientist with postgraduate research in palaeoclimate reconstruction. As a subject matter expert in the fields of climate change and sustainability, the CSM has been assigned the responsibility of working with the Chief Risk Officer to oversee climate-related scenario risk assessment. The CSM also engages with investors and other stakeholders, in conjunction with the Company Secretary and General Manager Investor Relations, during discussions on IPL's Climate Management Strategy.

The **President Dyno Nobel Asia Pacific** and the **President Dyno Nobel Americas** oversee the manufacturing maintenance shutdown schedules required to implement new technologies to reduce emissions. As such, these positions are assigned the responsibility of implementing measures to achieve GHG emissions reductions at the manufacturing facilities within their regions and are overseeing the nitrous oxide abatement projects at Moranbah, Australia and Louisiana, Missouri, as well the Waggaman, Louisiana CCS project.

The **Chief Technology Officer** is responsible for the development of low carbon products and services, which reduce customer GHG and IPL's downstream scope 3 GHG.

The **Carbon Pricing Steering Committee (CPSC)** is chaired by the Corporate Sustainability Manager and comprises manufacturing, strategy, finance, treasury, environmental and energy contract management personnel across our global sites.

Through the Corporate Sustainability Manager and VP Strategic Project Development, the committee continually monitors emerging carbon pricing developments and informs the CFO, the Decarbonisation & Energy Transition Steering Committee and the Board of relevant compliance requirements and market opportunities. For example, the emerging carbon cap and trade regulation in Oregon, a result of the Governor's Executive Order, is currently being tracked by the CPSC. Corporate Legal and site-based personnel at our St Helens, Oregon site are engaging with the relevant regulatory body and report back to the CPSC.

In Australia, three of our major manufacturing sites are captured under Australia's Direct Action Plan Safeguard Mechanism, which has essentially established a Cap and Trade scheme for any site which exceeds its emissions baseline within a June year-end period. Emissions in excess of the baseline requires the surrender of one Australian Carbon Credit Unit (ACCU) for every tonne above the facility baseline. [1] The CPSC oversees the processes which ensure that emissions against baselines are monitored and any regulatory requirements are met. Our compliance procedure for the Emissions Reduction Fund (ERF) Safeguard Mechanism is set out in the IPL Carbon Accounting Policy (Australia).

Under the Emissions Reduction Fund, ACCUs can be credited for certain projects which reduce emissions. Our strategy for maximising opportunities related to carbon pricing schemes is managed by the VP Strategic Projects and the Corporate Sustainability Manager, as members of both the CPSC and the DET Steering Committee. The strategy includes examining IPL's exposure to current, emerging and likely future carbon pricing schemes and incentives, and regular reporting of opportunities to the DET Steering Committee for consideration.

(1) ACCUs can be purchased on the open market, or earned under Emissions Reduction Fund Projects.

2 REDUCING OPERATIONAL EMISSIONS

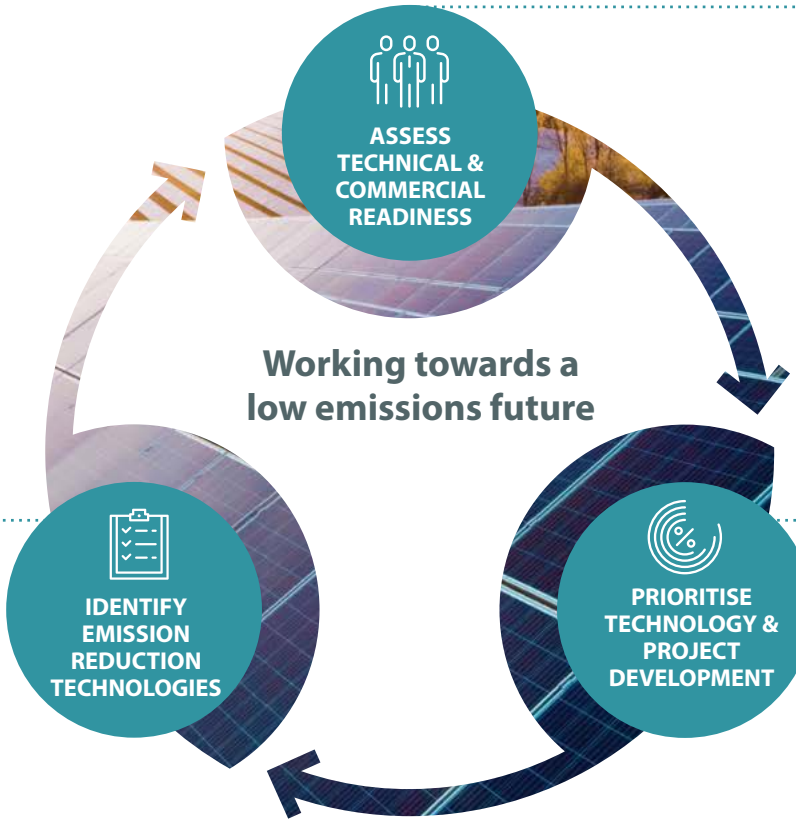
The MD&CEO and the DET Steering Committee are responsible for the development of the Company's Net Zero Pathway and the management of business risks and opportunities related to climate change, including the incorporation of risks and opportunities into business plans.

The strategy being applied by the DET Steering Committee to progress the development of IPL's Net Zero Pathway and reach our reduction targets, includes the following core pillars:

1. The identification of emissions reduction technologies required to reduce each of IPL's emissions sources. These technologies include renewable hydrogen (hydrogen obtained from splitting water using renewable energy, rather than natural gas) Carbon Capture and Storage, N_2O abatement technologies, renewable electricity technologies (solar, wind, hydro, pumped hydro) and alternate feedstocks (other than hydrogen from splitting water).
2. The ongoing assessment of the technical and commercial readiness of each of these technologies, by facility, at the scale required to decarbonise IPL's manufacturing facilities, including an assessment of materiality & scale, technology readiness levels, access to critical infrastructure required for each, the government policies which may support these in IPL's different operation regions, financing and 'bankability' considerations and vendors & technology partners.
3. The prioritisation of appropriate technologies and project development through feasibility studies such as IPL's AU$2.7m 2020 Solar Hydrogen Feasibility Study, assessment of alignment with long-term asset strategies, the strategic formation of value chain partnerships and engaging with Governments across our operating jurisdictions.

During 2022, this process has resulted in one project which has capital funding approved with installation planned for 2024, and several other projects that are moving to detailed assessment phase and provide a pathway to a >42% reduction in operational GHG by 2030. Our Transition Pathway, along with our emissions sources and projects by business, is described on the following pages.

LONG TERM CLIMATE CHANGE – PATHWAY TO NET ZERO EMISSIONS



- Materiality & scale
- TRL [1] of technologies
- Access to critical infrastructure
- Government policies (by jurisdiction)
- Financing & 'bankability'
- Vendors & technology partners

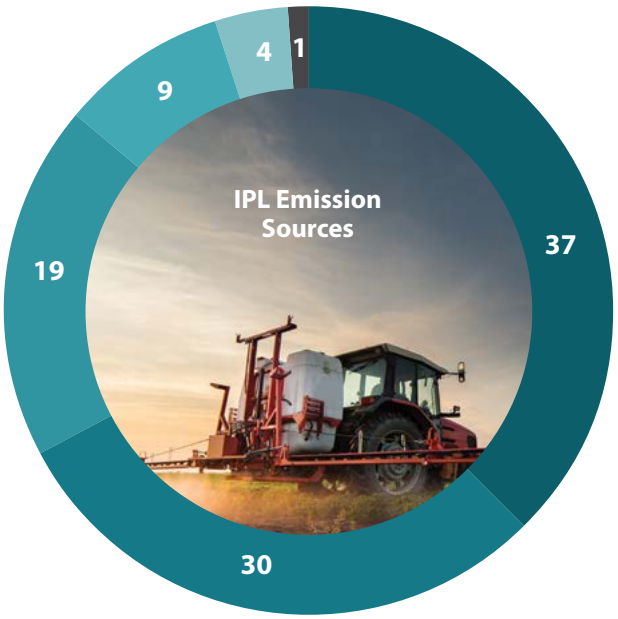
- Feasibility studies
- Alignment with long-term asset strategies
- Value chain partnerships
- Government engagement

- 'Clean' hydrogen
- Carbon capture & use or storage
- N_2O abatement
- Renewable electricity
- Alternate feedstocks

(1) Technology readiness levels (TRLs) are a method for estimating the maturity of technologies during the acquisition phase of a program. The use of TRLs enables consistent, uniform discussions of technical maturity across different types of technology.

OUR OPERATIONAL GHG EMISSIONS PROFILE

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

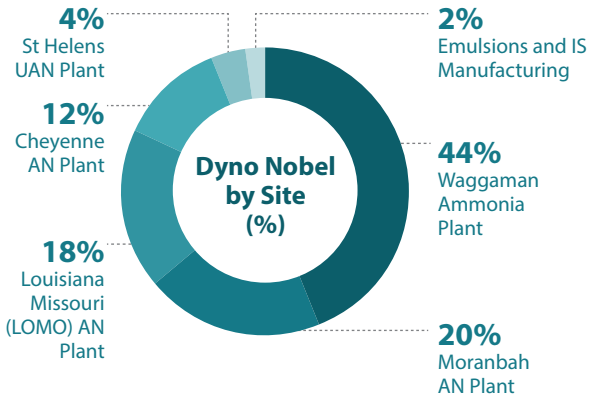


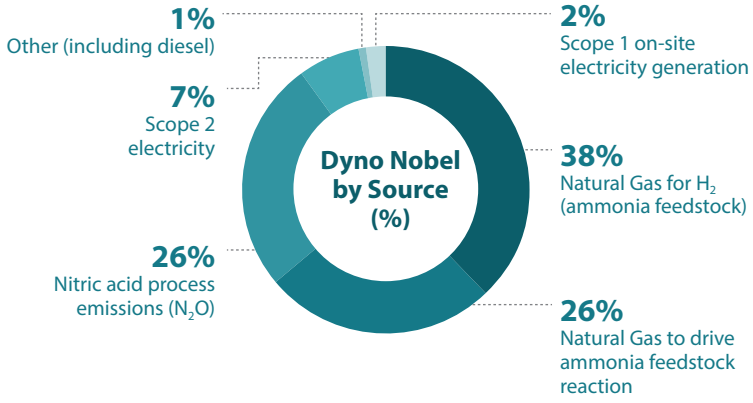
GHG emission source and reduction technology required to reduce

- **Natural Gas for H_2 (Ammonia Feedstock)**
  CCS to permanently sequester, conversion to green hydrogen production, other alternative feedstocks
- **Natural Gas to drive the ammonia feedstock reaction** (1)
  CCS to permanently sequester, conversion to green hydrogen production, other alternative feedstocks
- **Nitric Acid N_2O Process Emission**
  N_2O abatement technologies
- **Scope 2 Electricity**
  Rooftop solar installatIons, PPA's, grid decarbonisation
- **Scope 1 Electricity (Natural Gas)**
  Industrial scale solar installation with batteries, grid connection and PPAs
- **Other**
  Electric on-road vehicles and excavators

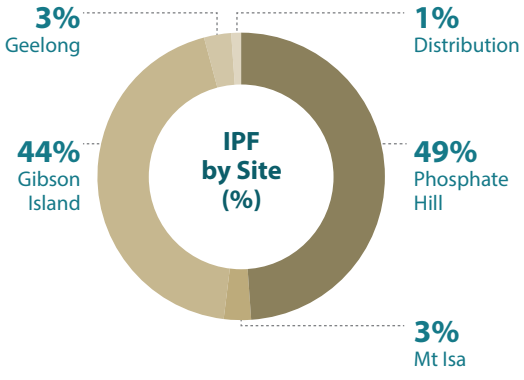
(1) >95% of our 'natural gas for energy' use is to drive the reaction to convert methane, CH_4 to H_2 for ammonia making in our ammonia plant reformers.

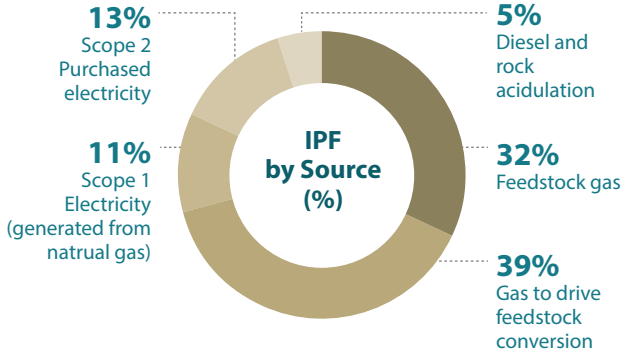
Baseline year (2020) operational GHG emissions for our explosives business





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

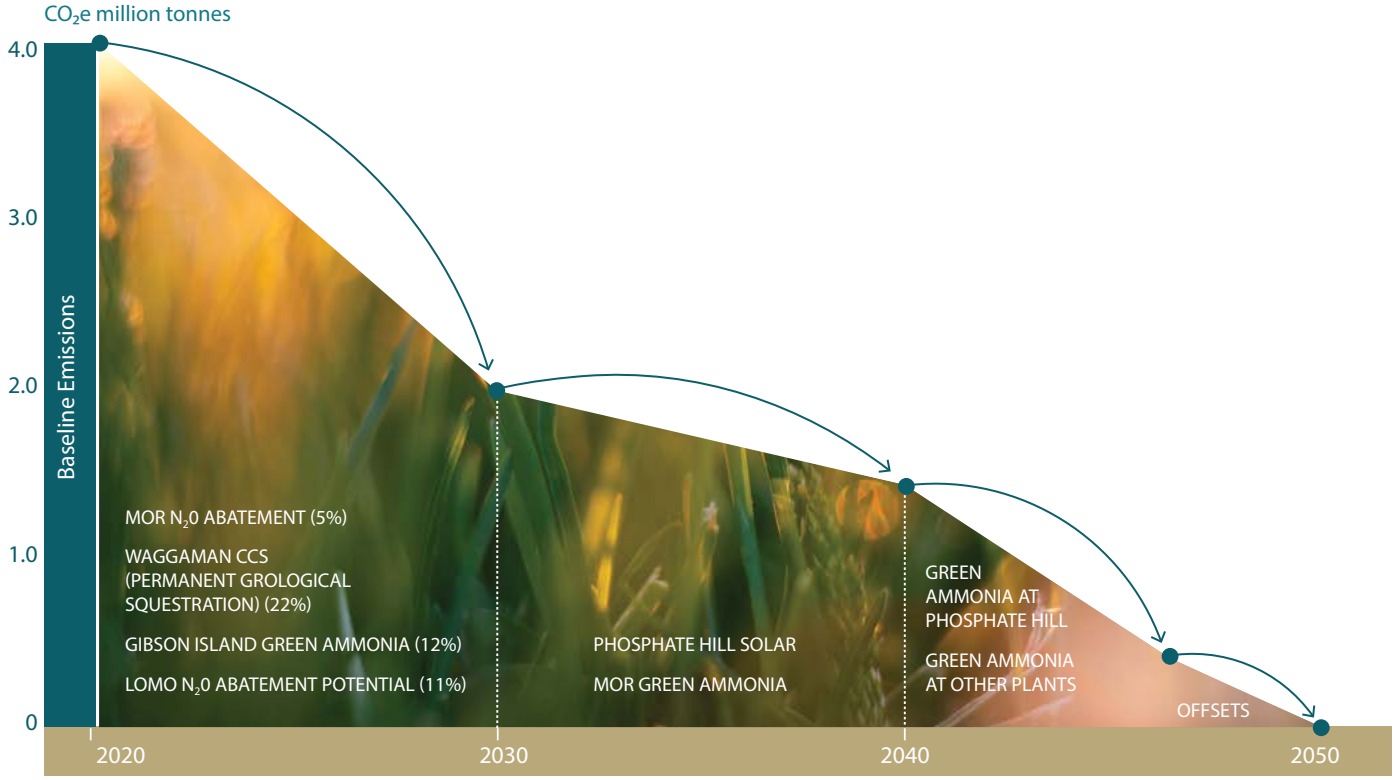




OUR OPERATIONAL GHG TRANSITION PLAN

Our Net Zero Pathway, developed in 2021, showed the key enablers for each emissions reduction technology required to reduce our emissions, along with the expected approximate timeframe for each.

During 2022, we developed a range of operational (scope 1&2) GHG reduction projects which provide a pathway to a > 42% against our 2020 baseline.[1] Our Transition Pathway to 2050 is taking shape, supported by these projects. Transition Pathways by our fertiliser and explosives businesses are also shown below and our projects are described on the following pages.



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.

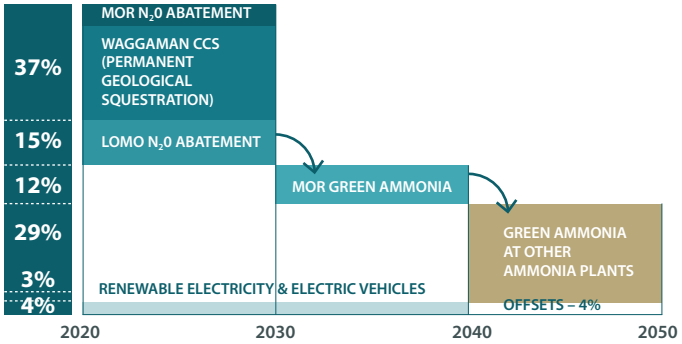
Green Ammonia (renewable hydrogen)

- 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.

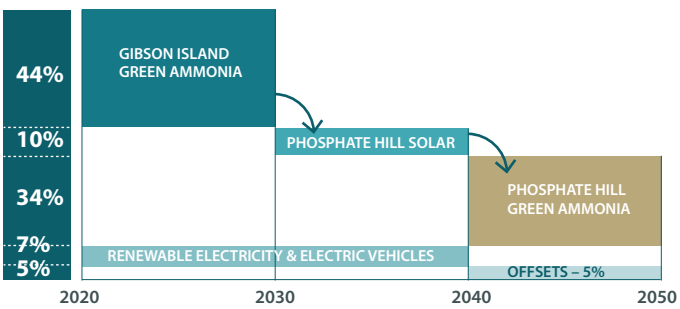
CCS

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

Dyno Nobel Transition Pathway



Incitec Pivot Fertilisers Transition Pathway



1. IPL's 2020 operational (scope 1&2) baseline has been restated from 3,961,222 tCO_2e to 3,991,396 tCO_2e due to external verification of our global GHG data set by an expert third party.

OUR EXPLOSIVES BUSINESS 2030 TRANSITION PLAN

Moranbah Tertiary N_2O Abatement Installation

7%

REDUCTION DYNO NOBEL 2020 BASELINE

WALA Carbon Capture Facility and CCS MOU

30%

REDUCTION DYNO NOBEL 2020 BASELINE

Louisiana, Missouri N_2O Abatement

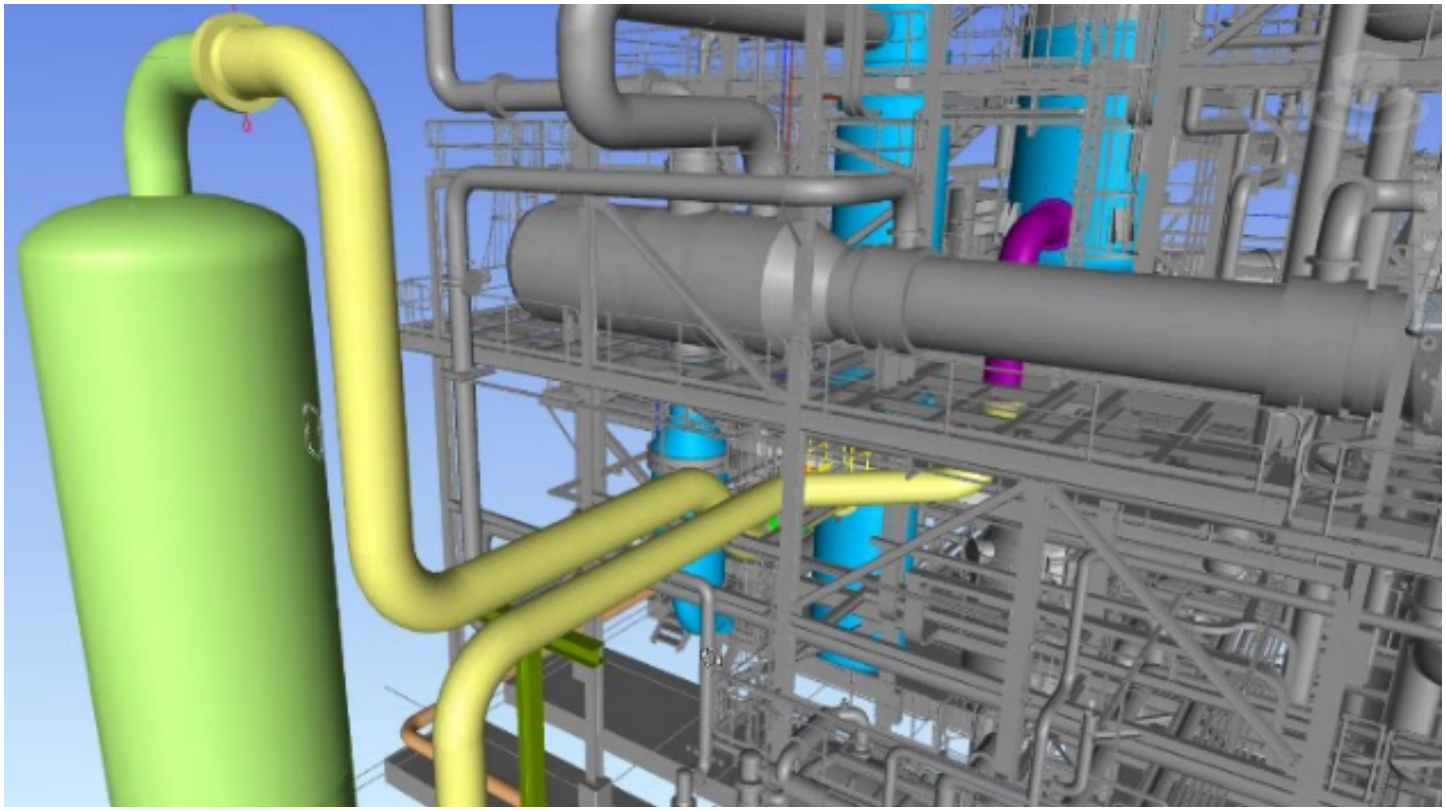
10%

REDUCTION DYNO NOBEL 2020 BASELINE

2024 – Moranbah Tertiary N_2O Abatement Installation

The Dyno Nobel Moranbah nitric acid plant was built 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. Up to 99% of N_2O process emissions, which are created during nitric acid manufacture, are removed from the tail gas stream through catalytic conversion to naturally occurring nitrogen and oxygen. Once installed, a further ~200,000 tCO_2e will be abated annually at Moranbah, which equates to a 5% reduction against IPL's 2020 baseline, and a 7% reduction for the Dyno Nobel business against its 2020 baseline. The project is expected to be installed in 2024 and will underpin the achievement of IPL's 5% by 2025 reduction target.



Waggaman, Louisiana Carbon Capture Facility and CCS MOU

Emissions from WALA, which began operations in late 2016, represent ~44 per cent of Dyno Nobel's total global GHG emissions. During 2022, a FEED study was approved for a Carbon Capture Facility (CCF) at the Dyno Nobel Waggaman, Louisiana (WALA) ammonia manufacturing facility. The CCF is intended 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. Memorandums of Understanding (MOU's) have been established with several shortlisted parties to work through options for transport and deep well injection.

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. Subject to the successful completion of the FEED study, construction of the carbon capture unit at WALA is expected to begin in 2023 and be completed by the end of 2025.

Louisiana, Missouri (LOMO) N_2O Abatement

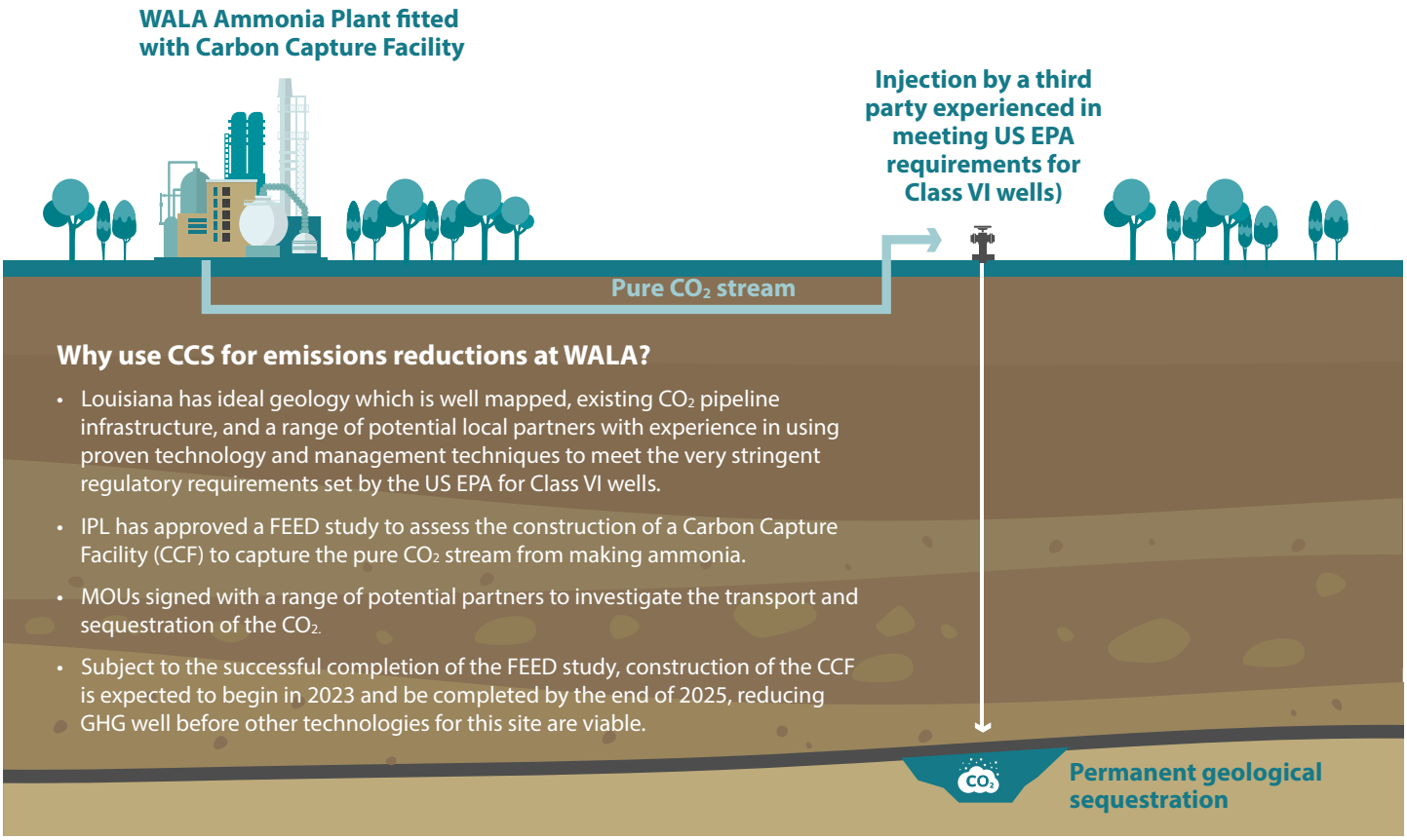
Abatement of N_2O at Dyno Nobel's Louisiana, Missouri (LOMO) nitric acid plant has been under investigation for some time, as this site has the company's only nitric acid plant without some form of abatement already installed. In 2021, Continuous Process Emissions Monitoring (CPEM) technology was installed at the plant to improve measurement and allow a more accurate 2020 baseline to be established, with stack testing throughout 2022 to further confirm actual emissions.

Secondary and tertiary abatement options are being investigated, as each offers different costs, installation timelines, and carbon crediting options. A scheduled maintenance shutdown planned for 2023 would allow the installation of baskets with the ability to hold a secondary abatement catalyst. The use of such catalysts would result in circa 10% reduction in Dyno Nobel's global operational GHG emisisons, and this opportunity is being actively investigated.

Partnering with Keppel Infrastructure and Temasek to investigate green hydrogen production

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 hydrogen and green ammonia for a low carbon economy. In 2021, we signed a memorandum of understanding (MOU) with Keppel Infrastructure Holdings Limited (Keppel Infrastructure) and Temasek to investigate the feasibility of producing green ammonia in Queensland and New South Wales (NSW), Australia for export to meet the rapidly growing market demand for carbon-free energy globally, including Singapore. If the project proceeds, the green ammonia could be used as a direct feedstock in green energy generation, or as a hydrogen carrier to provide green hydrogen solutions for other industries. See the diagram outlining the role of green hydrogen as ammonia in a zero-carbon energy system on the following page.

WAGGAMAN LOUISIANA CARBON CAPTURE AND PERMANENT SEQUESTRATION



OUR FERTILISER BUSINESS 2030 TRANSITION PLAN

GI Green Ammonia Project

44% REDUCTION IPF 2020 BASELINE

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

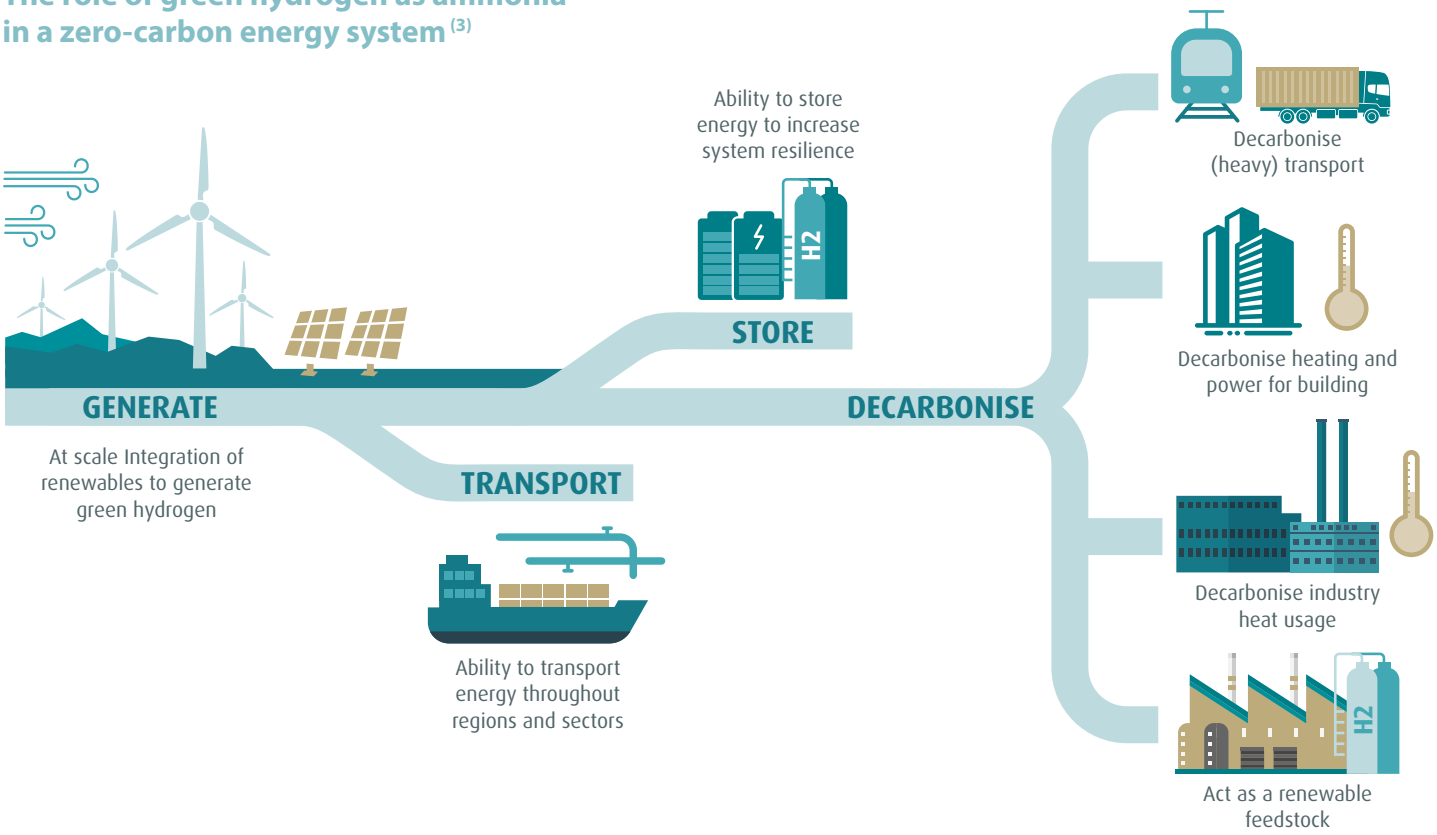
The site has used natural gas to produce hydrogen (H_2) for the manufacture of ammonia (NH_3) since it was built in 1969 (obtaining the nitrogen (N) required from the air).The proposal under investigation is for FFI to construct an on-site water electrolysis plant to produce hydrogen from the electrolysis of water (H_2O) using renewable electricity, thereby dramatically reducing GHG emissions. FFI would develop and operate the hydrogen manufacturing facility, with IPL operating the ammonia manufacturing facility.

The project progressed to FEED stage in 2022 and secured an AU$13.7m ARENA grant. Should the project proceed to a final investment decision, it would be Australia's first industrial scale green ammonia production facility, demonstrating existing infrastructure can be retrofitted to utilise zero-emissions energy sources.

The proposed water electrolysis facility would produce up to 50,000 tonnes of renewable hydrogen per year and replace all of Gibson Island's current gas feedstock more than 95% of its natural gas energy use. This would result in a 44% reduction for Incitec Pivot Fertilisers against its 2020 baseline and a 12% reduction against IPL's 2020 baseline.

The Gibson Island Green Ammonia project could play an important role in developing Australia's hydrogen potential. While green hydrogen is not expected to be competitive with natural gas for ammonia made for traditional uses until around 2040,[2] ammonia made with green hydrogen has the potential to contribute significantly to the decarbonisation of energy systems, by offering a practical, carbon-free hydrogen storage and transportation vector as well as a green fuel in its own right.

The role of green hydrogen as ammonia in a zero-carbon energy system [3]



(2) See our scenarios in Chapter 4 of this report.

(3) Adapted from Unlocking the Green Hydrogen Economy through Business Model Innovation – EGHAC

INVESTIGATING SCIENCE BASED TARGETS (SBTS)

During 2022, we engaged a specialist third party to assist us to investigate Science Based Targets (SBTs). SBTs are targets verified by the Science Based Targets Initiative as being aligned with the Paris Agreement on climate change. The work included:

→ External verification of our global scope 1, 2 and 3 GHG data set.

→ Modelling of our future GHG emissions trajectories. (4)

→ Estimations of the % emissions reductions associated with each of our GHG reduction projects against our 2030 modelled emissions.

→ Alignment of our scope 3 calculation methodology more fully with the GHG Protocol, resulting in a more complete and reliable scope 3 baseline. (5)

(4) IPL's future GHG emissions were modelled using long range forecasts based on a range of assumptions including asset utilisation, market demands and business growth.

(5) See chapter 3 for more details

3 DELIVERING PRODUCTS AND STRATEGIES T0 REDUCE SCOPE 3 GHG

We believe our existing and developing fertiliser products will play an increasingly important role in reducing land clearing and assisting the agriculture sector towards carbon neutrality by increasing yields of food and fibre. We know that innovative explosives products and services will be important in order to efficiently and effectively access the minerals and aggregates required for new technologies and infrastructure rebuilding in a world impacted by climate change. We recognise that increased supply chain collaboration and integrated business planning will be required to manage and reduce scope 3 emissions into the future.

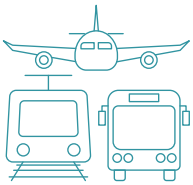
REVIEWING OUR SCOPE 3 EMISSIONS INVENTORY

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. For example, our scope 3 GHGs include the emissions which arise from the manufacture of the products we buy, and the emissions released when our customers use our products. These emissions are beyond our operating perimeter and operational control, making them more difficult to calculate and to influence.

To improve our scope 3 GHG reporting and management, we engaged a specialist third party to review our global GHG inventory, including our scope 3 calculation methodology. This scope of work has aligned our scope 3 calculations more closely with the GHG Protocol Corporate Value Chain (scope 3) Accounting and Reporting Standard as shown below.

2022 Improvements to our scope 3 calculations and management plan

Use of 'cradle-to-gate' LCA database emission factors to restate our 2020 scope 3 baseline, and our 2021 and 2022 scope 3 GHG

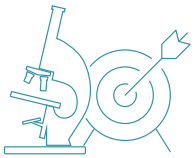


Inclusion of all relevant categories – new employee commuting and business travel calculations

Modelling of future scope 3 emissions trajectories,[1] allowing us to assess reduction opportunities against our scope 3 GHG as we grow our business

Key strategic scope 3 management steps identified at the business unit level, with integration into our supply chain function underway

Targeting FY23 delivery of scope 3 Management Framework, with systems in place to track and manage scope 3 GHG by FY25



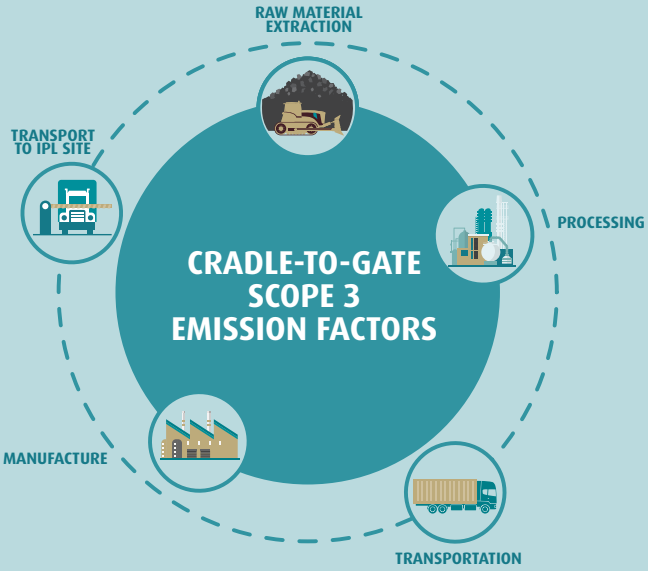
Investigated Science Based Target setting methodologies for our explosives and fertiliser businesses, which will use different SBT guides

What are cradle-to-gate scope 3 emission factors?

Cradle-to-gate' refers to the carbon impact of a product we buy, from the moment resources are mined, extracted, or grown to make it, through all processing, manufacturing and transport to our gate.

Since most companies are still developing their own scope 3 data set, many of our suppliers cannot yet supply us with cradle-to-gate emissions factors for the products we buy. For this reason, we purchased an ecoinvent LCA data base licence in 2022 to obtain cradle-to-gate emissions factors for many of the products we buy, allowing us to align our scope 3 calculations with the GHG Protocol's guidelines.

As the world's most consistent and transparent life cycle inventory database, supporting environmental assessments of products and processes worldwide, the ecoinvent licence provides us with cradle-to-gate scope 3 emissions factors for a range of products, depending on the country and region from which the product is purchased. This has, of course, increased our scope 3 GHG baseline and annual calculations totals, as we are now including all of the emissions from cradle-to-gate, not only those released by our suppliers as they make the final products we buy.



(1) IPL's scope 1,2 and 3 future emissions trajectories were modelled using long range forecasts based on a range of assumptions including asset utilisation, market demands and business growth.

OUR SCOPE 3 GHG REDUCTION OPPORTUNITIES

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 their adoption, and in some cases, the development of recognised methodologies to measure the reductions.

Some of our scope 3 emissions will disappear as we transition to alternative feedstocks. For example, the upstream emissions associated with the extraction and processing of the natural gas we currently purchase will be eliminated by a switch to hydrogen or other alternative feedstocks. The same is true as we replace diesel fuels for transport.

Our business units integrated scope 3 emissions management into their business strategies this year, and are targeting FY23 delivery of a management framework with systems in place to track and manage scope 3 by FY25. A supply chain partner with experience in scope 3 has been engaged to assist our businesses in obtaining supplier specific emissions factors and working with value chain partners to collaborate on reducing scope 3.

1.1%
Investments

4%
Transport and Distribution

We are already working with Rightship to reduce our shipping GHG by seeking to select the most efficient ships available for charter. We also work with road transport suppliers to reduce the distances travelled in their services for us.

Next Steps: Engaging with transport contractors to obtain their specific emissions factors and decarbonisation plans.

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

1.4%
Customer Use of Industrial Chemicals

3%
Customer Use of Explosives

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 25% reduction, and a limited assurance engagement is underway to independently verify these results.

Next Steps: Expanding our customer use of DeltaE, which 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.

52%
Customer Use of Fertilisers

Our Enhanced Efficiency Fertiliser (EEF) range is specially formulated to retain nitrogen in more stable forms for longer periods, increasing plant nutrient uptake and reducing denitrification losses to the atmosphere as N2O and nitrate leaching to waterways. In addition to reducing the direct nutrient losses, less fertiliser needs to be applied because more of the nitrogen is held in the soil for plant uptake, further reducing potential GHG losses and leaching to waterways. Trials of EEFs have been shown to reduce GHG emissions by up to 73%. (1)

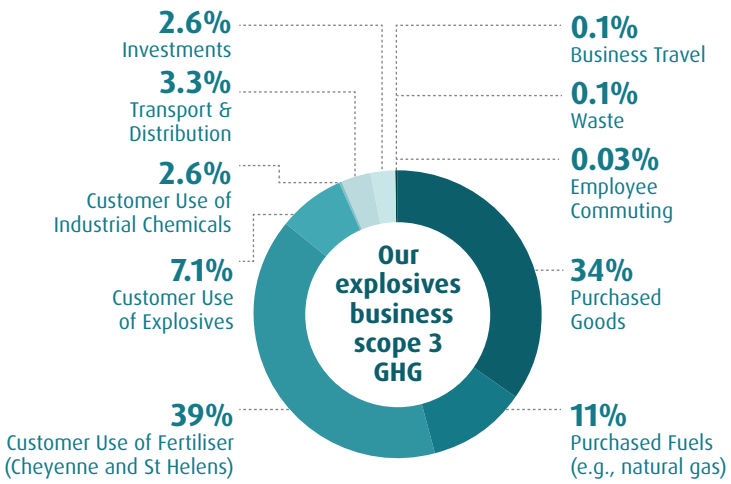
Next Steps: Increase sales of EEFs. Continue research and collaboration to quantify the reductions associated with their use for our farming customers.

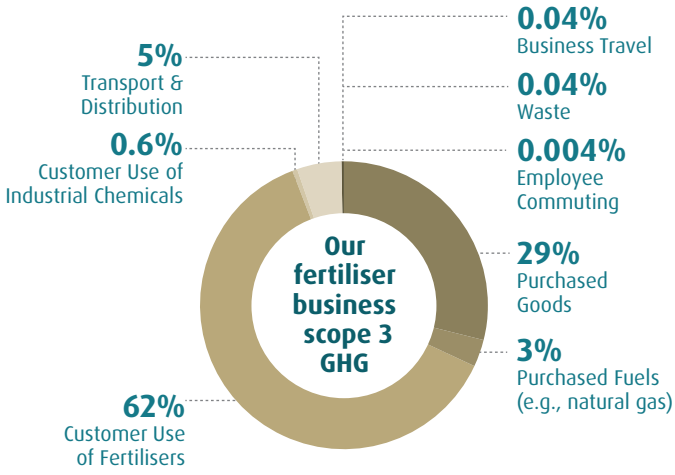
Key Enablers: Incentives for farmers to adopt EEFs.

(1) Results from a field trial conducted in a ryegrass pasture system in south–western Victoria show the application of EEF with the inhibitor DMPP reduced N_2O emissions by 73 per cent when compared to urea application alone. See the Australian Government Department of Agriculture, Water and the Environment Climate Research Program: Reducing Nitrous Oxide Emissions, p.5

See also: Suter, H., Lam, S. K., Walker, C., & Chen, D. (2020). Enhanced efficiency fertilisers reduce nitrous oxide emissions and improve fertiliser 15N recovery in a Southern Australian pasture. The Science of the total environment, 699, 134147. https://doi.org/10.1016/j.scitotenv.2019.134147

Our scope 3 emissions by busines





0.07%
Business Travel 0.07%

0.06%
Waste

0.01%
Employee Commuting

32%
Purchased Goods

Our purchases of ammonia, ammonium nitrate, urea and other fertilisers and chemicals make up a significant portion of our scope 3 GHG. Our inventory currently uses cradle-to-gate scope 3 emissions factors sourced from the ecoinvent data base.

Next Steps: Engaging with our suppliers to obtain supplier specific emissions factors and to collaborate on ways to reduce.

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 facilities at Gibson Island in Australia and Waggaman, Louisiana in the USA.

7%
Purchased Fuels (including natural gas)

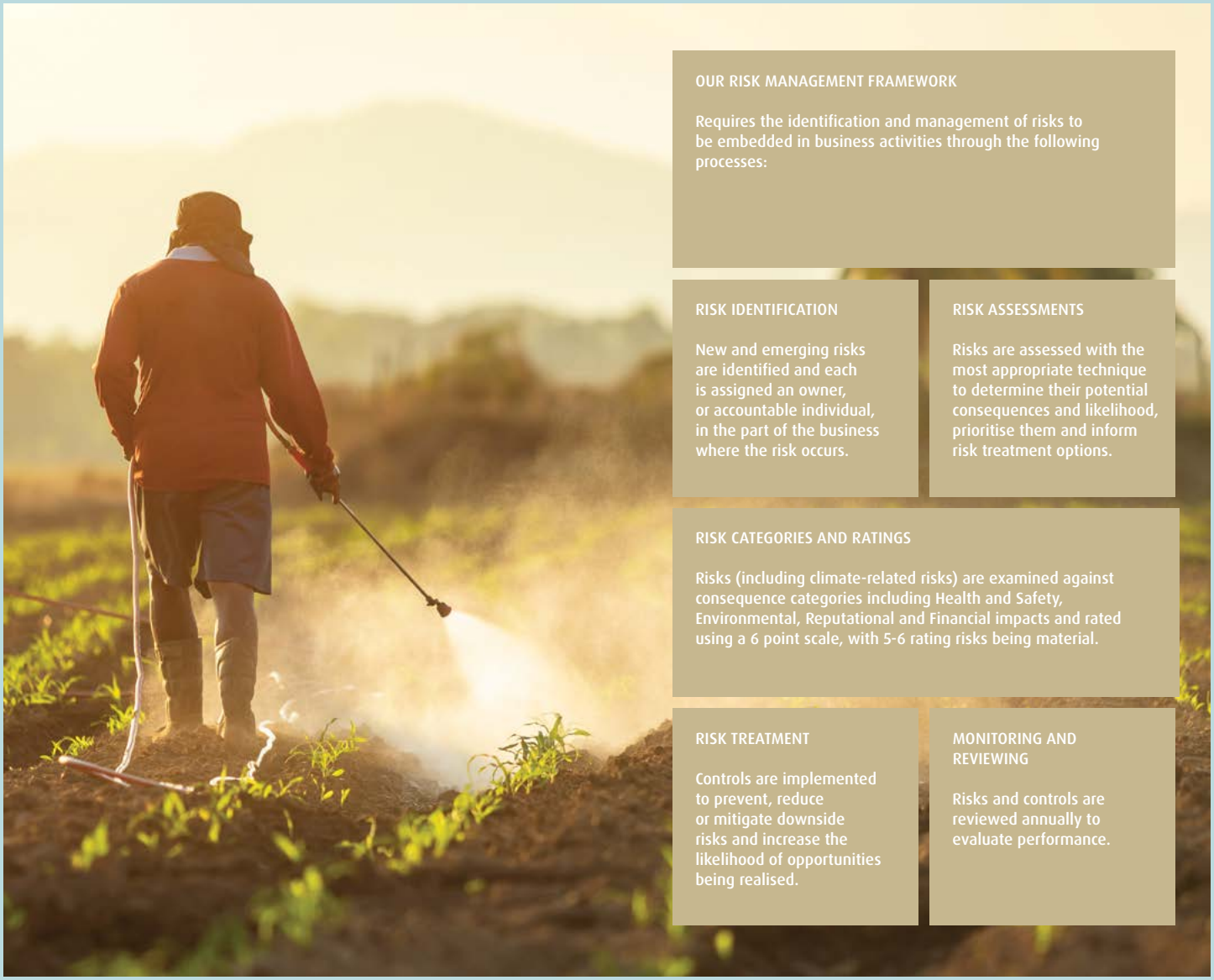
Our purchases of natural gas, petrol and diesel fuels have scope 3 GHG associated with their extraction, processing and transport to us.

Next Steps: Moving away from fossil fuel use.

Key Enablers: Switching from natural gas-based ammonia manufacture to green ammonia production will reduce our natural gas purchases and therefore eliminate the scope 3 GHG associated with its extraction and processing. Similar reductions in scope 3 will occur as we switch from petrol and diesel based fuels to electrified options.

4 MANAGING STRATEGIC BUSINESS RISKS AND OPPORTUNITIES

The IPL Board recognises that climate-related risks and opportunities be identified and managed in the same way as any other strategic risk or opportunity.



OUR RISK MANAGEMENT FRAMEWORK

Requires the identification and management of risks to be embedded in business activities through the following processes:

RISK IDENTIFICATION

New and emerging risks are identified and each is assigned an owner, or accountable individual, in the part of the business where the risk occurs.

RISK ASSESSMENTS

Risks are assessed with the most appropriate technique to determine their potential consequences and likelihood, prioritise them and inform risk treatment options.

RISK CATEGORIES AND RATINGS

Risks (including climate-related risks) are examined against consequence categories including Health and Safety, Environmental, Reputational and Financial impacts and rated using a 6 point scale, with 5-6 rating risks being material.

RISK TREATMENT

Controls are implemented to prevent, reduce or mitigate downside risks and increase the likelihood of opportunities being realised.

MONITORING AND REVIEWING

Risks and controls are reviewed annually to evaluate performance.

The IPL Group Risk Policy and Risk Management Framework ensures that risk is managed within a comprehensive risk management process which is consistent with the Australian/ New Zealand Standard for Risk Management (AS/NZS ISO 31000:2018).

A key element of this risk management process is the Board's risk appetite, which is based on the level of risk IPL is prepared to sustain in achieving the corporate objective of delivering value to shareholders. Risks are identified, analysed and prioritised using common methodologies and risk controls are designed and implemented having regard to the overall corporate strategy.

OUR SCENARIOS

IPL's integrated risk assessment process makes use of IPL specific future climate-related scenarios which are updated every three years, as mandated by the charter of the Audit and Risk Management Committee of the Board. An expert third-party is engaged to update the scenarios using the most recently available climate related information including Assessment Reports and Representative Concentration Pathways (RCPs) from the Intergovernmental Panel on Climate Change, New Energy Outlooks from BloombergNEF and Shared Socioeconomic Pathways (SSP), along with a range of scientific and consultancy papers relevant to our businesses and geographical locations (see Appendix 1).

In addition to updating the scenarios, the expert third party also conducts a comprehensive assessment of IPL's physical and transitional (market-based) risks and opportunities associated with climate change. The most recent scenario update and comprehensive external risk and opportunity assessment was conducted in 2021 using four scenarios that align with the TCFD five principles of plausible, distinctive, consistent, relevant and challenging. They each describe how physical climate change and efforts to reduce emissions would impact on areas including carbon pricing and carbon market development; the overall economy; the development of technology; people's consumption patterns and social structures; the physical environment and localised weather patterns; energy and power; agriculture and land use; mining and industry; infrastructure; and transport.

The existing risks and opportunities for IPL were then re-assessed against these scenarios through a comprehensive assessment process including interviews, workshops and validation sessions across our global business.

Our scenarios are described on the following pages. They are not predictions, but are descriptions of potential future scenarios associated with each degree of warming, using the most recently available information. For example:

- → The 1.5°C Fast Action and 2°C Required Action scenarios describe the policies, energy transitions and technology shifts that would be required to limit global temperature increases to 1.5°C and 2°C respectively, as well as the physical impacts that would occur with these degrees of warming;
- → The Delayed Action Scenario (Inevitable Policy Response Scenario) describes a future in which there is an initial period of inaction, leading to severe physical impacts, followed by rapid government action to mitigate these physical impacts. This delayed response would require an abrupt and disorderly transition to low carbon practices, resulting in rapid and unprecedented changes to the economy;
- → Finally, the 3°C+ Current Trajectory Scenario describes a future in which the current business-as-usual policies continue with limited further action. This leads to significant global warming and increased exposure to extreme acute and chronic physical risks.

OUR SCENARIOS

SCENARIO A
1.5°C FAST ACTION

Rapid, far-reaching and unprecedented transition across all sectors of the economy is required to limit global warming to 1.5° degrees. International cooperation is essential to achieve prompt decarbonisation.

The changes required to avoid 1.5 degrees of warming (when the world is already 1 degree above pre-industrial levels) are extreme. Rapid, far-reaching and unprecedented transitions would occur in energy, land, food, urban, infrastructure, transport, buildings and industrial systems.

SCENARIO B
2°C REQUIRED ACTION

Globally coordinated, government-led rapid deployment of climate policy where the worst physical impacts of climate change are avoided.

This scenario involves a high degree of government, 'penalty-led' regulation. Significant investment is deployed to transition to a decarbonised economy, including renewable energy and storage, energy efficiency and CCS. Global primary energy will lean heavily on renewables, bioenergy and nuclear. Oil demand peaks by 2028.

SCENARIO C
DELAYED ACTION FOLLOWED BY RAPID ACTION (INEVITABLE POLICY RESPONSE)

Delayed government action leads to significant climate impacts followed by a forced policy response that will be abrupt and disorderly, causing rapid and unprecedented changes to the economy.

In this scenario, delayed action results in severe physical impacts. Rapid action is then taken between 2025 and 2030, causing substantial shifts in global investment needs, driving down demand for assets that increase emissions, and driving up demand for assets that avoid or reduce them.

SCENARIO D
3°C+ CURRENT TRAJECTORY

Business as usual, with limited climate regulation and a growing global population leads to devastating physical impacts and a decline in economic growth.

This scenario describes a future resulting from current, business-as-usual policies which lead to significant global warming and increased exposure to extreme physical risks. Because less policy action is taken, transition risks are not as prevalent. However, substantial physical impacts over the medium to long term are socially and economically devastating.

Implications for IPL

The widespread adoption of new and disruptive technologies and enhanced climate-driven innovation are required to avoid more than 1.5 degrees of warming, including Carbon Capture and Storage (CCS). Significant economic incentives for companies to invest rapidly and at scale assist decarbonisation efforts in this scenario.

Because the 1.5°C Fast Action scenario assumes rapid global action is taken, physical risks are not as severe. The material financial risks are associated with the rapid transitioning of the economy and include policy and legal risks, including carbon pricing, market risks such as reduced demand for explosives due to thermal coal decline, and later, metallurgical (MET) coal. Reputational risks may arise if IPL were not to report transparently on its efforts to manage the rapid transition.

Opportunities include increased demand for low carbon products and services as well as business opportunities associated with the development of green hydrogen for energy use.

As industries decarbonise, major shifts in commodity demand are experienced. All industries face increasing pressure from government, investors and society to reduce emissions, with stakeholders pulling away from capital investments in high emissions industries which refuse to abate.

This scenario also assumes rapid global action is taken to reduce emissions, but describes greater physical impacts associated with a greater degree of global warming. Risks include supply chain disruptions due to more extreme weather events. Carbon pricing and reduced demand for explosives in the coal sectors have potential to be financially material, although the transition occurs more slowly.

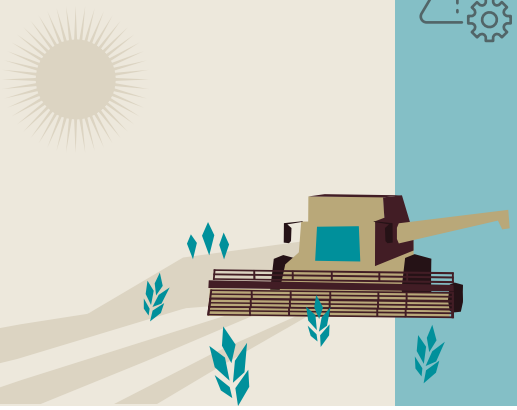
Opportunities for IPL are associated with the transition: increased demand for low carbon products and services and the development of green hydrogen for energy use.

Policy impacts include carbon border taxes, carbon pricing with high prices after 2030, methane and nitrous oxide emissions taxes or cap-and-trade systems, subsidies for low-emissions agricultural practices and technologies, and farmer education and technical assistance programs.(C1) Industry will be forced to decarbonise.

The DA scenario describes serious physical impacts followed by a forced policy response, causing rapid, disorderly and unprecedented changes to the economy. Transitional risks include localised carbon pricing schemes causing competition risks, market risks associated with a less orderly transition and, potentially, stranded assets and loss of revenue if this transition were not managed in advance.

Physical risks include increased hurricanes, storms and floods, periods of drought and water shortages, which could impact on IPL's operations, supply chains and customers, and an increased risk of inundation at some coastal sites.

Physical impacts from extreme weather events lead to business disruption, damage to property and infrastructure, and significant impacts to global supply chains. Increased temperatures, sea level rise and precipitation affect labour, capital and agricultural productivity, and cause operational and raw material disruptions to key industries. Geopolitical conflict results.



The limited climate regulation described in this scenario mean the transitional risks for IPL associated with market shifts and carbon pricing are limited to those which IPL is currently managing, including a shrinking thermal coal explosives market in the US and small regional carbon pricing schemes.

Because carbon emissions continue to rise in this scenario, the material risks identified for IPL are associated with chronic physical risks (e.g., creeping changes in climate which cause drought and sea level rise) and acute physical risks (e.g., more severe and more frequent extreme weather events such as hurricanes, drought and flooding from intense rain events and storm surges) which impact on IPL's operations, supply chain logistics and customers.

Scenario Outcomes

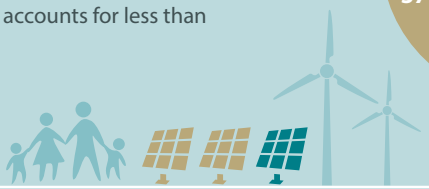
	2020	2030	2040
SCENARIO A 1.5°C FAST ACTION	A global carbon price is rapidly introduced. By 2030, the global price on carbon is ~US$300/t CO_2 and by 2040 is ~US$550/t CO_2 [A10] Deforestation is halted by around 2030, while rapid global reforestation occurs simultaneously. Food waste is increasingly reduced and new, low GHG cultivation methods are adopted [A2]	Global net anthropogenic CO_2 emissions decline by about 45 percent from 2010 levels by 2030, reaching net zero by 2050 [A1] Coal-fired electricity generation will decrease by nearly 80 percent by 2030 and will be reduced to close to zero percent of electricity by 2050 [A9]	Significantly increased demand and use of sustainably sourced bioenergy – e.g., biokerosene, biogas, biodiesel. This requires the deployment of large-scale bioenergy cropland [D2] CO_2 emissions from industry are 65-90 percent lower in 2050 relative to 2010. This is achieved through existing and new technologies including electrification, renewable hydrogen, CCS & CCU [A1]
SCENARIO B 2°C REQUIRED ACTION	Emissions are projected to decline by 25 percent from 2018 levels by 2030 and reach net zero by 2070 [B2] In OECD countries, the use of coal and oil as primary energy sources decreases steadily from now. Gas for energy increases to 2040, after which it falls [A2]. Globally, crop demand for energy sources doubles before 2030 [B17]	A global carbon price is implemented rapidly, reaching US$32.7/ tonne in 2030, increasing to US$71.8/ tonne in 2040 and US$100/ tonne in 2050. The carbon price peaks in 2080 before dropping [B2] Global food production increases from now until 2050. The agriculture, forestry and land use sector shifts from net positive to net negative GHG emissions. This drop is due to changing practices, including increasing forest cover [B17]	CCS is especially applicable in the chemicals industry, delivering 14 billion tonnes of abatement to 2060 [B5] Total global population peaks at 8.5 billion in 2050, before declining. By 2070, global population has dropped to 8.2 billion [B17]
SCENARIO C DELAYED ACTION FOLLOWED BY RAPID ACTION	Global GHG emissions continue on current trajectories until 2030. Between 2030 and 2050 there is a rapid decline in global emissions [C1] The US, Canada, Australia will have comprehensive mitigation policies in place by 2025 to reduce emissions from agriculture. Major tropical forest countries will end deforestation by 2030 [C1]	All major economies will have carbon pricing schemes covering emissions in power and industry by 2030. Policy ambition and backstop signal prices of US$60-85 by 2030 in leading countries [C2] Early coal phase-out for first mover countries by 2030. Steady retirement of coal-fired power generation after 2030 in lagging countries, with no thermal coal use by 2040. Bioenergy crops play a significant role in the transport sector [C3]	Countries with ambitious net-zero targets end the installation of new unabated (no CCS) fossil-based industrial plants by 2040 [C3] By 2050, hydrogen contributes at least 20 percent of energy and feedstock demand in hard-to-abate sectors, such as iron and steel, non-metallic minerals and chemicals [C3]
SCENARIO D 3°C+ CURRENT TRAJECTORY	A global carbon price is negligible, if it emerges at all. Carbon pricing is applied only in some geographies [D1] [D2] Wind and solar will match global gas capacity by 2022. Renewables accounted for 90 percent of new electricity generating capacity added globally in 2020 and will meet the same share in 2021 and 2022 [D12]	By 2030, there is a global 100 percent increase in the frequency of extreme heat events over land and by 2040 severe weather systems become significantly more intense [D5] Water stress begins to impact cities and industrial processes & sectors which rely on water, yet operate in scarce environments [D5]	Carbon emissions do not peak globally until around 2050. Lack of action results in an estimated median temperature rise of over 2°C by 2050 and close to 4°C by 2100 [D1] Physical impacts cause massive disruptions to global supply chains and economies [D9]. Extreme weather combined with sea-level rise will damage industry and infrastructure located near coastlines [D5]

2050 Global Primary Energy Mix

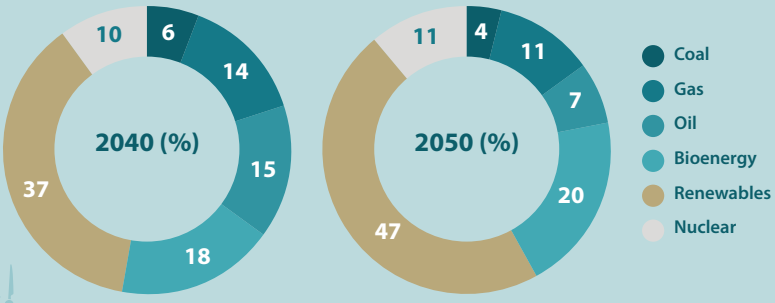
→ In this scenario, the global energy mix experiences a fast but measured decline in fossil fuel use. No new coal or gas power stations are built from 2022.

→ Gas is still utilised in non-energy goods in the US, however where possible CCUS technology is applied. Hydrogen replaces gas for industry in Australia. (A11)

→ By 2050 renewables supply 80% of electricity: gas with CCS makes up 8%, coal accounts for less than 1% by 2050. (A11)



Global Primary Energy



→ In this scenario, global primary energy will lean heavily on renewables, bioenergy and nuclear (see chart). This leads to peak oil demand by 2028. (A10)

→ Electrification will result in increasing demand for electricity globally while reducing emissions. (A10) By 2050, electricity will provide 45% of final energy (up from 20% in 2020).

→ Hydrogen will provide 25% of final energy by 2050, with oil and gas supplying energy to only those industries where electricity and hydrogen are not viable substitutes (e.g., aviation, select industrial processes). (A10)

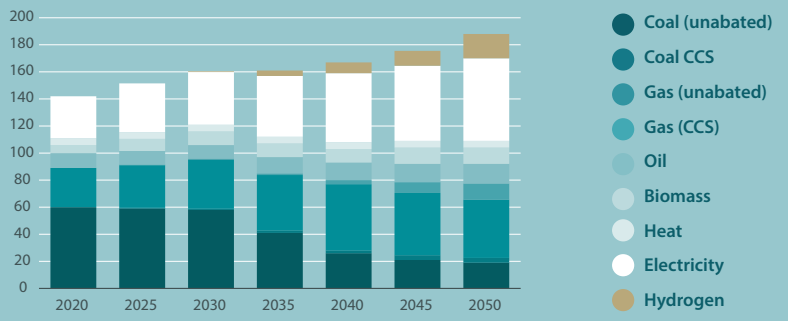
Global Primary Energy

→ In this scenario, coal maintains a 20% share of primary energy, with oil and gas holding 25% each to 2030. (C3)

→ From 2030 to 2050, this mix rapidly shifts to align with a 1.5°C scenario. Coal fired generation decreases to 4% with CCS on any remaining, oil falls to 7% of the energy market share, and renewables make up almost 50%. (C3)

→ For industry, by 2050, coal provides 10% of energy, natural gas provides 20%, electricity provides 25%, and hydrogen provides 10%. (C3)

Industry Energy Mix, EJ Per Year



Source: Vivid Economics and Energy Transition Advisors, The Inevitable Policy Response: Forecast Policy Scenario (2019)

→ In this scenario, current trends in renewable electricity generation uptake continue, however fossil fuels remain the dominant source of primary energy. (D12)

→ In the US, from 2022 to 2050 there are no new coal generation plants established and almost half of current generators retiring. US natural gas production and consumption grows, increasing by 25% from 2025 to 2050. (D13)

→ In Australia, trade in LNG continues to grow and increased competition causes governments to reconsider possible shortfalls in supply. (D13)

Global Primary Energy

RISKS AND OPPORTUNITIES

This section summarises the risks and opportunities for IPL as assessed against the 1.5°C Rapid Action, 2°C Required Action, Delayed Action (IPR) and 3°C+ Current Trajectory scenarios described in the previous section. Therefore, the descriptions of risks, opportunities and resilience are not forecasts, but describe what could happen if the world's development progressed as described in each of these scenarios.

Global temperature records show that we have already surpassed a global average temperature increase of 1°C above pre-industrial average temperatures, indicating that there is an appreciable prospect that the world will experience more than 2 degrees of warming. However, the transitional risks identified through the use of the 1.5°C and 2°C scenarios could still occur because nations may still introduce rapid market, technological and regulatory changes, regardless of the actual degree of warming, to try to reduce emissions as quickly as possible.

The climate-related risks and opportunities specific to IPL's businesses that were assessed during our most recent scenario analyses are summarised on the page to the right. Each risk or opportunity is categorised according to the TCFD definitions (shown below the table) and as they relate to IPLs' value chain. Also included are the relevant climate scenarios and the estimated timeframes they describe for the impact of the risk or opportunity. Where impacts are already being realised, these are described as 'Current'.

CURRENT

RISK
Loss of revenues due to decreased demand for thermal coal mining

Transitional: Market

1.5° 2° DA

OPPORTUNITY/RISK
Increased demand for new world minerals & reduced demand for base metals

Transitional: Market

1.5° 2°

RISK
Physical impact of severe weather events on supply chain logistics

Physical: Acute risk

1.5° 2° DA 3°

SHORT TERM
<1-3 YEARS

RISK
Regional carbon pricing schemes create a competition risk

Transitional: Legal & policy

2° DA 3°

RISK
High baseline water stress may lead to water shortages at some IPL operations

Physical: Chronic

1.5° 2° DA 3°

RISK
Reputational risk impacts access to capital and investors

Transitional: Market & reputation

1.5° 2°

RISK
Physical impact of severe weather events on operations & personnel

Physical: Acute risk

1.5° 2° DA 3°

MEDIUM TERM
<3-6 YEARS

OPPORTUNITY
Development of green ammonia and renewable hydrogen market

Transitional: Market & technology

1.5° 2°

OPPORTUNITY
Increased demand for specialist fertilisers due to harsher growing conditions

Physical: Chronic

DA 3°

OPPORTUNITY
Partnerships for soil carbon sequestration in agriculture sector

Transitional: Market & policy opportunity

1.5° 2°

OPPORTUNITY
Demand for low GHG emitting fertilisers and explosives

Transitional: Market & policy opportunity

1.5° 2°

LONG TERM
6+ YEARS

OPPORTUNITY
Growth in Quarry & Construction sector to rebuild infrastructure due to physical impacts

Transitional: Market

DA 3°

OPPORTUNITY/ RISK
Shifting growing regions leads to fertiliser demand shifts

Physical: Chronic

1.5° 2°

RISK
Stranded asset or long term contract risk due to late sudden transition

Transitional: Market

DA

RISK
Socio-economic downturn/ disruption leads to supply chain interruptions & reduced product demand

Physical: Acute & chronic

3°

CLIMATE SCENARIOS

1.5° Fast Action

2° Required Action

DA Delayed Action (IPR)

3° Current Trajectory

TCFD DEFINITIONS

The TCFD divided climate-related risks into two major categories:

1. Risks related to the transition to lower-carbon economy; and
2. Risks related to the physical impacts of climate change.

Transitional risks

Transitioning to a lower-carbon economy may entail extensive policy, legal, technology, reputation and market changes to address mitigation and adaptation requirements related to climate change.

Physical risks

Physical risks resulting from climate change can be acute or longer term (chronic) in climate patterns.

Acute Risks: Acute physical risks refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes or floods.

Chronic Risks: Chronic physical risks refer to longer-term shifts in climate patterns, eg. sustained higher temperatures and changes to rainfall patterns which may cause heat waves, sea level rise and/or increasing periods of drought.

MANAGING OUR EXPLOSIVES BUSINESS' CLIMATE-RELATED RISKS AND OPPORTUNITIES

The following table provides a detailed summary of the material climate-related risks and opportunities identified for Dyno Nobel during our most recent climate risk and opportunity review and assessment, which was conducted in 2021. IPL defines a 'material' financial impact as an AU$20m impact or greater on EBIT. The table includes a description of the risk or opportunity, the strategic approach Dyno Nobel is taking to maximise the opportunity or mitigate the risk, and the residual risk assessment.

RISK OR OPPORTUNITY	STRATEGY AND MITIGATING ACTIONS	RESIDUAL RISK ASSESSMENT AND KPIS
CURRENT		
RISK **Loss of revenues due to decreased demand for thermal coal mining** Transitional: Market Risk Climate Scenarios: 1.5° 2° DA Impact: LOW **MEDIUM** HIGH Decline in demand firstly for thermal coal, then also metallurgical coal is described in both the 1.5°C and 2°C Fast and Required Action scenarios. This would reduce demand for bulk explosives across thermal coal in the short term and MET coal in the long term. The US business has seen a structural decline in demand from the thermal coal market since the 2018 risk assessment.	• Dyno Nobel monitors the global environment, conducts detailed assessments of markets and regularly updates supply and demand forecasts to quickly respond to change. Dyno Nobel seeks to maintain competitive cost positions in its chosen markets, whilst maintaining quality product and service offerings. This focus on cost and quality positions Dyno Nobel's business units to compete over the medium to longer term in changing and competitive environments and the business prefers to engage in long term customer and supply contractual relationships. • The 1.5°C and 2°C scenarios describe the reduction in demand for explosives in the thermal coal market being partly offset by the mining of new world commodities required for renewable technologies, which could be higher margin activity. In the 3°C+ scenario, the physical impacts of climate change are expected to increase demand for materials, and therefore explosives, in the quarry & construction sector.	Considered an ongoing business risk. The business has been able to remain resilient through shifting supply to other sectors (quarrying & 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**
OPPORTUNITY/RISK **Increased demand for new world minerals & reduced demand for base metals** Transitional: Market Risk Climate Scenarios: 1.5° 2° Impact: LOW **MEDIUM** HIGH Both the 1.5°C Fast Action and 2°C Required Action scenarios describe a significant increase in the mining of primary metals due to increased demand for the 'new world minerals' required for new low-carbon technologies. However, they also describe increased recycling trends which will lower the need for primary metals, especially steel, with scrap steel being utilised in electric arc furnaces. This would reduce the demand for both virgin iron ore and bulk explosives for MET coal mining.	• Strategic action has been taken by Dyno Nobel Americas to shift operations and supply into emerging new world mineral markets in both South America and western USA, and increase revenues from the quarry & construction sector. • 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 3.75 billion tonnes MET coal with volatile matter less than 25 percent, 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. • Dyno Nobel may be at a competitive advantage due to its ability to relocate production through disassembly and reassembly of facilities in a short timeframe (3 years) as has been demonstrated with the relocation of the Moranbah plant from the US in 2012.	Active management of demand changes has minimised losses to date. However, there remains a risk that the opportunity in this space may not be as financially material as the risk due to new world minerals requiring less explosives volumes due to their smaller mine size. The business will be required to continue to manage this risk. **KPI: Annual % revenues from coal mining vs other sectors over time in our Dyno Nobel Americas and Dyno Nobel Asia Pacific businesses**

CURRENT

Physical: Acute Risk

Physical impact of severe weather events on supply chain logistics and customers

Climate Scenarios: 1.5° 2° 3°+ DA

Impact: LOW | MEDIUM | HIGH

An increase in the severity and/or frequency of extreme weather events as a result of climate change may cause more frequent disruption to IPL's supply chain and logistics including transportation of raw materials and finished product via road, rail and water. Interruptions to logistics from extreme weather events could result in financial loss if product cannot be stored effectively and degrades, or cannot be transferred off-site, resulting in production losses once site storage has reached capacity. These impacts on customers could also result in decreased product demand for periods of time. All scenarios describe these events as increasing in the short term (1-3 years). Under these scenarios, insurance premiums would be expected to increase along with a possibility that some events may be excluded from cover.

- The COVID-19 pandemic tested the ability of Dyno Nobel's supply chain function to respond to a global crisis, showing a high degree of resilience.
- Physical impacts (flooding) on logistics at Louisiana, Missouri (LOMO) have occurred recently with the impacts immaterial.
- Low Mississippi River levels have also been experienced, but with no material impact on river transport use.
- Additional storage, both onsite and at strategic locations along transport routes, may be necessary along with contingency plans to use alternative forms of transport to access these.
- Domestic co-location of critical products and diversification away from single source suppliers, already being managed, will assist in managing supply chain interruption.
- The location of the Moranbah facility close to high quality metallurgical coal producers would provide Dyno Nobel with a strategic advantage over its competitors in the event of supply chain disruption due to extreme weather events.

Considered a material risk which requires ongoing management.

KPI: Annual financial impact of acute weather events causing supply chain disruptions

SHORT TERM: 1-3 YEARS

RISK

Regional carbon pricing schemes create a competition risk

Transitional: Legal and Policy Risk

Climate Scenarios: 1.5° 2° 3°+ DA

Impact: LOW | MEDIUM | HIGH

Carbon pricing will materially impact Dyno Nobel if it is not applied uniformly across global markets and cannot therefore be passed on in the cost of goods. Further, a carbon price on transport may impact the price of receiving products. The 2°C Required Action scenario describes this impacting Dyno Nobel until 2025, when most shipping and trucking options will be retrofitted with zero or low carbon mobility options.

- IPL's DET Steering Committee has developed Dyno Nobel's Net Zero Pathway and a range of projects which seek to progressively reduce Dyno Nobel's exposure to carbon pricing.
- 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 regulation, including carbon pricing.
- Dyno Nobel customer agreements 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.

RISK

Reputational risk impacts capital markets and investors

Transitional: Market and Reputational Risk

Climate Scenarios: 1.5° 2° 3°+

Impact: LOW | MEDIUM | HIGH

Both the 1.5°C Fast Action and 2°C Required Action scenarios describe increased pressure from capital markets and investors to improve climate disclosure, worsening lending conditions, and risk of divestment in the short term.

Dyno Nobel recognises that climate-change is a material issue for its business, people, customers, investors and other stakeholders. Dyno Nobel is committed to reducing its impact, assessing and managing strategic and operational risks and opportunities, transparently reporting in line with TCFD recommendations and to engaging in other communications with stakeholders.

In 2021, IPL secured a sustainability-linked syndicated three-year term loan with Westpac Institutional Bank. The facility demonstrates IPL's commitment to sustainable outcomes by linking the cost of finance to key performance indicators on greenhouse gas emissions and water reductions, as well as increases in soil and plant testing rates.

Considered a material risk requiring ongoing management.

KPI: Number of face to face engagements with investor groups annually

SHORT TERM: 1-3 YEARS

RISK

Physical impact of severe weather events on operations & personnel

Physical: Acute Risk

Climate Scenarios: 3°+ DA

Impact: LOW | **MEDIUM** | HIGH

Some of Dyno Nobel's manufacturing plants are in areas that are susceptible to extreme weather events, such as hurricanes, electrical storms, tropical storms and tornadoes. An increase in the severity and/or frequency of these extreme weather events as a result of climate change may cause more frequent disruption to Dyno Nobel's operations and increase and/or amplify health and safety risks for personnel.

- Dyno Nobel's own manufacturing facilities are considered resilient to the anticipated acute physical impacts of climate change, with measures currently in place to manage exposure where sites are in tornado, electrical storm or hurricane zones.
- Some smaller explosives Initiating Systems (IS) manufacturing sites must cease production during electrical storms, with the impacts currently immaterial. These sites could potentially be relocated closer to emerging markets if such interruptions increase.
- Safety and evacuation plans are in place for all personnel and sites.
- Dyno Nobel endeavours to include force majeure clauses in agreements where relevant and insurance policies are in place across the Group.
- • Our Waggaman, Louisiana ammonia plant is located in a hurricane zone. Read about the specific actions being taken for this site on page 45.

Considered a material risk requiring ongoing management.

KPI: Annual financial impact of acute weather events on operations

MEDIUM TERM 3-6 YEARS

OPPORTUNITY

Development of green ammonia and renewable hydrogen market

Transitional: Market and technology

Climate Scenarios: 1.5° 2° 3°+ DA

Impact: LOW | **MEDIUM** | HIGH

Both the 1.5°C Fast Action and 2°C Required Action scenarios describe the development of green ammonia and renewable hydrogen in the medium term. IPL is an expert in the manufacture and handling of hydrogen (H_2) and ammonia (NH_3).

Dyno Nobel has a core competency in the manufacture, storage and transportation of ammonia and is well placed to play a role in the 'green hydrogen', and green ammonia for a low-carbon economy. Options including solar hydrogen and other alternative feedstocks are constantly being assessed for viability as part of Dyno Nobel's overall capital management framework, supported by two of our strategic values drivers, Leading Technology Solutions and Manufacturing Excellence.

Read about our decarbonisation projects and partnership with Keppel and Tamesek in Chapter 2.

Dyno Nobel is currently highly dependent on the availability of affordable natural gas, both as a feedstock for hydrogen and as a fuel source. The development of green ammonia and renewable hydrogen is considered to be a material opportunity requiring ongoing management.

KPI: Number of low carbon hydrogen projects being investigated/implemented annually

OPPORTUNITY

Demand for low GHG explosives

Transitional: Market & policy opportunity

Climate Scenarios: 1.5° 2° 3°+ DA

Impact: LOW | **MEDIUM** | HIGH

The 1.5°C Fast Action and 2°C Required Action scenarios describe increased demand for low carbon explosives products and services in the medium term. Bulk products, such as ammonium nitrate (AN) that are manufactured with reduced carbon emissions, which reduce our customers' scope 3 GHG, as well as lower carbon and environmentally friendly products, such as Dyno Nobel's DeltaE, will have a significant competitive advantage in this scenario.

Dyno Nobel aims 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 construction customers. See 'OUR SCOPE 3 GHG REDUCTION OPPORTUNITIES' for more details.

The development of explosives products and services which provide solutions for our customers is a core business driver. Considered a material opportunity requiring ongoing management.

KPI: Compound annual growth rate: premium emulsions

LONG TERM: 6+ YEARS

OPPORTUNITY

Growth in Quarry & Construction sector to rebuild infrastructure due to physical impacts

Transitional: Market

Climate Scenarios: 1.5° 2° 3°+ DA

Impact: LOW **MEDIUM** HIGH

The scenarios in which global warming surpasses 1.5°C describe domestic adaptation and rebuilding due to physical impacts. In these scenarios, demand for quarry & construction materials, and therefore explosives demand from this sector, increases in the medium term.

Our Dyno Nobel Americas business is the second largest industrial explosives distributor in North America by volume, providing ammonium nitrate, initiating systems and services to the Quarry & Construction sector in the southern US, northeast Midwest US and Canada. More than 40% of DNA revenues are from the Quarry & 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 offering. DeltaE has been in operation across the USA over the last four years and is well established in the quarry & construction and hard rock segments where customers value its safety, environmental, and efficiency benefits, including reduced GHG emissions due to reduced energy use.

DNA also operates a Quarry Academy training centre for stone quarry operators.

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. Considered a material opportunity requiring ongoing management.

KPI: % Revenues - supply of explosives to Quarry & Construction sector: Americas

RISK

Stranded asset or long term contract risk due to late sudden transition

Transitional: Market Risk

Climate Scenarios: 1.5° 2° 3°+ DA

Impact: **LOW** MEDIUM HIGH

The delayed, abrupt and disorderly transition away from carbon emitting assets described in the Delayed Action scenario presents a risk associated with long-term contracts or offtake agreements from 2030 (customers or suppliers may close before end of contract). Assets which are still emissions intensive or support an emissions intensive industry at this time may become stranded.

- IPL's DET Steering Committee has developed Dyno Nobel's Net Zero Pathway, which will progressively reduce IPL's exposure to the risk of stranded assets, should the Delayed Action scenario 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.

RISK

Socio-economic downturn/disruption leads to supply chain interruptions & reduced product demand

Physical: Acute & Chronic Risks

Climate Scenarios: 1.5° 2° 3°+ DA

Impact: LOW **MEDIUM** HIGH

The Delayed Action and, to a greater extent, 3°C+ Current Trajectory scenarios describe severe acute and chronic physical impacts which lead to infrastructure destruction, famine, competition for food and water, increased geo-political conflict and mass population displacement. In the 3°C+ scenario, this results in severe disruption to global trade and economic downturn.

Dyno Nobel's commitments to finding new ways to reduce GHG emissions, and to continue to develop and deliver products and services which reduce customer emissions, will ensure its contribution to the global aim of limiting global warming and reducing the physical, socio-economic and geopolitical impacts of climate change to those described in the 1.5°C and 2°C scenarios. This will require global action.

Considered to have severe impacts in affected regions. While Dyno Nobel's manufacturing plants are located primarily in wealthy countries with good governance which may be more resilient than most, the long-term future described in this 3°C+ scenario would not be conducive to operating a business regionally and/or globally.

NON-MATERIAL RISKS AND OPPORTUNITIES IDENTIFIED FOR OUR EXPLOSIVES BUSINESS

IPL defines a 'material' financial impact as an AU$20m impact or greater on EBIT. In addition to this financial threshold, IPL considers risks and management strategies based on an assessment of likelihood, with lower consequence risks that have a higher likelihood of occurring receiving an elevated level of management attention. IPL's risk management process also reviews the appropriateness of controls and management strategies for climate related-risks with impacts of less than AU$20m on EBIT.

In order to fully disclose the risks and opportunities identified for Dyno Nobel, the table below includes those risks which are not expected to result in a material financial impact, but which Dyno Nobel will continue to monitor and manage.

RISK OR OPPORTUNITY	STRATEGY AND MITIGATING ACTIONS	MATERIALITY ASSESSMENT
OPPORTUNITY **Financial incentives associated with carbon pricing schemes, grants or other policy support for decarbonisation** Physical: Chronic Climate Scenarios: 1.5° 2° DA Carbon pricing and other policy support for transitioning to the low carbon future described in the 2°C scenario may create opportunities for Dyno Nobel related to funding for investment in new technologies which reduce GHG emissions.	Dyno Nobel has successfully registered one project to earn Australian Carbon Credit Units (ACCUs) under the current Australian Federal Government Emissions Reduction Fund. We continue to seek opportunities to partner with research organisations to develop emerging technologies. Dyno Nobel's strategic focus on Leading Technology Solutions and Customer Focus as two of our six value drivers also positions us to leverage our premium technology platform throughout all our geographies and sectors, and we continue to develop and provide products and services which reduce our customers' energy use and GHG emissions, as well as monitor schemes which may provide our customers with financial incentives.	Dyno Nobel continues to monitor opportunities and partnerships which may financially assist us and our customers to decarbonise.
RISK **Impact on workers' health & safety** Physical: Chronic Climate Scenarios: 2° 3°+ DA All scenarios which describe greater than 1.5°C of global warming also describe an increase in heat stress and fatigue risks. This would be exacerbated by increased humidity in some regions, especially in Queensland, Australia.	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 global fatigue management procedure was implemented across the Americas in 2022 and will be extended globally in 2023. This will assist in monitoring the impacts of chronic changes in temperature on employee health and safety.	Dyno Nobel is committed to the ongoing management of worker health and safety through our Zero Harm strategic driver. While we continue to monitor our processes in regard to heat stress and fatigue, we do not consider this to be a material risk to our business.
RISK **Increased rainfall leads to an increased risk of dam overflows** Physical: Acute & chronic Climate Scenarios: 3°+ DA Two Dyno Nobel sites with on-site storm-water ponds have been identified as being in regions where the incidence of high intensity rainfall events is expected to increase. These are in Moranbah, Queensland and Graham, Kentucky. This presents a risk of non-compliance with licence conditions should the dams overflow.	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 Dyno Nobel's operations. The cost of increasing storm water pond capacity, should it be required, is not expected to be material.

MANAGING OUR FERTILISER BUSINESS' CLIMATE-RELATED RISKS AND OPPORTUNITIES

The following table provides a detailed summary of the material climate-related risks and opportunities identified for Incitec Pivot Fertilisers during our most recent climate risk and opportunity review and assessment, which was conducted in 2021. IPL defines a 'material' financial impact as an AU$20m impact or greater on EBIT. The table includes a description of the risk or opportunity, the strategic approach Incitec Pivot Fertilisers is taking to maximise the opportunity or mitigate the risk, and the residual risk assessment.

RISK OR OPPORTUNITY	STRATEGY AND MITIGATING ACTIONS	RESIDUAL RISK ASSESSMENT AND KPIS
CURRENT		
RISK  **Physical impact of severe weather events on supply chain logistics and customers** Physical: Acute Risk Climate Scenarios: 1.5° 2° 3°+ DA Impact: LOW MEDIUM HIGH An increase in the severity and/or frequency of extreme weather events as a result of climate change may cause more frequent disruption to IPF's supply chain and logistics including transportation of raw materials and finished product via road, rail and water. Interruptions to logistics from extreme weather events could result in financial loss if product cannot be stored effectively and degrades, or cannot be transferred off-site, resulting in production losses once site storage has reached capacity. These impacts on customers could also result in decreased product demand for periods of time. All scenarios describe these events as increasing in the short term (1-3 years). Under these scenarios, insurance premiums would be expected to increase along with a possibility that some events may be excluded from cover.	• 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) on logistics at Phosphate Hill, Queensland, have occurred recently. A one-in-one hundred year flooding event in north Queensland 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. • Additional storage, both onsite and at strategic locations along transport routes, may be necessary along with contingency plans to use alternative forms of transport to access these. • 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.	While still considered a material risk which requires ongoing management, residual risk has been greatly reduced due to mitigation strategies for future climate-related rail interruptions to Phosphate Hill. Had these been in place prior to the 2019 Phosphate Hill flooding event, it is estimated that the impact would have been reduced from AU$115m to ~AU$30m (at 2019 pricing). **KPI: Annual financial impact of acute weather events causing supply chain disruptions**
SHORT TERM: 1-3 YEARS		
RISK  **Regional carbon pricing schemes create a competition risk** Transitional: Legal and Policy Risk Climate Scenarios: 2° 3°+ DA Impact: LOW MEDIUM HIGH Carbon pricing will materially impact IPF if it is not applied uniformly across global markets and cannot therefore be passed on in the cost of goods. Further, a carbon price on transport may impact the price of receiving products. The 2°C Required Action scenario describes this impacting IPF until 2025, when most shipping and trucking options will be retrofitted with zero or low carbon mobility options.	• IPL's DET Steering Committee has developed IPF's Net Zero Pathway and a range of projects which will progressively reduce IPF's exposure to carbon pricing. • 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. • IPF customer agreements provide for the pass through of carbon pricing where products are not commodities whose price is set by the global market. • Domestic co-location of critical products would reduce carbon costs associated with transport.	Considered a material risk requiring ongoing management. **KPI: Proportion of operational (scope 1&2) emissions covered by carbon pricing schemes** **KPI: Percentage emissions reductions at sites covered by carbon pricing schemes**

SHORT TERM: 1-3 YEARS

RISK

High baseline water stress may lead to water shortages at some IPF operations

Physical: Chronic Risk

Climate Scenarios 1.5° 2° 3°+ DA

Impact LOW | MEDIUM | HIGH

Cooling water is a key raw material for ammonia manufacturing. In all scenarios, average annual rainfall across the lower half of Australia will be reduced and longer periods of prolonged drought will be created, especially in eastern Australia. While this may be offset somewhat by increased 1 in 20-year flooding events at some locations, and up to 15% more rainfall than historical averages in each single rain event, water restrictions may become more frequent in some areas.

IPF uses the World Resources Institute (WRI) Aqueduct Tool analysis annually as part of its water risk analysis to identify high-water-use sites located in catchments with high current or emerging baseline water stress. One high use water site, Gibson Island in Brisbane, Queensland, is in a catchment identified by the tool as currently experiencing high baseline water stress (40-80%) and this is projected to double by 2030. During 2021, a pipeline was completed to bring around 6,000 kL per day of recycled water into the site. Water will also be required as a raw material to produce hydrogen via electrolysis of water at this site under the Gibson Island Green Ammonia project if it proceeds.

The risk associated with our single high water use site in a high baseline water stress catchment has been greatly reduced. Future water scarcity concerns could prompt the need for additional water storage at some other sites. The cost of creating additional storage (dams) in these locations would not be material and would avoid an otherwise material impact on production.

KPI: % of freshwater withdrawn in regions with current or future 'high' or 'extremely high' baseline water stress

RISK

Reputational risk impacts capital markets and investors

Transitional: Market and Reputational Risk

Climate Scenarios 1.5° 2° 3°+ DA

Impact LOW | MEDIUM | HIGH

Both the 1.5°C Fast Action and 2°C Required Action scenarios describe increased pressure from capital markets and investors to improve climate disclosure, worsening lending conditions, and risk of divestment in the short term.

IPF recognises that climate-change is a material issue for our business, our people, our customers, our investors and our other stakeholders. We are committed to reducing our impact, to assessing and managing the strategic and operational risks and opportunities, to transparently reporting in line with TCFD recommendations and to engaging in other communications with our stakeholders.

In 2021, IPL secured a sustainability-linked syndicated three-year term loan with Westpac Institutional Bank. The facility demonstrates IPL's commitment to sustainable outcomes by linking the cost of finance to key performance indicators on greenhouse gas emissions and water reductions, as well as increases in soil and plant testing rates.

Considered a material risk requiring ongoing management.

KPI: Number of face-to-face engagements with investor groups annually

MEDIUM TERM 3-6 YEARS

OPPORTUNITY

Development of green ammonia and renewable hydrogen market

Transitional: Market and technology

Climate Scenarios 1.5° 2°

Impact LOW | MEDIUM | HIGH

Both the 1.5°C Fast Action and 2°C Required Action scenarios describe the development of green ammonia and renewable hydrogen in the medium term. IPL is an expert in the manufacture and handling of hydrogen (H_2) and ammonia (NH_3).

IPF has a core competency in the manufacture, storage and transportation of ammonia and is well placed to play a role in 'green hydrogen', and green ammonia for a low-carbon economy. Renewable energy options including solar hydrogen and other alternative feedstocks are constantly being assessed for viability as part of IPF's overall capital management framework, supported by two of our strategic values drivers, Leading Technology Solutions and Manufacturing Excellence.

Read about our decarbonisation projects in Chapter 2, including our partnership with FFI to investigate green ammonia at our Gibson Island site.

IPF is currently highly dependent on the availability of affordable natural gas, both as a feedstock for hydrogen and as a fuel source. The development of green ammonia and renewable hydrogen is considered to be a material opportunity requiring ongoing management.

KPI: Number of low carbon hydrogen projects being investigated/ implemented annually

MEDIUM TERM 3-6 YEARS

OPPORTUNITY

Increased demand for specialist fertilisers due to harsher growing conditions

Physical: Chronic Risk

Climate Scenarios 3°+ DA

Impact LOW **MEDIUM** HIGH

The Delayed Action and 3°C+ Current Trajectory scenarios describe heat stress, and in some locations, water stress impacting on agricultural production globally, particularly in the mid-latitudes, in the medium term. While heat stress is considered a potential risk, this may result in increased demand for specialist fertilisers to maintain yields in harsher growing conditions in the medium term.

- In line with our Leading Technology Solutions strategic driver, we continue to invest in a range of research projects with topics including new fertiliser technologies for sustained food security, healthy soils for sustainable food production, the development of novel urea coatings and the testing of silicon fertilisers which have been shown to increase heat stress resistance in crops.
- IPF's long term strategy is to grow from a leading fertiliser company, manufacturing and distributing a range of domestic fertilisers, to a sustainable soil health company providing sustainable plant nutrition solutions to improve soil health. This strategy will be leveraged through our expansive distribution footprint to drive new growth products and services towards soil health and changing growing conditions.

Considered a material risk and opportunity requiring ongoing management.

KPI: Number of climate-related research projects funded

OPPORTUNITY

Partnerships for soil carbon sequestration in agriculture sector

Transitional: Market & policy opportunity

Climate Scenarios 1.5° 2°

Impact **LOW** MEDIUM HIGH

The 1.5°C Fast Action and 2°C Required Action scenarios describe the development of carbon sequestration opportunities in the agriculture sector which provide IPL with commercial partnership opportunities, such as soil carbon measurement. Demand for sequestration-aiding products, including fertilisers for biofuels, timber or which assist in soil carbon sequestration, may also arise.

Our long term strategy is to grow IPF from a leading fertiliser company, manufacturing and distributing a range of domestic fertilisers, to a sustainable soil health company providing sustainable plant nutrition solutions to improve soil health. Our strategy will be leveraged through our expansive distribution footprint to drive new growth products and services towards soil health and changing growing conditions.

As part of this strategy, IPL owns and operates an analytical laboratory, Nutrient Advantage (NA), which offers specialist soil, plant and water testing to advisors and farmers, and tests more than 150,000 soil, plant and water samples each year. During 2021, NA launched a new soil health package to provide farmers with precise objective analysis and industry leading agronomic advice to help build healthier soils. The package includes tests for total carbon (C), total nitrogen (N), C:N ratio, aggregate slaking and dispersion, active (labile) carbon and microbial respiration (activity estimation).

The development of fertiliser products and services which provide solutions for our customers is a core business driver. Considered a material opportunity requiring ongoing management.

KPI: Number of soil and plant tests per annum

OPPORTUNITY

Demand for low GHG emitting fertilisers

Transitional: Market & policy opportunity

Climate Scenarios 1.5° 2°

Impact **LOW** MEDIUM HIGH

The 1.5°C Fast Action and 2°C Required Action scenarios describe increased demand for low carbon fertiliser products and services in the medium term. Products that are lower carbon and environmentally friendly (e.g. slow release fertilisers) will have a significant competitive advantage in this scenario.

We aim to provide leading technology solutions to meet our customers' needs. In 2020, we saw 28% growth in the sales volumes of our third high efficiency fertiliser, eNpower™, which was released to market in 2019. Like Green Urea® and Entec® products, eNpower™ is specially formulated to retain nutrients in more stable forms for longer periods, increasing plant nutrient uptake and reducing the likelihood of volatilisation losses to the atmosphere as GHG and to waterways through leaching.

Enhanced efficiency fertilisers have been shown to reduce GHG emissions from their use by up to 70%, dependent upon the application, for farming customers(1). See Chapter 3 for more details.

The development of fertiliser products and services which provide solutions for our customers is a core business driver. Considered a material opportunity requiring ongoing management.

KPI: Annual revenues from high efficiency fertilisers (Green Urea, Entec, eNpower)

(1) Results from a field trial conducted in a ryegrass pasture system in south–western Victoria show the application of EEF with the inhibitor DMPP reduced N_2O emissions by 73 per cent when compared to urea application alone. See the Australian Government Department of Agriculture, Water and the Environment Climate Research Program: Reducing Nitrous Oxide Emissions, p.5

See also: Suter, H., Lam, S. K., Walker, C., & Chen, D. (2020). Enhanced efficiency fertilisers reduce nitrous oxide emissions and improve fertiliser 15N recovery in a Southern Australian pasture. The Science of the total environment, 699, 134147. https://doi.org/10.1016/j.scitotenv.2019.134147

LONG TERM: 6+ YEARS

RISK/OPPORTUNITY

Shifting growing regions leads to fertiliser demand shifts

Physical: Chronic Risk

Climate Scenarios 3°+ DA

Impact LOW | MEDIUM | HIGH

All scenarios which describe greater than 1.5°C of global warming also describe changes to local climates that result in growing regions shifting poleward due to changes in soil temperatures in almost all agricultural zones, as well as changes in soil water content and water availability. This would result in increased fertiliser demand in new regions and decreased or changing demand in current growing regions in the long term.

- IPF currently operates in all four major climatic zones in Australia, including far North Queensland where some conditions are similar to those which may be experienced further south in the very long-term. Along with our strategy to grow IPF from a leading fertiliser company to a sustainable soil health company, this presents a strategic opportunity for IPF to partner with customers to develop and trial new suitable products that match the kinds of volatility that is likely to be experienced by farmers.
- In line with our Leading Technology Solutions strategic driver, we continue to invest in a range of research projects with topics including new fertiliser technologies for sustained food security, healthy soils for sustainable food production, the development of novel urea coatings and the testing of silicon fertilisers which have been shown to increase heat stress resistance in crops.
- IPF's extensive distribution networks enable it to roll out new products quickly and easily to a range of affected customers, from Cairns in North Queensland, to Tasmania and South Australia.

Considered a material risk and opportunity requiring ongoing management.

KPI: Annual revenues from high efficiency fertilisers (Green Urea, Entec, eNpower)

RISK

Stranded asset or long term contract risk due to late sudden transition

Transitional: Market Risk

Climate Scenarios DA

Impact LOW | MEDIUM | HIGH

The delayed, abrupt and disorderly transition away from carbon emitting assets described in the Delayed Action scenario presents a risk associated with long-term contracts or offtake agreements from 2030 (customers or suppliers may close before end of contract). Assets which are still emissions intensive or support an emissions intensive industry at this time may become stranded.

- IPL's DET Steering Committee has developed IPF's Net Zero Pathway, which will progressively reduce IPL's exposure to the risk of stranded assets, should the Delayed Action scenario 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.

RISK

Socio-economic downturn/disruption leads to supply chain interruptions & reduced product demand

Physical: Acute & Chronic Risks

Climate Scenarios 3°+

Impact LOW | MEDIUM | HIGH

The Delayed Action and, to a greater extent, 3°C+ Current Trajectory scenarios describe severe acute and chronic physical impacts which lead to infrastructure destruction, famine, competition for food and water, increased geo-political conflict and mass population displacement. In the 3°C+ scenario, this results in severe disruption to global trade and economic downturn.

IPF's commitments to finding new ways to reduce our emissions and to continue to develop and deliver products and services which reduce our customers' emissions will ensure that we contribute to the global aim of limiting global warming and reducing the physical, socio-economic and geopolitical impacts of climate change to those described in the 1.5°C and 2°C scenarios. This will require global action.

Considered to have severe impacts in affected regions. While IPF operates primarily in Australia, a wealthy country with good governance which may be more resilient than most, the long-term future described in this 3°C+ scenario would not be conducive to operating a business regionally and/or globally.

NON-MATERIAL RISKS AND OPPORTUNITIES IDENTIFIED FOR OUR FERILISERS BUSINESS

IPL defines a 'material' financial impact as an AU$20m impact or greater on EBIT. In order to fully disclose the risks and opportunities identified for Incitec Pivot Fertilisers, the table below includes those risks which are not expected to result in a material financial impact, but which IPF will continue to monitor and manage.

RISK OR OPPORTUNITY	STRATEGY AND MITIGATING ACTIONS	MATERIALITY ASSESSMENT
OPPORTUNITY **Financial incentives associated with carbon pricing schemes, grants or other policy support for decarbonisation** Physical: Chronic Climate Scenarios: 1.5° 2° DA Carbon pricing and other policies described in the 2°C scenario may create opportunities for IPF related to funding for investment in new technologies which reduce GHG emissions.	IPF continues to develop its Gibson Island Green Ammonia Project in partnership with FFI, which secured a AU$13.7m ARENA grant to proceed to FEED in 2022, and continues to seek opportunities to partner with research organisations to develop emerging technologies. IPF continues to develop and provide products and services which reduce our customers' GHG emissions, as well as monitor schemes which may provide our customers with financial incentives to adopt these products.	IPL continues to monitor opportunities and partnerships which may financially assist us and our customers to decarbonise.
RISK **Impact on workers' health & safety** Physical: Chronic Climate Scenarios: 2° 3°+ DA All scenarios which describe greater than 1.5°C of global warming also describe an increase in heat stress and fatigue risks. This would be exacerbated by increased humidity in some regions, e.g., Queensland, Australia.	IPF currently manages worker health and safety in very hot environments in Australia. A global fatigue management procedure will be implemented in 2023 which will assist in monitoring the impacts of chronic changes in temperature on employee health and safety.	IPL is committed to the ongoing management of worker health and safety through our Zero Harm strategic driver. While we continue to monitor our processes in regard to heat stress and fatigue, we do not consider this to be a material risk to our business.
RISK **Increased rainfall leads to dam overflows** Physical: Acute & chronic Climate Scenarios: 3°+ DA Two sites with on-site storm-water ponds have been identified as being in regions where the incidence of high intensity rainfall events is expected to increase. These are in Phosphate Hill and Gibson Island (both in Queensland). This presents a risk of non-compliance with licence conditions should the dams overflow.	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. The cost of increasing storm water pond capacity, should it be required, is not expected to be material.
RISK **Sea level rise increases storm inundation risk** Physical: Acute & chronic Climate Scenarios: 3°+ DA The Gibson Island manufacturing site and one distribution site at Portland, Victoria are located on coasts very close to sea level. A significant rise in sea level combined with a king tide may cause inundation events at these sites in the long term.	The construction of sea-level management infrastructure (levies, etc.) will be considered in the long-term for the identified sites where it may be required to manage the risk of inundation due to storm surges and sea level rise. For small distribution sites, relocation opportunities will also be assessed.	This risk is being actively managed by IPL operations. The risk is not considered to be financially material due to the non-material costs of building sea-level management infrastructure and/or relocating small sites.

BUILDING OUR RESILIENCE TO PHYSICAL CLIMATE RISK

Because 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 our 12 major manufacturing operations on an individual and detailed basis.
We recognise that due to the impacts of climate change on agriculture, new fertiliser technologies will be required for sustained food security, and we partner with a range of research institutions and customers on research and trials.

With exception of our Waggaman, Louisiana site, which is located in a hurricane zone, IPL's own manufacturing facilities are in areas considered to be relatively resilient to the anticipated acute physical impacts of climate change, with the most material physical impacts relating to supply chain and logistics interruptions.

Expected changes in the prevailing local weather conditions associated with climate change can also act as an amplifier of other risks across IPL's risk profile. For example, a greater risk of extreme weather events increases both the likelihood and potential impact of risks to the integrity of IPL's assets and may increase the risk of accidental releases to the environment. Higher temperature and humidity, as well as an increasing incidence of extreme heat events increases the risk of heat stress for our people at some of our sites.

For this reason, we have incorporated the future climate scenarios developed for each of our 12 major manufacturing sites into Climate Change Risk Review Packs to drive climate-related risk assessment throughout our risk management framework. The aim is twofold:

1. to ensure that the climate change-specific risks identified for each site during our most recent scenario risk analyses have been incorporated into site risk registers and are being managed; and
2. to assist sites in identifying any existing operational risks which may be amplified by the expected changes in prevailing weather conditions at each site and ensure that any additional controls required are identified and assigned to risk control owners.

CASE STUDY: Developing silicon fertilisers for a warming climate

During 2022, 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, has 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.

CASE STUDY: Future proofing water supplies in Brisbane, Queensland

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 to identify those at high risk in relation to water use using the World Resources Institute (WRI) Aqueduct Tool. This tool has identified our Gibson Island ammonia manufacturing site, which uses high volumes of cooling water, as being located in a catchment currently subject to high (40-80%) baseline water stress and high 'Physical risk – Water Quantity' due to a relatively large local population and high inter-annual variability in rainfall. The Tool also predicts that baseline water stress in the catchment will double by 2030 due to climate change and a growing population.

IPL has 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. We invested AU$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, 799,674 kL of recycled water was used, replacing 32% of the site's municipal water use.
This project will not only assist in providing an uninterrupted supply in the event that municipal water supplies become restricted – it will also leave around 6,000kL per day in municipal water supply dams for our communities.

(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

CASE STUDY: 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 2022, the hub has continued to work on improvements to the design and development of 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.

A recent study that included researchers from the Smart Fertilisers Hub showed that 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. This simple MPNs fabrication method is a new chapter in creating environmentally-friendly materials in controlled-release fertilisers.

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).

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 can 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.

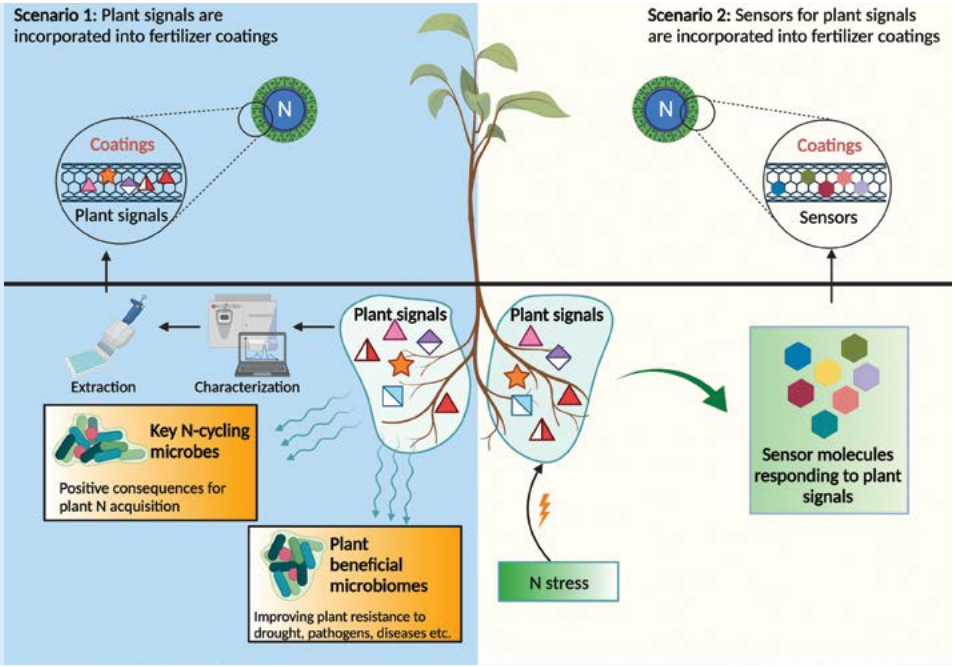
By measuring the N loss pathways and yield benefits of existing and newly developed products in field trials, the agronomic, environmental and social benefits of the new fertiliser technologies developed by the Hub can then be evaluated.

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.

The ARC Research Hub for Smart Fertilisers is developing next generation fertilisers products.

During 2022, the Hub continued to pursue discoveries in the design and development of enhanced efficiency fertiliser coatings by investigating plant signals in the root zone of crops and incorporating these into fertiliser coatings, as shown.



Adapted with permission from Mumford, Kathryn (2022) The spread of smart fertilisers, at https://www.openforum.com.au/the-spread-of-smart-fertilisers/

CASE STUDY: Mitigating supply chain risks associated with potential flooding at LOMO

Our Louisiana, Missouri ammonium nitrate manufacturing facility site 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. A number of vendors along the rail line were used as the flooding progressed, increasing the affected area and a number of supply points across our supply network were shifted to maintain supply to customers. 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.

CASE STUDY: 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 in, 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 AU$10m impact on EBIT, and in 2019, a one-in-one hundred-year flooding event damaged third-party rail infrastructure, interrupting rail services to the site for 3 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 AU$115m.

Following this event, a detailed review of contingency plans for rail interruptions at the site was completed. As a result, AU$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 AU$115m to approximately AU$30m (at 2019 pricing).

CASE STUDY: Preparing WALA for extreme weather events

Our 800,000 metric tonne per annum Waggaman, Louisiana ammonia plant was commissioned on 19 October 2016. The plant was built utilising the industry's leading technology and is among the most energy efficient plants of its kind in the world, employing gas purifier technology and recapturing steam for reuse. The plant is also fitted with Selective Catalytic Reduction technology in the reformer flue to reduce emissions of N_2O. The plant also captures a portion of its CO_2 emissions for use by a neighbouring plant to make melamine.

Due to its location in a hurricane zone, the plant was built to comply with wind codes set out by the International Building Code Design Standard IBC 20 and Minimum Design Loads for Buildings and Other Structures ASCE 7-05 which include the relevant standards for wind load, occupancy categories, basic wind speed and exposure. The design was signed off by a Louisiana based certified Professional Engineer with experience in these design standards for the region, where the impacts of future hurricanes must be considered. The required permits also included ensuring that the plant was built at a height above Louisiana's expected future inundation levels.

As part of its emergency response plan, the facility has a hurricane procedure which details the preparations that are made at various times prior to hurricane strike. Preparations include:

- → Management of the hurricane staffing crew;
- → Housekeeping checks to remove or tie down materials that could become airborne;
- → Ensuring the back-up power generator has adequate fuel;
- → Ensuring the site has adequate supplies for the hurricane staff and for recovery post-storm;
- → Communication with logistics on the status and coordination of final shipments prior to the event; and
- → Internal Company updates on plant status and readiness for the event.

If the expected hurricane is of a high intensity, the plant may be required to shut down. This decision has Zero Harm as the primary goal, and is made in consultation with Cornerstone Chemical Company (the overall site Owner), St. Charles and Jefferson Parish Emergency Operations Centers, and with the support of IPL senior management. When this decision is made, a process is followed to shut down the plant in a controlled manner, with steps to cool and purge the system of hydrocarbons, block in major reactors under nitrogen purge and install additional securing of the cooling tower fans to prevent wind damage. Staff remaining on site are required to be housed in the control building which is rated for hurricane-strength winds and was built at an elevation where risk of flooding is negligible. The procedure also calls for the storage of adequate supplies of food and water for the expected duration of the event and the release of staff early to make personal arrangements then return to site in advance of the event to make final preparations and begin monitoring. The procedure references emergency evacuation routes which limit direction of travel on the major highways in the New Orleans metropolitan area. Additional safety buddies are required when performing work in the plant and employees are to remain inside when winds rise above 60 miles (100km) per hour.

Post storm, the procedure requires an assessment to be conducted prior to start-up to ensure Zero Harm. The assessment targets hazards such as potential chemical loss of containment, downed power lines and compromised structures and, where required, forms the basis of a recovery plan. Once plant repairs are completed, the plant is restarted using procedures which include functional checks of systems.

Since commissioning, the facility has experienced seven tropical storms and hurricanes with zero injuries to our people and only one financial material impact to date caused by Hurricane Ida (Cat 4) with 23 days of production losses and a financial impact of US$28m. Production losses were the result of loss of power to the site from our electricity supplier.

CASE STUDY: Mitigating the impact of future power outages at WALA during extreme weather events

To further reduce the financial impacts of future power outages associated with hurricanes and storm events, the site will finalize commissioning of a new natural gas-fired boiler in early 2023 to generate the extra process steam required to restart the facility, rather than relying on purchased steam, which is not always available for restart when required. In May 2022, a FEED study was approved to investigate using these boilers to generate steam for electricity production on the site. As a result of the study, the site will be entering into a lease agreement for the installation of a steam turbine generator to use excess steam from the plant and the new boiler to generate electricity. This will offset most of the site power demand from the grid and avoid future production losses associated with extended local power outages after hurricane and storm events. Its is planned that this electricity will also provide power to run the carbon capture facility currently under FEED study, which is described on page 17.

APPENDICES

1. SCENARIO REFERENCES

Scenario A: Fast Action (1.5 Degrees)

A1: Allen, M. R., Babiker, M., Chen, Y., de Coninck, H., Connors, S., van Diemen, R., ... & Zickfeld, K. (2018). Summary for policymakers. In *Global Warming of 1.5: 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.* IPCC.

https://research-repository.uwa.edu.au/en/publications/summary-for-policymakers

A2: Henderson, K., Pinner, D., Rogers, M., Smeets, B. and Vargas, D. (2020) *Climate math: What a 1.5-degree pathway would take. McKinsey Quarterly, April 2020.*

https://www.mckinsey.com/~/media/mckinsey/business%20functions/sustainability/our%20insights/climate%20math%20what%20a%201%20point%205%20degree%20pathway%20would%20take/climate-math-what-a-1-point-5-degree-pathway-would-take-final.pdf

A3: Allen, M. R., Babiker, M., Chen, Y., de Coninck, H., Connors, S., van Diemen, R., ... & Zickfeld, K. (2018). Summary for policymakers. In *Global Warming of 1.5: 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.* IPCC.

https://research-repository.uwa.edu.au/en/publications/summary-for-policymakers

A4: Delevingne, L., Glazener, W., Grégoir, L. and Henderson, K. (2020) *Climate risk and decarbonisation: What every mining CEO needs to know. McKinsey Sustainability, January 2020.*

https://www.mckinsey.com/capabilities/sustainability/our-insights/climate-risk-and-decarbonization-what-every-mining-ceo-needs-to-know

A5: Henderson, K. and Maksimainen, J. (2020) *Here's how the mining industry can respond to climate change. McKinsey Sustainability, August 2020.*

https://www.mckinsey.com/capabilities/sustainability/our-insights/sustainability-blog/here-is-how-the-mining-industry-can-respond-to-climate-change

A6: BHP, *Climate Change Report 2020* (2020)

https://www.bhp.com/-/media/documents/investors/annual-reports/2020/200910_bhpclimatechangereport2020.pdf

A7: Michael Clark et al, (2020) *Global food system emissions could preclude achieving the 1.5°and 2° climate change targets, Science, (370) 6517, pp 705-708*

https://www.science.org/doi/10.1126/science.aba7357

A8: Alexander Pfeiffer et al, (2018) *Committed emissions from existing and planned power plants and asset stranding required to meet the Paris Agreement. Environmental Research Letters, Volume 13, Number 5*

https://iopscience.iop.org/article/10.1088/1748-9326/aabc5f/meta

A9: Climate Analytics (2019) *Coal phase-out.*

https://climateanalytics.org/briefings/coal-phase-out/

A10: International Institute for Applied Systems Analysis, *SSP Database* (Version 2.0 December 2018)

https://tntcat.iiasa.ac.at/SspDb/dsd?Action=htmlpage&page=20

A11: International Energy Agency (2021) *Net Zero by 2050: A Roadmap for the Global Energy Sector*

https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf

A12: International Energy Agency (2020) *World Energy Outlook* 2020.

https://www.iea.org/reports/world-energy-outlook-2020

A13: BloombergNEF (2020), *Hydrogen Economy Outlook: Key Messages.*

https://data.bloomberglp.com/professional/sites/24/BNEF-Hydrogen-Economy-Outlook-Key-Messages-30-Mar-2020.pdf

A14: Center for Climate and Energy Solutions (2010) *What is Black carbon?*

https://www.c2es.org/document/what-is-black-carbon/

Scenario B: Required Action (2 Degrees):

B1: Allen, M. R., Babiker, M., Chen, Y., de Coninck, H., Connors, S., van Diemen, R., ... & Zickfeld, K. (2018). Summary for policymakers. In *Global Warming of 1.5: 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.* IPCC.

https://research-repository.uwa.edu.au/en/publications/summary-for-policymakers

B2: International Institute for Applied Systems Analysis, *SSP Database* (Version 2.0 December 2018)

https://tntcat.iiasa.ac.at/SspDb/dsd?Action=htmlpage&page=20

B3: Network for Greening the Financial System (2020) *NGFS Climate Scenarios for central banks and supervisors*

https://www.ngfs.net/en/ngfs-climate-scenarios-central-banks-and-supervisors

B4: Lomborg, B (2020) *Welfare in the 21st Century: Increasing development, reducing inequality, the impact of climate change, and the cost of climate policies. Technological Forecasting and Social Change* (156) 119981

https://doi.org/10.1016/j.techfore.2020.119981

B5: Global CCS Institute (2020) *Global Status of CCS 2020.*

https://www.globalccsinstitute.com/wp-content/uploads/2021/03/Global-Status-of-CCS-Report-English.pdf

B6: Hausfather, Z (2018) Explainer: *How 'Shared Socioeconomic Pathways' explore future climate change.* CarbonBrief, April 2018.

https://www.carbonbrief.org/explainer-how-shared-socioeconomic-pathways-explore-future-climate-change/

B7: Keywan Riahi et al. (2017) *The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview. Global Environmental Change* (42) 153-168

https://doi.org/10.1016/j.gloenvcha.2016.05.009

B8: BloombergNEF (2020), *Hydrogen Economy Outlook: Key Messages.*

https://data.bloomberglp.com/professional/sites/24/BNEF-Hydrogen-Economy-Outlook-Key-Messages-30-Mar-2020.pdf

B9: Delevingne, L., Glazener, W., Grégoir, L. and Henderson, K. (2020) *Climate risk and decarbonisation: What every mining CEO needs to know. McKinsey Sustainability, January 2020.*

https://www.mckinsey.com/capabilities/sustainability/our-insights/climate-risk-and-decarbonization-what-every-mining-ceo-needs-to-know

B10: BloombergNEF (2020) *New Energy Outlook 2020*

https://about.bnef.com/new-energy-outlook-2020/

B11: *U.S. Energy Information Administration (2021) EIA Annual Energy Outlook 2021.*

https://www.eia.gov/outlooks/ieo/

B12: Australian Energy Market Operator (2021) *Gas Statement of Opportunities, March 2021.*

https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2021/2021-gas-statement-of-opportunities.pdf

B13: International Energy Agency (2020) *World Energy Outlook 2020.*

https://www.iea.org/reports/world-energy-outlook-2020

B14: Australian Energy Market Operator (2020) *Integrated System Plan 2020*

https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2020-integrated-system-plan-isp

B15: Knutson, T., NOAA/GFDL, *Global Warming and Hurricanes, an overview of current Research. Accessed in June 2021 at*

https://www.gfdl.noaa.gov/global-warming-and-hurricanes/

B16: BloombergNEF (2020), *Hydrogen Economy Outlook: Key Messages.*

https://data.bloomberglp.com/professional/sites/24/BNEF-Hydrogen-Economy-Outlook-Key-Messages-30-Mar-2020.pdf

B17: Detlef P. van Vuuren, et al. (2017) *Energy, land-use and greenhouse gas emissions trajectories under a green growth paradigm, Global Environmental Change,* (42) 237-250.

https://doi.org/10.1016/j.gloenvcha.2016.05.008

Scenario C: Delayed Action followed by Rapid Action (Inevitable Policy Response – IPR)

C1: Poulter, J. (2021) T*he Inevitable Policy Response 2021: Forecasting and Aligning, Principles for Responsible Investment, Investor Brief, March 2021*

https://www.unpri.org/inevitable-policy-response/the-inevitable-policy-response-2021-policy-forecasts/7344.article

C2: Vivid Economics and Energy Transition Advisors, I*nevitable Policy Response 2021 Policy Forecast Executive Summary* (2021)

https://www.eticanews.it/wp-content/uploads/2019/09/iprpolicyforecasts_executivesummary_september2019_20989.pdf

C3: Vivid Economics and Energy Transition Advisors (2019) *The Inevitable Policy Response: Forecast Policy Scenario 2021 (IPR FPS 2021), December 2021.*

https://www.unpri.org/download?ac=14916

C4: Principles for Responsible Investment, *Forecast Policy Scenario: Macroeconomic Results* (2019)

https://www.unpri.org/inevitable-policy-response/forecast-policyscenario-macroeconomic-results/4879.article

C5: Simeone, C. (2018) *The Inevitable Policy Response Theory, Kleinman Centre for Energy Policy, October 2018.*

https://kleinmanenergy.upenn.edu/news-insights/the-inevitable-policy-response-theory-2/

Scenario D: Current Trajectory (>3 Degrees)

D1: Network for Greening the Financial System (2020) *NGFS Climate Scenarios for central banks and supervisors*

https://www.ngfs.net/en/ngfs-climate-scenarios-central-banks-and-supervisors

D2: International Institute for Applied Systems Analysis, *SSP Database* (Version 2.0 December 2018)

https://tntcat.iiasa.ac.at/SspDb/dsd?Action=htmlpage&page=20

D3: Kompas, T., Pham, V. H., & Che, T. N. (2018). *The effects of climate change on GDP by country and the global economic gains from complying with the Paris Climate Accord. Earth's Future, 6, 1153– 1173.*

https://doi.org/10.1029/2018EF000922

D4: International Energy Agency (2020) *World Energy Outlook 2020.*

https://www.iea.org/reports/world-energy-outlook-2020

D5: Delevingne, L., Glazener, W., Grégoir, L. and Henderson, K. (2020) *Climate risk and decarbonisation: What every mining CEO needs to know. McKinsey Sustainability, January 2020.*

https://www.mckinsey.com/capabilities/sustainability/our-insights/climate-risk-and-decarbonization-what-every-mining-ceo-needs-to-know

D6: Jamasmie, C. (2018) *Leagold closing Brazil mine for two months due to drought. Mining Dot Com, October 2018.*

https://www.mining.com/leagold-closing-brazil-mine-two-months-due-drought/leagold-closing-brazil-mine-two-months-due-drought-jpg/

D8: Emily Morris, *Crop yields expected to fall as temperatures rise* (2017) Proc. Natl. Acad. Sci. U.S.A. 10.1073/pnas.1701762114 (2017)in Science, Editors' Choice.

https://www.science.org/doi/10.1126/science.2017.357.6355.twil

D9: International Energy Agency (2021) *The Role of Critical Minerals in Clean Energy Transitions, May 2021.*

https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions

D10: World Economic Forum (2021) *How a 4 Degree temperature rise will affect people around the world. Climate Change, January 2021*

https://www.weforum.org/agenda/2021/01/climate-change-global-warming-temperatures-rise-heat-environment/

D11: Evans, S. (2021) '*Exceptional new normal': IEA raises growth forecast for wind and solar by another 25%.* Carbon Brief, Renewables, May 2021.

https://www.carbonbrief.org/exceptional-new-normal-iea-raises-growth-forecast-for-wind-and-solar-by-another-25/#:~:text=In%20its%20latest%20update%2C%20the,2020%20(dashed%20mid%20blue).

D12: UNPRI (2021) *The Inevitable Policy Response: Forecast Policy Scenario Summary.*

https://www.unpri.org/download?ac=9834

D13: *U.S. Energy Information Administration (2021) EIA Annual Energy Outlook 2021.*

https://www.eia.gov/outlooks/ieo/

D14: Australian Energy Market Operator (2020) *Integrated System Plan 2020*

https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2020-integrated-system-plan-isp

D15: Australian Energy Market Operator (2021) *Gas Statement of Opportunities, March 2021.*

https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2021/2021-gas-statement-of-opportunities.pdf

D16: BloombergNEF (2020), *Hydrogen Economy Outlook: Key Messages.*

https://data.bloomberglp.com/professional/sites/24/BNEF-Hydrogen-Economy-Outlook-Key-Messages-30-Mar-2020.pdf

2. TCFD DISCLOSURES TABLE

TCFD Recommended Disclosure	Location of Disclosure
Governance:	
Disclose the organization's governance around climate-related risks and opportunities	'Ensuring Strong Governance' p.8-11
a) Describe the Board's oversight of climate-related risks and opportunities.	'Ensuring Strong Governance' p.9-10
b) Describe management's role in assessing and managing climate-related risks and opportunities.	'Ensuring Strong Governance' p.10-11
Strategy	
Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	'Management Roles and Responsibilities' p.10-11 'Reducing Operational Emissions' p.12-19 'Managing Strategic Business Risks and Opportunities', p.24-45
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	'Managing Strategic Business Risks and Opportunities', p.30-41
b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	'Management Roles and Responsibilities' p.10-11 'Reducing Operational Emissions' p.12-19 'Managing Strategic Business Risks and Opportunities', p.30-41
c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	'Management Roles and Responsibilities' p.10-11 'Reducing Operational Emissions' p.12-19 'Managing Strategic Business Risks and Opportunities', p.30-45
Risk Management	
Disclose how the organization identifies, assesses, and manages climate-related risks.	'Managing Strategic Business Risks and Opportunities', p.24-45
a) Describe the organization's processes for identifying and assessing climate-related risks.	'Managing Strategic Business Risks and Opportunities', p.24-29
b) Describe the organization's processes for managing climate-related risks.	'Managing Strategic Business Risks and Opportunities', p.30-45
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	'Management Roles and Responsibilities' p.10-11 'Managing Strategic Business Risks and Opportunities', p.30-45
Metrics and Targets	
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	'Managing Strategic Business Risks and Opportunities', p.32-40 (column 3)
a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	'Managing Strategic Business Risks and Opportunities', p.32-40 (column 3) 'Metrics Used to Assess and Manage Climate Related Risks and Opportunities' p.50
b) Disclose scope 1, scope 2, and, if appropriate, scope 3 greenhouse gas (GHG) emissions, and the related risks.	'Reducing Operational Emissions' p.12-19 'Delivering Products and Strategies to Reduce scope 3 GHG' p.20-23
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	'Our Reduction Targets' p.5

Metrics Used to Assess and Manage Climate Related Risks and Opportunities			
Physical Risks	**2020**	**2021**	**2022**
Financial impact due to weather-related events	$0	AU$37.3m (Hurricane Ida – US)	AU$4m (flood impacts – Australia)
Percentage of freshwater withdrawn in regions with high or extremely high baseline water stress	4.8%	5.2%	3.1%
Percentage of withdrawals where water management is considered to be a material issue	23%	27.3%	25.1%
Water withdrawal intensity (kL/t product manufactured for sale)	11.5	11.6	13.0
Net water use intensity (kL/t product manufactured for sale)	3.8	4.5	5.1
Physical Opportunities - Explosives	**FY16 to FY20**	**FY17 to FY21**	**FY18 to FY22**
Increasing demand for climate adaptation products – Compound annual growth rate: premium emulsions (including DeltaE)	DNA – 23% DNAP – 26%	DNA – 26% DNAP – 27%	DNA – 15% DNAP – 21%
Physical Opportunities - Fertilisers	**2020**	**2021**	**2022**
Increasing demand for climate adaptation products – Revenues from high efficiency fertilisers (Green Urea, Entec, eNpower)	AU$17.6m	AU$20.1m	AU$27.8m
Transition Risks	**2020**	**2021**	**2022**
GHG intensity per tonne ammonia produced (tCO_2e per t ammonia) (1)	1.99	2.03	1.97
% reduction in GHG intensity per tonne ammonia produced since 2015	10%	8%	11%
Proportion of operational (scope 1&2) emissions covered by carbon pricing schemes	41%	47%	43%
Number of major manufacturing facilities included in regional or national carbon pricing schemes	3	3	3
Number of major manufacturing facilities financially impacted by regional or national carbon pricing schemes	1	1	1
% Revenues – supply of explosives to thermal coal mining: Americas	21%	18%	21%
% Revenues – supply of explosives to thermal coal mining: Asia Pacific	5%	5%	3%
Transition Opportunities	**2020**	**2021**	**2022**
Number of climate-related research projects funded	3	4	4
Number of patents held for reduced carbon products/technologies	10	10	10

(1) Restated due to restatement of scope 1 emissions resulting from improved measurement technologies installed during 2021.

3. ENERGY AND GHG EMISSIONS DATA

Energy Use (GJ)			
	2020	2021	2022
Energy Use (GJ)	70,071,149	60,629,371	67,223,544
Operational GHG Emissions (tCO_2e) [1]	**2020**	**2021**	**2022**
Scope 1 emissions (tCO_2e)	3,646,215	3,065,695	3,550,961
Scope 2 emissions (tCO_2e)	345,181	351,523	338,223
Operational GHG Emissions	**3,991,396**	**3,417,218**	**3,889,184**
Value Chain GHG Emissions (kt CO_2e)	**2020**	**2021**	**2022**
Total scope 3 emissions (kt CO_2e) [2]	**9,994**	**9,636**	**9,156**
Category 1. Purchased goods and services	3,151	3,390	2,759
Category 2. Capital goods	(Not material. Not calculated)		
Category 3. Fuel and energy related activities	657	559	606
Category 4. Upstream transportation and distribution	413	403	339
Category 5. Waste generated in operations	6	6	6
Category 6. Business travel	7	7	7
Category 7. Employee commuting	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	4,721	4,852
Explosives	303	290	313
Industrial Chemicals	142	154	164
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	106	110

(1) Our 2020, 2021 and 2022 operational emissions have been restated in 2022 due to external review which aligned our global scope 1&2 calculations more fully with the GHG Protocol.

(2) Our 2020, 2021 and 2022 scope 3 emissions have been restated due to an external review which aligned our calculation methodology more fully with the GHG Protocol. This has resulted in an increase due to the use of LCA based 'crsdle to gate' emissions factors for purchased products and the inclusion of emissions values for categories not previously included, such as business travel and employee commuting.

4. SCOPE 3 EMISSIONS 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 fifteen 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 and 2022. In categories where scope 3 emissions have not been calculated, the basis for excluding the category is provided under 'Explanation'.

Scope 3 Standard Emissions Category	Scope 3 Emissions in 2020 (million tonnes CO_2e)
Category 1: Purchased goods and services (excluding capital goods)	
Category description	Upstream (i.e. cradle-to-gate) GHG emissions from goods & 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 (licenced 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
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.

Scope 3 Standard Emissions Category	Scope 3 Emissions in 2020 (million tonnes CO_2e)
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 & 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, TabWTT-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 & 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 & 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).

Scope 3 Standard Emissions Category	Scope 3 Emissions in 2020 (million tonnes CO_2e)
Category 4: Upstream transportation and distribution (cont.)	
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 emisisons 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.industry.gov.au/sites/default/files/2020-10/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 Category	Scope 3 Emissions in 2020 (million tonnes CO_2e)
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 load 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 Category	Scope 3 Emissions in 2020 (million tonnes CO_2e)
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 N2o 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 & 2 reported by franchisor.
Calculation Status	Not relevant.
Explanation	IPL does not have franchised operations.

Scope 3 Standard Emissions Category	Scope 3 Emissions in 2020 (million tonnes CO_2e)
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 subsidiaries, Incitec Pivot Fertilisers (IPF) and Dyno Nobel. Industry associations provide the opportunity to collaborate with other 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 us, 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.

During 2022 we engaged a specialist third party to conduct a review of our memberships of associations focusing on the climate positions of relevant associations. The review formed part of our ongoing industry association monitoring activities and assessed the alignment between the views of these associations and IPL in the following areas:

- → The Paris Agreement, and Net Zero by 2050 (which IPL supports);
- → Climate Change Policy and position on climate risk (IPL acknowledges, assesses and reports on climate risks in line with TCFD guidelines); and
- → Active investigation of, or support for, lower-emissions technologies and other pathways to reducing or offsetting emissions (which IPL is actively engaged in).

Associations were assessed as:

- The Member Association's position is in line with IPL's, or is more progressive than IPL's.
- The Member Association's position is not in line with IPL's but it is also not contrary to IPL's stated position, OR IPL's position is more progressive than its Member Association.
- The Member Association does not have a position in relation to the topic but IPL does, OR IPL's position is significantly more progressive than its Member Association.

Our next review will be conducted in 2023.

INDUSTRY ASSOCIATION	DESCRIPTION	ALIGNMENT WITH IPL ON CLIMATE CHANGE	
Fertilizer Australia	The industry association representing manufacturers, importers and distributors of fertiliser in Australia, and associated service industries. Fertiliser Australia members supply over 95% of the fertilisers used in Australia. IPL holds a board position.	Fertiliser Australia lists climate change as a 'fertiliser issue' on its website. It recognises fertilisers' contribution to global warming via the manufacturing process, transport and logistics. Fertiliser Australia does not have a strong public position on climate policy.	●
Australian Industry Greenhouse Network (AIGN)	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 supports the Paris Agreement and Net Zero by 2050. It advocates for climate policy that creates positive short- and long-term outcomes and considers sustainable industrial development and economic growth. It supports Australia's equitable contribution to global action to reduce emissions. Policy principles include promoting investment in 'first-of-a- kind' low-emissions technologies.	●
International Fertilizer Industry Association	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 acknowledges the Paris Agreement and its role in limiting global warming to 1.5 degrees in its 'Estimating and Reporting Fertilizer-Related Greenhouse Emissions guidance'. IFA acknowledges the need to reduce emissions and the role that fertilisers can play in this through its advocacy for sustainable fertilizer production and its role in carbon sequestration.	●
Business Council of Australia (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 task forces and the BCA Board.	BCA's climate policy supports the Paris Agreement and advocates for integrated energy and climate change policy which focuses on affordability, reliability, emissions reduction and investment in Australia. BCA has outlined a pathway to achieve Net Zero in Australia and highlights Australia's transition to net-zero as one of its advocacy priorities.	●
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's 'Climate Action Plan' notes that "MCA and all of its members are taking serious action on climate change and are committed to the Paris Agreement and its goal of net zero emissions." Its 2021 progress report affirmed the industry's ambition to achieve Net Zero by 2050, and continued to advocate for advancement of low-emissions technology as the key driver for this to occur. This position was echoed in 2022.	●
National Mining Association (NMA)	The voice of the American mining industry in Washington, D.C., NMA is the only national trade organisation that 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. However, there are differences between the views of the NMA and those of IPL in relation to climate policy. Since the last review in 2021, NMA has published its 'Climate Change Position' on its website which states that the NMA is "committed to working with elected officials, policymakers and other key stakeholders in the development of domestic and international policy to address the global climate challenge".	●
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 statement on Energy and Climate Change supports Australia's participation in global agreements, including the Paris Agreement and its associated 'emissions reductions goals to limit global warming to well below 2 degrees, preferably to 1.5 degrees'. QRC publicly supports the MCA's industry ambition to achieve net zero emissions by 2050.	●

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 supports Australia's Paris climate accord commitment and agrees that Australia should take action to reduce emissions but does not discuss climate risks in its policy agenda or position statements. It supports a national approach to emission reduction 'based as far as is practicable on market measures' to achieve the lowest-cost pathway.
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.	NSSGA supports investment into the expansion of renewable and reliable energy sources. It encourages emissions reduction for NSSGA members. NSSGA does not have a strong public position on climate and therefore is slightly less progressive than IPL.
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 supports the Paris Agreement and its 2021 Policy Position Statement outlines its commitment to independent, non-partisan and evidence-based advocacy. CMI's 2020 strategy paper outlines its 2050 vision for a 'prosperous, climate-resilient, Net Zero emissions world', and CMI's commitment to developing and promoting efficient and effective emissions reduction policy.
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 supports the objectives of the Paris Agreement, and actions to support net zero emissions by 2050. It advocates to minimise financial impact on consumers whilst meeting these commitments and supports a market-based carbon pricing intervention.
Climate Leaders Coalition (CLC)	The Climate Leaders Coalition is a cross-sectoral group of Australian corporate CEOs supporting the Paris Agreement commitments and setting public decarbonization targets. They are action orientated and commit their organisations to take voluntary action on climate change.	The CLC supports the Paris Agreement and Australia's commitment to it, including the objective to keep global warming well below 2 degrees above Pre-industrial levels. It broadly supports 2030 emissions reduction targets and a vision to transition Australia to a low emissions economy.
World Coal Association (WCA)	A global industry association comprising the major international coal producers and stakeholders. Dyno Nobel holds a Board position.	The WCA recognises the objective of the Paris Agreement and supports a pathway to zero emissions 'which starts with high efficiency low emission (HELE) coal technologies and includes carbon capture, use and storage (CCUS)'. It continues to advocate for the use of thermal and metallurgical coal.
Chemistry Australia (CA)	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 calls on Australia to honour its commitments under the Paris Agreement in a manner that supports technology-neutral policies and innovation at a national level. It does not explicitly support a transition to net zero by 2050, making it less progressive than IPL.
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.
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.	Not included in review.
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 ABCC 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.
Institute of Makers of Explosives	An association concerned with the safety and security of the commercial explosives industry in the United States and Canada. Dyno Nobel is a member.	Not included in review.

INDUSTRY ASSOCIATION	DESCRIPTION	ALIGNMENT WITH IPL ON CLIMATE CHANGE
International Society of Explosives Engineers	A professional society dedicated to promoting the safety, security and controlled use of explosives. Dyno Nobel is a member.	Not included in review.
Canadian Explosives Industry Association	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.	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 & 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 fertilizer 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.
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.	Not included in review.

6. 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 condition 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

This publication is printed on ecoStar+, a carbon neutral environmentally responsible paper, manufactured from 100% post-consumer waste, chlorine free environment using the ISO14001 environmental management system.