Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Incitec Pivot Limited (IPL) is a global diversified industrial chemicals company that supplies explosives, industrial chemicals, fertilisers and related services to the mining, infrastructure & construction, chemicals and agriculture industries. IPL has extensive operations throughout Australia, the United States, Canada, Mexico, Turkey and Indonesia, including over 30 manufacturing plants, scores of distribution centres and well-established channels to market. The Company employs over 5,000 staff worldwide, including almost 2,000 staff in Australia and over 2,500 staff in North America.

IPL manufactures a range of explosives and fertiliser inputs and products globally. Through the Dyno Nobel brand, IPL is the second largest supplier of explosives in Australia and is a market leader in North America. Dyno Nobel branded products include a complete range of commercial explosives including ammonium nitrate, bulk explosives, packaged emulsions and dynamite as well as a range of initiating systems. Services provided include expert technical consulting to customers such as mining companies and their suppliers, quarries and companies supporting the construction industry. In addition, IPL manufactures various industrial chemical products used in water treatment, process manufacturing and other industrial applications.

Through the Incitec Pivot Fertilisers brand (IPF) IPL is Australia's largest supplier of fertilisers, dispatching approximately two million tonnes each year for use in the grain, cotton, pasture, dairy, sugar and horticulture industries. Products including ammonium phosphates, ammonia, urea, sulphuric acid and superphosphates are manufactured at five manufacturing sites across eastern Australia and IPL is the only manufacturer of ammonium phosphates and urea in Australia. IPF supplies fertiliser through a comprehensive network of distributors who supply the product to Australian farmers. IPL has a long-term commitment to investment in soil nutrition research and its Nutrient Advantage laboratory is industry accredited. As a leading provider of nutrition advice to farmers and customers, IPL promotes the sustainable use and safe handling of its fertiliser products to customers and farmers.

Due to the energy intensive nature of the manufacture of the nitrogen-based fertiliser and explosives products IPL supplies, 98% of the Company's global Scope 1 and 2 greenhouse gas (GHG) emissions are from the manufacture of these products. Natural gas is used as both a feedstock for making hydrogen and as an energy source, with 45% of global GHG in this reporting year arising from the use of natural gas as a feedstock, and 28% from the use of natural gas use for energy to drive the chemical manufacturing process and provide electricity for it. 18% of IPL's global GHG were process emissions of N2O arising from the manufacture of

nitric acid, which is then used for the on-site manufacture of IPL's ammonium nitrate explosive products. 8% of the Company's emissions were from the purchase of electricity (Scope 2 emissions).

During this reporting period, which is the 2021 IPL Financial Year (ending 30 September 2021) the IPL Decarbonisation and Energy Transition Steering Committee continued to work on projects to achieve IPL's Pathway to Net Zero Emissions. The strategy being applied includes three core pillars:

1. The continued investigation 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/Use, N2O abatement technologies, renewable electricity and other alternate feedstocks.

2. The ongoing assessment of the technical and commercial readiness of each of these technologies 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 partnerships with Fortescue Future Industries to develop renewable hydrogen for ammonia production at our Gibson Island facility, and with Keppel Infrastructure and Temasek to investigate green ammonia production at Newcastle and Gladstone in Australia, assessment of alignment with long-term asset strategies, the strategic formation of value chain partnerships and engaging with Governments across our operating jurisdictions.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	October 1, 2020	September 30, 2021	No

C0.3

(C0.3) Select the countries/areas in which you operate.

Australia
Canada
Mexico
Turkey
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

AUD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-CH0.7

(C-CH0.7) Which part of the chemicals value chain does your organization operate in?

Row 1

Bulk organic chemicals

Bulk inorganic chemicals

Ammonia

Fertilizers

Nitric acid

Other chemicals

Other, please specify

Ammonium nitrate (explosives)

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	ASX:IPL
Yes, another unique identifier, please specify IPL has an LEI that is quoted for all derivative trades and is consistent across transactions. (Each debt instrument on issue also has a ISIN but they differ per debt issue)	LEI: 254900UW2F3BKV6Z9V18
Yes, another unique identifier, please specify The American Depository Receipts (ADR) program sponsored by Bank of New York Mellon is traded on the New York Stock Exchange. The stock DR symbol is INCZY.	INCZY

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	The CEO is a Board Member and Chair of the IPL Decarbonisation and Energy Transition (DET) Steering Committee, which comprises selected executives and other senior management. The CEO and the DET Steering Committee are responsible for the development of the Company's Net Zero Pathway and the strategic management of business risks and opportunities related to climate change, including the incorporation of opportunities into business strategy. During the reporting period, the CEO (and Board) brought IPL's short-term absolute GHG reduction target of 5% by 2026 (against a 2020 baseline) forward to 2025 and set a medium-term target absolute reduction target of 25% by 2030 (also against a 2020 baseline). A NET Zero Ambition for 050 was also announced during this reporting period.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding annual budgets Reviewing and guiding business plans Overseeing major capital expenditures,	The IPL Climate Change Policy was adopted by the Board in 2019, and the IPL Board Charter and Charter of the Audit and Risk Management Committee were updated to formally enshrine Directors' roles in relation to the strategic management and oversight of climate change-related issues. The Charter of the Board states that the Board will: "(c) Review and approve, at least annually, Incitec Pivot's climate change management strategy, strategic business opportunities and risks related to climate change, and potential targets and

	acquisitions and divestitures	performance objectives". In addition, climate-related issues are integrated into 'reviewing and guiding major plans of action' and 'decision making processes regarding major capital expenditures, acquisitions and divestitures'. This is due to both the nature of our markets (mining, quarry & construction and agriculture, which can be impacted by both market transitions associated with climate change and extreme weather events) and the nature of our main manufacturing process which requires long term access to both gas supply and large volumes of high quality fresh water (for cooling purposes), as well as the management of the physical impacts of extreme weather events. Due to the use of gas as a feedstock, the manufacturing process is also carbon intensive. For these reasons, investment decisions regarding long term capital projects consider an assessment of likely carbon regulation, changing market forces and market sentiment (which can influence regional gas and water supplies) and possible impacts on customer demand from either market changes or extreme weather events. Assessment of capital projects also include an internal carbon price. Climate change risks and opportunities are integrated into risk management procedures and Business Unit (explosives and fertilisers) business strategies.
Scheduled – some meetings	Reviewing and guiding annual budgets Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Decarbonisation project costs are included in Business Unit budgets and decarbonisation targets associated with these are included in the performance objectives of the CEO & MD and the members of her Executive Team, and are cascaded to the relevant employees in their teams. As a result, monitoring and overseeing progress against goals and targets for addressing climate-related issues are also integrated into governance mechanisms. For example, the table 'A summary of the Company's approach to Executive remuneration for the 2021 financial year' on page 67 of the IPL Annual Report states that 2021 Strategic Objectives (generally, a maximum of 20% of STI award) are aligned to personal strategic objectives, and examples include 'Greenhouse gas reduction targets'. Page 68 states under '2.2 Executive remuneration strategy' that "IPL's purpose is to unlock the potential in the Earth to help

		people grow. IPL embraces a set of Strategic Value Drivers that underpin the Company's business and form the platform for the Company's future earnings growth and shareholder returns. The company's commitment to addressing climate change challenges and looking for opportunities in decarbonizing the world's energy systems is at the heart of the business strategy and is integrated across all the Strategic Value Drivers".
Scheduled – some meetings	Reviewing and guiding risk management policies	The IPL Climate Change Policy was adopted by the Board in 2019, and the IPL Board Charter and Charter of the Audit and Risk Management Committee were updated to formally enshrine Directors' roles in relation to the strategic management and oversight of climate change-related issues, which are integrated into IPL's risk management processes and reported on in the Principal Risks section of the IPL Annual Reports. These included climate-related transition and physical risks identified by a comprehensive risk and opportunity analysis conducted during 2021 using four future climate-related scenarios: a 1.5o scenario, an updated 2o scenario, a 3o+ scenario (which is an update of the previously used 4o scenario) and an Inevitable Policy Response (IPR) scenario, in which delayed but sudden policy action is taken as the impacts of physical climate change ae realised. The identified climate-related risks and opportunities were reviewed by the Audit and Risk Management Committee of the Board and are disclosed in IPL's 2021 Climate Change Report. Risk controls, risk control owners and KPIs for the management of risks have been identified and management strategies are reported to the Board through the established risk management reporting process.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	IPL recognises that transitioning a business for success in a sustainable future, and as part of a low carbon economy, requires related expertise within its decision-making bodies. IPL considers that the most valuable capabilities required to do this include: **1. Strategy and Global Perspectives**: Experience in developing and executing business strategy and driving growth outcomes in large and complex organisations with a global perspective. This includes the ability to think strategically, not only in the short-term, but in the medium and long-term time frames that is demanded of leadership engaged in the task of transitioning a global business through the energy transition in response to climate change. **2. Risk Management:** Experience in understanding and responding to emerging risks, opportunities, and impacts, which includes identifying and managing risks that could impact upon the business and its reputation, monitoring the effectiveness of risk frameworks and controls, and building organisational risk culture. **3. Environment and Sustainability:** Experience in managing and driving environmental compliance and social responsibility, including in relation to the medium and long-term timeframes associated with establishing sustainable business practices and managing climate change. A summary of IPL directors' skills and experience is set out in the table on page 6 of the IPL 2021 Corporate Governance Statement. As shown in this table, for Board assessment of the three criteria above, of the seven IPL Board directors there were found to be: 1. Strategy and Global Perspectives: Seven x 'Highly skilled' Board members 2. Risk Management: Six 'Highly skilled' and one 'Skilled' Board member 3. Environment and Sustainability: Three 'Highly skilled' and four 'Skilled' Board members

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Other C-Suite Officer, please specify Chief Strategy and Sustainability Officer	Managing climate-related risks and opportunities	Quarterly
Other C-Suite Officer, please specify Chief Technology Development Officer	Managing climate-related risks and opportunities	As important matters arise
President	Managing climate-related risks and opportunities	As important matters arise
Environment/ Sustainability manager	Assessing climate-related risks and opportunities	As important matters arise

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The Company's highest governing body, the Board of Directors, is responsible for charting the direction, policies, strategies and financial objectives of the Company. The Board operates in accordance with the principles set out in its Board Charter. Day-to-day management of Company affairs and the implementation of the corporate strategy and policy initiatives are formally delegated to the Managing Director & CEO, and her direct reports form the Executive Team. For this reason, the CEO formed and Chairs the IPL Decarbonisation and Energy Transition Steering Committee (DETSC) to develop the Company's Net Zero Pathway and to manage the risks and strategic opportunities associated with climate change. The DET Steering Committee comprises selected executives including the CFO and the Chief Technology Development Officer, and management including the President Global Manufacturing and HSE, the VP Strategic Project Development and the Sustainability Manager.

• The CEO Chairs the DETSC and, as the person with Board delegated authority to implement the corporate strategy and policy initiatives, is responsible for managing climate-related issues. These responsibilities include coordinating with the other DETSC members on the assessment and monitoring of climate-related risks and opportunities and reporting results to the Board during the quarterly Board Meetings.

• The CFO is a member of the DETSC due to the financial and strategic aspects of the management of climate change. The IPL Chief Risk Officer reports to the CFO.

• The Chief Strategy & Sustainability Officer is an expert in strategy and is tasked with overseeing IPL's business strategy and Net Zero Pathway, including the incorporation Scope 3 strategies into IPL's business units. This role also oversees the integration of decarbonisation projects into company strategy.

• The Chief Technology Development Officer is an expert in product development and is tasked with overseeing the development of low carbon products and services.

• The Chief HSE & Operations Excellence Officer is an expert in IPL's global manufacturing facilities, which generate 97% of the Company's GHG, and also oversees the maintenance shutdown schedules required to implement new technologies to reduce emissions. As such, this position is assigned the responsibility of implementing projects to achieve GHG emissions reductions at IPL's manufacturing facilities and to establish a technical capability and practices framework to support IPL's Green Ammonia Operate and Maintain strategy.

• The VP Strategic Project Development is also an expert 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 Sustainability Manager is an Environmental Geoscientist with research in palaeoclimate reconstruction and is an expert in the fields of sustainability and climate change. This role oversees climate scenario risk assessment and climate policy development.

The CEO and the DETSC are responsible for the Company's Net Zero Pathway and the strategic management of business risks and opportunities related to climate change, including the incorporation of opportunities into business strategy. During the reporting period, the CEO (and Board) brought forward IPL's 5% absolute reduction target from 2026 to 2025; set a medium-term reduction target of 25% by 2030 and a Net Zero Ambition by 2050. The strategy being applied by the DETSC to implement IPL's Net Zero Pathway includes the following core pillars:

1. The identification of emissions reduction technologies and plant specific projects required to reduce each of IPL's emissions sources. These include renewable hydrogen (hydrogen obtained from splitting water with renewable energy, rather than natural gas) Carbon Capture and Storage, N2O abatement, renewable electricity and other alternate feedstocks.

2. The ongoing assessment of the technical and commercial readiness of each of these technologies 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 recently announced partnerships with Fortescue Future Industries to investigate renewable ammonia production at IPL's Gibson Island manufacturing site, and with Keppel Infrastructure and Temasek to investigate renewable ammonia production at Newcastle and Gladstone in Australia, assessment of alignment with long-term asset strategies, the strategic formation of value chain partnerships and engaging with Governments across our operating jurisdictions.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction project Emissions reduction target	The performance conditions under the STI are determined by the Board for each financial year. The performance conditions for the 2021 STI include "Strategic Outcomes: Measures based on performance criteria for the execution and implementation of strategic objectives and business priorities. These include measures related to greenhouse gas reduction targets" (see page 69 of the 2021 IPL Annual Report under '3.3 Short-term incentive'). As reported under '5. Overview of Remuneration Changes for the 2022 Financial Year' on page 82 of the 2021 IPL Annual Report, changes have been made to the STI and LTI programs for the 2022 financial year. The changes reflect strategic business priorities over

			the coming years. Emphasis will be on aligning to the new manufacturing regional management model being initiated and increasing focus on ESG, particularly the reduction of greenhouse gas emissions. Targeted climate change objectives, previously incorporated within the Strategic Objectives section of STI scorecards, will now be incorporated under a separate Environmental, Social & Governance (ESG) category that will extend to all Executive KMP. All Executive KMP will have 10% allocated to this new ESG metric. For the CEO, these include KPIs associated with actions to ensure the 2025 delivery of IPL's short-term absolute reduction target of 5% against a 2020 baseline.
Corporate executive team	Monetary reward	Emissions reduction project Emissions reduction target Environmental criteria included in purchases Supply chain engagement	As reported in the 2021 IPL Annual Report under '2.2 Executive remuneration strategy' on page 68 "IPL's purpose is to unlock the potential in the Earth to help people grow. IPL embraces a set of Strategic Value Drivers that underpin the Company's business and form the platform for the Company's future earnings growth and shareholder returns. The company's commitment to addressing climate change challenges and looking for opportunities associated with the decarbonization of the world's energy systems is at the heart of the business strategy and is integrated across all the Strategic Value Drivers." As reported under '5. Overview of Remuneration Changes for the 2022 Financial Year' on page 82 of the 2021 IPL Annual Report, Changes have been made to the STI and LTI programs for the 2022 financial year. The changes reflect strategic business priorities over the coming years. Emphasis will be on aligning to the new manufacturing

			regional management model being initiated and increasing focus on ESG, particularly the reduction of greenhouse gas emissions. Targeted climate change objectives, previously incorporated within the Strategic Objectives section of STI scorecards, will now be incorporated under a separate Environmental, Social & Governance (ESG) category that will extend to all Executive KMP. All Executive KMP will have 10% allocated to this new ESG metric. These include KPIs associated with: Actions to ensure the 2025 delivery of IPL's short-term absolute reduction target of 5% against a 2020 baseline; Developing and integrating Scope 3 reduction strategies into IPL Business Units; Developing reduced carbon products and services; and KPIs associated with the investigation, development and implementation of major capital projects required to support IPL's Ne Zero Pathway.
President	Monetary reward	Emissions reduction project Energy reduction project	The Vice President Strategic Project Development reports to the Chief Strategy and Sustainability Officer and is responsible for the assessment of the technical and commercial readiness of emerging technologies required for IPL's decarbonisation, as well as the development and implementation of specific decarbonisation projects to support IPL's Net Zero Pathway. KPIs relating to specific projects to meet IPL's short-term absolute GHG reduction target of 5% by 2025, and medium-term target of 25% by 2030 (each against a 2020 baseline) are included in the Remunerations of this VP.
Environment/Sustainability manager	Monetary reward	Company performance against a climate-related	The performance bonus of the sustainability manager includes maintaining company scores and memberships in/of selected climate-related sustainability indexes, KPIs

		sustainability index	associated with tracking and managing emerging carbon regulation and the development of Scope 3 reduction strategies and targets.
Facilities manager	Monetary reward	Emissions reduction project Energy reduction project	The performance bonuses of certain facilities managers include KPIs relating to specific projects to meet IPL's short-term absolute GHG reduction target of 5% by 2025, and medium-term target of 25% by 2030 (each against a 2020 baseline).
Process operation manager	Monetary reward	Emissions reduction project Emissions reduction target	The performance bonuses of certain process managers include KPIs relating to specific projects to meet IPL's short-term absolute GHG reduction target of 5% by 2025, and medium-term target of 25% by 2030 (each against a 2020 baseline).

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	1	3	IPL has historically made use of a three-year commodity cycle to define 'short-term'. Short term risks are assessed annually and addressed in the ‘Principal Risks’ section of the IPL Annual Reports. 'Current' and 'Short Term <1-3 Years' are two of the four time horizons used to categorise climate-related risks and opportunities in IPL's 2021 Climate Change Report.
Medium-term	3	6	Relates to two cycles of the three-year commodities cycle.
Long-term	6	30	Relates to three cycles of the three-year commodities cycle, or longer to 2050.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

IPL defines a 'material' financial impact as an AU$20 million 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 AUD$20 million on EBIT.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Management, through the Managing Director & CEO and the Chief Financial Officer, is responsible for the overall design, implementation, management and coordination of the Group's risk management and internal control system. Each business unit has responsibility for identification and management of risks specific to their business. This is managed through an annual risk workshop within each business unit. The risk workshops are facilitated by the Chief Risk Officer, and form part of the annual internal audit program, thereby aligning the internal audit activities with material business risks. The outcomes of the business unit risk workshops are assessed as part of the annual corporate risk workshop. The resultant Corporate Risk Register is presented to the Audit and Risk Management Committee on an annual basis, and management is required to present regular updates to the Committee on material business risks.

Prior to 2018, the physical and transitional risks and opportunities for IPL associated

with climate change were assessed by the IPL Sustainability and Carbon Steering Committee, a high-level cross functional committee which operated in 2010 for this specific purpose as part of IPL's Sustainability Strategy, which was formed and approved by the Board that year. The potential financial impact of each risk was estimated by this cross functional Committee. This single Committee has since been replaced with two: the IPL Decarbonisation and Energy Transition Steering Committee (DETSC), which is chaired by the CEO, and the IPL Carbon Pricing Steering Committee, which monitors global developments in carbon pricing and is chaired by a member of the DETSC.

Physical risks identified at that time include, but are not limited to, impacts from extreme weather events on farming and mining customers, IPL assets and IPL supply chain (including logistics). For example, increasing severity of both prolonged droughts and extreme flooding events in Australia would impact farming customers and have greater impact on fertiliser sales revenues than has
previously been the case. This is being mitigated by both geographic and market diversity. Impacts relating to transitional risks identified at that time include, but are not limited to, compliance, regulatory and legal risk (including carbon pricing risk), reputational risk, and changing market sentiment impacting on our markets. For example, if carbon pricing which contains no exemption for Emissions Intensive Trade Exposed (EITE) industries was applied in only some countries/regions would impose a cost which could not be passed on to customers for bulk ammonia products (both explosives and fertilisers) because the price for these commodities is set by the international market, making IPL's manufacturing facilities in these regions uncompetitive. This risk is being mitigated by engaging with local regulatory bodies.

As of 2018, IPL began using future climate-related scenario analyses in its risk assessment processes, as recommended the G20 Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) report. The Charter of the IPL Audit and Risk Management Committee (ARMC) of the Board mandates that these future climate-related scenarios be updated every three years. In 2018, IPL used 2 and 4 degree scenario. In 2021, these were updated to 2 and 3+ degree scenarios, and 1.5 degree and Inevitable Policy Response Scenarios were added. Previous risks and their estimated financial impacts were reassessed against these updated scenarios. Newly identified and emerging risks are assessed against the IPL Risk matrix and integrated into IPL's risk management process, as described above, where they are included in annual risk reviews. The scenarios are compiled by an expert third party specifically for IPL using RCPs and SSPs, and 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, energy and power, agriculture, mining, quarry and construction, infrastructure and transport, with the risk assessments considering the financial risks and opportunities for IPL in these areas under each scenario. This incorporates a 'top-down' approach.

The scenario based risk assessments also considered the physical and transitional impacts on IPL's 12 major manufacturing operations on an individual and detailed basis.

This incorporated a 'bottom-up' approach, with facilities managers and risk personnel interviewed.

As per IPL's risk management process, the identified risks and opportunities are then assessed against the IPL Risk matrix, a matrix of varying likelihoods and consequences that is used to determine its overall Risk Rating, then ranked in order of importance to determine whether a risk is above or below IPL's Risk Threshold. All risks are integrated into IPL's risk management process (described in paragraph 1 above) through each risk being assigned to a risk owner in the appropriate business unit, and through controls (including monitoring) being assigned to risk control owners. This ensures that risks are reviewed annually, at a minimum, as part of IPL's Annual Risk Review process.

Physical risks identified include an increasing incidence of logistics and supply chain interruptions from extreme weather events, increasing water scarcity at some IPL manufacturing locations, increased risk of storm water pond overflows at some sites, increasing incidence of hurricanes for one manufacturing site, and an increased risk of storm inundation at two sites located close to sea level due to creeping sea level rise. For example, our Gibson Island site uses high volumes of high quality water for cooling purposes. The site is located in an area that currently experiences high baseline water stress due to (a) a large local population and (b) high inter-annual variability in rainfall, and this water stress is expected to double by 2030. This could impact on production rates and/or result increased water costs for IPL, as well as impacting on local communities. This risk is being managed by connection of the site to a source of recycled water during 2021 which will ensure supply and also leave 6 million litres of potable water in south-east Queensland dams every day for our local communities.

Transitional risks identified include market changes, including impacts on bulk explosives product demand arising due to shrinking thermal coal markets, which will affect revenues. The transition away from thermal coal customers supplied by a key explosives manufacturing site is being managed through increasing our market share in the Quarry & Construction segment, with potential to switch from explosives to fertiliser supply.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Examples include Current Carbon Pricing Risk (Short-term risk - impact on EBIT). For example, the current Australian Federal Government 'Direct Action' policy includes three IPL manufacturing facilities under the ERF Safeguard Mechanism. The Safeguard Mechanism has established annual GHG baselines for these facilities. If these baselines are exceeded, IPL is required to purchase and surrender one Australian Carbon Credit Unit for each tonne of CO2e in

		excess of the baseline, which would impact EBIT. For example, an unexpected maintenance issue at one site in 2018 resulted in less effective secondary abatement of nitrous oxide (N2O) for a period, causing the GHG baseline to be exceeded. IPL successfully applied for a three-year monitoring period and settled the liability at the end of this period in 2021. In this case the impact for this period was approximately AUD$2 million. IPL is managing the risk of future baseline exceedances by investigating more effective tertiary abatement technologies for the site, which would reduce annual emissions well below the current baseline.
Emerging regulation	Relevant, always included	Examples include Transitional Risks: 1. Emerging Carbon Pricing Risk (Short to medium-term risk - impact on EBIT & market competitiveness): If the current Australian Federal Government 'Direct Action' policy Safeguard Mechanism rules were changed to mandate the progressive lowering of baselines over time in order for Australia to meet international GHG reduction targets (NDIs), IPL EBIT could be impacted unless manufacturing processes could be decarbonised as quickly as baselines were lowered. Carbon pricing regulation may also be introduced in other jurisdictions where IPL operates. Our manufacturing facilities are located across various geographical locations that may be impacted by regulatory changes aimed at reducing the impact of, or otherwise addressing, climate change. Any changed regulation could result in an increase to the cost base or operating cost of these plants, and it may not be possible to alter sales prices to offset these cost increases, due to commodities pricing being established by international markets. This would result in impacts on EBIT and pose a competition risk. 2. Carbon pricing may also increase costs to transport products, which could impact until road, rail & shipping options are be retrofitted with zero or low carbon mobility options (e.g. hydrogen). 3. Emerging GHG Limits Regulation: Risk to Licence to Operate (medium to long term risk). Alternatively, certain regulatory changes may potentially impact the ability of manufacturing plants to continue functioning as currently operated. For example, if the EPA or other regulatory bodies were to impose a limit of GHG for a facility which could not be offset by purchasing carbon credits, investment in decarbonisation of plant processes or closure of the plant would need to occur. This would impact on impact on CAPEX and manufacturing profits. 4. Competitiveness Risk. Risk of inconsistent regulations across jurisdictions impacting on competitiveness (medium-term risk). The above risks would be heightened if regulatory changes are implemented inconsistently across regions or countries so that IPL's

		facilities (principally located in Australia & North America) are impacted by regulatory changes while manufacturing facilities of competitors operating in other jurisdictions are less impacted. For example, a Carbon Price in Australia which has no EITE protection considerations would make ammonia manufactured by IPL in Australia a higher cost to produce on the global market.
Technology	Relevant, always included	Transitional Risk: In the 1.5 Degree future scenario developed for IPL, the global economic and political environment is highly supportive of investment, deployment and trade of no and low carbon technologies, including in transport, energy, agriculture and new infrastructure builds, whereas in the 3+ Degree scenario, many regions start to focus on adaptation technologies, especially related to food and water security, and defence related to the protection of these resources. IPL is currently highly dependent on the availability of affordable natural gas, both as a feedstock for hydrogen and as a fuel to drive the reaction to use hydrogen from the methane molecule for ammonia making. IPL would need to either transition away from natural gas to a low carbon feedstock or develop manufacturing processes which captured carbon for sequestration or as a solid, preventing it from being released to the atmosphere as carbon dioxide. A transition to low-carbon manufacturing technologies would involve not only a Capex expenditure to update plants, but could also cause an increase in IPL's costs (impacting OPEX and in turn, EBIT). For example, as determined by our recent Moranbah Solar Hydrogen Feasibility Study, a transition to solar hydrogen (replacing hydrogen from natural gas - CH4 - with hydrogen produced from splitting water - H2O - with solar power) at the industrial scale required for this ammonia manufacturing facility is currently more expensive than natural gas, and would affect IPL's P&L's or be reflected in an increased cost to the consumer, which in turn could result in a decrease in customers for the company. IPL continues to monitor developments in the renewables and low carbon energy space, including solar hydrogen and other alternative feedstocks. In 2021, we announced two new partnerships for renewable hydrogen. The first is with Fortescue Future Industries (FFI) to investigate green ammonia production at our Gibson Island manufacturing site, and the second is with Keppel Infrastructure and Temasek to investigate green ammonia production at Newcastle and Gladstone in Australia.
Legal	Relevant, always included	Carbon Pricing and Non-compliance risks (Short to Medium term risk): A range of legal implications related to climate change are considered in our risk assessments, including carbon regulations and carbon pricing, as reported above under 'Current Regulations' and 'Emerging Regulations'. In addition, there are legal risks associated with non-

		compliance with GHG reporting legislation or legal emissions limits. For example, if IPL were unable to source the required ACCUs (on the open market) to settle a carbon liability accrued due to an exceedance of GHG baseline limits at one of its Australian manufacturing sites under the 'Direct Action' Safeguard Mechanism (described above under 'Current Regulation'), IPL may be at risk of prosecution for non-compliance. IPL monitors the emerging carbon market in Australia and globally, as well as its emissions at manufacturing sites in order to manage this risk.
Market	Relevant, always included	Market Risk: Transitional Risk (current to medium term): The impacts of climate change on IPL's major markets (mining, quarry & construction, and agriculture) are considered in our risk assessments in detail, and include not only the direct acute and chronic physical impacts on these customers, but also transitional risks associated with market shifts. Examples of potential market shifts include an expected trend towards increased recycling of metals (which would reduce the volume of explosives to mine these, impacting on IPL revenues); changes in mining trends away from coal towards the minerals required for new technologies (which require less volume of bulk explosives and would therefore reduce the volume of explosives to mine these, impacting on IPL revenues); changes in crop growing regions and impacts on global trade and regions as described in the Climate Risk Index (CRI). For example, our Cheyenne, Wyoming ammonia manufacturing facility is located close to the Powder River Basin (PRB) and currently supplies large volumes of ammonium nitrate (AN) explosives to mine the Powder River Basin thermal coal mines located there. A declining market of explosives to mine this thermal coal could impact on this site's revenues and asset valuation. Thermal coal demand in this region is already declining and this risk is being managed through expanding IPL's market share in the Quarry and Construction sector. The nature of the manufacturing facility means that it could potentially be repurposed to produce ammonia based fertilisers if required in the future.
Reputation	Relevant, sometimes included	Reputational risks are considered in risk assessments due to IPL's carbon intensive manufacturing process. The risks relate to IPL's transparent reporting of the management of climate change related issues to ensure that stakeholders are aware of internal actions being taken to transition the company to a low carbon future. Attitudes and expectations towards companies with respect to climate-related issues, for example, to assess and report risks appropriately, as well as to describe their Net Zero Pathways and Transition Plans are expected to increase. For example, IPL is an ASX listed company with institutional investors. If IPL does not communicate effectively and transparently regarding its Net Zero Pathway and Transition Plan,

		and/or management of climate related risks and opportunities, this could impact share price and customer sentiment, further impacting on revenues. This risk could be exacerbated by climate active NGOs and media reporters. IPL is managing this risk by engaging with stakeholders to communicate our Net Zero Pathway and Transition Plan and by reporting risks, opportunities, strategy, governance and metrics associated with managing climate change in line with the Task Force on Climate-related Financial Disclosure (TCFD) guidelines.
Acute physical	Relevant, always included	Impacts on Operations (including supply chain): Some of IPL's manufacturing plants are located in areas that are susceptible to extreme weather events, such as hurricanes, 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 IPL's operations directly or as a result of supply chain disruption, which includes transportation of raw materials and finished product via road, rail and water. Impacts such as these may increase in the short term (1-3 years). Under this scenario, insurance premiums would be expected to increase along with a possibility that some events may be excluded from cover. 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. For example, a single rail line connecting our Phosphate Hill fertiliser manufacturing site (which is remotely located to access a natural phosphate deposit) could be affected more frequently by an increased incidence of flooding events, or by extreme heat. This risk to operations is being managed through the advanced planning of fast-response road load-out to temporary rail loading facilities at various points along the rail line and building of larger storage facilities at the site so that more product can be stored, and production levels at the 24-hour chemical plants maintained.
Chronic physical	Relevant, always included	IPL provides products and services to end markets, individual customers and suppliers that may be impacted by changes to weather patterns resulting from climate change. Changes to the number and/or intensity of storms, hurricanes and other extreme weather events may impact IPL's end markets, primarily mining and agriculture. Increasing periods of drought may also impact on agriculture customers, and therefore IPL's revenues. Water is also a key raw material for manufacturing, with the majority used for cooling purposes. In the 3+ Degree scenario, it is predicted that total average annual rainfall will be reduced in Southern Australia, and longer periods of prolonged drought will be created, especially in

		south-eastern Australia, which may cause water shortages which impact on IPL's manufacturing facilities. One manufacturing site, at Brisbane in Australia, and one fertiliser distribution site at Portland in Australia, are located on coasts and are very close to sea level. A significant rise in sea level combined with a king tide and a storm-event may cause flooding events at these sites from 2030 onward (considered a long-term risk), particularly with an expected increase in low-pressure cell related storm surges to become more intense.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Cyclone, hurricane, typhoon

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

Impacts on Operations (including supply chain): Some of IPL's manufacturing plants are located in areas that are susceptible to extreme weather events, such as hurricanes, tropical & electrical storms, floods and tornadoes. These sites include our Waggaman, Louisiana ammonia plant (hurricanes), Phosphate Hill ammonium phosphate manufacturing plant (floods), Louisiana, Missouri ammonium nitrate manufacturing plant (floods) and two initiating systems plants located in the USA (electrical storms). 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 IPL's operations directly or as a result of supply chain disruption, which includes transportation of raw materials and finished product via road, rail and water. Impacts such as these may increase in the

short term (1-3 years) under all scenarios, even the 1.5 Degree scenario. Under the 2o, 3o+ and IPR scenarios, insurance premiums would be expected to increase along with a possibility that some events may be excluded from cover. 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.

For example, our Phosphate Hill ammonium phosphate fertiliser manufacturing site is located in remote northern Australia (near a natural phosphate deposit) where all scenario analyses describe hotter, wetter weather conditions and an increase in the incidence & 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. In 2016, flood waters caused a derailment of sulphuric acid supply to the site, resulting in an AU$10 million impact on EBIT. In 2019, a one-in-one hundred-year flooding event damaged third-party rail infrastructure, interrupting rail services to the site for 3 months (early Feb to early May 2019). This rail outage required a temporary emergency change from rail to road transport of product for the three months. Production was also halted once product storage was at capacity, and several plant trips were experienced during restarting. This resulted in a period of almost three months in which production was interrupted. The total EBIT impact of the event was AU$115m.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

115,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The AU$115m impact reported is the actual impact of the 2019 one-in-one-hundred-year flooding event before the development of comprehensive contingency plans and CAPEX spend to increase site storage. The following breakdown is provided:
AU$95m implied lost sales margin
+ $13m loss from manufacturing plant inefficiencies (sulphur, gas, electricity, sulphuric

acid, take or pay agreements)
+ $2m to set up temporary alternative rail loading facility beyond flood damaged zone
+ $3m road freight to alternative rail loading facility
+ $2 other one off costs
= $115m.
(Note: No costs were incurred by IPL in repairing the damaged rail infrastructure because the rail line is owned and operated by a third-party. No IPL operations were damaged by the flood).

Learnings and contingency plans which have been developed as a result of this event have reduced the potential financial impact of future similar events. Product storage capacity at the site has been increased and lessons learned during the event have informed contingency planning for future events. As a result, the expected financial impact of a similar future event at this site is expected to be ~AU$30m.

In similar event, extensive flooding near our Louisiana, Missouri site damaged third-party rail infrastructure during 2019, which also required 3 months to be repaired. In this case, multiple third party operated transloading facilities along the rail line were able to be accessed, allowing our supply chain team to divert product loadouts to these by alternative road transport and maintain customer supply with a non-material impact (US$320,000 for additional freight costs).

Cost of response to risk

3,820,000

Description of response and explanation of cost calculation

Following the one-in-one-hundred-year flooding event at Phosphate Hill in 2019, a detailed review of contingency plans for rail interruptions at the site was completed. As a result, additional on-site and contingency storage was built, a dry truck unloading chute/conveyor and telehandler were hired for the 2021 wet season and a number of other process changes were implemented which will allow IPL to better prepare for, manage and mitigate the risks associated with future rail interruptions, both minor and major. In association with the risk review, an internal audit was conducted by KPMG which identified further minor improvements to contingency plans and resulted in an overall rating of ‘satisfactory’. This Case Study has been used to arrive at the cost of response figure reported above as follows:
AU$3.6m installation of increased product storage to avoid plant shutdowns in the event that rail transport must be transferred to road (which is slower)
+ $220,000 over the wet period to hire a dry truck unloading chute/ conveyor and telehandler for the 2021 wet season in case it is required.

Other mitigation responses for physical impacts include:
• Geographic and customer market diversification to reduce the financial impact of single point risks
• Due to its location in a hurricane zone, the Waggaman Louisiana 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. The

design was signed off by a Louisiana based certified Professional Engineer with experience in design standards for the region, where the impacts of future hurricanes must be considered.
• Safety and evacuation plans are in place for all personnel and sites.
• IPL has developed technology solutions to increase the shelf life of products since this assessment in 2018.
• The Group endeavours to include force majeure clauses in agreements where relevant.
• Insurance policies are in place across the Group.
• The location of the Moranbah facility close to high quality metallurgical coal producers would provide IPL with a strategic advantage over its competitors in the event of supply chain disruption due to extreme weather events.
• Domestic co-location of critical products and diversification away from single source suppliers, already being managed, will assist in managing supply chain interruption.
• Monitoring of weather by Site Managers in high risk locations

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Chronic physical
Changing precipitation patterns and types (rain, hail, snow/ice)

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

IPL provides products and services to end markets, individual customers and suppliers that may be impacted by changes to weather patterns resulting from climate change. Changes to temperature, the amount of rainfall or the number and/or intensity of storms and other weather events may impact IPL's end markets, primarily mining, quarry & construction, and agriculture. Such changes are expected in the short term in all scenarios, with more extreme impacts described in 2 Degree, 3+ Degree and IPR scenarios in the medium to long term.
For example, scenarios describe the south of Australia as becoming hotter and drier due to climate change, and IPL supplies 60-70% of the fertiliser market in this region. Much of eastern Australia experienced severe drought conditions during 2018-19. These conditions impacted on IPL's fertiliser sales volumes and mix, with the impact on EBIT calculated and publicly reported as $33.6 million in the 2019 IPL Annual Report.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

20,000,000

Potential financial impact figure – maximum (currency)

40,000,000

Explanation of financial impact figure

This figure is based upon reported annual impacts on EBIT associated with previous drought and flooding events impacting on IPL's customer markets. The range was arrived at using the past actual reported impacts below:

• AU$33.6m impact of prevailing drought conditions in Northern Victoria, New South Wales and Southern Queensland adversely impacted fertilisers sales volumes and mix (revenues) in early 2019

• AU$19.8 non-material impact on distribution earnings which were adversely impacted by sales mix in 2018 due to drought conditions in NSW and Southern Queensland dampening nitrogen demand for winter crop application in these regions. The impact of dry weather was somewhat mitigated by higher global Urea prices, higher sales volumes in non-drought affected regions and higher distribution margins, demonstrating the advantage of geographical, market and product diversity.

• A non-material impact on EBIT due to drought in Northern Australia which negatively impacted fertiliser sales (revenues), primarily lower BigN sales into the Northern NSW and Queensland

cotton markets, due to drought conditions in those regions.

Cost of response to risk

3,000,000

Description of response and explanation of cost calculation

• The S&OP process incorporates forecasting which enables upcoming seasonal scenario planning and some supply flexibility. Forecasts are based on typical weather conditions and are reviewed on an ongoing basis as the seasons progress to help align supply to changing demand.

• Geographic and market diversity (fertiliser): IPL’s Australian fertilisers business operates in all Australian States other than Western Australia. In addition to geographical diversity, there is also diversity across crops – IPL supplies fertilisers for a wide range of agricultural applications – and customers serviced. For example, in 2018

distribution earnings were adversely impacted by sales mix due to drought conditions (in NSW and Southern Queensland) dampening nitrogen demand for winter crop application in these regions. The impact of dry weather was somewhat mitigated by higher global Urea prices, higher sales volumes in non-drought affected regions and higher distribution margins, demonstrating the advantage of geographical, market and product diversity.

• Geographic and market diversity (explosives): The explosives business operates across North America and Asia Pacific, and in Europe, and is primarily aligned to customers with tier 1 assets, being those with the most efficient operations and best resources. Also, there is diversity in customer base, with products and services supplied for iron ore, base and precious metals, quarry and construction, and thermal and MET coal customers.

• DEVELOPING FERTILISERS FOR A WARMING CLIMATE: In 2020, IPL continued the testing of silicon fertilisers which have been shown to increase stress resistance in crops & replace silicon lost from soils through certain crops. Results to date indicate that crop tolerance of abiotic stresses, such as heat stress, can be increased.
The 'cost of 'response' reported here is the annual R&D investment into the development of fertilisers for a warming climate, as described above. Zero is included for the other mitigating actions reported here because the S&OP process and our geographic diversity requires no additional investment.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

IPL has manufacturing facilities across various geographical locations that may be impacted by regulatory changes aimed at reducing the impact of, or otherwise addressing, climate change. Any changed regulation could result in an increase to the cost base or operating cost of these plants, and it may not be possible to alter sales prices to offset these cost increases. This includes, but is not restricted to, any regulations relating to reducing carbon emissions. Alternatively, any such regulatory changes may potentially impact the ability of these plants to continue functioning as

currently operated. This risk would be heightened if regulatory changes are implemented inconsistently across regions or countries so that IPL's facilities (principally located in Australia and North America) are impacted by regulatory changes while manufacturing facilities of competitors operating in other jurisdictions are less impacted.

For example, carbon pricing currently applies in Australia, where three of our major manufacturing sites are located. These three sites at Phosphate Hill, Gibson Island and Moranbah, make up over 95% of our total Australian Scope 1 emissions, which were 1.6million tonnes CO2e in 2020. Under a 1.5 Degree scenario, a global carbon price is rapidly introduced reaches ~US$300/t CO2e by 2030 and ~US$550/t CO2e by 2040, with a global carbon price of US$50-100 in the short-term (1-3 years). In this scenario, carbon pricing would increase operational costs as well as costs to transport products until 2025, when the scenario describes most transport options being retrofitted with zero or low carbon mobility options (e.g., electricity and hydrogen). The transition to a global carbon price may give rise to a period of volatility where IPL would not be able to pass through the immediate carbon costs to customers, who may choose to source products more locally where available to avoid these carbon costs. However, well designed carbon pricing schemes may also offer opportunities to leverage grants to assist in the transition to low carbon technologies.

In a second example, the US State of Oregon, where IPL's St Helens ammonia manufacturing facility is located, has introduced a Carbon Reduction Scheme with the first three-year cycle beginning in January 2021. The impact on the St Helens facility could be up to $10m by 2024, depending on the success of the state's industry in achieving carbon reductions before 2024.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

80,000,000

Potential financial impact figure – maximum (currency)

166,000,000

Explanation of financial impact figure

• IPL's Australian scope 1 emissions were 1.6m tCO2e in 2020. If a AU$50 carbon price was applied to all of these emissions the impact would be AU$80m (1,600,000 tCO2e x $50 = 80m)
• IPL's global scope 1 emissions were 3,319,417 tCO2e in 2020. If a AU$50 carbon price was applied to all of these emissions the impact would be AU$166m (3,319,417 tCO2e x $50 = 166m)
• A global US$100 carbon price would result in an impact of 3,319,417 x $100 = $US332m. However, a global carbon price (rather than carbon pricing emerging in some jurisdictions and not others) would mean that such a cost impost could be passed on to customers and would not result in IPL being disadvantaged unless competitors produced products with lower emissions intensities than IPL.

Cost of response to risk

17,550,000

Description of response and explanation of cost calculation

To manage this risk, the IPL Corporate Sustainability Manager chairs the Carbon Pricing Steering Committee (CPSC). The CPSC comprises manufacturing, strategy, finance, treasury & energy contract management personnel across our global sites. The CPSC, through the Sustainability Manager and VP Strategic Projects, continually monitors emerging carbon pricing developments & informs 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.

The CEO formed and Chairs the IPL Decarbonisation and Energy Transition (DET) Steering Committee to develop the Company's Net Zero Pathway and reduce exposure to carbon pricing risks. The DET Steering Committee comprises selected executives including the CFO, the Chief Technology Development Officer and the President Global Manufacturing and HSE, and management including the VP Strategic Project Development and the Sustainability Manager. For example, the DETSC has identified potential projects for implementation at IPL"s manufacturing sites to achieve IPL's 5% absolute reduction target by 2025 against a 2020 baseline. $800,000 has been allocated to the DETSC to investigate these.

The cost of response to risk reported includes the following:
AU$750,000 in specialist roles related to carbon pricing management and the development of IPL's Net Zero Pathway.
+ AU$800,000 in DETSC funding allocated to manage decarbonisation pathway projects
+ AU$16,000,000 approved Capex
= AU$1,550,000
Other 'no cost' risk management actions and resilience aspects include:
• IPL has a large, diverse supplier group, which would assist in avoiding carbon pricing pass through in the short-term.

• IPL customer agreements provide for the pass through of carbon pricing where possible.
• 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, in the period 2030-2040 where carbon pricing may be applied unevenly (in some jurisdictions).

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Market

Other, please specify

Market shift away from mining of thermal coal for energy

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Under 1.5 and 2 Degree scenarios, transitioning away from fossil fuels is likely to significantly decrease demand for thermal coal, with impacts beginning in the short term (1-3 years). IPL supplies explosives to the thermal coal mining sector in the Powder River Basin in the US. Revenues from supply to this market have been reducing for several years, and made up 18% of IPL's Americas revenue and 4.7% of IPL's total global revenue in 2021 (this was 21% of IPL's Americas revenue and 6% of IPL's total global revenue in 2020 - see page 7 of IPL's Climate Change Report - 2021). Continued reduction in demand for thermal coal would reduce IPL's revenues from this sector. However, the 1.5 and 2 Degree scenarios also describe technologies associated with renewable energy, such as electric vehicles and largescale batteries, as likely to expand dramatically, with World Bank estimates indicating that demand for the metals required for these technologies could grow by 1000% under a 2-degree scenario.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

257,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

This figure is the total revenue from IPL's supply of explosives to the thermal coal mining sector in the US (AU$215m) and Australia (AU$42) in 2021. The figure reported therefore assumes the total impact if the entire market was lost (in 2021 earnings) with no expansion of revenues in other sectors.
$215 + $42 = $257m

Cost of response to risk

3,000,000

Description of response and explanation of cost calculation

IPL's major exposure to thermal coal is supplying the Powder River Basin (PRB), North America's most competitive thermal coal mining region with ammonium nitrate (AN) explosives manufactured at our Cheyenne, Wyoming plant (which is located adjacent to the PRB) and some imported AN. This sector made up 21% of IPL's Americas revenue, and 6% of global revenues in 2020. The Cheyenne site is also well positioned to service the Base & Precious Metals mining sector in Western US. To date, the decline in revenues from thermal coal mining in the PRB has been managed through expanding revenues into the Base & Precious Metals and Quarry & Construction sectors, which made up 35% and 43% of IPL's Americas revenues in 2020.

In the event that this strategy fails to utilise the full volume of AN manufactured at our Cheyenne, Wyoming facility in the nearby Base & Precious Metals market (with imported AN being diverted to Quarry & Construction markets elsewhere) it would be feasible to convert the Cheyenne plant to manufacture UAN fertilisers with an investment of ~AU$3m, as a small urea plant is already operating at the site.

The 'Cost of response' figure reported here is the AU$3m CAPEX that would be required to convert the plant from AN explosives manufacture to UAN fertiliser manufacture, as managing customer markets does not require additional investment. In addition:
• Since IPL currently buys in a portion of its ammonium nitrate to fulfil current demand in the PRB, the Group could manage a more rapid than expected market change away from thermal coal through reduced purchasing of third-party ammonium nitrate.
• IPL seeks to maintain competitive cost positions in its chosen markets, whilst maintaining quality product and service offerings. This focus on cost and quality positions its business units to compete over the medium to longer term in changing and

competitive environments.
• In the 2-degree scenario the reduction in demand for explosives supplying the thermal coal markets will be partly offset by the mining of new world commodities required for renewable technologies which could be higher margin activity.

Comment

The cost of the response to this risk is the estimated AU$3m CAPEX cost to convert the Cheyenne plant from AN manufacture (for explosives) to UAN manufacture (for fertilisers).

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical
Precipitation and/or hydrological variability

Primary potential financial impact

Other, please specify
Interruption to production

Company-specific description

Water is a key raw material for manufacturing at some manufacturing sites, with the majority used for cooling purposes. Under IPR, 2 and 3+ Degree climate change scenarios, it is predicted that in south-eastern Australia, average annual rainfall will be reduced, and longer periods of prolonged drought will be created. While this may be offset somewhat by increased 1 in 20-year flooding events at some locations, and up to 15% more rainfall in each single rain event (than historical averages), water restrictions may become more frequent in some areas. These impacts could occur in the short-term (1-3 years), with very low dam levels being recorded near some sites in the recent past. Three IPL sites which may be affected in Queensland, Australia are the Mt Isa sulphuric acid manufacturing plant, the Moranbah ammonium nitrate manufacturing plant and the Gibson Island ammonia manufacturing plant. (The Phosphate Hill site is supplied by a groundwater source which is renewed each year during the northern wet season, where rainfall is expected to increase).

For example, the Gibson Island ammonia manufacturing site is located in Brisbane, Queensland and uses high volumes of high quality cooling water in the ammonia plant. The WRI Aqueduct Water Tool identifies the site as being located in a catchment currently subject to high (40-80%) baseline water stress and high 'Physical risk - 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 affecting rainfall, and a growing population.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

7,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

This figure is the impact on EBIT which would result from a three-week outage at the Gibson Island ammonia manufacturing site due to water shortages.

Cost of response to risk

4,000,000

Description of response and explanation of cost calculation

IPL has worked with Seqwater, the Queensland Government Bulk Water Supply Authority, and Urban Utilities, who operate a water recycling plant located near the Gibson Island site, to enable the purchase of recycled water. During 2021, we concluded an agreement and completed construction of a pipeline to bring around 6,000 kL per day of recycled water to the site. This will ensure an uninterrupted supply in the event that municipal water supplies become restricted and also leave 6,000 kL per day in the municipal water supply dams for community use.

The 'cost of response' provided is the $4m total project cost to lay the pipeline from the recycled water plant to the Gibson Island plant, and connect it to site.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

Increased revenues through continued development and increased sales of Enhanced Efficiency Fertilisers (EEFs including Green Urea NV®, ENTEC®, and eNpower™), a new form of sustainable fertilisers in conjunction with Australian Bio-ferts, and lower emissions explosives, including DeltaE (Differential Energy explosives technology).

Global fertiliser demand initially grows in all scenarios before severe physical impacts described in the 3+ Degree and IPR scenarios cause a decline. Domestic demand in Australia and the US (where IPL manufacturing sites are located) becomes more important as the physical impacts of climate change impact on international trade and geopolitical stability. The 1.5 Degree scenario describes a rise in fertiliser use overall from 2025 due to increased focus on restoring degraded agricultural land and developing unused land close to urban centres in order to provide food and fibre for a growing population. Artificial growing environments may be developed to meet growing demand while avoiding additional land clearing. Higher yields will need to be obtained from smaller land plots and precision agriculture develops to reduce the environmental impacts of fertiliser use while maintaining yields. New farms are expected to be built around urban centres, using highly controlled environments (i.e. vertical and high-density farms with unique soil mixes). Products that reduce carbon emissions for growers, improve soil carbon content, are environmentally friendly and provide precision nutrient application for plant growth (e.g., slow release fertilisers and precision liquid fertilisers) will have a significant competitive advantage in this scenario.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

30,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Customer uptake of IPL's enhanced efficiency fertilisers, which have been shown to reduce nitrogen losses as N2O (a greenhouse gas) and enhanced efficiency explosives, which reduce fossil fuel use (and therefore also GHG) continues to grow. In 2020, we saw 28% growth in the sales volumes of our third high efficiency fertiliser, eNpower™, which was released to market in 2019.

The 'potential financial impact' reported is the revenue increase that would result if 20% of fertiliser sales (tonnes sold in 2020) made in 2020 were replaced with premium high efficiency (low GHG release) fertiliser sales. (EBIT is not reported here due to issues related to commerciality in confidence).

Cost to realize opportunity

48,000,000

Strategy to realize opportunity and explanation of cost calculation

Following a strategic review of IPL's fertilisers business (IPF) undertaken in 2020, the long-term strategy is to grow Incitec Pivot Fertiliser (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. This strategy will be leveraged through IPF's expansive distribution footprint to drive new growth products and services towards soil health, including precision application of nutrients to reduce environmental impacts, such as GHG, and increase yields. Our Enhanced Efficiency Fertiliser (EEF) range (Green Urea®, Entec® products and eNpower™) are products specially formulated to retain nutrients in more stable forms for longer periods, reducing the likelihood of volatilisation losses to the atmosphere as GHG and to waterways through leaching. EFF products not only reduce nitrogen losses to the atmosphere as N2O (a GHG), they facilitate greater uptake of nitrogen to the crop, enabling higher yields for growers on less cleared land.

During 2021, IPF worked towards the December announcement of its $38 million investment in Australian Bio Fert (ABF). This will enable the construction of Australia’s

first large-scale plant to develop and deliver a new category of sustainable fertilisers for Australian farmers. The investment will enable the construction of a new plant which uses the process of torrefaction, whereby organic waste materials sourced predominantly from the poultry industry are heated to high temperatures in a confined chamber with little or no oxygen to produce a dry, friable product which is free of harmful pathogens. This safe organic material can be blended with other fertilisers to streamline traditional practices of separate fertiliser and compost applications. This circular economy model contributes to our commitment to reduce environmental impacts and develop products with consistent and guaranteed quality which address soil degradation and assist in restoring soil carbon on farms.

The 'cost to realise opportunity' figure is the cost of CAPEX to build an additional product coating facility to switch 20% of our fertiliser sales to EEFs, which is AU$10m + the AU$38m investment in ABF.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Markets

Primary climate-related opportunity driver

Other, please specify

Increase in product demand due to physical impacts

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Market changes: All scenarios describe conditions in which demand for explosives in the Quarrying and Construction sector will increase. In the 1.5 and 2 Degree scenarios, steady urbanisation rates and enough global wealth to support stable development will likely lead to the building, reinforcing and repairing of roads, buildings and other infrastructure. As only 1 percent of all residential buildings and commercial buildings in the USA are certified ‘green’, an enormous opportunity presents itself for retrofitting of buildings in a future which addresses climate change. Although not as severe, physical impacts are still expected to occur, and rebuilding is required. While these scenarios describe this being completed in a resource efficient way, the scale of the transition is large and generates increased demand for aggregate, even though the use of recycled aggregate and re-use of building materials occurs.

The 3+ Degree and IPR scenarios both describe a future in which natural disasters severely impact on cities, towns and infrastructure, particularly along coasts due to sea level rise. An immense quantity of aggregate and other quarried materials is required to rebuild, and to build new climate resilient infrastructure. The IPR scenario describes the Quarrying and Construction sector expanding between 2020 and 2040 as the world (and the USA in particular) seeks to rebuild and protect itself from the physical impacts of climate change. From 2035, the scenario describes decreasing demand for fertiliser and explosives products from many emerging and developing economies which cannot afford to rebuild after the cumulative losses from both the acute and chronic physical impacts of climate change.

For example, IPL's has an ammonium nitrate manufacturing facility in Australia, ammonium nitrate manufacturing facilities at Louisiana, Missouri and Cheyenne Wyoming, and initiating system manufacturing plants at Wolf Lake in Illinois, Simsbury in Connecticut, Gregory in Kentucky and Carthage in Missouri. These plants are domestically located in the USA and Australia, countries which have strong governance and can afford to rebuild infrastructure in the event that the physical impacts of climate change cause damage. This would provide IPL with an opportunity to maintain revenues through supplying increased demand for domestically produced explosives products in these domestic markets.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

52,200,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The revenues from IPL's supply of explosives to the the quarry and construction sector were AU$522m in 2021. A 10 percent increase would be equivalent to $52.2m.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

IPL's Dyno Nobel 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 mid-west US and Canada. In 2019, 40 percent of Dyno Nobel Americas explosives revenue was generated from this sector. In 2020, this increased to 43%, which was maintained in 2021, with strong growth due to both market and share growth.

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 three years and is well established in the quarry and construction and hard rock segments where customers value its safety, environmental, and efficiency benefits, including reduced GHG emissions due to reduced energy use. This technology is was rolled out in the Asia Pacific business during 2018 and has continued to expand.

Dyno Nobel Americas also operates a Quarry Academy training centre for stone quarry operators, maximising contact with potential new customers.

The cost to realise this opportunity is reported as zero due to their being no additional costs associated with managing customer market share.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization’s strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan

Yes

Mechanism by which feedback is collected from shareholders on your transition plan

Our transition plan is voted on at Annual General Meetings (AGMs)

Attach any relevant documents which detail your transition plan (optional)

IPL_Climate-Report-2021_Interactive.pdf

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative, but we plan to add quantitative in the next two years

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 8.5	Company-wide		The RCP 8.5 scenario was used in IPL's 3o+ Scenario to assess physical risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit.
Physical climate scenarios RCP 8.5	Facility		The RCP 8.5 scenario was also used in IPL's 3o+ Scenario to assess physical risks which may impact on our 12 major manufacturing facilities, and on their suppliers, logistics and customer demand at the facility level.
Physical climate scenarios RCP 6.0	Company-wide		The RCP 6.0 scenario was used in IPL's Inevitable Policy Response scenario to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit.
Physical climate scenarios RCP 4.5	Company-wide		The RCP 4.5 scenario was used in IPL's 2o scenario to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit.
Physical climate scenarios RCP 2.6	Company-wide		The RCP 2.6 scenario was used in IPL's 1.5o scenario to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit.

Transition scenarios IEA SDS	Company-wide		The IEA SDS scenario was used in IPL's 1.5o, 2o and Inevitable Policy response scenarios to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit.
Transition scenarios IEA STEPS (previously IEA NPS)	Company-wide		The IEA NPS scenario was used in IPL's 1.5o and 2o scenarios to assess transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit.
Transition scenarios BNEF NEO	Company-wide		The BNEF NEO was used in IPL's 1.5o and 2o scenarios to assess transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit.
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5ºC	Shared Socioeconomic Pathway 1 (SSP1: Sustainability – Taking the Green Road) is a scenario of projected socio-economic global changes up to 2100 which outlines a future in which there are low challenges to mitigation and adaptation. SSP1 was used in creating IPL's bespoke 1.5o scenario, which was used to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit. See https://www.carbonbrief.org/explainer-how-shared-socioeconomic-pathways-explore-future-climate-change/
Transition scenarios Customized publicly available transition scenario	Company-wide	1.6ºC – 2ºC	Shared Socioeconomic Pathway 2 (SSP2: Middle of the Road) is a scenario of projected socio-economic global changes up to 2100 which outlines a future in which there are a medium level of challenges to mitigation and adaptation. SSP2 was used in creating IPL's bespoke 2o scenario, which was used to assess physical and transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across each business unit. See https://www.carbonbrief.org/explainer-how-shared-socioeconomic-pathways-explore-future-climate-change/
Transition scenarios Customized publicly	Company-wide	2.1ºC - 3ºC	The UNPRI Inevitable Policy Response (IPR) scenario was used by IPL to assess transitional risks which may impact our own operations, our suppliers, logistics, and customer demand for our products and services across

available transition scenario			each business unit. The Inevitable Policy Response (IPR) is a climate transition forecasting consortium commissioned by the Principles for Responsible Investment (PRI, an investor initiative in partnership with UNEP Finance Initiative and UN Global Compact) which aims to prepare institutional investors for the portfolio risks and opportunities associated with a period of relatively little policy action followed by an acceleration of policy responses to the impacts of climate change. IPR forecasts a continued acceleration in climate policy to 2025, driven, in part, by the 2023 Paris Stocktake and the 2025 Ratchet. IPR assesses that those policy responses will be increasingly forceful, abrupt, and disorderly, with financial, market and real economy uncertainties inherent in the climate transition. See https://www.unpri.org/sustainability-issues/climate-change/inevitable-policy-response

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

The results of our scenario analyses, along with detailed descriptions of our scenarios, are published in Chapter 4 of the IPL Climate Report (2021) at https://www.incitecpivot.com.au/~/media/Files/IPL/Sustainability/Sustainability%202021/13677_IPL_Climate-Report-2021_v25_FA_Interactive.pdf

See a brief summary below (with page references to the report above):

• Which IPL operations are most exposed to physical risk and why?

• What will each scenario mean for policy and legal risks, such as carbon pricing?

• What will each scenario mean for demand for our products and services across each business unit?

• Which customers are most exposed under each scenario and why?

• How may our suppliers and associated logistics be impacted under each scenario? Which items are at most risk under each scenario?

• Where do opportunities exist under each scenario? What actions should be put in place now to maximise future opportunities?

• What are the signposts that indicate a risk or opportunity is becoming more likely?

For the Inevitable Policy Response scenario the following additional focal questions were used:

• Are there any business relationships or long-term contracts which may be exposed under a rapid transition?

• Are there IPL operations which require a long-lead time to transition and therefore may have a higher exposure to a rapid transition?

Results of the climate-related scenario analysis with respect to the focal questions

The results of scenario analyses, along with detailed descriptions of our scenarios, are published in Ch4 of the IPL Climate Report (2021):
https://www.incitecpivot.com.au/~/media/Files/IPL/Sustainability/Sustainability%202021/13677_IPL_Climate-Report-2021_v25_FA_Interactive.pdf
A brief summary:
• Physical risks, all scenarios: Louisiana, Missouri & Phosphate Hill, QLD (flooding impacting logistics rather than the operations themselves); Carthage, Missouri (flooding, impacting logistics & employee commuting); Moranbah, QLD (heavier rainfall events may lead to dam overflows); Waggaman, Louisiana (hurricanes, which may impact operations directly, or result in extended power outages); Gibson Island, QLD & Portland, VIC (sea-level rise may increase risk of inundation during storms in the long-term; at GI, increased baseline water stress may cause water shortages in the medium to long term)
• Policy risks: In the 1.5o, 2o & IPR scenarios, carbon pricing will materially impact IPL, if it is not applied uniformly across global markets and cannot be passed on.
• Products & services across each business unit: A decline in demand for thermal coal first, then also metallurgical (MET) coal is described in the 1.5°&2° scenarios. This will reduce demand for bulk explosives across thermal coal markets (mainly in the US) in the short term and MET coal markets (Australia) in the medium to long term. However, both the 1.5°&2° scenarios see an increase in the mining of primary metals due to increased demand for the 'new world minerals' required for low-carbon technologies, and the 2o, 3o+ and IPR scenarios see an increased demand for quarry & construction explosives for rebuilding following impacts. The IPR & 3°+ scenarios describe climate impacts reducing farming yields which may result in increased demand for specialist fertilisers.
• Customer exposure: Farming customers are most impacted under the 3o+ and IPR scenarios due to physical impacts such as acute events and extended droughts. Thermal & MET coal mining customers are most impacted under 1.5 & 2 degree scenarios due to transitioning to renewable energy.
• Opportunities: The 1.5°&2° scenarios describe opportunities for low GHG fertilisers (EEFs), partnerships for soil carbon sequestration and low GHG explosives in the short term, and the development of green ammonia (NH3) & renewable H2 in the medium term. IPL is an expert in the manufacture & handling of both H2 & NH3 and is well placed to maximise opportunities.
• Business relationships / long-term contracts: The 1.5°&2° scenarios describe increased pressure from capital markets & investors to improve climate disclosure, worsening lending conditions, and risk of divestment in the short term. Certain long-term contracts & rising insurance costs present risks.
• Lead time to transition: IPL's ammonia manufacturing plants run continuously. GHG reductions require major capital investments with project implementation during 3-4 year shut-downs.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate change considerations have been built into our Core Strategic Drivers. 'Customer Focus' and providing 'Leading Technology Solutions' is a key driver for our business and we recognise the importance of developing and delivering products and services which enable our customers to reduce their greenhouse gas emissions, as well as partnering with research institutions to share and develop knowledge (see R&D below). • Case Study: Re-evaluating business strategy and developing new Enhanced Efficiency Fertilisers (EEFs) to reduce GHG emissions from farming: IPL's 2D scenario analysis identified that a $100 price on carbon emissions by 2025 and a significant change in farming practices would be required to limit global warming to 2D Risk 4). An opportunity analysis identified a high likelihood of increased demand for EEF fertilisers which reduce GHG emissions during their use, allowing our customers to reduce their exposure to carbon pricing. Our Incitec Pivot Fertiliser (IPF) business, which operates in eastern Australia, has responded by announcing that its new 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. The strategy will be leveraged through IPF's expansive distribution footprint to drive new growth products and services towards soil health, including EEFs. Our eNpower™ product was released in 2019. Like our Green Urea® & Entec® products, eNpower™ is specially formulated to retain nutrients in more stable forms for longer periods, increasing plant nutrient uptake and reducing volatilisation losses to the atmosphere as GHG.
Supply chain and/or value chain	Yes	IPL's 2D and 4D scenario analyses identified the likelihood of an increase in the incidence and severity of disruptions to IPL's supply chains due to physical impacts, beginning in the short-term. In response, IPL moved to reduce our

		reliance on single source suppliers and increased stocks where a single source supply chain risk remained. • Case Study: Ensuring DET NET component supply where supply chains are at risk of disruption due to climate change: Specialist components for IPL's Dyno Nobel DET NET explosives initiating systems are manufactured by a JV in South Africa. IPL's RCP based 2 and 4D scenarios both describe a likelihood of impacts to ports due to the increased incidence of extreme weather events, beginning in the short term, with extreme impacts in the medium to long term in the 4D scenario. In response, IPL's supply chain team stockpiles a 6-month supply of components in the US in the event that supply is interrupted. This strategy was tested during 2020 when the SA export port became congested due to COVID-19 impacts, with no resulting impact on US production. • Case Study: Ensuring continued production and product delivery at Phosphate Hill, where logistics are at risk of interruption due to climate change: IPL's Phosphate Hill ammonium phosphate manufacturing facility is remotely located in north west Queensland, Australia and is serviced by a single third-party operated rail line. This supply chain was identified as being at risk of increased incidence of flooding by IPL's RCP based 2 and 4D scenarios, beginning in the short term, with more extreme impacts in the medium to long term in the 4D scenario. IPL altered the supply chain strategy by emptying product storage tanks and sheds at the site and stockpiling product at our Townsville Port site in advance of the summer wet season each year. This strategy allows production at Phosphate Hill (and customer supply out of Townsville) to continue throughout a rail outage of up to three weeks. In 2019 a one-in-one-hundred-year flooding event damaged the third-party rail infrastructure, washing out rail sections and rail bridges which had to be rebuilt. As a result of this event, increased storage capacity has been built at the Phosphate Hill site and a response plan to switch quickly from rail to road freight for transfer product out of the site has been developed, and weather is monitored.
Investment in R&D	Yes	The development and adoption of low carbon manufacturing technologies has been built into our 'Manufacturing Excellence' strategy. Low carbon manufacturing technologies have been identified as both a risk management strategy for carbon pricing impacts and an opportunity for revenue increase associated with premium 'low carbon' products.

		• Case Study: Investigating Solar Hydrogen: The IPL 2D scenario estimates that a US$100 price on carbon would be required by 2025 to limit global warming to less than 2 degrees (Risk 4). The 4D scenario describes a future in which global carbon pricing never emerges and carbon pricing is established in only some jurisdictions, which presents a risk that IPL's manufacturing facilities in the US & Australia may become uncompetitive due to this cost. In response to these risks, and also to mitigate the physical impacts of climate change (Risks 1,2,5,6) IPL is developing a Net Zero Pathway as part of our Climate Change Management strategy. In line with this and drive by our Manufacturing Excellence & Profitable Growth Strategic Drivers, in 2020 we completed a $2.7m feasibility study, supported by the Australian Renewable Energy Agency. The study assessed the potential to use renewable hydrogen to increase ammonia production at our manufacturing facility at Moranbah, Queensland. Rather than being made from natural gas, renewable hydrogen can presently be made at very small plants using solar energy to split water into hydrogen and oxygen, allowing ammonia to be produced without the GHG associated with natural gas. The aim of the feasibility study was to determine whether renewable hydrogen can be made at an industrial scale, and at a commercially competitive price. Our study found that solar ammonia at an industrial scale was technically viable and a facility was designed that could reliably provide a continuous supply of renewable hydrogen suitable for ammonia manufacturing. However, commercial feasibility requires either a price premium for the solar ammonia; a reduction in renewable energy prices; and/or an increase in grant funding of approximately A$395m, or approximately 60% of the estimated capex. We are proud to have contributed valuable knowledge to the development of a renewable hydrogen industry in Australia and continue to investigate potential research partnerships towards its use.
Operations	Yes	The IPL 2D scenario estimates that a US$100 price on carbon would be required by 2025 to limit global warming to less than 2 degrees (Risk 4). The 4D scenario describes a future in which global carbon pricing never emerges and carbon pricing is established in only some jurisdictions, which presents a risk that IPL's manufacturing facilities in the US & Australia may become uncompetitive due to this cost. The 4D scenario described sever physical impacts from climate change if GHG are not reduced. This has led to our CEO's strategic decision to form the Decarbonisation

		and Energy Transition Steering Committee (DETSC), which is Chaired by the IPL CEO, and includes the President Global Manufacturing & Corporate HSE, VP Strategic Project Development, CFO and Corporate Sustainability Manager. The DETSC is overseeing the development IPL's Net Zero Pathway and the identification and investigation of new/emerging technologies and major capital projects that will be required to substantially reduce emissions in our hard-to-abate chemical manufacturing processes. In 2020, the DETSC set an absolute GHG reduction target of 5% by 2026 against a 2020 baseline for IPL globally as part of IPL's Climate Change Management strategy. This target is linked to the executive remuneration of the CEO and the President Global Manufacturing & Corporate HSE, who is responsible for the operational changes required to reach the target.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Capital expenditures Capital allocation	• Capital allocation has been influenced by the risk of carbon pricing. The IPL 2D scenario estimates that a US$100 price on carbon would be required by 2025 to limit global warming to less than 2 degrees (Risk 4). The 4D scenario describes a future in which global carbon pricing never emerges and carbon pricing is established in only some jurisdictions, which presents a risk that IPL's manufacturing facilities in the US & Australia may become uncompetitive due to this cost. The 4D scenario described sever physical impacts from climate change if GHG are not reduced. This has led to our CEO's strategic decision to form the Decarbonisation and Energy Transition Steering Committee (DETSC), which is Chaired by the IPL CEO, and includes the President Global Manufacturing & Corporate HSE, VP Strategic Project Development, CFO and Corporate Sustainability Manager. The DETSC is overseeing the development IPL's Net Zero Pathway and the identification and investigation of new/emerging technologies and major capital projects that will be required to substantially reduce emissions in our hard-to-abate chemical manufacturing processes. Capital allocation has been influenced, with approximately AU$800,000 allocated to the VP Strategic Engineering via the DETSC for project development related costs in 2021 to investigate and identify projects to meet IPL's 5% absolute

		reduction target. • Capital expenditures have been influenced by the physical risks of climate change to operations (Risk 1). The 2D and 4D scenarios describe the acute impacts of climate change increasing in the short term, with more extreme impacts in the medium to long term in the 4D scenario. Capital expenditures have been made to manage these impacts. For example, during 2020, AU$3,634,971 was invested in increasing product storage capacity to manage the risk of production interruptions at our remote Phosphate Hill site in Australia due to flooding. This site is serviced by a single third-party operated rail line which has been identified as being at increasing risk of extreme flooding events associated with the summer monsoon in the short-term. Flooding events in the area have been increasing and have interrupted rail services which transport product out of the site. Once storage capacity is reached, production must be halted, leading to the Capex investment in increased storage.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

No, but we plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2020

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Base year

2020

Base year Scope 1 emissions covered by target (metric tons CO2e)

3,663,898

Base year Scope 2 emissions covered by target (metric tons CO2e)

297,324

Base year Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

3,961,222

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2025

Targeted reduction from base year (%)

5

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

3,763,160.9

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

3,112,182

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

299,838

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

3,412,020

% of target achieved relative to base year [auto-calculated]

277.2891799551

Target status in reporting year

Underway

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

During 2021, IPL brought forward it's global Scope 1+2 absolute GHG reduction target of 5% by 2026 (against our 2020 baseline) to 2026. This is supported by our commitment to the investigation, identification and implementation of one or more projects to reduce our global emissions by 200,000 tCO2e which is equal to ~5% of our global 2020 emissions. IPL's total global 2020 emissions were 3,616,740 tCO2e. The 2020 GHG baseline is subject to adjustment due to unforeseen future expansions and acquisitions or divestments which may occur before the end of the 2025 IPL financial year.

It should be noted that while IPL's 2021 Scope1 and 2 emissions have decreased by almost 14% since the baseline year of 2020, this reduction relates directly to a decrease of 18% in ammonia production in the same time period. This was associated with major plant outages and a corresponding 14% decrease in global energy use. This reduction in GHG is not, therefore expected to be maintained and IPL is continuing to a progress pipeline of decarbonisation initiatives to materially reduce our operational emissions.

IPL has engaged a specialist third party to assist in the development of Science Based Targets during the IPL 2022 Financial Year (the next reporting period) and continues to seek options to advance its decarbonisation projects.

Plan for achieving target, and progress made to the end of the reporting year

During 2021, IPL progressed a number of projects that will provide significant future reductions in its Scope 1 and 2 emissions. Further abatement of nitrous oxide (N2O) emissions from nitric acid manufacture and carbon capture & storage of CO2 process

emissions from ammonia manufacture are the first steps in the decarbonisation of our operations, as these are currently technically feasible projects for our ammonium nitrate plants and our Waggaman, Louisiana ammonia plant respectively. Most significantly for this 5% absolute reduction target, a project to install tertiary abatement of N2O at our Moranbah ammonium nitrate plant was progressed during 2021 and will proceed to the Board for sanctioning in March 2022. The Moranbah ammonium nitrate facility was built in 2012 with secondary abatement technology, which is estimated to have reduced N2O emissions by 510,190 t CO2e in 2021. However, tertiary abatement will see a further ~200,000 t CO2e abated annually. Since our chemical plants must run 24 hours a day and are only stopped for planned major shutdowns, this AU$16m project is expected to be installed in 2024.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number

Abs 2

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Base year

2020

Base year Scope 1 emissions covered by target (metric tons CO2e)

3,663,898

Base year Scope 2 emissions covered by target (metric tons CO2e)

297,324

Base year Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

3,961,222

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

25

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

2,970,916.5

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

3,112,182

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

299,838

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

3,412,020

% of target achieved relative to base year [auto-calculated]

55.457835991

Target status in reporting year

New

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

As an ammonia manufacturer, IPL operates a 'hard-to-abate' chemical process - that is, significant reductions in GHG from ammonia manufacture require the introduction of emerging technologies at scale. These include options such as renewable hydrogen production to replace the need for natural gas (CH4) as both a source of hydrogen and for the energy required to drive the chemical reaction. Renewable hydrogen can be produced by the electrolysis of water (H2O) using renewable energy, but such a facility does not currently exist at the industrial scale required. There are technical challenges involved in integrating solar & wind energy into a chemical reaction process which must react reliably on a 24/7 basis. However, our $2.7m feasibility study, supported by the Australian Renewable Energy Agency, to assess the potential to use renewable hydrogen to increase ammonia production at our manufacturing facility at Moranbah, Queensland, found that solar ammonia at an industrial scale was technically viable and a facility was designed that could reliably provide a continuous supply of renewable hydrogen suitable for ammonia manufacturing. We continue to investigate the time frames by which such a facility could become commercially viable. IPL's scenario analyses indicate that renewable hydrogen will be commercially competitive by 2040, but is seeking to bring this forward through its recently announced partnerships with Fortescue Future Industries (FFI) to investigate renewable ammonia production at our Gibson Island ammonia manufacturing site, and with Keppel Infrastructure and Temasek to investigate renewable ammonia production at Newcastle and Gladstone in Australia.

Commercial readiness is being continuously evaluated and IPL has engaged a specialist third party to assist in the development of Science Based Targets during the IPL 2022 Financial Year.

It should be noted that while IPL's 2021 Scope1&2 emissions have decreased by ~14% since the baseline year of 2020, this reduction relates to an 18% decrease in ammonia production in the same period. This was associated with major plant outages and a corresponding 14% decrease in global energy use. This reduction in GHG is not, therefore, expected to be maintained. IPL is continuing to a progress its pipeline of decarbonisation initiatives to materially reduce operational emissions and meet reduction targets.

Plan for achieving target, and progress made to the end of the reporting year

To support our medium-term target, IPL has developed a pipeline of decarbonisation initiatives to materially reduce GHG emissions from our major manufacturing facilities. AS 97% of our GHG relate to chemical manufacturing processes, these will require major capex investment and process changes, which will require scheduled shutdowns to implement, which generally only occur every 3-4 years at most sites. Initiatives currently under investigation include:
» Further abatement of nitrous oxide emissions from the nitric acid plants at our Moranbah and Louisiana, Missouri ammonium nitrate manufacturing plants
» Sequestration of the pure CO2 process stream from ammonia manufacture at our

Waggaman, Louisiana ammonia manufacturing facility for permanent storage in already locally identified suitable geological formations; and
» Feedstock conversion from natural gas to renewable hydrogen at our Gibson Island and Moranbah ammonia and ammonium nitrate manufacturing plants.

List the emissions reduction initiatives which contributed most to achieving this target

---

Target reference number
Abs 3

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)

Base year
2020

Base year Scope 1 emissions covered by target (metric tons CO2e)
3,663,898

Base year Scope 2 emissions covered by target (metric tons CO2e)
297,324

Base year Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
3,961,222

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2050

Targeted reduction from base year (%)

100

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

0

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

3,112,182

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

299,838

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

3,412,020

% of target achieved relative to base year [auto-calculated]

13.8644589978

Target status in reporting year

New

Is this a science-based target?

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

This is a "Net Zero by 2050 Ambition".

Plan for achieving target, and progress made to the end of the reporting year

IPL operates a hard-to-abate manufacturing process - that is, significant reductions in GHG from ammonia manufacture require the introduction of emerging technologies at scale. IPL is currently investigating such technologies (as outlined in the previous target) and understands that in order for targets to be meaningful for external stakeholders, a clear series of projects and time frames is required to support them. IPL continues to seek options to advance its decarbonisation projects and accelerate its targets and has engaged a specialist third party to assist in the development of Science Based Targets (SBTs) during the IPL 2022 Financial Year (the next reporting period). This scope of work includes the development of Scope 3 targets for IPL's business units.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

No other climate-related targets

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	7	1,993,102
To be implemented*	2	2,496
Implementation commenced*	2	200,000
Implemented*	5	11,064
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Other, please specify

Other, please specify

Funding of the IPL Decarbonisation and Energy Transition Steering Committee (DETSC) to investigate and implement new low carbon technologies

Estimated annual CO2e savings (metric tonnes CO2e)

0

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

500,000

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

During the IPL 2021 FY, 500,000 was invested in the assessment of low carbon technologies and the advancement of projects under investigation which are yet to be implemented. These included two pre-feasibility assessments, continued investigation of Carbon Capture and Storage (CSS) for the pure CO2 stream from our Waggaman, Louisiana ammonia plant, which is located close to geologically suitable geological formations, and investigation of renewable hydrogen and other feedstocks to replace natural gas for ammonia making.

Initiative category & Initiative type

Energy efficiency in production processes

Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

8,123.4

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

450,000

Investment required (unit currency – as specified in C0.4)

6,721,056

Payback period

11-15 years

Estimated lifetime of the initiative

>30 years

Comment

Replacement of the ammonia converter at the Cheyenne, Wyoming ammonia plant during the 2021 shutdown. This was required due to the identification of potential vessel failure was and a more energy efficient replacement was chosen, saving the site 158,258 GJ of natural gas per annum.

Initiative category & Initiative type

Energy efficiency in production processes
Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

1,026.6

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

56,869

Investment required (unit currency – as specified in C0.4)

4,000,000

Payback period

>25 years

Estimated lifetime of the initiative

16-20 years

Comment

Replacement of ammonia converter baskets and catalyst at our Phosphate Hill ammonia manufacturing plant will result in improved efficiency of natural gas use for hydrogen feedstock and energy to drive the chemical reaction.

Initiative category & Initiative type

Non-energy industrial process emissions reductions

Other, please specify

Tertiary nitrous oxide (N2O) abatement installation

Estimated annual CO2e savings (metric tonnes CO2e)

200,000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

120,000

Payback period

No payback

Estimated lifetime of the initiative

>30 years

Comment

During the year $120,000 was invested in FEL 1 (project design, project development process and concept evaluation) to install tertiary abatement of N2O at our Moranbah Ammonium Nitrate Plant. The plant was built in 2012 with secondary abatement, which reduced GHG emissions by 510,000 tCO2e in the IPL 2021 FY (this reporting period). Tertiary abatement will reduce this by a further ~200,000 tCO2e. (Board sanctioning for the full $16m project, to be installed in 2024, was approved in March 2022 after the end of this reporting period).

Initiative category & Initiative type

Other, please specify

Other, please specify

Green Ammonia conversion of our Gibson Island ammonia manufacturing plant

Estimated annual CO2e savings (metric tonnes CO2e)

470,000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

500,000

Payback period

No payback

Estimated lifetime of the initiative

>30 years

Comment

During the year IPL invested $500,000 in our partnership with Fortescue Future Industries to investigate green ammonia production at our Gibson Island manufacturing site. The study is investigating making hydrogen for ammonia manufacturing by splitting water via electrolysis using renewable energy, rather than using natural gas as both the hydrogen source and as the energy source to drive the reaction. This would avoid the use of approximately 6,800,000 GJ feedstock gas and 6,100,000 GJ of natural gas used to drive the chemical reaction.

Initiative category & Initiative type

Energy efficiency in production processes

Other, please specify

SICT Fuel Cell Project

Estimated annual CO2e savings (metric tonnes CO2e)

726

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

516,446

Investment required (unit currency – as specified in C0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

16-20 years

Comment

Installation of a fuel cell at our Simsbury, Connecticut Initiating Systems manufacturing site. This fuel cell is now generating ~80% of power for the site (two 500kW units) with ~US$35,000 of the savings being cost avoidance from a production losses sustained from power outages, which will be eliminated, and a decrease in electricity purchased from the grid. While natural gas use will increase slightly, there are less GHG emissions from the fuel cell than grid generation. Due to participation in an energy efficiency scheme, the cost to IPL (Dyno Nobel) was zero Capex and zero O&M.

Initiative category & Initiative type

Energy efficiency in production processes
Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

1,188

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

154,085

Investment required (unit currency – as specified in C0.4)

837,480

Payback period

4-10 years

Estimated lifetime of the initiative

21-30 years

Comment

This project replaced a Nitration Boiler at our Graham, Kentucky manufacturing facility which a dual fuel boiler which improved burner efficiency from 60% to 90%. The unit saves 23,138 GJ of energy per annum and also reduced NOx exhaust emissions (not a GHG, but an air pollutant) from 120 ppm to 30 ppm.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for low-carbon product R&D	Our fertiliser and explosives manufacturing businesses have dedicated R&D budgets for product development which includes research and development of Enhanced Efficiency Fertilisers (EEFs) which are treated to reduce nitrous

	oxide (N2O) GHG emissions and reduced energy explosives products and delivery systems.
Employee engagement	Consistent improvement in energy efficiency is a key part of IPL's Manufacturing Excellence process review across our manufacturing business. Manufacturing Excellence involves continuous improvement and engagement of our employees by involving them directly in the implementation of 'best practice' in their own work areas. Employees at all levels of our business are encouraged to think laterally, to share their experiences and ideas, and to participate in implementing improvements, resulting in outcomes which are highly valued by both the business and our employees.
Financial optimization calculations	Due to the high cost of energy to our business, which includes the use of gas as both an energy source and a feedstock, consistent improvement in energy efficiency not only reduces greenhouse gas emissions, but also delivers costs savings.
Dedicated budget for other emissions reduction activities	The IPL Decarbonisation and Energy Transition Steering Committee is Chaired by the CEO and is responsible for IPL's Net Zero Pathway and the identification and implementation of projects to decarbonise IPL's operations. $800,000 has been allocated to the DETSC for this purpose.
Internal price on carbon	Internal carbon pricing has been included in IPL's 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 Board formally approved the application of this carbon price to all future growth capital and investment decisions. The price is currently AU$20, and is projected to increase to AU$50 by 2025, AU$65 by 2030 and $140 by 2050.
Partnering with governments on technology development	'Industry and government collaboration on green technologies towards Net Zero' was identified as a material issue for the sustainability of IPL's business in our 2021 GRI aligned materiality assessment. IPL has engaged with the Australian Government on its Low Emissions Technology Investment Roadmap through IPL's Decarbonisation and Energy Transition Steering Committee members and partnered with the Australian Renewable Energy Agency (ARENA) to complete the $2.7m Solar Hydrogen Feasibility Study for renewable ammonia production at Moranbah, Queensland in 2020. IPL continues to engage with the Australian Clean Energy Regulator and the Department of Industry, Science, Energy and Resources (DISER) on a range of issues related to the development of low emissions technologies and the development of Emissions Reduction Fund (ERF) methodologies to incentivise the uptake of new low carbon technologies by our customers. For example, no ERF methodology currently exists to recognise and quantify the GHG reductions associated with EEF (N-inhibited) fertiliser products during their use. IPL continues to engage with a range of industry bodies and directly with DISER to develop such a method.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

Thapa, R., Chatterjee, A., Awale, R., McGranahan, D. & Daigh, A. (2016) Effect of Enhanced Efficiency Fertilizers on Nitrous Oxide Emissions and Crop Yields. Soil Science Society of America Journal. 80. 1121–1134. 10.2136/sssaj2016.06.0179.

Type of product(s) or service(s)

Other

Other, please specify

Fertilisers

Description of product(s) or service(s)

Enhanced Efficiency Fertilisers (EEFs) are treated to keep nitrogen (N) in stable chemical forms in the soil for longer, reducing volatilisation to N2O during their use phase. E.g., 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 N2O 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 at http://www.naturalresources.sa.gov.au/files/78984243-0fc0-487e-8f64-a35d00d2f3dd/reducing-nitrous-oxide-emissions-gen.pdf.

Our EEFs include:

1. Green Urea NV products containing urea treated with the urease inhibitor, N-(n-butyl) thiophosphoric triamide (NBPT), which delays hydrolysis of urea into unstable forms;

2. Entec®, a fertiliser treatment that retains nitrogen in the stable ammonium form for an extended period. Both trials and customer use demonstrate the potential for significant reductions in GHG as well as yield increase (see page 35-42 of the Australian Sugarcane Annual 2016 and Less Nitrogen Lost is More Gain in Cane, also in the Australian Canegrower, Sept 2017).

3. eNpower™ 18:20 contains the nitrification inhibitor DMP in IPF's patented DMP-G formulation. DMP works by inhibiting nitrifying bacteria in the soil to slow down the conversion of ammonium N to nitrate, which is more prone to losses to air as GHG.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

1

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
Row 1	No

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

4,037,930

Comment

This year is chosen as the baseline because it was first year in which our Waggaman, Louisiana ammonia plant reached full production capacity. It therefore represents the baseline year of the current manufacturing profile of the global business.

Scope 2 (location-based)

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

327,536

Comment

This year is chosen as the baseline because it was first year in which our Waggaman, Louisiana ammonia plant reached full production capacity. It therefore represents the baseline year of the current manufacturing profile of the global business.

Scope 2 (market-based)

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

327,536

Comment

This year is chosen as the baseline because it was first year in which our Waggaman, Louisiana ammonia plant reached full production capacity. It therefore represents the baseline year of the current manufacturing profile of the global business.

Scope 3 category 1: Purchased goods and services

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

1,970,000

Comment

This year is chosen as the baseline because it was first year IPL calculated its Scope 3 emissions.
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. 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: For 2018, 2019 and 2020, 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.
Data sources: 'Annual tonnes purchased' data is extracted from the IPL internal system that tracks all external spend.

Scope 3 category 2: Capital goods

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

Not Material. Not calculated. Based on industry intensity factors applied to IPL's annual capital goods expenditure, emissions from this category are not considered to be material. This assumption will be reviewed by a specialist third party in 2022.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

602,000

Comment

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: The diesel fuels used for offsite transport of product in North America by trucks owned and operated by IPL have not been included in our Scope 3 or Scope 1 calculations. Although these are Scope 1 emissions, fuel use data is presently unavailable and materiality is very low, with Scope 1 emissions from this source

estimated to be less than 1% of IPL's total Scope 1 emissions.
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 and/or gas shipping reports. For all other fuels, 'annual volumes purchased' data is extracted from the IPL internal system that tracks all external spend.

Scope 3 category 4: Upstream transportation and distribution

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

213,000

Comment

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 contactors.

Scope 3 category 5: Waste generated in operations

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

6,000

Comment

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: This is not a material source of Scope 3 emissions in IPL's value chain, however detailed waste data was available due to the annual collection of global, site-by-site waste tonnes for sustainability reporting from the operations over which IPL has operational control. For wastes generated by our Australian sites, the supplier-specific method was used, whereby a national waste contractor supplied waste-specific emissions factors. For wastes in Australia disposed of by other waste contractors, and for sites outside of Australia, the average-data method was used. This involves estimating emissions based on total tonnes waste going to each disposal method (e.g., landfill) multiplied by an average emission factor for each disposal method.
Data sources: Annual reports from Australian waste management provider; the internal SAI Global data base used by IPL to collect and manage data associated with monthly site reports on energy use, water use and waste; relevant emissions factors.

Scope 3 category 6: Business travel

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

Calculation Status: Not material. Not calculated.
Explanation: This source is not considered to be material. (Hire car use in Australia is included in IPL's Scope 1 emissions reporting in order to comply with National Greenhouse and Energy Reporting legislation, and made up 0.04% of Australian Scope 1 emissions in 2020.) This assumption will be reviewed by a specialist third party in 2022.

Scope 3 category 7: Employee commuting

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

Calculation Status: Not material. Not calculated. This assumption will be reviewed by a specialist third party in 2022.

Scope 3 category 8: Upstream leased assets

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

Not relevant.

Scope 3 category 9: Downstream transportation and distribution

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

Included in 'Scope 3 category 4: Upstream transportation and distribution.'

Scope 3 category 10: Processing of sold products

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

Calculation Status: Not material. Not calculated. IPL primarily manufactures and supplies fertilisers and explosives which are typically consumed during their use by the customer.

Scope 3 category 11: Use of sold products

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

4,824,000

Comment

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.

Exclusions: IPL sells some industrial chemicals which have not been included, as their downstream uses, and the emissions factors associated with these, are unavailable. These emissions are not considered to be material and are estimated to be less than 1% of IPL's Scope 3 emissions.

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.

Scope 3 category 12: End of life treatment of sold products

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

4,824,000

Comment

Calculation Status: Not material. Not calculated. IPL primarily manufactures and supplies fertilisers and explosives which are typically consumed during their use by the customer.

Scope 3 category 13: Downstream leased assets

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

Not relevant.

Scope 3 category 14: Franchises

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

Not relevant.

Scope 3 category 15: Investments

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

102,000

Comment

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.) IPL's non-operated joint ventures relevant to each reporting year are described in IPL's Annual Reports.

Exclusions: Only joint ventures engaged in emissions intensive manufacturing activities have been included in the 2018, 2019 and 2020 calculation of emissions from this category.

Calculation methodology: The accounting approach for 'equity investments' as described in the GHG Protocol 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.

Scope 3: Other (upstream)

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Australia - National Greenhouse and Energy Reporting Act
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
US EPA Emissions & Generation Resource Integrated Database (eGRID)
Other, please specify
» 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-technicalcalculation-guidance

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

3,112,182

Comment

Start Date: 10/01/2020
End Date: 09/30/2021
(IPL's 2021 Financial Year)

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

299,838

Comment

Start Date: 10/01/2020
End Date: 09/30/2021
(IPL's 2021 Financial Year)

C6.4

(C6.4) Are there any sources (e.g., facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Emissions from offsite transport of product in North America

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why this source is excluded

Very low materiality (estimated to be less than 1% of total emissions) and difficulty in accessing this data.

Estimated percentage of total Scope 1+2 emissions this excluded source represents

1

Explain how you estimated the percentage of emissions this excluded source represents

Emissions from offsite transport of product in North America were estimated using a calculation of annual kilometres travelled x truck efficiency (km/kL) x diesel emissions factor.

Source

Emissions from electricity used in small remote offices and despatch sites in North America.

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

Very low materiality (estimated to be less than 1% of total emissions) and difficulty in collecting this information. IPL has engaged a supply chain partner to collect this usage data via scanning of electricity invoices beginning 2023.

Estimated percentage of total Scope 1+2 emissions this excluded source represents

1

Explain how you estimated the percentage of emissions this excluded source represents

Comparison with similar sites in Australia, where the usage data is available.

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,608,000

Emissions calculation methodology

Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Calculation Boundary: This category covers emissions generated upstream of IPL's operations associated with the manufacture of purchased fertilisers, explosives and chemical products. 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: For 2018, 2019 and 2020, 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. An average Scope 3 emissions factor specific to each product/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.

*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-technicalcalculation-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
• 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
• LCI data for the calculation tool Feedprint for greenhouse gas emissions of feed production and utilization: GHG Emissions of N, P and K fertilizer production, Blonk Consultants 2012; https://www.blonkconsultants.nl/wp-content/ uploads/2016/06/fertilizer_production-D03.pdf

Capital goods

Evaluation status

Not relevant, explanation provided

Please explain

Based on industry intensity factors applied to IPL's annual capital goods expenditure, emissions from this category are not considered to be material. However, IPL has engaged a specialist third party to investigate Science Based Targets for IPL, which requires the estimation of these emissions in order to determine their materiality. This will be completed in the next reporting period.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

516,000

Emissions calculation methodology

Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

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 a feedstock for hydrogen to make ammonia, and as an energy source to drive that reaction, 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 (see references below).
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.

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-technicalcalculation-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
• 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-report2018-volume-1.pdf
• World Resources Institute Greenhouse Gas Inventory Manual, Category 3: Fuel and Energy-Related Activities; https://www.wri.org/sustainability-wri/dashboard/methodology#category-3

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

328,000

Emissions calculation methodology

Supplier-specific method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

24

Please explain

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 contactors.

References
• RightShip Carbon Accounting; https://www.rightship.com/products/sustainability-products/
• 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-technicalcalculation-guidance
• United States Environmental Protection Agency Center for Corporate Climate Leadership, Emission Factors for Greenhouse Gas Inventories (2020), Table 8 - Scope 3 Category 4: Upstream Transportation and Distribution and Category 9: Downstream Transportation and Distribution; https://www.epa.gov/sites/production/files/2020-04/ghg-emission-factors-hub.xlsx
• Guidelines for Measuring and Managing CO2 Emissions from Freight Transport Operations; European Chemical Transport Association; https://www.ecta.com/wp-content/uploads/2021/03/ECTA-CEFIC-GUIDELINE-FORMEASURING-AND-MANAGING-CO2-ISSUE-1.pdf

Waste generated in operations

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

6,000

Emissions calculation methodology

Supplier-specific method
Average data method
Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

40

Please explain

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: This is not a material source of Scope 3 emissions in IPL's value chain, however detailed waste data is available due to the annual collection of global, site-by-site waste tonnes for sustainability reporting from the operations over which IPL has operational control. 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 waste-type-specific method was used. This involves estimating emissions based on total tonnes of each waste type going to each disposal method (e.g., landfill) multiplied by an average emission factor for each waste type and disposal method.
Data sources: Annual reports from Australian waste management provider; the internal SAI Global data base used by IPL to collect and manage data associated with monthly site reports on energy use, water use and waste; relevant emissions factors (see references below).

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-technicalcalculation-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

Business travel

Evaluation status

Not relevant, explanation provided

Please explain

This source is not considered to be material. (Hire car use in Australia is included in IPL's Scope 1 emissions reporting in order to comply with National Greenhouse and Energy Reporting legislation and made up 0.04% of Australian Scope 1 emissions in 2021.) However, IPL has engaged a specialist third party to investigate Science Based Targets for IPL, which requires the estimation of these emissions in order to determine their materiality. This will be completed in the next reporting period.

Employee commuting

Evaluation status

Not evaluated

Please explain

This source is not considered to be material. However, IPL has engaged a specialist third party to investigate Science Based Targets for IPL, which requires the estimation of these emissions in order to determine their materiality. This will be completed in the next reporting period.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

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.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

Emissions calculation methodology

Supplier-specific method
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain

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, these emissions are included in 'Upstream transportation and distribution'.

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 due to very low materiality and unavailability of data. Emissions associated with storage at third party distributors have not been included due to very low materiality and unavailability of data.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Not applicable: IPL manufactures and sells fertilisers and explosives which are typically consumed during their use by the customer.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,714,000

Emissions calculation methodology

Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

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.
Exclusions: IPL sells industrial chemicals, some of which have not been included, as their downstream uses, and the emissions factors associated with these, are unavailable. These emissions are not considered to be material and are estimated to be less than 1% of IPL's Scope 3 emissions.
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.

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-technicalcalculation-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-report2018-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: N2O Emissions From Managed Soils, and CO2 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
• LCI data for the calculation tool Feedprint for greenhouse gas emissions of feed production and utilization: GHG Emissions of N, P and K fertilizer production, Blonk Consultants 2012; https://www.blonkconsultants.nl/wpcontent/uploads/2016/06/fertilizer_production-D03.pdf

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Not applicable. IPL manufactures and sells fertilisers and explosives which are typically consumed during their use by the customer

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Leasing of downstream assets is not a material part of IPL’s business.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

IPL has no franchised operations.

Investments

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

106,000

Emissions calculation methodology

Investment-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

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.) IPL's non-operated joint ventures relevant to the
2021 reporting year are described on page 105 the IPL 2021 Annual Report.
Exclusions: None.
Calculation methodology: Investment-specific method. The accounting approach for 'equity investments' as described in the Scope 3 Guidance is used to calculate these emissions.
Data sources: 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; and the most recent reports published by the operating entity e.g. sustainability and annual reports; and other sources if identified through desktop research.
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-technicalcalculation-guidance
• 2019 IPL Annual Report; https://investors.incitecpivot.com.au/static-files/2eddba76-2047-4d13-ae66-60a9315d4f12
• 2020 IPL Annual Report; https://investors.incitecpivot.com.au/static-files/ae193d4c-d2c5-4bf8-a37ef570c0e19c0d
• 2021 IPL Annual Report: https://investors.incitecpivot.com.au/static-files/28580063-27ec-4be8-bc43-2040e4a7cf37

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

IPL has no other upstream Scope 3

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

IPL has no other downstream Scope 3

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0007846

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

3,412,020

Metric denominator

unit total revenue

Metric denominator: Unit total

4,348,500,000

Scope 2 figure used

Location-based

% change from previous year

21.9

Direction of change

Decreased

Reason for change

Revenues increased from AU$3,942.2m to AU$4,348.5 while emissions fell from 3,961,222 tCO2e (restated in 2021) to 3,412,020 tCO2e.

Intensity figure

22,884.1

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

3,412,020

Metric denominator

Other, please specify

Net Profit After Tax

Metric denominator: Unit total

149,100,000

Scope 2 figure used

Location-based

% change from previous year

29

Direction of change

Decreased

Reason for change

Net Profit After Tax increased from AU$123.4m to AU$146.1m while emissions fell from 3,961,222 tCO2e (restated in 2021) to 3,412,020 tCO2e.

Intensity figure

0.9478

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

3,412,020

Metric denominator

unit of production

Metric denominator: Unit total

3,600,000

Scope 2 figure used

Location-based

% change from previous year

9

Direction of change

Decreased

Reason for change

Metric tonnes produced fell from 3.8m to 3.6m (-5%) while emissions fell from 3,961,222 tCO2e (restated in 2021) to 3,412,020 tCO2e (-14%).

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	2,419,993	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	5,402	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	686,777	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	10	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Australia	1,531,521
North America	1,579,712
Turkey	949

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Incitec Pivot Fertilisers	968,247
Dyno Nobel Explosives	2,143,936

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Chemicals production activities	3,112,182	The amount reported here includes emissions from activities at facilities operated by IPL which supported chemicals production and distribution. These include IPL administration buildings, and fertiliser distribution sites under IPL operational control.

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Australia	161,614	161,614
North America	137,375	137,375
Turkey	849	849

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Incitec Pivot Fertilisers	158,786	158,786
Dyno Nobel Explosives	141,052	141,052

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Chemicals production activities	299,838	299,838	The amount reported here includes emissions from activities at facilities operated by IPL which supported chemicals production and distribution. These include IPL administration buildings, and fertiliser distribution sites under IPL operational control.

C-CH7.8

(C-CH7.8) Disclose the percentage of your organization's Scope 3, Category 1 emissions by purchased chemical feedstock.

Purchased feedstock	Percentage of Scope 3, Category 1 tCO2e from purchased feedstock	Explain calculation methodology
Ammonia	3	IPL uses natural gas (CH4) as both an energy source and a feedstock for hydrogen, which is used to make to make ammonia (NH3). Total natural gas used as feedstock vs energy is obtained from internal plant meters and/or the chemical formulas which govern the amount of hydrogen (and therefore natural gas: CH4) required to make a tonne of ammonia, and is reconciled back to invoiced amounts of natural gas purchased. Amounts of natural gas used for feedstock (in GJ) have been multiplied by the Scope 3 emission factor specific natural gas in the Australian National Greenhouse and Energy Reporting legislation/Technical Guidelines. The resulting tCO2e is described as a percentage of our total Scope 3 tCO2e.

C-CH7.8a

(C-CH7.8a) Disclose sales of products that are greenhouse gases.

	Sales, metric tons	Comment
Carbon dioxide (CO2)	157,230	IPL captures a pure CO2 stream, which arises from the use of natural gas as a feedstock to make hydrogen for ammonia manufacture, at four manufacturing facilities. Some of this CO2 is sold to make melamine, and some is sold for industrial and food industry use. Total sales are reported here.
Methane (CH4)	0	IPL does not sell CH4
Nitrous oxide (N2O)	0	IPL does not sell N2O
Hydrofluorocarbons (HFC)	0	IPL does not sell HFC
Perfluorocarbons (PFC)	0	IPL does not sell PFC
Sulphur hexafluoride (SF6)	0	IPL does not sell SF6
Nitrogen trifluoride (NF3)	0	IPL does not sell NF3

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	No change in renewable energy consumption
Other emissions reduction activities	37,352	Decreased	0.9	Maintenance to achieve increased effectiveness of secondary N2O abatement (27,013) + Ammonia Converter Replacement (8,123) + Phos Catalyst Basket Replacement

				(1027) + Gregory, Kentucky boiler project (1188) =37,352/ 3,961,222 = 0.9%
Divestment	0	No change	0	No divestments were made
Acquisitions	0	No change	0	No acquisitions were made
Mergers	0	No change	0	No mergers were made
Change in output	515,239	Decreased	13	A decrease in production meant less natural gas was used, mostly due to unplanned outages at the Waggaman, Louisiana ammonia manufacturing plant.
Change in methodology	0	No change	0	No changes in methodology were made
Change in boundary	0	No change	0	No boundaries were changed
Change in physical operating conditions	0	No change	0	There were no changes in physical operating conditions
Unidentified	0	No change	0	
Other	0	No change	0	

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	5,767,310	5,767,310
Consumption of purchased or acquired electricity		163,705	412,588	576,293
Consumption of self-generated non-fuel renewable energy		68,125		68,125
Total energy consumption		231,830	6,179,898	6,411,728

C-CH8.2a

(C-CH8.2a) Report your organization's energy consumption totals (excluding feedstocks) for chemical production activities in MWh.

Consumption of fuel (excluding feedstocks)

Heating value

HHV (higher heating value)

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

5,767,310

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

5,767,310

Consumption of purchased or acquired electricity

MWh consumed from renewable sources inside chemical sector boundary

163,705

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

412,588

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

576,293

Consumption of self-generated non-fuel renewable energy

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

68,125

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

68,125

Total energy consumption

MWh consumed from renewable sources inside chemical sector boundary

231,830

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

6,179,898

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

6,411,728

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

No sustainable biomass was consumed by the organisation

Other biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

No other biomass was consumed by the organisation

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

No other renewable fuels were consumed by the organisation

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

No coal was consumed by the organisation

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

25

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

25

Comment

25 MWh of fuel oil as consumed by he organisation for the generation of heat

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

5,673,190

MWh fuel consumed for self-generation of electricity

828,579

MWh fuel consumed for self-generation of heat

4,844,611

Comment

828579 MWh of natural gas was used to generate electricity at gas fired power plans at our Moranbah and Phosphate Hill sites in Queensland, Australia. The rest of our natural gas use was to generate heat, with the majority used to drive the chemical conversion of feedstock gas to hydrogen for ammonia production.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

94,095

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

651

Comment

These 'Other non-renewable fuels' include diesel and petrol fuels, and LPG used for heat.

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

5,767,310

MWh fuel consumed for self-generation of electricity

828,579

MWh fuel consumed for self-generation of heat

4,845,262

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	247,873	247,873	0	0
Heat	4,845,262	4,845,262	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C-CH8.2d

(C-CH8.2d) Provide details on electricity, heat, steam, and cooling your organization has generated and consumed for chemical production activities.

Electricity

Total gross generation inside chemicals sector boundary (MWh)

315,998

Generation that is consumed inside chemicals sector boundary (MWh)

315,998

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

68,125

Heat

Total gross generation inside chemicals sector boundary (MWh)

4,845,262

Generation that is consumed inside chemicals sector boundary (MWh)

4,845,262

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Steam

Total gross generation inside chemicals sector boundary (MWh)

0

Generation that is consumed inside chemicals sector boundary (MWh)

0

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Cooling

Total gross generation inside chemicals sector boundary (MWh)

0

Generation that is consumed inside chemicals sector boundary (MWh)

0

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

Australia

Consumption of electricity (MWh)

194,284

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

194,284

Country/area

Other, please specify

Americas

Consumption of electricity (MWh)

380,712

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

380,712

Country/area

Other, please specify

Europe

Consumption of electricity (MWh)

1,298

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

1,298

C-CH8.3

(C-CH8.3) Does your organization consume fuels as feedstocks for chemical production activities?

Yes

C-CH8.3a

(C-CH8.3a) Disclose details on your organization's consumption of fuels as feedstocks for chemical production activities.

Fuels used as feedstocks

Natural gas

Total consumption

838,580

Total consumption unit

thousand cubic metres

Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit

1.95

Heating value of feedstock, MWh per consumption unit

0.03

Heating value

HHV

Comment

In the interests of providing good data, in order to be able to use emissions factors as determined under NGER without conversions, and in order to be able to incorporate the differing range of HHVs, densities and composition of the different natural gas and coal seam natural gas sources used at our different manufacturing plants located across the

US and Australia, we request that CDP kindly include the option of 'GJ' for unit selection (rather than volumetric measurements) for natural gas in this question.

IPL uses NGER emissions factors for its natural gas globally, which are tCO2e per GJ.

C-CH8.3b

(C-CH8.3b) State the percentage, by mass, of primary resource from which your chemical feedstocks derive.

	Percentage of total chemical feedstock (%)
Oil	
Natural Gas	100
Coal	
Biomass	
Waste (non-biomass)	
Fossil fuel (where coal, gas, oil cannot be distinguished)	
Unknown source or unable to disaggregate	

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-CH9.3a

(C-CH9.3a) Provide details on your organization's chemical products.

Output product

Ammonia

Production (metric tons)

1,267,820

Capacity (metric tons)

1,780,000

Direct emissions intensity (metric tons CO2e per metric ton of product)

2.03

Electricity intensity (MWh per metric ton of product)

0.454

Steam intensity (MWh per metric ton of product)

0

Steam/ heat recovered (MWh per metric ton of product)

0

Comment

IPL manufactures (rather than buys in) it's ammonia. Ammonia is an energy intensive product.

Output product

Nitric acid

Production (metric tons)

816,597

Capacity (metric tons)

900,000

Direct emissions intensity (metric tons CO2e per metric ton of product)

0.84

Electricity intensity (MWh per metric ton of product)

0

Steam intensity (MWh per metric ton of product)

0

Steam/ heat recovered (MWh per metric ton of product)

0

Comment

Our nitric acid plants are net exporters of energy to other manufacturing processes, therefore have zero electricity intensity.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	IPL's internal R&D relates mostly to the development of products which reduce our customer's emissions during their use (our Scope 3 emissions). Although this is not asked for in the question below, we have included this research.

C-CH9.6a

(C-CH9.6a) Provide details of your organization's investments in low-carbon R&D for chemical production activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Other, please specify Low GHG emitting fertilisers	Applied research and development	21 - 40%		For approximately 10 years IPL has been developing and marketing enhanced efficiency fertilisers (fertilisers with nitrogen inhibitors) which have been shown to reduce GHG emissions to the atmosphere (as nitrous oxide), with applied research currently ongoing. Gold Standard has announced their intention to begin work in 2021 on the development of a methodology to quantify and generate carbon credits for the GHG abated through the use of these products.
Other, please specify	Large scale commercial deployment	21 - 40%		IPL estimates a capital investment of approximately $1 million, with training and

Low GHG emitting fertilisers				promotional costs of approximately $2 million (when employee costs are included) in the large-scale commercial deployment of our Green Urea NV, Entec and eNpower products, which continue to demonstrate the potential for significant reductions in GHG during their use. In 2021, Our new Big N EEF was test marketed with a group of eight growers and agronomists, using commercial quantities of the new formulation. Widely used in broadacre crops such as cotton, Big N is an anhydrous ammonia nitrogen fertiliser that is applied as a gas or in liquid form using modified application equipment. The high concentration of nitrogen means growers can cover more ground per tonne of fertiliser with BIG N, resulting in even higher efficiency due to precision application. The lower volume of nitrogen applied over larger expanses delivers a lower environmental footprint for growers, with the inhibitor aiding increased nitrogen uptake to maximise yields. A number of these trials undertaken throughout the year have been used to assist our teams in the collection of data to support this product and other novel inhibitors. Gold Standard has announced their

				intention to begin work in 2021 on the development of a methodology to quantify and generate carbon credits for the GHG abated through the use of these products.
Other, please specify Differential EnergyTM explosives technology	Large scale commercial deployment	21 - 40%		Differential EnergyTM is a proprietary explosives method which allows blasters to accurately vary the density of chemically gassed emulsion as it is being loaded into the blast hole, allowing the operator to load multiple densities of gassed emulsion into the same hole in order to match the unique geological characteristics present in the ground. Because the explosives energy is precisely targeted to match the rock properties, the amount of energy loaded into the blast hole will match only what is required for an optimal blast, reducing total energy and therefore vertical movement at the surface, air overpressure and noise from the blast event. The use of Differential Energy continues to result in reduced GHG as well as reduced energy use, NOx emissions, dust, noise and ground vibration and increased productivity while reducing overall costs for our mining customers.
Radical process redesign	Basic academic/theoretical research	21 - 40%	2,700,000	In line with our commitment to reducing our GHG emissions and driven by our Manufacturing Excellence and Profitable Growth Strategic Drivers, we

				completed a AU$2.7 million feasibility study, supported by the Australian Renewable Energy Agency (ARENA), to assess the potential to use renewable hydrogen to increase ammonia production at our manufacturing facility at Moranbah, Queensland. Rather than being made from natural gas, renewable hydrogen can presently be made at very small plants using solar energy to split water into hydrogen and oxygen, allowing ammonia to be produced without the GHG associated with natural gas. The aim of the feasibility study is to determine whether renewable hydrogen can be made at an industrial scale at a commercially competitive price. The results have been published by ARENA. Key Findings: • Our study found that solar ammonia at an industrial scale was technically viable and a facility was designed that could reliably provide a continuous supply of renewable hydrogen suitable for ammonia manufacturing. The design uses an off-grid (behind-the-meter) solar energy supply, with 160MW of electrolysis capable of producing approximately 25% of Moranbah's ammonia production.

				• Such a facility can be cash flow positive at A$2.00 per kg of hydrogen. However, to achieve a 5% return on equity contribution, the project would require A$395m in grant funding, or approximately 60% of the estimated capex. • Economic displacement of purchased ammonia at Moranbah requires solar hydrogen to be produced at A$2.00 per kg – at 5% return on investment it was found to be $4.09 per kg. • Commercial feasibility therefore requires either: – a price premium for the solar ammonia; – a reduction in renewable energy prices; and/or – an increase in grant funding. We are proud to have contributed valuable knowledge to the development of a renewable hydrogen industry in Australia and continue to investigate potential partnerships and pathways towards its use.
Radical process redesign	Full/commercial-scale demonstration	21 - 40%	500,000	IPL is partnering with global green energy company Fortescue Future Industries (FFI) to develop industrial-scale green ammonia production at IPL's Gibson Island facility. During 2021, FFI found that the project is technically feasible and issued IPL with a notice to proceed to a joint Front End Engineering

				Design (FEED) study. The study will refine cost, schedule, permitting and commercial agreements, and inform a potential Final Investment Decision. Located in Brisbane, the Gibson Island plant currently uses natural gas as a feedstock to produce ammonia. The project aims to replace natural gas with renewable hydrogen to produce industrial scale green ammonia as part of IPL's Ambition to be Net Zero by 2050. If the project proceeds, it is currently proposed that FFI would construct an on-site water electrolysis plant and develop and operate the hydrogen manufacturing facility, with IPL operating the ammonia manufacturing facility. The new water electrolysis facility would produce up to 50,000 tonnes of renewable hydrogen per year and be a complete replacement of Gibson Island's current gas use, where 60% of natural gas is currently used as feedstock and 40% is used for energy to drive the natural-gas-to-hydrogen feedstock reaction. The renewable hydrogen would then be converted into more than 300,000 tonnes of green ammonia for Australian and export markets.

				The project provides the potential to transition Gibson Island's ammonia manufacturing to a renewable future, following IPL's decision to cease manufacturing ammonia at the plant at the end of 2022 due to the cost and availability of natural gas on the east coast of Australia. The FEED study is expected to be completed by the end of 2022.
Other, please specify International partnership to investigate green ammonia supply from Australia's hydrogen hubs				Keppel Infrastructure Holdings Limited (Keppel Infrastructure) , Incitec Pivot Limited (IPL) and Temasek have signed a memorandum of understanding (MOU) 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. The green ammonia may be used as a direct feedstock in renewable energy generation, or as a hydrogen carrier to provide green hydrogen solutions. The MOU will bring together the complementary strengths and capabilities of the three international partners: Keppel Infrastructure has a strong track record in developing and operating efficient and reliable energy

				and environmental infrastructure, such as combined cycle power plants and waste-to-energy facilities, as well as in electricity retailing, and is looking to deepen its involvement in renewables and end-to-end low-carbon solutions including green electricity importation, hydrogen and carbon capture, utilisation, and storage. IPL is Australia's largest supplier of fertiliser on Australia's east coast and a global leader in the resources and agricultural sectors, with assets capable of blue/green conversion of ammonia. IPL will contribute our world class expertise in ammonia production, along with its strategic land at Kooragang Island in the Port of Newcastle, NSW. Temasek is a global investment company with a net portfolio of S$381 billion as at 31 March 2021. Temasek is actively supporting a range of decarbonisation opportunities, including feasibility of various renewable energy options. Temasek will fund part of the feasibility study. The three parties will work closely with the Queensland and NSW Governments to explore the feasibility of

				essential infrastructure, licences and approvals to facilitate the production and export of green ammonia. Green ammonia can be safely transported by ship and used to produce carbon-free electricity. It can also be used to replace bunker fuels to decarbonise the global maritime industry.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for reporting year – previous statement of process attached

Type of verification or assurance

Limited assurance

Attach the statement

IPL FY2020 NGER Limited Assurance Report_final signed 29102020.pdf

IPL NGER Limited Assurance Opinion 2021_ 28102021.pdf

Page/ section reference

Page 1: "Conclusion:"

~50% of IPL's Scope 1 GHG (100% of Australian Scope 1) is verified as part of the

Limited Assurance Opinion provided by Deloitte on an annual basis for our National Greenhouse and Energy Report (NGER). Since this is completed on a June 30 year-end, and the CDP reporting year is the Company financial year (Sept 30 year-end), this assurance is currently partially completed for the data in this report. This report and the previous annual report are attached.

Relevant standard

Other, please specify

ASAE 3410 Assurance Engagements on Greenhouse Gas Statements ('ASAE 3410') issued by the Auditing and Assurance Standards Board

Proportion of reported emissions verified (%)

49

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for reporting year – previous statement of process attached

Type of verification or assurance

Limited assurance

Attach the statement

IPL FY2020 NGER Limited Assurance Report_final signed 29102020.pdf

IPL NGER Limited Assurance Opinion 2021_ 28102021.pdf

Page/ section reference

Page 1: "Conclusion:"
~50% of IPL's Scope 2 GHG (100% of Australian Scope 2) is verified as part of the Limited Assurance Opinion provided by Deloitte on an annual basis for our National Greenhouse and Energy Report (NGER). Since this is completed on a June 30 year-end, and the CDP reporting year is the Company financial year (Sept 30 year-end), this assurance is currently partially completed for the data in this report. This report and the previous annual report are attached.

Relevant standard

Other, please specify

ASAE 3410 Assurance Engagements on Greenhouse Gas Statements ('ASAE 3410') issued by the Auditing and Assurance Standards Board

Proportion of reported emissions verified (%)

54

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Purchased goods and services
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Upstream transportation and distribution
Scope 3: Waste generated in operations
Scope 3: Business travel
Scope 3: Employee commuting
Scope 3: Investments
Scope 3: Downstream transportation and distribution
Scope 3: Use of sold products

Verification or assurance cycle in place

Biennial process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Third party verification/ assurance underway

Attach the statement

Page/section reference

As part of its investigation of, and preparation for, Science Based Targets, IPL has engaged an expert third party to review its scope 3 calculations and also it's scope 1 and 2 calculations for operations outside of Australia, which are not included in the annual limited assurance as part of annual Australian National Greenhouse and Energy Reporting (NGER).

Relevant standard

Other, please specify

Expert third party review of GHG calculations in accordance with GHG Protocol as preparation for Science Based Tragets

Proportion of reported emissions verified (%)

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	ASAE 3140	52% of IPL's energy use (100% of our Australian energy use) and 34% of our total purchased electricity is verified as part of the Limited Assurance Opinion provided by Deloitte on an annual basis for our National Greenhouse and Energy Report (NGER). Since this is completed on a June 30 year-end, and the CDP reporting year is the IPL financial year (Sept 30 year-end), this assurance is currently partially completed for the data in this report. The assurance statements attached include the energy assurance to June 30 2020 and June 30 2021. See Page 1: "Conclusion" 1, 2

[1]IPL FY2020 NGER Limited Assurance Report_final signed 29102020.pdf

[2]IPL NGER Limited Assurance Opinion 2021_ 28102021.pdf

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Australia ERF Safeguard Mechanism - ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

Australia ERF Safeguard Mechanism - ETS

% of Scope 1 emissions covered by the ETS

49

% of Scope 2 emissions covered by the ETS

0

Period start date

July 1, 2020

Period end date

June 30, 2021

Allowances allocated

129,955

Allowances purchased

129,955

Verified Scope 1 emissions in metric tons CO2e

1,208,701

Verified Scope 2 emissions in metric tons CO2e

100,681

Details of ownership

Facilities we own and operate

Comment

Three of IPL’s manufacturing facilities in Australia are captured under the Australian ERF Safeguard Mechanism. These three sites make up more than 99.8% of IPL's Australian Scope 1 emissions and 90.0% of IPL's total (Scope 1 + 2) GHG emissions.

Note: Scope 2 emissions are verified under NGER but are not covered by the Australian ERF Safeguard Mechanism.

Note: The Australian ERF Safeguard Mechanism ETS is based on the Australian Federal Government tax year ending 30 June while this CDP report and our sustainability reporting is based on the IPL financial year ending September 30.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

The IPL Corporate Sustainability Manager chairs the Carbon Pricing Steering Committee (CPSC). The CPSC comprises manufacturing, strategy, finance, treasury and energy contract management personnel across our global sites. The CPSC, through the Sustainability Manager and VP Strategic Projects, continually monitor emerging carbon pricing developments and inform the Decarbonisation and Energy Transition Steering Committee (chaired by the CEO) 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).

Our compliance procedure for the ERF Safeguard Mechanism is set out in the IPL Carbon Accounting Policy (Australia):

• Engineering and accounting specialists in our three Australian ERF Safeguard Mechanism-captured manufacturing facilities are responsible for implementing compliance plans to facilitate ongoing compliance.

• Site based accountants are responsible to collect monthly emissions data to track progress against site baselines and report to treasury on a monthly basis. In the event of an exceedance, a specific reporting process and management response is triggered.

• Treasury is responsible to monitor the carbon market/ACCU price and source any ACCUs which may be required.

• The Sustainability Manager is responsible to surrender any ACCUs required to settle a liability as directed by Treasury.

Our strategy for maximising opportunities related to carbon pricing schemes is managed by the VP Strategic Projects and the Sustainability Manager, as members of both the CPSC and the DETSC. The strategy includes:

• Quantifying and understanding our emissions sources;

• Identification of the required technologies to reduce these emissions as part of our Net Zero Pathway;

• Examining our exposure to current, emerging and likely future carbon pricing schemes and incentives;

• Use of an internal carbon price to evaluate CAPEX applications;

• Identification of site-based opportunities for GHG reduction capital projects and external partnerships, particularly in jurisdictions where financial incentives (such as carbon credits or tax credits) can be used to improve the business case; and

• Regular reporting of opportunities to the DETSC for consideration.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations

Identify and seize low-carbon opportunities

Other, please specify

Assess CAPEX applications

GHG Scope

Scope 1

Application

Facilities

Actual price(s) used (Currency /metric ton)

20

Variance of price(s) used

Market (supply and demand)

Type of internal carbon price

Implicit price

Impact & implication

• The internal carbon price is included in CAPEX applications to assess the risk of future carbon pricing costs associated with projects. For example, a project to increase the capacity of ammonia production at our Moranbah site included an internal price on carbon to assess the potential cost of increased GHG emissions under future schemes where baselines were reduced under the ERF Safeguard Mechanism. This ensures that low carbon designs for the expansion are being considered.

• The internal carbon price is used to improve the IRR of low carbon capital investments such as those relating to renewable energy. For example, IPL applied its internal carbon price when assessing two Rooftop Solar Installations at Helidon and Townsville to improve the IRR, resulting in the projects proceeding to installation in 2020, where they otherwise would not have met CAPEX hurdles.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers/clients

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

4

% total procurement spend (direct and indirect)

5

% of supplier-related Scope 3 emissions as reported in C6.5

4

Rationale for the coverage of your engagement

We have engaged with our shipping suppliers to collect information regarding the energy efficiency and GHG emissions of ships for two reasons:
1. Because our vessel selection partner, Rightship, rates ships on a scale from A to F regarding fuel efficiency and GHG emissions;
2. Because Rightship quantifies our Scope 3 shipping GHG using an internationally recognised standard (EN16258:2012); and
3. Because Rightship's ship rating tool allows us to reduce our Scope 3 emissions by selecting more efficient ships for our freight.

Impact of engagement, including measures of success

The Rightship GHG methodology uses the standard European energy efficiency scale and allows emissions to be benchmarked and tracked per journey and over time and the methodology has been verified according to an internationally recognised standard (EN16258:2012). This allows us to reliably quantify the scope 3 GHG associated with our global shipping.
Since we began using the RightShip greenhouse gas emissions rating system in 2016, we have reduced our emissions per tonne of cargo by 29%. In 2021, 32% of our ships were rated A or B, and 89% were rated D and above. We used no F or G rated ships in

2020 or 2021. During 2021, the Scope 3 emissions associated with our global shipping were 81,261tCO2e.

Comment

We will continue to take up similar engagements with other suppliers as they become available.

Type of engagement

Engagement & incentivization (changing supplier behaviour)

Details of engagement

Offer financial incentives for suppliers who reduce your downstream emissions (Scopes 3)
Offer financial incentives for suppliers who reduce your upstream emissions (Scopes 3)

% of suppliers by number

4

% total procurement spend (direct and indirect)

5

% of supplier-related Scope 3 emissions as reported in C6.5

4

Rationale for the coverage of your engagement

We have engaged with our shipping suppliers because our vessel selection partner, Rightship, rates ships on a scale from A to F regarding fuel efficiency and GHG emissions, allowing us to reward higher efficiency, low GHG ship owners with more trade by selecting them for our shipping over low efficiency-high emitting operators. This allows us to influence the shipping sector in transitioning to more efficient low GHG ships.

Impact of engagement, including measures of success

The Rightship GHG methodology uses the standard European energy efficiency scale and allows emissions to be benchmarked and tracked per journey and over time and the methodology has been verified according to an internationally recognised standard (EN16258:2012). This allows us to reliably quantify the scope 3 GHG associated with our global shipping.

Since we began using the RightShip greenhouse gas emissions rating system in 2016, we have reduced our emissions per tonne of cargo by 29%. In 2021, 32% of our ships were rated A or B, and 89% were rated D and above. We used no F or G rated ships in 2020 or 2021. During 2021, the Scope 3 emissions associated with our global shipping were 81,261tCO2e.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

Customer trials of our enhanced efficiency fertiliser, Entec, which reduces nitrogen losses to the atmosphere as N2O (a GHG) and to waterways through leaching.

% of customers by number

2

% of customer - related Scope 3 emissions as reported in C6.5

95

Please explain the rationale for selecting this group of customers and scope of engagement

Emissions from fertiliser use on farm make up 95% of our Scope 3 emissions from this 'customer use' category, and 60% of our total Scope 3 emissions. Our Enhanced Efficiency Fertiliser (EEF) range, which includes ENTEC treated fertilisers, are products specifically formulated to reduce Nitrogen (N) losses as N2O, a GHG, and to waterways through leaching, which can impact on aquatic life and reef health. Customer trials allow IPL to demonstrate and quantify GHG reductions on farms.

Impact of engagement, including measures of success

Research has demonstrated that using nitrogen stabilisers, such as ENTEC®, can provide crop growers with additional help in guarding against potential nitrogen losses to the atmosphere as GHG (as N2O) and can also therefore improve nitrogen use efficiency. Applied to ammonium and urea-based fertilisers, ENTEC works by delaying the activity of the bacteria, which oxidise ammonium to the nitrate form of nitrogen, for a period of time. While the nitrogen is stabilised in the ammonium form in the soil, it is safe from denitrification, resulting in less volatilisation to the atmosphere as GHG and less leaching losses to waterways. In addition, the crop can still access the stabilised nitrogen in the soil, resulting in increased yields. A two-year trial co-funded by DAFF and the Victorian DPI demonstrated consistent reductions in nitrous oxide emissions by around 60% when ENTEC was applied to NPK and urea-based fertilisers. Broccoli trials at Werribee and Boneo recorded yield increases of between 8% and 59% respectively from adding ENTEC to the base fertiliser (Nitrophoska®). These results highlight great potential for ENTEC in improving nitrogen use efficiencies, reducing greenhouse gas emissions, and achieving equivalent if not improved yields for a better bottom line for farming customers.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, and we do not plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, but we plan to have one in the next two years

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

The IPL Climate Change Policy states that "We support the international climate agreement developed at the 2015 Paris Conference of Parties, as well as the Nationally Determined Contributions of the countries in which we operate.
We believe carbon pricing can be an effective tool in reducing greenhouse gas emissions and advocate for a global, technology-neutral approach which delivers real reductions fairly and equitably. " IPL conducts its engagement activities in line with this statement and in order to reach our Net Zero ambition by 2050. The IPL Climate Change Policy was endorsed by the Board and describes how the management of climate change-related issues is incorporated into the Company's six Strategic Agenda Value Drivers.

Day-today management of Company affairs and the implementation of the corporate strategy and policy initiatives are formally delegated to the Managing Director and CEO. Responsibility for climate change strategy and governance resides with the Executive Team, advised by the Corporate Sustainability Manager, The Carbon Pricing Steering Committee (CPSC, which is Chaired by the Corporate Sustainability Manager) and the Decarbonisation and Energy Transition Steering Committee. The DETSC is tasked with developing the Company's Net Zero Pathway and to manage the risks and strategic opportunities associated with climate change. The DET Steering Committee comprises the following selected executives, aligning actions and engagement with policy, company strategy, financial performance and financial processes for the Company:

• The CEO Chairs the DETSC and, as the person with Board delegated authority to implement the corporate strategy and policy initiatives, is responsible for managing climate-related issues.
• The CFO is a member of the DET SC due to the financial and strategic aspects of the management of climate change.
• The Chief Technology Development Officer (CTDO) is a member due to his expertise in developing low carbon products and services.
• The VP Strategic Projects in tasked with the development of IPL's Net Zero Transition Plan and projects to support it.
• As per IPL Policy, no statements are made to external parties without IPL legal review. This legal review ensures that all statements align with IPL strategies approved by the Board. These statements include, but are not limited to, formal submissions regarding proposed government policies, statements to media organisations and formal statements to trade associations

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate

Emissions trading schemes

Other, please specify

Development of green hydrogen industry in Australia

Specify the policy, law, or regulation on which your organization is engaging with policy makers

1. The Australian ERF Safeguard Mechanism
2. The Australian Technology Investment Roadmap, which is a strategy to accelerate development and commercialisation of low emissions technologies.

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

Australia

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

1. IPL is engaging with policy makers regarding the design of new aspects of the Australian ERF Safeguard Mechanism, which are not yet in place, to ensure Australian manufacturers are not commercially disadvantaged by new aspects of the scheme, so as to ensure a just transition for its Australian workforces. The engagement is primarily in the form of written submissions in response to consultation on new rules being developed which relate to the Australian ERF Safeguard Mechanism.

2. IPL is engaging with policy makers regarding the Australian Technology Investment Roadmap and the development of the green hydrogen industry in Australia. With a core competency in the manufacture, storage and transportation of ammonia, IPL is well placed to play a role in green hydrogen and green ammonia for a low-carbon economy, generating sustainable shareholder returns into the future. Our partnership with global green energy company Fortescue Future Industries, on a feasibility study into industrial-scale production of green ammonia at our Gibson Island facility, represents
a crucial step in realising Australia's, and Queensland's, potential as a green ammonia powerhouse. The study will investigate building a new water electrolysis facility at the Gibson Island plant to produce around 50,000 tonnes of renewable hydrogen per year, which would then be converted into green ammonia for Australian and export markets. The project aligns with the strategies of both the Queensland and Federal governments to develop a clean, innovative and
competitive hydrogen industry delivering reliable domestic supply and new export opportunities. We're excited to share
the results of this work as they become available in 2022.
We also announced an international partnership with Singapore-based Keppel Infrastructure and Temasek to investigate the feasibility of producing green ammonia in Queensland and New South Wales. The goal is to produce green ammonia for export to meet the rapidly growing market demand for carbon-free energy, in Singapore and elsewhere.
The three parties will work closely with the Queensland and NSW Governments to explore the feasibility of essential
infrastructure, licences and approvals to facilitate the production and export of green ammonia. We are proud to be at the
forefront of this pioneering project that could revolutionise Australia's energy market.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

No, we have not evaluated

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Business Council of Australia

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Minerals Council of Australia

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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. A formal expert third party review of our memberships of associations found that this 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'.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is not aligned

Trade association

National Mining Association

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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. A formal expert third party review of our memberships of associations found that this 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'.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is not aligned

Trade association

Other, please specify

Queensland Resources Council (QRC)

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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'. A formal expert third party review of our memberships of associations found that this 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'.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is not aligned

Trade association

Other, please specify

The National Sand, Stone and Gravel Association

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

NSSGA supports investment into the expansion of renewable and reliable energy sources. It encourages emissions reduction for NSSGA members and provides them with a GHG emissions calculator in order to reduce their footprint. A formal expert third party review of our memberships of associations found that this association's position is "is in line with IPL's, or is more progressive than IPL's."

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Australian Industry Greenhouse Network

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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. Policy principles include promoting investment in 'first-of-a-kind' low-emissions technologies. AIGN is a network of industry associations and individual businesses which contribute to the climate change policy debate and see value in joint industry action on climate change in order to promote sustainable industry development. The network is committed to industry collaboration on equitable global action to reduce greenhouse gas emissions. A formal expert third party review of our memberships of associations found that this association's position is "is in line with IPL's, or is more progressive than IPL's."

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Carbon Market Institute

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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. A formal expert third party review of our memberships of associations found that this association's position is "is in line with IPL's, or is more progressive than IPL's."

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Energy Users Association of Australia

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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 policy states that 'climate change policies must be clear in their intent, consistent and fair in their application and always seek to minimise the financial impact on consumers while meeting the government's international commitments' under Paris. It advocates for an integrated response to long-term emission reduction policy. A formal expert third party review of our memberships of associations found that this 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'.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is not aligned

Trade association

Other, please specify

World Coal Association

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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). A formal expert third party review of our memberships of associations found that this 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'.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is not aligned

Trade association

Other, please specify

Chemistry Australia

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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. A formal expert third party review of our memberships of associations found that this 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'.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is not aligned

Trade association

Other, please specify

Fertilizer Australia

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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. A formal expert third party review of our memberships of associations found that this 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'.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is not aligned

Trade association

Other, please specify

International Fertilizer Industry Association

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

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'. 'The role of Fertilizers in Climate-Smart Agriculture' which was published in 2016, acknowledges the need to reduce emissions and how fertilisers can play a material role in this process. A formal expert third party review of our memberships of associations found that this 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'.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is not aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

IPL_Climate-Report-2021_Interactive.pdf

Page/Section reference

5. OUR TARGETS
9. OUR POSITION ON CLIMATE CHANGE
11. OUR CLIMATE CHANGE STRATEGY
16. REDUCING OPERATIONAL EMISSIONS
19. OUR NET ZERO PATHWAY
21. OUR SCOPE 3 EMISSIONS REDUCTION OPPORTUNITIES

24. MANAGING STRATEGIC BUSINESS RISKS AND OPPORTUNITIES
25. OUR SCENARIOS
34. RISKS AND OPPORTUNITIES
42. BUILDING OUR RESILIENCE TO PHYSICAL CLIMATE RISK
49. TCFD DISCLOSURES TABLE
51. ENERGY AND GHG EMISSIONS DATA
52. SCOPE 3 EMISSIONS CALCULATION METHODOLOGY

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Annual TCFD aligned climate change management report.

Publication

In mainstream reports

Status

Complete

Attach the document

IPL_2021_Annual Report.pdf

Page/Section reference

46-47

Content elements

Governance
Strategy
Emissions figures
Emission targets

Comment

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, board-level oversight	The Health, Safety, Environment and Community Committee of the Board has responsibility for oversight and management of issues related to biodiversity. While risks and opportunities associated with our own operations are limited in relation to impacts on biodiversity, soil degradation, including loss of soil biodiversity, is a material issue for our farming customers. Excessive use of mineral fertilisers can reduce soil biodiversity, which is the number and variety of species which exist within soil. Soil biodiversity is essential to both the environment and to agricultural industries because soil organisms cycle nutrients, making them available to plants, improve water entry and storage, provide resistance to erosion, aid in carbon capture and break down organic matter. Soil species include microbes, such as algae and cyanobacteria, micro-fauna, including amoebas and fungi, mesofauna, such as mites and other tiny insects, and macrofauna such as earth worms, ants, termites, and other insects which are large enough to be identified. These organisms are part of a vast food web that ensures the cycling of energy and nutrients within soils, promoting plant growth and soil productivity, and helps sustain organisms living above ground. IPL recognises that sustainable soil health includes restoring soil biodiversity in farmland soils where it has been reduced over time. Our Incitec Pivot Fertilisers (IPF) 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. During 2021, we worked towards the December announcement of our $38 million investment in Australian Bio Fert (ABF). Together we will build Australia's first large-scale plant to develop and deliver a new category of sustainable fertilisers for Australian farmers. IPF's soil

		analysis laboratory, Nutrient Advantage, also launched a new Soil Health Test Package that enables farmers to benchmark and improve the health and productivity of their soil. Our soil and plant testing services provide farmers and agronomists with high quality analytical results to support sustainable fertiliser application recommendations.

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity
Row 1	No, and we do not plan to do so within the next 2 years

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	Yes, we assess impacts on biodiversity in our downstream value chain only

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Other, please specify Soil Biodiversity: Investment in developing a new class of bio-fertilisers and release of a new Soil Health Test Package that enables farmers to benchmark and improve the health and productivity of their soil.

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Other, please specify Soil biodiversity through sustainable plant nutrition solutions	See under 'Sustainable plant nutrition solutions' on page 17 (page 10 of the pdf) 1
In voluntary sustainability report or other voluntary communications	Impacts on biodiversity Details on biodiversity indicators Other, please specify Soil biodiversity strategy.	See under 'MATERIAL ISSUE: SUSTAINABLE PLANT-NUTRITION SOLUTIONS', p 5 (p4 pdf): We seek to improve soil health, including restoring soil carbon levels, soil nutrient levels and the biodiversity of soil species, where these have been depleted. 2

1 2021 IPL Sustainability Report.pdf

2 2021 IPL GRI Index and Data Supplement.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Strategy and Sustainability Officer	Chief Sustainability Officer (CSO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options		Public